

City of Brampton

Extension of Intermodal Drive to Gorewood Drive

Traffic Study Report

December 22, 2025

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Contents

Acronyms and Abbreviations..... vi

Executive Summary..... 1

1 Introduction..... 1

 1.1 Study Area..... 1

2 Analysis Approach..... 2

 2.1 Data Collection..... 2

 2.2 Traffic Analysis Methodology..... 2

3 Existing Conditions..... 3

 3.1 Existing Road Network..... 3

 3.2 Existing Traffic Operations..... 5

 3.3 Existing Transit Routes and Services..... 7

 3.4 Existing Pedestrian and Cycling Facilities..... 8

 3.5 Existing Multi-Modal Level of Service..... 9

4 Future Conditions..... 11

 4.1 Future Transportation Network Improvements..... 11

 4.1.1 Road Network Improvements..... 11

 4.1.2 Transit Network Improvements..... 11

 4.1.3 Pedestrian and Cycling Network Improvements..... 12

 4.2 Traffic Forecasts..... 13

 4.2.1 Background Traffic Growth..... 13

 4.2.2 Background Traffic Diversion..... 14

 4.3 Future Total Traffic Conditions..... 15

 4.3.1 ‘Do Nothing’ Scenario..... 15

 4.3.1.1 Projected Average Annual Daily Traffic Volumes..... 18

 4.3.2 ‘With Extension’ Scenario..... 19

 4.3.2.1 Projected Average Annual Daily Traffic Volumes..... 23

 4.4 Future Traffic Operations..... 23

 4.4.1 ‘Do Nothing’ Scenario..... 23

 4.4.1.1 Future 2031 Conditions..... 23

 4.4.1.2 Future 2041 Conditions..... 25

 4.4.1.3 Future 2051 Conditions..... 26

4.4.1.4	Localized Intersection Improvements.....	27
4.4.2	'With Extension' Scenario.....	28
4.4.2.1	Future 2031 Conditions	28
4.4.2.2	Future 2041 Conditions	30
4.4.2.3	Future 2051 Conditions	31
4.5	Cycling Facility Requirements	32
4.5.1	Step 1: Pre-Select Facility Type Option.....	32
4.5.2	Step 2: Detailed & Contextual Evaluation	34
4.5.3	Step 3: Document & Justify Rationale.....	35
4.6	Pedestrian Facility Requirements.....	35
4.7	Transit Facility Requirements	36
4.8	Preferred Cross-Section	36
4.9	Future Multi-Modal Level of Service	37
5	Conclusion	38

Tables

Table 2-1	Turning Movement Count Inventory	2
Table 2-2	Level of Service Thresholds	3
Table 3-1	Intersection Capacity Analysis Results: Existing Traffic	7
Table 3-2	Existing Transit Service	8
Table 3-3	Existing Multi-Modal Level of Service Analysis Results.....	10
Table 4-1	Traffic Growth Rates	14
Table 4-2	Projected Average Annual Daily Traffic Volumes: 'Do Nothing' Scenario	19
Table 4-3	Projected Average Annual Daily Traffic Volumes: 'With Extension' Scenario	23
Table 4-4	Intersection Capacity Analysis Results: Future 2031 Traffic, 'Do Nothing' Scenario.....	24
Table 4-5	Intersection Capacity Analysis Results: Future 2041 Traffic, 'Do Nothing' Scenario.....	25
Table 4-6	Intersection Capacity Analysis Results: Future 2051 Traffic, 'Do Nothing' Scenario.....	26
Table 4-7	Intersection Capacity Analysis Results: Future 2051 Traffic, 'Do Nothing' Scenario with Localized Intersection Improvements	27
Table 4-8	Intersection Capacity Analysis Results: Future 2031 Traffic, 'With Extension' Scenario.....	28
Table 4-9	Intersection Capacity Analysis Results: Future 2041 Traffic, 'With Extension' Scenario.....	30
Table 4-10	Intersection Capacity Analysis Results: Future 2051 Traffic, 'With Extension' Scenario.....	31
Table 4-11	Roadway Characteristics.....	34
Table 4-12	Future Multi-Modal Level of Service Analysis Results	37

Figures

Figure 1-1 Study Area..... 1

Figure 3-1 Existing Intersection Traffic Controls and Lane Configurations..... 4

Figure 3-2 Existing Traffic..... 6

Figure 4-1 Existing and Future Pedestrian and Cycling Facilities..... 13

Figure 4-2 Projected Traffic Growth at Sample Locations..... 14

Figure 4-3 Traffic Diversion 15

Figure 4-4 Future 2031 Traffic: 'Do Nothing' Scenario 16

Figure 4-5 Future 2041 Traffic: 'Do Nothing' Scenario 17

Figure 4-6 Future 2051 Traffic: 'Do Nothing' Scenario 18

Figure 4-7 Future 2031 Traffic: 'With Extension' Scenario 20

Figure 4-8 Future 2041 Traffic: 'With Extension' Scenario 21

Figure 4-9 Future 2051 Traffic: 'With Extension' Scenario 22

Figure 4-10 Cycling Facility Pre-Selection Nomograph..... 33

Appendices

- Traffic Data
- Intersection Capacity Analysis Reports
- Multi-Modal Level of Service

Acronyms and Abbreviations

AAA	All Ages and Abilities
AADT	Average Annual Daily Traffic
AM	Morning
ATMP	Active Transportation Master Plan
EA	Environmental Assessment
EBL	Eastbound Right
EBR	Eastbound Left
EBT	Eastbound Right
Int.	Intersection
LOS	Level of Service
MMLOS	Multi-Modal Level of Service
MUP	Multi-Use Path
NBL	Northbound Left
NBR	Northbound Right
NBT	Northbound Through
OTC	Ontario Traffic Council
OTM	Ontario Traffic Manual
PM	Afternoon
PXO	Pedestrian Crossover
SBL	Southbound Left
SBR	Southbound Right
SBT	Southbound Through
TMP	Transportation Master Plan
v/c	Volume to Capacity
WBL	Westbound Left
WBR	Westbound Right
WBT	Westbound Through

Executive Summary

The City of Brampton retained Arcadis Professional Services (Canada) Inc. to conduct a transportation and traffic study in support of the Schedule 'B' Municipal Class Environmental Assessment (EA) for the proposed extension of Intermodal Drive to Gorewood Drive. The purpose of this transportation and traffic study was to analyze the impact of the proposed extension and inform the development of the preliminary design.

An Existing conditions analysis was conducted using weekday morning and afternoon peak hour traffic data collected at key intersections in the defined study area, including Steeles Avenue East & Goreway Drive, Steeles Avenue & Finch Avenue/Gorewood Drive, Goreway Drive & Intermodal Drive, as well as Intermodal Drive & Deerhurst Drive. Building on Existing conditions, a diversion analysis was undertaken with referenced to the City of Brampton's long-range forecasting EMME model, indicating that the Intermodal Drive extension to Gorewood Drive would result in an approximate 5% re-routing of traffic from Goreway Drive and Steeles Avenue East to Intermodal Drive. The EMME model projections were also utilized to establish background traffic growth rates for the study area roadways.

Traffic volume projections in 2031, 2041 and 2051 with and without the Intermodal Drive extension were then developed, based on Existing conditions and with consideration of the diversion analysis and background growth rates.

As informed by the traffic modelling exercise conducted for this study, the key results and findings of this analysis are summarized below:

- The intersection of Steeles & Goreway is currently approaching its theoretical capacity and is expected to exceed its capacity by 2031. As a result of the diversion of traffic associated with the Intermodal Drive extension, the Steeles & Goreway intersection is expected to operate at an acceptable Level of Service until 2051. At the Goreway & Intermodal intersection, permitted-protected phasing would be required for the southbound left-turn movement, however, to accommodate the diversion of traffic.
- At the Steeles & Finch/Gorewood intersection, the Region of Peel should consider converting the inside southbound through-left lane to a dedicated southbound left-turn lane, provided that the existing pavement width allows for this with the typical design vehicle used for functional design of this intersection. Although this would not be expected to have any significant impact on traffic operations, it would better align with driver expectations of a typical lane arrangement. Any functional design change to this intersection should consider the ability for simultaneous truck turning movements in the northbound and southbound directions, should the Region of Peel ever remove split phasing from this intersection in favour of conventional four-/eight-phase operation.
- The results of the analysis indicate that the extension of Intermodal Drive would only require a two-lane cross-section, rather than the existing four-lane cross-section of the existing portion of Intermodal Drive. Furthermore, the intersection of Intermodal & Gorewood was found to operate at an acceptable Level of Service as a two-way stop-controlled intersection. No auxiliary turning lanes are expected to be required at this intersection.

Multi-Modal Level of Service (MMLOS) analysis was completed for all road segments and intersections within the defined study area. Under existing conditions, all roads and intersections are failing to meet their pedestrian, cycling and transit Level of Service (LOS) targets. This is largely due to significant deficiencies in the pedestrian and cycling network.

The future Intermodal Drive extension is expected to meet most of its MMLOS targets and will be just shy of meeting the Pedestrian and Transit LOS target. The pedestrian cross-over (PXO) assessment suggests that a Level 2 Type D PXO is warranted on Intermodal Drive to provide network connectivity for pedestrians going to/from properties on the south side of Intermodal Drive.

If Intermodal Drive is not extended to Gorewood Drive, the intersection capacity analysis suggests that localized intersection modifications will be required at the Steeles & Goreway intersection to accommodate the projected traffic demand. The analysis suggests that implementing dual eastbound left-turn lanes and the signalization of the westbound right-turn channel with protected-overlap phasing would be required in this scenario.

1 Introduction

The City of Brampton has retained Arcadis Professional Services (Canada) Inc. to conduct a transportation and traffic study in support of the Class Environmental Assessment (EA) for the proposed extension of Intermodal Drive to Gorewood Drive. The purpose of this transportation and traffic study is to analyze the impact of the proposed extension and provide input to its preliminary design.

1.1 Study Area

The study area for this report is bound by Intermodal Drive to the north, Steeles Avenue to the south, Goreway Drive to the west and Gorewood Drive/Finch Avenue to the east. **Figure 1-1** illustrates the key roadways within the study area as well as the general location of the proposed extension. It should be noted that the precise future alignment of the proposed Intermodal Drive extension is not shown in **Figure 1-1**.

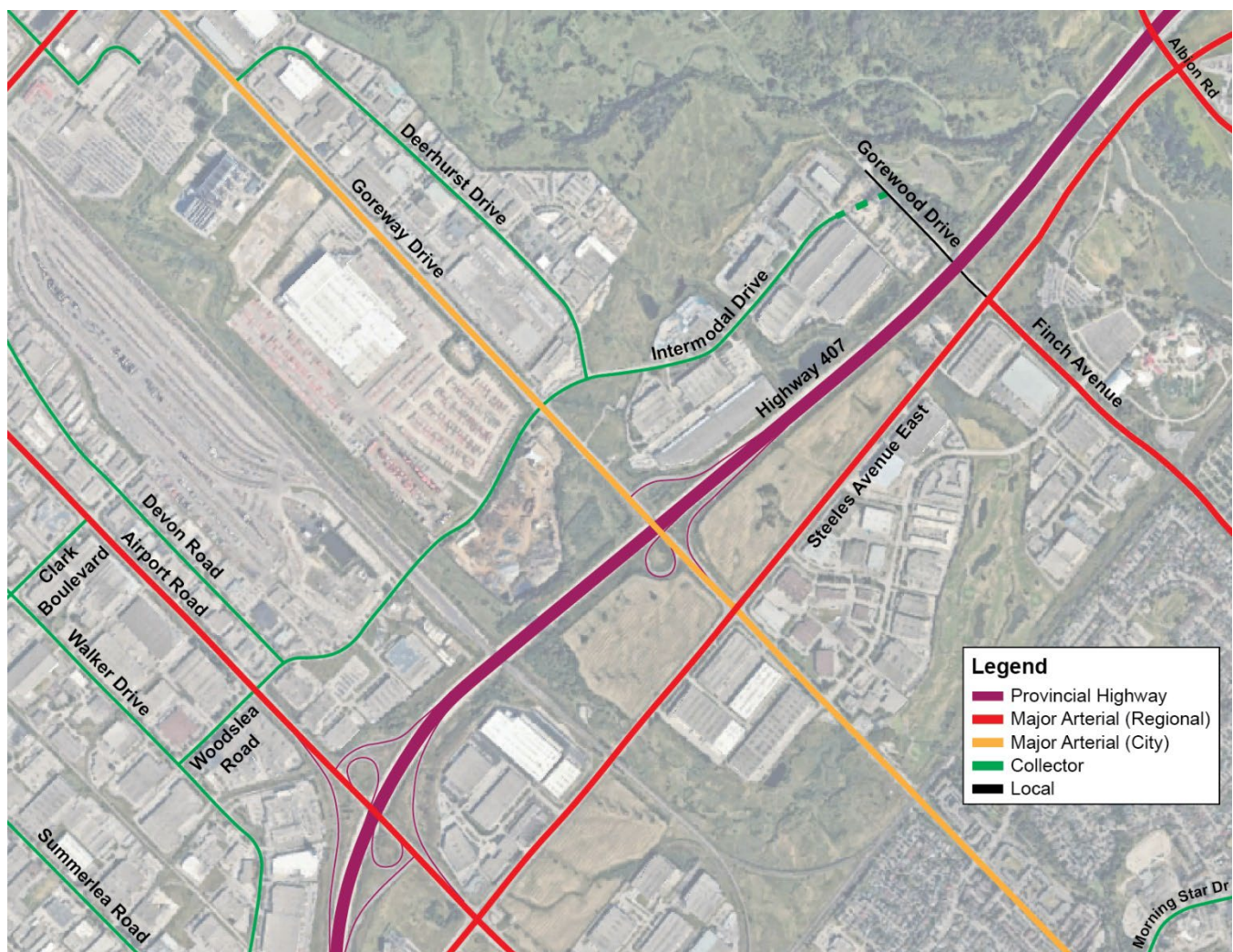


Figure 1-1 Study Area

The following intersections have been included in the intersection capacity analysis:

- Steeles Avenue & Goreway Drive
- Steeles Avenue & Finch Avenue/Gorewood Drive
- Goreway Drive & Intermodal Drive
- Intermodal Drive & Deerhurst Drive
- Intermodal Drive & Gorewood Drive (future)

2 Analysis Approach

2.1 Data Collection

Turning movement counts, signal timing plans, and EMME model projections were provided by the City of Brampton. A supplementary turning movement count was collected for the intersection of Intermodal & Deerhurst by Ontario Traffic Inc. **Table 2-1** summarizes the date when the turning movement counts were completed.

Table 2-1 Turning Movement Count Inventory

Intersection	Turning Movement Count Date
Steeles & Goreway	May 11, 2022
Steeles & Finch/Gorewood	May 10, 2022
Goreway & Intermodal	June 9, 2022
Intermodal & Deerhurst	March 19, 2024

The EMME model projections provided by the City of Brampton included the following scenarios:

- Baseline 2016 traffic volumes
- Future 2031 traffic volumes, with and without Intermodal Drive extension
- Future 2041 traffic volumes, with and without Intermodal Drive extension

The traffic data used for this study has been provided in **Appendix A**.

2.2 Traffic Analysis Methodology

In qualitative terms, Level of Service (LOS) describes a user's perception of the operational conditions of a transportation facility. For motorized traffic, these conditions are generally defined in terms of delay, speed and travel time, freedom to maneuver, traffic interruptions, safety, comfort and convenience. The two key metrics used to evaluate LOS are as follows:

- **Volume to Capacity (v/c) Ratio:** The ratio of traffic volume (either measured or forecast) to the capacity of the intersection or roadway.

- **Average Delay:** The average elapsed time from when a vehicle stops at the end of the queue until the vehicle departs from the stop line, including the time required for a vehicle to travel from the last-in-queue position to the first-in-queue position.

LOS is given a letter designation from 'A' to 'F'. LOS 'A' represents the best operating conditions and LOS 'E' represents the level at which the intersection, or an approach to the intersection, is carrying the maximum traffic volume that can, practicably, be accommodated. LOS 'F' indicates that the facility is operating beyond its theoretical capacity.

Table 2-2 outlines the Level of Service thresholds for signalized and unsignalized intersections.

Table 2-2 Level of Service Thresholds

Level of Service	Signalized Delay (s)	Unsignalized Delay (s)
A	≤10	≤10
B	>10 and ≤20	>10 and ≤15
C	>20 and ≤35	>15 and ≤25
D	>35 and ≤55	>25 and ≤35
E	>55 and ≤80	>35 and ≤50
F	>80	>50

The City of Brampton Traffic Impact and Parking Study Terms of Reference (April 2019) and the Peel Region Traffic Impact Study Guidelines indicate that the following traffic operational issues must be identified:

- Overall intersection with v/c ratios exceeding 0.90;
- Through movements, or shared through/turning movements with v/c ratios exceeding 0.90;
- Exclusive turning movements with v/c ratios exceeding 1.00;
- Individual movements with 95th percentile queues that exceed the available storage capacity; and
- Individual movements operating at LOS 'E' or 'F'.

3 Existing Conditions

The following sections describe the existing transportation network in the study area and its traffic operations under existing conditions.

3.1 Existing Road Network

The existing intersection traffic controls and lane configurations are illustrated in **Figure 3-1**.

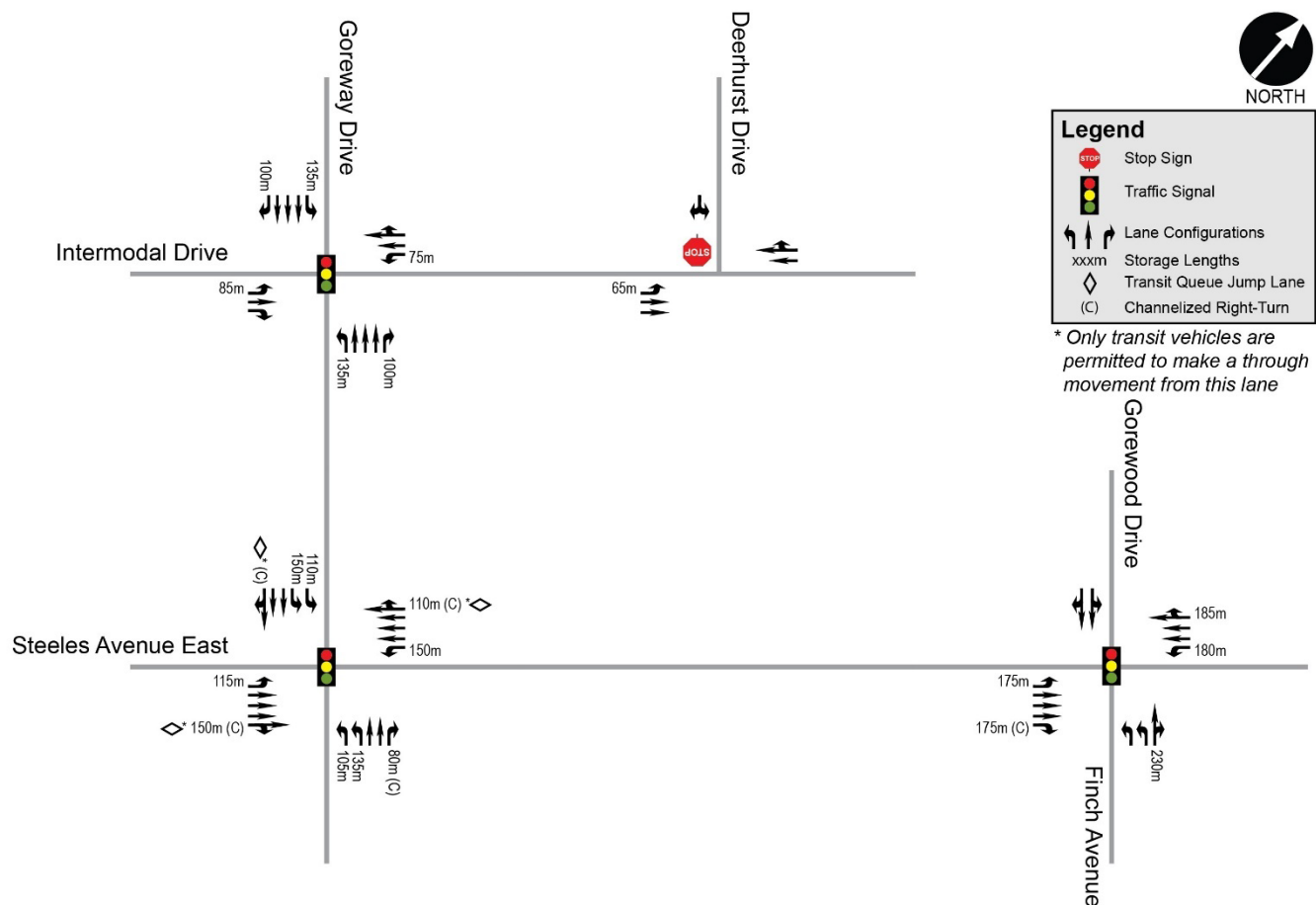


Figure 3-1 Existing Intersection Traffic Controls and Lane Configurations

The following provides a summary of the key study area roadways:

- **Highway 407** is a ten-lane controlled-access provincial toll highway with a posted speed limit of 100 km/h which extends from Highway 403 in Burlington in the west to Highway 115 in the east. Highway 407 has two eastbound on-ramps and one westbound off-ramp at Goreway Drive.
- **Steeles Avenue East** is a six-lane major arterial road with a posted speed limit of 80 km/h under the jurisdiction of Peel Region. Steeles Avenue extends from Appleby Line near Milton in the west to York Durham Line/Scarborough Pickering Townline in the east.
- **Finch Avenue** is four-lane major arterial road with a posted speed limit of 80 km/h under the jurisdiction of Peel Region. Finch Avenue extends from Steeles Avenue East in Brampton in the west to Morningside Avenue in Scarborough in the east.
- **Goreway Drive** is a six-lane major arterial road with a posted speed limit of 70 km/h under the jurisdiction of the City of Brampton. Goreway Drive extends from Mayfield Road in the north to Highway 427 in the south.
- **Intermodal Drive** is a four-lane collector road with an unposted speed limit of 50 km/h which extends from Airport Road in the west and terminates approximately 180m west of Gorewood Drive.

- **Deerhurst Drive** is a two-lane collector road with an unposted speed limit of 50 km/h which extends from Goreway Drive in the north to Intermodal Drive in the south.
- **Gorewood Drive** is a two-lane local road with an unposted speed limit of 50 km/h which extends north from Steeles Avenue East and terminates in a cul-de-sac after 600m. North of the cul-de-sac is the Claireville Conservation Area.

Although there is no formal public roadway connection between Intermodal Drive and Gorewood Drive, there currently exists an unofficial private roadway connection through private property approximately 400m north of Steeles Avenue. Field observations suggest that a significant percentage of the traffic on Gorewood Drive is using this unofficial connection to access Intermodal Drive.

3.2 Existing Traffic Operations

Traffic volumes representative of existing conditions are presented in **Figure 3-2**. A growth rate was applied to the 2022 traffic counts to estimate 2024 traffic volumes and volume balancing was completed on Intermodal Drive between Goreway Drive and Deerhurst Drive. Volume balancing was not completed at any other locations due to the presence of other intersections/highway ramp terminals between study area intersections.

Extension of Intermodal Drive to Gorewood Drive Traffic Study Report

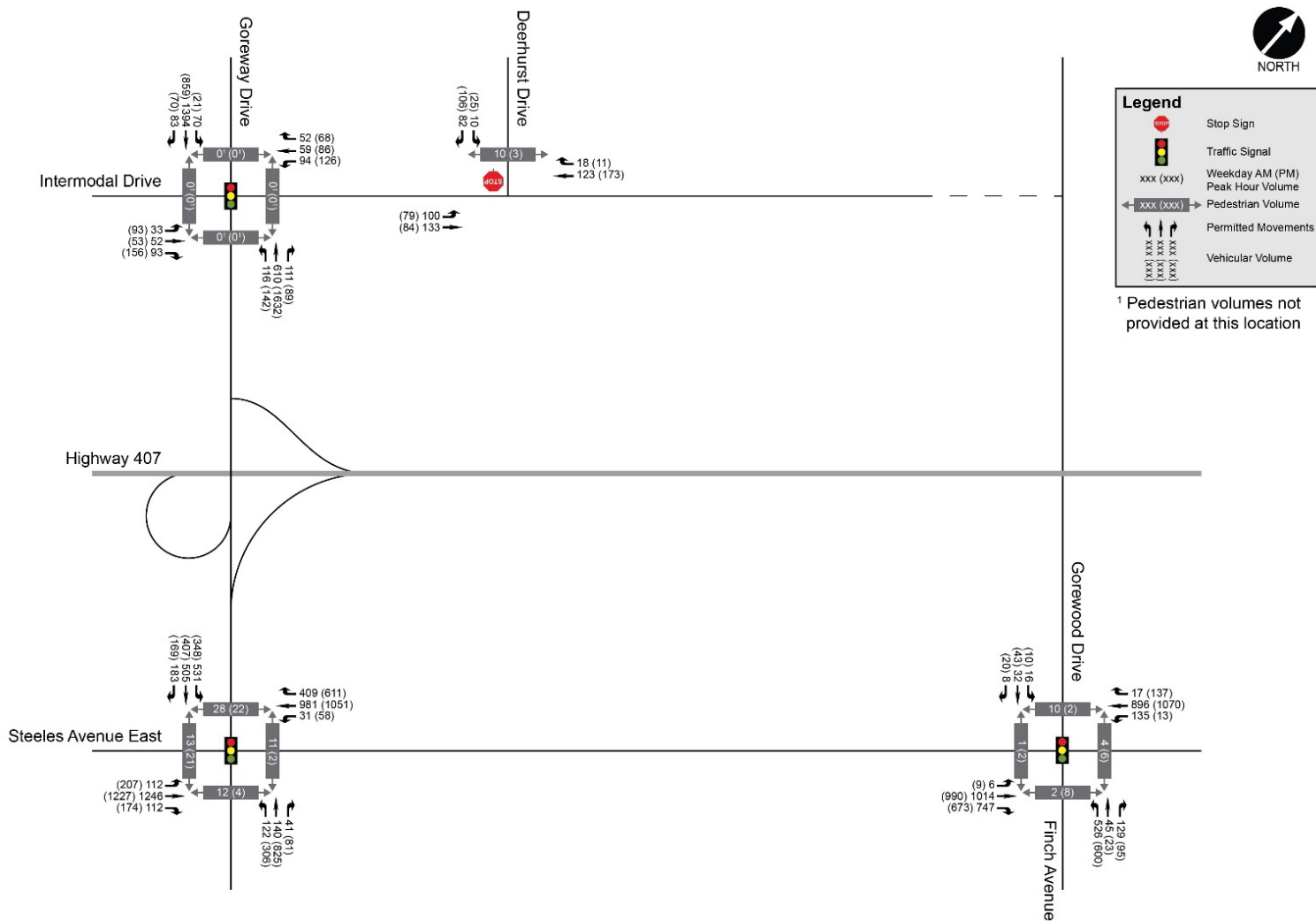


Figure 3-2 Existing Traffic

Existing traffic operations were assessed using Synchro 11 and the results are presented in **Table 3-1**. Detailed intersection capacity analysis reports are provided in **Appendix B**.

Table 3-1 Intersection Capacity Analysis Results: Existing Traffic

Intersection	Lane Group	Storage	AM Peak Hour (PM Peak Hour)					
			Int. Delay (s)	Int. LOS	Delay (s)	LOS	v/c Ratio	SimTraffic Queue (m)
Steeles & Goreway	EBL	115	34.5 (47.3)	C (D)	22.3 (50.8)	C (D)	0.50 (0.81)	85.8 (112.8)
	EBT	-			27.6 (40.2)	C (D)	0.56 (0.64)	129.6 (118.3)
	EBR	150			4.0 (5.2)	A (A)	0.15 (0.25)	- (-)
	WBL	150			12.5 (18.6)	B (B)	0.16 (0.30)	23.1 (33.3)
	WBT	-			29.1 (38.2)	C (D)	0.47 (0.67)	107.5 (142.7)
	WBR	110			12.7 (39.0)	B (D)	0.52 (0.92)	90.9 (117.6)
	NBL	120			81.4 (83.3)	F (F)	0.59 (0.79)	51.9 (99.4)
	NBT	-			79.1 (65.7)	E (E)	0.57 (0.87)	44.7 (146.3)
	NBR	80			1.6 (4.9)	A (A)	0.18 (0.17)	4.2 (87.6)
	SBL	130			61.5 (94.3)	E (F)	0.82 (0.95)	134.5 (118.3)
	SBT	-			51.2 (44.2)	D (D)	0.73 (0.42)	130.9 (94.6)
	SBR	-			5.9 (10.6)	A (B)	0.44 (0.33)	58.3 (38.4)
Steeles & Finch/ Gorewood	EBL	175	28.8 (29.9)	C (C)	28.3 (25.3)	C (C)	0.03 (0.05)	10.2 (14.3)
	EBT	-			24.2 (21.2)	C (C)	0.47 (0.42)	199.5 (79.0)
	EBR	175			15.8 (16.1)	B (B)	0.75 (0.65)	118.6 (62.8)
	WBL	180			20.4 (16.2)	C (B)	0.49 (0.05)	62.4 (16.2)
	WBTR	-			18.5 (22.8)	B (C)	0.37 (0.51)	92.6 (104.7)
	NBL	-			71.0 (74.1)	E (E)	0.85 (0.90)	110.6 (139.3)
	NBTR	-			30.1 (14.1)	C (B)	0.46 (0.30)	73.4 (63.5)
	SBTRL	-			69.2 (58.9)	E (E)	0.40 (0.41)	34.9 (27.5)
Goreway & Intermodal	EBL	85	17.1 (16.4)	B (B)	58.3 (83.4)	E (F)	0.23 (0.68)	34.7 (75.9)
	EBT	-			58.0 (58.5)	E (E)	0.25 (0.27)	40.6 (57.5)
	EBR	-			13.8 (11.1)	B (B)	0.41 (0.46)	40.2 (48.8)
	WBL	75			98.0 (90.5)	F (F)	0.78 (0.77)	80.3 (81.8)
	WBTR	-			30.5 (54.9)	C (D)	0.29 (0.35)	69.1 (65.5)
	NBL	135			29.2 (8.4)	C (A)	0.56 (0.44)	85.6 (71.9)
	NBT	-			3.5 (6.8)	A (A)	0.18 (0.46)	41.0 (125.2)
	NBR	100			0.4 (1.2)	A (A)	0.13 (0.12)	34.2 (30.7)
	SBL	135			15.2 (18.4)	B (B)	0.18 (0.18)	34.8 (23.8)
	SBT	-			15.5 (12.0)	B (B)	0.46 (0.28)	110.3 (63.6)
	SBR	100			3.3 (3.0)	A (A)	0.12 (0.09)	59.1 (28.6)
Intermodal & Deerhurst	EBL	65	4.1 (4.6)	A (A)	8.5 (9.1)	A (A)	0.12 (0.10)	22.8 (25.7)
	SBRL	-			11.5 (11.3)	B (B)	0.18 (0.22)	39.2 (30.9)

The study area intersections are generally operating at an acceptable Level of Service, although several left-turn movements and two through movements are operating at LOS 'E' or 'F'. Two turning movements at the Steeles & Goreway intersection are approaching their theoretical capacity (i.e., v/c ratios > 0.90) and several turning movement queues are currently exceeding the available storage capacity.

3.3 Existing Transit Routes and Services

Table 3-2 summarizes the transit routes operating within the study area.

Table 3-2 Existing Transit Service

Route	Service Provider	Service Type	Termini	Peak Period Frequency
5	Brampton Transit	Regular, all-day	Westwood Square to Mount Pleasant GO	15-minute headways
11/11A	Brampton Transit	Regular, all-day	Lisgar GO to Humber College	10-minute headways
29A	Brampton Transit	Regular, all-day	Mount Pleasant GO to Kenview Boulevard	15-minute headways
511/ 511A	Brampton Transit	Regular, all-day	Lisgar GO to Humber College	7.5-minute headways
511C	Brampton Transit	Weekday, daytime only	Brampton Gateway Terminal to Humber College	15-minute headways
38	GO Transit	Weekday, peak period only	Malton GO to Bolton	Two southbound trips in the morning and two northbound trips in the afternoon

3.4 Existing Pedestrian and Cycling Facilities

Within the study area, the following pedestrian facilities have been provided:

- Steeles Avenue East:
 - Concrete sidewalk on south side of the road between Goreway Drive and Finch Avenue
 - Concrete sidewalk on north side of the road west of Goreway Drive
- Finch Avenue:
 - Concrete sidewalk on west side of the road
- Goreway Drive:
 - Concrete sidewalk on east side of road south of Steeles Avenue East
 - Concrete sidewalks on both sides of the road north of Intermodal Drive
- Intermodal Drive:
 - Concrete sidewalk on the north side of the road
- Deerhurst Drive:
 - Concrete sidewalk on the east side of the road

No cycling facilities are present within the study area.

In addition to the above pedestrian facilities, there is also a network of nature trails within the Claireville Conservation Area which can be accessed via an entrance at the end of Gorewood Drive. A parking lot has been provided at this location to accommodate visitors.

3.5 Existing Multi-Modal Level of Service

When evaluating roads and intersections, the comfort and safety of all users needs to be assessed and weighed against performance targets. The Ontario Traffic Council (OTC) has developed a Multi-Modal Level of Service (MMLOS) analysis methodology to allow for the quantitative evaluation of Level of Service for pedestrians, cyclists, transit, trucks and cars. The elements considered in the MMLOS analysis for each user group are described below:

- **Pedestrian Level of Service** evaluates pedestrian comfort, safety, and convenience at intersections and along roadway segments. The evaluation considers whether sufficient space is allocated to pedestrians, the level of exposure to traffic, and pedestrian delays.
- **Bicycle Level of Service** evaluates the amount of space available for cyclists, delays at intersections and the level of exposure to traffic.
- **Transit Level of Service** evaluates the reliability of transit based on delays experienced by transit at intersections, the presence of passenger amenities and transit priority measures, and the Pedestrian Level of Service.
- **Truck Level of Service** evaluates the ability of trucks to operate with ease along the road network. The Truck Level of Service is associated with the width of the curb lanes, the average turning radius and the Car Level of Service.
- **Car Level of Service** evaluates the ease of travel by passenger vehicle and considers factors such as intersection delays, the number of movements with dedicated turn lanes and the level of utilization (i.e., v/c ratio) of a given roadway.

The OTC MMLOS Guidelines recommend targets for each mode based on the street type, and adjustment factors have been considered to reflect planning directions and strategic policy directions. The adjustment factors for planning directions consider whether planning documents such as the City of Brampton Transportation Master Plan or the Peel Region Long Range Transportation Plan identify a particular corridor as a key transportation link for a particular mode (e.g., a key cycling corridor or transit priority corridor). Strategic policy directions reflect the overall long-term policy priorities associated with various travel modes and determines whether additional priority should be given to particular modes on a community-wide basis.

Intermodal Drive and Gorewood Drive are considered Industrial Boulevards for the purposes of this study as they are classified as local or collector roadways and are located within an industrial zone. Truck Level of Service is prioritized for Industrial Boulevards, while LOS 'D' or 'E' is considered acceptable for all other modes. Steeles Avenue and Goreway Drive are considered Industrial Connectors for the purposes of this study. Industrial Connectors are major mobility corridors that move high volumes of cars and trucks, with priority also given to Truck Level of Service.

The City of Brampton Transportation Master Plan (TMP) identifies a long-term policy goal of doubling the mode share of sustainable transportation modes (i.e., walking, cycling, transit) as well as a goal of increasing the average auto occupancy. As such, strategic policy upward adjustments have been applied to the Pedestrian, Bicycle and Transit Level of Service targets. The TMP also identifies the need for cycling facilities on Intermodal Drive and Goreway Drive and identifies Steeles Avenue as a key transit corridor. Planning direction upward adjustments have therefore been applied to these corridors to reflect the above planning directions. Additionally, the Peel Long Range Transportation Plan identifies Steeles Avenue as a key cycling link therefore the Bicycle Level of Service target has been accordingly adjusted upwards.

Table 3-3 summarizes the results of the MMLOS analysis. The detailed MMLOS analysis worksheets have been provided in **Appendix C**. The deviation noted identifies the difference in LOS letter grade between the actual and target LOS.

Table 3-3 Existing Multi-Modal Level of Service Analysis Results

Location		Pedestrian LOS	Bicycle LOS	Transit LOS	Truck LOS	Car LOS
Roadway Segments						
Intermodal Drive	Actual	N/A ¹	N/A ²	D	C	C
	Target	C	B	C	B	E
	Deviation	-3	-4	-1	-1	+2
Steeles Avenue	Actual	N/A ¹	N/A ²	D	C	B
	Target	D	B	B	B	D
	Deviation	-2	-4	-2	-1	+2
Goreway Drive	Actual	F	N/A ²	E	B	B
	Target	D	B	C	B	D
	Deviation	-2	-4	-2	0	+2
Gorewood Drive	Actual	N/A ¹	N/A ²	E	B	C
	Target	C	C	C	B	E
	Deviation	-3	-3	-2	0	+2
Signalized Intersections						
Goreway & Intermodal	Actual	F	N/A ³	E	A	A
	Target	D	B	C	B	D
	Deviation	-2	-4	-2	+1	+3
Steeles & Goreway	Actual	F	N/A ³	E	A	B
	Target	D	B	C	B	D
	Deviation	-2	-4	-2	+1	+2
Steeles & Finch/ Gorewood	Actual	E	N/A ³	E	A	B
	Target	D	B	C	B	D
	Deviation	-1	-4	-2	+1	+2

Notes:

¹ Some or all properties are lacking direct connections to pedestrian facilities.

² Minimum appropriate bicycle facilities are not provided.

³ No intersection design features are provided to facilitate left-turn cycling turning movements.

The results of the MMLOS analysis suggests that Truck and Car Level of Service is currently over-prioritized within the study area, while pedestrian and cycling facilities do not meet the minimum acceptable standards. The Transit Level of Service targets are also far from being achieved within the study area. These results suggest that space within the study area should be taken from cars and trucks and reallocated to sustainable travel modes in order to meet the minimum acceptable standards and improve their Level of Service.

4 Future Conditions

This section provides a summary of the future conditions within the study area and the results of the intersection capacity analysis results. Traffic operations were assessed under the two following scenarios:

- **'Do Nothing'**: This scenario assumes that Intermodal Drive is not extended to Gorewood Drive.
- **'With Extension'**: This scenario assumes that Intermodal Drive is extended to Gorewood Drive and forms a two-way stop-controlled intersection with stop-control on the Intermodal Drive approach.

Both scenarios were evaluated under 2031, 2041 and 2051 traffic conditions.

4.1 Future Transportation Network Improvements

The following sections describe the planned road, transit, pedestrian and cycling network improvements planned within the study area.

4.1.1 Road Network Improvements

The 2015 Transportation Master Plan (TMP) outlines future road network improvements required in 2021, 2031 and 2041. The TMP projections have been supplemented by the more recent Transportation Background Study Final Report (City of Brampton, 2019) which was prepared in support of the 2019 Development Charges Update, as well as the City Construction Map¹.

The following project was noted that may have an impact on traffic within the study area:

- **Intermodal Drive Widening**: Planned widening of Intermodal Drive between Airport Road and the Canadian National Rail bridge to four lanes by 2025-2026.

4.1.2 Transit Network Improvements

The 2015 TMP also outlines future transit network improvements for 2021, 2031 and 2041. Based on the 2015 TMP, the following projects have been identified which may have an impact on transit usage within the study area:

- **Airport Road Züm**: Planned bus rapid transit route along Airport Road. This route was supposed to be implemented by 2021 but has yet to be implemented.
- **Steeles Avenue Rapid Transit**: The City is currently in the process of commencing a Corridor Masterplan Study for Steeles Avenue. The purpose of this study is to examine and evaluate potential high order transit alternatives, together with the supporting transportation, land use, densities, and urban design characteristics, for the Steeles Avenue corridor. This study will recommend the Rapid Transit technology to be implemented on Steeles Avenue. The study is projected to be completed by the end of 2027.

In addition to the above planned transit network improvements, the 2041 Regional Transportation Plan (Metrolinx, 2018) identifies the potential construction of a transitway within the Highway 407 corridor. This new transitway

¹ <https://www1.brampton.ca/EN/residents/Roads-and-Traffic/Pages/Construction-Projects.aspx>

would have a stop located on Goreway Drive, north of Steeles Avenue East. It is not anticipated that this transitway will be constructed until beyond 2041 and may not occur within the timeframe of this study.

4.1.3 Pedestrian and Cycling Network Improvements

The 2019 Active Transportation Master Plan (ATMP) does not identify specific pedestrian network projects; however, it recommends that priority be given to addressing gaps in the sidewalk network with priority given to high-speed arterial roads. The ATMP specifically identifies gaps in the sidewalk network along the portions of Steeles Avenue East and Goreway Drive within the study area.

Unlike for pedestrian facilities, the ATMP does outline recommended cycling network improvements. The ATMP recommends the implementation of a multi-use path (MUP) on the south side of Intermodal Drive and on Goreway Drive as well. The MUP on Goreway Drive south of Steeles Avenue East has been identified as a short-term priority project (2019-2024) whereas the MUP north of Steeles Avenue East and on Intermodal Drive are identified as long-term priority projects.

In addition to the above pedestrian and cycling facility projects, the Peel Region Long Range Transportation Plan (2019) also indicates that Steeles Avenue East is part of the proposed cycling network, although it does not identify what cycling facilities will be provided nor a timeline for when these facilities will be implemented.

Figure 4-1 illustrates existing and future pedestrian and cycling facilities.

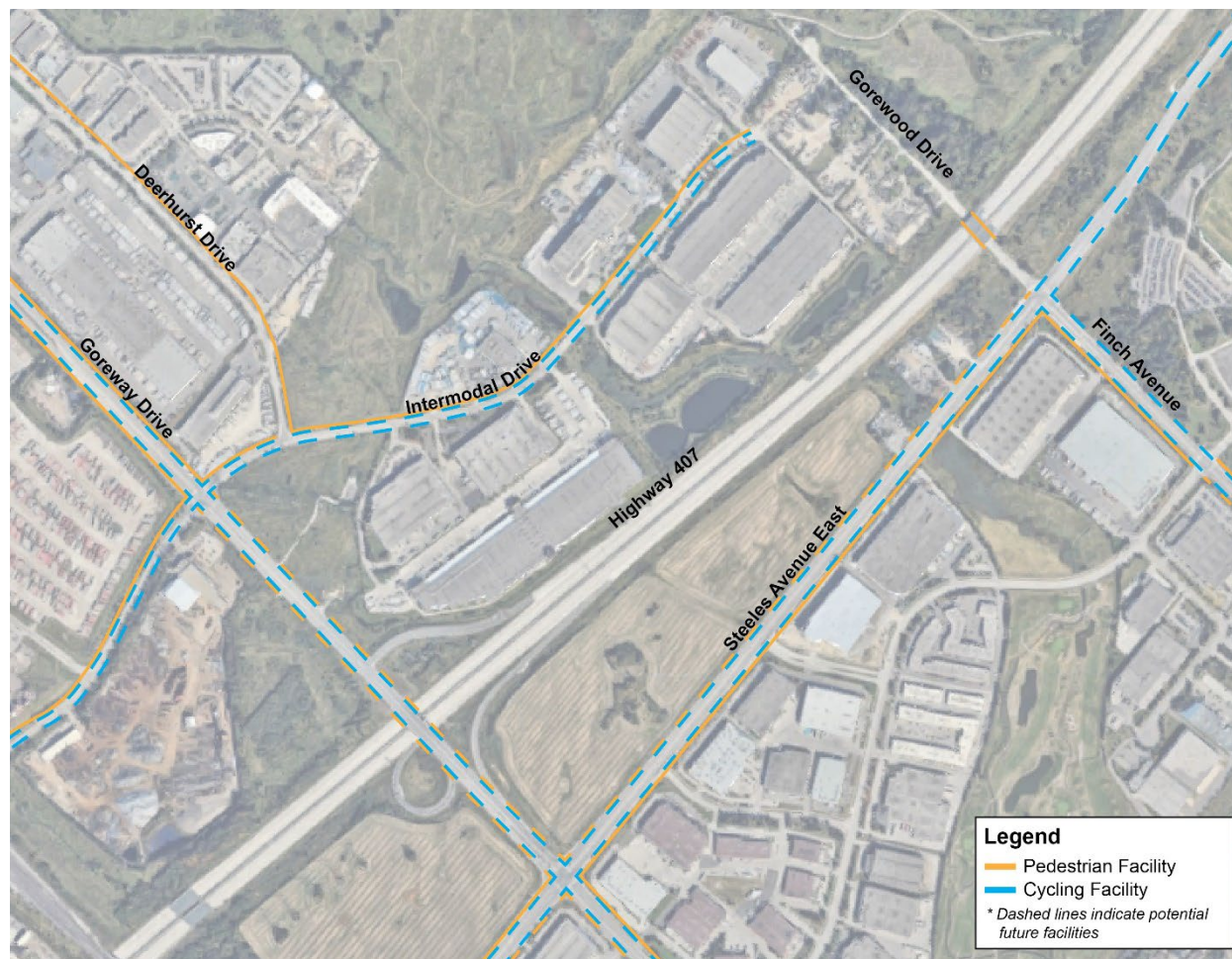


Figure 4-1 Existing and Future Pedestrian and Cycling Facilities

4.2 Traffic Forecasts

The EMME model projections provided by the City of Brampton were utilized to establish background traffic growth rates for the study area roadways as well as determine the proportion of traffic from parallel corridors that will be diverted to Intermodal Drive following the extension to Gorewood Drive.

The EMME model assumed that Gorewood Drive and the extension of Intermodal Drive would have a two-lane cross-section rather than the four-lane cross-section of the existing portion of Intermodal Drive.

4.2.1 Background Traffic Growth

The EMME model projections indicate that traffic volumes along the study area roadways will grow at a moderate rate from 2016 to 2031 and then continue growing at a very slow pace thereafter. This decreased pace of traffic growth after 2031 suggests that travel demand associated with continued population growth will be accommodated through alternative travel modes resulting in a stagnation of motor vehicle demand.

Figure 4-2 illustrates the change in traffic growth pre- and post-2031 at eight sample locations.

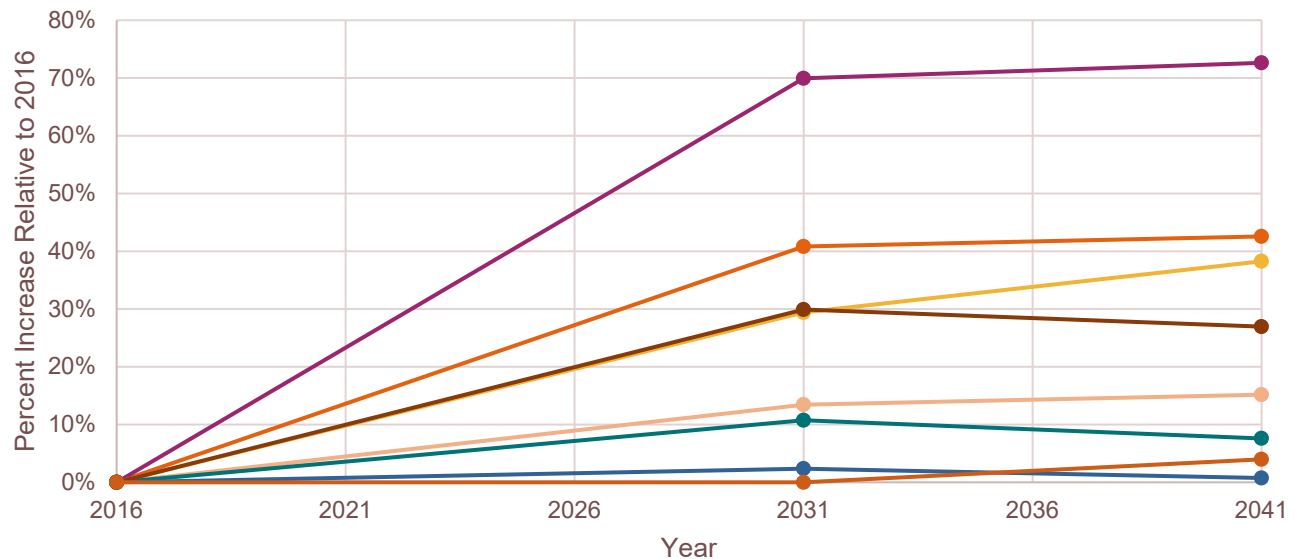


Figure 4-2 Projected Traffic Growth at Sample Locations

Given that traffic growth is not anticipated to be constant over the timeframe of this study, separate background growth rates have been established for the period before and after 2031. These growth rates are summarized in **Table 4-1**.

Table 4-1 Traffic Growth Rates

Roadway	Pre-2031 Growth Rate	Post-2031 Growth Rate
Steeles Avenue East	1%	0%
Finch Avenue	0%	0.5%
Goreway Drive	3.75%	0.25%
Intermodal Drive	2%	0.25%
Gorewood Drive	0%	0%

The above growth rates have been applied to the existing traffic volumes to estimate future 2031, 2041 and 2051 traffic volumes under the ‘Do Nothing’ scenario. As the EMME model considers the maximum growth potential within the study area, the model projections implicitly account for potential future development/intensification within the study area.

4.2.2 Background Traffic Diversion

The extension of Intermodal Drive to Gorewood Drive will provide an alternate route for traffic going from the Goreway & Intermodal intersection to the Steeles & Finch/Gorewood intersection and vice versa, as shown in **Figure 4-3**.

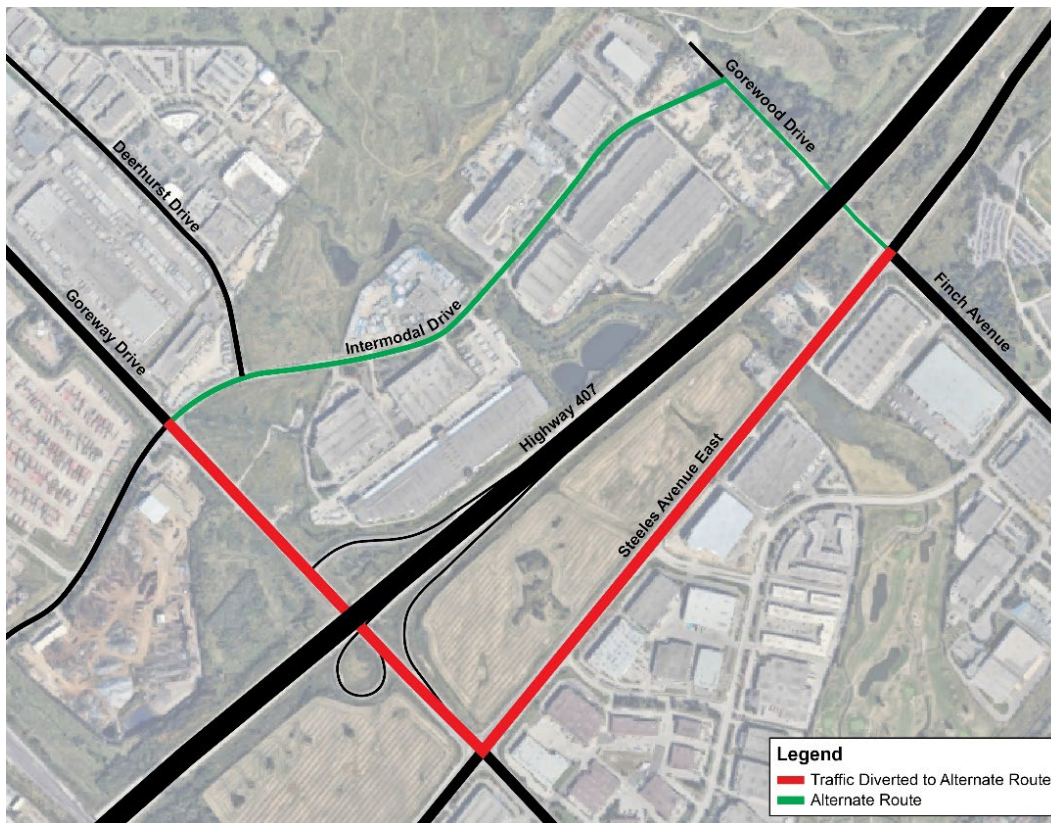


Figure 4-3 Traffic Diversion

The EMME model projections suggest that approximately 5.4% and 4.8% of traffic during the weekday morning and afternoon peak hours, respectively, will be diverted from Goreway Drive and Steeles Avenue East to Intermodal Drive.

The extension of Intermodal Drive will also provide a faster route for traffic to travel between destinations on Intermodal Drive and the Steeles & Finch/Gorewood intersection, and for traffic to travel between destinations on Gorewood Drive and the Goreway & Intermodal intersection. This has been accounted for in the 'With Extension' traffic volume projections and is considered in addition to the diversion of traffic from Steeles Avenue and Goreway Drive.

4.3 Future Total Traffic Conditions

This section describes the future traffic volumes projected at the study area intersections for the 2031, 2041 and 2051 analysis years under the two scenarios evaluated.

4.3.1 'Do Nothing' Scenario

The Future 2031, 2041 and 2051 Traffic volumes are shown in **Figure 4-4**, **Figure 4-5** and **Figure 4-6**, respectively. These traffic volume projections have been derived by applying the linear background traffic growth rates described in Section 4.2.1 to the Existing Traffic volumes.

Extension of Intermodal Drive to Gorewood Drive Traffic Study Report

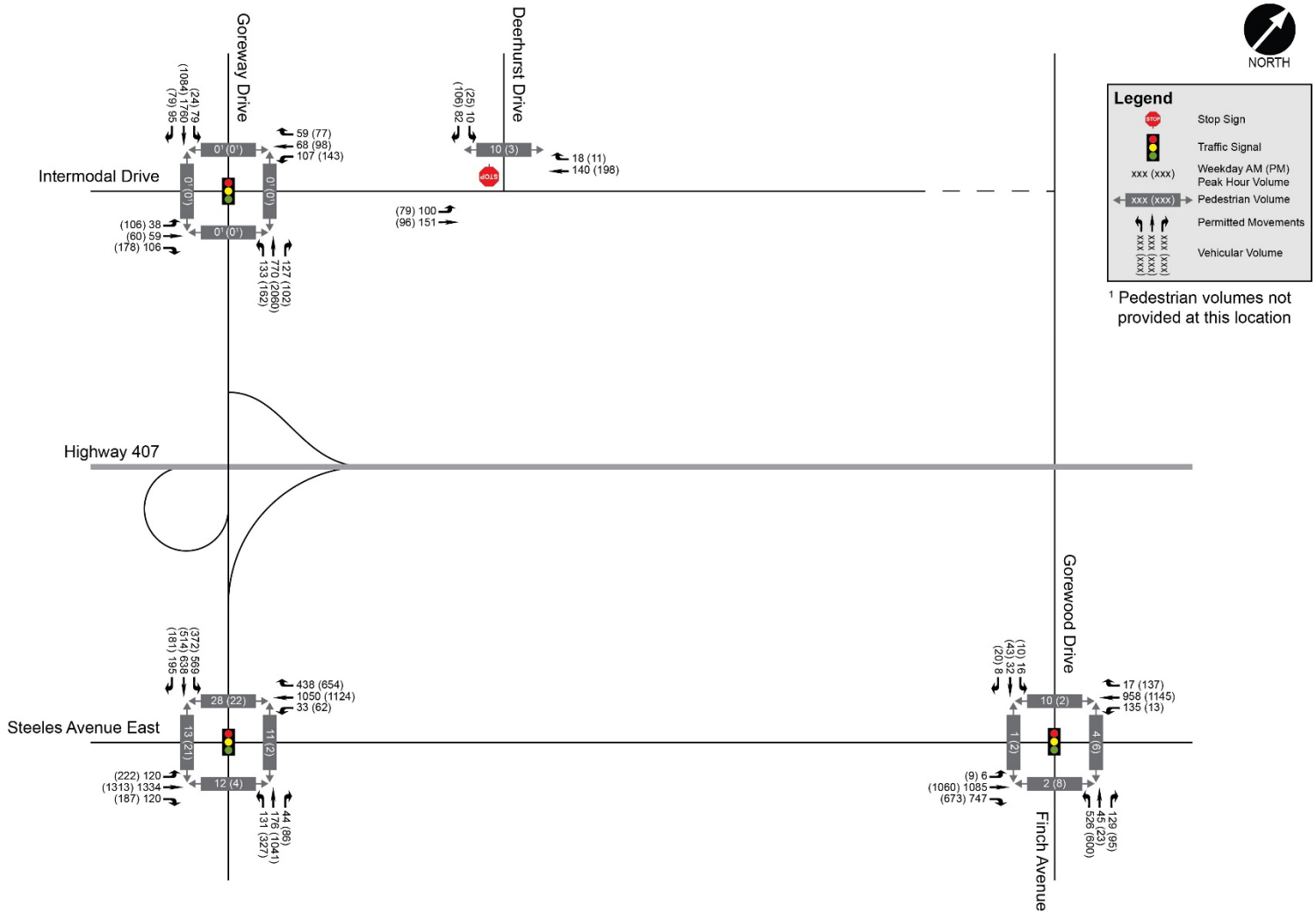


Figure 4-4 Future 2031 Traffic: 'Do Nothing' Scenario

Extension of Intermodal Drive to Gorewood Drive Traffic Study Report

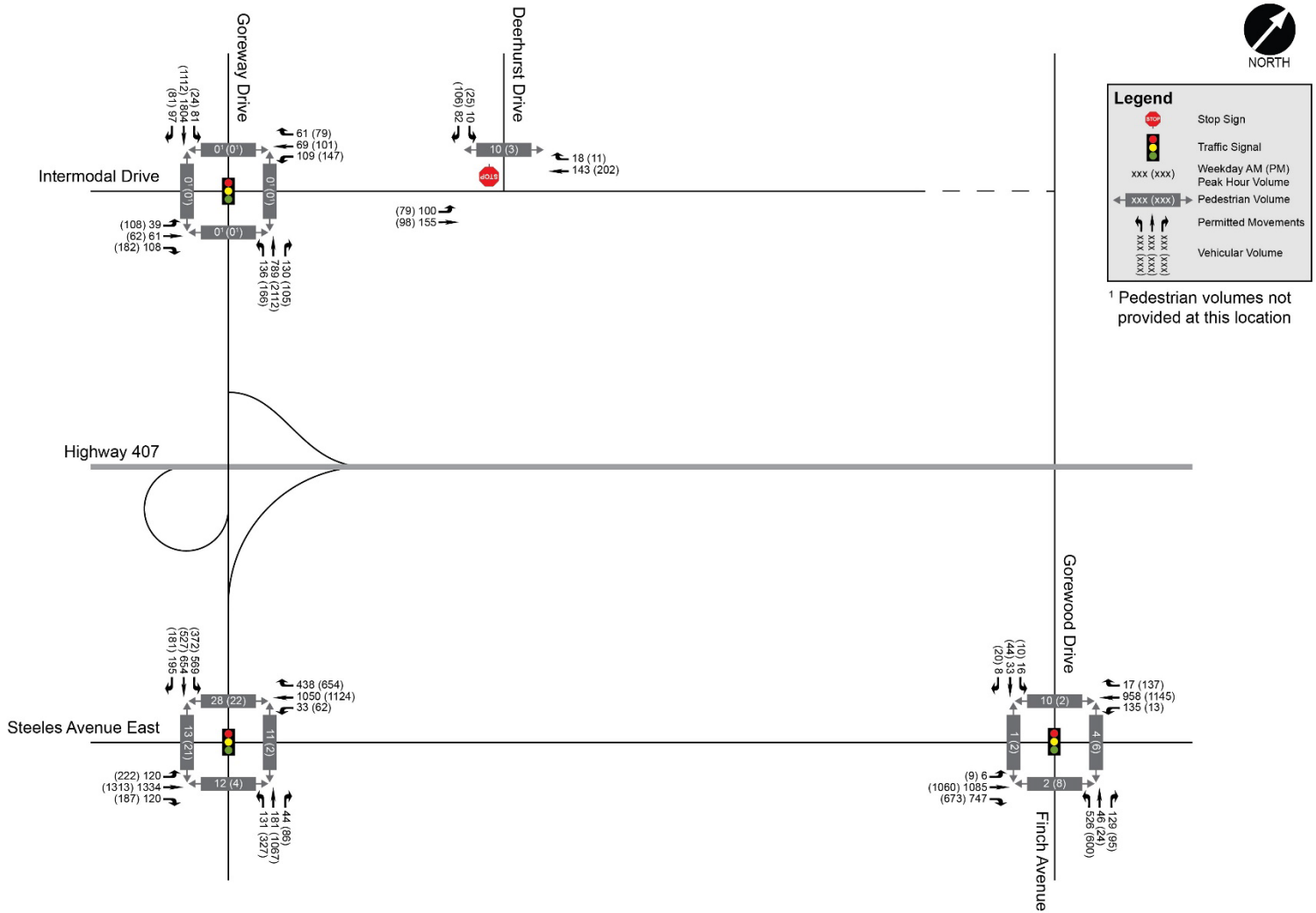


Figure 4-5 Future 2041 Traffic: 'Do Nothing' Scenario

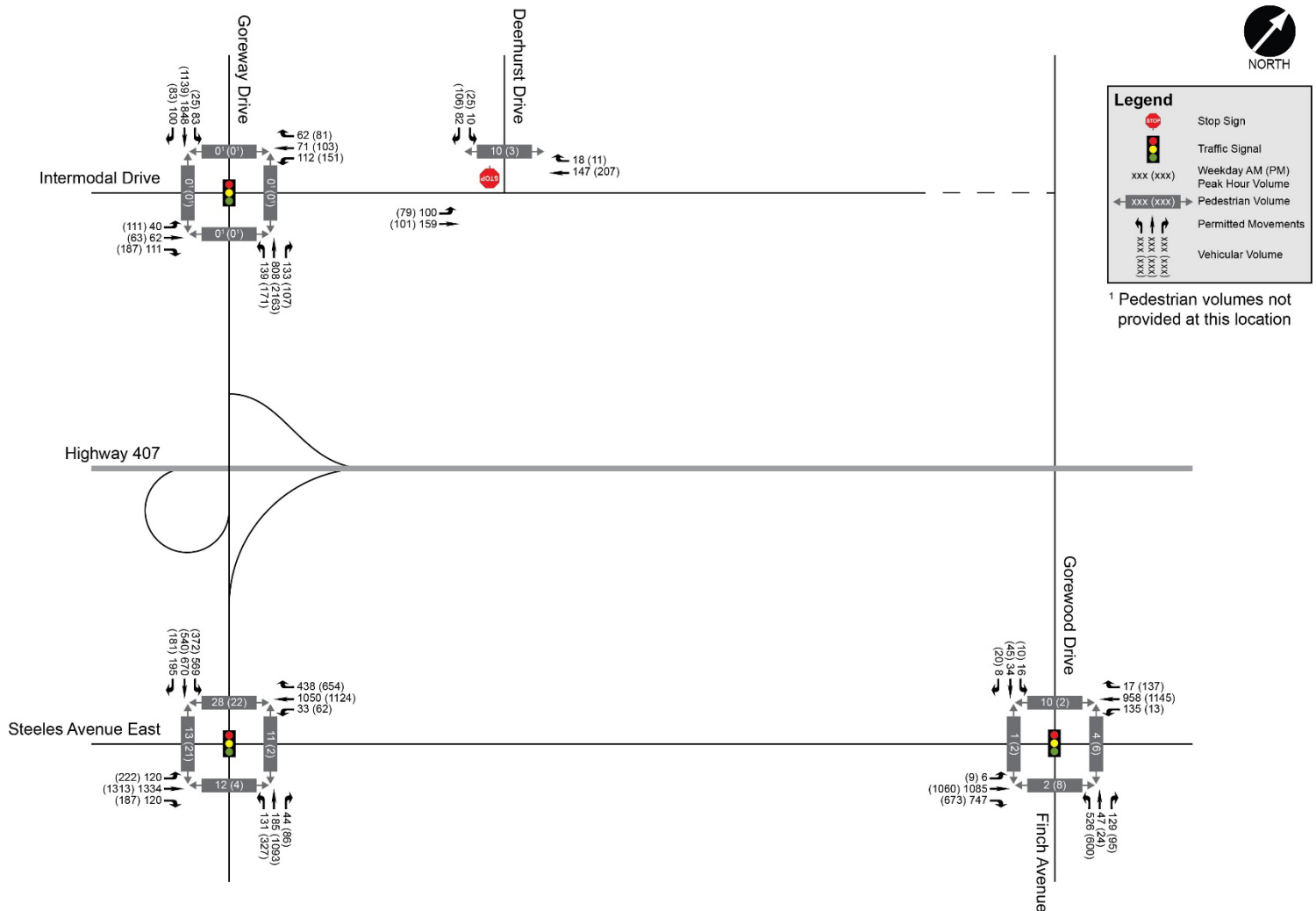


Figure 4-6 Future 2051 Traffic: 'Do Nothing' Scenario

4.3.1.1 Projected Average Annual Daily Traffic Volumes

In order to establish future average annual daily traffic (AADT) volumes within the study area, a conversion factor was developed to convert peak hour traffic projections into AADT volumes. Historical AADT volumes were obtained at five different locations and compared to the weekday peak hour traffic volumes from the turning movement counts. The five locations reviewed include:

- Steeles Avenue: West of Goreway Drive, east of Goreway Drive, and east of Finch Avenue/Gorewood Drive.
- Finch Avenue: South of Steeles Avenue.
- Intermodal Drive: West of Goreway Drive.

Based on this review, it was established that AADT volumes can be estimated by multiplying the sum of weekday morning and afternoon peak hour volumes by a factor of 6.41.

Using the above conversion factor, future AADT volumes within the study area were calculated and are summarized in **Table 4-2**. All volumes are rounded to the nearest multiple of 100.

Table 4-2 Projected Average Annual Daily Traffic Volumes: 'Do Nothing' Scenario

Roadway	Average Annual Daily Traffic				Percent Heavy Traffic
	Existing	2031	2041	2051	
Steeles Avenue East	49,000	52,500	52,500	52,500	15.4%
Finch Avenue	22,700	22,700	22,700	22,700	17.4%
Goreway Drive	40,200	49,900	51,200	52,400	14.2%
Intermodal Drive	7,700	8,800	9,000	9,200	42.6%
Gorewood Drive	2,700	2,700	2,700	2,800	24.4%

4.3.2 'With Extension' Scenario

Future 2031, 2041 and 2051 traffic volumes projections for the 'With Extension' scenario were developed by adjusting the 'Do Nothing' traffic volume projections to account for the diversion and rerouting of traffic that would occur once the extension is completed, as described in Section 4.2.2. The traffic volumes projections for this scenario are shown in **Figure 4-7**, **Figure 4-8** and **Figure 4-9**.

Extension of Intermodal Drive to Gorewood Drive Traffic Study Report

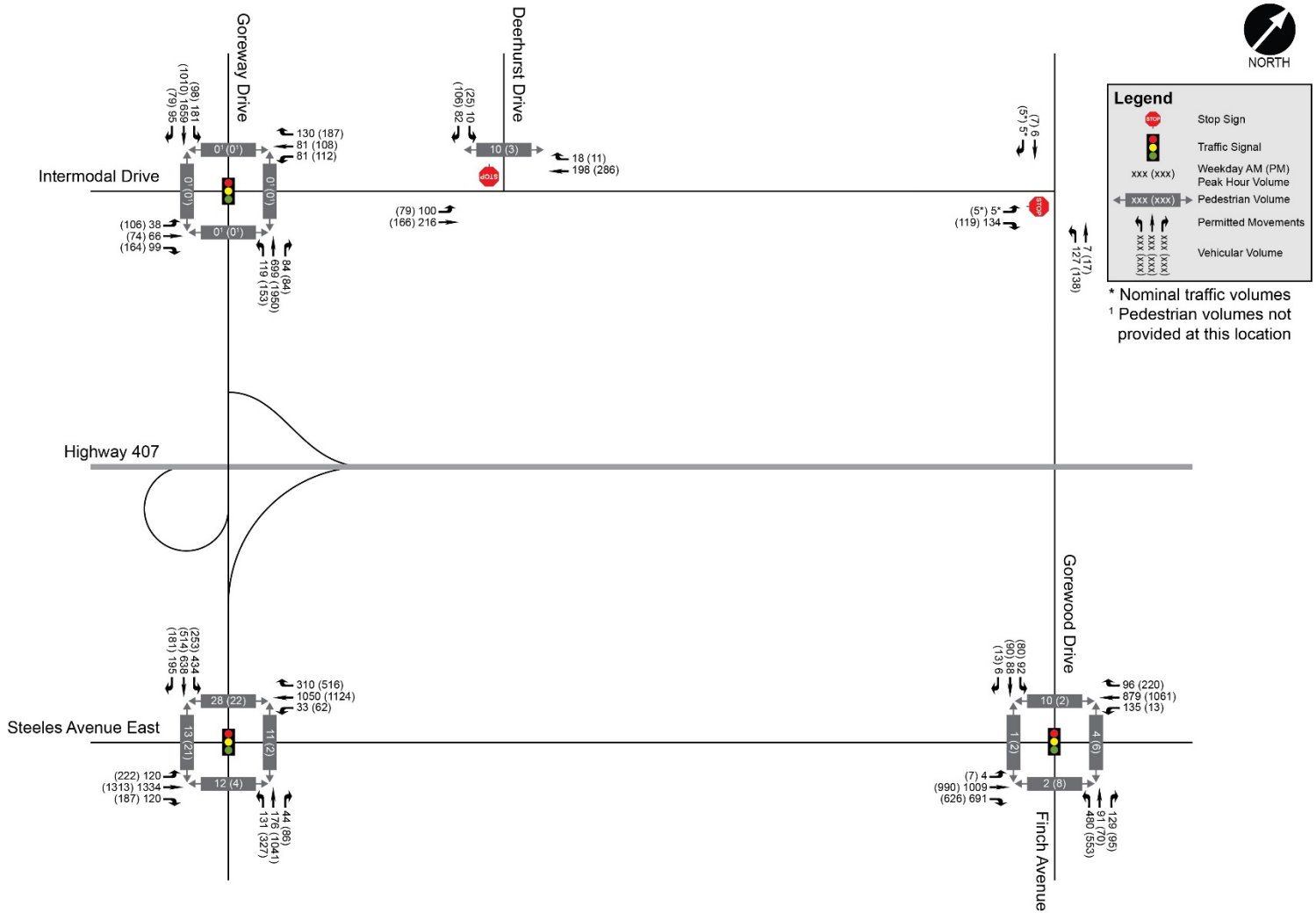


Figure 4-7 Future 2031 Traffic: 'With Extension' Scenario

Extension of Intermodal Drive to Gorewood Drive Traffic Study Report

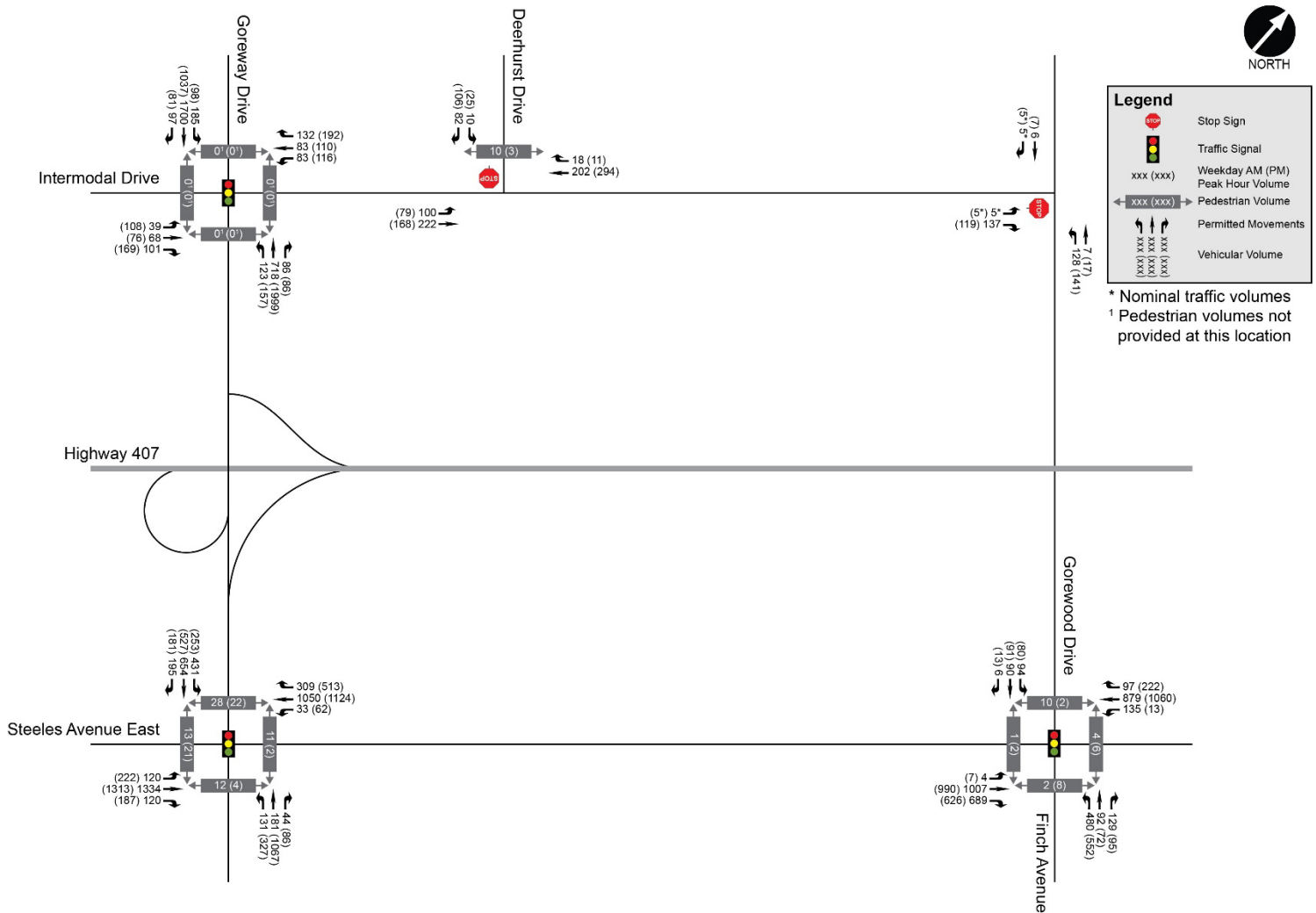


Figure 4-8 Future 2041 Traffic: 'With Extension' Scenario

Extension of Intermodal Drive to Gorewood Drive Traffic Study Report

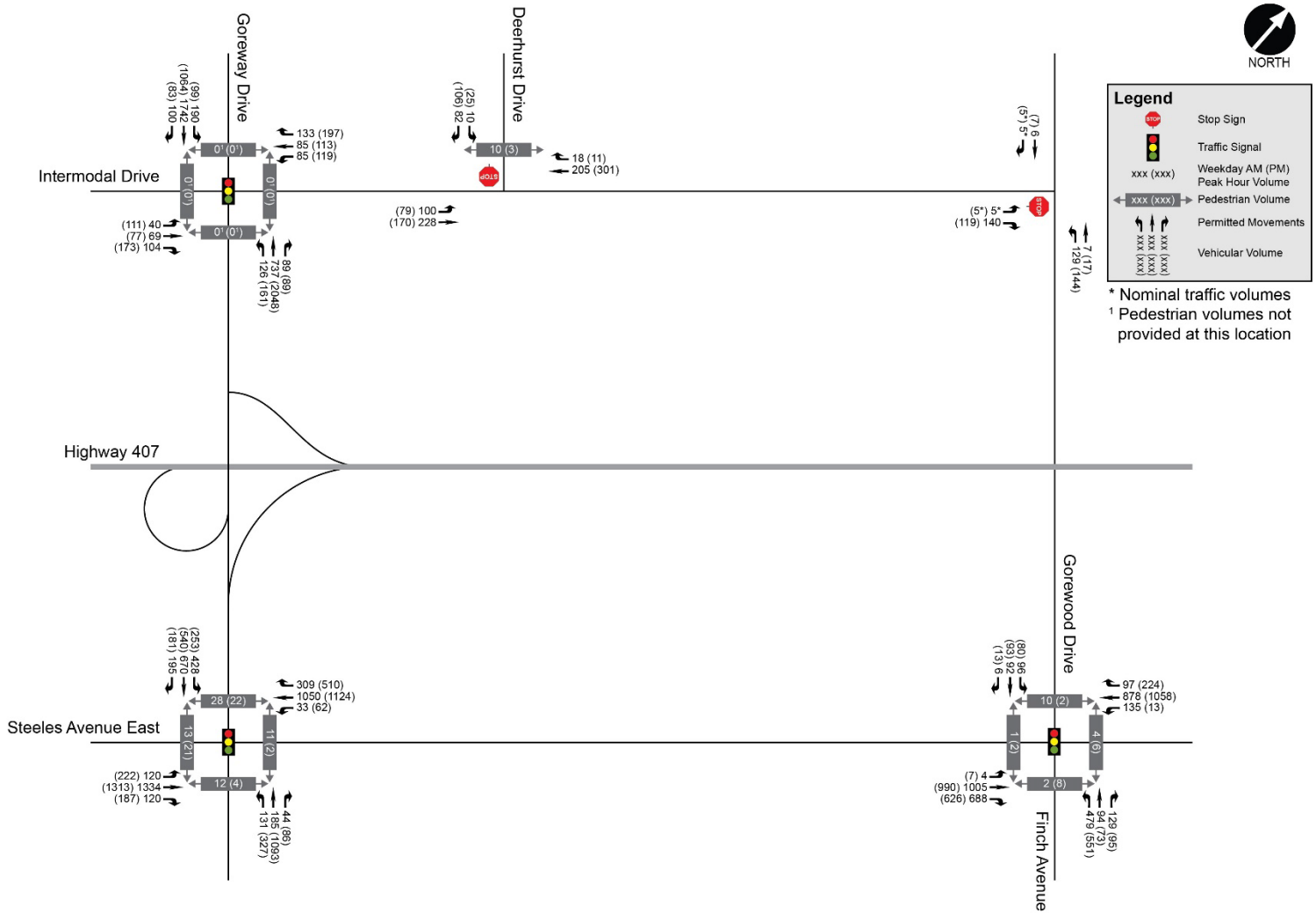


Figure 4-9 Future 2051 Traffic: 'With Extension' Scenario

4.3.2.1 Projected Average Annual Daily Traffic Volumes

Using the conversion factor discussed in Section 4.3.1.1, future AADT volumes under the 'With Diversion' scenario within the study area were calculated and are summarized in **Table 4-3**. All volumes are rounded to the nearest multiple of 100.

Table 4-3 Projected Average Annual Daily Traffic Volumes: 'With Extension' Scenario

Roadway	Average Annual Daily Traffic			Percent Heavy Traffic
	2031	2041	2051	
Steeles Avenue East	48,600	48,600	48,500	14.0%
Finch Avenue	22,700	22,700	22,700	17.3%
Goreway Drive	46,200	47,400	48,500	12.4%
Intermodal Drive	9,500	9,800	10,000	42.6%
Gorewood Drive	6,400	6,400	6,500	29.7%

4.4 Future Traffic Operations

Future traffic operations were evaluated for both scenarios under 2031, 2041 and 2051 traffic conditions. The intersection capacity analysis was completed using Synchro 11, while the queueing analysis was completed using SimTraffic 11. Detailed intersection capacity analysis reports are provided in **Appendix B**.

4.4.1 'Do Nothing' Scenario

4.4.1.1 Future 2031 Conditions

Intersection capacity analysis was completed using the Future 2031 Traffic volumes from **Figure 4-4** and the results are summarized below in **Table 4-4**.

Table 4-4 Intersection Capacity Analysis Results: Future 2031 Traffic, 'Do Nothing' Scenario

Intersection	Lane Group	Storage	AM Peak Hour (PM Peak Hour)					
			Int. Delay (s)	Int. LOS	Delay (s)	LOS	v/c Ratio	SimTraffic Queue (m)
Steeles & Goreway	EBL	115	39.4 (56.7)	D (E)	29.1 (99.0)	C (F)	0.59 (1.02)	96.3 (122.3)
	EBT	-			32.9 (42.3)	C (D)	0.64 (0.70)	138.8 (165.8)
	EBR	150			4.6 (4.8)	A (A)	0.17 (0.27)	37.1 (24.8)
	WBL	150			15.4 (24.6)	B (C)	0.19 (0.42)	23.8 (35.3)
	WBT	-			34.3 (42.4)	C (D)	0.54 (0.76)	115.4 (194.0)
	WBR	110			13.8 (60.7)	B (E)	0.57 (1.02)	79.2 (117.6)
	NBL	120			82.1 (79.9)	F (E)	0.61 (0.78)	61.5 (102.8)
	NBT	-			73.7 (83.2)	E (F)	0.56 (1.00)	48.2 (467.4)
	NBR	80			1.3 (5.8)	A (A)	0.17 (0.16)	11.0 (87.6)
	SBL	130			72.7 (110.9)	E (F)	0.85 (1.02)	132.2 (134.0)
	SBT	-			52.8 (41.3)	D (D)	0.82 (0.50)	205.8 (205.8)
	SBR	-			9.2 (10.2)	A (B)	0.43 (0.34)	46.0 (43.4)
Steeles & Finch/ Gorewood	EBL	175	30.7 (30.2)	C (C)	36.3 (26.7)	D (C)	0.03 (0.06)	11.7 (13.0)
	EBT	-			29.9 (22.2)	C (C)	0.50 (0.45)	210.8 (99.0)
	EBR	175			17.5 (16.2)	B (B)	0.75 (0.65)	100.4 (53.7)
	WBL	180			21.6 (16.2)	C (B)	0.53 (0.05)	48.8 (18.0)
	WBTR	-			18.9 (23.5)	B (C)	0.40 (0.54)	85.8 (99.4)
	NBL	-			71.0 (74.1)	E (E)	0.85 (0.90)	110.0 (137.4)
	NBTR	-			30.1 (14.1)	C (B)	0.46 (0.30)	72.4 (68.2)
	SBTRL	-			69.2 (58.9)	E (E)	0.40 (0.41)	35.4 (29.2)
Goreway & Intermodal	EBL	85	23.1 (18.3)	C (B)	56.2 (85.0)	E (F)	0.25 (0.72)	43.3 (79.2)
	EBT	-			55.5 (56.0)	E (E)	0.25 (0.27)	48.9 (59.2)
	EBR	-			12.5 (10.0)	B (A)	0.42 (0.47)	53.0 (58.2)
	WBL	75			95.7 (88.5)	F (F)	0.79 (0.79)	81.6 (79.8)
	WBTR	-			29.3 (56.3)	C (E)	0.29 (0.36)	62.5 (53.7)
	NBL	135			61.1 (19.8)	E (B)	0.66 (0.59)	117.8 (95.0)
	NBT	-			4.8 (8.0)	A (A)	0.23 (0.60)	57.2 (161.3)
	NBR	100			0.9 (1.4)	A (A)	0.16 (0.14)	35.9 (28.9)
	SBL	135			22.7 (44.6)	C (D)	0.27 (0.39)	62.9 (31.6)
	SBT	-			24.8 (17.0)	C (B)	0.65 (0.38)	134.6 (104.3)
	SBR	100			6.1 (4.0)	A (A)	0.15 (0.11)	91.2 (64.8)
Intermodal & Deerhurst	EBL	65	3.9 (4.4)	A (A)	8.6 (9.2)	A (A)	0.12 (0.10)	31.2 (27.7)
	SBRL	-			11.7 (11.5)	B (B)	0.19 (0.22)	29.9 (34.3)

The intersection capacity analysis results indicate that continued traffic growth along Goreway Drive and Steeles Avenue East is expected to push the Steeles & Goreway intersection beyond its maximum capacity. Several movements at the intersection are anticipated to be operating at a v/c ratio over 1.0 and with high delays. Several dedicated turning lanes are expected to have queues that exceed the available storage capacity.

A variety of potential mitigation measures were considered to identify what measures would be required mitigate the poor traffic operations. The analysis suggests that providing dual eastbound left-turn lanes combined with permitted/overlap phasing for the westbound right-turn lane would be sufficient to bring v/c ratios to an acceptable level (i.e., v/c ratio of 0.90 or less for through or shared through-turn movements, and v/c ratio of 1.0 or less for dedicated turning movements). For the purposes of this study, however, it is assumed that these mitigation measures would not be implemented under the 'Do Nothing' scenario.

Beyond the Steeles & Goreway intersection, most study area intersections are expected to continue operating at a similar Level of Service as they do currently.

4.4.1.2 Future 2041 Conditions

Intersection capacity analysis was completed using the Future 2041 Traffic volumes from **Figure 4-5** and the results are summarized below in **Table 4-5**.

Table 4-5 Intersection Capacity Analysis Results: Future 2041 Traffic, 'Do Nothing' Scenario

Intersection	Lane Group	Storage	AM Peak Hour (PM Peak Hour)					
			Int. Delay (s)	Int. LOS	Delay (s)	LOS	v/c Ratio	SimTraffic Queue (m)
Steeles & Goreway	EBL	115	40.0 (57.7)	D (E)	29.9 (99.0)	C (F)	0.60 (1.02)	102.6 (122.3)
	EBT	-			33.6 (42.3)	C (D)	0.65 (0.70)	133.8 (185.6)
	EBR	150			4.8 (4.8)	A (A)	0.17 (0.27)	13.7 (31.5)
	WBL	150			15.8 (24.6)	B (C)	0.20 (0.42)	26.9 (30.9)
	WBT	-			35.0 (42.4)	C (D)	0.55 (0.76)	121.7 (277.2)
	WBR	110			14.1 (61.1)	B (E)	0.57 (1.02)	116.7 (117.6)
	NBL	120			82.1 (79.9)	F (E)	0.61 (0.78)	58.6 (109.2)
	NBT	-			72.6 (88.9)	E (F)	0.55 (1.03)	42.7 (454.0)
	NBR	80			1.3 (5.8)	A (A)	0.17 (0.16)	- (87.6)
	SBL	130			73.7 (111.3)	E (F)	0.85 (1.02)	134.5 (131.6)
	SBT	-			52.7 (40.6)	D (D)	0.83 (0.52)	138.6 (204.3)
	SBR	-			9.3 (9.7)	A (A)	0.43 (0.34)	34.3 (42.0)
Steeles & Finch/ Gorewood	EBL	175	31.1 (30.2)	C (C)	37.5 (26.7)	D (C)	0.03 (0.06)	14.9 (11.7)
	EBT	-			30.8 (22.2)	C (C)	0.51 (0.45)	290.9 (435.3)
	EBR	175			18.0 (16.2)	B (B)	0.75 (0.65)	121.0 (44.7)
	WBL	180			21.7 (16.3)	C (B)	0.53 (0.05)	57.5 (13.7)
	WBTR	-			18.9 (23.5)	B (C)	0.40 (0.54)	91.6 (106.4)
	NBL	-			71.0 (74.1)	E (E)	0.85 (0.90)	131.5 (146.4)
	NBTR	-			30.9 (14.3)	C (B)	0.46 (0.31)	67.5 (65.0)
	SBTRL	-			69.5 (59.2)	E (E)	0.41 (0.41)	32.9 (31.9)
Goreway & Intermodal	EBL	85	24.0 (18.8)	C (B)	56.0 (84.6)	E (F)	0.25 (0.73)	38.7 (74.8)
	EBT	-			55.4 (55.5)	E (E)	0.26 (0.27)	44.8 (73.7)
	EBR	-			12.2 (9.8)	B (A)	0.42 (0.47)	63.3 (59.4)
	WBL	75			95.5 (88.2)	F (F)	0.80 (0.79)	80.4 (81.9)
	WBTR	-			28.7 (55.8)	C (E)	0.30 (0.36)	62.8 (70.7)
	NBL	135			64.8 (22.7)	E (C)	0.67 (0.61)	79.4 (99.0)
	NBT	-			5.0 (8.2)	A (A)	0.24 (0.62)	43.8 (240.0)
	NBR	100			1.0 (1.4)	A (A)	0.16 (0.14)	34.5 (58.6)
	SBL	135			23.8 (51.2)	C (D)	0.29 (0.43)	44.8 (39.0)
	SBT	-			26.2 (18.3)	C (B)	0.67 (0.39)	144.3 (99.3)
	SBR	100			6.5 (4.2)	A (A)	0.15 (0.11)	92.8 (45.5)
Intermodal & Deerhurst	EBL	65	3.8 (4.3)	A (A)	8.6 (9.2)	A (A)	0.12 (0.10)	27.9 (29.8)
	SBRL	-			11.8 (11.6)	B (B)	0.19 (0.22)	33.9 (30.5)

Intersection operations in 2041 are expected to be relatively similar to traffic operations in 2031 as background traffic is not expected to grow at a fast rate.

