URBANTRANS
Engineering Solutions Inc.

Traffic Impact Study (TIS)

Proposed Residential Development

3043 Sixth Line
Town of Oakville

UT-26-067

March 9, 2026

March 9, 2026

3043 6th Line LP
19-1295 Morningside Ave
Scarborough ON M1B 4Z4

URBANTRANS
Engineering Solutions Inc.

UrbanTrans Engineering Solutions Inc.
9275 Markham Road, Suite 146
Markham ON L6E 0H9
Tel: 437-236-7085
annosan@uteng.ca

RE: Traffic Impact Study
Proposed Residential Development
3043 Sixth Line, Oakville ON
Reference No.: UT-25-067

UrbanTrans Engineering Solutions Inc. was retained by 3043 6th Line LP (the "Client") to complete a Traffic Impact Study in support of a OPA/ZBA application(s). The proposed development is located at 3043 Sixth Line in the Town of Oakville.

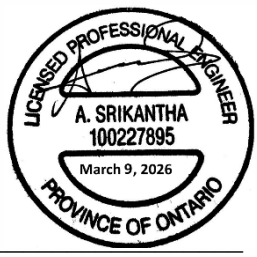
The subject site is currently occupied by a single-detached dwelling. The original proposal, per the site plan dated December 12, 2022, called for demolishing the existing dwelling and constructing a seven- and eight-storey stacked townhouse development with 98 units. This included 123 parking spaces across two underground levels (108 resident spaces and 15 visitor spaces), accessed via a full-movement driveway on Sixth Line aligned with Kaitting Trail.

The Traffic Impact Study, originally submitted on March 9, 2023, has been superseded by a revised site plan dated February 20, 2026. The updated proposal features a 12-storey apartment building with 165 units, including 75 affordable units. Parking has been revised to 128 spaces across two underground levels and the ground floor (including 33 visitor spaces), incorporating a ground-floor pick-up/drop-off area at the building entrance and retaining the full-movement driveway on Sixth Line aligned with Kaitting Trail.

This report concludes the proposed residential development will have minimal traffic impacts to the immediate roadways and nearby intersections. It is understood that the Town of Oakville is the Municipal authority to review and approve the Traffic Brief for the proposed development. The Study is in accordance with the municipalities Traffic Impact Study (TIS) Guidelines as well as the Terms of Reference comments received in a timely manner from Transportation Staff at Town of Oakville and Halton Region (see **Appendix A**).

We thank you for the opportunity to undertake this study. We trust the enclosed comply with your requirements. Should you have any questions, please do not hesitate to contact the undersigned.

Kind Regards,
UrbanTrans Engineering Solutions Inc.



Signature
Annosan Srikantha, P.Eng.
President

Engineer's Seal

DISCLAIMER

This document entitled '3043 Sixth Line - Traffic Impact Study (TIS)' or named part thereof (the "project") was prepared by UrbanTrans Engineering Solutions Inc. ("UrbanTrans") for the account 3043 6th Line LP (the "Client"). This document is confidential and prepared solely for approval and commenting municipalities and their agencies in their review and approval of this project. The materials in this report reflect the best judgement based on the information available at the time the document was issued. Any reliance on this document by any third party is strictly prohibited and UrbanTrans accepts no responsibility for damages, if any, suffered by any third party by reason of decisions made or actions based on this document.

RECORD OF REVISIONS

Revision	Date	Identification	Description
1	March 9, 2023	Final Report	Final Submission
2	March 9, 2026	Revised Report	Second Submission

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1.0 INTRODUCTION

1.1 Background

UrbanTrans Engineering Solutions Inc. was retained by 3043 6th Line LP (the "Client") to complete a Traffic Impact Study in support of a OPA/ZBA application(s).

1.2 Objective

The study will assess the following components:

- Evaluate potential impacts of traffic changes prompted by the proposed development on municipal roadways and identify any infrastructure enhancements or mitigation measures warranted to ensure the road network will operate acceptably and safely upon completion of the proposed development.
- Determine whether the proposed vehicle supply conforms to the Town's Zoning By-law requirements.
- Simulate vehicle swept path analysis to determine adequate space requirements are provided for passenger cars, waste collection and fire/emergency vehicles.

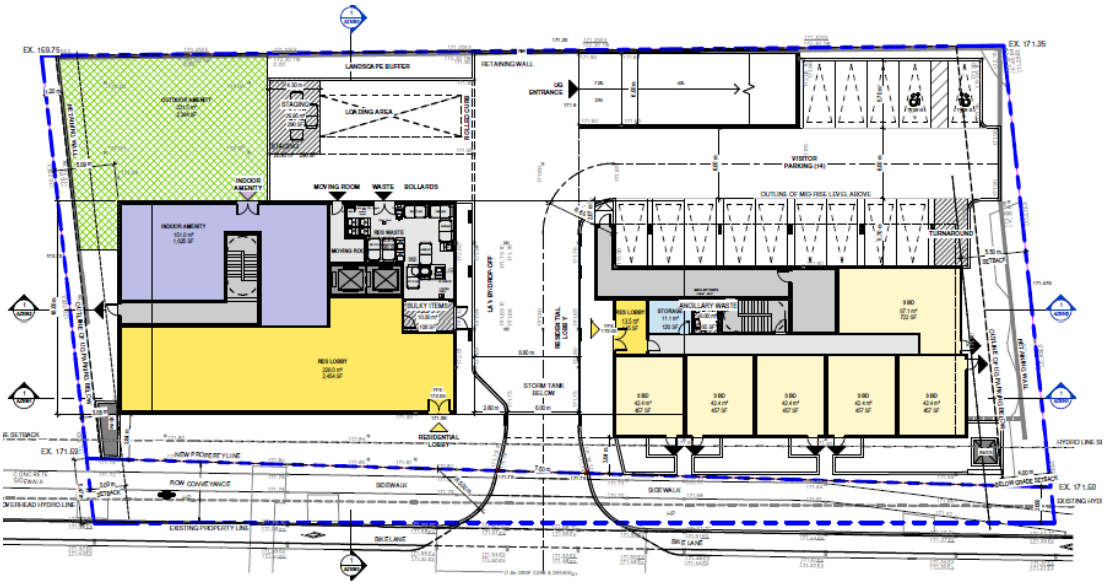
1.3 Development Proposal

The proposed development is located at 3043 Sixth Line in the Town of Oakville. Based on the revised site plan dated February 20, 2026, the development proposal features a 12-storey apartment building with 165 units, including 75 affordable units. Parking has been revised to 128 spaces across two underground levels and the ground floor (including 33 visitor spaces), incorporating a ground-floor pick-up/drop-off area at the building entrance and retaining the full-movement driveway on Sixth Line aligned with Kaitting Trail.

Figure 1 - Site Location

Source: Google Map

Figure 2 – Proposed Site Plan



Source: Sweeny&Co Architects

2.0 EXISTING CONDITIONS

This section documents the transportation network in the study area in 2026, including existing roadways, transit services, active transportation network, traffic control measures, and intersection performances.

2.1 Road Network

To provide clarity throughout this report, Sixth Line has been given a north-south orientation. On this basis, the characteristics of the roads and intersections within the vicinity of the subject site are described below:

- **Sixth Line** is a north-south minor arterial road under the jurisdiction of the Town of Oakville. It operates as a 4-lane cross-section, with two lane in each direction. Sixth Line maintains a posted speed limit of 60 km/hr.
- **Sixteen Mile Drive / Wheat Boom Drive** is an east-west minor collector road under the jurisdiction of the Town of Oakville. It operates as a 4-lane cross-section (two lanes in each direction). The posted speed limit on the street is 40 km/h.
- **Kaitting Trail** is an east-west minor collector road under the jurisdiction of the Town of Oakville. It operates as a 2-lane cross-section. The street has a posted speed limit of 40 km/h.
- **Dundas Street East** is an east-west major arterial road under the jurisdiction of Halton Region. It operates as a 6-lane cross-section, with three lanes in each direction. Dundas Street East maintains an unposted speed limit of 70 km/h. Multi-use trails are provided on both sides of Dundas Street West to accommodate pedestrians and cyclists.

2.2 Transit Network

The proposed subject site is situated within an area that is currently well serviced by the existing Oakville Transit network. Oakville Transit stops are easily accessible from the proposed development. The transit routes are provided in **Appendix C** and the route service in the vicinity of the subject site are summarized in **Table 1**. The existing Oakville Transit System Map in the vicinity of the subject site is illustrated in **Figure 3**.

Table 1: TTC Area Transit Context

Bus Route	Route Description	Frequency
Route 5 Dundas (Oakville)	Operates in a mostly east-west direction between Oakville Station and Highway 407. The 5 Dundas bus operates all day every day till approximately midnight.	15 minutes during weekday peak periods
Route 37 Neyagawa (Oakville)	Provide additional transit coverage for areas east and west of Trafalgar Road, north of Dundas Street, and will operate seven days a week, making connections at the Uptown Core Terminal as well as connecting with Route 5 at Dundas Street West and Neyagawa Boulevard.	25 minutes

Figure 3: Oakville Transit Map

Source: Oakville Transit

2.3 Active Transportation Infrastructure

Active transportation network involves human-powered forms of travel with walking and cycling being the most dominant and can be combined with other modes such as public transit.

2.3.1 Sidewalk Network

Currently, there are sidewalks located on both sides of Dundas Street East and Sixth Line, and Kaitting Trail in the vicinity of the subject site. The proposed development provides direct sidewalk connections to the surrounding road network. The sidewalk connections to the surrounding intersections and roadways will facilitate pedestrian movement to and from the development.

2.3.2 Bicycle Network

The subject site is located in proximity to several cycling facilities, including on-road bike lanes along Sixth Line, multi-use trails along Dundas Street West, and signed bicycle routes on Sixteen Mile Drive and Wheat Boom Drive.

2.4 Active Transportation Mode and Assessment

As previously mentioned, there are a number of opportunities for active transportation within the area surrounding the proposed development. A review of the current amenities and stores in the vicinity of the proposed development indicates that there are many complementary land uses provided which allow for short trips made convenient for walking, biking or transit. There are numerous restaurants, businesses, grocery stores/superstores, and others that are within 900 meters (about a 11 minute walk or 5 minute cycling) from the proposed development.

2.5 Traffic Data

Based on discussion and acceptance from Town and Region Staff (see **Appendix A**), the study will review and evaluate the following intersections in the vicinity of the subject site:

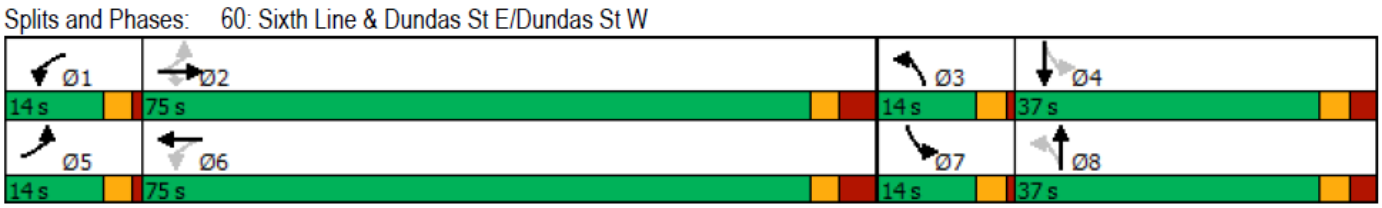
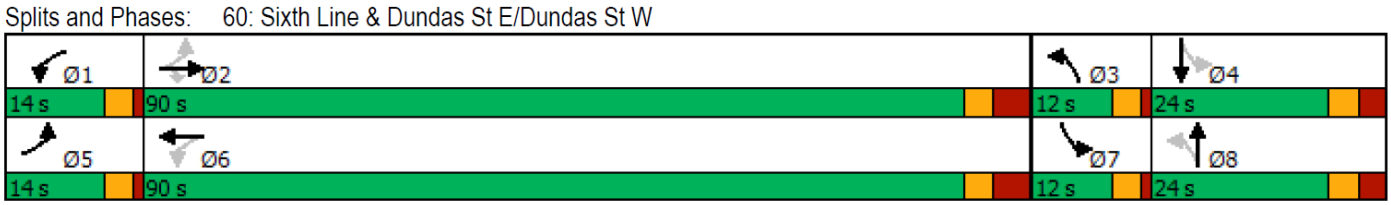
- Sixth Line & Sixteen Mile Drive/Wheat Boom Drive (Signalized)
- Sixth Line & Kaitting Trail (Unsignalized)
- Sixth Line & Dundas Street E (Signalized)

The existing traffic volumes at the abovementioned study area intersections were undertaken by Spectrum Traffic Data Inc. on Tuesday, January 31, 2023, during the morning (7:00 AM to 10:00 AM) and afternoon (4:00 PM to 7:00 PM) peak hour periods. The detailed traffic data are provided for reference in **Appendix D,** and the existing 2023 lane configuration and traffic volumes are illustrated in **Figure 4.**

It is important to note UrbanTrans Engineering requested signal timings from the Region for the Sixth Line & Dundas Street E/W intersection, however the signal timings were not provided in a timely manner. On this basis, UrbanTrans Engineering recommended signal timings with a 140 second cycle length for the intersections of Sixth Line & Dundas Street E/W. The recommended

splits and phase diagram are detailed in **Table 2** for the morning and afternoon peak hour periods and will be carried forward into future background and future total traffic analysis.

Table 2: Recommended Splits and Phase Diagram (Sixth Line & Dundas Street E/W Intersection)

Peak Hour	Splits and Phase Diagram
AM	
PM	

Based on Halton Region Staff's comments, Dundas Street was analyzed as six general purpose lanes for year 2023 (based on existing conditions), and four lanes plus HOV lane (with assumption that 20% of the lane capacity is assigned to HOV usage by using a 0.8 lane utilization factor) for year 2029 (build-out).

2.6 Base Year (2023) Traffic Operations

To assess the existing traffic conditions, UrbanTrans utilized window-based computer software Synchro Version 11 which incorporates the Highway Capacity Manual 2000 methodology (HCM 2000), to undertake capacity analysis (i.e., level of services, volume to capacity ratios, delays, queues, etc.) at the study area intersections during weekday AM and PM peak hour periods for the signalized and unsignalized intersections.

The detailed results of the analysis for existing (2023) baseline traffic conditions are provided in **Appendix E** and summarized in **Table 3**.

Table 3: Existing (2023) Traffic Peak Hour Level of Service Analysis

Intersection	Weekday AM Peak Hour					Weekday PM Peak Hour			
	Movement	Control Delay (s)	95th Queue (m)	V/C	LOS	Control Delay (s)	95th Queue (m)	V/C	LOS
Sixth Line & Dundas St (Signalized)	OVERALL	26.6	-	0.78	C	23.0	-	0.76	C
	EBL	10.0	13.5	0.30	A	48.5	28.7	0.71	D
	EBT	22.5	152.5	0.68	C	14.7	106.9	0.51	B
	EBR	4.6	18.7	0.22	A	1.9	9.9	0.18	A
	WBL	44.1	46.3	0.72	D	18.0	19.9	0.59	B
	WBTR	16.9	71.1	0.41	B	19.6	159.7	0.73	B
	NBL	58.1	61.1	0.74	E	72.9	53.6	0.76	E
	NBTR	43.5	37.5	0.78	D	41.0	25.0	0.68	D
	SBL	57.0	50.6	0.70	E	59.4	41.5	0.57	E
	SBTR	44.1	39.5	0.53	D	50.8	37.9	0.63	D
Sixth Line & Kaitting Tr (Unsignalized)	EBLR	11.8	5.0	0.17	B	12.3	3.0	0.11	B
	NBL	8.2	1.4	0.06	A	8.2	1.3	0.05	A
Sixth Line & Wheat Boom Dr/Sixteen Mile Dr (Signalized)	OVERALL	15.6	-	0.74	B	10.1	-	0.61	B
	EBL	21.4	19.1	0.38	C	24.7	17.3	0.37	C
	EBTR	26.2	36.3	0.74	C	17.9	20.5	0.61	B
	WBL	20.7	8.8	0.24	C	22.0	6.8	0.20	C
	WBTR	17.8	19.1	0.30	B	18.4	16.0	0.33	B
	NBL	9.8	10.9	0.13	A	6.6	11.0	0.19	A
	NBTR	6.9	10.6	0.13	A	4.6	9.4	0.14	A
	SBL	9.0	1.9	0.02	A	5.6	1.5	0.02	A
	SBTR	5.8	12.2	0.17	A	3.7	10.6	0.16	A

The intersection capacity analysis indicates that under the existing conditions, the signalized and unsignalized intersections are currently operating at acceptable levels of service based on overall intersection levels of service, v/c ratios and delay with no critical movements identified.

3.0 FUTURE BACKGROUND CONDITIONS

3.1 Horizon Years

It is anticipated that the development will be fully built out by 2027. As per discussion and acceptance from Town & Region Staff (see Appendix A), a five-year horizon (2032) period will be analyzed after the entire building process of the proposed development for assessment purposes.

3.2 Growth Rate and Future Background Developments

Future background traffic volumes in the vicinity of the subject property comprise two components: (1) background growth applied to existing through traffic at study area intersections, and (2) traffic generated by approved background developments nearby. Following discussions with Town staff (Appendix A), the Town of Oakville provided the following background development information from its website, and staff required calculation of site-generated traffic trips accordingly: (*https://www.oakville.ca/business/sp-33531.html*)

The background development currently under construction is located west of Sixth Line and Kaitting Trail intersection municipally known as 98 Kaitting Trail and proposes two 6-storey apartment buildings with 264 units and 10 townhouse units. On this basis, the number of vehicular trips generated by the proposed background development is estimated using the information contained in the ITE Trip Generation Manual (10th Edition) published by the Institute of Transportation Engineers (ITE) provided in **Appendix F**. For the purpose of this assessment, the maximum between equations and average rates of the ITE Land Use Codes (LUC) 221 "Multifamily Housing (Mid-Rise)" and (LUC) 220 "Multifamily Housing (Low-Rise)" has been utilized for the proposed development. It is important to note, the setting/location of 'General Urban/Suburban' was utilized instead of 'Dense Multi-Use Urban' for conservative analysis.

Based on discussion with the Region Staff (Appendix A), the Region of Halton's 2011 Transportation Master Plan utilizes a transit mode split of 10% for 2021, 15% for 2026 and 20% for 2031. Region staff directed that transit mode splits be updated from the 2011 TMP assumptions to realistic percentages reflecting the current year and proposed horizon years. These must be based on existing facilities and services in the area to date, as well as planned or proposed improvements, with clear rationale and assumptions documented in the study. To account for transit and other modes in the 2032 future horizon, an 18% trip reduction was applied as a conservative approach, derived from the weighted average of Halton Region's 2011 TMP modal splits, targeting 20% transit by 2031.

Table 4 summarizes the trip generation volumes for the proposed background development during the weekday AM and PM peak hour.

Table 4: Site Traffic Trip Generation (Background Development – 98 Kaitting Trail)

Land Use (Magnitude)	Parameter	Weekday AM Peak Hour			Weekday PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Mid-Rise) 264 Units	Gross Trip	0.09	0.27	0.36	0.27	0.17	0.44
	Gross Trip Rate	25	70	95	71	45	116
	Transit Modal Split (18%/18%)	4	13	17	13	8	21
	Gross Trip Rate	0.08	0.22	0.30	0.22	0.14	0.36
	New Trip	**21**	**57**	**78**	**58**	**37**	**95**
Multifamily Housing (Low-Rise) 10 Units)	Gross Trip	1	4	5	5	3	8
	Gross Trip Rate	0.00	0.02	0.02	0.02	0.01	0.03
	Transit Modal Split (18%/18%)	0	1	1	1	0	1
	Gross Trip Rate	0.00	0.02	0.02	0.02	0.01	0.03
	New Trip	**1**	**3**	**4**	**4**	**3**	**7**
Combined Total Trips		**22**	**60**	**82**	**62**	**40**	**102**

Based on the trip generation calculations, the proposed background development is projected to generate 82 two-way trips (22 inbound, 60 outbound) during the weekday morning peak hour and 102 two-way trips (62 inbound, 40 outbound) during the afternoon peak hour, based on the trip generation calculations.

Note that no trip distribution data was available in the 2016 Transportation Tomorrow Survey (TTS) for Traffic Zones 4183 and 4182 at the time of this study. Accordingly, trips from the background development were distributed to study area intersections using observed travel patterns on Sixth Line and at those intersections. Although Kaitting Trail connects to Dundas Street West via Preserve Drive (west of the site), all site-generated trips were conservatively assigned to the Kaitting Trail/Sixth Line intersection for analysis purposes.

Per discussions with and acceptance by Town and Region staff (Appendix A), annual growth rates of 5% were applied to through movements on Sixth Line and 2% to Dundas Street East/West. The resulting future (2029) background traffic volumes incorporate these growth rates alongside traffic from nearby background developments, as outlined above. This methodology has been reviewed and accepted by Town and Region staff to fully account for existing and approved background traffic.

3.3 Future (2032) Background Traffic Operations

To assess the future (2032) traffic conditions, UrbanTrans utilized window-based computer software Synchro Version 11 which incorporates the Highway Capacity Manual 2000 methodology (HCM 2000), to undertake capacity analysis (i.e., level of services, volume to capacity ratios, delays, queues, etc.) at the study area intersections during weekday AM and PM peak hour periods for the signalized and unsignalized intersections.

The estimated future (2032) background traffic volumes are illustrated in **Figure 5**. The detailed results of the analysis are provided in **Appendix G** and summarized in **Table 5**.

Table 5: Future (2032) Background Traffic Peak Hour Level of Service Analysis

Intersection	Weekday AM Peak Hour					Weekday PM Peak Hour			
	Movement	Control Delay (s)	95th Queue (m)	V/C	LOS	Control Delay (s)	95th Queue (m)	V/C	LOS
Sixth Line & Dundas St (Signalized)	OVERALL	33.6	-	0.90	C	33.2	-	0.93	C
	EBL	11.7	15.4	0.32	B	43.7	35.0	0.66	D
	EBT	33.5	264.2	0.90	C	20.8	171.4	0.69	C
	EBR	7.2	26.4	0.24	A	2.8	12.8	0.19	A
	WBL	45.2	48	0.71	D	58.3	54.3	0.77	E
	WBTR	19.8	107.0	0.52	B	32.5	293.8	0.93	C
	NBL	64.9	70.3	0.80	E	75.5	63.8	0.77	E
	NBTR	41.4	59.5	0.73	D	53.9	52.7	0.68	D
	SBL	61.2	60	0.76	E	57.0	43.8	0.56	E
	SBTR	57.4	67.3	0.74	E	68.1	64.2	0.79	E
Sixth Line & Kaitting Tr (Unsignalized)	EBLTR	15.8	10.1	0.30	C	17.0	6.6	0.22	C
	WBLTR	0.0	-	<0.01	A	0.0	-	<0.01	A
	NBL	8.8	1.5	0.06	A	9.0	2.4	0.09	A
Sixth Line & Wheat Boom Dr/Sixteen Mile Dr (Signalized)	OVERALL	12.1	-	0.60	B	8.9	-	0.40	A
	EBL	20.9	20.8	0.30	C	20.6	16.9	0.25	C
	EBTR	20.0	43.5	0.60	C	11.2	21.8	0.40	B
	WBL	19.4	9.4	0.16	B	18.8	8.2	0.11	B
	WBTR	17.3	21.1	0.25	B	16.3	16.3	0.20	B
	NBL	8.2	10.7	0.13	A	8.0	12.7	0.20	A
	NBTR	6.7	14.4	0.16	A	6.5	15.3	0.19	A
	SBL	7.3	2.1	0.01	A	6.1	2.0	0.01	A
	SBTR	6.0	15.8	0.19	A	6.0	16.8	0.22	A

The intersection capacity analysis indicates that under the future 2032 background traffic conditions, the signalized and unsignalized intersections are currently operating at acceptable levels of service based on overall intersection levels of service, v/c ratios and delay with no critical movements identified.

It is recommended that the Town and Region monitor these movements in the future and make appropriate adjustments as required based on the optimized signal timings recommended in this study. Furthermore, it is recommended that the Town and Region monitor the growth rates along Sixth Line and Dundas Street E/W, respectively so that signal timing plans will be appropriately prioritized for transit vehicles and other modes of transportation. This will facilitate and encourage new residents and employees to take alternative and sustainable modes of transportation to work, school, shopping, or other discretionary trips during peak periods.

4.0 SITE GENERATED TRAFFIC VOLUMES

4.1 Proposed Development

Based on the revised site plan, the development proposal features a 12-storey apartment building with 165 units, including 75 affordable units. Parking has been revised to 128 spaces across two underground levels and the ground floor (including 33 visitor spaces), incorporating a ground-floor pick-up/drop-off area at the building entrance and retaining the full-movement driveway on Sixth Line aligned with Kaitting Trail.

4.2 Non-Auto Modal Split

UrbanTrans reviewed the 2016 Transportation Tomorrow Survey Data Ward 5, in the Town of Oakville. **Table 6** summarizes the non-auto modal split information catered to the proposed development and is provided in **Appendix H**.

Table 6: Non-Auto Modal Split Based on 2016 TTS Data (6-9 AM)

Mode of Travel	Percentage	
	Trips Made by Residents (Ward 5)	Trips Made to (Ward 5)
Driver	**64%**	**55%**
Passenger (Carpool)	**11%**	**16%**
Transit	**3%**	**5%**
GO Train	**8%**	**1%**
Walk & Cycle	**11%**	**13%**
Other	**3%**	**10%**
Total	**100%**	**100%**

Based on the information outlined in Table 6, it is suggested that there is a considerable number of trips made by residents in Ward 5 and trips made to Ward 3 that are non-single occupant vehicles (non-SOV) with approximately 36% and 45%, respectively.

Furthermore, it is UrbanTrans' opinion that a 30% modal split reduction is acceptable for non-auto modes of transportation including transit, walking, bicycling to the proposed development for conservative analysis. However, to account for transit and other modes in the 2032 future horizon, an 18% trip reduction was applied as a conservative approach, derived from the weighted average of Halton Region's 2011 TMP modal splits, targeting 20% transit by 2031.

4.3 Trip Generation

The number of vehicular trips generated by the proposed development is estimated using the information contained in the ITE Trip Generation Manual (11th Edition) published by the Institute of Transportation Engineers (ITE) provided in **Appendix F**. For the purpose of this assessment, the maximum between equations and average rates of the ITE Land Use Code (LUC) 222 "Multifamily Housing (High-Rise)" has been utilized for the proposed development. It is important to note, the setting/location of 'General Urban/Suburban' was utilized instead of 'Dense Multi-Use Urban' for conservative analysis.

Table 7 summarizes the trip generation volumes for the proposed development during the weekday AM and PM peak hour for full build-out.

Table 7: Site Traffic Trip Generation

Land Use (Magnitude)	Parameter	Weekday AM Peak Hour			Weekday PM Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (High-Rise) 165 Units	Gross Trip	12	33	45	33	20	53
	Gross Trip Rate	0.09	0.27	0.36	0.27	0.17	0.44
	Transit Modal Split (18%/18%)	2	6	8	6	4	10
	Gross Trip Rate	0.07	0.23	0.3	0.21	0.15	0.36
	New Trip	10	27	37	27	16	43

Based on the trip generation calculations, the proposed development is estimated to generate a total 37 two-way trips (10 inbound and 27 outbound) during the weekday morning peak hour and 43 two-way trips (27 inbound and 16 outbound) during the afternoon peak hour.

4.4 Trip Distribution and Trip Assignment

As previously mentioned, there was no trip distribution data available at the time of this study for Traffic Zones 4183 and 4182 on the 2016 Transportation Tomorrow Survey (TTS) data. As such, the background development site generated trips were distributed to the study area intersections based on existing travel patterns at the study area intersections and Sixth Line. The distribution of site traffic trips to study area intersections are summarized in **Table 8** and illustrated in **Figure 6.**

Table 8: Trip Distribution and Assignment

Direction		AM Peak Hour		PM Peak Hour	
		In	Out	In	Out
Sixth Line	North	55%	40%	50%	50%
Sixth Line	South	45%	60%	50%	50%
Total		100%	100%	100%	100%

5.0 FUTURE TOTAL CONDTIONS

The future (2032) total traffic volumes are the sum of the future (2032) background traffic volumes plus the proposed site generated traffic volumes. To assess the future (2032) total traffic conditions for stop-controlled intersections, UrbanTrans utilized window-based computer software Synchro Version 11 which incorporates the Highway Capacity Manual 2000 methodology (HCM 2000), to undertake capacity analysis (i.e., level of services, volume to capacity ratios, delays, queues, etc.) at the study area intersections during weekday AM and PM peak hour periods for the signalized and unsignalized intersections.

The estimated future (2032) total traffic volumes are illustrated in **Figure 7**. The detailed results of the analysis are provided in **Appendix I** and summarized in **Table 9**.

Table 9: Future (2032) Total Traffic Peak Hour Level of Service Analysis

Intersection	Weekday AM Peak Hour					Weekday PM Peak Hour			
	Movement	Control Delay (s)	95th Queue (m)	V/C	LOS	Control Delay (s)	95th Queue (m)	V/C	LOS
Sixth Line & Dundas St (Signalized)	OVERALL	34.1	-	0.90	C	33.7	-	0.93	C
	EBL	12.0	15.6	0.33	B	45.4	36.4	0.67	D
	EBT	33.9	268.2	0.90	C	20.8	171.4	0.69	C
	EBR	7.3	26.7	0.24	A	2.8	12.8	0.19	A
	WBL	45.7	48.6	0.71	D	58.6	54.3	0.77	E
	WBTR	20.1	108.3	0.52	C	33.1	296.9	0.93	C
	NBL	65.6	70.3	0.81	E	76.5	64.6	0.78	E
	NBTR	41.3	60.0	0.73	D	54.9	53.9	0.69	D
	SBL	63.8	64.3	0.78	E	57.8	44.3	0.57	E
	SBTR	57.4	69.2	0.75	E	68.8	65.3	0.80	E
Sixth Line & Kaitting Tr (Unsignalized)	EBLTR	16.2	10.5	0.31	C	18.3	7.3	0.24	C
	WBLTR	19.8	2.8	0.11	C	16.8	1.4	0.06	C
	NBL	8.8	1.5	0.06	A	9.0	2.6	0.10	A
Sixth Line & Wheat Boom Dr/Sixteen Mile Dr (Signalized)	OVERALL	12.4	-	0.60	B	8.8	-	0.55	A
	EBL	20.8	20.8	0.30	C	25.5	17.1	0.38	C
	EBTR	20.1	43.7	0.60	C	15.4	22.3	0.55	B
	WBL	19.4	9.4	0.16	B	21.7	8.5	0.18	C
	WBTR	17.3	21.1	0.25	B	19.3	16.6	0.30	B
	NBL	8.3	11.0	0.13	A	6.2	11.7	0.18	A
	NBTR	7.5	14.4	0.14	A	4.7	14.2	0.18	A
	SBL	7.3	2.1	0.01	A	5.0	1.8	0.01	A
	SBTR	6.1	16.2	0.19	A	4.4	15.7	0.21	A

The intersection capacity analysis shows that under future 2032 total traffic conditions, all signalized and unsignalized intersections operate at acceptable levels of service, as measured by overall intersection LOS, v/c ratios, and average delays, with no critical movements identified consistent with 2032 background conditions. Similarly, the proposed site access at Sixth Line and Kaitting Trail is projected to maintain acceptable LOS, v/c ratios, and delays, without critical movements.

The proposed development's traffic is anticipated to have a negligible impact on overall intersection delays during both morning and afternoon peak hours. **Table 10** summarizes the changes in operational performance from future background to total traffic conditions across all movements for these periods.

Table 10: Future (2032) Background vs Future (2032) Total Level of Services Comparison

Intersection	Movement	Weekday AM Peak Hour			Weekday PM Peak Hour		
		Control Delay (s)	95th Queue (m)	V/C	Control Delay (s)	95th Queue (m)	V/C
Sixth Line & Dundas St (Signalized)	OVERALL	0.5	-	<0.01	0.5	-	<0.01
	EBL	0.3	0.2	0.01	1.7	1.4	0.01
	EBT	0.4	4	<0.01	-	-	<0.01
	EBR	0.1	0.3	<0.01	-	-	<0.01
	WBL	0.5	0.6	<0.01	0.3	-	<0.01
	WBTR	0.3	1.3	<0.01	0.6	3.1	<0.01
	NBL	0.7	-	0.01	1	0.8	0.01
	NBTR	-	0.5	<0.01	1	1.2	0.01
	SBL	2.6	4.3	0.02	0.8	0.5	0.01
	SBTR	-	1.9	0.01	0.7	1.1	0.01
Sixth Line & Kaitting Tr (Unsignalized)	EBLTR	0.4	0.4	0.01	1.3	0.7	0.02
	WBLTR	19.8	-	<0.01	16.8	-	<0.01
	NBL	-	-	<0.01	-	0.2	0.01
Sixth Line & Wheat Boom Dr/Sixteen Mile Dr (Signalized)	OVERALL	0.3	-	<0.01	-	-	0.15
	EBL	-	-	<0.01	4.9	0.2	0.13
	EBTR	0.1	0.2	<0.01	4.2	0.5	0.15
	WBL	-	-	<0.01	2.9	0.3	0.07
	WBTR	-	-	<0.01	3	0.3	0.1
	NBL	0.1	0.3	<0.01	-	-	<0.01
	NBTR	0.8	-	<0.01	-	-	<0.01
	SBL	-	-	<0.01	-	-	<0.01
	SBTR	0.1	0.4	<0.01	-	-	<0.01

As shown in Table 10, traffic from the proposed development will not adversely impact the adjacent road network or operations.

Town of Oakville transportation staff noted that the Sixth Line/Kaitting Trail intersection is planned for signalization in the near future. However, the analysis demonstrates that it will operate at an acceptable level of service under two-way stop control, and signals are not technically warranted based on the projected impacts from the proposed development and future background growth in the 2029 horizon.

UrbanTrans therefore recommends that the Town and Region monitor these movements going forward and implement adjustments as needed, incorporating the optimized signal timings outlined in this study. Additionally, staff should continue tracking growth rates along Sixth Line and Dundas Street (east/west) to prioritize signal timing plans that accommodate transit vehicles and other modes. This approach will promote and facilitate the use of alternative, sustainable

transportation options by future residents and employees for work, school, shopping, and other peak-period trips.

In summary, UrbanTrans concludes that the proposed development can be adequately accommodated within the existing transportation network, with minimal impacts on adjacent public roadways, provided the recommended signal timings in Table 2 are applied.

6.0 TRANSPORTATION IMPACT ASSESSMENT

6.1 Site Access

Based on the site plan, a full movement vehicular entrance is proposed via Sixth Line to align with Kaitting Trail.

6.2 On-site Circulation

AutoTURN software was used to generate vehicular turning templates to confirm and demonstrate the accessibility for typical 5.6m long passenger vehicle (P TAC-2017) and 9.65 Halton Region (Recycling Side Loading Collection).

It is to be noted that a total of two (2) parking stall (i.e., located P2 level) should be designated for 'small car' only. The Town's standard is to use a conservatively long vehicle (PTAC = 5.6 m) in AutoTURN software analysis for passenger vehicles. However, it is UrbanTrans' opinion that the 85th percentile average size passenger vehicles are (4.90 m in length), which represents most of the vehicles in the marketplace between years 2005 to 2023. As a result, a total of two (2) passenger vehicle used in the designated 'small car' parking spaces is the 85th percentile average size vehicle length 4.90 m as shown in **Figure 9**.

Figure 8 to **Figure 11** illustrate the turning movement templates for passenger vehicles, waste collection and fire/emergency vehicles, respectively. The analysis demonstrates that a passenger vehicle, Halton's waste collection and fire/emergency vehicles can maneuver within the designated route with no conflicts.

6.3 Signage and Pavement Marking Plan

In accordance with the Ontario Traffic Manuel (OTM) Book 5, UrbanTrans' recommends appropriate internal signages and convex mirrors illustrated in **Figure 12** for the proposed site plan on ground floor and underground parking levels, respectively.

Furthermore, it is recommended that a truck warning system be provided when there is a truck presence at the loading docks. The warning system will flash to notify motorists that garbage/loading trucks are in operation. Based on the recommended signages and pedestrian sidewalk within the subject site, it is our opinion the site will operate safely and efficiently for both motorists and pedestrian connectivity.

7.0 PARKING REQUIREMENT

7.1 Zoning By-law Review

The Town of Oakville's Zoning By-law No. 2009-189 is applied to the proposed residential development.

