590816 Ontario Inc.

2935 & 2955 Mississauga Road, City of Mississauga

Transportation Impact Study Addendum

2025-12-08

2935 & 2955 Mississauga Road

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1. Introduction

WSP was retained by 590816 Ontario Inc. to prepare a Transportation Impact Study Addendum for the proposed residential development of 2935 & 2955 Mississauga Road, located in the City of Mississauga.

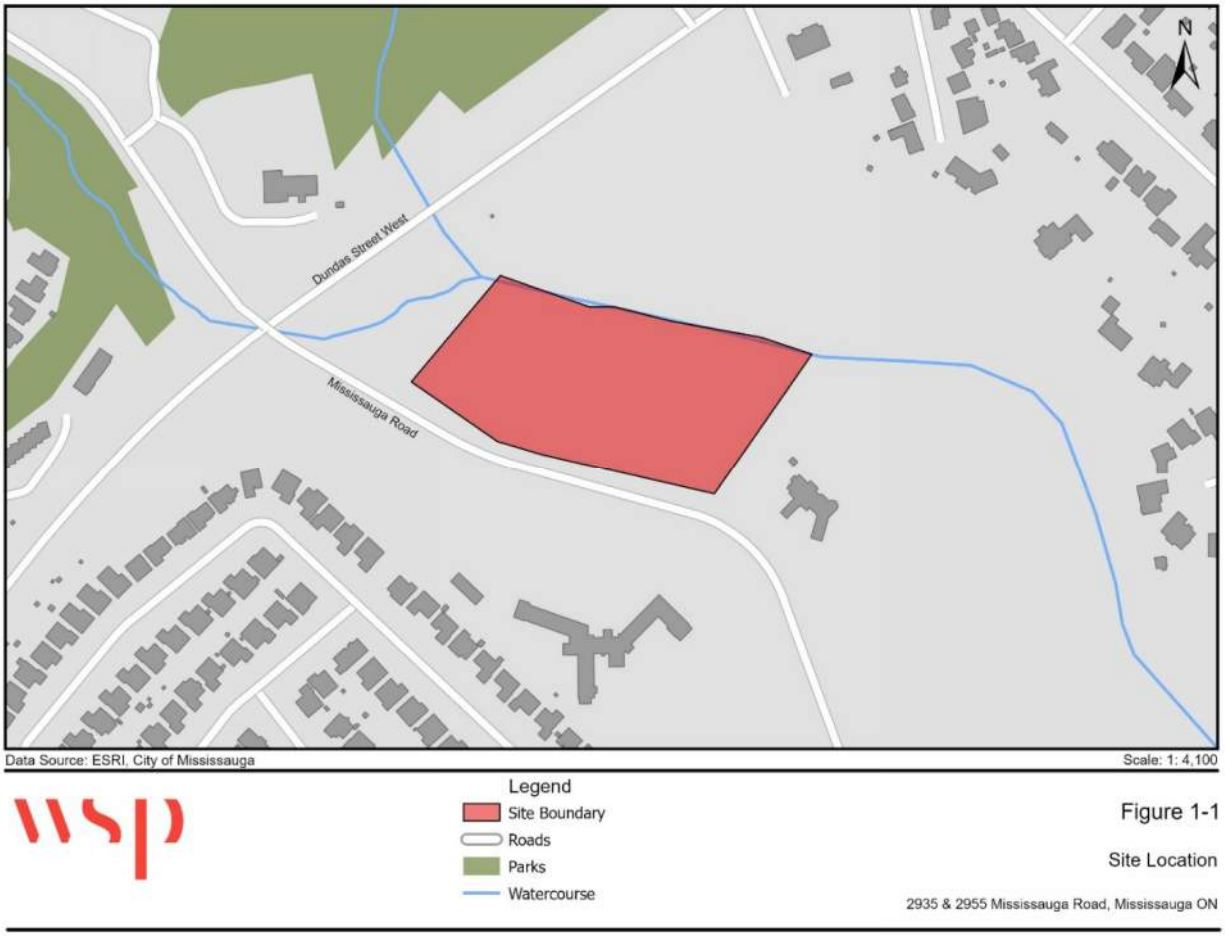
Two previous transportation impact studies (TIS) have been prepared by Trans-Plan Transportation Engineering, dated February 2021 and November 2023 in support of the development. The February 2021 and November 2023 TIS' had evaluated a total of 207 residential units (20 townhouses and 187 condo). A terms of reference (ToR) for these previous TIS were established with the City of Mississauga. Given the addendum nature of this submission and the similarities in land use and density, no additional ToR is required as the same study area and methodology is being maintained. The purpose of this TIS Addendum is to:

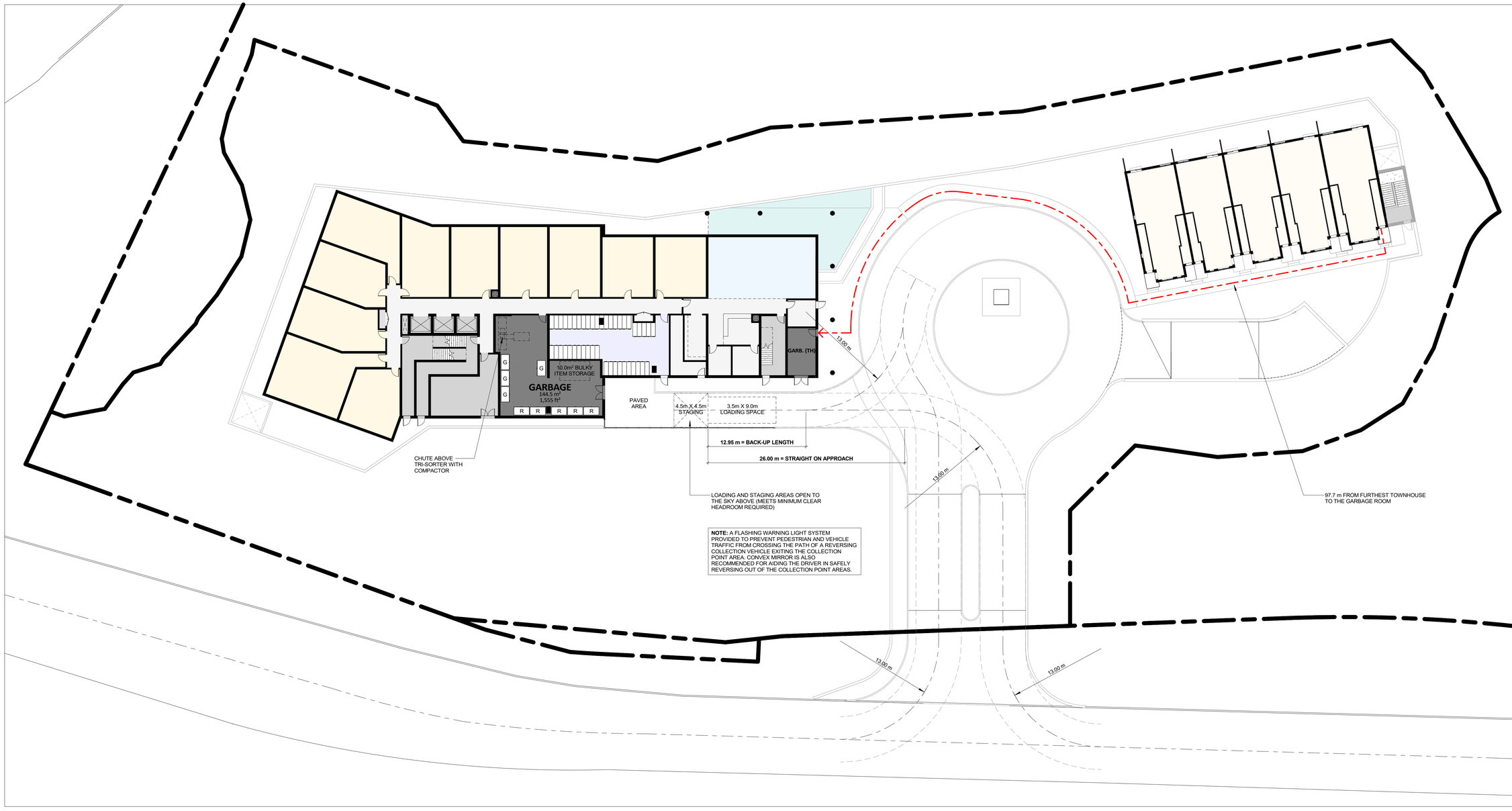
- Address and respond to City comments dated April 8, 2024 received from the City of Mississauga staff Bo Yang Yu; and
- Incorporate the latest site statistics and development plan.

The site is currently vacant, consisting of natural features and open area, and the Credit River. The site location is shown in **Figure 1-1** and the ground floor plan is shown in **Figure 1-2**.

The proposed development consists of 196 condo units and 15 townhouse units. The development will be built out over 1 phase.

Figure 1-1: Site Location





1 **LEVEL 1 - WASTE MANAGEMENT PLAN**
1 : 250

SOLID WASTE MANAGEMENT REQUIREMENTS:

**AS PER THE PEEL WASTE COLLECTION DESIGN STANDARDS MANUAL*

GARBAGE BINS REQUIRED:
ONE 3-CUBIC YARD BIN COLLECTING COMPACTED GARBAGE FOR EVERY 54 DWELLING UNITS.

RECYCLING BINS REQUIRED:
ONE 3-CUBIC YARD BIN COLLECTING NON-COMPACTED RECYCLING FOR EVERY 45 DWELLING UNITS. RECYCLABLE MATERIALS MUST NOT BE COMPACTED.

WASTE STORAGE SPACE REQUIRED:
PEEL WASTE MANAGEMENT REQUIRES INTERNAL STORAGE AREAS TO BE LARGE ENOUGH TO CONTAIN THE REQUIRED NUMBER OF FRONT-END GARBAGE BINS INCLUDING A MINIMUM SPACE OF 10.0 m² FOR THE STORAGE OF BULKY ITEMS.

TURNING RADIUS AND CLEARANCES REQUIRED:
THE TURNING RADIUS FROM THE CENTRE LINE AS TO BE A MINIMUM OF 13.0 m ON ALL TURNS FOR THE WASTE COLLECTION VEHICLE WITH THE MAXIMUM GRADE CHANGE PERMITTED ALONG THE ACCESS ROUTE BEING 8%. THE COLLECTION AREA IS TO BE DESIGNED SUCH THAT IT WILL CONSIST OF A LEVEL (+/-2%) CONCRETE SURFACE. THE APPROACH IS TO BE LEVEL (+/- 2%) AND THE SAME WIDTH AS THE COLLECTION POINT.

THE FOLLOWING MINIMUM CLEARANCES ARE TO BE PROVIDED FOR THE WASTE COLLECTION VEHICLE:
• IN THE COLLECTION AREA AN OVERHEAD CLEARANCE OF 7.5 m FROM OBSTRUCTIONS SUCH AS BALCONIES, WIRES AND TREES MUST BE PROVIDED.
• OUTSIDE OF THE COLLECTION AREA AN OVERHEAD CLEARANCE OF 4.4 m FROM OBSTRUCTIONS SUCH AS BALCONIES, WIRES AND TREES MUST BE PROVIDED.

BIN CALCULATIONS:

REQUIRED:	PROVIDED:
GARBAGE BINS REQUIRED: TOTAL # UNITS = 211 211 / 54 = 3.91 (ROUND UP)= 4 3-CUBIC YARD BINS **RECYCLING BINS REQUIRED:** TOTAL # OF UNITS = 211 211 / 45 = 4.68 (ROUND UP) = 5 3-CUBIC YARD BINS **BULKY STORAGE AREA REQUIRED:** A MINIMUM OF 10 m2 MUST BE PROVIDED FOR THE STORAGE OF BULKY ITEMS. **STORAGE ROOM AREA REQUIRED:** MUST HAVE SUFFICIENT AREA TO ACCOMMODATE THE REQUIRED NUMBER OF FRONT-END BINS REQUIRED FOR THE DEVELOPMENT PLUS 10m2 AREA FOR BULKY ITEMS.	**GARBAGE BINS PROVIDED:** 3-CUBIC YARD BINS PROVIDED = 4 **RECYCLING BINS PROVIDED:** 3-CUBIC YARD BINS PROVIDED = 5 **BULKY STORAGE AREA PROVIDED:** BULKY STORAGE AREA PROVIDED = 10.0 m2 **STORAGE ROOM AREA PROVIDED:** ROOM AREA PROVIDED = 144.5 m2

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PROJECT NAME
Mississauga Condo Development
2935 & 2955 Mississauga Road, Mississauga, Ontario

DRAWING TITLE
WASTE MANAGEMENT PLAN

No.	Date:	Issued / Revision:	By:
01	2024/10/25	ISSUED FOR ENGLOBE - SLOPE STABILITY	

Figure 1-2

SCALE	As indicated
PROJECT NO.	20001
DATE	OCT 2025
DRAWN BY	MNG
CHECKED BY	CLA

NORTH:

DRAWING NO.
A 0.02

2. Existing Conditions

2.1 Boundary Roadways

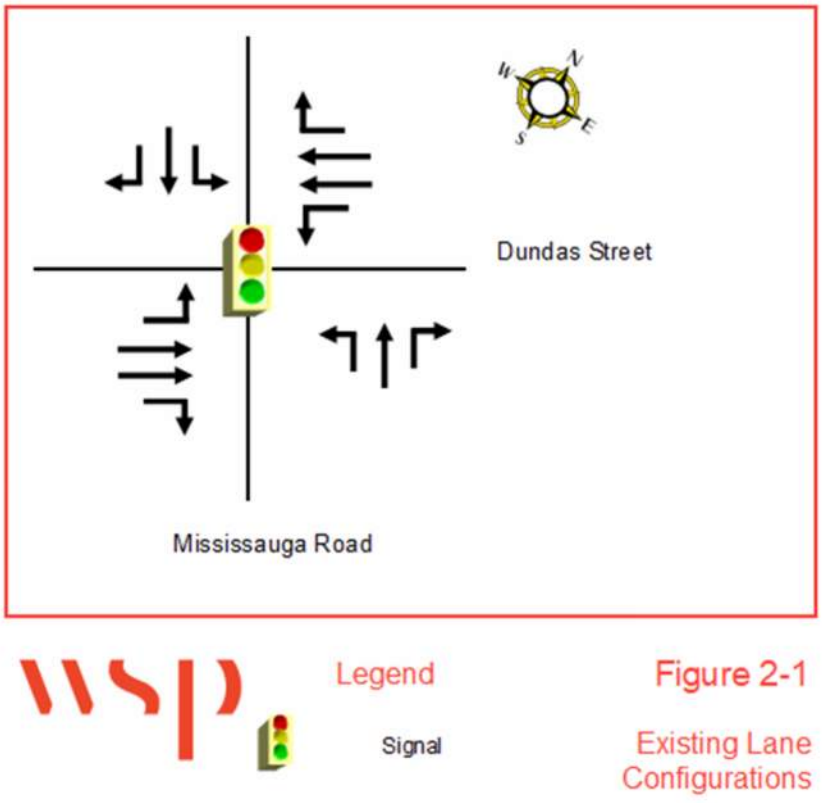
The following roadways make up the boundary road network that surrounds the subject site:

Mississauga Road is a north-south, two-lane major collector adjacent to the west border of the site. It has a posted speed limit of 50 km/h. There are bicycle lanes on both sides of the street and a pedestrian sidewalk along the west side.

Dundas Street is an east-west arterial road with a posted speed limit of 60 km/h. It has pedestrian sidewalks on both sides of the street

Based on the magnitude of the development and the terms of reference established previously with the City in the past February 2021 and November 2023 TIS, the Mississauga Road and Dundas Street West intersection will be evaluated. This signalized intersection is located northwest of the site. The existing lane configurations of the study intersection are illustrated in **Figure 2-1**.

Figure 2-1: Existing Lane Configurations



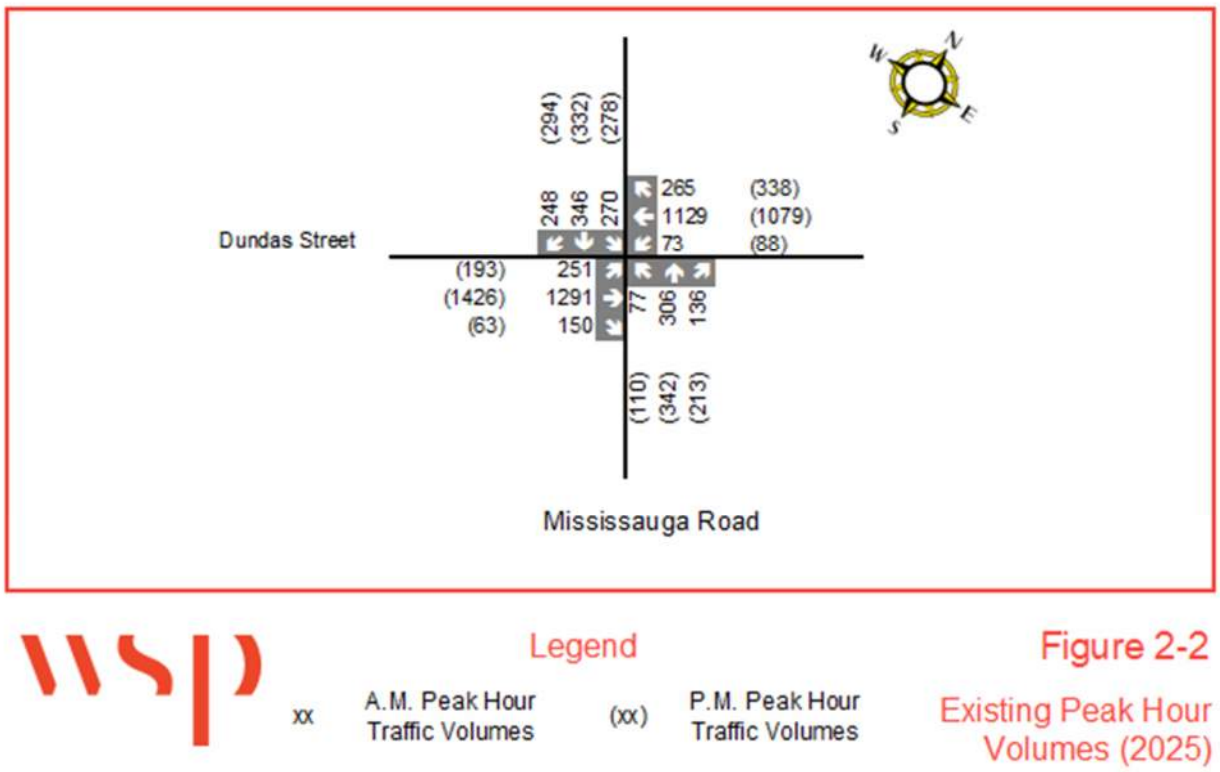
2.2 Traffic Data

New traffic data was collected at the study intersection. The weekday counts were surveyed on Thursday, September 11th, 2025. The traffic data source used for analysis is summarized in **Table 2-1**. The extracted peak hour volumes are shown in **Figure 2-2**. The surveyed data are presented in **Appendix A**. Moreover, WSP has also purchased the latest signal timing plans from the City for the study intersection which is documented in Appendix A and incorporated in this study.

Table 2-1: Traffic Data

Intersection	Count Date	Source
Mississauga Road and Dundas Street West	Thursday, September 11th, 2025	Horizon Data Services

Figure 2-2: Existing Peak Hour Volumes (2025)



2.3 Existing Transit Services

MiWay operates the following route near the site:

Route 1 Dundas is an east-west route along Dundas Street. It connects Kipling Bus Terminal in the east with Laird Road/ Ridgeway Drive. It has approximately 25-minute headway.

Route 1C Dundas is a variation of Route 1, going along Dundas Street. It connects Kipling Bus Terminal with South Common Centre, with stops at University of Toronto Mississauga Campus. It has approximately 15-minute headway.

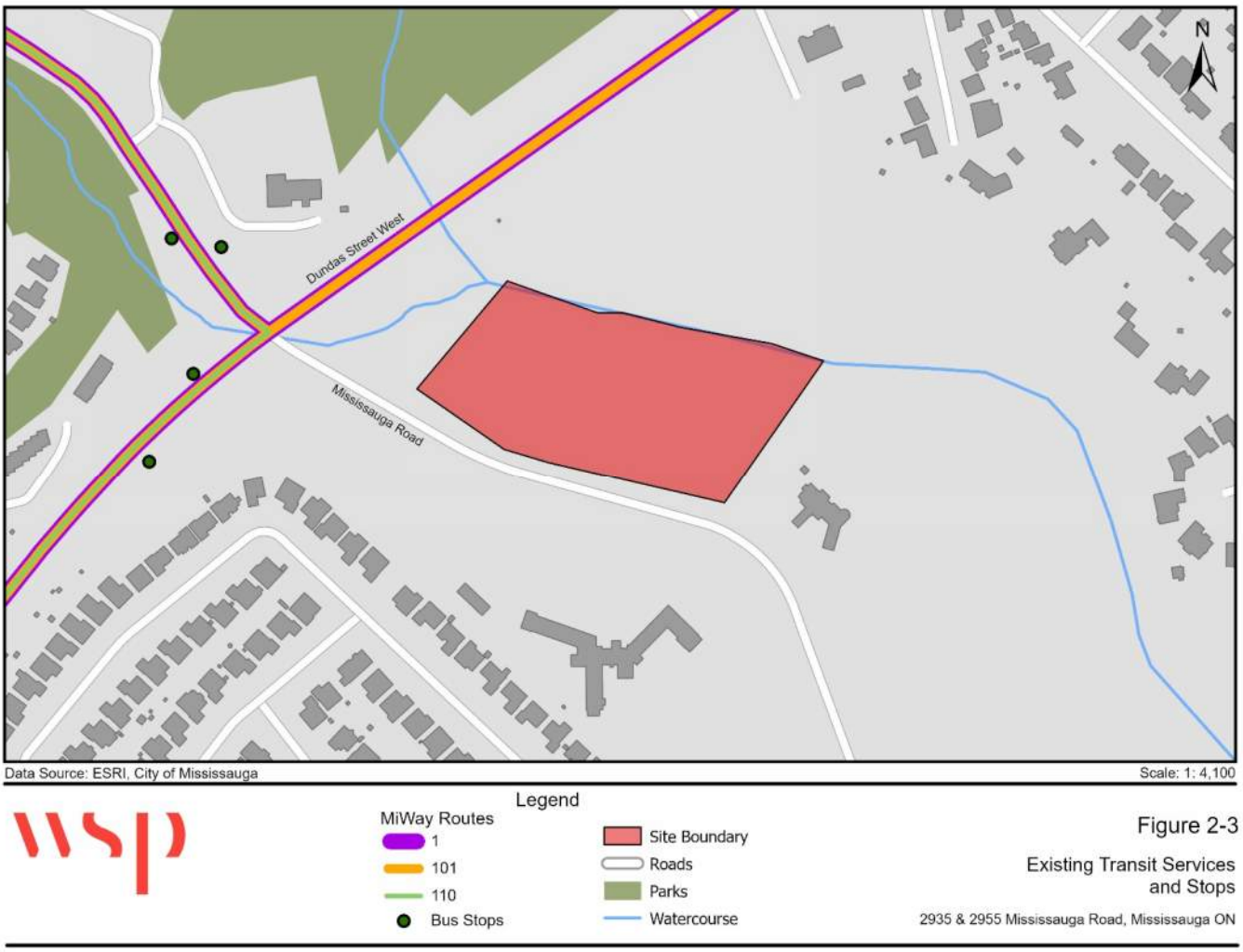
The subject site is located within approximately 500m from the University of Toronto Mississauga (UTM) Campus, servicing 5 MiWay transit routes. The UTM Bus stop services routes such as **1 Dundas**, **44 Mississauga Road**, **101 Dundas Express**, **110 University Express**, and **126 Burnhamthorpe Express**. These routes provide local and express service connections to major destinations such as Islington Subway Station (Line 2), South Common Centre, Clarkson GO Station, and central Mississauga.

The above transit services near the site are shown in **Figure 2-3**.

2.4 Existing Active Transportation Facilities

Mississauga Road includes on-road separated bicycle lanes, providing direct cycling connections between the Subject Lands, the UTM campus, and the broader active transportation network. These dedicated facilities support year-round cycling and contribute to a multimodal transportation system that aligns with provincial and municipal policy objectives

Figure 2-3: Existing Transit Services and Stops



There are four transit stops, located on the north approach of Mississauga Road and the west approach of Dundas Street. These stops service MiWay Route 1 Dundas. Routes 101 Dundas Express and 110 University Express passes through the study intersection of Mississauga Road and Dundas Street.

2.5 Existing Conditions

2.5.1 Methodology

To analyze existing traffic conditions in the study area, capacity analyses were undertaken using the Synchro 12 traffic analysis software. This software incorporates the methodology outlined in the Highway Capacity Manual (HCM) 2000. An intersection capacity analysis provides an indication of traffic operations based on calculations of volume-to-capacity (v/c) and delays for individual movements at an intersection. Level of Service (LOS) denoted by letters ‘A’ through ‘D’, represent satisfactory traffic operations. LOS denoted by the letters ‘E’ and ‘F’ represent congested traffic operations.

The Synchro parameters were set according to the *City of Mississauga's Transportation Impact Study Guidelines* (December 2022) Appendix D – Typical Synchro Analysis Parameters, as summarized in **Table 2-2**.

Table 2-2: Synchro Analysis Parameters

Parameter	Value
Saturation Flow Rate	1900 vehicles per hour per lane (vphpl)
Lane Width	3.7m throughout
Peak Hour Factor	0.92
Total Lost Time Adjustment*	Advanced Green: 1.0 second Back-to-Back Lefts: 1.0 second Main Phase: 5.0 seconds

**Lost Time Adjustment was calculated by choosing the designated option and subtracting each phase's Yellow Time and All-Red Time.*

The surveyed peak hour factor (PHF) of an intersection reflects the uniformity and arrival pattern of traffic. This is important because at busier intersections such as Mississauga Road and Dundas Street West, the PHF is typically higher and closer to 1. Using the Synchro default of 0.92 at a busier intersection like this will underestimate the capacity artificially. As a result, a sensitivity analysis was completed based on the surveyed peak hour factor (based on the turning movement count 15 minute data results presented in Appendix A.

2.5.2 Existing Traffic Operations

The peak hour traffic volumes from **Figure 2-2** were used for analysis. The resulting intersection operations are shown in **Table 2-3**. No signal timing split adjustment was applied as part of this evaluation. The detailed Synchro outputs are presented in **Appendix B**.

Table 2-3: Existing Conditions Intersection Operations

Intersection	Weekday A.M Peak Hour		Weekday P.M. Peak Hour	
	LOS (Delay in Seconds)	Critical Movement (v/c Ratio)	LOS (Delay in Seconds)	Critical Movement (v/c Ratio)
Mississauga Road and Dundas Street West (Based on City Default PHF)	E (58)	EB-L (1.06) NB-T (0.92) SB-L (1.33)	E (72)	EB-L (1.06) EB-T (1.00) NB-T (0.97) SB-L (1.68)
Mississauga Road and Dundas Street West (Based on surveyed PHF)	D (50)	EB-L (0.96) SB-L (1.19)	E (64)	EB-L (0.93) EB-T (0.94) NB-T (0.95) SB-L (1.57)

The results in **Table 2-3** show the under the City default PHF scenario, the intersection operates at LOS 'E' during both Weekday AM and PM peak hours. The eastbound left-turn and southbound left-turn movements are reported to be operating at over capacity under existing conditions when the City default PHF is applied. This is theoretically not possible given all of the turning movements were observed to have made it through the intersection based on the 2025 turning movement counts. This means Synchro is significantly underestimating the capacity of various movements, which is common at busier arterial to arterial intersections where the motorist patterns (i.e., gap acceptance) are more aggressive. It is also worth noting that the previous February 2021 and November 2023 TIS' both reported similar critical movements operating over capacity under existing conditions. Since Synchro is already underestimating the level of capacity of this intersection, it would not be reasonable to further exacerbate the situation by using a default PHF value that is lower than what was surveyed.

The existing conditions scenario with the surveyed PHF applied indicates that the study intersection operates better with a reduction in average intersection delay of 8 seconds per vehicle in delay during the Weekday AM and PM peak hours. The southbound left-turn movement is still reported to be operating well over capacity under existing conditions, which continues to reflect Synchro's underestimation of this movement's capacity.

Given Synchro's underestimation of the intersection's capacity, the future analyses presented herein is based on the surveyed PHF scenario, and the focus of the evaluation is identifying the subject site's influence on the intersection's overall delay and the v/c ratios of the critical movements.

The 50th and 95th percentile queues of all movements at the study intersection is provided in Appendix B. For ease of comparative review, the 50th and 95th percentile queues of all movements are presented in **Table 5-2** in Section 5 alongside future background and future total results.

3. Future Background Conditions

3.1 Horizon Year & Planned Improvements

Based on the magnitude of the development and standard industry practice, a 5 year buildout horizon of 2030 has been evaluated for this TIS. Based on WSP's review, there does not appear to be planned roadway improvements within this horizon. However, the Subject Lands are located along the future Dundas BRT corridor, a provincially funded higher-order transit project. The Dundas BRT project would bring 48 km of fast, frequent bus rapid transit along Dundas Street from Highway 6 in the City of Hamilton through to the Kipling Transit Hub in the City of Toronto, linking Etobicoke and Mississauga City Centres. More than 20 km of the project would operate in bus lanes or in a dedicated right-of-way, separate from other traffic, allowing faster and more reliable transit connections.

3.2 Corridor Growth

The morning and afternoon peak period general growth rates to apply to the surrounding roadways were provided by the City of Mississauga on September 24, 2025 (**Appendix C**). These growth rates replace the previous rates applied in the 2021 and 2023 TIS'. The corridor compound growth rates for each direction are summarized in **Table 3-1**. The 2030 grown volumes are illustrated in **Figure 3-1**.

Table 3-1: Corridor Compound General Growth Rates

Corridor	Direction	Annual Growth Rate	
		AM Peak	PM Peak
Applied to the period between 2025 to 2030			
Mississauga Road	Northbound	0.5%	1.0%
	Southbound	0.5%	1.0%
Dundas Street West	Eastbound	1.0%	1.0%
	Westbound	1.0%	1.0%

3.3 Background Developments

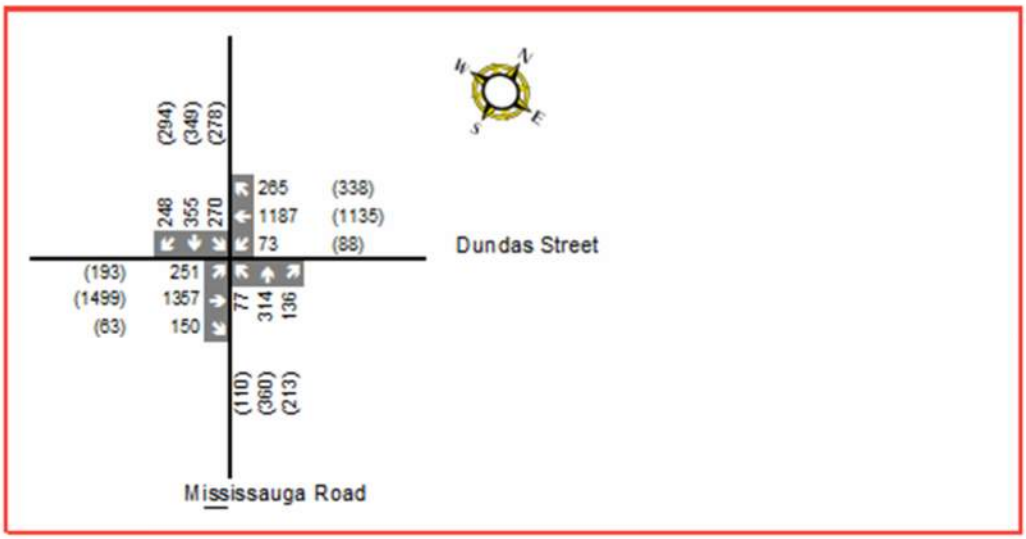
The surrounding background development information was obtained from the City of Mississauga's *Active Development Application* platform, which identified three active developments within proximity of the site as shown in **Table 3-2**.

Table 3-2: Nearby Background Developments

Background Development	Statistics	Source
1775 Thorny Brae Place	99 residential units	UrbanTrans Engineering Solutions Inc.
3855 Dundas Street West	168,091 sq.ft of self-storage space, 1,048 sq.ft of wine cellar, 61,941 sq.ft of Dymon Work Refined office space, 13.255 sq.ft of industrial condo units, 15,065 sq.ft of reception/retail area as ancillary use	CGH Transportation
1720 Sherwood Forrest Circle	56 residential units	CGH Transportation

The auto trips associated with the background developments were extracted from their respective Transportation Impact Studies and the combined background development volumes are shown in **Figure 3-2**.

Figure 3-1: 2030 Grown Volumes



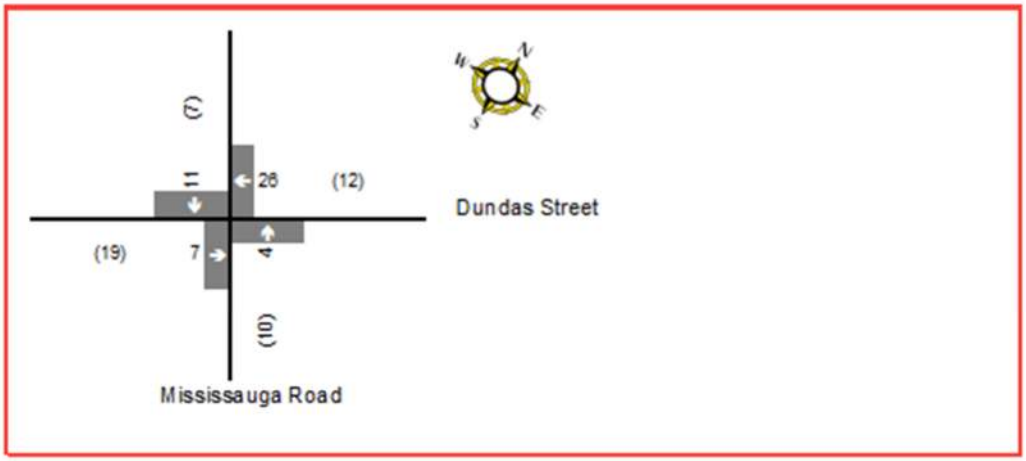
Legend

xx A.M. Peak Hour Traffic Volumes

(xx) P.M. Peak Hour Traffic Volumes

Figure 3-1
2030 Grown Traffic Volumes

Figure 3-2: Background Developments Traffic Volumes



Legend

xx A.M. Peak Hour Traffic Volumes

(xx) P.M. Peak Hour Traffic Volumes

Figure 3-2
Background Developments Traffic Volumes

3.4 2030 Future Background Operations

The projected future background volumes for the horizon year of 2030 were derived by combining the 2030 General Grown Volumes (Figure 3-1) and the Background Development Volumes (Figure 3-2). The resulting 2030 future background volumes are shown in **Figure 3-3.** The 2030 future background intersection operations are outlined in **Table 3-3**. The future background evaluation maintains the same signal timing parameters as evaluated in the existing conditions. The detailed Synchro worksheets are presented in **Appendix D**.

