Diamond Schmitt Architects Inc.

TRAFFIC OPERATIONS ASSESSMENT UPDATE

OAK VALLEY HEALTH HOPSITAL EXPANSION

4 Campbell Drive,
Township of Uxbridge

June 2025
25258

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June 12, 2025

Reference Number: 25258

Allison Ramlakhan
Business Development Coordinator
Diamond Schmitt Architects
384 Adelaide Street West, Suite 100
Toronto, Ontario, Canada M5V 1R7

Dear Ms. Ramlakhan,

RE: Traffic Operations Assessment Update
Proposed Oak Valley Health Hospital Expansion
4 Campbell Drive, Township of Uxbridge

LEA Consulting Ltd. (LEA) is pleased to present our findings for our Traffic Operations Assessment (TOA) Update for the proposed Oak Valley Health Hospital Expansion at 4 Campbell Drive in the Township of Uxbridge. Our latest TOA was prepared and submitted in February 2025. In response to AECOM Canada LTD. comments received on January 23 and March 6, 2025, LEA has prepared the following TOA Update, addressing the comments received.

Comments have been repeated below in blue italic, followed by LEA's responses. Comment numbers are based on the Comment Matrix.

1.1 TRAFFIC OPERATIONS ASSESSMENT COMMENTS:

Traffic Operations Assessment comments prepared by AECOM, March 6, 2025

TOA – Comment 1.a: For the proposed long-term facility, the Consultant should show the estimated number of trips based on the proposed GFA / area size of 18,647 square meters, and not just based on number of beds and undertake the traffic analysis based on the larger of the two numbers.

LEA Response: Acknowledged. Please review the TOA Update, Section 4.1, providing a revised trip generation calculation based on the proposed GFA of 201,000 square feet.

TOA – Comment 1.b: The Consultant should elaborate and provide the information in a clearer way in Section 4-1 of the updated report. In addition, it appears that there are typos / errors in Table 4-1 and Table 4-2. For examples, the area size of the existing hospital in both tables is reported at 92,209 square feet and it is not clear why the proposed 50 AHF beds are not included in the last row of Table 4-1.

LEA Response: Acknowledged. Please review the TOA Update, Section 4.1, providing a revised trip generation calculation based on the proposed 50 beds.

TOA – Comment 1.c: The information provided in section 3.2 of the updated report do not answer our previous comment, stating that on Victoria Drive, the traffic counts collected on July 16, 2024, when the nearby Uxbridge Public School was closed are most likely less than that on a school day. The additional information that the Consultant provided in the updated report is about seasonal / temporal variations in traffic volumes on Toronto Street, not Victoria Drive.

LEA Response: Acknowledged. Please review the TOA Update as updated traffic counts from March 2025 have been recollected at the intersection of Victoria Drive and Toronto Street to satisfy the comments pertaining to the previous TMCs not capturing school traffic flows.

TOA – Comment 1.d: As acknowledged in Section 7.1 of the updated report, the proposed number of parking spaces are still considerably less than what is required as per the relevant by-law. The Consultant should provide additional information to justify sufficiency of the proposed number of parking spaces. It is recommended that they provide information in support of their proposal from ITE Parking Generation Manual, proxy sites, etc.

LEA Response: Acknowledged. Please review the TOA Update, Section 7.2, providing justification for the proposed parking supply. LEA has used the ITE Parking Generation Manual and vehicular parking requirements in neighboring jurisdictions as part of the parking justification.

TOA – Comment 1.e: Considering the anticipated spillover of southbound queues from the intersection of Toronto Street and Campbell Drive onto the intersection of Toronto Street and Victoria Drive, the Consultant should recommend mitigation measures to address the noted queueing issue and to provide clear non-restricted access to emergency vehicles at the intersection of Toronto Street and Victoria Drive at all times.

LEA Response: Acknowledged. Please review the TOA Update, Section 6.3, which provides recommended mitigation measures to address the queueing issue of southbound traffic from the intersection of Toronto Street and Campbell Drive and the intersection of Toronto Street and Victoria Drive. The updated TMCs collected at the Toronto Street and Victoria Drive intersection along with the subsequent analysis indicate that southbound traffic queues from Toronto Street and Campbell Drive extend short of the Toronto Street and Victoria Drive intersection. To reinforce the need for southbound vehicles to avoid blocking traffic at Toronto/Victoria, LEA recommends painted pavement markings to denote where no vehicles are permitted to block the intersection. Accompanying signage with "DO NOT BLOCK INTERSECTION" should be added for both directions on Toronto Street South. These measures aim to ensure clear access to and from Victoria Street and the hospital for emergency vehicles.

Traffic Operations Assessment comments prepared by AECOM, January 23, 2025

Comment 15: The TOA report does not include a 'Collision Review" section.

LEA Response: Acknowledged. Please review the TOA Update, Section 2.7, providing an analysis of vehicle collision data received from Durham Regional Police.

Comment 1.a: A turning movement plan for the loading spaces should be provided.

LEA Response: Acknowledged. Turning movement plans for the loading spaces are included in Appendix J of the TOA update.

Signage and Pavement Marking Plans comments prepared by The Township of Uxbridge, February 6, 2025

Comment SPMP-1 through 6: Please provide a detail of all signage proposed on plans with a reference number (accessible signage, stop signs, electric vehicle, etc.)

LEA Response: Acknowledged. A Signage and Pavement Marking Plan is included in Appendix J of the TOA update.

Please do not hesitate to contact the undersigned should you have any additional questions or concerns at (905) 470-0015.

Yours truly,

LEA CONSULTING LTD.

Kenneth Chan, P.Eng., PTOE, PMP
Senior Vice President,
Transportation Engineering and Planning

Encl. Traffic Operations Assessment Update – Oak Valley Health Hospital Expansion, 4 Campbell Drive, Township of Uxbridge (April 2025)

Disclaimer

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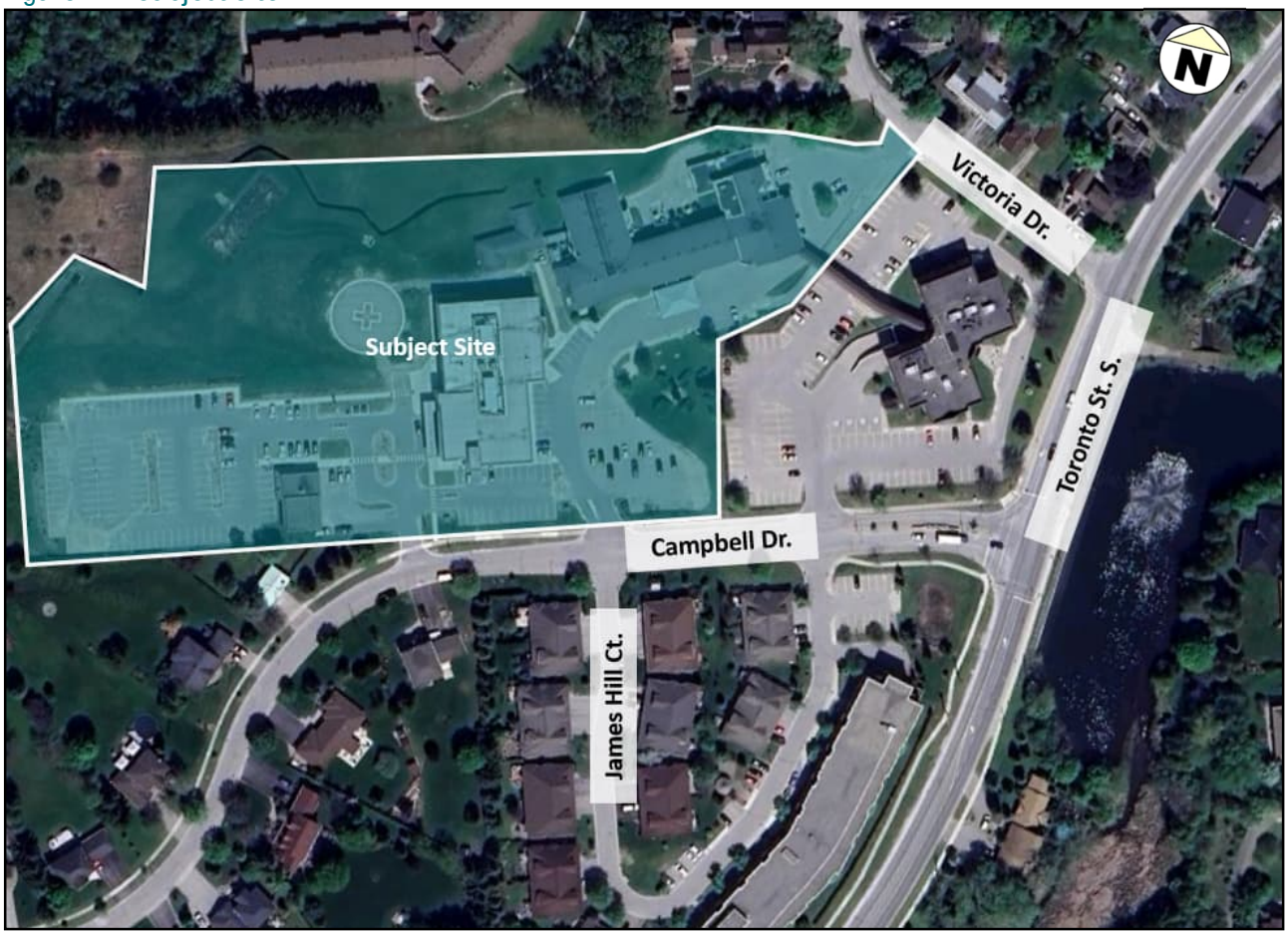
1 INTRODUCTION

LEA Consulting Ltd. (LEA) has been retained by Diamond Schmitt Architects to undertake an Updated Traffic Operations Assessment (TOA) for the proposed Oak Valley Hospital expansion, located at 4 Campbell Drive in the Township of Uxbridge (herein referred to as the "subject site"). By way of background, LEA prepared an initial TOA dated September 2024. A subsequent TOA Update was completed in December 2024 as the development concept evolved to include a long-term care building. Since then, comments were received in March 2025, leading to this revised TOA Update to address comments received in the previous submission.

The subject site is located north of Campbell Drive and approximately 100m west of Toronto Street South, as shown in Figure 1-1.

Figure 1-1: Subject Site



Source: Google Maps, Accessed July 2024

1.1 DEVELOPMENT PROPOSAL

Based on the site plan received, the proposed development will relocate the existing Uxbridge Hospital towards the west side of the site. The existing hospital will be demolished and replaced by surface parking. A long-term care (LTC) facility located west of the proposed hospital is also proposed which will provide both

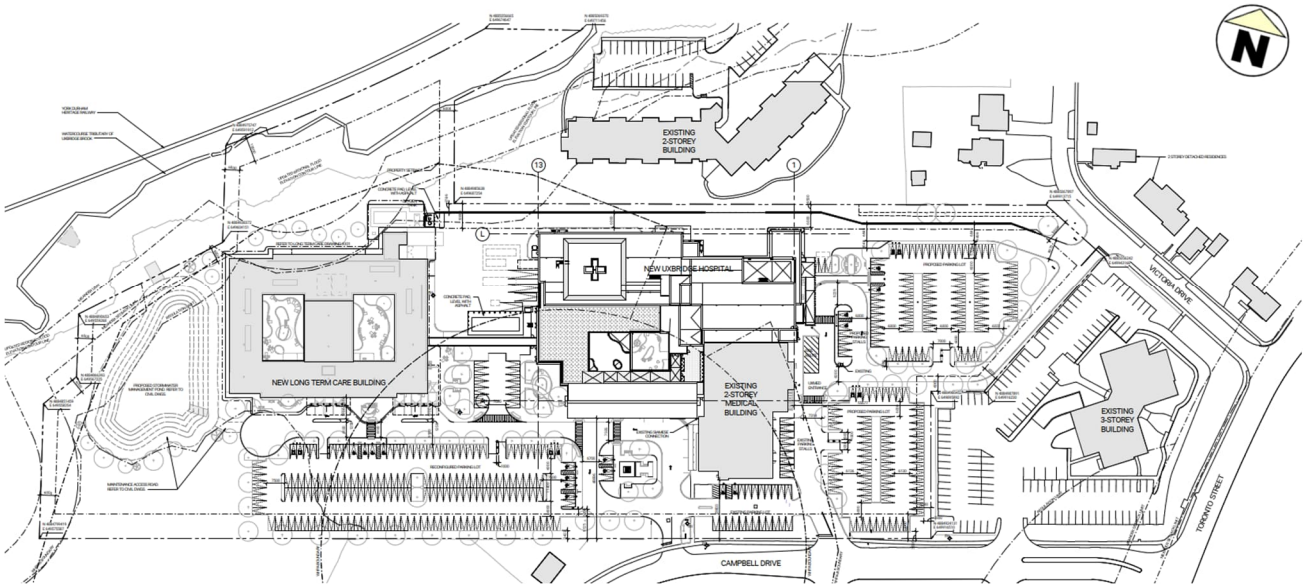
LTC beds and alternative health facility (AHF) beds. Of note, the AHF beds will be used to provide additional beds for patient recovery for the hospital use. The existing Uxbridge Medical building will remain unchanged.

The site statistics of the proposed expansion are presented in Table 1-1, and the proposed site plan is illustrated in Figure 1-2. Of note, no changes have been made to the proposed development since the December 2024 TOA Update.

Table 1-1: Proposed Site Statistics

Land Use	Existing	September 2024	December 2024 & April 2025 (Current)
Uxbridge Medical	~ 2,431 m^2	-	-
Hospital	~ 3,934 m^2 (20 Beds)	~ 12,355 m^2 (32 Beds)	~ 8,274 m^2 (32 Beds)
Long-Term Care	-	192 LTC Beds	~ 18,647 m^2 (192 LTC & 50 AHF Beds)

Figure 1-2: Proposed Site Plan



Source: Diamond Schmitt Architects, June 2025

The following TOA will undertake a review of the existing transportation context, applicable parking requirements, provide a transportation demand management plan (TDM), and forecast vehicle trip generation anticipated for the proposed land uses. The TOR shared to the Region is provided in Appendix A.

2 EXISTING TRANSPORTATION CONDITIONS

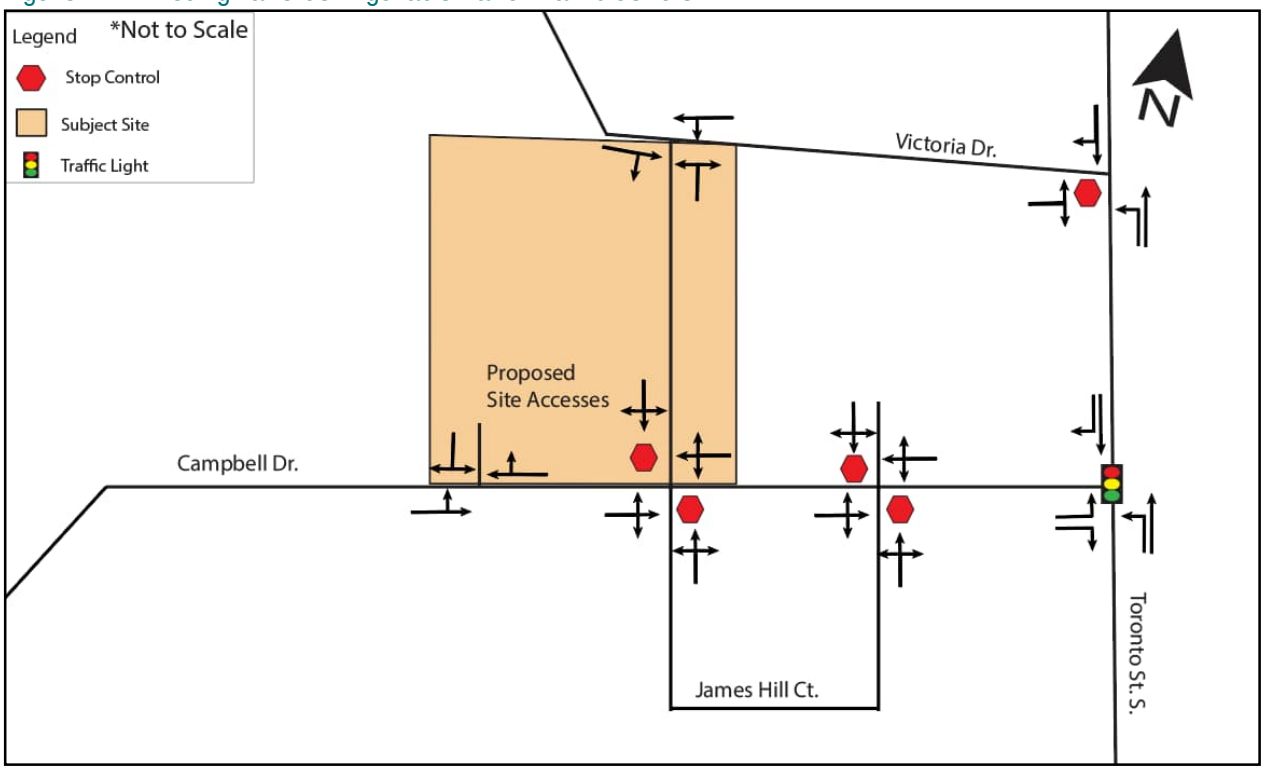
This section identifies and assesses the existing transportation conditions present in the study area, including the road, transit, cyclist, and pedestrian networks. The study area was determined by assessing the size of the proposed expansion and its anticipated transportation impacts. The study area includes the following existing intersections:

- James Hill Court/Hospital Southeast Driveway and Campbell Drive (Unsignalized);
- Hospital Southwest Driveway and Campbell Drive (Unsignalized);
- Hospital North Driveway and Victoria Drive (Unsignalized);
- Victoria Drive and Toronto Street South (Unsignalized); and,
- Campbell Drive and Toronto Street South (Signalized).

2.1 ROAD NETWORK

The following section provides a description and classification of the roadways within the study area that facilitate access to the subject site. Figure 2-1 illustrates the existing lane configuration and traffic control.

Figure 2-1: Existing Lane Configuration and Traffic Control



Toronto Street South is a north-south Type “B” arterial road within the study area. Toronto Street South operates with a three-lane cross section (1 lanes per direction along with dedicated left or right turn lanes), with sidewalks provided along both sides of the street. The posted speed within the study area is 50 km/h. On-street parking is not permitted along Toronto Street South.

Campbell Drive is an east-west local road within the study area. Campbell Drive operates with a two-lane cross section (one lane per direction). Campbell Drive operates from Toronto Street South in the east towards Cemetery Road to the south before terminating. Campbell Drive has a posted speed limit of 40 km/h and on-street parking is not permitted within the study area.

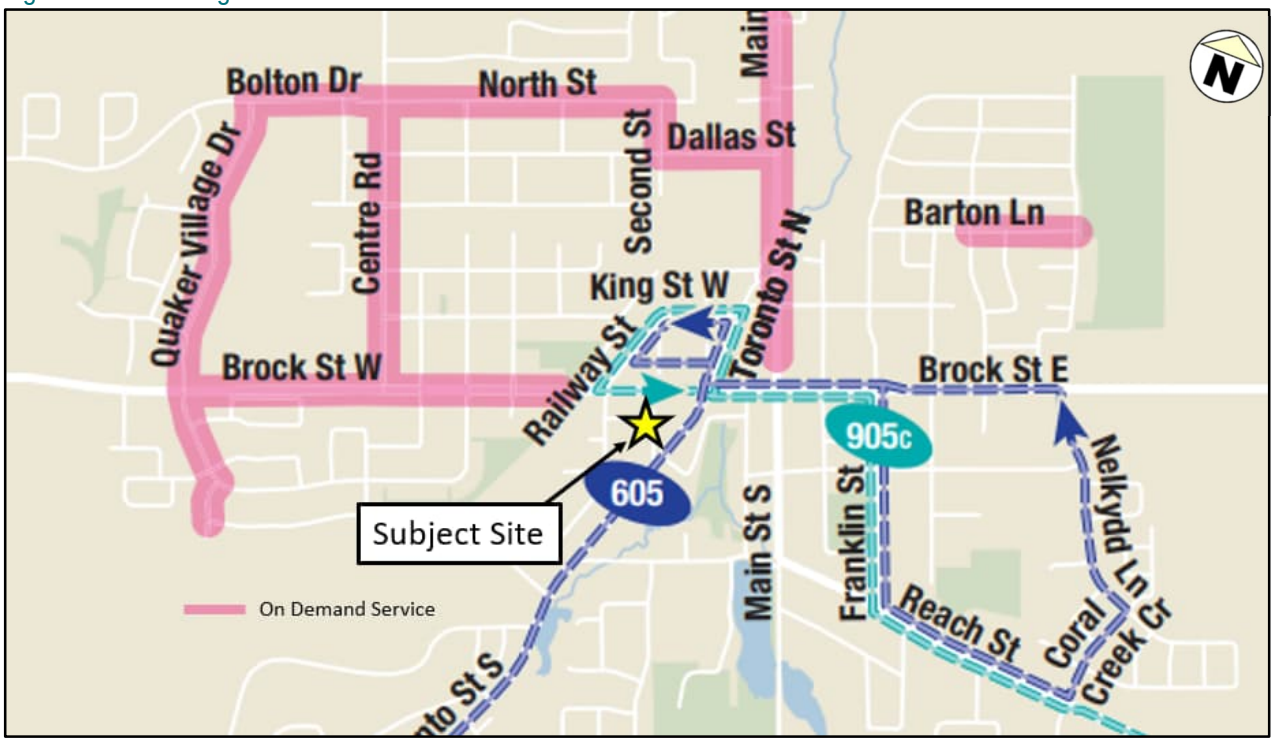
Victoria Drive is a north-south local road within the study area. Victoria Drive operates with a two-lane cross section (one lane per direction). Victoria Drive operates from Toronto Street South in the south towards Brock Street West before converting to Railway Street in the north. Victoria Drive has an assumed speed limit of 40 km/h and on-street parking is permitted during evenings and weekends on the north/east side of the street.

James Hill Court is a north-south private U-shaped road within the study area. James Hill Court operates with a two-lane cross section (one-lane in each direction) along Campbell Drive. James Hill Court has an assumed speed limit of 40 km/h and on-street parking is not permitted.

2.2 EXISTING TRANSIT NETWORK

The subject site is accessible by public transit serviced by Durham Region Transit (DRT) and GO Transit. The existing transit network within the study area is described below and illustrated in Figure 2-2.

Figure 2-2: Existing Transit Network



Source: Durham Region Transit, Accessed July 2024

DRT Route 605 is a bus route that operates between Welwood Drive and the area of Nelkydd Lane, generally in a north-south direction along Toronto Street South. The bus route operates with headways of 30 to 60 minutes on weekdays and weekends.

Access Locations: Route 605 is accessible at the intersection of Toronto Street South and Campbell Drive (approximately a 3-minute walk or 200 meters).

GO Bus 70 Uxbridge/Mount Joy is a regional bus service operating from Railway/Albert Street in Uxbridge to Mount Joy GO Station, generally in a north-south direction. GO Bus 70 operates from 10:35 a.m. to 8:40 p.m. from Monday to Friday, and 9:35 a.m. to 7:40 p.m. on Saturdays and Sundays.

> *Access Locations:* GO Bus 70 is accessible at the intersection of Toronto Street South and Mill Street (approximately a 5-minute walk or 350 meters).

GO Bus 71 Stouffville is a regional bus service operating from Railway/Albert Street in Uxbridge to Union Station in Toronto, generally in a north-south direction. GO Bus 71 operates from 3:30 p.m. to 4:20 a.m. from Monday to Friday, and 5:45 a.m. to 4:20 a.m. on Saturdays and Sundays.

> *Access Locations:* GO Bus 71 is accessible at the intersection of Toronto Street South and Mill Street (approximately a 5-minute walk or 350 meters).

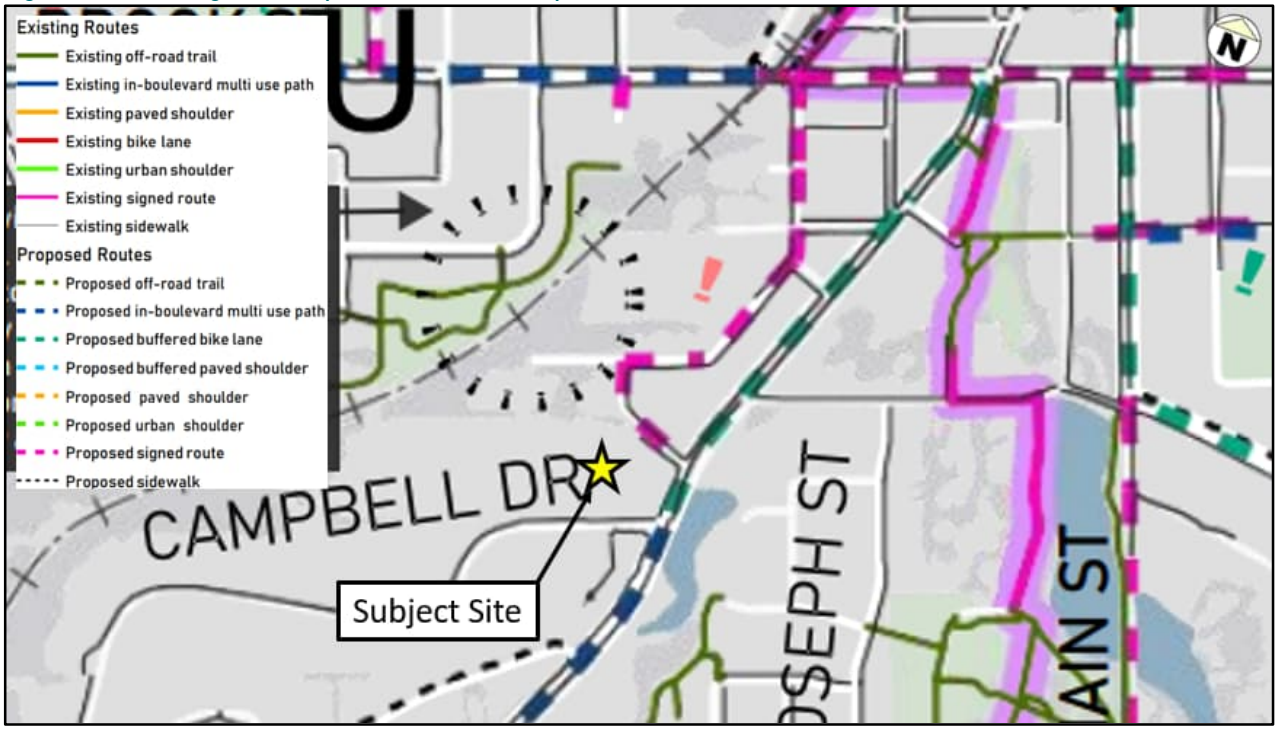
2.3 EXISTING CYCLING NETWORK

Cycling infrastructure in the area surrounding the site includes off-road trails along the South Balsam Trail and the Historic Rotary Trail. The site receives a BikeScore of 31/100, or "somewhat bikeable," when entered into the WalkScore application, indicating the area currently has minimal bike infrastructure.

As per the Township of Uxbridge Active Transportation Plan (ATP), cycling infrastructure is proposed along Toronto Street South, consisting of an in-boulevard multi-use path (MUP) and buffered bike lane. The Township ATP indicates several planned improvements to cycling infrastructure in the community that will improve bike access to/from the site and nearby neighbourhoods.

The existing and proposed active transportation network around the subject site is shown in Figure 2-3.

Figure 2-3 Existing and Proposed Active Transportation Network



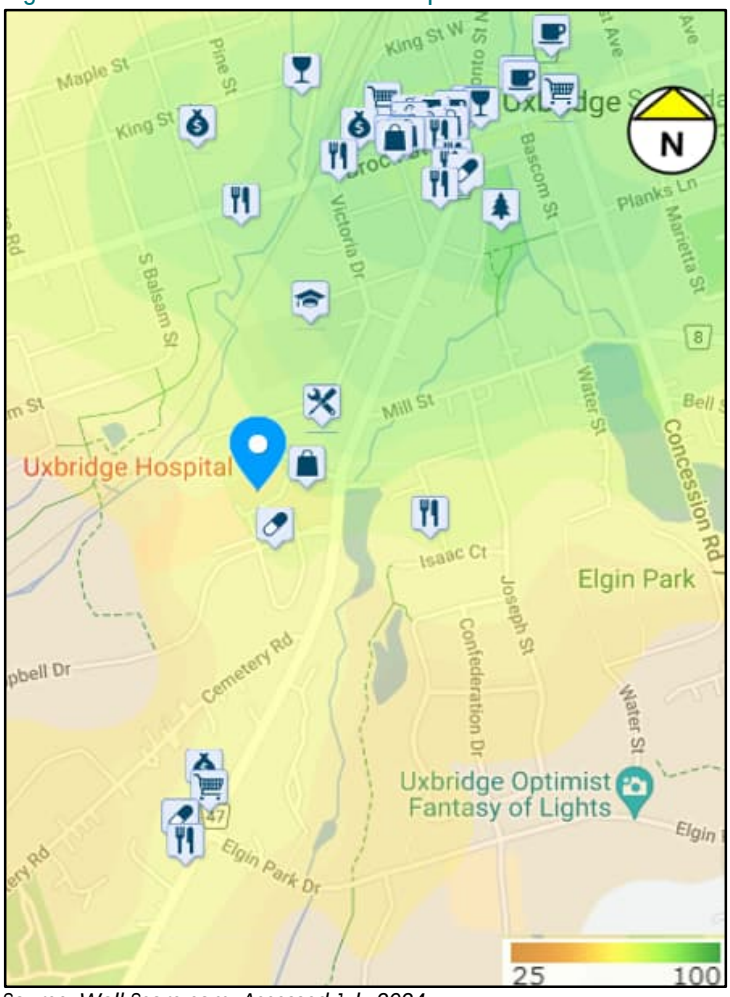
Source: Township of Uxbridge Active Transportation Plan, June 2021

2.4 EXISTING PEDESTRIAN NETWORK

Continuous sidewalks are present on both sides of Toronto Street South and on Victoria Drive leading to the hospital, while on Campbell Drive, sidewalks are only present on the north side. Landscaped buffer between sidewalks and the roadways provide additional protection for pedestrians. At the studied signalized intersection, crosswalks with protected pedestrian phases are present on all approaches.

The site receives a WalkScore of 61/100, or "Somewhat Walkable" when entered into the WalkScore application, indicating the area provides adequate infrastructure to accomplish some errands on foot. As shown in Figure 2-4, a 15-minute walk from the subject site could permit an individual to reach many services and amenities such as restaurants, grocery store, retail shops, and parks within Uxbridge's downtown area.

Figure 2-4: WalkScore Gradient Map



Source: WalkScore.com, Accessed July 2024

2.5 TRAFFIC DATA COLLECTION

Turning movement counts (TMCs) were used as the source of traffic data in the intersection capacity analysis. LEA collected traffic counts for the unsignalized intersections within the study area on Tuesday July 16th, 2024, during the weekday AM and PM peak periods between 7:30 to 9:30 AM and 4:00 to 6:00 PM, respectively.