The Town of Oakville's Zoning By-law No. 2009-189 indicated a maximum parking rate up to 1.25 parking spaces per unit, plus a minimum of 0.20 parking spaces per unit for visitors. As previously mentioned, there is a total of 128 spaces across two underground levels and the ground floor (including 33 visitor spaces). The parking requirement and supply for the proposed development is detailed in **Table 11**.

Table 11: Town of Oakville Zoning By-law No. 2009-189 Vehicle Parking Requirements

Land Use	Unit	No. of Units	Min. Rates	Max. Rates	Min. Spaces	Max. Parking	Parking Provided
Apartment Building	Residential Parking	165	-	1.25 space/unit	-	206	95
	Visitor Parking		0.2 space/unit	-	33	-	33
Total					**33**	**206**	**128**

As detailed in Table 11, the applicable Zoning By-law (Town of Oakville 2009-189) requires a maximum of 206 resident parking spaces and a minimum of 33 visitor spaces for the proposed apartment building with 165 dwelling units. The site provides 95 resident spaces and 33 visitor spaces, totaling 128 spaces, which falls below the maximum permitted while fully meeting the visitor parking minimum. This configuration therefore complies with the Zoning By-law and is acceptable from a parking perspective.

7.2 Bicycle Parking

The Town of Oakville's Zoning By-law No. 2009-189 requires bicycle parking for apartment buildings based on unit count, distinguishing short-term (visitor/occupant, typically horizontal racks) and long-term (resident, typically secure lockers or indoor). The applicable bicycle parking rates are summarized below based on Table 5.7A (Residential Uses) of Section 5.7, with detailed calculations provided in **Table 12**.

Table 12: Town of Oakville Zoning By-law No. 2009-189 Bicycle Parking Requirements

Type of Use	No. of Units	Short Term		Long Term		Min. Requirement	Proposed
		Rates	Spaces	Rates	Spaces		
Apartment Building	165	0.25 space/unit	42	0.75 space/unit	124	166	208

The proposed development will require 166 bicycle parking spaces, including 42 short-term and 124 long-term spaces. Based on the site plan provided, the proposed development provides 208 bicycle parking spaces, including 42 short-term and 124 long-term thereby meeting the By-Law requirement.

8.0 TRANSPORATION DEMAND MANAGEMENT (TDM)

Transportation Demand Management (TDM) is a strategic approach that uses policies, programs, incentives, and services to reduce single-occupant vehicle (SOV) travel, manage congestion, and encourage sustainable modes such as walking, cycling, transit, and ridesharing. A TDM Plan for 2026 outlines coordinated measures that promote more efficient use of the transportation system by shifting trips away from driving alone, redistributing to demand from peak periods, and, where feasible, reducing the overall number of vehicle trips.

TDM strategies deliver multiple **benefits**, including reduced traffic congestion and travel time, lower auto-related emissions and improved air quality, decreased personal transportation costs and fuel use, and expanded travel choices for users. By supporting compact, multimodal travel patterns and more efficient use of existing infrastructure, TDM initiatives also align with and help advance Provincial smart growth objectives related to sustainability, climate action, and complete communities.

The primary objective of this TDM plan are as follows:

- Provide facilities, programs, and operational measures that promote behavioral change away from single-occupant vehicle use and toward alternative, sustainable modes of transportation.
- Maximize average vehicle occupancy in order to minimize net site-related auto trips on the surrounding road network.
- Create and support an inclusive, safe, and efficient multimodal transportation system that accommodates all potential users, including pedestrians, cyclists, transit riders, and motorists.

8.1 TDM Incentives and Recommendations

The following TDM measures and incentives are recommended for the proposed development:

- The Town of Oakville has identified in the Active Transportation Master Plan. This will include:
  - Future off-road trails
  - Bike Lanes
  - Signed cycling routes
- The Owner shall provide direct shared pedestrian/bicycle connections from the proposed development to Sixth Line.
- A total of 208 bicycle parking spaces is proposed comprising of 42 short-term and 166 short-term.
- The Owner shall coordinate with Town of Oakville to deliver and promote the Transit Incentive information packages and programs for new residents. The information packages include Oakville transit network schedules, community and cycling maps, where appropriate. The Information Package can be distributed at the sale office; and

- The Owner shall provide one-time pre-loaded PRESTO Cards with the starting value of $25 (inclusive of the registration fee) for each residential unit on demand basis. This will help the future residents to consider taking Oakville transit service as an alternative mode of transportation. The pre-loaded PRESTO Cards can be distributed in conjunction with the Information Package at the time of occupancy.
- The Owner shall provide a Letter of Credit in the amount of $5,000.00 to the Town to secure for two (2) follow-up travel surveys following the initial baseline survey as part of a TDM monitoring program. The Town should reimburse the Owner for the $5,000.00 once the two (2) follow-up surveys have been completed and submitted to the Town.
- The Owner shall consider including electric vehicle supply equipment for the residential parking spaces.

UrbanTrans' opinion that the abovementioned Transportation Demand Management measures and incentives will reduce the numbers of single-occupant-vehicles to and from the proposed development.

9.0 Transportation Planning Context in the Area

9.1 Town of Oakville Official Plan (August 2021)

The Town of Oakville Official Plan (Livable Oakville Plan), consolidated as of August 2021, outlines the vision and policies guiding the municipality's growth through 2031 and beyond. It emphasizes creating livable communities by directing the majority of new development to identified locations suitable for higher density, transit-supportive, and pedestrian-oriented built form.

Key transportation policies promote a sustainable, multi-modal network integrating roads, transit, walking, and cycling infrastructure to connect people and places effectively. This approach aims to reduce single-occupant vehicle trips while supporting public transit and active transportation modes.

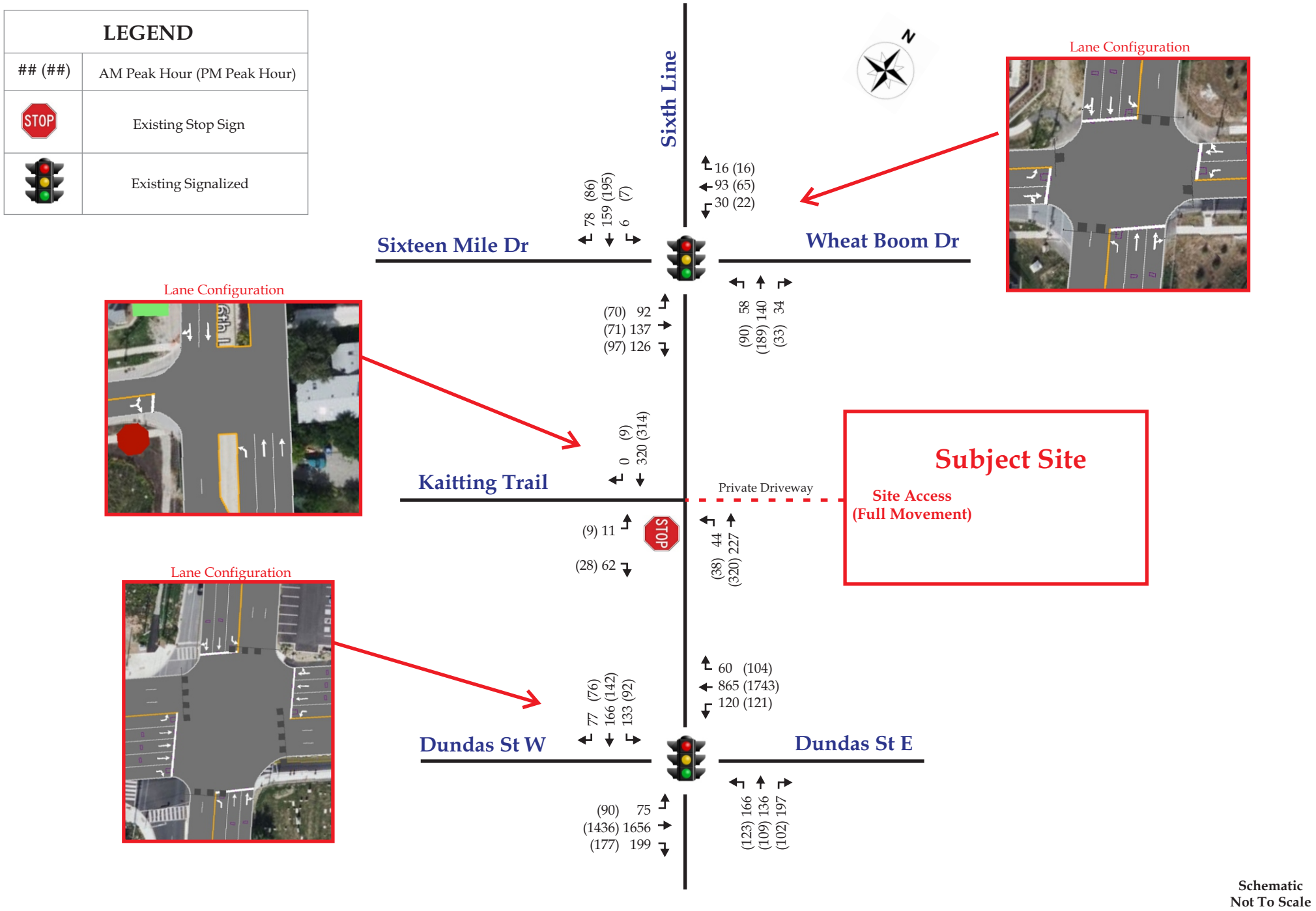
Overall, the Official Plan's directions align with the proposed development's location, leveraging existing and planned infrastructure along Sixth Line to accommodate growth with minimal adverse impacts on the road network.

9.2 Town of Oakville's Active Transportation Master Plan

The Town of Oakville's Active Transportation Master Plan (ATMP) includes recommendations for the Town's pedestrian and cycling network. The ATMP is a review of the 2009 ATMP by WSP, MMM Group, and GLPi. The vision is to have people choose active transportation (AT) to make Oakville "*the most livable town in Canada.*" In addition, an improved cycling network will lower overall emissions and incentivize the use of community-based small businesses. The ambitious plan recommends a framework for designing, constructing, and operating a safe, comprehensive, and cost-effect AT network in the Town of Oakville over the next 20 years.

The Town of Oakville ATMP recommended pedestrian and cycling facilities which indicates many new pedestrian and cycling facilities, including the following:

- Sixth Line (North of Dundas Street East) – Bike Lane
- Sixteen Mille Drive/ Wheat Boom Drive – Signed Route
- Sixth Line (North of Dundas Street East) – Off-Road Trail



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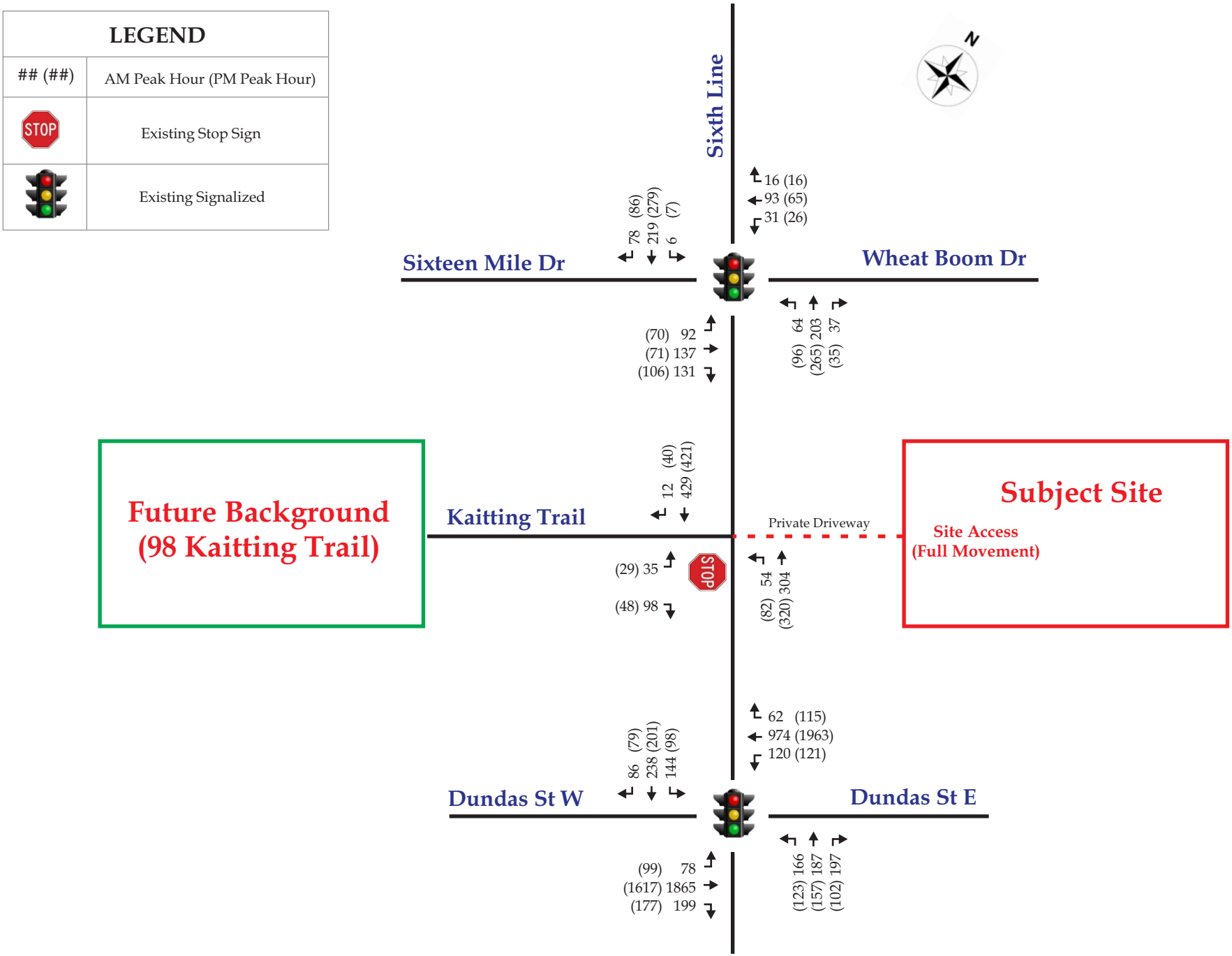
3043 Sixth Line, Town of Oakville ON
Project No. UT-21-025
February 2026

Figure 4 - Existing (2023) Traffic Volumes



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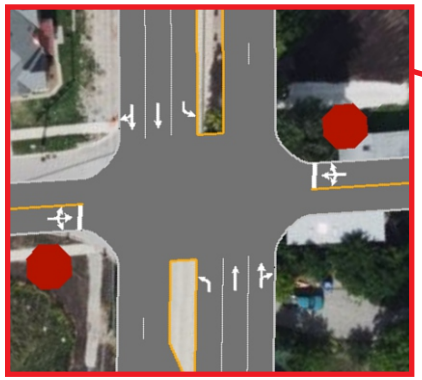
3043 Sixth Line, Town of Oakville ON
Project No. UT-21-025
February 2026

Figure 5 - Future (2032) Background Traffic Volumes

LEGEND	
## (##)	AM Peak Hour (PM Peak Hour)
STOP	Existing Stop Sign
	Existing Signalized



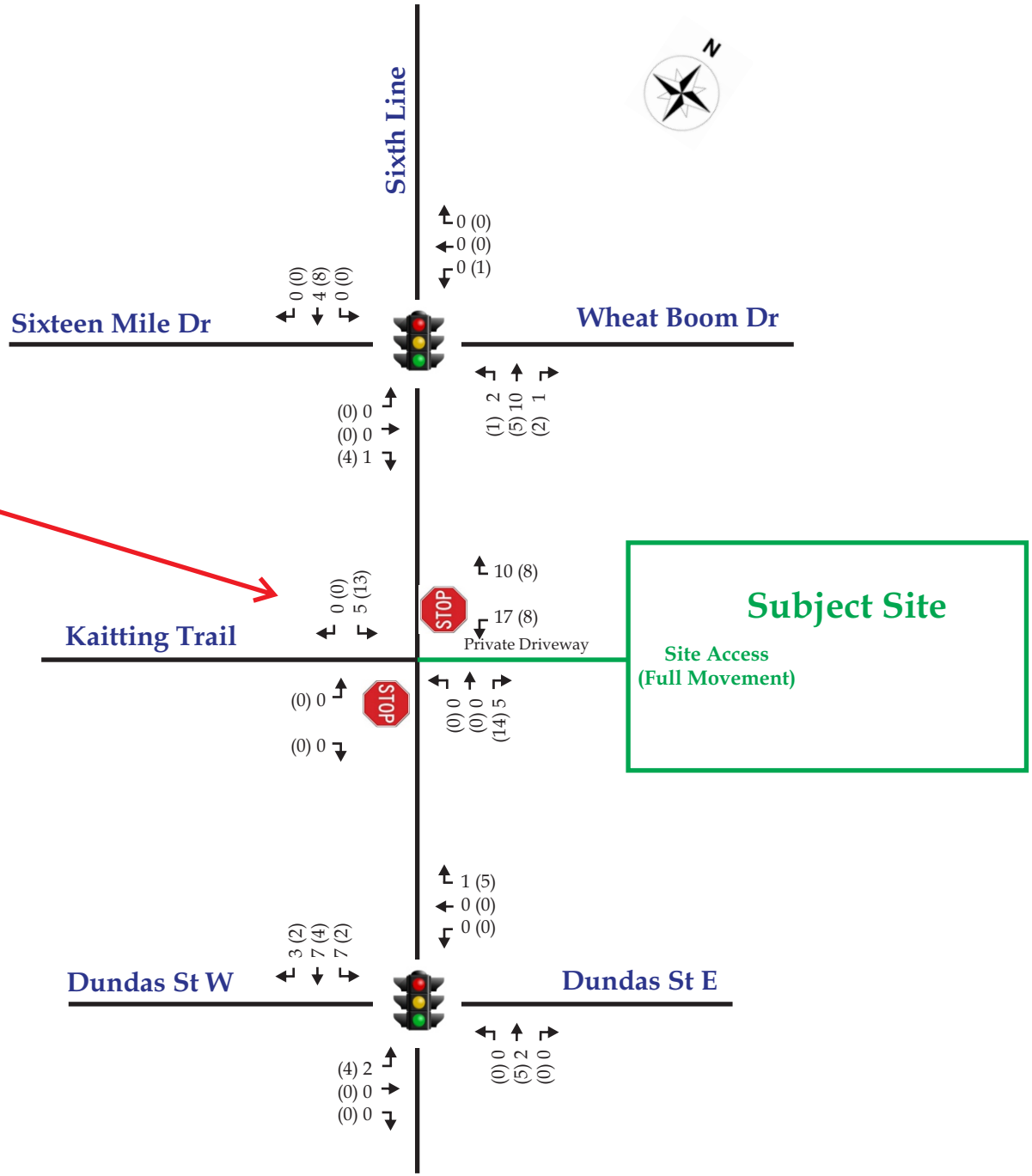
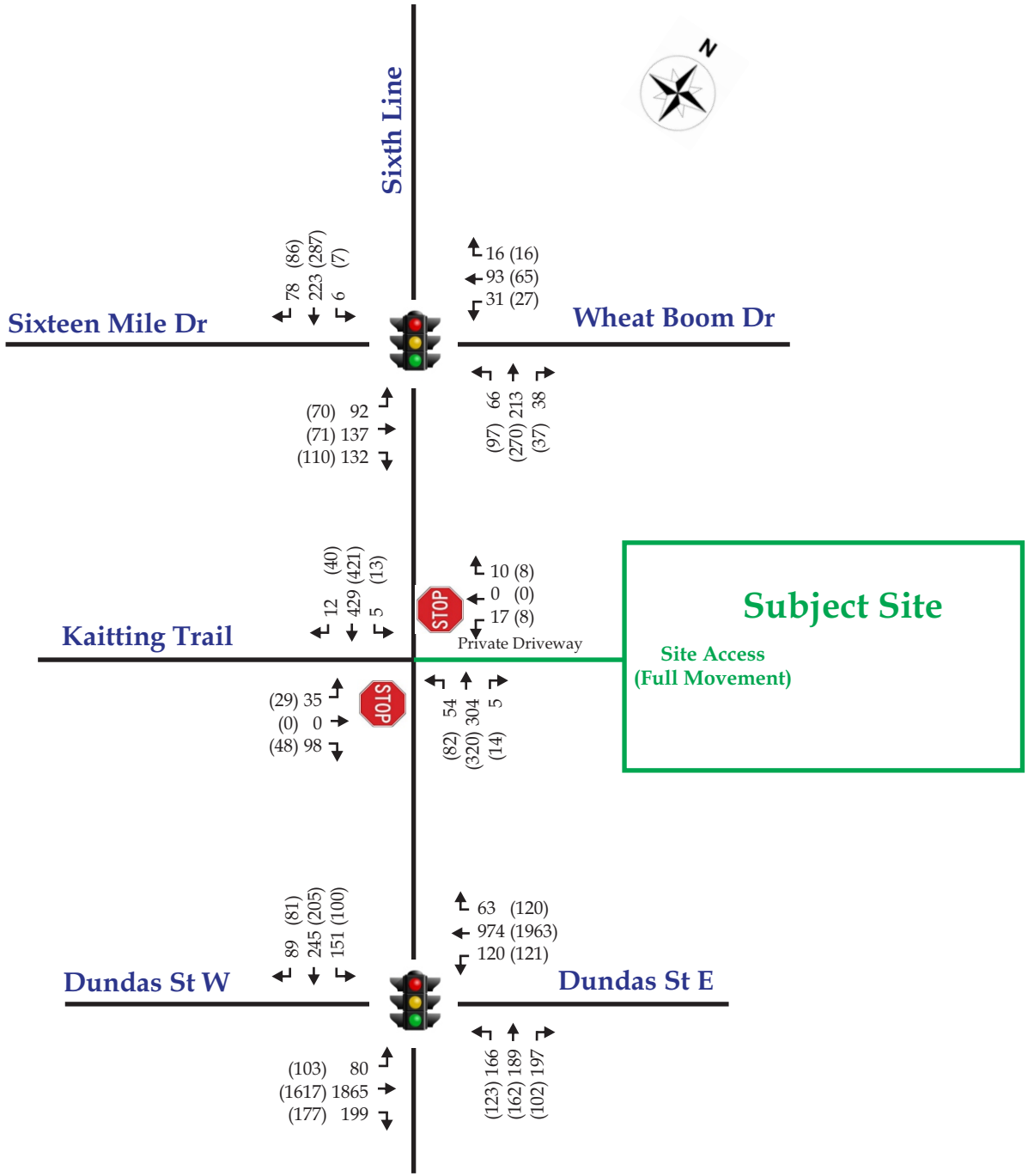


Figure 6 - Site Generated Traffic Volumes

LEGEND	
## (##)	AM Peak Hour (PM Peak Hour)
STOP	Existing Stop Sign
	Existing Signalized

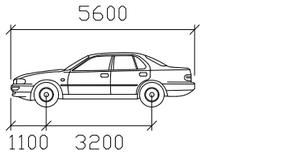


Schematic
Not To Scale

URBANTRANS Engineering Solutions Inc.

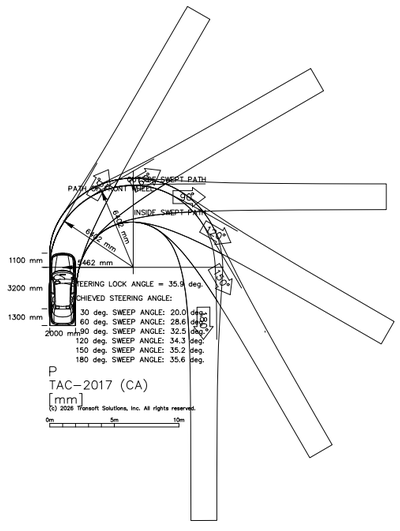
3043 Sixth Line, Town of Oakville ON
Project No. UT-21-025
February 2026

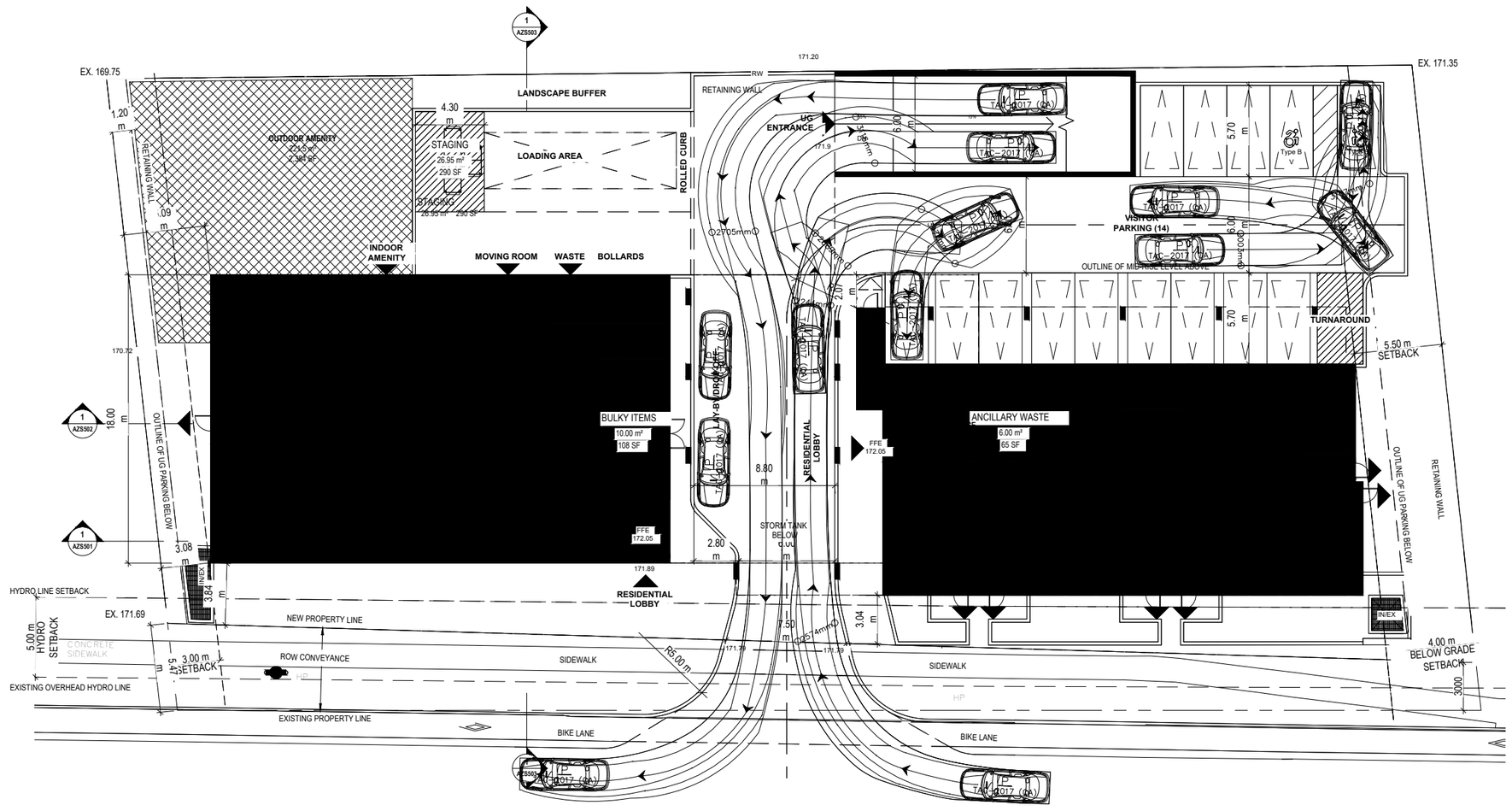
Figure 7 - Future (2032) Total Traffic Volumes



P

	mm
Width	: 2000
Track	: 2000
Lock to Lock Time	: 6.0
Steering Angle	: 35.9





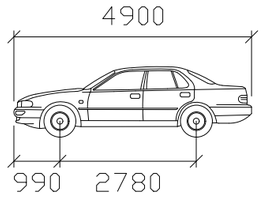
URBANTRANS Engineering Solutions Inc.

Project Name:

PROPOSED RESIDENTIAL DEVELOPMENT

3043 Sixth Line, Town of Oakville

Drawing Title:	AutoTURN Analysis Passenger Car (P TAC-2017)		
Drawing No.:	Figure 8	Date:	February 13, 2026
Project No.:	UT-25-067	Drawn By:	AS
Scale:	NTS	Notes:	



PCU (Average)

	mm
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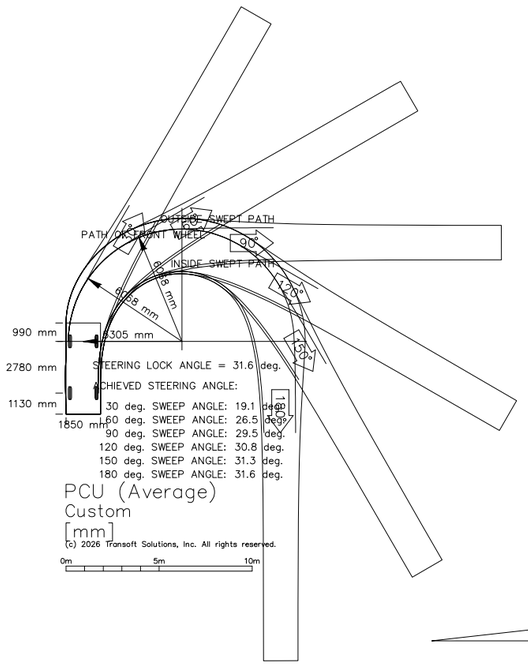
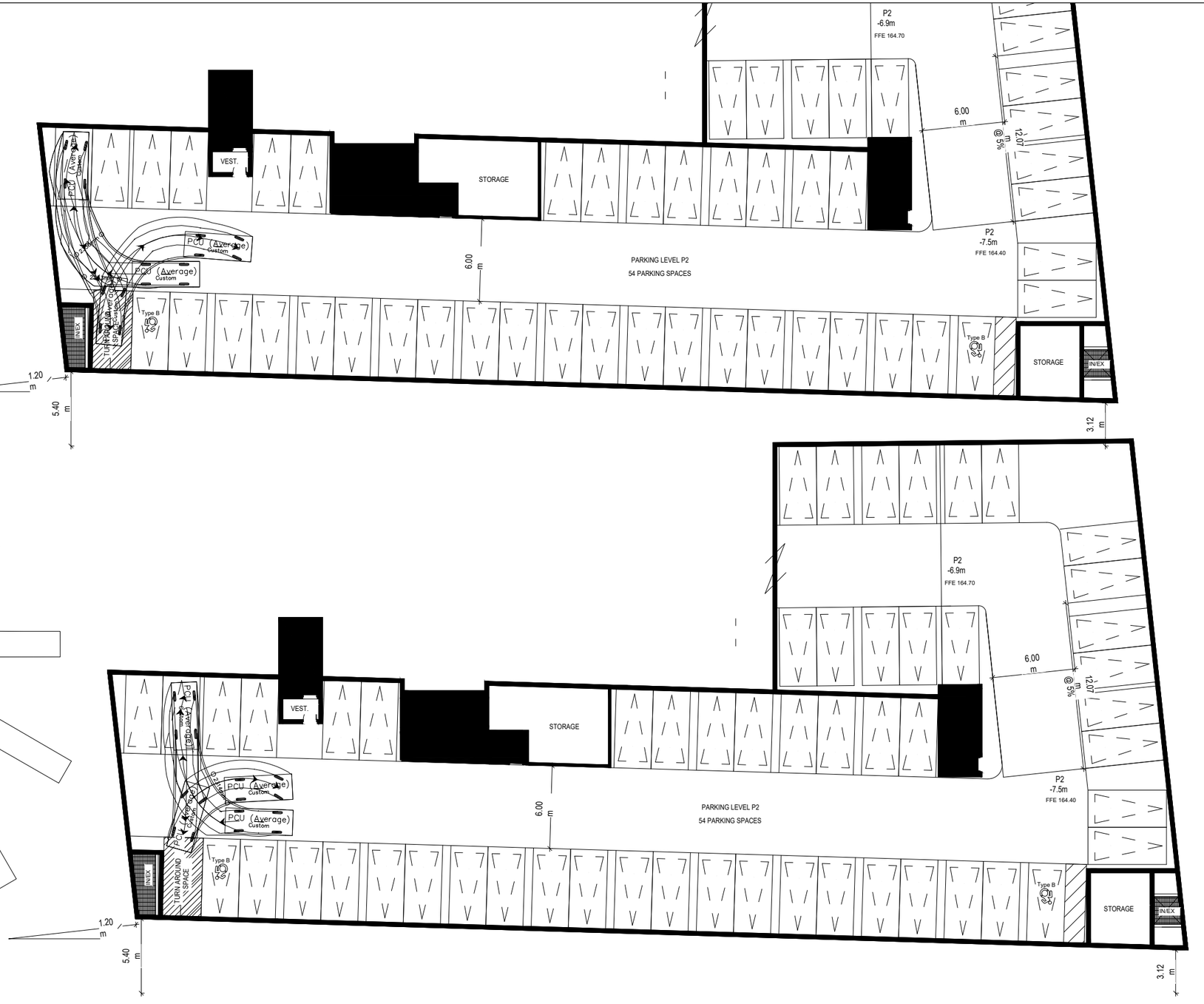
Track	: 1600
Lock to Lock Time	: 3.0
Steering Angle	: 31.6





P2
-6.9m
FFE 164.70
VEST.
STORAGE
6.00
m
12.07
m
@ 5%
PCU (Average)
Custom
PCU (Average)
Custom
PCU (Average)
Custom
Type B
INEX
TURN AROUND SPACE
6.00
m
PARKING LEVEL P2
54 PARKING SPACES
P2
-7.5m
FFE 164.40
Type B
STORAGE
IN/EX
1.20
m
5.40
m
3.12
m

1
AZS503

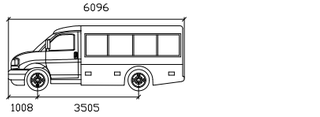
URBANTRANS
Engineering Solutions Inc.