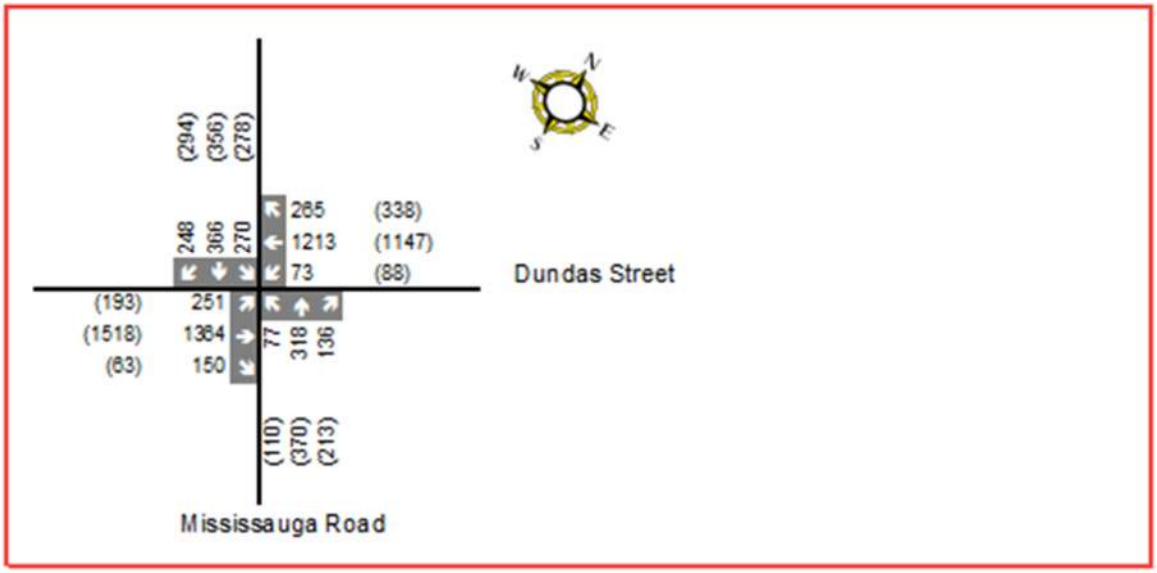
Table 3-3: 2030 Future Background Intersection Operations

Intersection	Weekday A.M Peak Hour		Weekday P.M. Peak Hour	
	LOS (Delay in Seconds)	Critical Movement (v/c Ratio)	LOS (Delay in Seconds)	Critical Movement (v/c Ratio)
Mississauga Road & Dundas St W	D (54)	EB-L (0.99) NB-T (0.90) SB-L (1.21)	E (72)	EB-L (1.04) EB-T (1.02) NB-T (0.97) SB-L (1.61)

Similar to existing conditions, the study intersection continues to operate at LOS D and E during the AM and PM peak hours, respectively. The critical movements reported previously and other movements deteriorate due to the assumed general growth and background development inclusion. For context, the increase in average vehicle delay due to the inclusion of the general growth and background development is 4 seconds/vehicle during the AM peak hour, and 8 seconds/vehicle during the PM peak hour. These results form the baseline for comparison to the future total conditions to understand the level of influence of the site-generated traffic.

For ease of comparative review, the 50th and 95th percentile queues of all movements are presented in **Table 5-2** in Section 5 alongside existing and future total results.

Figure 3-3: 2030 Future Background Traffic Volumes



Legend

xx A.M. Peak Hour Traffic Volumes

(xx) P.M. Peak Hour Traffic Volumes

Figure 3-3
2030 Future Background Volumes

4. Site-Generated Volumes

4.1 Site Access

The proposed development features a driveway onto Mississauga Road, which is the only opportunity for the site. The driveway location has been designed to be as far away from the upstream signal at Mississauga Road and Dundas Street as possible to avoid queuing influences. Based on the sightline analysis completed and presented in Section 7 of this TIS Addendum, the proposed driveway onto Mississauga Road is proposed as **a 3-moves driveway** accommodating:

- Westbound right-out;
- Northbound right-in; and
- Southbound left-in.

4.2 Site Trip Generation

The development features 196 condominium residential units and 15 stacked townhouse units. To be conservative and consistent with the previous TIS', it is assumed that all of the site-generated trips will be via auto mode. This is conservative considering there is an existing bike lane on Mississauga Road that will connect users to existing bus stops on Dundas Street.

The proposed development features a 12 storey apartment building with 196 units and a stacked townhouse building with 15 units. The Institute of Transportation Engineers (ITE) Trip Generation Manual, 11th edition rates for Land Use 222 "Residential High-Rise" and Land Use 220 "Residential Low-Rise" were used for trip generation. The weekday peaks use the "peak hour of adjacent street" equations.

Based on the ITE rates, the resulting auto trip generation for the proposed development is summarized in **Table 4-2**. The excerpts of the ITE rates used are provided in **Appendix E** for reference. The equation rate for LUC 222 was used given where the proposed development statistics fall within the sample size surveyed in terms of unit count. However, for LUC 220, the average rates were used due to the low magnitude of the development relative to the range of sites surveyed. For context, using the equation rate would have resulted in almost double the number of trips versus number of residential units proposed, which is not possible.

Table 4-2: Site Trip Generation

Land Use	Parameter	AM Peak			PM Peak		
		In	Out	Total	In	Out	Total
Residential High-Rise-ITE Code 222 (196 Units)	Equation (x= # units)	T = 0.22 X + 18.5			T = 0.26 X + 23.12		
	In/Out	26%	74%	100%	62%	38%	100%
	Rate	0.08	0.23	0.31	0.23	0.14	0.37
	Raw Generated Trips	16	46	62	46	28	74
Residential Low-Rise-ITE Code 220 (15 Units)	Average Rate	T=0.40X			T=0.51X		
	In/Out	24%	76%	100%	63%	37%	100%
	Rate	0.10	0.30	0.40	0.32	0.19	0.51
	Raw Generated Trips	1	5	6	5	3	8
Net Generated Trips		17	51	68	51	31	82

As shown in **Table 4-2**, the proposed development is estimated to generate 68 and 82 two-way auto trips during the weekday AM and weekday PM peak hours, respectively. For context, the City of Mississauga Transportation Impact Study Guidelines dated December 2022 (version 5.1) states the following:

> A **Transportation Impact Study** is required for proposed developments located outside the Downtown designation in the Official Plan which are projected to generate more than 100 peak hour person trips (worst peak hour), thereby satisfying the Trip Generation trigger.

Based on the above context, the worst-case trip generation of 82 trips during the PM peak hour means the site may be considered a relatively low trip generation source.

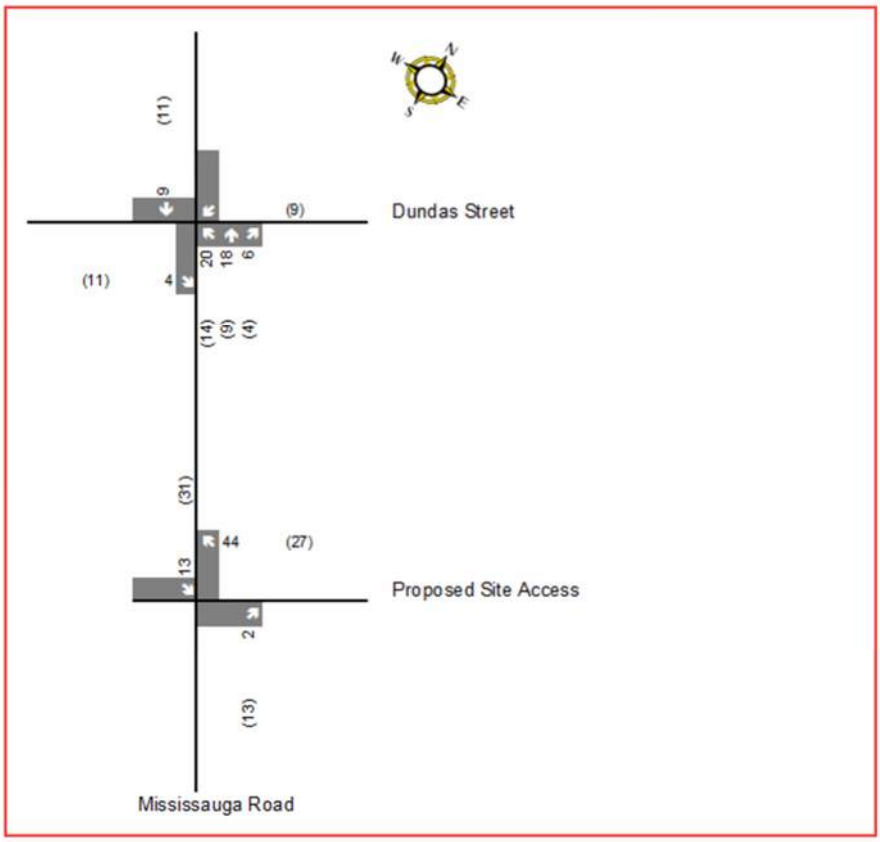
4.3 Site Trip Distribution and Assignment

Trip distribution data for home-based trips in Traffic Analysis Zones 3631, 3651, and 3663 from TTS were reviewed to determine the development's traffic distribution patterns. **Table 4-3** outlines the resulting TTS trip distribution. The site generated trips were assigned to the surrounding roadway network based on the existing distributions and the most logical route to and from the site driveway. The site-generated traffic assignment is shown in **Figure 4-2.** As noted in Section 4.1, the site driveway is proposed as 3-moves with the outbound left-turn being restricted.

Table 4-3: TTS Trip Distribution Patterns for the Study Area

Direction	AM In	AM Out	PM In	PM Out
North	58%	42%	25%	32%
East	8%	25%	40%	26%
South	2%	2%	6%	12%
West	32%	31%	29%	30%
Total	**100%**	**100%**	**100%**	**100%**

Figure 4-2: Site-Generated Traffic Volumes



Legend

xx A.M. Peak Hour Traffic Volumes

(xx) P.M. Peak Hour Traffic Volumes

Figure 4-2
2030 Site-Generated Traffic Volumes

5. Future Total Conditions

5.1 Future Improvements

Comments from the City's transportation staff noted the need for sidewalk connections to be built along from the Subject Lands to Mississauga Road, and from Mississauga Road to Dundas Street (along the site frontage where there are currently gaps). Accordingly, the applicant is agreeable to working with the City to deliver these important sidewalk connections that will enable residents and visitors to access transit facilities along Dundas Street, as well as walk to and from UTM.

5.2 2030 Future Total Conditions

The proposed future total volumes were developed by superimposing the volumes from 2030 future background conditions and the site-generated volumes. The resulting future total volumes are shown in **Figure 5-1**. The future total intersection operations are outlined in **Table 5-1**. The Synchro worksheets are in **Appendix F**. The future total evaluation maintains the same signal timing splits as per existing and future background conditions to allow "Apples to Apples" comparisons.

Table 5-1: 2030 Future Total Intersection Operations

Intersection	Weekday A.M Peak Hour		Weekday P.M. Peak Hour	
	LOS (Delay in Seconds)	Critical Movement (v/c Ratio)	LOS (Delay in Seconds)	Critical Movement (v/c Ratio)
Signalized				
Mississauga Road and Dundas Street West	E (56)	EB-L (0.99) NB-TR (0.92) SB-L (1.27)	E (73)	EB-L (1.04) EB-T (1.02) NB-TR (0.99) SB-L (1.61)
Unsignalized				
Mississauga Road and Site Access	B (13)	NB-TR (0.34)	B (15)	NB-TR (0.46)

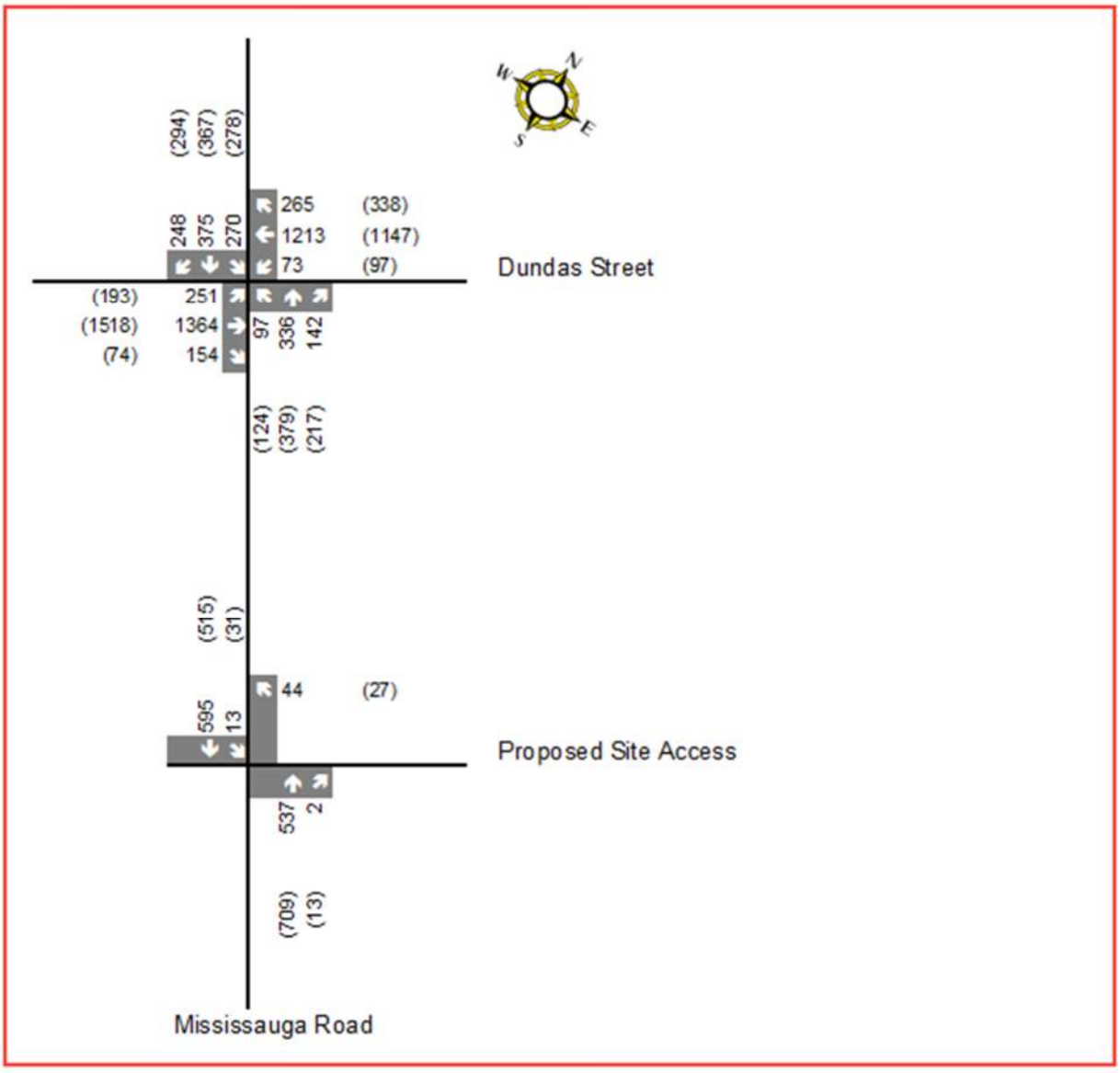
The signalized intersection operates at LOS E during both peak hours with a similar set of critical movements reported as existing and future background conditions. For the ease of comparing the future total results with existing and future background conditions, please see the summarized detailed intersection operations for all scenarios and horizons evaluated in **Table 5-2**.

For context, the increase in average vehicle delay due to the inclusion of the proposed development at the signalized intersection is 2 seconds/vehicle during the AM peak hour, and 1 second/vehicle during the PM peak hour. This level of change indicates the site-generated traffic will have minimal influence on the upstream intersection. The site-generated traffic does not trigger any new critical movements and the

change in v/c ratio is minimal as well. The proposed site driveway onto Mississauga Road is forecast to operate well at LOS B with no capacity constraints. The 50th and 95th percentile queues of the critical movements at the signalized study intersection reported in Table 5-1 also experience minimal increase.

The findings indicate the site-generated traffic will have minimal influence on the upstream signalized intersection. As noted earlier in existing conditions, the overcapacity movement reported in Table 5-1 are based on the underestimation of Synchro at a busier intersection.

Figure 5-1: 2030 Future Total Traffic Volumes



6. Parking Assessment

6.1 Auto Parking

The parking requirements were assessed based on the Mississauga Zoning By-law 0225-2007. Consistent with the previous TIS' completed for the site, the parking requirements have been evaluated based on Parking Precinct 4. Based on the By-law, residential and visitor parking are rounded down if the trailing decimal is less than 0.50. The relevant City By-law minimum requirements are provided below. Based on these rates, the minimum parking required for the development is summarized in **Table 6-1**.

Table 3.1.2.1 - Required Number of Off-Street Parking Spaces for Residential Uses
(0207-2008), (0297-2013), (0174-2017), (0179-2018), (0181-2018/LPAT Order 2019 February 15), (0111-2019/LPAT Order 2021 March 09), (0018-2021), (0117-2022), (0213-2022)

Column A		B	C	D	E	F
Line 1.0	TYPE OF USE	UNIT OF MEASUREMENT	PRECINCT 1	PRECINCT 2	PRECINCT 3	PRECINCT 4
2.0	Condominium **Apartment**	resident spaces per unit	0.8	0.9	1.0	1.1
		visitor spaces per unit	0.2	0.2	0.2	0.2
11.0	**Back to Back** and **Stacked Townhouse** without exclusive use **garage** and **driveway**	resident spaces per unit	1.0	1.1	1.3	1.5
		visitor spaces per unit	0.25	0.25	0.25	0.25

Table 6-1: Parking Requirements and Supply

Type (Magnitude)	Minimum Rate	Required Spaces	Proposed Spaces
Condominium Residents (196 units)	1.1	216	275
Stacked Townhouse Residents (15 units)	1.5	23	
Condominium Visitor (196 units)	0.2	39	43
Stacked Townhouse Visitor (15 units)	0.25	4	
Total		282	318

The results show that the proposed residential and visitor parking supplies meet the By-law minimum requirements.

From an accessible parking perspective, the By-law states that accessible parking spaces for residential uses shall only apply to the total number of visitor parking spaces required and in compliance with Table 3.1.3.1 – Accessible Parking Regulations. Accordingly, since the number of visitor spaces proposed is 43 spaces, the minimum quantity of accessible parking space is calculated as 4% of the total visitor supply. Therefore for 43 spaces, 2 accessible parking spaces are required. **Accordingly, the supply includes 2 accessible parking spaces, which satisfies the minimum requirement.**

3.1.3.1B **Accessible parking spaces** for residential **uses** shall only apply to the total number of visitor **parking spaces** required and shall be provided in compliance with Table 3.1.3.1 - Accessible Parking Regulations. *(0144-2016)*

Table 3.1.3.1 - Accessible Parking Regulations
(0190-2014), (0144-2016), (0018-2021)

Column	A	B	C
Line 1.0	TOTAL NUMBER OF REQUIRED NON-RESIDENTIAL PARKING SPACES	TOTAL NUMBER OF REQUIRED VISITOR PARKING SPACES	MINIMUM NUMBER OF REQUIRED ACCESSIBLE PARKING SPACES
2.0	1-12	1-12	1.0 space (1)
3.0	13-100	13-100	4% of the total (1)(2)
4.0	101-200	101-200	1.0 space plus 3% of the total (2)
5.0	201-1 000	201-1 000	2.0 spaces plus 2% of the total (2)
6.0	1 001 and greater	1 001 and greater	11.0 spaces plus 1% of the total (2)

6.2 Bicycle Parking

The bicycle parking requirements were assessed based on Table 3.1.6.5.1 of the By-law (excerpt below) which states the site (based on 211 condo/stacked townhouse units) would require 127 long-term bike parking plus 11 short-term spaces. **Accordingly, 11 short-term spaces and 127 long-term spaces are proposed for the development, which satisfies the By-law requirement and is an excellent TDM measure.**

Table 3.1.6.5.1 - Required Number of Bicycle Parking Spaces for Residential Uses

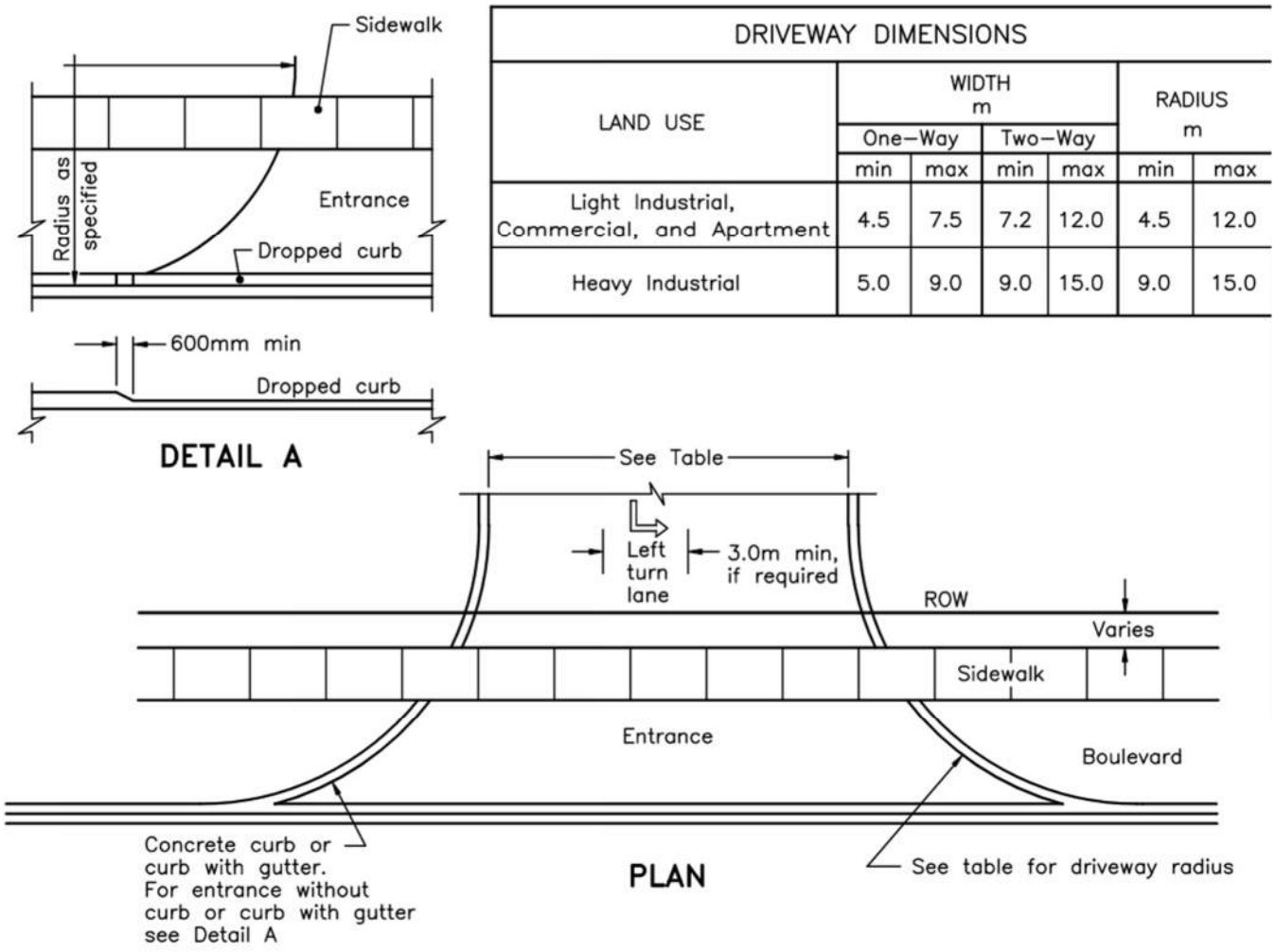
Column	A	B	C
Line 1.0	TYPE OF USE	BICYCLE PARKING - CLASS A	BICYCLE PARKING - CLASS B
2.0	**Apartment** and **stacked townhouse** without exclusive **garages**	0.6 spaces per unit	The greater of 0.05 spaces per unit or 6.0 spaces

7. Site Plan Review

The site plan has been reviewed using AutoTURN version 10 to simulate the various manoeuvres of design vehicles that will need to access and egress the site.

7.1 Site Access

As requested by City staff, the driveway has been reviewed relative to the OPSD 350.010 standard below. A median is proposed separating the inbound/outbound directions, which is proposed to add fire route resiliency as both can be used for fire routes if one direction is blocked. Therefore, the inbound and outbound approaches are evaluated as one-way approaches as per the table below, which allows for a maximum width of 7.5m. Accordingly, the proposed inbound and outbound approaches range from 6m to 7m wide. It is acknowledged that the outbound lane may be narrowed to 6m – particularly with the proposed restriction of outbound left-turns. This refinement will be considered in a future submission.



DRIVEWAY DIMENSIONS

LAND USE	WIDTH m				RADIUS m	
	One–Way		Two–Way			
	min	max	min	max	min	max
Light Industrial, Commercial, and Apartment	4.5	7.5	7.2	12.0	4.5	12.0
Heavy Industrial	5.0	9.0	9.0	15.0	9.0	15.0

7.2 Loading Assessment

A loading bay with a dimension of 3.5m width is proposed. A 10.2m long rear loading garbage truck used by the Region has been shown to be able to adequately reverse into the loading area within private lands and leave the site in a forward motion in **Figure 7-1**. Further refinements if necessary to the loading area will be considered and applied in the next submission.

7.3 Fire Truck

The internal road within the development is proposed to be a private road that will serve as the fire route for the development. The private road has a minimum pavement width of 6m. A standard fire truck has been tested entering the site, circulating internally within the driveway and exiting in a forward motion as shown in **Figure 7-2** adequately. The appropriate signage for a fire route are presented later in this section.

7.4 Moving Vehicle

Given the residential nature of the development, both a medium single unit (MSU) and heavy single unit (HSU) truck have been tested accessing the loading bays proposed and leaving the site in a forward motion. As shown in **Figures 7-3** and **7-4**, all of the maneuvers work adequately.

7.5 Passenger Vehicle Movements

A P-TAC passenger vehicle was tested entering and egressing the parking ramps, and circulating a typical underground parking level. As shown in **Figures 7-5 and 7-6**, all of the manoeuvres work adequately. The underground parking levels have been reviewed as shown in Figure 7-6 and found to conform with relevant City standards. There are 3 visitor parking spaces near the control arm separating residential parking from visitor parking that need to be designated as small car parking due to the dead-end nature. As shown in Figure 7-6, these can still accommodate a compact vehicle with a dimension similar to that of a Honda Civic.

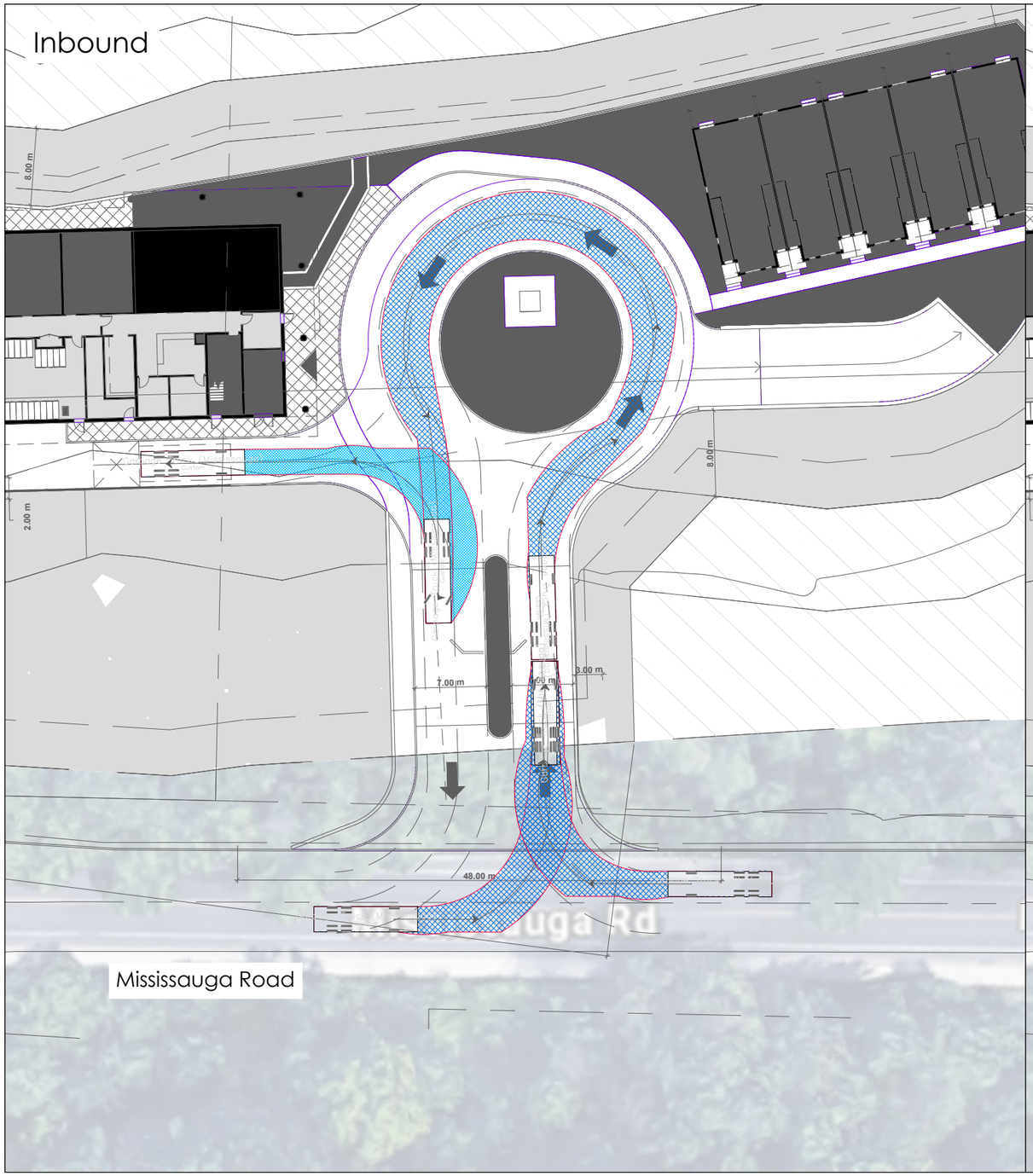
7.6 Pavement Markings and Signage Plan

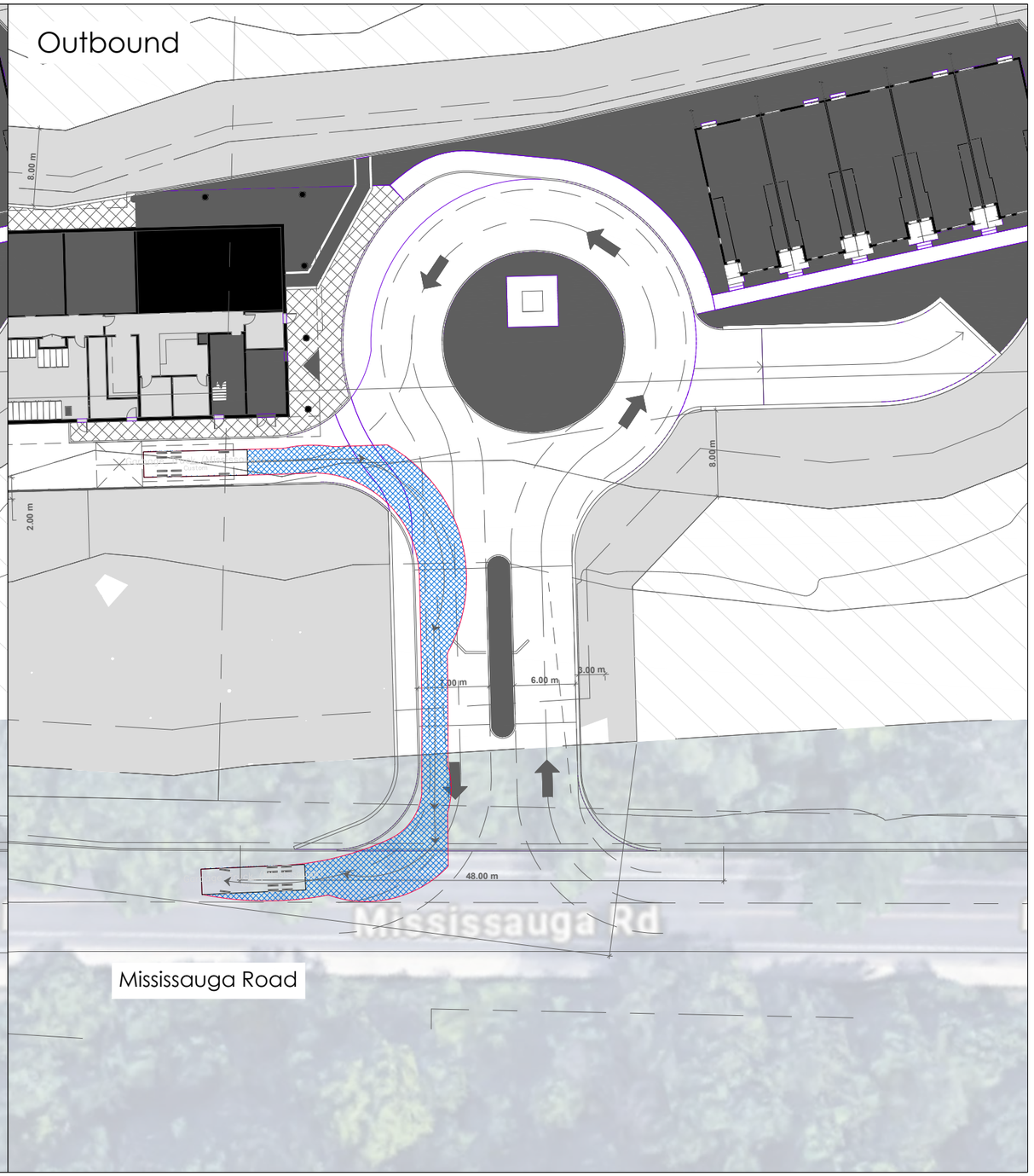
A pavement markings and signage plan has been prepared for the site as shown in **Figures 7-7** and **7-8** for the ground and a typical parking level. The signage follows OTM best practices and reflects the recommended 3-moves driveway operation (restricting left-turn out of the driveway).