Additionally, LEA recollected TMCs for the Toronto Street South & Victoria Drive intersection on Tuesday March 25th, 2025, based on comments received in the previous submission. Signal timing plans and TMC data for the signalized intersection of Toronto Street South and Campbell Drive were obtained from the Regional Municipality of Durham.

Table 2-1 summarizes the traffic data utilized in this study, with detailed TMCs and signal timing plans provided in Appendix B.

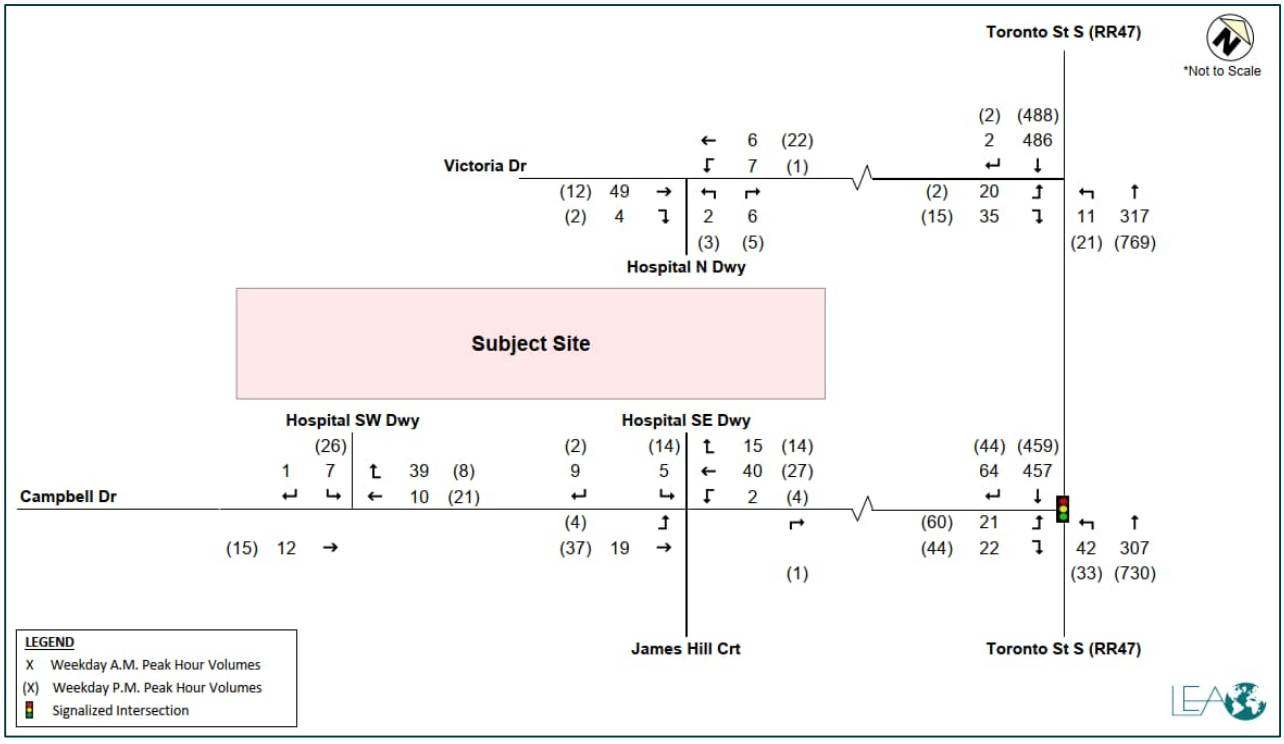
Table 2-1 Traffic Data Collection

Intersection	TMC Date	Source
Toronto Street South & Campbell Drive	Thursday September 21, 2023	Durham Region
Toronto Street South & Victoria Drive	Tuesday March 25, 2025	LEA
Hospital North Driveway & Victoria Drive	Tuesday July 16, 2024	
Hospital Southwest Driveway & Campbell Drive		
Hospital Southeast Driveway/James Hill Court Driveway & Campbell Drive		

2.6 EXISTING TRAFFIC VOLUMES

The existing traffic volumes in the study area during the weekday AM and PM peak hours are illustrated in Figure 2-5. Traffic volume balancing was conducted for the existing traffic volumes along Toronto Street South & Campbell Drive using historical ATR data from the Region of Durham.

Figure 2-5: Existing Peak Hour Traffic Volumes



2.7 POLICE COLLISION DATA

A vehicle collision review was conducted to assess the known incidents at Toronto Street South next to the subject site. A Freedom of Information (FOI) request was sent to the Durham Regional Police for vehicle collision data at Toronto St S at Campbell Dr and at Victoria Dr intersections. Data was sought as far back as 2015.

An earlier request for information was sent which only specified the number of incidents from January 2014 to December 2024. The data stated 11 incidents at Toronto St S at Campbell Dr intersection and 2 at Toronto St at Victoria Dr. The data suggested an average 1 incident per year at Toronto/Campbell and an incident on average every 5 years at Toronto/Victoria.

A subsequent requested asked to elaborate on each reported collision at Toronto St at Campbell Dr. between January 2015 to the end of 2024. The purpose of this request was to assess the severity of incidents and identify any trends. The data indicated the following:

A. 9 incidents over this time period for an average of 1 incident per year.

B. Most incidents were of property damage only while only 1 involved a fatal injury.

C. Two-thirds of the collisions occurred during the daylight.

D. Most incidents involved 2 vehicles.

E. It is presumed the primary cause of a collision is the motorist inattentiveness and or being unaware of the conditions permissive for safe driving but possibly exhibit assertive driving habits.

Overall, it can be concluded that the general area exhibits a minimal number of vehicle collisions and are minor in nature. The raw data is included in Appendix B.

3 FUTURE BACKGROUND TRAFFIC CONDITIONS

For the analysis of future background traffic conditions, this study considers an occupancy year of 2027 along with 5- and 10-year post-buildout years of 2032 and 2037 respectively. Future background conditions include traffic added to the network from background developments and general corridor growth. The future background conditions were used as a baseline for evaluating the impact of the proposed expansion.

3.1 FUTURE ROAD NETWORK IMPROVEMENTS

Based on a review of applicable plans and background developments within the study area, no changes to the future road network were identified. Therefore, the future background road network was assumed to remain consistent with the existing road network.

3.2 CORRIDOR GROWTH

Historical counts collected in 2022 and 2023 at the intersection of Toronto Street South and Douglas Road were used to derive corridor growth rates. While historical counts generally indicated negative growth, to be conservative a growth rate of 0.5% per year has been applied to movements along the Toronto Street South corridor in both directions. Corridor growth traffic volumes are provided in Appendix D.

Additionally, a review of MTO highway volumes was also conducted to compare Average Annual Daily Traffic (AADT), Summer Average Weekday Daily Traffic (SWADT) and Winter Average Daly Traffic (WADT). The closest MTO station is Highway 12 for the section between Highway 7 and Junction Highway 48. The MTO Provincial Highway Traffic Volumes 1988-2019, 2021 data was reviewed, and the data indicates the SAWDT is consistently higher than WADT. This indicates summer volumes are representative of peak road conditions. Detailed calculations are provided in Appendix D.

The weekday average from the ATR volumes on Toronto St S at Douglas Dr further supports a decline to street traffic over time as summarized in Table 3-1.

Table 3-1: ATR Volumes on Toronto Street South at Douglas Drive

Survey Dates	24 Hour Total				Weekday Average
June 15-16, 20, 2022	**Wed.**	**Thurs.**	**Mon.**	-	17134
	17309	17696	16397		
Aug 22-25, 2022	**Mon.**	**Tues.**	**Wed.**	**Thurs.**	16054
	15322	16319	16199	16377	
Sept 19-21, 2022	**Mon.**	**Tues.**	**Wed.**	-	15711
	15092	15872	16168		
April 17-19, 2023	**Mon.**	**Tues.**	**Wed.**	-	15522
	15042	15628	15895		
July 10-12, 2023	**Mon.**	**Tues.**	**Wed.**	-	16221
	16405	16173	16085		
Nov. 2, 6-7, 2023	**Thurs.**	**Mon.**	**Tues.**	-	16157
	16733	15974	15764		

In addition, as mentioned in Section 2.6, LEA recollected TMCs for the Toronto Street South & Victoria Drive intersection on Tuesday March 25th, 2025, based on comments received in the previous submission to account for school traffic.

3.3 BACKGROUND DEVELOPMENTS

One (1) background development was included in the future background analysis. The background development is summarized in Table 3-2. Excerpts from the study providing details of the background development trips are provided in Appendix D.

Table 3-2: Background Developments

#	Location	Proposed Development	Source of Traffic Volumes
1	179-181 Toronto Street South	10 residential units	TIS May 20, 2022, CGE Transportation Consulting (Review number of site tips generated and split traffic on Toronto St S based on two-way traffic flow on Toronto St south of Campbell Dr.)

3.4 FUTURE BACKGROUND TRAFFIC VOLUMES

Future background traffic volumes for the weekday AM and PM peak hours under the 2027, 2032, and 2037 horizon years are illustrated in Figure 3-1, Figure 3-2, and Figure 3-3, respectively.

Figure 3-1: 2027 Future Background Traffic Volumes

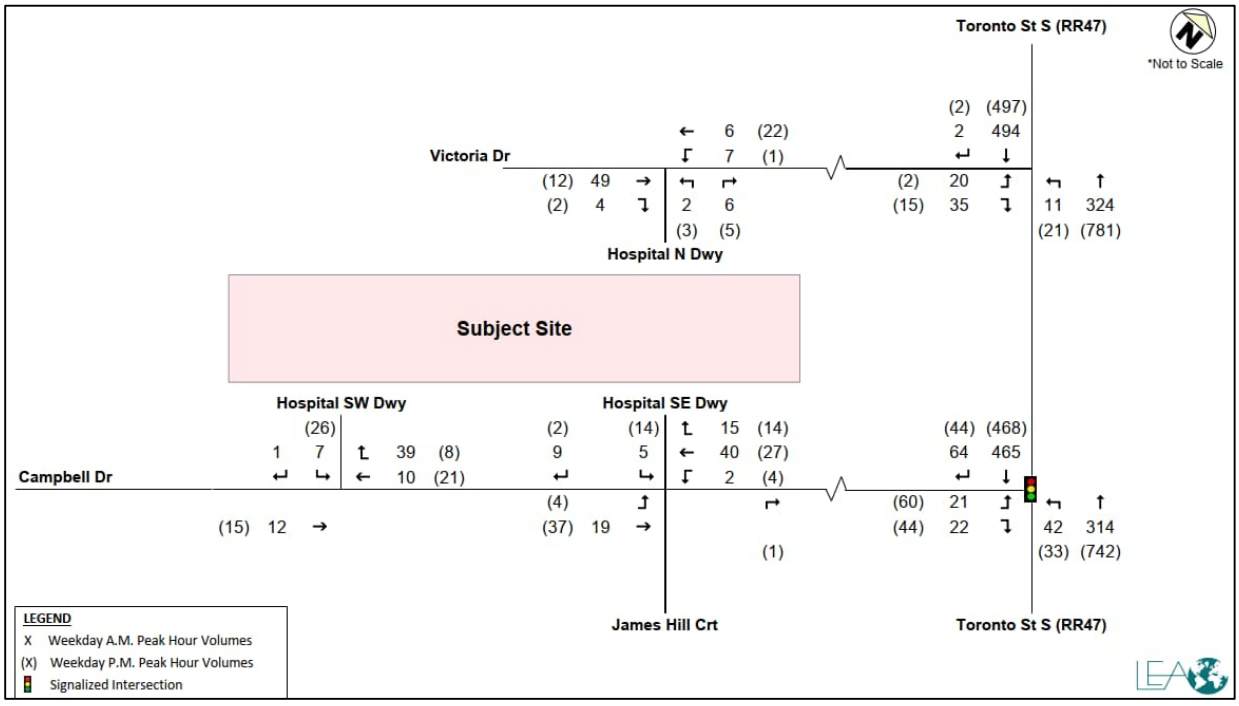

Toronto St S (RR47)
*Not to Scale
Victoria Dr
Hospital N Dwy
Subject Site
Hospital SW Dwy
Hospital SE Dwy
Campbell Dr
James Hill Crt
Toronto St S (RR47)
LEGEND
X Weekday A.M. Peak Hour Volumes
(X) Weekday P.M. Peak Hour Volumes
Signalized Intersection

Figure 3-2: 2032 Future Background Traffic Volumes

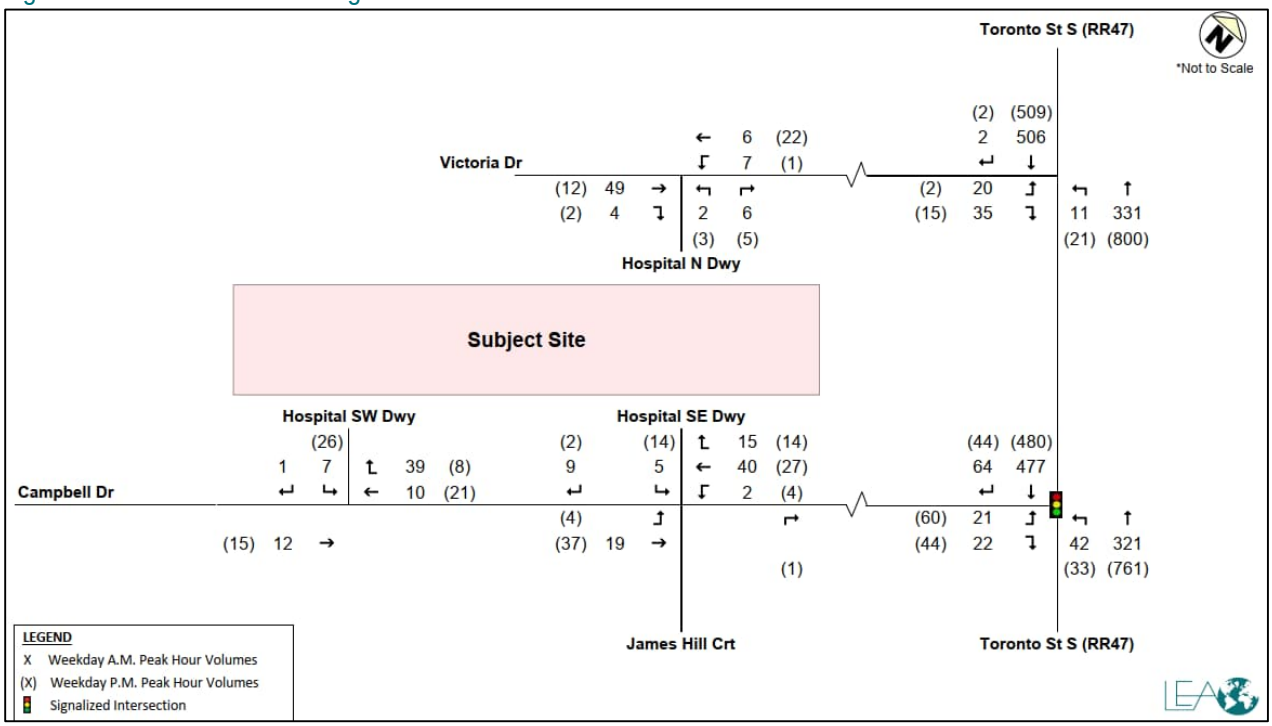
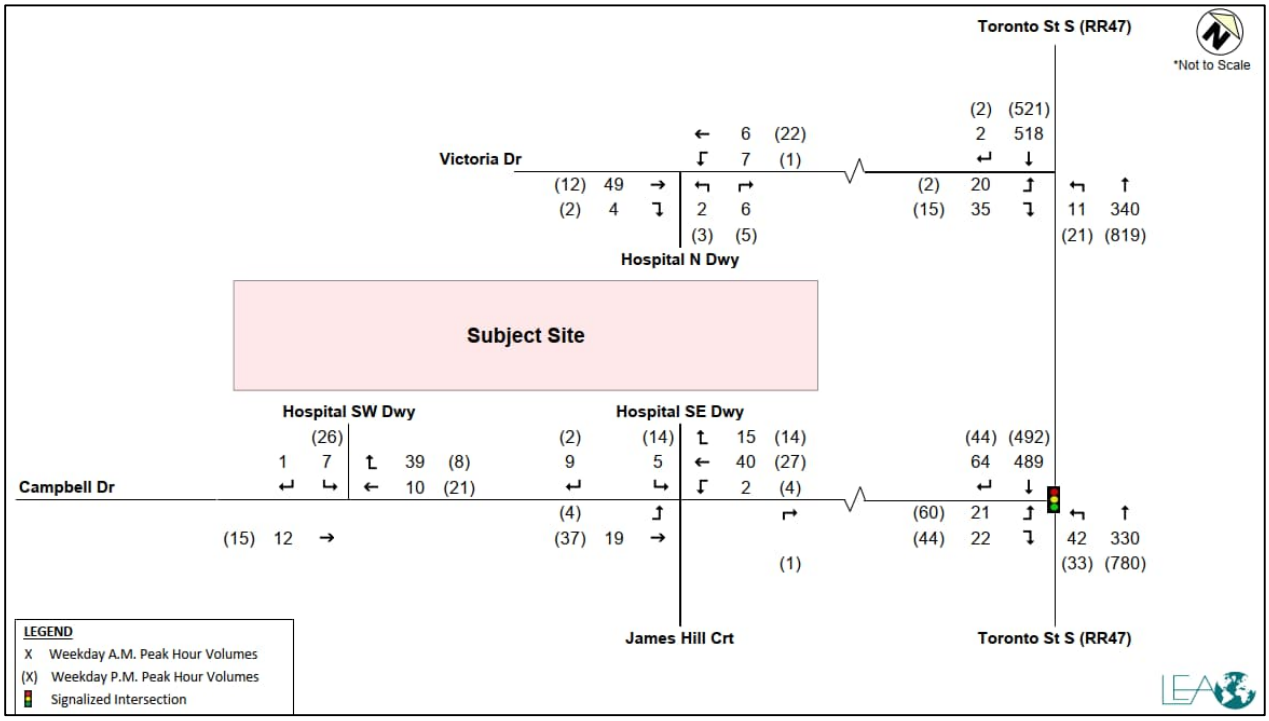


Figure 3-3: 2037 Future Background Traffic Volumes



4 SITE TRIP GENERATION

This section discusses forecasted trips associated with the proposed expansion. Vehicle access to the site will be accommodated via the existing site accesses: two (2) driveways along Cambell Drive and one (1) along Victoria Drive. All accesses permit full movements.

4.1 SITE TRIP GENERATION

To estimate the greater number of trips that would be generated from the proposed hospital use, a comparison of the various trip generation categories available is shown in Table 4-1 below.

Table 4-1: Hospital Vehicle Trip Generation Comparison

Land Use	Description	Weekday AM Peak Hour			Weekday PM Peak Hour		
		In	Out	Total	In	Out	Total
Hospital *(Existing Trip generation rates)* 92,209 ft^2	Auto Trip Rate (/1,000 ft^2)	0.78	0.36	1.14	0.35	0.60	0.95
	Total Auto Trips	63	29	92	32	55	87
	Primary External Auto Trips	**63**	**29**	**92**	**32**	**55**	**87**
Hospital *ITE11 LUC610 Hospital* 92,209 ft^2	Auto Trip Rate (/1,000 ft^2)	0.55	0.27	0.82	0.30	0.56	0.86
	Total Auto Trips	51	25	76	28	46	75
	Primary External Auto Trips	**51**	**25**	**76**	**28**	**46**	**75**
Hospital *ITE11 LUC610 Hospital* (50 Beds)	Auto Trip Rate (/bed)	1.29	0.50	1.79	0.56	1.13	1.69
	Total Auto Trips	64	26	90	28	57	85
	Primary External Auto Trips	**64**	**26**	**90**	**28**	**57**	**85**

The category with the greatest trips generated was selected in order to provide a conservative estimate of the future traffic impact. As a result, trip generation associated with the proposed hospital expansion was estimated using existing trip generation rates, which estimates a total of 92 two-way vehicle trips (63 inbound and 29 outbound) during the weekday AM peak hour and 87 two-way vehicle trips (32 inbound and 55 outbound) during the weekday PM peak hour.

For the proposed long-term care facility, ITE 11 LUC620 was applied given remoteness of location. Of note, the proposed AHF beds within the long-term care building have been added to proposed hospital trip generation given the use of AHF beds will be to provide additional capacity to the hospital. Additionally, based on comments received on the previous submission, Long Term Care facility trip generation has been conducted using proposed floor space. Table 4-2 summarizes the predicted vehicle trip generation.

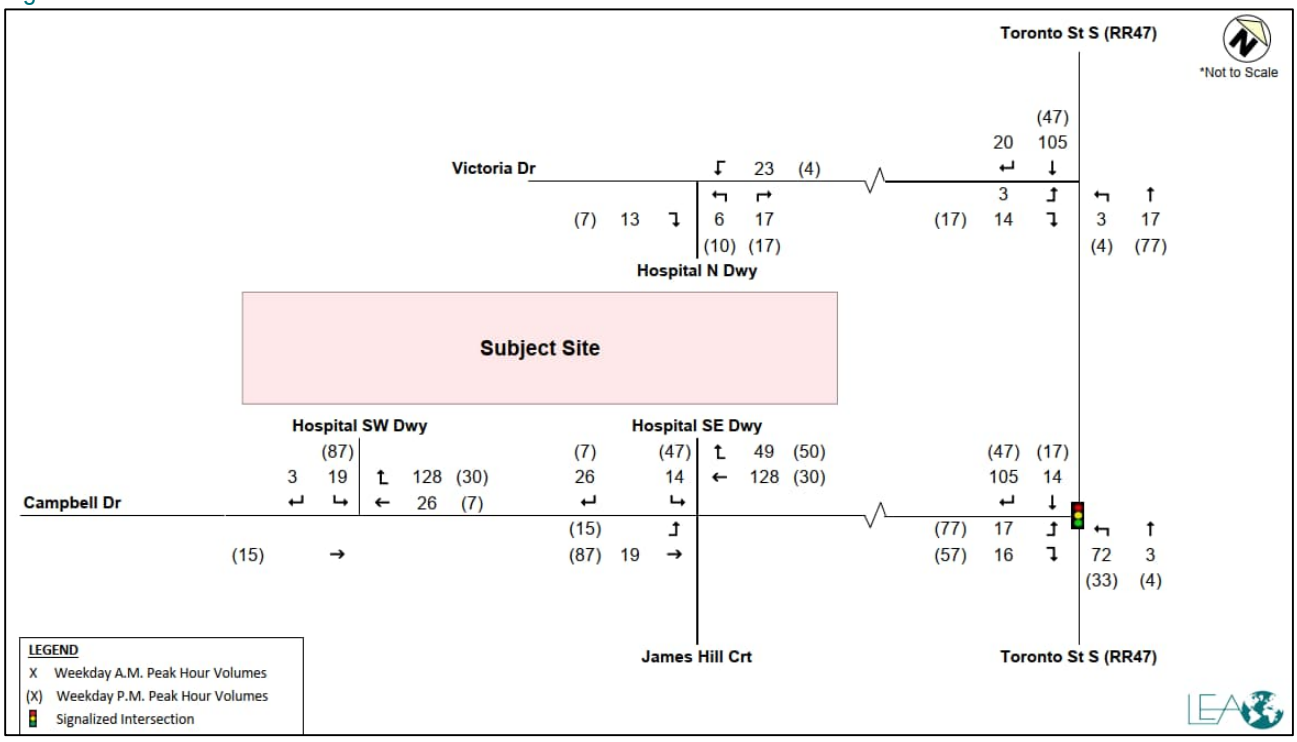
Table 4-2: Total Site Vehicle Trip Generation

Land Use	Description	Weekday AM Peak Hour			Weekday PM Peak Hour		
		In	Out	Total	In	Out	Total
Hospital *(Existing Trip generation rates)* 92,209 ft^2	Auto Trip Rate (/1,000 ft^2)	0.78	0.36	1.14	0.35	0.60	0.95
	Total Auto Trips	63	29	92	32	55	87
	Primary External Auto Trips	**63**	**29**	**92**	**32**	**55**	**87**
Long Term Care ITE11 LUC620 Nursing Home (201,000 ft^2)	Auto Trip Rate (/bed)	0.42	0.13	0.55	0.24	0.35	0.59
	Total Auto Trips	85	26	111	49	70	119
	Primary External Auto Trips	**85**	**26**	**111**	**49**	**70**	**119**
Total		**148**	**55**	**203**	**81**	**125**	**206**

The proposed expansion is predicted to generate 203 two-way vehicle trips (148 inbound and 55 outbound) during the weekday AM peak hour and 206 two-way vehicle trips (81 inbound and 125 outbound) during the weekday PM peak hour.

Total site traffic volumes during the weekday AM and PM peak hours are illustrated in Figure 4-1.

Figure 4-1: Site Traffic Volumes



5 FUTURE TOTAL TRAFFIC CONDITIONS

Future total traffic conditions include the addition of site trips to future background volumes.

5.1 FUTURE TOTAL TRAFFIC VOLUMES

Future total traffic volumes for the weekday AM and PM peak hours during the 2027, 2032, and 2037 horizon year are illustrated in Figure 5-1, Figure 5-2, and Figure 5-3, respectively.

Figure 5-1: 2027 Future Total Traffic Volumes

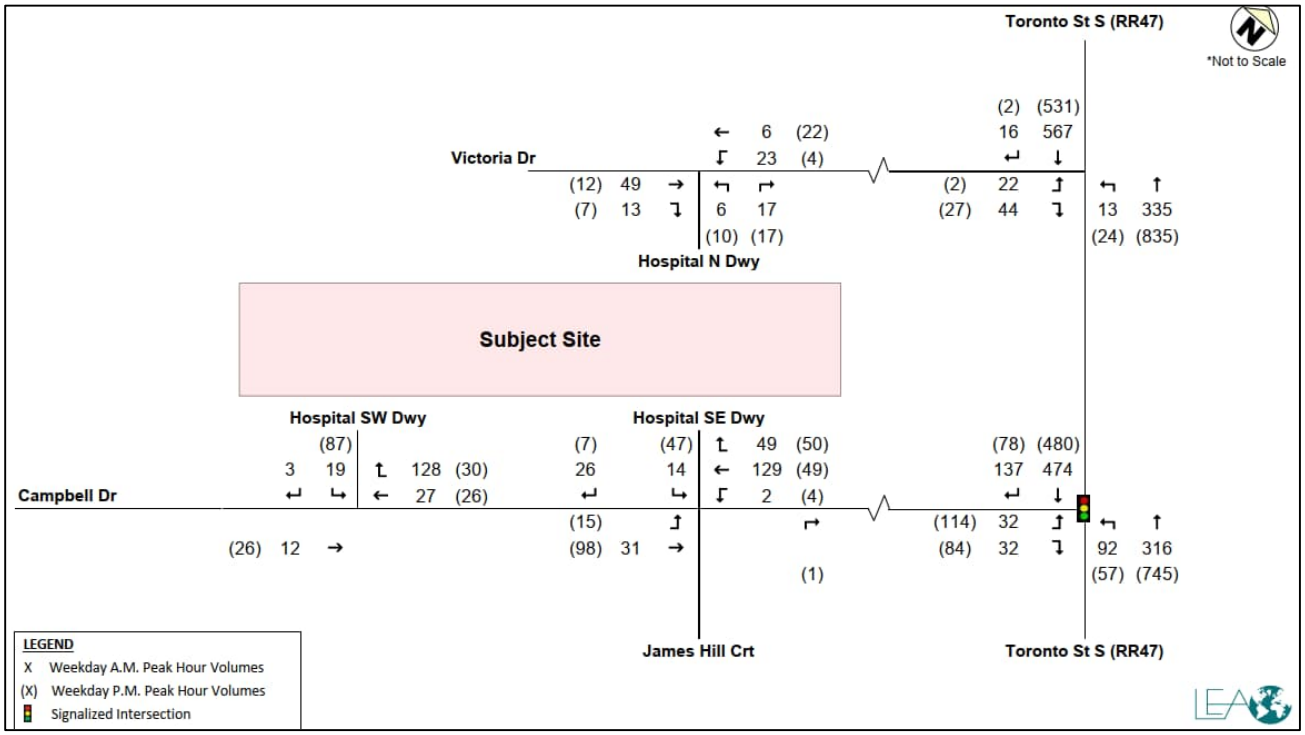


Figure 5-2: 2032 Future Total Traffic Volumes

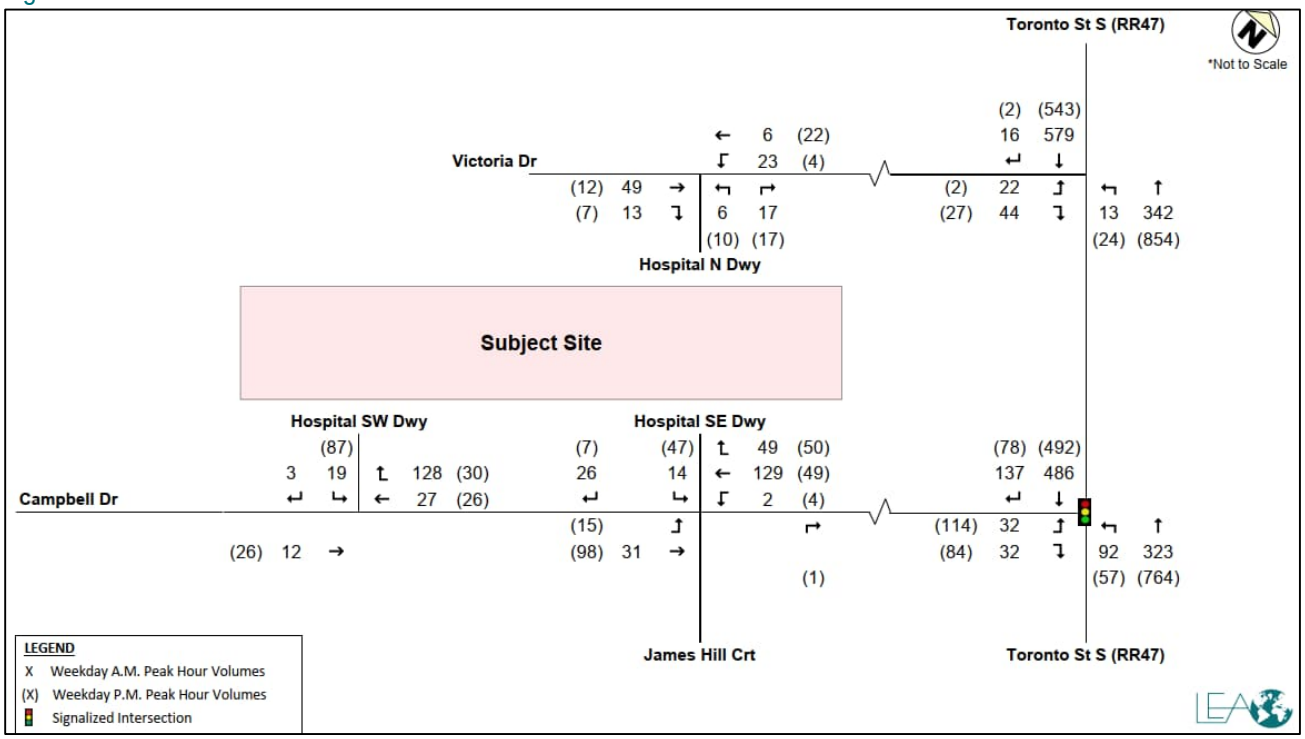
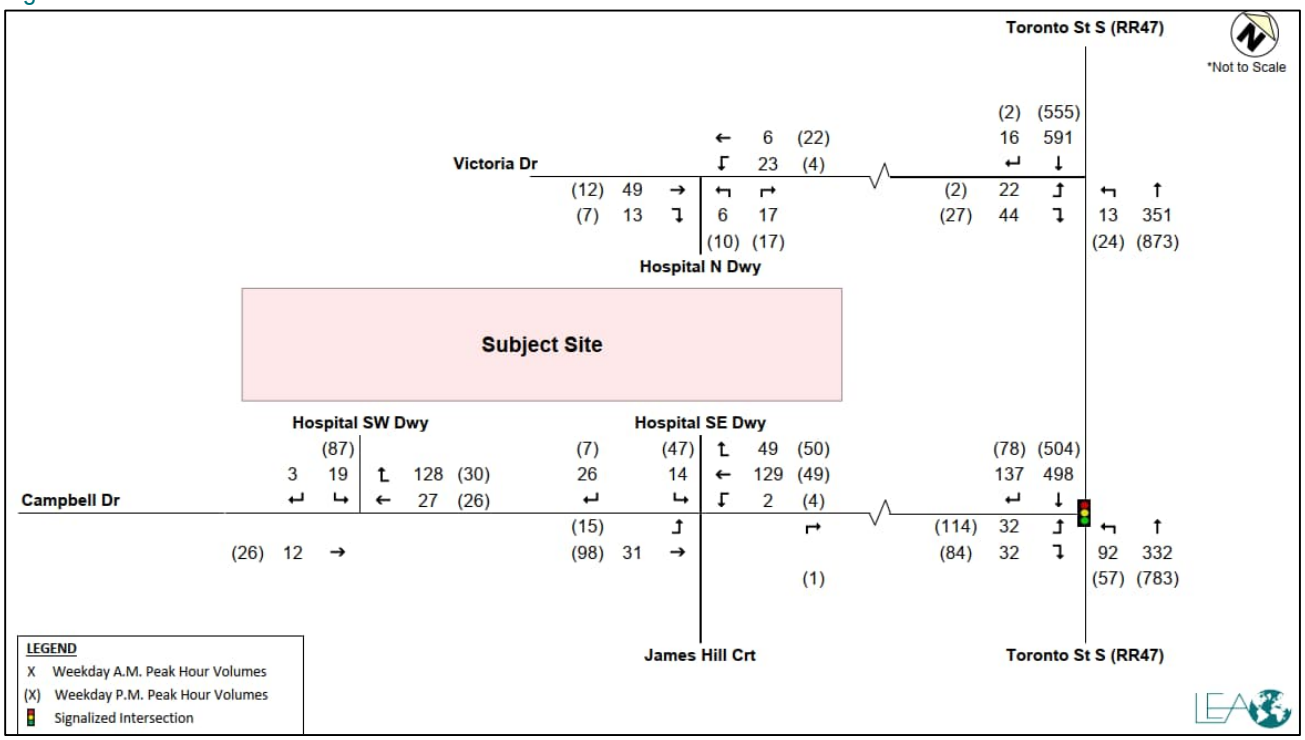


Figure 5-3: 2037 Future Total Traffic Volumes



6 INTERSECTION CAPACITY ANALYSIS

The intersection capacity analysis was undertaken using Synchro 11.0, which is based on the Highway Capacity Manual (2000) methodology and adhering to Durham Region's Traffic Impact Study Guidelines (October 2011). Peak Hour Factors (PHF) under existing conditions for all intersections were calculated based on available traffic counts. Key movements of interest are those with a Level of Service (LOS) E or worse or a Volume-to-Capacity (V/C) ratio greater than 0.85 for through and right movements and a V/C greater than 0.9 for dedicated left-turn movements.