Project Name:

PROPOSED RESIDENTIAL DEVELOPMENT

3043 Sixth Line, Town of Oakville

Drawing Title:	AutoTURN Analysis Passenger Car (Small Car 4.90m)		
Drawing No.:	Figure 9	Date:	February 13, 2026
Project No.:	UT-25-067	Drawn By:	AS
Scale:	NTS	Notes:	



AllStar Chevrolet 4500 (2016) Type 1

	mm
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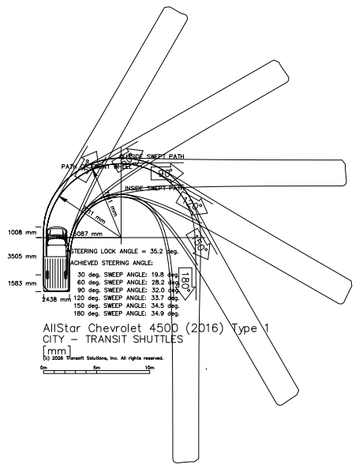
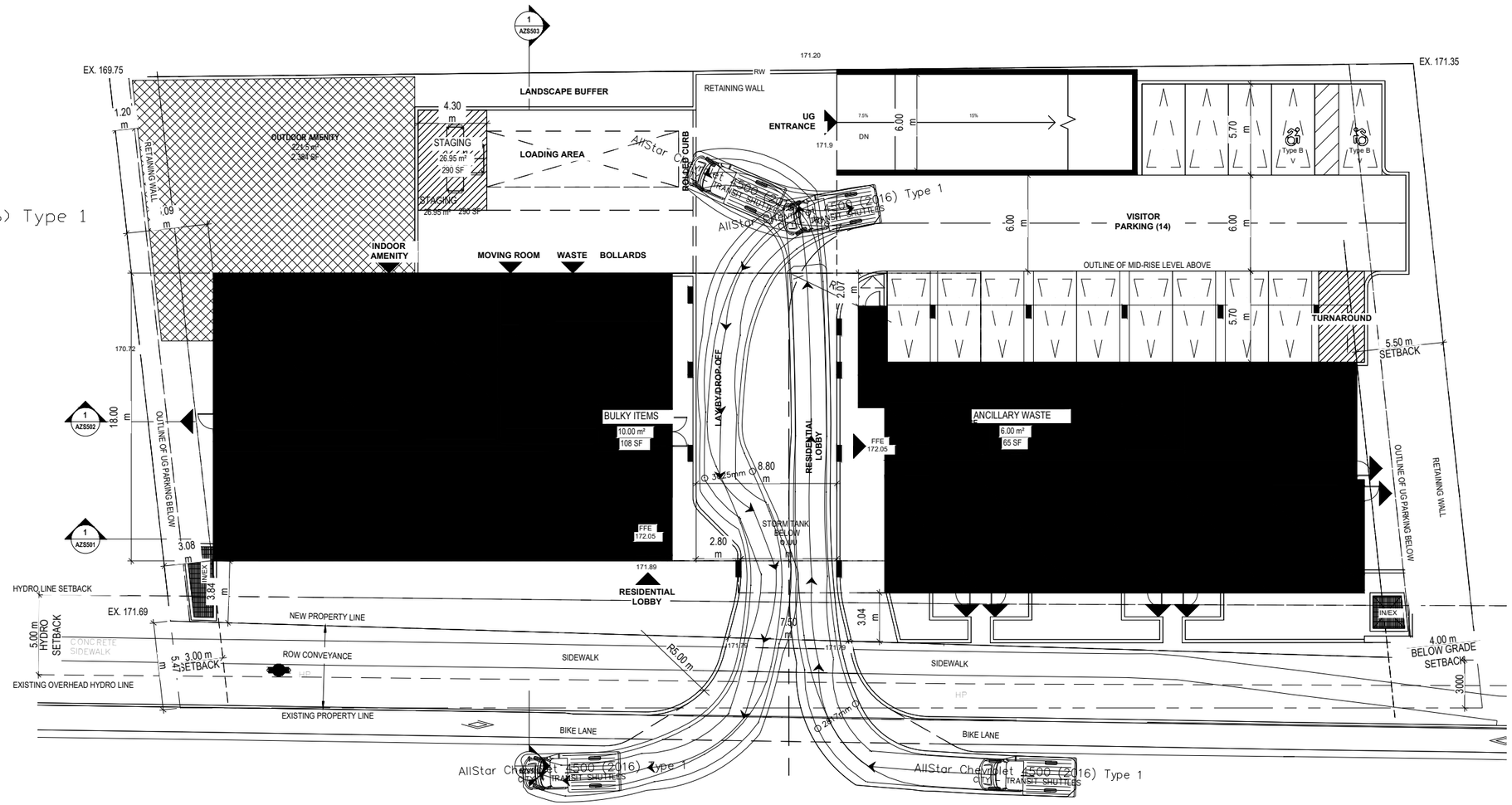
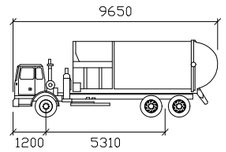
Lock to Lock Time	: 6.0
Steering Angle	: 35.2





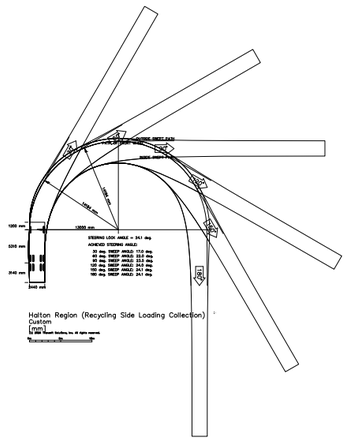
URBANTRANS Engineering Solutions Inc.	Project Name: PROPOSED RESIDENTIAL DEVELOPMENT 3043 Sixth Line, Town of Oakville	Drawing Title:	AutoTURN Analysis Para Transit Vehicle
		Drawing No.: Figure 10	Date: February 13, 2026
		Project No.: UT-25-067	Drawn By: AS
		Scale: NTS	Notes:

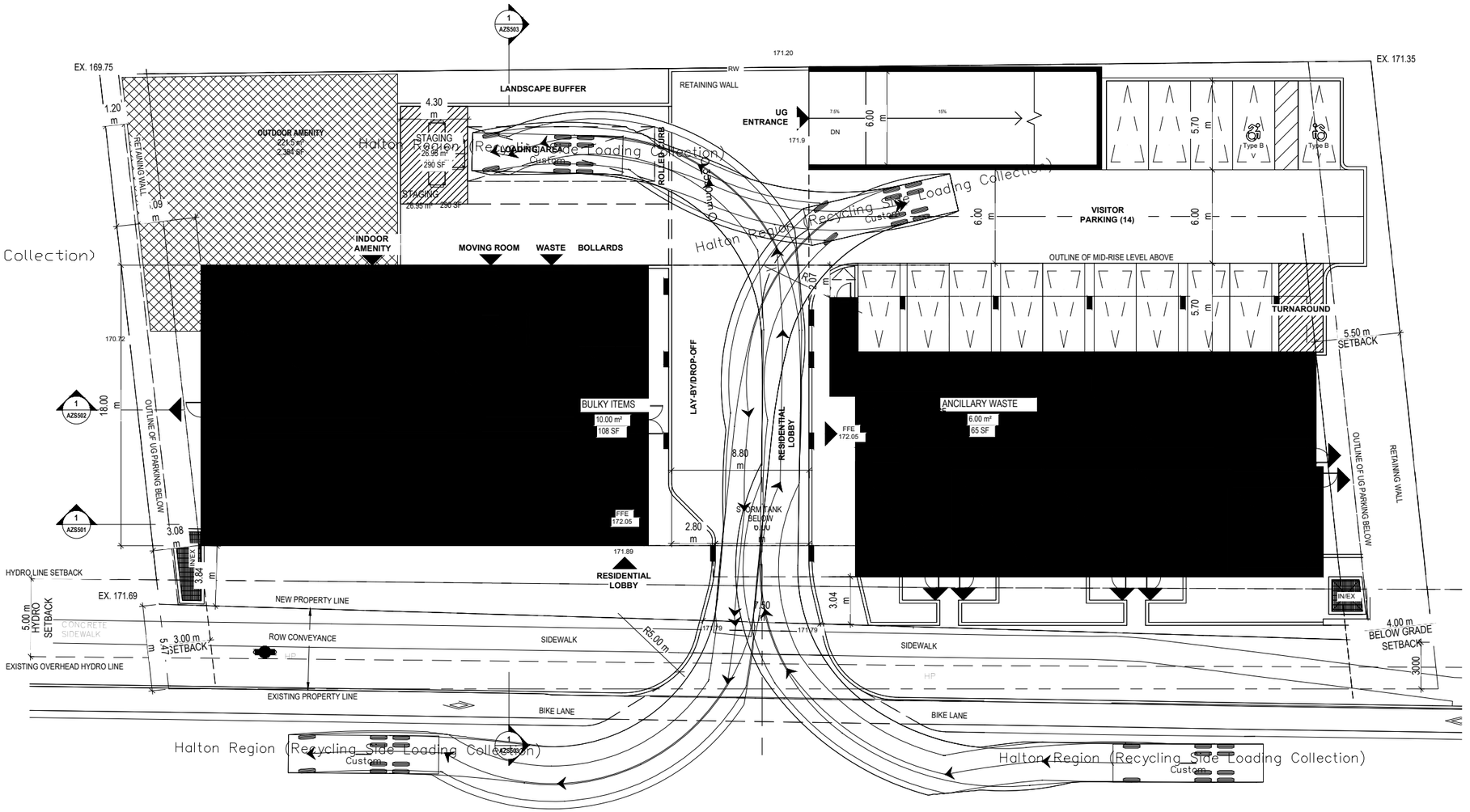


Halton Region (Recycling Side Loading Collection)

mm

Width : 2440
Track : 2440
Lock to Lock Time 6.0
Steering Angle : 24.1

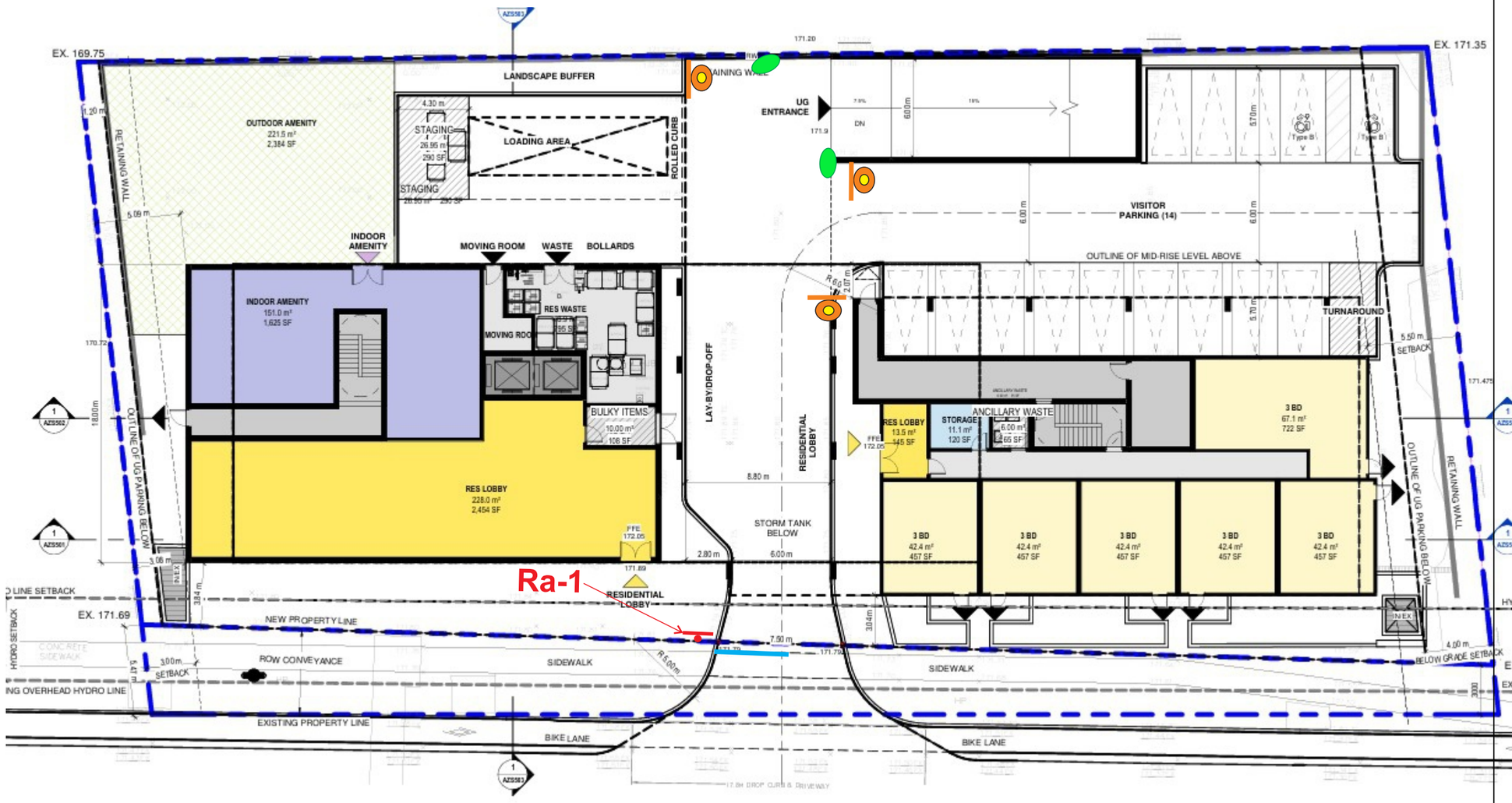




URBANTRANS Engineering Solutions Inc.	Project Name: PROPOSED RESIDENTIAL DEVELOPMENT 3043 Sixth Line, Town of Oakville	Drawing Title: AutoTURN Analysis Region Waste Collection Truck	
		Drawing No.: Figure 11	Date: February 13, 2026
		Project No.: UT-25-067	Drawn By: AS
		Scale: NTS	Notes:

LEGEND

SYMBOL	DESCRIPTION
STOP	STOP Sign (Ra-1)
	STOP BAR (Solid White Retro-Reflective Line between 30cm and 60 cm wide)
	Convex Mirror
	Flashing Beacon
TRUCK LOADING IN PROGRESS	



URBANTRANS Engineering Solutions Inc.	Project Name: PROPOSED RESIDENTIAL USE DEVELOPMENT 3043 Sixth Line, Town of Oakville	Drawing Title:	Signage and Pavement Marking Plan (Ground Floor)
		Drawing No.: Figure 12	Date: February 13, 2026
		Project No.: UT-26-067	Drawn By: AS
		Scale: NTS	Notes:

Appendix A

Terms of Reference Comments

(Town of Oakville & Halton Region)

Outlook

RE: Terms of Reference (3043 Sixth Line) Traffic Impact Study

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From Aquisha Khan <aquisha.khan@oakville.ca>
Date Wed 11/8/2023 2:11 PM
To Annosan Srikantha <annosan@uteng.ca>
Cc Duane Plata <duane@magnitudewell.com>

Hi Annosan,

Thank you for your patience. The attachment you sent previously is acceptable to be used for the Para transit.

Please use it for the turning movement plans submission.

If you have any further questions or concerns, please feel free to contact me.

Regards
Aquisha Khan, P. Eng.
Transportation Engineer, East Oakville

Sent from my Galaxy

-------- Original message --------
From: Annosan Srikantha <annosan@uteng.ca>
Date: 2023-11-08 12:33 p.m. (GMT-05:00)
To: Aquisha Khan <aquisha.khan@oakville.ca>
Cc: Annosan Srikantha <annosan@uteng.ca>, Duane Plata <duane@magnitudewell.com>
Subject: RE: Terms of Reference (3043 Sixth Line) Traffic Impact Study

Hi Aquisha,

I would like to touch base on the status of the confirmation to proceed with the car-a-van truck detailed below, please advise as time permits.

Kind regards,

Annosan Srikantha, P.Eng.
President

P: 437-236-7085
E: annosan@uteng.ca
10-9275 Markham Road, Suite 146 | Markham ON | L6E 0H9

From: Aquisha Khan <aquisha.khan@oakville.ca>
Sent: Friday, November 3, 2023 12:20 PM
To: Annosan Srikantha <annosan@uteng.ca>
Subject: RE: Terms of Reference (3043 Sixth Line) Traffic Impact Study

Hi Annosan;

Thank you for the attached. Confirmation will be provided on Monday.

Have a great weekend 😊

Aquisha Khan, (She/Her/Hers), P. Eng.,
Transportation Engineer, East Oakville
Transportation Planning Services,
Town of Oakville | P: 905-845-6601, Ext. 3236 | C: 289-952-9345 | www.oakville.ca

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From: Annosan Srikantha <annosan@uteng.ca>
Sent: Friday, November 3, 2023 12:08 PM
To: Aquisha Khan <aquisha.khan@oakville.ca>
Cc: Annosan Srikantha <annosan@uteng.ca>
Subject: RE: Terms of Reference (3043 Sixth Line) Traffic Impact Study

Hi Aquisha,

Thank you for attending the meeting this morning. As per our phone converastion, please see attached car-a-van truck (length 6.096m) that will be used for the para-transit vehicle AutoTURN Analysis and confirm acceptance as time permits.

Kind regards,

Annosan Srikantha, P.Eng.
President

P: 437-236-7085
E: annosan@uteng.ca
10-9275 Markham Road, Suite 146 | Markham ON | L6E 0H9

From: Aquisha Khan <aquisha.khan@oakville.ca>
Sent: Tuesday, October 31, 2023 2:47 PM
To: Annosan Srikantha <annosan@uteng.ca>
Subject: RE: Terms of Reference (3043 Sixth Line) Traffic Impact Study

Hello

Please schedule a Teams Meeting with me for Thursday afternoon from 130 – 230pm.

Thank you.
Aquisha

Aquisha Khan, (She/Her/Hers), P. Eng.
Transportation Engineer
Transportation and Engineering
Town of Oakville | 905-845-6601, ext.3236 | www.oakville.ca

From: Annosan Srikantha <annosan@uteng.ca>
Sent: Tuesday, October 31, 2023 11:46 AM
To: Aquisha Khan <aquisha.khan@oakville.ca>
Cc: Annosan Srikantha <annosan@uteng.ca>
Subject: RE: Terms of Reference (3043 Sixth Line) Traffic Impact Study

Hi Aquisha,

Can you please give me a call at your earliest as I want to understand the truck dimensions and turning radii for the para-transit vehicle you requested as per the comments attached.

Our clients timing is incredibly urgent, and I greatly appreciate if you get back to me as soon as possible.

Kind regards,

Annosan Srikantha, P.Eng.
President

P: 437-236-7085
E: annosan@uteng.ca
10-9275 Markham Road, Suite 146 | Markham ON | L6E 0H9

From: Aquisha Khan <aquisha.khan@oakville.ca>
Sent: Tuesday, February 28, 2023 6:55 AM
To: Annosan Srikantha <annosan@uteng.ca>
Subject: RE: Terms of Reference (3043 Sixth Line) Traffic Impact Study

Hello Annosan,

Yes I am.

Aquisha

Sent from my Galaxy

-------- Original message --------
From: Annosan Srikantha <annosan@uteng.ca>
Date: 2023-02-27 7:02 p.m. (GMT-05:00)
To: Aquisha Khan <aquisha.khan@oakville.ca>
Cc: Annosan Srikantha <annosan@uteng.ca>
Subject: RE: Terms of Reference (3043 Sixth Line) Traffic Impact Study

Hi Aquisha,

I just wanted to confirm are you requesting a Traffic Management Plan (TMP) as per OTM Book 7 to be completed for the following comment provided:

Include: Traffic Mitigation Measures

- Please include a preliminary detail plan outlining expectation for traffic control during construction.

Kind regards,

Annosan Srikantha, P.Eng.
President

P: 437-236-7085
E: annosan@uteng.ca
10-9275 Markham Road, Suite 146 | Markham ON | L6E 0H9

From: Aquisha Khan <aquisha.khan@oakville.ca>
Sent: Monday, February 27, 2023 6:51 PM
To: Annosan Srikantha <annosan@uteng.ca>
Subject: RE: Terms of Reference (3043 Sixth Line) Traffic Impact Study

Hi Annosan;

I unfortunately do not have any available time tomorrow, please send a team/zoom invite for Wednesday from 10:00 to 10:30am

I'm sending this message now because it works for me, but please note that I do not expect a response outside of your normal working hours.

Have a wonderful evening!

Aquisha Khan, P. Eng.,
Transportation Engineer, East Oakville
Transportation Planning Services,
Town of Oakville | P: 905-845-6601, Ext. 3236 | C: 289-952-9345 | www.oakville.ca
Canada's Best Place to Live (MoneySense 2018)

From: Annosan Srikantha <annosan@uteng.ca>
Sent: February 27, 2023 6:49 PM
To: Aquisha Khan <aquisha.khan@oakville.ca>
Cc: Annosan Srikantha <annosan@uteng.ca>
Subject: RE: Terms of Reference (3043 Sixth Line) Traffic Impact Study

SECURITY CAUTION: This email originated from outside of The Town of Oakville. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Received with thanks Aquisha, can you please give me a call as time permits tomorrow I will like to clarify a one item.

URBANTRANS
Engineering Solutions Inc.

Annosan Srikantha, P.Eng.
President

P: 437-236-7085
E: annosan@uteng.ca
10-9275 Markham Road, Suite 146 | Markham ON | L6E 0H9

From: Aquisha Khan <aquisha.khan@oakville.ca>
Sent: Monday, February 27, 2023 6:22 PM
To: Annosan Srikantha <annosan@uteng.ca>
Subject: RE: Terms of Reference (3043 Sixth Line) Traffic Impact Study

Hi Annosan;

My comments are as follows:

Proposal of a seven (7)-storey and a eight (8)-storey stacked townhouse developments with 98 units.

Include: Executive Summary

Existing Traffic and Active Transportation Conditions:
Study Intersections:

- Sixth Line & Sixteen Mile Drive/Wheat Boom Drive (unsignalized)
- Sixth Line & Kaitting Trail (unsignalized) – (T-intersection)
- Sixth Line & Dundas Street E (signalized)
- Proposed Site Accesses via Sixth Line (unsignalized)

Please clarify the following in TOR:

- Existing – Kaitting Trail & 6th Line (T-intersection)
- Proposed – Kaitting Trail/Proposed Site Access & 6th Line (Full Moves)

Please include any warrant analysis undertaken for the proposed intersections.

Future Background Traffic and Transit Assessment

- Please include 5-year post full build-out analysis (identify when full build-out is anticipated)
- Please use the following background development/growth rate:

- 1317.004/01 - Mattamy (Kaitting) Limited - 98 Kaitting Trail. Oakville (please calculate the trip generated based on the information provided on Town of Oakville website.
- Use a 5% growth rate for through movements along Sixth Line.
- Use a 2% growth rate for through movements along Dundas Street.

Trip Generation and Distribution

- Please use the most recent version of the Trip Generation and Distribution (11th Edition).
- Please confirm the land use code with Town staff prior to commencement of the analysis.

Future Total Traffic Assessment

- Provide mitigation methods for intersection impacts

Parking Demand

- Please include details on temporary parking for pick-up/drop-off area.

TDM Measure

- Please contact town staff to discuss the TDM Measures for the proposed development.

Include: Traffic Mitigation Measures

- Please include a preliminary detail plan outlining expectation for traffic control during construction.

Include: Summary/Conclusion/Recommendations

If you have any questions, please feel free to contact me.

Have a wonderful day 😊!

Aquisha Khan, P. Eng.,
Transportation Engineer, East Oakville
Transportation Planning Services,

Aquisha Khan, P. Eng.
Transportation Engineer
Transportation and Engineering
Town of Oakville | 905-845-6601, ext.3236 | www.oakville.ca

Vision: To be the most livable town in Canada
Please consider the environment before printing this email.
http://www.oakville.ca/privacy.html

From: Annosan Srikantha <annosan@uteng.ca>
Sent: February 27, 2023 9:20 AM
To: Aquisha Khan <aquisha.khan@oakville.ca>
Cc: Annosan Srikantha <annosan@uteng.ca>
Subject: FW: Terms of Reference (3043 Sixth Line) Traffic Impact Study

SECURITY CAUTION: This email originated from outside of The Town of Oakville. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hi Aquisha,

As per our phone conversation, please see attached Terms of Reference and Site Plan. Please note email below details Syed's comments and acceptance to the Terms of Reference. As discussed can you please confirm a 5% growth to the through traffic volumes will be acceptable for background development along Sixth Line.

Kind regards,

URBANTRANS
Engineering Solutions Inc.

Annosan Srikantha, P.Eng.
President

P: 437-236-7085
E: annosan@uteng.ca
10-9275 Markham Road, Suite 146 | Markham ON | L6E 0H9

From: Syed Rizvi <syed.rizvi@oakville.ca>
Sent: Monday, January 9, 2023 1:57 PM
To: Annosan Srikantha <annosan@uteng.ca>
Subject: RE: Terms of Reference (3043 Sixth Line) Traffic Impact Study

Hi Annosan,

Thanks for the TOR for subject site study. Transportation staff has no major comments and generally agree to the methodology to conduct TIS for the development proposal.

It is to be noted that in near future Sixth line and Kaitting Trail intersection will be signalized. Secondly the minimum width of the site access should be 7.5 m as per the town standards.

Please feel free to contact if you have any further questions.

Thanks,
Syed

Syed Rizvi, M.Sc., P. Eng
Transportation Engineer

Transportation and Engineering
Town of Oakville | 905-845-6601, ext.3981 | www.oakville.ca

From: Annosan Srikantha <annosan@uteng.ca>
Sent: Friday, January 6, 2023 1:47 PM
To: Syed Rizvi <syed.rizvi@oakville.ca>
Cc: Annosan Srikantha <annosan@uteng.ca>
Subject: Terms of Reference (3043 Sixth Line) Traffic Impact Study

Hi Syed,

Please see attached Terms of Reference to undertake a Traffic Impact Study (TIS) for the proposed residential development located at 3063 Sixth Line, in the Town of Oakville.
The site plan is also attached your review.

We look forward to your acceptance and comments as time permits.

Kind regards,

URBANTRANS
Engineering Solutions Inc.

Annosan Srikantha, P.Eng.
President

P: 437-236-7085
E: annosan@uteng.ca
10-9275 Markham Road, Suite 146 | Markham ON | L6E 0H9

Outlook

RE: Terms of Reference (3043 Sixth Line) Traffic Impact Study

From Annosan Srikantha <annosan@uteng.ca>
Date Wed 3/15/2023 10:37 AM
To 'Khan, Ayesha' <Ayesha.Khan@halton.ca>
Cc Annosan Srikantha <annosan@uteng.ca>

Hi Ayesha,

Acknoweledged. I previously contacted trafficdatarequets@halton.ca as per the terms of reference comments. However, please note as mentioned below, our 1st submission has been submitted and we provided recommended signal timings for the intersection under existing and future horizon traffic conditions in our Traffic Impact Study.

Kind regards,

URBANTRANS
Engineering Solutions Inc.

Annosan Srikantha, P.Eng.
President

P: 437-236-7085
E: annosan@uteng.ca
10-9275 Markham Road, Suite 146 | Markham ON | L6E 0H9

From: Khan, Ayesha <Ayesha.Khan@halton.ca>
Sent: Tuesday, March 14, 2023 10:57 AM
To: Annosan Srikantha <annosan@uteng.ca>
Subject: RE: Terms of Reference (3043 Sixth Line) Traffic Impact Study

Hi Annosan,
Who did you contact for the signal timings?

Previously the requests were to be sent to our Road Operations department at trafficdatarequets@halton.ca; however the process is slightly changed now and all requests for the most recent intersection turning movement data are to be submitted to accesshalton@halton.ca

Hope this helps!

Thanks,
Ayesha

From: Annosan Srikantha <annosan@uteng.ca>
Sent: Wednesday, March 8, 2023 10:35 AM
To: Khan, Ayesha <Ayesha.Khan@halton.ca>
Cc: Annosan Srikantha <annosan@uteng.ca>
Subject: RE: Terms of Reference (3043 Sixth Line) Traffic Impact Study

Hi Ayesha,

We still haven't heard back from the Region for the signal timing plan request on Sixth Line and Dundas Street E/W intersection. As such, please be advsied that we are ready for our 1st submission and we provided recommended signal timings for the intersection under existing and future horizon traffic conditions in our Traffic Impact Study.

Kind regards,

URBANTRANS
Engineering Solutions Inc.

Annosan Srikantha, P.Eng.
President

P: 437-236-7085
E: annosan@uteng.ca
10-9275 Markham Road, Suite 146 | Markham ON | L6E 0H9

From: Khan, Ayesha <Ayesha.Khan@halton.ca>
Sent: Wednesday, March 8, 2023 9:53 AM
To: Annosan Srikantha <annosan@uteng.ca>
Subject: RE: Terms of Reference (3043 Sixth Line) Traffic Impact Study

Hi Annosan,
My apologies for not getting back to you sooner. I am tied up in meetings all morning, but perhaps we can chat in the PM. What's a suitable time for you? I will send a zoom invite. Also – if you could let me know what you'd like to discuss I can be better prepared for our chat.

Thanks,
Ayesha

From: Annosan Srikantha <annosan@uteng.ca>
Sent: Wednesday, March 8, 2023 9:14 AM
To: Khan, Ayesha <Ayesha.Khan@halton.ca>
Cc: Annosan Srikantha <annosan@uteng.ca>
Subject: RE: Terms of Reference (3043 Sixth Line) Traffic Impact Study

Hi Ayesha,

Can you please give me a call as time permits.

Kind regards,

Annosan Srikantha, P.Eng.
President

P: 437-236-7085
E: annosan@uteng.ca
10-9275 Markham Road, Suite 146 | Markham ON | L6E 0H9

From: Khan, Ayesha <Ayesha.Khan@halton.ca>
Sent: Tuesday, January 24, 2023 1:40 PM
To: Annosan Srikantha <annosan@uteng.ca>
Subject: RE: Terms of Reference (3043 Sixth Line) Traffic Impact Study

Hi Annosan,

Further to our chat, I have revised my comments below in red.

Thanks,
Ayesha

From: Khan, Ayesha <Ayesha.Khan@halton.ca>
Sent: Wednesday, January 11, 2023 4:24 PM
To: annosan@uteng.ca
Cc: Krusto, Matt <Matt.Krusto@halton.ca>
Subject: RE: Terms of Reference (3043 Sixth Line) Traffic Impact Study

Good afternoon Annosan,
I was forwarded your request from Matt, thank you for circulating to us.

I have the following comments to provide for the TOR you've prepared:

Study Area Intersections

Noted as below:

- Sixth Line at Sixteen Mile Drive/Wheat Boom Drive (unsignalized)
- Sixth Line at Kaitting Trail (unsignalized)
- Sixth Line at Dundas Street E (signalized)
- Proposed Site Accesses via Sixth Line (unsignalized)

The above are satisfactory.

Traffic Counts:

It is noted that traffic counts will be collected for year 2023 – this is acceptable.

Horizon Years/Analysis Periods:

Horizon years and analysis periods are noted (and acceptable) as :

- Horizon year of 5 years post-build out
- AM (7-10am) and PM (4-7pm) peak hours to be analyzed

Mode Splits:

Halton's 2011 Transportation Master Plan utilizes a transit mode split of 10% for 2021, 15% for 2026 and 20% for 2031. Transit mode splits must be adjusted from the 2011 TMP assumptions to reasonable percentages based on current year and planned horizon years proposed mode splits, established on existing facilities and service in the area to date, and planned/proposed facilities and service. Reasonable assumptions and rationale must be clearly outlined in the Study.

Traffic Data:

Any Regional information (traffic counts, signal timing) if needed, can be obtained from Halton through a request to our Road Operations staff at trafficdatarequets@halton.ca

Growth Rate & HOV Analysis:

- A growth rate of 2% would be acceptable to use for Dundas Street W

- Dundas Street can be analyzed as six general purpose lanes for year 2023 (based on existing conditions), and four lanes plus HOV lane (with assumption that 20% of the lane capacity is assigned to HOV usage by using a 0.8 lane utilization factor) for year 2027 (build-out).

Access, TIS Guidelines:

The Study must be in accordance to Halton Region's Transportation Impact Study Guidelines (2015), Access Management Guidelines (2015) and Access By-Law 32-17.

It is noted that no direct access to any Regional road is proposed.

Background Developments:

Town staff will provide/approve all background developments to consider as part of the study.

Other general Study comments include:

The TIS report will include:

- Site Plan and Map,
- Size & Number of Development Phases,
- Existing Conditions (Study Area Intersections, Road Network, Pedestrian Routes, Cycling Routes, Transit Services),
- Existing Traffic Conditions (Site Operating Characteristics, Data Collection/Traffic Counts, Analysis Periods (5 years Ahead),
- Future Background Conditions (Horizon Years, Horizon Year Volumes)
- Background Traffic Demand (with TMC's < 2 years old),
- Background Traffic Demand Forecast (with acceptable growth rates)
- Site Generated Traffic (Transit Modal Split, Trip Generation/Distribution/Assignment)
- Future Total Traffic Demand,
- Capacity Analysis (by Intersection, with LOS, Avg. Delay, V/C ratios),
- Traffic Impacts (Tables – Total Traffic with/without Mitigation)
- Access Considerations – Existing, Proposed, Geometrics (turn lanes, sight lines),
- Recommendations - Identify required/recommended road improvements either as a result of the development impacts, or general non-development improvements.
- TDM recommendations (Transit, Pedestrian & Cycling Facilities Analysis)
- Conclusions
- Appendices with Terms of Reference correspondence from all agencies.

The above is also subject to the review and approval by the Town of Oakville.

Feel free to reach out to me if you require any clarification(s) on the above!

Thanks,
Ayesha

Ayesha Khan
Transportation Planning Coordination PM1
Infrastructure Planning & Policy
Public Works
Halton Region
905-825-6000, ext. | 1-866-442-5866

Halton Region logo Twitter logo Facebook logo LinkedIn logo YouTube logo

From: Annosan Srikantha <annosan@uteng.ca>
Sent: January 6, 2023 1:46 PM
To: Krusto, Matt <Matt.Krusto@halton.ca>
Cc: Annosan Srikantha <annosan@uteng.ca>
Subject: Terms of Reference (3043 Sixth Line) Traffic Impact Study

Hi Matt,

Please see attached Terms of Reference to undertake a Traffic Impact Study (TIS) for the proposed residential development located at 3063 Sixth Line, in the Town of Oakville.
The site plan is also attached your review.

We look forward to your acceptance and comments as time permits.

Kind regards,

Annosan Srikantha, P.Eng.
President

P: 437-236-7085
E: annosan@uteng.ca
10-9275 Markham Road, Suite 146 | Markham ON | L6E 0H9

Appendix B
Proposed Site Plan

3043 SIXTH LINE
OAKVILLE, ONTARIO

ISSUED FOR ZBA/OPA

ISSUED / REVISED yy-mm-dd

26-02-20	ISSUED FOR ZBA

Sweeny&Co Architects

134 PETER STREET | SUITE 1601
TORONTO, ONTARIO | M5V 2H2 | CANADA
P: 416-971-6252 | F: 416-971-5420
E: info@sweenyandco.com | www.sweenyandco.com

PROJ. NAME
3043 SIXTH LINE
3043 SIXTH LINE

OWNER
Mutual Developments

DWG TITLE
Cover Page

DATE: 2025-11-19
SCALE :
DRAWN : RM
CHECKED : MS/AG
PROJ. No. : 2503 DWG No.
AZS000

PROJECT & ZONING INFORMATION

ZONING REQUIREMENTS

SITE

TYPE	NOTES	PROVIDED
GROSS SITE AREA		**3,250.85 m²**
ROW CONVEYANCE		**343.40 m²**
NET SITE AREA		**2,907.45 m²**

COVERAGE

"Building coverage is only area of ground floor currently. Coverage definition to be confirmed by planner. ""Paved Area is paved area after ROW conveyance. """"Outdoor amenity is currently counted towards landscaping, to be confirmed.