7.7 Sightline Review

A turning and stopping sight distance review has been conducted based on the location of the driveway and the horizontal and vertical profiles of Mississauga Road. The results are presented below:

- **Left-turn out of the driveway**: the horizontal turning and stopping sight distance reviews are presented in **Figure 7-9**. The results show that the available turning sight distance does not meet





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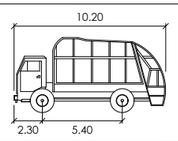
Date Site Plan Received: 2025-10-23

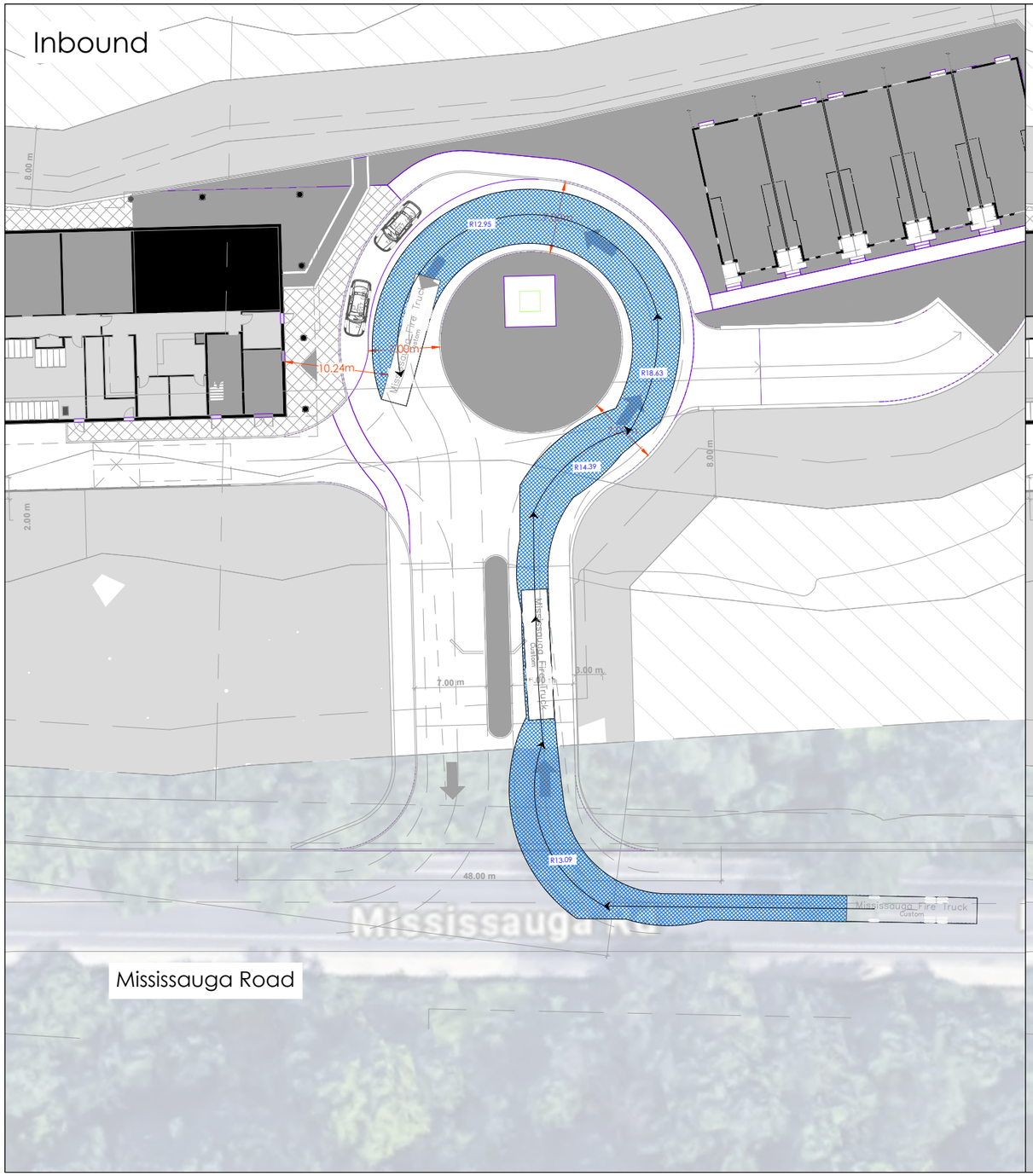
Scale: 1:500

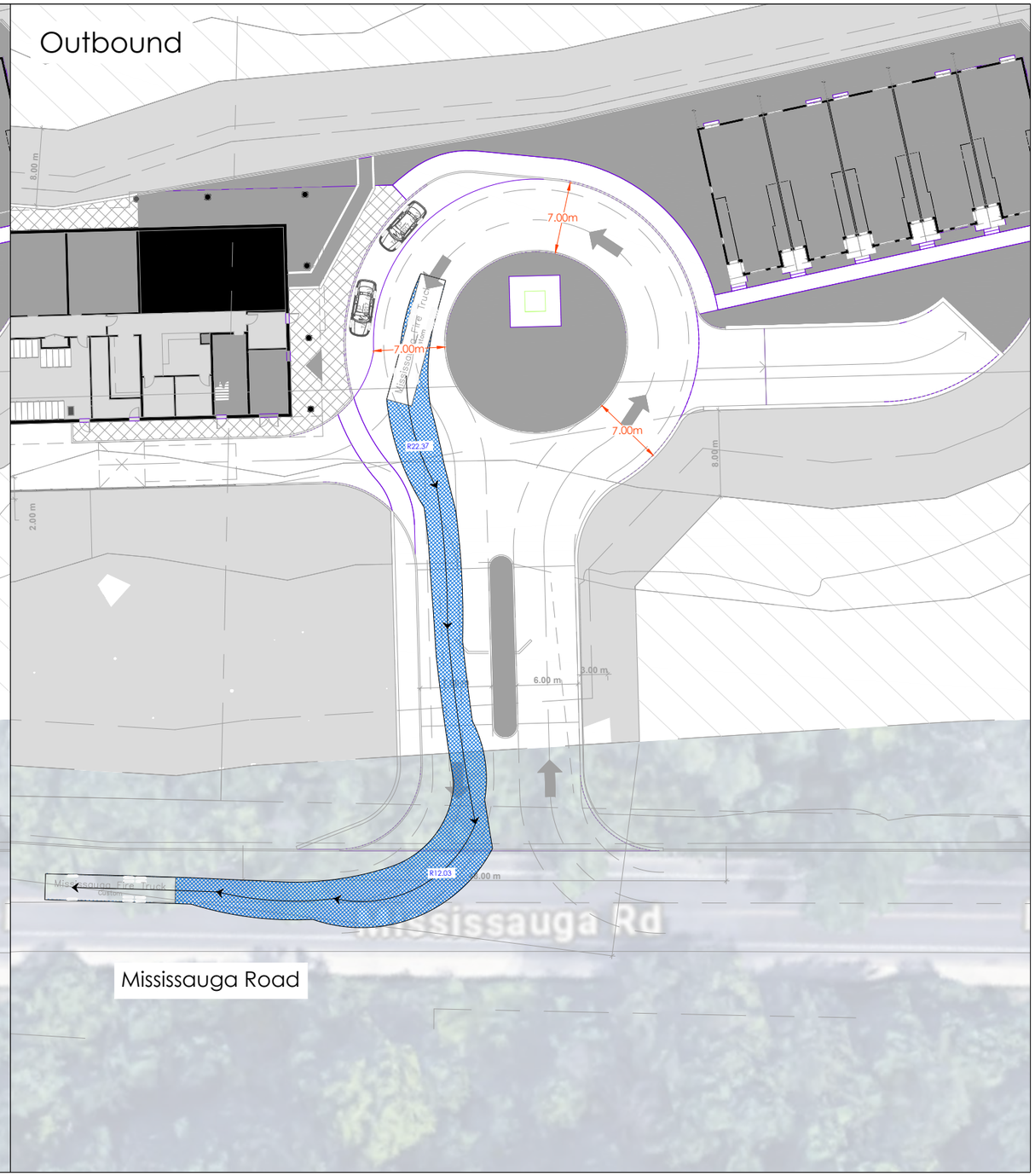


Garbage Truck (Mississauga)

	meters
Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 40.0

Figure 7-1
Waste Collection Vehicle Site Circulation
Proposed Residential Development - 2935 & 2955 Mississauga Road





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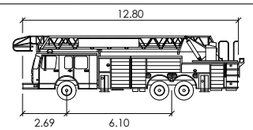
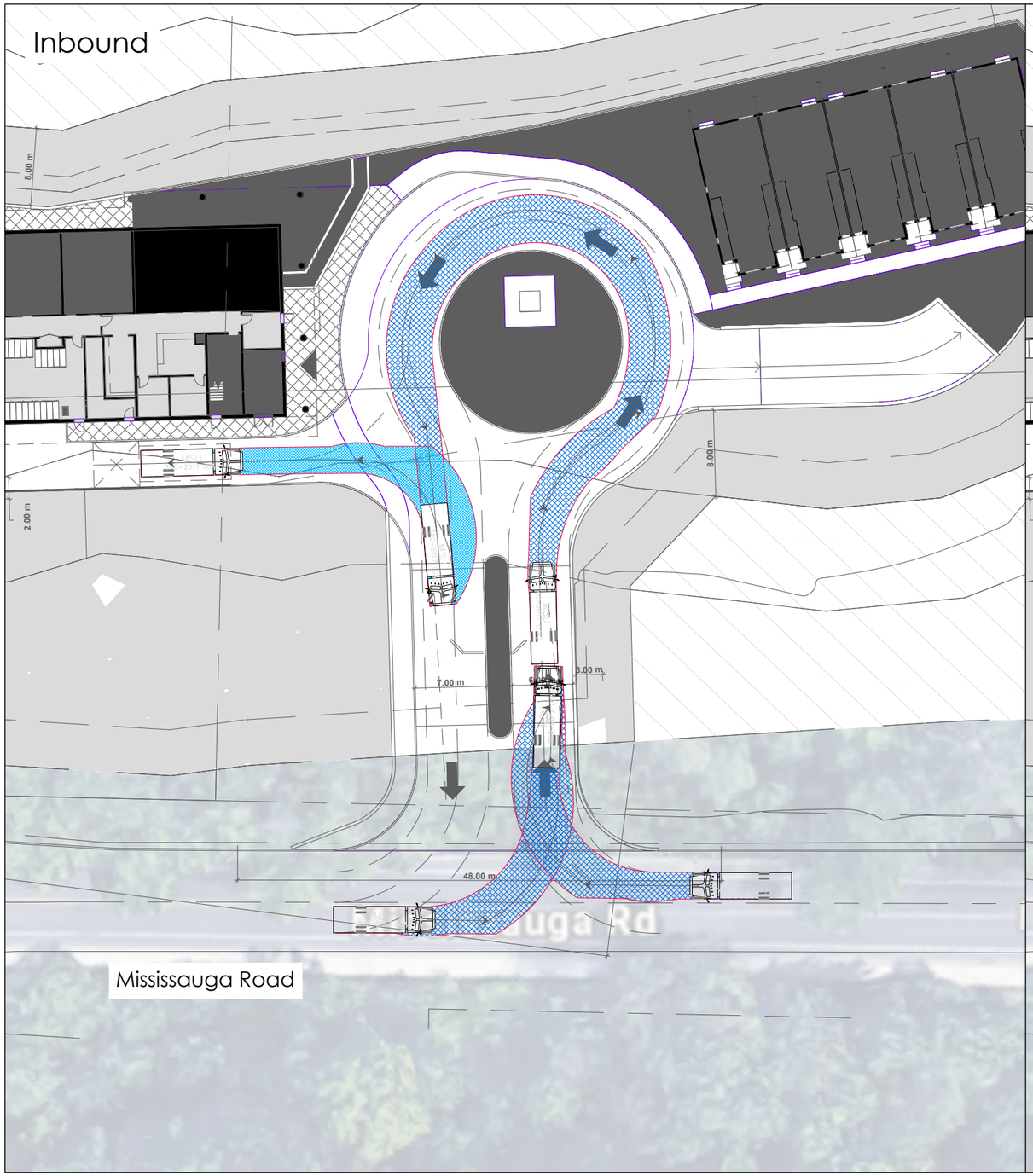
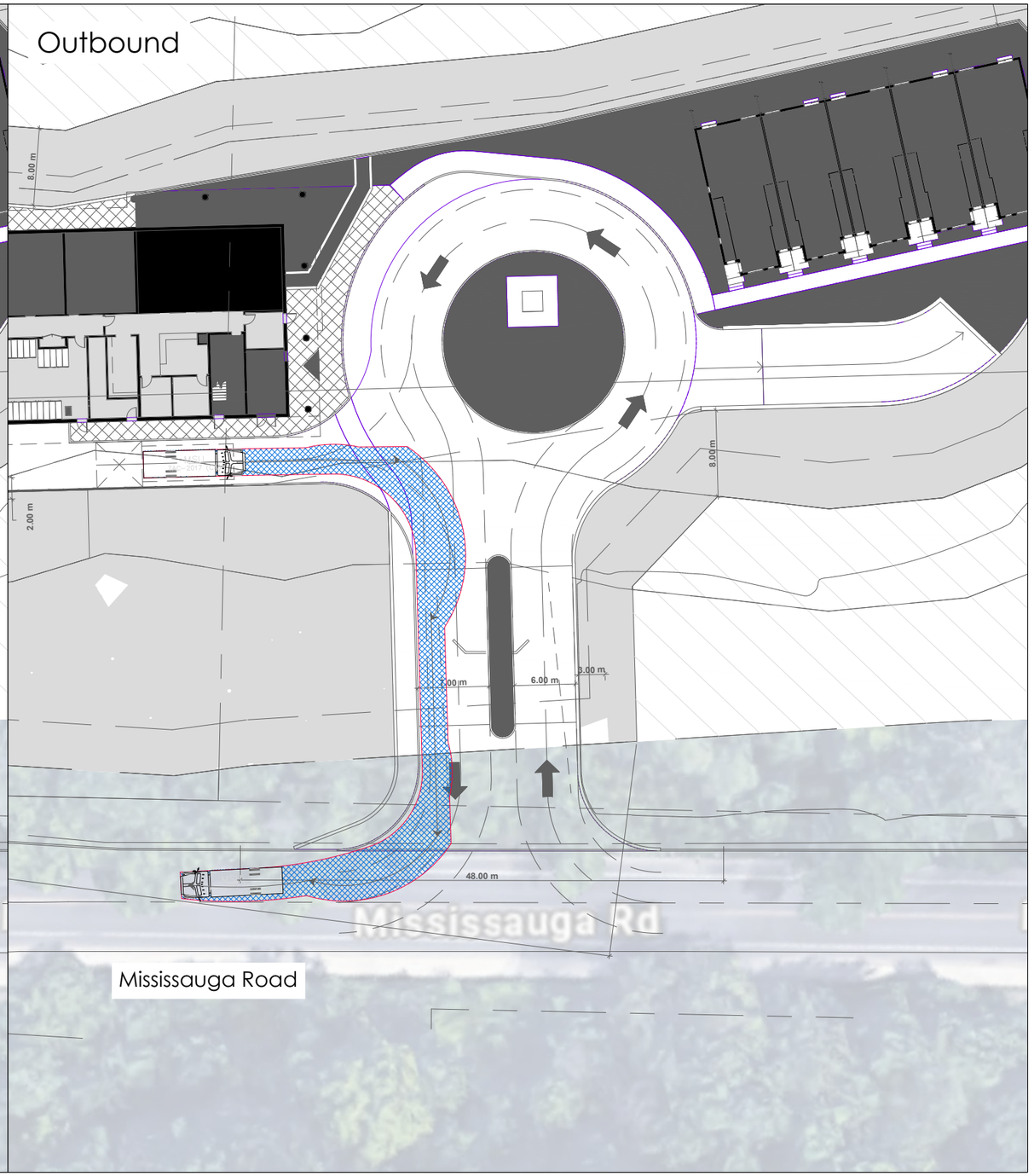


Mississauga Fire Truck

	meters
Width	: 2.54
Track	: 2.54
Lock to Lock Time	: 6.0
Steering Angle	: 37.0

Figure 7-2
Fire Truck Access Manoeuvre Review
Proposed Residential Development - 2935 & 2955 Mississauga Road





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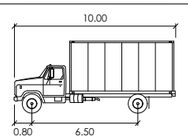


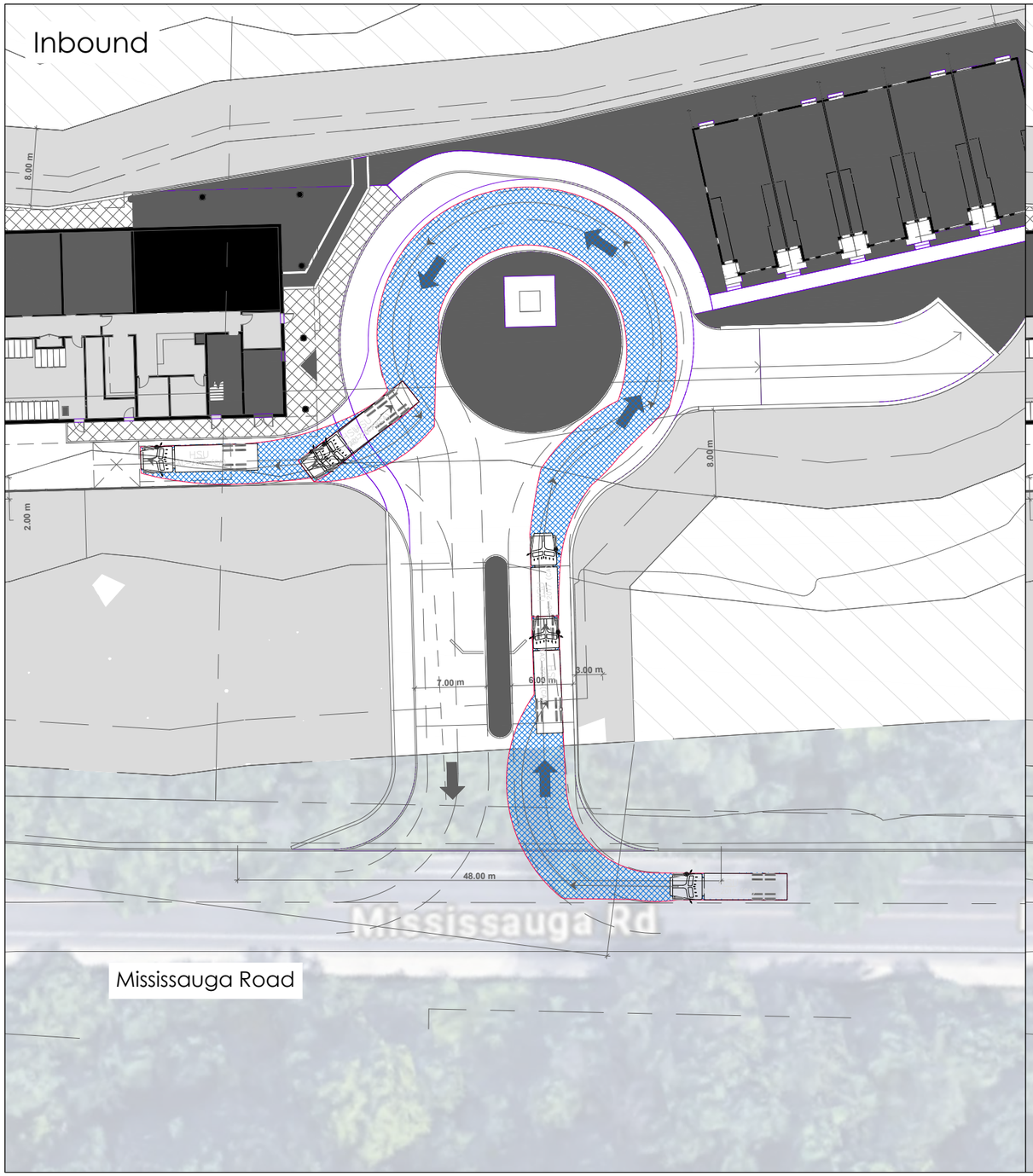
MSU

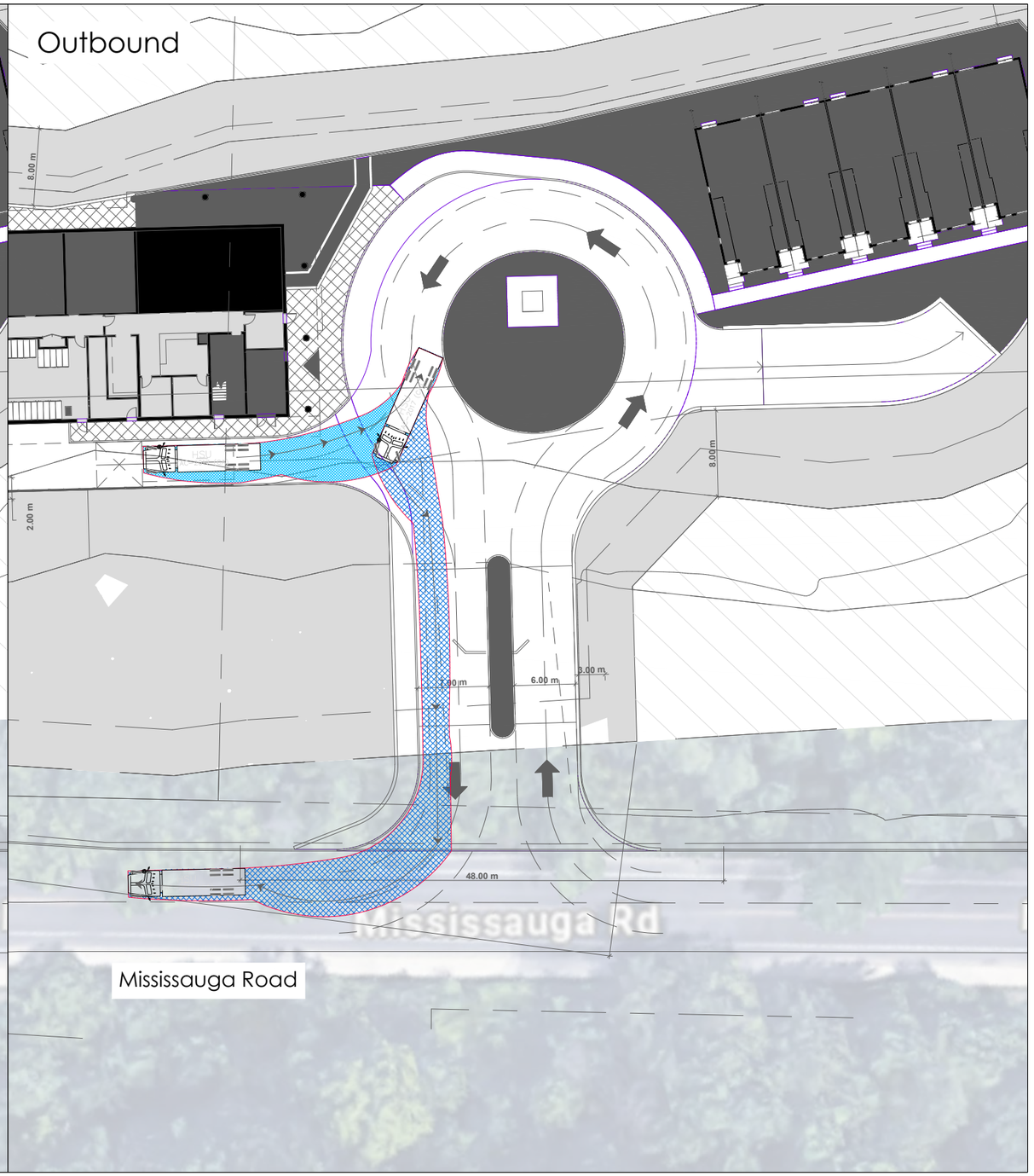
	meters
Width	: 2.60
Track	: 2.60
Lock to Lock Time	: 6.0
Steering Angle	: 40.2

Figure 7-3
Loading Vehicle (MSU) Site Circulation
Proposed Residential Development - 2935 & 2955 Mississauga Road

2935-2955 Mississauga Rd - SPR.dwg_2. MSU

Modified: 10/14/2025 4:05 PM By: cacm070523 Plot Date: 2025/10/24





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Date Site Plan Received: 2025-10-23

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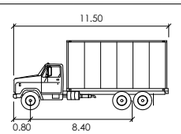


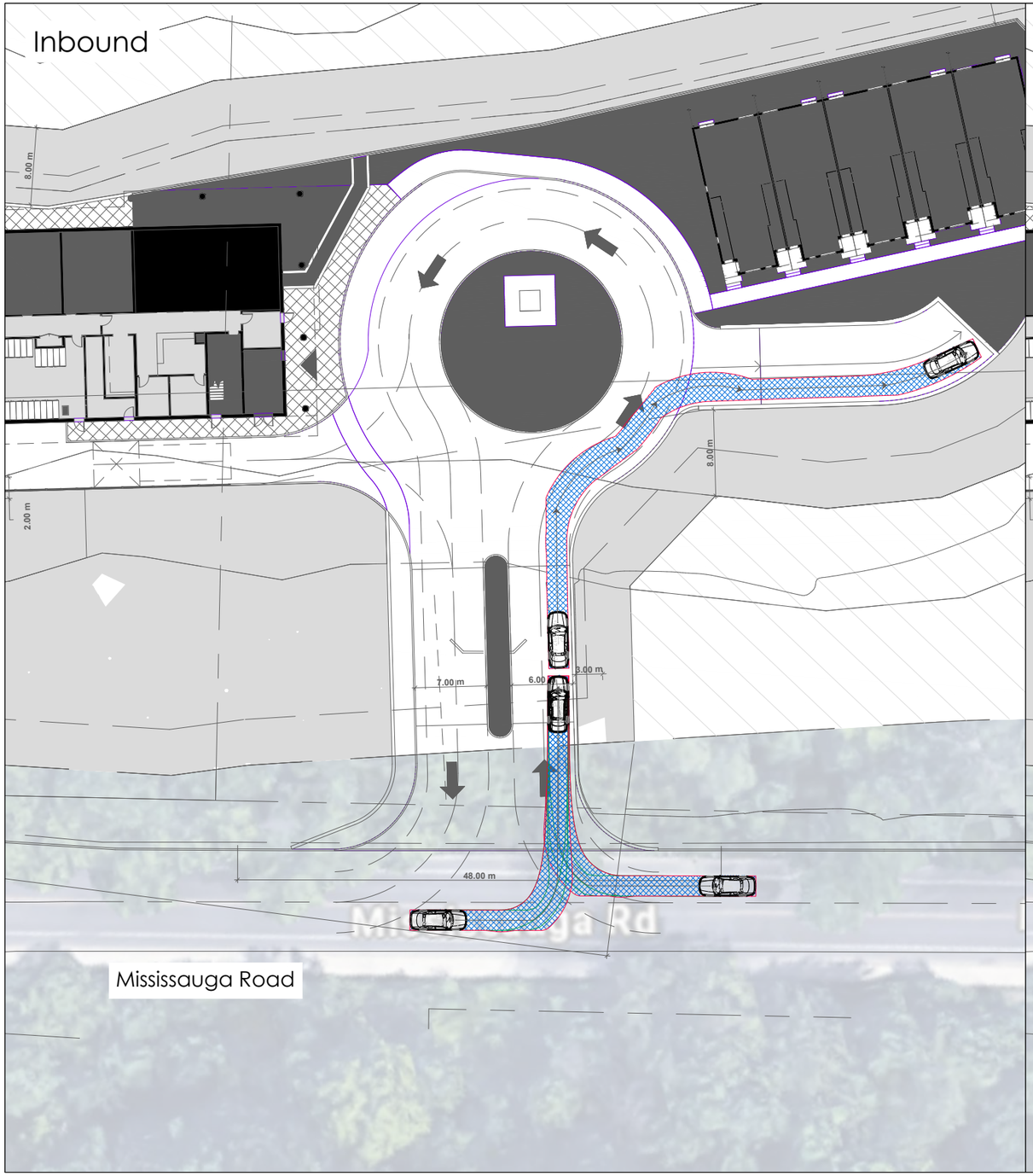
HSU

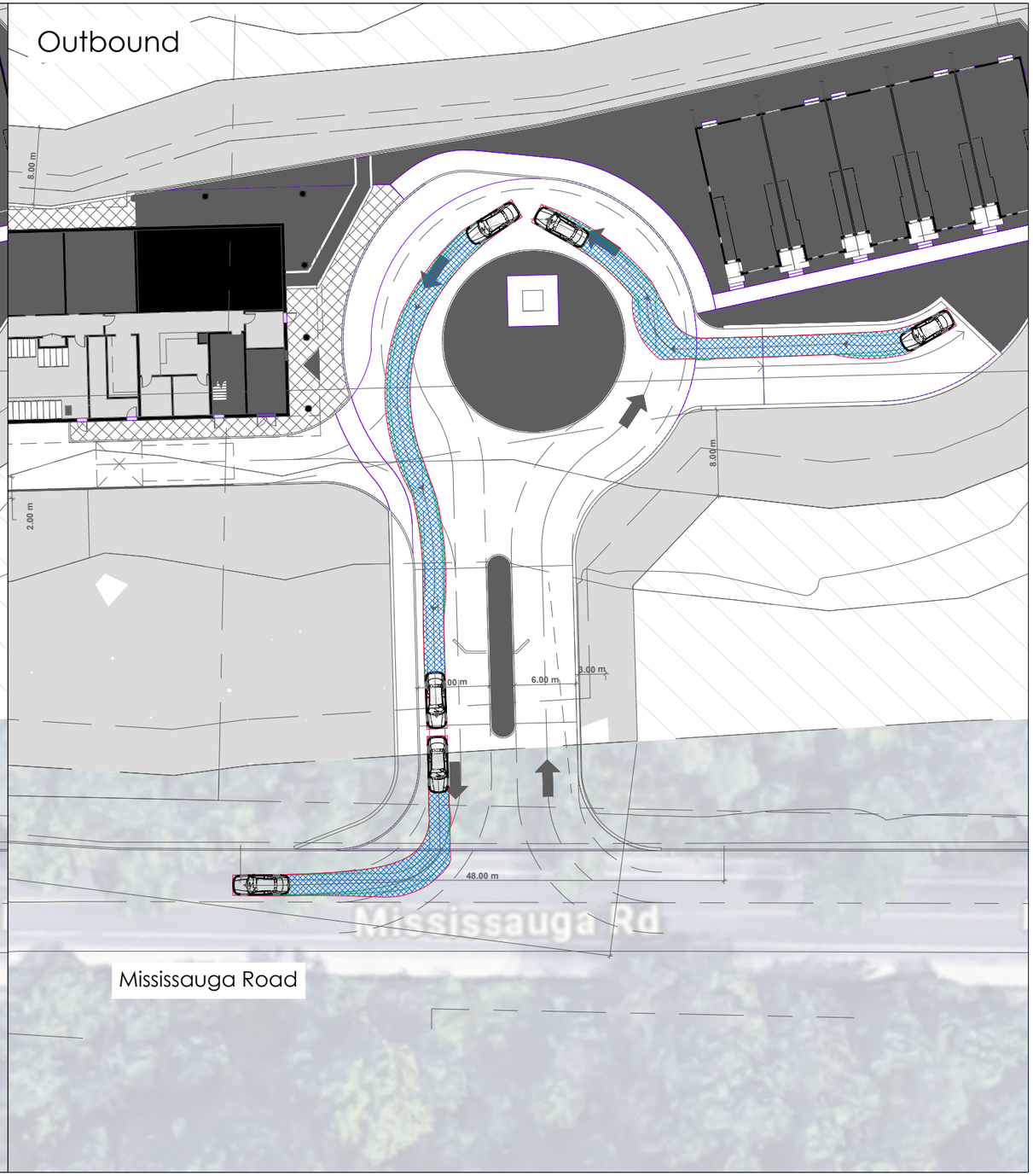
	meters
Width	: 2.60
Track	: 2.60
Lock to Lock Time	: 6.0
Steering Angle	: 40.0

Figure 7-4
Loading Vehicle (HSU) Site Circulation
Proposed Residential Development - 2935 & 2955 Mississauga Road

2935-2955 Mississauga Rd - SPR.dwg_4. HSU

Modified: 10/14/2025 4:05 PM By: cacm070523 Plot Date: 2025/10/24





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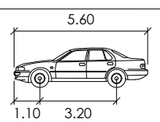


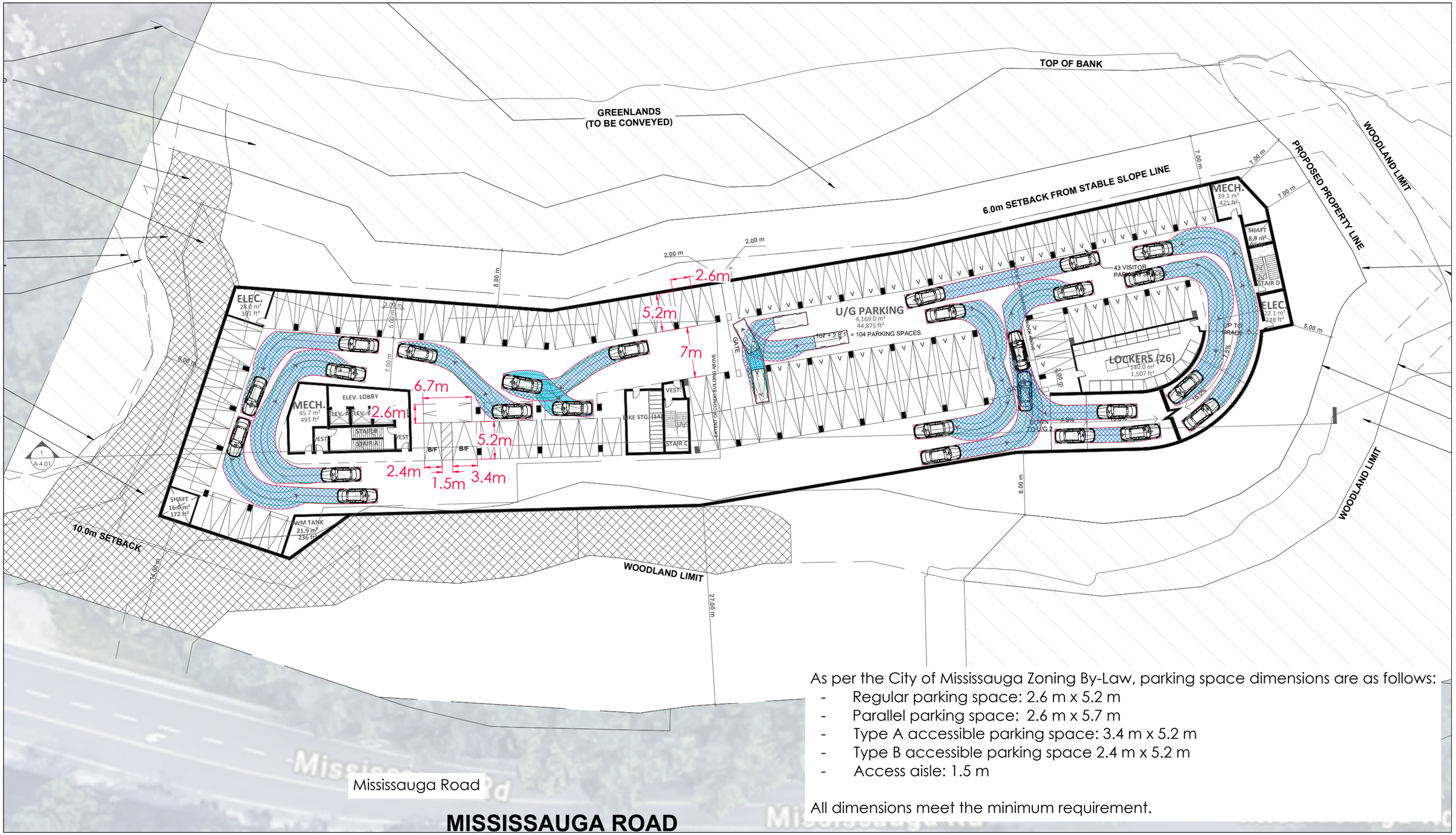
P

	meters
Width	: 2.00
Track	: 2.00
Lock to Lock Time	: 6.0
Steering Angle	: 35.9

Figure 7-5

Passenger Vehicle Site Circulation

Proposed Residential Development - 2935 & 2955 Mississauga Road



As per the City of Mississauga Zoning By-Law, parking space dimensions are as follows:

- Regular parking space: 2.6 m x 5.2 m
- Parallel parking space: 2.6 m x 5.7 m
- Type A accessible parking space: 3.4 m x 5.2 m
- Type B accessible parking space 2.4 m x 5.2 m
- Access aisle: 1.5 m

All dimensions meet the minimum requirement.

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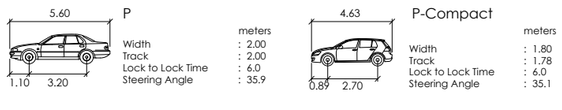

Figure 7-6

Underground Level P1 - Parking Space Dimensions and Passenger Vehicle Site Circulation
Proposed Residential Development - 2935 & 2955 Mississauga Road

PUDO Zone

Fire Route

Fire Route

PUDO Zone

Rb-21

Rb-21

Rb-21

Rb-21

Rb-25
Wa-33L

Rb-21

Fire Route

Fire Route

Rb-12

Ra-1

Rb-25
Wa-33L

Stop Bar

Rb-12

Mississauga Road

Mississauga Rd

Mississauga

PAVEMENT MARKING NOTES:

PAVEMNT MARKINGS ARE IN ACCORDANCE WITH OTM BOOK 11.