The sections below outline a comparison of the capacity analysis results under existing, future background and future total conditions. Detailed capacity results are provided in the following appendices:

- Appendix E: Existing Intersection Capacity Analysis;
- Appendix F: 2027 Intersection Capacity Analysis;
- Appendix G: 2032 Intersection Capacity Analysis; and,
- Appendix H: 2037 Intersection Capacity Analysis.

6.1 SIGNALIZED INTERSECTIONS

The results for the studied signalized intersections under each traffic scenario during the weekday AM and PM peak hours are summarized in the sections below.

6.1.1 Toronto Street South and Campbell Drive

The intersection capacity analysis results at Toronto Street South and Campbell Drive during the AM and PM peak hours are summarized in Table 6-1 and

Table 6-2, while the queue analysis is summarized in Table 6-3 and Table 6-4.

Table 6-1: Intersection Capacity Analysis - Toronto Street South & Campbell Drive (Existing & 2027)

AM	Existing Traffic				Future Background (2027)				Future Total (2027)			
Mvmt	Vol	V/C	Delay (s)	LOS	Vol	V/C	Delay (s)	LOS	Vol	V/C	Delay (s)	LOS
Overall	**-**	**0.35**	**11**	**B**	**-**	**0.35**	**11**	**B**	**-**	**0.36**	**11**	**B**
EBL	21	0.05	22	C	21	0.05	22	C	32	0.08	23	C
EBR	22	0.02	22	C	22	0.02	22	C	32	0.02	22	C
NBL	42	0.12	8	A	42	0.13	8	A	92	0.26	9	A
NBT	307	0.33	9	A	314	0.34	9	A	316	0.34	9	A
SBT	457	0.48	12	B	465	0.49	12	B	474	0.50	12	B
SBR	64	0.07	8	A	64	0.07	8	A	137	0.14	8	A
PM	**Existing Traffic**				**Future Background (2027)**				**Future Total (2027)**			
Mvmt	Vol	V/C	Delay (s)	LOS	Vol	V/C	Delay (s)	LOS	Vol	V/C	Delay (s)	LOS
Overall	**-**	**0.52**	**21**	**C**	**-**	**0.52**	**21**	**C**	**-**	**0.56**	**20**	**C**
EBL	60	0.10	16	B	60	0.10	17	B	114	0.18	18	B
EBR	44	0.03	16	B	44	0.03	16	B	84	0.06	18	B
NBL	33	0.11	12	B	33	0.11	12	B	57	0.18	12	B
NBT	730	**0.85**	26	C	742	**0.85**	26	C	745	**0.85**	26	C
SBT	459	0.53	15	B	468	0.54	15	B	480	0.55	15	B
SBR	44	0.05	11	B	44	0.05	11	B	78	0.08	11	B

Table 6-2: Intersection Capacity Analysis - Toronto Street South & Campbell Drive (2032 & 2037)

AM	Future Background (2032)				Future Total (2032)				Future Background (2037)				Future Total (2037)			
Mvmt	Vol	V/C	Delay (s)	LOS	Vol	V/C	Delay (s)	LOS	Vol	V/C	Delay (s)	LOS	Vol	V/C	Delay (s)	LOS
Overall	**-**	**0.36**	**11**	**B**	**-**	**0.37**	**11**	**B**	**-**	**0.37**	**11**	**B**	**-**	**0.38**	**11**	**B**
EBL	21	0.05	22	C	32	0.08	23	C	21	0.05	22	C	32	0.08	23	C
EBR	22	0.02	22	C	32	0.02	23	C	22	0.02	22	C	32	0.02	22	C
NBL	42	0.13	8	A	92	0.27	9	A	42	0.13	8	A	92	0.28	9	A
NBT	321	0.35	9	A	323	0.35	9	A	330	0.36	9	A	332	0.36	9	A
SBT	477	0.50	12	B	486	0.51	12	B	489	0.52	12	B	498	0.52	12	B
SBR	64	0.07	8	A	137	0.14	8	A	64	0.07	8	A	137	0.14	8	A
PM	**Future Background (2032)**				**Future Total (2032)**				**Future Background (2037)**				**Future Total (2037)**			
Mvmt	Vol	V/C	Delay (s)	LOS	Vol	V/C	Delay (s)	LOS	Vol	V/C	Delay (s)	LOS	Vol	V/C	Delay (s)	LOS
Overall	**-**	**0.54**	**21**	**C**	-	0.57	**21**	**C**	**-**	**0.55**	**21**	**C**	**-**	**0.58**	**21**	**C**
EBL	60	0.10	17	B	114	0.19	18	B	60	0.10	18	B	114	0.19	18	B
EBR	44	0.03	17	B	84	0.06	17	B	44	0.03	17	B	84	0.06	17	B
NBL	33	0.11	11	B	57	0.18	12	B	33	0.11	11	B	57	0.18	12	B
NBT	761	**0.86**	27	C	764	0.86	27	C	780	**0.87**	27	C	783	**0.87**	27	C
SBT	480	0.54	15	B	492	0.55	15	B	492	0.55	15	B	504	0.56	15	B
SBR	44	0.05	11	B	78	0.08	11	B	44	0.05	10	B	78	0.08	11	B

Table 6-3: Toronto Street South & Campbell Drive (Existing & 2027) Queues

AM		Existing Traffic		Future Background (2027)		Future Total (2027)	
Mvmt	Storage	50th Queue	95th Queue	50th Queue	95th Queue	50th Queue	95th Queue
EBL	30	3	8	3	8	4	12
EBR	0	0	6	0	6	0	7
NBL	30	8	17	3	8	8	17
NBT	0	61	87	27	44	27	44
SBT	0	44	68	45	69	46	71
SBR	15	2	7	2	7	4	12
PM		**Existing Traffic**		**Future Background (2027)**		**Future Total (2027)**	
Mvmt	Storage	50th Queue	95th Queue	50th Queue	95th Queue	50th Queue	95th Queue
EBL	30	6	16	7	16	13	27
EBR	0	0	7	0	7	0	10
NBL	30	3	7	3	7	5	11
NBT	0	95	131	97	135	96	134
SBT	0	48	66	49	68	50	70
SBR	15	1	6	1	6	3	9

Table 6-4: Toronto Street South & Campbell Drive (2032 & 2037) Queues

AM		Future Background (2032)		Future Total (2032)		Future Background (2037)		Future Total (2037)	
Mvmt	Storage	50th Queue	95th Queue	50th Queue	95th Queue	50th Queue	95th Queue	50th Queue	95th Queue
EBL	30	3	8	4	12	3	8	4	12
EBR	0	0	6	0	7	0	6	0	7
NBL	30	3	8	8	17	3	9	8	17
NBT	0	28	45	28	45	29	46	29	46
SBT	0	47	72	48	73	48	74	49	76
SBR	15	2	7	4	12	2	7	5	13
PM		Future Background (2032)		Future Total (2032)		Future Background (2037)		Future Total (2037)	
Mvmt	Storage	50th Queue	95th Queue	50th Queue	95th Queue	50th Queue	95th Queue	50th Queue	95th Queue
EBL	30	7	16	13	27	7	16	13	27
EBR	0	0	7	0	10	0	7	0	10
NBL	30	3	7	5	11	3	7	5	11
NBT	0	98	142	99	141	100	148	101	147
SBT	0	49	70	51	72	50	72	51	74
SBR	15	1	6	3	9	2	6	3	9

Existing Conditions: Under existing conditions, the intersection operates well during both weekday peak hours. During the PM peak period, the northbound through movement operates with a V/C of 0.85 while experiencing acceptable delays and LOS C. No intersection modifications are recommended. All other movements operate with residual capacity and acceptable delays. All existing 95th percentile queues can be accommodated by their available storage lanes.

Future Background Conditions: Under future background conditions, the intersection is expected to generally operate similar to existing conditions with acceptable increases in V/C ratios and delay. No major constraints are noted.

Future Total Conditions: Under future total conditions, the addition of site traffic is expected to have an acceptable impact on intersection operations, with all movements operating similar to future background conditions. As such, no intersection modifications are recommended.

6.2 UNSIGNALIZED INTERSECTIONS

The results for the unsignalized intersections under each traffic scenario during the weekday AM and PM peak hours are summarized in the sections below.

6.2.1 Toronto Street South and Victoria Drive

The intersection capacity analysis results at Toronto Street South and Victoria Drive during the AM and PM peak hours are summarized in Table 6-5 and Table 6-6.

Table 6-5: Intersection Capacity Analysis - Toronto Street South & Victoria Drive (Existing & 2027)

AM	Existing Traffic				Future Background (2027)				Future Total (2027)			
Mvmt	Vol	V/C	Delay(s)	LOS	Vol	V/C	Delay(s)	LOS	Vol	V/C	Delay(s)	LOS
NBL	11	0.01	9	A	11	0.01	9	A	11	0.01	9	A
NBT	317	0.00	0	-	324	0.00	0	-	324	0.00	0	-
EBLR	55	0.20	18	C	55	0.21	19	C	55	0.21	19	C
SBT	486	0.00	0	-	494	0.00	0	-	494	0.00	0	-
SBR	2	0.00	0	-	2	0.00	0	-	2	0.00	0	-
PM	Existing Traffic				Future Background (2027)				Future Total (2027)			
Mvmt	Vol	V/C	Delay(s)	LOS	Vol	V/C	Delay(s)	LOS	Vol	V/C	Delay(s)	LOS
NBL	21	0.02	9	A	21	0.02	9	A	24	0.03	9	A
NBT	769	0.00	0	-	781	0.00	0	-	835	0.00	0	-
EBLR	17	0.04	14	B	17	0.04	14	B	29	0.07	14	B
SBT	488	0.00	0	-	497	0.00	0	-	531	0.00	0	-
SBR	2	0.00	0	-	2	0.00	0	-	2	0.00	0	-

Table 6-6: Intersection Capacity Analysis - Toronto Street South & Victoria Drive (2032 & 2037)

AM	Future Background (2032)				Future Total (2032)				Future Background (2037)				Future Total (2037)			
Mvmt	Vol	V/C	Delay(s)	LOS	Vol	V/C	Delay(s)	LOS	Vol	V/C	Delay(s)	LOS	Vol	V/C	Delay(s)	LOS
NBL	11	0.01	9	A	13	0.02	9	A	11	0.01	9	A	13	0.02	9	A
NBT	331	0.00	0	-	342	0.00	0	-	340	0.00	0	-	351	0.00	0	-
EBLR	55	0.21	19	C	66	0.29	23	C	55	0.22	20	C	66	0.29	23	C
SBT	506	0.00	0	-	579	0.00	0	-	518	0.00	0	-	591	0.00	0	-
SBR	2	0.00	0	-	16	0.00	0	-	2	0.00	0	-	16	0.00	0	-
PM	Future Background (2032)				Future Total (2032)				Future Background (2037)				Future Total (2037)			
Mvmt	Vol	V/C	Delay(s)	LOS	Vol	V/C	Delay(s)	LOS	Vol	V/C	Delay(s)	LOS	Vol	V/C	Delay(s)	LOS
NBL	21	0.02	9	A	24	0.03	9	A	21	0.02	9	A	24	0.03	9	A
NBT	800	0.00	0	-	854	0.00	0	-	819	0.00	0	-	873	0.00	0	-
EBLR	17	0.05	14	B	29	0.07	14	B	17	0.05	15	B	29	0.08	14	B
SBT	509	0.00	0	-	543	0.00	0	-	521	0.00	0	-	555	0.00	0	-
SBR	2	0.00	0	-	2	0.00	0	-	2	0.00	0	-	2	0.00	0	-

Existing & Future Conditions: Under existing and future conditions, the intersection of Toronto Street South and Victoria Drive operates well, with no capacity, delay, or queueing issues identified during both weekday peak hours.

6.2.2 Hospital North Driveway and Victoria Drive

The intersection capacity analysis results at Hospital North Driveway and Victoria Drive during the AM and PM peak hours are summarized in Table 6-7 and Table 6-8.

Table 6-7: Intersection Capacity Analysis - Hospital North Driveway & Victoria Drive (Existing & 2027)

AM	Existing Traffic				Future Background (2027)				Future Total (2027)			
Mvmt	Vol	V/C	Delay(s)	LOS	Vol	V/C	Delay(s)	LOS	Vol	V/C	Delay(s)	LOS
NBLR	8	0.01	9	A	8	0.01	9	A	23	0.04	9	A
EBT	49	0.00	0	-	49	0.00	0	-	49	0.00	0	-
EBR	4	0.00	0	-	4	0.00	0	-	13	0.00	0	-
WBL	7	0.01	7	A	7	0.01	7	A	23	0.02	7	A
WBT	6	0.00	0	A	6	0.00	0	A	6	0.00	0	A
PM	Existing Traffic				Future Background (2027)				Future Total (2027)			
Mvmt	Vol	V/C	Delay(s)	LOS	Vol	V/C	Delay(s)	LOS	Vol	V/C	Delay(s)	LOS
NBLR	8	0.01	9	A	8	0.01	9	A	27	0.04	9	A
EBT	12	0.00	0	-	12	0.00	0	-	12	0.00	0	-
EBR	2	0.00	0	-	2	0.00	0	-	7	0.00	0	-
WBL	1	0.00	7	A	1	0.00	7	A	4	0.00	7	A
WBT	22	0.00	0	A	22	0.00	0	A	22	0.00	0	A

Table 6-8: Intersection Capacity Analysis - Hospital North Driveway & Victoria Drive (2032 & 2037)

AM	Future Background (2032)				Future Total (2032)				Future Background (2037)				Future Total (2037)			
Mvmt	Vol	V/C	Delay(s)	LOS	Vol	V/C	Delay(s)	LOS	Vol	V/C	Delay(s)	LOS	Vol	V/C	Delay(s)	LOS
NBLR	8	0.01	9	A	23	0.04	9	A	8	0.01	9	A	23	0.04	9	A
EBT	49	0.00	0	-	49	0.00	0	-	49	0.00	0	-	49	0.00	0	-
EBR	4	0.00	0	-	13	0.00	0	-	4	0.00	0	-	13	0.00	0	-
WBL	7	0.01	7	A	23	0.02	7	A	7	0.01	7	A	23	0.02	7	A
WBT	6	0.00	0	A	6	0.00	0	A	6	0.00	0	A	6	0.00	0	A
PM	Future Background (2032)				Future Total (2032)				Future Background (2037)				Future Total (2037)			
Mvmt	Vol	V/C	Delay(s)	LOS	Vol	V/C	Delay(s)	LOS	Vol	V/C	Delay(s)	LOS	Vol	V/C	Delay(s)	LOS
NBLR	8	0.01	9	A	27	0.04	9	A	8	0.01	9	A	27	0.04	9	A
EBT	12	0.00	0	-	12	0.00	0	-	12	0.00	0	-	12	0.00	0	-
EBR	2	0.00	0	-	7	0.00	0	-	2	0.00	0	-	7	0.00	0	-
WBL	1	0.00	7	A	4	0.00	7	A	1	0.00	7	A	4	0.00	7	A
WBT	22	0.00	0	A	22	0.00	0	A	22	0.00	0	A	22	0.00	0	A

Existing & Future Conditions: Under existing and future conditions, the intersection of Hospital North Driveway and Victoria Drive operates well, with no capacity, delay, or queueing issues identified during both weekday peak hours.

6.2.3 Hospital Southwest Driveway and Campbell Drive

The intersection capacity analysis results at Hospital Southwest Driveway and Campbell Driveduring the AM and PM peak hours are summarized in Table 6-9 and Table 6-10.

Table 6-9: Intersection Capacity Analysis - Hospital Southwest Driveway & Campbell Drive (Existing & 2027)

AM	Existing Traffic				Future Background (2027)				Future Total (2027)			
Mvmt	Vol	V/C	Delay(s)	LOS	Vol	V/C	Delay(s)	LOS	Vol	V/C	Delay(s)	LOS
EBL	0	0.00	0	A	0	0.00	0	A	0	0.00	0	A
EBT	12	0.00	0	-	12	0.00	0	-	12	0.00	0	-
WBT	10	0.00	0	-	10	0.00	0	-	27	0.00	0	-
WBR	39	0.00	0	-	39	0.00	0	-	128	0.00	0	-
SBLR	33	0.04	9	A	8	0.01	9	A	22	0.03	0	A
PM	Existing Traffic				Future Background (2027)				Future Total (2027)			
Mvmt	Vol	V/C	Delay(s)	LOS	Vol	V/C	Delay(s)	LOS	Vol	V/C	Delay(s)	LOS
EBL	0	0.00	0	A	0	0.00	0	A	0	0.00	0	A
EBT	15	0.00	0	-	15	0.00	0	-	26	0.00	0	-
WBT	21	0.00	0	-	21	0.00	0	-	26	0.00	0	-
WBR	8	0.00	0	-	8	0.00	0	-	30	0.00	0	-
SBLTR	26	0.04	9	A	26	0.04	9	A	87	0.13	9	A

Table 6-10: Intersection Capacity Analysis - Hospital Southwest Driveway & Campbell Drive (2032 & 2037)

AM	Future Background (2032)				Future Total (2032)				Future Background (2037)				Future Total (2037)			
Mvmt	Vol	V/C	Delay(s)	LOS	Vol	V/C	Delay(s)	LOS	Vol	V/C	Delay(s)	LOS	Vol	V/C	Delay(s)	LOS
EBL	0	0.00	0	A	0	0.00	0	A	0	0.00	0	A	0	0.00	0	A
EBT	12	0.00	0	-	12	0.00	0	-	12	0.00	0	-	12	0.00	0	-
WBT	10	0.00	0	-	27	0.00	0	-	10	0.00	0	-	27	0.00	0	-
WBR	39	0.00	0	-	128	0.00	0	-	39	0.00	0	-	128	0.00	0	-
SBLR	8	0.01	9	A	22	0.03	0	A	8	0.01	9	A	22	0.03	0	A
PM	Future Background (2032)				Future Total (2032)				Future Background (2037)				Future Total (2037)			
Mvmt	Vol	V/C	Delay(s)	LOS	Vol	V/C	Delay(s)	LOS	Vol	V/C	Delay(s)	LOS	Vol	V/C	Delay(s)	LOS
EBL	0	0.00	0	A	0	0.00	0	A	0	0.00	0	A	0	0.00	0	A
EBT	15	0.00	0	-	26	0.00	0	-	15	0.00	0	-	26	0.00	0	-
WBT	21	0.00	0	-	26	0.00	0	-	21	0.00	0	-	26	0.00	0	-
WBR	8	0.00	0	-	30	0.00	0	-	8	0.00	0	-	30	0.00	0	-
SBLTR	26	0.04	9	A	87	0.13	0	A	26	0.04	9	A	87	0.13	0	A

Existing & Future Conditions: Under existing and future conditions, the intersection of Hospital Southwest Driveway and Campbell Drive operates well, with no capacity, delay, or queueing issues identified during both weekday peak hours.

6.2.4 James Hill Court/Hospital Southeast Driveway and Campbell Drive

The intersection capacity analysis results at James Hill Court/Hospital Southeast Driveway and Campbell Drive during the AM and PM peak hours are summarized in Table 6-11 and Table 6-12.

Table 6-11: Intersection Capacity Analysis - James Hill Court/Hospital Southeast Driveway & Campbell Drive (Existing & 2027)

AM	Existing Traffic				Future Background (2027)				Future Total (2027)			
Mvmt	Vol	V/C	Delay(s)	LOS	Vol	V/C	Delay(s)	LOS	Vol	V/C	Delay(s)	LOS
NBLTR	0	0.00	0	A	0	0.00	0	A	0	0.00	0	A
EBL	0	0.00	0	A	0	0.00	0	A	0	0.00	0	A
EBT	19	0.00	0	-	31	0.00	0	-	31	0.00	0	-
WBL	2	0.00	7	A	2	0.00	7	A	2	0.00	7	A
WBT	40	0.00	0	A	129	0.00	0	A	129	0.00	0	A
WBR	15	0.00	0	-	49	0.00	0	-	49	0.00	0	-
SBLTR	14	0.02	9	A	40	0.07	10	A	40	0.07	10	A
PM	Existing Traffic				Future Background (2027)				Future Total (2027)			
Mvmt	Vol	V/C	Delay(s)	LOS	Vol	V/C	Delay(s)	LOS	Vol	V/C	Delay(s)	LOS
NBLTR	1	0.00	9	A	1	0.00	9	A	1	0.00	9	A
EBL	4	0.00	7	A	4	0.00	7	A	15	0.01	8	A
EBT	37	0.00	0	A	37	0.00	0	A	98	0.00	0	A
WBL	4	0.00	7	A	4	0.00	7	A	4	0.00	7	A
WBT	27	0.00	0	A	27	0.00	0	A	49	0.00	0	A
WBR	14	0.00	0	-	14	0.00	0	-	50	0.00	0	-
SBLTR	16	0.02	9	A	16	0.02	9	A	54	0.09	11	B

Table 6-12: Intersection Capacity Analysis - James Hill Court/Hospital Southeast Driveway & Campbell (2032 & 2037)

AM	Future Background 2032				Future Total (2032)				Future Background 2037				Future Total (2037)			
Mvmt	Vol	V/C	Delay(s)	LOS	Vol	V/C	Delay(s)	LOS	Vol	V/C	Delay(s)	LOS	Vol	V/C	Delay(s)	LOS
NBLTR	0	0.00	0	A	0	0.00	0	A	0	0.00	0	A	0	0.00	0	A
EBL	0	0.00	0	A	0	0.00	0	A	0	0.00	0	A	0	0.00	0	A
EBT	19	0.00	0	-	31	0.00	0	-	19	0.00	0	-	31	0.00	0	-
WBL	2	0.00	7	A	2	0.00	0	A	2	0.00	7	A	2	0.00	7	A
WBT	40	0.00	0	A	129	0.00	0	A	40	0.00	0	A	129	0.00	0	A
WBR	15	0.00	0	-	49	0.00	0	-	15	0.00	0	-	49	0.00	0	-
SBLTR	14	0.02	9	A	40	0.07	10	A	14	0.02	9	A	40	0.07	10	A
PM	Future Background 2032				Future Total (2032)				Future Background 2037				Future Total (2037)			
Mvmt	Vol	V/C	Delay(s)	LOS	Vol	V/C	Delay(s)	LOS	Vol	V/C	Delay(s)	LOS	Vol	V/C	Delay(s)	LOS
NBLTR	1	0.00	9	A	1	0.00	9	A	1	0.00	9	A	1	0.00	9	A
EBL	4	0.00	7	A	15	0.01	8	A	4	0.00	7	A	15	0.01	8	A
EBT	37	0.00	0	A	98	0.00	0	A	37	0.00	0	A	98	0.00	0	A
WBL	4	0.00	7	A	4	0.00	0	A	4	0.00	7	A	4	0.00	7	A
WBT	27	0.00	0	A	49	0.00	0	A	27	0.00	0	A	49	0.00	0	A
WBR	14	0.00	0	-	50	0.00	0	-	14	0.00	0	-	50	0.00	0	-
SBLTR	16	0.02	9	A	54	0.09	11	B	16	0.02	9	A	54	0.09	11	B

Existing & Future Conditions: Under existing and future conditions, the intersection of James Hill Court/Hospital Southeast Driveway and Campbell operates well, with no capacity, delay, or queueing issues identified during both weekday peak hours.

6.3 SIMTRAFFIC QUEUES

A SimTraffic Analysis was conducted with the following calibration setting:

- 30 minute seeding time
- 1 hour analysis
- 5 simulation runs

Resultant queues for the Toronto Street South and Campbell Drive intersection are summarized in Table 6-13 and Table 6-14, while queues for the Toronto Street South and Victoria Drive intersection are summarized in Table 6-15 and Table 6-16 below.

Table 6-13: Toronto Street South and Campbell Drive (Existing & 2027) SimTraffic Results

Mvmt	Stg (m)	Existing Traffic				Future Background 2027				Future Total 2027			
		Weekday AM Peak Hour		Weekday PM Peak Hour		Weekday AM Peak Hour		Weekday PM Peak Hour		Weekday AM Peak Hour		Weekday PM Peak Hour	
		Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max
EBL	30	5	15	9	23	4	14	8	21	6	18	15	**32**
EBR	149	4	18	6	17	4	16	6	21	5	14	10	31
NBL	30	7	19	11	**65**	8	**30**	12	**57**	15	**31**	22	**65**
NBT	618	23	52	86	152	25	55	92	162	25	63	94	196
SBT	88	40	74	47	79	37	73	47	80	41	77	47	79
SBR	15	9	**51**	8	**43**	8	**50**	7	**55**	12	**51**	10	**55**

Table 6-14: Toronto Street South and Campbell Drive (2032 & 2037) SimTraffic Results

Mvmt	Stg (m)	Future Background 2032				Future Total 2032				Future Background 2037				Future Total 2037			
		Weekday AM Peak Hour		Weekday PM Peak Hour		Weekday AM Peak Hour		Weekday PM Peak Hour		Weekday AM Peak Hour		Weekday PM Peak Hour		Weekday AM Peak Hour		Weekday PM Peak Hour	
		Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max
EBL	30	5	17	8	21	6	18	14	30	5	16	9	23	6	17	14	32
EBR	149	4	17	6	21	5	19	11	32	4	14	7	20	6	19	10	26
NBL	30	8	25	12	55	16	34	23	65	8	22	13	65	15	34	22	65
NBT	618	25	56	95	176	23	51	94	186	26	57	102	190	24	56	111	217
SBT	88	42	78	47	80	43	77	48	79	42	80	48	80	41	77	47	79
SBR	15	9	48	6	45	15	64	12	56	10	55	8	47	13	55	13	56

Table 6-15: Toronto Street South and Victoria Drive (Existing & 2027) SimTraffic Results

Mvmt	Stg (m)	Existing Traffic				Future Background 2027				Future Total 2027			
		Weekday AM Peak Hour		Weekday PM Peak Hour		Weekday AM Peak Hour		Weekday PM Peak Hour		Weekday AM Peak Hour		Weekday PM Peak Hour	
		Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max
EBLR	86	10	27	3	17	10	25	4	15	11	30	7	17
NBL	15	1	7	3	13	1	12	3	12	2	13	2	11
SBTR	681	2	26	1	20	0	12	2	30	3	36	1	20

Table 6-16: Toronto Street South and Campbell Drive (2032 & 2037) SimTraffic Results

Mvmt	Stg (m)	Future Background 2032				Future Total 2032				Future Background 2037				Future Total 2037			
		Weekday AM Peak Hour		Weekday PM Peak Hour		Weekday AM Peak Hour		Weekday PM Peak Hour		Weekday AM Peak Hour		Weekday PM Peak Hour		Weekday AM Peak Hour		Weekday PM Peak Hour	
		Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max
EBLR	86	10	26	5	12	11	23	7	20	11	30	4	13	11	25	6	21
NBL	15	1	10	3	13	2	13	3	11	2	15	3	10	2	12	3	9
SBTR	681	3	36	1	27	2	29	2	32	1	23	3	48	2	36	2	34

Based on the Simtraffic results, the maximum southbound queues at Toronto Street South and Campbell Drive are anticipated to reach Victoria Street, while the average queue are not anticipated to extend to Victora Street. There may be some minor moments during the peak minutes of the peak hour where the NBL from Toronto Street to Victoria Street is partially obstructed, but these moments are expected to be temporary and do not have a noticeable impact on the projected queues or delays associated with the NBL movement.