4.4.1.3 Future 2051 Conditions

Intersection capacity analysis was completed using the Future 2051 Traffic volumes from **Figure 4-6** and the results are summarized below in **Table 4-6**.

Table 4-6 Intersection Capacity Analysis Results: Future 2051 Traffic, 'Do Nothing' Scenario

Intersection	Lane Group	Storage	AM Peak Hour (PM Peak Hour)					
			Int. Delay (s)	Int. LOS	Delay (s)	LOS	v/c Ratio	SimTraffic Queue (m)
Steeles & Goreway	EBL	115	40.6 (58.7)	D (E)	30.5 (103.9)	C (F)	0.61 (1.03)	99.6 (116.0)
	EBT	-			34.2 (43.3)	C (D)	0.65 (0.71)	130.9 (172.3)
	EBR	150			4.9 (4.9)	A (A)	0.17 (0.27)	11.9 (13.2)
	WBL	150			16.1 (25.4)	B (C)	0.20 (0.43)	23.2 (33.1)
	WBT	-			35.6 (43.3)	D (D)	0.55 (0.77)	132.9 (244.9)
	WBR	110			14.3 (65.1)	B (E)	0.57 (1.03)	112.1 (117.6)
	NBL	120			82.1 (79.9)	F (E)	0.61 (0.78)	47.7 (101.7)
	NBT	-			71.6 (88.9)	E (F)	0.54 (1.03)	50.2 (467.1)
	NBR	80			1.2 (5.6)	A (A)	0.16 (0.16)	6.0 (87.6)
	SBL	130			75.7 (112.8)	E (F)	0.85 (1.02)	135.4 (130.9)
	SBT	-			52.9 (38.6)	D (D)	0.83 (0.52)	165.6 (186.1)
	SBR	-			9.8 (8.4)	A (A)	0.43 (0.34)	57.5 (37.0)
Steeles & Finch/ Gorewood	EBL	175	31.4 (30.3)	C (C)	38.2 (27.0)	D (C)	0.03 (0.06)	9.1 (14.2)
	EBT	-			31.4 (22.4)	C (C)	0.51 (0.45)	211.2 (258.4)
	EBR	175			18.3 (16.5)	B (B)	0.75 (0.65)	112.9 (62.6)
	WBL	180			21.8 (16.3)	C (B)	0.53 (0.05)	55.0 (12.7)
	WBTR	-			19.0 (23.6)	B (C)	0.40 (0.54)	93.0 (106.6)
	NBL	-			71.0 (74.1)	E (E)	0.85 (0.90)	121.1 (150.4)
	NBTR	-			31.7 (14.3)	C (B)	0.47 (0.31)	74.4 (63.7)
	SBTRL	-			69.7 (59.6)	E (E)	0.41 (0.41)	34.4 (27.8)
Goreway & Intermodal	EBL	85	25.1 (19.5)	C (B)	55.5 (84.6)	E (F)	0.25 (0.73)	44.4 (79.8)
	EBT	-			54.8 (54.8)	D (D)	0.25 (0.27)	50.5 (55.9)
	EBR	-			11.9 (9.6)	B (A)	0.42 (0.47)	65.3 (61.2)
	WBL	75			95.1 (87.9)	F (F)	0.80 (0.80)	81.2 (78.1)
	WBTR	-			28.5 (55.3)	C (E)	0.30 (0.36)	77.1 (59.9)
	NBL	135			68.2 (26.0)	E (C)	0.68 (0.62)	84.8 (94.8)
	NBT	-			5.2 (8.5)	A (A)	0.25 (0.63)	48.3 (260.7)
	NBR	100			1.0 (1.6)	A (A)	0.16 (0.15)	34.2 (51.8)
	SBL	135			25.2 (63.0)	C (E)	0.31 (0.50)	118.9 (63.3)
	SBT	-			27.9 (20.0)	C (B)	0.70 (0.41)	160.7 (101.9)
	SBR	100			6.9 (4.4)	A (A)	0.16 (0.12)	107.6 (61.8)
Intermodal & Deerhurst	EBL	65	3.8 (4.3)	- (-)	8.7 (9.3)	A (A)	0.12 (0.10)	28.2 (27.8)
	SBRL	-			11.8 (11.6)	B (B)	0.19 (0.23)	39.7 (30.5)

As observed under Future 2041 Traffic conditions, the minimal traffic growth projected post-2031 is not expected to have a significant impact on traffic operations. The key changes in traffic operations between 2041 and 2051 are as follows:

- **Goreway & Intermodal:**
 - The Level of Service for the southbound left-turn movement is expected to increase from LOS 'D' to 'E'.
 - The queue in the southbound right-turn lane is expected to exceed the available storage capacity.

4.4.1.4 Localized Intersection Improvements

As indicated in the preceding sections, under the 'Do Nothing' scenario the Steeles & Goreway intersection is anticipated to experience significant capacity issues. The intersection already features channelized right-turn lanes, dual northbound and southbound left-turn lanes and a 160s cycle length therefore the opportunities for increasing intersection capacity are limited. Potential mitigation measures that could be considered to increase intersection capacity include:

- Implementing dual eastbound left-turn lanes; and
- Signalization of the westbound right-turn lane with protected-overlap phasing.

Intersection capacity analysis has been completed to assess the impact of the above mitigation measures under Future (2051) Traffic conditions and the results are summarized below in **Table 4-7**.

Table 4-7 Intersection Capacity Analysis Results: Future 2051 Traffic, 'Do Nothing' Scenario with Localized Intersection Improvements

Intersection	Lane Group	Storage	AM Peak Hour (PM Peak Hour)					
			Int. Delay (s)	Int. LOS	Delay (s)	LOS	v/c Ratio	SimTraffic Queue (m)
Steeles & Goreway	EBL	115	41.0 (63.0)	D (E)	86.6 (116.3)	F (F)	0.65 (0.94)	71.9 (89.5)
	EBT	-			31.4 (46.5)	C (D)	0.63 (0.75)	133.1 (147.8)
	EBR	150			4.3 (5.2)	A (A)	0.17 (0.28)	9.8 (75.2)
	WBL	150			27.8 (50.2)	C (D)	0.22 (0.50)	26.1 (57.2)
	WBT	-			48.0 (69.8)	D (E)	0.56 (0.81)	228.3 (732.4)
	WBR	110			16.5 (78.7)	B (E)	0.50 (0.99)	117.6 (117.6)
	NBL	120			85.7 (79.9)	F (E)	0.65 (0.78)	54.4 (109.0)
	NBT	-			74.3 (74.1)	E (E)	0.58 (0.98)	47.0 (326.3)
	NBR	80			1.2 (3.2)	A (A)	0.16 (0.15)	11.3 (87.6)
	SBL	130			57.4 (94.3)	E (F)	0.85 (0.97)	135.2 (112.1)
	SBT	-			44.9 (40.8)	D (D)	0.84 (0.48)	149.1 (91.6)
	SBR	-			6.8 (15.9)	A (B)	0.44 (0.33)	25.1 (42.5)

With the implementation of the mitigation measures discussed above, traffic operations at Steeles & Goreway are expected to improve with no turning movements exceeding a v/c ratio of 1.0. The northbound through movement, however, will be exceeding the acceptable v/c ratio threshold for through movements.

4.4.2 'With Extension' Scenario

4.4.2.1 Future 2031 Conditions

Intersection capacity analysis was completed using the Future 2031 Traffic volumes from **Figure 4-7** and the results are summarized below in **Table 4-8**.

Table 4-8 Intersection Capacity Analysis Results: Future 2031 Traffic, 'With Extension' Scenario

Intersection	Lane Group	Storage	AM Peak Hour (PM Peak Hour)					
			Int. Delay (s)	Int. LOS	Delay (s)	LOS	v/c Ratio	SimTraffic Queue (m)
Steeles & Goreway	EBL	115	36.3 (48.5)	D (D)	29.1 (77.4)	C (E)	0.59 (0.90)	111.4 (122.3)
	EBT	-			33.0 (44.6)	C (D)	0.64 (0.72)	141.7 (135.9)
	EBR	150			4.6 (5.3)	A (A)	0.17 (0.27)	12.8 (6.9)
	WBL	150			13.6 (22.8)	B (C)	0.19 (0.43)	23.2 (88.5)
	WBT	-			29.5 (45.7)	C (D)	0.54 (0.87)	129.1 (204.6)
	WBR	110			10.8 (34.9)	B (C)	0.43 (0.90)	116.9 (117.6)
	NBL	120			82.1 (77.6)	F (E)	0.61 (0.76)	49.3 (106.2)
	NBT	-			63.8 (59.1)	E (E)	0.39 (0.88)	41.9 (183.1)
	NBR	80			0.9 (4.6)	A (A)	0.14 (0.15)	8.3 (87.6)
	SBL	130			65.2 (106.7)	E (F)	0.75 (0.90)	102.8 (103.1)
	SBT	-			50.8 (38.6)	D (D)	0.82 (0.50)	115.8 (166.2)
	SBR	-			5.3 (6.7)	A (A)	0.43 (0.34)	42.8 (35.8)
Steeles & Finch/ Gorewood	EBL	175	36.8 (31.4)	D (C)	43.0 (19.9)	D (B)	0.02 (0.05)	14.0 (10.2)
	EBT	-			34.3 (16.4)	C (B)	0.51 (0.43)	287.2 (78.8)
	EBR	175			18.9 (12.2)	B (B)	0.73 (0.62)	132.9 (87.0)
	WBL	180			24.1 (18.9)	C (B)	0.53 (0.05)	61.5 (18.7)
	WBTR	-			22.3 (26.3)	C (C)	0.44 (0.57)	91.8 (105.9)
	NBL	-			71.5 (72.0)	E (E)	0.83 (0.86)	108.8 (128.4)
	NBTR	-			57.2 (44.4)	E (D)	0.69 (0.51)	108.6 (87.5)
	SBTRL	-			88.4 (81.6)	F (F)	0.77 (0.69)	66.0 (56.1)
Goreway & Intermodal	EBL	85	19.4 (23.6)	B (C)	73.8 (138.1)	E (F)	0.43 (0.97)	37.1 (81.9)
	EBT	-			65.8 (55.9)	E (E)	0.38 (0.31)	53.4 (70.7)
	EBR	-			15.8 (9.5)	B (A)	0.46 (0.44)	60.1 (45.4)
	WBL	75			105.7 (61.6)	F (E)	0.74 (0.55)	74.1 (77.4)
	WBTR	-			33.3 (56.6)	C (E)	0.49 (0.58)	67.9 (73.6)
	NBL	135			46.0 (12.7)	D (B)	0.60 (0.55)	71.6 (90.8)
	NBT	-			3.1 (7.8)	A (A)	0.20 (0.57)	46.4 (156.8)
	NBR	100			0.3 (1.4)	A (A)	0.10 (0.11)	24.1 (61.3)
	SBL	135			22.8 (199.3)	C (F)	0.50 (1.23)	84.5 (142.6)
	SBT	-			17.0 (16.0)	B (B)	0.55 (0.35)	117.4 (326.0)
	SBR	100			4.1 (3.9)	A (A)	0.13 (0.11)	107.5 (63.2)
Goreway & Intermodal <i>With protected-permitted SBL in PM peak hour.</i>	EBL	85	19.4 (21.5)	B (C)	73.8 (129.6)	E (F)	0.43 (0.94)	37.4 (74.2)
	EBT	-			65.8 (55.0)	E (E)	0.38 (0.30)	55.7 (69.4)
	EBR	-			15.8 (9.3)	B (A)	0.46 (0.43)	59.0 (50.5)
	WBL	75			105.7 (62.0)	F (E)	0.74 (0.54)	73.4 (72.8)
	WBTR	-			33.3 (21.8)	C (C)	0.49 (0.46)	62.8 (83.5)
	NBL	135			46.0 (12.1)	D (B)	0.60 (0.56)	75.2 (84.3)

Intersection	Lane Group	Storage	AM Peak Hour (PM Peak Hour)					
			Int. Delay (s)	Int. LOS	Delay (s)	LOS	v/c Ratio	SimTraffic Queue (m)
	NBT	-			3.1 (17.4)	A (B)	0.20 (0.65)	45.0 (258.2)
	NBR	100			0.3 (2.0)	A (A)	0.10 (0.12)	28.6 (90.7)
	SBL	135			22.8 (36.8)	C (D)	0.50 (0.60)	94.8 (53.8)
	SBT	-			17.0 (15.9)	B (B)	0.55 (0.35)	130.8 (76.3)
	SBR	100			4.1 (3.8)	A (A)	0.13 (0.11)	107.5 (27.2)
Intermodal & Deerhurst	EBL	65	3.3 (3.7)	A (A)	9.0 (9.8)	A (A)	0.13 (0.11)	23.8 (41.9)
	SBRL	-			12.6 (12.8)	B (B)	0.21 (0.26)	31.8 (32.6)
Intermodal & Gorewood	NBL	-	8.1 (7.7)	A (A)	7.7 (7.8)	A (A)	0.10 (0.11)	6.2 (4.1)
	NBT	-			- (-)	A (A)	- (-)	- (-)
	EBRL	-			9.3 (9.1)	A (A)	0.15 (0.13)	31.3 (29.9)

Relative to the 'Do Nothing' scenario, traffic operations at the Steeles & Goreway intersection under the 'With Extension' scenario are significantly improved. None of the turning movements at the intersection exceed a v/c ratio of 0.90, queue spillback is no longer projected to occur for the southbound left-turn movement, and average delays are decreased.

The Steeles & Finch/Gorewood intersection is expected to operate at an acceptable Level of Service overall, however, the northbound and southbound approaches will experience high delays. These delays are primarily a result of the 160s cycle length which forces sidestreet traffic to wait a long time for their signal to change to green. Given the projected increase in traffic on the southbound approach, the Region should consider converting the inside lane to a dedicated southbound left-turn lane as currently it operates as a shared through-left lane, provided that the existing pavement width allows for this with the typical design vehicle used for functional design of this intersection. Although this would not be expected to have any significant impact on traffic operations, as established by an offline modelling exercise that took place with the Region in July 2024, it would better align with driver expectations of what a typical intersection approach should look like. Any functional design change to this intersection should consider the ability for simultaneous truck turning movements in the northbound and southbound directions should the Region ever remove split phasing from this intersection in favour of conventional four-/eight-phase operation. Traffic modelling for this study only considered retention of split phasing, however, supplementary traffic modelling has been completed to illustrate traffic operations at the Steeles & Finch/Gorewood intersection under conventional four-/eight-phase operation in 2051. The results of this analysis are provided in **Appendix B** and demonstrate that the intersection will operate at an acceptable Level of Service under either phasing configuration.

The diversion of traffic from Goreway Drive and Steeles Avenue onto Intermodal Drive is expected to have significant impacts on the Goreway & Intermodal intersection. During the afternoon peak hour, the eastbound left-turn movement is anticipated to be approaching its theoretical capacity (i.e., v/c ratio greater than 0.90) while the southbound left-turn movement will exceed its theoretical capacity (i.e., v/c ratio greater than 1.0). It is recommended that the southbound left-turn movement be provided a protected-permitted phase as this will largely address the issue.

The intersection of Intermodal & Deerhurst is anticipated to operate at an acceptable Level of Service following the extension of Intermodal Drive.

The intersection capacity analysis indicates that the intersection of Intermodal & Gorewood will operate at an acceptable Level of Service as a two-way stop-controlled intersection. The analysis suggests that a two-lane cross-section on Gorewood Drive and along the extension of Intermodal Drive is sufficient to accommodate the projected traffic demand.

4.4.2.2 Future 2041 Conditions

Intersection capacity analysis was completed using the Future 2041 Traffic volumes from **Figure 4-8** and the results are summarized below in **Table 4-9**. It is assumed that the recommendations from the 2031 traffic analysis is implemented by 2041.

Table 4-9 Intersection Capacity Analysis Results: Future 2041 Traffic, 'With Extension' Scenario

Intersection	Lane Group	Storage	AM Peak Hour (PM Peak Hour)					
			Int. Delay (s)	Int. LOS	Delay (s)	LOS	v/c Ratio	SimTraffic Queue (m)
Steeles & Goreway	EBL	115	36.9 (49.5)	D (D)	30.1 (80.5)	C (F)	0.60 (0.90)	106.5 (122.4)
	EBT	-			33.8 (45.4)	C (D)	0.65 (0.73)	134.7 (146.0)
	EBR	150			4.8 (5.4)	A (A)	0.17 (0.28)	36.6 (27.9)
	WBL	150			14.0 (23.6)	B (C)	0.20 (0.44)	21.0 (108.4)
	WBT	-			30.4 (47.7)	C (D)	0.55 (0.89)	119.7 (309.0)
	WBR	110			11.1 (36.3)	B (D)	0.43 (0.91)	76.7 (117.6)
	NBL	120			82.1 (77.6)	F (E)	0.61 (0.76)	51.9 (104.5)
	NBT	-			62.7 (59.2)	E (E)	0.39 (0.89)	47.5 (183.7)
	NBR	80			0.8 (4.6)	A (A)	0.14 (0.15)	13.8 (87.6)
	SBL	130			67.3 (115.0)	E (F)	0.75 (0.90)	106.8 (108.3)
	SBT	-			50.0 (36.4)	D (D)	0.82 (0.50)	133.4 (140.9)
	SBR	-			5.3 (3.9)	A (A)	0.43 (0.33)	43.8 (33.5)
Steeles & Finch/ Gorewood	EBL	175	37.3 (31.5)	D (C)	44.5 (19.9)	D (B)	0.02 (0.05)	10.5 (14.4)
	EBT	-			35.3 (16.4)	D (B)	0.51 (0.43)	120.4 (249.6)
	EBR	175			19.4 (12.6)	B (B)	0.73 (0.62)	120.2 (92.8)
	WBL	180			24.2 (18.9)	C (B)	0.53 (0.05)	60.3 (15.3)
	WBTR	-			22.4 (26.3)	C (C)	0.44 (0.57)	99.1 (113.5)
	NBL	-			71.5 (72.0)	E (E)	0.83 (0.86)	111.1 (120.5)
	NBTR	-			57.7 (45.2)	E (D)	0.69 (0.52)	97.4 (80.6)
	SBTRL	-			89.2 (81.7)	F (F)	0.78 (0.70)	71.1 (58.1)
Goreway & Intermodal	EBL	85	20.2 (22.2)	C (C)	73.7 (129.2)	E (F)	0.43 (0.94)	44.6 (82.7)
	EBT	-			65.5 (54.5)	E (D)	0.38 (0.30)	65.6 (62.8)
	EBR	-			15.4 (9.0)	B (A)	0.46 (0.43)	59.9 (43.7)
	WBL	75			105.7 (61.7)	F (E)	0.75 (0.54)	74.1 (68.0)
	WBTR	-			33.4 (22.4)	C (C)	0.49 (0.46)	67.2 (80.0)
	NBL	135			50.5 (13.5)	D (B)	0.62 (0.59)	90.8 (89.8)
	NBT	-			3.2 (18.2)	A (B)	0.21 (0.67)	218.9 (238.6)
	NBR	100			0.3 (2.1)	A (A)	0.10 (0.13)	32.8 (107.3)
	SBL	135			24.8 (42.5)	C (D)	0.53 (0.63)	97.6 (67.8)
	SBT	-			18.0 (16.7)	B (B)	0.57 (0.36)	128.0 (81.1)
	SBR	100			4.4 (3.9)	A (A)	0.14 (0.11)	107.5 (25.4)
Intermodal & Deerhurst	EBL	65	3.3 (3.6)	A (A)	9.0 (9.9)	A (A)	0.13 (0.11)	28.2 (36.0)
	SBRL	-			12.6 (12.9)	B (B)	0.21 (0.26)	37.2 (37.4)
	NBL	-	8.1 (7.7)	A (A)	7.7 (7.8)	A (A)	0.10 (0.11)	4.8 (5.2)

Intersection	Lane Group	Storage	AM Peak Hour (PM Peak Hour)					
			Int. Delay (s)	Int. LOS	Delay (s)	LOS	v/c Ratio	SimTraffic Queue (m)
Intermodal & Gorewood	NBT	-			- (-)	A (A)	- (-)	- (-)
	EBRL	-			9.3 (9.1)	A (A)	0.15 (0.13)	30.8 (27.9)

Intersection operations in 2041 are expected to be relatively similar to traffic operations in 2031 with the following exceptions:

- **Steeles & Goreway:**
 - Delays on the eastbound left-turn movement are expected to increase resulting in LOS 'F' during the weekday afternoon peak hour.
 - The westbound right-turn movement is approaching its theoretical capacity with a v/c ratio of 0.91 during the weekday afternoon peak hour.
- **Goreway & Intermodal:**
 - The northbound right-turn queues are expected to exceed the available storage during the weekday afternoon peak hour.

4.4.2.3 Future 2051 Conditions

Intersection capacity analysis was completed using the Future 2051 Traffic volumes from **Figure 4-9** and the results are summarized below in **Table 4-10**.

Table 4-10 Intersection Capacity Analysis Results: Future 2051 Traffic, 'With Extension' Scenario

Intersection	Lane Group	Storage	AM Peak Hour (PM Peak Hour)					
			Int. Delay (s)	Int. LOS	Delay (s)	LOS	v/c Ratio	SimTraffic Queue (m)
Steeles & Goreway	EBL	115	37.5 (50.1)	D (D)	31.0 (80.1)	C (F)	0.61 (0.90)	88.6 (115.7)
	EBT	-			34.6 (46.1)	C (D)	0.66 (0.74)	140.5 (142.5)
	EBR	150			4.9 (5.4)	A (A)	0.17 (0.28)	- (58.3)
	WBL	150			14.5 (24.4)	B (C)	0.20 (0.45)	26.2 (132.0)
	WBT	-			31.3 (49.4)	C (D)	0.56 (0.90)	122.5 (237.9)
	WBR	110			11.5 (37.3)	B (D)	0.43 (0.91)	84.0 (117.6)
	NBL	120			82.1 (77.6)	F (E)	0.61 (0.76)	53.2 (101.6)
	NBT	-			61.7 (59.9)	E (E)	0.38 (0.90)	45.9 (192.1)
	NBR	80			0.8 (4.6)	A (A)	0.13 (0.14)	5.8 (87.6)
	SBL	130			69.0 (115.9)	E (F)	0.74 (0.90)	121.8 (121.6)
	SBT	-			49.2 (35.5)	D (D)	0.82 (0.51)	149.5 (84.2)
	SBR	-			5.4 (3.6)	A (A)	0.42 (0.33)	64.9 (27.4)
Steeles & Finch/ Gorewood	EBL	175	37.8 (31.6)	D (C)	45.2 (19.7)	D (B)	0.02 (0.05)	9.1 (13.0)
	EBT	-			36.0 (16.4)	D (B)	0.51 (0.43)	360.1 (80.3)
	EBR	175			19.9 (12.7)	B (B)	0.73 (0.62)	113.0 (86.4)
	WBL	180			24.1 (18.9)	C (B)	0.52 (0.05)	54.4 (17.0)
	WBTR	-			22.4 (26.2)	C (C)	0.44 (0.57)	93.7 (112.5)
	NBL	-			71.6 (72.0)	E (E)	0.83 (0.86)	105.9 (120.3)
	NBTR	-			58.3 (45.8)	E (D)	0.70 (0.53)	93.6 (84.6)
	SBTRL	-			89.9 (82.0)	F (F)	0.79 (0.70)	78.6 (56.9)

Intersection	Lane Group	Storage	AM Peak Hour (PM Peak Hour)					
			Int. Delay (s)	Int. LOS	Delay (s)	LOS	v/c Ratio	SimTraffic Queue (m)
Goreway & Intermodal	EBL	85	21.0 (23.2)	C (C)	73.4 (130.8)	E (F)	0.44 (0.95)	44.8 (86.9)
	EBT	-			65.0 (53.8)	E (D)	0.38 (0.30)	54.3 (103.8)
	EBR	-			15.1 (8.9)	B (A)	0.47 (0.43)	64.6 (49.2)
	WBL	75			105.6 (61.1)	F (E)	0.75 (0.54)	73.2 (71.6)
	WBTR	-			33.5 (23.2)	C (C)	0.49 (0.46)	74.9 (77.1)
	NBL	135			54.9 (15.0)	D (B)	0.64 (0.62)	84.7 (87.7)
	NBT	-			3.3 (19.2)	A (B)	0.21 (0.70)	50.2 (128.1)
	NBR	100			0.3 (2.1)	A (A)	0.11 (0.13)	30.2 (106.9)
	SBL	135			27.0 (48.6)	C (D)	0.55 (0.65)	118.2 (56.1)
	SBT	-			19.0 (17.6)	B (B)	0.59 (0.37)	144.8 (82.9)
	SBR	100			4.7 (4.1)	A (A)	0.15 (0.11)	107.0 (27.3)
Intermodal & Deerhurst	EBL	65	3.2 (3.6)	A (A)	9.0 (9.9)	A (A)	0.13 (0.12)	25.8 (29.8)
	SBRL	-			12.7 (13.1)	B (B)	0.21 (0.26)	42.5 (32.2)
Intermodal & Gorewood	NBL	-	8.1 (7.7)	A (A)	7.7 (7.8)	A (A)	0.10 (0.11)	9.9 (6.2)
	NBT	-			- (-)	A (A)	- (-)	- (-)
	EBRL	-			9.3 (9.1)	A (A)	0.16 (0.13)	35.8 (26.6)

The only significant difference in traffic operations between 2041 and 2051 is that the eastbound left-turn movement at the Goreway & Intermodal intersection is expected to exceed the available storage capacity by 2051.

4.5 Cycling Facility Requirements

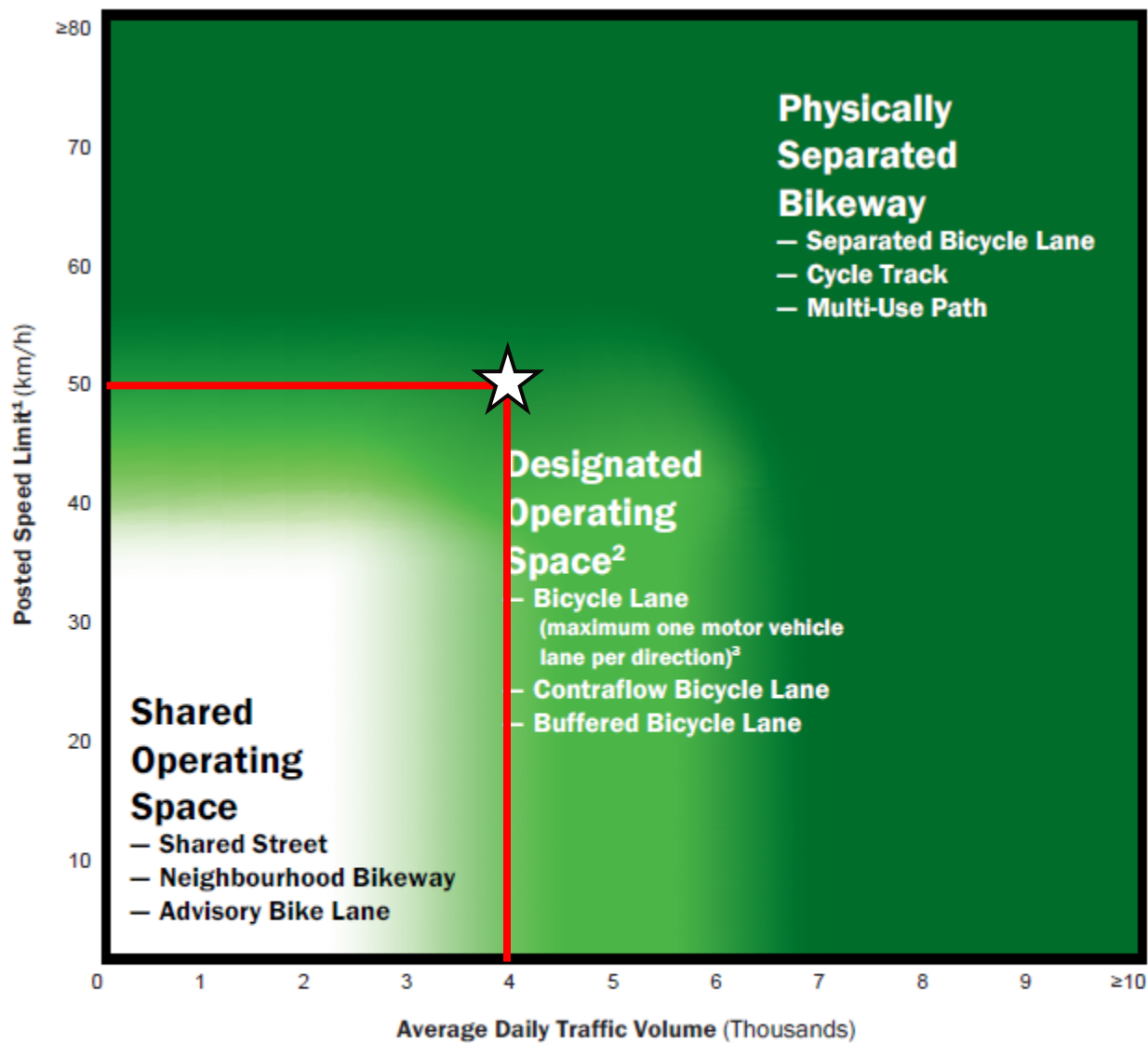
In order to ensure network connectivity, cycling facilities will be provided on the Intermodal Drive extension. Ontario Traffic Manual (OTM) Book 18: Cycling Facilities (June 2021) provides a process for selecting suitable cycling facilities for a roadway based on factors such as traffic volumes, speed limits, roadway function, vehicle mix and pedestrian activity. This process is separated into three steps:

1. Pre-Select Facility Type Option
2. Detailed & Contextual Evaluation
3. Document & Justify Rationale

The limits of the project do not include the existing portions of Intermodal Drive or Gorewood Drive. As such, the cycling facility requirements review will be limited to the design of the extension of Intermodal Drive only.

4.5.1 Step 1: Pre-Select Facility Type Option

Figure 4-10 illustrates the recommended cycling facility types based on the pre-selection nomograph.



1 Operating speeds are assumed to be similar to posted speeds. If evidence suggests this is not the case, practitioners may consider using 85th percentile speeds or implementing measures to reduce operating speeds.

2 Physically separated bikeways may always be considered in the designated operating space area of the nomograph.

3 On roadways with two or more lanes per direction (including multi-lane one-way roadways), a buffered bicycle lane should be considered the minimum with a typical facility being a physically separated bikeway.

Figure 4-10 Cycling Facility Pre-Selection Nomograph

It should be noted that the AADT volumes utilized in the nomograph above correspond to the projected traffic volumes through the Intermodal Drive extension only. The AADT volumes identified previously in Section 4.3.2.1 reflect the segment of Intermodal Drive with the highest traffic volumes. Based on the projected volumes and the posted speed limit, the Intermodal Drive extension is on the borderline between unseparated cycling facilities

being sufficient and fully separated cycling facilities being warranted. A large variety of cycling facilities are therefore potentially feasible, including bike lanes, buffered bike lanes, separated bike lanes, cycle tracks, or multi-use paths.

4.5.2 Step 2: Detailed & Contextual Evaluation

OTM Book 18, Table 5.3 provides detailed evaluation criteria for refining the selection of a suitable cycling facility for the Intermodal Drive extension. **Table 4-11** summarizes the roadway characteristics of this street as it relates to the criteria from OTM Book 18, Table 5.3.

Table 4-11 Roadway Characteristics

Roadway Characteristic (OTM Book 18, Table 5.3)	Discussion
Motor vehicle speed	Intermodal Drive has an unposted speed limit of 50 km/h, therefore, in the absence of speed data it is assumed that the 85 th percentile operating speed is 60 km/h.
Motor vehicle volumes	The Intermodal Drive extension is projected to have traffic volumes between 3,000 to 6,000 vehicles per day.
Function of street	Following the extension of Intermodal Drive, the road will function as both a mobility and access road.
Vehicle mix	Heavy truck volumes in the curb lanes are expected to exceed 30 vehicles per hour during the weekday peak hours. It is also anticipated that transit service will be extended along Intermodal Drive.
Pedestrian activity	Pedestrian volumes are expected to be low.
On-street parking	No on-street parking is anticipated along either Intermodal Drive or Gorewood Drive.
Frequency of intersections and crossings	Most driveways and unsignalized intersections along Intermodal Drive are expected to be relatively low-volume.

The results of the roadway characteristic evaluation suggest that separated cycling facilities such as separated bicycle lanes, cycle tracks and multi-use paths are suitable for the Intermodal Drive extension. Buffered bicycle lanes are also noted as being potentially suitable, however, given the high volumes of heavy truck traffic this cycling facility option is not recommended for further consideration.

Based on the above, potential cycling facility options that could be considered along the Intermodal Drive extension include:

- Provide a multi-use path on the north side of the Intermodal Drive extension. This option has the following advantages and disadvantages:
 - By placing the MUP on the north side of Intermodal Drive, cyclists will be crossing Gorewood Drive on the low-volume north leg, thereby minimizing conflicts with motorized traffic.

- As a physically separated facility, a MUP will provide a low stress cycling environment that is suitable for users of all ages and abilities (AAA).
- Properties on the south side of Intermodal Drive will not have any direct cycling connections to the MUP. Cyclists will be required to cross a high-volume, high-speed road to reach these properties. Given the types of land uses within the area, however, this is not likely to be a common occurrence.
- Provide separated cycling lanes along the Intermodal Drive extension. This option has the following advantages and disadvantages:
 - Eastbound cyclists on Intermodal Drive that wish to go to the Claireville Conservation Area will be required to cross Gorewood Drive on the south leg which has relatively high traffic volumes.
 - Physically separated bike lanes are not as low stress as a MUP.
 - Cyclists will be able to directly access properties on the south side of Intermodal Drive.
 - Conflicts between cyclists and transit users boarding and alighting from buses are more likely to occur.
- Provide cycle tracks along the Intermodal Drive. This option shares many of the advantages and disadvantages as the previous option, in addition to the following:
 - Cycle tracks will provide a low-stress AAA cycling environment.

4.5.3 Step 3: Document & Justify Rationale

The selection of cycling facilities for the Intermodal Drive extension will depend on many other factors other than simple transportation-related factors. Consideration also needs to be given to right-of-way availability, environmental impacts and other factors. The selection of the preferred cycling facilities is discussed in further detail in Section 4.8.

4.6 Pedestrian Facility Requirements

In order to ensure pedestrian network connectivity, it is recommended that some form of pedestrian facilities be provided on both sides of the road. This may include either concrete sidewalks or multi-use paths.

If the intersection of Intermodal Drive and Gorewood Drive is configured as stop-controlled intersection with free-flow on Gorewood Drive, it is recommended that a crosswalk be provided on the west leg only. With Gorewood Drive terminating in a cul-de-sac only 100m north of the intersection, pedestrians will be capable of walking around the perimeter of the cul-de-sac to cross from the east to west side of Gorewood Drive therefore a PXO crossing Gorewood Drive is not necessary.

Alternatively, it is possible that Intermodal Drive can form a 90-degree bend to connect to Gorewood Drive. In this case, the segment of Gorewood Drive north of Intermodal Drive would be stop-controlled. As the sidewalk on the south side of the Intermodal Drive extension does not connect to any existing pedestrian facilities, a pedestrian crossover (PXO) would be required to provide pedestrian connectivity. OTM Book 15 provides a warrant for identifying whether a PXO is warranted as well as a selection matrix to determine the appropriate type of PXO that should be provided in different contexts.

The PXO warrant is based on three criteria:

1. 4-hour or 8-hour pedestrian and vehicular volumes.
2. Distance from other controlled crossings.

3. Requirement for system connectivity.

It is unknown what volume of pedestrian demand would be utilizing the PXO, however, as the PXO would be located more than 200m from other potential crossing locations and would be required for system connectivity, it can be concluded that a PXO would be warranted under these circumstances.

Two-way traffic volumes at the location of the potential PXO would be in the order of 4,000 per day. It is also assumed that the posted speed limit would be 50 km/h along the Intermodal Drive extension and that the crossing distance would be approximately 7m. Based on these factors, a Level 2 Type D PXO would be warranted under these circumstances.

4.7 Transit Facility Requirements

Transit service may be extended along Intermodal Drive and Gorewood Drive in the future once the extension is complete. It is recommended that the design of the roadway provision for a pair of midblock transit stops between Goreway Drive and Gorewood Drive, and a pair of stops at the intersection of Intermodal & Gorewood.

4.8 Preferred Cross-Section

As part of the evaluation of alternatives solutions/alignments, a number of alternative alignments were considered. The evaluation considered a number of factors, including:

- Connectivity for Active Transportation
- Traffic operations
- Goods movement efficiency
- Development potential
- Impact to Development Land
- Property impacts/constraints
- Utility impacts
- Watermain alignment
- Alignment with planning policy documents
- Significant Natural Areas & resource disruption
- Potential impacts to species at risk
- Environmental contamination
- Archaeological potential
- Estimated Maintenance & Construction Costs
- Property Costs
- Construction Impacts (Short-term)

The results of the evaluation indicated that the preferred alignment for the Intermodal Drive extension was to extend the road east towards Gorewood Drive and introduce a tight 45-metre centreline radius to connect to the existing portion of Gorewood Drive to the south. The portion of Gorewood Drive north of this 45-metre centreline radius would be realigned to intersect with the Intermodal Drive extension and form a two-way stop-controlled

intersection with free-flow on Intermodal Drive. This differs slightly from this report which assumed that Intermodal Drive would be stop-controlled where it intersected with Gorewood Drive. This would have a minor impact on traffic operations at the Intermodal Drive & Gorewood Drive intersection but would not impact the other study area intersections.

In terms of cross-section, the Project File Report identified that the preferred alternative included a multi-use path (MUP) on the north side and a sidewalk on the south side of the Intermodal Drive extension. A PXO would be provided a short distance west of the 45-metre centreline radius to provide pedestrian network connectivity. These active transportation facilities would be separated from vehicular traffic by wide treed boulevards. Vehicular traffic itself would be provided one 4m-lane in each direction.

More details on the preferred alignment and cross-section are provided in the Project File Report.

4.9 Future Multi-Modal Level of Service

Multi-Modal Level of Service (MMLOS) analysis has been completed to assess the performance of the future Intermodal Drive extension. This assessment is based on the preferred alignment and cross-section identified in the Project File Report.

The Intermodal Drive extension is considered an Industrial Boulevard for the purposes of MMLOS. The base MMLOS targets for Industrial Boulevards are summarized as follows:

- Pedestrian LOS: 'D'
- Bicycle LOS: 'D'
- Transit LOS: 'D'
- Truck LOS 'B'
- Car LOS: 'E'

Upward adjustments have been applied to these targets to reflect local planning direction and strategic policy. The ATMP identifies the need for cycling facilities on Intermodal Drive while the TMP states that there is a city-wide goal to increase the use of sustainable travel modes (i.e., walking, cycling and transit). The adjusted MMLOS targets are summarized in **Table 4-12**.

It should be stressed that the MMLOS targets represent the Level of Service that should ideally be attained, rather than a minimum requirement that must be met. As such, it is acceptable for some of the targets not to be met.

The results of the MMLOS analysis are summarized in **Table 4-12**.

Table 4-12 Future Multi-Modal Level of Service Analysis Results

Location		Pedestrian LOS	Bicycle LOS	Transit LOS	Truck LOS	Car LOS
Roadway Segments						
Intermodal Drive Extension	Actual	D	B	D	A	A
	Target	C	B	C	B	E
	Deviation	-1	0	-1	+1	+4

The Intermodal Drive extension would meet the majority of its MMLOS targets except for the Pedestrian and Transit LOS target. Transit along this segment of Intermodal Drive would operate in mixed traffic with only one lane per direction and it is unlikely that transit stops will include an abundance of amenities. These factors result in a Transit LOS of 'D' rather than the target of 'C'. Additionally, as pedestrians would need to share the multi-use path with cyclists, the Pedestrian Level of Service has been decreased by one letter grade to reflect the negative impact sharing operating spaces has on the walking and cycling experience.

Although the Pedestrian Level of Service target is not met it should be noted that the design of the pedestrian and cycling facilities, including facility type, facility widths and boulevard widths, adhere to local design guidance for Employment Collector Streets provided by the City of Brampton Complete Streets Guide (April 2023).

5 Conclusion

The intersection of Steeles & Goreway is currently approaching its theoretical capacity and is expected to exceed its capacity by 2031. Extending Intermodal Drive to Gorewood Drive will create an alternate route for traffic and is expected to result in the diversion of approximately 5% of traffic from Goreway Drive and Steeles Avenue to Intermodal Drive. As a result of this diversion, the Steeles & Goreway intersection is expected to operate at an acceptable Level of Service until 2051. At the Goreway & Intermodal intersection, permitted-protected phasing would be required for the southbound left-turn movement, however, to accommodate the diversion of traffic. At the Steeles & Finch/Gorewood intersection, the Region should consider converting the inside southbound through-left lane to a dedicated southbound left-turn lane, provided that the existing pavement width allows for this with the typical design vehicle used for functional design of this intersection. Although this would not be expected to have any significant impact on traffic operations, it would better align with driver expectations of what a typical intersection approach should look like. Any functional design change to this intersection should consider the ability for simultaneous truck turning movements in the northbound and southbound directions should the Region ever remove split phasing from this intersection in favour of conventional four-/eight-phase operation.

The results of the analysis indicate that the extension of Intermodal Drive would only require a two-lane cross-section, rather than the existing four-lane cross-section of the existing portion of Intermodal Drive. Furthermore, the intersection of Intermodal & Gorewood is found to operate at an acceptable Level of Service as a two-way stop-controlled intersection. No auxiliary turning lanes are expected to be required at this intersection.

Multi-Modal Level of Service (MMLOS) analysis has been completed for all road segments and intersections within the study area. Under existing conditions, all roads and intersections are failing to meet their pedestrian, cycling and transit Level of Service (LOS) targets. This is largely due to significant deficiencies in the pedestrian and cycling network.

The Project File Report identified the preferred alignment and cross-section for the Intermodal Drive extension. Under this preferred alternative, Intermodal Drive would have a 2-lane cross-section with 4m wide travel lanes, wide boulevards, a multi-use path (MUP) on the north side of the road and a sidewalk on the south side. A tight 45-metre centreline radius would connect the Intermodal Drive extension to the south segment of Gorewood Drive and the existing segment of Gorewood Drive north of Intermodal Drive would become a stop-controlled approach.

The future Intermodal Drive extension is expected to meet most of its MMLOS targets and will be just shy of meeting the Pedestrian and Transit LOS target. The pedestrian cross-over (PXO) assessment suggests that a Level 2 Type D PXO is warranted on Intermodal Drive to provide network connectivity for pedestrians going to/from properties on the south side of Intermodal Drive.

If Intermodal Drive is not extended to Gorewood Drive, the intersection capacity analysis suggests that localized intersection modifications will be required at the Steeles & Goreway intersection to accommodate the projected traffic demand. The analysis indicates that implementing dual eastbound left-turn lanes and the signalization of the westbound right-turn channel with protected-overlap phasing would be required in this scenario.

Appendix A

Traffic Data



Turning Movement Count (152 . STEELES AVENUE & GOREWAY DRIVE) CustID: 01502397

Start Time	Southbound GOREWAY DR						Westbound STEELES AVE E						Northbound GOREWAY DR						Eastbound STEELES AVE E						Int. Total (15 min)	
	Left	Thru	Right	UTurn	Peds	Approach Total	Left	Thru	Right	UTurn	Peds	Approach Total	Left	Thru	Right	UTurn	Peds	Approach Total	Left	Thru	Right	UTurn	Peds	Approach Total		
07:00:00	122	100	50	0	4	272	6	224	82	0	1	312	33	27	10	0	4	70	31	300	19	0	1	350	1004	
07:15:00	116	114	32	0	1	262	6	250	103	0	3	359	31	51	10	0	11	92	21	337	17	0	5	375	1088	
07:30:00	153	130	45	0	3	328	8	204	106	0	3	318	20	9	7	0	3	36	24	290	28	0	3	342	1024	
07:45:00	130	126	52	0	4	308	10	284	110	0	4	404	36	43	13	0	10	92	34	295	46	1	4	376	1180	
Hourly	521	470	179	0	12	1170	30	962	401	0	11	1393	120	130	40	0	28	290	110	1222	110	1	13	1443	4296	
08:00:00	113	143	53	0	0	309	11	225	100	0	0	336	38	50	11	0	4	99	32	228	46	0	1	306	1050	
08:15:00	114	128	56	0	3	298	11	246	103	0	3	360	18	15	12	0	5	45	35	258	42	0	2	335	1038	
08:30:00	112	117	50	0	2	279	7	240	106	0	2	353	13	29	4	0	4	46	26	282	36	0	0	344	1022	
08:45:00	118	155	54	0	2	327	7	213	84	0	2	304	66	107	22	0	1	195	25	241	36	0	1	302	1128	
Hourly	457	543	213	0	7	1213	36	924	393	0	7	1353	135	201	49	0	14	385	118	1009	160	0	4	1287	4238	
BREAK																										
11:00:00	50	79	42	0	2	171	8	170	85	0	1	263	52	70	16	0	1	138	30	162	130	0	4	322	894	
11:15:00	61	79	53	0	2	193	13	161	78	0	0	252	24	45	14	1	0	84	33	180	92	0	0	305	834	
11:30:00	49	74	35	0	5	158	8	201	77	0	5	286	57	88	19	1	0	165	45	229	23	0	1	297	906	
11:45:00	49	79	37	0	0	165	12	168	80	0	0	260	59	67	11	0	2	137	46	191	25	0	1	262	824	
Hourly	209	311	167	0	9	687	41	700	320	0	6	1061	192	270	60	2	3	524	154	762	270	0	6	1186	3458	
12:00:00	63	59	39	0	0	161	8	184	87	0	2	279	25	20	6	1	1	52	30	209	26	0	4	265	757	
12:15:00	46	51	51	1	0	149	5	194	93	0	1	292	34	60	11	1	1	106	40	194	33	1	0	268	815	
12:30:00	57	71	49	0	2	177	6	176	101	0	2	283	25	19	4	0	2	48	40	211	25	0	3	276	784	
12:45:00	45	67	36	0	1	148	7	177	80	0	1	264	45	87	14	0	0	146	29	215	32	0	0	276	834	
Hourly	211	248	175	1	3	635	26	731	361	0	6	1118	129	186	35	2	4	352	139	829	116	1	7	1085	3190	
13:00:00	55	68	33	0	0	156	13	205	86	0	1	304	40	58	9	0	2	107	32	263	28	0	0	323	890	
13:15:00	64	72	39	0	5	175	7	174	97	0	5	278	51	54	13	1	1	119	43	219	29	0	0	291	863	
13:30:00	50	63	38	0	0	151	17	228	89	0	0	334	35	69	18	0	3	122	33	246	36	0	1	315	922	
13:45:00	67	73	43	1	3	184	7	176	105	0	3	288	58	68	14	0	0	140	35	199	30	1	0	265	877	
Hourly	236	276	153	1	8	666	44	783	377	0	9	1204	184	249	54	1	6	488	143	927	123	1	1	1194	3552	
BREAK																										
15:00:00	78	101	61	0	0	240	9	242	119	0	0	370	52	80	10	0	2	142	42	278	30	0	4	350	1102	
15:15:00	72	75	42	0	1	189	13	264	126	0	1	403	82	225	24	0	2	331	52	277	43	0	3	372	1295	
15:30:00	80	89	44	0	6	213	12	254	145	0	1	411	81	160	16	1	4	258	51	274	47	0	1	372	1254	
15:45:00	83	91	45	1	5	220	9	270	142	0	3	421	67	130	20	0	5	217	42	316	36	0	5	394	1252	
Hourly	313	356	192	1	12	862	43	1030	532	0	5	1605	282	595	70	1	13	948	187	1145	156	0	13	1488	4903	
16:00:00	78	102	35	0	1	215	17	249	152	0	1	418	72	223	17	0	4	312	47	297	36	1	4	381	1326	
16:15:00	99	110	34	0	1	243	18	256	137	1	1	412	89	207	17	0	3	313	49	279	42	0	2	370	1338	
16:30:00	77	92	50	0	1	219	8	300	153	0	0	461	69	172	27	1	7	269	51	308	45	0	8	404	1353	
16:45:00	87	75	47	0	1	209	14	225	157	0	0	396	70	165	18	0	8	253	56	319	48	0	7	423	1281	
Hourly	341	379	166	0	4	886	57	1030	599	1	2	1687	300	767	79	1	22	1147	203	1203	171	1	21	1578	5298	
17:00:00	78	116	27	0	2	221	15	285	163	1	2	464	82	203	22	0	2	307	42	273	31	0	5	346	1338	
17:15:00	82	79	34	0	3	195	11	287	177	0	3	475	81	225	13	1	1	320	43	304	39	0	0	386	1376	
17:30:00	89	67	42	0	1	198	13	234	153	0	1	400	78	197	24	0	2	299	44	231	41	0	3	316	1213	
17:45:00	82	70	27	0	2	179	16	281	182	0	4	479	47	89	13	0	7	149	45	245	39	0	6	329	1136	
Hourly	331	332	130	0	8	793	55	1087	675	1	10	1818	288	714	72	1	12	1075	174	1053	150	0	14	1377	5063	
Grand Total	2619	2915	1375	3	63	6912	332	7247	3658	2	56	11239	1630	3112	459	8	102	5209	1228	8150	1256	4	79	10638	33998	
Approach%	37.9%	42.2%	19.9%	0%	-	-	3%	64.5%	32.5%	0%	-	-	31.3%	59.7%	8.8%	0.2%	-	-	11.5%	76.6%	11.8%	0%	-	-	-	
Totals %	7.7%	8.6%	4%	0%	-	20.3%	1%	21.3%	10.8%	0%	-	33.1%	4.8%	9.2%	1.4%	0%	-	15.3%	3.6%	24%	3.7%	0%	-	31.3%	-	



Turning Movement Count
Location Name: STEELES AVENUE & GOREWAY DRIVE
Date: Wed, May 11, 2022 Deployment Lead: Peter Ilias

Peel Region
SUITE B 10 PEEL CENTRE DR
BRAMPTON ONTARIO, L6T 4B9
CANADA

Heavy	615	281	328	0	-	18	1206	870	0	-	190	186	19	0	-	427	1443	133	0	-	-
Heavy %	23.5%	9.6%	23.9%	0%	-	5.4%	16.6%	23.8%	0%	-	11.7%	6%	4.1%	0%	-	34.8%	17.7%	10.6%	0%	-	-
Bicycles	0	2	0	0	-	0	1	0	0	-	0	2	0	0	-	0	1	0	0	-	-
Bicycle %	0%	0.1%	0%	0%	-	0%	0%	0%	0%	-	0%	0.1%	0%	0%	-	0%	0%	0%	0%	-	-



Peak Hour: 07:00 AM - 08:00 AM Weather: Broken Clouds (9.94 °C)

Start Time	Southbound GOREWAY DR						Westbound STEELES AVE E						Northbound GOREWAY DR						Eastbound STEELES AVE E						Int. Total (15 min)
	Left	Thru	Right	UTurn	Peds	Approach Total	Left	Thru	Right	UTurn	Peds	Approach Total	Left	Thru	Right	UTurn	Peds	Approach Total	Left	Thru	Right	UTurn	Peds	Approach Total	
07:00:00	122	100	50	0	4	272	6	224	82	0	1	312	33	27	10	0	4	70	31	300	19	0	1	350	1004
07:15:00	116	114	32	0	1	262	6	250	103	0	3	359	31	51	10	0	11	92	21	337	17	0	5	375	1088
07:30:00	153	130	45	0	3	328	8	204	106	0	3	318	20	9	7	0	3	36	24	290	28	0	3	342	1024
07:45:00	130	126	52	0	4	308	10	284	110	0	4	404	36	43	13	0	10	92	34	295	46	1	4	376	1180
Grand Total	521	470	179	0	12	1170	30	962	401	0	11	1393	120	130	40	0	28	290	110	1222	110	1	13	1443	4296
Approach%	44.5%	40.2%	15.3%	0%		-	2.2%	69.1%	28.8%	0%		-	41.4%	44.8%	13.8%	0%		-	7.6%	84.7%	7.6%	0.1%		-	-
Totals %	12.1%	10.9%	4.2%	0%		27.2%	0.7%	22.4%	9.3%	0%		32.4%	2.8%	3%	0.9%	0%		6.8%	2.6%	28.4%	2.6%	0%		33.6%	-
PHF	0.85	0.9	0.86	0		0.89	0.75	0.85	0.91	0		0.86	0.83	0.64	0.77	0		0.79	0.81	0.91	0.6	0.25		0.96	-
Heavy	104	37	31	0		172	1	116	77	0		194	23	11	1	0		35	39	183	12	0		234	-
Heavy %	20%	7.9%	17.3%	0%		14.7%	3.3%	12.1%	19.2%	0%		13.9%	19.2%	8.5%	2.5%	0%		12.1%	35.5%	15%	10.9%	0%		16.2%	-
Lights	417	433	148	0		998	29	846	324	0		1199	97	119	39	0		255	71	1039	98	1		1209	-
Lights %	80%	92.1%	82.7%	0%		85.3%	96.7%	87.9%	80.8%	0%		86.1%	80.8%	91.5%	97.5%	0%		87.9%	64.5%	85%	89.1%	100%		83.8%	-
Single-Unit Trucks	32	15	16	0		63	1	34	33	0		68	7	4	1	0		12	16	66	2	0		84	-
Single-Unit Trucks %	6.1%	3.2%	8.9%	0%		5.4%	3.3%	3.5%	8.2%	0%		4.9%	5.8%	3.1%	2.5%	0%		4.1%	14.5%	5.4%	1.8%	0%		5.8%	-
Buses	9	6	1	0		16	0	10	1	0		11	10	7	0	0		17	2	12	7	0		21	-
Buses %	1.7%	1.3%	0.6%	0%		1.4%	0%	1%	0.2%	0%		0.8%	8.3%	5.4%	0%	0%		5.9%	1.8%	1%	6.4%	0%		1.5%	-
Articulated Trucks	63	16	14	0		93	0	72	43	0		115	6	0	0	0		6	21	105	3	0		129	-
Articulated Trucks %	12.1%	3.4%	7.8%	0%		7.9%	0%	7.5%	10.7%	0%		8.3%	5%	0%	0%	0%		2.1%	19.1%	8.6%	2.7%	0%		8.9%	-
Pedestrians	-	-	-	-	12	-	-	-	-	10	-	-	-	-	-	-	26	-	-	-	-	-	12	-	-
Pedestrians%	-	-	-	-	18.8%	-	-	-	-	15.6%	-	-	-	-	-	-	40.6%	-	-	-	-	-	18.8%	-	-
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	-
Bicycles on Road%	-	-	-	-	0%	-	-	-	-	0%	-	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	1	-	-	-	-	-	-	2	-	-	-	-	-	1	-	-
Bicycles on Crosswalk%	-	-	-	-	0%	-	-	-	-	1.6%	-	-	-	-	-	-	3.1%	-	-	-	-	-	1.6%	-	-



Peak Hour: 01:00 PM - 02:00 PM Weather: Scattered Clouds (20.08 °C)

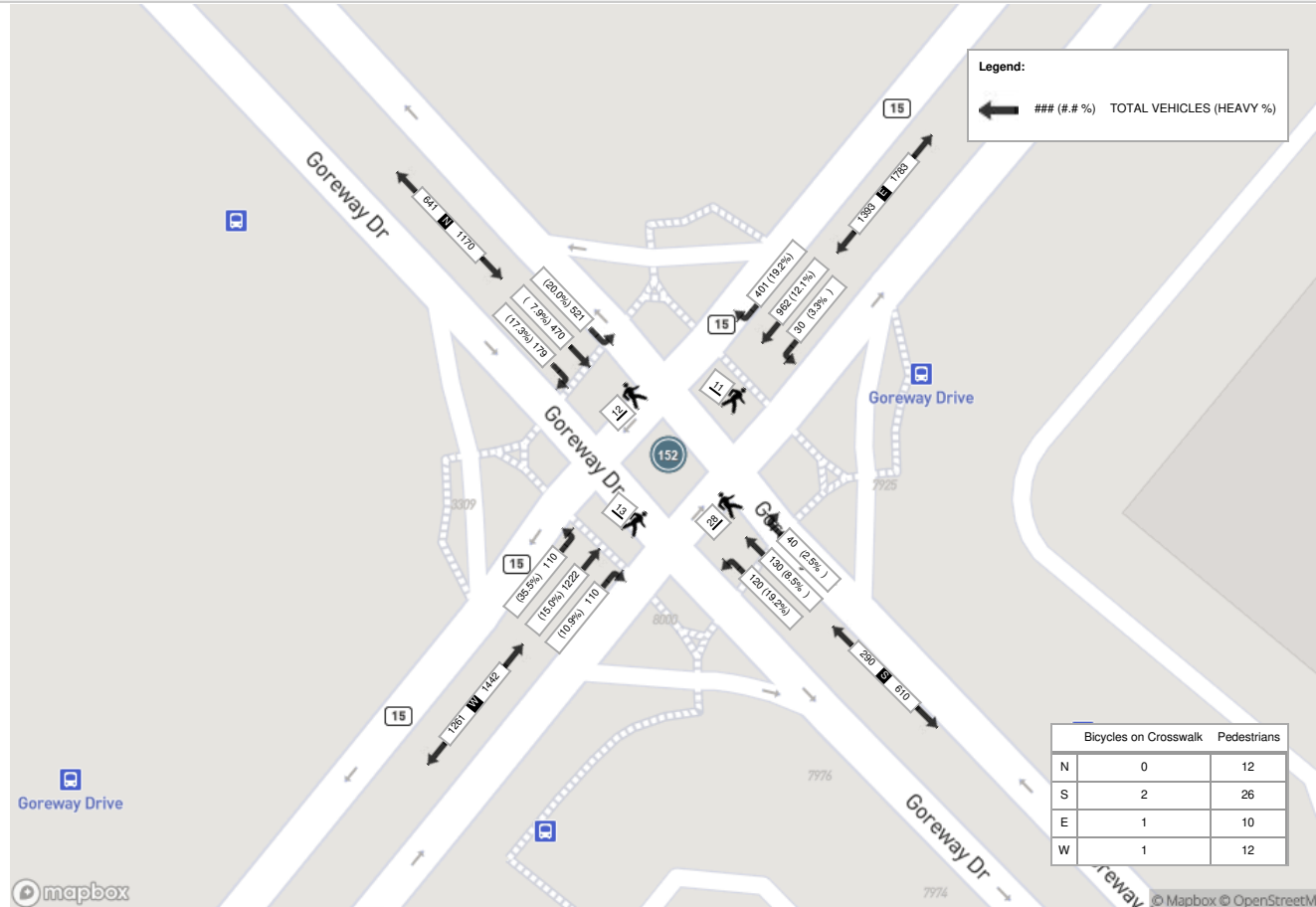
Start Time	Southbound GOREWAY DR						Westbound STEELES AVE E						Northbound GOREWAY DR						Eastbound STEELES AVE E						Int. Total (15 min)
	Left	Thru	Right	UTurn	Peds	Approach Total	Left	Thru	Right	UTurn	Peds	Approach Total	Left	Thru	Right	UTurn	Peds	Approach Total	Left	Thru	Right	UTurn	Peds	Approach Total	
13:00:00	55	68	33	0	0	156	13	205	86	0	1	304	40	58	9	0	2	107	32	263	28	0	0	323	890
13:15:00	64	72	39	0	5	175	7	174	97	0	5	278	51	54	13	1	1	119	43	219	29	0	0	291	863
13:30:00	50	63	38	0	0	151	17	228	89	0	0	334	35	69	18	0	3	122	33	246	36	0	1	315	922
13:45:00	67	73	43	1	3	184	7	176	105	0	3	288	58	68	14	0	0	140	35	199	30	1	0	265	877
Grand Total	236	276	153	1	8	666	44	783	377	0	9	1204	184	249	54	1	6	488	143	927	123	1	1	1194	3552
Approach%	35.4%	41.4%	23%	0.2%		-	3.7%	65%	31.3%	0%		-	37.7%	51%	11.1%	0.2%		-	12%	77.6%	10.3%	0.1%		-	-
Totals %	6.6%	7.8%	4.3%	0%		18.8%	1.2%	22%	10.6%	0%		33.9%	5.2%	7%	1.5%	0%		13.7%	4%	26.1%	3.5%	0%		33.6%	-
PHF	0.88	0.95	0.89	0.25		0.9	0.65	0.86	0.9	0		0.9	0.79	0.9	0.75	0.25		0.87	0.83	0.88	0.85	0.25		0.92	-
Heavy	85	45	50	0		180	6	155	140	0		301	25	20	4	0		49	53	214	20	0		287	-
Heavy %	36%	16.3%	32.7%	0%		27%	13.6%	19.8%	37.1%	0%		25%	13.6%	8%	7.4%	0%		10%	37.1%	23.1%	16.3%	0%		24%	-
Lights	151	231	103	1		486	38	628	237	0		903	159	229	50	1		439	90	713	103	1		907	-
Lights %	64%	83.7%	67.3%	100%		73%	86.4%	80.2%	62.9%	0%		75%	86.4%	92%	92.6%	100%		90%	62.9%	76.9%	83.7%	100%		76%	-
Single-Unit Trucks	22	22	28	0		72	2	59	48	0		109	10	12	1	0		23	19	89	7	0		115	-
Single-Unit Trucks %	9.3%	8%	18.3%	0%		10.8%	4.5%	7.5%	12.7%	0%		9.1%	5.4%	4.8%	1.9%	0%		4.7%	13.3%	9.6%	5.7%	0%		9.6%	-
Buses	0	2	1	0		3	0	5	0	0		5	4	1	0	0		5	0	6	5	0		11	-
Buses %	0%	0.7%	0.7%	0%		0.5%	0%	0.6%	0%	0%		0.4%	2.2%	0.4%	0%	0%		1%	0%	0.6%	4.1%	0%		0.9%	-
Articulated Trucks	63	21	21	0		105	4	91	92	0		187	11	7	3	0		21	34	119	8	0		161	-
Articulated Trucks %	26.7%	7.6%	13.7%	0%		15.8%	9.1%	11.6%	24.4%	0%		15.5%	6%	2.8%	5.6%	0%		4.3%	23.8%	12.8%	6.5%	0%		13.5%	-
Pedestrians	-	-	-	-	8	-	-	-	-	9	-	-	-	-	-	-	6	-	-	-	-	-	1	-	-
Pedestrians%	-	-	-	-	33.3%	-	-	-	-	37.5%	-	-	-	-	-	25%	-	-	-	-	-	-	4.2%	-	-
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	-	0	1	0	0	0	-	0	0	0	0	0	-	-
Bicycles on Road%	-	-	-	-	0%	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	-	0%	-	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-
Bicycles on Crosswalk%	-	-	-	-	0%	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	-	0%	-	-



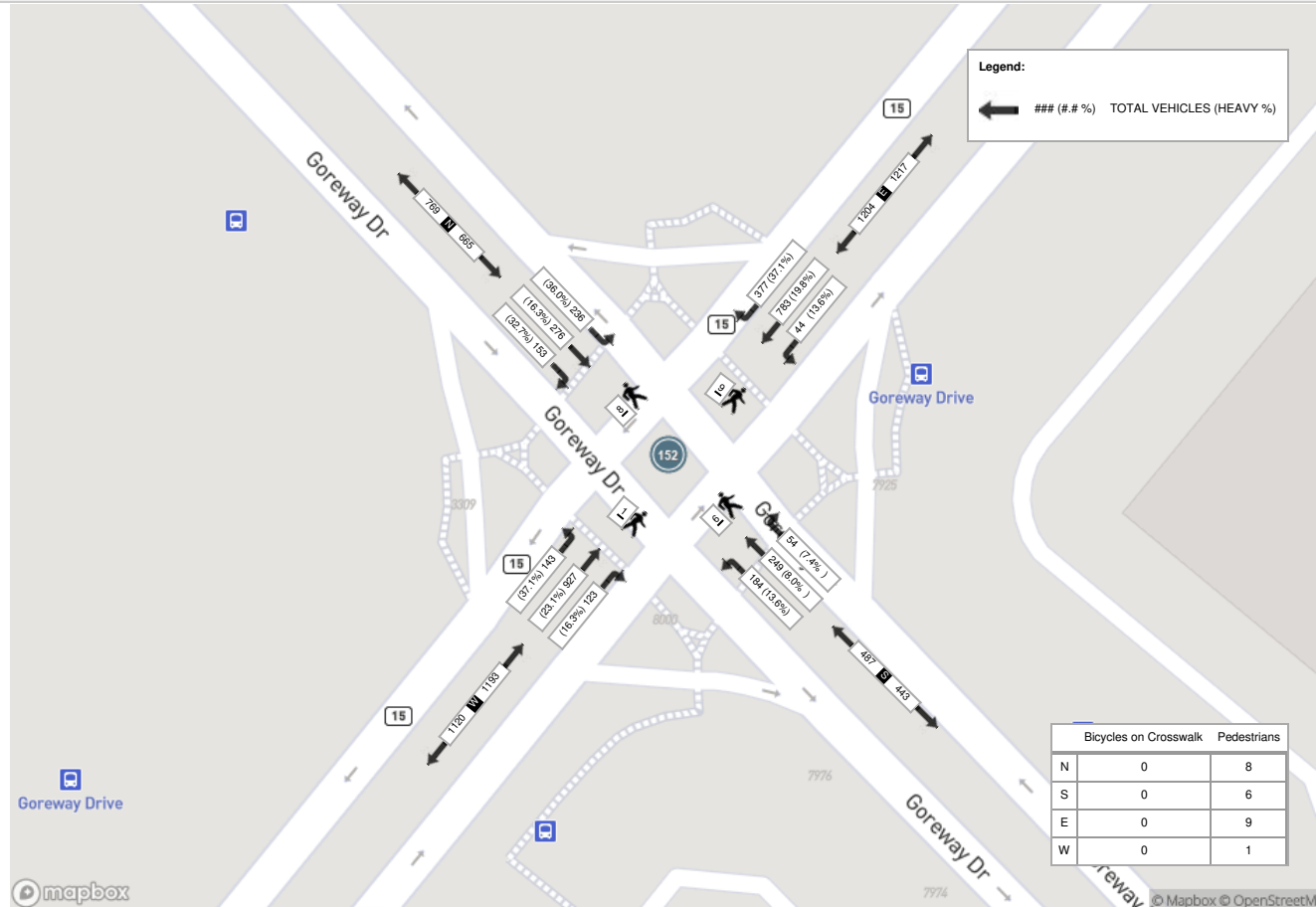
Peak Hour: 04:00 PM - 05:00 PM Weather: Few Clouds (25.07 °C)

Start Time	Southbound GOREWAY DR						Westbound STEELES AVE E						Northbound GOREWAY DR						Eastbound STEELES AVE E						Int. Total (15 min)
	Left	Thru	Right	UTurn	Peds	Approach Total	Left	Thru	Right	UTurn	Peds	Approach Total	Left	Thru	Right	UTurn	Peds	Approach Total	Left	Thru	Right	UTurn	Peds	Approach Total	
16:00:00	78	102	35	0	1	215	17	249	152	0	1	418	72	223	17	0	4	312	47	297	36	1	4	381	1326
16:15:00	99	110	34	0	1	243	18	256	137	1	1	412	89	207	17	0	3	313	49	279	42	0	2	370	1338
16:30:00	77	92	50	0	1	219	8	300	153	0	0	461	69	172	27	1	7	269	51	308	45	0	8	404	1353
16:45:00	87	75	47	0	1	209	14	225	157	0	0	396	70	165	18	0	8	253	56	319	48	0	7	423	1281
Grand Total	341	379	166	0	4	886	57	1030	599	1	2	1687	300	767	79	1	22	1147	203	1203	171	1	21	1578	5298
Approach%	38.5%	42.8%	18.7%	0%	-	-	3.4%	61.1%	35.5%	0.1%	-	-	26.2%	66.9%	6.9%	0.1%	-	-	12.9%	76.2%	10.8%	0.1%	-	-	-
Totals %	6.4%	7.2%	3.1%	0%	16.7%	1.1%	19.4%	11.3%	0%	31.8%	0.91	5.7%	14.5%	1.5%	0%	21.6%	3.8%	22.7%	3.8%	0%	29.8%	-	-	-	
PHF	0.86	0.86	0.83	0	0.91	0.79	0.86	0.95	0.25	0.91	0.84	0.86	0.73	0.25	0.92	0.91	0.94	0.89	0.25	0.93	-	-	-		
Heavy	49	22	40	0	111	2	156	96	0	254	25	31	3	0	59	58	146	18	0	222	-	-	-		
Heavy %	14.4%	5.8%	24.1%	0%	12.5%	3.5%	15.1%	16%	0%	15.1%	8.3%	4%	3.8%	0%	5.1%	28.6%	12.1%	10.5%	0%	14.1%	-	-	-		
Lights	292	357	126	0	775	55	874	503	1	1433	275	736	76	1	1088	145	1057	153	1	1356	-	-	-		
Lights %	85.6%	94.2%	75.9%	0%	87.5%	96.5%	84.9%	84%	100%	84.9%	91.7%	96%	96.2%	100%	94.9%	71.4%	87.9%	89.5%	100%	85.9%	-	-	-		
Single-Unit Trucks	13	6	27	0	46	1	61	26	0	88	10	10	2	0	22	21	57	7	0	85	-	-	-		
Single-Unit Trucks %	3.8%	1.6%	16.3%	0%	5.2%	1.8%	5.9%	4.3%	0%	5.2%	3.3%	1.3%	2.5%	0%	1.9%	10.3%	4.7%	4.1%	0%	5.4%	-	-	-		
Buses	4	4	0	0	8	0	12	3	0	15	7	10	0	0	17	1	10	7	0	18	-	-	-		
Buses %	1.2%	1.1%	0%	0%	0.9%	0%	1.2%	0.5%	0%	0.9%	2.3%	1.3%	0%	0%	1.5%	0.5%	0.8%	4.1%	0%	1.1%	-	-	-		
Articulated Trucks	32	12	13	0	57	1	83	67	0	151	8	11	1	0	20	36	79	4	0	119	-	-	-		
Articulated Trucks %	9.4%	3.2%	7.8%	0%	6.4%	1.8%	8.1%	11.2%	0%	9%	2.7%	1.4%	1.3%	0%	1.7%	17.7%	6.6%	2.3%	0%	7.5%	-	-	-		
Pedestrians	-	-	-	-	4	-	-	-	-	2	-	-	-	-	22	-	-	-	-	21	-	-	-		
Pedestrians%	-	-	-	-	8.2%	-	-	-	-	4.1%	-	-	-	-	44.9%	-	-	-	-	42.9%	-	-	-		
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	-	-		
Bicycles on Road%	-	-	-	-	0%	-	-	-	-	0%	-	-	-	-	0%	-	-	-	-	0%	-	-	-		
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-		
Bicycles on Crosswalk%	-	-	-	-	0%	-	-	-	-	0%	-	-	-	-	0%	-	-	-	-	0%	-	-	-		

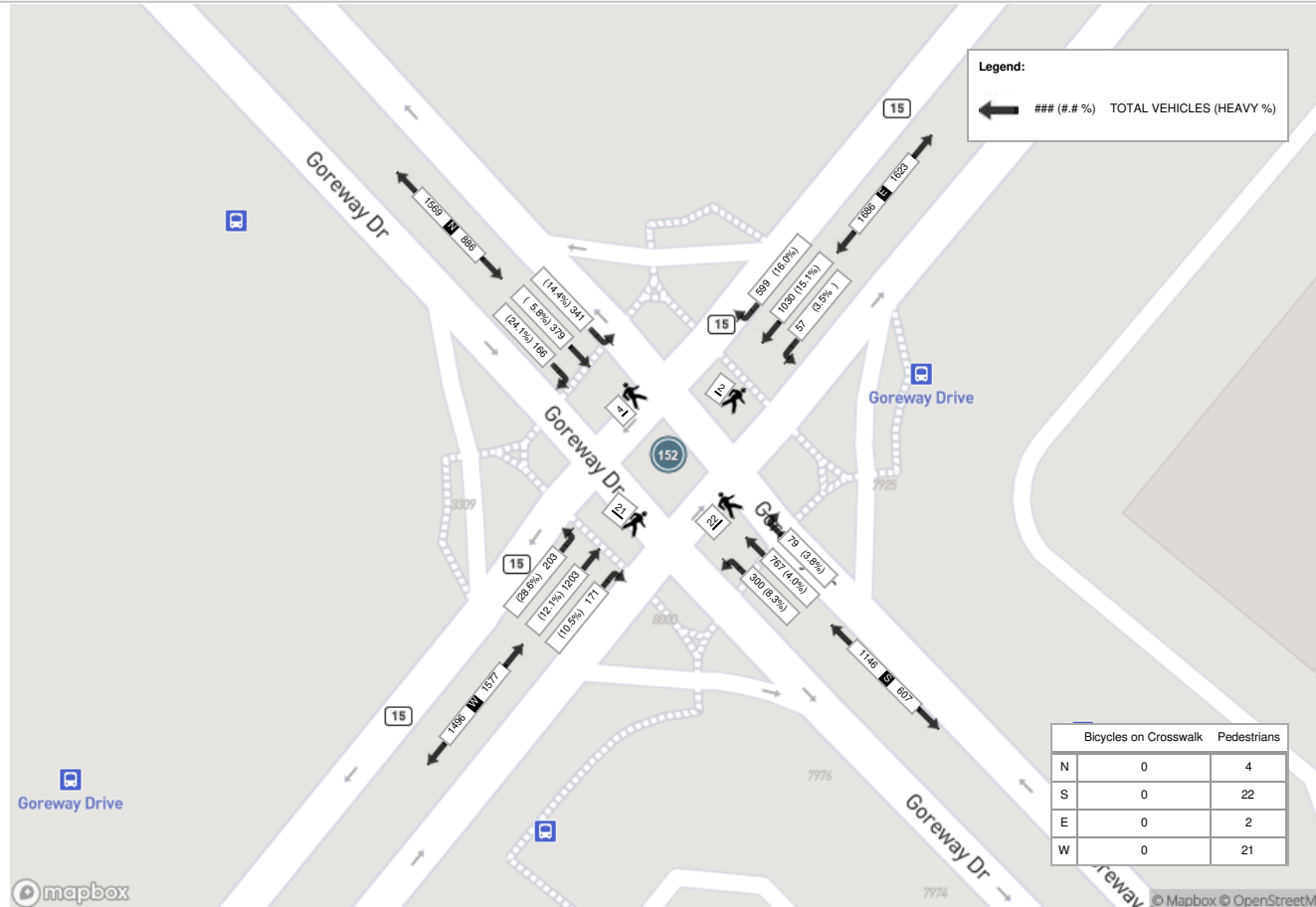
Peak Hour: 07:00 AM - 08:00 AM Weather: Broken Clouds (9.94 °C)



Peak Hour: 01:00 PM - 02:00 PM Weather: Scattered Clouds (20.08 °C)



Peak Hour: 04:00 PM - 05:00 PM Weather: Few Clouds (25.07 °C)





Turning Movement Count (28 . FINCH AVE & STEELES AVE) CustID: 00202179 MioID:

Start Time	Southbound GOREWOOD DR						Westbound STEELES AVE E						Northbound FINCH AVE						Eastbound STEELES AVE E						Int. Total (15 min)
	Left	Thru	Right	UTurn	Peds	Approach Total	Left	Thru	Right	UTurn	Peds	Approach Total	Left	Thru	Right	UTurn	Peds	Approach Total	Left	Thru	Right	UTurn	Peds	Approach Total	
07:00:00	3	9	1	0	0	13	31	210	3	0	1	244	118	16	32	0	1	166	3	233	184	0	0	420	843
07:15:00	5	10	5	0	0	20	25	210	5	0	0	240	159	9	35	0	0	203	0	221	182	0	0	403	866
07:30:00	4	10	2	0	2	16	43	223	4	0	3	270	90	3	23	0	7	116	2	271	184	0	0	457	859
07:45:00	4	3	0	0	0	7	36	235	5	0	0	276	159	17	39	0	2	215	1	269	197	0	1	467	965
Hourly	16	32	8	0	2	56	135	878	17	0	4	1030	526	45	129	0	10	700	6	994	747	0	1	1747	3533
08:00:00	5	8	3	0	0	16	36	194	6	0	0	236	153	6	27	0	1	186	2	222	173	1	0	398	836
08:15:00	1	7	0	0	2	8	21	251	3	0	3	275	120	7	19	0	2	146	1	255	184	1	0	441	870
08:30:00	2	5	1	0	0	8	31	218	4	0	0	253	146	8	31	0	0	185	1	176	200	0	0	377	823
08:45:00	3	3	3	0	1	9	26	212	3	0	1	241	105	5	36	0	0	146	1	206	200	1	0	408	804
Hourly	11	23	7	0	3	41	114	875	16	0	4	1005	524	26	113	0	3	663	5	859	757	3	0	1624	3333
BREAK																									
11:00:00	4	7	2	0	0	13	25	119	2	0	0	146	99	4	19	0	0	122	2	163	110	0	0	275	556
11:15:00	5	8	1	0	0	14	25	178	5	0	0	208	77	6	22	0	0	105	0	178	111	0	0	289	616
11:30:00	2	5	4	0	0	11	24	154	3	0	1	181	100	4	26	0	1	130	2	169	112	0	0	283	605
11:45:00	2	6	6	0	0	14	34	130	0	0	0	164	95	3	31	0	0	129	3	153	110	0	0	266	573
Hourly	13	26	13	0	0	52	108	581	10	0	1	699	371	17	98	0	1	486	7	663	443	0	0	1113	2350
12:00:00	2	3	2	0	0	7	31	182	3	0	2	216	93	2	24	0	0	119	3	193	106	0	0	302	644
12:15:00	1	4	1	0	0	6	30	162	1	1	0	194	71	9	18	0	0	98	0	155	130	0	0	285	583
12:30:00	2	1	2	0	1	5	29	170	2	0	2	201	104	5	43	0	1	152	1	176	148	0	0	325	683
12:45:00	0	4	0	0	1	4	38	194	2	0	0	234	83	5	20	0	0	108	3	184	108	0	0	295	641
Hourly	5	12	5	0	2	22	128	708	8	1	4	845	351	21	105	0	1	477	7	708	492	0	0	1207	2551
13:00:00	5	11	4	0	0	20	24	158	2	1	0	185	100	6	28	0	1	134	1	179	95	0	0	275	614
13:15:00	4	6	4	0	0	14	40	200	0	0	0	240	84	2	20	0	0	106	0	176	113	0	0	289	649
13:30:00	4	5	3	0	1	12	40	201	4	0	0	245	110	8	25	0	0	143	3	200	132	0	0	335	735
13:45:00	2	3	5	0	1	10	29	190	2	0	3	221	122	6	41	0	2	169	1	174	133	0	0	308	708
Hourly	15	25	16	0	2	56	133	749	8	1	3	891	416	22	114	0	3	552	5	729	473	0	0	1207	2706
BREAK																									
15:00:00	9	18	4	0	2	31	33	224	10	0	3	267	139	13	42	0	1	194	1	216	171	0	0	388	880
15:15:00	8	13	3	0	0	24	30	231	3	0	1	264	169	4	22	0	0	195	2	192	147	0	0	341	824
15:30:00	6	19	4	0	0	29	35	297	3	0	1	335	118	8	30	0	0	156	6	221	153	1	0	381	901
15:45:00	1	14	2	0	0	17	28	228	4	0	1	260	182	10	28	0	2	220	0	246	171	0	0	417	914
Hourly	24	64	13	0	2	101	126	980	20	0	6	1126	608	35	122	0	3	765	9	875	642	1	0	1527	3519
16:00:00	7	18	0	0	0	25	43	234	7	0	0	284	132	10	25	0	0	167	1	209	177	0	0	387	863
16:15:00	2	10	4	0	1	16	31	249	3	0	1	283	142	4	26	0	1	172	6	270	160	0	0	436	907
16:30:00	9	24	3	0	22	36	44	233	5	0	23	282	175	8	21	0	21	204	1	196	169	1	0	367	889
16:45:00	6	12	1	0	4	19	39	287	2	0	5	328	138	7	22	0	5	167	2	247	169	1	1	419	933
Hourly	24	64	8	0	27	96	157	1003	17	0	29	1177	587	29	94	0	27	710	10	922	675	2	1	1609	3592
17:00:00	1	10	5	0	2	16	32	263	6	1	1	302	154	6	27	0	0	187	2	271	164	0	1	437	942
17:15:00	5	9	5	0	4	19	34	226	3	0	4	263	157	8	22	0	2	187	4	228	196	1	0	429	898
17:30:00	4	13	6	0	0	23	37	304	2	0	0	343	143	5	25	0	0	173	2	254	165	1	1	422	961
17:45:00	0	11	4	0	2	15	34	256	2	0	1	292	146	4	21	0	0	171	1	218	148	0	0	367	845
Hourly	10	43	20	0	8	73	137	1049	13	1	6	1200	600	23	95	0	2	718	9	971	673	2	2	1655	3646
Grand Total	118	289	90	0	46	497	1038	6823	109	3	57	7973	3983	218	870	0	50	5071	58	6721	4902	8	4	11689	25230
Approach%	23.7%	58.1%	18.1%	0%	-	-	13%	85.6%	1.4%	0%	-	-	78.5%	4.3%	17.2%	0%	-	-	0.5%	57.5%	41.9%	0.1%	-	-	-
Totals %	0.5%	1.1%	0.4%	0%	2%	4.1%	27%	0.4%	0%	31.6%	15.8%	0.9%	3.4%	0%	20.1%	0.2%	26.6%	19.4%	0%	46.3%	-	-	-	-	



Turning Movement Count
Location Name: FINCH AVE & STEELES AVE
Date: Tue, May 10, 2022 Deployment Lead: Peter Ilias

Peel Region
SUITE B 10 PEEL CENTRE DR
BRAMPTON ONTARIO, L6T 4B9
CANADA

Heavy	25	52	21	0	-	118	1198	23	0	-	1052	41	122	0	-	8	1132	905	0	-	-
Heavy %	21.2%	18%	23.3%	0%	-	11.4%	17.6%	21.1%	0%	-	26.4%	18.8%	14%	0%	-	13.8%	16.8%	18.5%	0%	-	-
Bicycles	0	1	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	-
Bicycle %	0%	0.3%	0%	0%	-	0%	0%	0%	0%	-	0%	0%	0%	0%	-	0%	0%	0%	0%	-	-



Peak Hour: 07:00 AM - 08:00 AM Weather: Broken Clouds (8.33 °C)

Start Time	Southbound GOREWOOD DR						Westbound STEELES AVE E						Northbound FINCH AVE						Eastbound STEELES AVE E						Int. Total (15 min)
	Left	Thru	Right	UTurn	Peds	Approach Total	Left	Thru	Right	UTurn	Peds	Approach Total	Left	Thru	Right	UTurn	Peds	Approach Total	Left	Thru	Right	UTurn	Peds	Approach Total	
07:00:00	3	9	1	0	0	13	31	210	3	0	1	244	118	16	32	0	1	166	3	233	184	0	0	420	843
07:15:00	5	10	5	0	0	20	25	210	5	0	0	240	159	9	35	0	0	203	0	221	182	0	0	403	866
07:30:00	4	10	2	0	2	16	43	223	4	0	3	270	90	3	23	0	7	116	2	271	184	0	0	457	859
07:45:00	4	3	0	0	0	7	36	235	5	0	0	276	159	17	39	0	2	215	1	269	197	0	1	467	965
Grand Total	16	32	8	0	2	56	135	878	17	0	4	1030	526	45	129	0	10	700	6	994	747	0	1	1747	3533
Approach%	28.6%	57.1%	14.3%	0%		-	13.1%	85.2%	1.7%	0%		-	75.1%	6.4%	18.4%	0%		-	0.3%	56.9%	42.8%	0%		-	-
Totals %	0.5%	0.9%	0.2%	0%		1.6%	3.8%	24.9%	0.5%	0%		29.2%	14.9%	1.3%	3.7%	0%		19.8%	0.2%	28.1%	21.1%	0%		49.4%	-
PHF	0.8	0.8	0.4	0		0.7	0.78	0.93	0.85	0		0.93	0.83	0.66	0.83	0		0.81	0.5	0.92	0.95	0		0.94	-
Heavy	9	13	2	0		24	16	131	2	0		149	90	0	16	0		106	1	134	150	0		285	-
Heavy %	56.3%	40.6%	25%	0%		42.9%	11.9%	14.9%	11.8%	0%		14.5%	17.1%	0%	12.4%	0%		15.1%	16.7%	13.5%	20.1%	0%		16.3%	-
Lights	7	19	6	0		32	119	747	15	0		881	436	45	113	0		594	5	860	597	0		1462	-
Lights %	43.8%	59.4%	75%	0%		57.1%	88.1%	85.1%	88.2%	0%		85.5%	82.9%	100%	87.6%	0%		84.9%	83.3%	86.5%	79.9%	0%		83.7%	-
Single-Unit Trucks	7	10	1	0		18	6	69	1	0		76	26	0	5	0		31	1	61	49	0		111	-
Single-Unit Trucks %	43.8%	31.3%	12.5%	0%		32.1%	4.4%	7.9%	5.9%	0%		7.4%	4.9%	0%	3.9%	0%		4.4%	16.7%	6.1%	6.6%	0%		6.4%	-
Buses	0	0	0	0		0	4	0	0	0		4	12	0	10	0		22	0	4	15	0		19	-
Buses %	0%	0%	0%	0%		0%	3%	0%	0%	0%		0.4%	2.3%	0%	7.8%	0%		3.1%	0%	0.4%	2%	0%		1.1%	-
Articulated Trucks	2	3	1	0		6	6	62	1	0		69	52	0	1	0		53	0	69	86	0		155	-
Articulated Trucks %	12.5%	9.4%	12.5%	0%		10.7%	4.4%	7.1%	5.9%	0%		6.7%	9.9%	0%	0.8%	0%		7.6%	0%	6.9%	11.5%	0%		8.9%	-
Pedestrians	-	-	-	-	2	-	-	-	-	4		-	-	-	-	10		-	-	-	-	1		-	-
Pedestrians%	-	-	-	-	11.8%	-	-	-	-	23.5%		-	-	-	-	58.8%		-	-	-	-	5.9%		-	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0		-	-	-	-	0		-	-	-	-	0		-	-
Bicycles on Crosswalk%	-	-	-	-	0%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	-
Bicycles on Road%	-	-	-	-	0%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-



Peak Hour: 01:00 PM - 02:00 PM Weather: Overcast Clouds (17.32 °C)

Start Time	Southbound GOREWOOD DR						Westbound STEELES AVE E						Northbound FINCH AVE						Eastbound STEELES AVE E						Int. Total (15 min)
	Left	Thru	Right	UTurn	Peds	Approach Total	Left	Thru	Right	UTurn	Peds	Approach Total	Left	Thru	Right	UTurn	Peds	Approach Total	Left	Thru	Right	UTurn	Peds	Approach Total	
13:00:00	5	11	4	0	0	20	24	158	2	1	0	185	100	6	28	0	1	134	1	179	95	0	0	275	614
13:15:00	4	6	4	0	0	14	40	200	0	0	0	240	84	2	20	0	0	106	0	176	113	0	0	289	649
13:30:00	4	5	3	0	1	12	40	201	4	0	0	245	110	8	25	0	0	143	3	200	132	0	0	335	735
13:45:00	2	3	5	0	1	10	29	190	2	0	3	221	122	6	41	0	2	169	1	174	133	0	0	308	708
Grand Total	15	25	16	0	2	56	133	749	8	1	3	891	416	22	114	0	3	552	5	729	473	0	0	1207	2706
Approach%	26.8%	44.6%	28.6%	0%		-	14.9%	84.1%	0.9%	0.1%		-	75.4%	4%	20.7%	0%		-	0.4%	60.4%	39.2%	0%		-	-
Totals %	0.6%	0.9%	0.6%	0%		2.1%	4.9%	27.7%	0.3%	0%		32.9%	15.4%	0.8%	4.2%	0%		20.4%	0.2%	26.9%	17.5%	0%		44.6%	-
PHF	0.75	0.57	0.8	0		0.7	0.83	0.93	0.5	0.25		0.91	0.85	0.69	0.7	0		0.82	0.42	0.91	0.89	0		0.9	-
Heavy	3	3	3	0		9	31	152	0	0		183	151	5	18	0		174	1	153	121	0		275	-
Heavy %	20%	12%	18.8%	0%		16.1%	23.3%	20.3%	0%	0%		20.5%	36.3%	22.7%	15.8%	0%		31.5%	20%	21%	25.6%	0%		22.8%	-
Lights	12	22	13	0		47	102	597	8	1		708	265	17	96	0		378	4	576	352	0		932	-
Lights %	80%	88%	81.3%	0%		83.9%	76.7%	79.7%	100%	100%		79.5%	63.7%	77.3%	84.2%	0%		68.5%	80%	79%	74.4%	0%		77.2%	-
Single-Unit Trucks	1	1	2	0		4	25	74	0	0		99	37	5	8	0		50	1	65	32	0		98	-
Single-Unit Trucks %	6.7%	4%	12.5%	0%		7.1%	18.8%	9.9%	0%	0%		11.1%	8.9%	22.7%	7%	0%		9.1%	20%	8.9%	6.8%	0%		8.1%	-
Buses	0	0	0	0		0	1	1	0	0		2	7	0	3	0		10	0	0	6	0		6	-
Buses %	0%	0%	0%	0%		0%	0.8%	0.1%	0%	0%		0.2%	1.7%	0%	2.6%	0%		1.8%	0%	0%	1.3%	0%		0.5%	-
Articulated Trucks	2	2	1	0		5	5	77	0	0		82	107	0	7	0		114	0	88	83	0		171	-
Articulated Trucks %	13.3%	8%	6.3%	0%		8.9%	3.8%	10.3%	0%	0%		9.2%	25.7%	0%	6.1%	0%		20.7%	0%	12.1%	17.5%	0%		14.2%	-
Pedestrians	-	-	-	-	2	-	-	-	-	-	3	-	-	-	-	-	3	-	-	-	-	-	0	-	-
Pedestrians%	-	-	-	-	25%	-	-	-	-	-	37.5%	-	-	-	-	-	37.5%	-	-	-	-	-	0%	-	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
Bicycles on Crosswalk%	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-
Bicycles on Road	0	1	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	-
Bicycles on Road%	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-