SIGNAGE NOTES:

ALL SIGNAGE HAS BEEN PLACED IN THE OPTIMUM LOCATIONS. HOWEVER, MINOR MODIFICATIONS MAY BE REQUIRED TO SUIT LOCAL CONDITIONS.

SIGNS ARE IN ACCORDANCE WITH OTM BOOKS 5 AND 6.

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Date Site Plan Received: 2025-10-23

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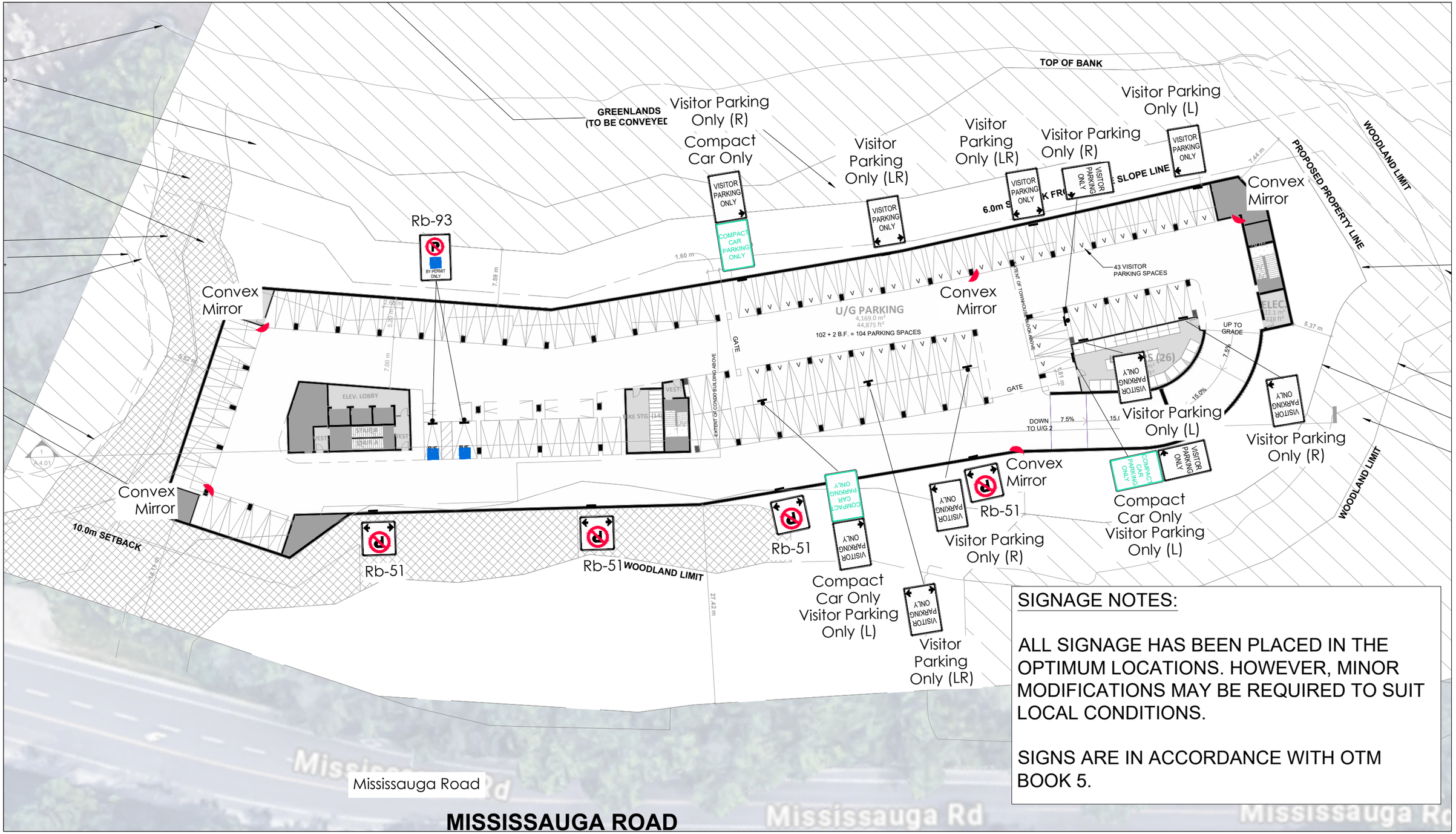
Figure 7-7
Pavement Markings and Signage Plan
Proposed Residential Development - 2935 & 2955 Mississauga Road



SIGNAGE NOTES:

ALL SIGNAGE HAS BEEN PLACED IN THE OPTIMUM LOCATIONS. HOWEVER, MINOR MODIFICATIONS MAY BE REQUIRED TO SUIT LOCAL CONDITIONS.

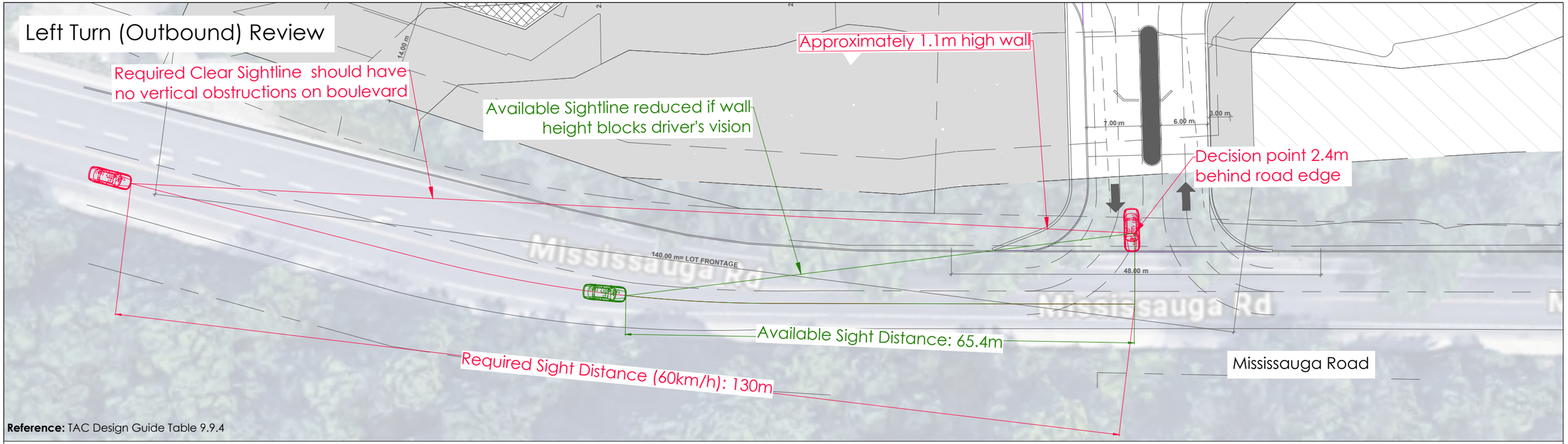
SIGNS ARE IN ACCORDANCE WITH OTM BOOK 5.

Date Site Plan Received: 2025-10-28

Scale: 1:500

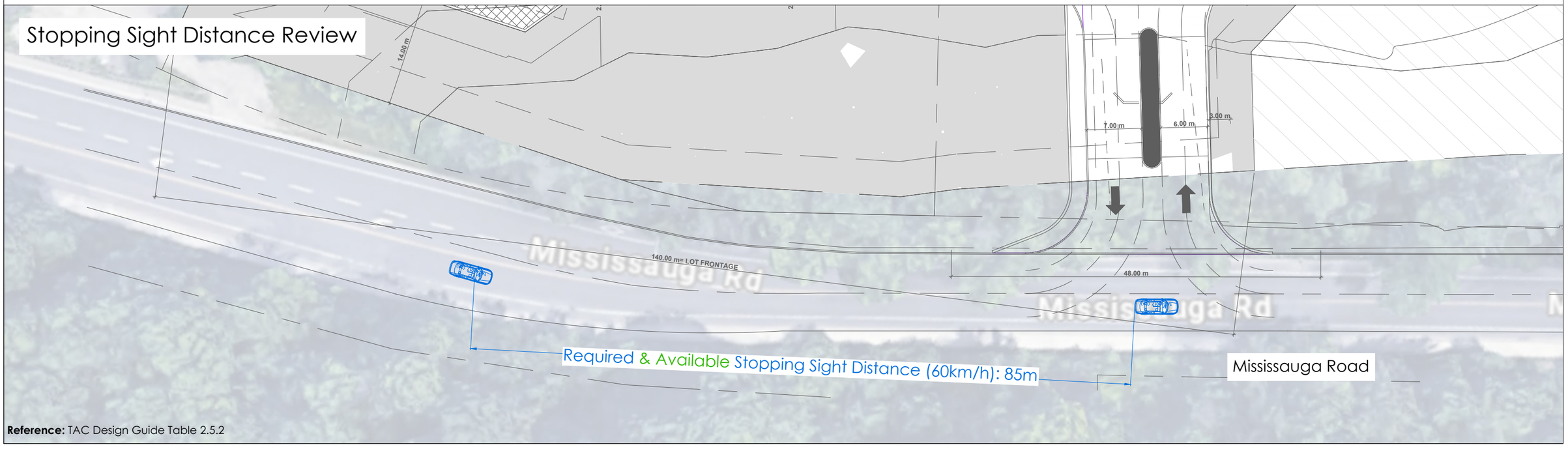
Figure 7-8
Signage and Convex Mirror Plan
Proposed Residential Development - 2935 & 2955 Mississauga Road

Left Turn (Outbound) Review



Reference: TAC Design Guide Table 9.9.4

Stopping Sight Distance Review



Reference: TAC Design Guide Table 2.5.2

Date Site Plan Received: 2025-10-23

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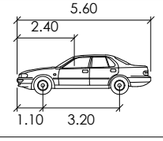

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	meters
Width	: 2.00
Track	: 2.00
Lock to Lock Time	: 6.0
Steering Angle	: 35.9

Figure 7-9

Left Turn (Outbound)Horizontal Sight Distance (SD) Review - Front of Vehicle at Edge of Road
Proposed Residential Development - 2935 & 2955 Mississauga Road

the requirement of 130m (based on a design speed of 60km/h). There is however sufficient stopping sight distance for motorists traveling along Mississauga Road southbound to stop in time for a vehicle ahead. The vertical sightline review for left-turn out of the driveway is presented in **Figure 7-10** and shows sufficient distance is available. ***Based on the limitation related to horizontal sightline for left-turns out of the driveway, this movement is recommended to be restricted for safety reasons.***

- **Right-turn out of the driveway**: the horizontal turning and stopping sight distance reviews are presented in **Figure 7-11**. The results show that the available turning sight distance meets the requirement of 110m (based on a design speed of 60km/h). There is also sufficient stopping sight distance for motorists traveling along Mississauga Road southbound to stop in time for a vehicle ahead. The vertical sightline review for left-turn out of the driveway is presented in **Figure 7-12** and shows sufficient distance is available. ***Based on the fulfillment of all of the sightline requirements, the right-out movement is deemed adequate for the driveway.***

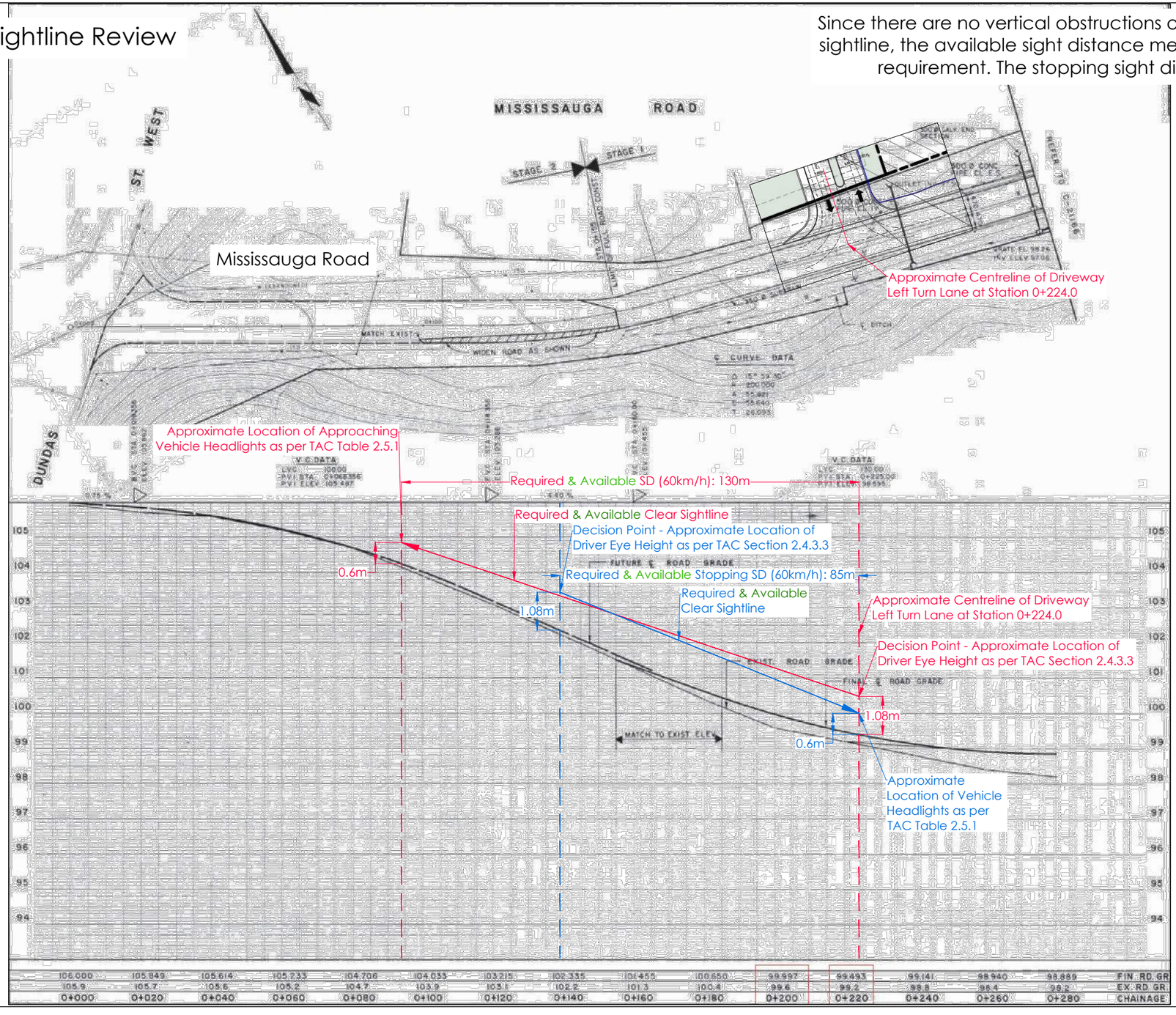
- **Right-in movement at the driveway**: this movement does not present any sightline challenges as there is sufficient horizontal and vertical stopping sight distances along Mississauga Road heading northbound as shown in Figures 7-11 and 7-12. **Therefore, the right-in movement is deemed adequate for the driveway.**

- **Left-in movement at the driveway**: a vehicle looking to make a southbound left-turn from Mississauga Road into the site driveway needs to look for a gap in the northbound traffic. This in turn means trailing vehicles headed southbound along Mississauga Road need enough stopping sight distance, which is shown to be fulfilled in the bottom excerpt of Figure 7-9. The vertical stopping sight distance requirement for motorists traveling southbound along Mississauga Road is also shown to be adequate as per Figure 7-10. **Figure 7-13** shows that a motorist looking to make a left-in also has enough sightline ahead to make a decision for gap acceptance over the 1 lane of traffic. **Therefore, the left-in movement is deemed adequate for the driveway.**

Collision history data were requested previously in the November 2023 TIS, which cited that there were a total of 7 collisions in the south approach of the Mississauga Road and Dundas Street intersection between 2018 and 2023 (6 year period). This represented 9.6% of the total number of collisions related to the intersection and of the 7 collisions, 43% were rear-ends and 57% were side-swipes. It is important to note however, the proposed site access is approximately 210m south of the intersection. Therefore, the higher collision tendencies related to lane change approaching an intersection (i.e., the northbound left-turn or through-right lane) does not apply to the site frontage. Moreover, as noted in the review of the left-in movement sightline, there are sufficient stopping sight distance along Mississauga Road to stop in time for a stationary object ahead at the driveway. The left-out movement has been proposed to be restricted based on sightline limitations, which minimizes influence on the collision trends present 210m upstream at the signalized intersection.

Left Turn (Outbound) Sightline Review

Since there are no vertical obstructions on the roadway within the clear sightline, the available sight distance meets the minimum sight distance requirement. The stopping sight distance requirement is also met.



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Date Road Profile Received: 2025-09-15

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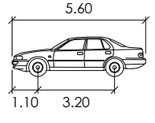


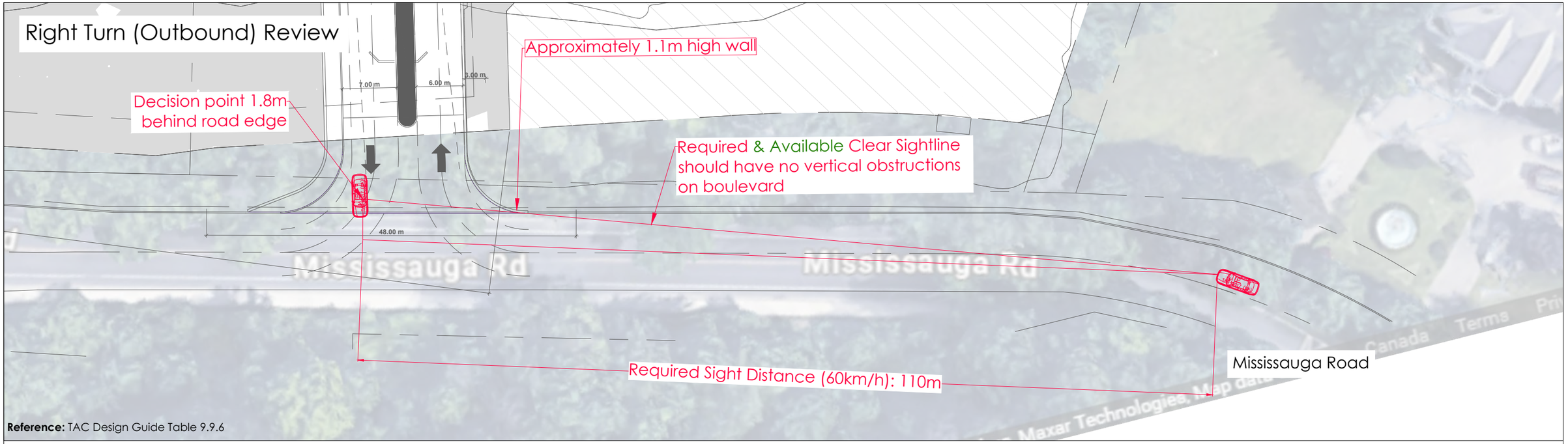
P

	meters
Width	: 2.00
Track	: 2.00
Lock to Lock Time	: 6.0
Steering Angle	: 35.9

wsp

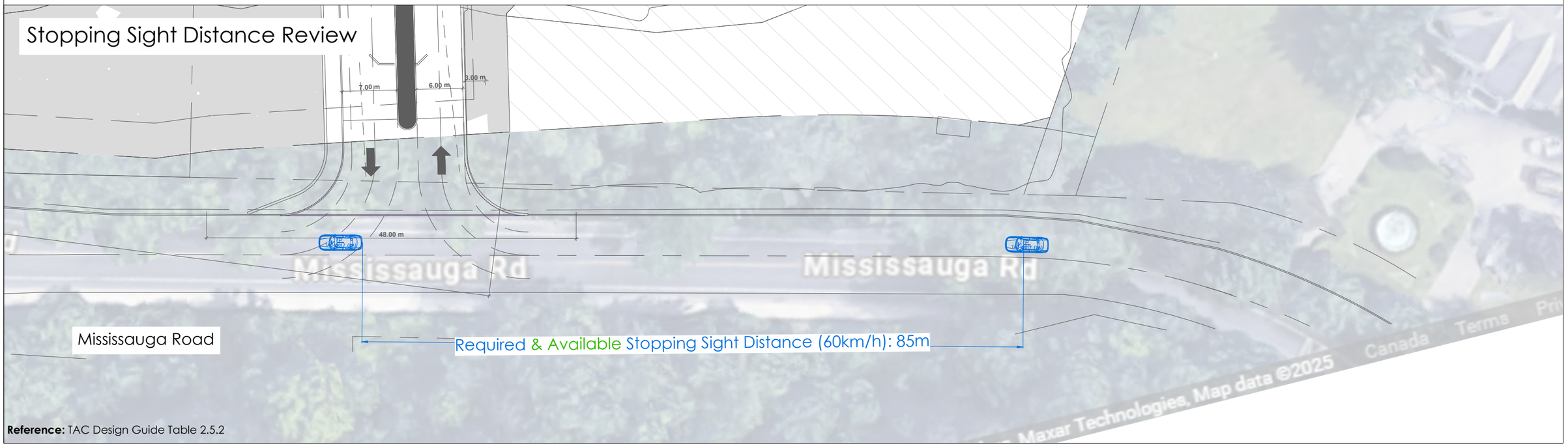
Figure 7-10
Vertical Sight Distance (SD) Review - Left Turns
Proposed Residential Development - 2935 & 2955 Mississauga Road

Right Turn (Outbound) Review



Reference: TAC Design Guide Table 9.9.6

Stopping Sight Distance Review



Reference: TAC Design Guide Table 2.5.2

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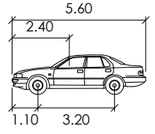


P

	meters
Width	: 2.00
Track	: 2.00
Lock to Lock Time	: 6.0
Steering Angle	: 35.9

Figure 7-11

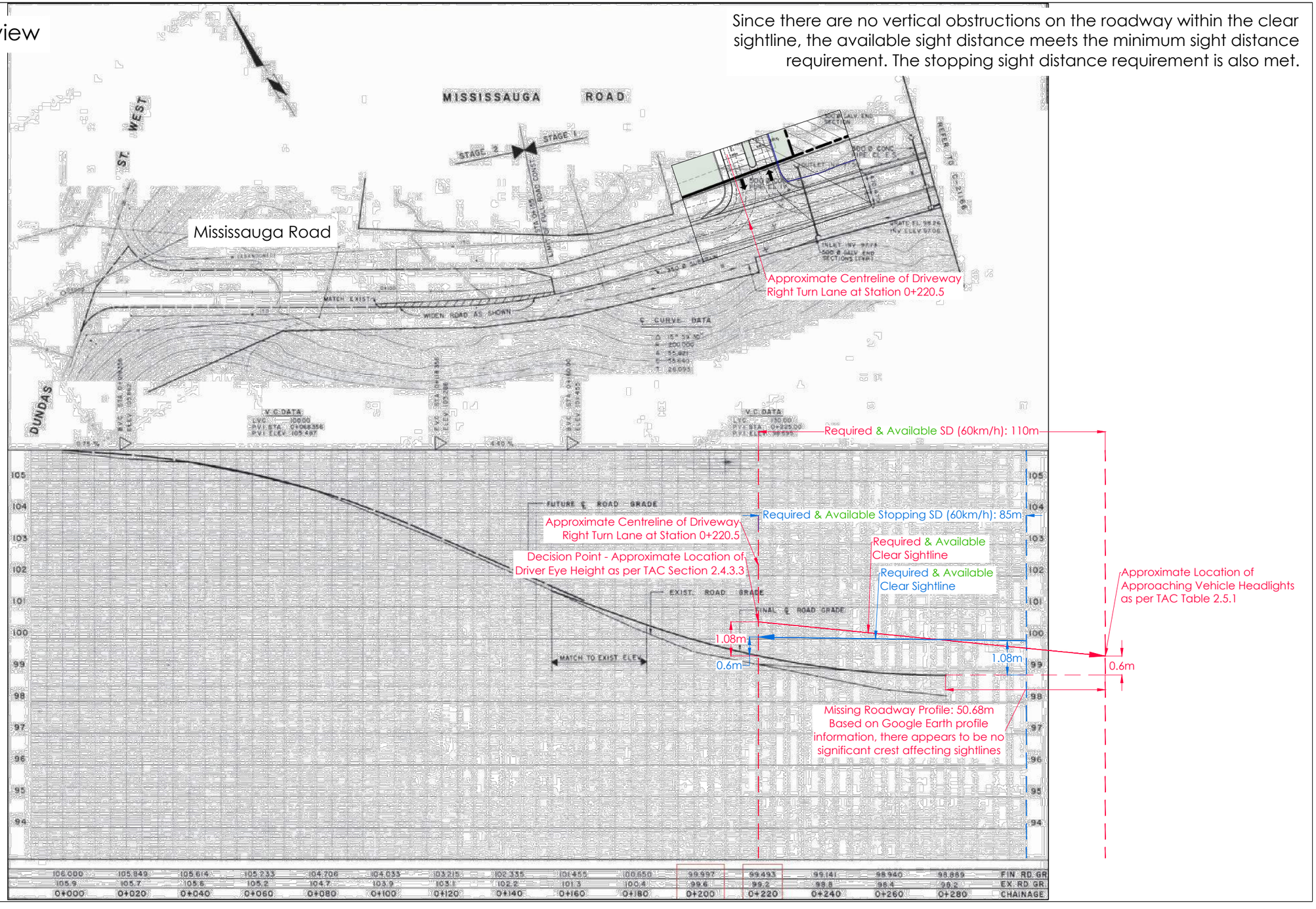
Right Turn (Outbound)Horizontal Sight Distance (SD) Review - Front of Vehicle at Edge of Road
Proposed Residential Development - 2935 & 2955 Mississauga Road

2935-2955 Mississauga Rd - SPR.dwg_5-2. HSD

Modified: 10/14/2025 4:05 PM By: cacm070523 Plot Date: 2025/10/24

Right Turn Sightline Review

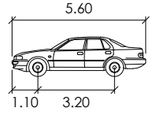
Since there are no vertical obstructions on the roadway within the clear sightline, the available sight distance meets the minimum sight distance requirement. The stopping sight distance requirement is also met.



J:\01 PROJECTS\2025 Jobs\CA0059801.6905-CA-2935 & 2955 Mississauga Road\CAD

Date Road Profile Received: 2025-09-15

Scale: N.T.S.

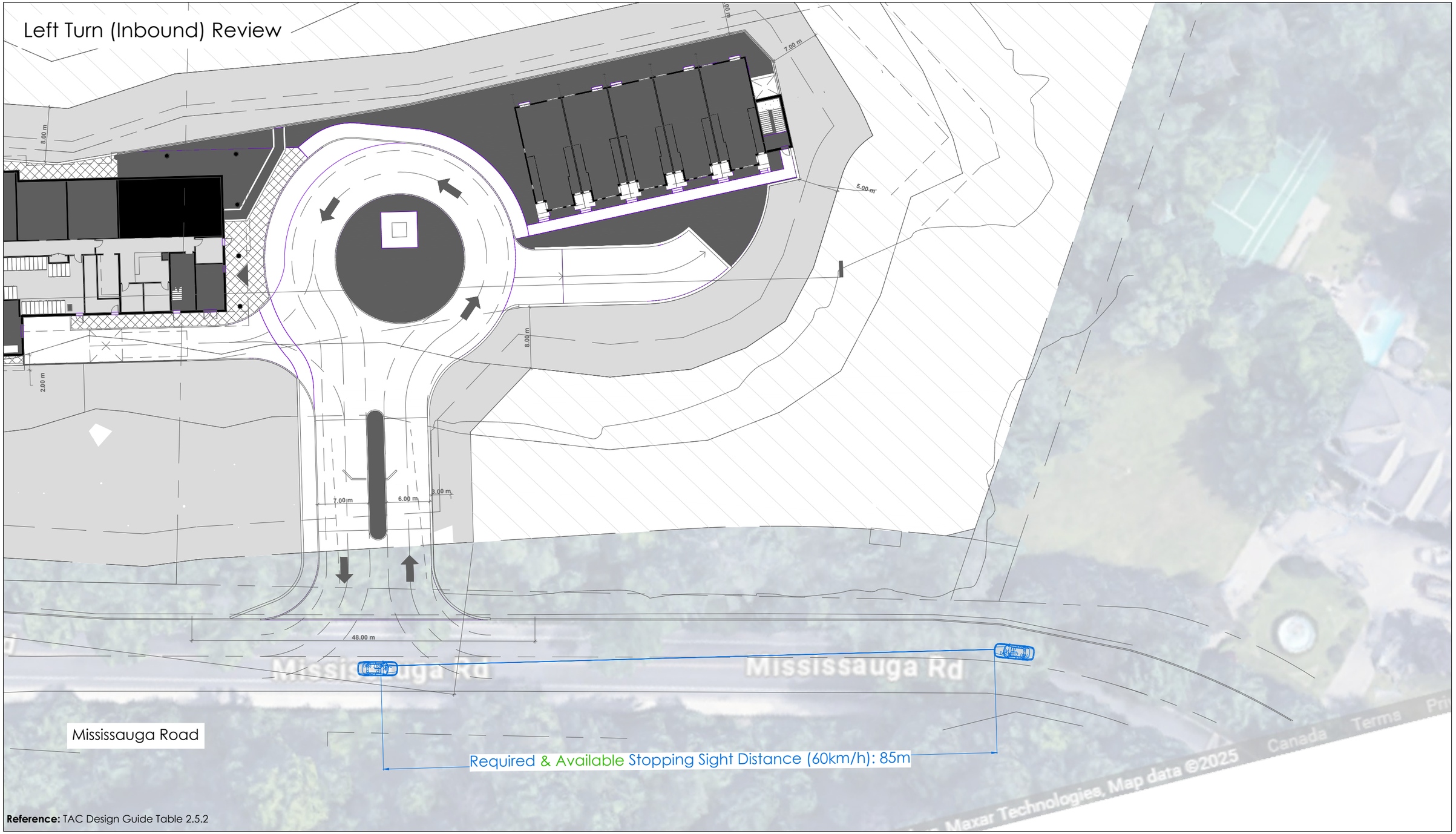


P

	meters
Width	: 2.00
Track	: 2.00
Lock to Lock Time	: 6.0
Steering Angle	: 35.9

Figure 7-12
Vertical Sight Distance (SD) Review - Right Turns
Proposed Residential Development - 2935 & 2955 Mississauga Road

Left Turn (Inbound) Review

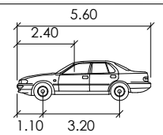


Reference: TAC Design Guide Table 2.5.2

J:\01 PROJECTS\2025 Jobs\CA0059801.6905-CA-2935 & 2955 Mississauga Road\CAD

Date Site Plan Received: 2025-10-23

Scale: 1:500



P

	meters
Width	: 2.00
Track	: 2.00
Lock to Lock Time	: 6.0
Steering Angle	: 35.9

Figure 7-13

Left Turn (Inbound)Horizontal Sight Distance (SD) Review

Proposed Residential Development - 2935 & 2955 Mississauga Road

2935-2955 Mississauga Rd - SPR.dwg_5-3. HSD

Modified: 10/14/2025 4:05 PM By: cacm070523 Plot Date: 2025/10/24

8. Transportation Demand Management

Transportation Demand Management (TDM) is a concept that includes various strategies that increase transportation system efficiency by managing the demand for travel. TDM treats mobility as a means to an end, rather than an end in itself, and emphasizes the movement of people and goods rather than motor vehicles. The following sections outline the soft and hard measures proposed. Some of the TDM details will be further defined through the SPA stage of application. The following TDM Plan was developed based on the strategies and toolkit described in the City of Mississauga's *TDM Strategy and Implementation Plan (2018).*

Unbundled Parking (Soft measure)

This TDM measure allows residents to purchase vehicle parking spaces separately from the residential unit, reducing the purchase costs for residents who do not require vehicle parking. This incentivizes residents to reduce dependency on private single-occupancy vehicles and consider alternative travel modes. The cost reduction must reflect the realistic and actual cost of the parking space to encourage purchasers to consider an unbundled parking option. This is a common TDM strategy for medium and high-density residential developments within the GTA.

Parking pricing (Soft measure)

This TDM measure means the applicant will market the sales of each parking space at prevailing market pricing. This helps with the transparency and disclosure of purchasers regarding the cost of auto ownership, and whether the cost can be invested in other means of non-auto transportation.

Encourage Transit Usage (Soft and Hard measures)

The applicant will provide transit information packages for new residents. Moreover, a centralized TDM screen is recommended in a centralized location of the building to allow residents and visitors to see real-time transit routing and schedule information. This allows them to better judge when to walk out of a building towards a bus stop / plan for their trip.

Encourage Cycling (Soft and Hard measures)

The site is well suited to take advantage of the existing and planned active transportation network in the surrounding area. There are currently existing bike facilities along Mississauga Road that connects to more facilities upstream and downstream. New owners will be provided with information regarding the available cycling features, such as the location of short-term and long-term bicycle parking and repair stations, and maps of the surrounding cycling network. Cycling tutorials could also be offered upon building occupancy to encourage new or novice riders. One on-site bike repair station is proposed for each building. The centralized TDM screen within each building will also provide wayfinding and direction to the above-noted cycling features.

9. Comment Response

This TIS Addendum responds to the 2nd Submission Circulation Comments memo and the transportation comments below. Each of these are responded herein. Comments from the 1st Submission Circulation that are not reiterated in the 2nd Submission Comments and already addressed in the November 2023 TIS are not repeated in this TIS Addendum.

City Comment: Alternative access arrangements must be provided for review. Sight line distance looking north at the proposed access does not meet minimum sight line requirements as per the TAC Geometric Design Guide for Canadian Roads due to road curvature. The report must provide additional justification on how this can be mitigated, and provide improvements recommendation. Alternative access arrangement such as physically restricting the access to right-in/right-out movements only via a 1.0m raised concrete median on Mississauga Road must be analyzed. Mitigation measures and municipal infrastructure improvements must be provided to ensure adequate operation and safety. Provide confirmation and technical justification on whether the site access location and design is safe for all roadway users and why.

WSP Response: Based on the updated turning sightline and stopping sightline review at the proposed driveway onto Mississauga Road, WSP recommends that the driveway be designated for 3-moves (right-in/right-out/left-in) with the left-out movement restricted due to sightline limitations. The 3 movements have no sightline obstructions related to the geometry of Mississauga Road. The appropriate pavement markings and signage, and any minor refinements to the driveway to reflect this arrangement will be provided in the subsequent submission upon discussion with City staff.

City Comment: Trip generation should reflect all proposed land uses on-site. ITE Land Use Code 222 does not apply to the 20 stacked townhouse units proposed.

WSP Response: Noted. Residential High-Rise ITE Code 222 was applied to the 196 condo units, while Residential Low-Rise ITE Code 220 was applied to the 15 townhouse units. Refer to Table 4-2 for further details.

City Comment: As per the City's TIS Guideline, the traffic data must be updated to reflect current conditions as it is more than 2 years old.

WSP Response: Noted. Refer to Section 2 documenting how 2025 traffic counts were collected and used in this addendum.

City Comment: The report must analyze future transportation condition for a horizon year five years from the date of the study. The current 2025 horizon year is not acceptable.

WSP Response: Noted. Refer to Section 3., which reflects the evaluation of a 5 year (2030) horizon.

City Comment: New growth rate for the updated horizon year should be confirmed with the City's Transportation Planning Section (tyler.xuereb@mississauga.ca, Ext. 4738).

WSP Response: Noted. The City was contacted for updated growth rates as shown in Table 3-1.

City Comment: A Synchro report for the existing conditions must be included in the appendices.

WSP Response: Noted, please see Appendix B of this addendum for the Synchro outputs.

City Comment: Peak Hour Factor must follow the City's TIS Guideline at 0.92.