The updated TMCs collected at the Toronto Street and Victoria Drive intersection along with the subsequent analysis indicate that southbound traffic queues from Toronto Street and Campbell Drive extend short of the Toronto Street and Victoria Drive intersection. To reinforce the need for southbound vehicles to avoid blocking traffic at Toronto/Victoria, LEA recommends painted pavement markings to denote where no vehicles are permitted to block the intersection. Accompanying signage with "DO NOT BLOCK INTERSECTION" should be added for both directions on Toronto Street South. These measures aim to ensure clear access to and from Victoria Street and the hospital for emergency vehicles.

6.4 ANALYSIS SUMMARY

The analysis results indicate that the proposed hospital expansion is expected to have an acceptable impact on road network operations in the surrounding area. No intersection modifications are required within the study area.

7 PARKING AND LOADING REVIEW

This section will review the applicable vehicle and bicycle parking standards for the subject site.

7.1 VEHICLE PARKING REVIEW

The parking requirements contained in By-Law 81-19, as amended, apply to subject site. Table 7-1 details the applicable parking requirements for the proposed hospital.

Table 7-1: Vehicle Parking Requirements - Zoning By-law 81-19

Land Use	Units	Zoning By-law 81-19		Proposed Supply
		Parking Rate	Parking Spaces	
Hospital (Proposed)	32 Beds 8,274m^2 of GFA	The greater of 1 Space/2 beds OR per 38 m^2 of GFA	299	375
Long-Term Care (Proposed)	50 AHF Beds 3,329 m^2 of GFA			
	192 LTC Beds	1 space/4 beds	48	
Uxbridge Medical (Existing)	11 Doctors 24 Exam Rooms	5 spaces/practitioner, plus 1 Space/examination room exceeding 5 such rooms per office	153	
	1,578m^2 of GFA	1 spaces/ 20 m^2 of GFA		
		Total	**500**	**375**

As detailed in Table 7-1, a minimum of 500 parking spaces are required based on the proposed GFA of the hospital expansion and LTC building addition. The proposed parking supply of 375 spaces results in a shortfall of 125 parking spaces. As such, the Section 7.2 will provide justification to support the proposed parking supply.

7.1.1 Accessible Parking Requirements

The Township of Uxbridge By-Law 2013-184, as amended, requires accessible parking spaces for all new developments. The required accessible parking requirements and proposed supply are detailed in Table 7-2.

Table 7-2: Accessible Parking Requirements

Total Parking	Zoning By-law 2013-184	
	Required Rate	Proposed Accessible Parking
375	Between 201 to 400 parking spaces requires *a minimum of 5* accessible parking spaces	**14 Spaces**

The proposed hospital is required to provide a minimum of five (5) accessible parking space as per the latest requirements. The proposed expansion proposes a total of 14 accessible parking spaces, exceeding the by-law requirement.

7.2 VEHICLE PARKING JUSTIFICATION

The following section will provide justification to support the proposed parking supply using ITE Parking Generation and vehicular parking requirements in other jurisdictions to support the proposed parking supply.

7.2.1 ITE Parking Generation

To support a reduced parking supply, the ITE *Parking Generation Manual*, *6th Edition,* was reviewed to assess whether the proposed parking supply is appropriate for the subject site. Table 7-3 details the applicable parking requirements for the proposed hospital using the recommended rates from the ITE Parking Generation Manual.

Table 7-3: Vehicle Parking Requirements – ITE Parking Generation 6th Edition

Land Use	Units / GFA	ITE Parking Generation 6th Editon		Proposed Supply
		Parking Rate	Parking Spaces	
Hospital (Proposed)	32 Beds 8,274m² of GFA	2.25 spaces per 1,000 sf² of GFA	200	375
Long-Term Care (Proposed)	50 AHF Beds 192 LTC Beds 3,329 m² of GFA	0.40 spaces per bed	97	
Uxbridge Medical (Existing)	11 Doctors 24 Exam Rooms 1,578m² of GFA	3.67 spaces per 1,000 sf² of GFA	62	
		Total	**359**	**375**

As detailed in Table 7-3, a minimum of 359 parking spaces is required based on the proposed GFA of the hospital expansion and LTC building addition. The proposed parking supply of 375 spaces exceeds the ITE Parking Generation requirements by 20 spaces.

Based on the these findings, a parking supply of 375 spaces is appropriate and consistent with the ITE Parking Generation rates. Detailed parking survey data is provided in Appendix I.

7.2.2 Vehicular Parking Requirements in Other Jurisdictions

Vehicle parking minimums in the Town of Ajax and City of Oshawa were reviewed as both municipalities are comparable to the Township of Uxbridge based on their location within the Region of Durham, along with the suburban transportation context.

7.2.2.1 Town of Ajax

The Town of Ajax is currently undertaking a comprehensive review of its existing Zoning By-laws. The draft Comprehensive Zoning By-law, dated June 2024, has been reviewed and applied to the subject site as shown in Table 7-4.

Table 7-4: Town of Ajax Draft Comprehensive Zoning By-law Parking Rates

Land Use	Units / GFA	Ajax Draft Comprehensive Zoning By-law		Proposed Supply
		Parking Rate	Parking Spaces	
Hospital (Proposed)	32 Beds 8,274m² of GFA	2 spaces per 100 m² of GFA	166	375
Long-Term Care (Proposed)	50 AHF Beds 192 LTC Beds 3,329 m² of GFA	1 space per 3 bed	81	

Land Use	Units / GFA	Ajax Draft Comprehensive Zoning By-law		Proposed Supply
		Parking Rate	Parking Spaces	
Uxbridge Medical (Existing)	11 Doctors 24 Exam Rooms 1,578m^2 of GFA	2 spaces per 100 m^2 of GFA	32	
		Total	**279**	**375**

When applied to the subject site, the Town of Ajax's minimum number of required parking spaces is 221 spaces less than the current requirements outlined in the Township of Uxbridge Zoning By-law. If the Town of Ajax rates were applied to the proposed development, the site would be required to provide a total of 279 parking spaces. The proposed parking supply of 375 spaces would exceed this requirement by 96 spaces.

7.2.2.2 City of Oshawa

The City of Oshawa has a specific hospital *By-law #16-94* that governs the parking requirements for Lakeridge Health. Additionally, parking rates for the long-term care and medical use are governed by By-law #60-94. The relevant requirements have been reviewed and applied to the subject site as shown in Table 7-5.

Table 7-5: City of Oshawa Zoning By-law Parking Rates

Land Use	Units / GFA	Oshawa Zoning By-law (#16-94 & #60-94)		Proposed Supply
		Parking Rate	Parking Spaces	
Hospital (Proposed)	32 Beds 8,274m^2 of GFA	1 spaces per 47.5 m^2 of GFA	174	375
Long-Term Care (Proposed)	50 AHF Beds 192 LTC Beds 3,329 m^2 of GFA	1 space per 4 bed	61	
Uxbridge Medical (Existing)	11 Doctors 24 Exam Rooms 1,578m^2 of GFA	1 spaces per 19 m^2 of GFA	83	
		Total	**318**	**375**

When applied to the subject site, the City of Oshawa's minimum number of required parking spaces is 182 spaces less than the current requirements outlined in the Township of Uxbridge Zoning By-law. If the City of Oshawa rates were applied to the proposed development, the site would be required to provide a total of 318 parking spaces. The proposed parking supply of 375 spaces would exceed this requirement by 57 spaces.

7.2.3 Vehicular Parking Justification Summary

As detailed above, the proposed parking supply of 375 vehicular spaces is appropriate given the projected parking demand of 359 spaces per the *ITE Parking Generation Manual*. Additionally, the parking supply is consistent with the municipal parking requirements of comparable, nearby jurisdictions and subsequently exceeds the minimum parking requirements in the reviewed municipalities. Given these results, it is LEA's opinion that the proposed parking supply is sufficient for the proposed hospital expansion.

7.3 BICYCLE PARKING REVIEW

While The Township of Uxbridge By-laws 81-19 and 2013-184 do not specify bicycle parking requirements, a total of 40 bicycle parking spaces are currently proposed for the site to accommodate both employees and visitors, in accordance to LEED V4 guidelines. Per LEED guidelines, a minimum of 2.5% of all peak visitors must be provided for short-term bicycle parking, and at least 5% of regular building occupants must be required for

long-term bicycle parking. Based on a peak estimate of 300 Visitors and 180 employees, it is estimated that 7 short-term and 9 long-term bicycle parking spaces will be required to satisfy LEED requirements.

The proposed bicycle parking supply is summarized in Table 7-6 and will support cycling as a travel alternative to and from the site. The proposed bicycle parking will also contribute towards an overall TDM strategy for the site that will be further developed through the submission process.

Table 7-6: Proposed Bicycle Parking Supply

Land Use	Beds / GFA	Bicycle Parking Rate	Proposed Bicycle Parking Spaces
Hospital	32 Beds	1.25 spaces/bed	40

The proposed bicycle parking spaces will be located at-grade, within 60 m of building entrances to provide convenient access for employees and visitors, satisfying LEED requirements.

7.4 LOADING AND CIRCULATION REVIEW

The applicable loading requirements under By-law 81-19 were reviewed and applied to the proposed hospital and long-term care building, as detailed in Table 7-7.

Table 7-7: Loading Space Requirements (By-law 81-19)

Land Use	GFA m^2	Uxbridge ZBL 81-19		
		Required Rate	Required	Proposed Supply
Hospital	8,274	1 space required for institutional buildings with a GFA of 2,300m^2 to 11,600 m^2	1	4
Uxbridge Medical (Existing)	2,431		1	1
Long-Term Care	18,647	0 spaces for nursing, aged, retirement or senior citizen housing	0	2
Total		-	**2**	**7**

As per By-law 81-19, the proposed hospital is required to provide a total of one (1) loading space, whilst the long-term care facility does not require any loading spaces given the intended use. Per the latest site plan, a total of four (4) loading spaces are proposed for the hospital and one (2) loading spaces are proposed for the long-term care facility, meeting and exceeding the requirements. The existing Uxbridge Medical building provides one (1) loading space, meeting the requirements as well.

A functional review of the site was completed to confirm that loading and fire services can safely circulate within the site. The lay-bys on the east side of the circular driveway were also reviewed for vehicular functionality. The swept path drawings are available in Appendix J.

8 TRANSPORTATION DEMAND MANAGEMENT

Transportation Demand Management (TDM) is a set of initiatives and policies to reduce traffic demand by influencing travel behavior. Effective TDM measures can reduce vehicle usage and encourage people to engage in more sustainable transportation modes including public transit and shared rides, as well as active transportation, such as walking and cycling. The TDM opportunities and proposed TDM measures are described in the following sections.

8.1 CYCLING-BASED STRATAGIES

Provision of bicycle parking supply on-site

The proposed hospital will include 40 bicycle parking spaces consisting of both short-term and long-term spaces. Bicycle parking spaces will be located in highly accessible, weather protected locations, near the building entrances.

Provision of showers and change facilities on-site

The proposed hospital will provide shower and change facilities to accommodate cycling as a viable mode of transportation.

Promote and increase cycling awareness

Provide information packages to encourage cycling as a viable opportunity of active transportation. This should include educating employees on the health and environmental benefits of cycling, as well as providing maps of the cycling network and available infrastructure in the surrounding area. The applicant should provide the information packages and communications to be distributed to future employees.

8.2 PEDESTRIAN-BASED STRATAGIES

Safe and attractive walkways linking building entrances with public sidewalks

The proposed pedestrian entrances to the hospital will have sidewalks and pathways that directly connect to the internal driveways and external roadways. The existing sidewalk along the north side of Campbell Drive will connect to an internal sidewalk which will lead pedestrians towards the main entrance of the hospital. These connections to existing streets will provide convenient access for pedestrians, transit users, and cyclists.

Enhanced pedestrian amenities on-site

The site will incorporate enhanced pedestrian amenities on-site, including additional landscaping, and lighting. These features will improve the overall wayfinding experience and provide additional safety measures through higher visibility.

8.3 TRANSIT-BASED STRATAGIES

Enhanced walking routes between main building entrances and transit stops

As mentioned in Section 2.2, the hospital is served by existing bus routes operated DRT and GO Transit. Existing sidewalks provided along Campbell Drive and Victoria Drive allow for direct connections to the current transit stops along Toronto Street South. Accessibility to transit will help reduce automobile travel in the area. It should also be noted that there are ongoing discussions with DRT to provide a DSR on-site, as illustrated in

DWG 008 of Appendix I. While details are yet to be confirmed, this transit stop is proposed to stop at the entrance of the hospital, allowing for improved access to the hospital.

Weather-protected waiting areas

Weather-protected transit stops are provided by DRT at the existing transit stops along Toronto Street South. This amenity will benefit users and increase the attractiveness of travelling to the site via transit.

Presto Cards with pre-loaded value shall be provided to employees

As Presto becomes a dominant form of payment for transit throughout the Greater Toronto Area, it is recommended that Presto Cards with a pre-loaded value be provided to employees of the hospital to encourage use of the transit services in their community. This provides an opportunity for employees to experience the benefits of using transit and induce transit behaviour to new users.

Transit information and travel planning resources on-site and adjacent to bus stops

For hospital employees to take advantage of the transit services surrounding the subject site (DRT & GO Transit), it is recommended that information packages and communications be provided to increase transit awareness and multi-modal transport by encouraging active transportation and different travel demand management programs. The information packages should contain public transit information such as route maps and timetables.

8.4 PARKING AND TRAVEL-BASED STRATEGIES

Enforced paid public parking

Paid parking for visitors reduces parking demand and discourages auto use. Parking fees should be priced higher than a two-way transit fare, making non-auto modes a more cost-effective option. A single trip adult fare for DRT using Presto costs $3.60. As per the Victoria Transport Policy Institute paper on Transportation Elasticities, the introduction of a $6 parking fee was associated with a 21% decline in the share of commuting trips by private vehicle (Todd Litman, "Understanding Transport Demands and Elasticities", 2017).

Smart Commute Durham

Smart Commute Durham is an online forum that promotes healthy and sustainable travel options for commuters within the GTHA. Different modes of transportation such as carpooling, cycling, walking and public transportation are included within the Smart Commute program. It is recommended that Uxbridge Hospital register as a participating workplace with Smart Commute to provide employees with carpooling opportunities, leading to a reduction in SOVs.

8.5 TDM CONCLUSIONS

The goal of the above recommendations is to create a development that reduces single occupant vehicle trips and utilizes the multi-modal transportation infrastructure available to tenants to create a healthier, happier, and more efficient community. The Transportation Demand Management checklist is presented in Table 8-1.

Table 8-1: Transportation Demand Management Checklist

TDM Category	TDM Measure	Cost
Cycling	Provide bicycle parking supply on-site	Included in Site Plan
	Provide showers on-site	
	Provide information packages to employees	To be confirmed
Pedestrian	Walkway linkages between building entrances and sidewalks	Included in Site Plan
	Provide enhanced on-site amenities that would encourage walking and pedestrian activity	
Transit	Connection to transit networks through enhanced walking routes and weather-protected waiting areas	
	Weather protected waiting areas	Existing
	Communication strategy and transit information provision	To be confirmed
	Presto Cards for Employees	
Parking and Travel	Provision of paid parking	Existing
	Smart Commute program	To be confirmed

9 CONCLUSIONS

- The proposed expansion will relocate the existing hospital on site to accommodate a total of 32 beds and 8,274m^2 of GFA. A long-term care (LTC) facility is also proposed, including a total of 192 LTC and 50 alternative health facility (AHF) beds. The existing Uxbridge Medical building will remain unchanged. The proposal contains 385 parking spaces at-grade. Site accesses will remain unchanged from existing conditions.
- The subject site is approximately 200 meters of DRT and GO Transit bus services along Toronto Street South. There are ongoing discussions with DRT for an additional transit stop on-site, which is proposed at the main entrance of the hospital.
- The subject site is in an area which is accessible to the existing cycling and pedestrian network. The surrounding cycling network offers access to/from the subject site. The study area provides a adequate pedestrian network with convenient access to a wide range of retail, restaurants, institutions, services, and recreational uses within convenient walking distance.
- The proposed hospital is predicted to generate 203 two-way vehicle trips (148 inbound and 55 outbound) during the weekday AM peak hour and 206 two-way vehicle trips (81 inbound 125 outbound) during the weekday PM peak hour.
- Under existing and future conditions, the signalized intersection of Toronto Street South and Campbell Drive is operating well during both weekday peak hours. During the PM peak period, the northbound through movement operates with a V/C of 0.85 while experiencing acceptable delays and LOS C. No intersection modifications are recommended. All other movements operate with residual capacity and acceptable delays. All existing 95th percentile queues can be accommodated by their available storage lanes.
- The intersection capacity analysis results indicate that the proposed hospital is expected to have an acceptable impact on road network operations in the surrounding area.
- The proposed vehicle parking supply of 375 spaces is a shortfall of Zoning By-law 81-19 requirements by 125 spaces. Based on a review of the ITE *Parking Generation Manual* and vehicular parking requirements in the Town of Ajax and City of Oshawa, the proposed parking supply is deemed sufficient and is anticipated to meet the parking demand.
- As per By-law 81-19, the proposed hospital is required to provide a total of one (1) loading space, whilst the LTC facility does not require any loading spaces. a total of four (4) loading spaces are proposed for the hospital and one (2) loading spaces are proposed for the long-term care facility, meeting and exceeding the requirements. The existing Uxbridge Medical building provides one (1) loading space, meeting the requirements as well.
- A number of TDM measures have been recommended to reduce single-occupant vehicle trips and encourage alternate means of travel including pedestrian connections, provision of Presto Cards and bicycle parking. A total of 40 bicycle parking will be provided.

Traffic Operations Assessment Update
Proposed Hospital Expansion
4 Campbell Drive, Uxbridge
25258

APPENDIX A

Terms of Reference

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July 23, 2024

Reference Number: 24138.00.200

Doug Robertson
Project Manager - Transportation Infrastructure
Regional Municipality of Durham, Works Department
605 Rossland Road East, Level 5
PO Box 623, Whitby, ON L1N 6A3
Email: Doug.Robertson@Durham.ca

RE: Terms of Reference – Proposed Uxbridge Redevelopment

Dear Mr. Robertson:

We wish to confirm the following work plan for a Transportation Impact Study (TIS) for a replacement of the Oak Valley Hospital at 4 Campbell Dr, Uxbridge. The lands are situated on the northwest corner of Toronto St S and Campbell Dr. The site location is illustrated below in Figure 1.

Figure 1: Site Location

Based on the information provided to us, it is our understanding that the redevelopment is to replace the north building. The existing building contain 20 beds with an approximate size of 42,350 sq. ft. with a 2,680 sq. ft. EMS area. The replacement proposes to house 32 beds with an approximate size of 140,000 sq. ft.

The following work plan is informed by the requirements set out by *The Regional Municipality of Durham Traffic Impact Study Guidelines* dated October 2011.

STUDY AREA & TRAFFIC DATA

LEA will review the existing conditions of the surrounding area, including the existing road network (lane configuration and turning restrictions), pedestrian and cycling network, and transit network.

The study will assess the weekday AM and PM peak hours. The proposed study area will include the analysis of the following intersections:

- Toronto Street S (RR47) and Campbell Drive (Signalized);
- Toronto Street S (RR47) and Victoria Dr (Unsignalized);
- Hospital North Driveway at Victoria Drive (Unsignalized);
- West Driveway and Campbell Drive (Unsignalized); and
- South Driveway at Campbell Drive (Unsignalized).

LEA will use the most recent turning movement count (TMC) data available for the study area intersections.

TRAFFIC ASSESSMENT & STUDY HORIZON YEAR

The study will analyze weekday AM and PM peak hour traffic operations. Synchro version 12 will be used to assess intersection operations based on the HCM 2000 methodology during the peak hours. Three proposed planning horizons for analysis is 2029 (include: opening day, five (5) years and 10 years from the opening date).

BACKGROUND TRAFFIC

General Corridor Growth Rate: LEA will consult with the review agencies on assumptions for general corridor growth rate, LEA will consult with the Region on assumptions for general corridor growth rates and/or historical intersection AADT data will be reviewed of intersections in the study area to determine corridor growth rates.

Road Network Improvements: LEA will note any road network improvements identified within the study area and account for any traffic diversions associated with these improvements within our analysis.

Background Development Traffic: LEA will consult with the review agencies on background development to be considered within the study. The following background developments have been identified:

- 179-181 Toronto Street South –10 Residential Dwelling units;
- Maple Bridge Subdivision (Phase 2) – 154 single detached dwelling units and 82 townhouse units;
- Northeast corner of Denland Lane and Brock Street East – 70 Townhouses, 12 semi-bungalow and 86 apartment units and 449.82 m^2.

Should no TIS be available, Trip generation will be based on ITE Trip Generation Manual 11th Edition will be applied to the proposed development. Trips from the proposed development will be assigned to the road network based on the local modal split and trip distribution based on observations of traffic patterns, and existing turn permissions/prohibitions.

TRIP GENERATION, DISTRIBUTION, & ASSIGNMENT

Trip generation will be estimated using subject site trip generation. The general trip distribution will be based on a review of existing traffic patterns. Trip assignment will be completed accordingly to reflect the configuration of site accesses, turning restrictions, and logical routings.

FUTURE TRAFFIC SCENARIOS

Future background and future total analyses for the intersections within the study area will be conducted for 2029.

REMEDIAL MEASURES

Any movements at the studied intersections that exceed a V/C ratio of 1.00 under future total conditions will be identified. If remedial actions such as signal optimization are unsuccessful, this will also be identified. If remedial measures are to be employed, a scenario will be provided demonstrating the change in intersection operations.

PARKING & LOADING

The site is currently subject to Corporation of the Township of the Township of Uxbridge Schedule A1 and A2, CF-1 (Community Facility Zone). If a shortfall in parking or loading is proposed, LEA will conduct a parking justification study to assess the appropriateness of the parking supply for the development. Loading requirements will be reviewed to ensure that the zoning by-law requirements are met.

TRANSPORTATION DEMAND MANAGEMENT

A TDM plan will be prepared and provide recommendations to promote alternate modes of travel.

Should you have any comments with our assumptions or have any concerns, please contact the undersigned at (905) 470-0015 x322 (JDoran@LEA.ca).

Yours truly,

LEA CONSULTING LTD.

Joseph Doran, B. Eng., E.I.T.
Project Coordinator

:ak

APPENDIX B

Traffic Data & Signal Timing Plan

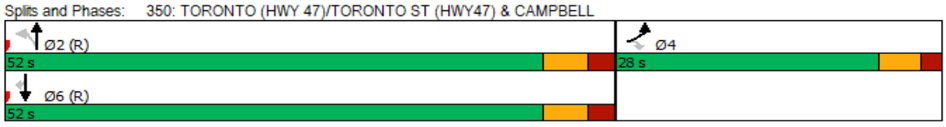
INTERSECTION SIGNAL TIMING REPORT

Location	Toronto St. and Campbell Dr.				
Date	2024-07-23	**C&E No.**	59999254	**Prepared by**	M. Patel
Prepared for	Lea Consulting				

AM Peak (6:00-9:00)

Phase Number	2	4	6
Movement	NBTL	EBL	SBT
Lead/Lag			
Lead-Lag Optimize			
Recall Mode	C-Max	None	C-Max
Maximum Split (s)	52	28	52
Maximum Split (%)	65.0%	35.0%	65.0%
Minimum Split (s)	32.2	23.5	32.2
Yellow Time (s)	3.9	3.6	3.9
All-Red Time (s)	2.3	1.9	2.3
Minimum Initial (s)	20	8	20
Vehicle Extension (s)	3	3	3
Minimum Gap (s)	3	3	3
Time Before Reduce (s)	0	0	0
Time To Reduce (s)	0	0	0
Walk Time (s)	7	7	7
Flash Dont Walk (s)	19	11	19
Intersection Summary			
Cycle Length			80
Control Type			Actuated-Coordinated
Natural Cycle			60
Offset: 72.8 (91%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			

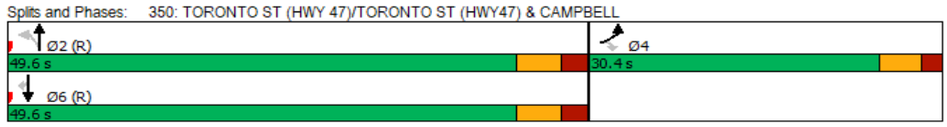
Splits and Phases: 350: TORONTO (HWY 47)/TORONTO ST (HWY47) & CAMPBELL



PM Peak (15:00-20:00)

Phase Number	2	4	6
Movement	NBTL	EBL	SBT
Lead/Lag			
Lead-Lag Optimize			
Recall Mode	C-Max	None	C-Max
Maximum Split (s)	49.6	30.4	49.6
Maximum Split (%)	62.0%	38.0%	62.0%
Minimum Split (s)	32.2	23.5	32.2
Yellow Time (s)	3.9	3.6	3.9
All-Red Time (s)	2.3	1.9	2.3
Minimum Initial (s)	20	8	20
Vehicle Extension (s)	3	3	3
Minimum Gap (s)	3	3	3
Time Before Reduce (s)	0	0	0
Time To Reduce (s)	0	0	0
Walk Time (s)	7	7	7
Flash Dont Walk (s)	19	11	19
Intersection Summary			
Cycle Length			80
Control Type			Actuated-Coordinated
Natural Cycle			60
Offset: 45.6 (57%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			

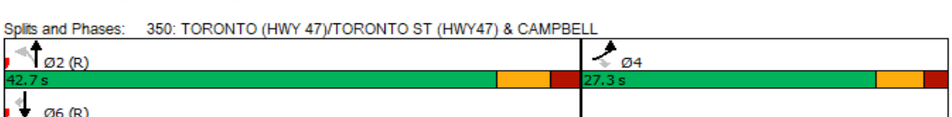
Splits and Phases: 350: TORONTO ST (HWY 47)/TORONTO ST (HWY47) & CAMPBELL



Weekend Peak (9:00-19:00)

Phase Number	2	4	6
Movement	NBTL	EBL	SBT
Lead/Lag			
Lead-Lag Optimize			
Recall Mode	C-Max	None	C-Max
Maximum Split (s)	42.7	27.3	42.7
Maximum Split (%)	61.0%	39.0%	61.0%
Minimum Split (s)	32.2	23.5	32.2
Yellow Time (s)	3.9	3.6	3.9
All-Red Time (s)	2.3	1.9	2.3
Minimum Initial (s)	20	8	20
Vehicle Extension (s)	3	3	3
Minimum Gap (s)	3	3	3
Time Before Reduce (s)	0	0	0
Time To Reduce (s)	0	0	0
Walk Time (s)	7	7	7
Flash Dont Walk (s)	19	11	19
Intersection Summary			
Cycle Length			70
Control Type			Actuated-Coordinated
Natural Cycle			60
Offset: 25.9 (37%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			

Splits and Phases: 350: TORONTO (HWY 47)/TORONTO ST (HWY47) & CAMPBELL



**Please note a concerted effort has been made to ensure the accuracy and completeness of the data provided, however, inadvertent errors or omissions can still occur. Please bring any errors or omissions to the Region's attention.*

TURNING MOVEMENT COUNT

Project #: 24138.00.200.02

Source: Durham Region TMC
Date: Thurs. Sept. 21, 2023

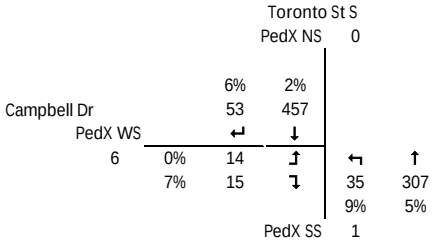
N/S Street: Toronto St S (RR47)
E/W Street: Campbell Dr

Municipality: Uxbridge
Province: Ontario

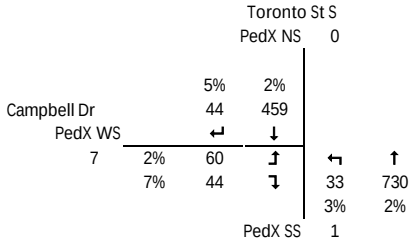
	Southbound							Northbound							Eastbound							Total Vehicles			Total	
	Cars		Trucks		Heavies		PedX	Cars		Trucks		Heavies		PedX	Cars		Trucks		Heavies		PedX					
	Thru	Right	Thru	Right	Thru	Right		Left	Thru'	Left	Thru'	Left	Thru'		Left	Right	Left	Right	Left	Right		SB	NB	EB	All	Hourly
7:00	104	6	10	0	0	0	0	2	30	0	2	0	0	0	0	2	0	1	0	0	0	120	34	3	157	
7:15	88	1	1	0	0	0	0	3	40	0	4	0	0	0	1	3	1	0	0	0	0	142	47	5	194	
7:30	89	5	2	0	0	0	0	2	41	0	4	0	0	0	4	4	0	0	0	0	0	151	47	8	206	
7:45	118	7	5	0	0	0	0	6	60	1	2	0	0	0	1	5	0	0	0	0	1	205	69	6	280	837
8:00	124	16	3	1	0	0	0	8	81	1	5	0	0	0	5	2	0	0	0	0	2	246	95	7	348	1028
8:15	105	14	1	1	0	0	0	8	62	1	7	0	0	0	4	2	0	0	0	0	0	121	78	6	205	1039
8:30	99	13	2	1	0	0	0	10	88	0	2	0	0	1	4	5	0	1	0	0	3	115	100	10	225	1058 <-- Peak Hour
8:45	111	21	2	0	0	0	0	6	75	0	4	0	0	0	5	9	0	0	0	0	1	134	85	14	233	1011
16:00	89	9	4	0	0	0	0	10	147	1	5	0	0	0	17	10	0	1	0	0	0	102	163	28	293	
16:15	116	13	5	0	0	0	0	10	152	1	1	0	0	0	25	16	1	0	0	0	0	134	164	42	340	
16:30	106	6	1	0	0	0	0	5	182	1	3	0	0	0	16	11	0	1	0	0	2	113	191	28	332	
16:45	118	12	2	1	0	0	0	11	174	0	3	0	0	0	11	5	0	0	0	0	3	133	188	16	337	1302
17:00	106	12	4	0	0	0	0	12	179	0	5	0	0	1	17	14	1	1	0	0	1	122	196	33	351	1360
17:15	121	12	1	1	0	0	0	4	182	0	2	0	0	0	15	11	0	1	0	0	1	135	188	27	350	1370 <-- Peak Hour
17:30	85	9	2	0	0	0	0	8	167	1	1	0	0	2	12	17	0	0	0	0	0	96	177	29	302	1340
17:45	124	8	0	0	0	0	0	4	158	0	3	0	0	0	12	4	0	0	0	0	0	132	165	16	313	1316
AM Peak	446	50	11	3	0	0	0	32	291	3	16	0	0	1	14	14	0	1	0	0	6					
HV	11	3						3	16						0	1										
Total	457	53						35	307						14	15										
HV%	2%	6%						9%	5%						0%	7%										
PM Peak	451	42	8	2	0	0	0	32	717	1	13	0	0	1	59	41	1	3	0	0	7					
HV	8	2						1	13						1	3										
Total	459	44						33	730						60	44										
HV%	2%	5%						3%	2%						2%	7%										

Notes: Data provide by intersection approach.
North Approach = Soutbound, South Approach, West Approach = Eastbound.