Peak Hour: 05:00 PM - 06:00 PM Weather: Broken Clouds (19.72 °C)

Start Time	Southbound GOREWOOD DR						Westbound STEELES AVE E						Northbound FINCH AVE						Eastbound STEELES AVE E						Int. Total (15 min)
	Left	Thru	Right	UTurn	Peds	Approach Total	Left	Thru	Right	UTurn	Peds	Approach Total	Left	Thru	Right	UTurn	Peds	Approach Total	Left	Thru	Right	UTurn	Peds	Approach Total	
17:00:00	1	10	5	0	2	16	32	263	6	1	1	302	154	6	27	0	0	187	2	271	164	0	1	437	942
17:15:00	5	9	5	0	4	19	34	226	3	0	4	263	157	8	22	0	2	187	4	228	196	1	0	429	898
17:30:00	4	13	6	0	0	23	37	304	2	0	0	343	143	5	25	0	0	173	2	254	165	1	1	422	961
17:45:00	0	11	4	0	2	15	34	256	2	0	1	292	146	4	21	0	0	171	1	218	148	0	0	367	845
Grand Total	10	43	20	0	8	73	137	1049	13	1	6	1200	600	23	95	0	2	718	9	971	673	2	2	1655	3646
Approach%	13.7%	58.9%	27.4%	0%		-	11.4%	87.4%	1.1%	0.1%		-	83.6%	3.2%	13.2%	0%		-	0.5%	58.7%	40.7%	0.1%		-	-
Totals %	0.3%	1.2%	0.5%	0%		2%	3.8%	28.8%	0.4%	0%		32.9%	16.5%	0.6%	2.6%	0%		19.7%	0.2%	26.6%	18.5%	0.1%		45.4%	-
PHF	0.5	0.83	0.83	0		0.79	0.93	0.86	0.54	0.25		0.87	0.96	0.72	0.88	0		0.96	0.56	0.9	0.86	0.5		0.95	-
Heavy	0	7	4	0		11	10	119	4	0		133	138	9	16	0		163	0	119	78	0		197	-
Heavy %	0%	16.3%	20%	0%		15.1%	7.3%	11.3%	30.8%	0%		11.1%	23%	39.1%	16.8%	0%		22.7%	0%	12.3%	11.6%	0%		11.9%	-
Lights	10	36	16	0		62	127	930	9	1		1067	462	14	79	0		555	9	852	595	2		1458	-
Lights %	100%	83.7%	80%	0%		84.9%	92.7%	88.7%	69.2%	100%		88.9%	77%	60.9%	83.2%	0%		77.3%	100%	87.7%	88.4%	100%		88.1%	-
Single-Unit Trucks	0	4	1	0		5	8	46	1	0		55	41	5	5	0		51	0	41	19	0		60	-
Single-Unit Trucks %	0%	9.3%	5%	0%		6.8%	5.8%	4.4%	7.7%	0%		4.6%	6.8%	21.7%	5.3%	0%		7.1%	0%	4.2%	2.8%	0%		3.6%	-
Buses	0	0	0	0		0	0	0	0	0		0	10	0	6	0		16	0	0	9	0		9	-
Buses %	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	1.7%	0%	6.3%	0%		2.2%	0%	0%	1.3%	0%		0.5%	-
Articulated Trucks	0	3	3	0		6	2	73	3	0		78	87	4	5	0		96	0	78	50	0		128	-
Articulated Trucks %	0%	7%	15%	0%		8.2%	1.5%	7%	23.1%	0%		6.5%	14.5%	17.4%	5.3%	0%		13.4%	0%	8%	7.4%	0%		7.7%	-
Pedestrians	-	-	-	-	7	-	-	-	-	6	-	-	-	-	-	-	2	-	-	-	-	-	2	-	-
Pedestrians%	-	-	-	-	38.9%	-	-	-	-	33.3%	-	-	-	-	-	11.1%	-	-	-	-	-	11.1%	-	-	-
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-
Bicycles on Crosswalk%	-	-	-	-	5.6%	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	-
Bicycles on Road%	-	-	-	-	0%	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-

Peak Hour: 07:00 AM - 08:00 AM Weather: Broken Clouds (8.33 °C)



Peak Hour: 01:00 PM - 02:00 PM Weather: Overcast Clouds (17.32 °C)





Turning Movement Count - Details Report

Location..... INTERMODAL DR @ GOREWAY DR

Municipality..... Brampton

Count Date..... Thursday, June 09, 2022

GOREWAY DR

INTERMODAL DR

North Approach

South Approach

East Approach

West Approach

Time Period	LT	TH	RT	U-Turn	TOT	LT	TH	RT	U-Turn	TOT	LT	TH	RT	U-Turn	TOT	LT	TH	RT	U-Turn	TOT
07:00 07:15	15	273	21	0	309	25	115	24	0	164	36	17	28	0	81	8	15	26	0	49
07:15 07:30	21	313	18	0	352	26	167	32	0	225	19	15	10	0	44	4	7	15	0	26
07:30 07:45	15	336	19	0	370	23	135	28	0	186	16	10	8	0	34	13	19	20	0	52
07:45 08:00	16	375	22	0	413	38	150	23	0	211	19	15	4	0	38	7	9	28	0	44
Hourly Total	67	1297	80	0	1444	112	567	107	0	786	90	57	50	0	197	32	50	89	0	171
08:00 08:15	15	325	16	0	356	22	143	34	0	199	23	9	5	0	37	12	11	19	0	42
08:15 08:30	13	281	22	0	316	26	122	34	0	182	18	9	3	0	30	9	19	30	0	58
08:30 08:45	12	303	13	0	328	22	148	36	0	206	13	9	5	0	27	5	21	15	0	41
08:45 09:00	9	287	18	0	314	17	109	30	0	156	18	17	5	0	40	11	15	21	0	47
Hourly Total	49	1196	69	0	1314	87	522	134	0	743	72	44	18	0	134	37	66	85	0	188
Grand Total	116	2493	149	0	2758	199	1089	241	0	1529	162	101	68	0	331	69	116	174	0	359
Truck %	20%	7%	49%	0%	9%	46%	10%	44%	0%	20%	69%	68%	24%	0%	60%	39%	35%	63%	0%	50%



Turning Movement Count - Details Report

Location..... INTERMODAL DR @ GOREWAY DR

Municipality..... Brampton

Count Date..... Thursday, June 09, 2022

GOREWAY DR

INTERMODAL DR

North Approach

South Approach

East Approach

West Approach

Time Period	LT	TH	RT	U-Turn	TOT	LT	TH	RT	U-Turn	TOT	LT	TH	RT	U-Turn	TOT	LT	TH	RT	U-Turn	TOT
15:00 15:15	7	158	14	0	179	27	185	20	0	232	45	15	38	0	98	24	23	37	0	84
15:15 15:30	4	168	11	0	183	42	385	27	0	454	24	13	9	0	46	16	16	29	0	61
15:30 15:45	12	178	27	0	217	27	299	24	0	350	30	15	37	0	82	19	12	34	0	65
15:45 16:00	5	193	22	0	220	34	276	21	0	331	26	17	16	0	59	16	13	26	0	55
Hourly Total	28	697	74	0	799	130	1145	92	0	1367	125	60	100	0	285	75	64	126	0	265
16:00 16:15	7	207	18	0	232	33	369	25	0	427	33	24	15	0	72	29	12	47	0	88
16:15 16:30	1	160	13	0	174	37	368	21	0	426	24	15	13	0	52	18	9	50	0	77
16:30 16:45	7	209	15	0	231	32	414	25	0	471	28	25	28	0	81	22	20	29	0	71
16:45 17:00	5	223	21	0	249	35	367	15	0	417	36	19	9	0	64	20	10	24	0	54
Hourly Total	20	799	67	0	886	137	1518	86	0	1741	121	83	65	0	269	89	51	150	0	290
17:00 17:15	9	190	27	0	226	27	350	13	0	390	29	30	17	0	76	26	8	37	0	71
17:15 17:30	4	175	11	0	190	24	516	11	0	551	22	9	12	0	43	19	10	16	0	45
17:30 17:45	12	183	11	0	206	35	490	12	0	537	20	14	13	0	47	15	7	18	0	40
17:45 18:00	4	168	16	0	188	44	382	12	0	438	15	11	16	0	42	25	6	10	0	41
Hourly Total	29	716	65	0	810	130	1738	48	0	1916	86	64	58	0	208	85	31	81	0	197
Grand Total	77	2212	206	0	2495	397	4401	226	0	5024	332	207	223	0	762	249	146	357	0	752
Truck %	36%	8%	38%	0%	12%	51%	7%	60%	0%	13%	32%	28%	14%	0%	26%	37%	49%	22%	0%	32%

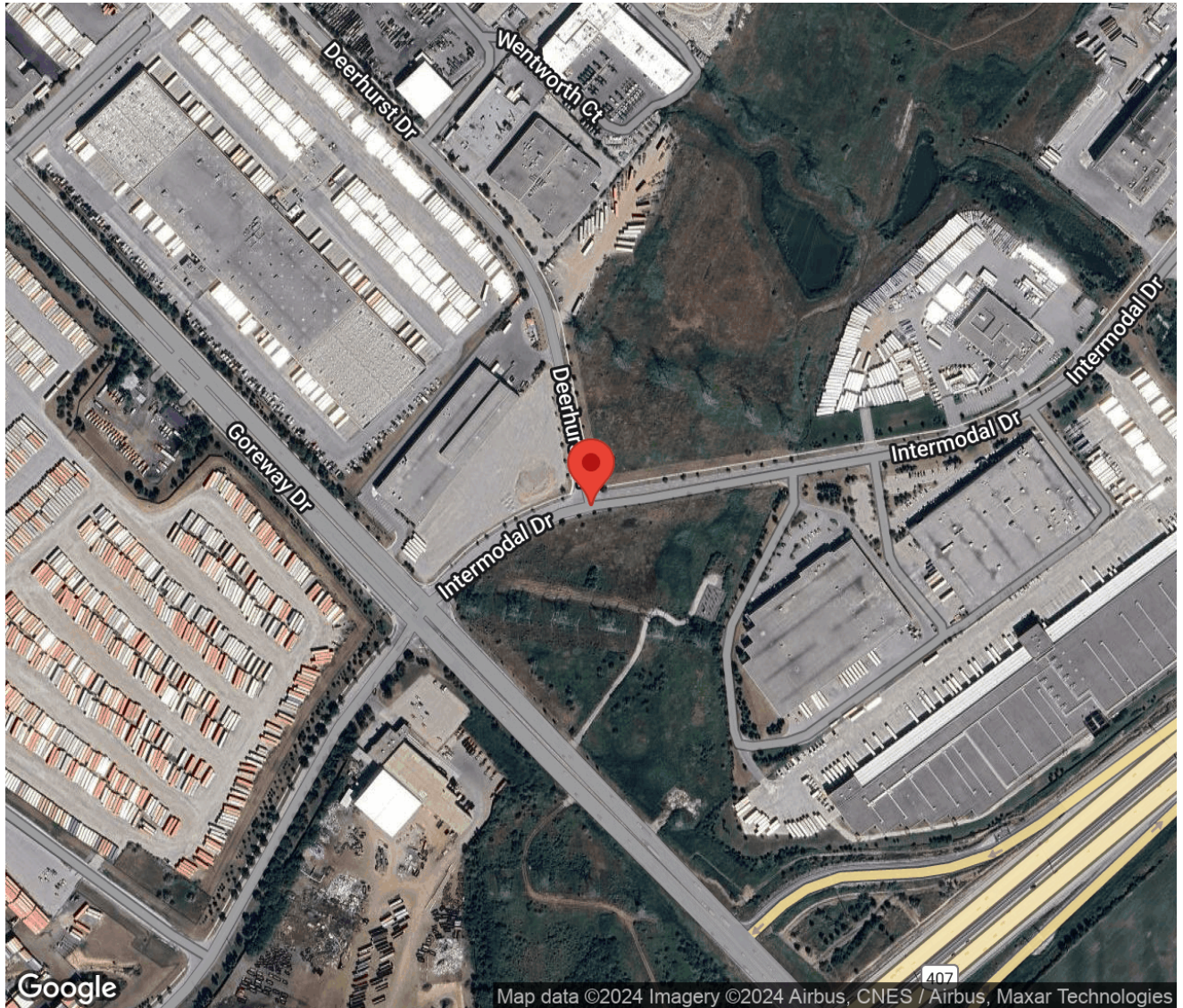
Project #24-106 - Arcadis Professional Services (Canada) Inc.

Intersection Count Report

Intersection: Deerhurst Dr & Intermodal Dr
Municipality: Brampton
Count Date: Tuesday, Mar 19, 2024
Site Code: 2410600001
Count Categories: Cars, Trucks, Bicycles, Pedestrians
Count Period: 07:00-10:00, 16:00-19:00
Weather: Clear
Comments:

Traffic Count Map

Intersection:	Deerhurst Dr & Intermodal Dr
Site Code:	2410600001
Municipality:	Brampton
Count Date:	Mar 19, 2024



Traffic Count Summary

Intersection: Deerhurst Dr & Intermodal Dr
Site Code: 2410600001
Municipality: Brampton
Count Date: Mar 19, 2024

Deerhurst Dr - Traffic Summary

Hour	North Approach Totals						South Approach Totals						Total
	Includes Cars, Trucks, Bicycles						Includes Cars, Trucks, Bicycles						
	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds	
07:00 - 08:00	10	0	79	0	89	10	0	0	0	0	0	0	89
08:00 - 09:00	8	0	57	0	65	2	0	0	0	0	0	0	65
09:00 - 10:00	7	0	68	0	75	0	0	0	0	0	0	0	75
BREAK													
16:00 - 17:00	29	0	115	0	144	2	0	0	0	0	0	0	144
17:00 - 18:00	22	0	86	0	108	2	0	0	0	0	0	0	108
18:00 - 19:00	15	0	29	0	44	4	0	0	0	0	0	0	44
GRAND TOTAL	91	0	434	0	525	20	0	0	0	0	0	0	525

Traffic Count Summary

Intersection: Deerhurst Dr & Intermodal Dr
Site Code: 2410600001
Municipality: Brampton
Count Date: Mar 19, 2024

Intermodal Dr - Traffic Summary

Hour	East Approach Totals						West Approach Totals						Total
	Includes Cars, Trucks, Bicycles						Includes Cars, Trucks, Bicycles						
	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds	
07:00 - 08:00	0	119	18	0	137	0	96	127	0	0	223	0	360
08:00 - 09:00	0	71	21	0	92	0	107	138	0	0	245	0	337
09:00 - 10:00	0	79	6	0	85	0	92	101	0	1	194	0	279
BREAK													
16:00 - 17:00	0	146	15	0	161	0	62	64	0	0	126	0	287
17:00 - 18:00	0	126	11	0	137	0	70	58	0	0	128	0	265
18:00 - 19:00	0	79	9	0	88	1	36	67	0	0	103	0	191
GRAND TOTAL	0	620	80	0	700	1	463	555	0	1	1019	0	1719

Traffic Count Data

Intersection: Deerhurst Dr & Intermodal Dr
Site Code: 2410600001
Municipality: Brampton
Count Date: Mar 19, 2024

North Approach - Deerhurst Dr

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↺	Total	←	↑	→	↺	Total	←	↑	→	↺	Total	
07:00	3	0	3	0	6	0	0	11	0	11	0	0	0	0	0	8
07:15	4	0	3	0	7	0	0	17	0	17	0	0	0	0	0	2
07:30	1	0	10	0	11	1	0	18	0	19	0	0	0	0	0	0
07:45	1	0	7	0	8	0	0	10	0	10	0	0	0	0	0	0
08:00	2	0	3	0	5	0	0	8	0	8	0	0	0	0	0	1
08:15	2	0	1	0	3	0	0	13	0	13	0	0	0	0	0	0
08:30	2	0	5	0	7	1	0	13	0	14	0	0	0	0	0	1
08:45	1	0	4	0	5	0	0	10	0	10	0	0	0	0	0	0
09:00	3	0	6	0	9	0	0	14	0	14	0	0	0	0	0	0
09:15	1	0	1	0	2	1	0	12	0	13	0	0	0	0	0	0
09:30	1	0	3	0	4	0	0	11	0	11	0	0	0	0	0	0
09:45	1	0	7	0	8	0	0	14	0	14	0	0	0	0	0	0
SUBTOTAL	22	0	53	0	75	3	0	151	0	154	0	0	0	0	0	12

Traffic Count Data

Intersection: Deerhurst Dr & Intermodal Dr
Site Code: 2410600001
Municipality: Brampton
Count Date: Mar 19, 2024

North Approach - Deerhurst Dr

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↻	Total	←	↑	→	↻	Total	←	↑	→	↻	Total	
16:00	10	0	36	0	46	0	0	6	0	6	0	0	0	0	0	0
16:15	2	0	17	0	19	0	0	6	0	6	0	0	0	0	0	1
16:30	9	0	27	0	36	2	0	3	0	5	0	0	0	0	0	1
16:45	4	0	14	0	18	2	0	6	0	8	0	0	0	0	0	0
17:00	6	0	25	0	31	0	0	4	0	4	0	0	0	0	0	1
17:15	5	0	14	0	19	1	0	5	0	6	0	0	0	0	0	0
17:30	7	0	15	0	22	0	0	2	0	2	0	0	0	0	0	0
17:45	3	0	13	0	16	0	0	8	0	8	0	0	0	0	0	1
18:00	3	0	3	0	6	0	0	2	0	2	0	0	0	0	0	0
18:15	6	0	6	0	12	1	0	5	0	6	0	0	0	0	0	3
18:30	5	0	5	0	10	0	0	2	0	2	0	0	0	0	0	1
18:45	0	0	5	0	5	0	0	1	0	1	0	0	0	0	0	0
SUBTOTAL	60	0	180	0	240	6	0	50	0	56	0	0	0	0	0	8
GRAND TOTAL	82	0	233	0	315	9	0	201	0	210	0	0	0	0	0	20

Traffic Count Data

Intersection: Deerhurst Dr & Intermodal Dr
Site Code: 2410600001
Municipality: Brampton
Count Date: Mar 19, 2024

East Approach - Intermodal Dr

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↺	Total	←	↑	→	↺	Total	←	↑	→	↺	Total	
07:00	0	55	6	0	61	0	8	1	0	9	0	1	0	0	1	0
07:15	0	16	0	0	16	0	10	1	0	11	0	0	0	0	0	0
07:30	0	4	1	0	5	0	7	0	0	7	0	0	0	0	0	0
07:45	0	11	9	0	20	0	7	0	0	7	0	0	0	0	0	0
08:00	0	10	3	0	13	0	6	0	0	6	0	0	0	0	0	0
08:15	0	4	3	0	7	0	13	1	0	14	0	0	0	0	0	0
08:30	0	9	6	0	15	0	11	4	0	15	0	0	0	0	0	0
08:45	0	7	3	0	10	0	11	1	0	12	0	0	0	0	0	0
09:00	0	11	1	0	12	0	5	0	0	5	0	0	0	0	0	0
09:15	0	8	0	0	8	0	9	2	0	11	0	0	0	0	0	0
09:30	0	8	2	0	10	0	16	0	0	16	0	0	0	0	0	0
09:45	0	14	1	0	15	0	8	0	0	8	0	0	0	0	0	0
SUBTOTAL	0	157	35	0	192	0	111	10	0	121	0	1	0	0	1	0

Traffic Count Data

Intersection: Deerhurst Dr & Intermodal Dr
Site Code: 2410600001
Municipality: Brampton
Count Date: Mar 19, 2024

East Approach - Intermodal Dr

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↺	Total	←	↑	→	↺	Total	←	↑	→	↺	Total	
16:00	0	27	6	0	33	0	4	1	0	5	0	0	0	0	0	0
16:15	0	29	4	0	33	0	7	0	0	7	0	0	0	0	0	0
16:30	0	41	0	0	41	0	5	1	0	6	0	0	0	0	0	0
16:45	0	25	2	0	27	0	8	1	0	9	0	0	0	0	0	0
17:00	0	42	3	0	45	0	9	0	0	9	0	0	0	0	0	0
17:15	0	17	0	0	17	0	12	0	0	12	0	0	0	0	0	0
17:30	0	25	4	0	29	0	10	0	0	10	0	0	0	0	0	0
17:45	0	8	3	0	11	0	3	1	0	4	0	0	0	0	0	0
18:00	0	21	1	0	22	0	4	0	0	4	0	0	0	0	0	0
18:15	0	17	0	0	17	0	5	0	0	5	0	0	0	0	0	1
18:30	0	12	4	0	16	0	5	0	0	5	0	0	0	0	0	0
18:45	0	11	3	0	14	0	4	1	0	5	0	0	0	0	0	0
SUBTOTAL	0	275	30	0	305	0	76	5	0	81	0	0	0	0	0	1
GRAND TOTAL	0	432	65	0	497	0	187	15	0	202	0	1	0	0	1	1

Traffic Count Data

Intersection: Deerhurst Dr & Intermodal Dr
Site Code: 2410600001
Municipality: Brampton
Count Date: Mar 19, 2024

West Approach - Intermodal Dr

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↺	Total	←	↑	→	↺	Total	←	↑	→	↺	Total	
07:00	17	31	0	0	48	7	6	0	0	13	0	0	0	0	0	0
07:15	13	25	0	0	38	10	7	0	0	17	0	0	0	0	0	0
07:30	12	15	0	0	27	6	8	0	0	14	0	0	0	0	0	0
07:45	20	23	0	0	43	11	12	0	0	23	0	0	0	0	0	0
08:00	12	24	0	0	36	8	10	0	0	18	0	0	0	0	0	0
08:15	19	19	0	0	38	16	11	0	0	27	0	0	0	0	0	0
08:30	11	28	0	0	39	11	7	0	0	18	0	0	0	0	0	0
08:45	21	26	0	0	47	9	13	0	0	22	0	0	0	0	0	0
09:00	11	16	0	0	27	12	9	0	0	21	0	0	0	0	0	0
09:15	7	13	0	0	20	11	15	0	0	26	0	0	0	0	0	0
09:30	12	12	0	1	25	11	10	0	0	21	0	0	0	0	0	0
09:45	14	19	0	0	33	14	7	0	0	21	0	0	0	0	0	0
SUBTOTAL	169	251	0	1	421	126	115	0	0	241	0	0	0	0	0	0

Traffic Count Data

Intersection: Deerhurst Dr & Intermodal Dr
Site Code: 2410600001
Municipality: Brampton
Count Date: Mar 19, 2024

West Approach - Intermodal Dr

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↺	Total	←	↑	→	↺	Total	←	↑	→	↺	Total	
16:00	6	8	0	0	14	12	5	0	0	17	0	0	0	0	0	0
16:15	4	6	0	0	10	8	13	0	0	21	0	0	0	0	0	0
16:30	4	8	0	0	12	9	12	0	0	21	0	0	0	0	0	0
16:45	6	7	0	0	13	13	5	0	0	18	0	0	0	0	0	0
17:00	10	13	0	0	23	14	8	0	0	22	0	0	0	0	0	0
17:15	6	3	0	0	9	15	7	0	0	22	0	0	0	0	0	0
17:30	4	6	0	0	10	11	5	0	0	16	0	0	0	0	0	0
17:45	1	5	0	0	6	9	11	0	0	20	0	0	0	0	0	0
18:00	3	10	0	0	13	7	5	0	0	12	0	0	0	0	0	0
18:15	6	18	0	0	24	3	7	0	0	10	0	0	0	0	0	0
18:30	2	13	0	0	15	7	2	0	0	9	0	0	0	0	0	0
18:45	2	7	0	0	9	6	5	0	0	11	0	0	0	0	0	0
SUBTOTAL	54	104	0	0	158	114	85	0	0	199	0	0	0	0	0	0
GRAND TOTAL	223	355	0	1	579	240	200	0	0	440	0	0	0	0	0	0

Peak Hour Diagram

Specified Period

From: 07:00:00
To: 10:00:00

One Hour Peak

From: 07:00:00
To: 08:00:00

Intersection: Deerhurst Dr & Intermodal Dr
Site Code: 2410600001
Count Date: Mar 19, 2024

Weather conditions: Clear

**** Unsignalized Intersection ****

Major Road: Intermodal Dr runs E/W

North Approach

	Out	In	Total
	32	78	110
	57	36	93
	0	0	0
	89	114	203

Deerhurst Dr

	0	0	0
	56	1	0
	23	9	0
Totals	79	10	0





East Approach

	Out	In	Total
	102	103	205
	34	34	68
	1	0	1
	137	137	274

Intermodal Dr

				Totals
	0	0	0	0
	0	34	62	96
	0	33	94	127





Peds: 10

Peds: 0



Peds: 0

Intermodal Dr

Totals			
0	0	0	0
18	16	2	0
119	86	32	1





Peds: 0

West Approach

	Out	In	Total
	156	109	265
	67	88	155
	0	1	1
	223	198	421

 - Cars

 - Trucks

 - Bicycles

Comments

Peak Hour Summary

Intersection: Deerhurst Dr & Intermodal Dr
Site Code: 2410600001
Count Date: Mar 19, 2024
Period: 07:00 - 10:00

Peak Hour Data (07:00 - 08:00)

Start Time	North Approach Deerhurst Dr						South Approach						East Approach Intermodal Dr						West Approach Intermodal Dr						Total Vehicles
	←	↑	→	↺	Peds	Total	←	↑	→	↺	Peds	Total	←	↑	→	↺	Peds	Total	←	↑	→	↺	Peds	Total	
07:00	3		14	0	8	17					0			64	7	0	0	71	24	37		0	0	61	149
07:15	4		20	0	2	24					0			26	1	0	0	27	23	32		0	0	55	106
07:30	2		28	0	0	30					0			11	1	0	0	12	18	23		0	0	41	83
07:45	1		17	0	0	18					0			18	9	0	0	27	31	35		0	0	66	111
Grand Total	10		79	0	10	89					0	0		119	18	0	0	137	96	127		0	0	223	449
Approach %	11.2		88.8	0	-	-					-	-		86.9	13.1	0	-	-	43	57		0	-	-	-
Totals %	2.2		17.6	0	19.8						0			26.5	4	0	30.5		21.4	28.3		0		49.7	
PHF	0.63		0.71	0	0.74						0			0.46	0.5	0	0.48		0.77	0.86		0		0.84	0.75
Cars	9		23	0		32					0			86	16	0		102	62	94		0		156	290
% Cars	90		29.1	0		36					0			72.3	88.9	0		74.5	64.6	74		0		70	64.6
Trucks	1		56	0		57					0			32	2	0		34	34	33		0		67	158
% Trucks	10		70.9	0		64					0			26.9	11.1	0		24.8	35.4	26		0		30	35.2
Bicycles	0		0	0		0					0			1	0	0		1	0	0		0		0	1
% Bicycles	0		0	0		0					0			0.8	0	0		0.7	0	0		0		0	0.2
Peds					10	-					0	-					0	-					0	-	10
% Peds					100	-					0	-					0	-					0	-	

Peak Hour Diagram

Specified Period

From: 16:00:00
To: 19:00:00

One Hour Peak

From: 16:15:00
To: 17:15:00

Intersection: Deerhurst Dr & Intermodal Dr
Site Code: 2410600001
Count Date: Mar 19, 2024

Weather conditions: Clear

**** Unsignalized Intersection ****

Major Road: Intermodal Dr runs E/W

North Approach

	Out	In	Total
	104	33	137
	23	46	69
	0	0	0
Totals	127	79	206

Deerhurst Dr

	0	0	0
	19	4	0
	83	21	0
Totals	102	25	0





East Approach

	Out	In	Total
	146	55	201
	31	42	73
	0	0	0
Totals	177	97	274

Intermodal Dr

				Totals
	0	0	0	0
	0	44	24	68
	0	38	34	72

Peds: 0

Peds: 3



Peds: 0

Peds: 0

Intermodal Dr

Totals			
0	0	0	0
11	9	2	0
166	137	29	0

West Approach

	Out	In	Total
	58	220	278
	82	48	130
	0	0	0
Totals	140	268	408

 - Cars

 - Trucks

 - Bicycles

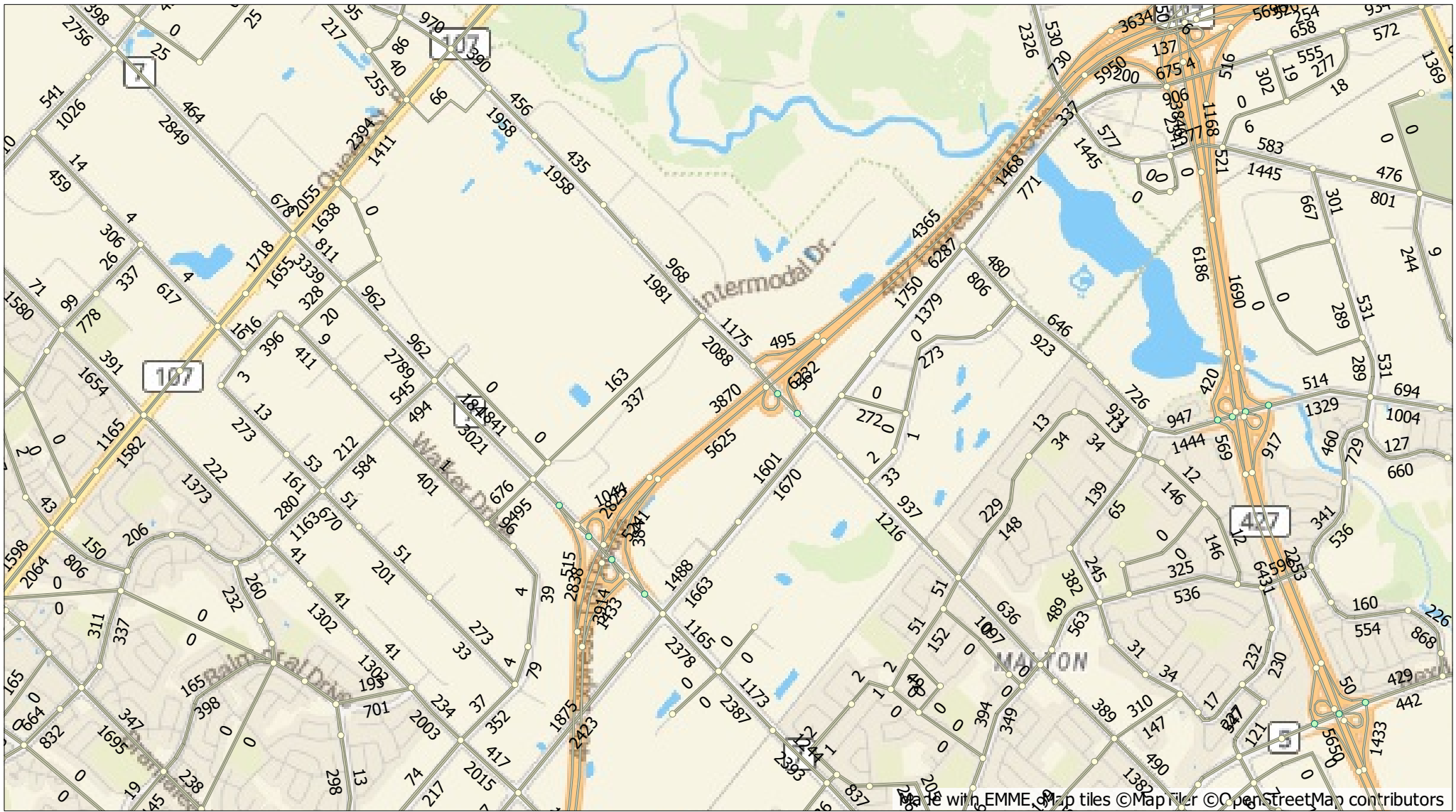
Comments

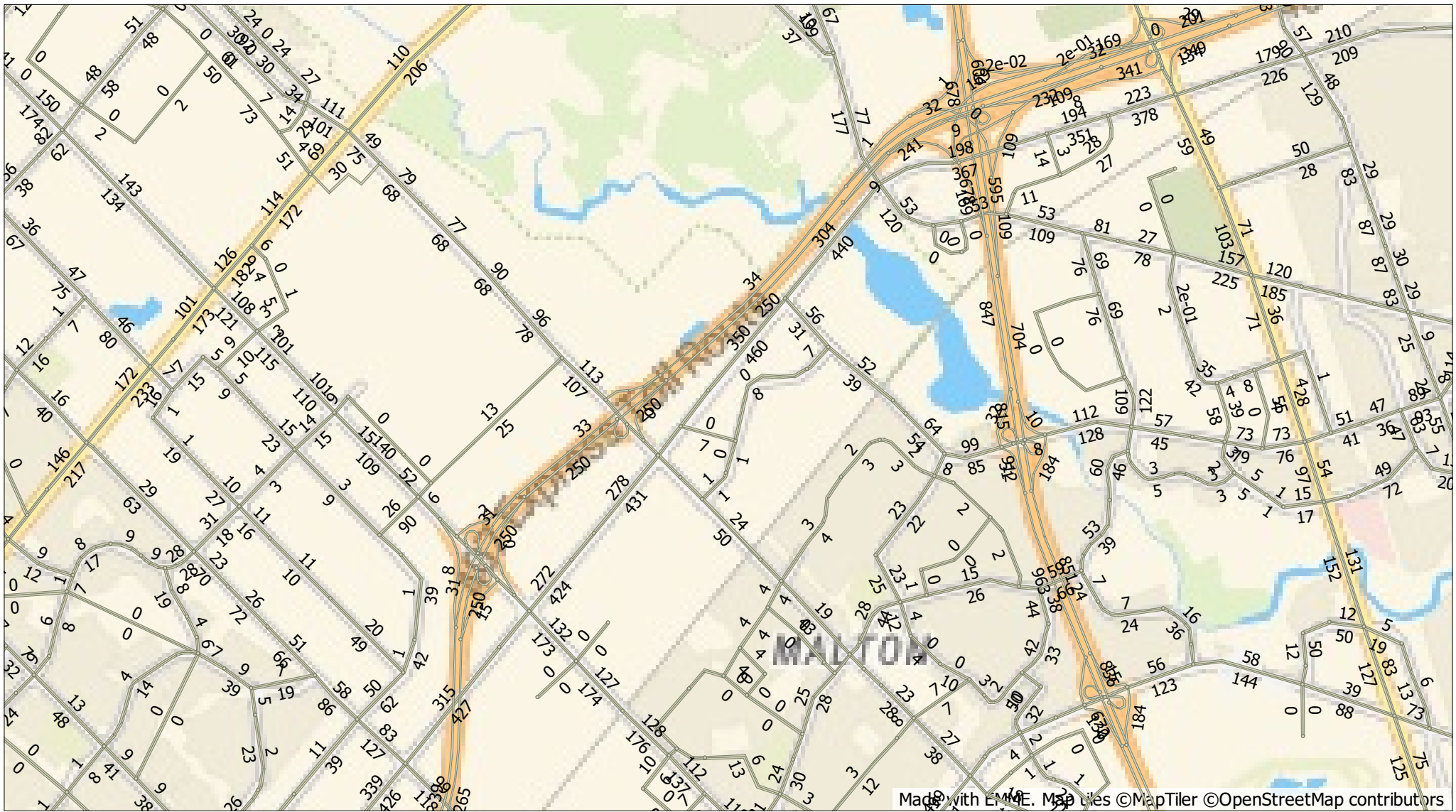
Peak Hour Summary

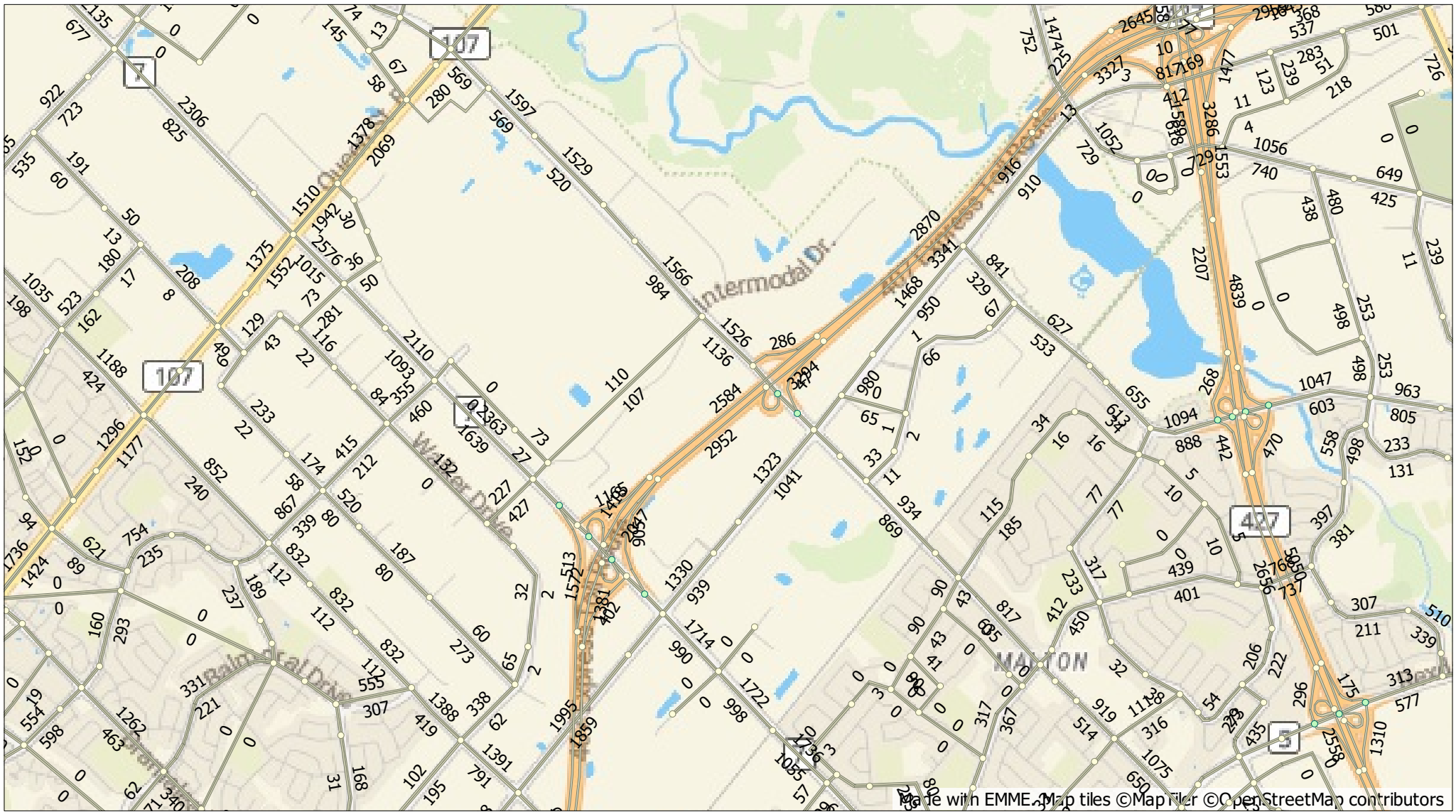
Intersection: Deerhurst Dr & Intermodal Dr
Site Code: 2410600001
Count Date: Mar 19, 2024
Period: 16:00 - 19:00

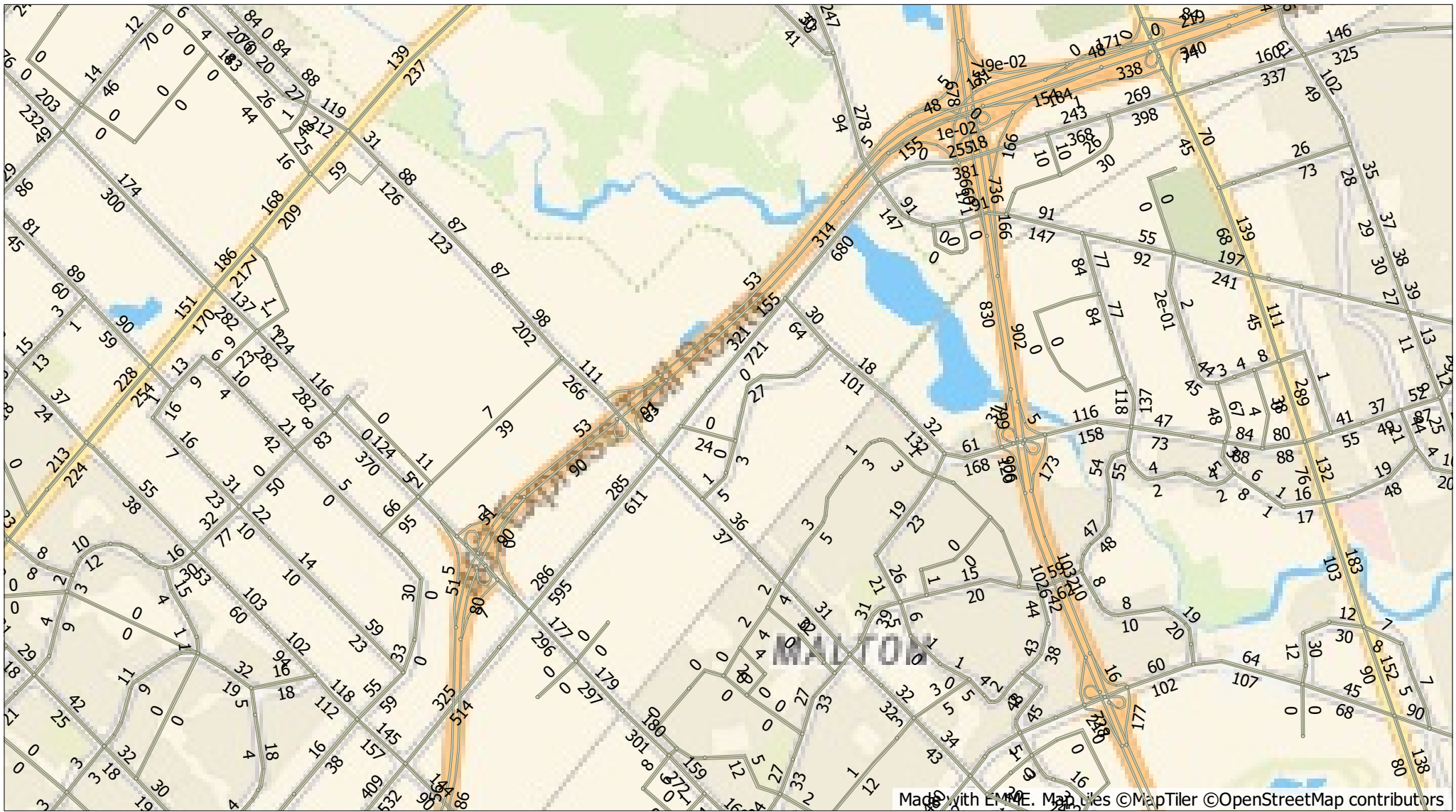
Peak Hour Data (16:15 - 17:15)

Start Time	North Approach Deerhurst Dr						South Approach						East Approach Intermodal Dr						West Approach Intermodal Dr						Total Vehicles
	←	↑	→	↺	Peds	Total	←	↑	→	↺	Peds	Total	←	↑	→	↺	Peds	Total	←	↑	→	↺	Peds	Total	
16:15	2		23	0	1	25					0			36	4	0	0	40	12	19		0	0	31	96
16:30	11		30	0	1	41					0			46	1	0	0	47	13	20		0	0	33	121
16:45	6		20	0	0	26					0			33	3	0	0	36	19	12		0	0	31	93
17:00	6		29	0	1	35					0			51	3	0	0	54	24	21		0	0	45	134
Grand Total	25		102	0	3	127					0	0		166	11	0	0	177	68	72		0	0	140	444
Approach %	19.7		80.3	0	-	-					-	-		93.8	6.2	0	-	-	48.6	51.4		0	-	-	-
Totals %	5.6		23	0		28.6					0			37.4	2.5	0		39.9	15.3	16.2		0		31.5	
PHF	0.57		0.85	0		0.77					0			0.81	0.69	0		0.82	0.71	0.86		0		0.78	0.83
Cars	21		83	0		104					0			137	9	0		146	24	34		0		58	308
% Cars	84		81.4	0		81.9					0			82.5	81.8	0		82.5	35.3	47.2		0		41.4	69.4
Trucks	4		19	0		23					0			29	2	0		31	44	38		0		82	136
% Trucks	16		18.6	0		18.1					0			17.5	18.2	0		17.5	64.7	52.8		0		58.6	30.6
Bicycles	0		0	0		0					0			0	0	0		0	0	0		0		0	0
% Bicycles	0		0	0		0					0			0	0	0		0	0	0		0		0	0
Peds					3	-					0	-					0	-					0	-	3
% Peds					100	-					0	-					0	-					0	-	

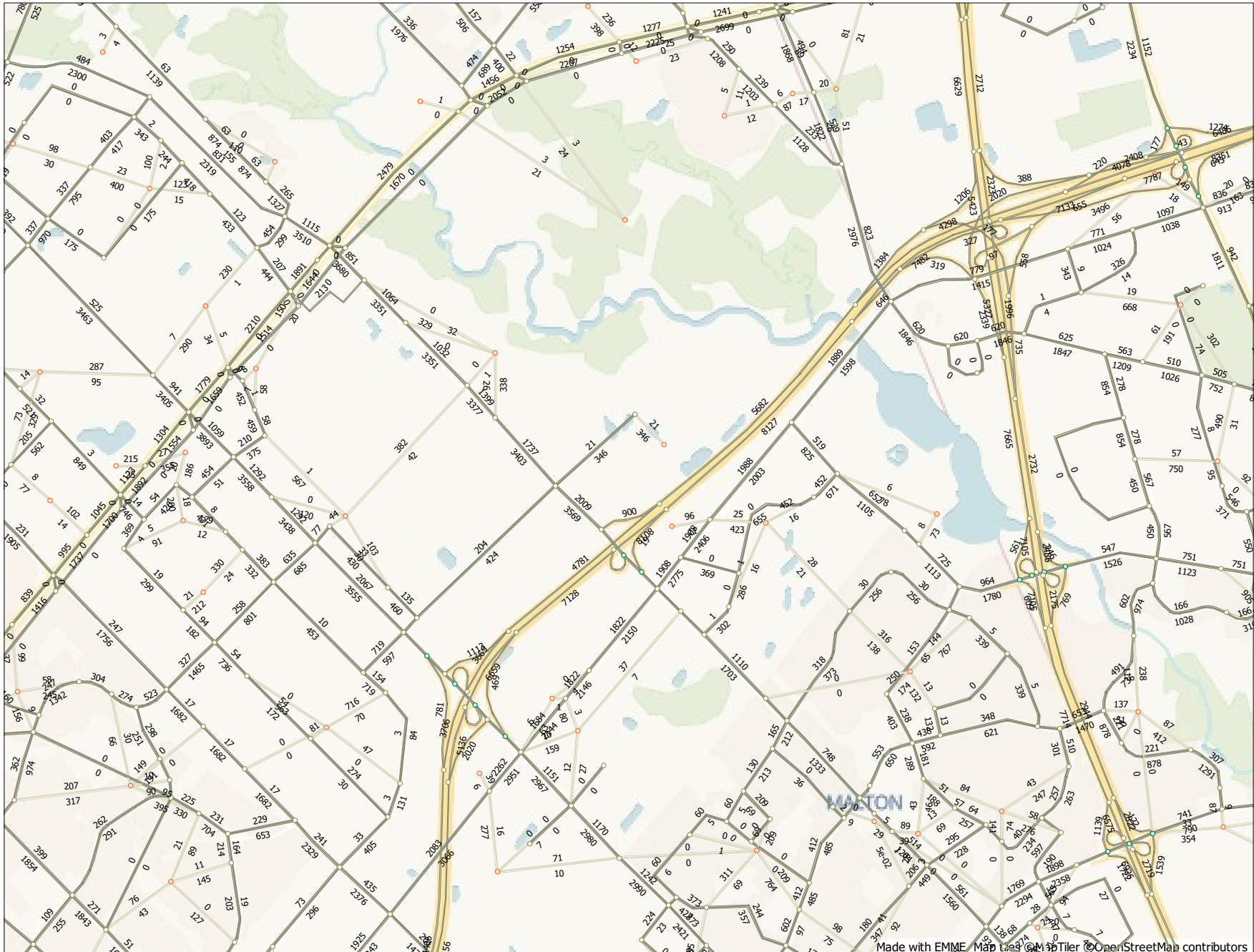






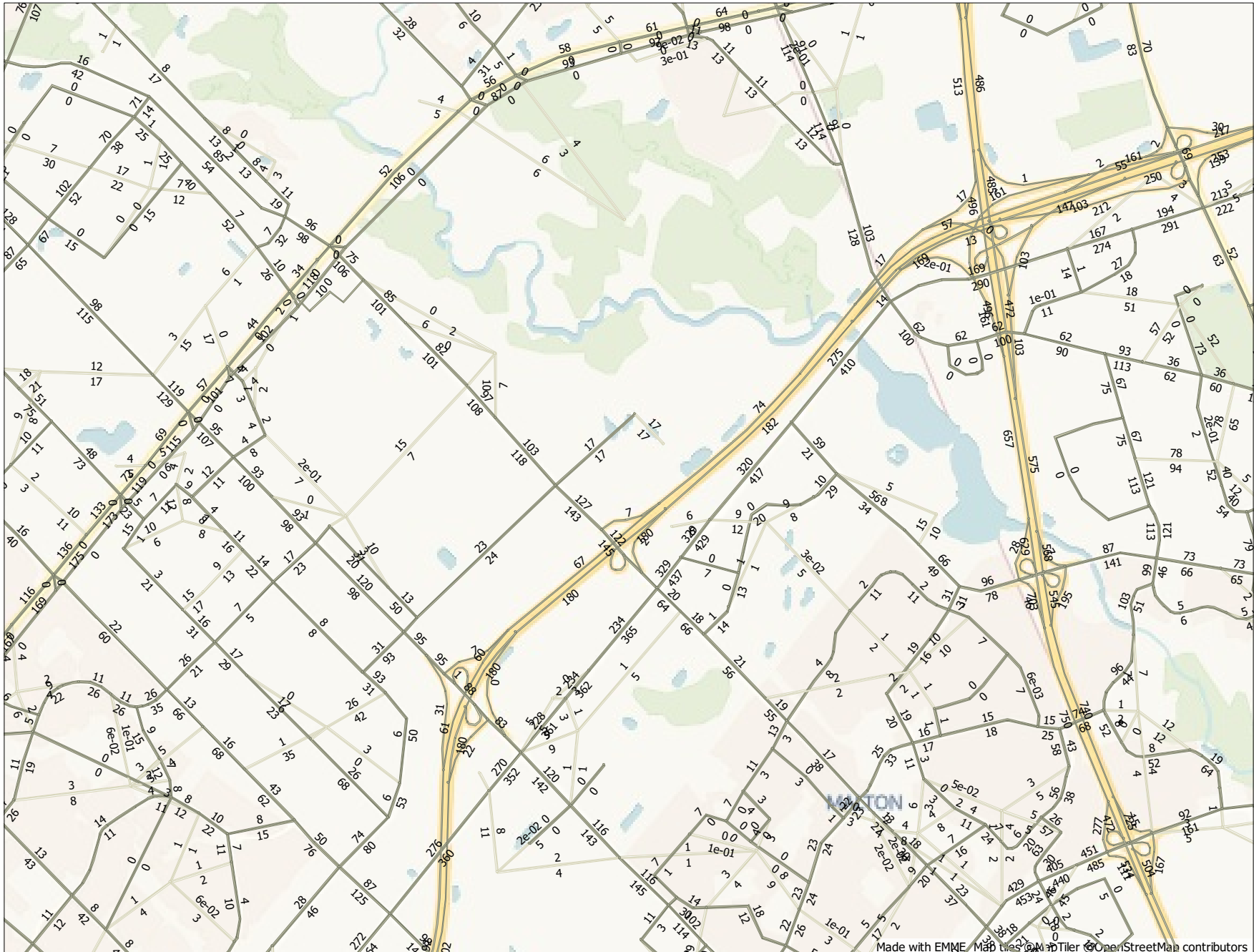


Auto Volumes



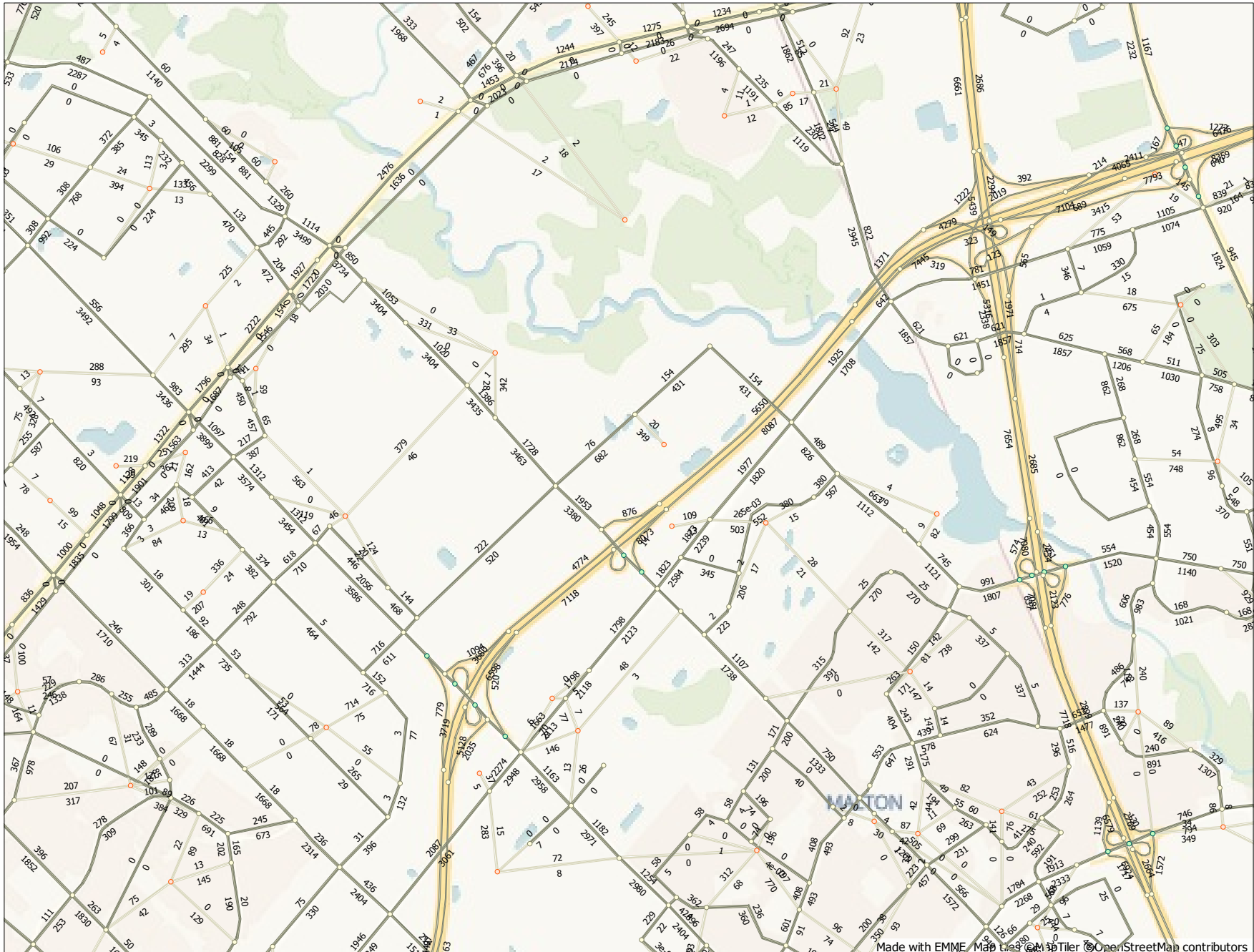
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Truck Volumes



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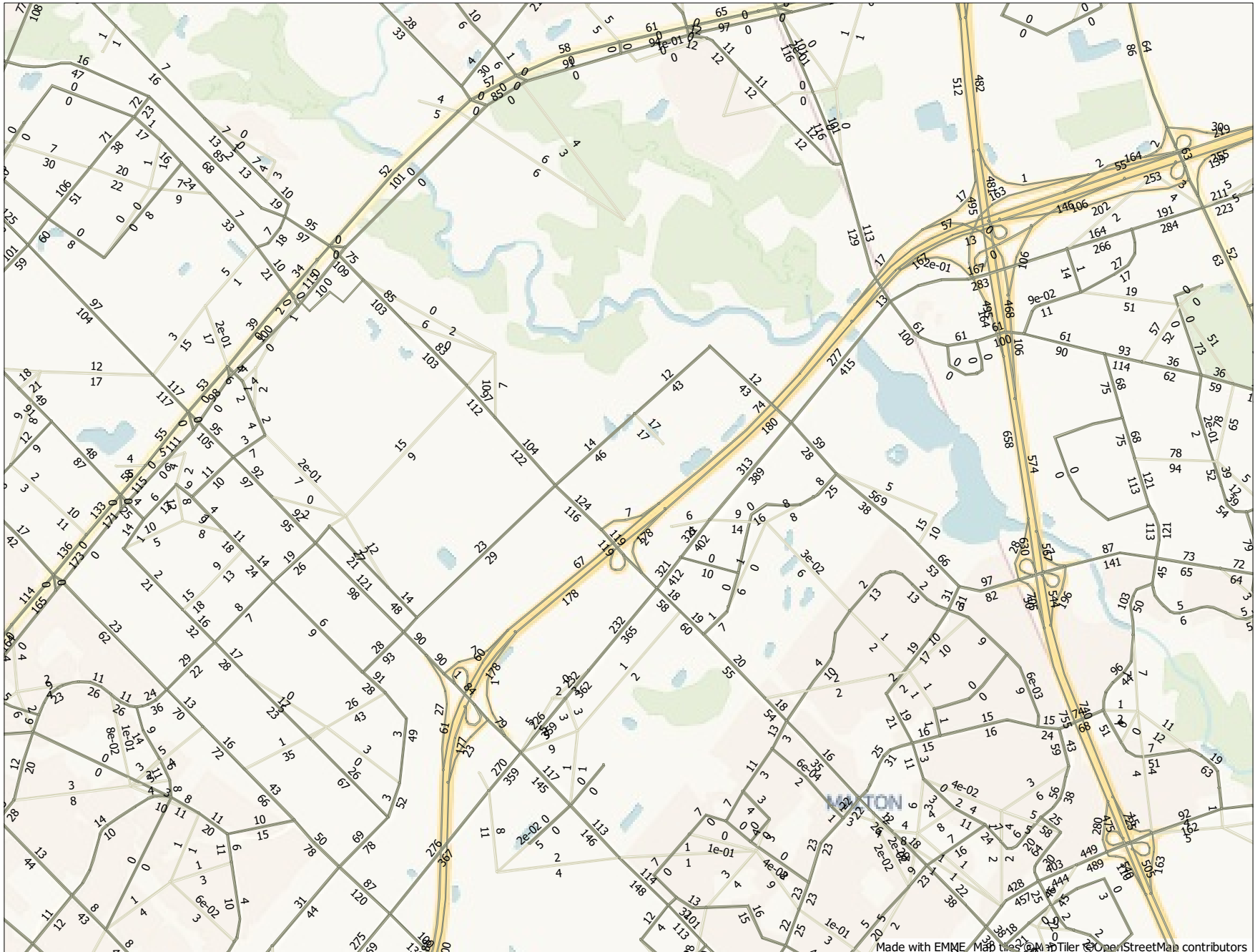
Auto Volumes



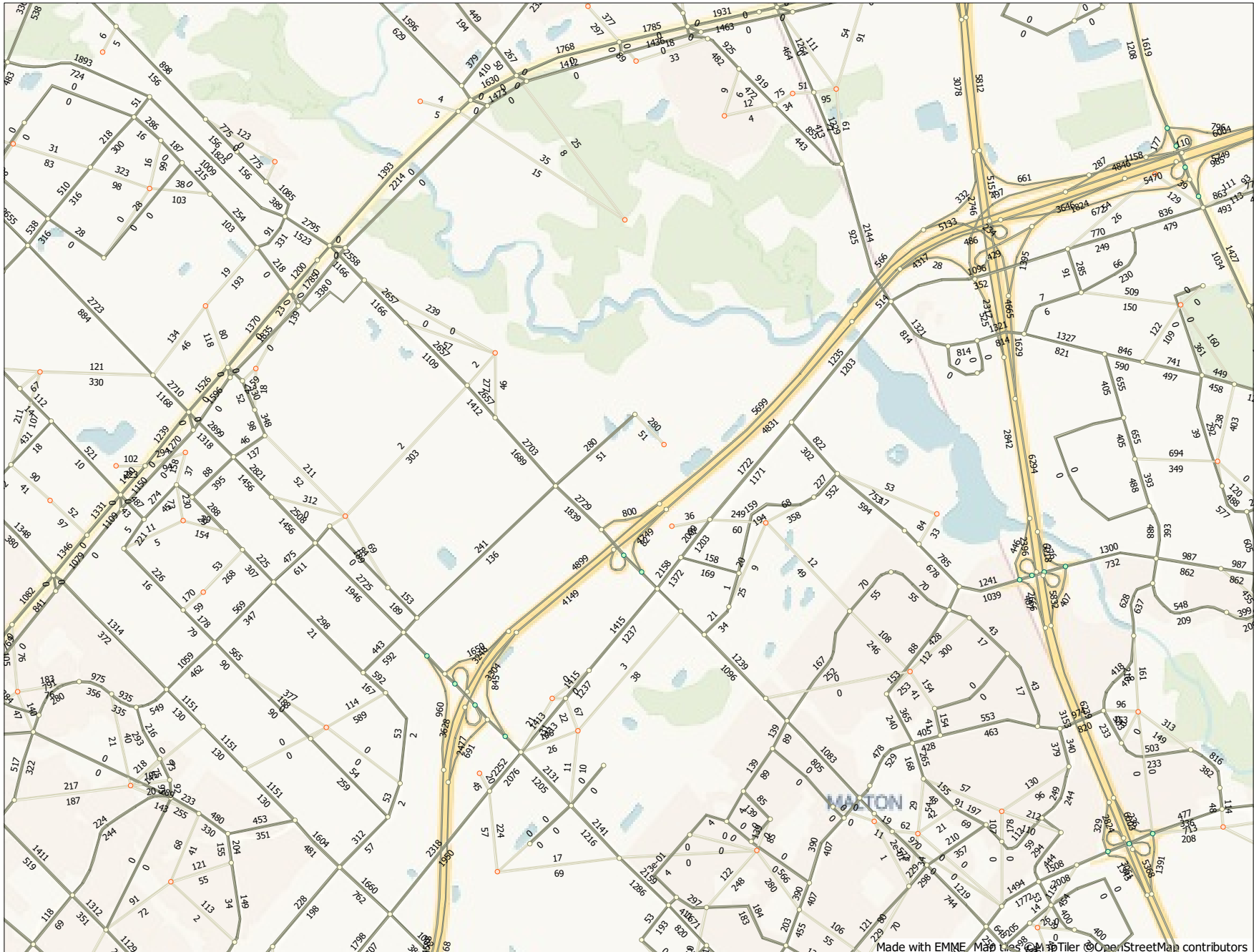
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Scenario 31119: 2031_AMRoad_R47 Intermodal Dr
2024-03-14 17:20 (wu@COB10W-MJOKBNKN)

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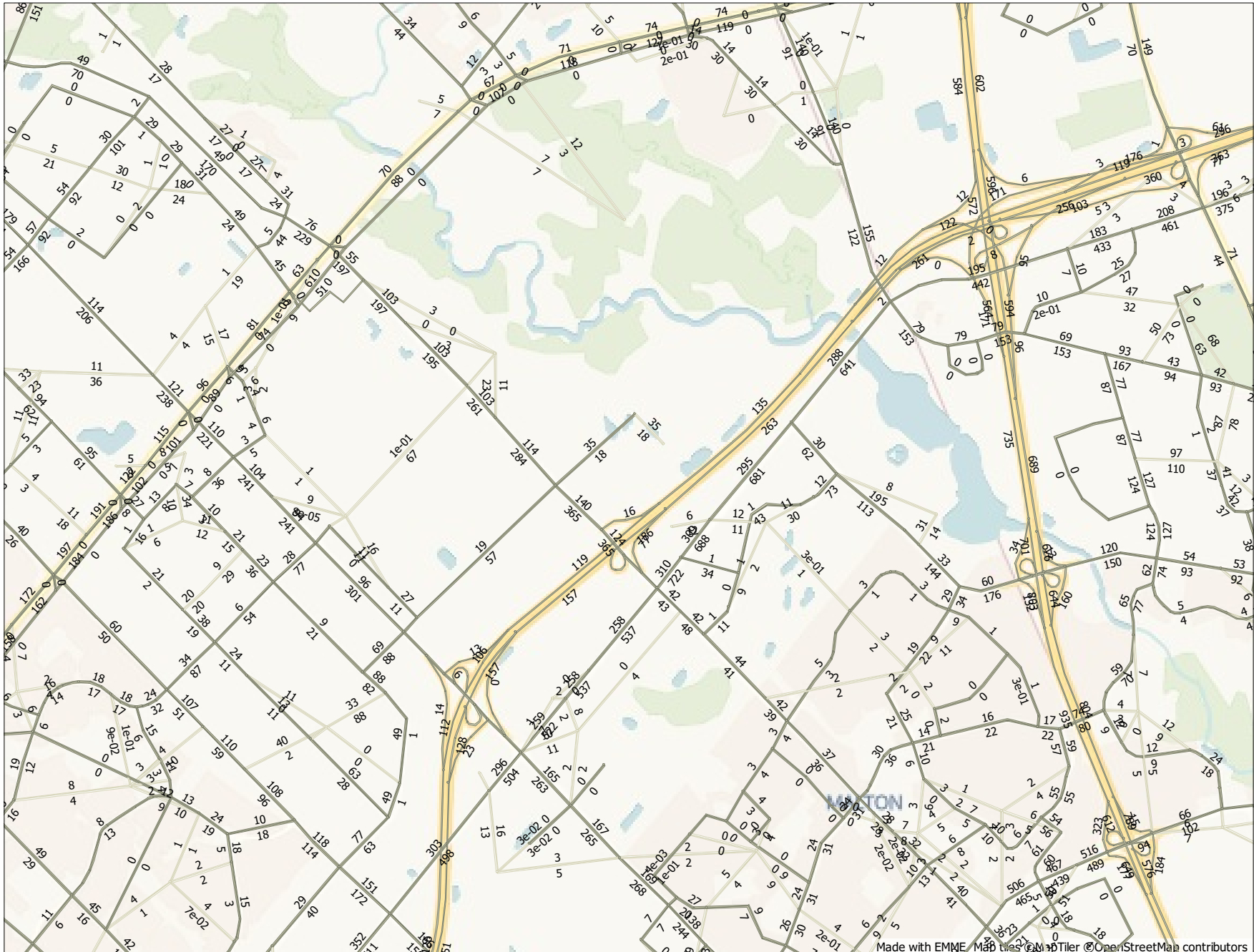
Truck Volumes



Auto Volumes

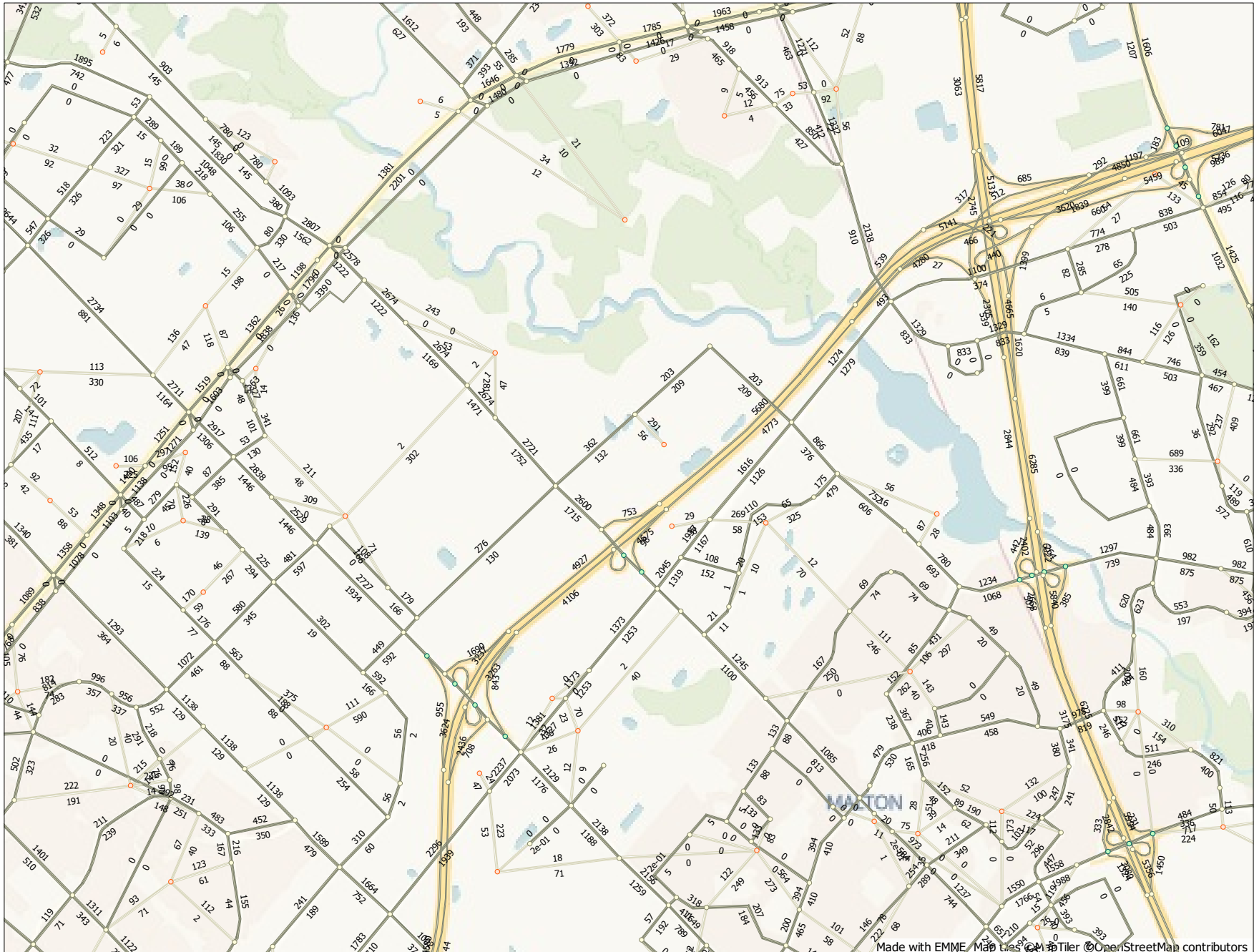


Truck Volumes



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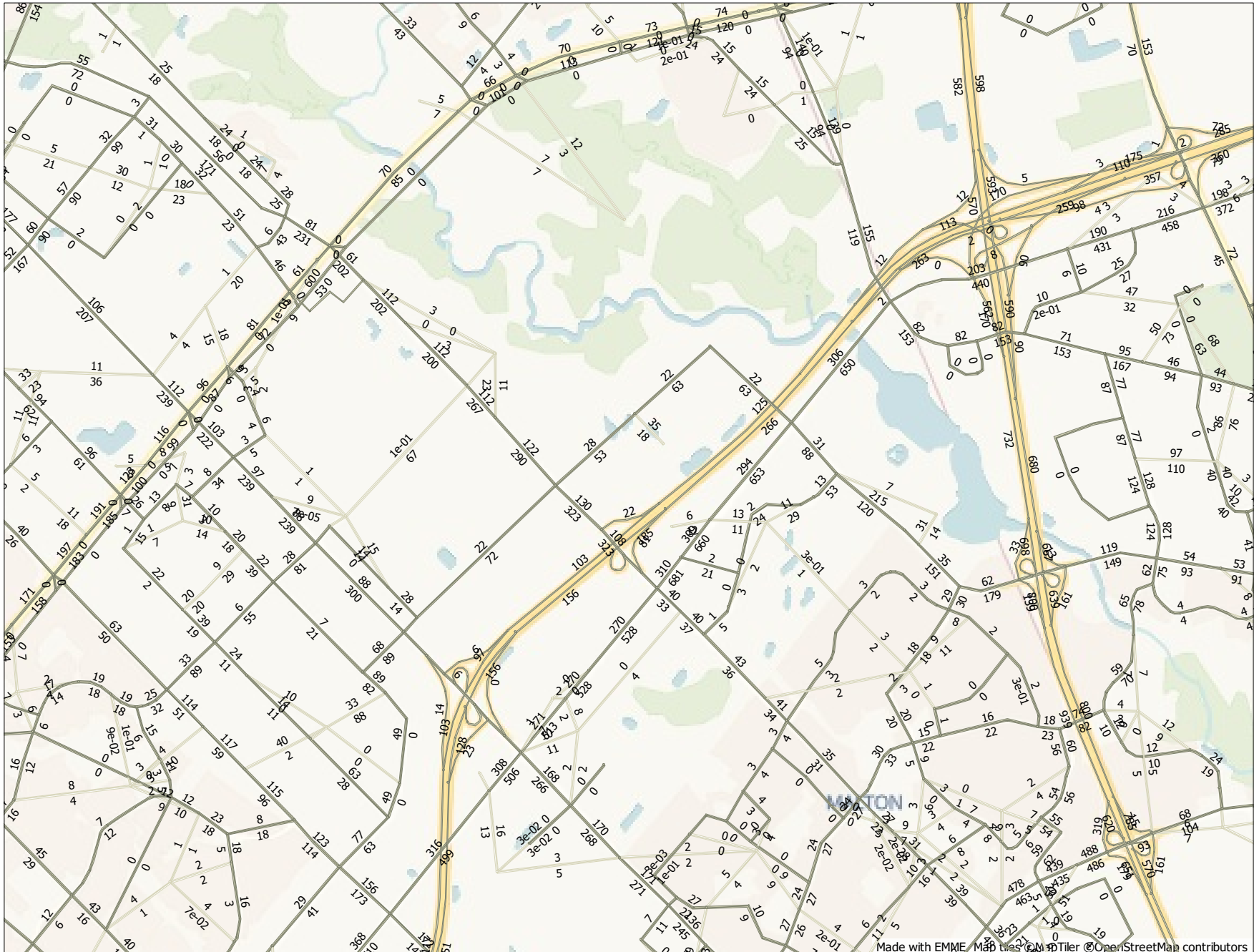
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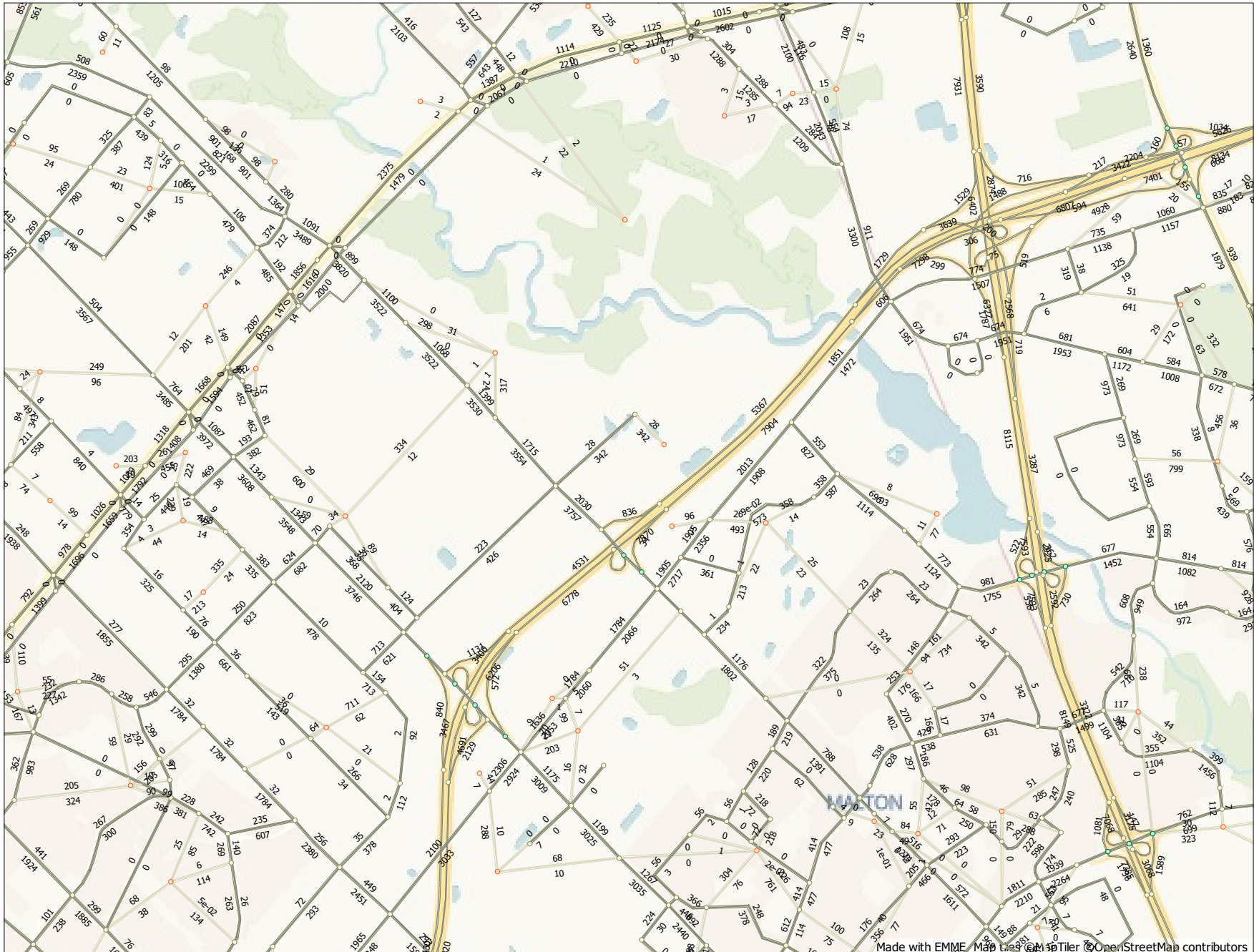
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Scenario 31319: 2031_PMRoad_R47_Intermodal Dr
2024-03-14 17:15 (wu@COB10W-MJOKBNKN)

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Truck Volumes

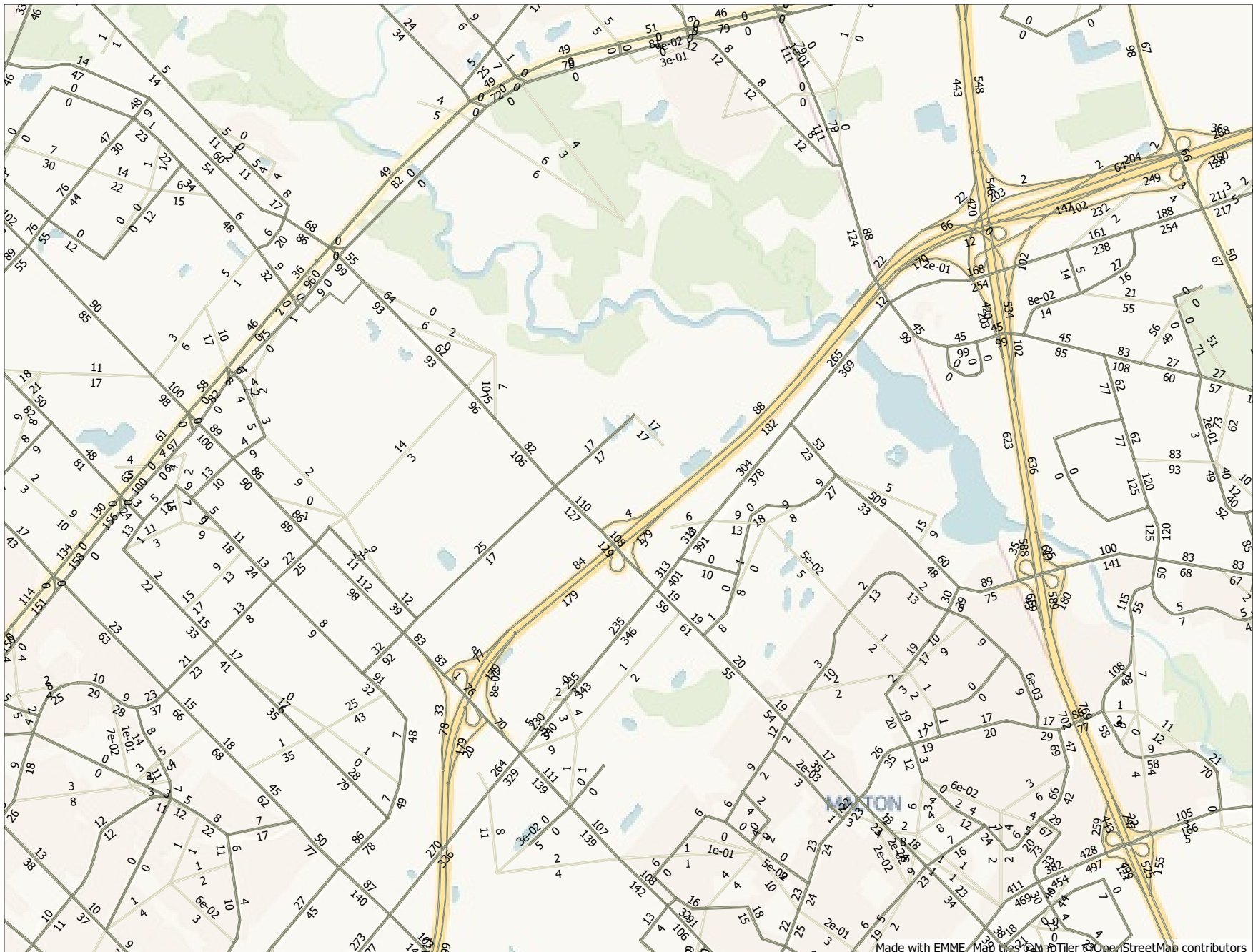


Auto Volumes



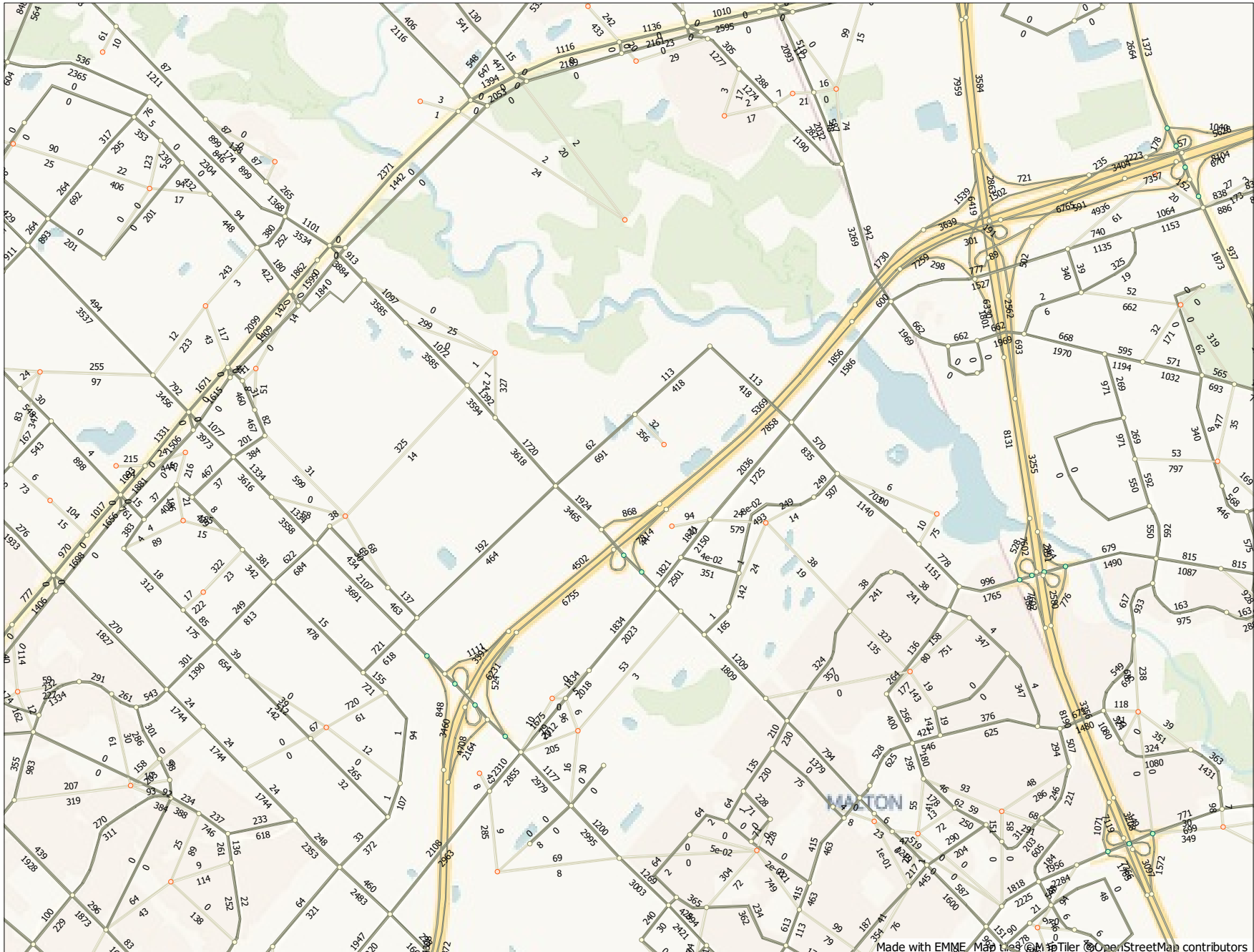
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Truck Volumes