TYPE	NOTES	PROVIDED	
BUILDING COVERAGE*		**956.62 m²**	32.90%
PAVED AREA		**944.42 m²**	32.48%
LANDSCAPING**		**1,006.41 m²**	34.61%
NET SITE AREA		**2,907.45 m²**	**100.00%**

FLOOR AREA/FSI

Floor Area: *means the total area of all floors of a building within the outside walls or outside finished furred partitions of the walls, but does not include a porch, non-walk-in bay window, attic, basement, enclosed or roofed walkways or loading dock*
Floor Space Index (FSI): *means the floor area of all buildings on a lot divided by the lot area.*

TYPE	NOTES	PROVIDED	
TOTAL RES FA		**12,819.73 m²**	100.00%
TOTAL FA		**12,819.73 m²**	**100.00%**
FLOOR SPACE INDEX (GROSS)		**3.94**	
FLOOR SPACE INDEX (NET)		**4.41**	
AFFORDABLE			
1 BEDROOM		1,599.71 m²	17,219 SF
2 BEDROOM		2,185.26 m²	23,522 SF
3 BEDROOM		387.50 m²	4,171 SF
TOTAL AFFORDABLE		***4,172.46 m²***	***44,912 SF***

UNITS	PROVIDED
AFFORDABLE	
1 BEDROOM	35 units
2 BEDROOM	35 units
3 BEDROOM	5 units
TOTAL AFFORDABLE	***75 units***
MARKET	
1 BEDROOM	30 units
2 BEDROOM	43 units
3 BEDROOM	17 units
TOTAL MARKET	***90 units***
PROJECT TOTAL	
1 BEDROOM	65 units
2 BEDROOM	78 units
3 BEDROOM	22 units
PROJECT TOTAL	***165 units***

RESIDENTIAL AMENITY

TYPE				PROVIDED (m²/unit)	PROVIDED (m²)
INDOOR	165 units			2.00 m²	**329.95 m²**
OUTDOOR	165 units			2.00 m²	**329.76 m²**
TOTAL RES. AMENITY				**4.00 m²**	**659.71 m²**

VEHICULAR PARKING

LEVEL					LVL TOTAL
P2					**54**
P1					**60**
L1					**14**
TOTAL PARKING					***128***

BICYCLE PARKING

TYPE			REQUIRED		PROVIDED
Res LONG TERM	165 units	1	spaces/unit	165	**166**
Res SHORT TERM	165 units	0.25	spaces/unit	42	**42**
TOTAL BICYCLES				207	**208**

LEVEL BREAKDOWN	RES. LT.	RES. ST.	LVL TOTAL
P2	0	0	**0**
P1	166	0	**166**
L1	0	42	**42**
TOTAL BICYCLES	*166*	*42*	***208***

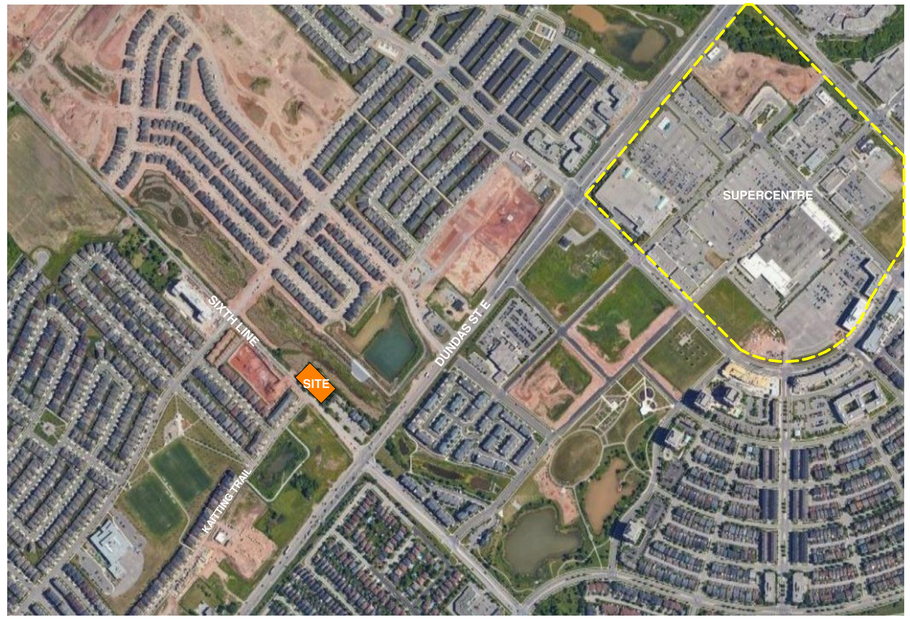
LOADING & STAGING

TYPE	REQUIRED	PROVIDED
3.5mx12m		**1**
STAGING		**26.95 m²**

GARBAGE ROOM

TYPE	REQUIRED	PROVIDED
Garbage Room		**73.90 m²**
TOTAL GARBAGE	--	**73.90 m²**

CONTEXT PLAN - NTS



PROJECT STATISTICS

UNDERGROUND	TFA Area m²	TFA Area SF	FLOOR AREA RESIDENTIAL Area m²	RESIDENTIAL Area SF	FLOOR AREA TOTAL Area m²	FLOOR AREA TOTAL Area SF	INDOOR AMENITY Area m²	INDOOR AMENITY Area SF	OUTDOOR AMENITY Area m²	OUTDOOR AMENITY Area SF	AFFORDABLE UNITS FLOOR AREA 1BD-AFF Area m²	1BD-AFF Area SF	2BD-AFF Area m²	2BD-AFF Area SF	3BD-AFF Area m²	3BD-AFF Area SF
PARKING																
Level -2	1,888.73 m²	20,330 SF	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Level -1	2,716.52 m²	29,240 SF	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PARKING TOTAL	*4,605.25 m²*	*49,571 SF*	--	--	--	--	--	--	--	--	--	--	--	--	--	--
UNDERGROUND TOTAL	***4,605.25 m²***	***49,571 SF***	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**

ABOVE GRADE	TFA Area m²	TFA Area SF	FLOOR AREA RESIDENTIAL Area m²	RESIDENTIAL Area SF	FLOOR AREA TOTAL Area m²	FLOOR AREA TOTAL Area SF	INDOOR AMENITY Area m²	INDOOR AMENITY Area SF	OUTDOOR AMENITY Area m²	OUTDOOR AMENITY Area SF	AFFORDABLE UNITS FLOOR AREA 1BD-AFF Area m²	1BD-AFF Area SF	2BD-AFF Area m²	2BD-AFF Area SF	3BD-AFF Area m²	3BD-AFF Area SF
PODIUM (Affordable)																
Level 01	956.62 m²	10,297 SF	956.62 m²	10,297 SF	956.62 m²	10,297 SF	150.98 m²	1,625 SF	221.48 m²	2,384 SF	--	--	--	--	--	--
Mezzanine Level	368.47 m²	3,966 SF	368.47 m²	3,966 SF	368.47 m²	3,966 SF	--	--	--	--	--	--	--	--	--	--
Level 02	1,243.56 m²	13,386 SF	1,243.56 m²	13,386 SF	1,243.56 m²	13,386 SF	--	--	--	--	137.81 m²	1,483 SF	313.47 m²	3,374 SF	77.50 m²	834 SF
Level 03- Typical	1,243.56 m²	13,386 SF	1,243.56 m²	13,386 SF	1,243.56 m²	13,386 SF	--	--	--	--	137.81 m²	1,483 SF	313.47 m²	3,374 SF	77.50 m²	834 SF
Level 4 to 6	*3,730.69 m²*	*40,157 SF*	*3,730.69 m²*	*40,157 SF*	*3,730.69 m²*	*40,157 SF*	--	--	--	--	*413.44 m²*	*4,450 SF*	*940.40 m²*	*10,122 SF*	*232.50 m²*	*2,503 SF*
SUBTOTAL	*7,542.90 m²*	*81,191 SF*	*7,542.90 m²*	*81,191 SF*	*7,542.90 m²*	*81,191 SF*	*150.98 m²*	*1,625 SF*	*221.48 m²*	*2,384 SF*	*689.06 m²*	*7,417 SF*	*1,567.33 m²*	*16,871 SF*	*387.50 m²*	*4,171 SF*
MID-RISE (Market)																
Level 07 - Amenity	845.80 m²	9,104 SF	845.80 m²	9,104 SF	845.80 m²	9,104 SF	178.97 m²	1,926 SF	108.27 m²	1,165 SF	--	--	--	--	--	--
Level 08 - Typical	812.47 m²	8,745 SF	812.47 m²	8,745 SF	812.47 m²	8,745 SF	--	--	--	--	182.13 m²	1,960 SF	123.59 m²	1,330 SF	--	--
Level 9 to 12	*3,249.90 m²*	*34,982 SF*	*3,249.90 m²*	*34,982 SF*	*3,249.90 m²*	*34,982 SF*	--	--	--	--	728.52 m²	*7,842 SF*	494.34 m²	*5,321 SF*	--	--
Mech. Penthouse	368.65 m²	3,968 SF	368.65 m²	3,968 SF	368.65 m²	3,968 SF	--	--	--	--	--	--	--	--	--	--
SUBTOTAL	*5,276.82 m²*	*56,799 SF*	*5,276.82 m²*	*56,799 SF*	*5,276.82 m²*	*56,799 SF*	*178.97 m²*	*1,926 SF*	*108.27 m²*	*1,165 SF*	*910.65 m²*	*9,802 SF*	*617.93 m²*	*6,651 SF*	--	--
ABOVEGRADE TOTAL	***12,819.73 m²***	***137,990 SF***	***12,819.73 m²***	***137,990 SF***	***12,819.73 m²***	***137,990 SF***	***329.95 m²***	***3,552 SF***	***329.76 m²***	***3,549 SF***	***1,599.71 m²***	***17,219 SF***	***2,185.26 m²***	***23,522 SF***	***387.50 m²***	***4,171 SF***
GRAND TOTAL	**17,424.98 m²**	**187,561 SF**	**12,819.73 m²**	**137,990 SF**	**12,819.73 m²**	**137,990 SF**	**329.95 m²**	**3,552 SF**	**329.76 m²**	**3,549 SF**	**1,599.71 m²**	**17,219 SF**	**2,185.26 m²**	**23,522 SF**	**387.50 m²**	**4,171 SF**
	TFA		RESIDENTIAL		FA TOTAL		INDOOR AMENITY		OUTDOOR AMENITY		1BD-AFF		2BD-AFF		3BD-AFF	

*** Areas in square feet are for reference only.

TOTAL RESIDENTIAL UNIT COUNT

	BACH	1BD-AFF	1BD	2BD	2BD-AFF	3BD	3BD-AFF	TOTAL
	-	-	-	-	-	6	-	6
	-	-	-	-	-	-	-	-
	-	3	4	4	5	1	1	18
	-	3	4	4	5	1	1	18
	-	*9*	*12*	*12*	*15*	*3*	*3*	*54*
	-	*15*	*20*	*20*	*25*	*11*	*5*	*96*
	-	15.6%	20.8%	20.8%	26.0%	11.5%	5.2%	
	-	-	5	3	-	1	-	9
	-	4	1	4	2	1	-	12
	-	*16*	*4*	*16*	*8*	*4*	-	*48*
	-	-	-	-	-	-	-	-
	-	*20*	*10*	*23*	*10*	*6*	-	*69*
	-	29.0%	14.5%	33.3%	14.5%	8.7%	-	
	-	-	-	-	-	-	-	-
	-	*36*	*30*	*43*	*35*	*17*	*5*	*165*
	0	**65**		**78**		**22**		
	0.0%	39.4%		47.3%		13.3%		
AVG. UNIT SIZE PER TYPE	-	45.71 m²	51.72 m²	66.45 m²	62.44 m²	85.39 m²	77.50 m²	
	-	492 SF	557 SF	715 SF	672 SF	919 SF	834 SF	

DRAWING NOT TO BE SCALED

Contractor must check and verify all dimensions on the job and report any discrepancies to the architect before proceeding with the work.

ISSUED / REVISED yy-mm-dd

26-02-20	ISSUED FOR ZBA

Sweeny&Co Architects

134 PETER STREET | SUITE 1601
TORONTO, ONTARIO | M5V 2H2 | CANADA
P: 416-971-6252 | F: 416-971-5420
E: info@sweenyandco.com | www.sweenyandco.com

PROJ. NAME
3043 SIXTH LINE
3043 SIXTH LINE

OWNER
Mutual Developments

DWG TITLE
Context Plan & Project Statistics

DATE: 2025-11-19
SCALE : 1 : 20
DRAWN : RM/AJ
CHECKED : MS/AG
PROJ. No. : 2503 DWG No.

AZS001

CAR PARKING SPACE:

NOTES:

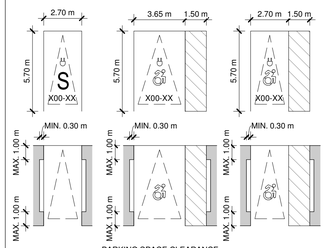
- DRIVE AISLE MINIMUM 6.0m UNLESS OTHERWISE NOTED.
- MINIMUM 2.1m VERTICAL CLEARANCE UNLESS OTHERWISE NOTED.
- ALL PARKING SPACES ARE TYPICAL UNLESS OTHERWISE NOTED.

MINIMUM PARKING SPACE DIMENSIONS:

REGULAR:
WIDTH: 2.70m
LENGTH: 5.70m

ACCESSIBLE A:
WIDTH: 3.65m
LENGTH: 5.70m

ACCESSIBLE B:
WIDTH: 2.70m
LENGTH: 5.70m



LEGEND:

ACCESIBLE PARKING SPACE

ELECTRIC VEHICLE PARKING SPACE

S — PARKING SPACE NOT MEETING THE MINIMUM DIMENSIONS REQUIREMENTS OR HAVING OBSTRUCTIONS

USES:

R = RESIDENTIAL
V = VISITOR
CS = CAR SHARE

X00-XX — USE / NUMBER / SUB-USE

BICYCLE PARKING SPACE:

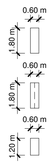
MINIMUM BICYCLE PARKING SPACE DIMENSIONS:

NOTE: 2.4m VERTICAL CLEARANCE IN ALL ROOMS UNLESS OTHERWISE NOTED.

HORIZONTAL:
WIDTH: 0.60m
LENGTH: 1.80m

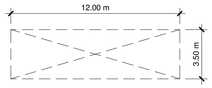
HORIZONTAL STACKED:
WIDTH: 0.60m
LENGTH: 1.80m

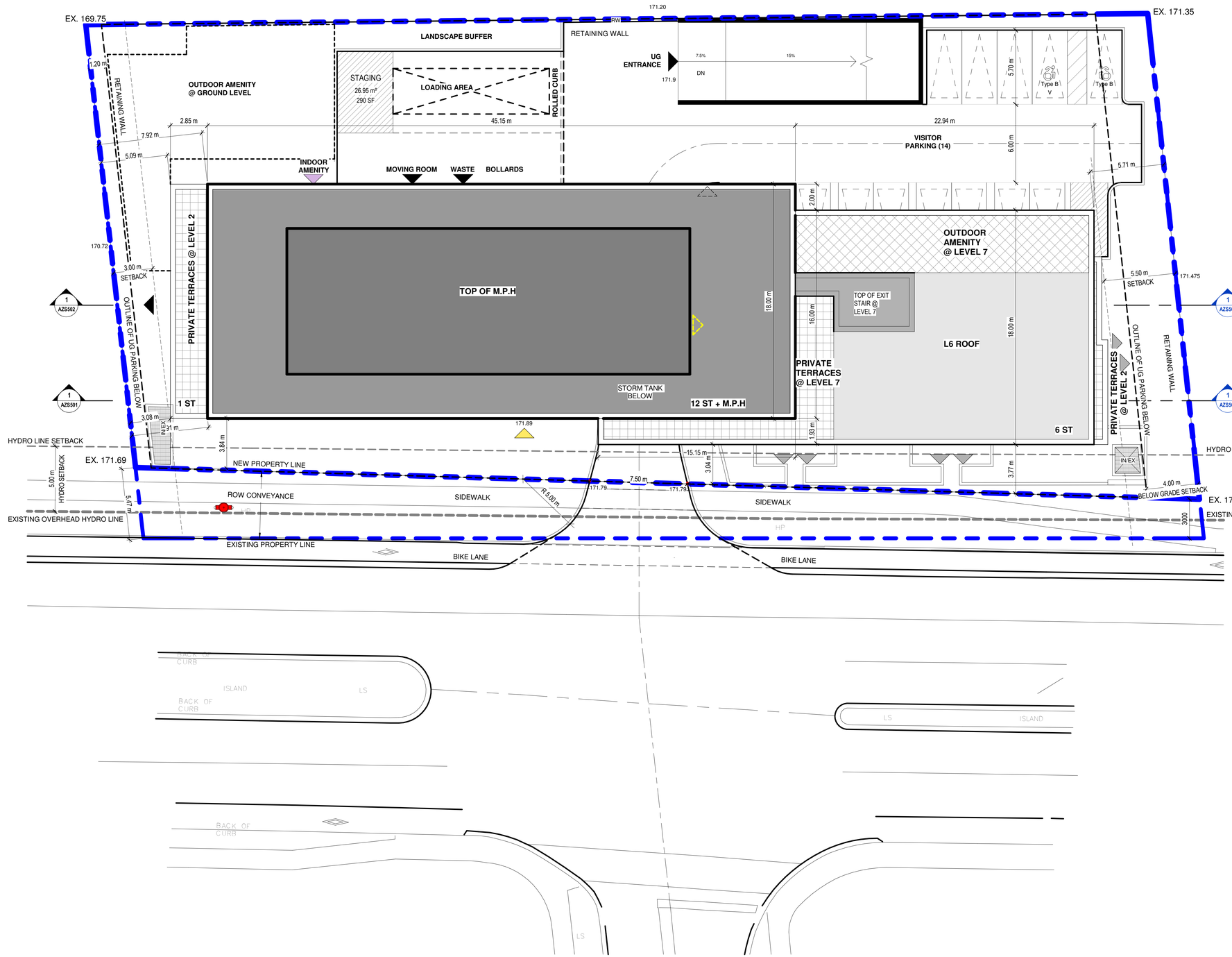
VERTICAL:
WIDTH: 0.60m
HORIZONTAL CLEARANCE: 1.20 m



TYPICAL LOADING SPACE:

RESIDENTIAL / RETAIL
LENGTH: 12.00m
WIDTH: 3.50m
VERTICAL CLEARANCE: 4.25m





ZBA_Site Plan 1
1 : 150 AZS101

DRAWING NOT TO BE SCALED

Contractor must check and verify all dimensions on the job and report any discrepancies to the architect before proceeding with the work.

ISSUED / REVISED yy-mm-dd

26-02-20	ISSUED FOR ZBA

SITE SYMBOL LEGEND:

- RESIDENTIAL ENTRANCE (TOWER)
- RESIDENTIAL ENTRANCE UNDER OVERHANG
- SERVICE ENTRANCE
- SERVICE ENTRANCE UNDER OVERHANG
- TOWNHOUSE UNITS SECONDARY ENTRANCES
- INDOOR AMENITY ENTRANCE
- PRIVATE TERRACE
- OUTDOOR AMENITY
- PROPERTY LINE
- FIRE HYDRANT
- LANDSCAPE - WOOD FENCE
- LANDSCAPE - CHAIN LINK FENCE

Sweeny&Co Architects

134 PETER STREET | SUITE 1601
TORONTO, ONTARIO | M5V 2H2 | CANADA
P: 416-971-6252 | F: 416-971-5420
E: info@sweenyandco.com | www.sweenyandco.com

PROJ. NAME
3043 SIXTH LINE
3043 SIXTH LINE

OWNER
Mutual Developments

DWG TITLE
Site Plan & Zoning Information

DATE:	2025-11-19
SCALE :	As indicated
DRAWN :	RM/AJ
CHECKED :	MS/AG
PROJ. No. :	2503

DWG No. **AZS101**

C:\Users\margaret\Documents\2503_A_r25_3043 SIXTH LINE OAKVILLE_Option 1_margaretRPOC4.rvt

2026-02-12 1:23:40 PM

CAR PARKING SPACE:

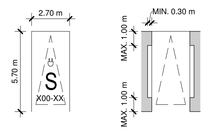
NOTES:

- DRIVE AISLE MINIMUM 6.0m UNLESS OTHERWISE NOTED.
- MINIMUM 2.1m VERTICAL CLEARANCE UNLESS OTHERWISE NOTED.
- ALL PARKING SPACES ARE TYPICAL UNLESS OTHERWISE NOTED.

MINIMUM PARKING SPACE DIMENSIONS:

REGULAR:
WIDTH: 2.70m
LENGTH: 5.70m

PARKING SPACE CLEARANCE FROM FIXED OBJECTS



LEGEND:

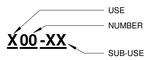
ACCESIBLE PARKING SPACE

ELECTRIC VEHICLE PARKING SPACE

S — PARKING SPACE NOT MEETING THE MINIMUM DIMENSIONS REQUIREMENTS OR HAVING OBSTRUCTIONS

USES:

R = RESIDENTIAL
V = VISITOR
CS = CAR SHARE



BICYCLE PARKING SPACE:

MINIMUM BICYCLE PARKING SPACE DIMENSIONS:

NOTE: 2.4m VERTICAL CLEARANCE IN ALL ROOMS UNLESS OTHERWISE NOTED.

HORIZONTAL:
WIDTH: 0.60m
LENGTH: 1.80m

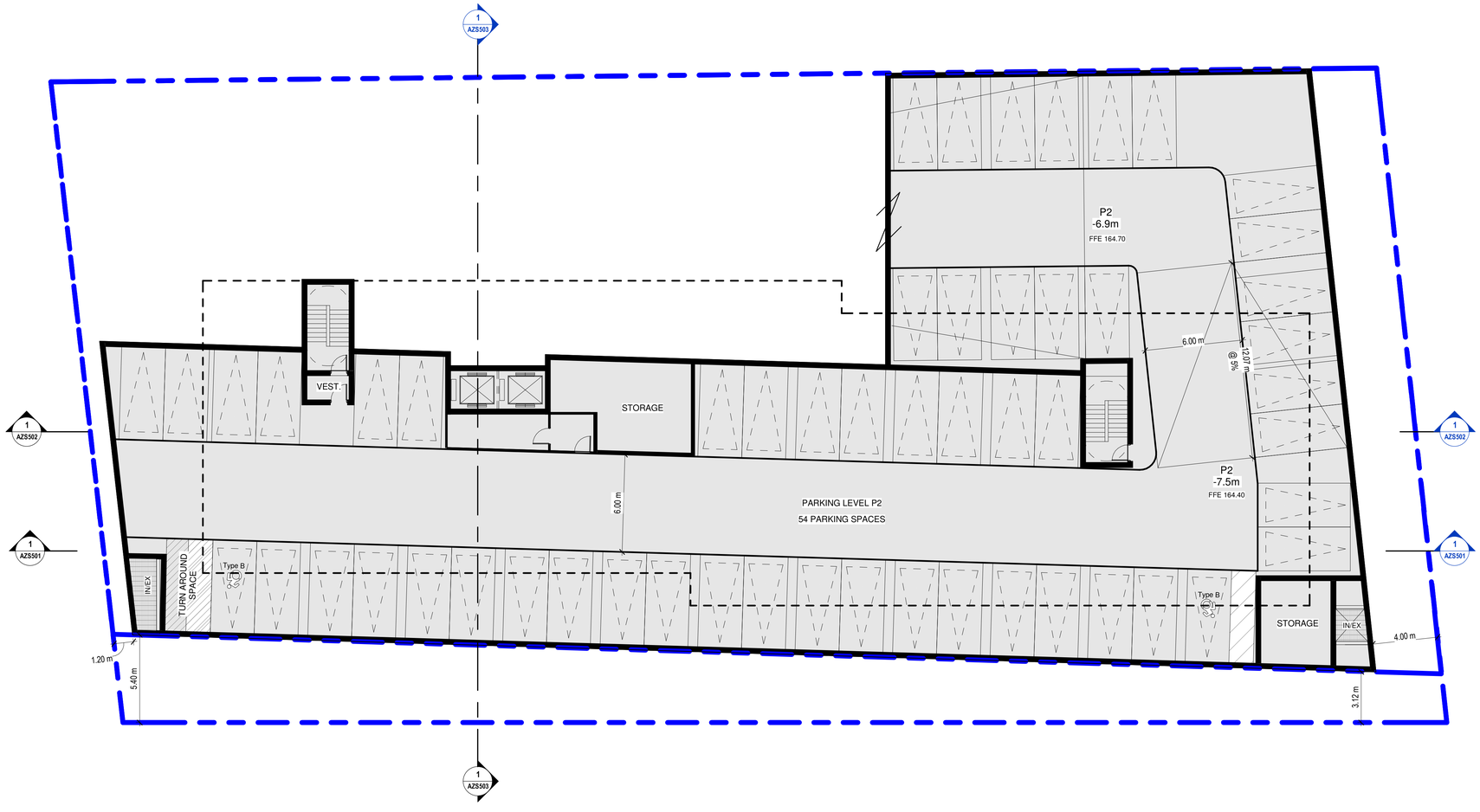
HORIZONTAL STACKED:
WIDTH: 0.60m
LENGTH: 1.80m

VERTICAL:
WIDTH: 0.60m
HORIZONTAL CLEARANCE: 1.20 m

TYPICAL LOADING SPACE:

MINIMUM LOADING SPACE DIMENSIONS:

RESIDENTIAL / RETAIL
LENGTH: 12.00m
WIDTH: 3.50m
VERTICAL CLEARANCE: 4.25m



ZBA_Level P2
1 : 150

1
AZS201

DRAWING NOT TO BE SCALED

Contractor must check and verify all dimensions on the job and report any discrepancies to the architect before proceeding with the work.

ISSUED / REVISED yy-mm-dd

26-02-20	ISSUED FOR ZBA

ROOM LEGEND

- RETAIL
- INDOOR AMENITY
- OUTDOOR AMENITY
- RESIDENTIAL (1BD)
- RESIDENTIAL (2BD)
- RESIDENTIAL (3BD)

SITE SYMBOL LEGEND:

- RESIDENTIAL ENTRANCE (TOWER)
- RESIDENTIAL ENTRANCE UNDER OVERHANG
- SERVICE ENTRANCE
- SERVICE ENTRANCE UNDER OVERHANG
- TOWNHOUSE UNITS SECONDARY ENTRANCES
- INDOOR AMENITY ENTRANCE
- PRIVATE TERRACE
- OUTDOOR AMENITY
- PROPERTY LINE
- FIRE HYDRANT
- LANDSCAPE - WOOD FENCE
- LANDSCAPE - CHAIN LINK FENCE

Sweeny&Co Architects

134 PETER STREET | SUITE 1601
TORONTO, ONTARIO | M5V 2H2 | CANADA
P: 416-971-6252 | F: 416-971-5420
E: info@sweenyandco.com | www.sweenyandco.com

PROJ. NAME
3043 SIXTH LINE
3043 SIXTH LINE

OWNER
Mutual Developments

DWG TITLE
Level P2 Underground

DATE:	2025-11-19
SCALE :	As indicated
DRAWN :	RM/MS
CHECKED :	MS/AG
PROJ. No. :	2503

DWG No.
AZS201

CAR PARKING SPACE:

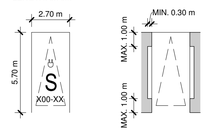
NOTES:

- DRIVE AISLE MINIMUM 6.0m UNLESS OTHERWISE NOTED.
- MINIMUM 2.1m VERTICAL CLEARANCE UNLESS OTHERWISE NOTED.
- ALL PARKING SPACES ARE TYPICAL UNLESS OTHERWISE NOTED.

MINIMUM PARKING SPACE DIMENSIONS:

REGULAR:
WIDTH: 2.70m
LENGTH: 5.70m

PARKING SPACE CLEARANCE FROM FIXED OBJECTS



LEGEND:

ACCESIBLE PARKING SPACE

ELECTRIC VEHICLE PARKING SPACE

S — PARKING SPACE NOT MEETING THE MINIMUM DIMENSIONS REQUIREMENTS OR HAVING OBSTRUCTIONS

USES:

R = RESIDENTIAL
V = VISITOR
CS = CAR SHARE

X00-XX
USE
NUMBER
SUB-USE

BICYCLE PARKING SPACE:

MINIMUM BICYCLE PARKING SPACE DIMENSIONS:

NOTE: 2.4m VERTICAL CLEARANCE IN ALL ROOMS UNLESS OTHERWISE NOTED.

HORIZONTAL:
WIDTH: 0.60m
LENGTH: 1.80m

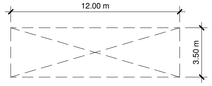
HORIZONTAL STACKED:
WIDTH: 0.60m
LENGTH: 1.80m

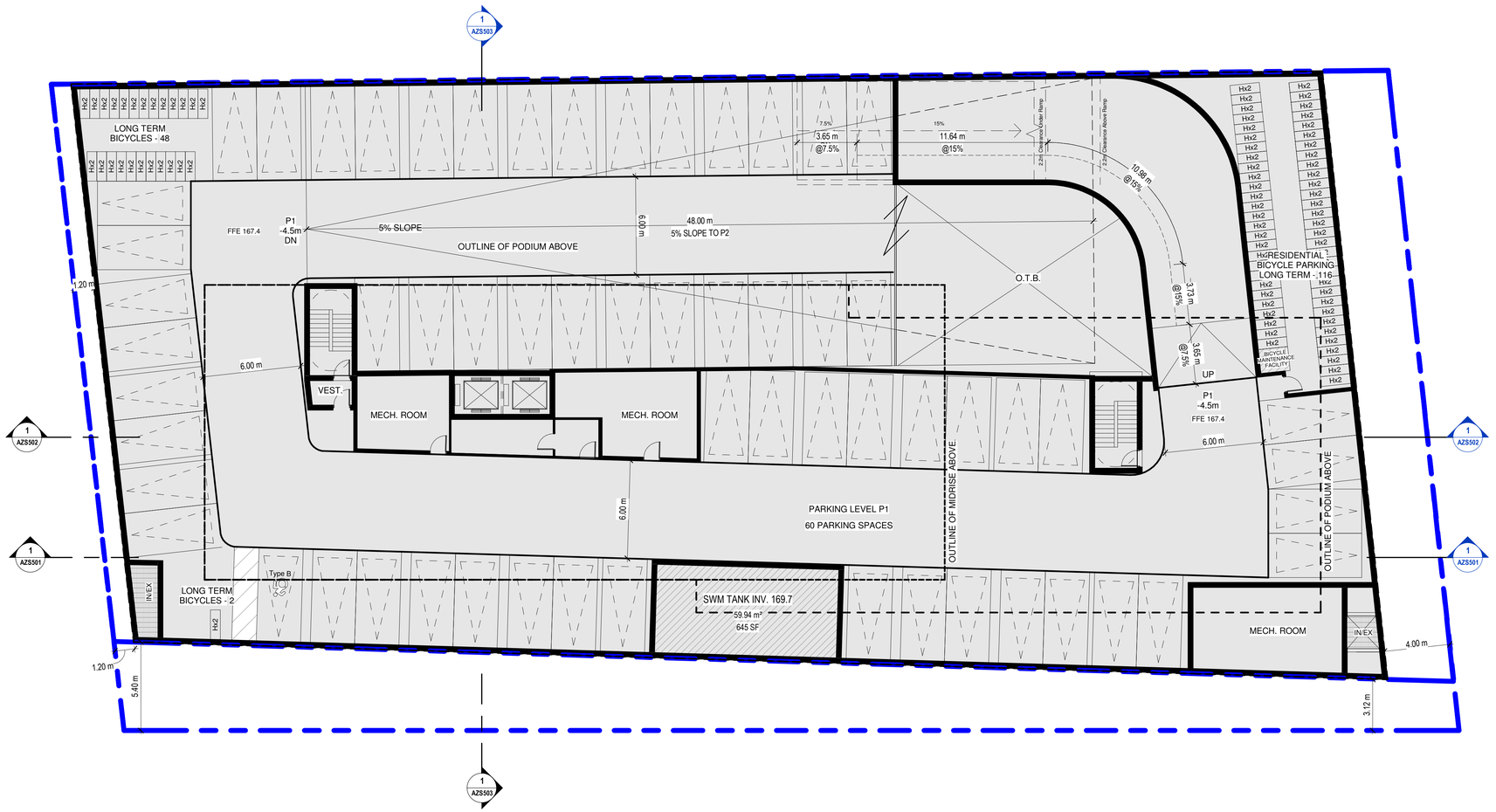
VERTICAL:
WIDTH: 0.60m
HORIZONTAL CLEARANCE: 1.20 m

TYPICAL LOADING SPACE:

MINIMUM LOADING SPACE DIMENSIONS:

RESIDENTIAL / RETAIL
LENGTH: 12.00m
WIDTH: 3.50m
VERTICAL CLEARANCE: 4.25m





ZBA_Level P1
1 : 150

1
AZS202

ISSUED / REVISED yy-mm-dd

26-02-20	ISSUED FOR ZBA

ROOM LEGEND

- RETAIL
- INDOOR AMENITY
- OUTDOOR AMENITY
- RESIDENTIAL (1BD)
- RESIDENTIAL (2BD)
- RESIDENTIAL (3BD)

SITE SYMBOL LEGEND:

- RESIDENTIAL ENTRANCE (TOWER)
- RESIDENTIAL ENTRANCE UNDER OVERHANG
- SERVICE ENTRANCE
- SERVICE ENTRANCE UNDER OVERHANG
- TOWNHOUSE UNITS SECONDARY ENTRANCES
- INDOOR AMENITY ENTRANCE
- PRIVATE TERRACE
- OUTDOOR AMENITY
- PROPERTY LINE
- FIRE HYDRANT
- LANDSCAPE - WOOD FENCE
- LANDSCAPE - CHAIN LINK FENCE

Sweeny&Co Architects

134 PETER STREET | SUITE 1601
TORONTO, ONTARIO | M5V 2H2 | CANADA
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E: info@sweenyandco.com | www.sweenyandco.com

PROJ. NAME
3043 SIXTH LINE
3043 SIXTH LINE

OWNER
Mutual Developments

DWG TITLE
Level P1 Undeground

DATE:	2025-11-19
SCALE :	As indicated
DRAWN :	RM/MS/AJ
CHECKED :	MS/AG
PROJ. No. :	2503

DWG No.
AZS202

CAR PARKING SPACE:

NOTES:

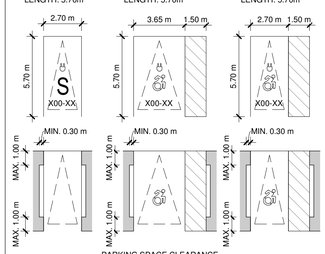
- DRIVE AISLE MINIMUM 6.0m UNLESS OTHERWISE NOTED.
- MINIMUM 2.1m VERTICAL CLEARANCE UNLESS OTHERWISE NOTED.
- ALL PARKING SPACES ARE TYPICAL UNLESS OTHERWISE NOTED.

MINIMUM PARKING SPACE DIMENSIONS:

REGULAR:
WIDTH: 2.70m
LENGTH: 5.70m

ACCESSIBLE A:
WIDTH: 3.65m
LENGTH: 5.70m

ACCESSIBLE B:
WIDTH: 2.70m
LENGTH: 5.70m



PARKING SPACE CLEARANCE FROM FIXED OBJECTS

LEGEND:

- ACCESIBLE PARKING SPACE
- ELECTRIC VEHICLE PARKING SPACE
- S — PARKING SPACE NOT MEETING THE MINIMUM DIMENSIONS REQUIREMENTS OR HAVING OBSTRUCTIONS

USES:

R = RESIDENTIAL
V = VISITOR
CS = CAR SHARE

X00-XX — USE / NUMBER / SUB-USE

BICYCLE PARKING SPACE:

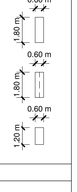
MINIMUM BICYCLE PARKING SPACE DIMENSIONS:

NOTE: 2.4m VERTICAL CLEARANCE IN ALL ROOMS UNLESS OTHERWISE NOTED.

HORIZONTAL:
WIDTH: 0.60m
LENGTH: 1.80m

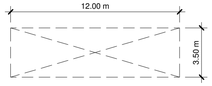
HORIZONTAL STACKED:
WIDTH: 0.60m
LENGTH: 1.80m

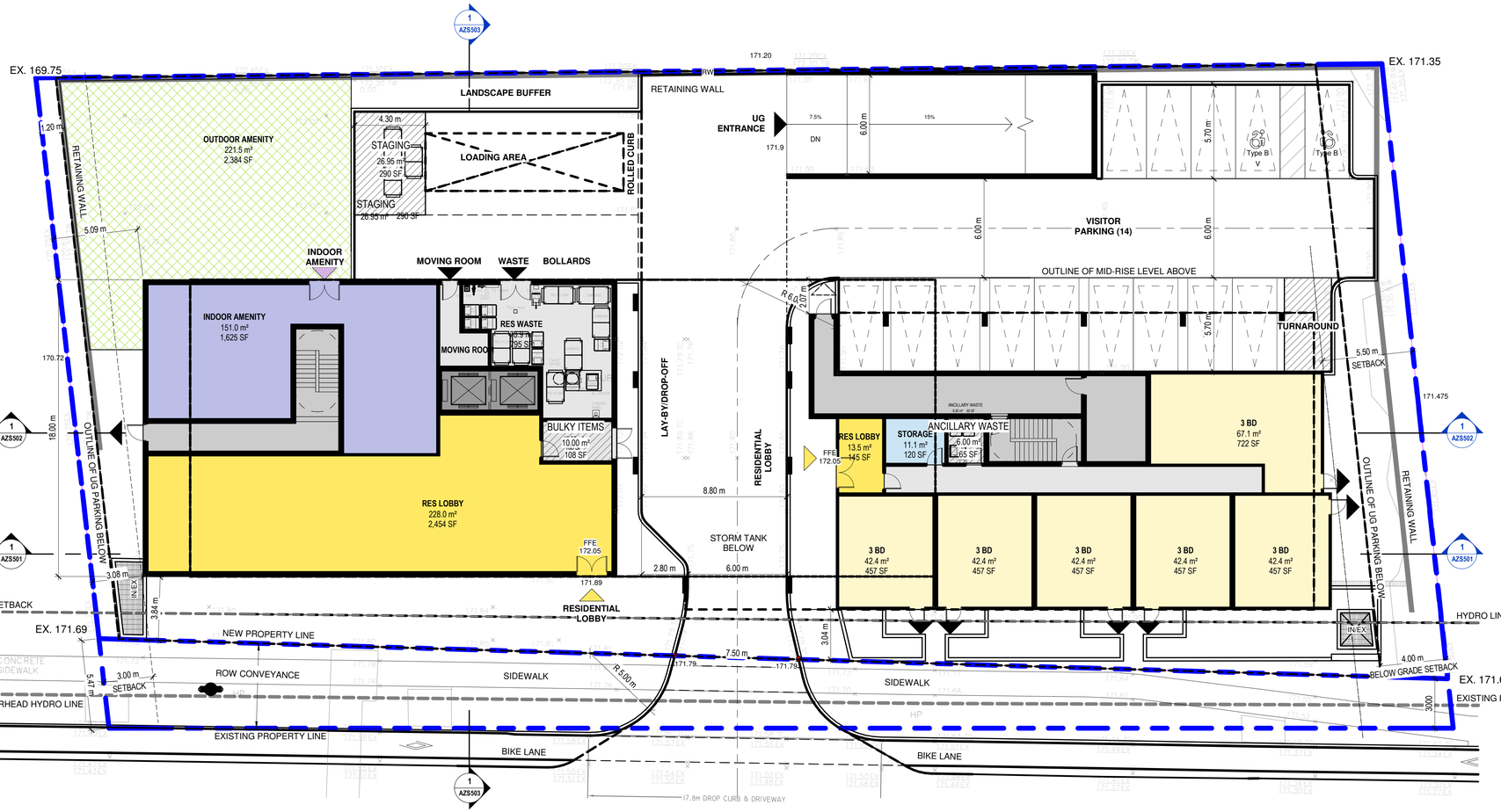
VERTICAL:
WIDTH: 0.60m
HORIZONTAL CLEARANCE: 1.20 m



TYPICAL LOADING SPACE:

RESIDENTIAL / RETAIL
LENGTH: 12.00m
WIDTH: 3.50m
VERTICAL CLEARANCE: 4.25m





ZBA_Level 1
1 : 150

1 AZS203

DRAWING NOT TO BE SCALED

Contractor must check and verify all dimensions on the job and report any discrepancies to the architect before proceeding with the work.