WSP Response: Noted. A sensitivity analysis was conducted using both the City's Peak Hour Factor and the Traffic Movement Count's Peak Hour Factor during the existing conditions analysis. Refer to Section 2. The rationale for proceeding with the future assessment using the surveyed PHF is provided.

City Comment: Lost Time Adjustment must adhere to the City's TIS Guideline.

WSP Response: Noted. Refer to Section 2-4. Documenting how this TIS Addendum follows the City's lost time adjustment policy.

City Comment: Site statistic must be consistent throughout the study, reflecting the latest proposal of 196 apartment units and 20 townhouse units.

WSP Response: Noted. The traffic analyses presented within this report is based on the latest site statistics provided by the architect (196 condo units and 15 townhouse units).

City Comment: The proposed access width must meet OPSD standards, with an updated vehicle turning movement diagram based on the revised plans.

WSP Response: Noted, as discussed in Section 7, the width of the driveway does meet the OPSD allowed ranges. Further refinements to the driveway design will be explored in the next submission.

City Comment: The City's TIS Guideline Appendix A - Certification Form must be completed to be submitted and attached as part of the updated report.

WSP Response: Please see WSP's completion of the said Certification Form in **Appendix G.**

City Comment: Additional comments may be provided as a result of the updated study.

WSP Response: Noted.

City Comment: The Owner shall ensure the proposed access provides sufficient sight lines such that views are not obstructed at the intersection to meet minimum sight line distance per TAC Geometric Design Guide for Canadian Roads. The Traffic Section has significant concerns with sightline visibility at the access point.

WSP Response: Noted, please see sightline review presented in Section 7 of this report illustrating how the required sightlines can be achieved with the proposed driveway arrangement.

City Comment: Additional justification is required as part of the TIS to review the proposed access from a safety and operations perspective.

WSP Response: Noted, please see commentary in Section 7.1 of this TIS Addendum, including the proposed restriction to a left-out turn.

City Comment: According to the Urban Design Guidelines for Mississauga Scenic Route, the development of lands will not be permitted if it will result in an increase of the road pavement width in the form of slip off lanes, centre median left-turn lanes or other pavement widening of Mississauga Road.

WSP Response: Noted, the project does not propose any widening of the pavement width along Mississauga Road.

City Comment: When the safest, environmentally responsible and most appropriate location for the vehicular site access has been determined in consultation with our Transportation and Works and Community Services Departments, please restrict the design of the vehicular site access to the minimum required widths.

WSP Response: Noted, the project team will work with the City to refine the driveway design in the subsequent submission, once the location of the driveway has been accepted. This includes the potential narrowing of the driveway to accommodate the various design vehicles.

10. Conclusions

This Transportation Impact Study has assessed the trip generation, traffic operations, parking, loading, and site layout aspects of the proposed development at 2935 and 2955 Mississauga Road in the City of Mississauga.

The updated existing, 2030 future background and 2030 future total intersection operations assessment indicates the site-generated traffic will have minimal influence on the upstream signalized intersection. The proposed site access can also accommodate the site-generated traffic while operating as a 3-moves driveway (with left-out movement restricted). For context, the site is forecast to generate 68 and 82 auto trips during the weekday morning and afternoon peak hours, respectively.

The parking assessment indicates the proposed residential auto parking, long-term and short-term bicycle parking supplies satisfy the City's minimum requirements.

The site plan review confirms that the various design vehicles can adequately access, circulate and egress the site in a logical fashion. No vehicle has to reverse onto a public street. The sightline review of the site driveway onto Mississauga Road reflects some sightline challenges for the left-out movement, which is recommended to be restricted. The other movements have sufficient stopping and turning sight distances.

A tangible package of TDM measures is proposed to support residents adopting a non-auto mode of transportation.

Appendix A – Traffic Data

Horizon Data Services Ltd

(416) 840-6619

Your Traffic Count Specialist

File Name : Mississauga Road at Dundas Street W
Site Code : Loc-1
Start Date : 2025-09-11
Page No : 1

Groups Printed- Light - Heavy

	Mississauga Rd From North				Dundas St W From East				Mississauga Rd From South				Dundas St W From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	29	32	31	92	24	180	12	216	7	26	8	41	10	171	23	204	553
07:15 AM	29	37	35	101	33	270	9	312	20	23	12	55	21	256	28	305	773
07:30 AM	41	57	57	155	52	346	8	406	19	35	19	73	52	300	56	408	1042
07:45 AM	64	98	77	239	55	301	15	371	25	40	19	84	45	324	54	423	1117
Total	163	224	200	587	164	1097	44	1305	71	124	58	253	128	1051	161	1340	3485
08:00 AM	69	89	62	220	44	312	18	374	37	51	13	101	46	339	66	451	1146
08:15 AM	65	104	70	239	77	249	21	347	31	106	17	154	33	302	78	413	1153
08:30 AM	50	55	61	166	89	267	19	375	43	109	28	180	26	326	53	405	1126
08:45 AM	44	29	67	140	68	280	21	369	36	94	28	158	22	306	71	399	1066
Total	228	277	260	765	278	1108	79	1465	147	360	86	593	127	1273	268	1668	4491
09:00 AM	55	56	76	187	46	215	24	285	30	60	21	111	28	263	33	324	907
09:15 AM	40	52	57	149	58	215	18	291	24	56	21	101	32	244	67	343	884
09:30 AM	41	51	51	143	40	192	12	244	32	77	12	121	20	197	71	288	796
09:45 AM	51	37	62	150	50	198	16	264	34	47	12	93	13	233	68	314	821
Total	187	196	246	629	194	820	70	1084	120	240	66	426	93	937	239	1269	3408
04:00 PM	75	90	46	211	58	284	24	366	48	105	24	177	21	250	50	321	1075
04:15 PM	60	80	57	197	93	238	31	362	50	104	21	175	13	194	46	253	987
04:30 PM	46	72	63	181	81	274	19	374	47	85	36	168	23	333	55	411	1134
04:45 PM	68	85	65	218	96	263	17	376	61	97	29	187	11	360	48	419	1200
Total	249	327	231	807	328	1059	91	1478	206	391	110	707	68	1137	199	1404	4396
05:00 PM	91	79	62	232	72	263	24	359	68	97	29	194	14	349	42	405	1190
05:15 PM	89	96	88	273	89	279	28	396	37	63	16	116	15	384	48	447	1232
05:30 PM	65	86	63	214	66	260	17	343	45	77	24	146	21	367	38	426	1129
05:45 PM	64	74	65	203	60	228	26	314	44	63	16	123	22	319	46	387	1027
Total	309	335	278	922	287	1030	95	1412	194	300	85	579	72	1419	174	1665	4578
06:00 PM	70	70	57	197	54	321	16	391	27	57	24	108	33	310	49	392	1088
06:15 PM	75	78	58	211	59	273	25	357	27	61	13	101	32	286	49	367	1036
06:30 PM	44	71	52	167	61	270	37	368	30	57	14	101	20	273	38	331	967
06:45 PM	43	44	49	136	56	210	9	275	25	56	16	97	25	272	56	353	861
Total	232	263	216	711	230	1074	87	1391	109	231	67	407	110	1141	192	1443	3952

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(416) 840-6619

Your Traffic Count Specialist

File Name : Mississauga Road at Dundas Street W
Site Code : Loc-1
Start Date : 2025-09-11
Page No : 2

Groups Printed- Light - Heavy

	Mississauga Rd From North				Dundas St W From East				Mississauga Rd From South				Dundas St W From West				
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Grand Total	1368	1622	1431	4421	1481	6188	466	8135	847	1646	472	2965	598	6958	1233	8789	24310
Apprch %	30.9	36.7	32.4		18.2	76.1	5.7		28.6	55.5	15.9		6.8	79.2	14		
Total %	5.6	6.7	5.9	18.2	6.1	25.5	1.9	33.5	3.5	6.8	1.9	12.2	2.5	28.6	5.1	36.2	
Light	1322	1581	1374	4277	1436	6068	452	7956	825	1608	461	2894	592	6839	1178	8609	23736
% Light	96.6	97.5	96	96.7	97	98.1	97	97.8	97.4	97.7	97.7	97.6	99	98.3	95.5	98	97.6
Heavy	46	41	57	144	45	120	14	179	22	38	11	71	6	119	55	180	574
% Heavy	3.4	2.5	4	3.3	3	1.9	3	2.2	2.6	2.3	2.3	2.4	1	1.7	4.5	2	2.4

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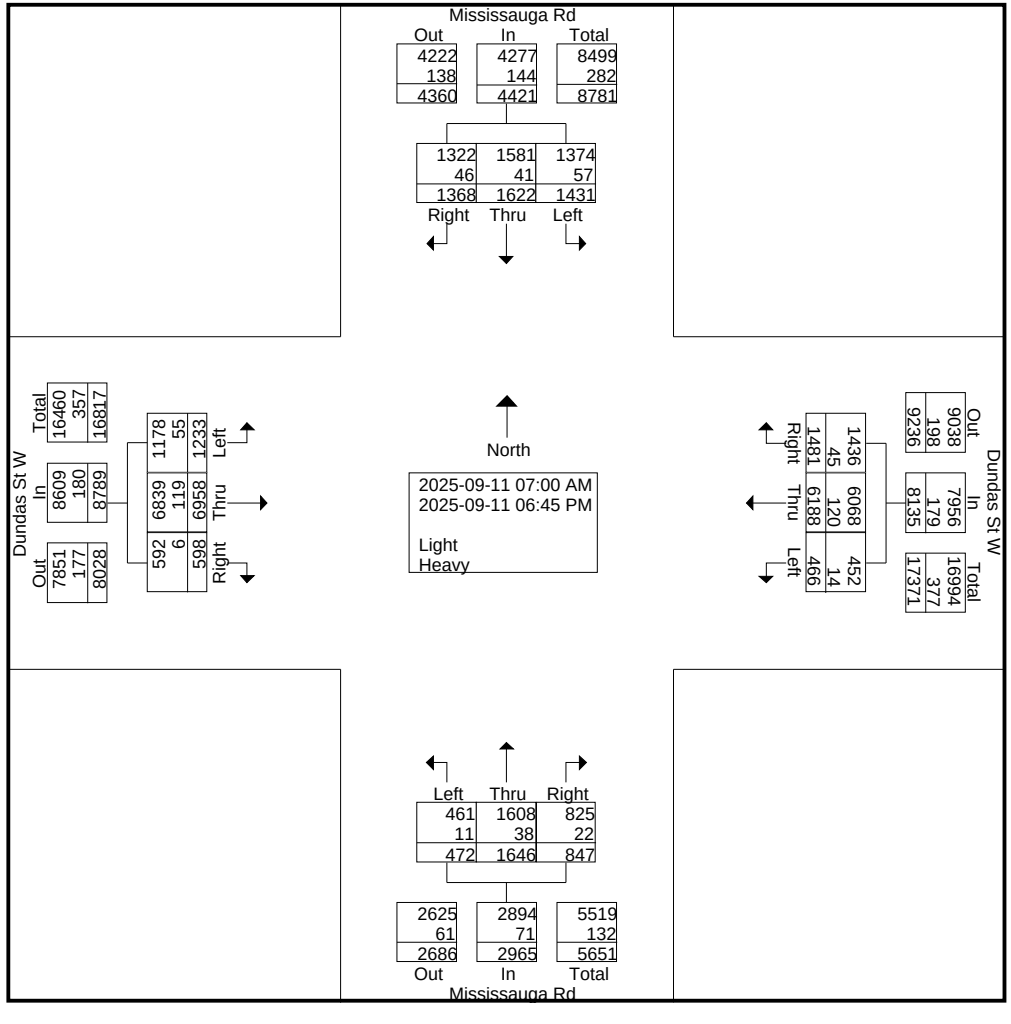
Your Traffic Count Specialist

File Name : Mississauga Road at Dundas Street W
Site Code : Loc-1
Start Date : 2025-09-11
Page No : 3



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(416) 840-6619

Your Traffic Count Specialist

File Name : Mississauga Road at Dundas Street W
Site Code : Loc-1
Start Date : 2025-09-11
Page No : 4

	Mississauga Rd From North				Dundas St W From East				Mississauga Rd From South				Dundas St W From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	64	98	**77**	**239**	55	301	15	371	25	40	19	84	45	324	54	423	1117
08:00 AM	**69**	89	62	220	44	**312**	18	374	37	51	13	101	**46**	**339**	66	**451**	1146
08:15 AM	65	**104**	70	239	77	249	**21**	347	31	106	17	154	33	302	**78**	413	**1153**
08:30 AM	50	55	61	166	**89**	267	19	**375**	**43**	**109**	**28**	**180**	26	326	53	405	1126
Total Volume	248	346	270	864	265	1129	73	1467	136	306	77	519	150	1291	251	1692	4542
% App. Total	28.7	40	31.2		18.1	77	5		26.2	59	14.8		8.9	76.3	14.8		
PHF	.899	.832	.877	.904	.744	.905	.869	.978	.791	.702	.688	.721	.815	.952	.804	.938	.985
Light	238	337	257	832	258	1097	71	1426	131	298	72	501	148	1264	241	1653	4412
% Light	96.0	97.4	95.2	96.3	97.4	97.2	97.3	97.2	96.3	97.4	93.5	96.5	98.7	97.9	96.0	97.7	97.1
Heavy	10	9	13	32	7	32	2	41	5	8	5	18	2	27	10	39	130
% Heavy	4.0	2.6	4.8	3.7	2.6	2.8	2.7	2.8	3.7	2.6	6.5	3.5	1.3	2.1	4.0	2.3	2.9

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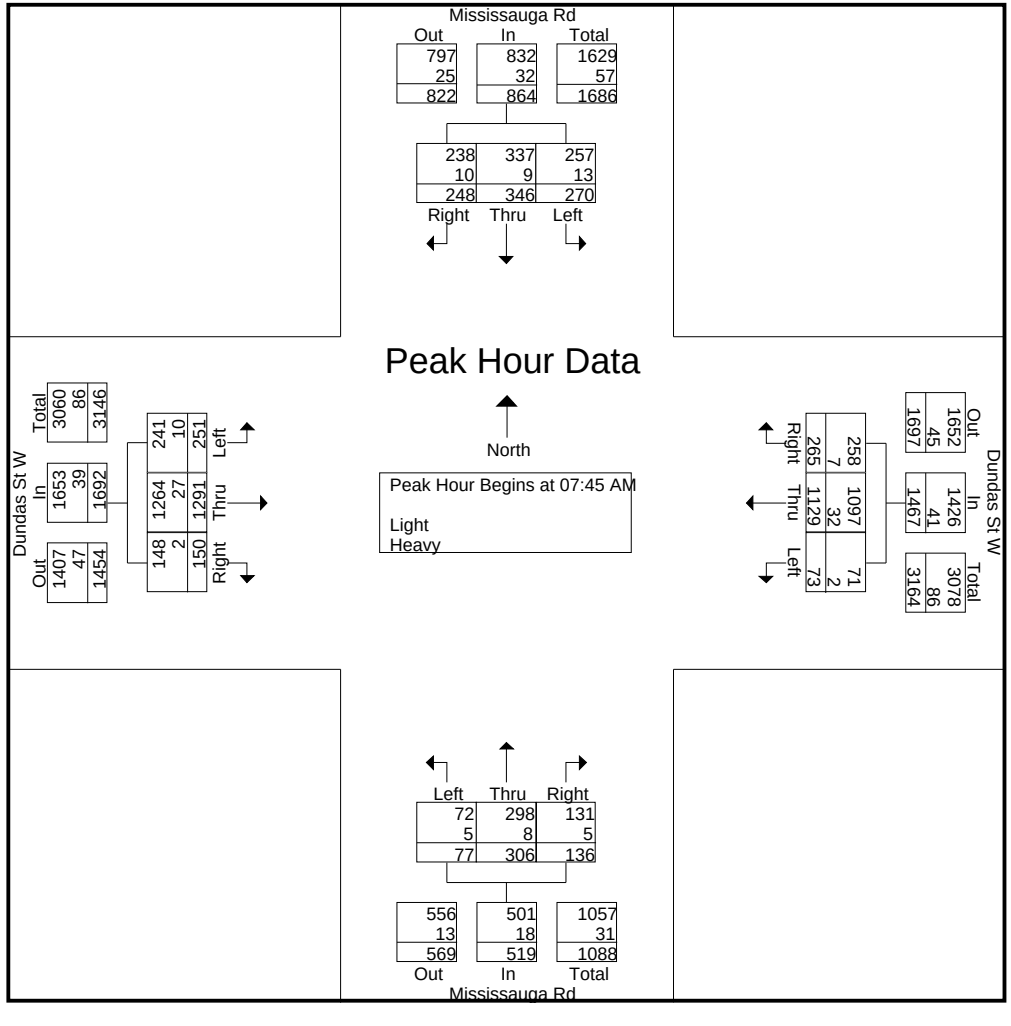
(416) 840-6619

Your Traffic Count Specialist

File Name : Mississauga Road at Dundas Street W
Site Code : Loc-1
Start Date : 2025-09-11
Page No : 5



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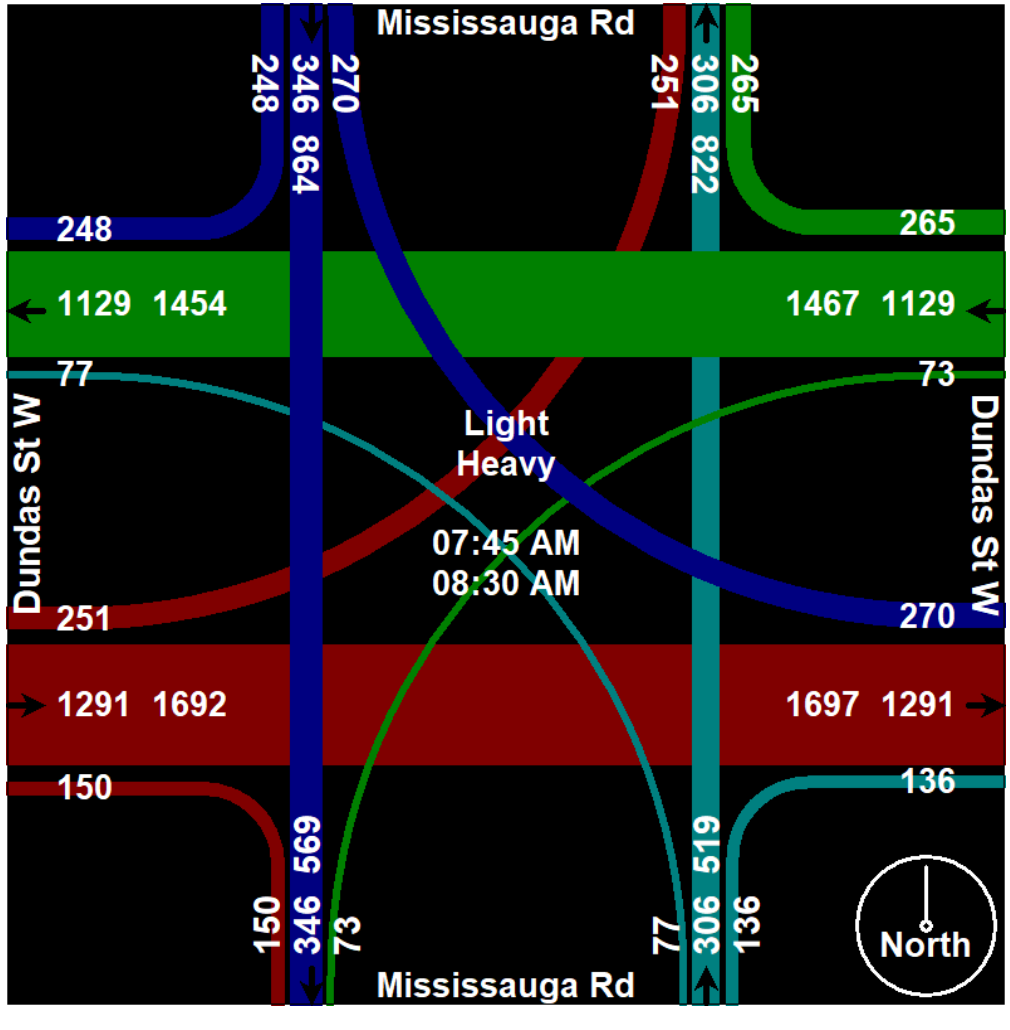
Your Traffic Count Specialist

File Name : Mississauga Road at Dundas Street W
Site Code : Loc-1
Start Date : 2025-09-11
Page No : 6



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Your Traffic Count Specialist

File Name : Mississauga Road at Dundas Street W
Site Code : Loc-1
Start Date : 2025-09-11
Page No : 7

	Mississauga Rd From North				Dundas St W From East				Mississauga Rd From South				Dundas St W From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	46	72	63	181	81	274	19	374	47	85	**36**	168	**23**	333	**55**	411	1134
04:45 PM	68	85	65	218	**96**	263	17	376	61	**97**	29	187	11	360	48	419	1200
05:00 PM	**91**	79	62	232	72	263	24	359	**68**	97	29	**194**	14	349	42	405	1190
05:15 PM	89	**96**	**88**	**273**	89	**279**	**28**	**396**	37	63	16	116	15	**384**	48	**447**	**1232**
Total Volume	294	332	278	904	338	1079	88	1505	213	342	110	665	63	1426	193	1682	4756
% App. Total	32.5	36.7	30.8		22.5	71.7	5.8		32	51.4	16.5		3.7	84.8	11.5		
PHF	.808	.865	.790	.828	.880	.967	.786	.950	.783	.881	.764	.857	.685	.928	.877	.941	.965
Light	287	326	269	882	332	1070	87	1489	210	339	109	658	62	1417	186	1665	4694
% Light	97.6	98.2	96.8	97.6	98.2	99.2	98.9	98.9	98.6	99.1	99.1	98.9	98.4	99.4	96.4	99.0	98.7
Heavy	7	6	9	22	6	9	1	16	3	3	1	7	1	9	7	17	62
% Heavy	2.4	1.8	3.2	2.4	1.8	0.8	1.1	1.1	1.4	0.9	0.9	1.1	1.6	0.6	3.6	1.0	1.3

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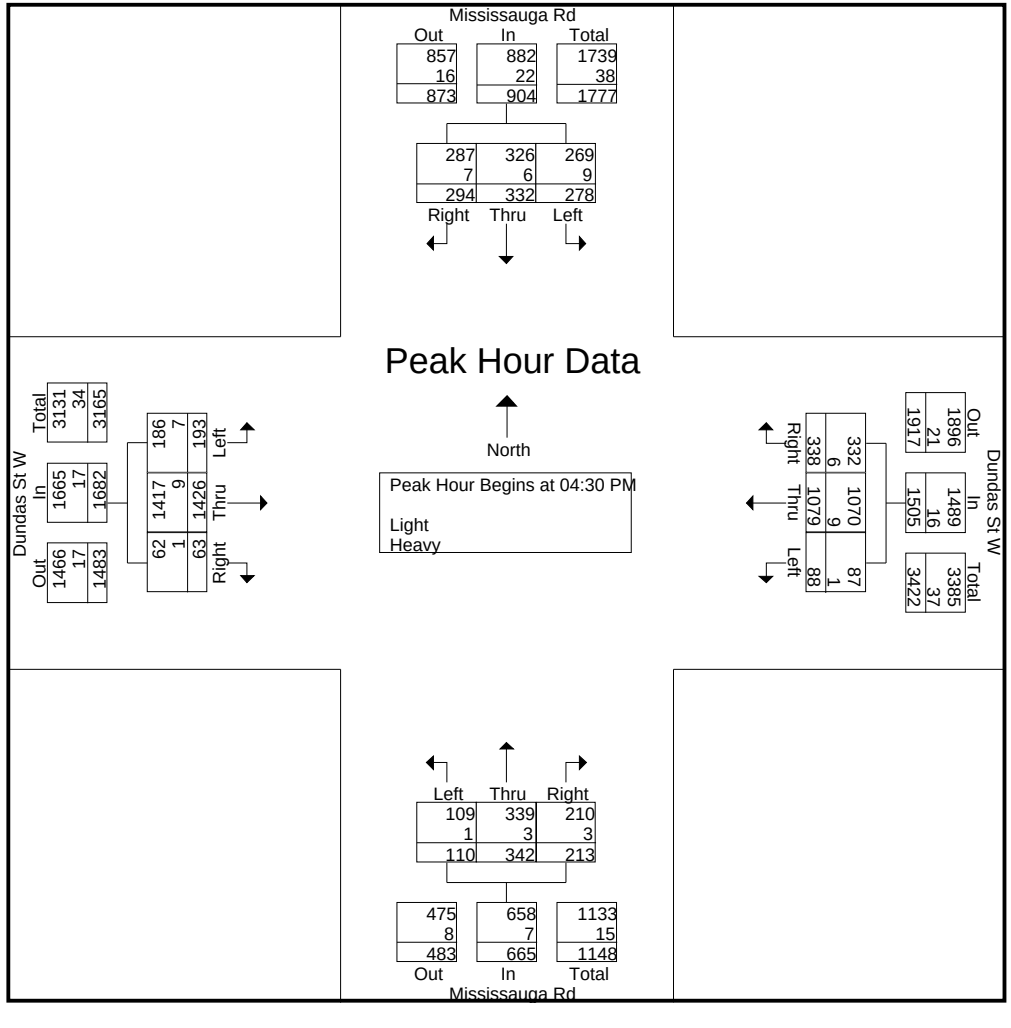
Your Traffic Count Specialist

File Name : Mississauga Road at Dundas Street W
Site Code : Loc-1
Start Date : 2025-09-11
Page No : 8



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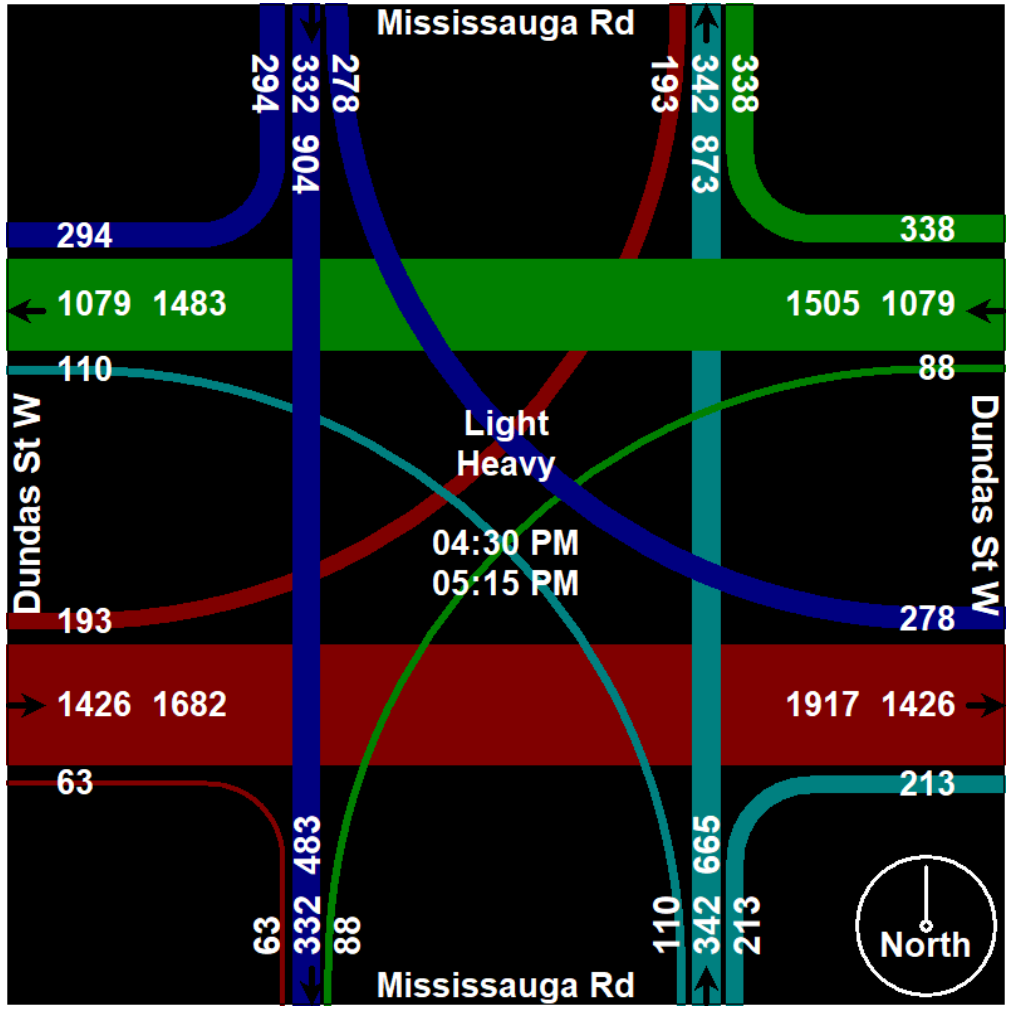
(416) 840-6619

Your Traffic Count Specialist

File Name : Mississauga Road at Dundas Street W
Site Code : Loc-1
Start Date : 2025-09-11
Page No : 9



Device: 1703

Intelight 1703 DUNDAS STREET E @ Mississauga Road

Phase - Parameter 1-16	Units	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6	Phase 7	Phase 8
Phase Description*	String								
Walk	Sec	0	10	0	10	0	10	0	10
Ped Clear	Sec	0	30	0	40	0	30	0	40
Min Green	Sec	7	10	7	10	7	10	7	10
Passage	Sec	2.0	3.0	2.0	3.0	2.0	3.0	3.0	3.0
Maximum 1	Sec	10	27	10	39	14	27	14	39
Maximum 2	Sec	10	27	10	39	14	27	14	39
Yellow Change	Sec	3.0	4.0	3.0	3.5	3.0	4.0	3.0	3.5
Red Clearance	Sec	0.0	2.5	0.0	4.0	0.0	2.5	0.0	4.0
Red Revert	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Added Initial	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Initial	Sec	0	0	0	0	0	0	0	0
Time Before Reduction	Sec	0	0	0	0	0	0	0	0
Cars Before Reduction	Veh	0	0	0	0	0	0	0	0
Time To Reduce	Sec	0	0	0	0	0	0	0	0
Reduce By	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Min Gap	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dynamic Max Limit	Sec	0	0	0	0	0	0	0	0
Dynamic Max Step	Sec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
[P2] Start Up	Enum	phaseNotOn	redClear	phaseNotOn	phaseNotOn	phaseNotOn	redClear	phaseNotOn	phaseNotOn
[P2] Options	Bit	0:Enabled Phase 5:Non Lock Detector Memory	0:Enabled Phase 1:Automatic Flash Entry Phase 2:Automatic Flash Exit Phase 3:Non-Actuated 1 7:Max Vehicle Recall 8:Ped. Recall 10:Dual Entry Phase 13:Actuated Rest In Walk	0:Enabled Phase 5:Non Lock Detector Memory	0:Enabled Phase 5:Non Lock Detector Memory 10:Dual Entry Phase	0:Enabled Phase 5:Non Lock Detector Memory	0:Enabled Phase 1:Automatic Flash Entry Phase 2:Automatic Flash Exit Phase 3:Non-Actuated 1 7:Max Vehicle Recall 8:Ped. Recall 10:Dual Entry Phase 13:Actuated Rest In Walk	0:Enabled Phase 5:Non Lock Detector Memory	0:Enabled Phase 5:Non Lock Detector Memory 10:Dual Entry Phase
[P2] Ring	Ring	1	1	1	1	2	2	2	2
[P2] Concurrency	Phase (,)	(5,6)	(5,6)	(7,8)	(7,8)	(1,2)	(1,2)	(3,4)	(3,4)

Coordination - Pattern 1-32	Units	1	2	3	4	5	6	7	8
Cycle Time	Sec	160	160	160	160	0	0	0	0
Offset	Sec	24	85	40	117	0	0	0	0
Split	Split	1	2	3	4	0	0	0	0
Sequence	Sequence	1	1	1	1	0	0	0	0
Phase Parameter Table*	Number	1	1	1	1	1	1	1	1
Coord Phase Reference Point*	Enum	green	green	green	green	green	green	green	green
Coord Mode*	Enum	singlePermissive	singlePermissive	singlePermissive	singlePermissive	singlePermissive	singlePermissive	singlePermissive	singlePermissive

Coordination - Splits	Units	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6	Phase 7	Phase 8
Split 1 - Mode	Enum	none	none	none	none	none	none	none	none
Split 1 - Time	Sec	10	75	16	59	20	65	10	65
Split 1 - Coord	Enum	False	True	False	False	False	True	False	False
Split 1 - Coord Phase Options*	Bit						0: Reference Point		
Split 2 - Mode	Enum	none	none	none	none	none	none	none	none
Split 2 - Time	Sec	13	69	10	68	14	68	10	68
Split 2 - Coord	Enum	False	True	False	False	False	True	False	False
Split 2 - Coord Phase Options*	Bit						0: Reference Point		
Split 3 - Mode	Enum	none	none	none	none	none	none	none	none
Split 3 - Time	Sec	14	68	13	65	14	68	10	68
Split 3 - Coord	Enum	False	True	False	False	False	True	False	False
Split 3 - Coord Phase Options*	Bit		0: Reference Point				0: Reference Point		
Split 4 - Mode	Enum	none	none	none	none	none	none	none	none

Split 4 - Time	Sec	10	66	16	68	10	66	12	72
Split 4 - Coord	Enum	False	True	False	False	False	True	False	False
Split 4 - Coord Phase Options*	Bit		0: Reference Point				0: Reference Point		
Split 10 - Mode	Enum	none	none	none	none	none	none	none	none
Split 10 - Time	Sec	12	67	13	58	13	66	13	58
Split 10 - Coord	Enum	False	True	False	False	False	True	False	False
Split 10 - Coord Phase Options*	Bit						0: Reference Point		
Split 13 - Mode	Enum	none	none	none	none	none	none	none	none
Split 13 - Time	Sec	10	77	16	57	13	74	10	63
Split 13 - Coord	Enum	False	True	False	False	False	True	False	False
Split 13 - Coord Phase Options*	Bit		0: Reference Point				0: Reference Point		
Split 14 - Mode	Enum	none	none	none	none	none	none	none	none
Split 14 - Time	Sec	10	77	15	58	14	73	10	63
Split 14 - Coord	Enum	False	True	False	False	False	True	False	False
Split 14 - Coord Phase Options*	Bit		0: Reference Point				0: Reference Point		
Split 15 - Mode	Enum	none	none	none	none	none	none	none	none
Split 15 - Time	Sec	10	75	18	57	10	75	10	65
Split 15 - Coord	Enum	False	True	False	False	False	True	False	False
Split 15 - Coord Phase Options*	Bit		0: Reference Point				0: Reference Point		
Time Base - Schedule 1-16	**Units**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Month	Bit	JFMAMJJASOND	JFMAMJJASOND	JFMAMJJASOND	J----------	-F---------	---A-------	----M------	-----J-----
Day of Week	Bit	-MTWTF-	S------	------S	----T--	-M-----	-----F-	-M-----	--T----
Day of Month	Bit	12345678901234567890123456789 01	12345678901234567890123456789 01	12345678901234567890123456789 01	1---------- --	----------7---------- --	----------8---------- --	----------9---------- --	1---------- --
Day Plan	Number	1	3	2	3	3	3	3	3
Time Base - Schedule 1-16	**Units**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Month	Bit	-------A----	--------S---	---------O--	----------D	----------D	----------D	-------S---	----------
Day of Week	Bit	-M-----	-M-----	-M-----	----T--	-----F-	---W---	--T----	SMTWTFS
Day of Month	Bit	---4---------- --	1---------- --	----------3---------- --	----------5---------- --	----------6--- --	----------4----- --	---------- 0-	---------- --
Day Plan	Number	3	3	3	3	3	3	3	0
Time Base - Day Plans	**Units**	**Evt 1**	**Evt 2**	**Evt 3**	**Evt 4**	**Evt 5**	**Evt 6**		
Plan 1 Hour	Hour	0	3	6	9	15	19		
Plan 1 Minute	Min	0	0	0	30	0	30		
Plan 1 Action	Number	8	7	1	2	3	2		
Plan 2 Hour	Hour	0	3	7	0	0	0		
Plan 2 Minute	Min	0	0	0	0	0	0		
Plan 2 Action	Number	8	7	4	0	0	0		
Plan 3 Hour	Hour	0	3	8	23	0	0		
Plan 3 Minute	Min	0	0	0	0	0	0		
Plan 3 Action	Number	8	7	4	8	0	0		
Time Base - Action 1-32	**Units**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Pattern	Enum	Pattern 1	Pattern 2	Pattern 3	Pattern 4	Pattern 5	Pattern 6	Free	Free
Aux. Functions	Bit								
Spec. Functions	Bit								

Location	Dundas Street W @ Mississauga Road	LPI
Phase 1	Dundas Street - WBLT	
Phase 2	Dundas Street - EB	**5 Sec**
Phase 3	Mississauga Road - SBLT	
Phase 4	Mississauga Road - NB	**5 Sec**
Phase 5	Dundas Street - EBLT	
Phase 6	Dundas Street - WB	**5 Sec**
Phase 7	Mississauga Road - NBLT	
Phase 8	Mississauga Road - SB	**5 Sec**

File: CA.13.SIG
Signal Timing Request
RT.07.1703

September 19, 2025

To Jason Small:

Re: Traffic Signal Timing

Dundas Street West at Mississauga Road

The side street phases (4) are actuated, unless noted in the timing plan, this means a vehicle or pedestrian must be present on the side street before the side street is given a green indication. Vehicle presence on the side street would result in a possible green time of between the minimum and maximum time noted, depending on demand. Phase 1 is also actuated. Pedestrian "Walk" and flashing "Don't Walk" time on the side street, as noted, would be used in the event that the pedestrian push button is activated. During the side street pedestrian indications, the side street vehicle green is concurrently displayed. Should there be no demand on the actuated phase, the signals would result in a green indication on the major street (2).