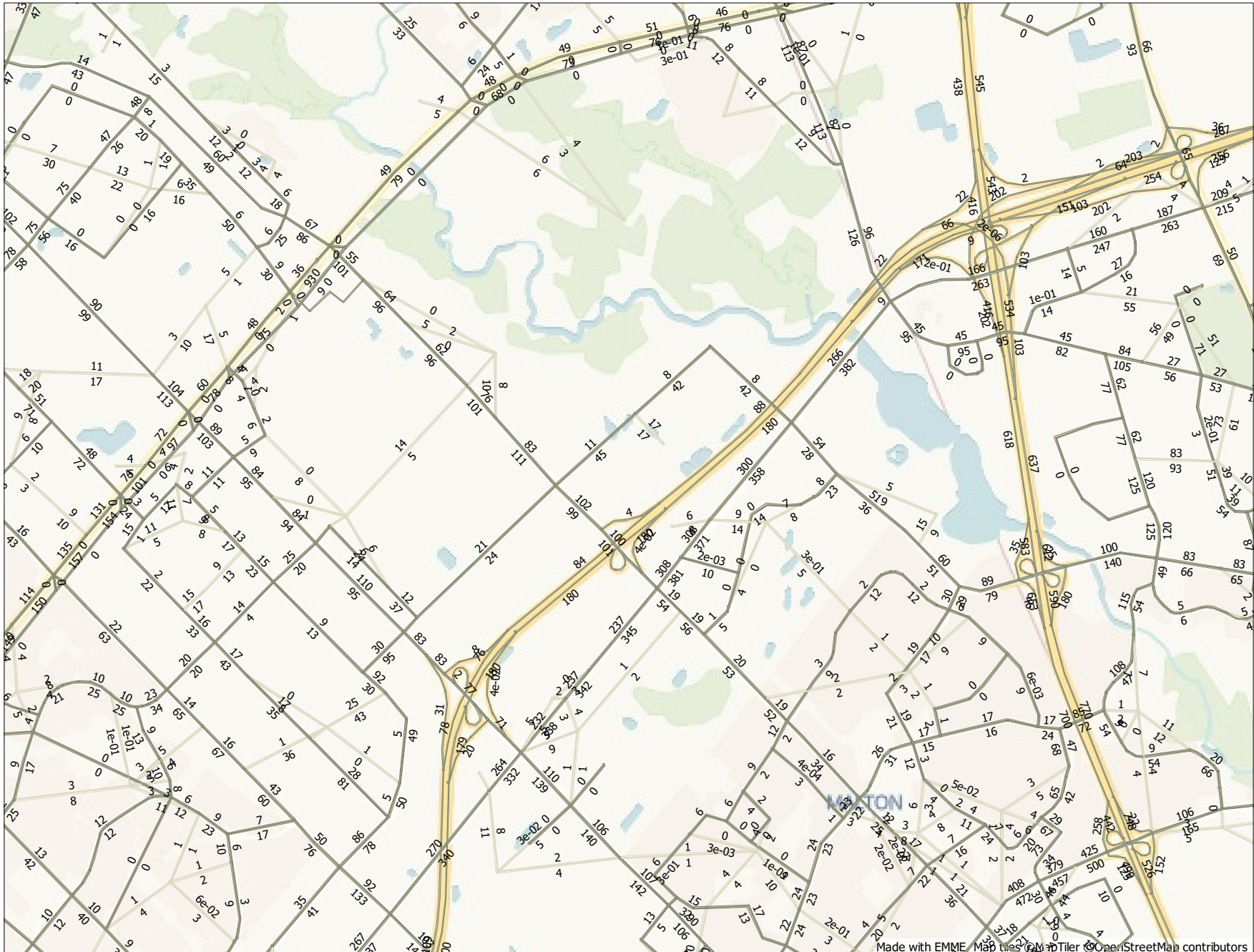
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Auto Volumes



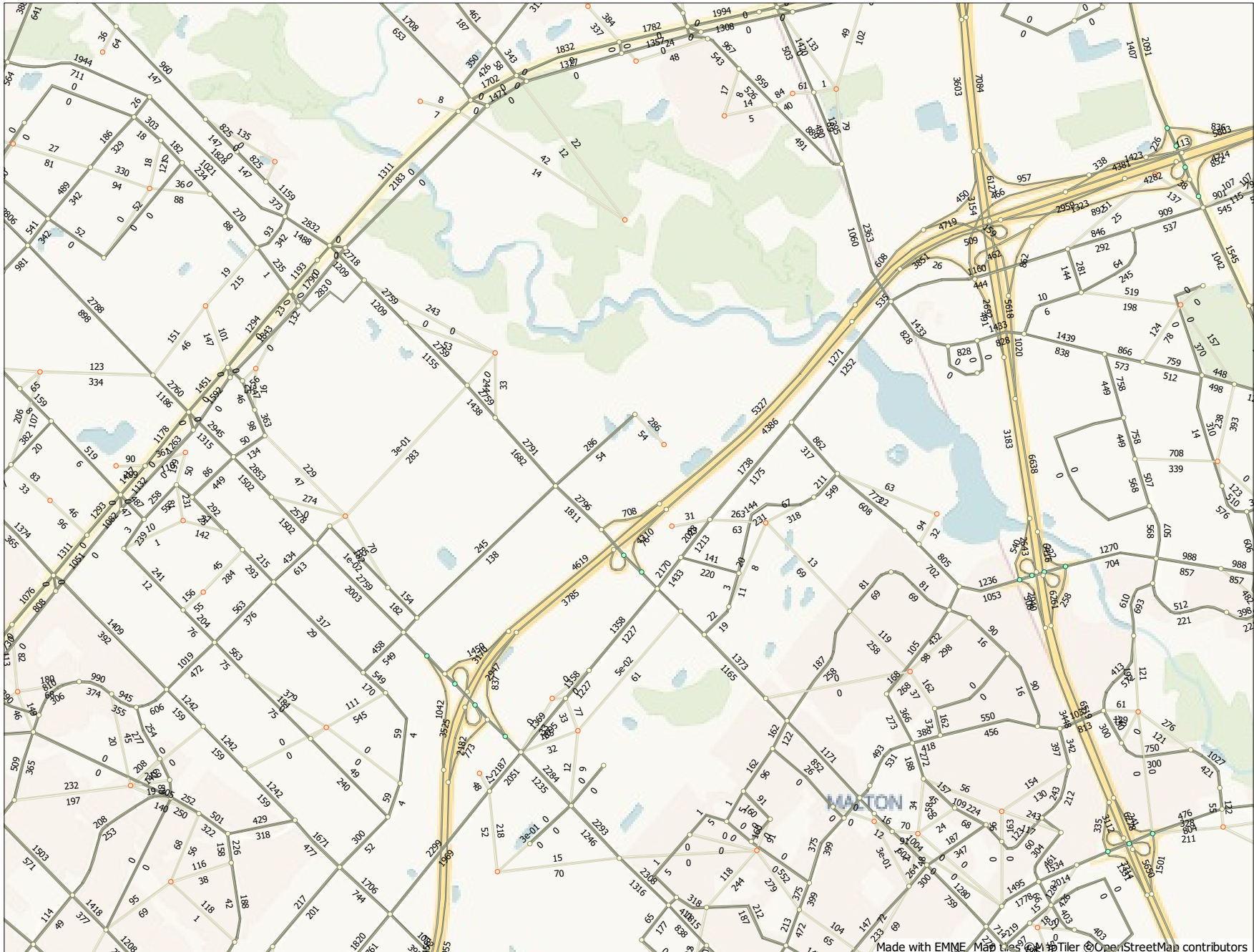
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Truck Volumes



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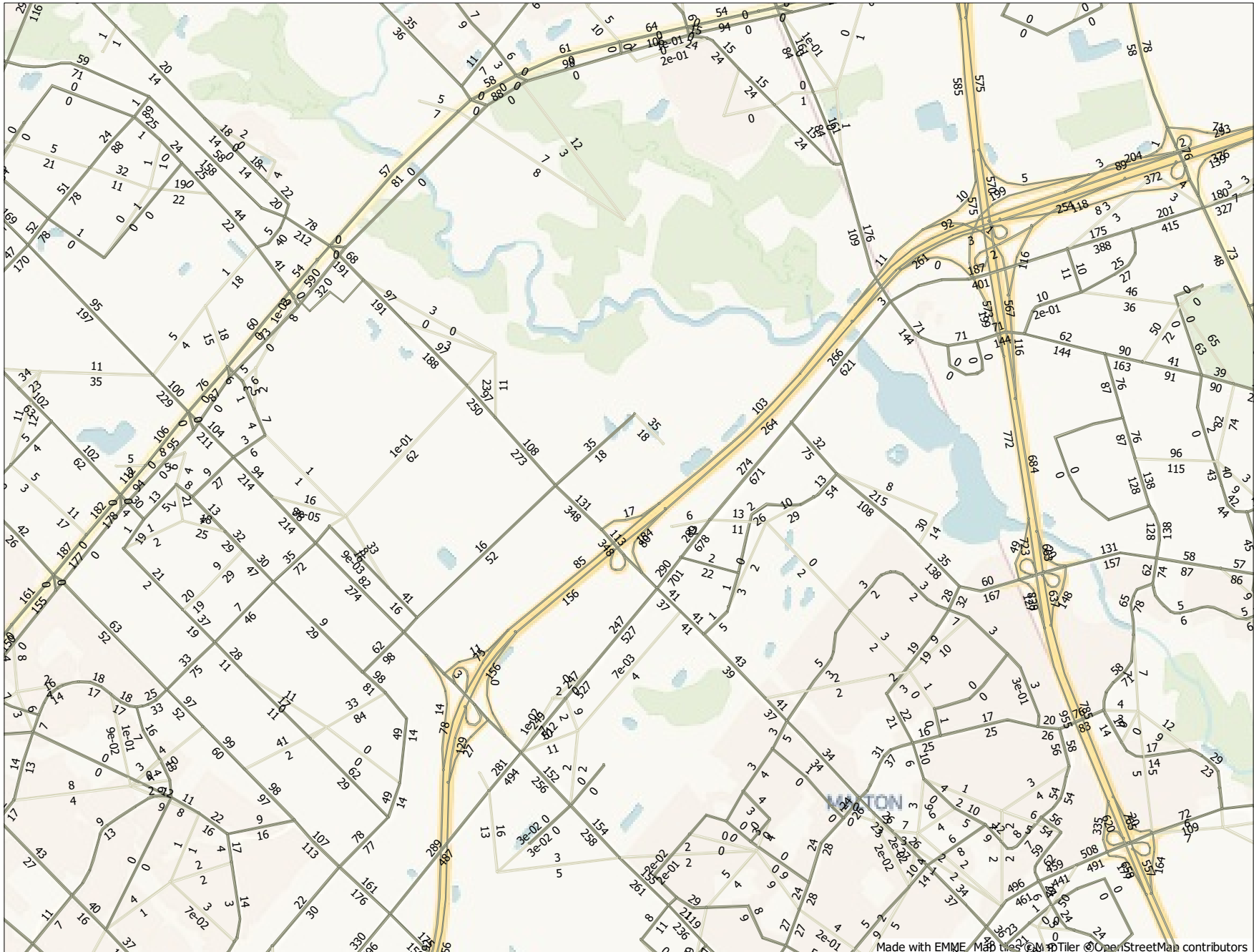
Auto Volumes



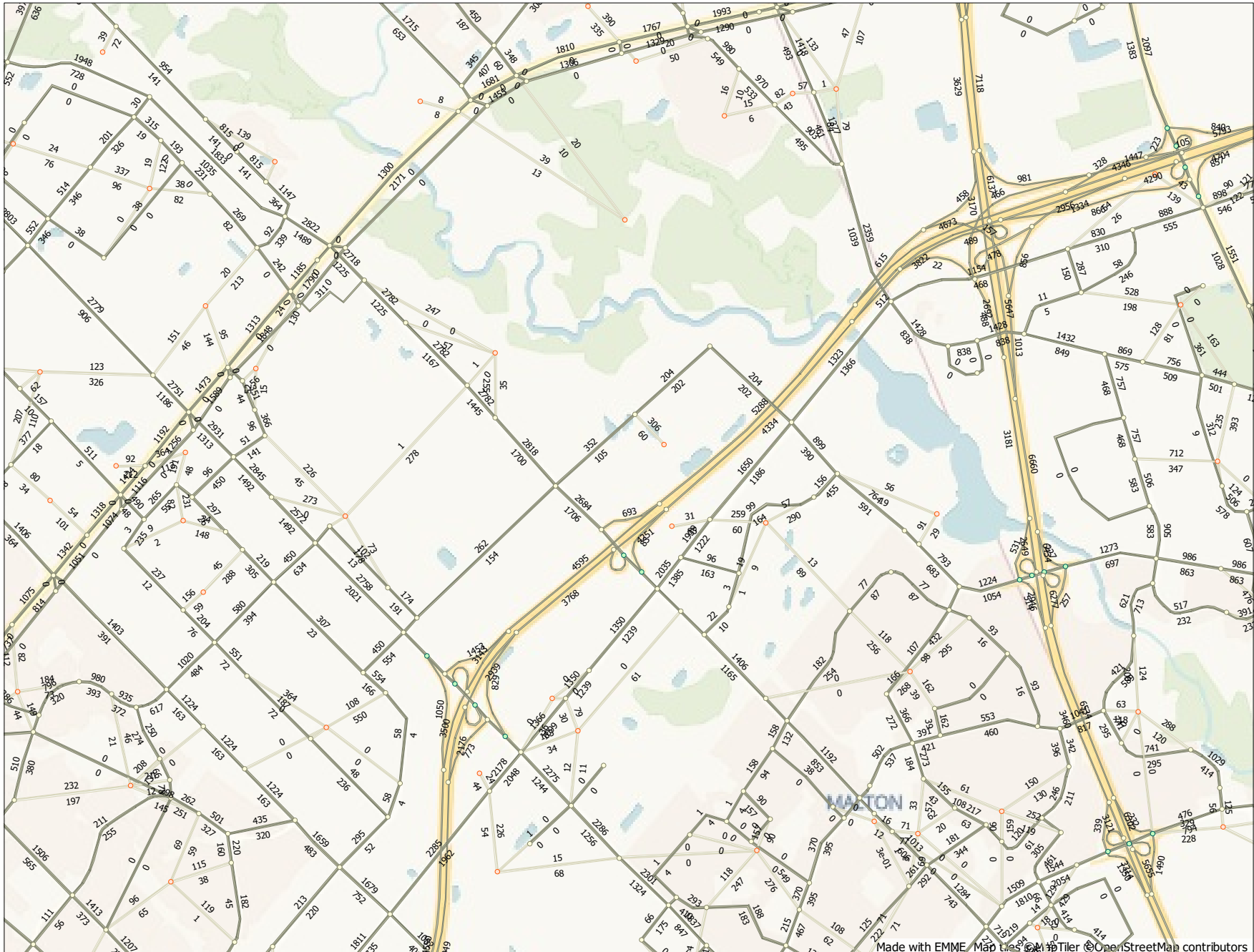
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Scenario 41319: 2041_PMRoad_R44_BaseNetwork
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Truck Volumes

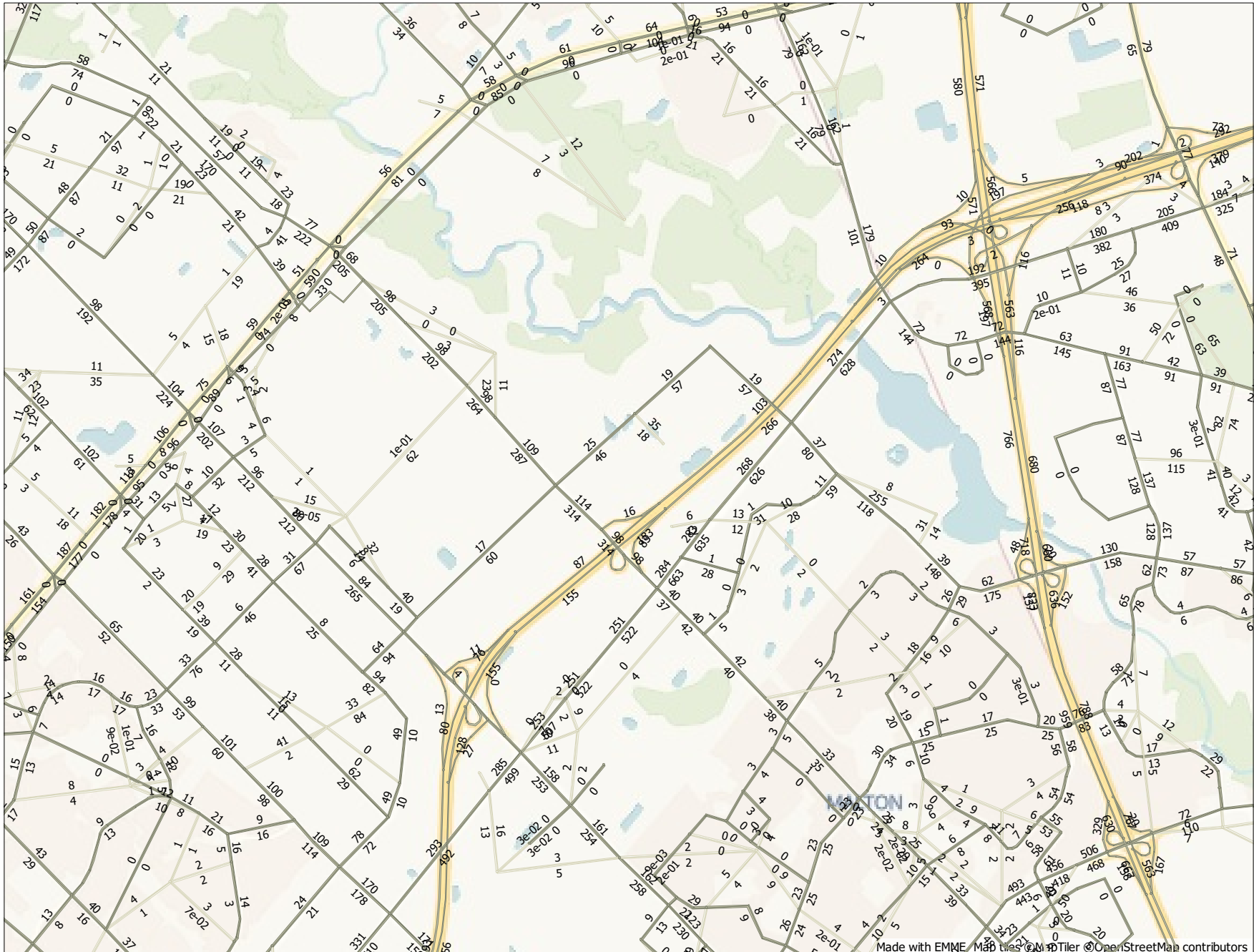


Auto Volumes



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Truck Vehicle Volume



Appendix B

Intersection Capacity Analysis Reports

58: Goreway Drive & Steeles Avenue East
Intermodal Drive Extension

Existing Conditions
AM Peak Period

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  		 	 		 	 	
Traffic Volume (vph)	112	1246	112	31	981	409	122	140	41	531	505	183
Future Volume (vph)	112	1246	112	31	981	409	122	140	41	531	505	183
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	115.0		150.0	150.0		110.0	120.0		80.0	130.0		0.0
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (m)	7.6			7.6			7.6			7.6		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Ped Bike Factor	0.99		0.97			0.94	0.99		0.97	0.99		0.97
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1342	4561	1471	1772	4683	1372	2975	3380	1601	2951	3380	1396
Flt Permitted	0.193			0.148			0.950			0.950		
Satd. Flow (perm)	271	4561	1424	276	4683	1291	2949	3380	1557	2912	3380	1353
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			123			449			134			201
Link Speed (k/h)		80			80			70			70	
Link Distance (m)		668.9			1373.2			472.6			952.1	
Travel Time (s)		30.1			61.8			24.3			49.0	
Confl. Peds. (#/hr)	28		12	12		28	13		11	11		13
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	36%	15%	11%	3%	12%	19%	19%	8%	2%	20%	8%	17%
Adj. Flow (vph)	123	1369	123	34	1078	449	134	154	45	584	555	201
Shared Lane Traffic (%)												
Lane Group Flow (vph)	123	1369	123	34	1078	449	134	154	45	584	555	201
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2		2	6		6			4			8
Detector Phase	5	2	2	1	6	6	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	5.0	12.0	12.0	5.0	12.0	12.0	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	8.0	34.7	34.7	8.0	34.7	34.7	13.0	39.7	39.7	13.0	39.7	39.7
Total Split (s)	18.0	61.0	61.0	13.0	56.0	56.0	20.0	42.0	42.0	44.0	66.0	66.0
Total Split (%)	11.3%	38.1%	38.1%	8.1%	35.0%	35.0%	12.5%	26.3%	26.3%	27.5%	41.3%	41.3%
Maximum Green (s)	15.0	54.3	54.3	10.0	49.3	49.3	15.0	35.3	35.3	39.0	59.3	59.3
Yellow Time (s)	3.0	4.6	4.6	3.0	4.6	4.6	3.0	4.2	4.2	3.0	4.2	4.2
All-Red Time (s)	0.0	2.1	2.1	0.0	2.1	2.1	2.0	2.5	2.5	2.0	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-3.0	0.0	0.0
Total Lost Time (s)	3.0	6.7	6.7	3.0	6.7	6.7	5.0	6.7	6.7	2.0	6.7	6.7
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	None
Walk Time (s)		8.0	8.0		8.0	8.0		8.0	8.0		8.0	8.0
Flash Dont Walk (s)		20.0	20.0		20.0	20.0		25.0	25.0		25.0	25.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	97.0	85.1	85.1	88.9	78.3	78.3	12.4	12.8	12.8	38.5	35.9	35.9
Actuated g/C Ratio	0.61	0.53	0.53	0.56	0.49	0.49	0.08	0.08	0.08	0.24	0.22	0.22
v/c Ratio	0.50	0.56	0.15	0.16	0.47	0.52	0.59	0.57	0.18	0.82	0.73	0.44

58: Goreway Drive & Steeles Avenue East
Intermodal Drive Extension

Existing Conditions
AM Peak Period

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	22.3	27.6	4.0	23.2	41.5	15.1	81.4	79.1	1.6	54.6	51.6	9.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.3	27.6	4.0	23.2	41.5	15.1	81.4	79.1	1.6	54.6	51.6	9.5
LOS	C	C	A	C	D	B	F	E	A	D	D	A
Approach Delay	25.4			33.5			69.6			46.6		
Approach LOS	C			C			E			D		
Queue Length 50th (m)	16.7	108.6	0.0	6.3	101.2	40.0	21.5	25.3	0.0	91.3	87.3	19.4
Queue Length 95th (m)	29.7	135.6	11.6	m13.9	132.1	78.5	32.7	37.0	0.0	77.7	106.0	27.7
Internal Link Dist (m)	644.9			1349.2			448.6			928.1		
Turn Bay Length (m)	115.0			150.0	150.0			110.0	120.0	80.0	130.0	
Base Capacity (vph)	264	2427	815	252	2293	861	278	745	447	774	1252	627
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.47	0.56	0.15	0.13	0.47	0.52	0.48	0.21	0.10	0.75	0.44	0.32

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 76 (48%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 110

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.82

Intersection Signal Delay: 36.9

Intersection LOS: D

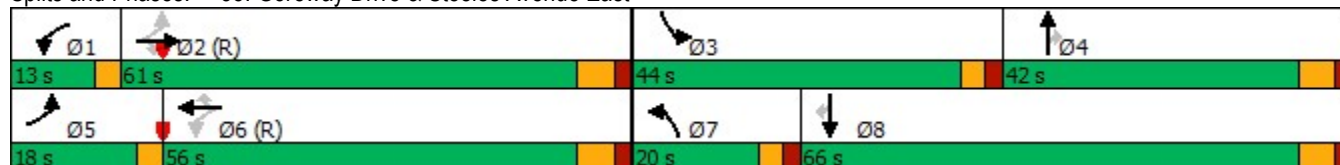
Intersection Capacity Utilization 75.6%

ICU Level of Service D

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 58: Goreway Drive & Steeles Avenue East



61: Finch Avenue/Gorewood Drive & Steeles Avenue East
Intermodal Drive Extension

Existing Conditions
AM Peak Period

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  		 				 	
Traffic Volume (vph)	6	1014	747	135	896	17	526	45	129	16	32	8
Future Volume (vph)	6	1014	747	135	896	17	526	45	129	16	32	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.8	3.5	3.5	3.5	3.4	3.4	3.7	3.7	3.7
Storage Length (m)	175.0		175.0	180.0		187.0	0.0		231.0	0.0		0.0
Storage Lanes	1		1	1		1	2		1	0		0
Taper Length (m)	7.6			7.6			7.6			7.6		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	0.91	0.97	1.00	1.00	0.95	0.95	0.95
Ped Bike Factor	0.99		0.98		1.00		1.00	0.99			1.00	
Frt			0.850		0.997			0.889			0.978	
Flt Protected	0.950			0.950			0.950				0.986	
Satd. Flow (prot)	1560	4601	1361	1647	4445	0	2960	1498	0	0	2459	0
Flt Permitted	0.277			0.189			0.950				0.986	
Satd. Flow (perm)	451	4601	1339	328	4445	0	2956	1498	0	0	2457	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			812		2			89			9	
Link Speed (k/h)		80			80			80			50	
Link Distance (m)		1373.2			447.9			426.1			872.2	
Travel Time (s)		61.8			20.2			19.2			62.8	
Confl. Peds. (#/hr)	10		2	2		10	1		4	4		1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	17%	14%	20%	12%	15%	12%	17%	0%	12%	56%	41%	25%
Adj. Flow (vph)	7	1102	812	147	974	18	572	49	140	17	35	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	7	1102	812	147	992	0	572	189	0	0	61	0
Turn Type	Perm	NA	Perm	pm+pt	NA		Split	NA		Split	NA	
Protected Phases		2		1	6		8	8		4	4	
Permitted Phases	2		2	6								
Detector Phase	2	2	2	1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	22.0	22.0	22.0	5.0	22.0		12.0	12.0		8.0	8.0	
Minimum Split (s)	29.9	29.9	29.9	8.0	29.9		45.2	45.2		15.2	15.2	
Total Split (s)	66.0	66.0	66.0	18.0	84.0		51.0	51.0		25.0	25.0	
Total Split (%)	41.3%	41.3%	41.3%	11.3%	52.5%		31.9%	31.9%		15.6%	15.6%	
Maximum Green (s)	59.1	59.1	59.1	15.0	77.1		43.8	43.8		17.8	17.8	
Yellow Time (s)	4.6	4.6	4.6	3.0	4.6		4.6	4.6		4.6	4.6	
All-Red Time (s)	2.3	2.3	2.3	0.0	2.3		2.6	2.6		2.6	2.6	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)	6.9	6.9	6.9	3.0	6.9		7.2	7.2			7.2	
Lead/Lag	Lag	Lag	Lag	Lead								
Lead-Lag Optimize?	Yes	Yes	Yes	Yes								
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	C-Max	C-Max	C-Max	None	C-Max		None	None		None	None	
Walk Time (s)	8.0	8.0	8.0		8.0		8.0	8.0				
Flash Dont Walk (s)	15.0	15.0	15.0		15.0		30.0	30.0				
Pedestrian Calls (#/hr)	0	0	0		0		0	0				
Act Effect Green (s)	81.2	81.2	81.2	99.6	95.7		36.6	36.6			9.4	
Actuated g/C Ratio	0.51	0.51	0.51	0.62	0.60		0.23	0.23			0.06	

61: Finch Avenue/Gorewood Drive & Steeles Avenue East
Intermodal Drive Extension

Existing Conditions
AM Peak Period

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.03	0.47	0.75	0.49	0.37		0.85	0.46			0.40	
Control Delay	22.0	23.9	12.8	20.4	18.6		71.0	30.1			69.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Delay	22.0	23.9	12.8	20.4	18.6		71.0	30.1			69.1	
LOS	C	C	B	C	B		E	C			E	
Approach Delay		19.2			18.8			60.8			69.1	
Approach LOS		B			B			E			E	
Queue Length 50th (m)	0.7	82.4	144.3	19.6	60.5		90.2	27.0			8.5	
Queue Length 95th (m)	m1.5	111.3	203.4	35.6	81.6		106.4	48.7			16.6	
Internal Link Dist (m)		1349.2			423.9			402.1			848.2	
Turn Bay Length (m)	175.0		175.0	180.0								
Base Capacity (vph)	228	2334	1079	327	2660		810	474			281	
Starvation Cap Reductn	0	0	0	0	0		0	0			0	
Spillback Cap Reductn	0	0	0	0	0		0	0			0	
Storage Cap Reductn	0	0	0	0	0		0	0			0	
Reduced v/c Ratio	0.03	0.47	0.75	0.45	0.37		0.71	0.40			0.22	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 127 (79%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 100

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.85

Intersection Signal Delay: 28.0

Intersection LOS: C

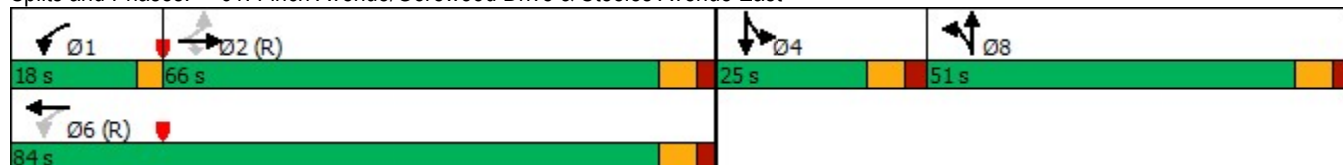
Intersection Capacity Utilization 77.9%

ICU Level of Service D

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 61: Finch Avenue/Gorewood Drive & Steeles Avenue East



224: Goreway Drive & Intermodal Drive
Intermodal Drive Extension

Existing Conditions
AM Peak Period

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	52	93	94	59	52	116	610	111	70	1394	83
Future Volume (vph)	33	52	93	94	59	52	116	610	111	70	1394	83
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	85.0		0.0	75.0		0.0	135.0		100.0	135.0		100.0
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (m)	7.6			7.6			7.6			7.6		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.91	1.00	1.00	0.91	1.00
Frt			0.850		0.929				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1313	1423	1002	1080	2302	0	1250	4768	1134	1521	4902	1096
Flt Permitted	0.677			0.720			0.132			0.391		
Satd. Flow (perm)	936	1423	1002	818	2302	0	174	4768	1134	626	4902	1096
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			100		56				119			89
Link Speed (k/h)		50			50			70			70	
Link Distance (m)		232.0			189.6			952.1			1512.1	
Travel Time (s)		16.7			13.7			49.0			77.8	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	39%	35%	63%	69%	68%	24%	46%	10%	44%	20%	7%	49%
Adj. Flow (vph)	35	56	100	101	63	56	125	656	119	75	1499	89
Shared Lane Traffic (%)												
Lane Group Flow (vph)	35	56	100	101	119	0	125	656	119	75	1499	89
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases		4			8		5	2			6	
Permitted Phases	4		4	8			2		2	6		6
Detector Phase	4	4	4	8	8		5	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0		6.0	12.0	12.0	12.0	12.0	12.0
Minimum Split (s)	45.0	45.0	45.0	45.0	45.0		9.0	42.0	42.0	42.0	42.0	42.0
Total Split (s)	65.0	65.0	65.0	65.0	65.0		18.0	95.0	95.0	77.0	77.0	77.0
Total Split (%)	40.6%	40.6%	40.6%	40.6%	40.6%		11.3%	59.4%	59.4%	48.1%	48.1%	48.1%
Maximum Green (s)	59.0	59.0	59.0	59.0	59.0		15.0	89.0	89.0	71.0	71.0	71.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		3.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		0.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0		3.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag							Lead			Lag	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	C-Max	C-Max	C-Max
Walk Time (s)	12.0	12.0	12.0	12.0	12.0			12.0	12.0	12.0	12.0	12.0
Flash Dont Walk (s)	27.0	27.0	27.0	27.0	27.0			24.0	24.0	24.0	24.0	24.0
Pedestrian Calls (#/hr)	0	0	0	0	0			0	0	0	0	0
Act Effct Green (s)	25.7	25.7	25.7	25.7	25.7		125.3	122.3	122.3	106.1	106.1	106.1
Actuated g/C Ratio	0.16	0.16	0.16	0.16	0.16		0.78	0.76	0.76	0.66	0.66	0.66
v/c Ratio	0.23	0.25	0.41	0.77	0.29		0.56	0.18	0.13	0.18	0.46	0.12
Control Delay	58.2	57.9	13.8	97.1	30.5		19.8	4.5	0.5	15.2	15.5	3.3
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0

224: Goreway Drive & Intermodal Drive
Intermodal Drive Extension

Existing Conditions
AM Peak Period

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	58.2	57.9	13.8	97.1	30.5		19.8	4.5	0.5	15.2	15.5	3.3
LOS	E	E	B	F	C		B	A	A	B	B	A
Approach Delay	34.9			61.1			6.1			14.8		
Approach LOS	C			E			A			B		
Queue Length 50th (m)	9.9	15.8	0.0	31.2	9.2		6.4	14.7	0.0	8.4	77.8	0.0
Queue Length 95th (m)	19.4	27.2	16.0	49.0	17.5		16.0	19.3	0.8	23.5	128.5	8.9
Internal Link Dist (m)	208.0			165.6			928.1			1488.1		
Turn Bay Length (m)	85.0			75.0			135.0		100.0	135.0		100.0
Base Capacity (vph)	345	524	432	301	884		247	3644	894	415	3250	756
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.11	0.23	0.34	0.13		0.51	0.18	0.13	0.18	0.46	0.12

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 97 (61%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 100

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.77

Intersection Signal Delay: 16.9

Intersection LOS: B

Intersection Capacity Utilization 58.6%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 224: Goreway Drive & Intermodal Drive



225: Intermodal Drive & Deerhurst Drive
Intermodal Drive Extension

Existing Conditions
AM Peak Period

Intersection						
Int Delay, s/veh	4.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	100	133	123	18	10	82
Future Vol, veh/h	100	133	123	18	10	82
Conflicting Peds, #/hr	10	0	0	10	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	65	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	75	75	75	75	75	75
Heavy Vehicles, %	35	26	27	11	10	71
Mvmt Flow	133	177	164	24	13	109
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	198	0	-	0	541	104
Stage 1	-	-	-	-	186	-
Stage 2	-	-	-	-	355	-
Critical Hdwy	4.8	-	-	-	7	8.32
Critical Hdwy Stg 1	-	-	-	-	6	-
Critical Hdwy Stg 2	-	-	-	-	6	-
Follow-up Hdwy	2.55	-	-	-	3.6	4.01
Pot Cap-1 Maneuver	1162	-	-	-	452	748
Stage 1	-	-	-	-	804	-
Stage 2	-	-	-	-	657	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1151	-	-	-	391	741
Mov Cap-2 Maneuver	-	-	-	-	391	-
Stage 1	-	-	-	-	704	-
Stage 2	-	-	-	-	650	-
Approach	EB	WB		SB		
HCM Control Delay, s	3.7	0		11.5		
HCM LOS				B		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1151	-	-	-	675	
HCM Lane V/C Ratio	0.116	-	-	-	0.182	
HCM Control Delay (s)	8.5	-	-	-	11.5	
HCM Lane LOS	A	-	-	-	B	
HCM 95th %tile Q(veh)	0.4	-	-	-	0.7	

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	6:45	6:45	6:45	6:45	6:45	6:45
End Time	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	75	75	75	75	75	75
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	4	4	4	4	4	4
# of Recorded Intervals	3	3	3	3	3	3
Vehs Entered	5777	5732	5737	5747	5735	5747
Vehs Exited	5702	5752	5725	5780	5800	5752
Starting Vehs	284	334	325	342	374	332
Ending Vehs	359	314	337	309	309	326
Travel Distance (km)	15577	15684	15617	15731	15722	15666
Travel Time (hr)	337.4	340.8	334.8	334.9	336.2	336.8
Total Delay (hr)	108.6	110.7	105.4	103.8	105.5	106.8
Total Stops	5692	5745	5547	5446	5490	5583
Fuel Used (l)	1232.0	1241.6	1235.0	1235.1	1238.0	1236.4

Interval #0 Information Seeding

Start Time	6:45
End Time	7:00
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	
No data recorded this interval.	

Interval #1 Information Pre-Peak

Start Time	7:00
End Time	7:20
Total Time (min)	20
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	1	2	3	4	5	Avg
Vehs Entered	1867	1907	1869	1875	1822	1870
Vehs Exited	1809	1908	1855	1893	1883	1870
Starting Vehs	284	334	325	342	374	332
Ending Vehs	342	333	339	324	313	331
Travel Distance (km)	5091	5203	5030	5249	5123	5139
Travel Time (hr)	107.9	113.0	106.5	110.5	107.2	109.0
Total Delay (hr)	33.7	36.8	32.8	33.2	32.3	33.7
Total Stops	1792	1921	1756	1774	1720	1795
Fuel Used (l)	401.7	412.9	396.2	410.3	400.5	404.3

Interval #2 Information Peak

Start Time 7:20
End Time 7:35
Total Time (min) 15

Volumes adjusted by PHF, Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	1604	1547	1581	1534	1617	1576
Vehs Exited	1576	1500	1489	1510	1538	1522
Starting Vehs	342	333	339	324	313	331
Ending Vehs	370	380	431	348	392	387
Travel Distance (km)	4219	4173	4111	4100	4239	4168
Travel Time (hr)	94.9	93.1	92.0	89.4	93.3	92.5
Total Delay (hr)	32.4	31.9	31.3	28.9	30.5	31.0
Total Stops	1644	1569	1619	1493	1594	1585
Fuel Used (l)	336.6	332.3	329.0	322.1	335.7	331.2

Interval #3 Information Post-Peak

Start Time 7:35
End Time 8:00
Total Time (min) 25

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	1	2	3	4	5	Avg
Vehs Entered	2306	2278	2287	2338	2296	2302
Vehs Exited	2317	2344	2381	2377	2379	2360
Starting Vehs	370	380	431	348	392	387
Ending Vehs	359	314	337	309	309	326
Travel Distance (km)	6267	6308	6476	6381	6360	6358
Travel Time (hr)	134.6	134.7	136.3	135.0	135.7	135.2
Total Delay (hr)	42.6	42.0	41.3	41.7	42.7	42.1
Total Stops	2256	2255	2172	2179	2176	2209
Fuel Used (l)	493.7	496.4	509.8	502.8	501.7	500.9

Intersection: 58: Goreway Drive & Steeles Avenue East

Movement	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB	NB
Directions Served	L	T	T	T	L	T	T	T	R	L	L	T
Maximum Queue (m)	79.1	118.2	116.1	118.6	23.6	131.9	133.3	147.8	104.5	49.6	59.4	50.0
Average Queue (m)	29.4	68.1	71.6	72.0	6.1	81.2	84.0	81.0	12.0	16.0	31.7	20.0
95th Queue (m)	60.2	101.6	105.3	107.3	17.7	119.7	120.6	123.7	64.3	42.0	53.3	39.2
Link Distance (m)		651.1	651.1	651.1		1334.5	1334.5	1334.5				453.2
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	115.0				150.0				110.0	120.0	120.0	
Storage Blk Time (%)		0				0		1	0			
Queuing Penalty (veh)		1				0		5	0			

Intersection: 58: Goreway Drive & Steeles Avenue East

Movement	NB	NB	SB	SB	SB	SB	SB
Directions Served	T	R	L	L	T	T	R
Maximum Queue (m)	45.3	10.2	127.0	130.7	117.3	84.3	21.4
Average Queue (m)	13.5	0.5	65.0	77.4	43.9	46.7	2.3
95th Queue (m)	32.4	4.8	111.7	121.0	84.8	76.7	12.1
Link Distance (m)	453.2				916.9	916.9	916.9
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (m)		80.0	130.0	130.0			
Storage Blk Time (%)			0	0			
Queuing Penalty (veh)			0	1			

Intersection: 61: Finch Avenue/Gorewood Drive & Steeles Avenue East

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB
Directions Served	L	T	T	T	R	L	T	T	TR	L	L	TR
Maximum Queue (m)	16.5	76.1	84.6	82.3	118.7	51.9	79.8	80.7	81.1	122.3	122.7	79.4
Average Queue (m)	1.7	36.7	41.2	44.0	25.3	25.0	47.6	45.1	36.7	68.8	69.8	27.5
95th Queue (m)	8.7	63.6	67.6	70.4	85.8	43.7	73.9	72.1	68.4	103.9	106.6	57.2
Link Distance (m)		1334.5	1334.5	1334.5			433.9	433.9		405.0	405.0	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	175.0				175.0	180.0			187.0			231.0
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 61: Finch Avenue/Gorewood Drive & Steeles Avenue East

Movement	SB	SB
Directions Served	LT	TR
Maximum Queue (m)	40.9	32.5
Average Queue (m)	15.9	8.4
95th Queue (m)	33.9	23.2
Link Distance (m)	853.6	853.6
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 224: Goreway Drive & Intermodal Drive

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	NB	SB
Directions Served	L	T	R	L	T	TR	L	T	T	T	R	L
Maximum Queue (m)	36.1	46.6	58.4	82.0	80.5	61.0	82.7	31.0	35.2	36.4	23.9	38.7
Average Queue (m)	12.5	16.4	19.3	39.9	16.0	20.0	34.6	9.0	8.4	11.8	5.5	14.6
95th Queue (m)	29.6	38.7	41.6	76.8	56.8	44.9	68.9	22.5	24.0	29.5	17.0	32.4
Link Distance (m)		209.1	209.1		160.4	160.4		916.9	916.9	916.9		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	85.0			75.0			135.0				100.0	135.0
Storage Blk Time (%)				4	0							
Queuing Penalty (veh)				1	0							

Intersection: 224: Goreway Drive & Intermodal Drive

Movement	SB	SB	SB	SB
Directions Served	T	T	T	R
Maximum Queue (m)	99.9	101.8	99.7	40.3
Average Queue (m)	48.2	44.2	39.4	8.2
95th Queue (m)	92.4	86.3	82.2	31.3
Link Distance (m)	1489.2	1489.2	1489.2	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)				100.0
Storage Blk Time (%)			0	0
Queuing Penalty (veh)			0	0

Intersection: 225: Intermodal Drive & Deerhurst Drive

Movement	EB	WB	SB
Directions Served	L	TR	LR
Maximum Queue (m)	28.6	1.3	37.8
Average Queue (m)	5.9	0.0	17.6
95th Queue (m)	20.2	1.0	31.5
Link Distance (m)		336.6	160.1
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (m)	65.0		
Storage Blk Time (%)			
Queuing Penalty (veh)			

Network Summary

Network wide Queuing Penalty: 8

58: Goreway Drive & Steeles Avenue East
Intermodal Drive Extension

Existing Conditions
PM Peak Period

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  		 	 		 	 	
Traffic Volume (vph)	207	1227	174	58	1051	611	306	825	81	348	407	169
Future Volume (vph)	207	1227	174	58	1051	611	306	825	81	348	407	169
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	115.0		150.0	150.0		110.0	120.0		80.0	130.0		0.0
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (m)	7.6			7.6			7.6			7.6		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Ped Bike Factor	1.00		0.98	1.00		0.95	0.98		0.99	1.00		0.96
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1534	4683	1484	1755	4561	1408	3278	3510	1570	2855	3444	1432
Flt Permitted	0.146			0.155			0.950			0.950		
Satd. Flow (perm)	235	4683	1457	286	4561	1339	3222	3510	1547	2853	3444	1372
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			178			321			100			172
Link Speed (k/h)		80			80			70			70	
Link Distance (m)		668.9			1373.2			472.6			952.1	
Travel Time (s)		30.1			61.8			24.3			49.0	
Confl. Peds. (#/hr)	22		4	4		22	21		2	2		21
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	19%	12%	10%	4%	15%	16%	8%	4%	4%	24%	6%	14%
Adj. Flow (vph)	211	1252	178	59	1072	623	312	842	83	355	415	172
Shared Lane Traffic (%)												
Lane Group Flow (vph)	211	1252	178	59	1072	623	312	842	83	355	415	172
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2		2	6		6			4			8
Detector Phase	5	2	2	1	6	6	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	5.0	12.0	12.0	5.0	12.0	12.0	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	8.0	34.7	34.7	8.0	34.7	34.7	13.0	39.7	39.7	13.0	39.7	39.7
Total Split (s)	22.0	64.0	64.0	14.0	56.0	56.0	26.0	56.0	56.0	26.0	56.0	56.0
Total Split (%)	13.8%	40.0%	40.0%	8.8%	35.0%	35.0%	16.3%	35.0%	35.0%	16.3%	35.0%	35.0%
Maximum Green (s)	19.0	57.3	57.3	11.0	49.3	49.3	21.0	49.3	49.3	21.0	49.3	49.3
Yellow Time (s)	3.0	4.6	4.6	3.0	4.6	4.6	3.0	4.2	4.2	3.0	4.2	4.2
All-Red Time (s)	0.0	2.1	2.1	0.0	2.1	2.1	2.0	2.5	2.5	2.0	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	6.7	6.7	3.0	6.7	6.7	5.0	6.7	6.7	5.0	6.7	6.7
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	None
Walk Time (s)		8.0	8.0		8.0	8.0		8.0	8.0		8.0	8.0
Flash Dont Walk (s)		20.0	20.0		20.0	20.0		25.0	25.0		25.0	25.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	80.4	67.1	67.1	68.3	56.2	56.2	19.3	43.9	43.9	21.0	45.6	45.6
Actuated g/C Ratio	0.50	0.42	0.42	0.43	0.35	0.35	0.12	0.27	0.27	0.13	0.28	0.28
v/c Ratio	0.81	0.64	0.25	0.30	0.67	0.92	0.79	0.88	0.17	0.95	0.42	0.33

58: Goreway Drive & Steeles Avenue East
Intermodal Drive Extension

Existing Conditions
PM Peak Period

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	50.1	40.1	5.2	33.1	61.9	57.7	83.3	66.1	4.9	96.9	49.1	15.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.1	40.1	5.2	33.1	61.9	57.7	83.3	66.1	4.9	96.9	49.1	15.5
LOS	D	D	A	C	E	E	F	E	A	F	D	B
Approach Delay	37.6			59.4			66.3			60.9		
Approach LOS	D			E			E			E		
Queue Length 50th (m)	38.3	117.8	0.0	14.8	128.0	140.5	50.1	134.7	0.0	59.0	61.4	11.3
Queue Length 95th (m)	#77.7	145.5	16.4	m22.8	146.2	#230.8	66.9	154.0	8.9	#90.8	76.2	33.5
Internal Link Dist (m)	644.9			1349.2			448.6			928.1		
Turn Bay Length (m)	115.0			150.0	150.0			110.0	120.0	80.0	130.0	
Base Capacity (vph)	272	1964	714	227	1601	678	430	1081	545	374	1061	541
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.78	0.64	0.25	0.26	0.67	0.92	0.73	0.78	0.15	0.95	0.39	0.32

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 61 (38%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 120

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.95

Intersection Signal Delay: 54.8

Intersection LOS: D

Intersection Capacity Utilization 89.0%

ICU Level of Service E

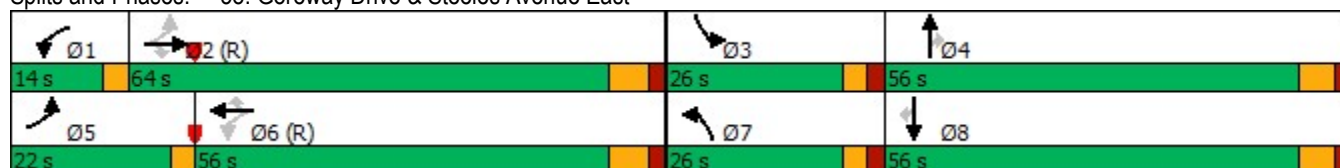
Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 58: Goreway Drive & Steeles Avenue East



61: Finch Avenue/Gorewood Drive & Steeles Avenue East
Intermodal Drive Extension

Existing Conditions
PM Peak Period

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  		 				 	
Traffic Volume (vph)	9	990	673	13	1070	137	600	23	95	10	43	20
Future Volume (vph)	9	990	673	13	1070	137	600	23	95	10	43	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.8	3.5	3.5	3.5	3.4	3.4	3.7	3.7	3.7
Storage Length (m)	175.0		175.0	180.0		187.0	0.0		231.0	0.0		0.0
Storage Lanes	1		1	1		1	2		1	0		0
Taper Length (m)	7.6			7.6			7.6			7.6		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	0.91	0.97	1.00	1.00	0.95	0.95	0.95
Ped Bike Factor	1.00		0.97		1.00		1.00	0.98			0.99	
Frt			0.850		0.983			0.879			0.959	
Flt Protected	0.950			0.950			0.950				0.993	
Satd. Flow (prot)	1825	4683	1458	1724	4438	0	2815	1326	0	0	3013	0
Flt Permitted	0.177			0.212			0.950				0.993	
Satd. Flow (perm)	340	4683	1417	385	4438	0	2809	1326	0	0	3011	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			708		19			100			21	
Link Speed (k/h)		80			80			80			50	
Link Distance (m)		1373.2			447.9			426.1			872.2	
Travel Time (s)		61.8			20.2			19.2			62.8	
Confl. Peds. (#/hr)	2		8	8		2	2		6	6		2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	12%	12%	7%	11%	31%	23%	39%	17%	0%	16%	20%
Adj. Flow (vph)	9	1042	708	14	1126	144	632	24	100	11	45	21
Shared Lane Traffic (%)												
Lane Group Flow (vph)	9	1042	708	14	1270	0	632	124	0	0	77	0
Turn Type	Perm	NA	Perm	pm+pt	NA		Split	NA		Split	NA	
Protected Phases		2		1	6		8	8		4	4	
Permitted Phases	2		2	6								
Detector Phase	2	2	2	1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	22.0	22.0	22.0	5.0	22.0		12.0	12.0		8.0	8.0	
Minimum Split (s)	29.9	29.9	29.9	8.0	29.9		45.2	45.2		15.2	15.2	
Total Split (s)	66.0	66.0	66.0	18.0	84.0		51.0	51.0		25.0	25.0	
Total Split (%)	41.3%	41.3%	41.3%	11.3%	52.5%		31.9%	31.9%		15.6%	15.6%	
Maximum Green (s)	59.1	59.1	59.1	15.0	77.1		43.8	43.8		17.8	17.8	
Yellow Time (s)	4.6	4.6	4.6	3.0	4.6		4.6	4.6		4.6	4.6	
All-Red Time (s)	2.3	2.3	2.3	0.0	2.3		2.6	2.6		2.6	2.6	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)	6.9	6.9	6.9	3.0	6.9		7.2	7.2			7.2	
Lead/Lag	Lag	Lag	Lag	Lead								
Lead-Lag Optimize?	Yes	Yes	Yes	Yes								
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	C-Max	C-Max	C-Max	None	C-Max		None	None		None	None	
Walk Time (s)	8.0	8.0	8.0		8.0		8.0	8.0				
Flash Dont Walk (s)	15.0	15.0	15.0		15.0		30.0	30.0				
Pedestrian Calls (#/hr)	0	0	0		0		0	0				
Act Effect Green (s)	85.6	85.6	85.6	93.4	89.5		40.1	40.1			9.1	
Actuated g/C Ratio	0.54	0.54	0.54	0.58	0.56		0.25	0.25			0.06	

61: Finch Avenue/Gorewood Drive & Steeles Avenue East
Intermodal Drive Extension

Existing Conditions
PM Peak Period

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.05	0.42	0.65	0.05	0.51		0.90	0.30			0.40	
Control Delay	9.7	8.2	9.3	16.2	22.9		74.1	14.1			58.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Delay	9.7	8.2	9.3	16.2	22.9		74.1	14.1			58.8	
LOS	A	A	A	B	C		E	B			E	
Approach Delay		8.7			22.8			64.3			58.8	
Approach LOS		A			C			E			E	
Queue Length 50th (m)	0.2	14.7	52.9	1.9	89.0		99.4	5.8			9.2	
Queue Length 95th (m)	m0.7	m30.4	m198.1	5.6	109.1		121.5	23.0			18.1	
Internal Link Dist (m)		1349.2			423.9			402.1			848.2	
Turn Bay Length (m)	175.0		175.0	180.0								
Base Capacity (vph)	181	2504	1087	350	2490		770	435			353	
Starvation Cap Reductn	0	0	0	0	0		0	0			0	
Spillback Cap Reductn	0	0	0	0	0		0	0			0	
Storage Cap Reductn	0	0	0	0	0		0	0			0	
Reduced v/c Ratio	0.05	0.42	0.65	0.04	0.51		0.82	0.29			0.22	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 132 (83%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 100

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.90

Intersection Signal Delay: 25.2

Intersection LOS: C

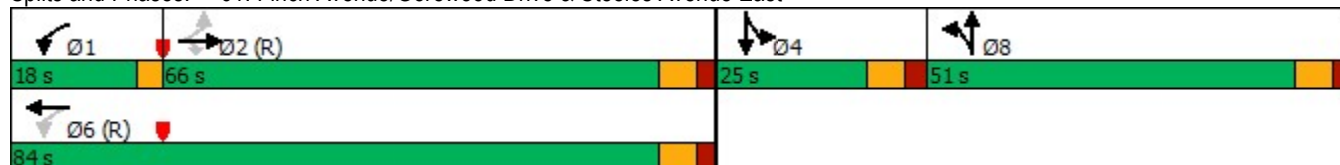
Intersection Capacity Utilization 68.4%

ICU Level of Service C

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 61: Finch Avenue/Gorewood Drive & Steeles Avenue East



224: Goreway Drive & Intermodal Drive
Intermodal Drive Extension

Existing Conditions
PM Peak Period

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	93	53	156	126	86	68	142	1632	89	21	859	70
Future Volume (vph)	93	53	156	126	86	68	142	1632	89	21	859	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	85.0		0.0	75.0		0.0	135.0		100.0	135.0		100.0
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (m)	7.6			7.6			7.6			7.6		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.91	1.00	1.00	0.91	1.00
Frt			0.850		0.934				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1332	1289	1338	1383	2799	0	1209	4902	1021	1342	4856	1183
Flt Permitted	0.632			0.720			0.279			0.128		
Satd. Flow (perm)	886	1289	1338	1048	2799	0	355	4902	1021	181	4856	1183
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			164		12				94			74
Link Speed (k/h)		50			50			70			70	
Link Distance (m)		232.0			189.6			952.1			1512.1	
Travel Time (s)		16.7			13.7			49.0			77.8	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	37%	49%	22%	32%	28%	14%	51%	7%	60%	36%	8%	38%
Adj. Flow (vph)	98	56	164	133	91	72	149	1718	94	22	904	74
Shared Lane Traffic (%)												
Lane Group Flow (vph)	98	56	164	133	163	0	149	1718	94	22	904	74
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases		4			8		5	2			6	
Permitted Phases	4		4	8			2		2	6		6
Detector Phase	4	4	4	8	8		5	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0		6.0	12.0	12.0	12.0	12.0	12.0
Minimum Split (s)	45.0	45.0	45.0	45.0	45.0		9.0	42.0	42.0	42.0	42.0	42.0
Total Split (s)	70.0	70.0	70.0	70.0	70.0		20.0	90.0	90.0	70.0	70.0	70.0
Total Split (%)	43.8%	43.8%	43.8%	43.8%	43.8%		12.5%	56.3%	56.3%	43.8%	43.8%	43.8%
Maximum Green (s)	64.0	64.0	64.0	64.0	64.0		17.0	84.0	84.0	64.0	64.0	64.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		3.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		0.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0		3.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag							Lead			Lag	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	C-Max	C-Max	C-Max
Walk Time (s)	12.0	12.0	12.0	12.0	12.0			12.0	12.0	12.0	12.0	12.0
Flash Dont Walk (s)	27.0	27.0	27.0	27.0	27.0			24.0	24.0	24.0	24.0	24.0
Pedestrian Calls (#/hr)	0	0	0	0	0			0	0	0	0	0
Act Effct Green (s)	26.4	26.4	26.4	26.4	26.4		124.6	121.6	121.6	107.6	107.6	107.6
Actuated g/C Ratio	0.16	0.16	0.16	0.16	0.16		0.78	0.76	0.76	0.67	0.67	0.67
v/c Ratio	0.67	0.26	0.46	0.77	0.35		0.44	0.46	0.12	0.18	0.28	0.09
Control Delay	83.1	58.5	11.1	90.1	54.9		7.1	4.9	0.7	18.4	12.0	3.0
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0

224: Goreway Drive & Intermodal Drive Intermodal Drive Extension

Existing Conditions
PM Peak Period

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	83.1	58.5	11.1	90.1	54.9		7.1	4.9	0.7	18.4	12.0	3.0
LOS	F	E	B	F	D		A	A	A	B	B	A
Approach Delay	41.6			70.7			4.9			11.5		
Approach LOS	D			E			A			B		
Queue Length 50th (m)	29.7	15.8	0.0	41.0	22.6		6.8	35.0	0.0	2.4	39.3	0.0
Queue Length 95th (m)	47.3	27.5	19.6	61.1	31.6		m11.1	47.5	m0.7	9.9	62.9	7.4
Internal Link Dist (m)	208.0			165.6			928.1			1488.1		
Turn Bay Length (m)	85.0			75.0			135.0		100.0	135.0		100.0
Base Capacity (vph)	354	515	633	419	1126		367	3725	798	121	3264	819
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.28	0.11	0.26	0.32	0.14		0.41	0.46	0.12	0.18	0.28	0.09

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 69 (43%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 100

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.77

Intersection Signal Delay: 15.4

Intersection LOS: B

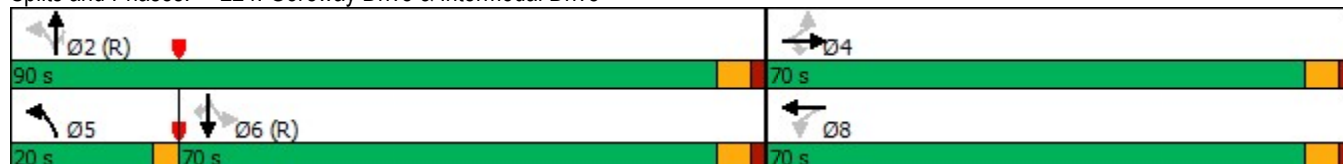
Intersection Capacity Utilization 75.2%

ICU Level of Service D

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 224: Goreway Drive & Intermodal Drive



225: Intermodal Drive & Deerhurst Drive
Intermodal Drive Extension

Existing Conditions
PM Peak Period

Intersection						
Int Delay, s/veh	4.6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	79	84	173	11	25	106
Future Vol, veh/h	79	84	173	11	25	106
Conflicting Peds, #/hr	3	0	0	3	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	65	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	83	83	83	83	83	83
Heavy Vehicles, %	65	53	17	18	16	19
Mvmt Flow	95	101	208	13	30	128
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	224	0	-	0	459	114
Stage 1	-	-	-	-	218	-
Stage 2	-	-	-	-	241	-
Critical Hdwy	5.4	-	-	-	7.12	7.28
Critical Hdwy Stg 1	-	-	-	-	6.12	-
Critical Hdwy Stg 2	-	-	-	-	6.12	-
Follow-up Hdwy	2.85	-	-	-	3.66	3.49
Pot Cap-1 Maneuver	985	-	-	-	497	865
Stage 1	-	-	-	-	757	-
Stage 2	-	-	-	-	736	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	982	-	-	-	446	862
Mov Cap-2 Maneuver	-	-	-	-	446	-
Stage 1	-	-	-	-	681	-
Stage 2	-	-	-	-	734	-
Approach	EB	WB		SB		
HCM Control Delay, s	4.4	0		11.3		
HCM LOS				B		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	982	-	-	-	732	
HCM Lane V/C Ratio	0.097	-	-	-	0.216	
HCM Control Delay (s)	9.1	-	-	-	11.3	
HCM Lane LOS	A	-	-	-	B	
HCM 95th %tile Q(veh)	0.3	-	-	-	0.8	

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	6:45	6:45	6:45	6:45	6:45	6:45
End Time	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	75	75	75	75	75	75
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	4	4	4	4	4	4
# of Recorded Intervals	3	3	3	3	3	3
Vehs Entered	6436	6626	6465	6534	6508	6515
Vehs Exited	6477	6599	6446	6542	6492	6511
Starting Vehs	442	411	373	402	403	407
Ending Vehs	401	438	392	394	419	411
Travel Distance (km)	17867	18317	17795	18020	17955	17991
Travel Time (hr)	389.3	404.2	388.7	399.9	398.9	396.2
Total Delay (hr)	127.6	135.2	127.4	135.7	134.9	132.1
Total Stops	6601	6933	6662	6851	6820	6771
Fuel Used (l)	1406.2	1442.5	1396.2	1425.6	1418.2	1417.7

Interval #0 Information Seeding

Start Time	6:45
End Time	7:00
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	
No data recorded this interval.	

Interval #1 Information Pre-Peak

Start Time	7:00
End Time	7:20
Total Time (min)	20
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	1	2	3	4	5	Avg
Vehs Entered	2151	2208	2182	2172	2147	2173
Vehs Exited	2201	2241	2166	2176	2140	2185
Starting Vehs	442	411	373	402	403	407
Ending Vehs	392	378	389	398	410	390
Travel Distance (km)	6134	6142	6067	6058	6002	6081
Travel Time (hr)	134.7	134.6	133.8	135.7	130.7	133.9
Total Delay (hr)	44.7	44.2	45.1	47.0	42.4	44.7
Total Stops	2289	2279	2303	2329	2195	2283
Fuel Used (l)	487.7	485.4	480.4	480.5	469.9	480.8

Interval #2 Information Peak

Start Time	7:20
End Time	7:35
Total Time (min)	15

Volumes adjusted by Growth Factors, 50%ile Adjustment.

Run Number	1	2	3	4	5	Avg
Vehs Entered	1681	1625	1629	1626	1666	1648
Vehs Exited	1646	1624	1607	1574	1682	1626
Starting Vehs	392	378	389	398	410	390
Ending Vehs	427	379	411	450	394	413
Travel Distance (km)	4482	4451	4347	4346	4522	4429
Travel Time (hr)	100.0	98.2	94.2	96.1	101.9	98.1
Total Delay (hr)	33.7	32.9	30.2	32.2	35.3	32.9
Total Stops	1753	1733	1600	1630	1745	1692
Fuel Used (l)	353.1	350.6	338.3	342.2	358.6	348.5

Interval #3 Information Post-Peak

Start Time	7:35
End Time	8:00
Total Time (min)	25

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	1	2	3	4	5	Avg
Vehs Entered	2604	2793	2654	2736	2695	2696
Vehs Exited	2630	2734	2673	2792	2670	2700
Starting Vehs	427	379	411	450	394	413
Ending Vehs	401	438	392	394	419	411
Travel Distance (km)	7251	7724	7381	7617	7432	7481
Travel Time (hr)	154.6	171.4	160.7	168.0	166.2	164.2
Total Delay (hr)	49.1	58.0	52.1	56.4	57.3	54.6
Total Stops	2559	2921	2759	2892	2880	2806
Fuel Used (l)	565.4	606.4	577.6	602.9	589.7	588.4

Intersection: 58: Goreway Drive & Steeles Avenue East

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB
Directions Served	L	T	T	T	R	L	T	T	T	R	L	L
Maximum Queue (m)	108.6	130.8	122.3	116.0	5.9	36.0	144.1	169.6	228.3	117.6	70.0	119.8
Average Queue (m)	48.1	71.5	72.2	72.1	0.2	11.3	94.5	100.0	117.3	90.1	42.2	57.5
95th Queue (m)	85.8	106.9	104.3	104.2	4.2	26.4	134.6	144.5	198.2	150.7	65.9	96.4
Link Distance (m)		651.1	651.1	651.1			1334.5	1334.5	1334.5			
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	115.0				150.0	150.0				110.0	120.0	120.0
Storage Blk Time (%)	1	0					0		2	11		0
Queuing Penalty (veh)	4	0					0		11	39		0

Intersection: 58: Goreway Drive & Steeles Avenue East

Movement	NB	NB	NB	SB	SB	SB	SB	SB
Directions Served	T	T	R	L	L	T	T	R
Maximum Queue (m)	134.9	134.3	87.6	89.8	100.7	96.4	73.8	38.4
Average Queue (m)	86.9	86.2	22.1	54.0	60.5	41.7	41.3	6.7
95th Queue (m)	127.9	126.5	82.1	93.2	98.4	83.4	66.6	25.6
Link Distance (m)	453.2	453.2				916.9	916.9	916.9
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (m)			80.0	130.0	130.0			
Storage Blk Time (%)	2	12	0	0	1	0		
Queuing Penalty (veh)	5	10	0	0	3	0		

Intersection: 61: Finch Avenue/Gorewood Drive & Steeles Avenue East

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB
Directions Served	L	T	T	T	R	L	T	T	TR	L	L	TR
Maximum Queue (m)	13.4	41.7	46.8	572.3	68.2	11.4	88.1	93.2	110.4	138.5	138.1	54.9
Average Queue (m)	2.3	16.0	23.1	45.5	6.4	2.3	54.8	54.1	57.9	79.9	82.8	20.8
95th Queue (m)	8.5	33.5	40.2	301.4	37.3	8.2	84.2	86.2	97.2	121.1	121.3	42.9
Link Distance (m)		1334.5	1334.5	1334.5			433.9	433.9		405.0	405.0	
Upstream Blk Time (%)				0								
Queuing Penalty (veh)				0								
Storage Bay Dist (m)	175.0				175.0	180.0			187.0			231.0
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 61: Finch Avenue/Gorewood Drive & Steeles Avenue East

Movement	SB	SB
Directions Served	LT	TR
Maximum Queue (m)	25.0	27.2
Average Queue (m)	11.1	8.8
95th Queue (m)	21.4	22.0
Link Distance (m)	853.6	853.6
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 224: Goreway Drive & Intermodal Drive

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	NB	SB
Directions Served	L	T	R	L	T	TR	L	T	T	T	R	L
Maximum Queue (m)	81.1	58.7	45.7	80.0	67.7	58.1	66.8	60.0	69.0	72.8	27.9	40.8
Average Queue (m)	33.1	18.6	16.2	38.3	16.9	22.4	28.2	24.2	32.6	35.1	7.2	13.0
95th Queue (m)	64.3	43.1	32.5	71.1	44.9	44.8	53.6	50.1	61.5	63.3	21.3	36.1
Link Distance (m)		209.1	209.1		160.4	160.4		916.9	916.9	916.9		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	85.0			75.0			135.0				100.0	135.0
Storage Blk Time (%)	1			2	0							
Queuing Penalty (veh)	0			1	0							

Intersection: 224: Goreway Drive & Intermodal Drive

Movement	SB	SB	SB	SB
Directions Served	T	T	T	R
Maximum Queue (m)	75.4	70.4	53.7	26.1
Average Queue (m)	30.5	29.7	21.8	6.0
95th Queue (m)	60.0	57.1	47.4	17.3
Link Distance (m)	1489.2	1489.2	1489.2	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)			100.0	
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 225: Intermodal Drive & Deerhurst Drive

Movement	EB	SB
Directions Served	L	LR
Maximum Queue (m)	30.6	29.3
Average Queue (m)	6.4	15.4
95th Queue (m)	21.4	25.0
Link Distance (m)		160.1
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)	65.0	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 74

58: Goreway Drive & Steeles Avenue East
Intermodal Drive Extension

'Do Nothing' 2031 Conditions

AM Peak Period

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  		 	 		 	 	
Traffic Volume (vph)	120	1334	120	33	1050	438	131	176	44	569	638	195
Future Volume (vph)	120	1334	120	33	1050	438	131	176	44	569	638	195
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	115.0		150.0	150.0		110.0	120.0		80.0	130.0		0.0
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (m)	7.6			7.6			7.6			7.6		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Ped Bike Factor			0.97			0.94	0.99		0.97	0.99		0.97
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1342	4561	1471	1772	4683	1372	2975	3380	1601	2951	3380	1396
Flt Permitted	0.162			0.121			0.950			0.950		
Satd. Flow (perm)	229	4561	1424	226	4683	1291	2954	3380	1557	2914	3380	1353
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			132			481			134			203
Link Speed (k/h)		80			80			70			70	
Link Distance (m)		668.9			1373.2			472.6			952.1	
Travel Time (s)		30.1			61.8			24.3			49.0	
Confl. Peds. (#/hr)	28		12	12		28	13		11	11		13
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	36%	15%	11%	3%	12%	19%	19%	8%	2%	20%	8%	17%
Adj. Flow (vph)	132	1466	132	36	1154	481	144	193	48	625	701	214
Shared Lane Traffic (%)												
Lane Group Flow (vph)	132	1466	132	36	1154	481	144	193	48	625	701	214
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2		2	6		6			4			8
Detector Phase	5	2	2	1	6	6	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	5.0	12.0	12.0	5.0	12.0	12.0	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	8.0	34.7	34.7	8.0	34.7	34.7	13.0	39.7	39.7	13.0	39.7	39.7
Total Split (s)	18.0	61.0	61.0	13.0	56.0	56.0	20.0	42.0	42.0	44.0	66.0	66.0
Total Split (%)	11.3%	38.1%	38.1%	8.1%	35.0%	35.0%	12.5%	26.3%	26.3%	27.5%	41.3%	41.3%
Maximum Green (s)	15.0	54.3	54.3	10.0	49.3	49.3	15.0	35.3	35.3	39.0	59.3	59.3
Yellow Time (s)	3.0	4.6	4.6	3.0	4.6	4.6	3.0	4.2	4.2	3.0	4.2	4.2
All-Red Time (s)	0.0	2.1	2.1	0.0	2.1	2.1	2.0	2.5	2.5	2.0	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-3.0	0.0	0.0
Total Lost Time (s)	3.0	6.7	6.7	3.0	6.7	6.7	5.0	6.7	6.7	2.0	6.7	6.7
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	None
Walk Time (s)		8.0	8.0		8.0	8.0		8.0	8.0		8.0	8.0
Flash Dont Walk (s)		20.0	20.0		20.0	20.0		25.0	25.0		25.0	25.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	92.2	80.1	80.1	83.3	72.5	72.5	12.7	16.4	16.4	39.7	40.4	40.4
Actuated g/C Ratio	0.58	0.50	0.50	0.52	0.45	0.45	0.08	0.10	0.10	0.25	0.25	0.25
v/c Ratio	0.59	0.64	0.17	0.19	0.54	0.57	0.61	0.56	0.17	0.85	0.82	0.43

58: Goreway Drive & Steeles Avenue East
Intermodal Drive Extension

'Do Nothing' 2031 Conditions
AM Peak Period

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	29.1	32.9	4.6	27.0	46.8	15.9	82.1	73.7	1.3	58.0	45.8	6.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.1	32.9	4.6	27.0	46.8	15.9	82.1	73.7	1.3	58.0	45.8	6.3
LOS	C	C	A	C	D	B	F	E	A	E	D	A
Approach Delay	30.5			37.5			67.8			45.2		
Approach LOS	C			D			E			D		
Queue Length 50th (m)	19.2	126.7	0.0	6.8	114.0	42.2	23.1	31.7	0.0	86.0	112.7	18.6
Queue Length 95th (m)	35.8	165.5	13.3	m15.4	141.3	82.8	34.8	42.4	0.0	101.4	86.4	7.0
Internal Link Dist (m)	644.9			1349.2			448.6			928.1		
Turn Bay Length (m)	115.0			150.0	150.0			110.0	120.0	80.0	130.0	
Base Capacity (vph)	236	2283	778	218	2122	848	278	745	447	774	1252	629
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.56	0.64	0.17	0.17	0.54	0.57	0.52	0.26	0.11	0.81	0.56	0.34

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 76 (48%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 120

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.85

Intersection Signal Delay: 39.6

Intersection LOS: D

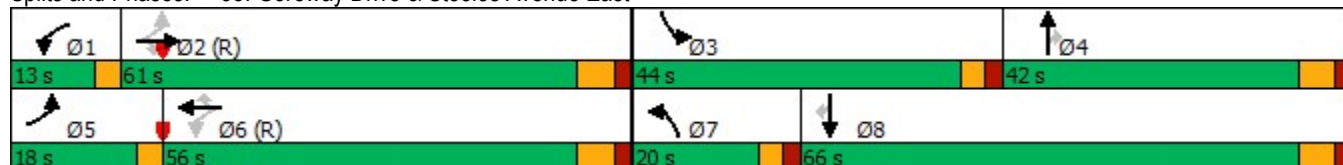
Intersection Capacity Utilization 77.1%

ICU Level of Service D

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 58: Goreway Drive & Steeles Avenue East



61: Finch Avenue/Gorewood Drive & Steeles Avenue East
Intermodal Drive Extension

'Do Nothing' 2031 Conditions
AM Peak Period

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  		 				 	
Traffic Volume (vph)	6	1085	747	135	958	17	526	45	129	16	32	8
Future Volume (vph)	6	1085	747	135	958	17	526	45	129	16	32	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.8	3.5	3.5	3.5	3.4	3.4	3.7	3.7	3.7
Storage Length (m)	175.0		175.0	180.0		187.0	0.0		231.0	0.0		0.0
Storage Lanes	1		1	1		1	2		1	0		0
Taper Length (m)	7.6			7.6			7.6			7.6		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	0.91	0.97	1.00	1.00	0.95	0.95	0.95
Ped Bike Factor	0.99		0.98		1.00		1.00	0.99			1.00	
Frt			0.850		0.997			0.889			0.978	
Flt Protected	0.950			0.950			0.950				0.986	
Satd. Flow (prot)	1560	4601	1361	1647	4445	0	2960	1498	0	0	2459	0
Flt Permitted	0.258			0.169			0.950				0.986	
Satd. Flow (perm)	420	4601	1339	293	4445	0	2956	1498	0	0	2457	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			812		2			89			9	
Link Speed (k/h)		80			80			80			50	
Link Distance (m)		1373.2			447.9			426.1			872.2	
Travel Time (s)		61.8			20.2			19.2			62.8	
Confl. Peds. (#/hr)	10		2	2		10	1		4	4		1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	17%	14%	20%	12%	15%	12%	17%	0%	12%	56%	41%	25%
Adj. Flow (vph)	7	1179	812	147	1041	18	572	49	140	17	35	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	7	1179	812	147	1059	0	572	189	0	0	61	0
Turn Type	Perm	NA	Perm	pm+pt	NA		Split	NA		Split	NA	
Protected Phases		2		1	6		8	8		4	4	
Permitted Phases	2		2	6								
Detector Phase	2	2	2	1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	22.0	22.0	22.0	5.0	22.0		12.0	12.0		8.0	8.0	
Minimum Split (s)	29.9	29.9	29.9	8.0	29.9		45.2	45.2		15.2	15.2	
Total Split (s)	66.0	66.0	66.0	18.0	84.0		51.0	51.0		25.0	25.0	
Total Split (%)	41.3%	41.3%	41.3%	11.3%	52.5%		31.9%	31.9%		15.6%	15.6%	
Maximum Green (s)	59.1	59.1	59.1	15.0	77.1		43.8	43.8		17.8	17.8	
Yellow Time (s)	4.6	4.6	4.6	3.0	4.6		4.6	4.6		4.6	4.6	
All-Red Time (s)	2.3	2.3	2.3	0.0	2.3		2.6	2.6		2.6	2.6	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)	6.9	6.9	6.9	3.0	6.9		7.2	7.2			7.2	
Lead/Lag	Lag	Lag	Lag	Lead								
Lead-Lag Optimize?	Yes	Yes	Yes	Yes								
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	C-Max	C-Max	C-Max	None	C-Max		None	None		None	None	
Walk Time (s)	8.0	8.0	8.0		8.0		8.0	8.0				
Flash Dont Walk (s)	15.0	15.0	15.0		15.0		30.0	30.0				
Pedestrian Calls (#/hr)	0	0	0		0		0	0				
Act Effect Green (s)	81.2	81.2	81.2	99.6	95.7		36.6	36.6			9.4	
Actuated g/C Ratio	0.51	0.51	0.51	0.62	0.60		0.23	0.23			0.06	

61: Finch Avenue/Gorewood Drive & Steeles Avenue East
Intermodal Drive Extension

'Do Nothing' 2031 Conditions
AM Peak Period

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.03	0.51	0.75	0.53	0.40		0.85	0.46			0.40	
Control Delay	21.5	21.6	11.6	21.7	18.9		71.0	30.1			69.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Delay	21.5	21.6	11.6	21.7	18.9		71.0	30.1			69.1	
LOS	C	C	B	C	B		E	C			E	
Approach Delay		17.5			19.3			60.8			69.1	
Approach LOS		B			B			E			E	
Queue Length 50th (m)	0.7	71.7	46.2	19.6	65.8		90.2	27.0			8.5	
Queue Length 95th (m)	m1.1	83.0	218.3	35.6	88.3		106.4	48.7			16.6	
Internal Link Dist (m)		1349.2			423.9			402.1			848.2	
Turn Bay Length (m)	175.0		175.0	180.0								
Base Capacity (vph)	213	2334	1079	309	2660		810	474			281	
Starvation Cap Reductn	0	0	0	0	0		0	0			0	
Spillback Cap Reductn	0	0	0	0	0		0	0			0	
Storage Cap Reductn	0	0	0	0	0		0	0			0	
Reduced v/c Ratio	0.03	0.51	0.75	0.48	0.40		0.71	0.40			0.22	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 127 (79%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 100

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.85

Intersection Signal Delay: 27.0

Intersection LOS: C

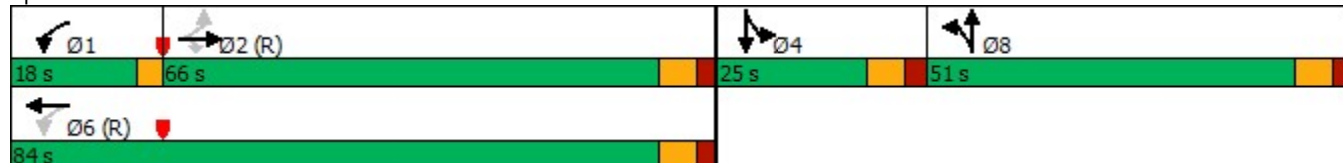
Intersection Capacity Utilization 77.9%

ICU Level of Service D

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 61: Finch Avenue/Gorewood Drive & Steeles Avenue East



224: Goreway Drive & Intermodal Drive
Intermodal Drive Extension

'Do Nothing' 2031 Conditions

AM Peak Period

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	38	59	106	107	68	59	133	770	127	79	1760	95
Future Volume (vph)	38	59	106	107	68	59	133	770	127	79	1760	95
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	85.0		0.0	75.0		0.0	135.0		100.0	135.0		100.0
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (m)	7.6			7.6			7.6			7.6		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.91	1.00	1.00	0.91	1.00
Frt			0.850		0.931				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1313	1423	1002	1080	2302	0	1250	4768	1134	1521	4902	1096
Flt Permitted	0.666			0.716			0.066			0.328		
Satd. Flow (perm)	920	1423	1002	814	2302	0	87	4768	1134	525	4902	1096
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			114		63				137			84
Link Speed (k/h)		50			50			70			70	
Link Distance (m)		232.0			189.6			952.1			1512.1	
Travel Time (s)		16.7			13.7			49.0			77.8	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	39%	35%	63%	69%	68%	24%	46%	10%	44%	20%	7%	49%
Adj. Flow (vph)	41	63	114	115	73	63	143	828	137	85	1892	102
Shared Lane Traffic (%)												
Lane Group Flow (vph)	41	63	114	115	136	0	143	828	137	85	1892	102
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases		4			8		5	2			6	
Permitted Phases	4		4	8			2		2	6		6
Detector Phase	4	4	4	8	8		5	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0		6.0	12.0	12.0	12.0	12.0	12.0
Minimum Split (s)	45.0	45.0	45.0	45.0	45.0		9.0	42.0	42.0	42.0	42.0	42.0
Total Split (s)	65.0	65.0	65.0	65.0	65.0		18.0	95.0	95.0	77.0	77.0	77.0
Total Split (%)	40.6%	40.6%	40.6%	40.6%	40.6%		11.3%	59.4%	59.4%	48.1%	48.1%	48.1%
Maximum Green (s)	59.0	59.0	59.0	59.0	59.0		15.0	89.0	89.0	71.0	71.0	71.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		3.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		0.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0		3.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag							Lead			Lag	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	C-Max	C-Max	C-Max
Walk Time (s)	12.0	12.0	12.0	12.0	12.0			12.0	12.0	12.0	12.0	12.0
Flash Dont Walk (s)	27.0	27.0	27.0	27.0	27.0			24.0	24.0	24.0	24.0	24.0
Pedestrian Calls (#/hr)	0	0	0	0	0			0	0	0	0	0
Act Effct Green (s)	28.7	28.7	28.7	28.7	28.7		122.3	119.3	119.3	95.6	95.6	95.6
Actuated g/C Ratio	0.18	0.18	0.18	0.18	0.18		0.76	0.75	0.75	0.60	0.60	0.60
v/c Ratio	0.25	0.25	0.42	0.79	0.29		0.66	0.23	0.16	0.27	0.65	0.15
Control Delay	56.2	55.5	12.5	95.5	29.3		47.1	5.4	0.6	22.7	24.9	6.1
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0

224: Goreway Drive & Intermodal Drive
Intermodal Drive Extension

'Do Nothing' 2031 Conditions
AM Peak Period

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	56.2	55.5	12.5	95.5	29.3		47.1	5.4	0.6	22.7	24.9	6.1
LOS	E	E	B	F	C		D	A	A	C	C	A
Approach Delay	33.1			59.6			10.2			23.9		
Approach LOS	C			E			B			C		
Queue Length 50th (m)	11.4	17.4	0.0	35.5	10.5		21.0	20.4	0.0	12.6	140.4	2.3
Queue Length 95th (m)	21.3	29.1	16.4	54.4	18.8		49.2	26.9	0.7	31.9	206.3	14.1
Internal Link Dist (m)	208.0			165.6			928.1			1488.1		
Turn Bay Length (m)	85.0			75.0			135.0		100.0	135.0		100.0
Base Capacity (vph)	339	524	441	300	888		220	3556	880	313	2929	688
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.12	0.12	0.26	0.38	0.15		0.65	0.23	0.16	0.27	0.65	0.15

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 97 (61%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 100

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.79

Intersection Signal Delay: 22.7

Intersection LOS: C

Intersection Capacity Utilization 73.0%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 224: Goreway Drive & Intermodal Drive



225: Intermodal Drive & Deerhurst Drive
Intermodal Drive Extension

'Do Nothing' 2031 Conditions
AM Peak Period

Intersection						
Int Delay, s/veh	3.9					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	100	151	140	18	10	82
Future Vol, veh/h	100	151	140	18	10	82
Conflicting Peds, #/hr	10	0	0	10	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	65	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	75	75	75	75	75	75
Heavy Vehicles, %	35	26	27	11	10	71
Mvmt Flow	133	201	187	24	13	109
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	221	0	-	0	576	116
Stage 1	-	-	-	-	209	-
Stage 2	-	-	-	-	367	-
Critical Hdwy	4.8	-	-	-	7	8.32
Critical Hdwy Stg 1	-	-	-	-	6	-
Critical Hdwy Stg 2	-	-	-	-	6	-
Follow-up Hdwy	2.55	-	-	-	3.6	4.01
Pot Cap-1 Maneuver	1136	-	-	-	429	732
Stage 1	-	-	-	-	782	-
Stage 2	-	-	-	-	648	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1125	-	-	-	371	725
Mov Cap-2 Maneuver	-	-	-	-	371	-
Stage 1	-	-	-	-	683	-
Stage 2	-	-	-	-	642	-
Approach	EB	WB		SB		
HCM Control Delay, s	3.4	0		11.7		
HCM LOS				B		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1125	-	-	-	657	
HCM Lane V/C Ratio	0.119	-	-	-	0.187	
HCM Control Delay (s)	8.6	-	-	-	11.7	
HCM Lane LOS	A	-	-	-	B	
HCM 95th %tile Q(veh)	0.4	-	-	-	0.7	

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	6:45	6:45	6:45	6:45	6:45	6:45
End Time	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	75	75	75	75	75	75
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	4	4	4	4	4	4
# of Recorded Intervals	3	3	3	3	3	3
Vehs Entered	6528	6524	6505	6392	6525	6495
Vehs Exited	6478	6482	6538	6356	6542	6480
Starting Vehs	358	349	384	368	377	369
Ending Vehs	408	391	351	404	360	380
Travel Distance (km)	17696	17854	17844	17556	17933	17776
Travel Time (hr)	388.7	392.4	395.4	382.8	390.8	390.0
Total Delay (hr)	129.3	130.9	134.0	125.5	127.9	129.5
Total Stops	6334	6405	6508	6184	6320	6349
Fuel Used (l)	1405.0	1413.4	1423.0	1387.2	1416.2	1409.0

Interval #0 Information Seeding

Start Time	6:45
End Time	7:00
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	
No data recorded this interval.	