ISSUED / REVISED yy-mm-dd

26-02-20	ISSUED FOR ZBA

ROOM LEGEND

- RETAIL
- INDOOR AMENITY
- OUTDOOR AMENITY
- RESIDENTIAL (1BD)
- RESIDENTIAL (2BD)
- RESIDENTIAL (3BD)

SITE SYMBOL LEGEND:

- RESIDENTIAL ENTRANCE (TOWER)
- RESIDENTIAL ENTRANCE UNDER OVERHANG
- SERVICE ENTRANCE
- SERVICE ENTRANCE UNDER OVERHANG
- TOWNHOUSE UNITS SECONDARY ENTRANCES
- INDOOR AMENITY ENTRANCE
- PRIVATE TERRACE
- OUTDOOR AMENITY
- PROPERTY LINE
- FIRE HYDRANT
- LANDSCAPE - WOOD FENCE
- LANDSCAPE - CHAIN LINK FENCE

Sweeny&Co Architects

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E: info@sweenyandco.com | www.sweenyandco.com

PROJ. NAME
3043 SIXTH LINE
3043 SIXTH LINE

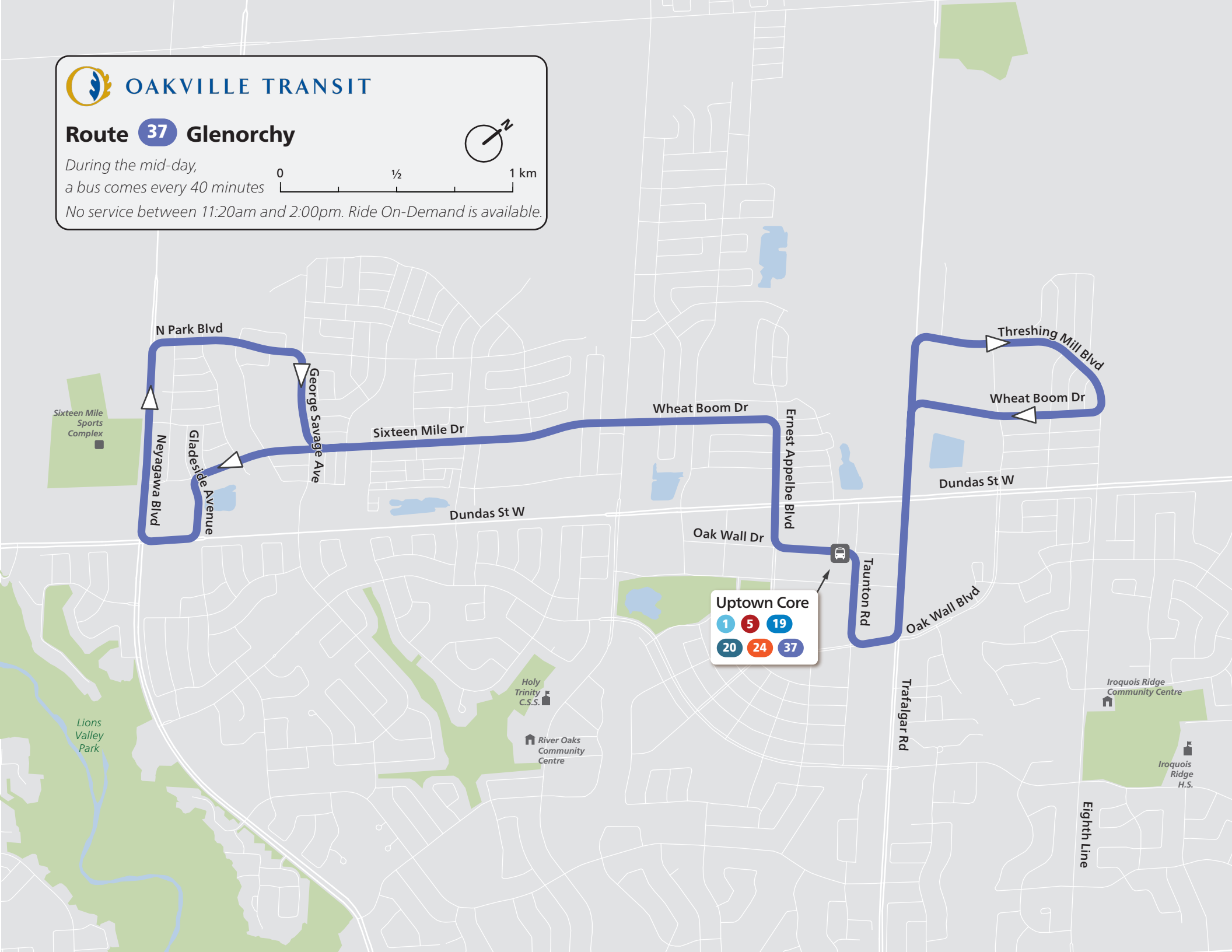
OWNER
Mutual Developments

DWG TITLE
Ground Level

DATE:	2025-11-19
SCALE :	As indicated
DRAWN :	RM/MS/AJ
CHECKED :	AG/MS
PROJ. No. :	2503

DWG No. AZS203

Appendix C
Transit Routes


OAKVILLE TRANSIT
Route 37 Glenorchy
During the mid-day,
a bus comes every 40 minutes
No service between 11:20am and 2:00pm. Ride On-Demand is available.
0
½
1 km
N
N Park Blvd
George Savage Ave
Sixteen Mile Dr
Wheat Boom Dr
Ernest Appelbe Blvd
Threshing Mill Blvd
Wheat Boom Dr
Dundas St W
Dundas St W
Neyagawa Blvd
Gladeside Avenue
Oak Wall Dr
Taunton Rd
Oak Wall Blvd
Trafalgar Rd
Eighth Line
Uptown Core
1 5 19
20 24 37
Sixteen Mile Sports Complex
Lions Valley Park
Holy Trinity C.S.S.
River Oaks Community Centre
Iroquois Ridge Community Centre
Iroquois Ridge H.S.


Bus Routes
Solid lines indicate regular service
Wider lines indicate more frequent service
Dashed lines indicate rush hour or limited service
Visit oakvilletransit.ca for information on schedules, fares and other services.
During the mid-day, a bus comes every...
20 minutes
1 5
30 minutes (15-20 min rush hour)
4 14
30 minutes
3 12 13 15 18 19 20 28
45-60 minutes
6 11
Rush hour only
10 26 34 37 120 190
Trafalgar @ Hwy 407 Park & Ride
1 Bus
Uptown Core
1 5 19 20 37
Laird & Ridgeway
5 6 12 120
Route 5 continues to Dundas @ Hwy 407 Park & Ride
Connections:
Bus
Route 14 continues to Appleby GO
Connections:
Bus
Train
Bronte GO
3 4 6 10 13 18 28 34
Train
Bus
South Oakville Centre
3 14/14A 15
Sheridan College
1 6
Bus
Oakville GO
1 4 10 11 13 14/14A 15 18 19 20 26 28 120 190
Train
Bus
Routes 4, 11, 12 continue to Clarkson GO
Connections:
Train
Bus
Lake Ontario
0 ½ 1 2 km
Dundas W
Dundas E
Upper Middle W
Upper Middle E
Pine Glen
Westoak Trails
Heritage
Pilgrims
Monastery
Abbey Park H.S.
Glen Abbey
St Ignatius
Glen Abbey Golf Club
Fourteen Mile Creek Lands
Bronte Creek Provincial Park
Halton Region Centre
Oakville Trafalgar Memorial Hospital
Sixteen Mile Sports Complex
Sixteen Mile
River Glen
Holy Trinity C.S.S.
River Oaks Community Centre
River Oaks
Mowat
Towne
Munn's
Oakmead
Iroquois Ridge Community Centre
Iroquois Ridge H.S.
Glenashton
Glenashton Park
North Ridge
Eight Line
Trafalgar
Lancaster
Grosvenor
Grand
Falgarwood
White Oaks
White Oaks S.S.
McCraney
Oxford
Culham
SixthLine
Leighland
Oakville Place
Gate
Pilgrims
Dorval
Kerr
N Service
S Service
Wyecroft
Speers
Bridge
Wildwood
Stewart
Maurice
Queen Mary
Rebecca
Fourth Line
Third Line
Lakeshore W
Lakeshore E
Trafalgar Park Community Centre
Randall Church
St Thomas Aquinas C.S.S.
T.A Blakelock H.S.
Q.E Park Community Centre
South Oakville Centre
Sir John Colbourne Re. Centre
Oakville Trafalgar Community Centre
Oakville Trafalgar H.S.
Linbrook
Devon
Maple Grove
Chartwell
Morrison
Watson
Cornwall
Royal Windsor
Sheridan Garden
Ford
Kingsway
Bristol Circle
Winston Park
Buckingham
Bayshire Woods Park
Iroquois Shoreline Woods Park
Lions Valley Park
Garth Webb S.S.
Proudfoot
Postmaster
Colonel William
Bronte
Burloak
Great Lakes
Burlington
Mississauga
Winston Churchhill
Ninth Line
Laird
Bristol Circle
QEW
403
407
AM
PM

Appendix D
Existing Traffic Data & Signal Timing Plan

Spectrum

Turning Movement Count
Location Name: SIXTH LINE & DUNDAS ST E
Date: Tue, Jan 31, 2023 Deployment Lead: Walter Fugaj

Urban Trans Engineering Solutions Inc
146 9275 MARKHAM ROAD
MARKHAM ONTARIO, L6E 0H9
CANADA

Turning Movement Count (3 . SIXTH LINE & DUNDAS ST E)

Start Time	N Approach 6TH LINE						E Approach DUNDAS ST W						S Approach 6TH LINE						W Approach DUNDAS ST W						Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Thru N:S	Left N:E	UTurn N:N	Peds N:	Approach Total	Right E:N	Thru E:W	Left E:S	UTurn E:E	Peds E:	Approach Total	Right S:E	Thru S:N	Left S:W	UTurn S:S	Peds S:	Approach Total	Right W:S	Thru W:E	Left W:N	UTurn W:W	Peds W:	Approach Total		
07:00:00	8	13	20	0	0	41	12	145	8	0	0	165	24	11	11	0	1	46	17	274	12	1	1	304	556	
07:15:00	14	13	23	0	0	50	11	127	15	0	0	153	25	16	12	0	0	53	23	300	13	1	0	337	593	
07:30:00	19	39	32	0	0	90	15	187	14	0	2	216	28	28	17	0	0	73	35	371	15	0	3	421	800	
07:45:00	12	40	34	1	0	87	12	186	16	0	0	214	52	29	29	0	0	110	30	401	18	0	0	449	860	2809
08:00:00	19	43	36	0	0	98	17	164	25	0	0	206	55	28	35	0	0	118	53	402	17	0	1	472	894	3147
08:15:00	20	41	34	0	0	95	15	223	33	0	0	271	35	36	43	0	5	114	45	398	23	0	0	466	946	3500
08:30:00	19	43	31	0	1	93	15	222	35	0	0	272	46	24	38	0	2	108	52	473	26	1	1	552	1025	3725
08:45:00	19	39	32	0	1	90	13	256	27	0	0	296	61	48	50	0	3	159	49	383	9	0	5	441	986	3851
09:00:00	32	34	45	0	0	111	25	187	16	0	0	228	42	24	31	0	1	97	29	354	16	4	0	403	839	3796
09:15:00	12	32	43	0	0	87	29	190	19	0	0	238	19	13	14	0	0	46	26	319	14	4	2	363	734	3584
09:30:00	17	13	28	0	0	58	12	160	13	0	0	185	26	15	20	0	0	61	24	288	15	2	1	329	633	3192
09:45:00	16	22	19	0	0	57	12	192	29	0	0	233	22	13	19	0	0	54	32	264	11	0	2	307	651	2857
BREAK																										
16:00:00	25	33	25	0	0	83	28	450	39	1	0	518	26	31	29	0	2	86	34	360	19	0	1	413	1100	
16:15:00	12	37	23	0	1	72	28	444	24	0	1	496	16	26	21	0	1	63	42	369	25	0	0	436	1067	
16:30:00	20	41	23	1	0	85	20	429	21	0	0	470	28	26	34	0	0	88	58	339	24	1	0	422	1065	
16:45:00	19	31	21	0	3	71	28	420	37	0	0	485	32	26	39	0	2	97	43	368	22	0	0	433	1086	4318
17:00:00	26	31	38	0	1	95	31	372	24	0	1	427	31	36	50	0	3	117	34	318	16	0	2	368	1007	4225
17:15:00	24	25	35	0	0	84	36	429	31	1	1	497	20	36	33	0	0	89	47	316	27	1	3	391	1061	4219
17:30:00	25	46	25	0	0	96	30	410	31	0	2	471	28	44	37	0	2	109	29	280	25	2	0	336	1012	4166
17:45:00	19	31	26	0	0	76	20	420	31	0	0	471	36	28	35	0	0	99	40	338	17	1	2	396	1042	4122
18:00:00	21	21	28	0	0	70	15	361	28	0	0	404	31	31	37	0	0	99	33	280	16	1	1	330	903	4018
18:15:00	14	26	24	0	5	64	23	364	31	0	1	418	19	26	46	0	1	91	32	271	23	1	0	327	900	3857
18:30:00	12	31	27	0	0	70	25	331	30	1	0	387	33	31	38	0	1	102	23	225	10	4	1	262	821	3666
18:45:00	14	26	19	0	1	59	33	334	19	0	1	386	19	20	30	0	0	69	24	264	9	0	0	297	811	3435
Grand Total	438	751	691	2	13	1882	505	7003	596	3	9	8107	754	646	748	0	24	2148	854	7955	422	24	26	9255	**21392**	-
Approach%	23.3%	39.9%	36.7%	0.1%		-	6.2%	86.4%	7.4%	0%		-	35.1%	30.1%	34.8%	0%		-	9.2%	86%	4.6%	0.3%		-	-	-
Totals %	2%	3.5%	3.2%	0%		8.8%	2.4%	32.7%	2.8%	0%		37.9%	3.5%	3%	3.5%	0%		10%	4%	37.2%	2%	0.1%		43.3%	-	-
Heavy	14	19	10	0		-	14	237	17	0		-	14	12	19	0		-	13	236	13	0		-	-	-
Heavy %	3.2%	2.5%	1.4%	0%		-	2.8%	3.4%	2.9%	0%		-	1.9%	1.9%	2.5%	0%		-	1.5%	3%	3.1%	0%		-	-	-
Bicycles	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-
Bicycle %	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-

Spectrum

Turning Movement Count
Location Name: SIXTH LINE & DUNDAS ST E
Date: Tue, Jan 31, 2023 Deployment Lead: Walter Fugaj

Urban Trans Engineering Solutions Inc
146 9275 MARKHAM ROAD
MARKHAM ONTARIO, L6E 0H9
CANADA

Peak Hour: 08:00 AM - 09:00 AM Weather: Broken Clouds (-10.94 °C)

Start Time	N Approach 6TH LINE						E Approach DUNDAS ST W						S Approach 6TH LINE						W Approach DUNDAS ST W						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
08:00:00	19	43	36	0	0	98	17	164	25	0	0	206	55	28	35	0	0	118	53	402	17	0	1	472	894
08:15:00	20	41	34	0	0	95	15	223	33	0	0	271	35	36	43	0	5	114	45	398	23	0	0	466	946
08:30:00	19	43	31	0	1	93	15	222	35	0	0	272	46	24	38	0	2	108	52	473	26	1	1	552	1025
08:45:00	19	39	32	0	1	90	13	256	27	0	0	296	61	48	50	0	3	159	49	383	9	0	5	441	986
Grand Total	77	166	133	0	2	376	60	865	120	0	0	1045	197	136	166	0	10	499	199	1656	75	1	7	1931	**3851**
Approach%	20.5%	44.1%	35.4%	0%		-	5.7%	82.8%	11.5%	0%		-	39.5%	27.3%	33.3%	0%		-	10.3%	85.8%	3.9%	0.1%		-	**-**
Totals %	2%	4.3%	3.5%	0%		9.8%	1.6%	22.5%	3.1%	0%		27.1%	5.1%	3.5%	4.3%	0%		13%	5.2%	43%	1.9%	0%		50.1%	**-**
PHF	0.96	0.97	0.92	0		0.96	0.88	0.84	0.86	0		0.88	0.81	0.71	0.83	0		0.78	0.94	0.88	0.72	0.25		0.87	**-**
Heavy	3	5	2	0		10	3	60	6	0		69	3	6	9	0		18	2	32	2	0		36	**-**
Heavy %	3.9%	3%	1.5%	0%		2.7%	5%	6.9%	5%	0%		6.6%	1.5%	4.4%	5.4%	0%		3.6%	1%	1.9%	2.7%	0%		1.9%	**-**
Lights	74	161	131	0		366	57	805	114	0		976	194	130	157	0		481	197	1624	73	1		1895	**-**
Lights %	96.1%	97%	98.5%	0%		97.3%	95%	93.1%	95%	0%		93.4%	98.5%	95.6%	94.6%	0%		96.4%	99%	98.1%	97.3%	100%		98.1%	**-**
Single-Unit Trucks	1	1	0	0		2	2	25	0	0		27	0	1	1	0		2	0	13	2	0		15	**-**
Single-Unit Trucks %	1.3%	0.6%	0%	0%		0.5%	3.3%	2.9%	0%	0%		2.6%	0%	0.7%	0.6%	0%		0.4%	0%	0.8%	2.7%	0%		0.8%	**-**
Buses	2	4	2	0		8	1	8	6	0		15	3	5	8	0		16	2	12	0	0		14	**-**
Buses %	2.6%	2.4%	1.5%	0%		2.1%	1.7%	0.9%	5%	0%		1.4%	1.5%	3.7%	4.8%	0%		3.2%	1%	0.7%	0%	0%		0.7%	**-**
Articulated Trucks	0	0	0	0		0	0	27	0	0		27	0	0	0	0		0	0	7	0	0		7	**-**
Articulated Trucks %	0%	0%	0%	0%		0%	0%	3.1%	0%	0%		2.6%	0%	0%	0%	0%		0%	0%	0.4%	0%	0%		0.4%	**-**
Bicycles on Road	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	**-**
Bicycles on Road %	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	**-**
Pedestrians	-	-	-	-	2	-	-	-	-	-	0	-	-	-	-	-	10	-	-	-	-	-	7	-	**-**
Pedestrians%	-	-	-	-	10.5%		-	-	-	-	0%		-	-	-	-	52.6%		-	-	-	-	36.8%		**-**
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	**-**
Bicycles on Crosswalk%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		**-**

Spectrum

Turning Movement Count
Location Name: SIXTH LINE & DUNDAS ST E
Date: Tue, Jan 31, 2023 Deployment Lead: Walter Fugaj

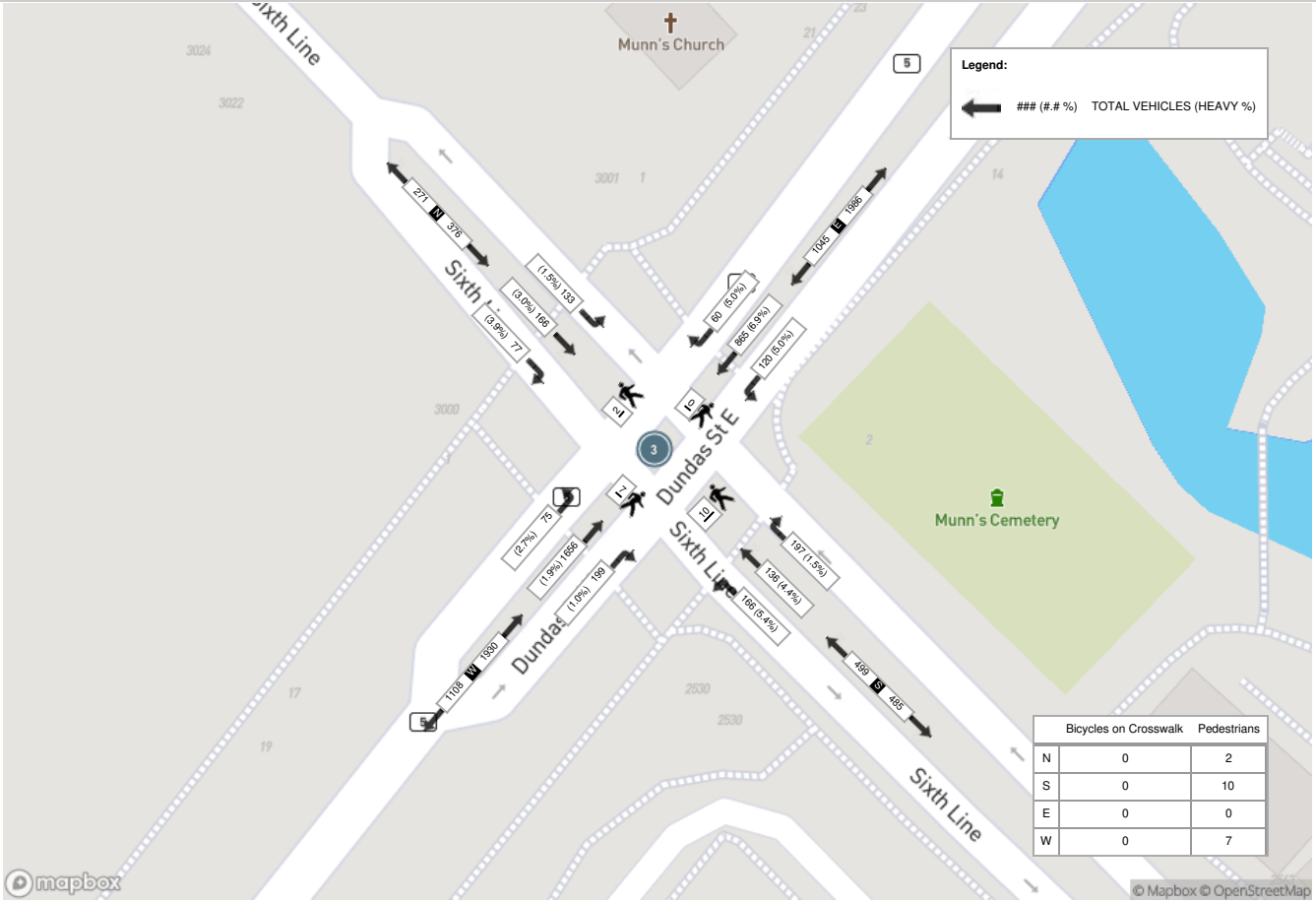
Urban Trans Engineering Solutions Inc
146 9275 MARKHAM ROAD
MARKHAM ONTARIO, L6E 0H9
CANADA

Peak Hour: 04:00 PM - 05:00 PM Weather: Overcast Clouds (-5.96 °C)

Start Time	N Approach 6TH LINE						E Approach DUNDAS ST W						S Approach 6TH LINE						W Approach DUNDAS ST W						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
16:00:00	25	33	25	0	0	83	28	450	39	1	0	518	26	31	29	0	2	86	34	360	19	0	1	413	1100
16:15:00	12	37	23	0	1	72	28	444	24	0	1	496	16	26	21	0	1	63	42	369	25	0	0	436	1067
16:30:00	20	41	23	1	0	85	20	429	21	0	0	470	28	26	34	0	0	88	58	339	24	1	0	422	1065
16:45:00	19	31	21	0	3	71	28	420	37	0	0	485	32	26	39	0	2	97	43	368	22	0	0	433	1086
Grand Total	76	142	92	1	4	311	104	1743	121	1	1	1969	102	109	123	0	5	334	177	1436	90	1	1	1704	**4318**
Approach%	24.4%	45.7%	29.6%	0.3%		-	5.3%	88.5%	6.1%	0.1%		-	30.5%	32.6%	36.8%	0%		-	10.4%	84.3%	5.3%	0.1%		-	**-**
Totals %	1.8%	3.3%	2.1%	0%		7.2%	2.4%	40.4%	2.8%	0%		45.6%	2.4%	2.5%	2.8%	0%		7.7%	4.1%	33.3%	2.1%	0%		39.5%	**-**
PHF	0.76	0.87	0.92	0.25		0.91	0.93	0.97	0.78	0.25		0.95	0.8	0.88	0.79	0		0.86	0.76	0.97	0.9	0.25		0.98	**-**
Heavy	2	2	1	0		5	2	36	1	0		39	6	2	3	0		11	2	95	3	0		100	**-**
Heavy %	2.6%	1.4%	1.1%	0%		1.6%	1.9%	2.1%	0.8%	0%		2%	5.9%	1.8%	2.4%	0%		3.3%	1.1%	6.6%	3.3%	0%		5.9%	**-**
Lights	74	140	91	1		306	102	1707	120	1		1930	96	107	120	0		323	175	1341	87	1		1604	**-**
Lights %	97.4%	98.6%	98.9%	100%		98.4%	98.1%	97.9%	99.2%	100%		98%	94.1%	98.2%	97.6%	0%		96.7%	98.9%	93.4%	96.7%	100%		94.1%	**-**
Single-Unit Trucks	1	0	0	0		1	1	14	1	0		16	6	0	2	0		8	2	34	1	0		37	**-**
Single-Unit Trucks %	1.3%	0%	0%	0%		0.3%	1%	0.8%	0.8%	0%		0.8%	5.9%	0%	1.6%	0%		2.4%	1.1%	2.4%	1.1%	0%		2.2%	**-**
Buses	1	2	1	0		4	1	10	0	0		11	0	2	1	0		3	0	13	2	0		15	**-**
Buses %	1.3%	1.4%	1.1%	0%		1.3%	1%	0.6%	0%	0%		0.6%	0%	1.8%	0.8%	0%		0.9%	0%	0.9%	2.2%	0%		0.9%	**-**
Articulated Trucks	0	0	0	0		0	0	12	0	0		12	0	0	0	0		0	0	48	0	0		48	**-**
Articulated Trucks %	0%	0%	0%	0%		0%	0%	0.7%	0%	0%		0.6%	0%	0%	0%	0%		0%	0%	3.3%	0%	0%		2.8%	**-**
Bicycles on Road	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	**-**
Bicycles on Road %	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	**-**
Pedestrians	-	-	-	-	4	-	-	-	-	-	1	-	-	-	-	-	5	-	-	-	-	-	1	-	**-**
Pedestrians%	-	-	-	-	36.4%		-	-	-	-	9.1%		-	-	-	-	45.5%		-	-	-	-	9.1%		**-**
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	**-**
Bicycles on Crosswalk%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		**-**

Urban Trans Engineering Solutions Inc
146 9275 MARKHAM ROAD
MARKHAM ONTARIO, L6E 0H9
CANADA

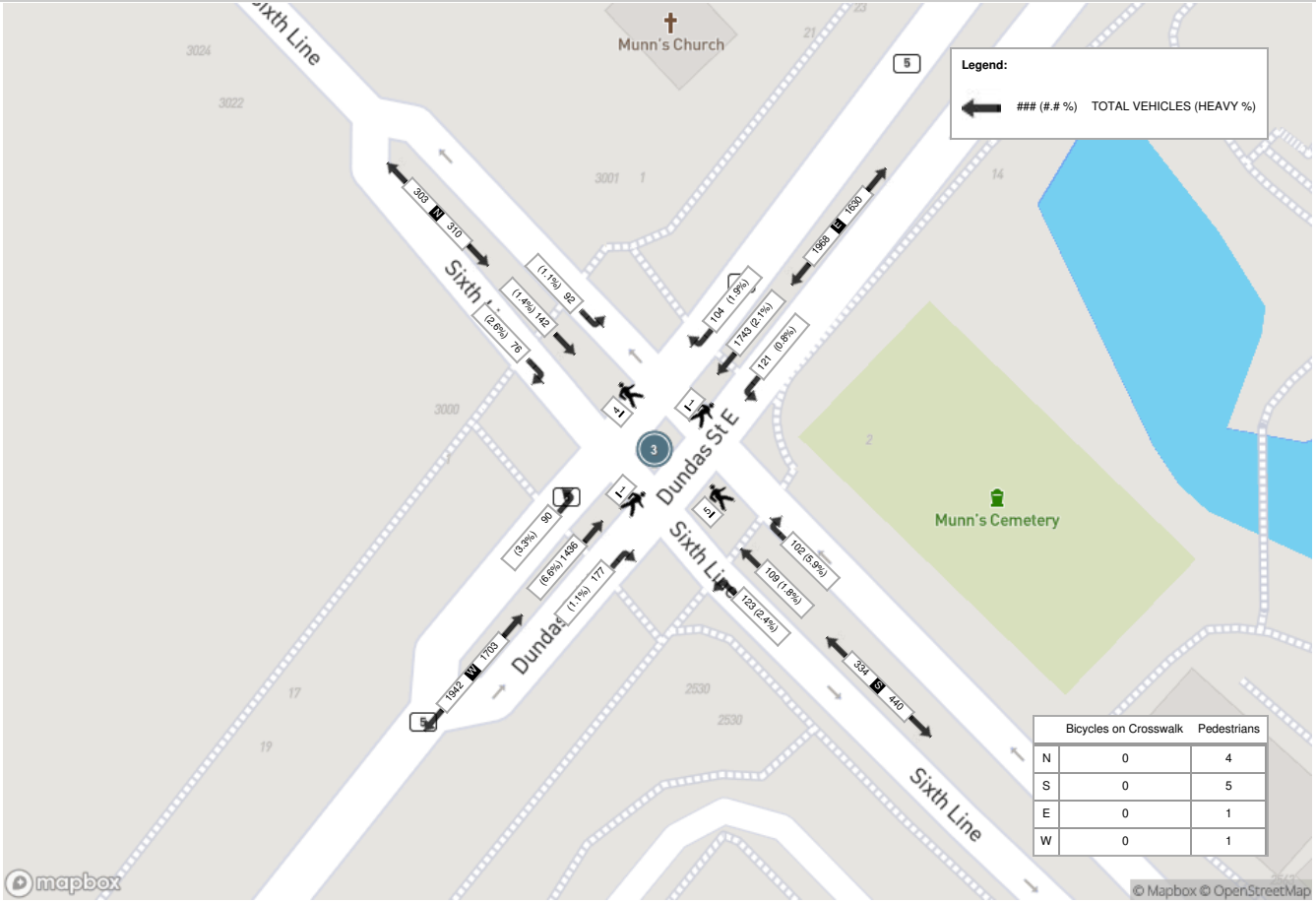
Peak Hour: 08:00 AM - 09:00 AM **Weather: Broken Clouds (-10.94 °C)**



	Bicycles on Crosswalk	Pedestrians
N	0	2
S	0	10
E	0	0
W	0	7

Urban Trans Engineering Solutions Inc
146 9275 MARKHAM ROAD
MARKHAM ONTARIO, L6E 0H9
CANADA

Peak Hour: 04:00 PM - 05:00 PM Weather: Overcast Clouds (-5.96 °C)



	Bicycles on Crosswalk	Pedestrians
N	0	4
S	0	5
E	0	1
W	0	1

Spectrum

Turning Movement Count
Location Name: SIXTH LINE & KAITTING TRAIL
Date: Tue, Jan 31, 2023 Deployment Lead: Walter Fugaj

Urban Trans Engineering Solutions Inc
146 9275 MARKHAM ROAD
MARKHAM ONTARIO, L6E 0H9
CANADA

Turning Movement Count (2 . SIXTH LINE & KAITTING TRAIL)

Start Time	N Approach SIXTH LINE					S Approach SIXTH LINE					W Approach KAITTING TRAIL					Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Thru N:S	UTurn N:N	Peds N:	Approach Total	Thru S:N	Left S:W	UTurn S:S	Peds S:	Approach Total	Right W:S	Left W:N	UTurn W:W	Peds W:	Approach Total		
07:00:00	0	35	0	0	35	30	4	0	0	34	6	0	0	0	6	75	
07:15:00	2	44	0	0	46	36	5	0	0	41	10	2	0	0	12	99	
07:30:00	2	76	0	2	78	54	3	0	1	57	12	2	0	2	14	149	
07:45:00	0	79	0	0	79	50	7	0	0	57	12	0	0	0	12	148	471
08:00:00	1	85	0	0	86	46	9	0	0	55	22	1	0	1	23	164	560
08:15:00	0	77	0	0	77	64	13	0	0	77	13	0	0	0	13	167	628
08:30:00	0	78	0	0	78	56	6	0	0	62	18	1	0	0	19	159	638
08:45:00	0	77	0	0	77	62	8	0	0	70	11	2	0	2	13	160	650
09:00:00	0	88	0	0	88	45	17	0	0	62	20	8	0	0	28	178	664
09:15:00	1	75	0	0	76	44	14	0	0	58	9	2	0	0	11	145	642
09:30:00	0	47	0	0	47	33	7	1	0	41	10	2	0	0	12	100	583
09:45:00	0	50	0	0	50	30	8	0	0	38	9	2	0	0	11	99	522
BREAK																	
16:00:00	0	74	0	0	74	67	10	0	0	77	7	1	0	1	8	159	
16:15:00	0	70	0	0	70	71	4	0	0	75	6	0	0	0	6	151	
16:30:00	2	68	0	0	70	57	11	0	0	68	9	0	0	0	9	147	
16:45:00	0	63	0	0	63	69	7	0	0	76	8	1	0	0	9	148	605
17:00:00	7	88	0	0	95	73	10	0	0	83	9	4	0	0	13	191	637
17:15:00	1	81	0	0	82	94	8	0	0	102	5	3	0	0	8	192	678
17:30:00	1	82	0	0	83	84	13	1	0	98	6	1	0	0	7	188	719
17:45:00	1	67	0	0	68	56	10	0	0	66	8	0	0	2	8	142	713
18:00:00	0	60	0	0	60	53	9	0	0	62	9	1	0	1	10	132	654
18:15:00	0	61	0	0	61	61	7	0	0	68	7	2	0	0	9	138	600
18:30:00	0	60	0	0	60	53	10	0	0	63	6	3	0	0	9	132	544
18:45:00	0	50	0	0	50	51	16	0	0	67	10	1	0	1	11	128	530
Grand Total	18	1635	0	2	1653	1339	216	2	1	1557	242	39	0	10	281	**3491**	-
Approach%	1.1%	98.9%	0%		-	86%	13.9%	0.1%		-	86.1%	13.9%	0%		-	**-**	-
Totals %	0.5%	46.8%	0%		47.4%	38.4%	6.2%	0.1%		44.6%	6.9%	1.1%	0%		8%	**-**	-
Heavy	2	45	0		-	35	5	0		-	2	1	0		-	**-**	-
Heavy %	11.1%	2.8%	0%		-	2.6%	2.3%	0%		-	0.8%	2.6%	0%		-	**-**	-
Bicycles	-	-	-		-	-	-	-		-	-	-	-		-	**-**	-
Bicycle %	-	-	-		-	-	-	-		-	-	-	-		-	**-**	-

Urban Trans Engineering Solutions Inc
146 9275 MARKHAM ROAD
MARKHAM ONTARIO, L6E 0H9
CANADA

Peak Hour: 08:15 AM - 09:15 AM Weather: Broken Clouds (-10.94 °C)