AM Peak



PM Peak

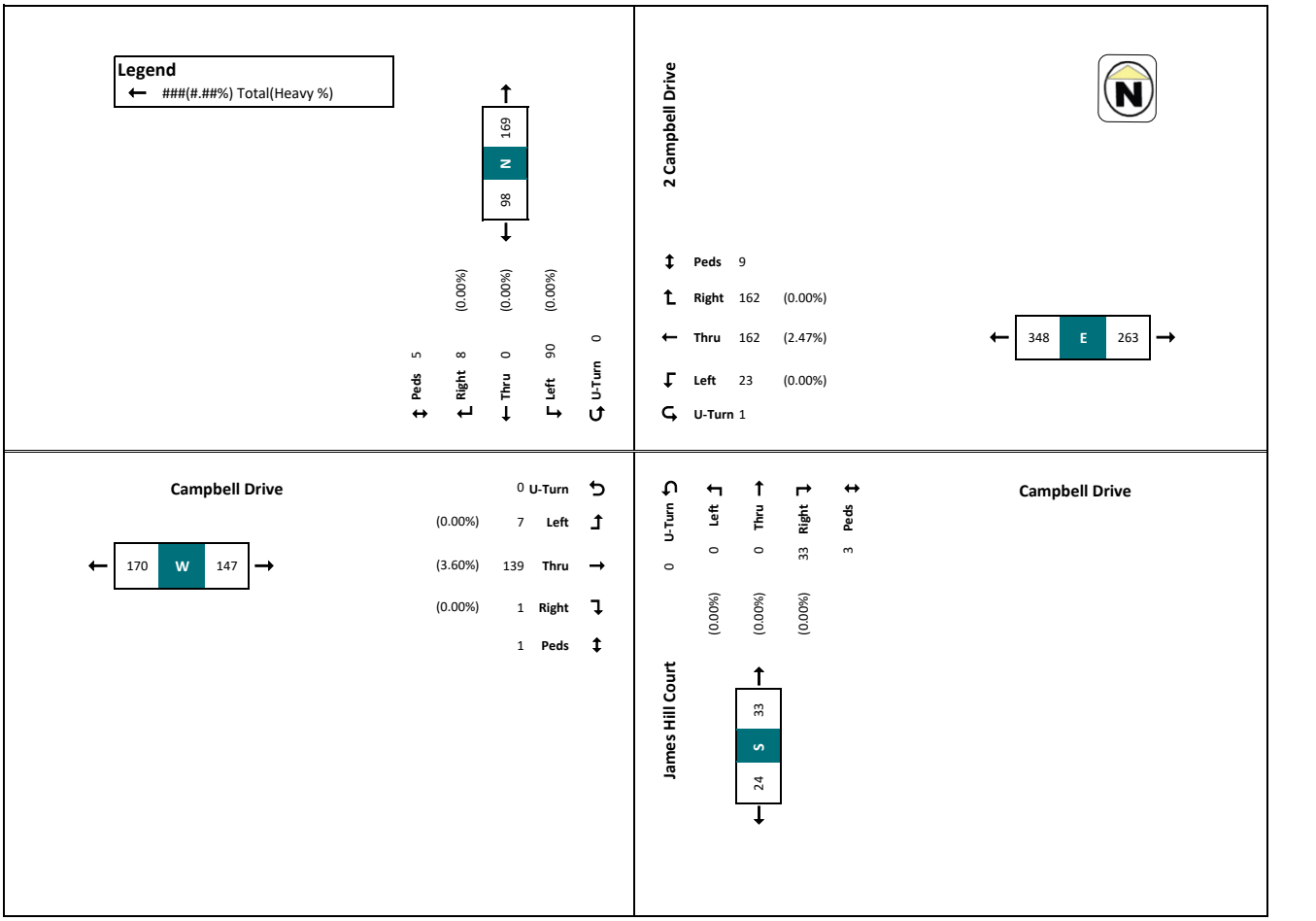


LEA Consulting Ltd.
625 Cochrane Drive, 5th Floor
Markham, ON L3R 9R9

Intersection : James Hill Court & Campbell Drive
Survey Date : July 16, 2024
Project No. : 24138
Count ID : 24246

Turning Movement Count - James Hill Court & Campbell Drive

	2 Campbell Drive Southbound						Campbell Drive Westbound						James Hill Court Northbound						Campbell Drive Eastbound						
Start Time	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Grand Total
7:30	0	0	0	0	1	0	0	0	5	6	1	11	0	0	0	2	0	2	0	0	5	0	0	5	18
7:45	0	1	0	0	2	1	0	2	13	15	2	30	0	0	0	1	0	1	0	0	3	0	0	3	35
Hourly Total	0	1	0	0	3	1	0	3	28	24	3	55	0	0	0	4	0	4	0	0	15	0	0	15	75
8:00	0	2	0	1	0	3	0	0	7	10	0	17	0	0	0	2	0	2	0	0	4	0	0	4	26
8:15	0	1	0	0	0	1	0	0	13	10	0	23	0	0	0	3	0	3	0	0	8	0	0	8	35
8:30	0	1	0	1	0	2	0	0	15	11	1	26	0	0	0	1	0	1	0	1	5	0	0	7	36
8:45	0	6	0	0	0	6	0	1	21	18	2	40	0	0	0	4	1	4	0	0	6	0	1	6	56
Hourly Total	0	10	0	2	0	12	0	1	56	49	3	106	0	0	0	10	1	10	0	2	23	0	1	25	153
9:00	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
9:15	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
Hourly Total	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
* Break *																									
16:00	0	11	0	1	0	12	0	1	10	5	2	16	0	0	0	4	1	4	0	0	17	0	0	17	49
16:15	0	8	0	0	1	8	0	6	9	8	0	23	0	0	0	5	0	5	0	1	15	0	0	16	52
16:30	0	13	0	1	0	14	0	3	9	4	1	16	0	0	0	1	0	1	0	0	11	1	0	12	43
16:45	0	9	0	3	0	12	0	1	7	11	0	19	0	0	0	1	1	1	0	0	7	0	0	7	39
Hourly Total	0	41	0	5	1	46	0	11	35	28	3	74	0	0	0	11	2	11	0	1	50	1	0	52	183
17:00	0	17	0	1	0	18	0	3	14	1	0	18	0	0	0	2	0	2	0	0	15	0	0	15	53
17:15	0	9	0	0	0	9	0	2	10	7	0	19	0	0	0	0	0	0	0	0	13	0	0	13	41
17:30	0	7	0	0	1	7	0	2	11	3	0	16	0	0	0	3	0	3	0	0	8	0	0	8	34
17:45	0	5	0	0	0	5	1	1	8	8	0	18	0	0	0	3	0	3	0	2	15	0	0	17	43
Hourly Total	0	38	0	1	1	39	1	8	43	19	0	71	0	0	0	8	0	8	0	2	51	0	0	53	171
Grand Total	0	90	0	8	5	98	1	23	162	120	9	306	0	0	0	33	3	33	0	5	139	1	1	145	582
Approach %	0.0%	91.8%	0.0%	8.2%	-	-	0.3%	7.5%	52.9%	39.2%	-	-	0.0%	0.0%	0.0%	100.0%	-	-	0.0%	3.4%	95.9%	0.7%	-	-	-
Total %	0.0%	15.5%	0.0%	1.4%	-	16.8%	0.2%	4.0%	27.8%	20.6%	-	52.6%	0.0%	0.0%	0.0%	5.7%	-	5.7%	0.0%	0.9%	23.9%	0.2%	-	24.9%	-
Lights	0	90	0	8	-	98	1	23	158	120	-	302	0	0	0	33	-	33	0	5	134	1	-	140	573
% Lights	-	100.0%	-	100.0%	-	100.0%	100.0%	100.0%	97.5%	100.0%	-	98.7%	-	-	-	100.0%	-	100.0%	-	100.0%	96.4%	100.0%	-	96.6%	98.5%
Buses	-	0	0	0	-	0	-	0	0	0	-	0	-	0	0	0	-	0	-	0	0	0	-	0	0
% Buses	-	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%
Trucks	-	0	0	0	-	0	-	0	4	0	-	4	-	0	0	0	-	0	-	0	5	0	-	5	9
% Trucks	-	0.0%	-	-	-	0.0%	-	0.0%	2.5%	0.0%	-	1.3%	-	-	-	0.0%	-	0.0%	-	0.0%	3.6%	0.0%	-	3.4%	1.5%
Bicycles	-	-	-	-	0	0	-	-	-	-	0	0	-	-	-	-	0	0	-	-	-	-	0	0	0
Pedestrians	-	-	-	-	5	-	-	-	-	-	9	-	-	-	-	-	3	-	-	-	-	-	1	-	18

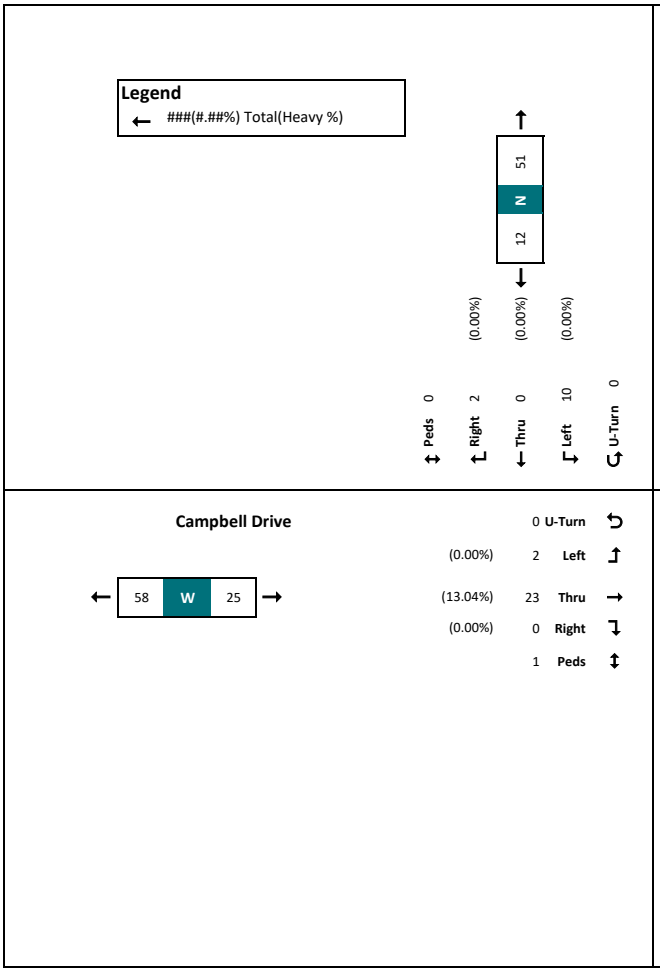


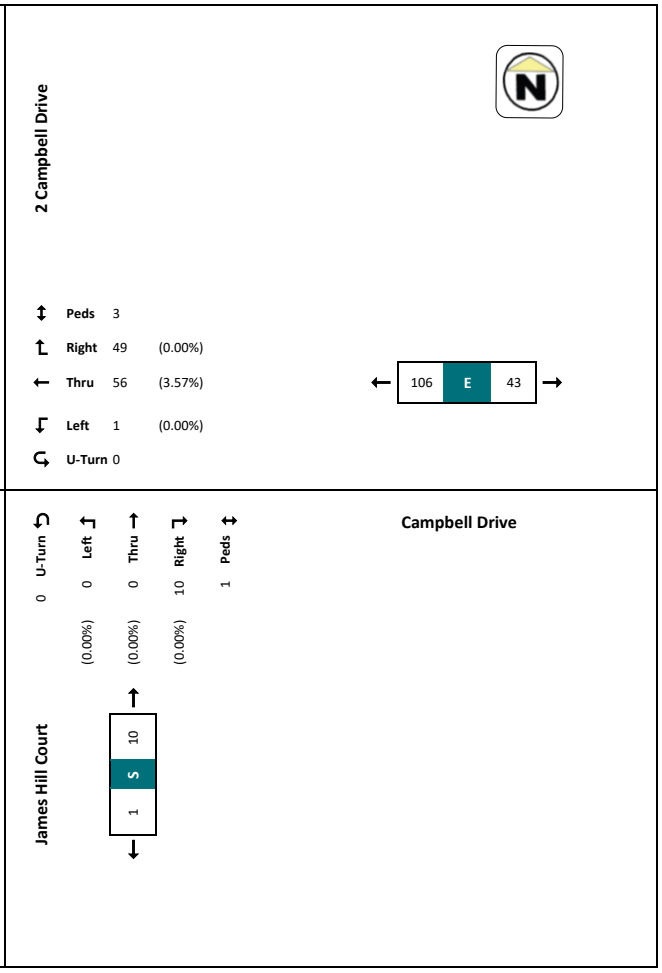
LEA Consulting Ltd.
625 Cochrane Drive, 5th Floor
Markham, ON L3R 9R9

Intersection : James Hill Court & Campbell Drive
Survey Date : July 16, 2024
Project No. : 24138
Count ID : 24246

AM Peak Hour - James Hill Court & Campbell Drive

	2 Campbell Drive Southbound						Campbell Drive Westbound						James Hill Court Northbound						Campbell Drive Eastbound						
Start Time	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Grand Total
8:00	0	2	0	1	0	3	0	0	7	10	0	17	0	0	0	2	0	2	0	0	4	0	0	4	26
8:15	0	1	0	0	0	1	0	0	13	10	0	23	0	0	0	3	0	3	0	0	8	0	0	8	35
8:30	0	1	0	1	0	2	0	0	15	11	1	26	0	0	0	1	0	1	0	2	5	0	0	7	36
8:45	0	6	0	0	0	6	0	1	21	18	2	40	0	0	0	4	1	4	0	0	6	0	1	6	56
Hourly Total	0	10	0	2	0	12	0	1	56	49	3	106	0	0	0	10	1	10	0	2	23	0	1	25	153
Approach %	0.0%	83.3%	0.0%	16.7%	-	-	0.0%	0.9%	52.8%	46.2%	-	-	0.0%	0.0%	0.0%	100.0%	-	-	0.0%	8.0%	92.0%	0.0%	-	-	-
Total %	0.0%	6.5%	0.0%	1.3%	-	7.8%	0.0%	0.7%	36.6%	32.0%	-	69.3%	0.0%	0.0%	0.0%	6.5%	-	6.5%	0.0%	1.3%	15.0%	0.0%	-	16.3%	-
PHF	0	0.42	0	0.5	-	0.5	0	0.25	0.67	0.68	-	0.66	0	0	0	0.63	-	0.63	0	0.25	0.72	0	-	0.78	0.68
Lights	0	10	0	2	-	12	0	1	54	49	-	104	0	0	0	10	-	10	0	2	20	0	-	22	148
% Lights	-	100.0%	-	100.0%	-	100.0%	-	100.0%	96.4%	100.0%	-	98.1%	-	-	-	100.0%	-	100.0%	-	100.0%	87.0%	-	-	88.0%	96.7%
Buses	-	0	0	0	-	0	-	0	0	0	-	0	-	0	0	0	-	0	-	0	0	0	-	0	0
% Buses	-	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%
Trucks	-	0	0	0	-	0	-	0	2	0	-	2	-	0	0	0	-	0	-	0	3	0	-	3	5
% Trucks	-	0.0%	-	0.0%	-	0.0%	-	0.0%	3.6%	0.0%	-	1.9%	-	-	-	0.0%	-	0.0%	-	0.0%	13.0%	-	-	12.0%	3.3%
Bicycles	-	-	-	-	0	0	-	-	-	-	0	0	-	-	-	-	0	0	-	-	-	-	0	0	0
Pedestrians	-	-	-	-	0	-	-	-	-	-	3	-	-	-	-	-	0	-	-	-	-	-	1	-	4



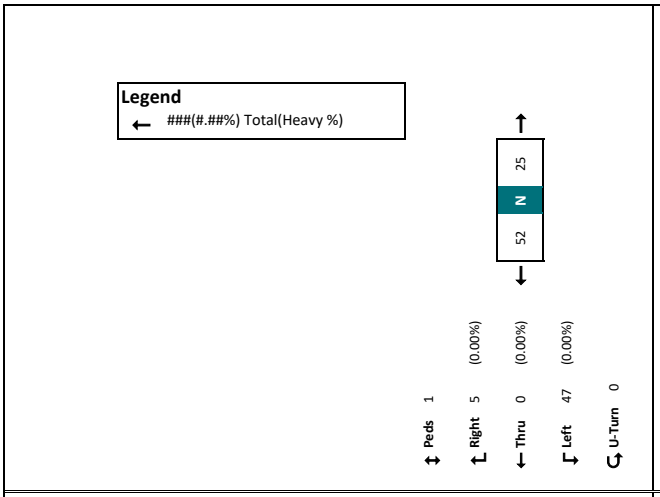


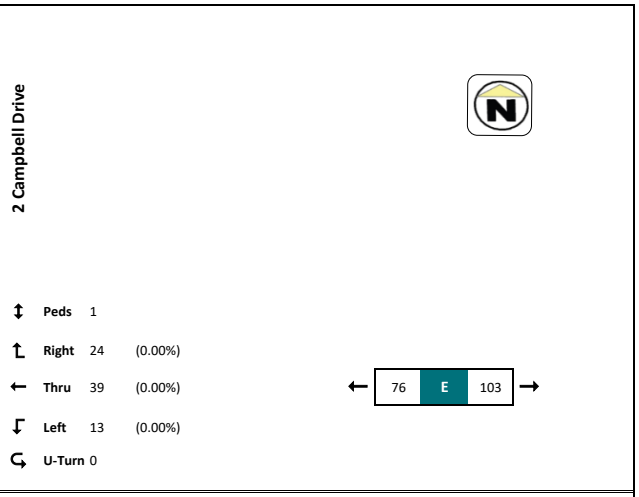
LEA Consulting Ltd.
625 Cochrane Drive, 5th Floor
Markham, ON L3R 9R9

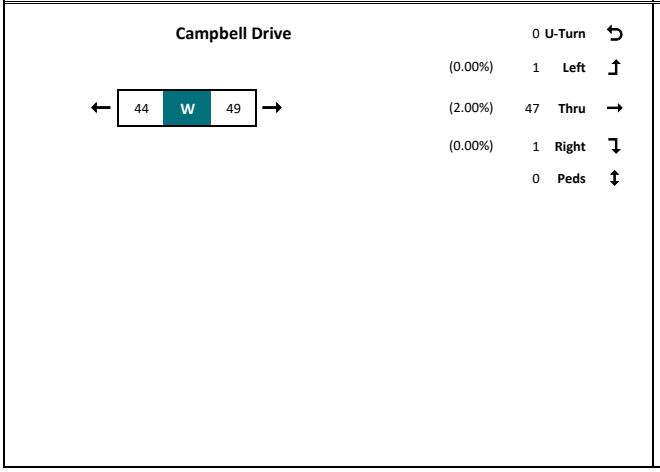
Intersection : James Hill Court & Campbell Drive
Survey Date : July 16, 2024
Project No. : 24138
Count ID : 24246

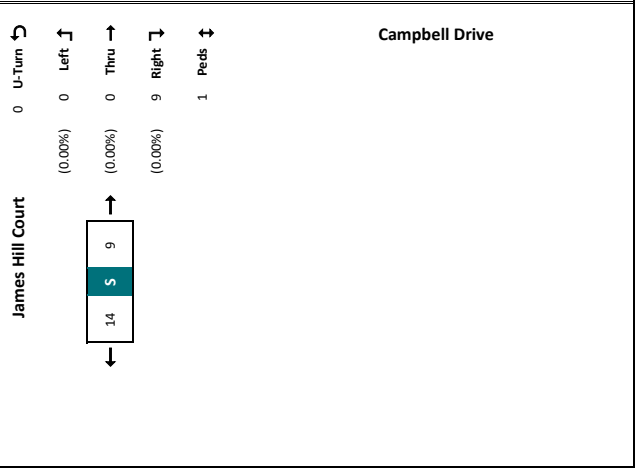
PM Peak Hour - James Hill Court & Campbell Drive

	2 Campbell Drive Southbound						Campbell Drive Westbound						James Hill Court Northbound						Campbell Drive Eastbound						
Start Time	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Grand Total
16:15	0	8	0	0	1	8	0	6	9	8	0	23	0	0	0	5	0	5	0	1	15	0	0	16	52
16:30	0	13	0	1	0	14	0	3	9	4	1	16	0	0	0	1	0	1	0	0	11	1	0	12	43
16:45	0	9	0	3	0	12	0	1	7	11	0	19	0	0	0	1	1	1	0	0	7	0	0	7	39
17:00	0	17	0	1	0	18	0	3	14	1	0	18	0	0	0	2	0	2	0	0	15	0	0	15	53
Hourly Total	0	47	0	5	1	52	0	13	39	24	1	76	0	0	0	9	1	9	0	1	48	1	0	50	187
Approach %	0.0%	90.4%	0.0%	9.6%	-	-	0.0%	17.1%	51.3%	31.6%	-	-	0.0%	0.0%	0.0%	100.0%	-	-	0.0%	2.0%	96.0%	2.0%	-	-	-
Total %	0.0%	25.1%	0.0%	2.7%	-	27.8%	0.0%	8.5%	25.5%	12.8%	-	40.6%	0.0%	0.0%	0.0%	5.9%	-	4.8%	0.0%	0.7%	31.4%	0.7%	-	26.7%	-
PHF	0	0.69	0	0.42	-	0.72	0	0.54	0.7	0.55	-	0.83	0	0	0	0.45	-	0.45	0	0.25	0.8	0.25	-	0.78	0.88
Lights	0	47	0	5	-	52	0	13	38	24	-	75	0	0	0	9	-	9	0	1	47	1	-	49	185
% Lights	-	100.0%	-	100.0%	-	100.0%	-	100.0%	97.4%	100.0%	-	98.7%	-	-	-	100.0%	-	100.0%	-	100.0%	97.9%	100.0%	-	98.0%	98.9%
Buses	-	0	0	0	-	0	-	0	0	0	-	0	-	0	0	0	-	0	-	0	0	0	-	0	0
% Buses	-	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%
Trucks	-	0	0	0	-	0	-	0	1	0	-	1	-	0	0	0	-	0	-	0	1	0	-	1	2
% Trucks	-	0.0%	-	0.0%	-	0.0%	-	0.0%	2.6%	0.0%	-	1.3%	-	-	-	0.0%	-	0.0%	-	0.0%	2.1%	0.0%	-	2.0%	1.1%
Bicycles	-	-	-	-	0	0	-	-	-	-	0	0	-	-	-	-	0	0	-	-	-	-	0	0	0
Pedestrians	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	1







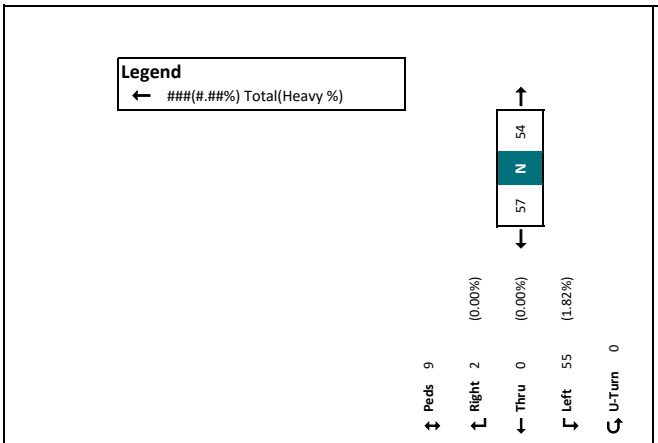


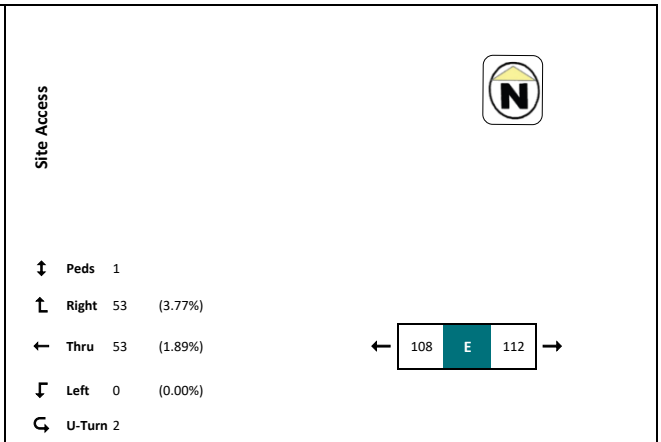
LEA Consulting Ltd.
625 Cochrane Drive, 5th Floor
Markham, ON L3R 9R9

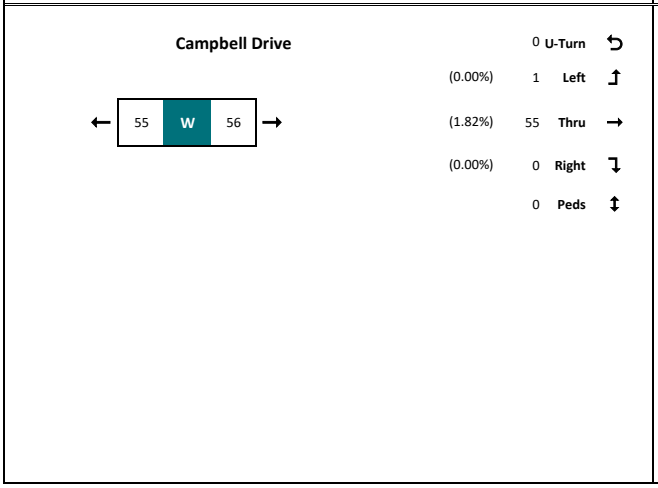
Intersection : Site Access & Campbell Drive
Survey Date : July 16, 2024
Project No. : 24138
Count ID : 24247

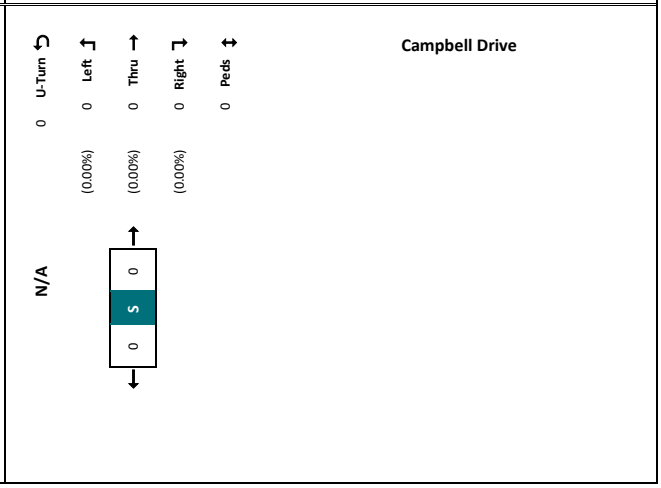
Turning Movement Count - Site Access & Campbell Drive

	Site Access Southbound						Campbell Drive Westbound						N/A Northbound						Campbell Drive Eastbound						
Start Time	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Grand Total
7:30	0	1	0	0	1	1	0	0	1	4	0	5	0	0	0	0	0	0	0	0	3	0	0	3	9
7:45	0	0	0	0	1	0	0	0	2	11	0	13	0	0	0	0	0	0	0	0	1	0	0	1	14
Hourly Total	0	4	0	0	4	4	0	0	6	22	0	28	0	0	0	0	0	0	0	0	6	0	0	6	38
8:00	0	1	0	1	0	2	0	0	2	6	0	8	0	0	0	0	0	0	0	0	3	0	0	3	13
8:15	0	3	0	0	0	3	0	0	0	9	0	9	0	0	0	0	0	0	0	0	3	0	0	3	15
8:30	0	1	0	0	0	1	0	0	4	11	0	15	0	0	0	0	0	0	0	0	2	0	0	2	18
8:45	0	2	0	0	2	2	0	0	4	13	0	17	0	0	0	0	0	0	0	0	4	0	0	4	23
Hourly Total	0	7	0	1	2	8	0	0	10	39	0	49	0	0	0	0	0	0	0	0	12	0	0	12	69
9:00	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
9:15	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
Hourly Total	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
* Break *																									
16:00	0	6	0	1	1	7	1	0	3	1	0	5	0	0	0	0	0	0	0	1	9	0	0	10	22
16:15	0	6	0	0	0	6	0	0	4	2	0	6	0	0	0	0	0	0	0	0	5	0	0	5	17
16:30	0	6	0	0	2	6	0	0	5	0	1	5	0	0	0	0	0	0	0	0	3	0	0	3	14
16:45	0	2	0	0	0	2	1	0	5	4	0	10	0	0	0	0	0	0	0	0	5	0	0	5	17
Hourly Total	0	20	0	1	3	21	2	0	17	7	1	26	0	0	0	0	0	0	0	1	22	0	0	23	70
17:00	0	12	0	0	0	12	0	0	7	2	0	9	0	0	0	0	0	0	0	0	2	0	0	2	23
17:15	0	5	0	0	0	5	0	0	6	2	0	8	0	0	0	0	0	0	0	0	4	0	0	4	17
17:30	0	2	0	0	0	2	0	0	5	2	0	7	0	0	0	0	0	0	0	0	5	0	0	5	14
17:45	0	5	0	0	0	5	0	0	2	5	0	7	0	0	0	0	0	0	0	0	4	0	0	4	16
Hourly Total	0	24	0	0	0	24	0	0	20	11	0	31	0	0	0	0	0	0	0	0	15	0	0	15	70
Grand Total	0	55	0	2	9	57	2	0	53	79	1	134	0	0	0	0	0	0	0	1	55	0	0	56	247
Approach %	0.0%	96.5%	0.0%	3.5%	-	-	1.5%	0.0%	39.6%	59.0%	-	-	-	-	-	-	-	-	0.0%	1.8%	98.2%	0.0%	-	-	-
Total %	0.0%	22.3%	0.0%	0.8%	-	23.1%	0.8%	0.0%	21.5%	32.0%	-	54.3%	0.0%	0.0%	0.0%	0.0%	-	0.0%	0.0%	0.4%	22.3%	0.0%	-	22.7%	-
Lights	0	54	0	2	-	56	2	0	52	77	-	131	0	0	0	0	-	0	0	1	54	0	-	55	242
% Lights	-	98.2%	-	100.0%	-	98.2%	100.0%	-	98.1%	97.5%	-	97.8%	-	-	-	-	-	-	-	100.0%	98.2%	-	-	98.2%	98.0%
Buses	-	0	0	0	-	0	-	0	0	0	-	0	-	0	0	0	-	0	-	0	0	0	-	0	0
% Buses	-	0.0%	-	0.0%	-	0.0%	-	-	0.0%	0.0%	-	0.0%	-	-	-	-	-	-	-	0.0%	0.0%	-	-	0.0%	0.0%
Trucks	-	1	0	0	-	1	-	0	1	2	-	3	-	0	0	0	-	0	-	0	1	0	-	1	5
% Trucks	-	1.8%	-	-	-	1.8%	-	-	1.9%	2.5%	-	2.2%	-	-	-	-	-	-	-	0.0%	1.8%	-	-	1.8%	2.0%
Bicycles	-	-	-	-	0	0	-	-	-	-	1	1	-	-	-	-	0	0	-	-	-	-	0	0	1
Pedestrians	-	-	-	-	9	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	10