Interval #1 Information Pre-Peak

Start Time	7:00
End Time	7:20
Total Time (min)	20
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	1	2	3	4	5	Avg
Vehs Entered	2085	2152	2134	2090	2095	2110
Vehs Exited	2087	2122	2194	2086	2070	2112
Starting Vehs	358	349	384	368	377	369
Ending Vehs	356	379	324	372	402	366
Travel Distance (km)	5664	5932	5966	5790	5800	5831
Travel Time (hr)	119.8	131.3	130.8	127.3	123.8	126.6
Total Delay (hr)	37.1	44.7	43.2	42.4	38.6	41.2
Total Stops	1875	2136	2100	2052	1911	2013
Fuel Used (l)	445.1	472.9	477.8	458.4	453.1	461.4

Interval #2 Information Peak

Start Time	7:20
End Time	7:35
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	1845	1726	1771	1674	1807	1766
Vehs Exited	1730	1694	1631	1624	1784	1693
Starting Vehs	356	379	324	372	402	366
Ending Vehs	471	411	464	422	425	437
Travel Distance (km)	4769	4648	4589	4483	4849	4667
Travel Time (hr)	110.6	103.8	102.9	98.2	108.6	104.8
Total Delay (hr)	40.3	35.5	35.5	32.4	37.4	36.2
Total Stops	1944	1723	1756	1620	1839	1779
Fuel Used (l)	383.9	368.2	366.9	354.8	386.6	372.1

Interval #3 Information Post-Peak

Start Time	7:35
End Time	8:00
Total Time (min)	25

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	1	2	3	4	5	Avg
Vehs Entered	2598	2646	2600	2628	2623	2621
Vehs Exited	2661	2666	2713	2646	2688	2675
Starting Vehs	471	411	464	422	425	437
Ending Vehs	408	391	351	404	360	380
Travel Distance (km)	7263	7274	7289	7282	7285	7279
Travel Time (hr)	158.3	157.4	161.7	157.3	158.4	158.6
Total Delay (hr)	51.9	50.7	55.2	50.7	51.9	52.1
Total Stops	2515	2546	2652	2512	2570	2559
Fuel Used (l)	576.0	572.3	578.4	574.0	576.6	575.5

Intersection: 58: Goreway Drive & Steeles Avenue East

Movement	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB	NB
Directions Served	L	T	T	T	L	T	T	T	R	L	L	T
Maximum Queue (m)	111.5	136.7	131.5	134.9	49.0	145.8	150.4	181.1	117.6	55.1	63.7	52.9
Average Queue (m)	32.8	74.1	77.0	78.9	8.2	87.2	91.6	87.8	22.6	18.0	30.7	26.1
95th Queue (m)	69.0	114.4	115.4	118.7	31.6	133.0	137.2	141.1	91.7	44.2	52.2	46.8
Link Distance (m)		651.1	651.1	651.1		1334.5	1334.5	1334.5				453.2
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	115.0				150.0				110.0	120.0	120.0	
Storage Blk Time (%)	0	1		0		0		2	0			
Queuing Penalty (veh)	0	1		0		0		10	0			

Intersection: 58: Goreway Drive & Steeles Avenue East

Movement	NB	NB	SB	SB	SB	SB	SB
Directions Served	T	R	L	L	T	T	R
Maximum Queue (m)	48.8	6.1	133.6	137.1	242.3	103.6	41.6
Average Queue (m)	19.5	0.2	82.6	93.9	57.3	47.4	4.4
95th Queue (m)	40.5	3.2	133.6	139.4	153.2	86.1	20.6
Link Distance (m)	453.2				916.9	916.9	916.9
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (m)		80.0	130.0	130.0			
Storage Blk Time (%)			0	3	0		
Queuing Penalty (veh)			1	11	1		

Intersection: 61: Finch Avenue/Gorewood Drive & Steeles Avenue East

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB
Directions Served	L	T	T	T	R	L	T	T	TR	L	L	TR
Maximum Queue (m)	8.0	77.7	82.6	374.4	122.0	61.0	84.4	83.4	80.0	133.0	121.3	68.7
Average Queue (m)	1.1	40.1	46.3	58.0	27.8	28.4	50.4	48.4	40.6	72.0	71.6	28.9
95th Queue (m)	5.1	67.5	74.6	241.5	93.1	51.1	81.1	79.0	74.5	111.8	107.3	54.6
Link Distance (m)		1334.5	1334.5	1334.5			433.9	433.9		405.0	405.0	
Upstream Blk Time (%)				0								
Queuing Penalty (veh)				0								
Storage Bay Dist (m)	175.0				175.0	180.0			187.0			231.0
Storage Blk Time (%)				0	0							
Queuing Penalty (veh)				0	1							

Intersection: 61: Finch Avenue/Gorewood Drive & Steeles Avenue East

Movement	SB	SB
Directions Served	LT	TR
Maximum Queue (m)	40.9	30.5
Average Queue (m)	15.9	8.7
95th Queue (m)	34.2	23.3
Link Distance (m)	853.6	853.6
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 224: Goreway Drive & Intermodal Drive

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	NB	SB
Directions Served	L	T	R	L	T	TR	L	T	T	T	R	L
Maximum Queue (m)	48.3	51.4	62.4	79.8	89.0	57.2	89.9	44.4	40.7	49.2	29.7	104.2
Average Queue (m)	12.9	17.8	24.1	44.0	18.2	21.9	45.3	14.3	13.5	14.8	8.0	18.8
95th Queue (m)	33.4	39.3	51.3	79.3	59.1	46.8	83.5	32.7	32.8	35.7	21.8	55.8
Link Distance (m)		209.1	209.1		160.4	160.4		916.9	916.9	916.9		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	85.0			75.0			135.0				100.0	135.0
Storage Blk Time (%)				4	0							0
Queuing Penalty (veh)				1	0							0

Intersection: 224: Goreway Drive & Intermodal Drive

Movement	SB	SB	SB	SB
Directions Served	T	T	T	R
Maximum Queue (m)	149.0	133.7	142.5	90.8
Average Queue (m)	73.0	69.3	66.0	13.1
95th Queue (m)	129.0	121.2	119.2	54.6
Link Distance (m)	1489.2	1489.2	1489.2	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)				100.0
Storage Blk Time (%)	1		2	0
Queuing Penalty (veh)	1		2	0

Intersection: 225: Intermodal Drive & Deerhurst Drive

Movement	EB	WB	WB	SB
Directions Served	L	T	TR	LR
Maximum Queue (m)	23.6	2.5	2.5	34.1
Average Queue (m)	5.0	0.1	0.1	17.7
95th Queue (m)	17.4	1.8	1.8	28.6
Link Distance (m)		336.6	336.6	160.1
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)	65.0			
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 29

58: Goreway Drive & Steeles Avenue East
Intermodal Drive Extension

'Do Nothing' 2031 Conditions

PM Peak Period

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  		 	 		 	 	
Traffic Volume (vph)	222	1313	187	62	1124	654	327	1041	86	372	514	181
Future Volume (vph)	222	1313	187	62	1124	654	327	1041	86	372	514	181
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	115.0		150.0	150.0		110.0	120.0		80.0	130.0		0.0
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (m)	7.6			7.6			7.6			7.6		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Ped Bike Factor			0.98	1.00		0.95	0.99		0.99	1.00		0.96
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1534	4683	1484	1755	4561	1408	3278	3510	1570	2855	3444	1432
Flt Permitted	0.115			0.128			0.950			0.950		
Satd. Flow (perm)	186	4683	1457	236	4561	1339	3230	3510	1547	2853	3444	1372
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			191			317			100			180
Link Speed (k/h)		80			80			70			70	
Link Distance (m)		668.9			1373.2			472.6			952.1	
Travel Time (s)		30.1			61.8			24.3			49.0	
Confl. Peds. (#/hr)	22		4	4		22	21		2	2		21
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	19%	12%	10%	4%	15%	16%	8%	4%	4%	24%	6%	14%
Adj. Flow (vph)	227	1340	191	63	1147	667	334	1062	88	380	524	185
Shared Lane Traffic (%)												
Lane Group Flow (vph)	227	1340	191	63	1147	667	334	1062	88	380	524	185
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2		2	6		6			4			8
Detector Phase	5	2	2	1	6	6	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	5.0	12.0	12.0	5.0	12.0	12.0	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	8.0	34.7	34.7	8.0	34.7	34.7	13.0	39.7	39.7	13.0	39.7	39.7
Total Split (s)	19.0	70.0	70.0	9.0	60.0	60.0	29.0	55.0	55.0	26.0	52.0	52.0
Total Split (%)	11.9%	43.8%	43.8%	5.6%	37.5%	37.5%	18.1%	34.4%	34.4%	16.3%	32.5%	32.5%
Maximum Green (s)	16.0	63.3	63.3	6.0	53.3	53.3	24.0	48.3	48.3	21.0	45.3	45.3
Yellow Time (s)	3.0	4.6	4.6	3.0	4.6	4.6	3.0	4.2	4.2	3.0	4.2	4.2
All-Red Time (s)	0.0	2.1	2.1	0.0	2.1	2.1	2.0	2.5	2.5	2.0	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	6.7	6.7	3.0	6.7	6.7	5.0	6.7	6.7	5.0	6.7	6.7
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	None
Walk Time (s)		8.0	8.0		8.0	8.0		8.0	8.0		8.0	8.0
Flash Dont Walk (s)		20.0	20.0		20.0	20.0		25.0	25.0		25.0	25.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	76.0	65.1	65.1	63.0	53.3	53.3	21.0	48.3	48.3	21.0	48.3	48.3
Actuated g/C Ratio	0.48	0.41	0.41	0.39	0.33	0.33	0.13	0.30	0.30	0.13	0.30	0.30
v/c Ratio	1.02	0.70	0.27	0.42	0.76	1.02	0.78	1.00	0.16	1.02	0.50	0.34

Lanes, Volumes, Timings
EM

Synchro 11 Report
April 2024

58: Goreway Drive & Steeles Avenue East
Intermodal Drive Extension

'Do Nothing' 2031 Conditions

PM Peak Period

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	99.0	42.3	4.8	41.3	68.5	79.7	79.9	83.2	5.8	107.4	46.8	16.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	99.0	42.3	4.8	41.3	68.5	79.7	79.9	83.2	5.8	107.4	46.8	16.4
LOS	F	D	A	D	E	E	E	F	A	F	D	B
Approach Delay	45.5			71.6			77.9			62.8		
Approach LOS	D			E			E			E		
Queue Length 50th (m)	~52.5	131.6	0.0	16.0	140.5	~157.5	53.6	~179.4	0.0	~65.7	78.9	16.8
Queue Length 95th (m)	#108.6	149.2	15.8	m0.0	155.4	#270.0	69.8	#226.8	10.4	#100.3	99.3	43.4
Internal Link Dist (m)	644.9			1349.2			448.6			928.1		
Turn Bay Length (m)	115.0	150.0		150.0	110.0		120.0	80.0		130.0		
Base Capacity (vph)	223	1905	705	149	1519	657	491	1059	536	374	1039	539
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.02	0.70	0.27	0.42	0.76	1.02	0.68	1.00	0.16	1.02	0.50	0.34

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 61 (38%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 120

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.02

Intersection Signal Delay: 64.2

Intersection LOS: E

Intersection Capacity Utilization 98.2%

ICU Level of Service F

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

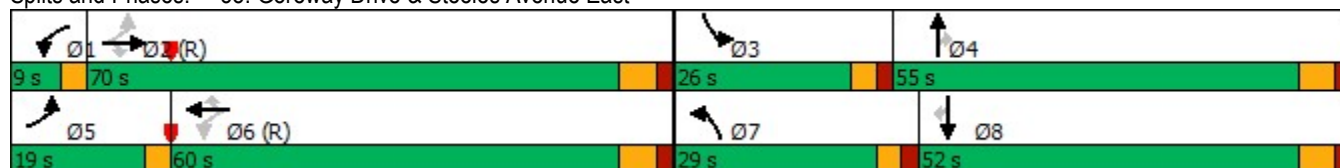
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 58: Goreway Drive & Steeles Avenue East



61: Finch Avenue/Gorewood Drive & Steeles Avenue East
Intermodal Drive Extension

'Do Nothing' 2031 Conditions

PM Peak Period

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  		 				 	
Traffic Volume (vph)	9	1060	673	13	1145	137	600	23	95	10	43	20
Future Volume (vph)	9	1060	673	13	1145	137	600	23	95	10	43	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.8	3.5	3.5	3.5	3.4	3.4	3.7	3.7	3.7
Storage Length (m)	175.0		175.0	180.0		187.0	0.0		231.0	0.0		0.0
Storage Lanes	1		1	1		1	2		1	0		0
Taper Length (m)	7.6			7.6			7.6			7.6		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	0.91	0.97	1.00	1.00	0.95	0.95	0.95
Ped Bike Factor	1.00		0.97		1.00		1.00	0.98			0.99	
Frt			0.850		0.984			0.879			0.959	
Flt Protected	0.950			0.950			0.950				0.993	
Satd. Flow (prot)	1825	4683	1458	1724	4449	0	2815	1326	0	0	3013	0
Flt Permitted	0.158			0.191			0.950				0.993	
Satd. Flow (perm)	303	4683	1417	347	4449	0	2809	1326	0	0	3011	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			708		18			100			21	
Link Speed (k/h)		80			80			80			50	
Link Distance (m)		1373.2			447.9			426.1			872.2	
Travel Time (s)		61.8			20.2			19.2			62.8	
Confl. Peds. (#/hr)	2		8	8		2	2		6	6		2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	12%	12%	7%	11%	31%	23%	39%	17%	0%	16%	20%
Adj. Flow (vph)	9	1116	708	14	1205	144	632	24	100	11	45	21
Shared Lane Traffic (%)												
Lane Group Flow (vph)	9	1116	708	14	1349	0	632	124	0	0	77	0
Turn Type	Perm	NA	Perm	pm+pt	NA		Split	NA		Split	NA	
Protected Phases		2		1	6		8	8		4	4	
Permitted Phases	2		2	6								
Detector Phase	2	2	2	1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	22.0	22.0	22.0	5.0	22.0		12.0	12.0		8.0	8.0	
Minimum Split (s)	29.9	29.9	29.9	8.0	29.9		45.2	45.2		15.2	15.2	
Total Split (s)	66.0	66.0	66.0	18.0	84.0		51.0	51.0		25.0	25.0	
Total Split (%)	41.3%	41.3%	41.3%	11.3%	52.5%		31.9%	31.9%		15.6%	15.6%	
Maximum Green (s)	59.1	59.1	59.1	15.0	77.1		43.8	43.8		17.8	17.8	
Yellow Time (s)	4.6	4.6	4.6	3.0	4.6		4.6	4.6		4.6	4.6	
All-Red Time (s)	2.3	2.3	2.3	0.0	2.3		2.6	2.6		2.6	2.6	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)	6.9	6.9	6.9	3.0	6.9		7.2	7.2			7.2	
Lead/Lag	Lag	Lag	Lag	Lead								
Lead-Lag Optimize?	Yes	Yes	Yes	Yes								
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	C-Max	C-Max	C-Max	None	C-Max		None	None		None	None	
Walk Time (s)	8.0	8.0	8.0		8.0		8.0	8.0				
Flash Dont Walk (s)	15.0	15.0	15.0		15.0		30.0	30.0				
Pedestrian Calls (#/hr)	0	0	0		0		0	0				
Act Effect Green (s)	85.6	85.6	85.6	93.4	89.5		40.1	40.1			9.1	
Actuated g/C Ratio	0.54	0.54	0.54	0.58	0.56		0.25	0.25			0.06	

61: Finch Avenue/Gorewood Drive & Steeles Avenue East
Intermodal Drive Extension

'Do Nothing' 2031 Conditions
PM Peak Period

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.06	0.45	0.65	0.05	0.54		0.90	0.30			0.40	
Control Delay	12.6	11.4	8.6	16.3	23.6		74.1	14.1			58.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Delay	12.6	11.4	8.6	16.3	23.6		74.1	14.1			58.8	
LOS	B	B	A	B	C		E	B			E	
Approach Delay		10.4			23.5			64.3			58.8	
Approach LOS		B			C			E			E	
Queue Length 50th (m)	0.4	21.0	47.7	1.9	97.1		99.4	5.8			9.2	
Queue Length 95th (m)	m0.7	m52.9	m194.9	5.6	118.3		121.5	23.0			18.1	
Internal Link Dist (m)		1349.2			423.9			402.1			848.2	
Turn Bay Length (m)	175.0		175.0	180.0								
Base Capacity (vph)	162	2504	1087	331	2495		770	435			353	
Starvation Cap Reductn	0	0	0	0	0		0	0			0	
Spillback Cap Reductn	0	0	0	0	0		0	0			0	
Storage Cap Reductn	0	0	0	0	0		0	0			0	
Reduced v/c Ratio	0.06	0.45	0.65	0.04	0.54		0.82	0.29			0.22	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 132 (83%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 100

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.90

Intersection Signal Delay: 25.8

Intersection LOS: C

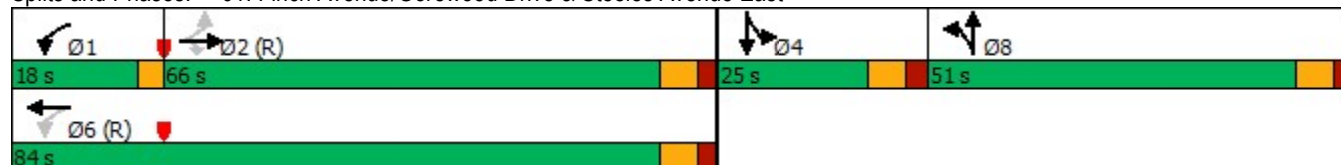
Intersection Capacity Utilization 68.4%

ICU Level of Service C

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 61: Finch Avenue/Gorewood Drive & Steeles Avenue East



224: Goreway Drive & Intermodal Drive
Intermodal Drive Extension

'Do Nothing' 2031 Conditions

PM Peak Period

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	106	60	178	143	98	77	162	2060	102	24	1084	79
Future Volume (vph)	106	60	178	143	98	77	162	2060	102	24	1084	79
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	85.0		0.0	75.0		0.0	135.0		100.0	135.0		100.0
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (m)	7.6			7.6			7.6			7.6		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.91	1.00	1.00	0.91	1.00
Frt			0.850		0.934				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1332	1289	1338	1383	2798	0	1209	4902	1021	1342	4856	1183
Flt Permitted	0.605			0.716			0.202			0.073		
Satd. Flow (perm)	848	1289	1338	1042	2798	0	257	4902	1021	103	4856	1183
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			187		3				90			83
Link Speed (k/h)		50			50			70			70	
Link Distance (m)		232.0			189.6			952.1			1512.1	
Travel Time (s)		16.7			13.7			49.0			77.8	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	37%	49%	22%	32%	28%	14%	51%	7%	60%	36%	8%	38%
Adj. Flow (vph)	112	63	187	151	103	81	171	2168	107	25	1141	83
Shared Lane Traffic (%)												
Lane Group Flow (vph)	112	63	187	151	184	0	171	2168	107	25	1141	83
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases		4			8		5	2			6	
Permitted Phases	4		4	8			2		2	6		6
Detector Phase	4	4	4	8	8		5	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0		6.0	12.0	12.0	12.0	12.0	12.0
Minimum Split (s)	45.0	45.0	45.0	45.0	45.0		9.0	42.0	42.0	42.0	42.0	42.0
Total Split (s)	70.0	70.0	70.0	70.0	70.0		20.0	90.0	90.0	70.0	70.0	70.0
Total Split (%)	43.8%	43.8%	43.8%	43.8%	43.8%		12.5%	56.3%	56.3%	43.8%	43.8%	43.8%
Maximum Green (s)	64.0	64.0	64.0	64.0	64.0		17.0	84.0	84.0	64.0	64.0	64.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		3.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		0.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0		3.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag							Lead			Lag	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	C-Max	C-Max	C-Max
Walk Time (s)	12.0	12.0	12.0	12.0	12.0			12.0	12.0	12.0	12.0	12.0
Flash Dont Walk (s)	27.0	27.0	27.0	27.0	27.0			24.0	24.0	24.0	24.0	24.0
Pedestrian Calls (#/hr)	0	0	0	0	0			0	0	0	0	0
Act Effct Green (s)	29.4	29.4	29.4	29.4	29.4		121.6	118.6	118.6	100.0	100.0	100.0
Actuated g/C Ratio	0.18	0.18	0.18	0.18	0.18		0.76	0.74	0.74	0.62	0.62	0.62
v/c Ratio	0.72	0.27	0.47	0.79	0.36		0.59	0.60	0.14	0.39	0.38	0.11
Control Delay	84.7	55.9	10.0	88.3	56.2		15.6	6.9	1.0	44.8	17.0	4.0
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0

224: Goreway Drive & Intermodal Drive
Intermodal Drive Extension

'Do Nothing' 2031 Conditions
PM Peak Period

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	84.7	55.9	10.0	88.3	56.2		15.6	6.9	1.0	44.8	17.0	4.0
LOS	F	E	A	F	E		B	A	A	D	B	A
Approach Delay	41.1			70.7			7.3			16.7		
Approach LOS	D			E			A			B		
Queue Length 50th (m)	34.0	17.4	0.0	46.5	26.7		9.3	53.5	0.0	3.7	60.4	0.0
Queue Length 95th (m)	52.8	29.4	20.2	67.0	35.5		m11.8	m70.8	m0.5	#21.5	99.5	9.3
Internal Link Dist (m)	208.0			165.6			928.1			1488.1		
Turn Bay Length (m)	85.0			75.0			135.0		100.0	135.0		100.0
Base Capacity (vph)	339	515	647	416	1121		306	3632	780	64	3034	770
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.33	0.12	0.29	0.36	0.16		0.56	0.60	0.14	0.39	0.38	0.11

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 69 (43%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 100

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.79

Intersection Signal Delay: 17.6

Intersection LOS: B

Intersection Capacity Utilization 84.4%

ICU Level of Service E

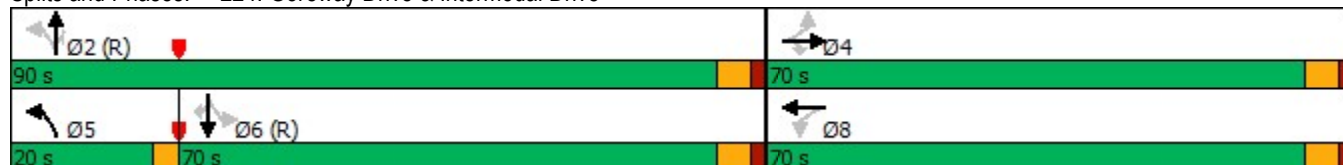
Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 224: Goreway Drive & Intermodal Drive



225: Intermodal Drive & Deerhurst Drive
Intermodal Drive Extension

'Do Nothing' 2031 Conditions
PM Peak Period

Intersection						
Int Delay, s/veh	4.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	79	96	198	11	25	106
Future Vol, veh/h	79	96	198	11	25	106
Conflicting Peds, #/hr	3	0	0	3	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	65	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	83	83	83	83	83	83
Heavy Vehicles, %	65	53	17	18	16	19
Mvmt Flow	95	116	239	13	30	128
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	255	0	-	0	497	129
Stage 1	-	-	-	-	249	-
Stage 2	-	-	-	-	248	-
Critical Hdwy	5.4	-	-	-	7.12	7.28
Critical Hdwy Stg 1	-	-	-	-	6.12	-
Critical Hdwy Stg 2	-	-	-	-	6.12	-
Follow-up Hdwy	2.85	-	-	-	3.66	3.49
Pot Cap-1 Maneuver	952	-	-	-	469	845
Stage 1	-	-	-	-	729	-
Stage 2	-	-	-	-	730	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	949	-	-	-	420	843
Mov Cap-2 Maneuver	-	-	-	-	420	-
Stage 1	-	-	-	-	654	-
Stage 2	-	-	-	-	728	-
Approach	EB	WB		SB		
HCM Control Delay, s	4.2	0		11.5		
HCM LOS				B		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	949	-	-	-	707	
HCM Lane V/C Ratio	0.1	-	-	-	0.223	
HCM Control Delay (s)	9.2	-	-	-	11.5	
HCM Lane LOS	A	-	-	-	B	
HCM 95th %tile Q(veh)	0.3	-	-	-	0.9	

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	6:45	6:45	6:45	6:45	6:45	6:45
End Time	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	75	75	75	75	75	75
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	4	4	4	4	4	4
# of Recorded Intervals	3	3	3	3	3	3
Vehs Entered	7535	7543	7638	7597	7661	7594
Vehs Exited	7493	7465	7512	7410	7536	7484
Starting Vehs	510	495	460	422	477	471
Ending Vehs	552	573	586	609	602	584
Travel Distance (km)	20809	20730	20814	20736	20878	20793
Travel Time (hr)	536.7	604.1	554.4	582.4	533.6	562.2
Total Delay (hr)	232.4	300.7	249.9	279.1	227.2	257.9
Total Stops	9890	10259	9859	10372	9866	10044
Fuel Used (l)	1714.8	1774.1	1736.1	1753.0	1718.6	1739.3

Interval #0 Information Seeding

Start Time	6:45
End Time	7:00
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	
No data recorded this interval.	

Interval #1 Information Pre-Peak

Start Time	7:00
End Time	7:20
Total Time (min)	20
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	1	2	3	4	5	Avg
Vehs Entered	2422	2508	2528	2503	2395	2472
Vehs Exited	2423	2428	2500	2361	2377	2416
Starting Vehs	510	495	460	422	477	471
Ending Vehs	509	575	488	564	495	523
Travel Distance (km)	6820	6859	6966	6708	6634	6797
Travel Time (hr)	170.1	193.8	168.2	166.6	150.5	169.9
Total Delay (hr)	70.3	93.7	66.8	68.7	53.1	70.5
Total Stops	3043	3452	3019	3098	2605	3043
Fuel Used (l)	557.6	582.5	565.9	549.7	526.0	556.3

Interval #2 Information Peak

Start Time 7:20
End Time 7:35
Total Time (min) 15

Volumes adjusted by PHF, Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	2051	1959	1992	1990	2116	2021
Vehs Exited	1966	1980	1917	1912	2000	1954
Starting Vehs	509	575	488	564	495	523
Ending Vehs	594	554	563	642	611	591
Travel Distance (km)	5341	5299	5321	5346	5532	5368
Travel Time (hr)	138.8	155.6	139.1	151.7	140.4	145.1
Total Delay (hr)	60.3	77.7	60.8	73.6	59.0	66.3
Total Stops	2726	2574	2519	2853	2711	2679
Fuel Used (l)	440.1	453.6	438.1	453.5	454.9	448.0

Interval #3 Information Post-Peak

Start Time 7:35
End Time 8:00
Total Time (min) 25

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	1	2	3	4	5	Avg
Vehs Entered	3062	3076	3118	3104	3150	3101
Vehs Exited	3104	3057	3095	3137	3159	3109
Starting Vehs	594	554	563	642	611	591
Ending Vehs	552	573	586	609	602	584
Travel Distance (km)	8648	8571	8526	8681	8712	8628
Travel Time (hr)	227.8	254.8	247.0	264.1	242.6	247.3
Total Delay (hr)	101.8	129.3	122.3	136.8	115.2	121.1
Total Stops	4121	4233	4321	4421	4550	4328
Fuel Used (l)	717.0	738.1	732.1	749.8	737.7	734.9

Intersection: 9: Bend

Movement	NW
Directions Served	T
Maximum Queue (m)	293.1
Average Queue (m)	10.1
95th Queue (m)	210.2
Link Distance (m)	1489.2
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (m)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 58: Goreway Drive & Steeles Avenue East

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB
Directions Served	L	T	T	T	R	L	T	T	T	R	L	L
Maximum Queue (m)	115.9	168.3	159.3	134.5	5.7	74.5	216.6	326.1	368.8	117.6	73.5	127.5
Average Queue (m)	73.3	91.9	90.1	78.4	0.2	17.5	107.4	159.4	227.9	113.8	43.8	106.3
95th Queue (m)	128.2	159.5	149.8	118.3	4.1	44.3	170.3	335.6	436.9	132.3	66.9	165.5
Link Distance (m)		651.1	651.1	651.1			1334.5	1334.5	1334.5			
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	115.0				150.0	150.0				110.0	120.0	120.0
Storage Blk Time (%)	9	1					1		4	38		0
Queuing Penalty (veh)	41	3					0		24	142		1

Intersection: 58: Goreway Drive & Steeles Avenue East

Movement	NB	NB	NB	SB	SB	SB	SB	SB
Directions Served	T	T	R	L	L	T	T	R
Maximum Queue (m)	470.3	466.4	87.6	133.7	136.7	197.3	318.2	44.1
Average Queue (m)	368.5	359.9	34.8	87.9	95.8	86.6	66.7	8.6
95th Queue (m)	552.6	549.1	103.8	145.9	151.8	229.3	204.1	29.3
Link Distance (m)	453.2	453.2				916.9	916.9	916.9
Upstream Blk Time (%)	31	20						
Queuing Penalty (veh)	0	0						
Storage Bay Dist (m)			80.0	130.0	130.0			
Storage Blk Time (%)	54	63	0	3	12	0		
Queuing Penalty (veh)	177	54	0	7	30	1		

Intersection: 61: Finch Avenue/Gorewood Drive & Steeles Avenue East

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB
Directions Served	L	T	T	T	R	L	T	T	TR	L	L	TR
Maximum Queue (m)	13.5	50.1	56.2	573.2	70.2	19.1	118.4	113.0	110.8	149.1	148.7	68.0
Average Queue (m)	1.7	21.1	25.4	47.8	5.2	3.7	59.4	56.9	63.7	84.0	89.1	21.2
95th Queue (m)	7.6	40.0	44.2	303.1	31.8	12.3	98.9	95.3	103.0	129.6	135.2	45.0
Link Distance (m)		1334.5	1334.5	1334.5			433.9	433.9		405.0	405.0	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	175.0				175.0	180.0			187.0			231.0
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 61: Finch Avenue/Gorewood Drive & Steeles Avenue East

Movement	SB	SB
Directions Served	LT	TR
Maximum Queue (m)	29.2	23.9
Average Queue (m)	11.7	8.2
95th Queue (m)	24.3	19.6
Link Distance (m)	853.6	853.6
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 224: Goreway Drive & Intermodal Drive

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	NB	SB
Directions Served	L	T	R	L	T	TR	L	T	T	T	R	L
Maximum Queue (m)	74.6	59.4	54.4	79.7	50.9	58.8	88.9	87.2	89.8	101.2	63.2	35.8
Average Queue (m)	30.5	20.8	21.9	42.0	15.2	24.7	39.2	40.5	46.8	50.4	10.4	13.1
95th Queue (m)	60.3	45.8	43.6	70.3	35.5	47.9	74.1	73.6	81.2	83.1	34.3	33.3
Link Distance (m)		209.1	209.1		160.4	160.4		916.9	916.9	916.9		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	85.0			75.0			135.0				100.0	135.0
Storage Blk Time (%)	0	0		2						0	0	
Queuing Penalty (veh)	0	0		1						0	0	

Intersection: 224: Goreway Drive & Intermodal Drive

Movement	SB	SB	SB	SB
Directions Served	T	T	T	R
Maximum Queue (m)	95.5	86.3	87.8	42.8
Average Queue (m)	49.6	45.2	40.6	8.4
95th Queue (m)	85.7	77.3	72.8	27.2
Link Distance (m)	1489.2	1489.2	1489.2	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)				100.0
Storage Blk Time (%)			0	0
Queuing Penalty (veh)			0	0

Intersection: 225: Intermodal Drive & Deerhurst Drive

Movement	EB	WB	WB	SB
Directions Served	L	T	TR	LR
Maximum Queue (m)	26.0	1.3	3.6	31.9
Average Queue (m)	7.7	0.0	0.2	14.4
95th Queue (m)	22.5	1.0	2.8	24.9
Link Distance (m)		336.6	336.6	160.1
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)	65.0			
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 480

58: Goreway Drive & Steeles Avenue East
Intermodal Drive Extension

'Do Nothing' 2041 Conditions

AM Peak Period

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  		 	 		 	 	
Traffic Volume (vph)	120	1334	120	33	1050	438	131	181	44	569	654	195
Future Volume (vph)	120	1334	120	33	1050	438	131	181	44	569	654	195
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	115.0		150.0	150.0		110.0	120.0		80.0	130.0		0.0
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (m)	7.6			7.6			7.6			7.6		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Ped Bike Factor			0.97			0.94	0.99		0.97	0.99		0.97
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1342	4561	1471	1772	4683	1372	2975	3380	1601	2951	3380	1396
Flt Permitted	0.161			0.120			0.950			0.950		
Satd. Flow (perm)	227	4561	1424	224	4683	1291	2955	3380	1557	2915	3380	1353
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			132			481			134			203
Link Speed (k/h)		80			80			70			70	
Link Distance (m)		668.9			1373.2			472.6			952.1	
Travel Time (s)		30.1			61.8			24.3			49.0	
Confl. Peds. (#/hr)	28		12	12		28	13		11	11		13
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	36%	15%	11%	3%	12%	19%	19%	8%	2%	20%	8%	17%
Adj. Flow (vph)	132	1466	132	36	1154	481	144	199	48	625	719	214
Shared Lane Traffic (%)												
Lane Group Flow (vph)	132	1466	132	36	1154	481	144	199	48	625	719	214
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2		2	6		6			4			8
Detector Phase	5	2	2	1	6	6	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	5.0	12.0	12.0	5.0	12.0	12.0	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	8.0	34.7	34.7	8.0	34.7	34.7	13.0	39.7	39.7	13.0	39.7	39.7
Total Split (s)	18.0	61.0	61.0	13.0	56.0	56.0	20.0	42.0	42.0	44.0	66.0	66.0
Total Split (%)	11.3%	38.1%	38.1%	8.1%	35.0%	35.0%	12.5%	26.3%	26.3%	27.5%	41.3%	41.3%
Maximum Green (s)	15.0	54.3	54.3	10.0	49.3	49.3	15.0	35.3	35.3	39.0	59.3	59.3
Yellow Time (s)	3.0	4.6	4.6	3.0	4.6	4.6	3.0	4.2	4.2	3.0	4.2	4.2
All-Red Time (s)	0.0	2.1	2.1	0.0	2.1	2.1	2.0	2.5	2.5	2.0	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-3.0	0.0	0.0
Total Lost Time (s)	3.0	6.7	6.7	3.0	6.7	6.7	5.0	6.7	6.7	2.0	6.7	6.7
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	None
Walk Time (s)		8.0	8.0		8.0	8.0		8.0	8.0		8.0	8.0
Flash Dont Walk (s)		20.0	20.0		20.0	20.0		25.0	25.0		25.0	25.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	91.6	79.5	79.5	82.8	72.0	72.0	12.7	17.0	17.0	39.7	40.9	40.9
Actuated g/C Ratio	0.57	0.50	0.50	0.52	0.45	0.45	0.08	0.11	0.11	0.25	0.26	0.26
v/c Ratio	0.60	0.65	0.17	0.20	0.55	0.57	0.61	0.56	0.17	0.85	0.83	0.43

58: Goreway Drive & Steeles Avenue East
Intermodal Drive Extension

'Do Nothing' 2041 Conditions
AM Peak Period

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	29.8	33.5	4.7	27.6	47.3	16.1	82.1	72.9	1.3	58.4	45.6	6.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.8	33.5	4.7	27.6	47.3	16.1	82.1	72.9	1.3	58.4	45.6	6.1
LOS	C	C	A	C	D	B	F	E	A	E	D	A
Approach Delay	31.0			37.9			67.5			45.3		
Approach LOS	C			D			E			D		
Queue Length 50th (m)	19.3	127.1	0.0	6.8	114.2	42.2	23.1	32.6	0.0	79.9	115.9	16.6
Queue Length 95th (m)	36.3	167.2	13.4	15.5	141.4	82.9	34.8	43.3	0.0	102.6	89.5	9.5
Internal Link Dist (m)	644.9			1349.2			448.6			928.1		
Turn Bay Length (m)	115.0			150.0	150.0			110.0	120.0	80.0	130.0	
Base Capacity (vph)	234	2266	774	216	2106	845	278	745	447	774	1252	629
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.56	0.65	0.17	0.17	0.55	0.57	0.52	0.27	0.11	0.81	0.57	0.34

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 76 (48%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 120

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.85

Intersection Signal Delay: 40.0

Intersection LOS: D

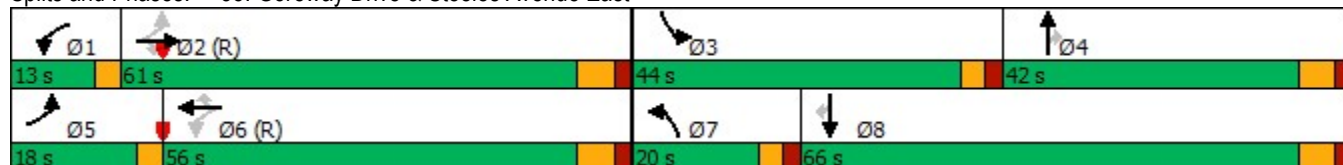
Intersection Capacity Utilization 77.1%

ICU Level of Service D

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 58: Goreway Drive & Steeles Avenue East



61: Finch Avenue/Gorewood Drive & Steeles Avenue East
Intermodal Drive Extension

'Do Nothing' 2041 Conditions

AM Peak Period

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  		 				 	
Traffic Volume (vph)	6	1085	747	135	958	17	526	46	129	16	33	8
Future Volume (vph)	6	1085	747	135	958	17	526	46	129	16	33	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.8	3.5	3.5	3.5	3.4	3.4	3.7	3.7	3.7
Storage Length (m)	175.0		175.0	180.0		187.0	0.0		231.0	0.0		0.0
Storage Lanes	1		1	1		1	2		1	0		0
Taper Length (m)	7.6			7.6			7.6			7.6		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	0.91	0.97	1.00	1.00	0.95	0.95	0.95
Ped Bike Factor	0.99		0.98		1.00		1.00	0.99			1.00	
Frt			0.850		0.997			0.889			0.978	
Flt Protected	0.950			0.950			0.950				0.986	
Satd. Flow (prot)	1560	4601	1361	1647	4445	0	2960	1498	0	0	2460	0
Flt Permitted	0.258			0.168			0.950				0.986	
Satd. Flow (perm)	420	4601	1339	291	4445	0	2956	1498	0	0	2457	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			812		2			87			9	
Link Speed (k/h)		80			80			80			50	
Link Distance (m)		1373.2			447.9			426.1			872.2	
Travel Time (s)		61.8			20.2			19.2			62.8	
Confl. Peds. (#/hr)	10		2	2		10	1		4	4		1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	17%	14%	20%	12%	15%	12%	17%	0%	12%	56%	41%	25%
Adj. Flow (vph)	7	1179	812	147	1041	18	572	50	140	17	36	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	7	1179	812	147	1059	0	572	190	0	0	62	0
Turn Type	Perm	NA	Perm	pm+pt	NA		Split	NA		Split	NA	
Protected Phases		2		1	6		8	8		4	4	
Permitted Phases	2		2	6								
Detector Phase	2	2	2	1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	22.0	22.0	22.0	5.0	22.0		12.0	12.0		8.0	8.0	
Minimum Split (s)	29.9	29.9	29.9	8.0	29.9		45.2	45.2		15.2	15.2	
Total Split (s)	66.0	66.0	66.0	18.0	84.0		51.0	51.0		25.0	25.0	
Total Split (%)	41.3%	41.3%	41.3%	11.3%	52.5%		31.9%	31.9%		15.6%	15.6%	
Maximum Green (s)	59.1	59.1	59.1	15.0	77.1		43.8	43.8		17.8	17.8	
Yellow Time (s)	4.6	4.6	4.6	3.0	4.6		4.6	4.6		4.6	4.6	
All-Red Time (s)	2.3	2.3	2.3	0.0	2.3		2.6	2.6		2.6	2.6	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)	6.9	6.9	6.9	3.0	6.9		7.2	7.2			7.2	
Lead/Lag	Lag	Lag	Lag	Lead								
Lead-Lag Optimize?	Yes	Yes	Yes	Yes								
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	C-Max	C-Max	C-Max	None	C-Max		None	None		None	None	
Walk Time (s)	8.0	8.0	8.0		8.0		8.0	8.0				
Flash Dont Walk (s)	15.0	15.0	15.0		15.0		30.0	30.0				
Pedestrian Calls (#/hr)	0	0	0		0		0	0				
Act Effct Green (s)	81.1	81.1	81.1	99.6	95.7		36.6	36.6			9.5	
Actuated g/C Ratio	0.51	0.51	0.51	0.62	0.60		0.23	0.23			0.06	

61: Finch Avenue/Gorewood Drive & Steeles Avenue East Intermodal Drive Extension

'Do Nothing' 2041 Conditions
AM Peak Period

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.03	0.51	0.75	0.53	0.40		0.85	0.46			0.40	
Control Delay	21.5	21.4	11.7	21.8	19.0		71.0	30.9			69.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Delay	21.5	21.4	11.7	21.8	19.0		71.0	30.9			69.3	
LOS	C	C	B	C	B		E	C			E	
Approach Delay		17.4			19.3			61.0			69.3	
Approach LOS		B			B			E			E	
Queue Length 50th (m)	0.7	70.4	46.5	19.6	65.8		90.2	27.8			8.7	
Queue Length 95th (m)	m1.1	79.7	59.9	35.7	88.4		106.4	49.9			16.7	
Internal Link Dist (m)		1349.2			423.9			402.1			848.2	
Turn Bay Length (m)	175.0		175.0	180.0								
Base Capacity (vph)	212	2333	1079	308	2659		810	473			281	
Starvation Cap Reductn	0	0	0	0	0		0	0			0	
Spillback Cap Reductn	0	0	0	0	0		0	0			0	
Storage Cap Reductn	0	0	0	0	0		0	0			0	
Reduced v/c Ratio	0.03	0.51	0.75	0.48	0.40		0.71	0.40			0.22	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 127 (79%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 100

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.85

Intersection Signal Delay: 27.0

Intersection LOS: C

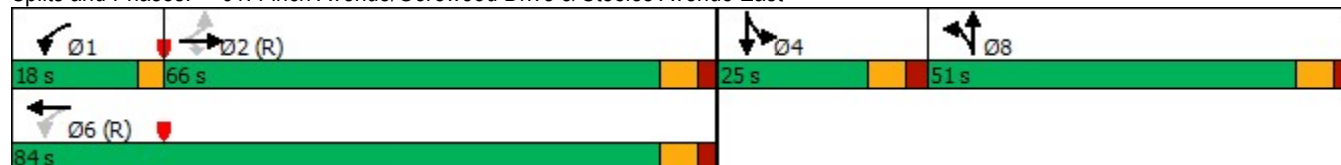
Intersection Capacity Utilization 77.9%

ICU Level of Service D

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 61: Finch Avenue/Gorewood Drive & Steeles Avenue East



224: Goreway Drive & Intermodal Drive
Intermodal Drive Extension

'Do Nothing' 2041 Conditions

AM Peak Period

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	39	61	108	109	69	61	136	789	130	81	1804	97
Future Volume (vph)	39	61	108	109	69	61	136	789	130	81	1804	97
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	85.0		0.0	75.0		0.0	135.0		100.0	135.0		100.0
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (m)	7.6			7.6			7.6			7.6		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.91	1.00	1.00	0.91	1.00
Frt			0.850		0.929				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1313	1423	1002	1080	2303	0	1250	4768	1134	1521	4902	1096
Flt Permitted	0.663			0.714			0.060			0.321		
Satd. Flow (perm)	916	1423	1002	812	2303	0	79	4768	1134	514	4902	1096
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			116		66				140			84
Link Speed (k/h)		50			50			70			70	
Link Distance (m)		232.0			189.6			952.1			1512.1	
Travel Time (s)		16.7			13.7			49.0			77.8	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	39%	35%	63%	69%	68%	24%	46%	10%	44%	20%	7%	49%
Adj. Flow (vph)	42	66	116	117	74	66	146	848	140	87	1940	104
Shared Lane Traffic (%)												
Lane Group Flow (vph)	42	66	116	117	140	0	146	848	140	87	1940	104
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases		4			8		5	2			6	
Permitted Phases	4		4	8			2		2	6		6
Detector Phase	4	4	4	8	8		5	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0		6.0	12.0	12.0	12.0	12.0	12.0
Minimum Split (s)	45.0	45.0	45.0	45.0	45.0		9.0	42.0	42.0	42.0	42.0	42.0
Total Split (s)	65.0	65.0	65.0	65.0	65.0		18.0	95.0	95.0	77.0	77.0	77.0
Total Split (%)	40.6%	40.6%	40.6%	40.6%	40.6%		11.3%	59.4%	59.4%	48.1%	48.1%	48.1%
Maximum Green (s)	59.0	59.0	59.0	59.0	59.0		15.0	89.0	89.0	71.0	71.0	71.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		3.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		0.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0		3.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag							Lead			Lag	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	C-Max	C-Max	C-Max
Walk Time (s)	12.0	12.0	12.0	12.0	12.0			12.0	12.0	12.0	12.0	12.0
Flash Dont Walk (s)	27.0	27.0	27.0	27.0	27.0			24.0	24.0	24.0	24.0	24.0
Pedestrian Calls (#/hr)	0	0	0	0	0			0	0	0	0	0
Act Effct Green (s)	29.1	29.1	29.1	29.1	29.1		121.9	118.9	118.9	94.3	94.3	94.3
Actuated g/C Ratio	0.18	0.18	0.18	0.18	0.18		0.76	0.74	0.74	0.59	0.59	0.59
v/c Ratio	0.25	0.26	0.42	0.80	0.30		0.67	0.24	0.16	0.29	0.67	0.15
Control Delay	55.9	55.3	12.2	95.4	28.7		49.8	5.5	0.6	23.9	26.3	6.5
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0

224: Goreway Drive & Intermodal Drive
Intermodal Drive Extension

'Do Nothing' 2041 Conditions

AM Peak Period

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	55.9	55.3	12.2	95.4	28.7		49.8	5.5	0.6	23.9	26.3	6.5
LOS	E	E	B	F	C		D	A	A	C	C	A
Approach Delay	33.1			59.0			10.6			25.2		
Approach LOS	C			E			B			C		
Queue Length 50th (m)	11.6	18.2	0.0	36.1	10.6		22.6	21.1	0.0	13.3	149.0	2.6
Queue Length 95th (m)	21.8	29.8	16.6	54.9	19.0		54.6	28.1	0.7	33.6	217.7	15.0
Internal Link Dist (m)	208.0			165.6			928.1			1488.1		
Turn Bay Length (m)	85.0			75.0			135.0		100.0	135.0		100.0
Base Capacity (vph)	337	524	442	299	890		219	3543	878	302	2888	680
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.12	0.13	0.26	0.39	0.16		0.67	0.24	0.16	0.29	0.67	0.15

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 97 (61%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 100

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.80

Intersection Signal Delay: 23.6

Intersection LOS: C

Intersection Capacity Utilization 74.1%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 224: Goreway Drive & Intermodal Drive



225: Intermodal Drive & Deerhurst Drive
Intermodal Drive Extension

'Do Nothing' 2041 Conditions
AM Peak Period

Intersection						
Int Delay, s/veh	3.8					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	100	155	143	18	10	82
Future Vol, veh/h	100	155	143	18	10	82
Conflicting Peds, #/hr	10	0	0	10	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	65	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	75	75	75	75	75	75
Heavy Vehicles, %	35	26	27	11	10	71
Mvmt Flow	133	207	191	24	13	109
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	225	0	-	0	583	118
Stage 1	-	-	-	-	213	-
Stage 2	-	-	-	-	370	-
Critical Hdwy	4.8	-	-	-	7	8.32
Critical Hdwy Stg 1	-	-	-	-	6	-
Critical Hdwy Stg 2	-	-	-	-	6	-
Follow-up Hdwy	2.55	-	-	-	3.6	4.01
Pot Cap-1 Maneuver	1131	-	-	-	425	729
Stage 1	-	-	-	-	778	-
Stage 2	-	-	-	-	646	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1120	-	-	-	367	722
Mov Cap-2 Maneuver	-	-	-	-	367	-
Stage 1	-	-	-	-	678	-
Stage 2	-	-	-	-	640	-
Approach	EB	WB		SB		
HCM Control Delay, s	3.4	0		11.8		
HCM LOS	B					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1120	-	-	-	653	
HCM Lane V/C Ratio	0.119	-	-	-	0.188	
HCM Control Delay (s)	8.6	-	-	-	11.8	
HCM Lane LOS	A	-	-	-	B	
HCM 95th %tile Q(veh)	0.4	-	-	-	0.7	

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	6:45	6:45	6:45	6:45	6:45	6:45
End Time	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	75	75	75	75	75	75
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	4	4	4	4	4	4
# of Recorded Intervals	3	3	3	3	3	3
Vehs Entered	6464	6463	6379	6422	6379	6421
Vehs Exited	6483	6454	6373	6419	6390	6424
Starting Vehs	388	384	398	380	365	379
Ending Vehs	369	393	404	383	354	384
Travel Distance (km)	17803	17448	17421	17541	17467	17536
Travel Time (hr)	387.9	379.9	376.1	381.6	379.0	380.9
Total Delay (hr)	127.6	124.1	121.6	125.2	122.5	124.2
Total Stops	6319	6134	6073	6211	6108	6168
Fuel Used (l)	1401.4	1376.5	1373.6	1386.0	1372.6	1382.0

Interval #0 Information Seeding

Start Time	6:45
End Time	7:00
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	
No data recorded this interval.	

Interval #1 Information Pre-Peak

Start Time	7:00
End Time	7:20
Total Time (min)	20
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	1	2	3	4	5	Avg
Vehs Entered	2094	2201	2026	2186	2138	2129
Vehs Exited	2086	2210	2093	2145	2138	2133
Starting Vehs	388	384	398	380	365	379
Ending Vehs	396	375	331	421	365	378
Travel Distance (km)	5805	5963	5633	5917	5917	5847
Travel Time (hr)	126.9	129.2	118.9	129.2	128.7	126.6
Total Delay (hr)	41.9	42.1	36.6	42.8	41.7	41.0
Total Stops	2063	2060	1845	2092	2022	2013
Fuel Used (l)	457.6	473.2	442.5	468.4	462.8	460.9

Interval #2 Information Peak

Start Time	7:20
End Time	7:35
Total Time (min)	15

Volumes adjusted by Growth Factors, 50%ile Adjustment.

Run Number	1	2	3	4	5	Avg
Vehs Entered	1683	1668	1633	1619	1673	1654
Vehs Exited	1665	1616	1540	1647	1616	1617
Starting Vehs	396	375	331	421	365	378
Ending Vehs	414	427	424	393	422	412
Travel Distance (km)	4565	4520	4266	4401	4435	4437
Travel Time (hr)	102.0	102.1	93.1	99.8	99.1	99.2
Total Delay (hr)	35.3	35.6	30.6	35.4	33.9	34.2
Total Stops	1721	1754	1601	1696	1684	1689
Fuel Used (l)	360.3	358.4	334.6	351.9	355.9	352.2

Interval #3 Information Post-Peak

Start Time	7:35
End Time	8:00
Total Time (min)	25

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	1	2	3	4	5	Avg
Vehs Entered	2687	2594	2720	2617	2568	2640
Vehs Exited	2732	2628	2740	2627	2636	2672
Starting Vehs	414	427	424	393	422	412
Ending Vehs	369	393	404	383	354	384
Travel Distance (km)	7433	6966	7522	7224	7115	7252
Travel Time (hr)	159.0	148.6	164.1	152.6	151.2	155.1
Total Delay (hr)	50.5	46.4	54.4	47.0	46.9	49.0
Total Stops	2535	2320	2627	2423	2402	2462
Fuel Used (l)	583.4	544.9	596.5	565.7	553.9	568.9

Intersection: 58: Goreway Drive & Steeles Avenue East

Movement	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB	NB
Directions Served	L	T	T	T	L	T	T	T	R	L	L	T
Maximum Queue (m)	65.6	132.8	125.7	127.5	22.4	123.8	131.0	156.9	117.6	52.4	55.5	49.3
Average Queue (m)	31.7	74.3	78.7	80.0	6.1	83.0	88.9	84.0	14.5	16.2	29.9	27.1
95th Queue (m)	59.1	109.5	113.7	117.3	16.7	119.8	126.4	128.1	68.1	41.7	50.3	44.5
Link Distance (m)		651.1	651.1	651.1		1334.5	1334.5	1334.5				453.2
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	115.0				150.0				110.0	120.0	120.0	
Storage Blk Time (%)		1						1	0			
Queuing Penalty (veh)		1						6	0			

Intersection: 58: Goreway Drive & Steeles Avenue East

Movement	NB	NB	SB	SB	SB	SB	SB
Directions Served	T	R	L	L	T	T	R
Maximum Queue (m)	46.4	13.8	133.0	136.1	127.9	112.5	21.5
Average Queue (m)	18.3	1.0	73.7	84.4	48.0	50.0	3.2
95th Queue (m)	38.3	7.7	124.3	131.1	101.4	92.2	14.3
Link Distance (m)	453.2				916.9	916.9	916.9
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (m)		80.0	130.0	130.0			
Storage Blk Time (%)			0	1	0		
Queuing Penalty (veh)			1	3	1		

Intersection: 61: Finch Avenue/Gorewood Drive & Steeles Avenue East

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB
Directions Served	L	T	T	T	R	L	T	T	TR	L	L	TR
Maximum Queue (m)	7.5	66.1	79.2	343.6	107.4	58.7	85.5	82.3	78.6	108.0	106.4	65.0
Average Queue (m)	0.9	39.4	45.3	59.1	24.4	28.8	46.3	44.3	37.7	68.5	67.8	27.3
95th Queue (m)	4.6	62.1	69.9	239.2	80.7	51.6	74.8	74.4	68.4	99.2	99.7	53.3
Link Distance (m)		1334.5	1334.5	1334.5			433.9	433.9		405.0	405.0	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	175.0				175.0	180.0			187.0			231.0
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 61: Finch Avenue/Gorewood Drive & Steeles Avenue East

Movement	SB	SB
Directions Served	LT	TR
Maximum Queue (m)	34.9	27.0
Average Queue (m)	13.1	6.9
95th Queue (m)	27.4	20.1
Link Distance (m)	853.6	853.6
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 224: Goreway Drive & Intermodal Drive

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	NB	SB
Directions Served	L	T	R	L	T	TR	L	T	T	T	R	L
Maximum Queue (m)	36.2	61.4	61.9	81.8	79.2	61.0	99.7	35.6	37.2	42.4	21.3	89.6
Average Queue (m)	11.7	16.8	22.1	45.2	16.4	20.5	43.4	13.7	11.1	15.2	7.2	20.2
95th Queue (m)	29.9	40.4	45.9	80.0	46.3	45.8	83.4	29.7	28.0	34.8	18.4	52.4
Link Distance (m)		209.1	209.1		160.4	160.4		916.9	916.9	916.9		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	85.0			75.0			135.0				100.0	135.0
Storage Blk Time (%)		0		4			0					
Queuing Penalty (veh)		0		1			0					

Intersection: 224: Goreway Drive & Intermodal Drive

Movement	SB	SB	SB	SB
Directions Served	T	T	T	R
Maximum Queue (m)	149.8	136.5	141.3	107.3
Average Queue (m)	75.5	70.1	67.1	12.4
95th Queue (m)	129.1	118.7	118.4	47.5
Link Distance (m)	1489.2	1489.2	1489.2	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)				100.0
Storage Blk Time (%)	1		2	0
Queuing Penalty (veh)	1		2	0

Intersection: 225: Intermodal Drive & Deerhurst Drive

Movement	EB	WB	SB
Directions Served	L	TR	LR
Maximum Queue (m)	27.8	3.1	37.5
Average Queue (m)	5.3	0.1	17.5
95th Queue (m)	17.7	2.2	28.7
Link Distance (m)		336.6	160.1
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (m)	65.0		
Storage Blk Time (%)			
Queuing Penalty (veh)			

Network Summary

Network wide Queuing Penalty: 15

58: Goreway Drive & Steeles Avenue East
Intermodal Drive Extension

'Do Nothing' 2041 Conditions

PM Peak Period

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  		 	 		 	 	
Traffic Volume (vph)	222	1313	187	62	1124	654	327	1067	86	372	527	181
Future Volume (vph)	222	1313	187	62	1124	654	327	1067	86	372	527	181
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	115.0		150.0	150.0		110.0	120.0		80.0	130.0		0.0
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (m)	7.6			7.6			7.6			7.6		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Ped Bike Factor			0.98	1.00		0.95	0.99		0.99	1.00		0.96
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1534	4683	1484	1755	4561	1408	3278	3510	1570	2855	3444	1432
Flt Permitted	0.115			0.128			0.950			0.950		
Satd. Flow (perm)	186	4683	1457	236	4561	1339	3231	3510	1547	2853	3444	1372
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			191			316			100			180
Link Speed (k/h)		80			80			70			70	
Link Distance (m)		668.9			1373.2			472.6			952.1	
Travel Time (s)		30.1			61.8			24.3			49.0	
Confl. Peds. (#/hr)	22		4	4		22	21		2	2		21
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	19%	12%	10%	4%	15%	16%	8%	4%	4%	24%	6%	14%
Adj. Flow (vph)	227	1340	191	63	1147	667	334	1089	88	380	538	185
Shared Lane Traffic (%)												
Lane Group Flow (vph)	227	1340	191	63	1147	667	334	1089	88	380	538	185
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2		2	6		6			4			8
Detector Phase	5	2	2	1	6	6	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	5.0	12.0	12.0	5.0	12.0	12.0	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	8.0	34.7	34.7	8.0	34.7	34.7	13.0	39.7	39.7	13.0	39.7	39.7
Total Split (s)	19.0	70.0	70.0	9.0	60.0	60.0	29.0	55.0	55.0	26.0	52.0	52.0
Total Split (%)	11.9%	43.8%	43.8%	5.6%	37.5%	37.5%	18.1%	34.4%	34.4%	16.3%	32.5%	32.5%
Maximum Green (s)	16.0	63.3	63.3	6.0	53.3	53.3	24.0	48.3	48.3	21.0	45.3	45.3
Yellow Time (s)	3.0	4.6	4.6	3.0	4.6	4.6	3.0	4.2	4.2	3.0	4.2	4.2
All-Red Time (s)	0.0	2.1	2.1	0.0	2.1	2.1	2.0	2.5	2.5	2.0	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	6.7	6.7	3.0	6.7	6.7	5.0	6.7	6.7	5.0	6.7	6.7
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	None
Walk Time (s)		8.0	8.0		8.0	8.0		8.0	8.0		8.0	8.0
Flash Dont Walk (s)		20.0	20.0		20.0	20.0		25.0	25.0		25.0	25.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	76.0	65.1	65.1	63.0	53.3	53.3	21.0	48.3	48.3	21.0	48.3	48.3
Actuated g/C Ratio	0.48	0.41	0.41	0.39	0.33	0.33	0.13	0.30	0.30	0.13	0.30	0.30
v/c Ratio	1.02	0.70	0.27	0.42	0.76	1.02	0.78	1.03	0.16	1.02	0.52	0.34

58: Goreway Drive & Steeles Avenue East Intermodal Drive Extension

'Do Nothing' 2041 Conditions

PM Peak Period

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	99.0	42.3	4.8	41.3	68.5	80.1	79.9	88.9	5.8	106.3	46.3	16.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	99.0	42.3	4.8	41.3	68.5	80.1	79.9	88.9	5.8	106.3	46.3	16.0
LOS	F	D	A	D	E	F	E	F	A	F	D	B
Approach Delay	45.5			71.7			82.1			61.9		
Approach LOS	D			E			F			E		
Queue Length 50th (m)	~52.5	131.6	0.0	16.0	140.5	~158.0	53.6	~193.9	0.0	~65.6	81.3	17.6
Queue Length 95th (m)	#108.6	149.2	15.8	m24.6	155.3	#270.7	69.8	#236.2	10.4	#99.4	102.1	44.4
Internal Link Dist (m)	644.9			1349.2			448.6			928.1		
Turn Bay Length (m)	115.0			150.0	150.0			110.0	120.0	80.0	130.0	
Base Capacity (vph)	223	1905	705	149	1519	656	491	1059	536	374	1039	539
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.02	0.70	0.27	0.42	0.76	1.02	0.68	1.03	0.16	1.02	0.52	0.34

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 61 (38%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 130

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.03

Intersection Signal Delay: 65.1

Intersection LOS: E

Intersection Capacity Utilization 98.9%

ICU Level of Service F

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

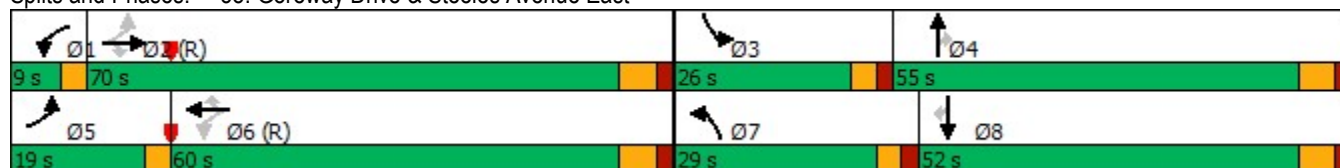
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 58: Goreway Drive & Steeles Avenue East



61: Finch Avenue/Gorewood Drive & Steeles Avenue East
Intermodal Drive Extension

'Do Nothing' 2041 Conditions

PM Peak Period

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  		 				 	
Traffic Volume (vph)	9	1060	673	13	1145	137	600	24	95	10	44	20
Future Volume (vph)	9	1060	673	13	1145	137	600	24	95	10	44	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.8	3.5	3.5	3.5	3.4	3.4	3.7	3.7	3.7
Storage Length (m)	175.0		175.0	180.0		187.0	0.0		231.0	0.0		0.0
Storage Lanes	1		1	1		1	2		1	0		0
Taper Length (m)	7.6			7.6			7.6			7.6		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	0.91	0.97	1.00	1.00	0.95	0.95	0.95
Ped Bike Factor	1.00		0.97		1.00		1.00	0.98			0.99	
Frt			0.850		0.984			0.880			0.960	
Flt Protected	0.950			0.950			0.950				0.993	
Satd. Flow (prot)	1825	4683	1458	1724	4449	0	2815	1326	0	0	3016	0
Flt Permitted	0.158			0.191			0.950				0.993	
Satd. Flow (perm)	303	4683	1417	347	4449	0	2809	1326	0	0	3014	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			708		18			100			21	
Link Speed (k/h)		80			80			80			50	
Link Distance (m)		1373.2			447.9			426.1			872.2	
Travel Time (s)		61.8			20.2			19.2			62.8	
Confl. Peds. (#/hr)	2		8	8		2	2		6	6		2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	12%	12%	7%	11%	31%	23%	39%	17%	0%	16%	20%
Adj. Flow (vph)	9	1116	708	14	1205	144	632	25	100	11	46	21
Shared Lane Traffic (%)												
Lane Group Flow (vph)	9	1116	708	14	1349	0	632	125	0	0	78	0
Turn Type	Perm	NA	Perm	pm+pt	NA		Split	NA		Split	NA	
Protected Phases		2		1	6		8	8		4	4	
Permitted Phases	2		2	6								
Detector Phase	2	2	2	1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	22.0	22.0	22.0	5.0	22.0		12.0	12.0		8.0	8.0	
Minimum Split (s)	29.9	29.9	29.9	8.0	29.9		45.2	45.2		15.2	15.2	
Total Split (s)	66.0	66.0	66.0	18.0	84.0		51.0	51.0		25.0	25.0	
Total Split (%)	41.3%	41.3%	41.3%	11.3%	52.5%		31.9%	31.9%		15.6%	15.6%	
Maximum Green (s)	59.1	59.1	59.1	15.0	77.1		43.8	43.8		17.8	17.8	
Yellow Time (s)	4.6	4.6	4.6	3.0	4.6		4.6	4.6		4.6	4.6	
All-Red Time (s)	2.3	2.3	2.3	0.0	2.3		2.6	2.6		2.6	2.6	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)	6.9	6.9	6.9	3.0	6.9		7.2	7.2			7.2	
Lead/Lag	Lag	Lag	Lag	Lead								
Lead-Lag Optimize?	Yes	Yes	Yes	Yes								
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	C-Max	C-Max	C-Max	None	C-Max		None	None		None	None	
Walk Time (s)	8.0	8.0	8.0		8.0		8.0	8.0				
Flash Dont Walk (s)	15.0	15.0	15.0		15.0		30.0	30.0				
Pedestrian Calls (#/hr)	0	0	0		0		0	0				
Act Effect Green (s)	85.5	85.5	85.5	93.3	89.4		40.1	40.1			9.2	
Actuated g/C Ratio	0.53	0.53	0.53	0.58	0.56		0.25	0.25			0.06	

61: Finch Avenue/Gorewood Drive & Steeles Avenue East
Intermodal Drive Extension

'Do Nothing' 2041 Conditions
PM Peak Period

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.06	0.45	0.65	0.05	0.54		0.90	0.31			0.41	
Control Delay	12.6	11.5	8.7	16.3	23.6		74.1	14.3			59.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Delay	12.6	11.5	8.7	16.3	23.6		74.1	14.3			59.1	
LOS	B	B	A	B	C		E	B			E	
Approach Delay		10.4			23.5			64.2			59.1	
Approach LOS		B			C			E			E	
Queue Length 50th (m)	0.4	21.0	47.7	1.9	97.1		99.4	6.0			9.3	
Queue Length 95th (m)	m0.7	m53.3	m194.8	5.6	118.6		121.5	23.3			18.2	
Internal Link Dist (m)		1349.2			423.9			402.1			848.2	
Turn Bay Length (m)	175.0		175.0	180.0								
Base Capacity (vph)	162	2503	1086	331	2494		770	435			354	
Starvation Cap Reductn	0	0	0	0	0		0	0			0	
Spillback Cap Reductn	0	0	0	0	0		0	0			0	
Storage Cap Reductn	0	0	0	0	0		0	0			0	
Reduced v/c Ratio	0.06	0.45	0.65	0.04	0.54		0.82	0.29			0.22	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 132 (83%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 100

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.90

Intersection Signal Delay: 25.9

Intersection LOS: C

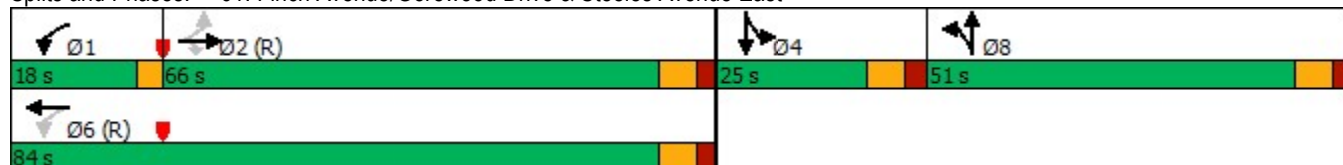
Intersection Capacity Utilization 68.4%

ICU Level of Service C

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 61: Finch Avenue/Gorewood Drive & Steeles Avenue East



224: Goreway Drive & Intermodal Drive
Intermodal Drive Extension

'Do Nothing' 2041 Conditions

PM Peak Period

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	108	62	182	147	101	79	166	2112	105	24	1112	81
Future Volume (vph)	108	62	182	147	101	79	166	2112	105	24	1112	81
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	85.0		0.0	75.0		0.0	135.0		100.0	135.0		100.0
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (m)	7.6			7.6			7.6			7.6		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.91	1.00	1.00	0.91	1.00
Frt			0.850		0.934				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1332	1289	1338	1383	2798	0	1209	4902	1021	1342	4856	1183
Flt Permitted	0.599			0.715			0.192			0.068		
Satd. Flow (perm)	840	1289	1338	1041	2798	0	244	4902	1021	96	4856	1183
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			192		3				91			85
Link Speed (k/h)		50			50			70			70	
Link Distance (m)		232.0			189.6			952.1			1512.1	
Travel Time (s)		16.7			13.7			49.0			77.8	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	37%	49%	22%	32%	28%	14%	51%	7%	60%	36%	8%	38%
Adj. Flow (vph)	114	65	192	155	106	83	175	2223	111	25	1171	85
Shared Lane Traffic (%)												
Lane Group Flow (vph)	114	65	192	155	189	0	175	2223	111	25	1171	85
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases		4			8		5	2			6	
Permitted Phases	4		4	8			2		2	6		6
Detector Phase	4	4	4	8	8		5	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0		6.0	12.0	12.0	12.0	12.0	12.0
Minimum Split (s)	45.0	45.0	45.0	45.0	45.0		9.0	42.0	42.0	42.0	42.0	42.0
Total Split (s)	70.0	70.0	70.0	70.0	70.0		20.0	90.0	90.0	70.0	70.0	70.0
Total Split (%)	43.8%	43.8%	43.8%	43.8%	43.8%		12.5%	56.3%	56.3%	43.8%	43.8%	43.8%
Maximum Green (s)	64.0	64.0	64.0	64.0	64.0		17.0	84.0	84.0	64.0	64.0	64.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		3.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		0.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0		3.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag							Lead			Lag	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	C-Max	C-Max	C-Max
Walk Time (s)	12.0	12.0	12.0	12.0	12.0			12.0	12.0	12.0	12.0	12.0
Flash Dont Walk (s)	27.0	27.0	27.0	27.0	27.0			24.0	24.0	24.0	24.0	24.0
Pedestrian Calls (#/hr)	0	0	0	0	0			0	0	0	0	0
Act Effct Green (s)	30.1	30.1	30.1	30.1	30.1		120.9	117.9	117.9	97.9	97.9	97.9
Actuated g/C Ratio	0.19	0.19	0.19	0.19	0.19		0.76	0.74	0.74	0.61	0.61	0.61
v/c Ratio	0.72	0.27	0.47	0.79	0.36		0.61	0.62	0.14	0.43	0.39	0.11
Control Delay	84.2	55.4	9.8	87.8	55.7		18.0	7.4	1.0	51.6	18.3	4.2
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0

224: Goreway Drive & Intermodal Drive Intermodal Drive Extension

'Do Nothing' 2041 Conditions
PM Peak Period

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	84.2	55.4	9.8	87.8	55.7		18.0	7.4	1.0	51.6	18.3	4.2
LOS	F	E	A	F	E		B	A	A	D	B	A
Approach Delay	40.7			70.2			7.8			18.0		
Approach LOS	D			E			A			B		
Queue Length 50th (m)	34.5	17.9	0.0	47.7	27.4		9.7	55.5	0.0	3.9	64.6	0.0
Queue Length 95th (m)	52.8	29.8	20.0	68.4	36.0		m12.1	m90.8	m0.5	#23.1	106.0	9.6
Internal Link Dist (m)	208.0			165.6			928.1			1488.1		
Turn Bay Length (m)	85.0			75.0			135.0		100.0	135.0		100.0
Base Capacity (vph)	336	515	650	416	1121		301	3611	776	58	2972	756
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.34	0.13	0.30	0.37	0.17		0.58	0.62	0.14	0.43	0.39	0.11

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 69 (43%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 100

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.79

Intersection Signal Delay: 18.2

Intersection LOS: B

Intersection Capacity Utilization 85.6%

ICU Level of Service E

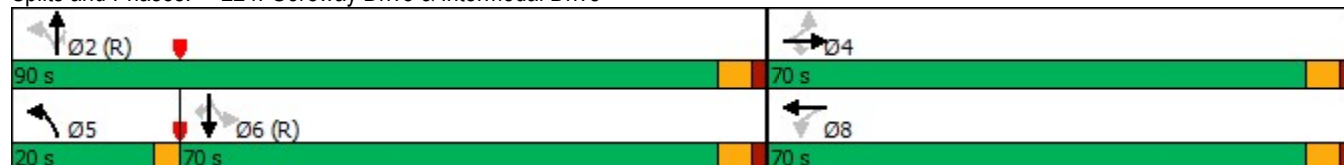
Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 224: Goreway Drive & Intermodal Drive



225: Intermodal Drive & Deerhurst Drive
Intermodal Drive Extension

'Do Nothing' 2041 Conditions
PM Peak Period

Intersection						
Int Delay, s/veh	4.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	79	98	202	11	25	106
Future Vol, veh/h	79	98	202	11	25	106
Conflicting Peds, #/hr	3	0	0	3	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	65	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	83	83	83	83	83	83
Heavy Vehicles, %	65	53	17	18	16	19
Mvmt Flow	95	118	243	13	30	128

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	259	0	-	0	502
Stage 1	-	-	-	-	253
Stage 2	-	-	-	-	249
Critical Hdwy	5.4	-	-	-	7.12
Critical Hdwy Stg 1	-	-	-	-	6.12
Critical Hdwy Stg 2	-	-	-	-	6.12
Follow-up Hdwy	2.85	-	-	-	3.66
Pot Cap-1 Maneuver	947	-	-	-	465
Stage 1	-	-	-	-	726
Stage 2	-	-	-	-	729
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	944	-	-	-	416
Mov Cap-2 Maneuver	-	-	-	-	416
Stage 1	-	-	-	-	650
Stage 2	-	-	-	-	727

Approach	EB	WB	SB
HCM Control Delay, s	4.1	0	11.6
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	944	-	-	-	704
HCM Lane V/C Ratio	0.101	-	-	-	0.224
HCM Control Delay (s)	9.2	-	-	-	11.6
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.3	-	-	-	0.9

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	6:45	6:45	6:45	6:45	6:45	6:45
End Time	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	75	75	75	75	75	75
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	4	4	4	4	4	4
# of Recorded Intervals	3	3	3	3	3	3
Vehs Entered	7749	7748	7608	7729	7751	7717
Vehs Exited	7635	7646	7525	7562	7640	7602
Starting Vehs	506	537	461	450	459	484
Ending Vehs	620	639	544	617	570	598
Travel Distance (km)	21077	21290	20816	21109	21179	21094
Travel Time (hr)	571.2	616.8	542.1	561.8	521.8	562.7
Total Delay (hr)	261.6	305.3	237.4	252.5	211.4	253.6
Total Stops	10337	10929	9834	10016	9640	10154
Fuel Used (l)	1767.5	1822.5	1720.8	1765.5	1720.3	1759.3

Interval #0 Information Seeding

Start Time	6:45
End Time	7:00
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	
No data recorded this interval.	

Interval #1 Information Pre-Peak

Start Time	7:00
End Time	7:20
Total Time (min)	20
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	1	2	3	4	5	Avg
Vehs Entered	2504	2558	2486	2594	2537	2537
Vehs Exited	2486	2482	2439	2470	2476	2471
Starting Vehs	506	537	461	450	459	484
Ending Vehs	524	613	508	574	520	550
Travel Distance (km)	6920	7056	6870	6984	7043	6975
Travel Time (hr)	163.2	197.0	161.1	166.2	162.3	170.0
Total Delay (hr)	61.6	93.8	60.6	64.2	59.4	67.9
Total Stops	2905	3644	2855	2984	2793	3035
Fuel Used (l)	555.2	600.8	551.3	567.1	558.7	566.6

Interval #2 Information Peak

Start Time	7:20
End Time	7:35
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	2130	1951	2024	1927	2057	2017
Vehs Exited	2041	1952	1926	1928	2004	1970
Starting Vehs	524	613	508	574	520	550
Ending Vehs	613	612	606	573	573	596
Travel Distance (km)	5526	5320	5227	5283	5406	5352
Travel Time (hr)	150.2	154.9	135.7	137.6	132.9	142.3
Total Delay (hr)	69.1	77.1	58.9	60.0	53.4	63.7
Total Stops	2828	2684	2516	2668	2513	2642
Fuel Used (l)	466.5	456.3	430.9	437.9	439.9	446.3

Interval #3 Information Post-Peak

Start Time	7:35
End Time	8:00
Total Time (min)	25

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	1	2	3	4	5	Avg
Vehs Entered	3115	3239	3098	3208	3157	3163
Vehs Exited	3108	3212	3160	3164	3160	3161
Starting Vehs	613	612	606	573	573	596
Ending Vehs	620	639	544	617	570	598
Travel Distance (km)	8631	8915	8719	8842	8730	8768
Travel Time (hr)	257.8	264.9	245.3	258.0	226.6	250.5
Total Delay (hr)	131.0	134.3	118.0	128.4	98.6	122.0
Total Stops	4604	4601	4463	4364	4334	4475
Fuel Used (l)	745.7	765.3	738.7	760.4	721.7	746.4

Intersection: 9: Bend

Movement	NW
Directions Served	T
Maximum Queue (m)	299.6
Average Queue (m)	10.3
95th Queue (m)	214.9
Link Distance (m)	1489.2
Upstream Blk Time (%)	0
Queuing Penalty (veh)	0
Storage Bay Dist (m)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 58: Goreway Drive & Steeles Avenue East

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB
Directions Served	L	T	T	T	R	L	T	T	T	R	L	L
Maximum Queue (m)	113.4	166.1	152.1	132.8	51.1	66.4	167.0	331.4	381.9	117.6	84.3	127.6
Average Queue (m)	73.7	96.1	97.0	82.6	3.1	15.4	109.2	183.4	255.5	115.7	47.6	111.3
95th Queue (m)	126.7	194.1	183.5	124.7	34.6	40.7	156.5	354.7	442.7	129.6	72.8	163.8
Link Distance (m)		651.1	651.1	651.1			1334.5	1334.5	1334.5			
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	115.0				150.0	150.0				110.0	120.0	120.0
Storage Blk Time (%)	12	2		0	0		1		4	45		0
Queuing Penalty (veh)	54	5		0	0		0		26	169		1

Intersection: 58: Goreway Drive & Steeles Avenue East

Movement	NB	NB	NB	SB	SB	SB	SB	SB
Directions Served	T	T	R	L	L	T	T	R
Maximum Queue (m)	465.3	458.0	87.6	130.2	134.7	181.4	157.4	45.7
Average Queue (m)	353.1	343.1	35.5	88.6	98.1	73.4	56.1	10.0
95th Queue (m)	565.8	556.0	104.5	140.8	144.1	176.7	104.2	32.5
Link Distance (m)	453.2	453.2				916.9	916.9	916.9
Upstream Blk Time (%)	25	16						
Queuing Penalty (veh)	0	0						
Storage Bay Dist (m)			80.0	130.0	130.0			
Storage Blk Time (%)	49	59	0	1	8	0		
Queuing Penalty (veh)	161	51	0	3	21	0		

Intersection: 61: Finch Avenue/Gorewood Drive & Steeles Avenue East

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB
Directions Served	L	T	T	T	R	L	T	T	TR	L	L	TR
Maximum Queue (m)	8.1	43.2	48.8	315.2	48.2	20.3	107.8	107.5	106.8	136.3	150.1	54.3
Average Queue (m)	1.8	21.7	28.8	41.8	2.9	4.2	63.5	58.5	62.2	85.3	87.8	21.3
95th Queue (m)	6.6	40.0	46.8	223.0	23.2	13.7	97.4	96.1	99.6	123.5	127.2	43.0
Link Distance (m)		1334.5	1334.5	1334.5			433.9	433.9		405.0	405.0	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	175.0				175.0	180.0			187.0			231.0
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 61: Finch Avenue/Gorewood Drive & Steeles Avenue East

Movement	SB	SB
Directions Served	LT	TR
Maximum Queue (m)	24.4	25.3
Average Queue (m)	10.8	8.5
95th Queue (m)	20.7	20.3
Link Distance (m)	853.6	853.6
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 224: Goreway Drive & Intermodal Drive

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	NB	SB
Directions Served	L	T	R	L	T	TR	L	T	T	T	R	L
Maximum Queue (m)	81.6	57.7	56.2	76.3	84.1	64.1	98.3	91.2	103.7	109.5	76.3	43.5
Average Queue (m)	38.0	20.3	24.8	44.8	19.1	27.6	42.5	43.1	51.9	54.0	12.0	13.6
95th Queue (m)	69.4	45.0	48.0	75.6	51.0	51.3	81.6	78.5	88.8	91.4	39.2	34.7
Link Distance (m)		209.1	209.1		160.4	160.4		916.9	916.9	916.9		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	85.0			75.0			135.0				100.0	135.0
Storage Blk Time (%)	0			2	0		0			0	0	
Queuing Penalty (veh)	0			1	0		0			0	0	

Intersection: 224: Goreway Drive & Intermodal Drive

Movement	SB	SB	SB	SB
Directions Served	T	T	T	R
Maximum Queue (m)	105.6	98.4	91.0	24.6
Average Queue (m)	55.0	51.7	46.3	8.0
95th Queue (m)	93.1	88.3	81.9	20.5
Link Distance (m)	1489.2	1489.2	1489.2	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)				100.0
Storage Blk Time (%)				0
Queuing Penalty (veh)				0

Intersection: 225: Intermodal Drive & Deerhurst Drive

Movement	EB	WB	WB	SB
Directions Served	L	T	TR	LR
Maximum Queue (m)	30.6	1.2	2.8	27.8
Average Queue (m)	7.1	0.0	0.1	14.3
95th Queue (m)	21.9	0.8	2.0	22.6
Link Distance (m)		336.6	336.6	160.1
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)	65.0			
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 493

58: Goreway Drive & Steeles Avenue East
Intermodal Drive Extension

'Do Nothing' 2051 Conditions

AM Peak Period

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  		 	 		 	 	
Traffic Volume (vph)	120	1334	120	33	1050	438	131	185	44	569	670	195
Future Volume (vph)	120	1334	120	33	1050	438	131	185	44	569	670	195
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	115.0		150.0	150.0		110.0	120.0		80.0	130.0		0.0
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (m)	7.6			7.6			7.6			7.6		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Ped Bike Factor			0.97			0.94	0.99		0.97	0.99		0.97
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1342	4561	1471	1772	4683	1372	2975	3380	1601	2951	3380	1396
Flt Permitted	0.160			0.119			0.950			0.950		
Satd. Flow (perm)	226	4561	1424	222	4683	1291	2955	3380	1557	2915	3380	1353
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			132			481			134			203
Link Speed (k/h)		80			80			70			70	
Link Distance (m)		668.9			1373.2			472.6			952.1	
Travel Time (s)		30.1			61.8			24.3			49.0	
Confl. Peds. (#/hr)	28		12	12		28	13		11	11		13
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	36%	15%	11%	3%	12%	19%	19%	8%	2%	20%	8%	17%
Adj. Flow (vph)	132	1466	132	36	1154	481	144	203	48	625	736	214
Shared Lane Traffic (%)												
Lane Group Flow (vph)	132	1466	132	36	1154	481	144	203	48	625	736	214
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2		2	6		6			4			8
Detector Phase	5	2	2	1	6	6	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	5.0	12.0	12.0	5.0	12.0	12.0	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	8.0	34.7	34.7	8.0	34.7	34.7	13.0	39.7	39.7	13.0	39.7	39.7
Total Split (s)	18.0	61.0	61.0	13.0	56.0	56.0	20.0	42.0	42.0	44.0	66.0	66.0
Total Split (%)	11.3%	38.1%	38.1%	8.1%	35.0%	35.0%	12.5%	26.3%	26.3%	27.5%	41.3%	41.3%
Maximum Green (s)	15.0	54.3	54.3	10.0	49.3	49.3	15.0	35.3	35.3	39.0	59.3	59.3
Yellow Time (s)	3.0	4.6	4.6	3.0	4.6	4.6	3.0	4.2	4.2	3.0	4.2	4.2
All-Red Time (s)	0.0	2.1	2.1	0.0	2.1	2.1	2.0	2.5	2.5	2.0	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-3.0	0.0	0.0
Total Lost Time (s)	3.0	6.7	6.7	3.0	6.7	6.7	5.0	6.7	6.7	2.0	6.7	6.7
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	None
Walk Time (s)		8.0	8.0		8.0	8.0		8.0	8.0		8.0	8.0
Flash Dont Walk (s)		20.0	20.0		20.0	20.0		25.0	25.0		25.0	25.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	91.1	79.0	79.0	82.2	71.4	71.4	12.7	17.5	17.5	39.7	41.5	41.5
Actuated g/C Ratio	0.57	0.49	0.49	0.51	0.45	0.45	0.08	0.11	0.11	0.25	0.26	0.26
v/c Ratio	0.60	0.65	0.17	0.20	0.55	0.57	0.61	0.55	0.17	0.85	0.84	0.43

58: Goreway Drive & Steeles Avenue East
Intermodal Drive Extension

'Do Nothing' 2051 Conditions
AM Peak Period

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	30.2	34.0	4.8	28.1	47.9	16.3	82.1	72.2	1.2	58.7	45.1	5.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.2	34.0	4.8	28.1	47.9	16.3	82.1	72.2	1.2	58.7	45.1	5.8
LOS	C	C	A	C	D	B	F	E	A	E	D	A
Approach Delay	31.5			38.3			67.2			45.2		
Approach LOS	C			D			E			D		
Queue Length 50th (m)	19.4	127.4	0.0	6.9	114.6	42.4	23.1	33.3	0.0	73.8	119.3	14.6
Queue Length 95th (m)	36.7	168.7	13.5	m15.6	141.6	83.2	34.8	43.8	0.0	103.6	92.1	10.0
Internal Link Dist (m)	644.9			1349.2			448.6			928.1		
Turn Bay Length (m)	115.0			150.0	150.0			110.0	120.0	80.0	130.0	
Base Capacity (vph)	233	2251	769	214	2089	842	278	745	447	774	1252	629
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.57	0.65	0.17	0.17	0.55	0.57	0.52	0.27	0.11	0.81	0.59	0.34

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 76 (48%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 120

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.85

Intersection Signal Delay: 40.2

Intersection LOS: D

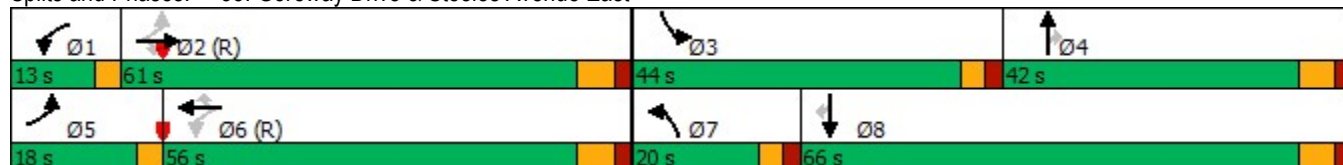
Intersection Capacity Utilization 77.1%

ICU Level of Service D

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 58: Goreway Drive & Steeles Avenue East



61: Finch Avenue/Gorewood Drive & Steeles Avenue East
Intermodal Drive Extension

'Do Nothing' 2051 Conditions

AM Peak Period

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  		 				 	
Traffic Volume (vph)	6	1085	747	135	958	17	526	47	129	16	34	8
Future Volume (vph)	6	1085	747	135	958	17	526	47	129	16	34	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.8	3.5	3.5	3.5	3.4	3.4	3.7	3.7	3.7
Storage Length (m)	175.0		175.0	180.0		187.0	0.0		231.0	0.0		0.0
Storage Lanes	1		1	1		1	2		1	0		0
Taper Length (m)	7.6			7.6			7.6			7.6		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	0.91	0.97	1.00	1.00	0.95	0.95	0.95
Ped Bike Factor	0.99		0.98		1.00		1.00	0.99			1.00	
Frt			0.850		0.997			0.890			0.979	
Flt Protected	0.950			0.950			0.950				0.987	
Satd. Flow (prot)	1560	4601	1361	1647	4445	0	2960	1501	0	0	2465	0
Flt Permitted	0.258			0.168			0.950				0.987	
Satd. Flow (perm)	420	4601	1339	291	4445	0	2956	1501	0	0	2463	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			812		2			85			9	
Link Speed (k/h)		80			80			80			50	
Link Distance (m)		1373.2			447.9			426.1			872.2	
Travel Time (s)		61.8			20.2			19.2			62.8	
Confl. Peds. (#/hr)	10		2	2		10	1		4	4		1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	17%	14%	20%	12%	15%	12%	17%	0%	12%	56%	41%	25%
Adj. Flow (vph)	7	1179	812	147	1041	18	572	51	140	17	37	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	7	1179	812	147	1059	0	572	191	0	0	63	0
Turn Type	Perm	NA	Perm	pm+pt	NA		Split	NA		Split	NA	
Protected Phases		2		1	6		8	8		4	4	
Permitted Phases	2		2	6								
Detector Phase	2	2	2	1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	22.0	22.0	22.0	5.0	22.0		12.0	12.0		8.0	8.0	
Minimum Split (s)	29.9	29.9	29.9	8.0	29.9		45.2	45.2		15.2	15.2	
Total Split (s)	66.0	66.0	66.0	18.0	84.0		51.0	51.0		25.0	25.0	
Total Split (%)	41.3%	41.3%	41.3%	11.3%	52.5%		31.9%	31.9%		15.6%	15.6%	
Maximum Green (s)	59.1	59.1	59.1	15.0	77.1		43.8	43.8		17.8	17.8	
Yellow Time (s)	4.6	4.6	4.6	3.0	4.6		4.6	4.6		4.6	4.6	
All-Red Time (s)	2.3	2.3	2.3	0.0	2.3		2.6	2.6		2.6	2.6	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)	6.9	6.9	6.9	3.0	6.9		7.2	7.2			7.2	
Lead/Lag	Lag	Lag	Lag	Lead								
Lead-Lag Optimize?	Yes	Yes	Yes	Yes								
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	C-Max	C-Max	C-Max	None	C-Max		None	None		None	None	
Walk Time (s)	8.0	8.0	8.0		8.0		8.0	8.0				
Flash Dont Walk (s)	15.0	15.0	15.0		15.0		30.0	30.0				
Pedestrian Calls (#/hr)	0	0	0		0		0	0				
Act Effect Green (s)	81.1	81.1	81.1	99.5	95.6		36.6	36.6			9.5	
Actuated g/C Ratio	0.51	0.51	0.51	0.62	0.60		0.23	0.23			0.06	

61: Finch Avenue/Gorewood Drive & Steeles Avenue East
Intermodal Drive Extension

'Do Nothing' 2051 Conditions
AM Peak Period

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.03	0.51	0.75	0.53	0.40		0.85	0.47			0.41	
Control Delay	21.5	21.2	11.9	21.8	19.0		71.0	31.7			69.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Delay	21.5	21.2	11.9	21.8	19.0		71.0	31.7			69.5	
LOS	C	C	B	C	B		E	C			E	
Approach Delay		17.4			19.4			61.2			69.5	
Approach LOS		B			B			E			E	
Queue Length 50th (m)	0.7	70.0	46.7	19.6	65.9		90.2	28.7			8.8	
Queue Length 95th (m)	m1.1	77.2	61.3	35.7	88.6		106.4	50.9			17.1	
Internal Link Dist (m)		1349.2			423.9			402.1			848.2	
Turn Bay Length (m)	175.0		175.0	180.0								
Base Capacity (vph)	212	2331	1079	308	2657		810	472			282	
Starvation Cap Reductn	0	0	0	0	0		0	0			0	
Spillback Cap Reductn	0	0	0	0	0		0	0			0	
Storage Cap Reductn	0	0	0	0	0		0	0			0	
Reduced v/c Ratio	0.03	0.51	0.75	0.48	0.40		0.71	0.40			0.22	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 127 (79%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 100

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.85

Intersection Signal Delay: 27.1

Intersection LOS: C

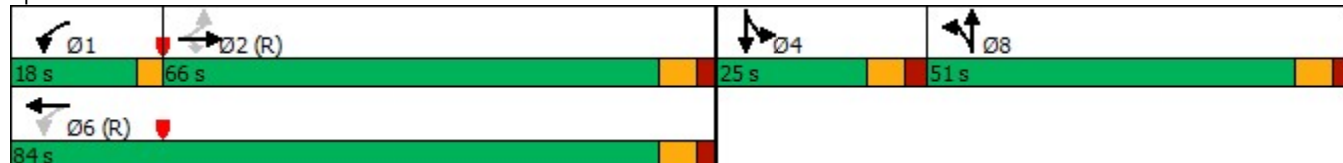
Intersection Capacity Utilization 77.9%

ICU Level of Service D

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 61: Finch Avenue/Gorewood Drive & Steeles Avenue East



224: Goreway Drive & Intermodal Drive
Intermodal Drive Extension

'Do Nothing' 2051 Conditions

AM Peak Period

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	62	111	112	71	62	139	808	133	83	1848	100
Future Volume (vph)	40	62	111	112	71	62	139	808	133	83	1848	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	85.0		0.0	75.0		0.0	135.0		100.0	135.0		100.0
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (m)	7.6			7.6			7.6			7.6		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.91	1.00	1.00	0.91	1.00
Frt			0.850		0.930				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1313	1423	1002	1080	2303	0	1250	4768	1134	1521	4902	1096
Flt Permitted	0.661			0.713			0.053			0.314		
Satd. Flow (perm)	914	1423	1002	811	2303	0	70	4768	1134	503	4902	1096
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			119		67				143			85
Link Speed (k/h)		50			50			70			70	
Link Distance (m)		232.0			189.6			952.1			1512.1	
Travel Time (s)		16.7			13.7			49.0			77.8	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	39%	35%	63%	69%	68%	24%	46%	10%	44%	20%	7%	49%
Adj. Flow (vph)	43	67	119	120	76	67	149	869	143	89	1987	108
Shared Lane Traffic (%)												
Lane Group Flow (vph)	43	67	119	120	143	0	149	869	143	89	1987	108
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases		4			8		5	2			6	
Permitted Phases	4		4	8			2		2	6		6
Detector Phase	4	4	4	8	8		5	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0		6.0	12.0	12.0	12.0	12.0	12.0
Minimum Split (s)	45.0	45.0	45.0	45.0	45.0		9.0	42.0	42.0	42.0	42.0	42.0
Total Split (s)	65.0	65.0	65.0	65.0	65.0		18.0	95.0	95.0	77.0	77.0	77.0
Total Split (%)	40.6%	40.6%	40.6%	40.6%	40.6%		11.3%	59.4%	59.4%	48.1%	48.1%	48.1%
Maximum Green (s)	59.0	59.0	59.0	59.0	59.0		15.0	89.0	89.0	71.0	71.0	71.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		3.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		0.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0		3.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag							Lead			Lag	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	C-Max	C-Max	C-Max
Walk Time (s)	12.0	12.0	12.0	12.0	12.0			12.0	12.0	12.0	12.0	12.0
Flash Dont Walk (s)	27.0	27.0	27.0	27.0	27.0			24.0	24.0	24.0	24.0	24.0
Pedestrian Calls (#/hr)	0	0	0	0	0			0	0	0	0	0
Act Effct Green (s)	29.7	29.7	29.7	29.7	29.7		121.3	118.3	118.3	92.6	92.6	92.6
Actuated g/C Ratio	0.19	0.19	0.19	0.19	0.19		0.76	0.74	0.74	0.58	0.58	0.58
v/c Ratio	0.25	0.25	0.42	0.80	0.30		0.68	0.25	0.16	0.31	0.70	0.16
Control Delay	55.4	54.7	11.9	94.9	28.5		52.6	5.8	0.6	25.2	28.0	6.9
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0

224: Goreway Drive & Intermodal Drive
Intermodal Drive Extension

'Do Nothing' 2051 Conditions
AM Peak Period

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	55.4	54.7	11.9	94.9	28.5		52.6	5.8	0.6	25.2	28.0	6.9
LOS	E	D	B	F	C		D	A	A	C	C	A
Approach Delay	32.6			58.8			11.1			26.8		
Approach LOS	C			E			B			C		
Queue Length 50th (m)	11.8	18.5	0.0	37.0	10.8		24.3	22.1	0.0	14.1	159.1	3.1
Queue Length 95th (m)	21.9	30.1	16.8	56.0	19.1		57.7	30.6	0.6	35.5	230.4	15.9
Internal Link Dist (m)	208.0			165.6			928.1			1488.1		
Turn Bay Length (m)	85.0			75.0			135.0		100.0	135.0		100.0
Base Capacity (vph)	337	524	444	299	891		220	3524	875	291	2837	670
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.13	0.13	0.27	0.40	0.16		0.68	0.25	0.16	0.31	0.70	0.16

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 97 (61%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 100

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.80

Intersection Signal Delay: 24.6

Intersection LOS: C

Intersection Capacity Utilization 75.1%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 224: Goreway Drive & Intermodal Drive



225: Intermodal Drive & Deerhurst Drive
Intermodal Drive Extension

'Do Nothing' 2051 Conditions
AM Peak Period

Intersection						
Int Delay, s/veh	3.8					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	100	159	147	18	10	82
Future Vol, veh/h	100	159	147	18	10	82
Conflicting Peds, #/hr	10	0	0	10	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	65	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	75	75	75	75	75	75
Heavy Vehicles, %	35	26	27	11	10	71
Mvmt Flow	133	212	196	24	13	109
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	230	0	-	0	590	120
Stage 1	-	-	-	-	218	-
Stage 2	-	-	-	-	372	-
Critical Hdwy	4.8	-	-	-	7	8.32
Critical Hdwy Stg 1	-	-	-	-	6	-
Critical Hdwy Stg 2	-	-	-	-	6	-
Follow-up Hdwy	2.55	-	-	-	3.6	4.01
Pot Cap-1 Maneuver	1126	-	-	-	420	727
Stage 1	-	-	-	-	774	-
Stage 2	-	-	-	-	644	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1115	-	-	-	362	720
Mov Cap-2 Maneuver	-	-	-	-	362	-
Stage 1	-	-	-	-	675	-
Stage 2	-	-	-	-	638	-
Approach	EB	WB		SB		
HCM Control Delay, s	3.3	0		11.8		
HCM LOS				B		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1115	-	-	-	650	
HCM Lane V/C Ratio	0.12	-	-	-	0.189	
HCM Control Delay (s)	8.7	-	-	-	11.8	
HCM Lane LOS	A	-	-	-	B	
HCM 95th %tile Q(veh)	0.4	-	-	-	0.7	

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	6:45	6:45	6:45	6:45	6:45	6:45
End Time	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	75	75	75	75	75	75
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	4	4	4	4	4	4
# of Recorded Intervals	3	3	3	3	3	3
Vehs Entered	6597	6705	6675	6739	6695	6681
Vehs Exited	6592	6720	6719	6708	6709	6688
Starting Vehs	381	392	419	371	374	386
Ending Vehs	386	377	375	402	360	378
Travel Distance (km)	18047	18357	18324	18400	18295	18285
Travel Time (hr)	391.8	401.2	398.5	399.9	405.3	399.3
Total Delay (hr)	127.2	133.1	131.9	130.7	137.0	132.0
Total Stops	6219	6558	6434	6331	6762	6462
Fuel Used (l)	1423.9	1454.9	1454.0	1452.1	1451.3	1447.2

Interval #0 Information Seeding

Start Time	6:45
End Time	7:00
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	
No data recorded this interval.	