Note: All times recorded in seconds, based on full demand.

The time of day plan is used for system control operation. In the event that the coordination pattern has a cycle length, offset and split value identified, the cycle length, split and offset values, as noted, would be used. However, when the time of day plan is programed using 'Action' 8, the mode is 'Free', meaning no cycle length, split and offset values are given and the intersection operates using the phase timings provided in the report.
The phases for each intersection are included in the "Phasing Info" tab of the attached spreadsheet. If the Leading Pedestrian Interval (LPI) is programmed at the intersection for

Jason Small
Re: Traffic Signal Timing
September 19 ,2025

phase 2 and/or 6, the pedestrian ‘Walk’ indication will be displayed 5 seconds in advance of the green signal indication. However, in order for the Leading Pedestrian Interval to be displayed 5 seconds in advance of the green signal indication for phase 4 or 8, the pedestrian push button must be pressed, unless noted in the timing plan. Should an LPI be programmed at the intersection, it will be noted in the “Phasing Info” tab on the attached spreadsheet.

Should you require further information, please contact Dennis Shaw, at 905-615-3200 ext. 3107.

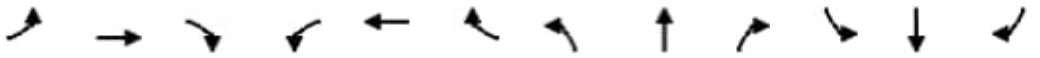
Thank you,

Dennis Shaw
ITS Technologist
Traffic Systems and ITS
Transportation and Works Department
City of Mississauga
905-615-3200 Ext. 3107
Dennis.Shaw@mississauga.ca

Appendix B – Existing Conditions LOS

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	251	1291	150	73	1129	265	77	306	136	270	346	248
Future Volume (vph)	251	1291	150	73	1129	265	77	306	136	270	346	248
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	220.0		25.0	55.0		40.0	120.0		0.0	70.0		0.0
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (m)	30.0			20.0			40.0			40.0		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor			0.97			0.95	1.00	1.00		1.00		0.98
Frt			0.850			0.850		0.954				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1755	3523	1582	1772	3544	1585	1706	1767	0	1738	1865	1537
Flt Permitted	0.060			0.065			0.336			0.097		
Satd. Flow (perm)	111	3523	1531	121	3544	1504	601	1767	0	177	1865	1503
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			112			147		14				270
Link Speed (k/h)		60			60			50			50	
Link Distance (m)		358.0			1394.5			536.8			370.6	
Travel Time (s)		21.5			83.7			38.6			26.7	
Confl. Peds. (#/hr)	14		5	5		14	8		1	1		8
Confl. Bikes (#/hr)			1						1			2
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	3%	2%	3%	3%	3%	7%	3%	4%	5%	3%	5%
Bus Blockages (#/hr)	0	3	3	0	0	0	0	0	0	0	0	3
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	273	1403	163	79	1227	288	84	333	148	293	376	270
Shared Lane Traffic (%)												
Lane Group Flow (vph)	273	1403	163	79	1227	288	84	481	0	293	376	270
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.9			4.9			4.9			4.9	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	1.00	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	1.00
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	1	0	1	1	0	1	1		1	1	0
Detector Template	Left			Left			Left			Left		
Leading Detector (m)	6.1	1.8	0.0	6.1	1.8	0.0	6.1	1.8		6.1	1.8	0.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2		2	6		6	4			8		8
Detector Phase	5	2	2	1	6	6	7	4		3	8	8
Switch Phase												

Lane Group	Ø9	Ø10	Ø11	Ø12
Lane Configurations				
Traffic Volume (vph)				
Future Volume (vph)				
Ideal Flow (vphpl)				
Lane Width (m)				
Grade (%)				
Storage Length (m)				
Storage Lanes				
Taper Length (m)				
Lane Util. Factor				
Ped Bike Factor				
Frt				
Flt Protected				
Satd. Flow (prot)				
Flt Permitted				
Satd. Flow (perm)				
Right Turn on Red				
Satd. Flow (RTOR)				
Link Speed (k/h)				
Link Distance (m)				
Travel Time (s)				
Confl. Peds. (#/hr)				
Confl. Bikes (#/hr)				
Peak Hour Factor				
Growth Factor				
Heavy Vehicles (%)				
Bus Blockages (#/hr)				
Parking (#/hr)				
Mid-Block Traffic (%)				
Adj. Flow (vph)				
Shared Lane Traffic (%)				
Lane Group Flow (vph)				
Enter Blocked Intersection				
Lane Alignment				
Median Width(m)				
Link Offset(m)				
Crosswalk Width(m)				
Two way Left Turn Lane				
Headway Factor				
Turning Speed (k/h)				
Number of Detectors				
Detector Template				
Leading Detector (m)				
Trailing Detector (m)				
Turn Type				
Protected Phases	9	10	11	12
Permitted Phases				
Detector Phase				
Switch Phase				



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	7.0	10.0	10.0	7.0	10.0	10.0	7.0	10.0		7.0	10.0	10.0
Minimum Split (s)	10.0	47.0	47.0	10.0	47.0	47.0	10.0	53.0		10.0	58.0	58.0
Total Split (s)	20.0	70.0	70.0	10.0	60.0	60.0	10.0	54.0		16.0	60.0	60.0
Total Split (%)	12.5%	43.8%	43.8%	6.3%	37.5%	37.5%	6.3%	33.8%		10.0%	37.5%	37.5%
Maximum Green (s)	17.0	63.5	63.5	7.0	53.5	53.5	7.0	46.5		13.0	52.5	52.5
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	3.5		3.0	3.5	3.5
All-Red Time (s)	0.0	2.5	2.5	0.0	2.5	2.5	0.0	4.0		0.0	4.0	4.0
Lost Time Adjust (s)	-2.0	-1.5	-1.5	-2.0	-1.5	-1.5	-2.0	-2.5		-2.0	-2.5	-2.5
Total Lost Time (s)	1.0	5.0	5.0	1.0	5.0	5.0	1.0	5.0		1.0	5.0	5.0
Lead/Lag	Lead			Lead			Lead			Lead		
Lead-Lag Optimize?	Yes			Yes			Yes			Yes		
Vehicle Extension (s)	2.0	3.0	3.0	2.0	3.0	3.0	3.0	3.0		2.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None		None	None	None
Walk Time (s)		5.0	5.0		5.0	5.0		5.0			5.0	5.0
Flash Don't Walk (s)		30.0	30.0		30.0	30.0		40.0			40.0	40.0
Pedestrian Calls (#/hr)		5	5		14	14		1			8	8
Act Effct Green (s)	90.3	75.3	75.3	77.3	64.3	64.3	59.7	46.7		67.7	52.7	52.7
Actuated g/C Ratio	0.56	0.47	0.47	0.48	0.40	0.40	0.37	0.29		0.42	0.33	0.33
v/c Ratio	1.06	0.85	0.21	0.52	0.86	0.42	0.29	0.92		1.33	0.61	0.40
Control Delay (s/veh)	118.2	43.7	9.9	37.8	51.6	19.2	30.0	76.0		208.2	49.6	5.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay (s/veh)	118.2	43.7	9.9	37.8	51.6	19.2	30.0	76.0		208.2	49.6	5.6
LOS	F	D	A	D	D	B	C	E		F	D	A
Approach Delay (s/veh)		51.7			45.1			69.1			86.4	
Approach LOS		D			D			E			F	
Queue Length 50th (m)	~79.0	204.7	8.8	11.4	185.6	30.5	15.9	142.1		~100.1	98.5	0.0
Queue Length 95th (m)	#140.7	#281.0	26.1	27.7	#256.9	62.0	25.8	#202.3		#157.1	132.9	19.6
Internal Link Dist (m)		334.0			1370.5			512.8			346.6	
Turn Bay Length (m)	220.0		25.0	55.0		40.0	120.0			70.0		
Base Capacity (vph)	257	1658	779	151	1424	692	286	550		221	641	693
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	1.06	0.85	0.21	0.52	0.86	0.42	0.29	0.87		1.33	0.59	0.39

Intersection Summary			
Area Type:	Other		
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 24 (15%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 145			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.33			
Intersection Signal Delay (s/veh): 58.2		Intersection LOS: E	
Intersection Capacity Utilization 99.9%		ICU Level of Service F	
Analysis Period (min) 15			

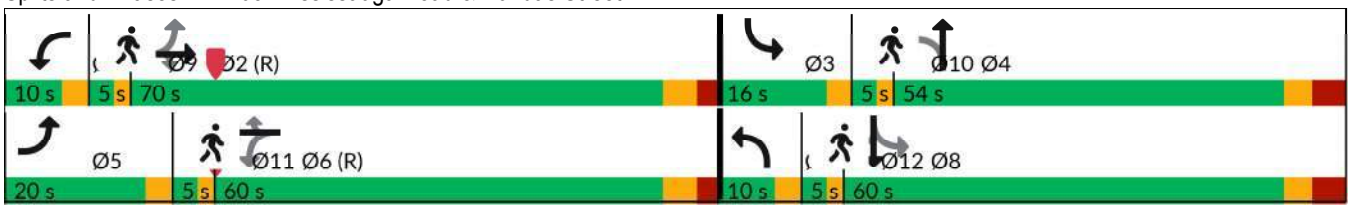
Lane Group	Ø9	Ø10	Ø11	Ø12
Minimum Initial (s)	3.0	3.0	3.0	3.0
Minimum Split (s)	5.0	5.0	5.0	5.0
Total Split (s)	5.0	5.0	5.0	5.0
Total Split (%)	3%	3%	3%	3%
Maximum Green (s)	3.0	3.0	3.0	3.0
Yellow Time (s)	2.0	2.0	2.0	2.0
All-Red Time (s)	0.0	0.0	0.0	0.0
Lost Time Adjust (s)				
Total Lost Time (s)				
Lead/Lag	Lag	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None
Walk Time (s)	3.0	3.0	3.0	3.0
Flash Don't Walk (s)	0.0	0.0	0.0	0.0
Pedestrian Calls (#/hr)	5	1	14	8
Act Effct Green (s)				
Actuated g/C Ratio				
v/c Ratio				
Control Delay (s/veh)				
Queue Delay				
Total Delay (s/veh)				
LOS				
Approach Delay (s/veh)				
Approach LOS				
Queue Length 50th (m)				
Queue Length 95th (m)				
Internal Link Dist (m)				
Turn Bay Length (m)				
Base Capacity (vph)				
Starvation Cap Reductn				
Spillback Cap Reductn				
Storage Cap Reductn				
Reduced v/c Ratio				

Intersection Summary

~ 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.

Splits and Phases: 1703: Mississauga Road & Dundas Street



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	273	1403	163	79	1227	288	84	481	293	376	270
v/c Ratio	1.06	0.85	0.21	0.52	0.86	0.42	0.29	0.92	1.33	0.61	0.40
Control Delay (s/veh)	118.2	43.7	9.9	37.8	51.6	19.2	30.0	76.0	208.2	49.6	5.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	118.2	43.7	9.9	37.8	51.6	19.2	30.0	76.0	208.2	49.6	5.6
Queue Length 50th (m)	~79.0	204.7	8.8	11.4	185.6	30.5	15.9	142.1	~100.1	98.5	0.0
Queue Length 95th (m)	#140.7	#281.0	26.1	27.7	#256.9	62.0	25.8	#202.3	#157.1	132.9	19.6
Internal Link Dist (m)		334.0			1370.5			512.8		346.6	
Turn Bay Length (m)	220.0		25.0	55.0		40.0	120.0		70.0		
Base Capacity (vph)	257	1658	779	151	1424	692	286	550	221	641	693
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	1.06	0.85	0.21	0.52	0.86	0.42	0.29	0.87	1.33	0.59	0.39

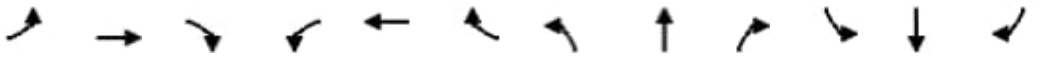
Intersection Summary

~ 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.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	193	1426	63	88	1079	338	110	342	213	278	332	294
Future Volume (vph)	193	1426	63	88	1079	338	110	342	213	278	332	294
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	220.0		25.0	55.0		40.0	120.0		0.0	70.0		0.0
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (m)	30.0			20.0			40.0			40.0		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor			0.97			0.95	0.99	0.99				0.97
Frt			0.850			0.850		0.942				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1755	3592	1582	1789	3614	1601	1807	1775	0	1755	1883	1566
Flt Permitted	0.069			0.062			0.336			0.072		
Satd. Flow (perm)	127	3592	1529	117	3614	1522	635	1775	0	133	1883	1525
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			99			131		21				248
Link Speed (k/h)		60			60			50			50	
Link Distance (m)		358.0			1394.5			536.8			370.6	
Travel Time (s)		21.5			83.7			38.6			26.7	
Confl. Peds. (#/hr)	13		5	5		13	11					11
Confl. Bikes (#/hr)			2						5			5
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	1%	2%	2%	1%	2%	1%	1%	2%	4%	2%	3%
Bus Blockages (#/hr)	0	3	3	0	0	0	0	0	0	0	0	3
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	210	1550	68	96	1173	367	120	372	232	302	361	320
Shared Lane Traffic (%)												
Lane Group Flow (vph)	210	1550	68	96	1173	367	120	604	0	302	361	320
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.9			4.9			4.9			4.9	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	1.00	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	1.00
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	1	0	1	1	0	1	1		1	1	0
Detector Template	Left			Left			Left			Left		
Leading Detector (m)	6.1	1.8	0.0	6.1	1.8	0.0	6.1	1.8		6.1	1.8	0.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2		2	6		6	4			8		8
Detector Phase	5	2	2	1	6	6	7	4		3	8	8
Switch Phase												

Lane Group	Ø9	Ø10	Ø11	Ø12
Lane Configurations				
Traffic Volume (vph)				
Future Volume (vph)				
Ideal Flow (vphpl)				
Lane Width (m)				
Grade (%)				
Storage Length (m)				
Storage Lanes				
Taper Length (m)				
Lane Util. Factor				
Ped Bike Factor				
Frt				
Flt Protected				
Satd. Flow (prot)				
Flt Permitted				
Satd. Flow (perm)				
Right Turn on Red				
Satd. Flow (RTOR)				
Link Speed (k/h)				
Link Distance (m)				
Travel Time (s)				
Confl. Peds. (#/hr)				
Confl. Bikes (#/hr)				
Peak Hour Factor				
Growth Factor				
Heavy Vehicles (%)				
Bus Blockages (#/hr)				
Parking (#/hr)				
Mid-Block Traffic (%)				
Adj. Flow (vph)				
Shared Lane Traffic (%)				
Lane Group Flow (vph)				
Enter Blocked Intersection				
Lane Alignment				
Median Width(m)				
Link Offset(m)				
Crosswalk Width(m)				
Two way Left Turn Lane				
Headway Factor				
Turning Speed (k/h)				
Number of Detectors				
Detector Template				
Leading Detector (m)				
Trailing Detector (m)				
Turn Type				
Protected Phases	9	10	11	12
Permitted Phases				
Detector Phase				
Switch Phase				



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	7.0	10.0	10.0	7.0	10.0	10.0	7.0	10.0		7.0	10.0	10.0
Minimum Split (s)	10.0	41.5	41.5	10.0	41.5	41.5	10.0	52.5		10.0	52.5	52.5
Total Split (s)	14.0	63.0	63.0	14.0	63.0	63.0	10.0	60.0		13.0	63.0	63.0
Total Split (%)	8.8%	39.4%	39.4%	8.8%	39.4%	39.4%	6.3%	37.5%		8.1%	39.4%	39.4%
Maximum Green (s)	11.0	56.5	56.5	11.0	56.5	56.5	7.0	52.5		10.0	55.5	55.5
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	3.5		3.0	3.5	3.5
All-Red Time (s)	0.0	2.5	2.5	0.0	2.5	2.5	0.0	4.0		0.0	4.0	4.0
Lost Time Adjust (s)	-2.0	-1.5	-1.5	-2.0	-1.5	-1.5	-2.0	-2.5		-2.0	-2.5	-2.5
Total Lost Time (s)	1.0	5.0	5.0	1.0	5.0	5.0	1.0	5.0		1.0	5.0	5.0
Lead/Lag	Lead			Lead			Lead			Lead		
Lead-Lag Optimize?	Yes			Yes			Yes			Yes		
Vehicle Extension (s)	2.0	3.0	3.0	2.0	3.0	3.0	3.0	3.0		2.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None		None	None	None
Walk Time (s)		5.0	5.0		5.0	5.0		5.0			5.0	5.0
Flash Don't Walk (s)		30.0	30.0		30.0	30.0		40.0			40.0	40.0
Pedestrian Calls (#/hr)		5	5		13	13		0			11	11
Act Effct Green (s)	84.9	69.3	69.3	81.2	66.2	66.2	67.8	54.8		70.6	55.8	55.8
Actuated g/C Ratio	0.53	0.43	0.43	0.51	0.41	0.41	0.42	0.34		0.44	0.35	0.35
v/c Ratio	1.06	1.00	0.09	0.55	0.78	0.52	0.36	0.97		1.68	0.55	0.46
Control Delay (s/veh)	116.5	66.7	1.9	38.0	45.7	25.1	29.4	79.6		356.9	46.3	11.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay (s/veh)	116.5	66.7	1.9	38.0	45.7	25.1	29.4	79.6		356.9	46.3	11.9
LOS	F	E	A	D	D	C	C	E		F	D	B
Approach Delay (s/veh)		70.0			40.6			71.3			130.5	
Approach LOS		E			D			E			F	
Queue Length 50th (m)	~52.8	253.4	0.0	14.6	166.1	54.2	22.3	184.3		~123.4	90.5	15.3
Queue Length 95th (m)	#110.1	#334.2	3.9	32.4	204.4	89.7	35.7	#262.3		#186.4	129.0	44.3
Internal Link Dist (m)		334.0			1370.5			512.8			346.6	
Turn Bay Length (m)	220.0		25.0	55.0		40.0	120.0			70.0		
Base Capacity (vph)	199	1554	718	196	1495	706	334	623		180	682	710
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	1.06	1.00	0.09	0.49	0.78	0.52	0.36	0.97		1.68	0.53	0.45

Intersection Summary			
Area Type:	Other		
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 40 (25%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 145			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.68			
Intersection Signal Delay (s/veh): 72.4		Intersection LOS: E	
Intersection Capacity Utilization 106.6%		ICU Level of Service G	
Analysis Period (min) 15			

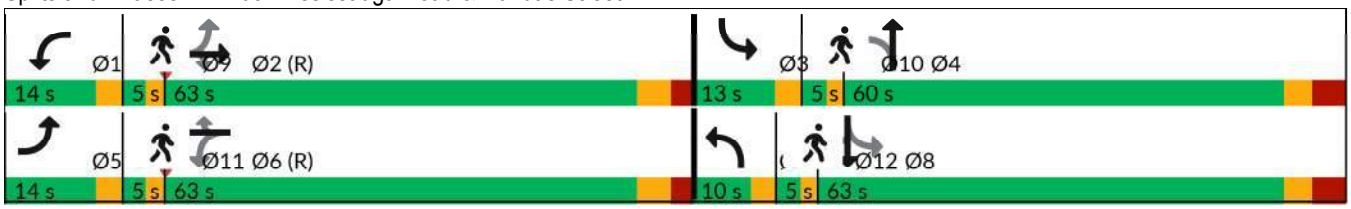
Lane Group	Ø9	Ø10	Ø11	Ø12
Minimum Initial (s)	3.0	3.0	3.0	3.0
Minimum Split (s)	5.0	5.0	5.0	5.0
Total Split (s)	5.0	5.0	5.0	5.0
Total Split (%)	3%	3%	3%	3%
Maximum Green (s)	3.0	3.0	3.0	3.0
Yellow Time (s)	2.0	2.0	2.0	2.0
All-Red Time (s)	0.0	0.0	0.0	0.0
Lost Time Adjust (s)				
Total Lost Time (s)				
Lead/Lag	Lag	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None
Walk Time (s)	3.0	3.0	3.0	3.0
Flash Don't Walk (s)	0.0	0.0	0.0	0.0
Pedestrian Calls (#/hr)	5	0	13	11
Act Effct Green (s)				
Actuated g/C Ratio				
v/c Ratio				
Control Delay (s/veh)				
Queue Delay				
Total Delay (s/veh)				
LOS				
Approach Delay (s/veh)				
Approach LOS				
Queue Length 50th (m)				
Queue Length 95th (m)				
Internal Link Dist (m)				
Turn Bay Length (m)				
Base Capacity (vph)				
Starvation Cap Reductn				
Spillback Cap Reductn				
Storage Cap Reductn				
Reduced v/c Ratio				

Intersection Summary

~ 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.

Splits and Phases: 1703: Mississauga Road & Dundas Street



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	210	1550	68	96	1173	367	120	604	302	361	320
v/c Ratio	1.06	1.00	0.09	0.55	0.78	0.52	0.36	0.97	1.68	0.55	0.46
Control Delay (s/veh)	116.5	66.7	1.9	38.0	45.7	25.1	29.4	79.6	356.9	46.3	11.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	116.5	66.7	1.9	38.0	45.7	25.1	29.4	79.6	356.9	46.3	11.9
Queue Length 50th (m)	~52.8	253.4	0.0	14.6	166.1	54.2	22.3	184.3	~123.4	90.5	15.3
Queue Length 95th (m)	#110.1	#334.2	3.9	32.4	204.4	89.7	35.7	#262.3	#186.4	129.0	44.3
Internal Link Dist (m)		334.0			1370.5			512.8		346.6	
Turn Bay Length (m)	220.0		25.0	55.0		40.0	120.0		70.0		
Base Capacity (vph)	199	1554	718	196	1495	706	334	623	180	682	710
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	1.06	1.00	0.09	0.49	0.78	0.52	0.36	0.97	1.68	0.53	0.45

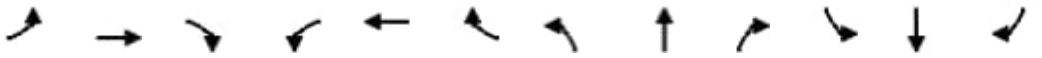
Intersection Summary

~ 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.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	251	1291	150	73	1129	265	77	306	136	270	346	248
Future Volume (vph)	251	1291	150	73	1129	265	77	306	136	270	346	248
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	220.0		25.0	55.0		40.0	120.0		0.0	70.0		0.0
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (m)	30.0			20.0			40.0			40.0		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor			0.97			0.95	1.00	1.00		1.00		0.98
Frt			0.850			0.850		0.954				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1755	3523	1582	1772	3544	1585	1706	1767	0	1738	1865	1537
Flt Permitted	0.070			0.082			0.359			0.118		
Satd. Flow (perm)	129	3523	1531	153	3544	1504	642	1767	0	216	1865	1503
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			112			147		14				253
Link Speed (k/h)		60			60			50			50	
Link Distance (m)		358.0			1394.5			536.8			370.6	
Travel Time (s)		21.5			83.7			38.6			26.7	
Confl. Peds. (#/hr)	14		5	5		14	8		1	1		8
Confl. Bikes (#/hr)			1						1			2
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	3%	2%	3%	3%	3%	7%	3%	4%	5%	3%	5%
Bus Blockages (#/hr)	0	3	3	0	0	0	0	0	0	0	0	3
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	256	1317	153	74	1152	270	79	312	139	276	353	253
Shared Lane Traffic (%)												
Lane Group Flow (vph)	256	1317	153	74	1152	270	79	451	0	276	353	253
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.9			4.9			4.9			4.9	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	1.00	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	1.00
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	1	0	1	1	0	1	1		1	1	0
Detector Template	Left			Left			Left			Left		
Leading Detector (m)	6.1	1.8	0.0	6.1	1.8	0.0	6.1	1.8		6.1	1.8	0.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2		2	6		6	4			8		8
Detector Phase	5	2	2	1	6	6	7	4		3	8	8
Switch Phase												

Lane Group	Ø9	Ø10	Ø11	Ø12
Lane Configurations				
Traffic Volume (vph)				
Future Volume (vph)				
Ideal Flow (vphpl)				
Lane Width (m)				
Grade (%)				
Storage Length (m)				
Storage Lanes				
Taper Length (m)				
Lane Util. Factor				
Ped Bike Factor				
Frt				
Flt Protected				
Satd. Flow (prot)				
Flt Permitted				
Satd. Flow (perm)				
Right Turn on Red				
Satd. Flow (RTOR)				
Link Speed (k/h)				
Link Distance (m)				
Travel Time (s)				
Confl. Peds. (#/hr)				
Confl. Bikes (#/hr)				
Peak Hour Factor				
Growth Factor				
Heavy Vehicles (%)				
Bus Blockages (#/hr)				
Parking (#/hr)				
Mid-Block Traffic (%)				
Adj. Flow (vph)				
Shared Lane Traffic (%)				
Lane Group Flow (vph)				
Enter Blocked Intersection				
Lane Alignment				
Median Width(m)				
Link Offset(m)				
Crosswalk Width(m)				
Two way Left Turn Lane				
Headway Factor				
Turning Speed (k/h)				
Number of Detectors				
Detector Template				
Leading Detector (m)				
Trailing Detector (m)				
Turn Type				
Protected Phases	9	10	11	12
Permitted Phases				
Detector Phase				
Switch Phase				



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	7.0	10.0	10.0	7.0	10.0	10.0	7.0	10.0		7.0	10.0	10.0
Minimum Split (s)	10.0	47.0	47.0	10.0	47.0	47.0	10.0	53.0		10.0	58.0	58.0
Total Split (s)	20.0	70.0	70.0	10.0	60.0	60.0	10.0	54.0		16.0	60.0	60.0
Total Split (%)	12.5%	43.8%	43.8%	6.3%	37.5%	37.5%	6.3%	33.8%		10.0%	37.5%	37.5%
Maximum Green (s)	17.0	63.5	63.5	7.0	53.5	53.5	7.0	46.5		13.0	52.5	52.5
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	3.5		3.0	3.5	3.5
All-Red Time (s)	0.0	2.5	2.5	0.0	2.5	2.5	0.0	4.0		0.0	4.0	4.0
Lost Time Adjust (s)	-2.0	-1.5	-1.5	-2.0	-1.5	-1.5	-2.0	-2.5		-2.0	-2.5	-2.5
Total Lost Time (s)	1.0	5.0	5.0	1.0	5.0	5.0	1.0	5.0		1.0	5.0	5.0
Lead/Lag	Lead			Lead			Lead			Lead		
Lead-Lag Optimize?	Yes			Yes			Yes			Yes		
Vehicle Extension (s)	2.0	3.0	3.0	2.0	3.0	3.0	3.0	3.0		2.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None		None	None	None
Walk Time (s)		5.0	5.0		5.0	5.0		5.0			5.0	5.0
Flash Don't Walk (s)		30.0	30.0		30.0	30.0		40.0			40.0	40.0
Pedestrian Calls (#/hr)		5	5		14	14		1			8	8
Act Effct Green (s)	91.8	76.8	76.8	78.8	65.8	65.8	58.2	45.2		66.2	51.2	51.2
Actuated g/C Ratio	0.57	0.48	0.48	0.49	0.41	0.41	0.36	0.28		0.41	0.32	0.32
v/c Ratio	0.96	0.78	0.19	0.45	0.79	0.38	0.27	0.89		1.19	0.59	0.39
Control Delay (s/veh)	88.7	39.6	8.9	28.0	46.9	17.5	30.1	72.6		153.7	49.6	5.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay (s/veh)	88.7	39.6	8.9	28.0	46.9	17.5	30.1	72.6		153.7	49.6	5.7
LOS	F	D	A	C	D	B	C	E		F	D	A
Approach Delay (s/veh)		44.2			40.7			66.3			69.6	
Approach LOS		D			D			E			E	
Queue Length 50th (m)	62.8	182.1	6.9	10.4	166.8	25.6	15.1	131.3		~80.9	92.0	0.0
Queue Length 95th (m)	#123.1	#243.4	23.3	21.3	#230.8	55.4	24.4	#176.7		#134.7	123.9	19.1
Internal Link Dist (m)		334.0			1370.5			512.8			346.6	
Turn Bay Length (m)	220.0		25.0	55.0		40.0	120.0			70.0		
Base Capacity (vph)	266	1690	792	166	1456	704	293	550		232	641	682
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	0.96	0.78	0.19	0.45	0.79	0.38	0.27	0.82		1.19	0.55	0.37

Intersection Summary			
Area Type:	Other		
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 24 (15%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 145			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.19			
Intersection Signal Delay (s/veh): 50.4		Intersection LOS: D	
Intersection Capacity Utilization 99.9%		ICU Level of Service F	
Analysis Period (min) 15			

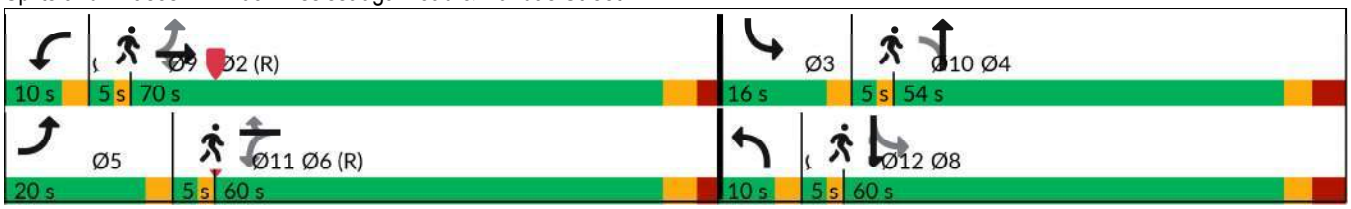
Lane Group	Ø9	Ø10	Ø11	Ø12
Minimum Initial (s)	3.0	3.0	3.0	3.0
Minimum Split (s)	5.0	5.0	5.0	5.0
Total Split (s)	5.0	5.0	5.0	5.0
Total Split (%)	3%	3%	3%	3%
Maximum Green (s)	3.0	3.0	3.0	3.0
Yellow Time (s)	2.0	2.0	2.0	2.0
All-Red Time (s)	0.0	0.0	0.0	0.0
Lost Time Adjust (s)				
Total Lost Time (s)				
Lead/Lag	Lag	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None
Walk Time (s)	3.0	3.0	3.0	3.0
Flash Don't Walk (s)	0.0	0.0	0.0	0.0
Pedestrian Calls (#/hr)	5	1	14	8
Act Effct Green (s)				
Actuated g/C Ratio				
v/c Ratio				
Control Delay (s/veh)				
Queue Delay				
Total Delay (s/veh)				
LOS				
Approach Delay (s/veh)				
Approach LOS				
Queue Length 50th (m)				
Queue Length 95th (m)				
Internal Link Dist (m)				
Turn Bay Length (m)				
Base Capacity (vph)				
Starvation Cap Reductn				
Spillback Cap Reductn				
Storage Cap Reductn				
Reduced v/c Ratio				

Intersection Summary

~ 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.

Splits and Phases: 1703: Mississauga Road & Dundas Street



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	256	1317	153	74	1152	270	79	451	276	353	253
v/c Ratio	0.96	0.78	0.19	0.45	0.79	0.38	0.27	0.89	1.19	0.59	0.39
Control Delay (s/veh)	88.7	39.6	8.9	28.0	46.9	17.5	30.1	72.6	153.7	49.6	5.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	88.7	39.6	8.9	28.0	46.9	17.5	30.1	72.6	153.7	49.6	5.7
Queue Length 50th (m)	62.8	182.1	6.9	10.4	166.8	25.6	15.1	131.3	~80.9	92.0	0.0
Queue Length 95th (m)	#123.1	#243.4	23.3	21.3	#230.8	55.4	24.4	#176.7	#134.7	123.9	19.1
Internal Link Dist (m)		334.0			1370.5			512.8		346.6	
Turn Bay Length (m)	220.0		25.0	55.0		40.0	120.0		70.0		
Base Capacity (vph)	266	1690	792	166	1456	704	293	550	232	641	682
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	0.96	0.78	0.19	0.45	0.79	0.38	0.27	0.82	1.19	0.55	0.37

Intersection Summary

~ 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.