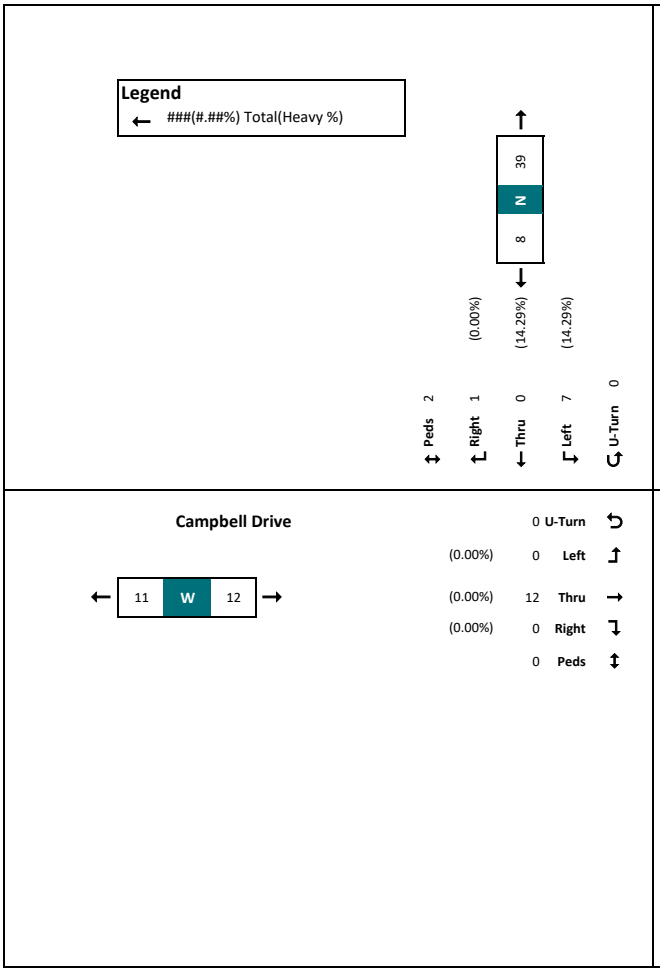


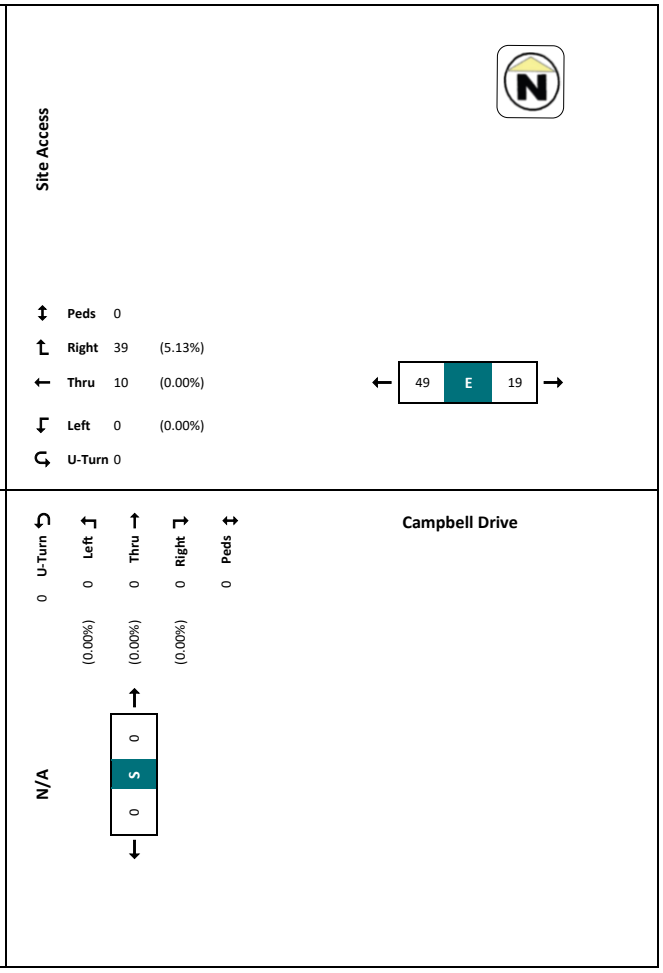
LEA Consulting Ltd.
625 Cochrane Drive, 5th Floor
Markham, ON L3R 9R9

Intersection : Site Access & Campbell Drive
Survey Date : July 16, 2024
Project No. : 24138
Count ID : 24247

AM Peak Hour - Site Access & Campbell Drive

	Site Access Southbound						Campbell Drive Westbound						N/A Northbound						Campbell Drive Eastbound						
Start Time	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Grand Total
8:00	0	1	0	1	0	2	0	0	2	6	0	8	0	0	0	0	0	0	0	0	3	0	0	3	13
8:15	0	3	0	0	0	3	0	0	0	9	0	9	0	0	0	0	0	0	0	0	3	0	0	3	15
8:30	0	1	0	0	0	1	0	0	4	11	0	15	0	0	0	0	0	0	0	0	2	0	0	2	18
8:45	0	2	0	0	2	2	0	0	4	13	0	17	0	0	0	0	0	0	0	0	4	0	0	4	23
Hourly Total	0	7	0	1	2	8	0	0	10	39	0	49	0	0	0	0	0	0	0	0	12	0	0	12	69
Approach %	0.0%	87.5%	0.0%	12.5%	-	-	0.0%	0.0%	20.4%	79.6%	-	-							0.0%	0.0%	100.0%	0.0%	-		-
Total %	0.0%	10.1%	0.0%	1.4%	-	11.6%	0.0%	0.0%	14.5%	56.5%	-	71.0%	0.0%	0.0%	0.0%	0.0%	-	0.0%	0.0%	0.0%	17.4%	0.0%	-	17.4%	-
PHF	0	0.58	0	0.25	-	0.67	0	0	0.63	0.75	-	0.72	0	0	0	0	-	0	0	0	0.75	0	-	0.75	0.75
Lights	0	6	0	1	-	7	0	0	10	37	-	47	0	0	0	0	-	0	0	0	12	0	-	12	66
% Lights	-	85.7%	-	100.0%	-	87.5%	-	-	100.0%	94.9%	-	95.9%	-	-	-	-	-	-	-	-	100.0%	-	-	100.0%	95.7%
Buses	-	0	0	0	-	0	-	0	0	0	-	0	-	0	0	0	-	0	-	0	0	0	-	0	0
% Buses	-	0.0%	-	0.0%	-	0.0%	-	-	0.0%	0.0%	-	0.0%	-	-	-	-	-	-	-	-	0.0%	-	-	0.0%	0.0%
Trucks	-	1	0	0	-	1	-	0	0	2	-	2	-	0	0	0	-	0	-	0	0	0	-	0	3
% Trucks	-	14.3%	-	0.0%	-	12.5%	-	-	0.0%	5.1%	-	4.1%	-	-	-	-	-	-	-	-	0.0%	-	-	0.0%	4.3%
Bicycles	-	-	-	-	0	0	-	-	-	-	0	0	-	-	-	-	0	0	-	-	-	-	0	0	0
Pedestrians	-	-	-	-	2	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	2



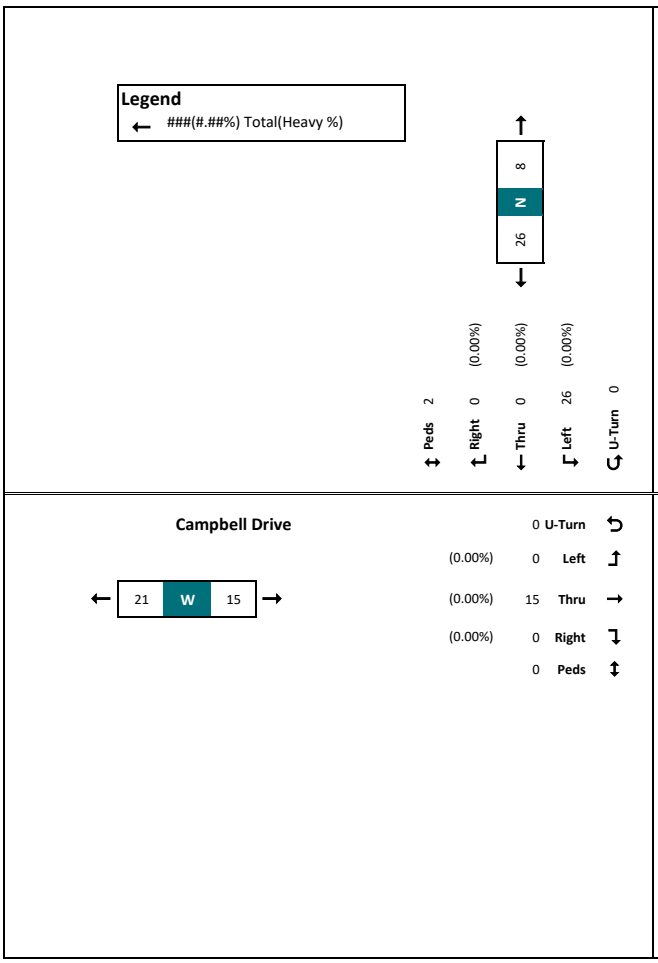


LEA Consulting Ltd.
625 Cochrane Drive, 5th Floor
Markham, ON L3R 9R9

Intersection : Site Access & Campbell Drive
Survey Date : July 16, 2024
Project No. : 24138
Count ID : 24247

PM Peak Hour - Site Access & Campbell Drive

	Site Access Southbound						Campbell Drive Westbound						N/A Northbound						Campbell Drive Eastbound						
Start Time	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Grand Total
16:15	0	6	0	0	0	6	0	0	4	2	0	6	0	0	0	0	0	0	0	0	5	0	0	5	17
16:30	0	6	0	0	2	6	0	0	5	0	1	5	0	0	0	0	0	0	0	0	3	0	0	3	14
16:45	0	2	0	0	0	2	1	0	5	4	0	10	0	0	0	0	0	0	0	0	5	0	0	5	17
17:00	0	12	0	0	0	12	0	0	7	2	0	9	0	0	0	0	0	0	0	0	2	0	0	2	23
Hourly Total	0	26	0	0	2	26	1	0	21	8	1	30	0	0	0	0	0	0	0	0	15	0	0	15	71
Approach %	0.0%	100.0%	0.0%	0.0%	-	-	3.3%	0.0%	70.0%	26.7%	-	-	-	-	-	-	-	-	0.0%	0.0%	100.0%	0.0%	-	-	-
Total %	0.0%	36.6%	0.0%	0.0%	-	36.6%	1.4%	0.0%	30.4%	11.3%	-	42.3%	0.0%	0.0%	0.0%	0.0%	-	0.0%	0.0%	0.0%	21.7%	0.0%	-	21.1%	-
PHF	0	0.54	0	0	-	0.54	0.25	0	0.75	0.5	-	0.75	0	0	0	0	-	0	0	0	0.75	0	-	0.75	0.77
Lights	0	26	0	0	-	26	1	0	20	8	-	29	0	0	0	0	-	0	0	0	15	0	-	15	70
% Lights	-	100.0%	-	-	-	100.0%	-	-	95.2%	100.0%	-	96.7%	-	-	-	-	-	-	-	-	100.0%	-	-	100.0%	98.6%
Buses	-	0	0	0	-	0	-	-	0	0	-	0	-	0	0	0	-	0	-	0	0	0	-	0	0
% Buses	-	0.0%	-	-	-	0.0%	-	-	0.0%	0.0%	-	0.0%	-	-	-	-	-	-	-	-	0.0%	-	-	0.0%	0.0%
Trucks	-	0	0	0	-	0	-	0	1	0	-	1	-	0	0	0	-	0	-	0	0	0	-	0	1
% Trucks	-	0.0%	-	-	-	0.0%	-	-	4.8%	0.0%	-	3.3%	-	-	-	-	-	-	-	-	0.0%	-	-	0.0%	1.4%
Bicycles	-	-	-	-	0	0	-	-	-	-	0	0	-	-	-	-	0	0	-	-	-	-	0	0	0
Pedestrians	-	-	-	-	2	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	3

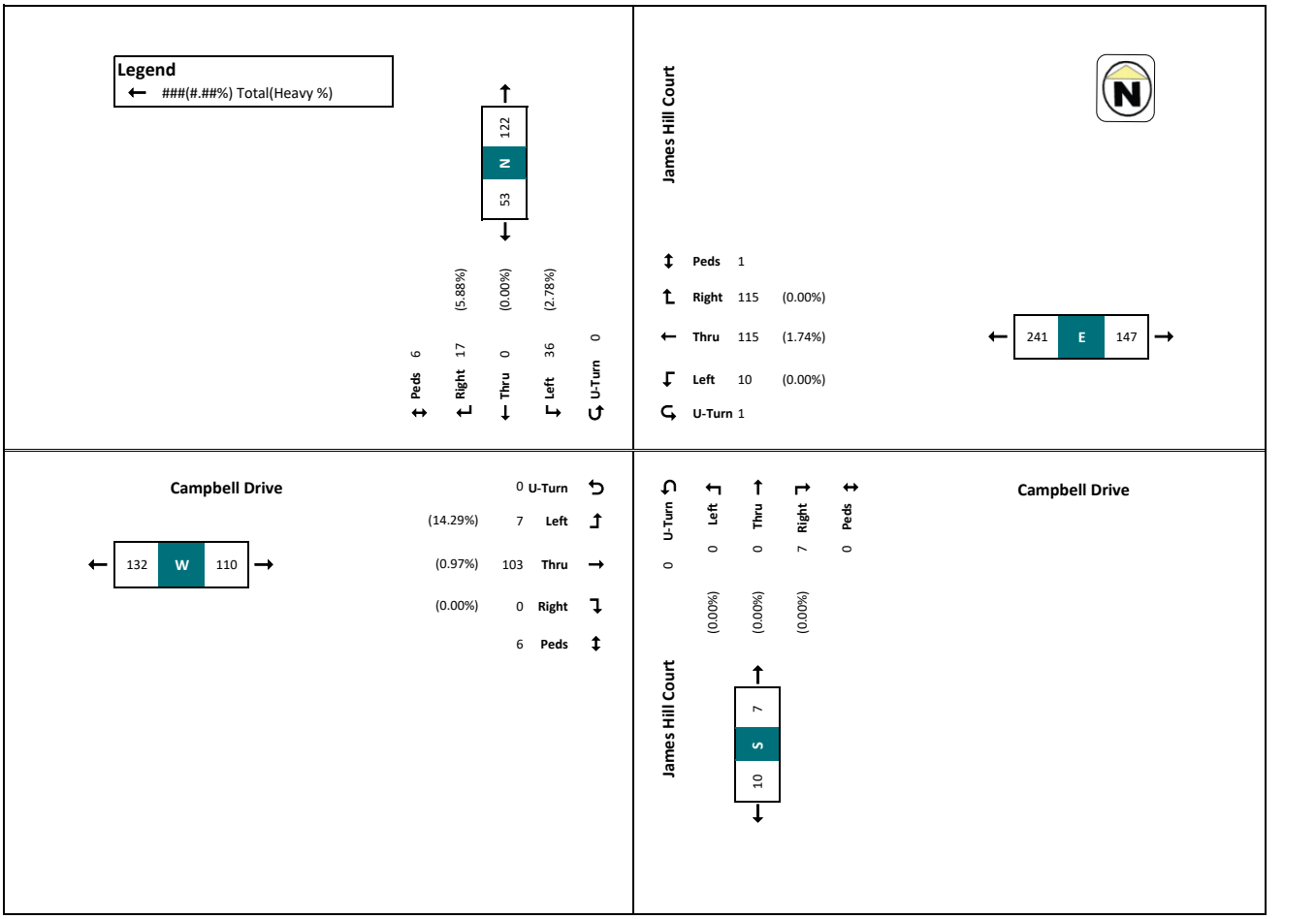


LEA Consulting Ltd.
625 Cochrane Drive, 5th Floor
Markham, ON L3R 9R9

Intersection : James Hill Court & Campbell Drive
Survey Date : July 16, 2024
Project No. : 24138
Count ID : 24248

Turning Movement Count - James Hill Court & Campbell Drive

	James Hill Court Southbound						Campbell Drive Westbound						James Hill Court Northbound						Campbell Drive Eastbound						
Start Time	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Grand Total
7:30	0	0	0	0	1	0	0	0	5	0	0	5	0	0	0	1	0	1	0	0	4	0	0	4	10
7:45	0	1	0	0	2	1	0	0	13	1	0	14	0	0	0	1	0	1	0	0	1	0	0	1	17
Hourly Total	0	3	0	2	3	5	0	0	26	3	0	29	0	0	0	2	0	2	0	0	10	0	2	10	46
8:00	0	0	0	1	0	1	0	0	7	3	0	10	0	0	0	0	0	0	0	0	4	0	0	4	15
8:15	0	2	0	1	0	3	0	1	8	1	0	10	0	0	0	0	0	0	0	0	6	0	0	6	19
8:30	0	1	0	4	0	7	1	1	11	4	0	17	0	0	0	0	0	0	0	0	3	0	0	3	27
8:45	0	0	0	3	2	3	0	0	14	7	0	21	0	0	0	0	0	0	0	0	6	0	1	6	30
Hourly Total	0	5	0	9	2	14	1	2	40	15	0	58	0	0	0	0	0	0	0	0	19	0	1	19	91
9:00	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
9:15	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
Hourly Total	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
* Break *																									
16:00	0	1	0	0	1	1	0	3	4	3	1	10	0	0	0	1	0	1	0	0	15	0	0	15	27
16:15	0	7	0	1	0	8	0	1	5	4	0	10	0	0	0	0	0	0	0	0	11	0	0	11	29
16:30	0	3	0	0	0	3	0	1	5	4	0	10	0	0	0	1	0	1	0	2	7	0	2	9	23
16:45	0	2	0	1	0	3	0	0	8	2	0	10	0	0	0	0	0	0	0	2	5	0	0	7	20
Hourly Total	0	13	0	2	1	15	0	5	22	13	1	40	0	0	0	2	0	2	0	4	38	0	2	42	99
17:00	0	2	0	0	0	2	0	2	9	4	0	15	0	0	0	0	0	0	0	0	14	0	0	14	31
17:15	0	5	0	2	0	7	0	0	6	4	0	10	0	0	0	1	0	1	0	1	8	0	0	9	27
17:30	0	2	0	0	0	2	0	1	7	3	0	11	0	0	0	0	0	0	0	2	5	0	0	7	20
17:45	0	6	0	2	0	8	0	0	5	5	0	10	0	0	0	2	0	2	0	0	9	0	1	9	29
Hourly Total	0	15	0	4	0	19	0	3	27	16	0	46	0	0	0	3	0	3	0	3	36	0	1	39	107
Grand Total	0	36	0	17	6	53	1	10	115	47	1	173	0	0	0	7	0	7	0	7	103	0	6	110	343
Approach %	0.0%	67.9%	0.0%	32.1%	-	-	0.6%	5.8%	66.5%	27.2%	-	-	0.0%	0.0%	0.0%	100.0%	-	-	0.0%	6.4%	93.6%	0.0%	-	-	-
Total %	0.0%	10.5%	0.0%	5.0%	-	15.5%	0.3%	2.9%	33.5%	13.7%	-	50.4%	0.0%	0.0%	0.0%	2.0%	-	2.0%	0.0%	2.0%	30.0%	0.0%	-	32.1%	-
Lights	0	35	0	16	-	51	1	10	113	47	-	171	0	0	0	7	-	7	0	6	102	0	-	108	337
% Lights	-	97.2%	-	94.1%	-	96.2%	100.0%	100.0%	98.3%	100.0%	-	98.8%	-	-	-	100.0%	-	100.0%	-	85.7%	99.0%	-	-	98.2%	98.3%
Buses	-	0	0	0	-	0	-	0	0	0	-	0	-	0	0	0	-	0	-	0	0	0	-	0	0
% Buses	-	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%
Trucks	-	1	0	1	-	2	-	0	2	0	-	2	-	0	0	0	-	0	-	1	1	0	-	2	6
% Trucks	-	2.8%	-	-	-	3.8%	-	0.0%	1.7%	0.0%	-	1.2%	-	-	-	0.0%	-	0.0%	-	14.3%	1.0%	-	-	1.8%	1.7%
Bicycles	-	-	-	-	0	0	-	-	-	-	0	0	-	-	-	-	0	0	-	-	-	-	0	0	0
Pedestrians	-	-	-	-	6	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	6	-	13

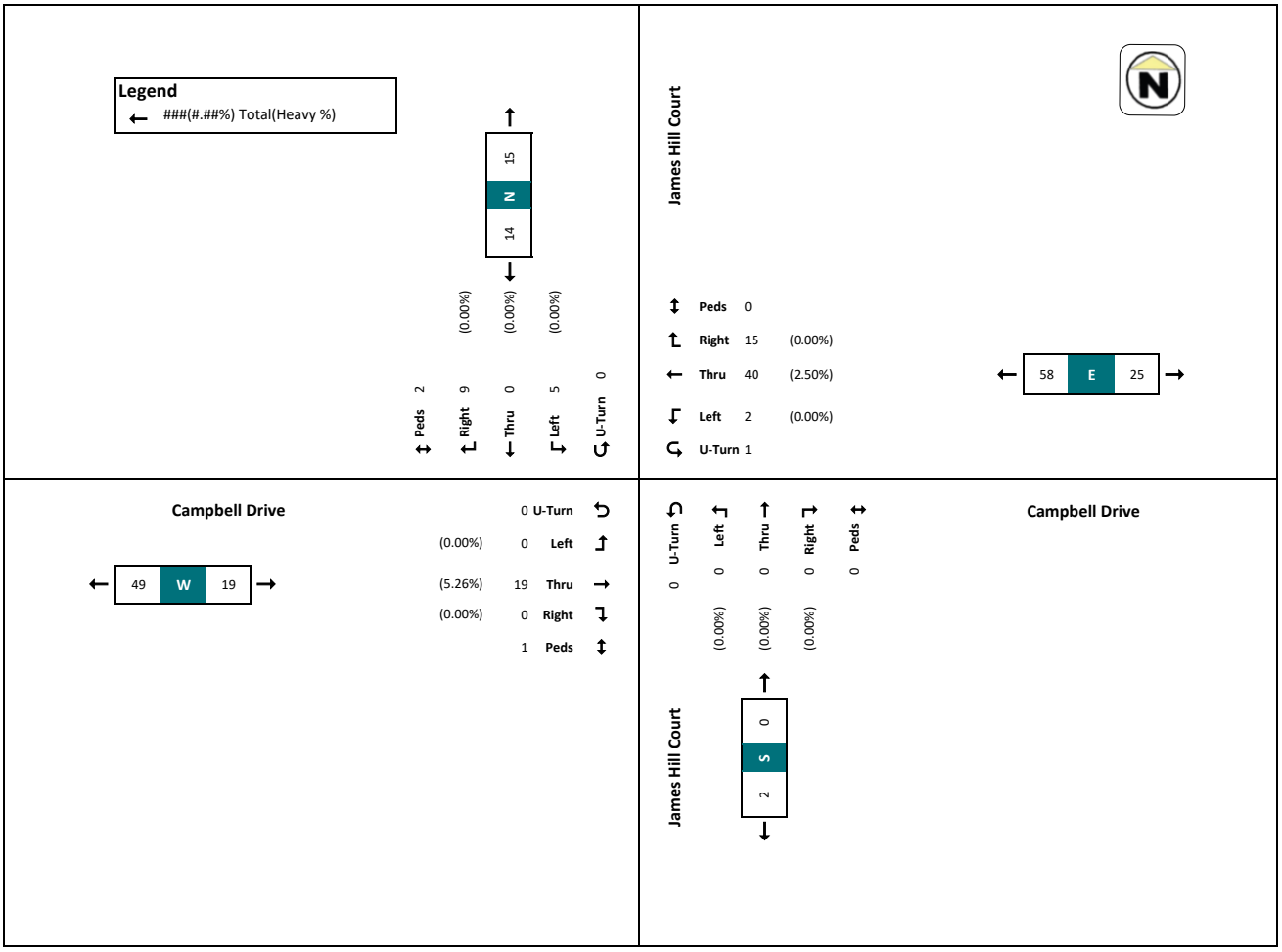


LEA Consulting Ltd.
625 Cochrane Drive, 5th Floor
Markham, ON L3R 9R9

Intersection : James Hill Court & Campbell Drive
Survey Date : July 16, 2024
Project No. : 24138
Count ID : 24248

AM Peak Hour - James Hill Court & Campbell Drive

	James Hill Court Southbound						Campbell Drive Westbound						James Hill Court Northbound						Campbell Drive Eastbound						
Start Time	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Grand Total
8:00	0	0	0	1	0	1	0	0	7	3	0	10	0	0	0	0	0	0	0	0	4	0	0	4	15
8:15	0	2	0	1	0	3	0	1	8	1	0	10	0	0	0	0	0	0	0	0	6	0	0	6	19
8:30	0	3	0	4	0	7	1	1	11	4	0	17	0	0	0	0	0	0	0	0	3	0	0	3	27
8:45	0	0	0	3	2	3	0	0	14	7	0	21	0	0	0	0	0	0	0	0	6	0	1	6	30
Hourly Total	0	5	0	9	2	14	1	2	40	15	0	58	0	0	0	0	0	0	0	0	19	0	1	19	91
Approach %	0.0%	35.7%	0.0%	64.3%	-	-	1.7%	3.4%	69.0%	25.9%	-	-	-	-	-	-	-	-	0.0%	0.0%	100.0%	0.0%	-	-	-
Total %	0.0%	5.5%	0.0%	9.9%	-	15.4%	1.1%	2.2%	44.0%	16.5%	-	63.7%	0.0%	0.0%	0.0%	0.0%	-	0.0%	0.0%	0.0%	20.9%	0.0%	-	20.9%	-
PHF	0	0.42	0	0.56	-	0.5	0.25	0.5	0.71	0.54	-	0.69	0	0	0	0	-	0	0	0	0.79	0	-	0.79	0.76
Lights	0	5	0	8	-	13	1	2	39	15	-	57	0	0	0	0	-	0	0	0	18	0	-	18	88
% Lights	-	100.0%	-	88.9%	-	92.9%	-	100.0%	97.5%	100.0%	-	98.3%	-	-	-	-	-	-	-	-	94.7%	-	-	94.7%	96.7%
Buses	-	0	0	0	-	0	-	0	0	0	-	0	-	0	0	0	-	0	-	0	0	0	-	0	0
% Buses	-	0.0%	-	0.0%	-	0.0%	-	0.0%	0.0%	0.0%	-	0.0%	-	-	-	-	-	-	-	-	0.0%	-	-	0.0%	0.0%
Trucks	-	0	0	1	-	1	-	0	1	0	-	1	-	0	0	0	-	0	-	0	1	0	-	1	3
% Trucks	-	0.0%	-	11.1%	-	7.1%	-	0.0%	2.5%	0.0%	-	1.7%	-	-	-	-	-	-	-	-	5.3%	-	-	5.3%	3.3%
Bicycles	-	-	-	-	0	0	-	-	-	-	0	0	-	-	-	-	0	0	-	-	-	-	0	0	0
Pedestrians	-	-	-	-	2	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	3

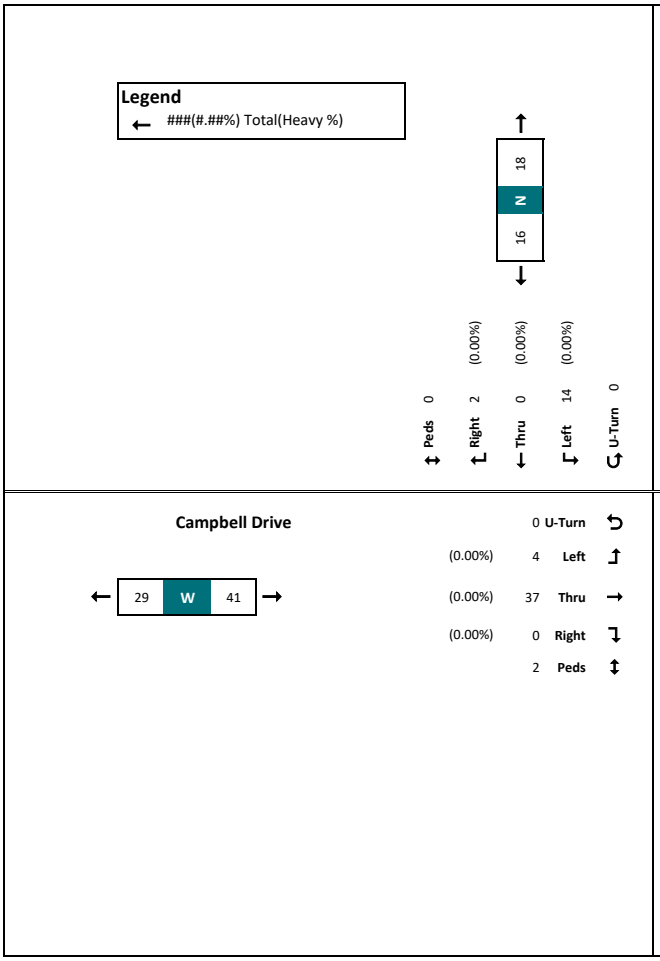


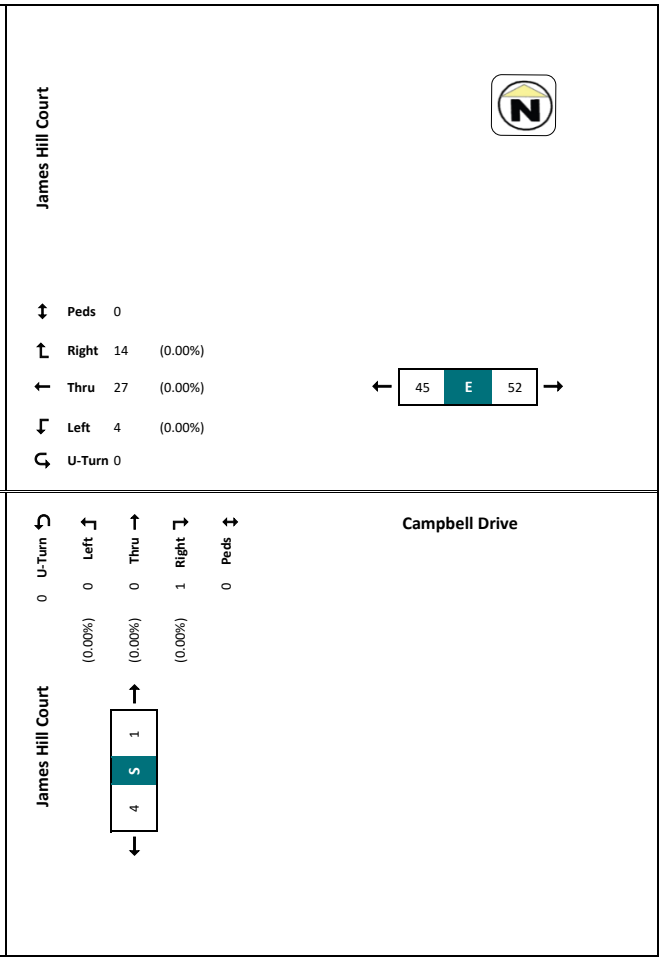
LEA Consulting Ltd.
625 Cochrane Drive, 5th Floor
Markham, ON L3R 9R9