Interval #1 Information Pre-Peak

Start Time	7:00
End Time	7:20
Total Time (min)	20
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	1	2	3	4	5	Avg
Vehs Entered	2142	2213	2158	2186	2186	2180
Vehs Exited	2161	2231	2187	2154	2131	2172
Starting Vehs	381	392	419	371	374	386
Ending Vehs	362	374	390	403	429	392
Travel Distance (km)	5945	6125	5954	5926	5940	5978
Travel Time (hr)	127.3	133.2	128.3	125.9	127.5	128.4
Total Delay (hr)	40.5	43.5	41.7	39.3	40.4	41.1
Total Stops	2045	2138	1987	1911	2063	2028
Fuel Used (l)	470.0	483.8	470.5	465.5	464.6	470.9

Interval #2 Information Peak

Start Time	7:20
End Time	7:35
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	1814	1804	1795	1826	1879	1825
Vehs Exited	1746	1757	1737	1776	1805	1763
Starting Vehs	362	374	390	403	429	392
Ending Vehs	430	421	448	453	503	451
Travel Distance (km)	4779	4781	4696	4818	4992	4813
Travel Time (hr)	106.7	109.2	104.3	110.8	115.3	109.3
Total Delay (hr)	36.5	39.1	35.5	40.1	41.8	38.6
Total Stops	1763	1924	1768	1892	2034	1876
Fuel Used (l)	378.0	385.4	373.4	384.6	401.4	384.6

Interval #3 Information Post-Peak

Start Time	7:35
End Time	8:00
Total Time (min)	25

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	1	2	3	4	5	Avg
Vehs Entered	2641	2688	2722	2727	2630	2683
Vehs Exited	2685	2732	2795	2778	2773	2752
Starting Vehs	430	421	448	453	503	451
Ending Vehs	386	377	375	402	360	378
Travel Distance (km)	7323	7451	7674	7656	7364	7494
Travel Time (hr)	157.8	158.8	166.0	163.1	162.5	161.7
Total Delay (hr)	50.3	50.5	54.7	51.3	54.8	52.3
Total Stops	2411	2496	2679	2528	2665	2554
Fuel Used (l)	575.9	585.6	610.1	601.9	585.4	591.8

Intersection: 58: Goreway Drive & Steeles Avenue East

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB
Directions Served	L	T	T	T	R	L	T	T	T	R	L	L
Maximum Queue (m)	78.0	134.2	132.8	130.6	39.9	26.0	137.7	139.7	142.4	117.2	46.6	57.9
Average Queue (m)	28.8	75.3	77.0	76.9	1.4	6.5	86.1	89.2	84.7	19.4	15.0	29.9
95th Queue (m)	56.3	114.5	114.1	116.4	23.3	17.7	125.3	125.9	128.4	83.2	38.0	50.2
Link Distance (m)		651.1	651.1	651.1			1334.5	1334.5	1334.5			
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	115.0				150.0	150.0				110.0	120.0	120.0
Storage Blk Time (%)	0	1		0	0		0		2	0		
Queuing Penalty (veh)	0	1		0	0		0		7	0		

Intersection: 58: Goreway Drive & Steeles Avenue East

Movement	NB	NB	NB	SB	SB	SB	SB	SB
Directions Served	T	T	R	L	L	T	T	R
Maximum Queue (m)	49.7	47.6	5.9	130.8	136.2	181.2	135.1	32.2
Average Queue (m)	24.4	18.5	0.2	77.3	88.1	51.8	53.2	4.7
95th Queue (m)	43.6	38.4	3.1	126.1	130.1	115.5	99.0	20.6
Link Distance (m)	453.2	453.2				916.9	916.9	916.9
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (m)			80.0	130.0	130.0			
Storage Blk Time (%)				0	2	0		
Queuing Penalty (veh)				1	6	1		

Intersection: 61: Finch Avenue/Gorewood Drive & Steeles Avenue East

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB
Directions Served	L	T	T	T	R	L	T	T	TR	L	L	TR
Maximum Queue (m)	7.6	80.5	90.8	83.9	93.1	56.5	88.2	88.1	81.8	109.6	113.7	65.2
Average Queue (m)	0.6	40.7	46.1	49.8	25.1	26.6	52.4	48.6	40.5	66.6	64.8	29.1
95th Queue (m)	3.9	69.2	73.2	76.8	79.6	47.1	81.2	77.1	72.8	98.2	98.2	56.5
Link Distance (m)		1334.5	1334.5	1334.5			433.9	433.9		405.0	405.0	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	175.0				175.0	180.0			187.0			231.0
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 61: Finch Avenue/Gorewood Drive & Steeles Avenue East

Movement	SB	SB
Directions Served	LT	TR
Maximum Queue (m)	45.6	39.7
Average Queue (m)	17.3	11.0
95th Queue (m)	36.2	28.7
Link Distance (m)	853.6	853.6
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 224: Goreway Drive & Intermodal Drive

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	NB	SB
Directions Served	L	T	R	L	T	TR	L	T	T	T	R	L
Maximum Queue (m)	45.8	51.5	66.4	81.5	101.8	70.1	97.0	51.7	45.2	406.4	23.2	105.4
Average Queue (m)	16.0	18.3	26.9	46.3	18.2	22.6	45.2	18.4	16.5	29.1	6.6	20.5
95th Queue (m)	38.6	39.8	53.8	84.3	60.0	50.7	80.5	38.9	37.0	208.0	18.7	60.8
Link Distance (m)		209.1	209.1		160.4	160.4		916.9	916.9	916.9		
Upstream Blk Time (%)					0					0		
Queuing Penalty (veh)					0					0		
Storage Bay Dist (m)	85.0			75.0			135.0				100.0	135.0
Storage Blk Time (%)				5	0							0
Queuing Penalty (veh)				2	0							0

Intersection: 224: Goreway Drive & Intermodal Drive

Movement	SB	SB	SB	SB
Directions Served	T	T	T	R
Maximum Queue (m)	163.6	162.2	163.8	107.5
Average Queue (m)	79.3	78.6	75.7	17.7
95th Queue (m)	142.3	140.7	139.7	67.6
Link Distance (m)	1489.2	1489.2	1489.2	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)				100.0
Storage Blk Time (%)	1		4	0
Queuing Penalty (veh)	1		4	0

Intersection: 225: Intermodal Drive & Deerhurst Drive

Movement	EB	SB
Directions Served	L	LR
Maximum Queue (m)	24.0	40.5
Average Queue (m)	5.8	17.9
95th Queue (m)	18.2	30.8
Link Distance (m)		160.1
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)	65.0	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 23

58: Goreway Drive & Steeles Avenue East
Intermodal Drive Extension

'Do Nothing' 2051 Conditions

PM Peak Period

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  		 	 		 	 	
Traffic Volume (vph)	222	1313	187	62	1124	654	327	1093	86	372	540	181
Future Volume (vph)	222	1313	187	62	1124	654	327	1093	86	372	540	181
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	115.0		150.0	150.0		110.0	120.0		80.0	130.0		0.0
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (m)	7.6			7.6			7.6			7.6		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Ped Bike Factor			0.98	1.00		0.95	0.99		0.99	1.00		0.96
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1534	4683	1484	1755	4561	1408	3278	3510	1570	2855	3444	1432
Flt Permitted	0.112			0.125			0.950			0.950		
Satd. Flow (perm)	181	4683	1457	231	4561	1339	3232	3510	1547	2854	3444	1372
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			191			311			100			182
Link Speed (k/h)		80			80			70			70	
Link Distance (m)		668.9			1373.2			472.6			952.1	
Travel Time (s)		30.1			61.8			24.3			49.0	
Confl. Peds. (#/hr)	22		4	4		22	21		2	2		21
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	19%	12%	10%	4%	15%	16%	8%	4%	4%	24%	6%	14%
Adj. Flow (vph)	227	1340	191	63	1147	667	334	1115	88	380	551	185
Shared Lane Traffic (%)												
Lane Group Flow (vph)	227	1340	191	63	1147	667	334	1115	88	380	551	185
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2		2	6		6			4			8
Detector Phase	5	2	2	1	6	6	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	5.0	12.0	12.0	5.0	12.0	12.0	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	8.0	34.7	34.7	8.0	34.7	34.7	13.0	39.7	39.7	13.0	39.7	39.7
Total Split (s)	19.0	69.0	69.0	9.0	59.0	59.0	29.0	56.0	56.0	26.0	53.0	53.0
Total Split (%)	11.9%	43.1%	43.1%	5.6%	36.9%	36.9%	18.1%	35.0%	35.0%	16.3%	33.1%	33.1%
Maximum Green (s)	16.0	62.3	62.3	6.0	52.3	52.3	24.0	49.3	49.3	21.0	46.3	46.3
Yellow Time (s)	3.0	4.6	4.6	3.0	4.6	4.6	3.0	4.2	4.2	3.0	4.2	4.2
All-Red Time (s)	0.0	2.1	2.1	0.0	2.1	2.1	2.0	2.5	2.5	2.0	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	6.7	6.7	3.0	6.7	6.7	5.0	6.7	6.7	5.0	6.7	6.7
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	None
Walk Time (s)		8.0	8.0		8.0	8.0		8.0	8.0		8.0	8.0
Flash Dont Walk (s)		20.0	20.0		20.0	20.0		25.0	25.0		25.0	25.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	75.0	64.1	64.1	62.0	52.3	52.3	21.0	49.3	49.3	21.0	49.3	49.3
Actuated g/C Ratio	0.47	0.40	0.40	0.39	0.33	0.33	0.13	0.31	0.31	0.13	0.31	0.31
v/c Ratio	1.03	0.71	0.27	0.43	0.77	1.03	0.78	1.03	0.16	1.02	0.52	0.34

58: Goreway Drive & Steeles Avenue East
Intermodal Drive Extension

'Do Nothing' 2051 Conditions

PM Peak Period

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	103.9	43.3	4.9	42.3	68.8	83.8	79.9	88.9	5.6	105.9	44.4	15.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	103.9	43.3	4.9	42.3	68.8	83.8	79.9	88.9	5.6	105.9	44.4	15.0
LOS	F	D	A	D	E	F	E	F	A	F	D	B
Approach Delay	46.9			73.2			82.2			60.5		
Approach LOS	D			E			F			E		
Queue Length 50th (m)	~54.6	133.1	0.0	16.3	140.5	~161.7	53.6	~199.1	0.0	~65.7	83.2	18.6
Queue Length 95th (m)	#110.6	150.8	16.0	m24.6	155.4	#274.8	69.8	#241.7	10.3	#96.2	104.3	45.1
Internal Link Dist (m)	644.9			1349.2			448.6			928.1		
Turn Bay Length (m)	115.0			150.0	150.0			110.0	120.0	80.0	130.0	
Base Capacity (vph)	220	1876	697	146	1490	647	491	1081	545	374	1060	548
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.03	0.71	0.27	0.43	0.77	1.03	0.68	1.03	0.16	1.02	0.52	0.34

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 61 (38%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 130

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.03

Intersection Signal Delay: 65.8

Intersection LOS: E

Intersection Capacity Utilization 99.6%

ICU Level of Service F

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

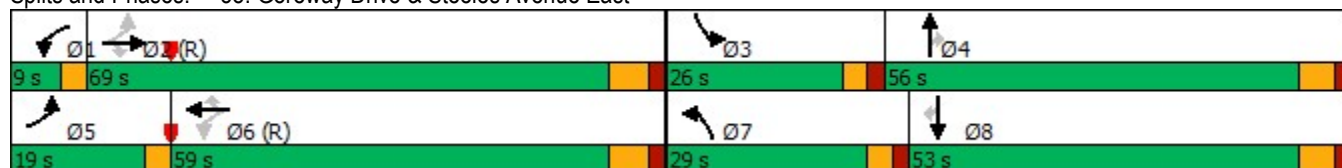
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 58: Goreway Drive & Steeles Avenue East



61: Finch Avenue/Gorewood Drive & Steeles Avenue East
Intermodal Drive Extension

'Do Nothing' 2051 Conditions
PM Peak Period

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  		 				 	
Traffic Volume (vph)	9	1060	673	13	1145	137	600	24	95	10	45	20
Future Volume (vph)	9	1060	673	13	1145	137	600	24	95	10	45	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.8	3.5	3.5	3.5	3.4	3.4	3.7	3.7	3.7
Storage Length (m)	175.0		175.0	180.0		187.0	0.0		231.0	0.0		0.0
Storage Lanes	1		1	1		1	2		1	0		0
Taper Length (m)	7.6			7.6			7.6			7.6		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	0.91	0.97	1.00	1.00	0.95	0.95	0.95
Ped Bike Factor	1.00		0.97		1.00		1.00	0.98			0.99	
Frt			0.850		0.984			0.880			0.960	
Flt Protected	0.950			0.950			0.950				0.993	
Satd. Flow (prot)	1825	4683	1458	1724	4449	0	2815	1326	0	0	3016	0
Flt Permitted	0.158			0.191			0.950				0.993	
Satd. Flow (perm)	303	4683	1417	347	4449	0	2809	1326	0	0	3013	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			708		18			100			21	
Link Speed (k/h)		80			80			80			50	
Link Distance (m)		1373.2			447.9			426.1			872.2	
Travel Time (s)		61.8			20.2			19.2			62.8	
Confl. Peds. (#/hr)	2		8	8		2	2		6	6		2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	12%	12%	7%	11%	31%	23%	39%	17%	0%	16%	20%
Adj. Flow (vph)	9	1116	708	14	1205	144	632	25	100	11	47	21
Shared Lane Traffic (%)												
Lane Group Flow (vph)	9	1116	708	14	1349	0	632	125	0	0	79	0
Turn Type	Perm	NA	Perm	pm+pt	NA		Split	NA		Split	NA	
Protected Phases		2		1	6		8	8		4	4	
Permitted Phases	2		2	6								
Detector Phase	2	2	2	1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	22.0	22.0	22.0	5.0	22.0		12.0	12.0		8.0	8.0	
Minimum Split (s)	29.9	29.9	29.9	8.0	29.9		45.2	45.2		15.2	15.2	
Total Split (s)	66.0	66.0	66.0	18.0	84.0		51.0	51.0		25.0	25.0	
Total Split (%)	41.3%	41.3%	41.3%	11.3%	52.5%		31.9%	31.9%		15.6%	15.6%	
Maximum Green (s)	59.1	59.1	59.1	15.0	77.1		43.8	43.8		17.8	17.8	
Yellow Time (s)	4.6	4.6	4.6	3.0	4.6		4.6	4.6		4.6	4.6	
All-Red Time (s)	2.3	2.3	2.3	0.0	2.3		2.6	2.6		2.6	2.6	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)	6.9	6.9	6.9	3.0	6.9		7.2	7.2			7.2	
Lead/Lag	Lag	Lag	Lag	Lead								
Lead-Lag Optimize?	Yes	Yes	Yes	Yes								
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	C-Max	C-Max	C-Max	None	C-Max		None	None		None	None	
Walk Time (s)	8.0	8.0	8.0		8.0		8.0	8.0				
Flash Dont Walk (s)	15.0	15.0	15.0		15.0		30.0	30.0				
Pedestrian Calls (#/hr)	0	0	0		0		0	0				
Act Effect Green (s)	85.5	85.5	85.5	93.3	89.4		40.1	40.1			9.2	
Actuated g/C Ratio	0.53	0.53	0.53	0.58	0.56		0.25	0.25			0.06	

61: Finch Avenue/Gorewood Drive & Steeles Avenue East
Intermodal Drive Extension

'Do Nothing' 2051 Conditions
PM Peak Period

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.06	0.45	0.65	0.05	0.54		0.90	0.31			0.41	
Control Delay	11.8	10.6	8.7	16.3	23.6		74.1	14.3			59.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Delay	11.8	10.6	8.7	16.3	23.6		74.1	14.3			59.4	
LOS	B	B	A	B	C		E	B			E	
Approach Delay		9.9			23.5			64.2			59.4	
Approach LOS		A			C			E			E	
Queue Length 50th (m)	0.3	19.7	48.3	1.9	97.2		99.4	6.0			9.5	
Queue Length 95th (m)	m0.6	m50.0	m194.8	5.6	118.6		121.5	23.3			18.4	
Internal Link Dist (m)		1349.2			423.9			402.1			848.2	
Turn Bay Length (m)	175.0		175.0	180.0								
Base Capacity (vph)	161	2502	1086	331	2494		770	435			354	
Starvation Cap Reductn	0	0	0	0	0		0	0			0	
Spillback Cap Reductn	0	0	0	0	0		0	0			0	
Storage Cap Reductn	0	0	0	0	0		0	0			0	
Reduced v/c Ratio	0.06	0.45	0.65	0.04	0.54		0.82	0.29			0.22	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 132 (83%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 100

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.90

Intersection Signal Delay: 25.7

Intersection LOS: C

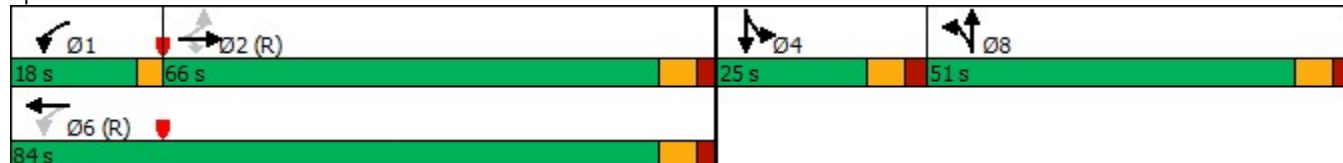
Intersection Capacity Utilization 68.4%

ICU Level of Service C

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 61: Finch Avenue/Gorewood Drive & Steeles Avenue East



224: Goreway Drive & Intermodal Drive
Intermodal Drive Extension

'Do Nothing' 2051 Conditions

PM Peak Period

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	111	63	187	151	103	81	171	2163	107	25	1139	83
Future Volume (vph)	111	63	187	151	103	81	171	2163	107	25	1139	83
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	85.0		0.0	75.0		0.0	135.0		100.0	135.0		100.0
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (m)	7.6			7.6			7.6			7.6		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.91	1.00	1.00	0.91	1.00
Frt			0.850		0.934				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1332	1289	1338	1383	2798	0	1209	4902	1021	1342	4856	1183
Flt Permitted	0.595			0.714			0.182			0.063		
Satd. Flow (perm)	834	1289	1338	1039	2798	0	232	4902	1021	89	4856	1183
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			197		3				91			87
Link Speed (k/h)		50			50			70			70	
Link Distance (m)		232.0			189.6			952.1			1512.1	
Travel Time (s)		16.7			13.7			49.0			77.8	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	37%	49%	22%	32%	28%	14%	51%	7%	60%	36%	8%	38%
Adj. Flow (vph)	117	66	197	159	108	85	180	2277	113	26	1199	87
Shared Lane Traffic (%)												
Lane Group Flow (vph)	117	66	197	159	193	0	180	2277	113	26	1199	87
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases		4			8		5	2			6	
Permitted Phases	4		4	8			2		2	6		6
Detector Phase	4	4	4	8	8		5	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0		6.0	12.0	12.0	12.0	12.0	12.0
Minimum Split (s)	45.0	45.0	45.0	45.0	45.0		9.0	42.0	42.0	42.0	42.0	42.0
Total Split (s)	70.0	70.0	70.0	70.0	70.0		20.0	90.0	90.0	70.0	70.0	70.0
Total Split (%)	43.8%	43.8%	43.8%	43.8%	43.8%		12.5%	56.3%	56.3%	43.8%	43.8%	43.8%
Maximum Green (s)	64.0	64.0	64.0	64.0	64.0		17.0	84.0	84.0	64.0	64.0	64.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		3.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		0.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0		3.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag							Lead			Lag	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	C-Max	C-Max	C-Max
Walk Time (s)	12.0	12.0	12.0	12.0	12.0			12.0	12.0	12.0	12.0	12.0
Flash Dont Walk (s)	27.0	27.0	27.0	27.0	27.0			24.0	24.0	24.0	24.0	24.0
Pedestrian Calls (#/hr)	0	0	0	0	0			0	0	0	0	0
Act Effct Green (s)	30.8	30.8	30.8	30.8	30.8		120.2	117.2	117.2	95.3	95.3	95.3
Actuated g/C Ratio	0.19	0.19	0.19	0.19	0.19		0.75	0.73	0.73	0.60	0.60	0.60
v/c Ratio	0.73	0.27	0.47	0.80	0.36		0.62	0.63	0.15	0.50	0.41	0.12
Control Delay	84.5	54.8	9.6	87.5	55.2		19.8	7.9	1.1	63.0	20.0	4.4
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0

224: Goreway Drive & Intermodal Drive Intermodal Drive Extension

'Do Nothing' 2051 Conditions
PM Peak Period

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	84.5	54.8	9.6	87.5	55.2		19.8	7.9	1.1	63.0	20.0	4.4
LOS	F	D	A	F	E		B	A	A	E	B	A
Approach Delay		40.5			69.8			8.4			19.8	
Approach LOS		D			E			A			B	
Queue Length 50th (m)	35.4	18.1	0.0	48.8	27.9		9.8	56.8	0.2	4.5	71.0	0.0
Queue Length 95th (m)	54.1	29.8	20.2	69.5	36.5		m12.4	m118.9	m0.6	#25.4	113.0	10.2
Internal Link Dist (m)		208.0			165.6			928.1			1488.1	
Turn Bay Length (m)	85.0			75.0			135.0		100.0	135.0		100.0
Base Capacity (vph)	333	515	653	415	1121		299	3591	772	52	2892	739
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.35	0.13	0.30	0.38	0.17		0.60	0.63	0.15	0.50	0.41	0.12

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 69 (43%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 100

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.80

Intersection Signal Delay: 19.0

Intersection LOS: B

Intersection Capacity Utilization 86.8%

ICU Level of Service E

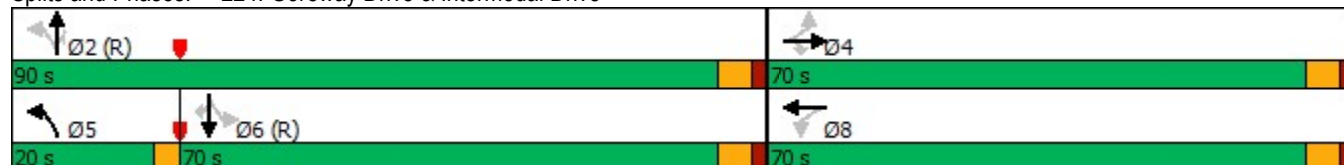
Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 224: Goreway Drive & Intermodal Drive



225: Intermodal Drive & Deerhurst Drive
Intermodal Drive Extension

'Do Nothing' 2051 Conditions
PM Peak Period

Intersection						
Int Delay, s/veh	4.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	79	101	207	11	25	106
Future Vol, veh/h	79	101	207	11	25	106
Conflicting Peds, #/hr	3	0	0	3	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	65	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	83	83	83	83	83	83
Heavy Vehicles, %	65	53	17	18	16	19
Mvmt Flow	95	122	249	13	30	128

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	265	0	-	0	510
Stage 1	-	-	-	-	259
Stage 2	-	-	-	-	251
Critical Hdwy	5.4	-	-	-	7.12
Critical Hdwy Stg 1	-	-	-	-	6.12
Critical Hdwy Stg 2	-	-	-	-	6.12
Follow-up Hdwy	2.85	-	-	-	3.66
Pot Cap-1 Maneuver	941	-	-	-	460
Stage 1	-	-	-	-	720
Stage 2	-	-	-	-	727
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	938	-	-	-	411
Mov Cap-2 Maneuver	-	-	-	-	411
Stage 1	-	-	-	-	645
Stage 2	-	-	-	-	725

Approach	EB	WB	SB
HCM Control Delay, s	4.1	0	11.6
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	938	-	-	-	699
HCM Lane V/C Ratio	0.101	-	-	-	0.226
HCM Control Delay (s)	9.3	-	-	-	11.6
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.3	-	-	-	0.9

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	6:45	6:45	6:45	6:45	6:45	6:45
End Time	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	75	75	75	75	75	75
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	4	4	4	4	4	4
# of Recorded Intervals	3	3	3	3	3	3
Vehs Entered	7945	7651	7841	7924	7837	7841
Vehs Exited	7861	7614	7738	7797	7722	7747
Starting Vehs	510	512	516	514	472	501
Ending Vehs	594	549	619	641	587	596
Travel Distance (km)	21710	20913	21461	21540	21390	21403
Travel Time (hr)	561.8	524.3	596.3	577.4	612.6	574.5
Total Delay (hr)	243.7	216.6	282.2	261.9	299.2	260.7
Total Stops	10368	9707	10430	10173	10727	10285
Fuel Used (l)	1798.0	1722.3	1804.7	1801.4	1818.5	1789.0

Interval #0 Information Seeding

Start Time	6:45
End Time	7:00
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	
No data recorded this interval.	

Interval #1 Information Pre-Peak

Start Time	7:00
End Time	7:20
Total Time (min)	20
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	1	2	3	4	5	Avg
Vehs Entered	2554	2560	2559	2614	2581	2573
Vehs Exited	2562	2554	2530	2545	2485	2536
Starting Vehs	510	512	516	514	472	501
Ending Vehs	502	518	545	583	568	541
Travel Distance (km)	7164	7134	7078	7155	6973	7101
Travel Time (hr)	181.0	175.9	177.1	171.3	179.4	177.0
Total Delay (hr)	76.1	71.2	74.0	66.7	77.5	73.1
Total Stops	3267	3169	3124	3099	3391	3212
Fuel Used (l)	595.9	587.1	579.4	581.7	574.3	583.7

Interval #2 Information Peak

Start Time 7:20
End Time 7:35
Total Time (min) 15

Volumes adjusted by PHF, Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	2128	1943	2088	1990	2069	2040
Vehs Exited	2063	1945	1996	2009	2004	2001
Starting Vehs	502	518	545	583	568	541
Ending Vehs	567	516	637	564	633	584
Travel Distance (km)	5623	5250	5475	5331	5527	5441
Travel Time (hr)	145.2	129.8	147.7	139.4	157.7	144.0
Total Delay (hr)	62.3	52.3	67.4	61.0	76.8	63.9
Total Stops	2719	2380	2776	2599	2813	2657
Fuel Used (l)	463.4	428.8	453.4	443.4	469.4	451.7

Interval #3 Information Post-Peak

Start Time 7:35
End Time 8:00
Total Time (min) 25

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	1	2	3	4	5	Avg
Vehs Entered	3263	3148	3194	3320	3187	3222
Vehs Exited	3236	3115	3212	3243	3233	3207
Starting Vehs	567	516	637	564	633	584
Ending Vehs	594	549	619	641	587	596
Travel Distance (km)	8923	8529	8908	9054	8890	8861
Travel Time (hr)	235.7	218.6	271.5	266.7	275.4	253.6
Total Delay (hr)	105.3	93.1	140.8	134.3	145.0	123.7
Total Stops	4382	4158	4530	4475	4523	4413
Fuel Used (l)	738.7	706.4	771.9	776.3	774.8	753.6

Intersection: 58: Goreway Drive & Steeles Avenue East

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB
Directions Served	L	T	T	T	R	L	T	T	T	R	L	L
Maximum Queue (m)	121.2	163.0	147.2	132.2	28.5	107.0	170.7	325.2	371.3	117.6	68.5	127.6
Average Queue (m)	75.5	87.3	89.8	84.5	1.0	18.4	110.3	163.8	243.1	115.9	45.6	109.0
95th Queue (m)	129.6	142.9	138.3	122.3	12.3	54.6	156.6	295.3	392.1	128.0	66.0	163.7
Link Distance (m)		651.1	651.1	651.1			1334.5	1334.5	1334.5			
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	115.0				150.0	150.0				110.0	120.0	120.0
Storage Blk Time (%)	6	1		0			1		5	45		0
Queuing Penalty (veh)	28	2		0			1		30	169		1

Intersection: 58: Goreway Drive & Steeles Avenue East

Movement	NB	NB	NB	SB	SB	SB	SB	SB
Directions Served	T	T	R	L	L	T	T	R
Maximum Queue (m)	459.4	455.8	87.6	127.6	127.1	177.4	129.9	42.3
Average Queue (m)	352.2	341.4	40.4	84.2	91.9	65.6	56.5	7.2
95th Queue (m)	524.8	521.3	110.6	137.3	141.7	153.2	98.2	25.7
Link Distance (m)	453.2	453.2				916.9	916.9	916.9
Upstream Blk Time (%)	24	16						
Queuing Penalty (veh)	0	0						
Storage Bay Dist (m)			80.0	130.0	130.0			
Storage Blk Time (%)	54	63	0	0	6	0		
Queuing Penalty (veh)	177	54	0	1	16	0		

Intersection: 61: Finch Avenue/Gorewood Drive & Steeles Avenue East

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB
Directions Served	L	T	T	T	R	L	T	T	TR	L	L	TR
Maximum Queue (m)	14.9	300.6	307.0	836.8	95.9	16.8	104.6	101.0	116.3	137.5	139.1	53.0
Average Queue (m)	2.3	38.4	34.6	75.5	12.1	3.5	61.5	59.9	61.0	82.5	83.7	19.8
95th Queue (m)	10.5	293.3	213.9	475.2	57.4	10.9	96.6	94.2	104.4	123.7	125.8	41.8
Link Distance (m)		1334.5	1334.5	1334.5			433.9	433.9		405.0	405.0	
Upstream Blk Time (%)		0	0	0								
Queuing Penalty (veh)		0	0	0								
Storage Bay Dist (m)	175.0				175.0	180.0			187.0			231.0
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 61: Finch Avenue/Gorewood Drive & Steeles Avenue East

Movement	SB	SB
Directions Served	LT	TR
Maximum Queue (m)	30.7	31.4
Average Queue (m)	11.7	10.1
95th Queue (m)	24.4	24.8
Link Distance (m)	853.6	853.6
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 224: Goreway Drive & Intermodal Drive

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	NB	SB
Directions Served	L	T	R	L	T	TR	L	T	T	T	R	L
Maximum Queue (m)	77.7	58.2	60.2	82.2	82.9	56.0	100.9	94.0	104.7	116.7	75.8	40.2
Average Queue (m)	34.4	22.2	23.0	46.1	20.0	26.8	43.9	47.0	53.4	59.5	11.1	15.5
95th Queue (m)	66.4	48.1	44.2	82.3	56.7	49.9	81.4	84.6	89.3	99.3	38.1	36.6
Link Distance (m)		209.1	209.1		160.4	160.4		916.9	916.9	916.9		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	85.0			75.0			135.0				100.0	135.0
Storage Blk Time (%)	1			3						1	0	
Queuing Penalty (veh)	0			2						1	0	

Intersection: 224: Goreway Drive & Intermodal Drive

Movement	SB	SB	SB	SB
Directions Served	T	T	T	R
Maximum Queue (m)	105.2	95.8	94.8	26.2
Average Queue (m)	56.0	53.3	48.3	9.1
95th Queue (m)	95.4	89.1	81.7	20.8
Link Distance (m)	1489.2	1489.2	1489.2	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)				100.0
Storage Blk Time (%)				0
Queuing Penalty (veh)				0

Intersection: 225: Intermodal Drive & Deerhurst Drive

Movement	EB	WB	SB
Directions Served	L	TR	LR
Maximum Queue (m)	29.4	1.3	29.9
Average Queue (m)	8.2	0.0	14.8
95th Queue (m)	23.9	0.9	24.8
Link Distance (m)		336.6	160.1
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (m)	65.0		
Storage Blk Time (%)			
Queuing Penalty (veh)			

Network Summary

Network wide Queuing Penalty: 483

58: Goreway Drive & Steeles Avenue East
Intermodal Drive Extension

'Do Nothing' 2051 Conditions
AM Peak Period (With Modifications)

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  			  		 	 		 	 	
Traffic Volume (vph)	120	1334	120	33	1050	438	131	185	44	569	670	195
Future Volume (vph)	120	1334	120	33	1050	438	131	185	44	569	670	195
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	115.0		150.0	150.0		110.0	120.0		80.0	130.0		0.0
Storage Lanes	2		1	1		1	2		1	2		1
Taper Length (m)	7.6			7.6			7.6			7.6		
Lane Util. Factor	0.97	0.91	1.00	1.00	0.91	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Ped Bike Factor	0.99		0.97	1.00			0.99		0.97	0.99		0.97
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	2603	4561	1471	1772	4683	1372	2975	3380	1601	2951	3380	1396
Flt Permitted	0.950			0.129			0.950			0.950		
Satd. Flow (perm)	2578	4561	1424	240	4683	1372	2955	3380	1557	2915	3380	1353
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)			132						148			183
Link Speed (k/h)		80			80			70			70	
Link Distance (m)		668.9			1373.2			472.6			952.1	
Travel Time (s)		30.1			61.8			24.3			49.0	
Confl. Peds. (#/hr)	28		12	12		28	13		11	11		13
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	36%	15%	11%	3%	12%	19%	19%	8%	2%	20%	8%	17%
Adj. Flow (vph)	132	1466	132	36	1154	481	144	203	48	625	736	214
Shared Lane Traffic (%)												
Lane Group Flow (vph)	132	1466	132	36	1154	481	144	203	48	625	736	214
Turn Type	Prot	NA	Perm	pm+pt	NA	pt+ov	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6	6 3	7	4		3	8	
Permitted Phases			2	6					4			8
Detector Phase	5	2	2	1	6	6 3	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	5.0	12.0	12.0	5.0	12.0		8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	10.0	34.7	34.7	8.0	34.7		13.0	39.7	39.7	13.0	39.7	39.7
Total Split (s)	19.0	68.0	68.0	8.0	57.0		18.0	40.0	40.0	44.0	66.0	66.0
Total Split (%)	11.9%	42.5%	42.5%	5.0%	35.6%		11.3%	25.0%	25.0%	27.5%	41.3%	41.3%
Maximum Green (s)	14.0	61.3	61.3	5.0	50.3		13.0	33.3	33.3	39.0	59.3	59.3
Yellow Time (s)	3.0	4.6	4.6	3.0	4.6		3.0	4.2	4.2	3.0	4.2	4.2
All-Red Time (s)	2.0	2.1	2.1	0.0	2.1		2.0	2.5	2.5	2.0	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	-3.0	0.0	0.0
Total Lost Time (s)	5.0	6.7	6.7	3.0	6.7		5.0	6.7	6.7	2.0	6.7	6.7
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	C-Max	C-Max	None	C-Max		None	None	None	None	None	None
Walk Time (s)		8.0	8.0		8.0			8.0	8.0		8.0	8.0
Flash Dont Walk (s)		20.0	20.0		20.0			25.0	25.0		25.0	25.0
Pedestrian Calls (#/hr)		0	0		0			0	0		0	0
Act Effct Green (s)	12.5	81.5	81.5	79.1	70.4	112.5	12.0	16.6	16.6	40.1	41.7	41.7
Actuated g/C Ratio	0.08	0.51	0.51	0.49	0.44	0.70	0.08	0.10	0.10	0.25	0.26	0.26
v/c Ratio	0.65	0.63	0.17	0.22	0.56	0.50	0.65	0.58	0.16	0.85	0.84	0.44

58: Goreway Drive & Steeles Avenue East
Intermodal Drive Extension

'Do Nothing' 2051 Conditions
AM Peak Period (With Modifications)

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	86.6	31.4	4.3	27.8	48.0	16.5	85.7	74.3	1.2	57.4	44.9	6.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	86.6	31.4	4.3	27.8	48.0	16.5	85.7	74.3	1.2	57.4	44.9	6.8
LOS	F	C	A	C	D	B	F	E	A	E	D	A
Approach Delay	33.5			38.5			69.6			44.7		
Approach LOS	C			D			E			D		
Queue Length 50th (m)	21.2	124.5	0.0	6.8	114.6	51.8	23.2	33.3	0.0	75.1	119.0	16.6
Queue Length 95th (m)	32.9	157.7	12.6	m15.3	140.1	113.4	35.3	44.5	0.0	103.6	92.1	11.9
Internal Link Dist (m)	644.9			1349.2			448.6			928.1		
Turn Bay Length (m)	115.0			150.0	150.0			110.0	120.0	80.0	130.0	
Base Capacity (vph)	227	2323	790	166	2060	980	241	703	441	774	1252	616
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.58	0.63	0.17	0.22	0.56	0.49	0.60	0.29	0.11	0.81	0.59	0.35

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 76 (48%), Referenced to phase 2:EBT and 6:WBTL, Start of Green

Natural Cycle: 120

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.85

Intersection Signal Delay: 41.0

Intersection LOS: D

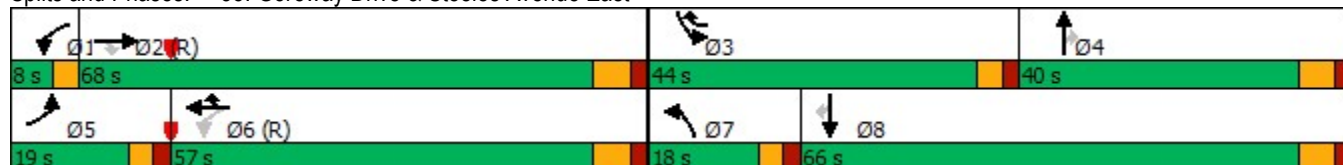
Intersection Capacity Utilization 77.1%

ICU Level of Service D

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 58: Goreway Drive & Steeles Avenue East



Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	6:45	6:45	6:45	6:45	6:45	6:45
End Time	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	75	75	75	75	75	75
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	4	4	4	4	4	4
# of Recorded Intervals	3	3	3	3	3	3
Vehs Entered	6712	6699	6652	6697	6618	6675
Vehs Exited	6672	6739	6696	6666	6626	6679
Starting Vehs	354	418	379	389	379	383
Ending Vehs	394	378	335	420	371	379
Travel Distance (km)	18304	18297	18357	18223	18096	18255
Travel Time (hr)	405.9	401.7	405.1	404.6	405.0	404.5
Total Delay (hr)	138.3	133.6	136.6	137.4	138.8	136.9
Total Stops	6623	6559	6641	6661	6663	6631
Fuel Used (l)	1456.5	1442.3	1452.1	1447.3	1446.0	1448.9

Interval #0 Information Seeding

Start Time	6:45
End Time	7:00
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	
No data recorded this interval.	

Interval #1 Information Pre-Peak

Start Time	7:00
End Time	7:20
Total Time (min)	20
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	1	2	3	4	5	Avg
Vehs Entered	2173	2178	2179	2206	2044	2155
Vehs Exited	2141	2204	2172	2165	2000	2136
Starting Vehs	354	418	379	389	379	383
Ending Vehs	386	392	386	430	423	402
Travel Distance (km)	5956	6081	6064	6014	5560	5935
Travel Time (hr)	128.5	135.1	136.3	133.8	122.8	131.3
Total Delay (hr)	41.6	45.6	47.7	45.6	40.8	44.3
Total Stops	2031	2185	2264	2195	1994	2132
Fuel Used (l)	469.3	481.6	485.1	482.3	443.2	472.3

Interval #2 Information Peak

Start Time 7:20
End Time 7:35
Total Time (min) 15

Volumes adjusted by PHF, Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	1875	1748	1832	1744	1883	1813
Vehs Exited	1810	1729	1755	1752	1814	1772
Starting Vehs	386	392	386	430	423	402
Ending Vehs	451	411	463	422	492	444
Travel Distance (km)	4939	4653	4834	4715	5005	4829
Travel Time (hr)	115.2	105.1	108.7	106.3	115.0	110.0
Total Delay (hr)	42.8	36.6	37.7	37.1	41.2	39.1
Total Stops	2003	1822	1891	1830	1942	1894
Fuel Used (l)	395.8	371.1	381.3	373.9	405.7	385.6

Interval #3 Information Post-Peak

Start Time 7:35
End Time 8:00
Total Time (min) 25

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	1	2	3	4	5	Avg
Vehs Entered	2664	2773	2641	2747	2691	2703
Vehs Exited	2721	2806	2769	2749	2812	2772
Starting Vehs	451	411	463	422	492	444
Ending Vehs	394	378	335	420	371	379
Travel Distance (km)	7409	7562	7459	7493	7530	7491
Travel Time (hr)	162.2	161.5	160.1	164.5	167.2	163.1
Total Delay (hr)	53.9	51.3	51.3	54.7	56.7	53.6
Total Stops	2589	2552	2486	2636	2727	2596
Fuel Used (l)	591.4	589.7	585.7	591.1	597.1	591.0

Intersection: 58: Goreway Drive & Steeles Avenue East

Movement	EB	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB
Directions Served	L	L	T	T	T	R	L	T	T	T	R	L
Maximum Queue (m)	53.0	90.8	131.7	134.7	132.9	9.8	26.1	141.2	375.4	168.2	117.6	49.7
Average Queue (m)	20.9	31.3	78.7	81.0	82.3	0.5	7.9	87.4	101.3	96.0	75.1	19.8
95th Queue (m)	44.9	60.8	116.3	120.8	123.8	7.5	20.3	127.1	265.2	147.2	139.3	47.0
Link Distance (m)			650.9	650.9	650.9			1334.2	1334.2	1334.2		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	115.0	115.0				150.0	150.0				110.0	120.0
Storage Blk Time (%)		0	0					0		2	4	
Queuing Penalty (veh)		0	1					0		8	15	

Intersection: 58: Goreway Drive & Steeles Avenue East

Movement	NB	NB	NB	NB	SB	SB	SB	SB	SB
Directions Served	L	T	T	R	L	L	T	T	R
Maximum Queue (m)	59.1	49.2	44.7	11.3	133.3	137.1	189.8	108.4	25.1
Average Queue (m)	33.5	25.3	18.4	0.5	76.9	86.8	52.0	47.0	3.6
95th Queue (m)	55.8	44.5	38.6	4.7	125.0	131.8	124.1	85.1	16.1
Link Distance (m)		451.3	451.3				915.0	915.0	915.0
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (m)	120.0			80.0	130.0	130.0			
Storage Blk Time (%)					1	2	0		
Queuing Penalty (veh)					2	7	0		

58: Goreway Drive & Steeles Avenue East
Intermodal Drive Extension

'Do Nothing' 2051 Conditions
PM Peak Period (With Modifications)

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  			  		 	 		 	 	
Traffic Volume (vph)	222	1313	187	62	1124	654	327	1093	86	372	540	181
Future Volume (vph)	222	1313	187	62	1124	654	327	1093	86	372	540	181
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	115.0		150.0	150.0		110.0	120.0		80.0	130.0		0.0
Storage Lanes	2		1	1		1	2		1	2		1
Taper Length (m)	7.6			7.6			7.6			7.6		
Lane Util. Factor	0.97	0.91	1.00	1.00	0.91	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Ped Bike Factor	0.99		0.98	1.00			0.99		0.99	1.00		0.96
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	2975	4683	1484	1755	4561	1408	3278	3510	1570	2855	3444	1432
Flt Permitted	0.950			0.116			0.950			0.950		
Satd. Flow (perm)	2952	4683	1457	214	4561	1408	3232	3510	1547	2854	3444	1372
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)			191						114			152
Link Speed (k/h)		80			80			70			70	
Link Distance (m)		668.9			1373.2			472.6			952.1	
Travel Time (s)		30.1			61.8			24.3			49.0	
Confl. Peds. (#/hr)	22		4	4		22	21		2	2		21
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	19%	12%	10%	4%	15%	16%	8%	4%	4%	24%	6%	14%
Adj. Flow (vph)	227	1340	191	63	1147	667	334	1115	88	380	551	185
Shared Lane Traffic (%)												
Lane Group Flow (vph)	227	1340	191	63	1147	667	334	1115	88	380	551	185
Turn Type	Prot	NA	Perm	pm+pt	NA	pt+ov	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6	6 3	7	4		3	8	
Permitted Phases			2	6					4			8
Detector Phase	5	2	2	1	6	6 3	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	5.0	12.0	12.0	5.0	12.0		8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	10.0	34.7	34.7	8.0	34.7		13.0	39.7	39.7	13.0	39.7	39.7
Total Split (s)	18.0	66.0	66.0	8.0	56.0		29.0	59.0	59.0	27.0	57.0	57.0
Total Split (%)	11.3%	41.3%	41.3%	5.0%	35.0%		18.1%	36.9%	36.9%	16.9%	35.6%	35.6%
Maximum Green (s)	13.0	59.3	59.3	5.0	49.3		24.0	52.3	52.3	22.0	50.3	50.3
Yellow Time (s)	3.0	4.6	4.6	3.0	4.6		3.0	4.2	4.2	3.0	4.2	4.2
All-Red Time (s)	2.0	2.1	2.1	0.0	2.1		2.0	2.5	2.5	2.0	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.7	6.7	3.0	6.7		5.0	6.7	6.7	5.0	6.7	6.7
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	C-Max	C-Max	None	C-Max		None	None	None	None	None	None
Walk Time (s)		8.0	8.0		8.0			8.0	8.0		8.0	8.0
Flash Dont Walk (s)		20.0	20.0		20.0			25.0	25.0		25.0	25.0
Pedestrian Calls (#/hr)		0	0		0			0	0		0	0
Act Effct Green (s)	13.0	61.1	61.1	58.2	49.5	76.5	21.0	52.1	52.1	22.0	53.1	53.1
Actuated g/C Ratio	0.08	0.38	0.38	0.36	0.31	0.48	0.13	0.33	0.33	0.14	0.33	0.33
v/c Ratio	0.94	0.75	0.28	0.50	0.81	0.99	0.78	0.98	0.15	0.97	0.48	0.33

58: Goreway Drive & Steeles Avenue East
Intermodal Drive Extension

'Do Nothing' 2051 Conditions
PM Peak Period (With Modifications)

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	116.3	46.5	5.2	50.2	69.8	78.7	79.9	74.1	3.2	94.3	40.8	15.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	116.3	46.5	5.2	50.2	69.8	78.7	79.9	74.1	3.2	94.3	40.8	15.9
LOS	F	D	A	D	E	E	E	E	A	F	D	B
Approach Delay	51.0			72.3			71.3			54.9		
Approach LOS	D			E			E			D		
Queue Length 50th (m)	37.7	137.4	0.0	16.7	140.6	179.1	53.6	184.7	0.0	63.4	80.7	21.3
Queue Length 95th (m)	#64.5	155.8	16.5	m25.1	155.4	#293.7	69.8	#230.3	6.8	#93.1	101.2	47.7
Internal Link Dist (m)	644.9			1349.2			448.6			928.1		
Turn Bay Length (m)	115.0			150.0	150.0			110.0	120.0	80.0	130.0	
Base Capacity (vph)	241	1787	674	125	1410	672	491	1147	582	392	1143	557
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.94	0.75	0.28	0.50	0.81	0.99	0.68	0.97	0.15	0.97	0.48	0.33

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 61 (38%), Referenced to phase 2:EBT and 6:WBTL, Start of Green

Natural Cycle: 120

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.99

Intersection Signal Delay: 63.0

Intersection LOS: E

Intersection Capacity Utilization 94.5%

ICU Level of Service F

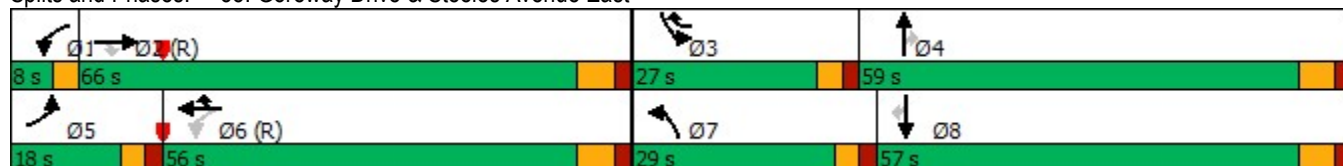
Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 58: Goreway Drive & Steeles Avenue East



Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	6:45	6:45	6:45	6:45	6:45	6:45
End Time	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	75	75	75	75	75	75
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	4	4	4	4	4	4
# of Recorded Intervals	3	3	3	3	3	3
Vehs Entered	7918	7855	7793	7886	7963	7885
Vehs Exited	7861	7744	7696	7756	7892	7789
Starting Vehs	513	535	461	515	513	508
Ending Vehs	570	646	558	645	584	601
Travel Distance (km)	21757	21454	21234	21398	21767	21522
Travel Time (hr)	561.6	556.4	519.0	564.6	583.1	556.9
Total Delay (hr)	242.9	242.1	208.5	251.2	264.1	241.8
Total Stops	9859	9333	8693	9599	9249	9347
Fuel Used (l)	1813.5	1772.3	1720.2	1780.8	1815.8	1780.5

Interval #0 Information Seeding

Start Time	6:45
End Time	7:00
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	
No data recorded this interval.	

Interval #1 Information Pre-Peak

Start Time	7:00
End Time	7:20
Total Time (min)	20
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	1	2	3	4	5	Avg
Vehs Entered	2614	2560	2525	2537	2657	2579
Vehs Exited	2572	2557	2485	2531	2583	2544
Starting Vehs	513	535	461	515	513	508
Ending Vehs	555	538	501	521	587	539
Travel Distance (km)	7274	7131	6952	6952	7286	7119
Travel Time (hr)	187.5	179.3	161.0	165.3	180.6	174.7
Total Delay (hr)	81.3	74.9	59.6	63.3	73.9	70.6
Total Stops	3494	3088	2742	2844	3029	3039
Fuel Used (l)	603.3	586.9	554.1	564.0	593.4	580.3

Interval #2 Information Peak

Start Time	7:20
End Time	7:35
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	2093	2038	2083	2048	2090	2072
Vehs Exited	2062	2025	2013	1957	2059	2024
Starting Vehs	555	538	501	521	587	539
Ending Vehs	586	551	571	612	618	587
Travel Distance (km)	5558	5463	5530	5306	5585	5488
Travel Time (hr)	143.5	140.8	132.2	132.8	150.1	139.9
Total Delay (hr)	62.0	60.5	51.0	55.0	67.9	59.3
Total Stops	2516	2404	2286	2277	2404	2378
Fuel Used (l)	465.7	450.4	443.8	431.1	467.0	451.6

Interval #3 Information Post-Peak

Start Time	7:35
End Time	8:00
Total Time (min)	25

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	1	2	3	4	5	Avg
Vehs Entered	3211	3257	3185	3301	3216	3233
Vehs Exited	3227	3162	3198	3268	3250	3220
Starting Vehs	586	551	571	612	618	587
Ending Vehs	570	646	558	645	584	601
Travel Distance (km)	8926	8860	8752	9140	8896	8915
Travel Time (hr)	230.6	236.3	225.8	266.6	252.5	242.4
Total Delay (hr)	99.6	106.6	98.0	132.9	122.3	111.9
Total Stops	3849	3841	3665	4478	3816	3930
Fuel Used (l)	744.4	735.1	722.3	785.7	755.3	748.6

Intersection: 58: Goreway Drive & Steeles Avenue East

Movement	EB	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB
Directions Served	L	L	T	T	T	R	L	T	T	T	R	L
Maximum Queue (m)	71.8	107.2	140.2	148.1	155.2	75.2	57.2	586.3	795.4	815.4	117.6	90.4
Average Queue (m)	36.6	45.9	87.9	91.8	91.6	3.2	18.8	178.0	384.0	510.7	117.3	48.8
95th Queue (m)	66.5	81.5	125.0	129.4	129.8	35.7	40.3	481.5	853.6	900.1	119.0	75.9
Link Distance (m)			650.9	650.9	650.9			1334.2	1334.2	1334.2		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	115.0	115.0				150.0	150.0				110.0	120.0
Storage Blk Time (%)		0	1		0	0		0		6	55	
Queuing Penalty (veh)		0	3		1	0		0		42	206	

Intersection: 58: Goreway Drive & Steeles Avenue East

Movement	NB	NB	NB	NB	SB	SB	SB	SB	SB
Directions Served	L	T	T	R	L	L	T	T	R
Maximum Queue (m)	127.5	334.2	318.4	87.6	109.4	114.7	96.7	86.4	42.5
Average Queue (m)	99.8	218.1	207.7	35.4	63.2	72.7	45.1	48.4	8.8
95th Queue (m)	160.8	369.8	351.7	104.6	102.2	112.2	80.0	79.6	29.1
Link Distance (m)		451.3	451.3				915.0	915.0	915.0
Upstream Blk Time (%)		2	0						
Queuing Penalty (veh)		0	0						
Storage Bay Dist (m)	120.0			80.0	130.0	130.0			
Storage Blk Time (%)	0	35	50	0	0	0			
Queuing Penalty (veh)	1	113	43	0	0	0			

58: Goreway Drive & Steeles Avenue East
Intermodal Drive Extension

'With Extension' 2031 Conditions

AM Peak Period

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  		 	 		 	 	
Traffic Volume (vph)	120	1334	120	33	1050	310	131	176	44	434	638	195
Future Volume (vph)	120	1334	120	33	1050	310	131	176	44	434	638	195
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	115.0		150.0	150.0		110.0	120.0		80.0	130.0		0.0
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (m)	7.6			7.6			7.6			7.6		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Ped Bike Factor			0.97			0.94	0.99		0.97	0.99		0.97
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1342	4561	1471	1772	4683	1432	2975	3380	1601	3106	3380	1396
Flt Permitted	0.162			0.120			0.950			0.950		
Satd. Flow (perm)	229	4561	1424	224	4683	1348	2954	3380	1557	3068	3380	1353
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			132			341			134			203
Link Speed (k/h)		80			80			70			70	
Link Distance (m)		668.9			1373.2			472.6			952.1	
Travel Time (s)		30.1			61.8			24.3			49.0	
Confl. Peds. (#/hr)	28		12	12		28	13		11	11		13
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	36%	15%	11%	3%	12%	14%	19%	8%	2%	14%	8%	17%
Adj. Flow (vph)	132	1466	132	36	1154	341	144	193	48	477	701	214
Shared Lane Traffic (%)												
Lane Group Flow (vph)	132	1466	132	36	1154	341	144	193	48	477	701	214
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2		2	6		6			4			8
Detector Phase	5	2	2	1	6	6	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	5.0	12.0	12.0	5.0	12.0	12.0	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	8.0	34.7	34.7	8.0	34.7	34.7	13.0	39.7	39.7	13.0	39.7	39.7
Total Split (s)	18.0	61.0	61.0	13.0	56.0	56.0	20.0	42.0	42.0	44.0	66.0	66.0
Total Split (%)	11.3%	38.1%	38.1%	8.1%	35.0%	35.0%	12.5%	26.3%	26.3%	27.5%	41.3%	41.3%
Maximum Green (s)	15.0	54.3	54.3	10.0	49.3	49.3	15.0	35.3	35.3	39.0	59.3	59.3
Yellow Time (s)	3.0	4.6	4.6	3.0	4.6	4.6	3.0	4.2	4.2	3.0	4.2	4.2
All-Red Time (s)	0.0	2.1	2.1	0.0	2.1	2.1	2.0	2.5	2.5	2.0	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-3.0	0.0	0.0
Total Lost Time (s)	3.0	6.7	6.7	3.0	6.7	6.7	5.0	6.7	6.7	2.0	6.7	6.7
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	None
Walk Time (s)		8.0	8.0		8.0	8.0		8.0	8.0		8.0	8.0
Flash Dont Walk (s)		20.0	20.0		20.0	20.0		25.0	25.0		25.0	25.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	92.2	80.1	80.1	83.4	72.6	72.6	12.7	23.2	23.2	32.9	40.4	40.4
Actuated g/C Ratio	0.58	0.50	0.50	0.52	0.45	0.45	0.08	0.14	0.14	0.21	0.25	0.25
v/c Ratio	0.59	0.64	0.17	0.19	0.54	0.43	0.61	0.39	0.14	0.75	0.82	0.43

58: Goreway Drive & Steeles Avenue East
Intermodal Drive Extension

'With Extension' 2031 Conditions
AM Peak Period

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	29.1	33.0	4.6	29.0	53.4	18.6	82.1	63.8	0.9	54.9	50.6	8.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.1	33.0	4.6	29.0	53.4	18.6	82.1	63.8	0.9	54.9	50.6	8.9
LOS	C	C	A	C	D	B	F	E	A	D	D	A
Approach Delay	30.5			45.1			62.8			45.7		
Approach LOS	C			D			E			D		
Queue Length 50th (m)	19.2	126.7	0.0	7.9	129.4	36.9	23.1	29.6	0.0	74.7	112.5	23.1
Queue Length 95th (m)	35.8	165.5	13.3	m16.9	148.5	65.7	34.8	41.5	0.0	64.6	124.1	24.6
Internal Link Dist (m)	644.9			1349.2			448.6			928.1		
Turn Bay Length (m)	115.0			150.0	150.0			110.0	120.0			80.0 130.0
Base Capacity (vph)	236	2284	779	217	2123	797	278	745	447	815	1252	629
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.56	0.64	0.17	0.17	0.54	0.43	0.52	0.26	0.11	0.59	0.56	0.34

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 76 (48%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 100

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.82

Intersection Signal Delay: 41.6

Intersection LOS: D

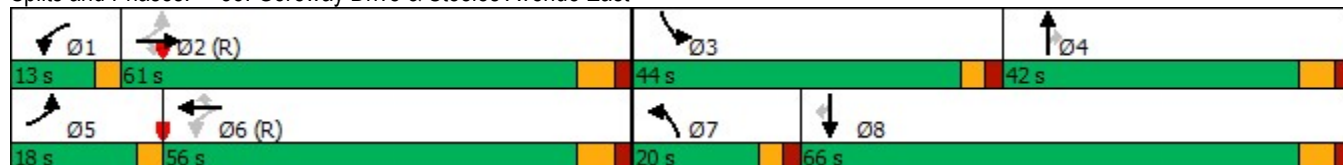
Intersection Capacity Utilization 76.4%

ICU Level of Service D

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 58: Goreway Drive & Steeles Avenue East



61: Finch Avenue/Gorewood Drive & Steeles Avenue East 'With Extension' 2031 Conditions
Intermodal Drive Extension

AM Peak Period

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  		 				 	
Traffic Volume (vph)	4	1009	691	135	879	96	480	91	129	92	88	6
Future Volume (vph)	4	1009	691	135	879	96	480	91	129	92	88	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.8	3.5	3.5	3.5	3.4	3.4	3.7	3.7	3.7
Storage Length (m)	175.0		175.0	180.0		187.0	0.0		231.0	0.0		0.0
Storage Lanes	1		1	1		1	2		1	0		0
Taper Length (m)	7.6			7.6			7.6			7.6		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	0.91	0.97	1.00	1.00	0.95	0.95	0.95
Ped Bike Factor	0.99		0.98		0.99		1.00	0.99			1.00	
Frt			0.850		0.985			0.912			0.995	
Flt Protected	0.950			0.950			0.950				0.976	
Satd. Flow (prot)	1560	4683	1384	1647	4371	0	2985	1476	0	0	2568	0
Flt Permitted	0.258			0.180			0.950				0.976	
Satd. Flow (perm)	420	4683	1362	312	4371	0	2982	1476	0	0	2563	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			751		16			44			2	
Link Speed (k/h)		80			80			80			50	
Link Distance (m)		1373.2			447.9			426.1			120.3	
Travel Time (s)		61.8			20.2			19.2			8.7	
Confl. Peds. (#/hr)	10		2	2		10	1		4	4		1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	17%	12%	18%	12%	14%	24%	16%	16%	12%	35%	42%	25%
Adj. Flow (vph)	4	1097	751	147	955	104	522	99	140	100	96	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	4	1097	751	147	1059	0	522	239	0	0	203	0
Turn Type	Perm	NA	Perm	pm+pt	NA		Split	NA		Split	NA	
Protected Phases		2		1	6		8	8		4	4	
Permitted Phases	2		2	6								
Detector Phase	2	2	2	1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	22.0	22.0	22.0	5.0	22.0		12.0	12.0		8.0	8.0	
Minimum Split (s)	29.9	29.9	29.9	8.0	29.9		45.2	45.2		15.2	15.2	
Total Split (s)	66.0	66.0	66.0	18.0	84.0		51.0	51.0		25.0	25.0	
Total Split (%)	41.3%	41.3%	41.3%	11.3%	52.5%		31.9%	31.9%		15.6%	15.6%	
Maximum Green (s)	59.1	59.1	59.1	15.0	77.1		43.8	43.8		17.8	17.8	
Yellow Time (s)	4.6	4.6	4.6	3.0	4.6		4.6	4.6		4.6	4.6	
All-Red Time (s)	2.3	2.3	2.3	0.0	2.3		2.6	2.6		2.6	2.6	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)	6.9	6.9	6.9	3.0	6.9		7.2	7.2			7.2	
Lead/Lag	Lag	Lag	Lag	Lead								
Lead-Lag Optimize?	Yes	Yes	Yes	Yes								
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	C-Max	C-Max	C-Max	None	C-Max		None	None		None	None	
Walk Time (s)	8.0	8.0	8.0		8.0		8.0	8.0				
Flash Dont Walk (s)	15.0	15.0	15.0		15.0		30.0	30.0				
Pedestrian Calls (#/hr)	0	0	0		0		0	0				
Act Effect Green (s)	73.4	73.4	73.4	92.3	88.4		33.9	33.9			16.4	
Actuated g/C Ratio	0.46	0.46	0.46	0.58	0.55		0.21	0.21			0.10	

61: Finch Avenue/Gorewood Drive & Steeles Avenue East 'With Extension' 2031 Conditions
Intermodal Drive Extension

AM Peak Period

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.02	0.51	0.73	0.53	0.44		0.83	0.69			0.77	
Control Delay	20.8	22.6	12.7	24.2	22.3		71.5	57.2			88.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Delay	20.8	22.6	12.7	24.2	22.3		71.5	57.2			88.2	
LOS	C	C	B	C	C		E	E			F	
Approach Delay		18.6			22.6			67.0			88.2	
Approach LOS		B			C			E			F	
Queue Length 50th (m)	0.3	76.4	148.1	21.6	71.6		82.4	58.1			33.0	
Queue Length 95th (m)	m0.6	72.3	213.7	37.4	91.8		97.9	84.6			47.7	
Internal Link Dist (m)		1349.2			423.9			402.1			96.3	
Turn Bay Length (m)	175.0		175.0	180.0								
Base Capacity (vph)	192	2147	1031	304	2422		817	436			287	
Starvation Cap Reductn	0	0	0	0	0		0	0			0	
Spillback Cap Reductn	0	0	0	0	0		0	0			0	
Storage Cap Reductn	0	0	0	0	0		0	0			0	
Reduced v/c Ratio	0.02	0.51	0.73	0.48	0.44		0.64	0.55			0.71	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 127 (79%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 100

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.83

Intersection Signal Delay: 32.5

Intersection LOS: C

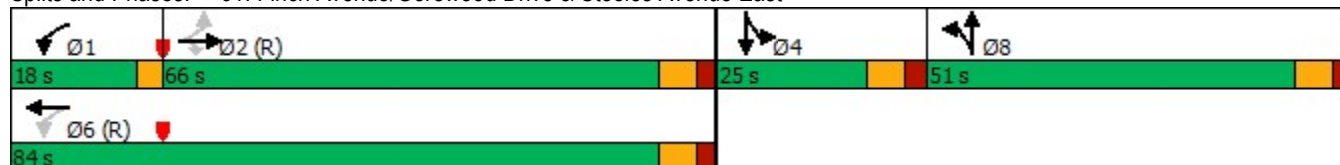
Intersection Capacity Utilization 83.7%

ICU Level of Service E

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

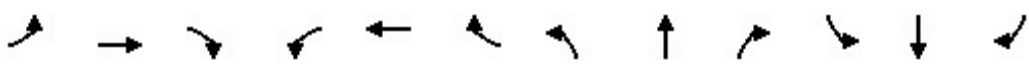
Splits and Phases: 61: Finch Avenue/Gorewood Drive & Steeles Avenue East



224: Goreway Drive & Intermodal Drive
Intermodal Drive Extension

'With Extension' 2031 Conditions

AM Peak Period

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	38	66	99	81	81	130	119	699	84	181	1659	95
Future Volume (vph)	38	66	99	81	81	130	119	699	84	181	1659	95
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	85.0		0.0	75.0		0.0	135.0		100.0	135.0		100.0
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (m)	7.6			7.6			7.6			7.6		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.91	1.00	1.00	0.91	1.00
Frt			0.850		0.907				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1313	1372	1008	1141	2463	0	1250	4768	1118	1587	4902	1096
Flt Permitted	0.506			0.711			0.089			0.355		
Satd. Flow (perm)	699	1372	1008	854	2463	0	117	4768	1118	593	4902	1096
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			106		140				90			89
Link Speed (k/h)		50			50			70			70	
Link Distance (m)		232.0			189.6			952.1			1512.1	
Travel Time (s)		16.7			13.7			49.0			77.8	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	39%	40%	62%	60%	64%	16%	46%	10%	46%	15%	7%	49%
Adj. Flow (vph)	41	71	106	87	87	140	128	752	90	195	1784	102
Shared Lane Traffic (%)												
Lane Group Flow (vph)	41	71	106	87	227	0	128	752	90	195	1784	102
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases		4			8		5	2			6	
Permitted Phases	4		4	8			2		2	6		6
Detector Phase	4	4	4	8	8		5	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0		6.0	12.0	12.0	12.0	12.0	12.0
Minimum Split (s)	45.0	45.0	45.0	45.0	45.0		9.0	42.0	42.0	42.0	42.0	42.0
Total Split (s)	65.0	65.0	65.0	65.0	65.0		18.0	95.0	95.0	77.0	77.0	77.0
Total Split (%)	40.6%	40.6%	40.6%	40.6%	40.6%		11.3%	59.4%	59.4%	48.1%	48.1%	48.1%
Maximum Green (s)	59.0	59.0	59.0	59.0	59.0		15.0	89.0	89.0	71.0	71.0	71.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		3.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		0.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0		3.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag							Lead			Lag	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	C-Max	C-Max	C-Max
Walk Time (s)	12.0	12.0	12.0	12.0	12.0			12.0	12.0	12.0	12.0	12.0
Flash Dont Walk (s)	27.0	27.0	27.0	27.0	27.0			24.0	24.0	24.0	24.0	24.0
Pedestrian Calls (#/hr)	0	0	0	0	0			0	0	0	0	0
Act Effect Green (s)	22.2	22.2	22.2	22.2	22.2		128.8	125.8	125.8	106.0	106.0	106.0
Actuated g/C Ratio	0.14	0.14	0.14	0.14	0.14		0.80	0.79	0.79	0.66	0.66	0.66
v/c Ratio	0.43	0.37	0.46	0.74	0.49		0.60	0.20	0.10	0.50	0.55	0.14
Control Delay	73.4	65.7	15.7	106.6	34.5		31.2	3.7	0.4	22.8	17.0	4.1
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0

224: Goreway Drive & Intermodal Drive
Intermodal Drive Extension

'With Extension' 2031 Conditions
AM Peak Period

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	73.4	65.7	15.7	106.6	34.5		31.2	3.7	0.4	22.8	17.0	4.1
LOS	E	E	B	F	C		C	A	A	C	B	A
Approach Delay	42.8			54.4			7.0			16.9		
Approach LOS	D			D			A			B		
Queue Length 50th (m)	12.1	20.9	0.0	27.9	15.0		9.1	14.1	0.1	29.7	104.7	1.3
Queue Length 95th (m)	23.7	34.5	17.0	45.2	28.3		25.5	19.0	0.4	71.9	160.7	11.2
Internal Link Dist (m)	208.0			165.6			928.1			1488.1		
Turn Bay Length (m)	85.0			75.0			135.0		100.0	135.0		100.0
Base Capacity (vph)	257	505	438	314	996		224	3749	898	392	3246	755
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.14	0.24	0.28	0.23		0.57	0.20	0.10	0.50	0.55	0.14

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 97 (61%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 100

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.74

Intersection Signal Delay: 19.1

Intersection LOS: B

Intersection Capacity Utilization 70.3%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 224: Goreway Drive & Intermodal Drive



225: Intermodal Drive & Deerhurst Drive
Intermodal Drive Extension

'With Extension' 2031 Conditions
AM Peak Period

Intersection						
Int Delay, s/veh	3.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	100	216	198	18	10	82
Future Vol, veh/h	100	216	198	18	10	82
Conflicting Peds, #/hr	10	0	0	10	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	65	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	75	75	75	75	75	75
Heavy Vehicles, %	35	12	4	11	10	71
Mvmt Flow	133	288	264	24	13	109
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	298	0	-	0	696	154
Stage 1	-	-	-	-	286	-
Stage 2	-	-	-	-	410	-
Critical Hdwy	4.8	-	-	-	7	8.32
Critical Hdwy Stg 1	-	-	-	-	6	-
Critical Hdwy Stg 2	-	-	-	-	6	-
Follow-up Hdwy	2.55	-	-	-	3.6	4.01
Pot Cap-1 Maneuver	1053	-	-	-	359	684
Stage 1	-	-	-	-	714	-
Stage 2	-	-	-	-	615	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1043	-	-	-	307	677
Mov Cap-2 Maneuver	-	-	-	-	307	-
Stage 1	-	-	-	-	616	-
Stage 2	-	-	-	-	609	-
Approach	EB	WB		SB		
HCM Control Delay, s	2.8	0		12.6		
HCM LOS				B		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1043	-	-	-	599	
HCM Lane V/C Ratio	0.128	-	-	-	0.205	
HCM Control Delay (s)	9	-	-	-	12.6	
HCM Lane LOS	A	-	-	-	B	
HCM 95th %tile Q(veh)	0.4	-	-	-	0.8	

226: Gorewood Drive & Intermodal Drive
Intermodal Drive Extension

'With Extension' 2031 Conditions
AM Peak Period

Intersection						
Int Delay, s/veh	8.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	134	127	7	6	0
Future Vol, veh/h	0	134	127	7	6	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	36	28	0	0	0
Mvmt Flow	0	146	138	8	7	0
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	291	7	7	0	-	0
Stage 1	7	-	-	-	-	-
Stage 2	284	-	-	-	-	-
Critical Hdwy	6.4	6.56	4.38	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.624	2.452	-	-	-
Pot Cap-1 Maneuver	704	984	1459	-	-	-
Stage 1	1021	-	-	-	-	-
Stage 2	769	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	637	984	1459	-	-	-
Mov Cap-2 Maneuver	637	-	-	-	-	-
Stage 1	924	-	-	-	-	-
Stage 2	769	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	9.3	7.3		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1459	-	984	-	-	
HCM Lane V/C Ratio	0.095	-	0.148	-	-	
HCM Control Delay (s)	7.7	0	9.3	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0.3	-	0.5	-	-	

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	6:45	6:45	6:45	6:45	6:45	6:45
End Time	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	75	75	75	75	75	75
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	4	4	4	4	4	4
# of Recorded Intervals	3	3	3	3	3	3
Vehs Entered	6609	6441	6486	6474	6555	6516
Vehs Exited	6593	6449	6493	6475	6539	6512
Starting Vehs	377	375	363	365	354	369
Ending Vehs	393	367	356	364	370	370
Travel Distance (km)	17790	17263	17485	17269	17538	17469
Travel Time (hr)	392.8	376.2	379.8	380.8	381.6	382.2
Total Delay (hr)	130.6	121.9	122.6	125.5	124.2	125.0
Total Stops	6669	6384	6470	6576	6423	6503
Fuel Used (l)	1406.8	1365.9	1387.9	1368.8	1391.4	1384.2

Interval #0 Information Seeding

Start Time	6:45
End Time	7:00
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	
No data recorded this interval.	