Lane Group	Ø9	Ø10	Ø11	Ø12
Lane Configurations				
Traffic Volume (vph)				
Future Volume (vph)				
Ideal Flow (vphpl)				
Lane Width (m)				
Grade (%)				
Storage Length (m)				
Storage Lanes				
Taper Length (m)				
Lane Util. Factor				
Ped Bike Factor				
Frt				
Flt Protected				
Satd. Flow (prot)				
Flt Permitted				
Satd. Flow (perm)				
Right Turn on Red				
Satd. Flow (RTOR)				
Link Speed (k/h)				
Link Distance (m)				
Travel Time (s)				
Confl. Peds. (#/hr)				
Confl. Bikes (#/hr)				
Peak Hour Factor				
Growth Factor				
Heavy Vehicles (%)				
Bus Blockages (#/hr)				
Parking (#/hr)				
Mid-Block Traffic (%)				
Adj. Flow (vph)				
Shared Lane Traffic (%)				
Lane Group Flow (vph)				
Enter Blocked Intersection				
Lane Alignment				
Median Width(m)				
Link Offset(m)				
Crosswalk Width(m)				
Two way Left Turn Lane				
Headway Factor				
Turning Speed (k/h)				
Number of Detectors				
Detector Template				
Leading Detector (m)				
Trailing Detector (m)				
Turn Type				
Protected Phases	9	10	11	12
Permitted Phases				
Detector Phase				
Switch Phase				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	7.0	10.0	10.0	7.0	10.0	10.0	7.0	10.0		7.0	10.0	10.0
Minimum Split (s)	10.0	41.5	41.5	10.0	41.5	41.5	10.0	52.5		10.0	52.5	52.5
Total Split (s)	14.0	63.0	63.0	14.0	63.0	63.0	10.0	60.0		13.0	63.0	63.0
Total Split (%)	8.8%	39.4%	39.4%	8.8%	39.4%	39.4%	6.3%	37.5%		8.1%	39.4%	39.4%
Maximum Green (s)	11.0	56.5	56.5	11.0	56.5	56.5	7.0	52.5		10.0	55.5	55.5
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	3.5		3.0	3.5	3.5
All-Red Time (s)	0.0	2.5	2.5	0.0	2.5	2.5	0.0	4.0		0.0	4.0	4.0
Lost Time Adjust (s)	-2.0	-1.5	-1.5	-2.0	-1.5	-1.5	-2.0	-2.5		-2.0	-2.5	-2.5
Total Lost Time (s)	1.0	5.0	5.0	1.0	5.0	5.0	1.0	5.0		1.0	5.0	5.0
Lead/Lag	Lead			Lead			Lead			Lead		
Lead-Lag Optimize?	Yes			Yes			Yes			Yes		
Vehicle Extension (s)	2.0	3.0	3.0	2.0	3.0	3.0	3.0	3.0		2.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None		None	None	None
Walk Time (s)		5.0	5.0		5.0	5.0		5.0			5.0	5.0
Flash Don't Walk (s)		30.0	30.0		30.0	30.0		40.0			40.0	40.0
Pedestrian Calls (#/hr)		5	5		13	13		0			11	11
Act Effct Green (s)	86.0	70.4	70.4	82.1	67.2	67.2	66.8	53.8		69.6	54.8	54.8
Actuated g/C Ratio	0.54	0.44	0.44	0.51	0.42	0.42	0.42	0.34		0.44	0.34	0.34
v/c Ratio	0.93	0.94	0.09	0.53	0.74	0.49	0.34	0.95		1.57	0.54	0.44
Control Delay (s/veh)	76.9	55.2	1.7	36.8	43.4	23.8	29.3	75.0		308.4	46.3	10.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay (s/veh)	76.9	55.2	1.7	36.8	43.4	23.8	29.3	75.0		308.4	46.3	10.1
LOS	E	E	A	D	D	C	C	E		F	D	B
Approach Delay (s/veh)		55.6			38.6			67.5			115.2	
Approach LOS		E			D			E			F	
Queue Length 50th (m)	39.2	234.8	0.0	13.9	155.9	50.0	21.3	172.2		~111.0	86.0	11.1
Queue Length 95th (m)	#93.2	#312.0	3.3	31.0	192.5	84.0	34.4	#244.3		#173.7	123.2	37.5
Internal Link Dist (m)		334.0			1370.5			512.8			346.6	
Turn Bay Length (m)	220.0		25.0	55.0		40.0	120.0			70.0		
Base Capacity (vph)	216	1580	728	196	1518	715	339	623		185	682	714
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	0.93	0.94	0.09	0.47	0.74	0.49	0.34	0.93		1.57	0.51	0.43

Intersection Summary			
Area Type:	Other		
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 40 (25%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 145			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.57			
Intersection Signal Delay (s/veh): 63.2		Intersection LOS: E	
Intersection Capacity Utilization 106.6%		ICU Level of Service G	
Analysis Period (min) 15			

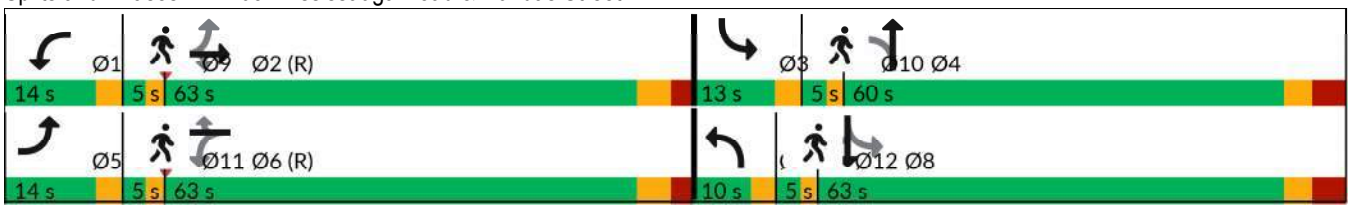
Lane Group	Ø9	Ø10	Ø11	Ø12
Minimum Initial (s)	3.0	3.0	3.0	3.0
Minimum Split (s)	5.0	5.0	5.0	5.0
Total Split (s)	5.0	5.0	5.0	5.0
Total Split (%)	3%	3%	3%	3%
Maximum Green (s)	3.0	3.0	3.0	3.0
Yellow Time (s)	2.0	2.0	2.0	2.0
All-Red Time (s)	0.0	0.0	0.0	0.0
Lost Time Adjust (s)				
Total Lost Time (s)				
Lead/Lag	Lag	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None
Walk Time (s)	3.0	3.0	3.0	3.0
Flash Don't Walk (s)	0.0	0.0	0.0	0.0
Pedestrian Calls (#/hr)	5	0	13	11
Act Effct Green (s)				
Actuated g/C Ratio				
v/c Ratio				
Control Delay (s/veh)				
Queue Delay				
Total Delay (s/veh)				
LOS				
Approach Delay (s/veh)				
Approach LOS				
Queue Length 50th (m)				
Queue Length 95th (m)				
Internal Link Dist (m)				
Turn Bay Length (m)				
Base Capacity (vph)				
Starvation Cap Reductn				
Spillback Cap Reductn				
Storage Cap Reductn				
Reduced v/c Ratio				

Intersection Summary

~ 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.

Splits and Phases: 1703: Mississauga Road & Dundas Street



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	201	1485	66	92	1124	352	115	578	290	346	306
v/c Ratio	0.93	0.94	0.09	0.53	0.74	0.49	0.34	0.95	1.57	0.54	0.44
Control Delay (s/veh)	76.9	55.2	1.7	36.8	43.4	23.8	29.3	75.0	308.4	46.3	10.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	76.9	55.2	1.7	36.8	43.4	23.8	29.3	75.0	308.4	46.3	10.1
Queue Length 50th (m)	39.2	234.8	0.0	13.9	155.9	50.0	21.3	172.2	~111.0	86.0	11.1
Queue Length 95th (m)	#93.2	#312.0	3.3	31.0	192.5	84.0	34.4	#244.3	#173.7	123.2	37.5
Internal Link Dist (m)		334.0			1370.5			512.8		346.6	
Turn Bay Length (m)	220.0		25.0	55.0		40.0	120.0		70.0		
Base Capacity (vph)	216	1580	728	196	1518	715	339	623	185	682	714
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	0.93	0.94	0.09	0.47	0.74	0.49	0.34	0.93	1.57	0.51	0.43

Intersection Summary

~ 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.

Appendix C – Growth Rate Information

Outlook

RE: 2935-2955 Mississauga Rd - TIS Growth Rate

From Tyler Xuereb <Tyler.Xuereb@mississauga.ca>
Date Wed 9/24/2025 10:55 AM
To Yu, Peter <Peter.Yu@wsp.com>; Small, Jason <Jason.Small@wsp.com>
Cc Mathivannan, Ashvika <Ashvika.Mathivannan@wsp.com>

Hi Peter,

Below are the recommended growth rates to be used along Mississauga Road and Dundas Street. These rates are compounded annually from existing to 2030.

Mississauga Road

	Compounded Annual Growth from Existing to 2030	
	NB	SB
AM Peak	0.5%	0.5%
PM Peak	1.0%	1.0%

Dundas Street W

	Compounded Annual Growth from Existing to 2030	
	EB	WB
AM Peak	1.0%	1.0%
PM Peak	1.0%	1.0%

Regards,

Tyler Xuereb
Transportation Planning Analyst
T 905-615-3200 ext.4783
Tyler.xuereb@mississauga.ca

City of Mississauga | Transportation and Works Department,
Infrastructure Planning and Engineering Services Division

From: Yu, Peter <Peter.Yu@wsp.com>
Sent: Wednesday, September 17, 2025 11:47 AM
To: Tyler Xuereb <Tyler.Xuereb@mississauga.ca>; Small, Jason <Jason.Small@wsp.com>
Cc: Mathivannan, Ashvika <Ashvika.Mathivannan@wsp.com>
Subject: [EXTERNAL] Re: 2935-2955 Mississauga Rd - TIS Growth Rate

[CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.]

Hi Tyler

The original TIS was done in 2021, so I assume it was provided around then.

Peter

From: Tyler Xuereb <Tyler.Xuereb@mississauga.ca>
Sent: Wednesday, September 17, 2025 11:37 AM
To: Small, Jason <Jason.Small@wsp.com>
Cc: Yu, Peter <Peter.Yu@wsp.com>; Mathivannan, Ashvika <Ashvika.Mathivannan@wsp.com>
Subject: RE: 2935-2955 Mississauga Rd - TIS Growth Rate

[CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.]

Hi Jason,

Do you happen to remember when the rates in the chart below were provided?

Thanks,

Tyler Xuereb
Transportation Planning Analyst
T 905-615-3200 ext.4783
Tyler.xuereb@mississauga.ca

City of Mississauga | Transportation and Works Department,
Infrastructure Planning and Engineering Services Division

From: Small, Jason <Jason.Small@wsp.com>
Sent: Wednesday, September 17, 2025 11:33 AM
To: Tyler Xuereb <Tyler.Xuereb@mississauga.ca>

Cc: Yu, Peter <Peter.Yu@wsp.com>; Mathivannan, Ashvika <Ashvika.Mathivannan@wsp.com>
Subject: [EXTERNAL] 2935-2955 Mississauga Rd - TIS Growth Rate

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[CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.]

Good morning Tyler,

WSP has been retained by 590816 Ontario Inc. to serve as their transportation consultant moving forward for their proposed development at 2935-2955 Mississauga Rd. At this time, we are preparing an updated TIS report to respond to the City's comments.

For this updated report, we have just collected new traffic counts of the existing study intersection (Dundas St & Mississauga Rd), and we will be analyzing a new 5-year horizon of 2030. Therefore, in accordance with the comments, **we would like to confirm with you whether the growth rates that were applied in the previous report (shown below) remain acceptable for the new horizon year**.

Table 3 – Compounded Annual Roadway Growth Rates

Study Roadway	Travel Direction	AM Peak Hour	PM Peak Hour
Mississauga Road	Northbound	0.0%	1.0%
	Southbound	0.5%	0.5%
Dundas Street West	Eastbound	0.0%	1.0%
	Westbound	0.5%	1.0%

Please note that we are on a tight timeline to complete our report, so your prompt response would be greatly appreciated.

Thanks,

Jason Small, P.Eng.
Transportation Engineer
Transportation Planning and Science
he / him

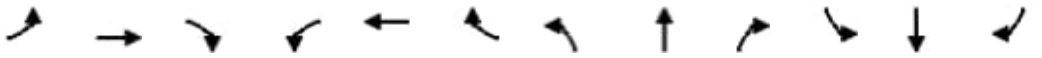
T +1 416-342-2948

WSP
25 York Street, 7th Floor
Toronto, Ontario
M5J 2V5 Canada

wsp.com

Appendix D – Future Background Conditions LOS

Lane Group	Ø9	Ø10	Ø11	Ø12
Lane Configurations				
Traffic Volume (vph)				
Future Volume (vph)				
Ideal Flow (vphpl)				
Lane Width (m)				
Grade (%)				
Storage Length (m)				
Storage Lanes				
Taper Length (m)				
Lane Util. Factor				
Ped Bike Factor				
Frt				
Flt Protected				
Satd. Flow (prot)				
Flt Permitted				
Satd. Flow (perm)				
Right Turn on Red				
Satd. Flow (RTOR)				
Link Speed (k/h)				
Link Distance (m)				
Travel Time (s)				
Confl. Peds. (#/hr)				
Confl. Bikes (#/hr)				
Peak Hour Factor				
Growth Factor				
Heavy Vehicles (%)				
Bus Blockages (#/hr)				
Parking (#/hr)				
Mid-Block Traffic (%)				
Adj. Flow (vph)				
Shared Lane Traffic (%)				
Lane Group Flow (vph)				
Enter Blocked Intersection				
Lane Alignment				
Median Width(m)				
Link Offset(m)				
Crosswalk Width(m)				
Two way Left Turn Lane				
Headway Factor				
Turning Speed (k/h)				
Number of Detectors				
Detector Template				
Leading Detector (m)				
Trailing Detector (m)				
Turn Type				
Protected Phases	9	10	11	12
Permitted Phases				
Detector Phase				
Switch Phase				



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	7.0	10.0	10.0	7.0	10.0	10.0	7.0	10.0		7.0	10.0	10.0
Minimum Split (s)	10.0	47.0	47.0	10.0	47.0	47.0	10.0	53.0		10.0	58.0	58.0
Total Split (s)	20.0	70.0	70.0	10.0	60.0	60.0	10.0	54.0		16.0	60.0	60.0
Total Split (%)	12.5%	43.8%	43.8%	6.3%	37.5%	37.5%	6.3%	33.8%		10.0%	37.5%	37.5%
Maximum Green (s)	17.0	63.5	63.5	7.0	53.5	53.5	7.0	46.5		13.0	52.5	52.5
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	3.5		3.0	3.5	3.5
All-Red Time (s)	0.0	2.5	2.5	0.0	2.5	2.5	0.0	4.0		0.0	4.0	4.0
Lost Time Adjust (s)	-2.0	-1.5	-1.5	-2.0	-1.5	-1.5	-2.0	-2.5		-2.0	-2.5	-2.5
Total Lost Time (s)	1.0	5.0	5.0	1.0	5.0	5.0	1.0	5.0		1.0	5.0	5.0
Lead/Lag	Lead			Lead			Lead			Lead		
Lead-Lag Optimize?	Yes			Yes			Yes			Yes		
Vehicle Extension (s)	2.0	3.0	3.0	2.0	3.0	3.0	3.0	3.0		2.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None		None	None	None
Walk Time (s)		5.0	5.0		5.0	5.0		5.0			5.0	5.0
Flash Don't Walk (s)		30.0	30.0		30.0	30.0		40.0			40.0	40.0
Pedestrian Calls (#/hr)		5	5		14	14		1			8	8
Act Effct Green (s)	91.1	76.1	76.1	78.1	65.1	65.1	58.9	45.9		66.9	51.9	51.9
Actuated g/C Ratio	0.57	0.48	0.48	0.49	0.41	0.41	0.37	0.29		0.42	0.32	0.32
v/c Ratio	0.99	0.83	0.19	0.49	0.86	0.39	0.28	0.90		1.21	0.62	0.38
Control Delay (s/veh)	100.9	42.4	9.0	35.1	51.0	17.6	30.0	73.3		162.6	50.2	5.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay (s/veh)	100.9	42.4	9.0	35.1	51.0	17.6	30.0	73.3		162.6	50.2	5.7
LOS	F	D	A	D	D	B	C	E		F	D	A
Approach Delay (s/veh)		47.9			44.6			67.0			72.1	
Approach LOS		D			D			E			E	
Queue Length 50th (m)	66.2	202.0	7.0	10.6	188.2	25.9	14.9	134.6		~83.3	97.5	0.0
Queue Length 95th (m)	#128.0	#277.2	23.3	25.9	#261.1	55.4	24.4	#189.4		#138.4	132.1	19.1
Internal Link Dist (m)		334.0			1370.5			512.8			346.6	
Turn Bay Length (m)	220.0		25.0	55.0		40.0	120.0			70.0		
Base Capacity (vph)	258	1674	786	151	1441	698	283	551		228	641	682
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	0.99	0.83	0.19	0.49	0.86	0.39	0.28	0.84		1.21	0.58	0.37

Intersection Summary			
Area Type:	Other		
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 24 (15%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 145			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.21			
Intersection Signal Delay (s/veh): 53.5		Intersection LOS: D	
Intersection Capacity Utilization 102.9%		ICU Level of Service G	
Analysis Period (min) 15			

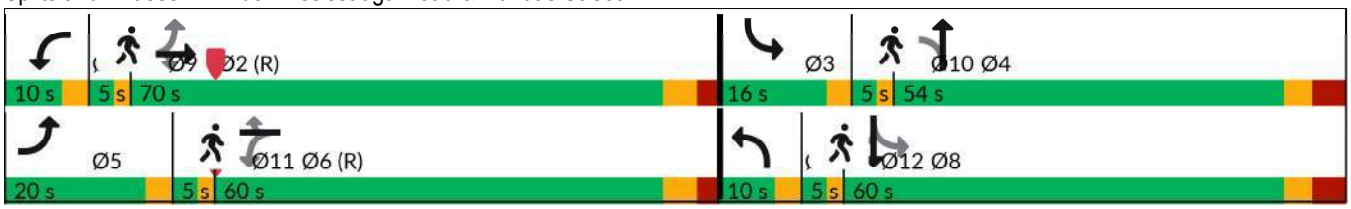
Lane Group	Ø9	Ø10	Ø11	Ø12
Minimum Initial (s)	3.0	3.0	3.0	3.0
Minimum Split (s)	5.0	5.0	5.0	5.0
Total Split (s)	5.0	5.0	5.0	5.0
Total Split (%)	3%	3%	3%	3%
Maximum Green (s)	3.0	3.0	3.0	3.0
Yellow Time (s)	2.0	2.0	2.0	2.0
All-Red Time (s)	0.0	0.0	0.0	0.0
Lost Time Adjust (s)				
Total Lost Time (s)				
Lead/Lag	Lag	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None
Walk Time (s)	3.0	3.0	3.0	3.0
Flash Don't Walk (s)	0.0	0.0	0.0	0.0
Pedestrian Calls (#/hr)	5	1	14	8
Act Effct Green (s)				
Actuated g/C Ratio				
v/c Ratio				
Control Delay (s/veh)				
Queue Delay				
Total Delay (s/veh)				
LOS				
Approach Delay (s/veh)				
Approach LOS				
Queue Length 50th (m)				
Queue Length 95th (m)				
Internal Link Dist (m)				
Turn Bay Length (m)				
Base Capacity (vph)				
Starvation Cap Reductn				
Spillback Cap Reductn				
Storage Cap Reductn				
Reduced v/c Ratio				

Intersection Summary

~ 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.

Splits and Phases: 1703: Mississauga Road & Dundas Street

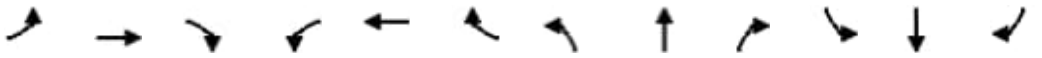


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	256	1392	153	74	1238	270	79	463	276	373	253
v/c Ratio	0.99	0.83	0.19	0.49	0.86	0.39	0.28	0.90	1.21	0.62	0.38
Control Delay (s/veh)	100.9	42.4	9.0	35.1	51.0	17.6	30.0	73.3	162.6	50.2	5.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	100.9	42.4	9.0	35.1	51.0	17.6	30.0	73.3	162.6	50.2	5.7
Queue Length 50th (m)	66.2	202.0	7.0	10.6	188.2	25.9	14.9	134.6	~83.3	97.5	0.0
Queue Length 95th (m)	#128.0	#277.2	23.3	25.9	#261.1	55.4	24.4	#189.4	#138.4	132.1	19.1
Internal Link Dist (m)		334.0			1370.5			512.8		346.6	
Turn Bay Length (m)	220.0		25.0	55.0		40.0	120.0		70.0		
Base Capacity (vph)	258	1674	786	151	1441	698	283	551	228	641	682
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	0.99	0.83	0.19	0.49	0.86	0.39	0.28	0.84	1.21	0.58	0.37

Intersection Summary

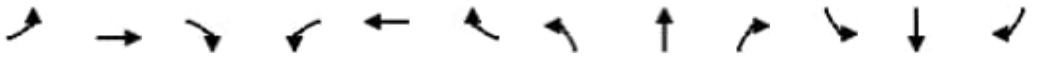
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	193	1518	63	88	1147	338	110	370	213	278	356	294
Future Volume (vph)	193	1518	63	88	1147	338	110	370	213	278	356	294
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	220.0		25.0	55.0		40.0	120.0		0.0	70.0		0.0
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (m)	30.0			20.0			40.0			40.0		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor			0.97			0.95	0.99	0.99				0.97
Frt			0.850			0.850		0.945				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1755	3592	1582	1789	3614	1601	1807	1781	0	1755	1883	1566
Flt Permitted	0.062			0.062			0.324			0.072		
Satd. Flow (perm)	115	3592	1529	117	3614	1522	613	1781	0	133	1883	1525
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			99			124		20				248
Link Speed (k/h)		60			60			50			50	
Link Distance (m)		358.0			1394.5			536.8			370.6	
Travel Time (s)		21.5			83.7			38.6			26.7	
Confl. Peds. (#/hr)	13		5	5		13	11					11
Confl. Bikes (#/hr)			2						5			5
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	1%	2%	2%	1%	2%	1%	1%	2%	4%	2%	3%
Bus Blockages (#/hr)	0	3	3	0	0	0	0	0	0	0	0	3
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	201	1581	66	92	1195	352	115	385	222	290	371	306
Shared Lane Traffic (%)												
Lane Group Flow (vph)	201	1581	66	92	1195	352	115	607	0	290	371	306
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.9			4.9			4.9			4.9	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	1.00	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	1.00
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	1	0	1	1	0	1	1		1	1	0
Detector Template	Left			Left			Left			Left		
Leading Detector (m)	6.1	1.8	0.0	6.1	1.8	0.0	6.1	1.8		6.1	1.8	0.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2		2	6		6	4			8		8
Detector Phase	5	2	2	1	6	6	7	4		3	8	8
Switch Phase												

Lane Group	Ø9	Ø10	Ø11	Ø12
Lane Configurations				
Traffic Volume (vph)				
Future Volume (vph)				
Ideal Flow (vphpl)				
Lane Width (m)				
Grade (%)				
Storage Length (m)				
Storage Lanes				
Taper Length (m)				
Lane Util. Factor				
Ped Bike Factor				
Frt				
Flt Protected				
Satd. Flow (prot)				
Flt Permitted				
Satd. Flow (perm)				
Right Turn on Red				
Satd. Flow (RTOR)				
Link Speed (k/h)				
Link Distance (m)				
Travel Time (s)				
Confl. Peds. (#/hr)				
Confl. Bikes (#/hr)				
Peak Hour Factor				
Growth Factor				
Heavy Vehicles (%)				
Bus Blockages (#/hr)				
Parking (#/hr)				
Mid-Block Traffic (%)				
Adj. Flow (vph)				
Shared Lane Traffic (%)				
Lane Group Flow (vph)				
Enter Blocked Intersection				
Lane Alignment				
Median Width(m)				
Link Offset(m)				
Crosswalk Width(m)				
Two way Left Turn Lane				
Headway Factor				
Turning Speed (k/h)				
Number of Detectors				
Detector Template				
Leading Detector (m)				
Trailing Detector (m)				
Turn Type				
Protected Phases	9	10	11	12
Permitted Phases				
Detector Phase				
Switch Phase				



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	7.0	10.0	10.0	7.0	10.0	10.0	7.0	10.0		7.0	10.0	10.0
Minimum Split (s)	10.0	41.5	41.5	10.0	41.5	41.5	10.0	52.5		10.0	52.5	52.5
Total Split (s)	14.0	63.0	63.0	14.0	63.0	63.0	10.0	60.0		13.0	63.0	63.0
Total Split (%)	8.8%	39.4%	39.4%	8.8%	39.4%	39.4%	6.3%	37.5%		8.1%	39.4%	39.4%
Maximum Green (s)	11.0	56.5	56.5	11.0	56.5	56.5	7.0	52.5		10.0	55.5	55.5
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	3.5		3.0	3.5	3.5
All-Red Time (s)	0.0	2.5	2.5	0.0	2.5	2.5	0.0	4.0		0.0	4.0	4.0
Lost Time Adjust (s)	-2.0	-1.5	-1.5	-2.0	-1.5	-1.5	-2.0	-2.5		-2.0	-2.5	-2.5
Total Lost Time (s)	1.0	5.0	5.0	1.0	5.0	5.0	1.0	5.0		1.0	5.0	5.0
Lead/Lag	Lead			Lead			Lead			Lead		
Lead-Lag Optimize?	Yes			Yes			Yes			Yes		
Vehicle Extension (s)	2.0	3.0	3.0	2.0	3.0	3.0	3.0	3.0		2.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None		None	None	None
Walk Time (s)		5.0	5.0		5.0	5.0		5.0			5.0	5.0
Flash Don't Walk (s)		30.0	30.0		30.0	30.0		40.0			40.0	40.0
Pedestrian Calls (#/hr)		5	5		13	13		0			11	11
Act Effct Green (s)	84.9	69.3	69.3	81.0	66.2	66.2	67.8	54.8		70.6	55.8	55.8
Actuated g/C Ratio	0.53	0.43	0.43	0.51	0.41	0.41	0.42	0.34		0.44	0.35	0.35
v/c Ratio	1.04	1.02	0.09	0.53	0.80	0.50	0.35	0.97		1.61	0.56	0.44
Control Delay (s/veh)	114.5	71.1	1.7	36.5	46.5	24.9	29.3	79.8		329.0	46.7	10.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay (s/veh)	114.5	71.1	1.7	36.5	46.5	24.9	29.3	79.8		329.0	46.7	10.6
LOS	F	E	A	D	D	C	C	E		F	D	B
Approach Delay (s/veh)		73.3			41.3			71.7			120.0	
Approach LOS		E			D			E			F	
Queue Length 50th (m)	~50.5	262.0	0.0	13.9	170.6	51.8	21.3	185.8		~115.4	93.6	12.2
Queue Length 95th (m)	#106.8	#345.0	3.3	30.7	210.1	86.0	34.4	#264.1		#177.8	133.1	39.1
Internal Link Dist (m)		334.0			1370.5			512.8			346.6	
Turn Bay Length (m)	220.0		25.0	55.0		40.0	120.0			70.0		
Base Capacity (vph)	194	1556	718	196	1494	702	326	625		180	682	710
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	1.04	1.02	0.09	0.47	0.80	0.50	0.35	0.97		1.61	0.54	0.43

Intersection Summary			
Area Type:	Other		
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 40 (25%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 145			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.61			
Intersection Signal Delay (s/veh): 71.7		Intersection LOS: E	
Intersection Capacity Utilization 110.7%		ICU Level of Service H	
Analysis Period (min) 15			

Lane Group	Ø9	Ø10	Ø11	Ø12
Minimum Initial (s)	3.0	3.0	3.0	3.0
Minimum Split (s)	5.0	5.0	5.0	5.0
Total Split (s)	5.0	5.0	5.0	5.0
Total Split (%)	3%	3%	3%	3%
Maximum Green (s)	3.0	3.0	3.0	3.0
Yellow Time (s)	2.0	2.0	2.0	2.0
All-Red Time (s)	0.0	0.0	0.0	0.0
Lost Time Adjust (s)				
Total Lost Time (s)				
Lead/Lag	Lag	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None
Walk Time (s)	3.0	3.0	3.0	3.0
Flash Don't Walk (s)	0.0	0.0	0.0	0.0
Pedestrian Calls (#/hr)	5	0	13	11
Act Effct Green (s)				
Actuated g/C Ratio				
v/c Ratio				
Control Delay (s/veh)				
Queue Delay				
Total Delay (s/veh)				
LOS				
Approach Delay (s/veh)				
Approach LOS				
Queue Length 50th (m)				
Queue Length 95th (m)				
Internal Link Dist (m)				
Turn Bay Length (m)				
Base Capacity (vph)				
Starvation Cap Reductn				
Spillback Cap Reductn				
Storage Cap Reductn				
Reduced v/c Ratio				

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
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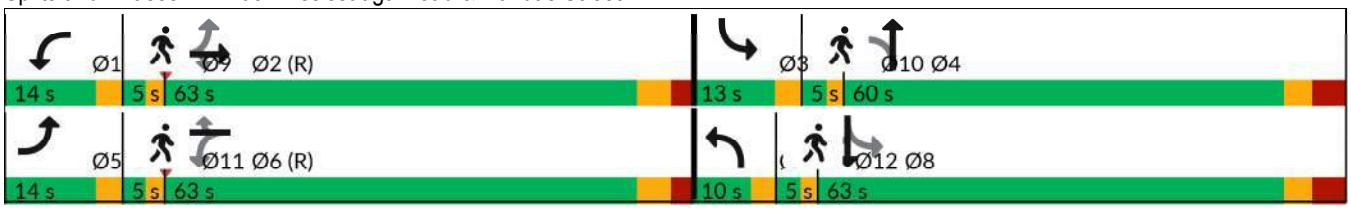
Queue shown is maximum after two cycles.

Splits and Phases: 1703: Mississauga Road & Dundas Street



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	201	1581	66	92	1195	352	115	607	290	371	306
v/c Ratio	1.04	1.02	0.09	0.53	0.80	0.50	0.35	0.97	1.61	0.56	0.44
Control Delay (s/veh)	114.5	71.1	1.7	36.5	46.5	24.9	29.3	79.8	329.0	46.7	10.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	114.5	71.1	1.7	36.5	46.5	24.9	29.3	79.8	329.0	46.7	10.6
Queue Length 50th (m)	~50.5	262.0	0.0	13.9	170.6	51.8	21.3	185.8	~115.4	93.6	12.2
Queue Length 95th (m)	#106.8	#345.0	3.3	30.7	210.1	86.0	34.4	#264.1	#177.8	133.1	39.1
Internal Link Dist (m)		334.0			1370.5			512.8		346.6	
Turn Bay Length (m)	220.0		25.0	55.0		40.0	120.0		70.0		
Base Capacity (vph)	194	1556	718	196	1494	702	326	625	180	682	710
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	1.04	1.02	0.09	0.47	0.80	0.50	0.35	0.97	1.61	0.54	0.43

Intersection Summary

~ 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.

Appendix E – ITE Trip Generation Information

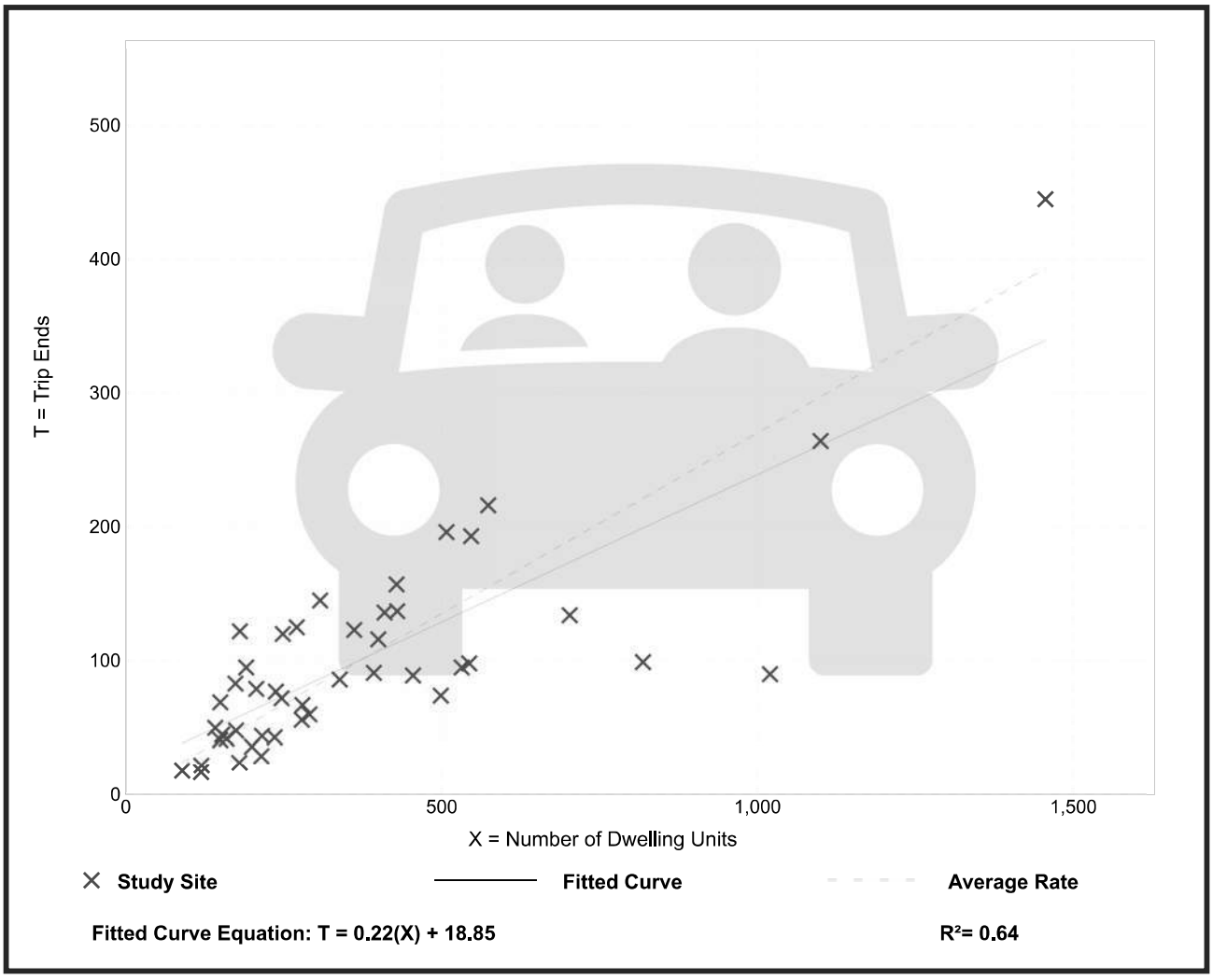
Multifamily Housing (High-Rise)
Not Close to Rail Transit (222)

Vehicle Trip Ends vs:	**Dwelling Units**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 7 and 9 a.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	45
Avg. Num. of Dwelling Units:	372
Directional Distribution:	26% entering, 74% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.27	0.09 - 0.67	0.11

Data Plot and Equation



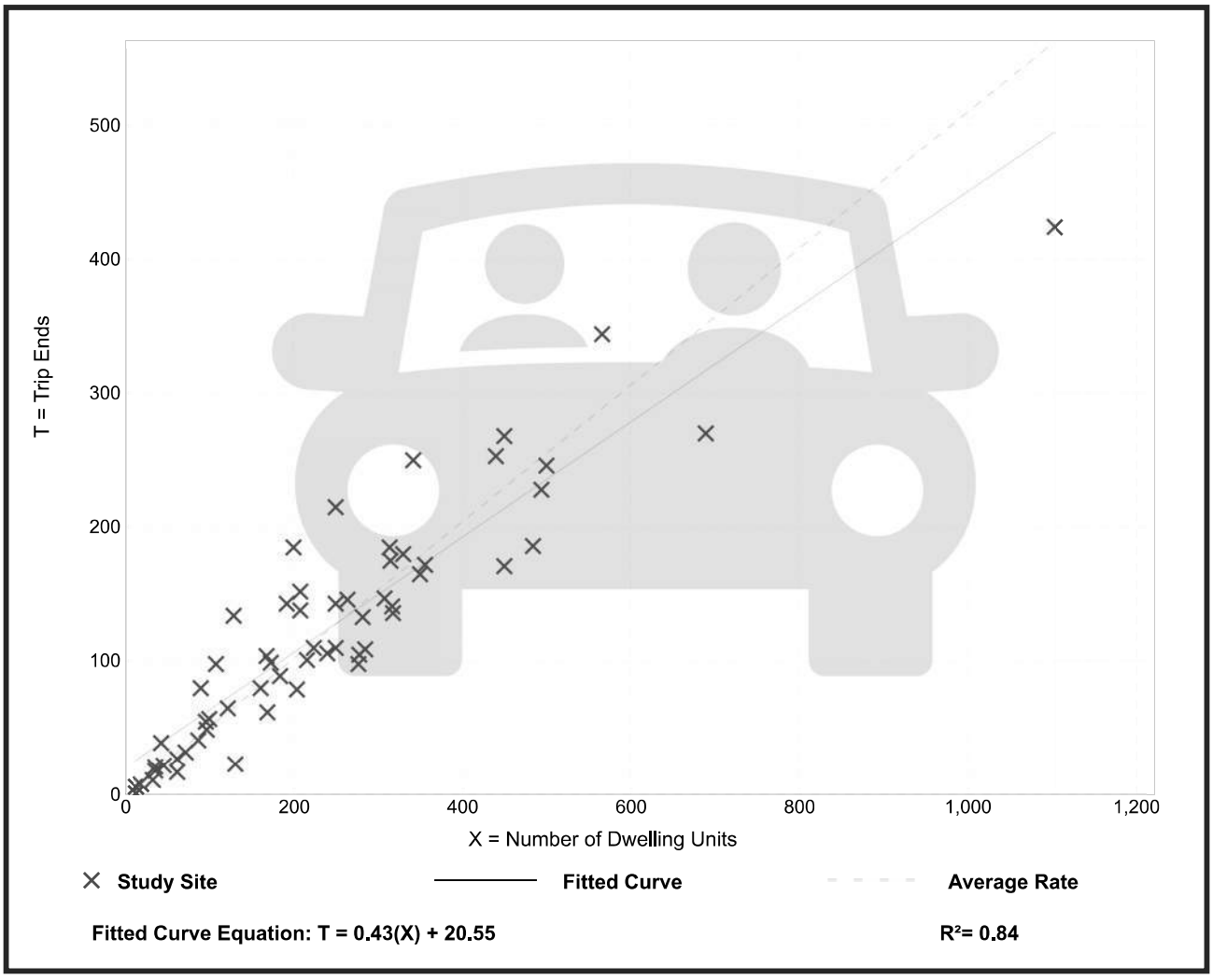
Multifamily Housing (Low-Rise)
Not Close to Rail Transit (220)