Intersection : James Hill Court & Campbell Drive
Survey Date : July 16, 2024
Project No. : 24138
Count ID : 24248

PM Peak Hour - James Hill Court & Campbell Drive

	James Hill Court Southbound						Campbell Drive Westbound						James Hill Court Northbound						Campbell Drive Eastbound						
Start Time	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Grand Total
16:15	0	7	0	1	0	8	0	1	5	4	0	10	0	0	0	0	0	0	0	0	11	0	0	11	29
16:30	0	3	0	0	0	3	0	1	5	4	0	10	0	0	0	1	0	1	0	2	7	0	2	9	23
16:45	0	2	0	1	0	3	0	0	8	2	0	10	0	0	0	0	0	0	0	2	5	0	0	7	20
17:00	0	2	0	0	0	2	0	2	9	4	0	15	0	0	0	0	0	0	0	0	14	0	0	14	31
Hourly Total	0	14	0	2	0	16	0	4	27	14	0	45	0	0	0	1	0	1	0	4	37	0	2	41	103
Approach %	0.0%	87.5%	0.0%	12.5%	-	-	0.0%	8.9%	60.0%	31.1%	-	-	0.0%	0.0%	0.0%	100.0%	-	-	0.0%	9.8%	90.2%	0.0%	-	-	-
Total %	0.0%	13.6%	0.0%	1.9%	-	15.5%	0.0%	4.4%	29.7%	13.6%	-	43.7%	0.0%	0.0%	0.0%	1.1%	-	1.0%	0.0%	4.4%	40.7%	0.0%	-	39.8%	-
PHF	0	0.5	0	0.5	-	0.5	0	0.5	0.75	0.88	-	0.75	0	0	0	0.25	-	0.25	0	0.5	0.66	0	-	0.73	0.83
Lights	0	14	0	2	-	16	0	4	26	14	-	44	0	0	0	1	-	1	0	4	37	0	-	41	102
% Lights	-	100.0%	-	100.0%	-	100.0%	-	100.0%	96.3%	100.0%	-	97.8%	-	-	-	100.0%	-	100.0%	-	100.0%	100.0%	-	-	100.0%	99.0%
Buses	-	0	0	0	-	0	-	0	0	0	-	0	-	0	0	0	-	0	-	0	0	0	-	0	0
% Buses	-	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%
Trucks	-	0	0	0	-	0	-	0	1	0	-	1	-	0	0	0	-	0	-	0	0	0	-	0	1
% Trucks	-	0.0%	-	0.0%	-	0.0%	-	0.0%	3.7%	0.0%	-	2.2%	-	-	-	0.0%	-	0.0%	-	0.0%	0.0%	-	-	0.0%	1.0%
Bicycles	-	-	-	-	0	0	-	-	-	-	0	0	-	-	-	-	0	0	-	-	-	-	0	0	0
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	0



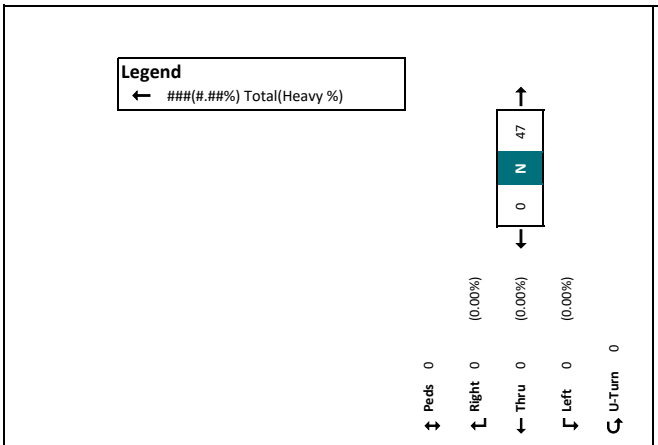


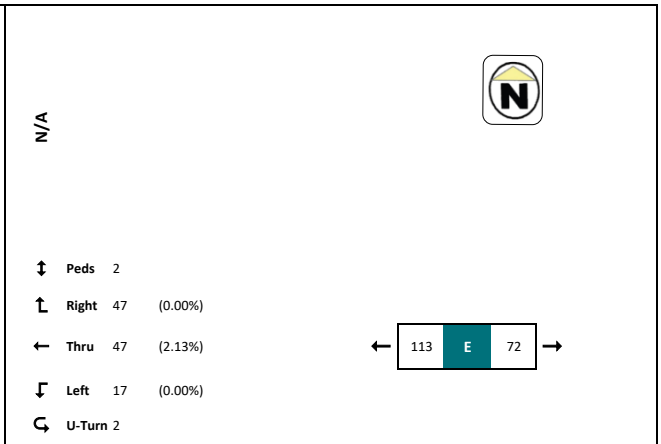
LEA Consulting Ltd.
625 Cochrane Drive, 5th Floor
Markham, ON L3R 9R9

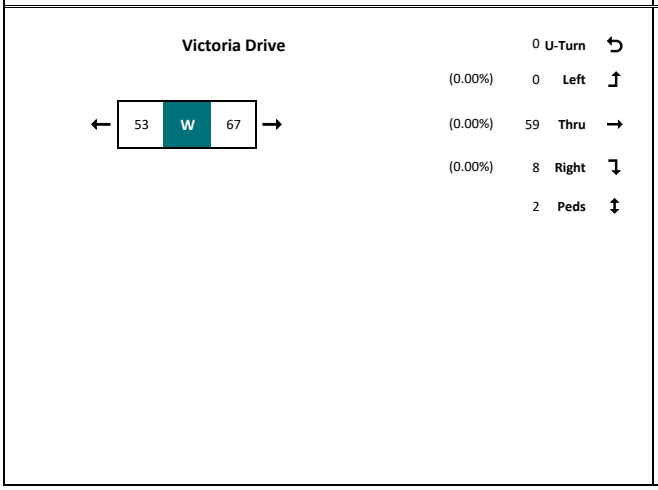
Intersection : Site Access & Victoria Drive
Survey Date : July 16, 2024
Project No. : 24138
Count ID : 24249

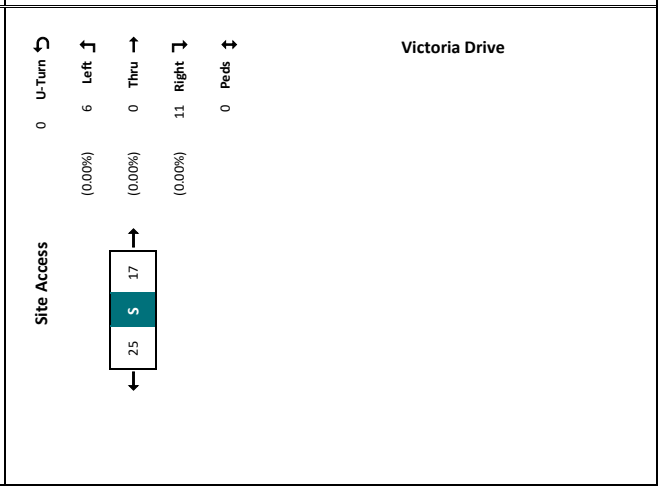
Turning Movement Count - Site Access & Victoria Drive

	N/A Southbound						Victoria Drive Westbound						Site Access Northbound						Victoria Drive Eastbound						
Start Time	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Grand Total
7:30	0	0	0	0	0	0	0	1	0	0	0	1	0	1	0	0	0	1	0	0	3	0	0	3	5
7:45	0	0	0	0	0	0	0	4	1	0	0	5	0	0	0	0	0	0	0	0	9	0	0	9	14
Hourly Total	0	0	0	0	0	0	0	6	3	0	0	9	0	1	0	0	0	1	0	0	15	0	0	15	25
8:00	0	0	0	0	0	0	0	1	2	0	0	3	0	1	0	1	0	2	0	0	2	0	0	2	7
8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	3	0	0	3	4
8:30	0	0	0	0	0	0	0	3	3	0	1	6	0	1	0	1	0	2	0	0	6	3	0	9	17
8:45	0	0	0	0	0	0	0	3	2	0	0	5	0	0	0	3	0	3	0	0	7	1	0	8	16
Hourly Total	0	0	0	0	0	0	0	7	7	0	1	14	0	2	0	6	0	8	0	0	18	4	0	22	44
9:00	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
9:15	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
Hourly Total	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
* Break *																									
16:00	0	0	0	0	0	0	0	1	5	0	0	6	0	0	0	0	0	0	0	0	3	0	0	3	9
16:15	0	0	0	0	0	0	0	0	7	0	0	7	0	0	0	1	0	1	0	0	4	2	1	6	14
16:30	0	0	0	0	0	0	0	0	6	0	1	6	0	2	0	0	0	2	0	0	4	0	0	4	12
16:45	0	0	0	0	0	0	1	1	1	0	0	3	0	1	0	2	0	3	0	0	2	0	1	2	8
Hourly Total	0	0	0	0	0	0	1	2	19	0	1	22	0	3	0	3	0	6	0	0	13	2	2	15	43
17:00	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	2	0	2	0	0	2	0	0	2	7
17:15	0	0	0	0	0	0	0	1	3	0	0	4	0	0	0	0	0	0	0	0	5	1	0	6	10
17:30	0	0	0	0	0	0	1	0	8	0	0	9	0	0	0	0	0	0	0	0	4	0	0	4	13
17:45	0	0	0	0	0	0	0	1	4	0	0	5	0	0	0	0	0	0	0	0	2	1	0	3	8
Hourly Total	0	0	0	0	0	0	1	2	18	0	0	21	0	0	0	2	0	2	0	0	13	2	0	15	38
Grand Total	0	0	0	0	0	0	2	17	47	0	2	66	0	6	0	11	0	17	0	0	59	8	2	67	150
Approach %	-	-	-	-	-	-	3.0%	25.8%	71.2%	0.0%	-	-	0.0%	35.3%	0.0%	64.7%	-	-	0.0%	0.0%	88.1%	11.9%	-	-	-
Total %	0.0%	0.0%	0.0%	0.0%	-	0.0%	1.3%	11.3%	31.3%	0.0%	-	44.0%	0.0%	4.0%	0.0%	7.3%	-	11.3%	0.0%	0.0%	39.3%	5.3%	-	44.7%	-
Lights	0	0	0	0	-	0	2	17	46	0	-	65	0	6	0	11	-	17	0	0	59	8	-	67	149
% Lights	-	-	-	-	-	-	100.0%	100.0%	97.9%	-	-	98.5%	-	100.0%	-	100.0%	-	100.0%	-	-	100.0%	100.0%	-	100.0%	99.3%
Buses	-	0	0	0	-	0	-	0	0	0	-	0	-	0	0	0	-	0	-	0	0	0	-	0	0
% Buses	-	-	-	-	-	-	-	0.0%	0.0%	-	-	0.0%	-	0.0%	-	0.0%	-	0.0%	-	-	0.0%	0.0%	-	0.0%	0.0%
Trucks	-	0	0	0	-	0	-	0	1	0	-	1	-	0	0	0	-	0	-	0	0	0	-	0	1
% Trucks	-	-	-	-	-	-	-	0.0%	2.1%	-	-	1.5%	-	0.0%	-	0.0%	-	0.0%	-	-	0.0%	0.0%	-	0.0%	0.7%
Bicycles	-	-	-	-	1	1	-	-	-	-	2	2	-	-	-	-	0	0	-	-	-	-	5	5	8
Pedestrians	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	0	-	-	-	-	-	2	-	4







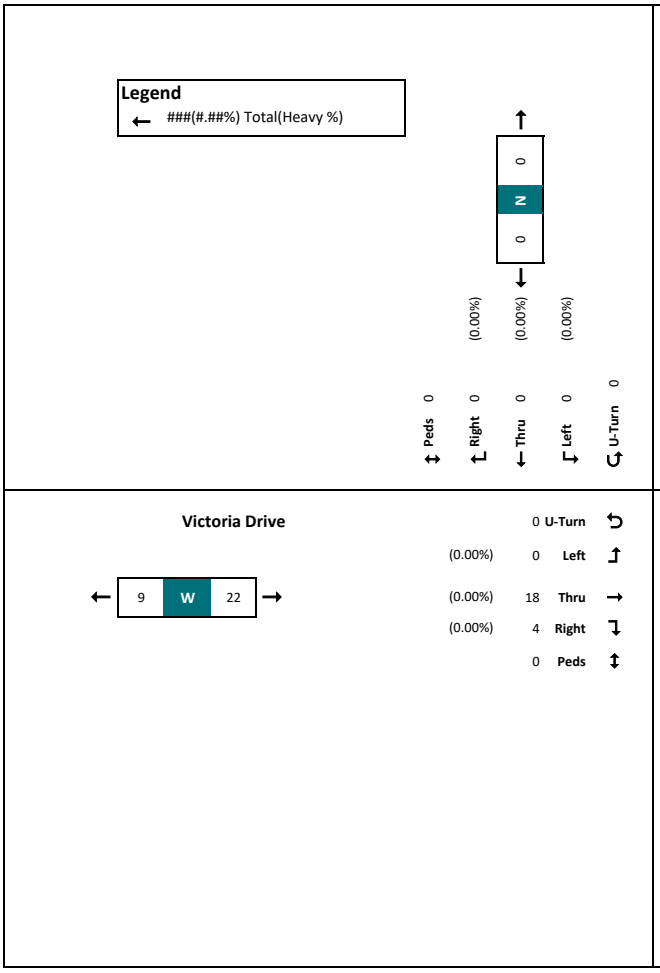


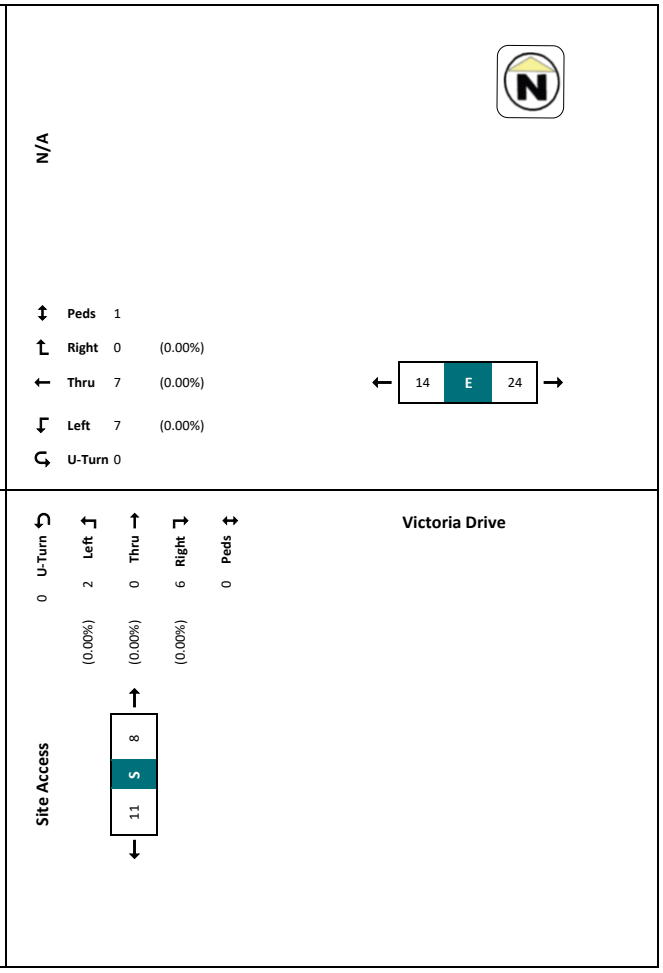
LEA Consulting Ltd.
625 Cochrane Drive, 5th Floor
Markham, ON L3R 9R9

Intersection : Site Access & Victoria Drive
Survey Date : July 16, 2024
Project No. : 24138
Count ID : 24249

AM Peak Hour - Site Access & Victoria Drive

	N/A Southbound						Victoria Drive Westbound						Site Access Northbound						Victoria Drive Eastbound						
Start Time	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Grand Total
8:00	0	0	0	0	0	0	0	1	2	0	0	3	0	1	0	1	0	2	0	0	2	0	0	2	7
8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	3	0	0	3	4
8:30	0	0	0	0	0	0	0	3	3	0	1	6	0	1	0	1	0	2	0	0	6	3	0	9	17
8:45	0	0	0	0	0	0	0	3	2	0	0	5	0	0	0	3	0	3	0	0	7	1	0	8	16
Hourly Total	0	0	0	0	0	0	0	7	7	0	1	14	0	2	0	6	0	8	0	0	18	4	0	22	44
Approach %	-	-	-	-	-	-	0.0%	50.0%	50.0%	0.0%	-	-	0.0%	25.0%	0.0%	75.0%	-	-	0.0%	0.0%	81.8%	18.2%	-	-	-
Total %	0.0%	0.0%	0.0%	0.0%	-	0.0%	0.0%	15.9%	15.9%	0.0%	-	31.8%	0.0%	4.5%	0.0%	13.6%	-	18.2%	0.0%	0.0%	40.9%	9.1%	-	50.0%	-
PHF	0	0	0	0	-	0	0	0.58	0.58	0	-	0.58	0	0.5	0	0.5	-	0.67	0	0	0.64	0.33	-	0.61	0.65
Lights	0	0	0	0	-	0	0	7	7	0	-	14	0	2	0	6	-	8	0	0	18	4	-	22	44
% Lights	-	-	-	-	-	-	-	100.0%	100.0%	-	-	100.0%	-	100.0%	-	100.0%	-	100.0%	-	-	100.0%	100.0%	-	100.0%	100.0%
Buses	-	0	0	0	-	0	-	0	0	0	-	0	-	0	0	0	-	0	-	0	0	0	-	0	0
% Buses	-	-	-	-	-	-	-	0.0%	0.0%	-	-	0.0%	-	0.0%	-	0.0%	-	0.0%	-	-	0.0%	0.0%	-	0.0%	0.0%
Trucks	-	0	0	0	-	0	-	0	0	0	-	0	-	0	0	0	-	0	-	0	0	0	-	0	0
% Trucks	-	-	-	-	-	-	-	0.0%	0.0%	-	-	0.0%	-	0.0%	-	0.0%	-	0.0%	-	-	0.0%	0.0%	-	0.0%	0.0%
Bicycles	-	-	-	-	0	0	-	-	-	-	0	0	-	-	-	-	0	0	-	-	-	-	0	0	0
Pedestrians	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	1



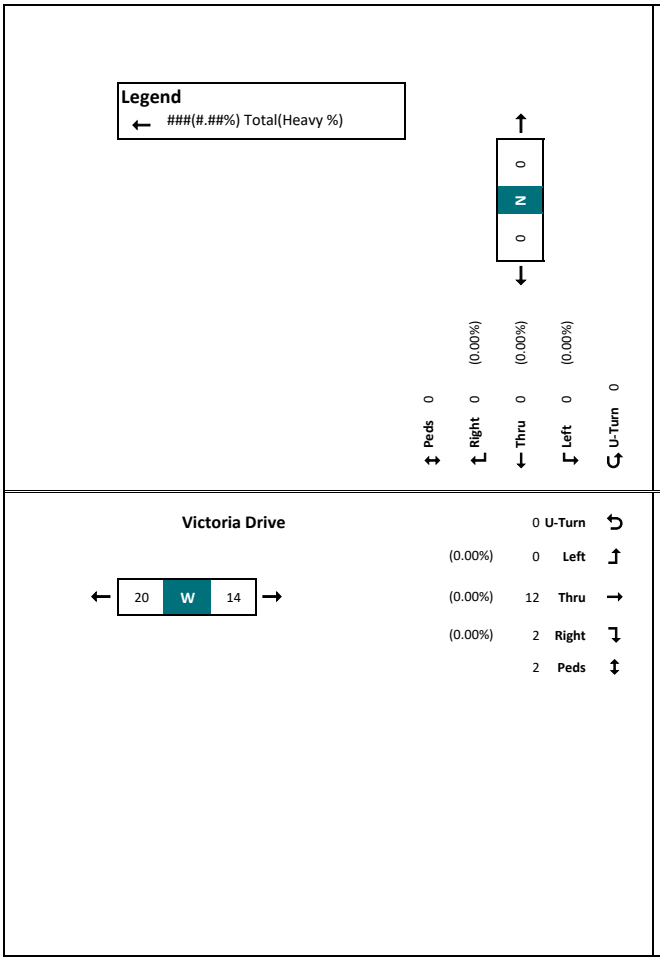


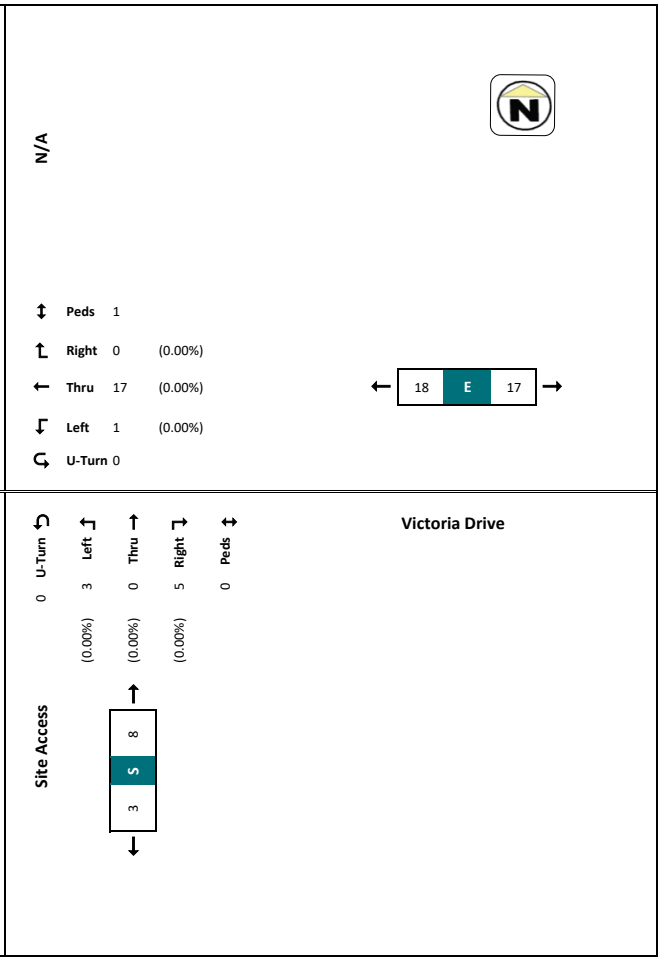
LEA Consulting Ltd.
625 Cochrane Drive, 5th Floor
Markham, ON L3R 9R9

Intersection : Site Access & Victoria Drive
Survey Date : July 16, 2024
Project No. : 24138
Count ID : 24249

PM Peak Hour - Site Access & Victoria Drive

	N/A Southbound						Victoria Drive Westbound						Site Access Northbound						Victoria Drive Eastbound						
Start Time	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Grand Total
16:15	0	0	0	0	0	0	0	0	7	0	0	7	0	0	0	1	0	1	0	0	4	2	1	6	14
16:30	0	0	0	0	0	0	0	0	6	0	1	6	0	2	0	0	0	2	0	0	4	0	0	4	12
16:45	0	0	0	0	0	0	1	1	1	0	0	3	0	1	0	2	0	3	0	0	2	0	1	2	8
17:00	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	2	0	2	0	0	2	0	0	2	7
Hourly Total	0	0	0	0	0	0	1	1	17	0	1	19	0	3	0	5	0	8	0	0	12	2	2	14	41
Approach %	-	-	-	-	-	-	5.3%	5.3%	89.5%	0.0%	-	-	0.0%	37.5%	0.0%	62.5%	-	-	0.0%	0.0%	85.7%	14.3%	-	-	-
Total %	0.0%	0.0%	0.0%	0.0%	-	0.0%	2.3%	2.3%	38.6%	0.0%	-	46.3%	0.0%	6.8%	0.0%	11.4%	-	19.5%	0.0%	0.0%	27.3%	4.5%	-	34.1%	-
PHF	0	0	0	0	-	0	0.25	0.25	0.61	0	-	0.68	0	0.38	0	0.63	-	0.67	0	0	0.75	0.25	-	0.58	0.73
Lights	0	0	0	0	-	0	1	1	17	0	-	19	0	3	0	5	-	8	0	0	12	2	-	14	41
% Lights	-	-	-	-	-	-	-	100.0%	100.0%	-	-	100.0%	-	100.0%	-	100.0%	-	100.0%	-	-	100.0%	100.0%	-	100.0%	100.0%
Buses	-	0	0	0	-	0	-	0	0	0	-	0	-	0	0	0	-	0	-	0	0	0	-	0	0
% Buses	-	-	-	-	-	-	-	0.0%	0.0%	-	-	0.0%	-	0.0%	-	0.0%	-	0.0%	-	-	0.0%	0.0%	-	0.0%	0.0%
Trucks	-	0	0	0	-	0	-	0	0	0	-	0	-	0	0	0	-	0	-	0	0	0	-	0	0
% Trucks	-	-	-	-	-	-	-	0.0%	0.0%	-	-	0.0%	-	0.0%	-	0.0%	-	0.0%	-	-	0.0%	0.0%	-	0.0%	0.0%
Bicycles	-	-	-	-	1	1	-	-	-	-	2	2	-	-	-	-	0	0	-	-	-	-	3	3	6
Pedestrians	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	1



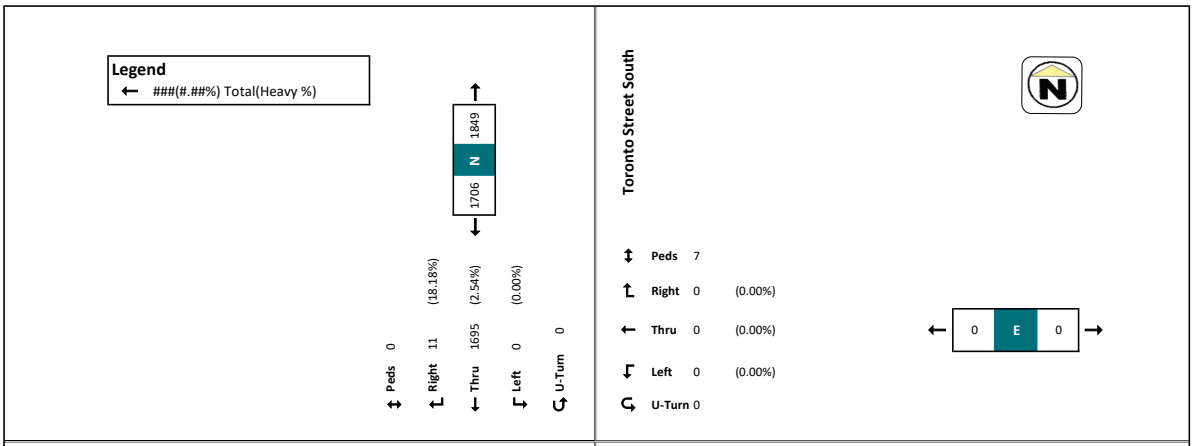


LEA Consulting Ltd.
625 Cochrane Drive, 5th Floor
Markham, ON L3R 9R9

Intersection : Toronto Street South & Victoria Drive
Survey Date : March 25, 2025
Project No. : 25258
Count ID : 25100

Turning Movement Count - Toronto Street South & Victoria Drive

	Toronto Street South Southbound						N/A Westbound						Toronto Street South Northbound						Victoria Drive Eastbound						
Start Time	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Grand Total
7:00	0	0	97	0	0	97	0	0	0	0	0	0	0	0	24	0	0	24	0	1	0	1	0	2	123
7:15	0	0	94	0	0	94	0	0	0	0	0	0	0	2	32	0	0	34	0	0	0	3	0	3	131
7:30	0	0	118	1	0	119	0	0	0	0	0	0	0	4	57	0	0	61	0	1	0	4	0	5	185
7:45	0	0	142	0	0	142	0	0	0	0	1	0	0	4	76	0	0	80	0	3	0	0	0	3	225
Hourly Total	0	0	451	1	0	452	0	0	0	0	1	0	0	10	189	0	0	199	0	5	0	8	0	13	664
8:00	0	0	113	0	0	113	0	0	0	0	1	0	0	2	66	0	0	68	0	1	0	3	0	4	185
8:15	0	0	113	1	0	114	0	0	0	0	0	0	0	0	71	0	0	71	0	0	0	8	1	8	193
8:30	0	0	118	0	0	118	0	0	0	0	1	0	0	4	51	0	0	55	0	1	0	5	2	6	179
8:45	0	0	122	1	0	123	0	0	0	0	1	0	0	5	84	0	0	89	0	18	0	19	0	37	249
Hourly Total	0	0	466	2	0	468	0	0	0	0	3	0	0	11	272	0	0	283	0	20	0	35	3	55	806
* Break *																									
16:00	0	0	102	1	0	103	0	0	0	0	0	0	0	4	198	0	0	202	0	2	0	3	0	5	310
16:15	0	0	108	1	0	109	0	0	0	0	2	0	0	6	155	0	0	161	0	0	0	1	0	1	271
16:30	0	0	100	0	0	100	0	0	0	0	1	0	0	6	180	0	0	186	0	0	0	5	0	5	291
16:45	0	0	106	0	0	106	0	0	0	0	0	0	0	5	174	0	0	179	0	0	0	6	0	6	291
Hourly Total	0	0	416	2	0	418	0	0	0	0	3	0	0	21	707	0	0	728	0	2	0	15	0	17	1163
17:00	0	0	107	3	0	110	0	0	0	0	0	0	0	3	168	0	0	171	0	0	0	7	0	7	288
17:15	0	0	97	1	0	98	0	0	0	0	0	0	0	5	184	0	0	189	0	0	0	2	0	2	289
17:30	0	0	73	0	0	73	0	0	0	0	0	0	0	4	155	0	0	159	0	0	0	4	0	4	236
17:45	0	0	85	2	0	87	0	0	0	0	0	0	0	3	147	0	0	150	0	0	0	1	0	1	238
Hourly Total	0	0	362	6	0	368	0	0	0	0	0	0	0	15	654	0	0	669	0	0	0	14	0	14	1051
Grand Total	0	0	1695	11	0	1706	0	0	0	0	7	0	0	57	1822	0	0	1879	0	27	0	72	3	99	3684
Approach %	0.0%	0.0%	99.4%	0.6%	-	-	-	-	-	-	-	-	0.0%	3.0%	97.0%	0.0%	-	-	0.0%	27.3%	0.0%	72.7%	-	-	-
Total %	0.0%	0.0%	46.0%	0.3%	-	46.3%	0.0%	0.0%	0.0%	0.0%	-	0.0%	0.0%	1.5%	49.5%	0.0%	-	51.0%	0.0%	0.7%	0.0%	2.0%	-	2.7%	-
Lights	0	0	1652	9	-	1661	0	0	0	0	-	0	0	55	1784	0	-	1839	0	18	0	71	-	89	3589
% Lights	-	-	97.5%	81.8%	-	97.4%	-	-	-	-	-	-	-	96.5%	97.9%	-	-	97.9%	-	66.7%	-	98.6%	-	89.9%	97.4%
Buses	-	0	16	0	-	16	-	0	0	0	-	0	-	0	15	0	-	15	-	8	0	0	-	8	39
% Buses	-	-	0.9%	0.0%	-	0.9%	-	-	-	-	-	-	-	0.0%	0.8%	-	-	0.8%	-	29.6%	-	0.0%	-	8.1%	1.1%
Trucks	-	0	27	2	-	29	-	0	0	0	-	0	-	2	23	0	-	25	-	1	0	1	-	2	56
% Trucks	-	-	1.6%	-	-	1.7%	-	-	-	-	-	-	-	3.5%	1.3%	-	-	1.3%	-	3.7%	-	1.4%	-	2.0%	1.5%
Bicycles	-	-	-	-	0	0	-	-	-	-	4	4	-	-	-	-	0	0	-	-	-	-	7	7	11
Pedestrians	-	-	-	-	0	-	-	-	-	-	7	-	-	-	-	-	0	-	-	-	-	-	3	-	10