Interval #1 Information Pre-Peak

Start Time	7:00
End Time	7:20
Total Time (min)	20
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	1	2	3	4	5	Avg
Vehs Entered	2091	2066	2136	2102	2087	2099
Vehs Exited	2104	2069	2113	2088	2042	2084
Starting Vehs	377	375	363	365	354	369
Ending Vehs	364	372	386	379	399	379
Travel Distance (km)	5673	5589	5806	5611	5599	5656
Travel Time (hr)	123.6	121.6	128.1	121.6	120.7	123.1
Total Delay (hr)	40.3	39.4	42.3	38.9	38.7	39.9
Total Stops	2087	2060	2209	2081	1980	2082
Fuel Used (l)	447.6	444.2	465.1	442.2	443.2	448.5

Interval #2 Information Peak

Start Time	7:20
End Time	7:35
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	1882	1751	1753	1746	1816	1791
Vehs Exited	1781	1725	1726	1675	1750	1730
Starting Vehs	364	372	386	379	399	379
Ending Vehs	465	398	413	450	465	439
Travel Distance (km)	4821	4627	4600	4517	4646	4642
Travel Time (hr)	112.6	103.3	100.9	103.3	102.7	104.6
Total Delay (hr)	41.0	35.0	33.1	36.4	34.3	36.0
Total Stops	2021	1764	1771	1863	1758	1833
Fuel Used (l)	387.1	370.2	366.4	362.3	370.8	371.4

Interval #3 Information Post-Peak

Start Time	7:35
End Time	8:00
Total Time (min)	25

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	1	2	3	4	5	Avg
Vehs Entered	2636	2624	2597	2626	2652	2632
Vehs Exited	2708	2655	2654	2712	2747	2694
Starting Vehs	465	398	413	450	465	439
Ending Vehs	393	367	356	364	370	370
Travel Distance (km)	7296	7047	7080	7140	7293	7171
Travel Time (hr)	156.6	151.3	150.8	155.9	158.2	154.6
Total Delay (hr)	49.2	47.5	47.2	50.3	51.3	49.1
Total Stops	2561	2560	2490	2632	2685	2586
Fuel Used (l)	572.2	551.4	556.4	564.3	577.4	564.4

Intersection: 58: Goreway Drive & Steeles Avenue East

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB
Directions Served	L	T	T	T	R	L	T	T	T	R	L	L
Maximum Queue (m)	93.8	138.5	147.0	139.7	31.3	25.5	134.2	141.0	163.1	117.6	48.1	55.4
Average Queue (m)	32.3	76.2	77.3	79.0	1.1	8.4	86.1	91.3	91.2	24.5	16.3	30.6
95th Queue (m)	67.3	118.0	120.2	123.6	22.5	20.3	125.2	129.6	136.9	101.4	41.7	51.4
Link Distance (m)		651.1	651.1	651.1			1334.5	1334.5	1334.5			
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	115.0				150.0	150.0				110.0	120.0	120.0
Storage Blk Time (%)	0	1		0	0		0		3	0		
Queuing Penalty (veh)	0	2		0	0		0		9	1		

Intersection: 58: Goreway Drive & Steeles Avenue East

Movement	NB	NB	NB	SB	SB	SB	SB	SB
Directions Served	T	T	R	L	L	T	T	R
Maximum Queue (m)	46.0	42.9	8.4	97.5	102.7	104.0	105.0	30.8
Average Queue (m)	23.7	17.1	0.5	52.2	62.5	45.4	51.2	4.5
95th Queue (m)	43.7	36.5	4.8	88.8	98.9	87.6	88.9	18.5
Link Distance (m)	453.2	453.2				916.9	916.9	916.9
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (m)			80.0	130.0	130.0			
Storage Blk Time (%)					0			
Queuing Penalty (veh)					0			

Intersection: 61: Finch Avenue/Gorewood Drive & Steeles Avenue East

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB
Directions Served	L	T	T	T	R	L	T	T	TR	L	L	TR
Maximum Queue (m)	8.1	74.7	84.3	596.2	120.7	53.3	84.2	82.0	86.3	104.1	99.5	96.0
Average Queue (m)	0.5	36.1	43.6	64.0	37.8	28.0	52.8	48.3	42.9	62.0	58.3	41.5
95th Queue (m)	3.6	64.7	73.4	318.3	109.1	47.5	78.9	77.1	73.7	92.7	88.7	76.0
Link Distance (m)		1334.5	1334.5	1334.5			434.6	434.6		405.0	405.0	
Upstream Blk Time (%)				0								
Queuing Penalty (veh)				0								
Storage Bay Dist (m)	175.0				175.0	180.0			187.0			231.0
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 61: Finch Avenue/Gorewood Drive & Steeles Avenue East

Movement	SB	SB	B3
Directions Served	LT	TR	T
Maximum Queue (m)	91.7	59.7	7.6
Average Queue (m)	47.2	24.7	0.3
95th Queue (m)	80.3	50.1	5.4
Link Distance (m)	96.8	96.8	479.5
Upstream Blk Time (%)	0		
Queuing Penalty (veh)	0		
Storage Bay Dist (m)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 224: Goreway Drive & Intermodal Drive

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	NB	SB
Directions Served	L	T	R	L	T	TR	L	T	T	T	R	L
Maximum Queue (m)	51.1	55.2	53.9	75.1	51.7	69.7	92.9	39.8	41.5	40.6	23.5	81.3
Average Queue (m)	14.5	18.5	23.3	34.3	17.0	31.3	36.9	15.8	13.9	12.3	5.5	35.4
95th Queue (m)	35.2	41.9	45.4	65.2	40.7	60.2	70.3	35.0	33.9	31.5	17.1	64.6
Link Distance (m)		209.1	209.1		160.4	160.4		916.9	916.9	916.9		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	85.0			75.0			135.0				100.0	135.0
Storage Blk Time (%)				1								
Queuing Penalty (veh)				0								

Intersection: 224: Goreway Drive & Intermodal Drive

Movement	SB	SB	SB	SB
Directions Served	T	T	T	R
Maximum Queue (m)	128.2	129.2	130.4	76.1
Average Queue (m)	63.2	62.0	61.1	14.8
95th Queue (m)	112.5	110.6	111.9	51.6
Link Distance (m)	1489.2	1489.2	1489.2	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)				100.0
Storage Blk Time (%)	0		1	0
Queuing Penalty (veh)	0		1	0

Intersection: 225: Intermodal Drive & Deerhurst Drive

Movement	EB	WB	WB	SB
Directions Served	L	T	TR	LR
Maximum Queue (m)	23.4	1.2	4.3	36.2
Average Queue (m)	6.8	0.0	0.1	17.2
95th Queue (m)	19.2	0.9	3.1	29.6
Link Distance (m)		336.6	336.6	160.1
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)	65.0			
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 226: Gorewood Drive & Intermodal Drive

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (m)	30.5	11.1
Average Queue (m)	16.2	0.6
95th Queue (m)	25.9	5.2
Link Distance (m)	157.7	479.5
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 14

58: Goreway Drive & Steeles Avenue East
Intermodal Drive Extension

'With Extension' 2031 Conditions

PM Peak Period

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  		 	 		 	 	
Traffic Volume (vph)	222	1313	187	62	1124	516	327	1041	86	253	514	181
Future Volume (vph)	222	1313	187	62	1124	516	327	1041	86	253	514	181
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	115.0		150.0	150.0		110.0	120.0		80.0	130.0		0.0
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (m)	7.6			7.6			7.6			7.6		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Ped Bike Factor			0.98	1.00		0.95	0.99		0.99	1.00		0.96
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1534	4683	1484	1755	4561	1471	3278	3510	1570	2902	3444	1432
Flt Permitted	0.088			0.139			0.950			0.950		
Satd. Flow (perm)	142	4683	1457	257	4561	1399	3230	3510	1547	2900	3444	1372
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			191			251			100			185
Link Speed (k/h)		80			80			70			70	
Link Distance (m)		668.9			1373.2			472.6			952.1	
Travel Time (s)		30.1			61.8			24.3			49.0	
Confl. Peds. (#/hr)	22		4	4		22	21		2	2		21
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	19%	12%	10%	4%	15%	11%	8%	4%	4%	22%	6%	14%
Adj. Flow (vph)	227	1340	191	63	1147	527	334	1062	88	258	524	185
Shared Lane Traffic (%)												
Lane Group Flow (vph)	227	1340	191	63	1147	527	334	1062	88	258	524	185
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2		2	6		6			4			8
Detector Phase	5	2	2	1	6	6	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	5.0	12.0	12.0	5.0	12.0	12.0	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	8.0	34.7	34.7	8.0	34.7	34.7	13.0	39.7	39.7	13.0	39.7	39.7
Total Split (s)	28.0	63.0	63.0	9.0	44.0	44.0	35.0	67.0	67.0	21.0	53.0	53.0
Total Split (%)	17.5%	39.4%	39.4%	5.6%	27.5%	27.5%	21.9%	41.9%	41.9%	13.1%	33.1%	33.1%
Maximum Green (s)	25.0	56.3	56.3	6.0	37.3	37.3	30.0	60.3	60.3	16.0	46.3	46.3
Yellow Time (s)	3.0	4.6	4.6	3.0	4.6	4.6	3.0	4.2	4.2	3.0	4.2	4.2
All-Red Time (s)	0.0	2.1	2.1	0.0	2.1	2.1	2.0	2.5	2.5	2.0	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	6.7	6.7	3.0	6.7	6.7	5.0	6.7	6.7	5.0	6.7	6.7
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	None
Walk Time (s)		8.0	8.0		8.0	8.0		8.0	8.0		8.0	8.0
Flash Dont Walk (s)		20.0	20.0		20.0	20.0		25.0	25.0		25.0	25.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	74.6	63.7	63.7	56.0	46.3	46.3	21.6	54.8	54.8	15.9	49.1	49.1
Actuated g/C Ratio	0.47	0.40	0.40	0.35	0.29	0.29	0.14	0.34	0.34	0.10	0.31	0.31
v/c Ratio	0.90	0.72	0.27	0.43	0.87	0.90	0.76	0.88	0.15	0.90	0.50	0.34

58: Goreway Drive & Steeles Avenue East
Intermodal Drive Extension

'With Extension' 2031 Conditions
PM Peak Period

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	77.4	44.6	5.3	32.3	60.6	54.5	77.6	59.1	4.6	94.6	42.0	13.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	77.4	44.6	5.3	32.3	60.6	54.5	77.6	59.1	4.6	94.6	42.0	13.0
LOS	E	D	A	C	E	D	E	E	A	F	D	B
Approach Delay	44.5			57.7			60.0			50.5		
Approach LOS	D			E			E			D		
Queue Length 50th (m)	55.5	134.8	0.0	12.1	139.5	127.9	53.6	166.6	0.0	42.8	73.7	16.9
Queue Length 95th (m)	#100.2	160.8	17.0	m18.3	#183.0	#193.0	68.2	186.1	9.2	#65.0	96.5	42.3
Internal Link Dist (m)	644.9			1349.2			448.6			928.1		
Turn Bay Length (m)	115.0			150.0	150.0			110.0	120.0	80.0	130.0	
Base Capacity (vph)	283	1864	695	146	1321	583	614	1322	645	290	1057	549
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.80	0.72	0.27	0.43	0.87	0.90	0.54	0.80	0.14	0.89	0.50	0.34

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 61 (38%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 100

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.90

Intersection Signal Delay: 53.2

Intersection LOS: D

Intersection Capacity Utilization 90.3%

ICU Level of Service E

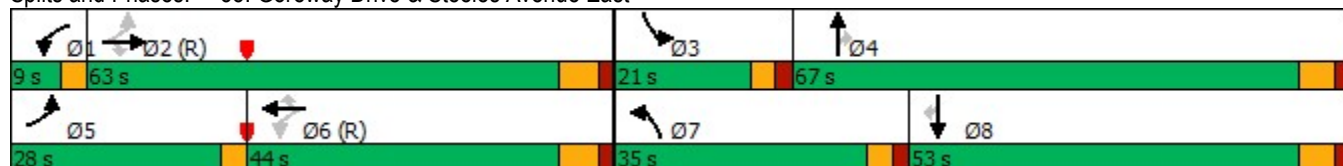
Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 58: Goreway Drive & Steeles Avenue East



61: Finch Avenue/Gorewood Drive & Steeles Avenue East 'With Extension' 2031 Conditions
Intermodal Drive Extension PM Peak Period

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  		 				 	
Traffic Volume (vph)	7	990	626	13	1061	220	553	70	95	80	90	13
Future Volume (vph)	7	990	626	13	1061	220	553	70	95	80	90	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.8	3.5	3.5	3.5	3.4	3.4	3.7	3.7	3.7
Storage Length (m)	175.0		175.0	180.0		187.0	0.0		231.0	0.0		0.0
Storage Lanes	1		1	1		1	2		1	0		0
Taper Length (m)	7.6			7.6			7.6			7.6		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	0.91	0.97	1.00	1.00	0.95	0.95	0.95
Ped Bike Factor	1.00		0.97		1.00		1.00	0.99			1.00	
Frt			0.850		0.974			0.914			0.989	
Flt Protected	0.950			0.950			0.950				0.979	
Satd. Flow (prot)	1825	4725	1484	1724	4390	0	2862	1307	0	0	2866	0
Flt Permitted	0.153			0.207			0.950				0.979	
Satd. Flow (perm)	294	4725	1442	376	4390	0	2856	1307	0	0	2859	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			659		38			42			4	
Link Speed (k/h)		80			80			80			50	
Link Distance (m)		1373.2			447.9			426.1			120.3	
Travel Time (s)		61.8			20.2			19.2			8.7	
Confl. Peds. (#/hr)	2		8	8		2	2		6	6		2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	11%	10%	7%	10%	29%	21%	44%	17%	25%	22%	20%
Adj. Flow (vph)	7	1042	659	14	1117	232	582	74	100	84	95	14
Shared Lane Traffic (%)												
Lane Group Flow (vph)	7	1042	659	14	1349	0	582	174	0	0	193	0
Turn Type	Perm	NA	Perm	pm+pt	NA		Split	NA		Split	NA	
Protected Phases		2		1	6		8	8		4	4	
Permitted Phases	2		2	6								
Detector Phase	2	2	2	1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	22.0	22.0	22.0	5.0	22.0		12.0	12.0		8.0	8.0	
Minimum Split (s)	29.9	29.9	29.9	8.0	29.9		45.2	45.2		15.2	15.2	
Total Split (s)	66.0	66.0	66.0	18.0	84.0		51.0	51.0		25.0	25.0	
Total Split (%)	41.3%	41.3%	41.3%	11.3%	52.5%		31.9%	31.9%		15.6%	15.6%	
Maximum Green (s)	59.1	59.1	59.1	15.0	77.1		43.8	43.8		17.8	17.8	
Yellow Time (s)	4.6	4.6	4.6	3.0	4.6		4.6	4.6		4.6	4.6	
All-Red Time (s)	2.3	2.3	2.3	0.0	2.3		2.6	2.6		2.6	2.6	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)	6.9	6.9	6.9	3.0	6.9		7.2	7.2			7.2	
Lead/Lag	Lag	Lag	Lag	Lead								
Lead-Lag Optimize?	Yes	Yes	Yes	Yes								
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	C-Max	C-Max	C-Max	None	C-Max		None	None		None	None	
Walk Time (s)	8.0	8.0	8.0		8.0		8.0	8.0				
Flash Dont Walk (s)	15.0	15.0	15.0		15.0		30.0	30.0				
Pedestrian Calls (#/hr)	0	0	0		0		0	0				
Act Effect Green (s)	81.6	81.6	81.6	89.4	85.5		37.7	37.7			15.4	
Actuated g/C Ratio	0.51	0.51	0.51	0.56	0.53		0.24	0.24			0.10	

61: Finch Avenue/Gorewood Drive & Steeles Avenue East 'With Extension' 2031 Conditions
Intermodal Drive Extension PM Peak Period

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.05	0.43	0.62	0.05	0.57		0.86	0.51			0.69	
Control Delay	5.0	7.0	13.6	18.9	26.3		72.0	44.4			81.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Delay	5.0	7.0	13.6	18.9	26.3		72.0	44.4			81.4	
LOS	A	A	B	B	C		E	D			F	
Approach Delay		9.5			26.2			65.7			81.4	
Approach LOS		A			C			E			F	
Queue Length 50th (m)	0.1	21.5	162.0	2.0	102.1		91.7	36.5			31.0	
Queue Length 95th (m)	m0.9	86.9	m223.9	6.2	128.0		109.6	58.8			44.6	
Internal Link Dist (m)		1349.2			423.9			402.1			96.3	
Turn Bay Length (m)	175.0		175.0	180.0								
Base Capacity (vph)	149	2408	1057	336	2364		783	388			322	
Starvation Cap Reductn	0	0	0	0	0		0	0			0	
Spillback Cap Reductn	0	0	0	0	0		0	0			0	
Storage Cap Reductn	0	0	0	0	0		0	0			0	
Reduced v/c Ratio	0.05	0.43	0.62	0.04	0.57		0.74	0.45			0.60	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 132 (83%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 100

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.86

Intersection Signal Delay: 29.2

Intersection LOS: C

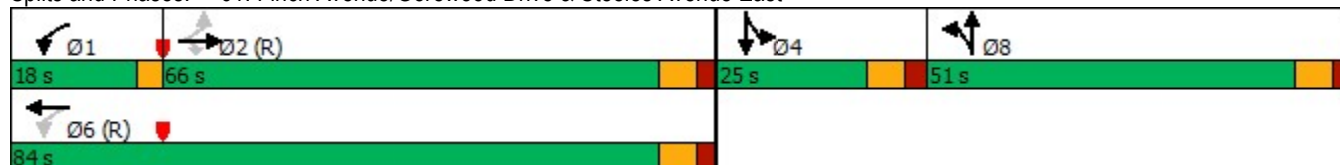
Intersection Capacity Utilization 68.5%

ICU Level of Service C

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

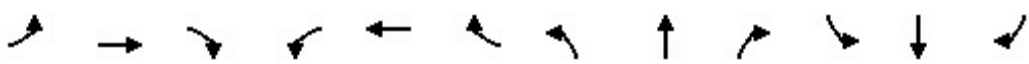
Splits and Phases: 61: Finch Avenue/Gorewood Drive & Steeles Avenue East



224: Goreway Drive & Intermodal Drive
Intermodal Drive Extension

'With Extension' 2031 Conditions

PM Peak Period

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	106	74	164	112	108	187	153	1950	84	98	1010	79
Future Volume (vph)	106	74	164	112	108	187	153	1950	84	98	1010	79
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	85.0		0.0	75.0		0.0	135.0		100.0	135.0		100.0
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (m)	7.6			7.6			7.6			7.6		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.91	1.00	1.00	0.91	1.00
Frt			0.850		0.905				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1332	1325	1350	1521	2777	0	1217	4902	1096	1547	4856	1183
Flt Permitted	0.435			0.706			0.224			0.082		
Satd. Flow (perm)	610	1325	1350	1130	2777	0	287	4902	1096	134	4856	1183
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			173		5				78			83
Link Speed (k/h)		50			50			70			70	
Link Distance (m)		232.0			189.6			952.1			1512.1	
Travel Time (s)		16.7			13.7			49.0			77.8	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	37%	45%	21%	20%	31%	12%	50%	7%	49%	18%	8%	38%
Adj. Flow (vph)	112	78	173	118	114	197	161	2053	88	103	1063	83
Shared Lane Traffic (%)												
Lane Group Flow (vph)	112	78	173	118	311	0	161	2053	88	103	1063	83
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases		4			8		5	2			6	
Permitted Phases	4		4	8			2		2	6		6
Detector Phase	4	4	4	8	8		5	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0		6.0	12.0	12.0	12.0	12.0	12.0
Minimum Split (s)	45.0	45.0	45.0	45.0	45.0		9.0	42.0	42.0	42.0	42.0	42.0
Total Split (s)	70.0	70.0	70.0	70.0	70.0		20.0	90.0	90.0	70.0	70.0	70.0
Total Split (%)	43.8%	43.8%	43.8%	43.8%	43.8%		12.5%	56.3%	56.3%	43.8%	43.8%	43.8%
Maximum Green (s)	64.0	64.0	64.0	64.0	64.0		17.0	84.0	84.0	64.0	64.0	64.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		3.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		0.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0		3.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag							Lead			Lag	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	C-Max	C-Max	C-Max
Walk Time (s)	12.0	12.0	12.0	12.0	12.0			12.0	12.0	12.0	12.0	12.0
Flash Dont Walk (s)	27.0	27.0	27.0	27.0	27.0			24.0	24.0	24.0	24.0	24.0
Pedestrian Calls (#/hr)	0	0	0	0	0			0	0	0	0	0
Act Effect Green (s)	30.6	30.6	30.6	30.6	30.6		120.4	117.4	117.4	101.3	101.3	101.3
Actuated g/C Ratio	0.19	0.19	0.19	0.19	0.19		0.75	0.73	0.73	0.63	0.63	0.63
v/c Ratio	0.97	0.31	0.44	0.55	0.58		0.55	0.57	0.11	1.23	0.35	0.11
Control Delay	136.7	55.8	9.5	62.2	57.2		10.1	8.2	0.8	200.4	16.0	3.9
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0

224: Goreway Drive & Intermodal Drive
Intermodal Drive Extension

'With Extension' 2031 Conditions
PM Peak Period

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	136.7	55.8	9.5	62.2	57.2		10.1	8.2	0.8	200.4	16.0	3.9
LOS	F	E	A	E	E		B	A	A	F	B	A
Approach Delay	58.7			58.6			8.0			30.4		
Approach LOS	E			E			A			C		
Queue Length 50th (m)	35.8	21.7	0.0	34.9	47.6		5.4	64.3	0.1	~39.6	54.0	0.0
Queue Length 95th (m)	#59.8	33.8	18.6	51.5	58.2		m19.4	190.8	m2.2	#65.5	90.2	9.2
Internal Link Dist (m)	208.0			165.6			928.1			1488.1		
Turn Bay Length (m)	85.0			75.0			135.0		100.0	135.0		100.0
Base Capacity (vph)	244	530	643	452	1113		318	3598	825	84	3074	779
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.46	0.15	0.27	0.26	0.28		0.51	0.57	0.11	1.23	0.35	0.11

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 69 (43%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.23

Intersection Signal Delay: 23.7

Intersection LOS: C

Intersection Capacity Utilization 83.4%

ICU Level of Service E

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

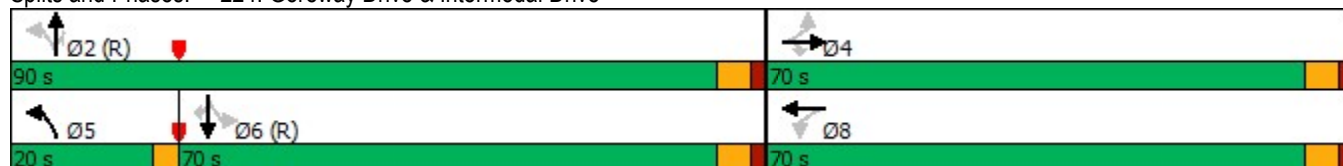
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 224: Goreway Drive & Intermodal Drive



225: Intermodal Drive & Deerhurst Drive
Intermodal Drive Extension

'With Extension' 2031 Conditions
PM Peak Period

Intersection						
Int Delay, s/veh	3.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	79	166	286	11	25	106
Future Vol, veh/h	79	166	286	11	25	106
Conflicting Peds, #/hr	3	0	0	3	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	65	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	83	83	83	83	83	83
Heavy Vehicles, %	65	18	9	18	16	19
Mvmt Flow	95	200	345	13	30	128
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	361	0	-	0	645	182
Stage 1	-	-	-	-	355	-
Stage 2	-	-	-	-	290	-
Critical Hdwy	5.4	-	-	-	7.12	7.28
Critical Hdwy Stg 1	-	-	-	-	6.12	-
Critical Hdwy Stg 2	-	-	-	-	6.12	-
Follow-up Hdwy	2.85	-	-	-	3.66	3.49
Pot Cap-1 Maneuver	845	-	-	-	374	779
Stage 1	-	-	-	-	641	-
Stage 2	-	-	-	-	694	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	843	-	-	-	330	777
Mov Cap-2 Maneuver	-	-	-	-	330	-
Stage 1	-	-	-	-	567	-
Stage 2	-	-	-	-	692	-
Approach	EB	WB		SB		
HCM Control Delay, s	3.2	0		12.8		
HCM LOS	B					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	843	-	-	-	617	
HCM Lane V/C Ratio	0.113	-	-	-	0.256	
HCM Control Delay (s)	9.8	-	-	-	12.8	
HCM Lane LOS	A	-	-	-	B	
HCM 95th %tile Q(veh)	0.4	-	-	-	1	

226: Gorewood Drive & Intermodal Drive
Intermodal Drive Extension

'With Extension' 2031 Conditions
PM Peak Period

Intersection						
Int Delay, s/veh	7.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	119	138	17	7	0
Future Vol, veh/h	0	119	138	17	7	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	28	34	0	0	0
Mvmt Flow	0	129	150	18	8	0
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	326	8	8	0	-	0
Stage 1	8	-	-	-	-	-
Stage 2	318	-	-	-	-	-
Critical Hdwy	6.4	6.48	4.44	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.552	2.506	-	-	-
Pot Cap-1 Maneuver	672	1003	1426	-	-	-
Stage 1	1020	-	-	-	-	-
Stage 2	742	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	601	1003	1426	-	-	-
Mov Cap-2 Maneuver	601	-	-	-	-	-
Stage 1	912	-	-	-	-	-
Stage 2	742	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	9.1	7		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1426	-	1003	-	-	
HCM Lane V/C Ratio	0.105	-	0.129	-	-	
HCM Control Delay (s)	7.8	0	9.1	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0.4	-	0.4	-	-	

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	6:45	6:45	6:45	6:45	6:45	6:45
End Time	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	75	75	75	75	75	75
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	4	4	4	4	4	4
# of Recorded Intervals	3	3	3	3	3	3
Vehs Entered	7685	7562	7678	7609	7541	7616
Vehs Exited	7551	7510	7700	7560	7513	7566
Starting Vehs	451	478	495	450	451	466
Ending Vehs	585	530	473	499	479	516
Travel Distance (km)	20656	20584	20907	20671	20585	20681
Travel Time (hr)	507.0	477.9	518.0	484.9	486.6	494.9
Total Delay (hr)	204.4	175.1	211.0	181.4	184.6	191.3
Total Stops	8549	8048	9390	8372	8358	8542
Fuel Used (l)	1688.0	1657.8	1716.7	1664.3	1661.7	1677.7

Interval #0 Information Seeding

Start Time	6:45
End Time	7:00
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	
No data recorded this interval.	

Interval #1 Information Pre-Peak

Start Time	7:00
End Time	7:20
Total Time (min)	20
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	1	2	3	4	5	Avg
Vehs Entered	2477	2562	2535	2535	2393	2503
Vehs Exited	2468	2529	2517	2516	2364	2478
Starting Vehs	451	478	495	450	451	466
Ending Vehs	460	511	513	469	480	487
Travel Distance (km)	6809	7019	7008	6940	6614	6878
Travel Time (hr)	154.2	160.4	162.0	159.4	148.2	156.8
Total Delay (hr)	54.1	57.0	59.3	57.7	51.4	55.9
Total Stops	2535	2738	2778	2703	2510	2654
Fuel Used (l)	541.3	564.8	564.8	552.5	527.8	550.2

Interval #2 Information Peak

Start Time 7:20
End Time 7:35
Total Time (min) 15

Volumes adjusted by PHF, Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	2094	1950	2033	2050	2019	2029
Vehs Exited	2002	1951	1976	1983	1963	1975
Starting Vehs	460	511	513	469	480	487
Ending Vehs	552	510	570	536	536	540
Travel Distance (km)	5384	5151	5321	5417	5367	5328
Travel Time (hr)	133.3	121.3	136.7	126.1	126.1	128.7
Total Delay (hr)	54.1	45.5	58.2	46.4	47.2	50.3
Total Stops	2394	2001	2492	2194	2199	2254
Fuel Used (l)	441.9	418.7	437.7	436.4	433.6	433.7

Interval #3 Information Post-Peak

Start Time 7:35
End Time 8:00
Total Time (min) 25

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	1	2	3	4	5	Avg
Vehs Entered	3114	3050	3110	3024	3129	3087
Vehs Exited	3081	3030	3207	3061	3186	3113
Starting Vehs	552	510	570	536	536	540
Ending Vehs	585	530	473	499	479	516
Travel Distance (km)	8463	8414	8578	8314	8603	8474
Travel Time (hr)	219.6	196.2	219.3	199.3	212.3	209.3
Total Delay (hr)	96.2	72.6	93.5	77.2	86.1	85.1
Total Stops	3620	3309	4120	3475	3649	3635
Fuel Used (l)	704.8	674.3	714.2	675.4	700.3	693.8

Intersection: 58: Goreway Drive & Steeles Avenue East

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB
Directions Served	L	T	T	T	R	L	T	T	T	R	L	L
Maximum Queue (m)	110.6	138.3	126.5	128.6	5.6	133.6	214.6	227.9	252.1	117.6	80.4	127.5
Average Queue (m)	57.1	86.4	87.0	89.1	0.2	24.5	127.7	132.6	136.1	79.2	47.5	66.4
95th Queue (m)	97.8	119.1	118.1	119.9	4.0	82.7	218.6	234.7	262.2	147.8	74.5	109.4
Link Distance (m)		651.1	651.1	651.1			1334.5	1334.5	1334.5			
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	115.0				150.0	150.0				110.0	120.0	120.0
Storage Blk Time (%)	0	1				0	6		11	3		0
Queuing Penalty (veh)	2	1				0	4		57	10		0

Intersection: 58: Goreway Drive & Steeles Avenue East

Movement	NB	NB	NB	SB	SB	SB	SB	SB
Directions Served	T	T	R	L	L	T	T	R
Maximum Queue (m)	168.1	156.4	87.6	97.5	102.4	87.0	89.3	50.8
Average Queue (m)	105.4	103.5	32.1	48.7	56.3	46.9	50.0	9.4
95th Queue (m)	145.0	142.9	100.2	82.7	92.0	78.0	79.2	30.7
Link Distance (m)	453.2	453.2				916.9	916.9	916.9
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (m)			80.0	130.0	130.0			
Storage Blk Time (%)	3	18	0	0				
Queuing Penalty (veh)	10	16	0	0				

Intersection: 61: Finch Avenue/Gorewood Drive & Steeles Avenue East

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB
Directions Served	L	T	T	T	R	L	T	T	TR	L	L	TR
Maximum Queue (m)	12.1	37.1	44.0	307.4	99.5	16.5	107.4	110.7	136.2	125.0	126.9	93.9
Average Queue (m)	2.0	8.3	14.3	26.6	19.4	3.2	66.4	65.6	72.8	76.6	78.1	39.8
95th Queue (m)	7.7	25.5	32.6	210.0	70.6	10.2	101.2	101.0	117.0	113.3	115.4	79.0
Link Distance (m)		1334.5	1334.5	1334.5			434.6	434.6		405.0	405.0	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	175.0				175.0	180.0			187.0			231.0
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 61: Finch Avenue/Gorewood Drive & Steeles Avenue East

Movement	SB	SB
Directions Served	LT	TR
Maximum Queue (m)	80.8	51.0
Average Queue (m)	39.2	20.9
95th Queue (m)	66.5	43.4
Link Distance (m)	96.8	96.8
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 224: Goreway Drive & Intermodal Drive

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	NB	SB
Directions Served	L	T	R	L	T	TR	L	T	T	T	R	L
Maximum Queue (m)	75.0	62.7	47.4	67.3	65.2	89.6	77.8	115.3	111.8	292.5	91.5	142.6
Average Queue (m)	34.7	21.0	21.6	30.3	20.1	37.7	32.9	48.2	52.3	66.4	9.1	121.1
95th Queue (m)	66.4	46.1	40.4	58.2	44.7	69.1	61.1	95.3	96.7	241.9	39.4	171.7
Link Distance (m)		209.1	209.1		160.4	160.4		916.9	916.9	916.9		
Upstream Blk Time (%)										0		
Queuing Penalty (veh)										0		
Storage Bay Dist (m)	85.0			75.0			135.0				100.0	135.0
Storage Blk Time (%)	0			0						1	0	52
Queuing Penalty (veh)	0			0						1	0	176

Intersection: 224: Goreway Drive & Intermodal Drive

Movement	SB	SB	SB	SB
Directions Served	T	T	T	R
Maximum Queue (m)	330.2	317.0	291.0	28.6
Average Queue (m)	145.1	120.7	85.1	8.1
95th Queue (m)	361.5	320.7	265.9	21.2
Link Distance (m)	1489.2	1489.2	1489.2	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)				100.0
Storage Blk Time (%)	3		0	
Queuing Penalty (veh)	3		0	

Intersection: 225: Intermodal Drive & Deerhurst Drive

Movement	EB	WB	WB	SB
Directions Served	L	T	TR	LR
Maximum Queue (m)	29.2	3.9	2.6	29.3
Average Queue (m)	8.4	0.1	0.1	14.6
95th Queue (m)	23.2	1.7	1.4	26.1
Link Distance (m)		336.6	336.6	160.1
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)	65.0			
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 226: Gorewood Drive & Intermodal Drive

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (m)	30.9	10.8
Average Queue (m)	14.9	0.9
95th Queue (m)	26.6	7.2
Link Distance (m)	157.7	479.5
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 281

224: Goreway Drive & Intermodal Drive
Intermodal Drive Extension

'With Extension' 2031 Conditions
AM Peak Period (pm+pt SBL)

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	38	66	99	81	81	130	119	699	84	181	1659	95
Future Volume (vph)	38	66	99	81	81	130	119	699	84	181	1659	95
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	85.0		0.0	75.0		0.0	135.0		100.0	135.0		100.0
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (m)	7.6			7.6			7.6			7.6		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.91	1.00	1.00	0.91	1.00
Frt			0.850		0.907				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1313	1372	1008	1141	2463	0	1250	4768	1118	1587	4902	1096
Flt Permitted	0.506			0.711			0.089			0.355		
Satd. Flow (perm)	699	1372	1008	854	2463	0	117	4768	1118	593	4902	1096
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			106		140				90			89
Link Speed (k/h)		50			50			70			70	
Link Distance (m)		232.0			189.6			952.1			1512.1	
Travel Time (s)		16.7			13.7			49.0			77.8	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	39%	40%	62%	60%	64%	16%	46%	10%	46%	15%	7%	49%
Adj. Flow (vph)	41	71	106	87	87	140	128	752	90	195	1784	102
Shared Lane Traffic (%)												
Lane Group Flow (vph)	41	71	106	87	227	0	128	752	90	195	1784	102
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases		4			8		5	2			6	
Permitted Phases	4		4	8			2		2	6		6
Detector Phase	4	4	4	8	8		5	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0		6.0	12.0	12.0	12.0	12.0	12.0
Minimum Split (s)	45.0	45.0	45.0	45.0	45.0		9.0	42.0	42.0	42.0	42.0	42.0
Total Split (s)	65.0	65.0	65.0	65.0	65.0		18.0	95.0	95.0	77.0	77.0	77.0
Total Split (%)	40.6%	40.6%	40.6%	40.6%	40.6%		11.3%	59.4%	59.4%	48.1%	48.1%	48.1%
Maximum Green (s)	59.0	59.0	59.0	59.0	59.0		15.0	89.0	89.0	71.0	71.0	71.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		3.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		0.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0		3.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag							Lead			Lag	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	C-Max	C-Max	C-Max
Walk Time (s)	12.0	12.0	12.0	12.0	12.0			12.0	12.0	12.0	12.0	12.0
Flash Dont Walk (s)	27.0	27.0	27.0	27.0	27.0			24.0	24.0	24.0	24.0	24.0
Pedestrian Calls (#/hr)	0	0	0	0	0			0	0	0	0	0
Act Effct Green (s)	22.2	22.2	22.2	22.2	22.2		128.8	125.8	125.8	106.0	106.0	106.0
Actuated g/C Ratio	0.14	0.14	0.14	0.14	0.14		0.80	0.79	0.79	0.66	0.66	0.66
v/c Ratio	0.43	0.37	0.46	0.74	0.49		0.60	0.20	0.10	0.50	0.55	0.14
Control Delay	73.4	65.7	15.7	106.6	34.5		31.2	3.7	0.4	22.8	17.0	4.1
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0

224: Goreway Drive & Intermodal Drive
Intermodal Drive Extension

'With Extension' 2031 Conditions
AM Peak Period (pm+pt SBL)

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	73.4	65.7	15.7	106.6	34.5		31.2	3.7	0.4	22.8	17.0	4.1
LOS	E	E	B	F	C		C	A	A	C	B	A
Approach Delay		42.8			54.4			7.0			16.9	
Approach LOS		D			D			A			B	
Queue Length 50th (m)	12.1	20.9	0.0	27.9	15.0		9.1	14.1	0.1	29.7	104.7	1.3
Queue Length 95th (m)	23.7	34.5	17.0	45.2	28.3		25.5	19.0	0.4	71.9	160.7	11.2
Internal Link Dist (m)		208.0			165.6			928.1			1488.1	
Turn Bay Length (m)	85.0			75.0			135.0		100.0	135.0		100.0
Base Capacity (vph)	257	505	438	314	996		224	3749	898	392	3246	755
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.14	0.24	0.28	0.23		0.57	0.20	0.10	0.50	0.55	0.14

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 97 (61%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 100

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.74

Intersection Signal Delay: 19.1

Intersection LOS: B

Intersection Capacity Utilization 70.3%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 224: Goreway Drive & Intermodal Drive



Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	6:45	6:45	6:45	6:45	6:45	6:45
End Time	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	75	75	75	75	75	75
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	4	4	4	4	4	4
# of Recorded Intervals	3	3	3	3	3	3
Vehs Entered	6591	6495	6422	6474	6555	6508
Vehs Exited	6567	6498	6406	6475	6539	6498
Starting Vehs	351	357	368	365	354	360
Ending Vehs	375	354	384	364	370	366
Travel Distance (km)	17638	17533	17184	17269	17538	17432
Travel Time (hr)	390.2	383.0	373.8	380.8	381.6	381.9
Total Delay (hr)	131.3	124.6	120.6	125.5	124.2	125.3
Total Stops	6754	6505	6380	6576	6423	6527
Fuel Used (l)	1404.7	1390.6	1358.6	1368.8	1391.4	1382.8

Interval #0 Information Seeding

Start Time	6:45
End Time	7:00
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	
No data recorded this interval.	

Interval #1 Information Pre-Peak

Start Time	7:00
End Time	7:20
Total Time (min)	20
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	1	2	3	4	5	Avg
Vehs Entered	2133	2092	2117	2102	2087	2104
Vehs Exited	2115	2117	2094	2088	2042	2091
Starting Vehs	351	357	368	365	354	360
Ending Vehs	369	332	391	379	399	373
Travel Distance (km)	5795	5724	5733	5611	5599	5692
Travel Time (hr)	126.6	124.5	123.0	121.6	120.7	123.3
Total Delay (hr)	41.9	40.3	38.7	38.9	38.7	39.7
Total Stops	2205	2101	2050	2081	1980	2082
Fuel Used (l)	462.9	455.7	451.7	442.2	443.2	451.1

Interval #2 Information Peak

Start Time	7:20
End Time	7:35
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	1829	1763	1707	1746	1816	1774
Vehs Exited	1758	1689	1661	1675	1750	1707
Starting Vehs	369	332	391	379	399	373
Ending Vehs	440	406	437	450	465	441
Travel Distance (km)	4684	4614	4405	4517	4646	4573
Travel Time (hr)	107.9	103.5	98.8	103.3	102.7	103.2
Total Delay (hr)	38.9	35.4	33.6	36.4	34.3	35.7
Total Stops	1918	1867	1840	1863	1758	1846
Fuel Used (l)	375.8	368.5	352.1	362.3	370.8	365.9

Interval #3 Information Post-Peak

Start Time	7:35
End Time	8:00
Total Time (min)	25

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	1	2	3	4	5	Avg
Vehs Entered	2629	2640	2598	2626	2652	2631
Vehs Exited	2694	2692	2651	2712	2747	2700
Starting Vehs	440	406	437	450	465	441
Ending Vehs	375	354	384	364	370	366
Travel Distance (km)	7159	7195	7046	7140	7293	7167
Travel Time (hr)	155.7	154.9	152.0	155.9	158.2	155.3
Total Delay (hr)	50.5	49.0	48.4	50.3	51.3	49.9
Total Stops	2631	2537	2490	2632	2685	2595
Fuel Used (l)	565.9	566.4	554.8	564.3	577.4	565.8

Intersection: 224: Goreway Drive & Intermodal Drive

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	NB	SB
Directions Served	L	T	R	L	T	TR	L	T	T	T	R	L
Maximum Queue (m)	47.0	60.7	54.2	77.6	53.0	70.1	98.9	36.4	41.0	39.1	24.1	95.1
Average Queue (m)	13.0	20.5	21.9	36.8	16.9	29.8	37.8	15.6	14.7	13.0	6.0	35.9
95th Queue (m)	32.8	46.8	46.1	69.8	39.0	59.1	75.7	34.3	33.7	33.4	18.0	68.6
Link Distance (m)		209.1	209.1		160.4	160.4		916.9	916.9	916.9		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	85.0			75.0			135.0				100.0	135.0
Storage Blk Time (%)				1								
Queuing Penalty (veh)				0								

Intersection: 224: Goreway Drive & Intermodal Drive

Movement	SB	SB	SB	SB
Directions Served	T	T	T	R
Maximum Queue (m)	129.6	122.8	117.0	92.2
Average Queue (m)	63.7	63.6	60.9	14.8
95th Queue (m)	111.7	111.0	107.7	52.1
Link Distance (m)	1489.2	1489.2	1489.2	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)				100.0
Storage Blk Time (%)	0		1	0
Queuing Penalty (veh)	0		1	0

224: Goreway Drive & Intermodal Drive
Intermodal Drive Extension

'With Extension' 2031 Conditions
PM Peak Period (pm+pt SBL)

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	106	74	164	112	108	187	153	1950	84	98	1010	79
Future Volume (vph)	106	74	164	112	108	187	153	1950	84	98	1010	79
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	85.0		0.0	75.0		0.0	135.0		100.0	135.0		100.0
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (m)	7.6			7.6			7.6			7.6		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.91	1.00	1.00	0.91	1.00
Frt			0.850		0.905				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1332	1325	1350	1521	2777	0	1217	4902	1096	1547	4856	1183
Flt Permitted	0.439			0.706			0.229			0.059		
Satd. Flow (perm)	616	1325	1350	1130	2777	0	293	4902	1096	96	4856	1183
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			173		174				78			83
Link Speed (k/h)		50			50			70			70	
Link Distance (m)		232.0			189.6			952.1			1512.1	
Travel Time (s)		16.7			13.7			49.0			77.8	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	37%	45%	21%	20%	31%	12%	50%	7%	49%	18%	8%	38%
Adj. Flow (vph)	112	78	173	118	114	197	161	2053	88	103	1063	83
Shared Lane Traffic (%)												
Lane Group Flow (vph)	112	78	173	118	311	0	161	2053	88	103	1063	83
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2		2	6		6
Detector Phase	4	4	4	8	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0		6.0	12.0	12.0	6.0	12.0	12.0
Minimum Split (s)	45.0	45.0	45.0	45.0	45.0		9.0	42.0	42.0	10.5	42.0	42.0
Total Split (s)	52.0	52.0	52.0	52.0	52.0		26.0	90.0	90.0	18.0	82.0	82.0
Total Split (%)	32.5%	32.5%	32.5%	32.5%	32.5%		16.3%	56.3%	56.3%	11.3%	51.3%	51.3%
Maximum Green (s)	46.0	46.0	46.0	46.0	46.0		23.0	84.0	84.0	15.0	76.0	76.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		0.0	2.0	2.0	0.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0		3.0	6.0	6.0	3.0	6.0	6.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?								Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)	12.0	12.0	12.0	12.0	12.0			12.0	12.0		12.0	12.0
Flash Dont Walk (s)	27.0	27.0	27.0	27.0	27.0			24.0	24.0		24.0	24.0
Pedestrian Calls (#/hr)	0	0	0	0	0			0	0		0	0
Act Effct Green (s)	31.2	31.2	31.2	31.2	31.2		117.8	102.5	102.5	115.8	101.4	101.4
Actuated g/C Ratio	0.20	0.20	0.20	0.20	0.20		0.74	0.64	0.64	0.72	0.63	0.63
v/c Ratio	0.94	0.30	0.43	0.54	0.46		0.56	0.65	0.12	0.60	0.35	0.11
Control Delay	128.7	55.0	9.3	63.1	22.9		10.8	20.8	4.9	36.6	15.9	3.8
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0

224: Goreway Drive & Intermodal Drive
Intermodal Drive Extension

'With Extension' 2031 Conditions
PM Peak Period (pm+pt SBL)

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	128.7	55.0	9.3	63.1	22.9		10.8	20.8	4.9	36.6	15.9	3.8
LOS	F	D	A	E	C		B	C	A	D	B	A
Approach Delay	55.9			33.9			19.5			16.8		
Approach LOS	E			C			B			B		
Queue Length 50th (m)	35.4	21.5	0.0	34.8	20.6		9.3	170.9	4.3	10.4	54.7	0.0
Queue Length 95th (m)	#57.3	33.6	18.5	52.4	34.5		m25.3	221.6	m10.0	34.5	88.6	9.1
Internal Link Dist (m)	208.0			165.6			928.1			1488.1		
Turn Bay Length (m)	85.0			75.0			135.0		100.0	135.0		100.0
Base Capacity (vph)	177	380	511	324	922		352	3139	729	208	3078	780
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.63	0.21	0.34	0.36	0.34		0.46	0.65	0.12	0.50	0.35	0.11

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 69 (43%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 100

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.94

Intersection Signal Delay: 23.2

Intersection LOS: C

Intersection Capacity Utilization 77.1%

ICU Level of Service D

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 224: Goreway Drive & Intermodal Drive



Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	6:45	6:45	6:45	6:45	6:45	6:45
End Time	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	75	75	75	75	75	75
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	4	4	4	4	4	4
# of Recorded Intervals	3	3	3	3	3	3
Vehs Entered	7594	7661	7584	7519	7672	7604
Vehs Exited	7618	7584	7591	7538	7699	7606
Starting Vehs	499	461	476	483	469	477
Ending Vehs	475	538	469	464	442	475
Travel Distance (km)	20738	20752	20743	20425	20865	20705
Travel Time (hr)	477.3	482.8	474.9	468.0	487.9	478.2
Total Delay (hr)	172.5	178.0	169.7	168.7	181.0	174.0
Total Stops	8596	8773	8525	8422	8842	8628
Fuel Used (l)	1667.8	1673.2	1670.6	1645.2	1689.6	1669.3

Interval #0 Information Seeding

Start Time	6:45
End Time	7:00
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	
No data recorded this interval.	

Interval #1 Information Pre-Peak

Start Time	7:00
End Time	7:20
Total Time (min)	20
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	1	2	3	4	5	Avg
Vehs Entered	2434	2588	2463	2427	2444	2470
Vehs Exited	2499	2575	2494	2437	2396	2480
Starting Vehs	499	461	476	483	469	477
Ending Vehs	434	474	445	473	517	465
Travel Distance (km)	6862	6996	6856	6773	6569	6811
Travel Time (hr)	157.9	158.4	153.6	153.9	150.3	154.8
Total Delay (hr)	57.1	55.6	53.3	55.0	54.1	55.0
Total Stops	2746	2825	2659	2691	2637	2714
Fuel Used (l)	548.9	561.9	549.7	545.2	528.4	546.8

Interval #2 Information Peak

Start Time	7:20
End Time	7:35
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	2076	1940	1971	1979	2100	2015
Vehs Exited	1992	1906	1911	1966	2069	1969
Starting Vehs	434	474	445	473	517	465
Ending Vehs	518	508	505	486	548	513
Travel Distance (km)	5336	5167	5185	5153	5572	5282
Travel Time (hr)	126.1	122.2	119.0	117.8	133.1	123.7
Total Delay (hr)	47.3	46.3	42.0	41.9	50.9	45.7
Total Stops	2400	2266	2202	2156	2481	2301
Fuel Used (l)	433.7	416.6	420.2	412.9	450.6	426.8

Interval #3 Information Post-Peak

Start Time	7:35
End Time	8:00
Total Time (min)	25

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	1	2	3	4	5	Avg
Vehs Entered	3084	3133	3150	3113	3128	3122
Vehs Exited	3127	3103	3186	3135	3234	3156
Starting Vehs	518	508	505	486	548	513
Ending Vehs	475	538	469	464	442	475
Travel Distance (km)	8540	8589	8703	8500	8724	8611
Travel Time (hr)	193.3	202.2	202.2	196.3	204.5	199.7
Total Delay (hr)	68.1	76.1	74.3	71.8	76.0	73.3
Total Stops	3450	3682	3664	3575	3724	3619
Fuel Used (l)	685.2	694.7	700.7	687.1	710.6	695.7

Intersection: 224: Goreway Drive & Intermodal Drive

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	NB	SB
Directions Served	L	T	R	L	T	TR	L	T	T	T	R	L
Maximum Queue (m)	84.0	71.7	44.0	73.0	58.7	85.3	111.2	137.2	147.3	621.2	107.5	54.9
Average Queue (m)	37.7	23.9	19.3	32.1	20.2	40.4	36.9	74.4	82.0	104.7	19.9	22.1
95th Queue (m)	70.1	52.7	35.8	60.6	44.8	70.9	71.0	131.4	142.7	312.5	76.4	44.2
Link Distance (m)		209.1	209.1		160.4	160.4		916.9	916.9	916.9		
Upstream Blk Time (%)										0		
Queuing Penalty (veh)										1		
Storage Bay Dist (m)	85.0			75.0			135.0				100.0	135.0
Storage Blk Time (%)	1			1				0		4	0	
Queuing Penalty (veh)	1			0				0		4	1	

Intersection: 224: Goreway Drive & Intermodal Drive

Movement	SB	SB	SB	SB
Directions Served	T	T	T	R
Maximum Queue (m)	76.9	77.5	80.8	23.8
Average Queue (m)	38.7	39.8	36.6	7.8
95th Queue (m)	67.6	67.9	67.2	20.3
Link Distance (m)	1489.2	1489.2	1489.2	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)			100.0	
Storage Blk Time (%)				
Queuing Penalty (veh)				

58: Goreway Drive & Steeles Avenue East
Intermodal Drive Extension

'With Extension' 2041 Conditions

AM Peak Period

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  		 	 		 	 	
Traffic Volume (vph)	120	1334	120	33	1050	309	131	181	44	431	654	195
Future Volume (vph)	120	1334	120	33	1050	309	131	181	44	431	654	195
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	115.0		150.0	150.0		110.0	120.0		80.0	130.0		0.0
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (m)	7.6			7.6			7.6			7.6		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Ped Bike Factor			0.97			0.94	0.99		0.97	0.99		0.97
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1342	4561	1471	1772	4683	1432	2975	3380	1601	3106	3380	1396
Flt Permitted	0.160			0.119			0.950			0.950		
Satd. Flow (perm)	226	4561	1424	222	4683	1348	2955	3380	1557	3068	3380	1353
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			132			340			134			203
Link Speed (k/h)		80			80			70			70	
Link Distance (m)		668.9			1373.2			472.6			952.1	
Travel Time (s)		30.1			61.8			24.3			49.0	
Confl. Peds. (#/hr)	28		12	12		28	13		11	11		13
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	36%	15%	11%	3%	12%	14%	19%	8%	2%	14%	8%	17%
Adj. Flow (vph)	132	1466	132	36	1154	340	144	199	48	474	719	214
Shared Lane Traffic (%)												
Lane Group Flow (vph)	132	1466	132	36	1154	340	144	199	48	474	719	214
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2		2	6		6			4			8
Detector Phase	5	2	2	1	6	6	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	5.0	12.0	12.0	5.0	12.0	12.0	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	8.0	34.7	34.7	8.0	34.7	34.7	13.0	39.7	39.7	13.0	39.7	39.7
Total Split (s)	18.0	61.0	61.0	13.0	56.0	56.0	20.0	42.0	42.0	44.0	66.0	66.0
Total Split (%)	11.3%	38.1%	38.1%	8.1%	35.0%	35.0%	12.5%	26.3%	26.3%	27.5%	41.3%	41.3%
Maximum Green (s)	15.0	54.3	54.3	10.0	49.3	49.3	15.0	35.3	35.3	39.0	59.3	59.3
Yellow Time (s)	3.0	4.6	4.6	3.0	4.6	4.6	3.0	4.2	4.2	3.0	4.2	4.2
All-Red Time (s)	0.0	2.1	2.1	0.0	2.1	2.1	2.0	2.5	2.5	2.0	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-3.0	0.0	0.0
Total Lost Time (s)	3.0	6.7	6.7	3.0	6.7	6.7	5.0	6.7	6.7	2.0	6.7	6.7
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	None
Walk Time (s)		8.0	8.0		8.0	8.0		8.0	8.0		8.0	8.0
Flash Dont Walk (s)		20.0	20.0		20.0	20.0		25.0	25.0		25.0	25.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	91.4	79.3	79.3	82.5	71.7	71.7	12.7	24.2	24.2	32.8	41.2	41.2
Actuated g/C Ratio	0.57	0.50	0.50	0.52	0.45	0.45	0.08	0.15	0.15	0.20	0.26	0.26
v/c Ratio	0.60	0.65	0.17	0.20	0.55	0.43	0.61	0.39	0.14	0.75	0.83	0.43

58: Goreway Drive & Steeles Avenue East
Intermodal Drive Extension

'With Extension' 2041 Conditions
AM Peak Period

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	30.0	33.7	4.7	29.7	54.3	18.9	82.1	62.9	0.8	55.1	49.3	8.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.0	33.7	4.7	29.7	54.3	18.9	82.1	62.9	0.8	55.1	49.3	8.3
LOS	C	C	A	C	D	B	F	E	A	E	D	A
Approach Delay	31.2			45.8			62.4			45.0		
Approach LOS	C			D			E			D		
Queue Length 50th (m)	19.5	128.1	0.0	7.9	130.1	36.9	23.1	30.4	0.0	74.3	115.3	23.9
Queue Length 95th (m)	36.3	167.2	13.4	m17.0	148.6	65.6	34.8	42.4	0.0	65.9	118.6	21.1
Internal Link Dist (m)	644.9			1349.2			448.6			928.1		
Turn Bay Length (m)	115.0			150.0	150.0			110.0	120.0	80.0	130.0	
Base Capacity (vph)	233	2259	772	215	2097	791	278	745	447	815	1252	629
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.57	0.65	0.17	0.17	0.55	0.43	0.52	0.27	0.11	0.58	0.57	0.34

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 76 (48%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 100

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.83

Intersection Signal Delay: 41.9

Intersection LOS: D

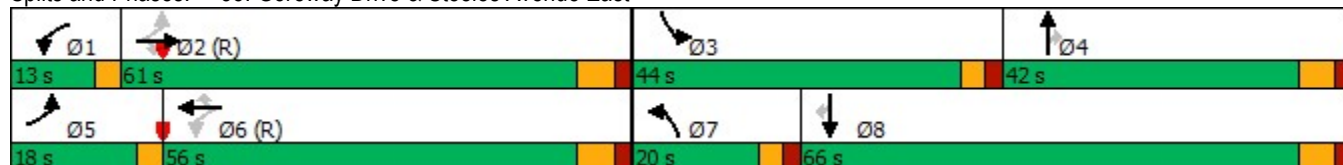
Intersection Capacity Utilization 76.7%

ICU Level of Service D

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 58: Goreway Drive & Steeles Avenue East



61: Finch Avenue/Gorewood Drive & Steeles Avenue East 'With Extension' 2041 Conditions
Intermodal Drive Extension

AM Peak Period

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  		 				 	
Traffic Volume (vph)	4	1007	689	135	879	97	480	92	129	94	90	6
Future Volume (vph)	4	1007	689	135	879	97	480	92	129	94	90	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.8	3.5	3.5	3.5	3.4	3.4	3.7	3.7	3.7
Storage Length (m)	175.0		175.0	180.0		187.0	0.0		231.0	0.0		0.0
Storage Lanes	1		1	1		1	2		1	0		0
Taper Length (m)	7.6			7.6			7.6			7.6		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	0.91	0.97	1.00	1.00	0.95	0.95	0.95
Ped Bike Factor	0.99		0.98		0.99		1.00	0.99			1.00	
Frt			0.850		0.985			0.912			0.995	
Flt Protected	0.950			0.950			0.950				0.976	
Satd. Flow (prot)	1560	4683	1384	1647	4370	0	2985	1476	0	0	2568	0
Flt Permitted	0.258			0.180			0.950				0.976	
Satd. Flow (perm)	420	4683	1362	312	4370	0	2982	1476	0	0	2563	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			749		16			43			2	
Link Speed (k/h)		80			80			80			50	
Link Distance (m)		1373.2			447.9			426.1			120.3	
Travel Time (s)		61.8			20.2			19.2			8.7	
Confl. Peds. (#/hr)	10		2	2		10	1		4	4		1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	17%	12%	18%	12%	14%	24%	16%	16%	12%	35%	42%	25%
Adj. Flow (vph)	4	1095	749	147	955	105	522	100	140	102	98	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	4	1095	749	147	1060	0	522	240	0	0	207	0
Turn Type	Perm	NA	Perm	pm+pt	NA		Split	NA		Split	NA	
Protected Phases		2		1	6		8	8		4	4	
Permitted Phases	2		2	6								
Detector Phase	2	2	2	1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	22.0	22.0	22.0	5.0	22.0		12.0	12.0		8.0	8.0	
Minimum Split (s)	29.9	29.9	29.9	8.0	29.9		45.2	45.2		15.2	15.2	
Total Split (s)	66.0	66.0	66.0	18.0	84.0		51.0	51.0		25.0	25.0	
Total Split (%)	41.3%	41.3%	41.3%	11.3%	52.5%		31.9%	31.9%		15.6%	15.6%	
Maximum Green (s)	59.1	59.1	59.1	15.0	77.1		43.8	43.8		17.8	17.8	
Yellow Time (s)	4.6	4.6	4.6	3.0	4.6		4.6	4.6		4.6	4.6	
All-Red Time (s)	2.3	2.3	2.3	0.0	2.3		2.6	2.6		2.6	2.6	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)	6.9	6.9	6.9	3.0	6.9		7.2	7.2			7.2	
Lead/Lag	Lag	Lag	Lag	Lead								
Lead-Lag Optimize?	Yes	Yes	Yes	Yes								
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	C-Max	C-Max	C-Max	None	C-Max		None	None		None	None	
Walk Time (s)	8.0	8.0	8.0		8.0		8.0	8.0				
Flash Dont Walk (s)	15.0	15.0	15.0		15.0		30.0	30.0				
Pedestrian Calls (#/hr)	0	0	0		0		0	0				
Act Effect Green (s)	73.3	73.3	73.3	92.2	88.3		33.9	33.9			16.5	
Actuated g/C Ratio	0.46	0.46	0.46	0.58	0.55		0.21	0.21			0.10	

61: Finch Avenue/Gorewood Drive & Steeles Avenue East 'With Extension' 2041 Conditions
Intermodal Drive Extension

AM Peak Period

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.02	0.51	0.73	0.53	0.44		0.83	0.69			0.78	
Control Delay	20.5	22.2	12.5	24.2	22.4		71.5	57.7			88.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Delay	20.5	22.2	12.5	24.2	22.4		71.5	57.7			88.9	
LOS	C	C	B	C	C		E	E			F	
Approach Delay		18.3			22.6			67.2			88.9	
Approach LOS		B			C			E			F	
Queue Length 50th (m)	0.3	72.0	150.3	21.6	71.7		82.4	58.8			33.7	
Queue Length 95th (m)	m0.6	68.0	214.9	37.4	92.0		97.9	85.3			48.5	
Internal Link Dist (m)		1349.2			423.9			402.1			96.3	
Turn Bay Length (m)	175.0		175.0	180.0								
Base Capacity (vph)	192	2144	1029	304	2419		817	435			287	
Starvation Cap Reductn	0	0	0	0	0		0	0			0	
Spillback Cap Reductn	0	0	0	0	0		0	0			0	
Storage Cap Reductn	0	0	0	0	0		0	0			0	
Reduced v/c Ratio	0.02	0.51	0.73	0.48	0.44		0.64	0.55			0.72	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 127 (79%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 100

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.83

Intersection Signal Delay: 32.5

Intersection LOS: C

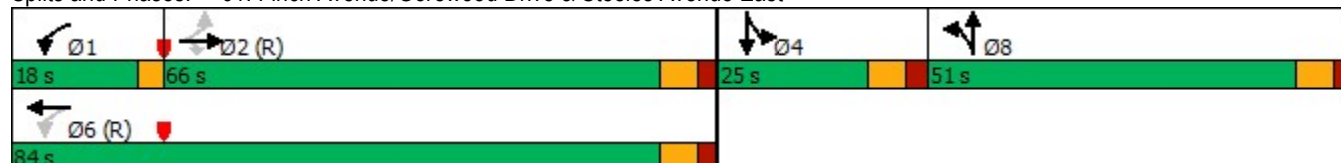
Intersection Capacity Utilization 83.7%

ICU Level of Service E

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

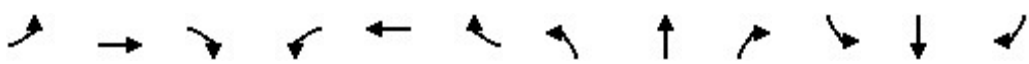
Splits and Phases: 61: Finch Avenue/Gorewood Drive & Steeles Avenue East



224: Goreway Drive & Intermodal Drive
Intermodal Drive Extension

'With Extension' 2041 Conditions

AM Peak Period

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	39	68	101	83	83	132	123	718	86	185	1700	97
Future Volume (vph)	39	68	101	83	83	132	123	718	86	185	1700	97
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	85.0		0.0	75.0		0.0	135.0		100.0	135.0		100.0
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (m)	7.6			7.6			7.6			7.6		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.91	1.00	1.00	0.91	1.00
Frt			0.850		0.908				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1313	1372	1008	1141	2464	0	1250	4768	1118	1587	4902	1096
Flt Permitted	0.501			0.709			0.083			0.347		
Satd. Flow (perm)	692	1372	1008	851	2464	0	109	4768	1118	580	4902	1096
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			109		142				92			89
Link Speed (k/h)		50			50			70			70	
Link Distance (m)		232.0			189.6			952.1			1512.1	
Travel Time (s)		16.7			13.7			49.0			77.8	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	39%	40%	62%	60%	64%	16%	46%	10%	46%	15%	7%	49%
Adj. Flow (vph)	42	73	109	89	89	142	132	772	92	199	1828	104
Shared Lane Traffic (%)												
Lane Group Flow (vph)	42	73	109	89	231	0	132	772	92	199	1828	104
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases		4			8		5	2			6	
Permitted Phases	4		4	8			2		2	6		6
Detector Phase	4	4	4	8	8		5	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0		6.0	12.0	12.0	12.0	12.0	12.0
Minimum Split (s)	45.0	45.0	45.0	45.0	45.0		9.0	42.0	42.0	42.0	42.0	42.0
Total Split (s)	65.0	65.0	65.0	65.0	65.0		18.0	95.0	95.0	77.0	77.0	77.0
Total Split (%)	40.6%	40.6%	40.6%	40.6%	40.6%		11.3%	59.4%	59.4%	48.1%	48.1%	48.1%
Maximum Green (s)	59.0	59.0	59.0	59.0	59.0		15.0	89.0	89.0	71.0	71.0	71.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		3.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		0.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0		3.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag							Lead			Lag	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	C-Max	C-Max	C-Max
Walk Time (s)	12.0	12.0	12.0	12.0	12.0			12.0	12.0	12.0	12.0	12.0
Flash Dont Walk (s)	27.0	27.0	27.0	27.0	27.0			24.0	24.0	24.0	24.0	24.0
Pedestrian Calls (#/hr)	0	0	0	0	0			0	0	0	0	0
Act Effct Green (s)	22.6	22.6	22.6	22.6	22.6		128.4	125.4	125.4	104.7	104.7	104.7
Actuated g/C Ratio	0.14	0.14	0.14	0.14	0.14		0.80	0.78	0.78	0.65	0.65	0.65
v/c Ratio	0.43	0.38	0.46	0.74	0.49		0.62	0.21	0.10	0.53	0.57	0.14
Control Delay	73.5	65.4	15.3	106.3	34.5		34.3	3.8	0.4	24.8	18.1	4.4
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0

224: Goreway Drive & Intermodal Drive
Intermodal Drive Extension

'With Extension' 2041 Conditions
AM Peak Period

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	73.5	65.4	15.3	106.3	34.5		34.3	3.8	0.4	24.8	18.1	4.4
LOS	E	E	B	F	C		C	A	A	C	B	A
Approach Delay	42.5			54.5			7.5			18.0		
Approach LOS	D			D			A			B		
Queue Length 50th (m)	12.4	21.4	0.0	28.6	15.4		10.9	14.7	0.1	31.9	112.3	1.6
Queue Length 95th (m)	24.3	35.2	17.3	46.0	28.5		28.8	20.0	0.4	76.7	169.8	11.9
Internal Link Dist (m)	208.0			165.6			928.1			1488.1		
Turn Bay Length (m)	85.0			75.0			135.0		100.0	135.0		100.0
Base Capacity (vph)	255	505	440	313	998		222	3736	895	379	3207	747
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.14	0.25	0.28	0.23		0.59	0.21	0.10	0.53	0.57	0.14

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 97 (61%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 100

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.74

Intersection Signal Delay: 19.9

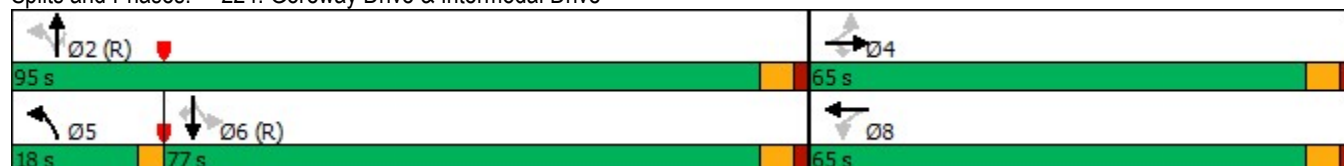
Intersection LOS: B

Intersection Capacity Utilization 71.3%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 224: Goreway Drive & Intermodal Drive



225: Intermodal Drive & Deerhurst Drive
Intermodal Drive Extension

'With Extension' 2041 Conditions
AM Peak Period

Intersection						
Int Delay, s/veh	3.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	100	222	202	18	10	82
Future Vol, veh/h	100	222	202	18	10	82
Conflicting Peds, #/hr	10	0	0	10	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	65	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	75	75	75	75	75	75
Heavy Vehicles, %	35	12	4	11	10	71
Mvmt Flow	133	296	269	24	13	109
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	303	0	-	0	705	157
Stage 1	-	-	-	-	291	-
Stage 2	-	-	-	-	414	-
Critical Hdwy	4.8	-	-	-	7	8.32
Critical Hdwy Stg 1	-	-	-	-	6	-
Critical Hdwy Stg 2	-	-	-	-	6	-
Follow-up Hdwy	2.55	-	-	-	3.6	4.01
Pot Cap-1 Maneuver	1047	-	-	-	354	681
Stage 1	-	-	-	-	710	-
Stage 2	-	-	-	-	613	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1037	-	-	-	303	674
Mov Cap-2 Maneuver	-	-	-	-	303	-
Stage 1	-	-	-	-	613	-
Stage 2	-	-	-	-	607	-
Approach	EB	WB		SB		
HCM Control Delay, s	2.8	0		12.6		
HCM LOS				B		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1037	-	-	-	595	
HCM Lane V/C Ratio	0.129	-	-	-	0.206	
HCM Control Delay (s)	9	-	-	-	12.6	
HCM Lane LOS	A	-	-	-	B	
HCM 95th %tile Q(veh)	0.4	-	-	-	0.8	

226: Gorewood Drive & Intermodal Drive
Intermodal Drive Extension

'With Extension' 2041 Conditions
AM Peak Period

Intersection						
Int Delay, s/veh	8.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	137	128	7	6	0
Future Vol, veh/h	0	137	128	7	6	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	36	28	0	0	0
Mvmt Flow	0	149	139	8	7	0
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	293	7	7	0	-	0
Stage 1	7	-	-	-	-	-
Stage 2	286	-	-	-	-	-
Critical Hdwy	6.4	6.56	4.38	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.624	2.452	-	-	-
Pot Cap-1 Maneuver	702	984	1459	-	-	-
Stage 1	1021	-	-	-	-	-
Stage 2	767	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	635	984	1459	-	-	-
Mov Cap-2 Maneuver	635	-	-	-	-	-
Stage 1	923	-	-	-	-	-
Stage 2	767	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	9.3	7.3		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1459	-	984	-	-	
HCM Lane V/C Ratio	0.095	-	0.151	-	-	
HCM Control Delay (s)	7.7	0	9.3	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0.3	-	0.5	-	-	

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	6:45	6:45	6:45	6:45	6:45	6:45
End Time	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	75	75	75	75	75	75
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	4	4	4	4	4	4
# of Recorded Intervals	3	3	3	3	3	3
Vehs Entered	6599	6530	6614	6596	6644	6596
Vehs Exited	6576	6541	6605	6537	6642	6580
Starting Vehs	335	395	355	366	377	364
Ending Vehs	358	384	364	425	379	383
Travel Distance (km)	17580	17409	17617	17547	17794	17589
Travel Time (hr)	388.6	381.0	383.6	383.9	388.5	385.1
Total Delay (hr)	129.9	124.8	124.1	125.3	126.1	126.0
Total Stops	6699	6456	6492	6625	6488	6552
Fuel Used (l)	1395.5	1384.0	1395.0	1390.8	1405.0	1394.1

Interval #0 Information Seeding

Start Time	6:45
End Time	7:00
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	
No data recorded this interval.	

Interval #1 Information Pre-Peak

Start Time	7:00
End Time	7:20
Total Time (min)	20
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	1	2	3	4	5	Avg
Vehs Entered	2148	2146	2143	2123	2089	2129
Vehs Exited	2081	2189	2117	2113	2084	2117
Starting Vehs	335	395	355	366	377	364
Ending Vehs	402	352	381	376	382	380
Travel Distance (km)	5734	5790	5703	5723	5617	5714
Travel Time (hr)	122.0	124.9	122.6	122.2	121.6	122.6
Total Delay (hr)	37.8	39.9	38.8	37.9	38.8	38.7
Total Stops	2032	2077	2024	2070	1987	2039
Fuel Used (l)	452.8	461.4	449.5	450.6	441.8	451.2

Interval #2 Information Peak

Start Time	7:20
End Time	7:35
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	1850	1728	1814	1855	1864	1823
Vehs Exited	1834	1682	1724	1785	1780	1761
Starting Vehs	402	352	381	376	382	380
Ending Vehs	418	398	471	446	466	443
Travel Distance (km)	4736	4456	4623	4764	4858	4687
Travel Time (hr)	111.3	97.9	104.8	108.4	109.8	106.4
Total Delay (hr)	41.0	32.3	36.4	38.2	37.8	37.1
Total Stops	2060	1725	1911	1985	1894	1913
Fuel Used (l)	384.4	355.3	371.1	380.2	386.6	375.5

Interval #3 Information Post-Peak

Start Time	7:35
End Time	8:00
Total Time (min)	25

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	1	2	3	4	5	Avg
Vehs Entered	2601	2656	2657	2618	2691	2645
Vehs Exited	2661	2670	2764	2639	2778	2704
Starting Vehs	418	398	471	446	466	443
Ending Vehs	358	384	364	425	379	383
Travel Distance (km)	7110	7164	7290	7060	7319	7189
Travel Time (hr)	155.4	158.2	156.2	153.3	157.1	156.0
Total Delay (hr)	51.0	52.6	49.0	49.2	49.5	50.3
Total Stops	2607	2654	2557	2570	2607	2598
Fuel Used (l)	558.4	567.3	574.3	560.1	576.6	567.3

Intersection: 58: Goreway Drive & Steeles Avenue East

Movement	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB	NB
Directions Served	L	T	T	T	L	T	T	T	R	L	L	T
Maximum Queue (m)	82.2	126.9	127.0	128.8	24.0	142.5	149.2	159.6	117.6	47.7	51.5	50.1
Average Queue (m)	28.0	70.3	72.8	76.8	7.3	88.8	93.2	92.0	21.2	16.9	29.6	23.2
95th Queue (m)	56.3	107.3	110.0	118.2	18.7	131.8	135.0	136.0	92.9	41.9	49.1	42.2
Link Distance (m)		651.1	651.1	651.1		1334.5	1334.5	1334.5				453.2
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	115.0				150.0				110.0	120.0	120.0	
Storage Blk Time (%)	0	0		0		0		3	0			
Queuing Penalty (veh)	0	0		0		0		10	0			

Intersection: 58: Goreway Drive & Steeles Avenue East

Movement	NB	NB	SB	SB	SB	SB	SB
Directions Served	T	R	L	L	T	T	R
Maximum Queue (m)	39.2	12.4	101.5	107.8	98.0	96.6	34.1
Average Queue (m)	14.3	0.8	53.8	63.4	43.7	48.0	5.1
95th Queue (m)	31.8	6.2	90.3	98.7	83.0	84.7	22.3
Link Distance (m)	453.2				916.9	916.9	916.9
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (m)		80.0	130.0	130.0			
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 61: Finch Avenue/Gorewood Drive & Steeles Avenue East

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB
Directions Served	L	T	T	T	R	L	T	T	TR	L	L	TR
Maximum Queue (m)	10.0	74.7	81.7	341.9	132.1	72.0	101.6	92.0	83.2	105.2	110.7	98.3
Average Queue (m)	0.6	37.3	42.7	53.9	36.7	29.7	57.9	53.5	46.4	63.1	61.0	42.2
95th Queue (m)	4.5	66.6	72.0	235.4	108.0	54.5	85.7	81.7	79.9	96.1	96.0	79.8
Link Distance (m)		1334.5	1334.5	1334.5			434.6	434.6		405.0	405.0	
Upstream Blk Time (%)				0								
Queuing Penalty (veh)				0								
Storage Bay Dist (m)	175.0				175.0	180.0			187.0			231.0
Storage Blk Time (%)					0							
Queuing Penalty (veh)					0							

Intersection: 61: Finch Avenue/Gorewood Drive & Steeles Avenue East

Movement	SB	SB
Directions Served	LT	TR
Maximum Queue (m)	85.1	58.4
Average Queue (m)	48.2	23.1
95th Queue (m)	77.3	48.6
Link Distance (m)	96.8	96.8
Upstream Blk Time (%)	0	
Queuing Penalty (veh)	0	
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 224: Goreway Drive & Intermodal Drive

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	NB	SB
Directions Served	L	T	R	L	T	TR	L	T	T	T	R	L
Maximum Queue (m)	44.4	61.6	59.6	72.2	67.6	78.8	95.1	44.3	47.8	46.4	20.6	105.7
Average Queue (m)	15.7	20.4	19.7	31.3	22.2	33.3	37.7	16.3	13.5	12.1	4.9	38.8
95th Queue (m)	36.1	46.4	41.1	61.0	51.6	65.6	74.6	35.0	33.9	33.3	15.1	75.8
Link Distance (m)		209.1	209.1		160.4	160.4		916.9	916.9	916.9		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	85.0			75.0			135.0				100.0	135.0
Storage Blk Time (%)		0		0								0
Queuing Penalty (veh)		0		0								0

Intersection: 224: Goreway Drive & Intermodal Drive

Movement	SB	SB	SB	SB
Directions Served	T	T	T	R
Maximum Queue (m)	127.4	125.8	119.9	106.9
Average Queue (m)	63.5	65.3	61.5	13.6
95th Queue (m)	111.0	111.5	107.5	48.8
Link Distance (m)	1489.2	1489.2	1489.2	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)				100.0
Storage Blk Time (%)	0		1	0
Queuing Penalty (veh)	0		1	0

Intersection: 225: Intermodal Drive & Deerhurst Drive

Movement	EB	WB	SB
Directions Served	L	TR	LR
Maximum Queue (m)	34.2	2.5	39.2
Average Queue (m)	8.2	0.1	17.7
95th Queue (m)	22.5	1.8	30.2
Link Distance (m)		336.6	160.1
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (m)	65.0		
Storage Blk Time (%)	0		
Queuing Penalty (veh)	0		

Intersection: 226: Gorewood Drive & Intermodal Drive

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (m)	34.0	5.9
Average Queue (m)	16.9	0.2
95th Queue (m)	27.1	3.0
Link Distance (m)	157.7	479.5
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 13

58: Goreway Drive & Steeles Avenue East
Intermodal Drive Extension

'With Extension' 2041 Conditions

PM Peak Period

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  		 	 		 	 	
Traffic Volume (vph)	222	1313	187	62	1124	513	327	1067	86	253	527	181
Future Volume (vph)	222	1313	187	62	1124	513	327	1067	86	253	527	181
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	115.0		150.0	150.0		110.0	120.0		80.0	130.0		0.0
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (m)	7.6			7.6			7.6			7.6		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Ped Bike Factor			0.98	1.00		0.95	0.99		0.99	1.00		0.96
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1534	4683	1484	1755	4561	1471	3278	3510	1570	2902	3444	1432
Flt Permitted	0.084			0.137			0.950			0.950		
Satd. Flow (perm)	136	4683	1457	253	4561	1399	3231	3510	1547	2900	3444	1372
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			191			249			100			185
Link Speed (k/h)		80			80			70			70	
Link Distance (m)		668.9			1373.2			472.6			952.1	
Travel Time (s)		30.1			61.8			24.3			49.0	
Confl. Peds. (#/hr)	22		4	4		22	21		2	2		21
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	19%	12%	10%	4%	15%	11%	8%	4%	4%	22%	6%	14%
Adj. Flow (vph)	227	1340	191	63	1147	523	334	1089	88	258	538	185
Shared Lane Traffic (%)												
Lane Group Flow (vph)	227	1340	191	63	1147	523	334	1089	88	258	538	185
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2		2	6		6			4			8
Detector Phase	5	2	2	1	6	6	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	5.0	12.0	12.0	5.0	12.0	12.0	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	8.0	34.7	34.7	8.0	34.7	34.7	13.0	39.7	39.7	13.0	39.7	39.7
Total Split (s)	28.0	63.0	63.0	9.0	44.0	44.0	35.0	67.0	67.0	21.0	53.0	53.0
Total Split (%)	17.5%	39.4%	39.4%	5.6%	27.5%	27.5%	21.9%	41.9%	41.9%	13.1%	33.1%	33.1%
Maximum Green (s)	25.0	56.3	56.3	6.0	37.3	37.3	30.0	60.3	60.3	16.0	46.3	46.3
Yellow Time (s)	3.0	4.6	4.6	3.0	4.6	4.6	3.0	4.2	4.2	3.0	4.2	4.2
All-Red Time (s)	0.0	2.1	2.1	0.0	2.1	2.1	2.0	2.5	2.5	2.0	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	6.7	6.7	3.0	6.7	6.7	5.0	6.7	6.7	5.0	6.7	6.7
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	None
Walk Time (s)		8.0	8.0		8.0	8.0		8.0	8.0		8.0	8.0
Flash Dont Walk (s)		20.0	20.0		20.0	20.0		25.0	25.0		25.0	25.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	73.8	62.9	62.9	55.2	45.5	45.5	21.6	55.6	55.6	15.9	49.9	49.9
Actuated g/C Ratio	0.46	0.39	0.39	0.34	0.28	0.28	0.14	0.35	0.35	0.10	0.31	0.31
v/c Ratio	0.90	0.73	0.28	0.44	0.89	0.91	0.76	0.89	0.15	0.90	0.50	0.33

58: Goreway Drive & Steeles Avenue East
Intermodal Drive Extension

'With Extension' 2041 Conditions
PM Peak Period

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	79.9	45.3	5.4	33.0	62.2	55.5	77.6	59.5	4.6	100.9	38.7	9.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	79.9	45.3	5.4	33.0	62.2	55.5	77.6	59.5	4.6	100.9	38.7	9.1
LOS	E	D	A	C	E	E	E	E	A	F	D	A
Approach Delay	45.5			59.1			60.3			49.5		
Approach LOS	D			E			E			D		
Queue Length 50th (m)	56.7	136.4	0.0	12.4	140.4	126.3	53.6	170.9	0.0	42.8	75.3	17.7
Queue Length 95th (m)	#101.3	160.8	17.0	m18.3	#182.6	#190.1	68.2	192.6	9.2	#65.0	96.2	41.4
Internal Link Dist (m)	644.9			1349.2			448.6			928.1		
Turn Bay Length (m)	115.0			150.0	150.0			110.0	120.0	80.0	130.0	
Base Capacity (vph)	281	1841	688	143	1296	576	614	1322	645	290	1073	554
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.81	0.73	0.28	0.44	0.89	0.91	0.54	0.82	0.14	0.89	0.50	0.33

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 61 (38%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 100

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.91

Intersection Signal Delay: 53.8

Intersection LOS: D

Intersection Capacity Utilization 91.0%

ICU Level of Service F

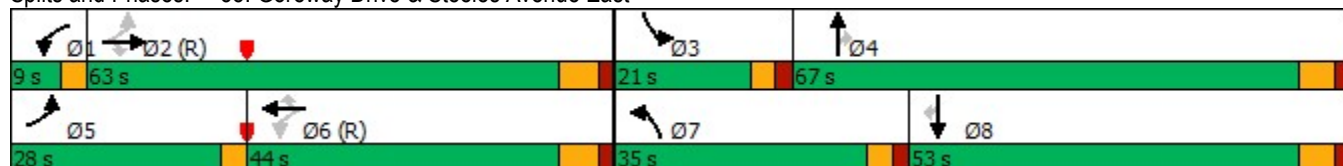
Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 58: Goreway Drive & Steeles Avenue East



61: Finch Avenue/Gorewood Drive & Steeles Avenue East 'With Extension' 2041 Conditions
Intermodal Drive Extension PM Peak Period

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  		 				 	
Traffic Volume (vph)	7	990	626	13	1060	222	552	72	95	80	91	13
Future Volume (vph)	7	990	626	13	1060	222	552	72	95	80	91	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.8	3.5	3.5	3.5	3.4	3.4	3.7	3.7	3.7
Storage Length (m)	175.0		175.0	180.0		187.0	0.0		231.0	0.0		0.0
Storage Lanes	1		1	1		1	2		1	0		0
Taper Length (m)	7.6			7.6			7.6			7.6		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	0.91	0.97	1.00	1.00	0.95	0.95	0.95
Ped Bike Factor	1.00		0.97		1.00		1.00	0.99			1.00	
Frt			0.850		0.974			0.915			0.989	
Flt Protected	0.950			0.950			0.950				0.979	
Satd. Flow (prot)	1825	4725	1484	1724	4389	0	2862	1307	0	0	2866	0
Flt Permitted	0.153			0.206			0.950				0.979	
Satd. Flow (perm)	294	4725	1442	374	4389	0	2856	1307	0	0	2859	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			659		39			41			4	
Link Speed (k/h)		80			80			80			50	
Link Distance (m)		1373.2			447.9			426.1			120.3	
Travel Time (s)		61.8			20.2			19.2			8.7	
Confl. Peds. (#/hr)	2		8	8		2	2		6	6		2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	11%	10%	7%	10%	29%	21%	44%	17%	25%	22%	20%
Adj. Flow (vph)	7	1042	659	14	1116	234	581	76	100	84	96	14
Shared Lane Traffic (%)												
Lane Group Flow (vph)	7	1042	659	14	1350	0	581	176	0	0	194	0
Turn Type	Perm	NA	Perm	pm+pt	NA		Split	NA		Split	NA	
Protected Phases		2		1	6		8	8		4	4	
Permitted Phases	2		2	6								
Detector Phase	2	2	2	1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	22.0	22.0	22.0	5.0	22.0		12.0	12.0		8.0	8.0	
Minimum Split (s)	29.9	29.9	29.9	8.0	29.9		45.2	45.2		15.2	15.2	
Total Split (s)	66.0	66.0	66.0	18.0	84.0		51.0	51.0		25.0	25.0	
Total Split (%)	41.3%	41.3%	41.3%	11.3%	52.5%		31.9%	31.9%		15.6%	15.6%	
Maximum Green (s)	59.1	59.1	59.1	15.0	77.1		43.8	43.8		17.8	17.8	
Yellow Time (s)	4.6	4.6	4.6	3.0	4.6		4.6	4.6		4.6	4.6	
All-Red Time (s)	2.3	2.3	2.3	0.0	2.3		2.6	2.6		2.6	2.6	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)	6.9	6.9	6.9	3.0	6.9		7.2	7.2			7.2	
Lead/Lag	Lag	Lag	Lag	Lead								
Lead-Lag Optimize?	Yes	Yes	Yes	Yes								
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	C-Max	C-Max	C-Max	None	C-Max		None	None		None	None	
Walk Time (s)	8.0	8.0	8.0		8.0		8.0	8.0				
Flash Dont Walk (s)	15.0	15.0	15.0		15.0		30.0	30.0				
Pedestrian Calls (#/hr)	0	0	0		0		0	0				
Act Effect Green (s)	81.6	81.6	81.6	89.4	85.5		37.7	37.7			15.5	
Actuated g/C Ratio	0.51	0.51	0.51	0.56	0.53		0.24	0.24			0.10	

61: Finch Avenue/Gorewood Drive & Steeles Avenue East 'With Extension' 2041 Conditions
Intermodal Drive Extension PM Peak Period

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.05	0.43	0.62	0.05	0.57		0.86	0.52			0.69	
Control Delay	4.9	6.7	13.4	18.9	26.3		72.0	45.2			81.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Delay	4.9	6.7	13.4	18.9	26.3		72.0	45.2			81.5	
LOS	A	A	B	B	C		E	D			F	
Approach Delay		9.2			26.2			65.7			81.5	
Approach LOS		A			C			E			F	
Queue Length 50th (m)	0.1	15.6	164.5	2.0	102.2		91.5	37.4			31.2	
Queue Length 95th (m)	m0.9	86.9	m223.9	6.2	128.0		109.4	60.2			45.0	
Internal Link Dist (m)		1349.2			423.9			402.1			96.3	
Turn Bay Length (m)	175.0		175.0	180.0								
Base Capacity (vph)	149	2408	1058	335	2364		783	387			322	
Starvation Cap Reductn	0	0	0	0	0		0	0			0	
Spillback Cap Reductn	0	0	0	0	0		0	0			0	
Storage Cap Reductn	0	0	0	0	0		0	0			0	
Reduced v/c Ratio	0.05	0.43	0.62	0.04	0.57		0.74	0.45			0.60	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 132 (83%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 100

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.86

Intersection Signal Delay: 29.1

Intersection LOS: C

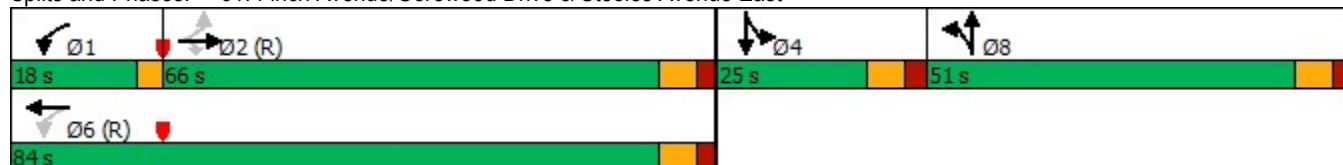
Intersection Capacity Utilization 68.5%

ICU Level of Service C

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 61: Finch Avenue/Gorewood Drive & Steeles Avenue East



224: Goreway Drive & Intermodal Drive
Intermodal Drive Extension

'With Extension' 2041 Conditions

PM Peak Period

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	108	76	169	116	110	192	157	1999	86	98	1037	81
Future Volume (vph)	108	76	169	116	110	192	157	1999	86	98	1037	81
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	85.0		0.0	75.0		0.0	135.0		100.0	135.0		100.0
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (m)	7.6			7.6			7.6			7.6		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.91	1.00	1.00	0.91	1.00
Frt			0.850		0.905				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1332	1325	1350	1521	2778	0	1217	4902	1096	1547	4856	1183
Flt Permitted	0.434			0.705			0.218			0.054		
Satd. Flow (perm)	609	1325	1350	1129	2778	0	279	4902	1096	88	4856	1183
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			178		174				79			85
Link Speed (k/h)		50			50			70			70	
Link Distance (m)		232.0			189.6			952.1			1512.1	
Travel Time (s)		16.7			13.7			49.0			77.8	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	37%	45%	21%	20%	31%	12%	50%	7%	49%	18%	8%	38%
Adj. Flow (vph)	114	80	178	122	116	202	165	2104	91	103	1092	85
Shared Lane Traffic (%)												
Lane Group Flow (vph)	114	80	178	122	318	0	165	2104	91	103	1092	85
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2		2	6		6
Detector Phase	4	4	4	8	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0		6.0	12.0	12.0	6.0	12.0	12.0
Minimum Split (s)	45.0	45.0	45.0	45.0	45.0		9.0	42.0	42.0	10.5	42.0	42.0
Total Split (s)	52.0	52.0	52.0	52.0	52.0		26.0	90.0	90.0	18.0	82.0	82.0
Total Split (%)	32.5%	32.5%	32.5%	32.5%	32.5%		16.3%	56.3%	56.3%	11.3%	51.3%	51.3%
Maximum Green (s)	46.0	46.0	46.0	46.0	46.0		23.0	84.0	84.0	15.0	76.0	76.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		0.0	2.0	2.0	0.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0		3.0	6.0	6.0	3.0	6.0	6.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?								Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)	12.0	12.0	12.0	12.0	12.0			12.0	12.0		12.0	12.0
Flash Dont Walk (s)	27.0	27.0	27.0	27.0	27.0			24.0	24.0		24.0	24.0
Pedestrian Calls (#/hr)	0	0	0	0	0			0	0		0	0
Act Effect Green (s)	31.9	31.9	31.9	31.9	31.9		117.3	101.8	101.8	114.4	100.2	100.2
Actuated g/C Ratio	0.20	0.20	0.20	0.20	0.20		0.73	0.64	0.64	0.72	0.63	0.63
v/c Ratio	0.94	0.30	0.43	0.54	0.46		0.59	0.67	0.13	0.62	0.36	0.11
Control Delay	128.7	54.4	9.0	62.9	23.5		12.0	21.8	5.0	42.3	16.8	4.0
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0

224: Goreway Drive & Intermodal Drive
Intermodal Drive Extension

'With Extension' 2041 Conditions
PM Peak Period

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	128.7	54.4	9.0	62.9	23.5		12.0	21.8	5.0	42.3	16.8	4.0
LOS	F	D	A	E	C		B	C	A	D	B	A
Approach Delay	55.5			34.4			20.4			18.0		
Approach LOS	E			C			C			B		
Queue Length 50th (m)	36.1	21.9	0.0	35.7	21.7		10.3	181.3	4.5	12.5	58.1	0.0
Queue Length 95th (m)	#57.8	34.3	18.6	53.8	35.5		m26.0	231.1	m10.0	36.8	94.2	9.3
Internal Link Dist (m)	208.0			165.6			928.1			1488.1		
Turn Bay Length (m)	85.0			75.0			135.0		100.0	135.0		100.0
Base Capacity (vph)	175	380	514	324	922		342	3120	726	201	3041	772
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.65	0.21	0.35	0.38	0.34		0.48	0.67	0.13	0.51	0.36	0.11

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 69 (43%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 100

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.94

Intersection Signal Delay: 24.0

Intersection LOS: C

Intersection Capacity Utilization 78.3%

ICU Level of Service D

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 224: Goreway Drive & Intermodal Drive



225: Intermodal Drive & Deerhurst Drive
Intermodal Drive Extension

'With Extension' 2041 Conditions
PM Peak Period

Intersection						
Int Delay, s/veh	3.6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	79	168	294	11	25	106
Future Vol, veh/h	79	168	294	11	25	106
Conflicting Peds, #/hr	3	0	0	3	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	65	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	83	83	83	83	83	83
Heavy Vehicles, %	65	18	9	18	16	19
Mvmt Flow	95	202	354	13	30	128
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	370	0	-	0	655	187
Stage 1	-	-	-	-	364	-
Stage 2	-	-	-	-	291	-
Critical Hdwy	5.4	-	-	-	7.12	7.28
Critical Hdwy Stg 1	-	-	-	-	6.12	-
Critical Hdwy Stg 2	-	-	-	-	6.12	-
Follow-up Hdwy	2.85	-	-	-	3.66	3.49
Pot Cap-1 Maneuver	837	-	-	-	369	773
Stage 1	-	-	-	-	634	-
Stage 2	-	-	-	-	693	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	835	-	-	-	325	771
Mov Cap-2 Maneuver	-	-	-	-	325	-
Stage 1	-	-	-	-	560	-
Stage 2	-	-	-	-	691	-
Approach	EB	WB		SB		
HCM Control Delay, s	3.2	0		12.9		
HCM LOS	B					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	835	-	-	-	611	
HCM Lane V/C Ratio	0.114	-	-	-	0.258	
HCM Control Delay (s)	9.9	-	-	-	12.9	
HCM Lane LOS	A	-	-	-	B	
HCM 95th %tile Q(veh)	0.4	-	-	-	1	

226: Gorewood Drive & Intermodal Drive
Intermodal Drive Extension

'With Extension' 2041 Conditions
PM Peak Period

Intersection						
Int Delay, s/veh	7.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	119	141	17	7	0
Future Vol, veh/h	0	119	141	17	7	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	28	34	0	0	0
Mvmt Flow	0	129	153	18	8	0
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	332	8	8	0	-	0
Stage 1	8	-	-	-	-	-
Stage 2	324	-	-	-	-	-
Critical Hdwy	6.4	6.48	4.44	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.552	2.506	-	-	-
Pot Cap-1 Maneuver	667	1003	1426	-	-	-
Stage 1	1020	-	-	-	-	-
Stage 2	738	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	595	1003	1426	-	-	-
Mov Cap-2 Maneuver	595	-	-	-	-	-
Stage 1	910	-	-	-	-	-
Stage 2	738	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	9.1	7		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1426	-	1003	-	-	
HCM Lane V/C Ratio	0.107	-	0.129	-	-	
HCM Control Delay (s)	7.8	0	9.1	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0.4	-	0.4	-	-	

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	6:45	6:45	6:45	6:45	6:45	6:45
End Time	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	75	75	75	75	75	75
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	4	4	4	4	4	4
# of Recorded Intervals	3	3	3	3	3	3
Vehs Entered	7707	7782	7572	7729	7615	7681
Vehs Exited	7677	7795	7552	7649	7633	7662
Starting Vehs	478	471	461	447	467	466
Ending Vehs	508	458	481	527	449	482
Travel Distance (km)	20858	21066	20761	20963	20748	20879
Travel Time (hr)	490.8	485.5	481.0	490.3	488.3	487.2
Total Delay (hr)	184.4	176.2	176.2	182.6	182.9	180.4
Total Stops	8955	8629	8728	8733	8967	8804
Fuel Used (l)	1694.4	1694.3	1676.5	1691.5	1683.7	1688.1

Interval #0 Information Seeding

Start Time	6:45
End Time	7:00
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	
No data recorded this interval.	