Start Time	N Approach SIXTH LINE					S Approach SIXTH LINE					W Approach KAITTING TRAIL					Int. Total (15 min)
	Right	Thru	UTurn	Peds	Approach Total	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	
08:15:00	0	77	0	0	77	64	13	0	0	77	13	0	0	0	13	167
08:30:00	0	78	0	0	78	56	6	0	0	62	18	1	0	0	19	159
08:45:00	0	77	0	0	77	62	8	0	0	70	11	2	0	2	13	160
09:00:00	0	88	0	0	88	45	17	0	0	62	20	8	0	0	28	178
Grand Total	0	320	0	0	320	227	44	0	0	271	62	11	0	2	73	**664**
Approach%	0%	100%	0%		-	83.8%	16.2%	0%		-	84.9%	15.1%	0%		-	**-**
Totals %	0%	48.2%	0%		48.2%	34.2%	6.6%	0%		40.8%	9.3%	1.7%	0%		11%	**-**
PHF	0	0.91	0		0.91	0.89	0.65	0		0.88	0.78	0.34	0		0.65	**-**
Heavy	0	11	0		11	9	1	0		10	0	0	0		0	**-**
Heavy %	0%	3.4%	0%		3.4%	4%	2.3%	0%		3.7%	0%	0%	0%		0%	**-**
Lights	0	309	0		309	218	43	0		261	62	11	0		73	**-**
Lights %	0%	96.6%	0%		96.6%	96%	97.7%	0%		96.3%	100%	100%	0%		100%	**-**
Single-Unit Trucks	0	2	0		2	4	1	0		5	0	0	0		0	**-**
Single-Unit Trucks %	0%	0.6%	0%		0.6%	1.8%	2.3%	0%		1.8%	0%	0%	0%		0%	**-**
Buses	0	9	0		9	5	0	0		5	0	0	0		0	**-**
Buses %	0%	2.8%	0%		2.8%	2.2%	0%	0%		1.8%	0%	0%	0%		0%	**-**
Articulated Trucks	0	0	0		0	0	0	0		0	0	0	0		0	**-**
Articulated Trucks %	0%	0%	0%		0%	0%	0%	0%		0%	0%	0%	0%		0%	**-**
Bicycles on Road	0	0	0		0	0	0	0		0	0	0	0		0	**-**
Bicycles on Road %	0%	0%	0%		0%	0%	0%	0%		0%	0%	0%	0%		0%	**-**
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	2	-	**-**
Pedestrians%	-	-	-	0%		-	-	-	0%		-	-	-	100%		**-**

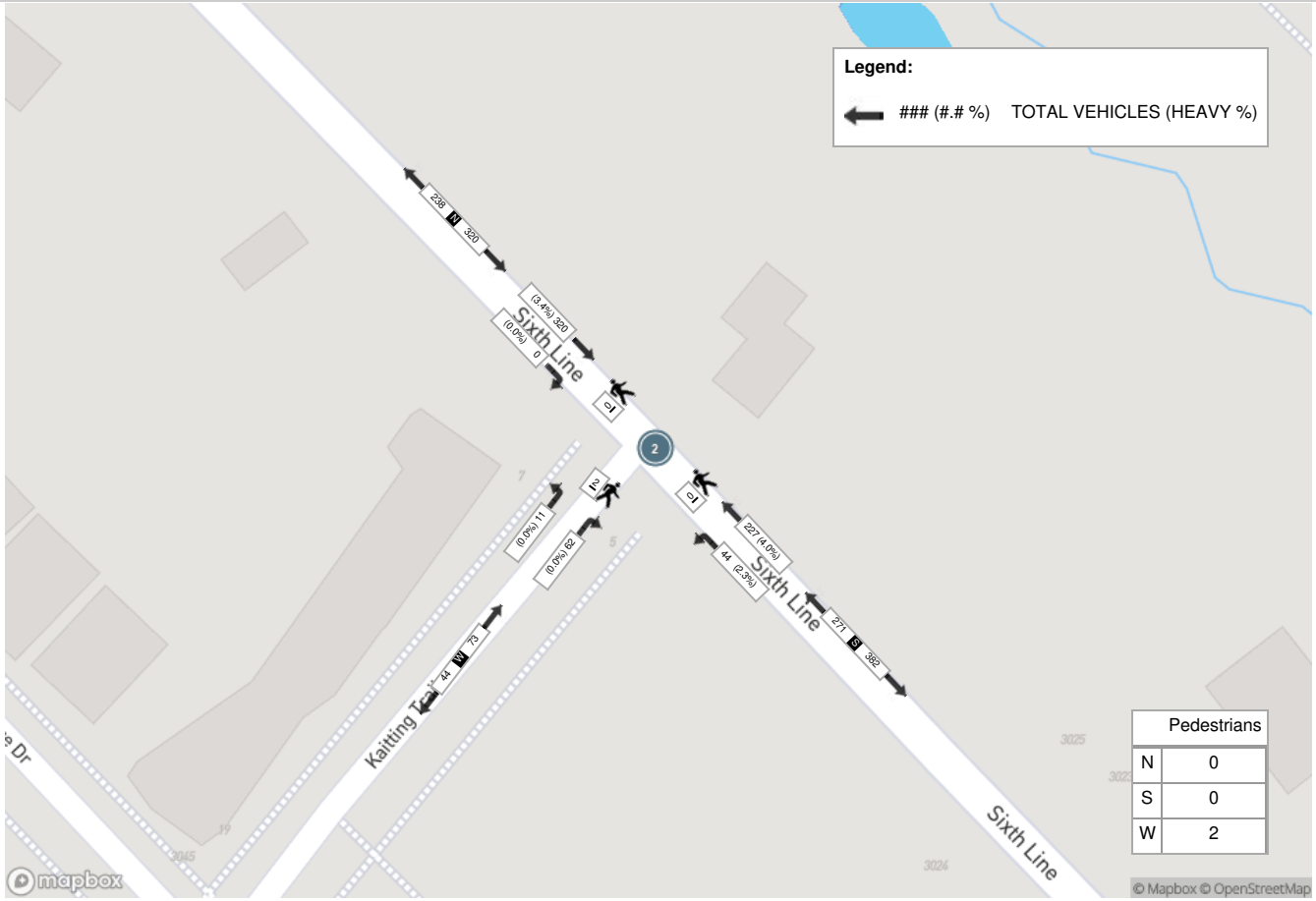
Urban Trans Engineering Solutions Inc
146 9275 MARKHAM ROAD
MARKHAM ONTARIO, L6E 0H9
CANADA

Peak Hour: 04:45 PM - 05:45 PM Weather: Overcast Clouds (-5.96 °C)

Start Time	N Approach SIXTH LINE					S Approach SIXTH LINE					W Approach KAITTING TRAIL					Int. Total (15 min)
	Right	Thru	UTurn	Peds	Approach Total	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	
16:45:00	0	63	0	0	63	69	7	0	0	76	8	1	0	0	9	148
17:00:00	7	88	0	0	95	73	10	0	0	83	9	4	0	0	13	191
17:15:00	1	81	0	0	82	94	8	0	0	102	5	3	0	0	8	192
17:30:00	1	82	0	0	83	84	13	1	0	98	6	1	0	0	7	188
Grand Total	9	314	0	0	323	320	38	1	0	359	28	9	0	0	37	**719**
Approach%	2.8%	97.2%	0%		-	89.1%	10.6%	0.3%		-	75.7%	24.3%	0%		-	**-**
Totals %	1.3%	43.7%	0%		44.9%	44.5%	5.3%	0.1%		49.9%	3.9%	1.3%	0%		5.1%	**-**
PHF	0.32	0.89	0		0.85	0.85	0.73	0.25		0.88	0.78	0.56	0		0.71	**-**
Heavy	1	1	0		2	2	1	0		3	0	0	0		0	**-**
Heavy %	11.1%	0.3%	0%		0.6%	0.6%	2.6%	0%		0.8%	0%	0%	0%		0%	**-**
Lights	8	313	0		321	318	37	1		356	28	9	0		37	**-**
Lights %	88.9%	99.7%	0%		99.4%	99.4%	97.4%	100%		99.2%	100%	100%	0%		100%	**-**
Single-Unit Trucks	1	1	0		2	0	0	0		0	0	0	0		0	**-**
Single-Unit Trucks %	11.1%	0.3%	0%		0.6%	0%	0%	0%		0%	0%	0%	0%		0%	**-**
Buses	0	0	0		0	2	1	0		3	0	0	0		0	**-**
Buses %	0%	0%	0%		0%	0.6%	2.6%	0%		0.8%	0%	0%	0%		0%	**-**
Articulated Trucks	0	0	0		0	0	0	0		0	0	0	0		0	**-**
Articulated Trucks %	0%	0%	0%		0%	0%	0%	0%		0%	0%	0%	0%		0%	**-**
Bicycles on Road	0	0	0		0	0	0	0		0	0	0	0		0	**-**
Bicycles on Road %	0%	0%	0%		0%	0%	0%	0%		0%	0%	0%	0%		0%	**-**
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	**-**
Pedestrians%	-	-	-	0%		-	-	-	0%		-	-	-	0%		**-**

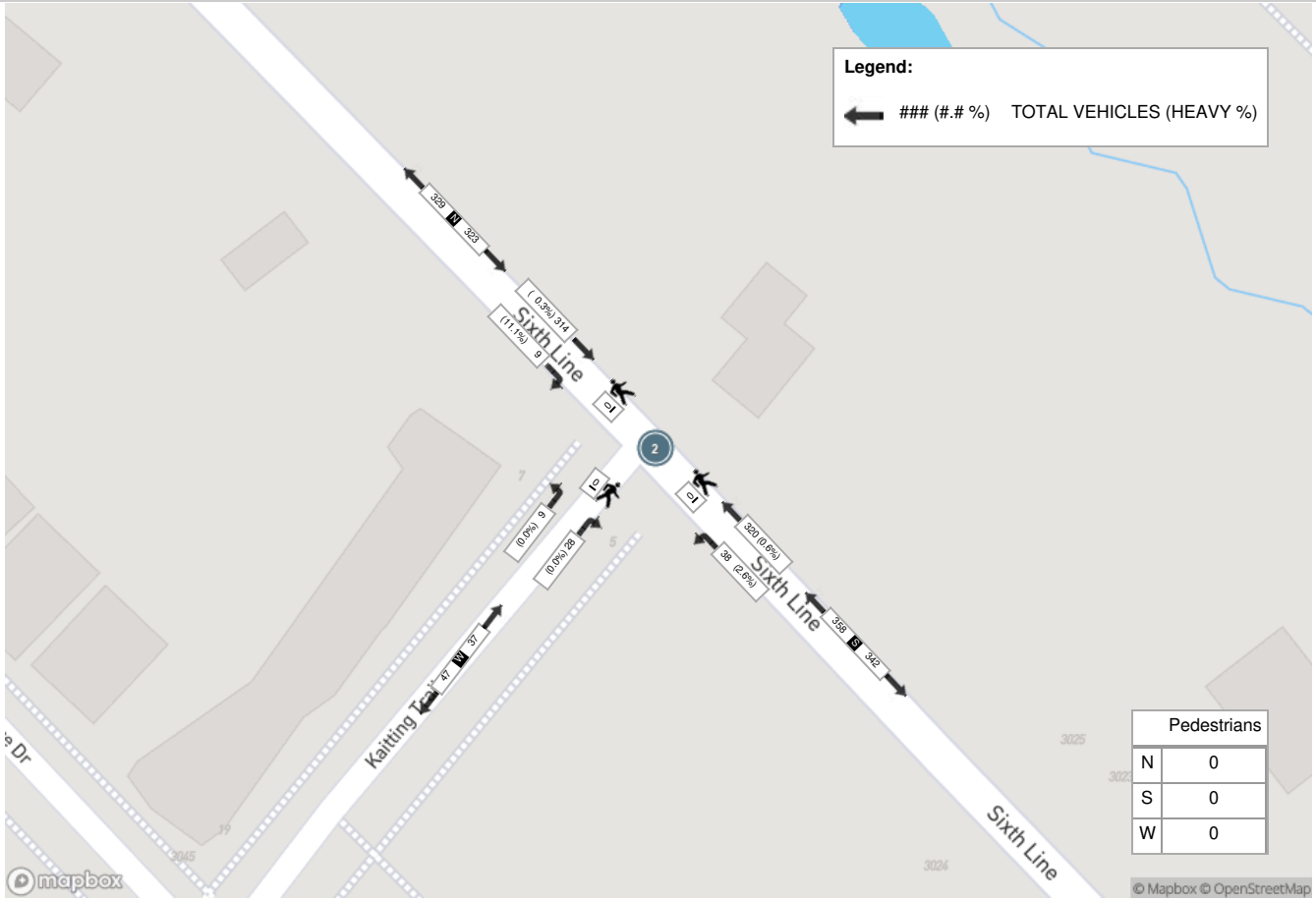
Urban Trans Engineering Solutions Inc
146 9275 MARKHAM ROAD
MARKHAM ONTARIO, L6E 0H9
CANADA

Peak Hour: 08:15 AM - 09:15 AM Weather: Broken Clouds (-10.94 °C)



Urban Trans Engineering Solutions Inc
146 9275 MARKHAM ROAD
MARKHAM ONTARIO, L6E 0H9
CANADA

Peak Hour: 04:45 PM - 05:45 PM Weather: Overcast Clouds (-5.96 °C)



Spectrum

Turning Movement Count
Location Name: SIXTH LINE & SIXTEEN MILE DR / WHEAT BOOM DR
Date: Tue, Jan 31, 2023 Deployment Lead: Walter Fugaj

Urban Trans Engineering Solutions Inc
146 9275 MARKHAM ROAD
MARKHAM ONTARIO, L6E 0H9
CANADA

Turning Movement Count (1 . SIXTH LINE & SIXTEEN MILE DR / WHEAT BOOM DR)

Start Time	N Approach SIXTH LINE						E Approach WHEAT BOOM DR						S Approach SIXTH LINE						W Approach SIXTEEN MILE DR						Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Thru N:S	Left N:E	UTurn N:N	Peds N:	Approach Total	Right E:N	Thru E:W	Left E:S	UTurn E:E	Peds E:	Approach Total	Right S:E	Thru S:N	Left S:W	UTurn S:S	Peds S:	Approach Total	Right W:S	Thru W:E	Left W:N	UTurn W:W	Peds W:	Approach Total		
07:00:00	11	18	0	1	0	30	0	2	1	0	0	3	2	25	2	0	0	29	16	4	8	0	0	28	90	
07:15:00	9	30	4	1	1	44	3	5	4	0	0	12	3	29	4	1	0	37	9	5	22	0	0	36	129	
07:30:00	11	47	1	0	2	59	2	5	8	0	1	15	2	43	8	0	2	53	20	9	17	0	1	46	173	
07:45:00	7	41	1	0	0	49	3	7	3	0	0	13	3	41	7	1	2	52	26	13	22	0	0	61	175	567
08:00:00	10	43	2	0	0	55	7	4	7	0	0	18	2	33	12	0	0	47	32	20	30	0	1	82	202	679
08:15:00	10	44	0	0	1	54	1	8	9	0	2	18	5	41	13	0	0	59	17	13	25	0	0	55	186	736
08:30:00	17	48	1	0	0	66	5	11	10	0	5	26	12	43	11	0	2	66	19	18	34	0	0	71	229	792
08:45:00	28	40	2	0	1	70	2	35	10	0	1	47	6	37	15	0	2	58	27	21	15	0	0	63	238	855
09:00:00	16	35	0	0	1	51	4	22	5	0	0	31	9	32	18	0	1	59	42	54	21	0	0	117	258	911
09:15:00	17	36	3	0	2	56	5	25	5	0	0	35	7	28	14	0	0	49	38	44	22	0	1	104	244	969
09:30:00	5	21	2	1	2	29	2	14	7	0	3	23	4	20	8	0	0	32	14	7	14	0	2	35	119	859
09:45:00	11	32	4	0	2	47	0	4	2	0	1	6	4	18	10	0	1	32	13	7	6	0	4	26	111	732
BREAK																										
16:00:00	19	37	5	1	0	62	2	32	13	0	0	47	6	39	22	0	0	67	21	14	15	0	0	50	226	
16:15:00	26	48	3	0	0	77	2	21	4	0	0	27	8	46	20	0	1	74	21	11	15	0	0	47	225	
16:30:00	16	34	4	1	0	55	2	16	6	0	0	24	2	31	20	1	0	54	20	12	15	0	0	47	180	
16:45:00	21	44	2	3	4	70	4	18	4	0	0	26	7	44	21	0	2	72	16	16	19	0	0	51	219	850
17:00:00	12	51	2	2	0	67	0	13	8	0	0	21	6	43	18	0	0	67	33	17	12	0	0	62	217	841
17:15:00	25	45	0	0	0	70	6	20	5	0	1	31	9	61	30	0	0	100	29	23	19	0	0	71	272	888
17:30:00	28	55	3	0	1	86	6	14	5	0	0	25	11	41	21	0	0	73	19	15	20	0	0	54	238	946
17:45:00	23	43	4	1	2	71	2	21	3	0	0	26	5	36	18	0	1	59	19	8	20	0	1	47	203	930
18:00:00	19	41	6	0	0	66	7	13	4	0	0	24	6	27	13	0	1	46	13	11	16	0	0	40	176	889
18:15:00	18	43	2	1	1	64	0	14	5	0	0	19	8	40	13	1	0	62	13	15	10	0	0	38	183	800
18:30:00	19	40	1	0	0	60	2	13	4	0	0	19	4	27	22	0	0	53	18	14	6	0	0	38	170	732
18:45:00	17	30	1	0	0	48	3	12	6	0	0	21	9	23	16	0	1	48	11	17	17	0	0	45	162	691
Grand Total	395	946	53	12	20	1406	70	349	138	0	14	557	140	848	356	4	16	1348	506	388	420	0	10	1314	**4625**	-
Approach%	28.1%	67.3%	3.8%	0.9%		-	12.6%	62.7%	24.8%	0%		-	10.4%	62.9%	26.4%	0.3%		-	38.5%	29.5%	32%	0%		-	-	-
Totals %	8.5%	20.5%	1.1%	0.3%		30.4%	1.5%	7.5%	3%	0%		12%	3%	18.3%	7.7%	0.1%		29.1%	10.9%	8.4%	9.1%	0%		28.4%	-	-
Heavy	11	25	3	0		-	1	24	5	0		-	2	28	9	0		-	14	27	6	0		-	-	-
Heavy %	2.8%	2.6%	5.7%	0%		-	1.4%	6.9%	3.6%	0%		-	1.4%	3.3%	2.5%	0%		-	2.8%	7%	1.4%	0%		-	-	-
Bicycles	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-
Bicycle %	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-

Spectrum

Turning Movement Count
Location Name: SIXTH LINE & SIXTEEN MILE DR / WHEAT BOOM DR
Date: Tue, Jan 31, 2023 Deployment Lead: Walter Fugaj

Urban Trans Engineering Solutions Inc
146 9275 MARKHAM ROAD
MARKHAM ONTARIO, L6E 0H9
CANADA

Peak Hour: 08:30 AM - 09:30 AM Weather: Broken Clouds (-10.94 °C)

Start Time	N Approach SIXTH LINE						E Approach WHEAT BOOM DR						S Approach SIXTH LINE						W Approach SIXTEEN MILE DR						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
08:30:00	17	48	1	0	0	66	5	11	10	0	5	26	12	43	11	0	2	66	19	18	34	0	0	71	229
08:45:00	28	40	2	0	1	70	2	35	10	0	1	47	6	37	15	0	2	58	27	21	15	0	0	63	238
09:00:00	16	35	0	0	1	51	4	22	5	0	0	31	9	32	18	0	1	59	42	54	21	0	0	117	258
09:15:00	17	36	3	0	2	56	5	25	5	0	0	35	7	28	14	0	0	49	38	44	22	0	1	104	244
Grand Total	78	159	6	0	4	243	16	93	30	0	6	139	34	140	58	0	5	232	126	137	92	0	1	355	**969**
Approach%	32.1%	65.4%	2.5%	0%		-	11.5%	66.9%	21.6%	0%		-	14.7%	60.3%	25%	0%		-	35.5%	38.6%	25.9%	0%		-	**-**
Totals %	8%	16.4%	0.6%	0%		25.1%	1.7%	9.6%	3.1%	0%		14.3%	3.5%	14.4%	6%	0%		23.9%	13%	14.1%	9.5%	0%		36.6%	**-**
PHF	0.7	0.83	0.5	0		0.87	0.8	0.66	0.75	0		0.74	0.71	0.81	0.81	0		0.88	0.75	0.63	0.68	0		0.76	**-**
Heavy	4	3	0	0		7	0	4	2	0		6	1	8	2	0		11	4	13	2	0		19	**-**
Heavy %	5.1%	1.9%	0%	0%		2.9%	0%	4.3%	6.7%	0%		4.3%	2.9%	5.7%	3.4%	0%		4.7%	3.2%	9.5%	2.2%	0%		5.4%	**-**
Lights	74	156	6	0		236	16	89	28	0		133	33	132	56	0		221	122	124	90	0		336	**-**
Lights %	94.9%	98.1%	100%	0%		97.1%	100%	95.7%	93.3%	0%		95.7%	97.1%	94.3%	96.6%	0%		95.3%	96.8%	90.5%	97.8%	0%		94.6%	**-**
Single-Unit Trucks	1	1	0	0		2	0	0	1	0		1	0	5	1	0		6	0	1	1	0		2	**-**
Single-Unit Trucks %	1.3%	0.6%	0%	0%		0.8%	0%	0%	3.3%	0%		0.7%	0%	3.6%	1.7%	0%		2.6%	0%	0.7%	1.1%	0%		0.6%	**-**
Buses	3	2	0	0		5	0	4	1	0		5	0	3	1	0		4	4	12	1	0		17	**-**
Buses %	3.8%	1.3%	0%	0%		2.1%	0%	4.3%	3.3%	0%		3.6%	0%	2.1%	1.7%	0%		1.7%	3.2%	8.8%	1.1%	0%		4.8%	**-**
Articulated Trucks	0	0	0	0		0	0	0	0	0		0	1	0	0	0		1	0	0	0	0		0	**-**
Articulated Trucks %	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	2.9%	0%	0%	0%		0.4%	0%	0%	0%	0%		0%	**-**
Bicycles on Road	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	**-**
Bicycles on Road %	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	**-**
Pedestrians	-	-	-	-	4	-	-	-	-	-	6	-	-	-	-	-	5	-	-	-	-	-	1	-	**-**
Pedestrians%	-	-	-	-	25%		-	-	-	-	37.5%		-	-	-	-	31.3%		-	-	-	-	6.3%		**-**

Spectrum

Turning Movement Count
Location Name: SIXTH LINE & SIXTEEN MILE DR / WHEAT BOOM DR
Date: Tue, Jan 31, 2023 Deployment Lead: Walter Fugaj

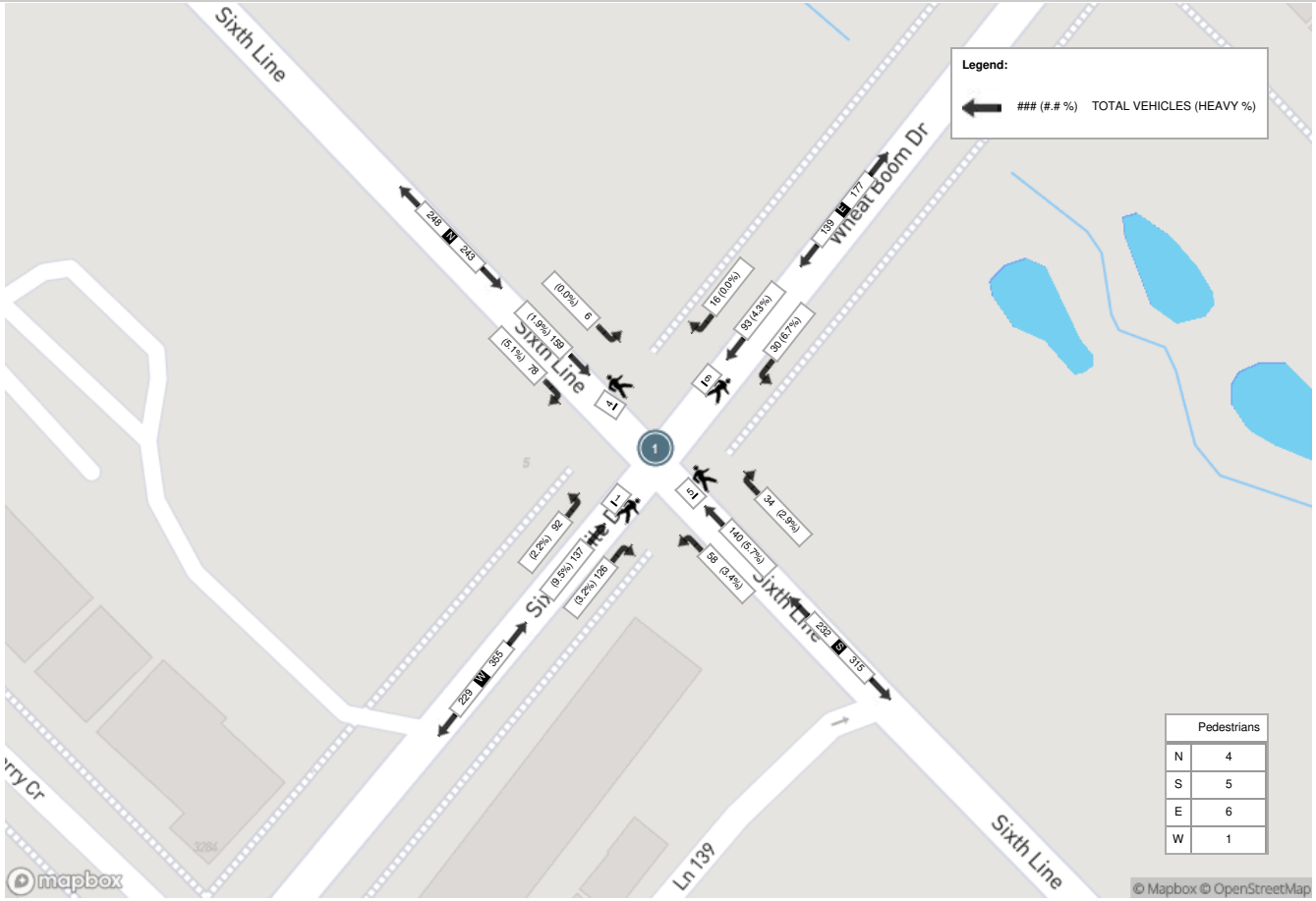
Urban Trans Engineering Solutions Inc
146 9275 MARKHAM ROAD
MARKHAM ONTARIO, L6E 0H9
CANADA

Peak Hour: 04:45 PM - 05:45 PM Weather: Overcast Clouds (-5.96 °C)

Start Time	N Approach SIXTH LINE						E Approach WHEAT BOOM DR						S Approach SIXTH LINE						W Approach SIXTEEN MILE DR						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
16:45:00	21	44	2	3	4	70	4	18	4	0	0	26	7	44	21	0	2	72	16	16	19	0	0	51	219
17:00:00	12	51	2	2	0	67	0	13	8	0	0	21	6	43	18	0	0	67	33	17	12	0	0	62	217
17:15:00	25	45	0	0	0	70	6	20	5	0	1	31	9	61	30	0	0	100	29	23	19	0	0	71	272
17:30:00	28	55	3	0	1	86	6	14	5	0	0	25	11	41	21	0	0	73	19	15	20	0	0	54	238
Grand Total	86	195	7	5	5	293	16	65	22	0	1	103	33	189	90	0	2	312	97	71	70	0	0	238	**946**
Approach%	29.4%	66.6%	2.4%	1.7%		-	15.5%	63.1%	21.4%	0%		-	10.6%	60.6%	28.8%	0%		-	40.8%	29.8%	29.4%	0%		-	**-**
Totals %	9.1%	20.6%	0.7%	0.5%		31%	1.7%	6.9%	2.3%	0%		10.9%	3.5%	20%	9.5%	0%		33%	10.3%	7.5%	7.4%	0%		25.2%	**-**
PHF	0.77	0.89	0.58	0.42		0.85	0.67	0.81	0.69	0		0.83	0.75	0.77	0.75	0		0.78	0.73	0.77	0.88	0		0.84	**-**
Heavy	0	1	1	0		2	1	4	0	0		5	0	1	1	0		2	1	2	0	0		3	**-**
Heavy %	0%	0.5%	14.3%	0%		0.7%	6.3%	6.2%	0%	0%		4.9%	0%	0.5%	1.1%	0%		0.6%	1%	2.8%	0%	0%		1.3%	**-**
Lights	86	194	6	5		291	15	61	22	0		98	33	188	89	0		310	96	69	70	0		235	**-**
Lights %	100%	99.5%	85.7%	100%		99.3%	93.8%	93.8%	100%	0%		95.1%	100%	99.5%	98.9%	0%		99.4%	99%	97.2%	100%	0%		98.7%	**-**
Single-Unit Trucks	0	1	1	0		2	1	2	0	0		3	0	0	0	0		0	1	1	0	0		2	**-**
Single-Unit Trucks %	0%	0.5%	14.3%	0%		0.7%	6.3%	3.1%	0%	0%		2.9%	0%	0%	0%	0%		0%	1%	1.4%	0%	0%		0.8%	**-**
Buses	0	0	0	0		0	0	2	0	0		2	0	1	1	0		2	0	1	0	0		1	**-**
Buses %	0%	0%	0%	0%		0%	0%	3.1%	0%	0%		1.9%	0%	0.5%	1.1%	0%		0.6%	0%	1.4%	0%	0%		0.4%	**-**
Articulated Trucks	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	**-**
Articulated Trucks %	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	**-**
Bicycles on Road	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	**-**
Bicycles on Road %	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	**-**
Pedestrians	-	-	-	-	5	-	-	-	-	-	1	-	-	-	-	-	2	-	-	-	-	-	0	-	**-**
Pedestrians%	-	-	-	-	62.5%		-	-	-	-	12.5%		-	-	-	-	25%		-	-	-	-	0%		**-**

Urban Trans Engineering Solutions Inc
146 9275 MARKHAM ROAD
MARKHAM ONTARIO, L6E 0H9
CANADA

Peak Hour: 08:30 AM - 09:30 AM **Weather: Broken Clouds (-10.94 °C)**

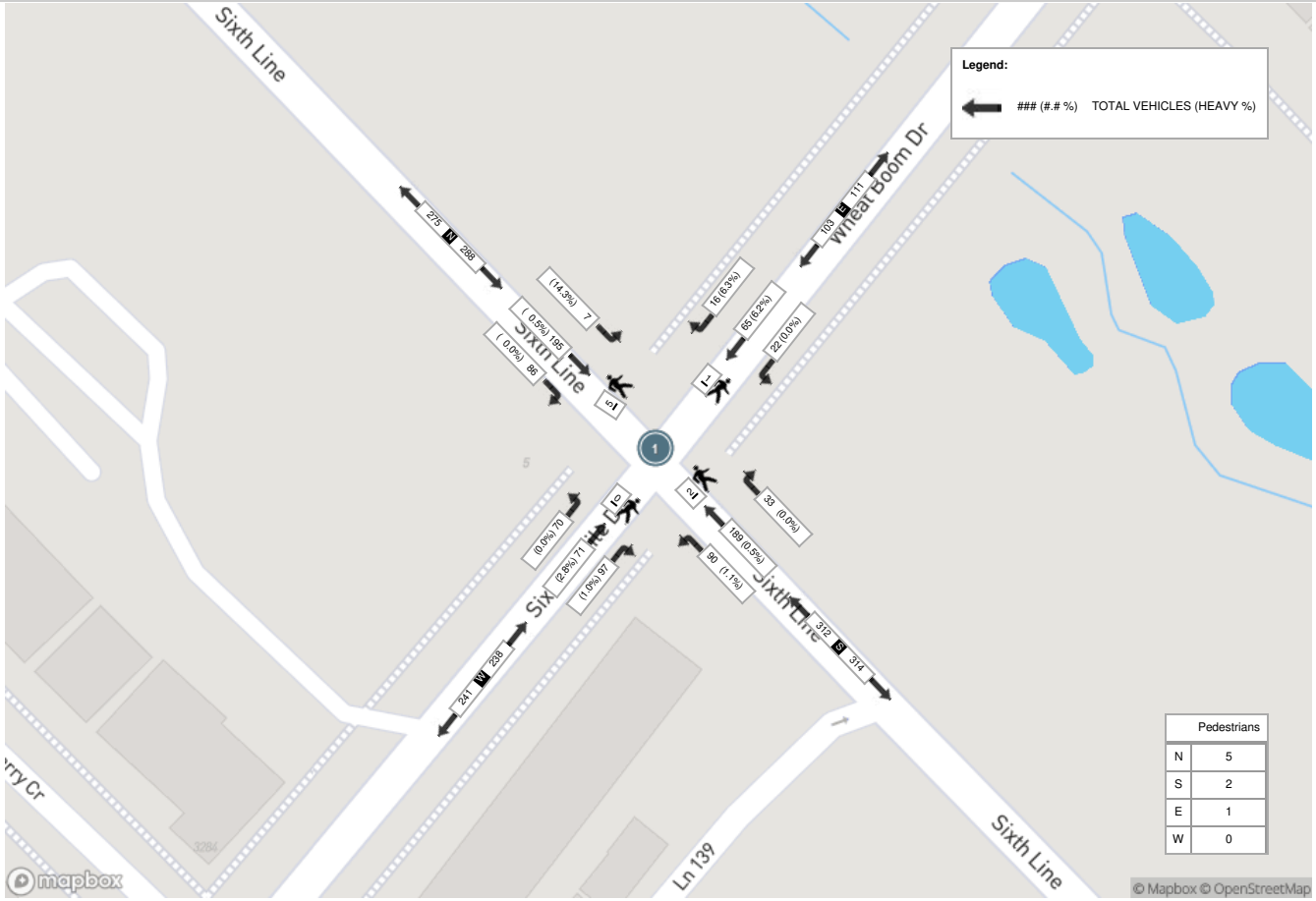


Spectrum

Turning Movement Count
Location Name: SIXTH LINE & SIXTEEN MILE DR / WHEAT BOOM DR
Date: Tue, Jan 31, 2023 Deployment Lead: Walter Fugaj

Urban Trans Engineering Solutions Inc
146 9275 MARKHAM ROAD
MARKHAM ONTARIO, L6E 0H9
CANADA

Peak Hour: 04:45 PM - 05:45 PM **Weather: Overcast Clouds (-5.96 °C)**



Town of Oakville

ECONOLITE

MOVING TRAFFIC FORWARD

OAK5 - Sixth Line @ Sixteen Mile - Econolite Type - Cobalt

Configuration Port 1 (SDLC)

Port 1 SDLC (MM) 1-4-1

BIU	1	2	3	4	5	6	7	8
Term & Facility	X	X						
Detector Rack	X		X					

Enable TS2/MMU Type Cabinet: No
Enable MMU Extended Status: Yes
Enable SDLC Stop Time: No
Enable 3 Critical RFE's Lockup: Yes

MMU Program (MM) 1-4-2

Channel Can Serve With Channel	
Channel 1	**Channel 2**
1	5
1	6
1	11
2	5
2	6
2	9
2	11
3	7
3	8
3	12
4	7
4	8
4	10
4	12
5	9
6	9
6	11
7	10
8	10
8	12
9	11
10	12

Color Check Enable (MM) 1-4-3

Enable Color Check: No

MMU/LS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Green																
Yellow																
Red																

Secondary Stations/Tests (MM) 1-4-4

ID	1	2	3	4	5	6	7	8	MMU
Term & Facility									

ID	1	2	3	4	5	6	7	8	Diag
Detector Rack									

Enable SDLC Diagnostic Test: No

Town of Oakville

ECONOLITE

MOVING TRAFFIC FORWARD

OAK5 - Sixth Line @ Sixteen Mile - Econolite Type - Cobalt

Controller Timing Plan (MM) 2-1

Plan 1 - ""

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Direction	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Min Green	0	15	0	15	0	15	0	15	5	5	5	5	5	5	5	5
Bk Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CS Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk	0	10	0	8	0	10	0	8	0	10	0	10	0	10	0	10
Walk2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear	0	18	0	13	0	18	0	13	0	16	0	16	0	16	0	16
Ped Clear 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Ext	3.0	5.0	3.0	5.0	3.0	5.0	3.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Ext 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max1	35	40	35	30	35	40	35	30	35	35	35	35	35	35	35	35
Max2	40	60	40	40	40	40	40	40	40	40	40	40	40	40	40	40
Max3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DYM Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dym Step	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	3.0	3.7	3.0	3.3	3.0	3.7	3.0	3.3	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Red Clear	0.0	2.4	0.0	2.8	0.0	2.4	0.0	2.8	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Red Max	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Act B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sec/Act	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Int	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Wt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STPTDuc	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TTReduc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Town of Oakville

ECONOLITE

MOVING TRAFFIC FORWARD

OAK5 - Sixth Line @ Sixteen Mile - Econolite Type - Cobalt

Controller Start / Flash Data (MM) 2-5

Start Up

Phase	Phase Setting
1	.
2	Y
3	.
4	.
5	.
6	Y
7	.
8	.
9	.
10	.
11	.
12	.
13	.
14	.
15	.
16	.