Vehicle Trip Ends vs:	**Dwelling Units**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 4 and 6 p.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	59
Avg. Num. of Dwelling Units:	241
Directional Distribution:	63% entering, 37% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.51	0.08 - 1.04	0.15

Data Plot and Equation



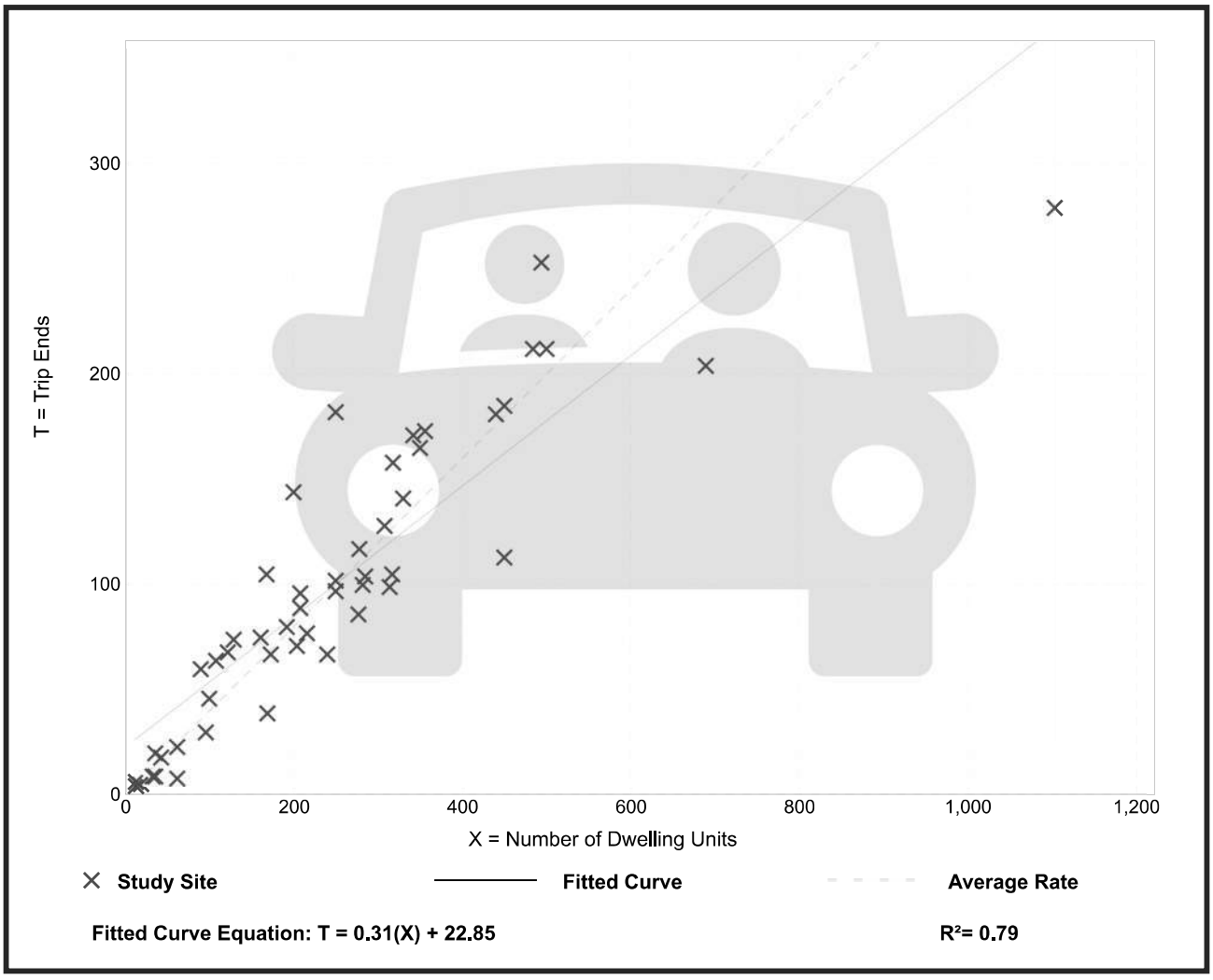
Multifamily Housing (Low-Rise)
Not Close to Rail Transit (220)

Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 49
Avg. Num. of Dwelling Units: 249
Directional Distribution: 24% entering, 76% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.40	0.13 - 0.73	0.12

Data Plot and Equation



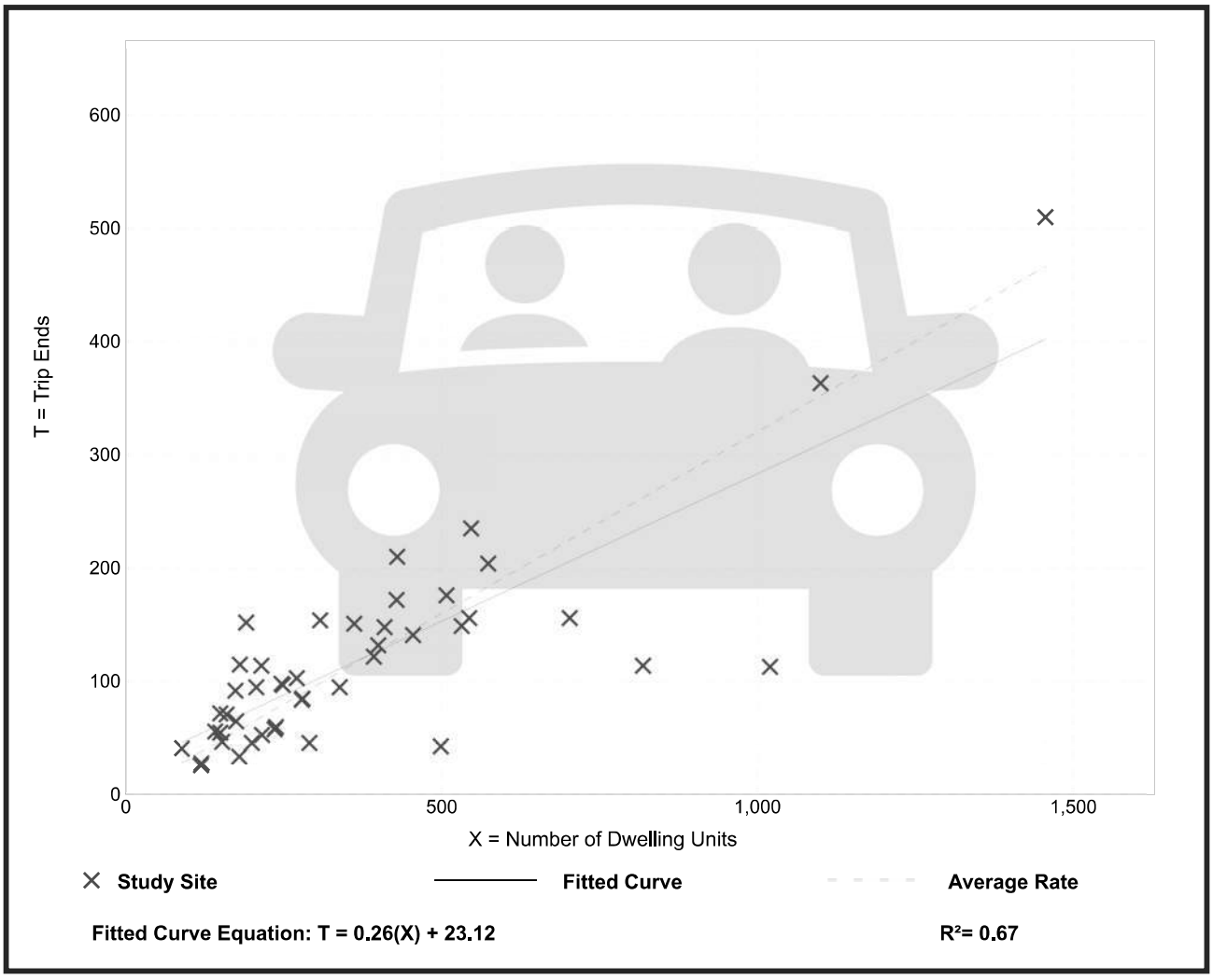
Multifamily Housing (High-Rise)
Not Close to Rail Transit (222)

Vehicle Trip Ends vs:	**Dwelling Units**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 4 and 6 p.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	45
Avg. Num. of Dwelling Units:	372
Directional Distribution:	62% entering, 38% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.32	0.09 - 0.80	0.13

Data Plot and Equation



Appendix F – Future Total Conditions LOS

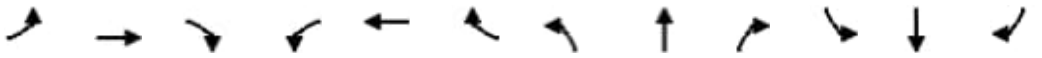
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	50	537	2	14	595
Future Volume (vph)	0	50	537	2	14	595
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7
Grade (%)	0%		0%			0%
Storage Length (m)	0.0	0.0		0.0	0.0	
Storage Lanes	0	1		0	0	
Taper Length (m)	2.5				2.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.865				
Flt Protected						0.999
Satd. Flow (prot)	0	1629	1883	0	0	1882
Flt Permitted						0.999
Satd. Flow (perm)	0	1629	1883	0	0	1882
Link Speed (k/h)	48		50			50
Link Distance (m)	57.5		155.6			201.4
Travel Time (s)	4.3		11.2			14.5
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Adj. Flow (vph)	0	54	584	2	15	647
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	54	586	0	0	662
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	0.0		3.7			3.7
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	1.6		1.6			1.6
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14		14	24	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	45.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	50	537	2	14	595
Future Volume (Veh/h)	0	50	537	2	14	595
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	54	584	2	15	647
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						201
pX, platoon unblocked	0.82					
vC, conflicting volume	1262	585			586	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1209	585			586	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	89			98	
cM capacity (veh/h)	163	511			989	

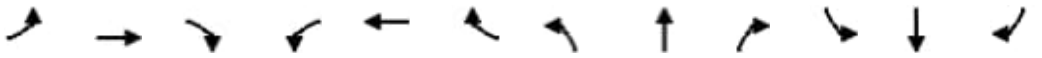
Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	54	586	662
Volume Left	0	0	15
Volume Right	54	2	0
cSH	511	1700	989
Volume to Capacity	0.11	0.34	0.02
Queue Length 95th (m)	2.7	0.0	0.4
Control Delay (s/veh)	12.9	0.0	0.4
Lane LOS	B		A
Approach Delay (s/veh)	12.9	0.0	0.4
Approach LOS	B		

Intersection Summary			
Average Delay		0.7	
Intersection Capacity Utilization		45.9%	ICU Level of Service A
Analysis Period (min)		15	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	251	1364	154	73	1213	265	100	339	142	270	376	248
Future Volume (vph)	251	1364	154	73	1213	265	100	339	142	270	376	248
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	220.0		25.0	55.0		40.0	120.0		0.0	70.0		0.0
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (m)	30.0			20.0			40.0			40.0		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor			0.97			0.95	1.00	1.00		1.00		0.98
Frt			0.850			0.850		0.956				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1755	3523	1582	1772	3544	1585	1706	1771	0	1738	1865	1537
Flt Permitted	0.061			0.065			0.329			0.090		
Satd. Flow (perm)	113	3523	1531	121	3544	1504	588	1771	0	165	1865	1503
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			112			147		14				248
Link Speed (k/h)		60			60			50			50	
Link Distance (m)		358.0			1394.5			201.4			370.6	
Travel Time (s)		21.5			83.7			14.5			26.7	
Confl. Peds. (#/hr)	14		5	5		14	8		1	1		8
Confl. Bikes (#/hr)			1						1			2
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	3%	2%	3%	3%	3%	7%	3%	4%	5%	3%	5%
Bus Blockages (#/hr)	0	3	3	0	0	0	0	0	0	0	0	3
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	256	1392	157	74	1238	270	102	346	145	276	384	253
Shared Lane Traffic (%)												
Lane Group Flow (vph)	256	1392	157	74	1238	270	102	491	0	276	384	253
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.9			4.9			4.9			4.9	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	1.00	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	1.00
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	1	0	1	1	0	1	1		1	1	0
Detector Template	Left			Left			Left			Left		
Leading Detector (m)	6.1	1.8	0.0	6.1	1.8	0.0	6.1	1.8		6.1	1.8	0.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2		2	6		6	4			8		8
Detector Phase	5	2	2	1	6	6	7	4		3	8	8
Switch Phase												

Lane Group	Ø9	Ø10	Ø11	Ø12
Lane Configurations				
Traffic Volume (vph)				
Future Volume (vph)				
Ideal Flow (vphpl)				
Lane Width (m)				
Grade (%)				
Storage Length (m)				
Storage Lanes				
Taper Length (m)				
Lane Util. Factor				
Ped Bike Factor				
Frt				
Flt Protected				
Satd. Flow (prot)				
Flt Permitted				
Satd. Flow (perm)				
Right Turn on Red				
Satd. Flow (RTOR)				
Link Speed (k/h)				
Link Distance (m)				
Travel Time (s)				
Confl. Peds. (#/hr)				
Confl. Bikes (#/hr)				
Peak Hour Factor				
Growth Factor				
Heavy Vehicles (%)				
Bus Blockages (#/hr)				
Parking (#/hr)				
Mid-Block Traffic (%)				
Adj. Flow (vph)				
Shared Lane Traffic (%)				
Lane Group Flow (vph)				
Enter Blocked Intersection				
Lane Alignment				
Median Width(m)				
Link Offset(m)				
Crosswalk Width(m)				
Two way Left Turn Lane				
Headway Factor				
Turning Speed (k/h)				
Number of Detectors				
Detector Template				
Leading Detector (m)				
Trailing Detector (m)				
Turn Type				
Protected Phases	9	10	11	12
Permitted Phases				
Detector Phase				
Switch Phase				



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	7.0	10.0	10.0	7.0	10.0	10.0	7.0	10.0		7.0	10.0	10.0
Minimum Split (s)	10.0	47.0	47.0	10.0	47.0	47.0	10.0	53.0		10.0	58.0	58.0
Total Split (s)	20.0	70.0	70.0	10.0	60.0	60.0	10.0	54.0		16.0	60.0	60.0
Total Split (%)	12.5%	43.8%	43.8%	6.3%	37.5%	37.5%	6.3%	33.8%		10.0%	37.5%	37.5%
Maximum Green (s)	17.0	63.5	63.5	7.0	53.5	53.5	7.0	46.5		13.0	52.5	52.5
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	3.5		3.0	3.5	3.5
All-Red Time (s)	0.0	2.5	2.5	0.0	2.5	2.5	0.0	4.0		0.0	4.0	4.0
Lost Time Adjust (s)	-2.0	-1.5	-1.5	-2.0	-1.5	-1.5	-2.0	-2.5		-2.0	-2.5	-2.5
Total Lost Time (s)	1.0	5.0	5.0	1.0	5.0	5.0	1.0	5.0		1.0	5.0	5.0
Lead/Lag	Lead			Lead			Lead			Lead		
Lead-Lag Optimize?	Yes			Yes			Yes			Yes		
Vehicle Extension (s)	2.0	3.0	3.0	2.0	3.0	3.0	3.0	3.0		2.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None		None	None	None
Walk Time (s)		5.0	5.0		5.0	5.0		5.0			5.0	5.0
Flash Don't Walk (s)		30.0	30.0		30.0	30.0		40.0			40.0	40.0
Pedestrian Calls (#/hr)		5	5		14	14		1			8	8
Act Effct Green (s)	89.8	74.8	74.8	76.8	63.8	63.8	60.2	47.2		68.2	53.2	53.2
Actuated g/C Ratio	0.56	0.47	0.47	0.48	0.40	0.40	0.38	0.30		0.43	0.33	0.33
v/c Ratio	0.99	0.85	0.20	0.49	0.88	0.39	0.36	0.92		1.27	0.62	0.38
Control Delay (s/veh)	100.6	43.9	9.4	35.2	52.9	17.8	31.2	76.6		187.7	49.6	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
Total Delay (s/veh)	100.6	43.9	9.4	35.2	52.9	17.8	31.2	76.6		187.7	49.6	6.1
LOS	F	D	A	D	D	B	C	E		F	D	A
Approach Delay (s/veh)		48.9			46.1			68.8			79.3	
Approach LOS		D			D			E			E	
Queue Length 50th (m)	65.9	202.0	7.7	10.6	188.2	25.9	19.5	146.0		~91.5	101.1	1.1
Queue Length 95th (m)	#127.5	#277.2	24.5	25.7	#261.1	55.4	30.5	#209.2		#147.4	136.2	20.6
Internal Link Dist (m)		334.0			1370.5			177.4			346.6	
Turn Bay Length (m)	220.0		25.0	55.0		40.0	120.0			70.0		
Base Capacity (vph)	258	1647	775	150	1413	688	283	552		217	641	679
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	0.99	0.85	0.20	0.49	0.88	0.39	0.36	0.89		1.27	0.60	0.37

Intersection Summary			
Area Type:	Other		
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 24 (15%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 145			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.27			
Intersection Signal Delay (s/veh): 56.1		Intersection LOS: E	
Intersection Capacity Utilization 104.3%		ICU Level of Service G	
Analysis Period (min) 15			

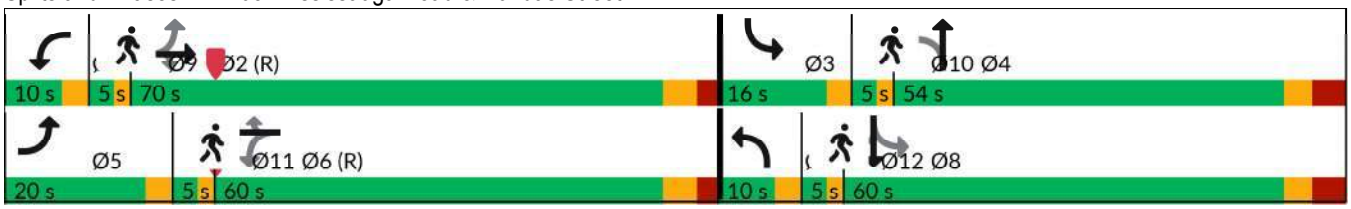
Lane Group	Ø9	Ø10	Ø11	Ø12
Minimum Initial (s)	3.0	3.0	3.0	3.0
Minimum Split (s)	5.0	5.0	5.0	5.0
Total Split (s)	5.0	5.0	5.0	5.0
Total Split (%)	3%	3%	3%	3%
Maximum Green (s)	3.0	3.0	3.0	3.0
Yellow Time (s)	2.0	2.0	2.0	2.0
All-Red Time (s)	0.0	0.0	0.0	0.0
Lost Time Adjust (s)				
Total Lost Time (s)				
Lead/Lag	Lag	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None
Walk Time (s)	3.0	3.0	3.0	3.0
Flash Don't Walk (s)	0.0	0.0	0.0	0.0
Pedestrian Calls (#/hr)	5	1	14	8
Act Effct Green (s)				
Actuated g/C Ratio				
v/c Ratio				
Control Delay (s/veh)				
Queue Delay				
Total Delay (s/veh)				
LOS				
Approach Delay (s/veh)				
Approach LOS				
Queue Length 50th (m)				
Queue Length 95th (m)				
Internal Link Dist (m)				
Turn Bay Length (m)				
Base Capacity (vph)				
Starvation Cap Reductn				
Spillback Cap Reductn				
Storage Cap Reductn				
Reduced v/c Ratio				

Intersection Summary

~ 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.

Splits and Phases: 1703: Mississauga Road & Dundas Street



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	256	1392	157	74	1238	270	102	491	276	384	253
v/c Ratio	0.99	0.85	0.20	0.49	0.88	0.39	0.36	0.92	1.27	0.62	0.38
Control Delay (s/veh)	100.6	43.9	9.4	35.2	52.9	17.8	31.2	76.6	187.7	49.6	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
Total Delay (s/veh)	100.6	43.9	9.4	35.2	52.9	17.8	31.2	76.6	187.7	49.6	6.1
Queue Length 50th (m)	65.9	202.0	7.7	10.6	188.2	25.9	19.5	146.0	~91.5	101.1	1.1
Queue Length 95th (m)	#127.5	#277.2	24.5	25.7	#261.1	55.4	30.5	#209.2	#147.4	136.2	20.6
Internal Link Dist (m)		334.0			1370.5			177.4		346.6	
Turn Bay Length (m)	220.0		25.0	55.0		40.0	120.0		70.0		
Base Capacity (vph)	258	1647	775	150	1413	688	283	552	217	641	679
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	0.99	0.85	0.20	0.49	0.88	0.39	0.36	0.89	1.27	0.60	0.37

Intersection Summary

~ 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.

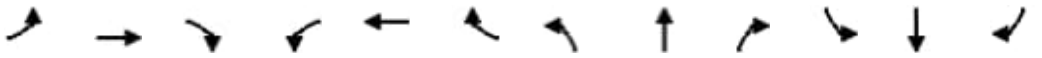
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	31	709	15	37	515
Future Volume (vph)	0	31	709	15	37	515
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7
Grade (%)	0%		0%			0%
Storage Length (m)	0.0	0.0		0.0	0.0	
Storage Lanes	0	1		0	0	
Taper Length (m)	2.5				2.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.865	0.997			
Flt Protected						0.997
Satd. Flow (prot)	0	1629	1878	0	0	1878
Flt Permitted						0.997
Satd. Flow (perm)	0	1629	1878	0	0	1878
Link Speed (k/h)	48		50			50
Link Distance (m)	48.8		155.6			201.4
Travel Time (s)	3.7		11.2			14.5
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Adj. Flow (vph)	0	34	771	16	40	560
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	34	787	0	0	600
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	0.0		3.7			3.7
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	1.6		1.6			1.6
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24	14		14	24	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 60.9%		ICU Level of Service B	
Analysis Period (min) 15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	31	709	15	37	515
Future Volume (Veh/h)	0	31	709	15	37	515
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	34	771	16	40	560
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						201
pX, platoon unblocked	0.81					
vC, conflicting volume	1419	779			787	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1400	779			787	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	91			95	
cM capacity (veh/h)	119	396			832	

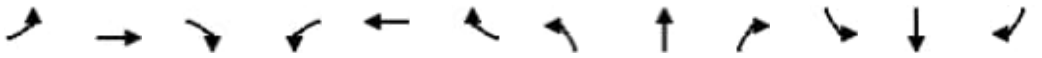
Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	34	787	600
Volume Left	0	0	40
Volume Right	34	16	0
cSH	396	1700	832
Volume to Capacity	0.09	0.46	0.05
Queue Length 95th (m)	2.1	0.0	1.1
Control Delay (s/veh)	14.9	0.0	1.3
Lane LOS	B		A
Approach Delay (s/veh)	14.9	0.0	1.3
Approach LOS	B		

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	60.9%	ICU Level of Service	B
Analysis Period (min)	15		



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	193	1518	76	99	1147	338	126	380	218	278	369	294
Future Volume (vph)	193	1518	76	99	1147	338	126	380	218	278	369	294
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	220.0		25.0	55.0		40.0	120.0		0.0	70.0		0.0
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (m)	30.0			20.0			40.0			40.0		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor			0.97			0.95	0.99	0.99				0.97
Frt			0.850			0.850		0.945				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1755	3592	1582	1789	3614	1601	1807	1781	0	1755	1883	1566
Flt Permitted	0.061			0.062			0.310			0.072		
Satd. Flow (perm)	113	3592	1529	117	3614	1522	586	1781	0	133	1883	1525
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			99			124		20				242
Link Speed (k/h)		60			60			50			50	
Link Distance (m)		358.0			1394.5			201.4			370.6	
Travel Time (s)		21.5			83.7			14.5			26.7	
Confl. Peds. (#/hr)	13		5	5		13	11					11
Confl. Bikes (#/hr)			2						5			5
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	1%	2%	2%	1%	2%	1%	1%	2%	4%	2%	3%
Bus Blockages (#/hr)	0	3	3	0	0	0	0	0	0	0	0	3
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	201	1581	79	103	1195	352	131	396	227	290	384	306
Shared Lane Traffic (%)												
Lane Group Flow (vph)	201	1581	79	103	1195	352	131	623	0	290	384	306
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.9			4.9			4.9			4.9	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	1.00	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	1.00
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	1	0	1	1	0	1	1		1	1	0
Detector Template	Left			Left			Left			Left		
Leading Detector (m)	6.1	1.8	0.0	6.1	1.8	0.0	6.1	1.8		6.1	1.8	0.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2		2	6		6	4			8		8
Detector Phase	5	2	2	1	6	6	7	4		3	8	8
Switch Phase												

Lane Group	Ø9	Ø10	Ø11	Ø12
Lane Configurations				
Traffic Volume (vph)				
Future Volume (vph)				
Ideal Flow (vphpl)				
Lane Width (m)				
Grade (%)				
Storage Length (m)				
Storage Lanes				
Taper Length (m)				
Lane Util. Factor				
Ped Bike Factor				
Frt				
Flt Protected				
Satd. Flow (prot)				
Flt Permitted				
Satd. Flow (perm)				
Right Turn on Red				
Satd. Flow (RTOR)				
Link Speed (k/h)				
Link Distance (m)				
Travel Time (s)				
Confl. Peds. (#/hr)				
Confl. Bikes (#/hr)				
Peak Hour Factor				
Growth Factor				
Heavy Vehicles (%)				
Bus Blockages (#/hr)				
Parking (#/hr)				
Mid-Block Traffic (%)				
Adj. Flow (vph)				
Shared Lane Traffic (%)				
Lane Group Flow (vph)				
Enter Blocked Intersection				
Lane Alignment				
Median Width(m)				
Link Offset(m)				
Crosswalk Width(m)				
Two way Left Turn Lane				
Headway Factor				
Turning Speed (k/h)				
Number of Detectors				
Detector Template				
Leading Detector (m)				
Trailing Detector (m)				
Turn Type				
Protected Phases	9	10	11	12
Permitted Phases				
Detector Phase				
Switch Phase				



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	7.0	10.0	10.0	7.0	10.0	10.0	7.0	10.0		7.0	10.0	10.0
Minimum Split (s)	10.0	41.5	41.5	10.0	41.5	41.5	10.0	52.5		10.0	52.5	52.5
Total Split (s)	14.0	63.0	63.0	14.0	63.0	63.0	10.0	60.0		13.0	63.0	63.0
Total Split (%)	8.8%	39.4%	39.4%	8.8%	39.4%	39.4%	6.3%	37.5%		8.1%	39.4%	39.4%
Maximum Green (s)	11.0	56.5	56.5	11.0	56.5	56.5	7.0	52.5		10.0	55.5	55.5
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	3.5		3.0	3.5	3.5
All-Red Time (s)	0.0	2.5	2.5	0.0	2.5	2.5	0.0	4.0		0.0	4.0	4.0
Lost Time Adjust (s)	-2.0	-1.5	-1.5	-2.0	-1.5	-1.5	-2.0	-2.5		-2.0	-2.5	-2.5
Total Lost Time (s)	1.0	5.0	5.0	1.0	5.0	5.0	1.0	5.0		1.0	5.0	5.0
Lead/Lag	Lead			Lead			Lead			Lead		
Lead-Lag Optimize?	Yes			Yes			Yes			Yes		
Vehicle Extension (s)	2.0	3.0	3.0	2.0	3.0	3.0	3.0	3.0		2.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None		None	None	None
Walk Time (s)		5.0	5.0		5.0	5.0		5.0			5.0	5.0
Flash Don't Walk (s)		30.0	30.0		30.0	30.0		40.0			40.0	40.0
Pedestrian Calls (#/hr)		5	5		13	13		0			11	11
Act Effct Green (s)	84.6	68.8	68.8	81.2	66.0	66.0	68.0	55.0		70.8	56.0	56.0
Actuated g/C Ratio	0.53	0.43	0.43	0.51	0.41	0.41	0.43	0.34		0.44	0.35	0.35
v/c Ratio	1.04	1.02	0.11	0.59	0.80	0.50	0.41	1.00		1.61	0.58	0.44
Control Delay (s/veh)	116.6	73.3	3.0	40.7	46.7	24.9	30.7	85.1		328.2	47.3	11.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay (s/veh)	116.6	73.3	3.0	40.7	46.7	24.9	30.7	85.1		328.2	47.3	11.3
LOS	F	E	A	D	D	C	C	F		F	D	B
Approach Delay (s/veh)		75.0			41.7			75.7			119.2	
Approach LOS		E			D			E			F	
Queue Length 50th (m)	~51.1	~267.4	0.0	15.7	170.6	51.8	24.4	193.4		~115.4	97.8	13.6
Queue Length 95th (m)	#107.4	#345.0	6.7	35.5	210.1	86.0	38.5	#275.4		#177.8	138.6	40.9
Internal Link Dist (m)		334.0			1370.5			177.4			346.6	
Turn Bay Length (m)	220.0		25.0	55.0		40.0	120.0			70.0		
Base Capacity (vph)	193	1545	714	196	1490	700	317	625		180	682	707
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	1.04	1.02	0.11	0.53	0.80	0.50	0.41	1.00		1.61	0.56	0.43

Intersection Summary			
Area Type:	Other		
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 40 (25%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 145			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.61			
Intersection Signal Delay (s/veh): 72.9		Intersection LOS: E	
Intersection Capacity Utilization 111.5%		ICU Level of Service H	
Analysis Period (min) 15			

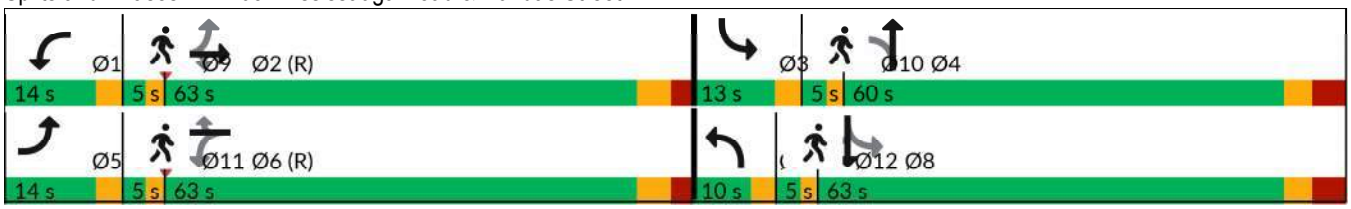
Lane Group	Ø9	Ø10	Ø11	Ø12
Minimum Initial (s)	3.0	3.0	3.0	3.0
Minimum Split (s)	5.0	5.0	5.0	5.0
Total Split (s)	5.0	5.0	5.0	5.0
Total Split (%)	3%	3%	3%	3%
Maximum Green (s)	3.0	3.0	3.0	3.0
Yellow Time (s)	2.0	2.0	2.0	2.0
All-Red Time (s)	0.0	0.0	0.0	0.0
Lost Time Adjust (s)				
Total Lost Time (s)				
Lead/Lag	Lag	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None
Walk Time (s)	3.0	3.0	3.0	3.0
Flash Don't Walk (s)	0.0	0.0	0.0	0.0
Pedestrian Calls (#/hr)	5	0	13	11
Act Effct Green (s)				
Actuated g/C Ratio				
v/c Ratio				
Control Delay (s/veh)				
Queue Delay				
Total Delay (s/veh)				
LOS				
Approach Delay (s/veh)				
Approach LOS				
Queue Length 50th (m)				
Queue Length 95th (m)				
Internal Link Dist (m)				
Turn Bay Length (m)				
Base Capacity (vph)				
Starvation Cap Reductn				
Spillback Cap Reductn				
Storage Cap Reductn				
Reduced v/c Ratio				

Intersection Summary

~ 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.

Splits and Phases: 1703: Mississauga Road & Dundas Street



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	201	1581	79	103	1195	352	131	623	290	384	306
v/c Ratio	1.04	1.02	0.11	0.59	0.80	0.50	0.41	1.00	1.61	0.58	0.44
Control Delay (s/veh)	116.6	73.3	3.0	40.7	46.7	24.9	30.7	85.1	328.2	47.3	11.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	116.6	73.3	3.0	40.7	46.7	24.9	30.7	85.1	328.2	47.3	11.3
Queue Length 50th (m)	~51.1	~267.4	0.0	15.7	170.6	51.8	24.4	193.4	~115.4	97.8	13.6
Queue Length 95th (m)	#107.4	#345.0	6.7	35.5	210.1	86.0	38.5	#275.4	#177.8	138.6	40.9
Internal Link Dist (m)		334.0			1370.5			177.4		346.6	
Turn Bay Length (m)	220.0		25.0	55.0		40.0	120.0		70.0		
Base Capacity (vph)	193	1545	714	196	1490	700	317	625	180	682	707
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	1.04	1.02	0.11	0.53	0.80	0.50	0.41	1.00	1.61	0.56	0.43

Intersection Summary

~ 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.

Appendix G – Certification Form

Appendix A

Certification Form

Individuals submitting reports will be responsible for all aspects of development-related transportation assessment and reporting, and undertaking such work, in accordance and compliance with the City of Mississauga's Official Plan, Transportation Master Plan, and Transportation Impact Study Guidelines.

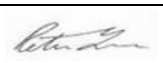
By submitting the attached report (and any associated documents) and signing this document, I acknowledge that:

- I have reviewed and have a sound understanding of the objectives, needs, and requirements of the City of Mississauga's Official Plan, Transportation Master Plan, and the Transportation Impact Study Guidelines as they apply to this submission;
- I have sound knowledge of industry standard practices pertaining to the preparation of development-related transportation study reports;
- I have substantial experience (more than five years) in completing development-related transportation studies and strong background knowledge of the transportation planning and engineering principles underpinning these studies; and
- I am registered as a Professional Engineer (P.Eng.), Licensed Engineering Technologist (LET), Certified Engineering Technologist (C.E.T.), or Registered Professional Planner (RPP) in good standing in the Province of Ontario with specific training in transportation planning and engineering.

Dated at Toronto (City) this _____ day of October, 2025.

Name: Peter Yu

Professional Title: Senior Project Manager

Signature: 

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