Interval #1 Information Pre-Peak

Start Time	7:00
End Time	7:20
Total Time (min)	20
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	1	2	3	4	5	Avg
Vehs Entered	2514	2607	2507	2474	2475	2515
Vehs Exited	2508	2587	2457	2446	2479	2495
Starting Vehs	478	471	461	447	467	466
Ending Vehs	484	491	511	475	463	478
Travel Distance (km)	6860	7131	6812	6814	6802	6884
Travel Time (hr)	157.5	161.6	156.2	153.7	154.7	156.8
Total Delay (hr)	56.6	57.4	56.2	53.9	54.6	55.7
Total Stops	2833	2796	2781	2695	2846	2791
Fuel Used (l)	554.1	575.5	546.7	545.4	549.3	554.2

Interval #2 Information Peak

Start Time	7:20
End Time	7:35
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	2037	2062	1933	2006	2053	2016
Vehs Exited	2021	2053	1968	1923	1996	1994
Starting Vehs	484	491	511	475	463	478
Ending Vehs	500	500	476	558	520	511
Travel Distance (km)	5427	5455	5196	5218	5379	5335
Travel Time (hr)	131.4	130.1	122.5	123.1	125.9	126.6
Total Delay (hr)	51.5	49.8	46.0	46.3	46.5	48.0
Total Stops	2472	2407	2283	2257	2299	2342
Fuel Used (l)	444.8	442.8	422.2	421.8	433.9	433.1

Interval #3 Information Post-Peak

Start Time	7:35
End Time	8:00
Total Time (min)	25

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	1	2	3	4	5	Avg
Vehs Entered	3156	3113	3132	3249	3087	3148
Vehs Exited	3148	3155	3127	3280	3158	3174
Starting Vehs	500	500	476	558	520	511
Ending Vehs	508	458	481	527	449	482
Travel Distance (km)	8570	8481	8753	8931	8568	8660
Travel Time (hr)	202.0	193.8	202.2	213.5	207.8	203.8
Total Delay (hr)	76.3	69.0	73.9	82.4	81.7	76.7
Total Stops	3650	3426	3664	3781	3822	3671
Fuel Used (l)	695.6	675.9	707.7	724.3	700.5	700.8

Queuing and Blocking Report
Intermodal Drive Extension

'With Extension' 2041 Conditions
PM Peak Period

Intersection: 9: Bend

Movement	NW	NW	NW
Directions Served	T	T	T
Maximum Queue (m)	295.0	297.0	298.3
Average Queue (m)	10.2	10.2	10.3
95th Queue (m)	211.6	213.0	214.0
Link Distance (m)	1489.2	1489.2	1489.2
Upstream Blk Time (%)		0	0
Queuing Penalty (veh)		0	0
Storage Bay Dist (m)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 58: Goreway Drive & Steeles Avenue East

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB
Directions Served	L	T	T	T	R	L	T	T	T	R	L	L
Maximum Queue (m)	122.0	149.6	144.7	140.5	39.6	115.6	198.2	214.6	229.7	117.6	69.4	127.5
Average Queue (m)	65.3	87.8	91.1	89.7	1.6	22.2	118.3	125.3	127.2	86.3	40.0	64.1
95th Queue (m)	113.5	129.2	127.9	124.7	24.1	67.5	178.8	192.0	209.0	152.6	64.7	116.7
Link Distance (m)		651.1	651.1	651.1			1334.5	1334.5	1334.5			
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	115.0				150.0	150.0				110.0	120.0	120.0
Storage Blk Time (%)	1	1		0	0		3		10	4		0
Queuing Penalty (veh)	6	3		0	0		2		50	15		0

Intersection: 58: Goreway Drive & Steeles Avenue East

Movement	NB	NB	NB	SB	SB	SB	SB	SB
Directions Served	T	T	R	L	L	T	T	R
Maximum Queue (m)	180.6	173.0	87.6	117.5	124.0	111.7	85.9	45.4
Average Queue (m)	108.0	108.5	18.6	60.2	68.7	42.2	44.7	7.6
95th Queue (m)	154.0	154.9	75.6	105.7	113.3	83.7	76.0	28.1
Link Distance (m)	453.2	453.2				916.9	916.9	916.9
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (m)			80.0	130.0	130.0			
Storage Blk Time (%)	4	19	0	0	1	0		
Queuing Penalty (veh)	14	16	0	0	2	0		

Intersection: 61: Finch Avenue/Gorewood Drive & Steeles Avenue East

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB
Directions Served	L	T	T	T	R	L	T	T	TR	L	L	TR
Maximum Queue (m)	9.8	27.6	35.6	570.8	87.9	18.4	113.5	104.7	112.2	124.3	116.8	87.7
Average Queue (m)	1.3	8.6	13.5	55.6	17.1	3.1	66.2	64.0	71.1	75.0	73.2	39.3
95th Queue (m)	6.3	23.0	29.3	417.3	63.9	11.5	97.6	95.4	107.9	110.5	105.6	75.9
Link Distance (m)		1334.5	1334.5	1334.5			434.6	434.6		405.0	405.0	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	175.0				175.0	180.0			187.0			231.0
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 61: Finch Avenue/Gorewood Drive & Steeles Avenue East

Movement	SB	SB
Directions Served	LT	TR
Maximum Queue (m)	66.6	49.7
Average Queue (m)	38.9	21.0
95th Queue (m)	62.4	42.8
Link Distance (m)	96.8	96.8
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 224: Goreway Drive & Intermodal Drive

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	NB	SB
Directions Served	L	T	R	L	T	TR	L	T	T	T	R	L
Maximum Queue (m)	79.8	76.0	45.4	78.1	62.7	87.1	124.0	149.1	152.7	619.0	107.6	51.1
Average Queue (m)	36.2	27.3	18.6	32.7	22.0	42.9	40.3	85.2	90.4	122.4	23.8	25.5
95th Queue (m)	74.1	61.1	35.6	63.3	51.3	74.5	84.5	142.7	148.0	381.4	83.4	44.9
Link Distance (m)		209.1	209.1		160.4	160.4		916.9	916.9	916.9		
Upstream Blk Time (%)										1		
Queuing Penalty (veh)										4		
Storage Bay Dist (m)	85.0			75.0			135.0				100.0	135.0
Storage Blk Time (%)	2	0		1			0	0		6	0	
Queuing Penalty (veh)	1	0		1			0	1		5	0	

Intersection: 224: Goreway Drive & Intermodal Drive

Movement	SB	SB	SB	SB
Directions Served	T	T	T	R
Maximum Queue (m)	74.8	73.8	72.1	31.5
Average Queue (m)	41.2	41.5	38.5	8.1
95th Queue (m)	67.3	67.3	64.7	21.5
Link Distance (m)	1489.2	1489.2	1489.2	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)			100.0	
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 225: Intermodal Drive & Deerhurst Drive

Movement	EB	WB	WB	SB
Directions Served	L	T	TR	LR
Maximum Queue (m)	30.8	1.3	4.7	33.6
Average Queue (m)	10.2	0.0	0.2	14.9
95th Queue (m)	25.2	0.9	2.8	26.5
Link Distance (m)		336.6	336.6	160.1
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)	65.0			
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 226: Gorewood Drive & Intermodal Drive

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (m)	27.6	11.8
Average Queue (m)	15.4	0.6
95th Queue (m)	24.8	5.1
Link Distance (m)	157.7	479.5
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 121

58: Goreway Drive & Steeles Avenue East
Intermodal Drive Extension

'With Extension' 2051 Conditions

AM Peak Period

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  		 	 		 	 	
Traffic Volume (vph)	120	1334	120	33	1050	309	131	185	44	428	670	195
Future Volume (vph)	120	1334	120	33	1050	309	131	185	44	428	670	195
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	115.0		150.0	150.0		110.0	120.0		80.0	130.0		0.0
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (m)	7.6			7.6			7.6			7.6		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Ped Bike Factor			0.97			0.94	0.99		0.97	0.99		0.97
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1342	4561	1471	1772	4683	1432	2975	3380	1601	3106	3380	1396
Flt Permitted	0.159			0.118			0.950			0.950		
Satd. Flow (perm)	225	4561	1424	220	4683	1348	2955	3380	1557	3068	3380	1353
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			132			340			134			203
Link Speed (k/h)		80			80			70			70	
Link Distance (m)		668.9			1373.2			472.6			952.1	
Travel Time (s)		30.1			61.8			24.3			49.0	
Confl. Peds. (#/hr)	28		12	12		28	13		11	11		13
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	36%	15%	11%	3%	12%	14%	19%	8%	2%	14%	8%	17%
Adj. Flow (vph)	132	1466	132	36	1154	340	144	203	48	470	736	214
Shared Lane Traffic (%)												
Lane Group Flow (vph)	132	1466	132	36	1154	340	144	203	48	470	736	214
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2		2	6		6			4			8
Detector Phase	5	2	2	1	6	6	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	5.0	12.0	12.0	5.0	12.0	12.0	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	8.0	34.7	34.7	8.0	34.7	34.7	13.0	39.7	39.7	13.0	39.7	39.7
Total Split (s)	18.0	61.0	61.0	13.0	56.0	56.0	20.0	42.0	42.0	44.0	66.0	66.0
Total Split (%)	11.3%	38.1%	38.1%	8.1%	35.0%	35.0%	12.5%	26.3%	26.3%	27.5%	41.3%	41.3%
Maximum Green (s)	15.0	54.3	54.3	10.0	49.3	49.3	15.0	35.3	35.3	39.0	59.3	59.3
Yellow Time (s)	3.0	4.6	4.6	3.0	4.6	4.6	3.0	4.2	4.2	3.0	4.2	4.2
All-Red Time (s)	0.0	2.1	2.1	0.0	2.1	2.1	2.0	2.5	2.5	2.0	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-3.0	0.0	0.0
Total Lost Time (s)	3.0	6.7	6.7	3.0	6.7	6.7	5.0	6.7	6.7	2.0	6.7	6.7
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	None
Walk Time (s)		8.0	8.0		8.0	8.0		8.0	8.0		8.0	8.0
Flash Dont Walk (s)		20.0	20.0		20.0	20.0		25.0	25.0		25.0	25.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	90.6	78.5	78.5	81.7	70.8	70.8	12.7	25.1	25.1	32.6	42.0	42.0
Actuated g/C Ratio	0.57	0.49	0.49	0.51	0.44	0.44	0.08	0.16	0.16	0.20	0.26	0.26
v/c Ratio	0.61	0.66	0.17	0.20	0.56	0.43	0.61	0.38	0.13	0.74	0.83	0.42

58: Goreway Drive & Steeles Avenue East
Intermodal Drive Extension

'With Extension' 2051 Conditions
AM Peak Period

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	30.6	34.3	4.8	30.4	55.1	19.1	82.1	62.0	0.8	55.3	48.0	7.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.6	34.3	4.8	30.4	55.1	19.1	82.1	62.0	0.8	55.3	48.0	7.7
LOS	C	C	A	C	E	B	F	E	A	E	D	A
Approach Delay	31.8			46.5			61.9			44.3		
Approach LOS	C			D			E			D		
Queue Length 50th (m)	19.8	129.5	0.0	8.0	130.6	36.6	23.1	30.8	0.0	71.8	117.8	24.5
Queue Length 95th (m)	36.7	168.7	13.5	m17.1	148.7	65.7	34.8	42.8	0.0	66.6	113.3	18.0
Internal Link Dist (m)	644.9			1349.2			448.6			928.1		
Turn Bay Length (m)	115.0			150.0	150.0			110.0	120.0	80.0	130.0	
Base Capacity (vph)	232	2236	765	213	2073	786	278	745	447	815	1252	629
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.57	0.66	0.17	0.17	0.56	0.43	0.52	0.27	0.11	0.58	0.59	0.34

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 76 (48%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 100

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.83

Intersection Signal Delay: 42.1

Intersection LOS: D

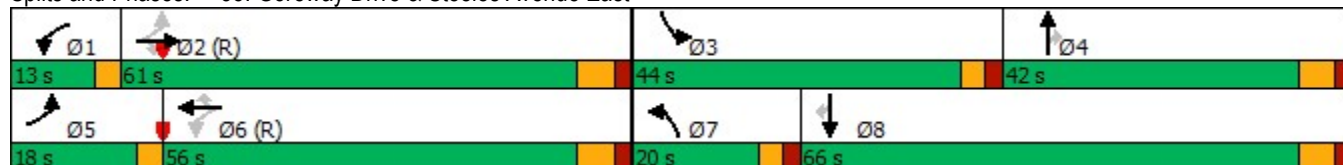
Intersection Capacity Utilization 77.0%

ICU Level of Service D

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 58: Goreway Drive & Steeles Avenue East



61: Finch Avenue/Gorewood Drive & Steeles Avenue East 'With Extension' 2051 Conditions
Intermodal Drive Extension

AM Peak Period

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  		 				 	
Traffic Volume (vph)	4	1005	688	135	878	97	479	94	129	96	92	6
Future Volume (vph)	4	1005	688	135	878	97	479	94	129	96	92	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.8	3.5	3.5	3.5	3.4	3.4	3.7	3.7	3.7
Storage Length (m)	175.0		175.0	180.0		187.0	0.0		231.0	0.0		0.0
Storage Lanes	1		1	1		1	2		1	0		0
Taper Length (m)	7.6			7.6			7.6			7.6		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	0.91	0.97	1.00	1.00	0.95	0.95	0.95
Ped Bike Factor	0.99		0.98		0.99		1.00	0.99			1.00	
Frt			0.850		0.985			0.913			0.995	
Flt Protected	0.950			0.950			0.950				0.976	
Satd. Flow (prot)	1560	4683	1384	1647	4370	0	2985	1477	0	0	2568	0
Flt Permitted	0.258			0.181			0.950				0.976	
Satd. Flow (perm)	420	4683	1362	314	4370	0	2982	1477	0	0	2563	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			748		16			43			2	
Link Speed (k/h)		80			80			80			50	
Link Distance (m)		1373.2			447.9			426.1			120.3	
Travel Time (s)		61.8			20.2			19.2			8.7	
Confl. Peds. (#/hr)	10		2	2		10	1		4	4		1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	17%	12%	18%	12%	14%	24%	16%	16%	12%	35%	42%	25%
Adj. Flow (vph)	4	1092	748	147	954	105	521	102	140	104	100	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	4	1092	748	147	1059	0	521	242	0	0	211	0
Turn Type	Perm	NA	Perm	pm+pt	NA		Split	NA		Split	NA	
Protected Phases		2		1	6		8	8		4	4	
Permitted Phases	2		2	6								
Detector Phase	2	2	2	1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	22.0	22.0	22.0	5.0	22.0		12.0	12.0		8.0	8.0	
Minimum Split (s)	29.9	29.9	29.9	8.0	29.9		45.2	45.2		15.2	15.2	
Total Split (s)	66.0	66.0	66.0	18.0	84.0		51.0	51.0		25.0	25.0	
Total Split (%)	41.3%	41.3%	41.3%	11.3%	52.5%		31.9%	31.9%		15.6%	15.6%	
Maximum Green (s)	59.1	59.1	59.1	15.0	77.1		43.8	43.8		17.8	17.8	
Yellow Time (s)	4.6	4.6	4.6	3.0	4.6		4.6	4.6		4.6	4.6	
All-Red Time (s)	2.3	2.3	2.3	0.0	2.3		2.6	2.6		2.6	2.6	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)	6.9	6.9	6.9	3.0	6.9		7.2	7.2			7.2	
Lead/Lag	Lag	Lag	Lag	Lead								
Lead-Lag Optimize?	Yes	Yes	Yes	Yes								
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	C-Max	C-Max	C-Max	None	C-Max		None	None		None	None	
Walk Time (s)	8.0	8.0	8.0		8.0		8.0	8.0				
Flash Dont Walk (s)	15.0	15.0	15.0		15.0		30.0	30.0				
Pedestrian Calls (#/hr)	0	0	0		0		0	0				
Act Effect Green (s)	73.2	73.2	73.2	92.2	88.3		33.8	33.8			16.6	
Actuated g/C Ratio	0.46	0.46	0.46	0.58	0.55		0.21	0.21			0.10	

61: Finch Avenue/Gorewood Drive & Steeles Avenue East 'With Extension' 2051 Conditions
Intermodal Drive Extension

AM Peak Period

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.02	0.51	0.73	0.52	0.44		0.83	0.70				0.79
Control Delay	20.5	21.8	12.4	24.1	22.4		71.6	58.3				89.7
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0				0.0
Total Delay	20.5	21.8	12.4	24.1	22.4		71.6	58.3				89.7
LOS	C	C	B	C	C		E	E				F
Approach Delay		18.0			22.6			67.4				89.7
Approach LOS		B			C			E				F
Queue Length 50th (m)	0.3	67.4	152.5	21.6	71.5		82.2	59.5				34.4
Queue Length 95th (m)	m0.6	64.4	216.1	37.4	91.9		97.7	86.1				#51.1
Internal Link Dist (m)		1349.2			423.9			402.1				96.3
Turn Bay Length (m)	175.0		175.0	180.0								
Base Capacity (vph)	192	2142	1028	305	2418		817	435				287
Starvation Cap Reductn	0	0	0	0	0		0	0				0
Spillback Cap Reductn	0	0	0	0	0		0	0				0
Storage Cap Reductn	0	0	0	0	0		0	0				0
Reduced v/c Ratio	0.02	0.51	0.73	0.48	0.44		0.64	0.56				0.74

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 127 (79%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 100

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.83

Intersection Signal Delay: 32.5

Intersection LOS: C

Intersection Capacity Utilization 83.6%

ICU Level of Service E

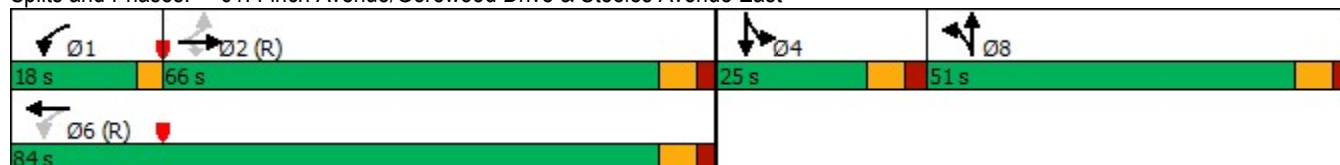
Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 61: Finch Avenue/Gorewood Drive & Steeles Avenue East



224: Goreway Drive & Intermodal Drive
Intermodal Drive Extension

'With Extension' 2051 Conditions

AM Peak Period

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	69	104	85	85	133	126	737	89	190	1742	100
Future Volume (vph)	40	69	104	85	85	133	126	737	89	190	1742	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	85.0		0.0	75.0		0.0	135.0		100.0	135.0		100.0
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (m)	7.6			7.6			7.6			7.6		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.91	1.00	1.00	0.91	1.00
Frt			0.850		0.908				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1313	1372	1008	1141	2461	0	1250	4768	1118	1587	4902	1096
Flt Permitted	0.499			0.709			0.076			0.340		
Satd. Flow (perm)	690	1372	1008	851	2461	0	100	4768	1118	568	4902	1096
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			112		143				96			90
Link Speed (k/h)		50			50			70			70	
Link Distance (m)		232.0			189.6			952.1			1512.1	
Travel Time (s)		16.7			13.7			49.0			77.8	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	39%	40%	62%	60%	64%	16%	46%	10%	46%	15%	7%	49%
Adj. Flow (vph)	43	74	112	91	91	143	135	792	96	204	1873	108
Shared Lane Traffic (%)												
Lane Group Flow (vph)	43	74	112	91	234	0	135	792	96	204	1873	108
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases		4			8		5	2			6	
Permitted Phases	4		4	8			2		2	6		6
Detector Phase	4	4	4	8	8		5	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0		6.0	12.0	12.0	12.0	12.0	12.0
Minimum Split (s)	45.0	45.0	45.0	45.0	45.0		9.0	42.0	42.0	42.0	42.0	42.0
Total Split (s)	65.0	65.0	65.0	65.0	65.0		18.0	95.0	95.0	77.0	77.0	77.0
Total Split (%)	40.6%	40.6%	40.6%	40.6%	40.6%		11.3%	59.4%	59.4%	48.1%	48.1%	48.1%
Maximum Green (s)	59.0	59.0	59.0	59.0	59.0		15.0	89.0	89.0	71.0	71.0	71.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		3.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		0.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0		3.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag							Lead			Lag	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	C-Max	C-Max	C-Max
Walk Time (s)	12.0	12.0	12.0	12.0	12.0			12.0	12.0	12.0	12.0	12.0
Flash Dont Walk (s)	27.0	27.0	27.0	27.0	27.0			24.0	24.0	24.0	24.0	24.0
Pedestrian Calls (#/hr)	0	0	0	0	0			0	0	0	0	0
Act Effct Green (s)	23.0	23.0	23.0	23.0	23.0		128.0	125.0	125.0	103.6	103.6	103.6
Actuated g/C Ratio	0.14	0.14	0.14	0.14	0.14		0.80	0.78	0.78	0.65	0.65	0.65
v/c Ratio	0.43	0.38	0.47	0.75	0.49		0.64	0.21	0.11	0.56	0.59	0.15
Control Delay	73.2	64.9	15.1	106.2	34.5		38.2	3.9	0.4	27.0	19.1	4.7
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0

224: Goreway Drive & Intermodal Drive
Intermodal Drive Extension

'With Extension' 2051 Conditions
AM Peak Period

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	73.2	64.9	15.1	106.2	34.5		38.2	3.9	0.4	27.0	19.1	4.7
LOS	E	E	B	F	C		D	A	A	C	B	A
Approach Delay	42.1			54.6			8.1			19.1		
Approach LOS	D			D			A			B		
Queue Length 50th (m)	12.7	21.6	0.0	29.1	15.7		12.8	15.4	0.1	34.3	119.5	2.0
Queue Length 95th (m)	24.5	35.4	17.9	46.6	28.6		31.7	21.0	0.4	82.9	179.1	12.6
Internal Link Dist (m)	208.0			165.6			928.1			1488.1		
Turn Bay Length (m)	85.0			75.0			135.0		100.0	135.0		100.0
Base Capacity (vph)	254	505	442	313	997		219	3725	894	367	3173	741
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.15	0.25	0.29	0.23		0.62	0.21	0.11	0.56	0.59	0.15

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 97 (61%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 100

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.75

Intersection Signal Delay: 20.6

Intersection LOS: C

Intersection Capacity Utilization 72.3%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 224: Goreway Drive & Intermodal Drive



225: Intermodal Drive & Deerhurst Drive
Intermodal Drive Extension

'With Extension' 2051 Conditions
AM Peak Period

Intersection						
Int Delay, s/veh	3.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	100	228	205	18	10	82
Future Vol, veh/h	100	228	205	18	10	82
Conflicting Peds, #/hr	10	0	0	10	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	65	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	75	75	75	75	75	75
Heavy Vehicles, %	35	12	4	11	10	71
Mvmt Flow	133	304	273	24	13	109
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	307	0	-	0	713	159
Stage 1	-	-	-	-	295	-
Stage 2	-	-	-	-	418	-
Critical Hdwy	4.8	-	-	-	7	8.32
Critical Hdwy Stg 1	-	-	-	-	6	-
Critical Hdwy Stg 2	-	-	-	-	6	-
Follow-up Hdwy	2.55	-	-	-	3.6	4.01
Pot Cap-1 Maneuver	1043	-	-	-	350	678
Stage 1	-	-	-	-	706	-
Stage 2	-	-	-	-	610	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1033	-	-	-	299	671
Mov Cap-2 Maneuver	-	-	-	-	299	-
Stage 1	-	-	-	-	609	-
Stage 2	-	-	-	-	604	-
Approach	EB	WB		SB		
HCM Control Delay, s	2.7	0		12.7		
HCM LOS				B		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1033	-	-	-	591	
HCM Lane V/C Ratio	0.129	-	-	-	0.208	
HCM Control Delay (s)	9	-	-	-	12.7	
HCM Lane LOS	A	-	-	-	B	
HCM 95th %tile Q(veh)	0.4	-	-	-	0.8	

226: Gorewood Drive & Intermodal Drive
Intermodal Drive Extension

'With Extension' 2051 Conditions
AM Peak Period

Intersection						
Int Delay, s/veh	8.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	140	129	7	6	0
Future Vol, veh/h	0	140	129	7	6	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	36	28	0	0	0
Mvmt Flow	0	152	140	8	7	0
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	295	7	7	0	-	0
Stage 1	7	-	-	-	-	-
Stage 2	288	-	-	-	-	-
Critical Hdwy	6.4	6.56	4.38	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.624	2.452	-	-	-
Pot Cap-1 Maneuver	700	984	1459	-	-	-
Stage 1	1021	-	-	-	-	-
Stage 2	766	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	633	984	1459	-	-	-
Mov Cap-2 Maneuver	633	-	-	-	-	-
Stage 1	923	-	-	-	-	-
Stage 2	766	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	9.3	7.3		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1459	-	984	-	-	
HCM Lane V/C Ratio	0.096	-	0.155	-	-	
HCM Control Delay (s)	7.7	0	9.3	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0.3	-	0.5	-	-	

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	6:45	6:45	6:45	6:45	6:45	6:45
End Time	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	75	75	75	75	75	75
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	4	4	4	4	4	4
# of Recorded Intervals	3	3	3	3	3	3
Vehs Entered	6662	6797	6693	6656	6656	6696
Vehs Exited	6642	6807	6666	6666	6656	6688
Starting Vehs	370	399	345	399	369	372
Ending Vehs	390	389	372	389	369	380
Travel Distance (km)	17734	18139	17807	17793	17833	17861
Travel Time (hr)	390.0	406.8	388.1	393.7	393.4	394.4
Total Delay (hr)	129.3	139.5	125.9	130.7	131.8	131.4
Total Stops	6639	6994	6532	6688	6710	6713
Fuel Used (l)	1412.5	1456.1	1415.0	1417.1	1413.2	1422.8

Interval #0 Information Seeding

Start Time	6:45
End Time	7:00
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	
No data recorded this interval.	

Interval #1 Information Pre-Peak

Start Time	7:00
End Time	7:20
Total Time (min)	20
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	1	2	3	4	5	Avg
Vehs Entered	2136	2206	2107	2111	2197	2151
Vehs Exited	2119	2212	2097	2094	2168	2137
Starting Vehs	370	399	345	399	369	372
Ending Vehs	387	393	355	416	398	390
Travel Distance (km)	5767	5950	5713	5606	5812	5770
Travel Time (hr)	125.1	132.9	122.9	121.7	127.4	126.0
Total Delay (hr)	40.9	45.3	38.7	38.7	42.0	41.1
Total Stops	2099	2244	1999	2043	2165	2109
Fuel Used (l)	462.8	479.8	452.8	447.1	458.6	460.2

Interval #2 Information Peak

Start Time 7:20
End Time 7:35
Total Time (min) 15

Volumes adjusted by PHF, Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	1865	1855	1866	1841	1852	1854
Vehs Exited	1814	1814	1786	1783	1822	1803
Starting Vehs	387	393	355	416	398	390
Ending Vehs	438	434	435	474	428	443
Travel Distance (km)	4800	4850	4749	4735	4877	4802
Travel Time (hr)	108.9	114.9	104.5	106.5	110.4	109.1
Total Delay (hr)	37.7	43.0	34.3	36.6	38.8	38.1
Total Stops	1927	2072	1773	1840	1911	1907
Fuel Used (l)	381.6	396.4	379.7	376.6	388.7	384.6

Interval #3 Information Post-Peak

Start Time 7:35
End Time 8:00
Total Time (min) 25

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	1	2	3	4	5	Avg
Vehs Entered	2661	2736	2720	2704	2607	2686
Vehs Exited	2709	2781	2783	2789	2666	2746
Starting Vehs	438	434	435	474	428	443
Ending Vehs	390	389	372	389	369	380
Travel Distance (km)	7167	7339	7345	7452	7145	7290
Travel Time (hr)	155.9	158.9	160.7	165.5	155.5	159.3
Total Delay (hr)	50.6	51.2	52.9	55.3	51.1	52.2
Total Stops	2613	2678	2760	2805	2634	2696
Fuel Used (l)	568.1	579.9	582.5	593.5	565.9	578.0

Intersection: 58: Goreway Drive & Steeles Avenue East

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB
Directions Served	L	T	T	T	R	L	T	T	T	R	L	L
Maximum Queue (m)	93.7	121.6	133.1	135.4	30.7	23.7	128.7	141.1	153.1	117.5	53.4	61.2
Average Queue (m)	32.9	74.3	78.4	79.8	1.1	7.8	88.6	94.1	92.5	22.6	16.7	29.4
95th Queue (m)	64.5	108.6	115.7	121.1	22.0	19.4	126.6	131.7	135.3	94.6	41.9	51.6
Link Distance (m)		651.1	651.1	651.1			1334.5	1334.5	1334.5			
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	115.0				150.0	150.0				110.0	120.0	120.0
Storage Blk Time (%)	0	1		0	0				4	0		
Queuing Penalty (veh)	0	1		0	0				12	0		

Intersection: 58: Goreway Drive & Steeles Avenue East

Movement	NB	NB	NB	SB	SB	SB	SB	SB
Directions Served	T	T	R	L	L	T	T	R
Maximum Queue (m)	43.6	41.7	10.0	112.2	121.0	116.7	120.7	29.5
Average Queue (m)	24.7	16.8	0.5	54.9	64.6	45.7	50.0	3.4
95th Queue (m)	40.2	34.7	5.2	93.8	103.3	91.2	93.8	15.7
Link Distance (m)	453.2	453.2				916.9	916.9	916.9
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (m)			80.0	130.0	130.0			
Storage Blk Time (%)						0		
Queuing Penalty (veh)						0		

Intersection: 61: Finch Avenue/Gorewood Drive & Steeles Avenue East

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB
Directions Served	L	T	T	T	R	L	T	T	TR	L	L	TR
Maximum Queue (m)	8.1	78.8	76.0	87.8	118.1	66.1	96.5	83.1	87.7	109.4	100.7	92.4
Average Queue (m)	0.8	36.0	40.1	42.4	41.7	29.6	56.7	50.4	42.9	66.8	61.0	41.4
95th Queue (m)	4.5	66.4	67.3	71.2	108.7	56.5	86.4	79.5	78.2	100.4	93.6	76.5
Link Distance (m)		1334.5	1334.5	1334.5			434.6	434.6		405.0	405.0	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	175.0				175.0	180.0			187.0			231.0
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 61: Finch Avenue/Gorewood Drive & Steeles Avenue East

Movement	SB	SB
Directions Served	LT	TR
Maximum Queue (m)	79.2	57.2
Average Queue (m)	45.3	26.5
95th Queue (m)	71.7	50.4
Link Distance (m)	96.8	96.8
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 224: Goreway Drive & Intermodal Drive

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	NB	SB
Directions Served	L	T	R	L	T	TR	L	T	T	T	R	L
Maximum Queue (m)	41.5	55.3	56.0	75.5	69.2	74.9	82.7	43.0	42.1	41.3	21.7	101.8
Average Queue (m)	14.6	21.7	20.9	34.4	18.9	30.7	40.5	15.4	13.6	12.6	6.1	47.1
95th Queue (m)	34.7	47.9	43.1	66.5	47.1	59.1	71.0	34.6	33.7	32.6	17.7	94.9
Link Distance (m)		209.1	209.1		160.4	160.4		916.9	916.9	916.9		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	85.0			75.0			135.0				100.0	135.0
Storage Blk Time (%)				1	0							0
Queuing Penalty (veh)				1	0							0

Intersection: 224: Goreway Drive & Intermodal Drive

Movement	SB	SB	SB	SB
Directions Served	T	T	T	R
Maximum Queue (m)	129.6	129.4	131.1	91.5
Average Queue (m)	66.1	67.9	65.9	15.6
95th Queue (m)	113.3	116.0	116.9	52.0
Link Distance (m)	1489.2	1489.2	1489.2	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)				100.0
Storage Blk Time (%)	0		2	0
Queuing Penalty (veh)	0		2	0

Intersection: 225: Intermodal Drive & Deerhurst Drive

Movement	EB	WB	SB
Directions Served	L	TR	LR
Maximum Queue (m)	24.5	1.3	38.2
Average Queue (m)	7.3	0.0	17.9
95th Queue (m)	20.0	1.0	29.6
Link Distance (m)		336.6	160.1
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (m)	65.0		
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 226: Gorewood Drive & Intermodal Drive

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (m)	29.6	3.7
Average Queue (m)	17.3	0.3
95th Queue (m)	26.3	3.0
Link Distance (m)	157.7	479.5
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 17

58: Goreway Drive & Steeles Avenue East
Intermodal Drive Extension

'With Extension' 2051 Conditions

PM Peak Period

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  		 	 		 	 	
Traffic Volume (vph)	222	1313	187	62	1124	510	327	1093	86	253	540	181
Future Volume (vph)	222	1313	187	62	1124	510	327	1093	86	253	540	181
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	115.0		150.0	150.0		110.0	120.0		80.0	130.0		0.0
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (m)	7.6			7.6			7.6			7.6		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Ped Bike Factor			0.98	1.00		0.95	0.99		0.99	1.00		0.96
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1534	4683	1484	1755	4561	1471	3278	3510	1570	2902	3444	1432
Flt Permitted	0.084			0.135			0.950			0.950		
Satd. Flow (perm)	136	4683	1457	249	4561	1399	3232	3510	1547	2900	3444	1372
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			191			248			100			185
Link Speed (k/h)		80			80			70			70	
Link Distance (m)		668.9			1373.2			472.6			952.1	
Travel Time (s)		30.1			61.8			24.3			49.0	
Confl. Peds. (#/hr)	22		4	4		22	21		2	2		21
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	19%	12%	10%	4%	15%	11%	8%	4%	4%	22%	6%	14%
Adj. Flow (vph)	227	1340	191	63	1147	520	334	1115	88	258	551	185
Shared Lane Traffic (%)												
Lane Group Flow (vph)	227	1340	191	63	1147	520	334	1115	88	258	551	185
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2		2	6		6			4			8
Detector Phase	5	2	2	1	6	6	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	5.0	12.0	12.0	5.0	12.0	12.0	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	8.0	34.7	34.7	8.0	34.7	34.7	13.0	39.7	39.7	13.0	39.7	39.7
Total Split (s)	28.0	63.0	63.0	9.0	44.0	44.0	35.0	67.0	67.0	21.0	53.0	53.0
Total Split (%)	17.5%	39.4%	39.4%	5.6%	27.5%	27.5%	21.9%	41.9%	41.9%	13.1%	33.1%	33.1%
Maximum Green (s)	25.0	56.3	56.3	6.0	37.3	37.3	30.0	60.3	60.3	16.0	46.3	46.3
Yellow Time (s)	3.0	4.6	4.6	3.0	4.6	4.6	3.0	4.2	4.2	3.0	4.2	4.2
All-Red Time (s)	0.0	2.1	2.1	0.0	2.1	2.1	2.0	2.5	2.5	2.0	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	6.7	6.7	3.0	6.7	6.7	5.0	6.7	6.7	5.0	6.7	6.7
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	None
Walk Time (s)		8.0	8.0		8.0	8.0		8.0	8.0		8.0	8.0
Flash Dont Walk (s)		20.0	20.0		20.0	20.0		25.0	25.0		25.0	25.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	73.1	62.2	62.2	54.4	44.7	44.7	21.6	56.3	56.3	15.9	50.6	50.6
Actuated g/C Ratio	0.46	0.39	0.39	0.34	0.28	0.28	0.14	0.35	0.35	0.10	0.32	0.32
v/c Ratio	0.90	0.74	0.28	0.45	0.90	0.91	0.76	0.90	0.14	0.90	0.51	0.33

58: Goreway Drive & Steeles Avenue East
Intermodal Drive Extension

'With Extension' 2051 Conditions
PM Peak Period

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	80.0	46.0	5.4	33.7	64.0	56.6	77.6	60.1	4.6	102.7	37.7	8.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	80.0	46.0	5.4	33.7	64.0	56.6	77.6	60.1	4.6	102.7	37.7	8.6
LOS	F	D	A	C	E	E	E	E	A	F	D	A
Approach Delay	46.0			60.7			60.7			49.1		
Approach LOS	D			E			E			D		
Queue Length 50th (m)	57.0	137.8	0.0	12.8	141.3	124.9	53.6	175.1	0.0	42.3	76.7	18.1
Queue Length 95th (m)	#101.3	160.8	17.0	m18.5	#182.6	#187.7	68.2	199.2	9.2	#65.1	98.5	35.4
Internal Link Dist (m)	644.9			1349.2			448.6			928.1		
Turn Bay Length (m)	115.0			150.0	150.0			110.0	120.0	80.0	130.0	
Base Capacity (vph)	280	1820	683	141	1274	569	614	1322	645	290	1088	560
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.81	0.74	0.28	0.45	0.90	0.91	0.54	0.84	0.14	0.89	0.51	0.33

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 61 (38%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 100

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.91

Intersection Signal Delay: 54.5

Intersection LOS: D

Intersection Capacity Utilization 91.7%

ICU Level of Service F

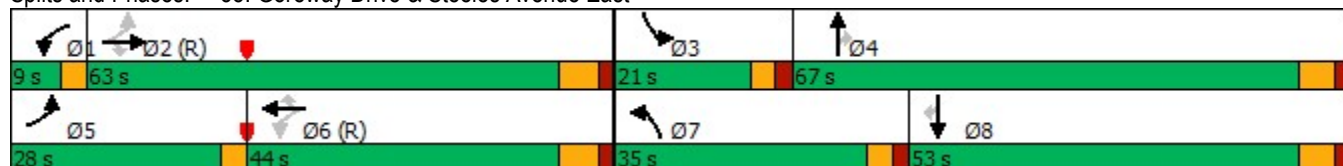
Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 58: Goreway Drive & Steeles Avenue East



61: Finch Avenue/Gorewood Drive & Steeles Avenue East 'With Extension' 2051 Conditions
Intermodal Drive Extension PM Peak Period

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  		 				 	
Traffic Volume (vph)	7	990	626	13	1058	224	551	73	95	80	93	13
Future Volume (vph)	7	990	626	13	1058	224	551	73	95	80	93	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.8	3.5	3.5	3.5	3.4	3.4	3.7	3.7	3.7
Storage Length (m)	175.0		175.0	180.0		187.0	0.0		231.0	0.0		0.0
Storage Lanes	1		1	1		1	2		1	0		0
Taper Length (m)	7.6			7.6			7.6			7.6		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	0.91	0.97	1.00	1.00	0.95	0.95	0.95
Ped Bike Factor	1.00		0.97		1.00		1.00	0.99			1.00	
Frt			0.850		0.974			0.915			0.989	
Flt Protected	0.950			0.950			0.950				0.979	
Satd. Flow (prot)	1825	4725	1484	1724	4388	0	2862	1306	0	0	2866	0
Flt Permitted	0.153			0.207			0.950				0.979	
Satd. Flow (perm)	294	4725	1442	376	4388	0	2856	1306	0	0	2859	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			659		40			40			4	
Link Speed (k/h)		80			80			80			50	
Link Distance (m)		1373.2			447.9			426.1			120.3	
Travel Time (s)		61.8			20.2			19.2			8.7	
Confl. Peds. (#/hr)	2		8	8		2	2		6	6		2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	11%	10%	7%	10%	29%	21%	44%	17%	25%	22%	20%
Adj. Flow (vph)	7	1042	659	14	1114	236	580	77	100	84	98	14
Shared Lane Traffic (%)												
Lane Group Flow (vph)	7	1042	659	14	1350	0	580	177	0	0	196	0
Turn Type	Perm	NA	Perm	pm+pt	NA		Split	NA		Split	NA	
Protected Phases		2		1	6		8	8		4	4	
Permitted Phases	2		2	6								
Detector Phase	2	2	2	1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	22.0	22.0	22.0	5.0	22.0		12.0	12.0		8.0	8.0	
Minimum Split (s)	29.9	29.9	29.9	8.0	29.9		45.2	45.2		15.2	15.2	
Total Split (s)	66.0	66.0	66.0	18.0	84.0		51.0	51.0		25.0	25.0	
Total Split (%)	41.3%	41.3%	41.3%	11.3%	52.5%		31.9%	31.9%		15.6%	15.6%	
Maximum Green (s)	59.1	59.1	59.1	15.0	77.1		43.8	43.8		17.8	17.8	
Yellow Time (s)	4.6	4.6	4.6	3.0	4.6		4.6	4.6		4.6	4.6	
All-Red Time (s)	2.3	2.3	2.3	0.0	2.3		2.6	2.6		2.6	2.6	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)	6.9	6.9	6.9	3.0	6.9		7.2	7.2			7.2	
Lead/Lag	Lag	Lag	Lag	Lead								
Lead-Lag Optimize?	Yes	Yes	Yes	Yes								
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	C-Max	C-Max	C-Max	None	C-Max		None	None		None	None	
Walk Time (s)	8.0	8.0	8.0		8.0		8.0	8.0				
Flash Dont Walk (s)	15.0	15.0	15.0		15.0		30.0	30.0				
Pedestrian Calls (#/hr)	0	0	0		0		0	0				
Act Effect Green (s)	81.6	81.6	81.6	89.4	85.5		37.6	37.6			15.5	
Actuated g/C Ratio	0.51	0.51	0.51	0.56	0.53		0.24	0.24			0.10	

61: Finch Avenue/Gorewood Drive & Steeles Avenue East 'With Extension' 2051 Conditions
Intermodal Drive Extension PM Peak Period

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.05	0.43	0.62	0.05	0.57		0.86	0.53			0.70	
Control Delay	4.9	6.4	13.1	18.9	26.3		72.0	45.8			81.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Delay	4.9	6.4	13.1	18.9	26.3		72.0	45.8			81.7	
LOS	A	A	B	B	C		E	D			F	
Approach Delay		9.0			26.2			65.8			81.7	
Approach LOS		A			C			E			F	
Queue Length 50th (m)	0.0	9.8	166.5	2.0	102.1		91.4	38.1			31.5	
Queue Length 95th (m)	m0.7	86.9	m223.9	6.2	128.0		109.2	60.9			45.3	
Internal Link Dist (m)		1349.2			423.9			402.1			96.3	
Turn Bay Length (m)	175.0		175.0	180.0								
Base Capacity (vph)	149	2408	1058	336	2364		783	386			322	
Starvation Cap Reductn	0	0	0	0	0		0	0			0	
Spillback Cap Reductn	0	0	0	0	0		0	0			0	
Storage Cap Reductn	0	0	0	0	0		0	0			0	
Reduced v/c Ratio	0.05	0.43	0.62	0.04	0.57		0.74	0.46			0.61	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 132 (83%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 100

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.86

Intersection Signal Delay: 29.1

Intersection LOS: C

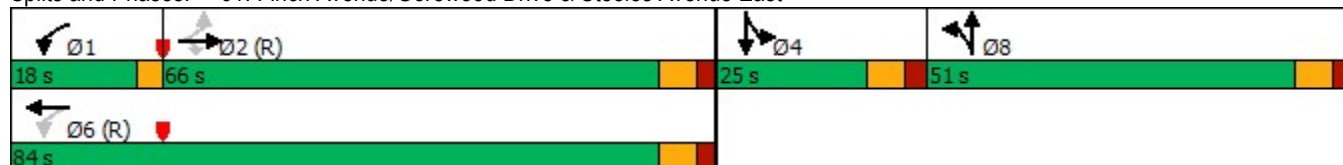
Intersection Capacity Utilization 68.5%

ICU Level of Service C

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

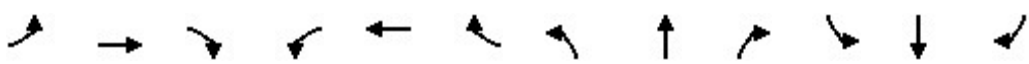
Splits and Phases: 61: Finch Avenue/Gorewood Drive & Steeles Avenue East



224: Goreway Drive & Intermodal Drive
Intermodal Drive Extension

'With Extension' 2051 Conditions

PM Peak Period

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	111	77	173	119	113	197	161	2048	89	99	1064	83
Future Volume (vph)	111	77	173	119	113	197	161	2048	89	99	1064	83
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	85.0		0.0	75.0		0.0	135.0		100.0	135.0		100.0
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (m)	7.6			7.6			7.6			7.6		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.91	1.00	1.00	0.91	1.00
Frt			0.850		0.905				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1332	1325	1350	1521	2777	0	1217	4902	1096	1547	4856	1183
Flt Permitted	0.429			0.704			0.208			0.049		
Satd. Flow (perm)	602	1325	1350	1127	2777	0	266	4902	1096	80	4856	1183
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			182		173				80			87
Link Speed (k/h)		50			50			70			70	
Link Distance (m)		232.0			189.6			952.1			1512.1	
Travel Time (s)		16.7			13.7			49.0			77.8	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	37%	45%	21%	20%	31%	12%	50%	7%	49%	18%	8%	38%
Adj. Flow (vph)	117	81	182	125	119	207	169	2156	94	104	1120	87
Shared Lane Traffic (%)												
Lane Group Flow (vph)	117	81	182	125	326	0	169	2156	94	104	1120	87
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2		2	6		6
Detector Phase	4	4	4	8	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0		6.0	12.0	12.0	6.0	12.0	12.0
Minimum Split (s)	45.0	45.0	45.0	45.0	45.0		9.0	42.0	42.0	10.5	42.0	42.0
Total Split (s)	52.0	52.0	52.0	52.0	52.0		26.0	90.0	90.0	18.0	82.0	82.0
Total Split (%)	32.5%	32.5%	32.5%	32.5%	32.5%		16.3%	56.3%	56.3%	11.3%	51.3%	51.3%
Maximum Green (s)	46.0	46.0	46.0	46.0	46.0		23.0	84.0	84.0	15.0	76.0	76.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		0.0	2.0	2.0	0.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0		3.0	6.0	6.0	3.0	6.0	6.0
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?								Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)	12.0	12.0	12.0	12.0	12.0			12.0	12.0		12.0	12.0
Flash Dont Walk (s)	27.0	27.0	27.0	27.0	27.0			24.0	24.0		24.0	24.0
Pedestrian Calls (#/hr)	0	0	0	0	0			0	0		0	0
Act Effct Green (s)	32.7	32.7	32.7	32.7	32.7		116.6	101.0	101.0	113.1	98.8	98.8
Actuated g/C Ratio	0.20	0.20	0.20	0.20	0.20		0.73	0.63	0.63	0.71	0.62	0.62
v/c Ratio	0.95	0.30	0.43	0.54	0.46		0.62	0.70	0.13	0.65	0.37	0.11
Control Delay	130.8	53.7	8.9	62.3	24.3		13.2	23.0	5.1	48.3	17.7	4.1
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0

224: Goreway Drive & Intermodal Drive
Intermodal Drive Extension

'With Extension' 2051 Conditions
PM Peak Period

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	130.8	53.7	8.9	62.3	24.3		13.2	23.0	5.1	48.3	17.7	4.1
LOS	F	D	A	E	C		B	C	A	D	B	A
Approach Delay	56.0			34.8			21.6			19.2		
Approach LOS	E			C			C			B		
Queue Length 50th (m)	37.0	22.0	0.0	36.6	23.3		11.7	193.1	4.9	15.0	61.7	0.0
Queue Length 95th (m)	#62.3	34.6	18.6	55.1	37.2		m26.1	240.4	m9.8	39.4	99.1	9.7
Internal Link Dist (m)	208.0			165.6			928.1			1488.1		
Turn Bay Length (m)	85.0			75.0			135.0		100.0	135.0		100.0
Base Capacity (vph)	173	380	517	324	921		333	3093	721	195	2999	763
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.68	0.21	0.35	0.39	0.35		0.51	0.70	0.13	0.53	0.37	0.11

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 69 (43%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 110

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.95

Intersection Signal Delay: 25.1

Intersection LOS: C

Intersection Capacity Utilization 79.5%

ICU Level of Service D

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 224: Goreway Drive & Intermodal Drive



225: Intermodal Drive & Deerhurst Drive
Intermodal Drive Extension

'With Extension' 2051 Conditions
PM Peak Period

Intersection						
Int Delay, s/veh	3.6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	79	170	301	11	25	106
Future Vol, veh/h	79	170	301	11	25	106
Conflicting Peds, #/hr	3	0	0	3	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	65	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	83	83	83	83	83	83
Heavy Vehicles, %	65	18	9	18	16	19
Mvmt Flow	95	205	363	13	30	128
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	379	0	-	0	666	191
Stage 1	-	-	-	-	373	-
Stage 2	-	-	-	-	293	-
Critical Hdwy	5.4	-	-	-	7.12	7.28
Critical Hdwy Stg 1	-	-	-	-	6.12	-
Critical Hdwy Stg 2	-	-	-	-	6.12	-
Follow-up Hdwy	2.85	-	-	-	3.66	3.49
Pot Cap-1 Maneuver	828	-	-	-	363	768
Stage 1	-	-	-	-	627	-
Stage 2	-	-	-	-	691	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	826	-	-	-	319	766
Mov Cap-2 Maneuver	-	-	-	-	319	-
Stage 1	-	-	-	-	553	-
Stage 2	-	-	-	-	689	-
Approach	EB	WB		SB		
HCM Control Delay, s	3.1	0		13.1		
HCM LOS	B					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	826	-	-	-	604	
HCM Lane V/C Ratio	0.115	-	-	-	0.261	
HCM Control Delay (s)	9.9	-	-	-	13.1	
HCM Lane LOS	A	-	-	-	B	
HCM 95th %tile Q(veh)	0.4	-	-	-	1	

226: Gorewood Drive & Intermodal Drive
Intermodal Drive Extension

'With Extension' 2051 Conditions
PM Peak Period

Intersection						
Int Delay, s/veh	7.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	119	144	17	7	0
Future Vol, veh/h	0	119	144	17	7	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	28	34	0	0	0
Mvmt Flow	0	129	157	18	8	0
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	340	8	8	0	-	0
Stage 1	8	-	-	-	-	-
Stage 2	332	-	-	-	-	-
Critical Hdwy	6.4	6.48	4.44	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.552	2.506	-	-	-
Pot Cap-1 Maneuver	660	1003	1426	-	-	-
Stage 1	1020	-	-	-	-	-
Stage 2	731	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	587	1003	1426	-	-	-
Mov Cap-2 Maneuver	587	-	-	-	-	-
Stage 1	907	-	-	-	-	-
Stage 2	731	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	9.1	7		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1426	-	1003	-	-	
HCM Lane V/C Ratio	0.11	-	0.129	-	-	
HCM Control Delay (s)	7.8	0	9.1	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0.4	-	0.4	-	-	

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	6:45	6:45	6:45	6:45	6:45	6:45
End Time	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	75	75	75	75	75	75
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	4	4	4	4	4	4
# of Recorded Intervals	3	3	3	3	3	3
Vehs Entered	7984	7778	7734	7913	7716	7824
Vehs Exited	7957	7765	7650	7797	7728	7779
Starting Vehs	481	479	515	490	507	494
Ending Vehs	508	492	599	606	495	535
Travel Distance (km)	21555	21081	20976	21326	21004	21188
Travel Time (hr)	547.9	485.4	546.6	528.4	503.5	522.3
Total Delay (hr)	230.9	176.0	238.3	214.3	195.0	210.9
Total Stops	10405	8672	10251	9714	9214	9646
Fuel Used (l)	1781.6	1701.4	1743.8	1751.7	1710.3	1737.8

Interval #0 Information Seeding

Start Time	6:45
End Time	7:00
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	
No data recorded this interval.	

Interval #1 Information Pre-Peak

Start Time	7:00
End Time	7:20
Total Time (min)	20
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	1	2	3	4	5	Avg
Vehs Entered	2655	2591	2523	2620	2482	2575
Vehs Exited	2607	2599	2532	2539	2548	2564
Starting Vehs	481	479	515	490	507	494
Ending Vehs	529	471	506	571	441	500
Travel Distance (km)	7038	7115	6957	6997	6914	7004
Travel Time (hr)	166.1	167.7	164.9	166.6	158.2	164.7
Total Delay (hr)	62.1	63.3	62.3	63.4	56.9	61.6
Total Stops	3080	3063	2930	3098	2790	2994
Fuel Used (l)	570.0	576.6	562.5	569.9	557.4	567.3

Interval #2 Information Peak

Start Time 7:20
End Time 7:35
Total Time (min) 15

Volumes adjusted by PHF, Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	2128	1993	2011	1984	2036	2032
Vehs Exited	2021	1993	1954	1997	1953	1985
Starting Vehs	529	471	506	571	441	500
Ending Vehs	636	471	563	558	524	550
Travel Distance (km)	5575	5351	5276	5365	5287	5371
Travel Time (hr)	149.1	121.3	132.1	134.4	128.2	133.0
Total Delay (hr)	66.8	42.6	54.4	55.2	50.1	53.8
Total Stops	2794	2141	2451	2465	2413	2452
Fuel Used (l)	463.9	430.8	436.0	441.4	431.7	440.8

Interval #3 Information Post-Peak

Start Time 7:35
End Time 8:00
Total Time (min) 25

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	1	2	3	4	5	Avg
Vehs Entered	3201	3194	3200	3309	3198	3219
Vehs Exited	3329	3173	3164	3261	3227	3230
Starting Vehs	636	471	563	558	524	550
Ending Vehs	508	492	599	606	495	535
Travel Distance (km)	8942	8615	8743	8964	8803	8813
Travel Time (hr)	232.6	196.4	249.6	227.4	217.1	224.6
Total Delay (hr)	102.0	70.1	121.6	95.7	88.0	95.5
Total Stops	4531	3468	4870	4151	4011	4208
Fuel Used (l)	747.7	694.0	745.3	740.5	721.3	729.8

Intersection: 58: Goreway Drive & Steeles Avenue East

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB
Directions Served	L	T	T	T	R	L	T	T	T	R	L	L
Maximum Queue (m)	122.2	158.5	156.3	140.0	31.5	133.4	302.1	312.9	315.6	117.6	83.6	127.5
Average Queue (m)	68.7	89.7	93.0	88.7	1.1	35.4	168.9	175.3	187.0	91.9	45.9	73.8
95th Queue (m)	119.6	137.4	134.7	126.4	22.6	119.5	318.7	331.4	359.1	159.6	72.8	128.5
Link Distance (m)		651.1	651.1	651.1			1334.5	1334.5	1334.5			
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	115.0				150.0	150.0				110.0	120.0	120.0
Storage Blk Time (%)	3	1		0	0	0	18		22	5		0
Queuing Penalty (veh)	15	2		0	0	0	11		112	19		0

Intersection: 58: Goreway Drive & Steeles Avenue East

Movement	NB	NB	NB	SB	SB	SB	SB	SB
Directions Served	T	T	R	L	L	T	T	R
Maximum Queue (m)	209.0	198.8	87.6	118.0	121.7	196.5	168.2	47.4
Average Queue (m)	120.4	120.2	32.1	83.6	90.3	85.5	52.1	6.3
95th Queue (m)	181.4	174.8	99.4	146.0	149.6	215.4	121.4	26.6
Link Distance (m)	453.2	453.2				916.9	916.9	916.9
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (m)			80.0	130.0	130.0			
Storage Blk Time (%)	7	25	0	6	19	1		
Queuing Penalty (veh)	24	22	0	17	51	2		

Intersection: 61: Finch Avenue/Gorewood Drive & Steeles Avenue East

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB
Directions Served	L	T	T	T	R	L	T	T	TR	L	L	TR
Maximum Queue (m)	9.5	32.7	41.4	569.5	96.8	19.9	100.8	106.0	128.4	119.8	123.9	85.7
Average Queue (m)	1.4	8.6	15.1	37.4	20.0	4.2	66.9	64.4	69.6	76.2	75.7	40.9
95th Queue (m)	6.1	23.6	33.4	295.5	70.4	14.0	95.3	94.6	104.7	114.2	112.1	73.9
Link Distance (m)		1334.5	1334.5	1334.5			434.6	434.6		405.0	405.0	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	175.0				175.0	180.0			187.0			231.0
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 61: Finch Avenue/Gorewood Drive & Steeles Avenue East

Movement	SB	SB
Directions Served	LT	TR
Maximum Queue (m)	72.0	49.2
Average Queue (m)	38.5	22.3
95th Queue (m)	63.8	44.2
Link Distance (m)	96.8	96.8
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 224: Goreway Drive & Intermodal Drive

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	NB	SB
Directions Served	L	T	R	L	T	TR	L	T	T	T	R	L
Maximum Queue (m)	88.0	81.8	49.6	77.5	72.4	105.0	101.4	162.1	170.2	331.2	107.6	54.7
Average Queue (m)	40.6	24.6	22.1	35.7	21.3	45.9	39.2	83.1	90.5	105.6	20.9	25.3
95th Queue (m)	74.6	57.5	39.9	65.3	50.6	81.0	77.6	143.9	153.2	279.5	77.2	46.4
Link Distance (m)		209.1	209.1		160.4	160.4		916.9	916.9	916.9		
Upstream Blk Time (%)										0		
Queuing Penalty (veh)										2		
Storage Bay Dist (m)	85.0			75.0			135.0				100.0	135.0
Storage Blk Time (%)	1	0		0	0		0	1		6	0	
Queuing Penalty (veh)	0	0		0	0		2	1		5	0	

Intersection: 224: Goreway Drive & Intermodal Drive

Movement	SB	SB	SB	SB
Directions Served	T	T	T	R
Maximum Queue (m)	84.9	80.7	81.4	26.4
Average Queue (m)	45.8	45.1	40.8	8.2
95th Queue (m)	79.2	76.1	73.5	21.0
Link Distance (m)	1489.2	1489.2	1489.2	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)			100.0	
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 225: Intermodal Drive & Deerhurst Drive

Movement	EB	WB	WB	SB
Directions Served	L	T	TR	LR
Maximum Queue (m)	26.8	1.2	7.6	33.3
Average Queue (m)	9.2	0.0	0.3	15.7
95th Queue (m)	23.6	0.9	3.4	26.7
Link Distance (m)		336.6	336.6	160.1
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)	65.0			
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 226: Gorewood Drive & Intermodal Drive

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (m)	29.6	4.8
Average Queue (m)	15.1	0.2
95th Queue (m)	25.0	2.6
Link Distance (m)	157.7	479.5
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 288

61: Finch Avenue/Gorewood Drive & Steeles Avenue East 'With Extension' 2051 Conditions
Intermodal Drive Extension AM Peak Period (Conventional Phasing)

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  		 					
Traffic Volume (vph)	4	1005	688	135	878	97	479	94	129	96	92	6
Future Volume (vph)	4	1005	688	135	878	97	479	94	129	96	92	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.8	3.5	3.5	3.5	3.4	3.4	3.7	3.7	3.7
Storage Length (m)	175.0		175.0	180.0		187.0	0.0		231.0	0.0		0.0
Storage Lanes	1		1	1		1	2		1	1		0
Taper Length (m)	7.6			7.6			7.6			7.6		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	0.91	0.97	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99		0.97		0.99		1.00	0.99		1.00	1.00	
Frt			0.850		0.985			0.913			0.990	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1560	4683	1384	1647	4370	0	2985	1477	0	1352	1349	0
Flt Permitted	0.258			0.185			0.950			0.608		
Satd. Flow (perm)	421	4683	1347	321	4370	0	2982	1477	0	862	1349	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			748		11			78			2	
Link Speed (k/h)		80			80			80			50	
Link Distance (m)		1373.2			447.9			426.1			120.3	
Travel Time (s)		61.8			20.2			19.2			8.7	
Confl. Peds. (#/hr)	10		2	2		10	1		4	4		1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	17%	12%	18%	12%	14%	24%	16%	16%	12%	35%	42%	25%
Adj. Flow (vph)	4	1092	748	147	954	105	521	102	140	104	100	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	4	1092	748	147	1059	0	521	242	0	104	107	0
Turn Type	Perm	NA	Perm	pm+pt	NA		Prot	NA		pm+pt	NA	
Protected Phases		2		1	6		3	8		7	4	
Permitted Phases	2		2	6						4		
Detector Phase	2	2	2	1	6		3	8		7	4	
Switch Phase												
Minimum Initial (s)	22.0	22.0	22.0	5.0	22.0		5.0	12.0		5.0	12.0	
Minimum Split (s)	29.9	29.9	29.9	8.0	29.9		10.0	45.2		8.0	45.2	
Total Split (s)	30.0	30.0	30.0	13.0	43.0		65.0	104.0		13.0	52.0	
Total Split (%)	18.8%	18.8%	18.8%	8.1%	26.9%		40.6%	65.0%		8.1%	32.5%	
Maximum Green (s)	23.1	23.1	23.1	10.0	36.1		60.0	96.8		10.0	44.8	
Yellow Time (s)	4.6	4.6	4.6	3.0	4.6		3.0	4.6		3.0	4.6	
All-Red Time (s)	2.3	2.3	2.3	0.0	2.3		2.0	2.6		0.0	2.6	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.9	6.9	6.9	3.0	6.9		5.0	7.2		3.0	7.2	
Lead/Lag	Lag	Lag	Lag	Lead			Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	C-Max	C-Max	C-Max	None	C-Max		None	None		None	None	
Walk Time (s)	8.0	8.0	8.0		8.0			8.0			8.0	
Flash Dont Walk (s)	15.0	15.0	15.0		15.0			30.0			30.0	
Pedestrian Calls (#/hr)	0	0	0		0			0			0	
Act Effect Green (s)	75.4	75.4	75.4	92.3	88.4		34.2	44.7		32.4	18.4	
Actuated g/C Ratio	0.47	0.47	0.47	0.58	0.55		0.21	0.28		0.20	0.12	

61: Finch Avenue/Gorewood Drive & Steeles Avenue East 'With Extension' 2051 Conditions
Intermodal Drive Extension AM Peak Period (Conventional Phasing)

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.02	0.50	0.73	0.55	0.44		0.82	0.52		0.51	0.69	
Control Delay	40.8	31.5	18.6	26.6	23.0		70.6	34.5		44.2	87.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	40.8	31.5	18.6	26.6	23.0		70.6	34.5		44.2	87.4	
LOS	D	C	B	C	C		E	C		D	F	
Approach Delay		26.3			23.5			59.2			66.1	
Approach LOS		C			C			E			E	
Queue Length 50th (m)	0.5	57.0	44.2	21.0	69.8		82.2	44.2		22.0	32.7	
Queue Length 95th (m)	m1.5	98.1	163.9	40.7	100.0		97.2	62.5		30.9	51.7	
Internal Link Dist (m)		1349.2			423.9			402.1			96.3	
Turn Bay Length (m)	175.0		175.0	180.0								
Base Capacity (vph)	198	2205	1030	268	2418		1119	924		206	379	
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	
Reduced v/c Ratio	0.02	0.50	0.73	0.55	0.44		0.47	0.26		0.50	0.28	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 127 (79%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 105

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.82

Intersection Signal Delay: 33.8

Intersection LOS: C

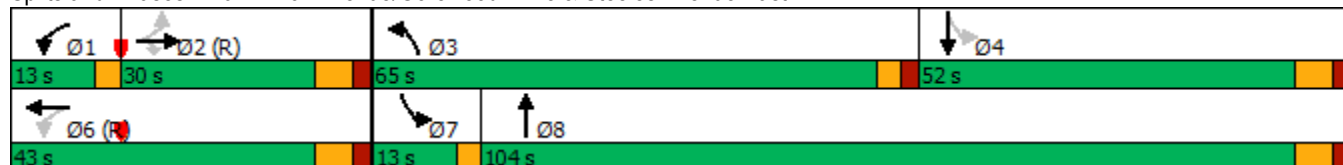
Intersection Capacity Utilization 83.6%

ICU Level of Service E

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 61: Finch Avenue/Gorewood Drive & Steeles Avenue East



61: Finch Avenue/Gorewood Drive & Steeles Avenue East 'With Extension' 2051 Conditions
Intermodal Drive Extension PM Peak Period (Conventional Phasing)

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  		 					
Traffic Volume (vph)	7	990	626	13	1058	224	551	73	95	80	93	13
Future Volume (vph)	7	990	626	13	1058	224	551	73	95	80	93	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.8	3.5	3.5	3.5	3.4	3.4	3.7	3.7	3.7
Storage Length (m)	175.0		175.0	180.0		187.0	0.0		231.0	0.0		0.0
Storage Lanes	1		1	1		1	2		1	1		0
Taper Length (m)	7.6			7.6			7.6			7.6		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	0.91	0.97	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor			0.95		1.00		1.00	0.99		0.99	1.00	
Frt			0.850		0.974			0.915			0.981	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1825	4725	1484	1724	4388	0	2862	1306	0	1460	1545	0
Flt Permitted	0.150			0.206			0.950			0.646		
Satd. Flow (perm)	288	4725	1414	374	4388	0	2856	1306	0	987	1545	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			659		25			88			4	
Link Speed (k/h)		80			80			80			50	
Link Distance (m)		1373.2			447.9			426.1			120.3	
Travel Time (s)		61.8			20.2			19.2			8.7	
Confl. Peds. (#/hr)	2		8	8		2	2		6	6		2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	11%	10%	7%	10%	29%	21%	44%	17%	25%	22%	20%
Adj. Flow (vph)	7	1042	659	14	1114	236	580	77	100	84	98	14
Shared Lane Traffic (%)												
Lane Group Flow (vph)	7	1042	659	14	1350	0	580	177	0	84	112	0
Turn Type	Perm	NA	Perm	pm+pt	NA		Prot	NA		pm+pt	NA	
Protected Phases		2		1	6		3	8		7	4	
Permitted Phases	2		2	6						4		
Detector Phase	2	2	2	1	6		3	8		7	4	
Switch Phase												
Minimum Initial (s)	22.0	22.0	22.0	5.0	22.0		5.0	12.0		5.0	12.0	
Minimum Split (s)	29.9	29.9	29.9	8.0	29.9		10.0	45.2		8.0	45.2	
Total Split (s)	30.0	30.0	30.0	8.0	38.0		76.0	114.0		8.0	46.0	
Total Split (%)	18.8%	18.8%	18.8%	5.0%	23.8%		47.5%	71.3%		5.0%	28.8%	
Maximum Green (s)	23.1	23.1	23.1	5.0	31.1		71.0	106.8		5.0	38.8	
Yellow Time (s)	4.6	4.6	4.6	3.0	4.6		3.0	4.6		3.0	4.6	
All-Red Time (s)	2.3	2.3	2.3	0.0	2.3		2.0	2.6		0.0	2.6	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.9	6.9	6.9	3.0	6.9		5.0	7.2		3.0	7.2	
Lead/Lag	Lag	Lag	Lag	Lead			Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	C-Max	C-Max	C-Max	None	C-Max		None	None		None	None	
Walk Time (s)	8.0	8.0	8.0		8.0			8.0			8.0	
Flash Dont Walk (s)	15.0	15.0	15.0		15.0			30.0			30.0	
Pedestrian Calls (#/hr)	0	0	0		0			0			0	
Act Effect Green (s)	81.0	81.0	81.0	88.1	84.2		39.5	53.7		26.4	17.2	
Actuated g/C Ratio	0.51	0.51	0.51	0.55	0.53		0.25	0.34		0.16	0.11	

61: Finch Avenue/Gorewood Drive & Steeles Avenue East 'With Extension' 2051 Conditions
Intermodal Drive Extension PM Peak Period (Conventional Phasing)

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.05	0.44	0.63	0.06	0.58		0.82	0.36		0.47	0.66	
Control Delay	16.4	14.1	12.1	21.0	28.1		66.7	19.5		48.8	84.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	16.4	14.1	12.1	21.0	28.1		66.7	19.5		48.8	84.2	
LOS	B	B	B	C	C		E	B		D	F	
Approach Delay		13.3			28.1			55.7			69.0	
Approach LOS		B			C			E			E	
Queue Length 50th (m)	0.4	26.7	50.2	2.0	102.5		90.6	20.6		16.7	33.7	
Queue Length 95th (m)	m0.6	33.0	m74.2	6.8	142.8		104.7	35.5		23.9	53.5	
Internal Link Dist (m)		1349.2			423.9			402.1			96.3	
Turn Bay Length (m)	175.0		175.0	180.0								
Base Capacity (vph)	145	2392	1041	248	2321		1270	901		177	377	
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	
Reduced v/c Ratio	0.05	0.44	0.63	0.06	0.58		0.46	0.20		0.47	0.30	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 132 (83%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 115

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.82

Intersection Signal Delay: 29.0

Intersection LOS: C

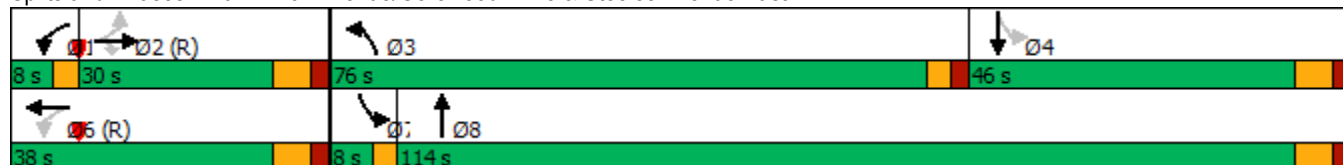
Intersection Capacity Utilization 70.2%

ICU Level of Service C

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 61: Finch Avenue/Gorewood Drive & Steeles Avenue East



Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	6:45	6:45	6:45	6:45	6:45	6:45
End Time	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	75	75	75	75	75	75
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	4	4	4	4	4	4
# of Recorded Intervals	3	3	3	3	3	3
Vehs Entered	6794	6612	6660	6666	6678	6682
Vehs Exited	6788	6634	6654	6717	6710	6701
Starting Vehs	381	406	366	446	372	395
Ending Vehs	387	384	372	395	340	375
Travel Distance (km)	18180	17558	17559	17877	17857	17806
Travel Time (hr)	406.4	396.9	384.1	398.3	401.0	397.3
Total Delay (hr)	138.5	138.0	126.0	134.2	137.7	134.9
Total Stops	7008	6996	6724	6898	6967	6918
Fuel Used (l)	1451.2	1406.4	1395.1	1427.5	1421.4	1420.3

Interval #0 Information Seeding

Start Time	6:45
End Time	7:00
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	
No data recorded this interval.	

Interval #1 Information Pre-Peak

Start Time	7:00
End Time	7:20
Total Time (min)	20
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	1	2	3	4	5	Avg
Vehs Entered	2194	2203	2127	2133	2094	2150
Vehs Exited	2182	2235	2162	2192	2084	2171
Starting Vehs	381	406	366	446	372	395
Ending Vehs	393	374	331	387	382	372
Travel Distance (km)	5875	6006	5637	5848	5606	5794
Travel Time (hr)	130.4	135.3	123.4	129.9	121.9	128.2
Total Delay (hr)	43.7	46.8	40.3	43.6	39.6	42.8
Total Stops	2221	2332	2158	2222	2087	2206
Fuel Used (l)	465.3	484.7	448.7	466.4	442.6	461.5

Interval #2 Information Peak

Start Time	7:20
End Time	7:35
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	1873	1755	1833	1828	1879	1834
Vehs Exited	1777	1727	1716	1725	1771	1743
Starting Vehs	393	374	331	387	382	372
Ending Vehs	489	402	448	490	490	463
Travel Distance (km)	4848	4568	4612	4631	4767	4685
Travel Time (hr)	112.7	105.9	104.0	105.0	111.4	107.8
Total Delay (hr)	41.3	38.0	35.7	36.5	41.0	38.5
Total Stops	2077	1952	1855	1879	1994	1951
Fuel Used (l)	391.5	366.1	369.1	371.6	382.0	376.1

Interval #3 Information Post-Peak

Start Time	7:35
End Time	8:00
Total Time (min)	25

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	1	2	3	4	5	Avg
Vehs Entered	2727	2654	2700	2705	2705	2697
Vehs Exited	2829	2672	2776	2800	2855	2787
Starting Vehs	489	402	448	490	490	463
Ending Vehs	387	384	372	395	340	375
Travel Distance (km)	7456	6984	7311	7398	7485	7327
Travel Time (hr)	163.3	155.7	156.7	163.4	167.6	161.3
Total Delay (hr)	53.5	53.2	50.1	54.2	57.0	53.6
Total Stops	2710	2712	2711	2797	2886	2762
Fuel Used (l)	594.4	555.5	577.3	589.6	596.8	582.7

Queuing and Blocking Report
Intermodal Drive Extension

'With Extension' 2051 Conditions
AM Peak Period (Conventional Phasing)

Intersection: 61: Finch Avenue/Gorewood Drive & Steeles Avenue East

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB
Directions Served	L	T	T	T	R	L	T	T	TR	L	L	TR
Maximum Queue (m)	9.5	108.2	111.9	362.3	157.4	75.1	108.4	100.0	97.5	107.6	103.3	108.9
Average Queue (m)	0.6	62.8	67.7	79.9	59.5	35.2	58.5	51.7	45.4	65.9	63.7	44.7
95th Queue (m)	4.5	100.5	104.9	258.6	139.8	63.7	94.1	88.5	83.1	98.3	96.0	85.5
Link Distance (m)		1338.2	1338.2	1338.2			434.6	434.6		405.0	405.0	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	175.0				175.0	180.0			187.0			231.0
Storage Blk Time (%)					0							
Queuing Penalty (veh)					1							

Intersection: 61: Finch Avenue/Gorewood Drive & Steeles Avenue East

Movement	SB	SB
Directions Served	L	TR
Maximum Queue (m)	69.6	83.6
Average Queue (m)	28.1	38.9
95th Queue (m)	59.9	69.3
Link Distance (m)	96.8	96.8
Upstream Blk Time (%)	0	0
Queuing Penalty (veh)	0	0
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	6:45	6:45	6:45	6:45	6:45	6:45
End Time	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	75	75	75	75	75	75
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	4	4	4	4	4	4
# of Recorded Intervals	3	3	3	3	3	3
Vehs Entered	7755	7841	7710	7746	7901	7791
Vehs Exited	7729	7822	7751	7813	7856	7796
Starting Vehs	445	552	502	556	451	500
Ending Vehs	471	571	461	489	496	495
Travel Distance (km)	21012	21239	20966	21265	21268	21150
Travel Time (hr)	505.3	513.7	483.9	535.1	497.9	507.2
Total Delay (hr)	196.7	201.5	176.7	222.1	185.0	196.4
Total Stops	9089	9425	8607	10068	8869	9215
Fuel Used (l)	1709.2	1735.0	1688.6	1752.6	1723.9	1721.9

Interval #0 Information Seeding

Start Time	6:45
End Time	7:00
Total Time (min)	15
Volumes adjusted by Growth Factors, Anti PHF.	
No data recorded this interval.	

Interval #1 Information Pre-Peak

Start Time	7:00
End Time	7:20
Total Time (min)	20
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	1	2	3	4	5	Avg
Vehs Entered	2507	2565	2540	2515	2527	2530
Vehs Exited	2465	2663	2602	2555	2484	2552
Starting Vehs	445	552	502	556	451	500
Ending Vehs	487	454	440	516	494	478
Travel Distance (km)	6904	7130	6995	6958	6837	6965
Travel Time (hr)	162.4	176.7	159.9	172.7	156.2	165.6
Total Delay (hr)	60.9	72.0	57.3	70.3	56.0	63.3
Total Stops	2827	3297	2792	3199	2784	2979
Fuel Used (l)	558.7	592.4	562.6	573.7	550.2	567.5

Interval #2 Information Peak

Start Time	7:20
End Time	7:35
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	2085	2034	2002	2089	2127	2068
Vehs Exited	1986	1955	1946	1995	2058	1989
Starting Vehs	487	454	440	516	494	478
Ending Vehs	586	533	496	610	563	554
Travel Distance (km)	5369	5340	5312	5431	5613	5413
Travel Time (hr)	133.6	127.6	125.5	137.4	134.6	131.7
Total Delay (hr)	54.8	48.6	47.6	57.2	51.3	51.9
Total Stops	2525	2339	2300	2627	2433	2444
Fuel Used (l)	440.2	432.0	429.5	444.8	456.1	440.5

Interval #3 Information Post-Peak

Start Time	7:35
End Time	8:00
Total Time (min)	25

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	1	2	3	4	5	Avg
Vehs Entered	3163	3242	3168	3142	3247	3194
Vehs Exited	3278	3204	3203	3263	3314	3251
Starting Vehs	586	533	496	610	563	554
Ending Vehs	471	571	461	489	496	495
Travel Distance (km)	8740	8769	8658	8876	8818	8772
Travel Time (hr)	209.3	209.4	198.6	225.0	207.2	209.9
Total Delay (hr)	81.0	80.9	71.8	94.6	77.7	81.2
Total Stops	3737	3789	3515	4242	3652	3788
Fuel Used (l)	710.3	710.6	696.5	734.1	717.6	713.8

Intersection: 61: Finch Avenue/Gorewood Drive & Steeles Avenue East

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB
Directions Served	L	T	T	T	R	L	T	T	TR	L	L	TR
Maximum Queue (m)	8.2	63.6	72.8	336.0	80.2	14.7	127.6	132.7	157.4	113.6	120.9	105.3
Average Queue (m)	1.5	31.1	37.1	58.5	8.5	3.0	72.5	71.3	81.0	72.3	72.0	33.0
95th Queue (m)	5.9	54.8	61.1	313.3	43.0	10.0	113.8	117.9	136.4	107.7	108.4	73.9
Link Distance (m)		1338.2	1338.2	1338.2			434.6	434.6		405.0	405.0	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	175.0				175.0	180.0			187.0			231.0
Storage Blk Time (%)									0			
Queuing Penalty (veh)									0			

Intersection: 61: Finch Avenue/Gorewood Drive & Steeles Avenue East

Movement	SB	SB
Directions Served	L	TR
Maximum Queue (m)	65.9	70.2
Average Queue (m)	24.7	32.1
95th Queue (m)	50.7	59.3
Link Distance (m)	96.8	96.8
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Appendix C

Multi-Modal Level of Service

Actual	C	C	D	C	C
SCENARIO: Extension of Intermodal Drive to Gorewood Drive (Existing Conditions)					
Area Type: Industrial Boulevard					
MODE					
Intermodal Drive (Goreway Drive to eastern terminus)					
Type	SEGMENTS				
Target (Custom if necessary)	C	B	C	B	E
Adjustment for Planning Direction	None	Upwards	None	None	None
Reasons for adjustment (if applicable)		The ATMP identifies the need for cycling facilities			
Adjustment for Strategic Policy	Upwards	Upwards	Upwards	None	None
Reasons for adjustment (if applicable)	TMP states that it has the goal of doubling the sustainable transportation mode share	TMP states that it has the goal of doubling the sustainable transportation mode share	TMP states that it has the goal of doubling the sustainable transportation mode share		
Actual	C	C	D	C	C
Active Transportation Design Check					
Do the pedestrian facilities provide direct access to all properties along the segment? (Direct access can be provided by an adjacent facility or designated crossing to the property in question)					Yes
Does the bicycle facility selected correspond with the minimum appropriate facility type identified in the context appropriate nomograph (Figure 6.1, 6.2)?					Yes
MMLOS Evaluation					
Measure 1	Pedestrian Facility Width (m)	Bike Facility Width per Direction (m)	Transit Facility Type	Width of Curb Lane (m)	Mid-block V/C Ratio
	2.1 - 2.5	1.6 - 1.8	Mixed traffic with > 1 lane per direction	3.4 - 3.6	Less than 0.60
Measure 2	Pedestrian Buffer Width (m)	Bike Buffer Width (m)	Transit Passenger Amenities	Car Level of Service	Curb Lane Conflicts
	Greater than 2.5	Has physical measures AND buffer width > 1	Low presence of passenger amenities such as shelters, seating, shade trees, etc.	C	9+
Measure 3	Max Distance Between Controlled Crossings (m)	Conflicts with Other Modes (in-lane conflicts and cross point conflicts)	Pedestrian Level of Service	-	-
	Greater than 320	One "moderate" conflict indicator and one "high" conflict indicator	D		
Measure 4		-	-	-	-

Actual	E	F	D	C	B
SCENARIO: Extension of Intermodal Drive to Gorewood Drive (Existing Conditions)					
Area Type: Industrial Connector					
MODE					
Steeles Avenue (Goreway Drive to Finch Avenue/Gorewood Drive)					
Type	SEGMENTS				
Target (Custom if necessary)	D	B	B	B	D
Adjustment for Planning Direction	None	Upwards	Upwards	None	None
Reasons for adjustment (if applicable)		The Peel Region Long Range Transportation Plan identifies this street as part of the cycling network	The 2015 TMP indicates that Steeles Avenue will form part of a rapid transit corridor		
Adjustment for Strategic Policy	Upwards	Upwards	Upwards	None	None
Reasons for adjustment (if applicable)	TMP states that it has the goal of doubling the sustainable transportation mode share	TMP states that it has the goal of doubling the sustainable transportation mode share	TMP states that it has the goal of doubling the sustainable transportation mode share		
Actual	E	F	D	C	B
Active Transportation Design Check					
Do the pedestrian facilities provide direct access to all properties along the segment? (Direct access can be provided by an adjacent facility or designated crossing to the property in question)					No
Does the bicycle facility selected correspond with the minimum appropriate facility type identified in the context appropriate nomograph (Figure 6.1, 6.2)?					No
MMLOS Evaluation					
Measure 1	Pedestrian Facility Width (m)	Bike Facility Width per Direction (m)	Transit Facility Type	Width of Curb Lane (m)	Mid-block V/C Ratio
	Less than 1.5	Less than 1.2	Mixed traffic with > 1 lane per direction	3.4 - 3.6	Less than 0.60
Measure 2	Pedestrian Buffer Width (m)	Bike Buffer Width (m)	Transit Passenger Amenities	Car Level of Service	Curb Lane Conflicts
	1.3 - 1.5	Has no physical measures and buffer width is < 0.5	Moderate presence of passenger amenities such as shelters, seating, shade trees, etc.	B	5-6
Measure 3	Max Distance Between Controlled Crossings (m)	Conflicts with Other Modes (in-lane conflicts and cross point conflicts)	Pedestrian Level of Service	-	-
	Greater than 320	One "moderate" conflict indicator and one "high" conflict indicator	E		
Measure 4		-	-	-	-

Actual	F	F	E	B	B
SCENARIO: Extension of Intermodal Drive to Gorewood Drive (Existing Conditions)					
Area Type: Industrial Connector					
MODE					
Goreway Drive (Intermodal Drive to Steeles Avenue)					
Type	SEGMENTS				
Target (Custom if necessary)	D	B	C	B	D
Adjustment for Planning Direction	None	Upwards	None	None	None
Reasons for adjustment (if applicable)		The ATMP identifies the need for cycling facilities			
Adjustment for Strategic Policy	Upwards	Upwards	Upwards	None	None
Reasons for adjustment (if applicable)	TMP states that it has the goal of doubling the sustainable transportation mode share	TMP states that it has the goal of doubling the sustainable transportation mode share	TMP states that it has the goal of doubling the sustainable transportation mode share		
Actual	F	F	E	B	B
Active Transportation Design Check					
Do the pedestrian facilities provide direct access to all properties along the segment? (Direct access can be provided by an adjacent facility or designated crossing to the property in question)					Yes
Does the bicycle facility selected correspond with the minimum appropriate facility type identified in the context appropriate nomograph (Figure 6.1, 6.2)?					No
MMLOS Evaluation					
Measure 1	Pedestrian Facility Width (m)	Bike Facility Width per Direction (m)	Transit Facility Type	Width of Curb Lane (m)	Mid-block V/C Ratio
	Less than 1.5	Less than 1.2	Mixed traffic with > 1 lane per direction	3.9 - 4.0	Less than 0.60
Measure 2	Pedestrian Buffer Width (m)	Bike Buffer Width (m)	Transit Passenger Amenities	Car Level of Service	Curb Lane Conflicts
	Less than 1.0	Has no physical measures and buffer width is < 0.5	Low presence of passenger amenities such as shelters, seating, shade trees, etc.	B	3-4
Measure 3	Max Distance Between Controlled Crossings (m)	Conflicts with Other Modes (in-lane conflicts and cross point conflicts)	Pedestrian Level of Service	-	-
	Greater than 320	One "moderate" conflict indicator and one "high" conflict indicator	F		
Measure 4		-	-	-	-

Actual	F	F	E	B	C
SCENARIO: Extension of Intermodal Drive to Gorewood Drive (Existing Conditions)					
Area Type: Industrial Boulevard					
MODE					
Gorewood Drive (Steeles Avenue to northern terminus)					
Type	SEGMENTS				
Target (Custom if necessary)	C	C	C	B	E
Adjustment for Planning Direction	None	None	None	None	None
Reasons for adjustment (if applicable)					
Adjustment for Strategic Policy	Upwards	Upwards	Upwards	None	None
Reasons for adjustment (if applicable)	TMP states that it has the goal of doubling the sustainable transportation mode share	TMP states that it has the goal of doubling the sustainable transportation mode share	TMP states that it has the goal of doubling the sustainable transportation mode share		
Actual	F	F	E	B	C
Active Transportation Design Check					
Do the pedestrian facilities provide direct access to all properties along the segment? (Direct access can be provided by an adjacent facility or designated crossing to the property in question)					No
Does the bicycle facility selected correspond with the minimum appropriate facility type identified in the context appropriate nomograph (Figure 6.1, 6.2)?					No
MMLOS Evaluation					
Measure 1	Pedestrian Facility Width (m)	Bike Facility Width per Direction (m)	Transit Facility Type	Width of Curb Lane (m)	Mid-block V/C Ratio
	Less than 1.5	Less than 1.2	Mixed traffic with 1 lane per direction	3.9 - 4.0	Less than 0.60
Measure 2	Pedestrian Buffer Width (m)	Bike Buffer Width (m)	Transit Passenger Amenities	Car Level of Service	Curb Lane Conflicts
	Less than 1.0	Has no physical measures and buffer width is < 0.5	Low presence of passenger amenities such as shelters, seating, shade trees, etc.	C	9+
Measure 3	Max Distance Between Controlled Crossings (m)	Conflicts with Other Modes (in-lane conflicts and cross point conflicts)	Pedestrian Level of Service	-	-
	Greater than 320	One "moderate" conflict indicator and one "high" conflict indicator	F		
Measure 4		-	-	-	-

Actual	F	F	E	A	A
SCENARIO: Extension of Intermodal Drive to Gorewood Drive (Existing Conditions)					
Area Type: Industrial Connector					
MODE					
Goreway Drive & Intermodal Drive					
Type	SIGNALIZED INTERSECTIONS				
Target (Custom if necessary)	D	B	C	B	D
Adjustment for Planning Direction	None	Upwards	None	None	None
Reasons for adjustment (if applicable)		The ATMP identifies the need for cycling facilities			
Adjustment for Strategic Policy	Upwards	Upwards	Upwards	None	None
Reasons for adjustment (if applicable)	TMP states that it has the goal of doubling the sustainable transportation mode share	TMP states that it has the goal of doubling the sustainable transportation mode share	TMP states that it has the goal of doubling the sustainable transportation mode share		
Actual	F	F	E	A	A
Active Transportation Design Check					
Are marked pedestrian crossings provided to connect all approaching pedestrian facilities?					Yes
Does the approaching bike facility continue at a consistent width up to the edge of the intersection (crosswalk or curb edge of intersecting roadway)?					Yes
Is a continuous amount of space and accompanying pavement markings delineated for cyclists through the intersection?					Yes
Does the intersection design provide features which facilitate all the intended turn movements for cyclists (e.g. bike boxes, queuing space, protected intersection, etc)?					No
Have Accessibility for Ontarians with Disabilities Act (AODA) and municipal accessibility standards (if applicable) been considered?					
MMLOS Evaluation					
Measure 1	Enhanced Pedestrian Measures	Enhanced Bicycle Facilities	Transit Priority Measures	Average Effective Turning Radius (m)	% of Movements with Dedicated Turn Lanes
	0	0	No transit priority measures at any approaches for transit	Greater than 18	85 - 100%
Measure 2	Average Effective Turning Radius (m)	Average Effective Turning Radius (m)	Transit Movement Delay (s)	Car Level of Service	Intersection Delay (s)
	Greater than or Equal to 18	Greater than or Equal to 18	21 - 35	A	11 - 20
Measure 3	Signal Cycle Length (s)	Signal Cycle Length (s)	Pedestrian Level of Service	-	-
	Greater than 120	Greater than 120	F		
Measure 4	Number of Uncontrolled Conflicts (conflicts/approach)	Number of Uncontrolled Conflicts (conflicts/approach)	-	-	-
	2.6 - 3.0	2.6 - 3.0			

Actual	F	F	E	A	B
SCENARIO: Extension of Intermodal Drive to Gorewood Drive (Existing Conditions)					
Area Type: Industrial Connector					
MODE					
Steeles Avenue & Goreway Drive					
Type	SIGNALIZED INTERSECTIONS				
Target (Custom if necessary)	D	B	C	B	D
Adjustment for Planning Direction	None	Upwards	None	None	None
Reasons for adjustment (if applicable)		The ATMP and Peel Region Long Range Transportation Plan identifies the need for cycling facilities			
Adjustment for Strategic Policy	Upwards	Upwards	Upwards	None	None
Reasons for adjustment (if applicable)	TMP states that it has the goal of doubling the sustainable transportation mode share	TMP states that it has the goal of doubling the sustainable transportation mode share	TMP states that it has the goal of doubling the sustainable transportation mode share		
Actual	F	F	E	A	B

Active Transportation Design Check	
Are marked pedestrian crossings provided to connect all approaching pedestrian facilities?	Yes
Does the approaching bike facility continue at a consistent width up to the edge of the intersection (crosswalk or curb edge of intersecting roadway)?	Yes
Is a continuous amount of space and accompanying pavement markings delineated for cyclists through the intersection?	Yes
Does the intersection design provide features which facilitate all the intended turn movements for cyclists (e.g. bike boxes, queuing space, protected intersection, etc)?	No
Have Accessibility for Ontarians with Disabilities Act (AODA) and municipal accessibility standards (if applicable) been considered?	

MMLOS Evaluation					
Measure 1	Enhanced Pedestrian Measures	Enhanced Bicycle Facilities	Transit Priority Measures	Average Effective Turning Radius (m)	% of Movements with Dedicated Turn Lanes
	0	0	No transit priority measures at any approaches for transit	Greater than 18	85 - 100%
Measure 2	Average Effective Turning Radius (m)	Average Effective Turning Radius (m)	Transit Movement Delay (s)	Car Level of Service	Intersection Delay (s)
	Greater than or Equal to 18	Greater than or Equal to 18	36 - 55	B	36 - 55
Measure 3	Signal Cycle Length (s)	Signal Cycle Length (s)	Pedestrian Level of Service	-	-
	Greater than 120	Greater than 120	F		
Measure 4	Number of Uncontrolled Conflicts (conflicts/approach)	Number of Uncontrolled Conflicts (conflicts/approach)	-	-	-
	Greater than 3	Greater than 3			

Actual	E	E	E	A	B
SCENARIO: Extension of Intermodal Drive to Gorewood Drive (Existing Conditions)					
Area Type: Industrial Connector					
MODE					
Steeles Avenue & Finch Avenue/Gorewood Drive					
Type	SIGNALIZED INTERSECTIONS				
Target (Custom if necessary)	D	B	C	B	D
Adjustment for Planning Direction	None	Upwards	None	None	None
Reasons for adjustment (if applicable)		The Peel Region Long Range Transportation Plan identifies this street as part of the cycling network			
Adjustment for Strategic Policy	Upwards	Upwards	Upwards	None	None
Reasons for adjustment (if applicable)	TMP states that it has the goal of doubling the sustainable transportation mode share	TMP states that it has the goal of doubling the sustainable transportation mode share	TMP states that it has the goal of doubling the sustainable transportation mode share		
Actual	E	E	E	A	B
Active Transportation Design Check					
Are marked pedestrian crossings provided to connect all approaching pedestrian facilities?					Yes
Does the approaching bike facility continue at a consistent width up to the edge of the intersection (crosswalk or curb edge of intersecting roadway)?					Yes
Is a continuous amount of space and accompanying pavement markings delineated for cyclists through the intersection?					Yes
Does the intersection design provide features which facilitate all the intended turn movements for cyclists (e.g. bike boxes, queuing space, protected intersection, etc)?					No
Have Accessibility for Ontarians with Disabilities Act (AODA) and municipal accessibility standards (if applicable) been considered?					
MMLOS Evaluation					
Measure 1	Enhanced Pedestrian Measures	Enhanced Bicycle Facilities	Transit Priority Measures	Average Effective Turning Radius (m)	% of Movements with Dedicated Turn Lanes
	0	0	No transit priority measures at any approaches for transit	Greater than 18	60 - 84%
Measure 2	Average Effective Turning Radius (m)	Average Effective Turning Radius (m)	Transit Movement Delay (s)	Car Level of Service	Intersection Delay (s)
	Greater than or Equal to 18	Greater than or Equal to 18	21 - 35	B	21 - 35
Measure 3	Signal Cycle Length (s)	Signal Cycle Length (s)	Pedestrian Level of Service	-	-
	Greater than 120	Greater than 120	E		
Measure 4	Number of Uncontrolled Conflicts (conflicts/approach)	Number of Uncontrolled Conflicts (conflicts/approach)	-	-	-
	2.1 - 2.5	1.6 - 2.0			

Actual	C	A	D	A	A
SCENARIO: Extension of Intermodal Drive to Gorewood Drive (Future Conditions)					
Area Type: Industrial Boulevard					
MODE					
Intermodal Drive Extension					
Type	SEGMENTS				
Target (Custom if necessary)	C	B	C	B	E
Adjustment for Planning Direction	None	Upwards	None	None	None
Reasons for adjustment (if applicable)		The ATMP identifies the need for cycling facilities			
Adjustment for Strategic Policy	Upwards	Upwards	Upwards	None	None
Reasons for adjustment (if applicable)	TMP states that it has the goal of doubling the sustainable transportation mode share	TMP states that it has the goal of doubling the sustainable transportation mode share	TMP states that it has the goal of doubling the sustainable transportation mode share		
Actual	C	A	D	A	A
Active Transportation Design Check					
Do the pedestrian facilities provide direct access to all properties along the segment? (Direct access can be provided by an adjacent facility or designated crossing to the property in question)					Yes
Does the bicycle facility selected correspond with the minimum appropriate facility type identified in the context appropriate nomograph (Figure 6.1, 6.2)?					Yes
MMLOS Evaluation					
Measure 1	Pedestrian Facility Width (m)	Bike Facility Width per Direction (m)	Transit Facility Type	Width of Curb Lane (m)	Mid-block V/C Ratio
	2.1 - 2.5	Greater than 2.4	Mixed traffic with 1 lane per direction	3.9 - 4.0	Less than 0.60
Measure 2	Pedestrian Buffer Width (m)	Bike Buffer Width (m)	Transit Passenger Amenities	Car Level of Service	Curb Lane Conflicts
	Greater than 2.5	Has physical measures AND buffer width > 1	Moderate presence of passenger amenities such as shelters, seating, shade trees, etc.	A	1-2
Measure 3	Max Distance Between Controlled Crossings (m)	Conflicts with Other Modes (in-lane conflicts and cross point conflicts)	Pedestrian Level of Service	-	-
	Greater than 320	Two "low" conflict indicators	D		
Measure 4		-	-	-	-

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