Overlap
A
B
C
D

Flash Thru Mon: No
Flash Time: 0
All Red: 4
Power Start Seq: 1
MUTCD Enabled: No
Y->G: n/a

Automatic Flash

Entry
2
6

Exit
2
6

Overlap Exit
A
B
C
D

Flash Thru Mon: No
Exit Flash: W
Minimum Flash: 8
Mimimum Recall: Yes
Cycle Through Phase: Yes

Town of Oakville

ECONOLITE

MOVING TRAFFIC FORWARD

OAK5 - Sixth Line @ Sixteen Mile - Econolite Type - Cobalt

Controller Options

Controller Options (MM) 2-6-1

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Flashing Grn Ph	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Guar Passage																
Non-Act I		X				X										
Non-Act II				X				X								
Dual Entry		X		X		X		X								
Cond Service																
Cond Reservice																
Ped Re-Service		X				X										
Rest In Walk		X				X										
Flashing Walk																
Ped Clr-Yel																
Ped Clr-Red																
IGRN + Veh Ext																

Ped Clear Protect: Off Unit Red Revert: 2.0 MUTCD 3 Seconds Don't Walk: No

Pre-Timed Mode (MM) 2-7

Enable Pre-Timed Mode: No Free Input Disables Pre-Timed: No

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Pre-Timed																

Phase Recall Options (MM) 2-8

Plan # 1

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Lock Detector																
Vehicle Recall																
Ped Recall		X				X										
Max Recall		X				X										
Soft Recall																
No Rest																
AI Calc																

Town of Oakville

ECONOLITE

MOVING TRAFFIC FORWARD

OAK5 - Sixth Line @ Sixteen Mile - Econolite Type - Cobalt

Preempt Plan

Preempt Plan (MM) 4-1

Preempt Plan 3

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Overlap	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Trk Clr Veh	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Trk Clr Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Enable Trailing	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Dwell Veh	.	X	.	.	.	X	.	.	.	.	.	.	.	.	.	.
Dwell Ped																
Dwell Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycling Veh	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycling Ped																
Cycling Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Exit Phases		X				X										
Exit Calls																
Special Function																

Enable	Yes	Preempt Override	Yes	Interlock Enable	No
Det Lock	Yes	Delay	0	Inhibit	0
Override Flash	No	Duration	10	CLR > GRN	No
Term Ovlp Asap	No	PC Through Yel	Yes	Terminate Phase	No
Ped Dark	No	Track Clear Rsrv	No	Dwell Flash	Off
Linked Pmt	0	FL Exit Color	Grn	Exit Options	Off
Exit Timing Plan	0	Reservice	0	Fault Type	Hard

Ring	1	2	3	4
Free During Pmt	No	No	No	No

Timing	Walk	Ped Clr	Min Grn	Yellow	Red
Entrance	0	7	5	3.7	2.4
	Min Grn	Ext Grn	Max Grn	Yellow	Red
Track Clear	0	0	0	4.0	1.0
	Min Dwell	Pmt Ext	Max Time	Yellow	Red
Dwell / Cycle-Exit	0	0.0	0	4.0	1.0

Preemption Active Out	On	Preempt Act Dwell	No
Other - Priority Preempt	Off	Non-Priority Pmt	Off
Inhibit Extension Time	0.0	Ped Priority Return	Off
Veh Priority Return	Off	Queue Delay	Off
Conditional Delay	Off		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Veh Pri Return %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Preempt Plan 4

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Overlap	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**	**L**	**M**	**N**	**O**	**P**
Trk Clr Veh	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Trk Clr Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Enable Trailing	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Dwell Veh	.	.	.	X	.	.	.	X	.	.	.	.	.	.	.	.
Dwell Ped																
Dwell Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycling Veh	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycling Ped																
Cycling Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Exit Phases				X				X								
Exit Calls																
Special Function																

Enable	Yes	Preempt Override	Yes	Interlock Enable	No
Det Lock	Yes	Delay	0	Inhibit	0
Override Flash	No	Duration	10	CLR > GRN	No
Term Ovlp Asap	No	PC Through Yel	Yes	Terminate Phase	No
Ped Dark	No	Track Clear Rsrv	No	Dwell Flash	Off
Linked Pmt	0	FL Exit Color	Grn	Exit Options	Off
Exit Timing Plan	0	Reservice	0	Fault Type	Hard

Ring	1	2	3	4
Free During Pmt	No	No	No	No

Timing	Walk	Ped Clr	Min Grn	Yellow	Red
Entrance	0	7	5	3.3	2.8
	Min Grn	**Ext Grn**	**Max Grn**	**Yellow**	**Red**
Track Clear	0	0	0	4.0	1.0
	Min Dwell	**Pmt Ext**	**Max Time**	**Yellow**	**Red**

Dwell / Cycle-Exit	0	0.0	0	4.0	1.0

Preemption Active Out	On	Preempt Act Dwell	No
Other - Priority Preempt	Off	Non-Priority Pmt	Off
Inhibit Extension Time	0.0	Ped Priority Return	Off
Veh Priority Return	Off	Queue Delay	Off
Conditional Delay	Off		

Phase	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Veh Pri Return %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Town of Oakville

ECONOLITE

MOVING TRAFFIC FORWARD

OAK5 - Sixth Line @ Sixteen Mile - Econolite Type - Cobalt

Time Base Clock/Calendar

Clock/Calendar Data (MM) 5-1

Manual Action Plan:	0
SYNC Reference Time:	00:00
SYNC Reference:	Reference Time
Day Light Savings:	USDLS
Time Reset Input Set Time:	3:30:00
Standard Time From GMT:	-5

Town of Oakville

ECONOLITE

MOVING TRAFFIC FORWARD

OAK5 - Sixth Line @ Sixteen Mile - Econolite Type - Cobalt

Detectors

Detectors - Pg 1

Veh Det Phase Assignment (MM) 6-1

Vehicle Detector Plan Number - 1

Veh Detector	Assigned Phase	Called Phase	Type
4	4		N
8	8		N
9	9		N
10	10		N
11	11		N
12	12		N
13	13		N
14	14		N
15	15		N
16	16		N
33	9		N
34	10		N
35	11		N
36	12		N

Vehicle Detector Plan Number - 2

Veh Detector	Assigned Phase	Called Phase	Type
1	1		N
2	2		N
3	3		N
4	4		N
5	5		N
6	6		N
7	7		N
8	8		N
9	9		N
10	10		N
11	11		N
12	12		N
13	13		N
14	14		N
15	15		N
16	16		N

Vehicle Detector Setup (MM) 6-2

Veh Detector	Type	TS2 Detector	Description

1	N-NTCIP	Yes	
2	N-NTCIP	Yes	
3	N-NTCIP	Yes	
4	N-NTCIP	Yes	
5	N-NTCIP	Yes	
6	N-NTCIP	Yes	
7	N-NTCIP	Yes	
8	N-NTCIP	Yes	
9	N-NTCIP	Yes	
10	N-NTCIP	Yes	
11	N-NTCIP	Yes	
12	N-NTCIP	Yes	
13	N-NTCIP	Yes	
14	N-NTCIP	Yes	
15	N-NTCIP	Yes	
16	N-NTCIP	Yes	
17	N-NTCIP	Yes	
18	N-NTCIP	Yes	
19	N-NTCIP	Yes	
20	N-NTCIP	Yes	
21	N-NTCIP	Yes	
22	N-NTCIP	Yes	
23	N-NTCIP	Yes	
24	N-NTCIP	Yes	
25	N-NTCIP	Yes	
26	N-NTCIP	Yes	
27	N-NTCIP	Yes	
28	N-NTCIP	Yes	
29	N-NTCIP	Yes	
30	N-NTCIP	Yes	
31	N-NTCIP	Yes	
32	N-NTCIP	Yes	
33	N-NTCIP	Yes	
34	N-NTCIP	Yes	
35	N-NTCIP	Yes	
36	N-NTCIP	Yes	
37	N-NTCIP	Yes	
38	N-NTCIP	Yes	
39	N-NTCIP	Yes	
40	N-NTCIP	Yes	
41	N-NTCIP	Yes	
42	N-NTCIP	Yes	
43	N-NTCIP	Yes	
44	N-NTCIP	Yes	
45	N-NTCIP	Yes	
46	N-NTCIP	Yes	
47	N-NTCIP	Yes	
48	N-NTCIP	Yes	
49	N-NTCIP	Yes	
50	N-NTCIP	Yes	
51	N-NTCIP	Yes	

52	N-NTCIP	Yes	
53	N-NTCIP	Yes	
54	N-NTCIP	Yes	
55	N-NTCIP	Yes	
56	N-NTCIP	Yes	
57	N-NTCIP	Yes	
58	N-NTCIP	Yes	
59	N-NTCIP	Yes	
60	N-NTCIP	Yes	
61	N-NTCIP	Yes	
62	N-NTCIP	Yes	
63	N-NTCIP	Yes	
64	N-NTCIP	Yes	

Vehicle Detector Plan Number - 1

Veh Detector	Phase	ECPI Log	Call Option	Delay Time	Ext Option	Extend Time / Passage Time	Queue Lim. / Discon. Time	Use Added Initial	Cross Switch Ph	Lock In	NTCIP Vol.	NTCIP Occ.	Pmt Queue Delay
1	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
2	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
3	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
4	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
5	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
6	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
7	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
8	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
9	9	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
10	10	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
11	11	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
12	12	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
13	13	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
14	14	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
15	15	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
16	16	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
33	9	No	No	0.0	None	0.0	0	No	0	None	No	No	No
34	10	No	No	0.0	None	0.0	0	No	0	None	No	No	No
35	11	No	No	0.0	None	0.0	0	No	0	None	No	No	No
36	12	No	No	0.0	None	0.0	0	No	0	None	No	No	No

Vehicle Detector Plan Number - 2

Veh Detector	Phase	ECPI Log	Call Option	Delay Time	Ext Option	Extend Time / Passage Time	Queue Lim. / Discon. Time	Use Added Initial	Cross Switch Ph	Lock In	NTCIP Vol.	NTCIP Occ.	Pmt Queue Delay
1	1	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
2	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
3	3	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
4	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
5	5	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
6	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No

7	7	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
8	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
9	9	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
10	10	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
11	11	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
12	12	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
13	13	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
14	14	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
15	15	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
16	16	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No

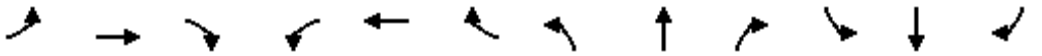
Ped Detector Phase Assignment (MM) 6-3

Mode: Econolite

Ped Detector Number	Called Phase															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.
3	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.
4	.	.	.	X	.	.	.	X	.	.	.	.	.	.	.	.
5	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.
6	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.
7	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.
8	.	.	.	X	.	.	.	X	.	.	.	.	.	.	.	.
9	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.
10	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.
11	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.	.
12	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.	.
13	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.	.
14	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.	.
15	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X	.
16	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X

Appendix E
Existing (2023) Traffic Level of Service Calculations

4: Sixth Line & Sixteen Mile Dr/Wheat Boom Dr



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	92	137	126	30	93	16	58	140	34	6	159	78
Future Volume (vph)	92	137	126	30	93	16	58	140	34	6	159	78
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	0.0		0.0	0.0		0.0	65.0		0.0	65.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Satd. Flow (prot)	1770	1661	0	1687	1801	0	1752	3314	0	1805	3297	0
Flt Permitted	0.655			0.332			0.567			0.614		
Satd. Flow (perm)	1220	1661	0	590	1801	0	1046	3314	0	1167	3297	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		61			11			48			111	
Link Speed (k/h)		50			50			60			60	
Link Distance (m)		104.8			123.3			164.3			137.2	
Travel Time (s)		7.5			8.9			9.9			8.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.68	0.63	0.75	0.75	0.66	0.80	0.81	0.81	0.71	0.50	0.83	0.70
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	10%	3%	7%	4%	0%	3%	6%	3%	0%	2%	6%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	135	385	0	40	161	0	72	221	0	12	303	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	15.0	15.0		15.0	15.0		15.0	15.0		15.0	15.0	
Minimum Split (s)	26.4	26.4		26.4	26.4		34.5	34.5		34.5	34.5	
Total Split (s)	30.0	30.0		30.0	30.0		40.0	40.0		40.0	40.0	
Total Split (%)	42.9%	42.9%		42.9%	42.9%		57.1%	57.1%		57.1%	57.1%	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.7	3.7		3.7	3.7	
All-Red Time (s)	2.4	2.4		2.4	2.4		2.8	2.8		2.8	2.8	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.4	5.4		5.4	5.4		6.5	6.5		6.5	6.5	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Act Effct Green (s)	18.5	18.5		18.5	18.5		33.6	33.6		33.6	33.6	
Actuated g/C Ratio	0.29	0.29		0.29	0.29		0.52	0.52		0.52	0.52	
v/c Ratio	0.38	0.74		0.24	0.30		0.13	0.13		0.02	0.17	
Control Delay	21.4	26.2		20.7	17.8		9.8	6.9		9.0	5.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	21.4	26.2		20.7	17.8		9.8	6.9		9.0	5.8	

4: Sixth Line & Sixteen Mile Dr/Wheat Boom Dr

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	C	C		C	B		A	A		A	A	
Approach Delay		25.0			18.4			7.6			5.9	
Approach LOS		C			B			A			A	
Queue Length 50th (m)	13.3	35.9		3.8	14.3		4.1	5.0		0.6	5.6	
Queue Length 95th (m)	19.1	36.3		8.8	19.1		10.9	10.6		1.9	12.2	
Internal Link Dist (m)		80.8			99.3			140.3			113.2	
Turn Bay Length (m)							65.0			65.0		
Base Capacity (vph)	469	677		227	700		548	1760		612	1781	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.29	0.57		0.18	0.23		0.13	0.13		0.02	0.17	

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 64.1			
Natural Cycle: 65			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.74			
Intersection Signal Delay: 15.6		Intersection LOS: B	
Intersection Capacity Utilization 65.3%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 4: Sixth Line & Sixteen Mile Dr/Wheat Boom Dr

60: Sixth Line & Dundas St E/Dundas St W

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	75	1656	199	120	865	60	166	136	197	133	166	77
Future Volume (vph)	75	1656	199	120	865	60	166	136	197	133	166	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	90.0		0.0	45.0		0.0	115.0		0.0	115.0		110.0
Storage Lanes	2		1	1		0	1		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Satd. Flow (prot)	1752	5085	1599	1719	4810	0	1719	3214	0	1770	3326	0
Flt Permitted	0.220			0.062			0.494			0.248		
Satd. Flow (perm)	406	5085	1599	112	4810	0	894	3214	0	462	3326	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			169		10			158			51	
Link Speed (k/h)		70			70			60			60	
Link Distance (m)		367.8			381.1			177.5			162.5	
Travel Time (s)		18.9			19.6			10.7			9.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.72	0.88	0.94	0.86	0.84	0.88	0.83	0.71	0.81	0.92	0.97	0.96
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	2%	1%	5%	7%	5%	5%	4%	2%	2%	3%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	104	1882	212	140	1098	0	200	435	0	145	251	0
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6			8			4		
Detector Phase	5	2	2	1	6		3	8		7	4	
Switch Phase												
Minimum Initial (s)	7.0	5.0	5.0	7.0	5.0		7.0	5.0		7.0	5.0	
Minimum Split (s)	11.0	25.0	25.0	11.0	25.0		11.5	24.0		11.5	24.0	
Total Split (s)	14.0	75.0	75.0	14.0	75.0		14.0	37.0		14.0	37.0	
Total Split (%)	10.0%	53.6%	53.6%	10.0%	53.6%		10.0%	26.4%		10.0%	26.4%	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	4.0	4.0	1.0	4.0		1.0	3.0		1.0	3.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	7.0	7.0	4.0	7.0		4.0	6.0		4.0	6.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	Max	Max	None	Max		None	None		None	None	
Act Effct Green (s)	79.3	68.1	68.1	81.8	69.4		28.3	16.3		27.9	16.1	
Actuated g/C Ratio	0.64	0.55	0.55	0.66	0.56		0.23	0.13		0.22	0.13	
v/c Ratio	0.30	0.68	0.22	0.72	0.41		0.74	0.78		0.70	0.53	
Control Delay	10.0	22.5	4.6	44.1	16.9		58.1	43.5		57.0	44.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	10.0	22.5	4.6	44.1	16.9		58.1	43.5		57.0	44.1	

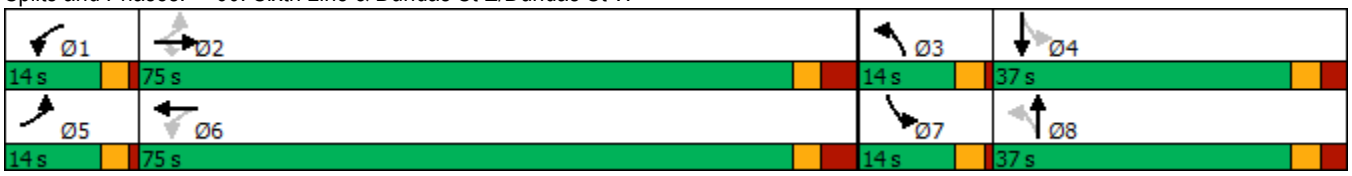
60: Sixth Line & Dundas St E/Dundas St W

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	A	C	A	D	B		E	D		E	D	
Approach Delay		20.2			20.0			48.1			48.8	
Approach LOS		C			B			D			D	
Queue Length 50th (m)	8.4	124.7	5.1	17.3	56.6		43.8	37.3		30.5	25.6	
Queue Length 95th (m)	13.5	152.5	18.7	#46.3	71.1		61.1	37.5		#50.6	39.5	
Internal Link Dist (m)		343.8			357.1			153.5			138.5	
Turn Bay Length (m)	90.0			45.0			115.0			115.0		
Base Capacity (vph)	372	2778	950	203	2679		269	919		209	866	
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	
Reduced v/c Ratio	0.28	0.68	0.22	0.69	0.41		0.74	0.47		0.69	0.29	

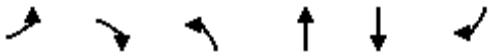
Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 124.7
Natural Cycle: 80
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.78
Intersection Signal Delay: 26.6 Intersection LOS: C
Intersection Capacity Utilization 73.6% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 60: Sixth Line & Dundas St E/Dundas St W



8: Sixth Line & Kaitting Trail

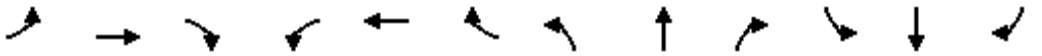


Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	11	62	44	227	320	0
Future Volume (Veh/h)	11	62	44	227	320	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.34	0.78	0.65	0.89	0.91	0.25
Hourly flow rate (vph)	32	79	68	255	352	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)				162	227	
pX, platoon unblocked						
vC, conflicting volume	616	176	352			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	616	176	352			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	92	91	94			
cM capacity (veh/h)	403	843	1203			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	111	68	128	128	235	117
Volume Left	32	68	0	0	0	0
Volume Right	79	0	0	0	0	0
cSH	641	1203	1700	1700	1700	1700
Volume to Capacity	0.17	0.06	0.07	0.07	0.14	0.07
Queue Length 95th (m)	5.0	1.4	0.0	0.0	0.0	0.0
Control Delay (s)	11.8	8.2	0.0	0.0	0.0	0.0
Lane LOS	B	A				
Approach Delay (s)	11.8	1.7			0.0	
Approach LOS	B					

Intersection Summary			
Average Delay	2.4		
Intersection Capacity Utilization	26.6%	ICU Level of Service	A
Analysis Period (min)	15		

4: Sixth Line & Sixteen Mile Dr/Wheat Boom Dr



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	70	71	97	22	65	16	90	189	33	7	195	86
Future Volume (vph)	70	71	97	22	65	16	90	189	33	7	195	86
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	0.0		0.0	0.0		0.0	65.0		0.0	65.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Satd. Flow (prot)	1770	1635	0	1687	1779	0	1752	3342	0	1805	3315	0
Flt Permitted	0.690			0.531			0.552			0.575		
Satd. Flow (perm)	1285	1635	0	943	1779	0	1018	3342	0	1092	3315	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		115			24			40			112	
Link Speed (k/h)		50			50			60			60	
Link Distance (m)		104.8			123.3			164.3			137.2	
Travel Time (s)		7.5			8.9			9.9			8.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.88	0.77	0.73	0.69	0.81	0.67	0.75	0.77	0.75	0.58	0.89	0.77
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	10%	3%	7%	4%	0%	3%	6%	3%	0%	2%	6%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	80	225	0	32	104	0	120	289	0	12	331	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	26.4	26.4		26.4	26.4		34.5	34.5		34.5	34.5	
Total Split (s)	30.0	30.0		30.0	30.0		40.0	40.0		40.0	40.0	
Total Split (%)	42.9%	42.9%		42.9%	42.9%		57.1%	57.1%		57.1%	57.1%	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.7	3.7		3.7	3.7	
All-Red Time (s)	2.4	2.4		2.4	2.4		2.8	2.8		2.8	2.8	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.4	5.4		5.4	5.4		6.5	6.5		6.5	6.5	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Act Effct Green (s)	9.6	9.6		9.6	9.6		35.4	35.4		35.4	35.4	
Actuated g/C Ratio	0.17	0.17		0.17	0.17		0.62	0.62		0.62	0.62	
v/c Ratio	0.37	0.61		0.20	0.33		0.19	0.14		0.02	0.16	
Control Delay	24.7	17.9		22.0	18.4		6.6	4.6		5.6	3.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	24.7	17.9		22.0	18.4		6.6	4.6		5.6	3.7	

4: Sixth Line & Sixteen Mile Dr/Wheat Boom Dr

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	C	B		C	B		A	A		A	A	
Approach Delay		19.7			19.3			5.2			3.7	
Approach LOS		B			B			A			A	
Queue Length 50th (m)	7.5	10.3		2.9	7.3		4.6	4.7		0.4	4.1	
Queue Length 95th (m)	17.3	20.5		6.8	16.0		11.0	9.4		1.5	10.6	
Internal Link Dist (m)		80.8			99.3			140.3			113.2	
Turn Bay Length (m)							65.0			65.0		
Base Capacity (vph)	557	774		409	784		633	2093		679	2104	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.14	0.29		0.08	0.13		0.19	0.14		0.02	0.16	

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 56.9			
Natural Cycle: 65			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.61			
Intersection Signal Delay: 10.1		Intersection LOS: B	
Intersection Capacity Utilization 46.7%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 4: Sixth Line & Sixteen Mile Dr/Wheat Boom Dr

60: Sixth Line & Dundas St E/Dundas St W

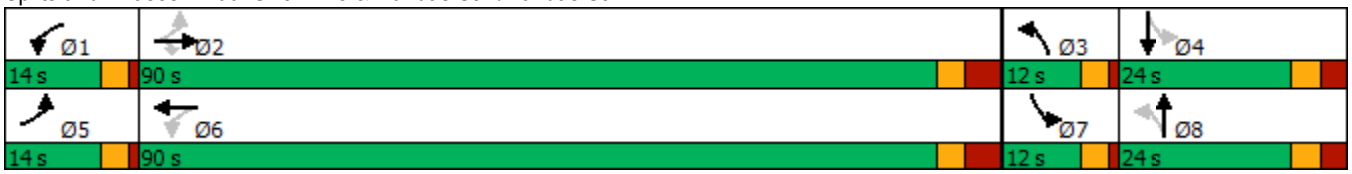
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	90	1436	177	121	1743	104	123	109	102	92	142	76
Future Volume (vph)	90	1436	177	121	1743	104	123	109	102	92	142	76
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	90.0		0.0	45.0		0.0	115.0		0.0	115.0		110.0
Storage Lanes	2		1	1		0	1		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Satd. Flow (prot)	1752	5085	1599	1719	4814	0	1719	3263	0	1770	3308	0
Flt Permitted	0.048			0.112			0.481			0.357		
Satd. Flow (perm)	89	5085	1599	203	4814	0	870	3263	0	665	3308	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			188		11			124			60	
Link Speed (k/h)		70			70			60			60	
Link Distance (m)		367.8			381.1			177.5			162.5	
Travel Time (s)		18.9			19.6			10.7			9.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.72	0.88	0.94	0.86	0.84	0.88	0.83	0.71	0.81	0.92	0.97	0.96
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	2%	1%	5%	7%	5%	5%	4%	2%	2%	3%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	125	1632	188	141	2193	0	148	280	0	100	225	0
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6			8			4		
Detector Phase	5	2	2	1	6		3	8		7	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	25.0	25.0	9.5	25.0		9.0	24.0		9.0	24.0	
Total Split (s)	14.0	90.0	90.0	14.0	90.0		12.0	24.0		12.0	24.0	
Total Split (%)	10.0%	64.3%	64.3%	10.0%	64.3%		8.6%	17.1%		8.6%	17.1%	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	4.0	4.0	1.0	4.0		1.0	3.0		1.0	3.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	7.0	7.0	4.0	7.0		4.0	6.0		4.0	6.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	Max	Max	None	Max		None	None		None	None	
Act Effct Green (s)	95.7	83.7	83.7	94.5	83.1		22.3	12.3		22.1	12.2	
Actuated g/C Ratio	0.72	0.63	0.63	0.71	0.62		0.17	0.09		0.17	0.09	
v/c Ratio	0.71	0.51	0.18	0.59	0.73		0.76	0.68		0.57	0.63	
Control Delay	48.5	14.7	1.9	18.0	19.6		72.9	41.0		59.4	50.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	48.5	14.7	1.9	18.0	19.6		72.9	41.0		59.4	50.8	

60: Sixth Line & Dundas St E/Dundas St W

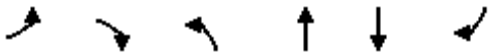
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	D	B	A	B	B		E	D		E	D	
Approach Delay		15.6			19.5			52.0			53.4	
Approach LOS		B			B			D			D	
Queue Length 50th (m)	16.7	85.3	0.0	9.6	147.2		36.7	22.2		24.0	23.5	
Queue Length 95th (m)	28.7	106.9	9.9	19.9	159.7		53.6	25.0		41.5	37.9	
Internal Link Dist (m)		343.8			357.1			153.5			138.5	
Turn Bay Length (m)	90.0			45.0			115.0			115.0		
Base Capacity (vph)	189	3191	1073	260	3004		196	548		177	498	
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	
Reduced v/c Ratio	0.66	0.51	0.18	0.54	0.73		0.76	0.51		0.56	0.45	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 133.3			
Natural Cycle: 90			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.76			
Intersection Signal Delay: 23.0		Intersection LOS: C	
Intersection Capacity Utilization 71.6%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 60: Sixth Line & Dundas St E/Dundas St W



8: Sixth Line & Kaitting Trail



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	9	28	38	320	314	9
Future Volume (Veh/h)	9	28	38	320	314	9
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.34	0.78	0.65	0.89	0.91	0.25
Hourly flow rate (vph)	26	36	58	360	345	36
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)				162	227	
pX, platoon unblocked						
vC, conflicting volume	659	190	381			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	659	190	381			
tC, single (s)	6.8	6.9	4.2			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	93	96	95			
cM capacity (veh/h)	381	825	1167			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	62	58	180	180	230	151
Volume Left	26	58	0	0	0	0
Volume Right	36	0	0	0	0	36
cSH	554	1167	1700	1700	1700	1700
Volume to Capacity	0.11	0.05	0.11	0.11	0.14	0.09
Queue Length 95th (m)	3.0	1.3	0.0	0.0	0.0	0.0
Control Delay (s)	12.3	8.2	0.0	0.0	0.0	0.0
Lane LOS	B	A				
Approach Delay (s)	12.3	1.1			0.0	
Approach LOS	B					

Intersection Summary			
Average Delay	1.4		
Intersection Capacity Utilization	25.6%	ICU Level of Service	A
Analysis Period (min)	15		

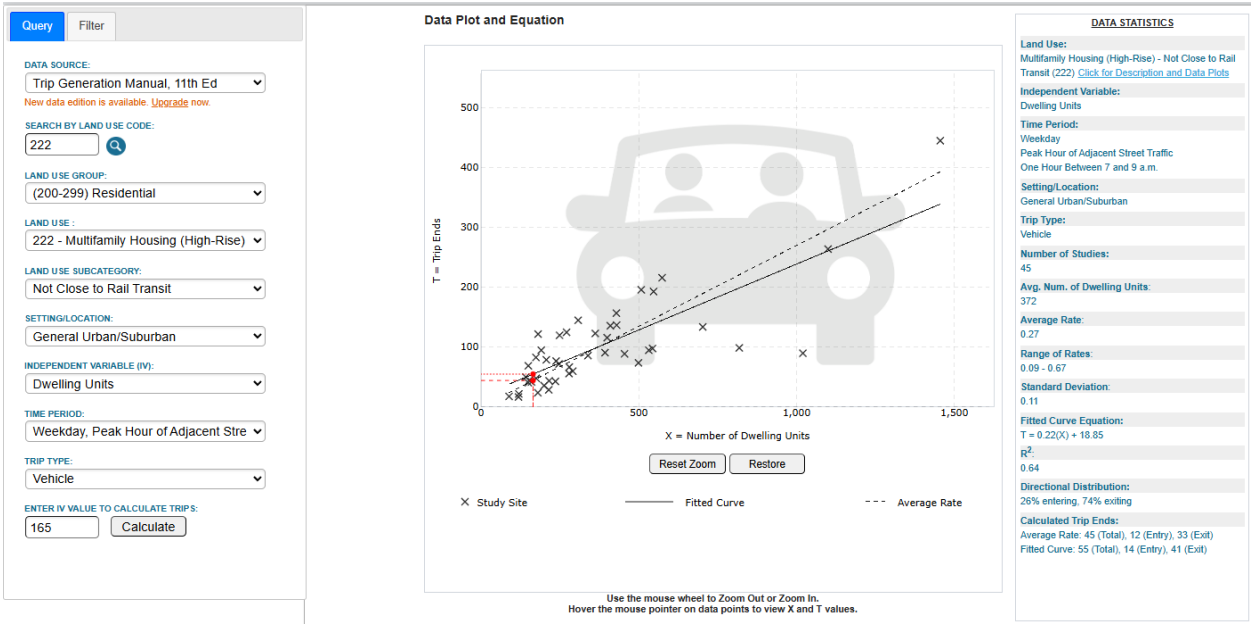
Appendix F

ITE 10th Edition Trip Generation Manual

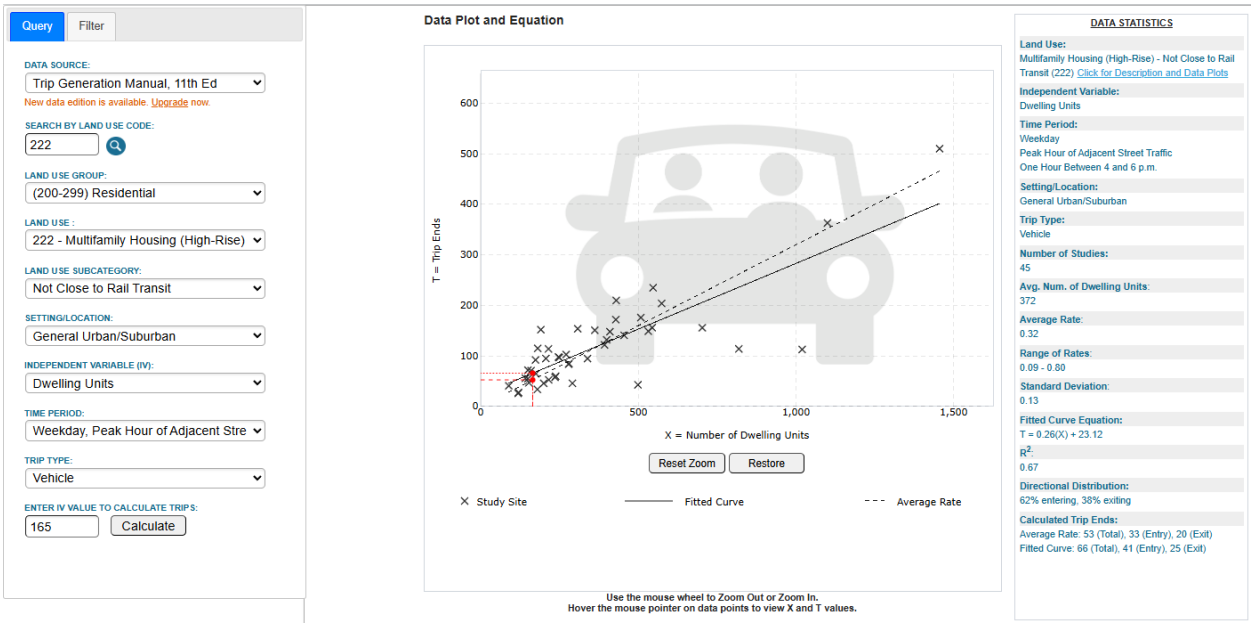
(LUC 220 & LUC 221)

165 units

AM Peak:



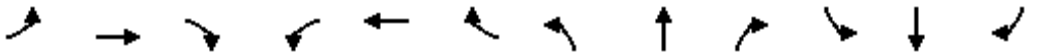
PM Peak:



Appendix G

Future (2032) Background Traffic Level of Service Calculations

4: Sixth Line & Sixteen Mile Dr/Wheat Boom Dr



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	92	137	131	31	93	16	64	232	37	6	253	78
Future Volume (vph)	92	137	131	31	93	16	64	232	37	6	253	78
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	0.0		0.0	0.0		0.0	65.0		0.0	65.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Satd. Flow (prot)	1770	1652	0	1687	1797	0	1752	3347	0	1805	3384	0
Flt Permitted	0.681			0.461			0.537			0.573		
Satd. Flow (perm)	1269	1652	0	819	1797	0	991	3347	0	1089	3384	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		76			13			35			81	
Link Speed (k/h)		50			50			60			60	
Link Distance (m)		104.8			123.3			164.3			137.2	
Travel Time (s)		7.5			8.9			9.9			8.2	
Adj. Flow (vph)	100	149	142	34	101	17	70	252	40	7	275	85
Lane Group Flow (vph)	100	291	0	34	118	0	70	292	0	7	360	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	15.0	15.0		15.0	15.0		15.0	15.0		15.0	15.0	
Minimum Split (s)	26.4	26.4		26.4	26.4		34.5	34.5		34.5	34.5	
Total Split (s)	30.0	30.0		30.0	30.0		40.0	40.0		40.0	40.0	
Total Split (%)	42.9%	42.9%		42.9%	42.9%		57.1%	57.1%		57.1%	57.1%	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.7	3.7		3.7	3.7	
All-Red Time (s)	2.4	2.4		2.4	2.4		2.8	2.8		2.8	2.8	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.4	5.4		5.4	5.4		6.5	6.5		6.5	6.5	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Act Effct Green (s)	16.2	16.2		16.2	16.2		33.5	33.5		33.5	33.5	
Actuated g/C Ratio	0.26	0.26		0.26	0.26		0.54	0.54		0.54	0.54	
v/c Ratio	0.30	0.60		0.16	0.25		0.13	0.16		0.01	0.19	
Control Delay	20.9	20.0		19.4	17.3		8.2	6.7		7.3	6.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	20.9	20.0		19.4	17.3		8.2	6.7		7.3	6.0	
LOS	C	C		B	B		A	A		A	A	
Approach Delay		20.3			17.8			7.0			6.0	
Approach LOS		C			B			A			A	
Queue Length 50th (m)	9.5	21.7		3.1	9.8		3.5	6.7		0.3	7.4	
Queue Length 95th (m)	20.8	43.5		9.4	21.1		10.7	14.4		2.1	15.8	
Internal Link Dist (m)		80.8			99.3			140.3			113.2	
Turn Bay Length (m)							65.0			65.0		
Base Capacity (vph)	507	705		327	726		539	1837		592	1878	

4: Sixth Line & Sixteen Mile Dr/Wheat Boom Dr

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.20	0.41		0.10	0.16		0.13	0.16		0.01	0.19	

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 61.6			
Natural Cycle: 65			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.60			
Intersection Signal Delay: 12.1		Intersection LOS: B	
Intersection Capacity Utilization 66.1%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 4: Sixth Line & Sixteen Mile Dr/Wheat Boom Dr

60: Sixth Line & Dundas St E/Dundas St W

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	78	1979	199	120	1034	62	166	216	197	144	274	86
Future Volume (vph)	78	1979	199	120	1034	62	166	216	197	144	274	86
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	90.0		0.0	45.0		0.0	115.0		0.0	115.0		110.0
Storage Lanes	1		1	1		0	1		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Satd. Flow (prot)	1752	4471	1599	1719	4232	0	1719	3255	0	1770	3371	0
Flt Permitted	0.151			0.058			0.301			0.227		
Satd. Flow (perm)	279	4471	1599	105	4232	0	545	3255	0	423	3371	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			133		8			150			27	
Link Speed (k/h)		70			70			60			60	
Link Distance (m)		367.8			381.1			177.5			162.5	
Travel Time (s)		18.9			19.6			10.7			9.8	
Adj. Flow (vph)	85	2151	216	130	1124	67	180	235	214	157	298	93
Lane Group Flow (vph)	85	2151	216	130	1191	0	180	449	0	157	391	0
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6			8			4		
Detector Phase	5	2	2	1	6		3	8		7	4	
Switch Phase												
Minimum Initial (s)	7.0	5.0	5.0	7.0	5.0		7.0	5.0		7.0	5.0	
Minimum Split (s)	11.0	25.0	25.0	11.0	25.0		11.5	24.0		11.5	24.0	
Total Split (s)	14.0	75.0	75.0	14.0	75.0		14.0	37.0		14.0	37.0	
Total Split (%)	10.0%	53.6%	53.6%	10.0%	53.6%		10.0%	26.4%		10.0%	26.4%	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	4.0	4.0	1.0	4.0		1.0	3.0		1.0	3.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	7.0	7.0	4.0	7.0		4.0	6.0		4.0	6.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	Max	Max	None	Max		None	None		None	None	
Act Effct Green (s)	79.1	68.1	68.1	81.5	69.3		31.1	19.1		30.9	19.0	
Actuated g/C Ratio	0.62	0.53	0.53	0.64	0.54		0.24	0.15		0.24	0.15	
v/c Ratio	0.32	0.90	0.24	0.71	0.52		0.80	0.73		0.76	0.74	
Control Delay	11.7	33.5	7.2	45.2	19.8		64.9	41.4		61.2	57.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	11.7	33.5	7.2	45.2	19.8		64.9	41.4		61.2	57.4	
LOS	B	C	A	D	B		E	D		E	E	
Approach Delay		30.4			22.3			48.1			58.5	
Approach LOS		C			C			D			E	
Queue Length 50th (m)	7.4	207.8	10.5	16.5	78.7		38.9	40.5		33.3	49.4	
Queue Length 95th (m)	15.4	#264.2	26.4	#48.0	107.0		#70.3	59.5		#60.0	67.3	
Internal Link Dist (m)		343.8			357.1			153.5			138.5	
Turn Bay Length (m)	90.0			45.0			115.0			115.0		
Base Capacity (vph)	293	2391	917	194	2307		225	907		208	842	

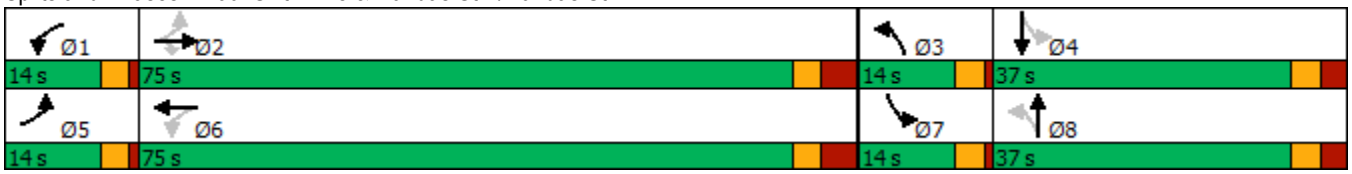
60: Sixth Line & Dundas St E/Dundas St W

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	
Reduced v/c Ratio	0.29	0.90	0.24	0.67	0.52		0.80	0.50		0.75	0.46	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 127.3			
Natural Cycle: 100			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.90			
Intersection Signal Delay: 33.6		Intersection LOS: C	
Intersection Capacity Utilization 82.7%		ICU Level of Service E	
Analysis Period (min) 15			

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

Splits and Phases: 60: Sixth Line & Dundas St E/Dundas St W



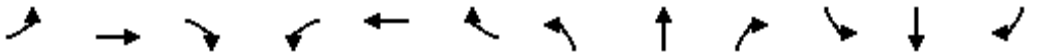
8: Sixth Line/Dundas Street W & Kaitting Trail/Site Access

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	0	98	0	0	0	54	352	0	0	496	12
Future Volume (Veh/h)	35	0	98	0	0	0	54	352	0	0	496	12
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
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
Hourly flow rate (vph)	38	0	107	0	0	0	59	383	0	0	539	13
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)								162			227	
pX, platoon unblocked												
vC, conflicting volume	855	1046	276	878	1053	192	552			383		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	855	1046	276	878	1053	192	552			383		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	84	100	85	100	100	100	94			100		
cM capacity (veh/h)	244	214	727	198	212	818	1014			1172		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	145	0	59	255	128	0	359	193
Volume Left	38	0	59	0	0	0	0	0
Volume Right	107	0	0	0	0	0	0	13
cSH	479	1700	1014	1700	1700	1700	1700	1700
Volume to Capacity	0.30	0.00	0.06	0.15	0.08	0.00	0.21	0.11
Queue Length 95th (m)	10.1	0.0	1.5	0.0	0.0	0.0	0.0	0.0
Control Delay (s)	15.8	0.0	8.8	0.0	0.0	0.0	0.0	0.0
Lane LOS	C	A	A					
Approach Delay (s)	15.8	0.0	1.2			0.0		
Approach LOS	C	A						

Intersection Summary				
Average Delay	2.5			
Intersection Capacity Utilization	35.4%	ICU Level of Service	A	
Analysis Period (min)	15			

4: Sixth Line & Sixteen Mile Dr/Wheat Boom Dr



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	70	71	106	26	65	16	96	305	35	7	321	86
Future Volume (vph)	70	71	106	26	65	16	96	305	35	7	321	86
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	0.0		0.0	0.0		0.0	65.0		0.0	65.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Satd. Flow (prot)	1770	1634	0	1687	1787	0	1752	3364	0	1805	3398	0
Flt Permitted	0.700			0.622			0.496			0.532		
Satd. Flow (perm)	1304	1634	0	1104	1787	0	915	3364	0	1011	3398	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		115			17			24			66	
Link Speed (k/h)		50			50			60			60	
Link Distance (m)		104.8			123.3			164.3			137.2	
Travel Time (s)		7.5			8.9			9.9			8.2	
Adj. Flow (vph)	76	77	115	28	71	17	104	332	38	8	349	93
Lane Group Flow (vph)	76	192	0	28	88	0	104	370	0	8	442	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	15.0	15.0		15.0	15.0		15.0	15.0		15.0	15.0	
Minimum Split (s)	26.4	26.4		26.4	26.4		34.5	34.5		34.5	34.5	
Total Split (s)	30.0	30.0		30.0	30.0		40.0	40.0		40.0	40.0	
Total Split (%)	42.9%	42.9%		42.9%	42.9%		57.1%	57.1%		57.1%	57.1%	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.7	3.7		3.7	3.7	
All-Red Time (s)	2.4	2.4		2.4	2.4		2.8	2.8		2.8	2.8	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.4	5.4		5.4	5.4		6.5	6.5		6.5	6.5	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Act Effct Green (s)	15.1	15.1		15.1	15.1		36.3	36.3		36.3	36.3	
Actuated g/C Ratio	0.24	0.24		0.24	0.24		0.57	0.57		0.57	0.57	
v/c Ratio	0.25	0.40		0.11	0.20		0.20	0.19		0.01	0.22	
Control Delay	20.6	11.2		18.8	16.3		8.0	6.5		6.1	6.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	20.6	11.2		18.8	16.3		8.0	6.5		6.1	6.0	
LOS	C	B		B	B		A	A		A	A	
Approach Delay		13.9			16.9			6.8			6.0	
Approach LOS		B			B			A			A	
Queue Length 50th (m)	7.1	7.1		2.5	6.5		5.4	9.4		0.4	10.3	
Queue Length 95th (m)	16.9	21.8		8.2	16.3		12.7	15.3		2.0	16.8	
Internal Link Dist (m)		80.8			99.3			140.3			113.2	
Turn Bay Length (m)							65.0			65.0		
Base Capacity (vph)	510	708		431	708		523	1935		578	1973	

4: Sixth Line & Sixteen Mile Dr/Wheat Boom Dr

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.15	0.27		0.06	0.12		0.20	0.19		0.01	0.22	

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 63.4			
Natural Cycle: 65			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.40			
Intersection Signal Delay: 8.9		Intersection LOS: A	
Intersection Capacity Utilization 61.9%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 4: Sixth Line & Sixteen Mile Dr/Wheat Boom Dr

60: Sixth Line & Dundas St E/Dundas St W

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	99	1716	177	121	2083	115	123	180	102	98	231	79
Future Volume (vph)	99	1716	177	121	2083	115	123	180	102	98	231	79
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	90.0		0.0	45.0		0.0	115.0		0.0	115.0		110.0
Storage Lanes	1		1	1		0	1		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Satd. Flow (prot)	1752	4471	1599	1719	4232	0	1719	3307	0	1770	3363	0
Flt Permitted	0.048			0.048			0.307			0.360		
Satd. Flow (perm)	89	4471	1599	87	4232	0	556	3307	0	671	3363	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			172		9			64			28	
Link Speed (k/h)		70			70			60			60	
Link Distance (m)		367.8			381.1			177.5			162.5	
Travel Time (s)		18.9			19.6			10.7			9.8	
Adj. Flow (vph)	108	1865	192	132	2264	125	134	196	111	107	251	86
Lane Group Flow (vph)	108	1865	192	132	2389	0	134	307	0	107	337	0
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6			8			4		
Detector Phase	5	2	2	1	6		3	8		7	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	25.0	25.0	9.5	25.0		9.0	24.0		9.0	24.0	
Total Split (s)	14.0	90.0	90.0	14.0	90.0		12.0	24.0		12.0	24.0	
Total Split (%)	10.0%	64.3%	64.3%	10.0%	64.3%		8.6%	17.1%		8.6%	17.1%	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	4.0	4.0	1.0	4.0		1.0	3.0		1.0	3.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	7.0	7.0	4.0	7.0		4.0	6.0		4.0	6.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	Max	Max	None	Max		None	None		None	None	
Act Effct Green (s)	94.6	83.0	83.0	96.1	83.8		26.5	16.5		26.5	16.5	
Actuated g/C Ratio	0.69	0.60	0.60	0.70	0.61		0.19	0.12		0.19	0.12	
v/c Ratio	0.66	0.69	0.19	0.77	0.93		0.77	0.68		0.56	0.79	
Control Delay	43.7	20.8	2.8	58.3	32.5		75.5	53.9		57.0	68.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	43.7	20.8	2.8	58.3	32.5		75.5	53.9		57.0	68.1	
LOS	D	C	A	E	C		E	D		E	E	
Approach Delay		20.3			33.8			60.5			65.4	
Approach LOS		C			C			E			E	
Queue Length 50th (m)	13.7	151.2	2.3	21.3	255.5		33.0	35.8		25.8	46.3	
Queue Length 95th (m)	35.0	171.4	12.8	#54.3	#293.8		#63.8	52.7		43.8	64.2	
Internal Link Dist (m)		343.8			357.1			153.5			138.5	
Turn Bay Length (m)	90.0			45.0			115.0			115.0		
Base Capacity (vph)	182	2691	1031	179	2574		174	487		193	463	

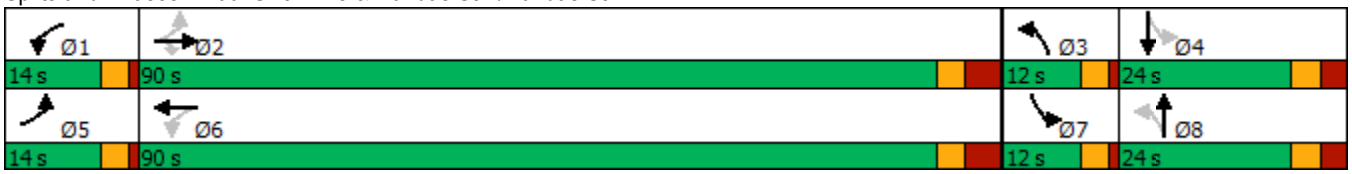
60: Sixth Line & Dundas St E/Dundas St W

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	
Reduced v/c Ratio	0.59	0.69	0.19	0.74	0.93		0.77	0.63		0.55	0.73	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 137.9			
Natural Cycle: 110			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.93			
Intersection Signal Delay: 33.2		Intersection LOS: C	
Intersection Capacity Utilization 81.5%		ICU Level of Service D	
Analysis Period (min) 15			

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

Splits and Phases: 60: Sixth Line & Dundas St E/Dundas St W



8: Sixth Line/Dundas Street W & Kaitting Trail/Site Access

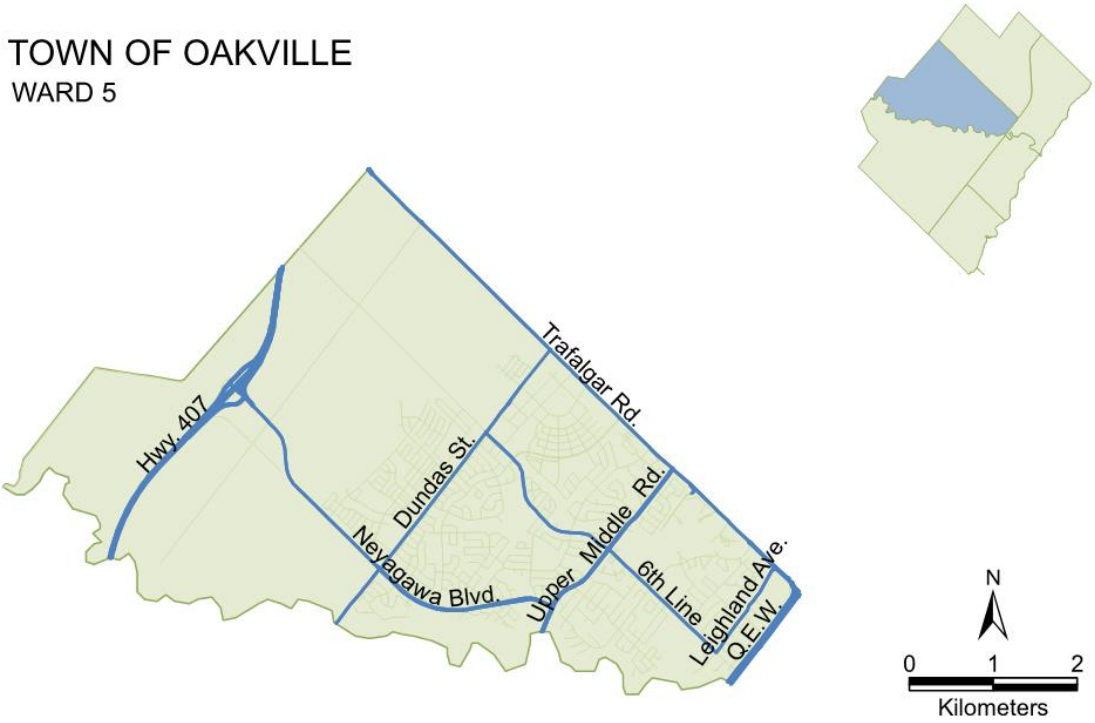
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	29	0	48	0	0	0	82	320	0	0	487	40
Future Volume (Veh/h)	29	0	48	0	0	0	82	320	0	0	487	40
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	32	0	52	0	0	0	89	348	0	0	529	43
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)								162			227	
pX, platoon unblocked												
vC, conflicting volume	902	1076	286	842	1098	174	572			348		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	902	1076	286	842	1098	174	572			348		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.2			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	85	100	93	100	100	100	91			100		
cM capacity (veh/h)	219	198	717	222	192	839	990			1208		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	84	0	89	232	116	0	353	219
Volume Left	32	0	89	0	0	0	0	0
Volume Right	52	0	0	0	0	0	0	43
cSH	385	1700	990	1700	1700	1700	1700	1700
Volume to Capacity	0.22	0.00	0.09	0.14	0.07	0.00	0.21	0.13
Queue Length 95th (m)	6.6	0.0	2.4	0.0	0.0	0.0	0.0	0.0
Control Delay (s)	17.0	0.0	9.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	C	A	A					
Approach Delay (s)	17.0	0.0	1.8			0.0		
Approach LOS	C	A						

Intersection Summary				
Average Delay	2.0			
Intersection Capacity Utilization	33.8%	ICU Level of Service	A	
Analysis Period (min)	15			

Appendix H
Non-Auto Modal Split Based on 2016 TTS Data

TOWN OF OAKVILLE
WARD 5



WARD 5

HOUSEHOLD CHARACTERISTICS

Households	Dwelling Type			Household Size					Number of Available Vehicles					Household Averages				
	House	Townhouse	Apartment	1	2	3	4	5+	0	1	2	3	4+	Persons	Workers	Drivers	Vehicles	Trips/Day
14,100	62%	20%	18%	19%	26%	19%	24%	12%	5%	31%	49%	9%	6%	2.9	1.7	2.0	1.8	5.8

POPULATION CHARACTERISTICS

Population	Age							Daily Trips per Person (age 11+)	Daily Work Trips per Worker	Population	Employment Type			Student	Licensed	Transit Pass
	0-10	11-15	16-25	26-45	46-64	65+	Median				Full Time	Part Time	At Home			
										Male						
										19,800	45%	9%	4%	28%	70%	27%
										Female						
40,600	13%	8%	13%	25%	29%	12%	39.8	2.4	0.71	20,800	33%	10%	6%	25%	69%	24%

TRIPS MADE BY RESIDENTS OF TOWN OF OAKVILLE - WARD 5

Time Period	Trips	% 24hr	Trip Purpose				Mode of Travel						Median Trip Length (km)			
			HB-W	HB-S	HB-D	N-HB	Driver	Pass.	Transit	GO Train	Walk & Cycle	Other	Driver	Pass.	Transit	GO Train
6-9 AM	21,300	25.8%	48%	19%	23%	10%	64%	11%	3%	8%	11%	4%	10.2	3.8	6.4	34.4
24 Hrs	82,600		32%	13%	40%	15%	68%	13%	3%	5%	8%	3%	6.2	4.3	4.2	34.4

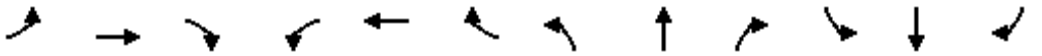
TRIPS MADE TO TOWN OF OAKVILLE - WARD 5 - BY RESIDENTS OF THE TTS AREA

Time Period	Trips	% 24 hr	Trip Purpose				Mode of Travel						Median Trip Length (km)			
			Work	School	Home	Other	Driver	Pass.	Transit	GO Train	Walk & Cycle	Other	Driver	Pass.	Transit	GO Train
6-9 AM	17,300	22.8%	25%	45%	7%	24%	55%	16%	5%	1%	13%	11%	6.1	4.1	10.2	32.6
24 Hrs	76,000		10%	14%	46%	30%	65%	15%	4%	3%	9%	4%	5.8	4.1	7.2	34.4

Appendix I

Future (2032) Total Traffic Level of Service Calculations

4: Sixth Line & Sixteen Mile Dr/Wheat Boom Dr



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	92	137	132	31	93	16	66	242	0	6	257	78
Future Volume (vph)	92	137	132	31	93	16	66	242	0	6	257	78
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	0.0		0.0	0.0		0.0	65.0		0.0	65.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Satd. Flow (prot)	1770	1653	0	1687	1797	0	1752	3406	0	1805	3384	0
Flt Permitted	0.681			0.460			0.535			0.589		
Satd. Flow (perm)	1269	1653	0	817	1797	0	987	3406	0	1119	3384	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		76			13						78	
Link Speed (k/h)		50			50			60			60	
Link Distance (m)		104.8			123.3			164.3			137.2	
Travel Time (s)		7.5			8.9			9.9			8.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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 (%)	2%	10%	3%	7%	4%	0%	3%	6%	3%	0%	2%	6%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	100	292	0	34	118	0	72	263	0	7	364	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	15.0	15.0		15.0	15.0		15.0	15.0		15.0	15.0	
Minimum Split (s)	26.4	26.4		26.4	26.4		34.5	34.5		34.5	34.5	
Total Split (s)	30.0	30.0		30.0	30.0		40.0	40.0		40.0	40.0	
Total Split (%)	42.9%	42.9%		42.9%	42.9%		57.1%	57.1%		57.1%	57.1%	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.7	3.7		3.7	3.7	
All-Red Time (s)	2.4	2.4		2.4	2.4		2.8	2.8		2.8	2.8	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.4	5.4		5.4	5.4		6.5	6.5		6.5	6.5	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Act Effct Green (s)	16.2	16.2		16.2	16.2		33.5	33.5		33.5	33.5	
Actuated g/C Ratio	0.26	0.26		0.26	0.26		0.54	0.54		0.54	0.54	
v/c Ratio	0.30	0.60		0.16	0.25		0.13	0.14		0.01	0.19	
Control Delay	20.8	20.1		19.4	17.3		8.3	7.5		7.3	6.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	20.8	20.1		19.4	17.3		8.3	7.5		7.3	6.1	

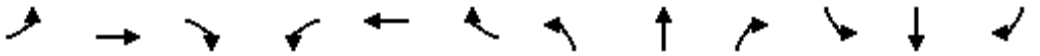
4: Sixth Line & Sixteen Mile Dr/Wheat Boom Dr

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	C	C		B	B		A	A		A	A	
Approach Delay		20.3			17.7			7.7			6.1	
Approach LOS		C			B			A			A	
Queue Length 50th (m)	9.5	21.8		3.1	9.8		3.6	6.9		0.3	7.6	
Queue Length 95th (m)	20.8	43.7		9.4	21.1		11.0	14.4		2.1	16.2	
Internal Link Dist (m)		80.8			99.3			140.3			113.2	
Turn Bay Length (m)							65.0			65.0		
Base Capacity (vph)	507	706		326	725		537	1853		608	1877	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.20	0.41		0.10	0.16		0.13	0.14		0.01	0.19	

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 61.6			
Natural Cycle: 65			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.60			
Intersection Signal Delay: 12.4		Intersection LOS: B	
Intersection Capacity Utilization 66.1%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 4: Sixth Line & Sixteen Mile Dr/Wheat Boom Dr

60: Sixth Line & Dundas St E/Dundas St W



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	80	1979	199	120	1034	63	166	218	197	151	281	89
Future Volume (vph)	80	1979	199	120	1034	63	166	218	197	151	281	89
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	90.0		0.0	45.0		0.0	115.0		0.0	115.0		110.0
Storage Lanes	1		1	1		0	1		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Satd. Flow (prot)	1752	4471	1599	1719	4228	0	1719	3254	0	1770	3371	0
Flt Permitted	0.150			0.058			0.293			0.228		
Satd. Flow (perm)	277	4471	1599	105	4228	0	530	3254	0	425	3371	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			133		8			149			28	
Link Speed (k/h)		70			70			60			60	
Link Distance (m)		367.8			381.1			177.5			162.5	
Travel Time (s)		18.9			19.6			10.7			9.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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 (%)	3%	2%	1%	5%	7%	5%	5%	4%	2%	2%	3%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	87	2151	216	130	1192	0	180	451	0	164	402	0
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6			8			4		
Detector Phase	5	2	2	1	6		3	8		7	4	
Switch Phase												
Minimum Initial (s)	7.0	5.0	5.0	7.0	5.0		7.0	5.0		7.0	5.0	
Minimum Split (s)	11.0	25.0	25.0	11.0	25.0		11.5	24.0		11.5	24.0	
Total Split (s)	14.0	75.0	75.0	14.0	75.0		14.0	37.0		14.0	37.0	
Total Split (%)	10.0%	53.6%	53.6%	10.0%	53.6%		10.0%	26.4%		10.0%	26.4%	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	4.0	4.0	1.0	4.0		1.0	3.0		1.0	3.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	7.0	7.0	4.0	7.0		4.0	6.0		4.0	6.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	Max	Max	None	Max		None	None		None	None	
Act Effct Green (s)	79.1	68.1	68.1	81.4	69.2		31.5	19.5		31.4	19.4	
Actuated g/C Ratio	0.62	0.53	0.53	0.64	0.54		0.25	0.15		0.25	0.15	
v/c Ratio	0.33	0.90	0.24	0.71	0.52		0.81	0.73		0.78	0.75	
Control Delay	12.0	33.9	7.3	45.7	20.1		65.6	41.3		63.8	57.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	12.0	33.9	7.3	45.7	20.1		65.6	41.3		63.8	57.4	

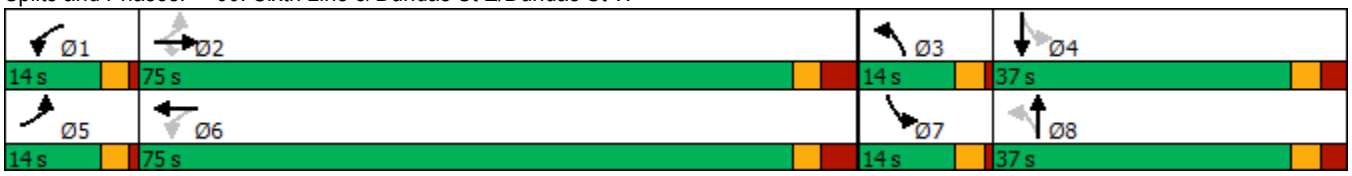
60: Sixth Line & Dundas St E/Dundas St W

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	B	C	A	D	C		E	D		E	E	
Approach Delay		30.8			22.6			48.2			59.2	
Approach LOS		C			C			D			E	
Queue Length 50th (m)	7.6	209.2	10.6	16.7	79.6		38.9	41.0		34.9	50.9	
Queue Length 95th (m)	15.6	#268.2	26.7	#48.6	108.3		#70.3	60.0		#64.3	69.2	
Internal Link Dist (m)		343.8			357.1			153.5			138.5	
Turn Bay Length (m)	90.0			45.0			115.0			115.0		
Base Capacity (vph)	291	2383	914	193	2294		223	903		210	840	
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	
Reduced v/c Ratio	0.30	0.90	0.24	0.67	0.52		0.81	0.50		0.78	0.48	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 127.7			
Natural Cycle: 100			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.90			
Intersection Signal Delay: 34.1		Intersection LOS: C	
Intersection Capacity Utilization 83.1%		ICU Level of Service E	
Analysis Period (min) 15			

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

Splits and Phases: 60: Sixth Line & Dundas St E/Dundas St W



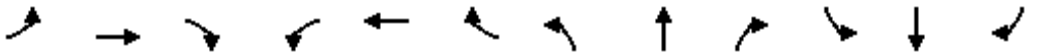
8: Sixth Line/Dundas Street W & Kaitting Trail/Site Access

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	0	98	17	0	10	54	352	5	5	496	12
Future Volume (Veh/h)	35	0	98	17	0	10	54	352	5	5	496	12
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
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
Hourly flow rate (vph)	38	0	107	18	0	11	59	383	5	5	539	13
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)								162			227	
pX, platoon unblocked												
vC, conflicting volume	876	1062	276	890	1066	194	552			388		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	876	1062	276	890	1066	194	552			388		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	84	100	85	91	100	99	94			100		
cM capacity (veh/h)	231	208	727	193	207	815	1014			1167		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	145	29	59	255	133	5	359	193
Volume Left	38	18	59	0	0	5	0	0
Volume Right	107	11	0	0	5	0	0	13
cSH	466	271	1014	1700	1700	1167	1700	1700
Volume to Capacity	0.31	0.11	0.06	0.15	0.08	0.00	0.21	0.11
Queue Length 95th (m)	10.5	2.8	1.5	0.0	0.0	0.1	0.0	0.0
Control Delay (s)	16.2	19.8	8.8	0.0	0.0	8.1	0.0	0.0
Lane LOS	C	C	A			A		
Approach Delay (s)	16.2	19.8	1.2			0.1		
Approach LOS	C	C						

Intersection Summary				
Average Delay	3.0			
Intersection Capacity Utilization	35.5%	ICU Level of Service	A	
Analysis Period (min)	15			

4: Sixth Line & Sixteen Mile Dr/Wheat Boom Dr



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	70	71	110	27	65	16	97	310	37	7	329	86
Future Volume (vph)	70	71	110	27	65	16	97	310	37	7	329	86
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	0.0		0.0	0.0		0.0	65.0		0.0	65.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Satd. Flow (prot)	1770	1633	0	1687	1787	0	1752	3361	0	1805	3402	0
Flt Permitted	0.700			0.597			0.491			0.528		
Satd. Flow (perm)	1304	1633	0	1060	1787	0	906	3361	0	1003	3402	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		120			17			25			64	
Link Speed (k/h)		50			50			60			60	
Link Distance (m)		104.8			123.3			164.3			137.2	
Travel Time (s)		7.5			8.9			9.9			8.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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 (%)	2%	10%	3%	7%	4%	0%	3%	6%	3%	0%	2%	6%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	76	197	0	29	88	0	105	377	0	8	451	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	26.4	26.4		26.4	26.4		34.5	34.5		34.5	34.5	
Total Split (s)	30.0	30.0		30.0	30.0		40.0	40.0		40.0	40.0	
Total Split (%)	42.9%	42.9%		42.9%	42.9%		57.1%	57.1%		57.1%	57.1%	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.7	3.7		3.7	3.7	
All-Red Time (s)	2.4	2.4		2.4	2.4		2.8	2.8		2.8	2.8	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.4	5.4		5.4	5.4		6.5	6.5		6.5	6.5	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Act Effct Green (s)	8.9	8.9		8.9	8.9		36.3	36.3		36.3	36.3	
Actuated g/C Ratio	0.16	0.16		0.16	0.16		0.63	0.63		0.63	0.63	
v/c Ratio	0.38	0.55		0.18	0.30		0.18	0.18		0.01	0.21	
Control Delay	25.5	15.4		21.7	19.3		6.2	4.7		5.0	4.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	25.5	15.4		21.7	19.3		6.2	4.7		5.0	4.4	

4: Sixth Line & Sixteen Mile Dr/Wheat Boom Dr

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	C	B		C	B		A	A		A	A	
Approach Delay		18.2			19.9			5.0			4.4	
Approach LOS		B			B			A			A	
Queue Length 50th (m)	7.1	7.1		2.6	6.5		3.8	6.5		0.3	7.3	
Queue Length 95th (m)	17.1	22.3		8.5	16.6		11.7	14.2		1.8	15.7	
Internal Link Dist (m)		80.8			99.3			140.3			113.2	
Turn Bay Length (m)							65.0			65.0		
Base Capacity (vph)	564	774		458	783		575	2143		637	2183	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.13	0.25		0.06	0.11		0.18	0.18		0.01	0.21	

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 57.2			
Natural Cycle: 65			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.55			
Intersection Signal Delay: 8.8		Intersection LOS: A	
Intersection Capacity Utilization 51.7%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 4: Sixth Line & Sixteen Mile Dr/Wheat Boom Dr

60: Sixth Line & Dundas St E/Dundas St W

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	103	1716	177	121	2083	120	123	185	102	100	235	81
Future Volume (vph)	103	1716	177	121	2083	120	123	185	102	100	235	81
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
Grade (%)		0%			0%			0%			0%	
Storage Length (m)	90.0		0.0	45.0		0.0	115.0		0.0	115.0		110.0
Storage Lanes	1		1	1		0	1		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Satd. Flow (prot)	1752	4471	1599	1719	4232	0	1719	3310	0	1770	3363	0
Flt Permitted	0.048			0.048			0.298			0.353		
Satd. Flow (perm)	89	4471	1599	87	4232	0	539	3310	0	658	3363	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			172		9			62			28	
Link Speed (k/h)		70			70			60			60	
Link Distance (m)		367.8			381.1			177.5			162.5	
Travel Time (s)		18.9			19.6			10.7			9.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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 (%)	3%	2%	1%	5%	7%	5%	5%	4%	2%	2%	3%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	112	1865	192	132	2394	0	134	312	0	109	343	0
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6			8			4		
Detector Phase	5	2	2	1	6		3	8		7	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	25.0	25.0	9.5	25.0		9.0	24.0		9.0	24.0	
Total Split (s)	14.0	90.0	90.0	14.0	90.0		12.0	24.0		12.0	24.0	
Total Split (%)	10.0%	64.3%	64.3%	10.0%	64.3%		8.6%	17.1%		8.6%	17.1%	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	4.0	4.0	1.0	4.0		1.0	3.0		1.0	3.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	7.0	7.0	4.0	7.0		4.0	6.0		4.0	6.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	Max	Max	None	Max		None	None		None	None	
Act Effct Green (s)	94.8	83.0	83.0	95.9	83.6		26.6	16.6		26.6	16.6	
Actuated g/C Ratio	0.69	0.60	0.60	0.69	0.61		0.19	0.12		0.19	0.12	
v/c Ratio	0.67	0.69	0.19	0.77	0.93		0.78	0.69		0.57	0.80	
Control Delay	45.4	20.8	2.8	58.6	33.1		76.5	54.9		57.8	68.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	45.4	20.8	2.8	58.6	33.1		76.5	54.9		57.8	68.8	

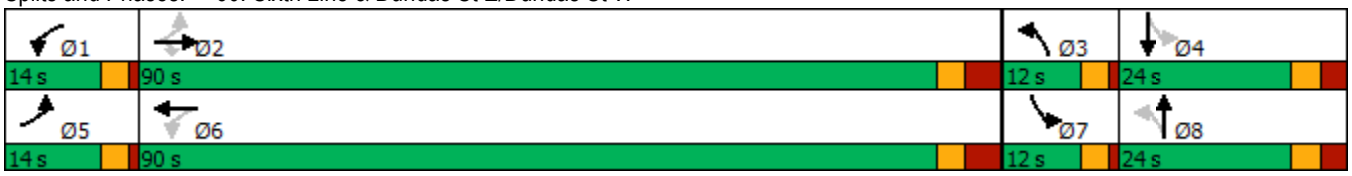
60: Sixth Line & Dundas St E/Dundas St W

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	D	C	A	E	C		E	D		E	E	
Approach Delay		20.5			34.4			61.4			66.1	
Approach LOS		C			C			E			E	
Queue Length 50th (m)	14.8	151.2	2.3	21.4	259.0		33.0	36.9		26.3	47.3	
Queue Length 95th (m)	#36.4	171.4	12.8	#54.3	#296.9		#64.6	53.9		44.3	65.3	
Internal Link Dist (m)		343.8			357.1			153.5			138.5	
Turn Bay Length (m)	90.0			45.0			115.0			115.0		
Base Capacity (vph)	182	2689	1030	179	2567		172	485		191	462	
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	
Reduced v/c Ratio	0.62	0.69	0.19	0.74	0.93		0.78	0.64		0.57	0.74	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 138			
Natural Cycle: 110			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.93			
Intersection Signal Delay: 33.7		Intersection LOS: C	
Intersection Capacity Utilization 82.0%		ICU Level of Service E	
Analysis Period (min) 15			

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

Splits and Phases: 60: Sixth Line & Dundas St E/Dundas St W



8: Sixth Line/Dundas Street W & Kaitting Trail/Site Access

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	29	0	48	8	0	8	90	320	14	13	487	40
Future Volume (Veh/h)	29	0	48	8	0	8	90	320	14	13	487	40
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
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
Hourly flow rate (vph)	32	0	52	9	0	9	98	348	15	14	529	43
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)								162			227	
pX, platoon unblocked												
vC, conflicting volume	958	1138	286	896	1152	182	572			363		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	958	1138	286	896	1152	182	572			363		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.2			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	84	100	93	95	100	99	90			99		
cM capacity (veh/h)	195	178	717	200	175	830	990			1192		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	84	18	98	232	131	14	353	219
Volume Left	32	9	98	0	0	14	0	0
Volume Right	52	9	0	0	15	0	0	43
cSH	355	322	990	1700	1700	1192	1700	1700
Volume to Capacity	0.24	0.06	0.10	0.14	0.08	0.01	0.21	0.13
Queue Length 95th (m)	7.3	1.4	2.6	0.0	0.0	0.3	0.0	0.0
Control Delay (s)	18.3	16.8	9.0	0.0	0.0	8.1	0.0	0.0
Lane LOS	C	C	A			A		
Approach Delay (s)	18.3	16.8	1.9			0.2		
Approach LOS	C	C						

Intersection Summary				
Average Delay	2.5			
Intersection Capacity Utilization	34.9%	ICU Level of Service	A	
Analysis Period (min)	15			