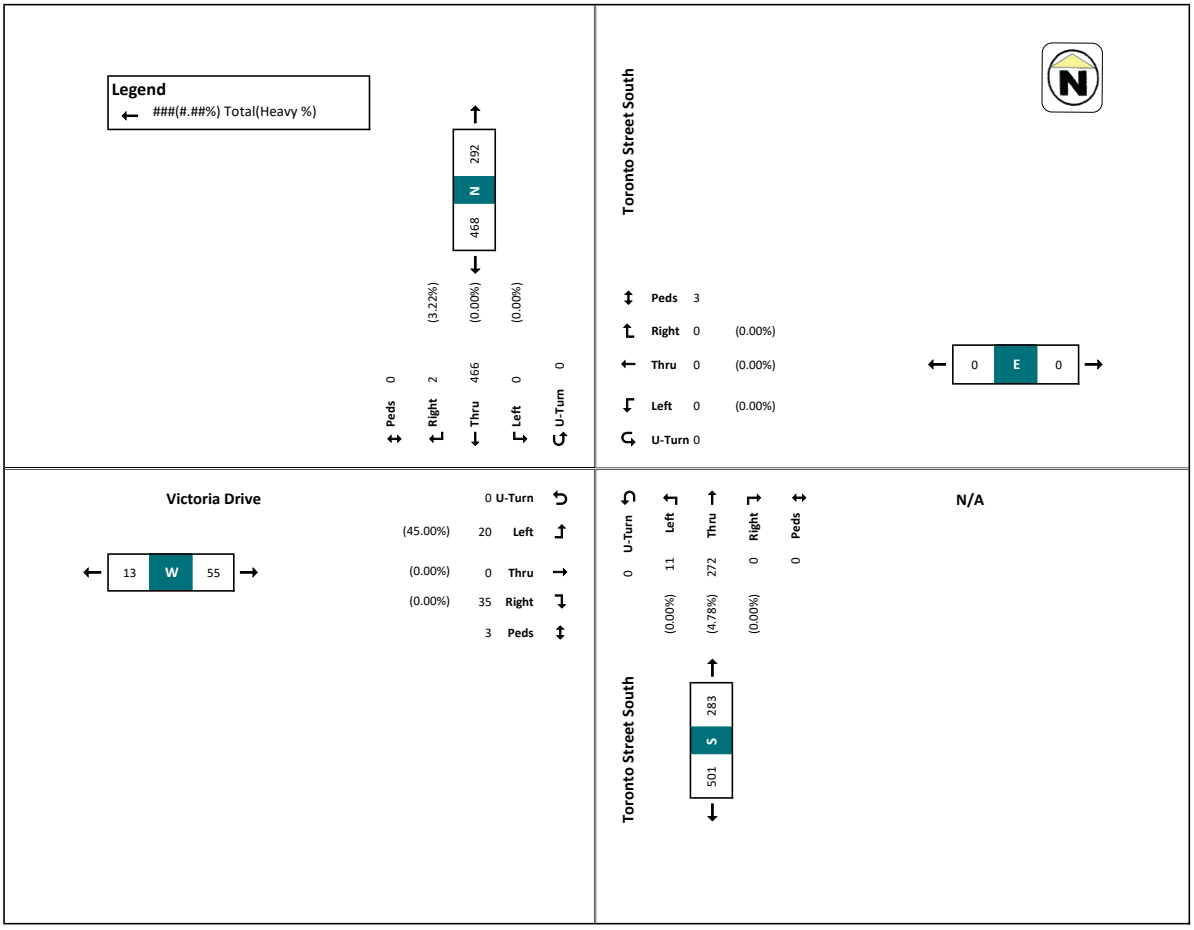


LEA Consulting Ltd.
625 Cochrane Drive, 5th Floor
Markham, ON L3R 9R9

Intersection : Toronto Street South & Victoria Drive
Survey Date : March 25, 2025
Project No. : 25258
Count ID : 25100

AM Peak Hour - Toronto Street South & Victoria Drive

	Toronto Street South Southbound						N/A Westbound						Toronto Street South Northbound						Victoria Drive Eastbound						
Start Time	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Grand Total
8:00	0	0	113	0	0	113	0	0	0	0	1	0	0	2	66	0	0	68	0	1	0	3	0	4	185
8:15	0	0	113	1	0	114	0	0	0	0	0	0	0	0	71	0	0	71	0	0	0	8	1	8	193
8:30	0	0	118	0	0	118	0	0	0	0	1	0	0	4	51	0	0	55	0	1	0	5	2	6	179
8:45	0	0	122	1	0	123	0	0	0	0	1	0	0	5	84	0	0	89	0	18	0	19	0	37	249
Hourly Total	0	0	466	2	0	468	0	0	0	0	3	0	0	11	272	0	0	283	0	20	0	35	3	55	806
Approach %	0.0%	0.0%	99.6%	0.4%	-	-	-	-	-	-	-	-	0.0%	3.9%	96.1%	0.0%	-	-	0.0%	36.4%	0.0%	63.6%	-	-	-
Total %	0.0%	0.0%	57.8%	0.2%	-	58.1%	0.0%	0.0%	0.0%	0.0%	-	0.0%	0.0%	1.4%	33.7%	0.0%	-	35.1%	0.0%	2.5%	0.0%	4.3%	-	6.8%	-
PHF	0	0	0.95	0.5	-	0.95	0	0	0	0	-	0	0	0.55	0.81	0	-	0.79	0	0.28	0	0.46	-	0.37	0.81
Lights	0	0	451	2	-	453	0	0	0	0	-	0	0	11	259	0	-	270	0	11	0	35	-	46	769
% Lights	-	-	96.8%	100.0%	-	96.8%	-	-	-	-	-	-	-	100.0%	95.2%	-	-	95.4%	-	55.0%	-	100.0%	-	83.6%	95.4%
Buses	-	0	4	0	-	4	-	0	0	0	-	0	-	0	5	0	-	5	-	8	0	0	-	8	17
% Buses	-	-	0.9%	0.0%	-	0.9%	-	-	-	-	-	-	-	0.0%	1.8%	-	-	1.8%	-	40.0%	-	0.0%	-	14.5%	2.1%
Trucks	-	0	11	0	-	11	-	0	0	0	-	0	-	0	8	0	-	8	-	1	0	0	-	1	20
% Trucks	-	-	2.4%	0.0%	-	2.4%	-	-	-	-	-	-	-	0.0%	2.9%	-	-	2.8%	-	5.0%	-	0.0%	-	1.8%	2.5%
Bicycles	-	-	-	-	0	0	-	-	-	-	2	2	-	-	-	-	0	0	-	-	-	-	0	0	2
Pedestrians	-	-	-	-	0	-	-	-	-	-	3	-	-	-	-	-	0	-	-	-	-	-	3	-	6

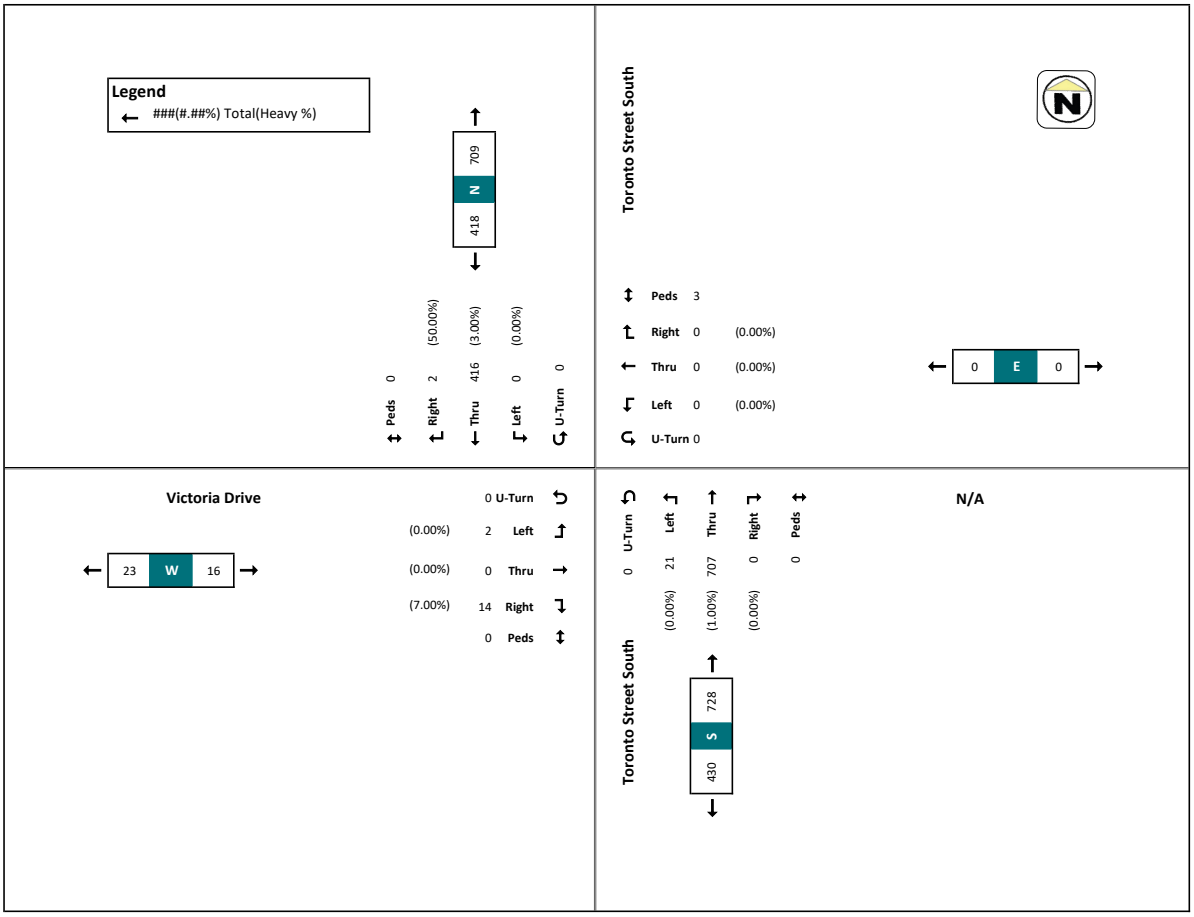


LEA Consulting Ltd.
625 Cochrane Drive, 5th Floor
Markham, ON L3R 9R9

Intersection : Toronto Street South & Victoria Drive
Survey Date : March 25, 2025
Project No. : 25258
Count ID : 25100

PM Peak Hour - Toronto Street South & Victoria Drive

	Toronto Street South Southbound						N/A Westbound						Toronto Street South Northbound						Victoria Drive Eastbound						
Start Time	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Grand Total
16:00	0	0	102	1	0	103	0	0	0	0	0	0	0	4	198	0	0	202	0	2	0	3	0	5	310
16:15	0	0	108	1	0	109	0	0	0	0	2	0	0	6	155	0	0	161	0	0	0	1	0	1	271
16:30	0	0	100	0	0	100	0	0	0	0	1	0	0	6	180	0	0	186	0	0	0	5	0	5	291
16:45	0	0	106	0	0	106	0	0	0	0	0	0	0	5	174	0	0	179	0	0	0	6	0	6	291
Hourly Total	0	0	416	2	0	418	0	0	0	0	3	0	0	21	707	0	0	728	0	2	0	15	0	17	1163
Approach %	0.0%	0.0%	99.5%	0.5%	-	-	-	-	-	-	-	-	0.0%	2.9%	97.1%	0.0%	-	-	0.0%	11.8%	0.0%	88.2%	-	-	-
Total %	0.0%	0.0%	35.8%	0.2%	-	35.9%	0.0%	0.0%	0.0%	0.0%	-	0.0%	0.0%	2.6%	87.7%	0.0%	-	62.6%	0.0%	0.2%	0.0%	1.9%	-	1.5%	-
PHF	0	0	0.96	0.5	-	0.96	0	0	0	0	-	0	0	0.88	0.89	0	-	0.9	0	0.25	0	0.63	-	0.71	0.94
Lights	0	0	404	1	-	405	0	0	0	0	-	0	0	21	701	0	-	722	0	2	0	14	-	16	1143
% Lights	-	-	97.1%	50.0%	-	96.9%	-	-	-	-	-	-	-	100.0%	99.2%	-	-	99.2%	-	100.0%	-	93.3%	-	94.1%	98.3%
Buses	-	0	4	0	-	4	-	0	0	0	-	0	-	0	2	0	-	2	-	0	0	0	-	0	6
% Buses	-	-	1.0%	0.0%	-	1.0%	-	-	-	-	-	-	-	0.0%	0.3%	-	-	0.3%	-	0.0%	-	0.0%	-	0.0%	0.5%
Trucks	-	0	7	1	-	8	-	0	0	0	-	0	-	0	4	0	-	4	-	0	0	1	-	1	13
% Trucks	-	-	1.7%	50.0%	-	1.9%	-	-	-	-	-	-	-	0.0%	0.6%	-	-	0.5%	-	0.0%	-	6.7%	-	5.9%	1.1%
Bicycles	-	-	-	-	0	0	-	-	-	-	0	0	-	-	-	-	0	0	-	-	-	-	5	5	5
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	0



DURHAM REGIONAL POLICE

leaders in community safety

April 14, 2025

Mr. Anatole Kung
25 Sealstone Terrace
Markham, ON M1E 4J6

Dear Mr. Kung:

Re: Access Request #25-0439

I am responding to your request for access to information under *the Municipal Freedom of Information and Protection of Privacy Act.*

Specifically, you have requested access to the number of motor vehicle collisions over the past 10 years at Toronto Street South (RR47) and Campbell Drive, as well as at Toronto Street South (RR47) and Victoria Drive, in Uxbridge.

I have identified records responsive to your request and a decision has been made to grant access in accordance with the *Act*.

Please be advised that a search was completed for the timeframe of January 1, 2014 to December 31, 2024 and there were 11 motor vehicle collisions reported at Toronto Street South and Campbell Drive, in Uxbridge.

Please be advised that a search was completed for the timeframe of January 1, 2014 to December 31, 2024 and there were 2 motor vehicle collisions reported at Toronto Street South and Victoria Drive, in Uxbridge.

I am responsible for this decision. Should you have any questions or concerns regarding this decision, please contact the Freedom of Information Unit of this institution at 905-579-1520, extension 4110. If, after discussing the matter, you wish the decision reviewed, you may appeal to the Information and Privacy Commissioner, 2 Bloor Street East, Suite 1400, Toronto, Ontario, M4W 1A8. Please note that you have 30 days from the date of this letter to appeal this decision.

If you decide to request a review of this decision, please provide the Commissioner's office with the following:

1) the file number listed at the beginning of this letter;

2) a copy of this decision letter;
3) a copy of the original request for information you sent to this institution; and
4) the reasons why you believe the records exist (*if the decision was that no records exist*).

In addition, you must send an appeal fee to the Commissioner's office. If your request was for your personal information, the appeal fee is $10.00. The appeal fee for all other requests for information is $25.00. Please include the fee with your letter of appeal - appeal fees should be in the form of either a cheque or money order, payable to the Minister of Finance.

Yours truly,

per: Janice Greer
Sylvia Terwillegar
Coordinator
Freedom of Information Unit

/jg
enclosure

DURHAM REGIONAL POLICE

leaders in community safety

May 26, 2025

The Lea Group
5 – 625 Cochrane Drive
Markham, ON L3R 9R9
Attn: Anatole Kung

Dear Mr. Kung:

Re: Access Request #25-0719
Your File: Collision data for Toronto St S at Campbell Drive, Uxbridge

I am responding to your request for access to information under *the Municipal Freedom of Information and Protection of Privacy Act.*

Specifically, you have requested access to the collision data for Toronto Street South at Campbell Drive in the Township of Uxbridge, from 2015 to the end of 2024.

I have identified records responsive to your request and a decision has been made to grant access in accordance with the *Act*.

I am responsible for this decision. Should you have any questions or concerns regarding this decision, please contact the Freedom of Information Unit of this institution at 905-579-1520, extension 4110. If, after discussing the matter, you wish the decision reviewed, you may appeal to the Information and Privacy Commissioner, 2 Bloor Street East, Suite 1400, Toronto, Ontario, M4W 1A8. Please note that you have 30 days from the date of this letter to appeal this decision.

If you decide to request a review of this decision, please provide the Commissioner's office with the following:

1) the file number listed at the beginning of this letter;
2) a copy of this decision letter;
3) a copy of the original request for information you sent to this institution; and
4) the reasons why you believe the records exist (*if the decision was that no records exist*).

Durham Regional Police Service
Police Headquarters, 605 Rossland Road East
Box 911 Whitby, Ontario L1N 0B8
Tel. 905-579-1520
Toll Free 888-579-1520
Fax 905-666-8733
www.drps.ca

In addition, you must send an appeal fee to the Commissioner's office. If your request was for your personal information, the appeal fee is $10.00. The appeal fee for all other requests for information is $25.00. Please include the fee with your letter of appeal - appeal fees should be in the form of either a cheque or money order, payable to the Minister of Finance.

Yours truly,

per: Janice Greer
Sylvia Terwillegar
Coordinator
Freedom of Information Unit

/jg
enclosure

RIGHT OF ACCESS TO GENERAL INFORMATION

Section 4

4. (1) Every person has a right of access to a record or a part of a record in the custody or under the control of an institution unless the record or part falls within one of the exemptions under sections 6 to 15.

(2) Where an institution receives a request for access to a record that contains information that falls within one of the exemptions under sections 6 to 15, the head shall disclose as much of the record as can reasonably be severed without disclosing the information that falls under one of the exemptions.

Intersection of Toronto St S and Campbell Drive, Uxbridge

ac_num	rep_date	accident_classification	traffic_unit_Driver_num	Initial_Impact_Type	light	environment_condition_1	init_direction	veh_man	veh_type	First Event
2015-84987	06-May-15	PD only	1	Rear end	Daylight	Clear	South	Slowing or stopping	Automobile, station wagon	Other motor vehicle
2015-84987	06-May-15	PD only	2	Rear end	Daylight	Clear	South	Slowing or stopping	Pick-up truck	Other motor vehicle
2018-173014	23-Aug-18	Fatal Injury	1	Single motor vehicle - other	Dark	Clear	South	Going ahead	Automobile, station wagon	Curb
2018-173025	23-Aug-18	Non-reportable	1	Single motor vehicle - unattended vehicle	Dark, artificial	Clear	South	Reversing	Police vehicle	Unattended vehicle
2018-173025	23-Aug-18	Non-reportable	2	Single motor vehicle - unattended vehicle	Dark, artificial	Clear	North	Parked	Automobile, station wagon	Other motor vehicle
2019-36084	15-Feb-19	PD only	1	Single motor vehicle - unattended vehicle	Dark, artificial	Clear	North	Going ahead	Automobile, station wagon	Ran off road
2019-36084	15-Feb-19	PD only	2	Single motor vehicle - unattended vehicle	Dark, artificial	Clear		Parked	Unknown	Other motor vehicle
2019-135221	25-Jun-19	PD only	1	Turning movement	Daylight	Clear	East	Turning Right	Automobile, station wagon	Other motor vehicle
2019-135221	25-Jun-19	PD only	2	Turning movement	Daylight	Clear	South	Going ahead	Automobile, station wagon	Other motor vehicle
2019-149634	11-Jul-19	PD only	1	Rear end	Daylight	Clear	South	Stopped	Pick-up truck	Other motor vehicle
2019-149634	11-Jul-19	PD only	2	Rear end	Daylight	Clear	South	Going ahead	Automobile, station wagon	Other motor vehicle
2021-161435	10-Jul-21	PD only	1	Rear end	Daylight	Clear	North	Slowing or stopping	Automobile, station wagon	Other motor vehicle
2021-161435	10-Jul-21	PD only	2	Rear end	Daylight	Clear	North	Slowing or stopping	Automobile, station wagon	Other motor vehicle
2021-178858	01-Aug-21	PD only	1	Single motor vehicle - other	Dark, artificial	Clear	South	Going ahead	Automobile, station wagon	Pole (sign, parking meter)
2021-297353	23-Dec-21	PD only	1	Turning movement	Daylight	Clear	South	Turning Left	Automobile, station wagon	Other motor vehicle
2021-297353	23-Dec-21	PD only	2	Turning movement	Daylight	Clear	South	Stopped	Automobile, station wagon	Other motor vehicle
2022-84393	20-Apr-22	PD only	1	Turning movement	Daylight	Clear	East	Turning Left	Automobile, station wagon	Other motor vehicle
2022-84393	20-Apr-22	PD only	2	Turning movement	Daylight	Clear	West	Going ahead	Automobile, station wagon	Other motor vehicle

APPENDIX C

Trip Generation Calculations

TURNING MOVEMENT COUNT

Project #: 24138.00.200.02

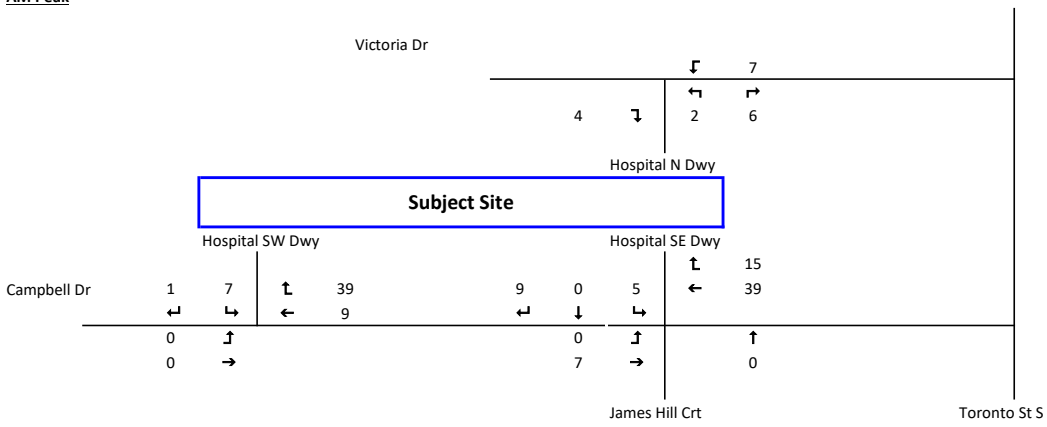
Source:	LEA	N/S Street:	Hospital Site Dwys (3)	Municipality:	Uxbridge
Date:	Thurs. Sept. 21, 2023	E/W Street:	Victoria Dr & Campbell Dr	Province:	Ontario

Time Start	North Dwy+Victoria Dr				Southwest Dwy+Campbell Dr				Southeast Dwy/James Hill Crt + Campbell Dr						Total				
	In		Out		In		Out		In			Out			In	Out	All	Hourly	
	Left	Right	Left	Right	Left	Right	Left	Right	Left	Thru'	Right	Left	Thru'	Right					
7:00	0	0	0	0	0	4	1	0	0	0	2	1	0	1	6	3	9		
7:15	1	0	0	0	0	3	2	0	0	0	0	1	0	1	4	4	8		
7:30	1	0	1	0	0	4	1	0	0	0	0	0	0	0	5	2	7		
7:45	4	0	0	0	0	11	0	0	0	0	1	1	0	0	16	1	17	41	
8:00	1	0	1	1	0	6	1	1	0	0	3	0	0	1	10	5	15	47	
8:15	0	0	0	1	0	9	3	0	0	0	1	2	0	1	10	7	17	56	
8:30	3	3	1	1	0	11	1	0	0	0	4	3	0	4	21	10	31	80	
8:45	3	1	0	3	0	13	2	0	0	0	7	0	0	3	24	8	32	95	<-- Peak Hour
16:00	1	0	0	0	1	1	6	1	0	0	3	1	0	0	6	8	14		
16:15	0	2	0	1	0	2	6	0	0	0	4	7	0	1	8	15	23		
16:30	0	0	2	0	0	0	6	0	2	0	4	3	0	0	6	11	17		
16:45	1	0	1	2	0	4	2	0	2	0	2	2	0	1	9	8	17	71	
17:00	0	0	0	2	0	2	12	0	0	0	4	2	0	0	6	16	22	79	
17:15	1	1	0	0	0	2	5	0	1	0	4	5	0	2	9	12	21	77	
17:30	0	0	0	0	0	2	2	0	2	0	3	2	0	0	7	4	11	71	
17:45	1	1	0	0	0	5	5	0	0	0	5	6	0	2	12	13	25	79	<-- Peak Hour
Total	17	8	6	11	1	79	55	2	7	0	47	36	0	17	159	127	286	343	
AM Peak	7	4	2	6	0	39	7	1	0	0	15	5	0	9	65	30	95	406	
PM Peak	1	2	3	5	0	8	26	0	4	0	14	14	0	2	29	50	79	460	

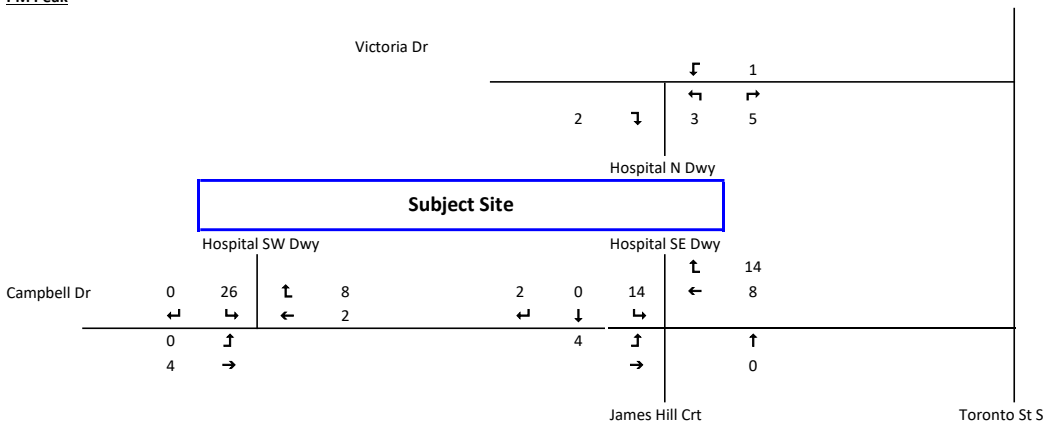
Notes: Subject site has a total approximate building size of 82,930 sf (North: 45,030 sf, South: 37,900 sf)

Peak Hour	Two-way Site Trips			Trip Rate		
	In	Out	Total	In	Out	Total
AM	65	30	95	0.78	0.36	1.14
PM	29	50	79	0.35	0.60	0.95

AM Peak



PM Peak



TURNING MOVEMENT COUNT

Project #: 24138.00.200.02

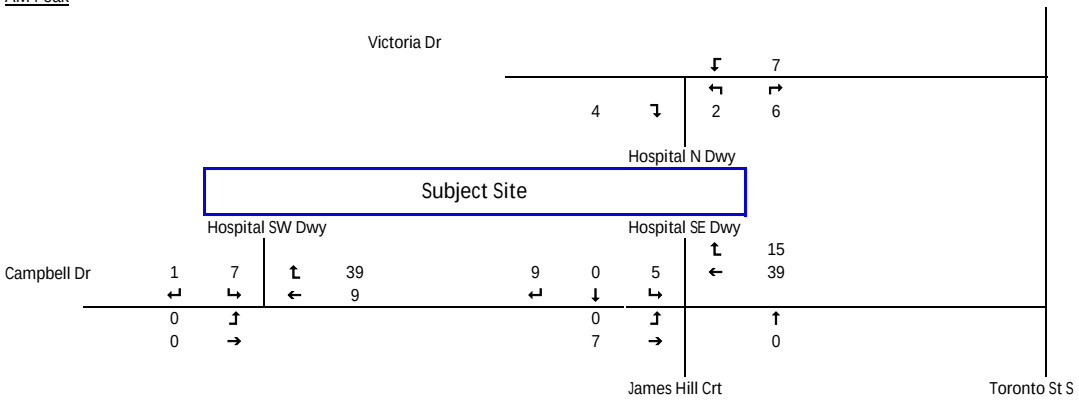
Source:	LEA	N/S Street:	Hospital Site Dwys (3)	Municipality:	Uxbridge	
Date:	Thurs. Sept. 21, 2023	E/W Street:	Victoria Dr & Campbell Dr	Province:	Ontario	

Time Start	North Dwy+Victoria Dr				Southwest Dwy+Campbell Dr				Southeast Dwy/James Hill Crt + Campbell Dr						Total				
	In		Out		In		Out		In			Out			In	Out	All	Hourly	
	Left	Right	Left	Right	Left	Right	Left	Right	Left	Thru'	Right	Left	Thru'	Right					
7:00	0	0	0	0	0	4	1	0	0	0	2	1	0	1	6	3	9		
7:15	1	0	0	0	0	3	2	0	0	0	0	1	0	1	4	4	8		
7:30	1	0	1	0	0	4	1	0	0	0	0	0	0	0	5	2	7		
7:45	4	0	0	0	0	11	0	0	0	0	1	1	0	0	16	1	17	41	
8:00	1	0	1	1	0	6	1	1	0	0	3	0	0	1	10	5	15	47	
8:15	0	0	0	1	0	9	3	0	0	0	1	2	0	1	10	7	17	56	
8:30	3	3	1	1	0	11	1	0	0	0	4	3	0	4	21	10	31	80	
8:45	3	1	0	3	0	13	2	0	0	0	7	0	0	3	24	8	32	95	<-- Peak Hour
16:00	1	0	0	0	1	1	6	1	0	0	3	1	0	0	6	8	14		
16:15	0	2	0	1	0	2	6	0	0	0	4	7	0	1	8	15	23		
16:30	0	0	2	0	0	0	6	0	2	0	4	3	0	0	6	11	17		
16:45	1	0	1	2	0	4	2	0	2	0	2	2	0	1	9	8	17	71	
17:00	0	0	0	2	0	2	12	0	0	0	4	2	0	0	6	16	22	79	
17:15	1	1	0	0	0	2	5	0	1	0	4	5	0	2	9	12	21	77	
17:30	0	0	0	0	0	2	2	0	2	0	3	2	0	0	7	4	11	71	
17:45	1	1	0	0	0	5	5	0	0	0	5	6	0	2	12	13	25	79	<-- Peak Hour
Total	17	8	6	11	1	79	55	2	7	0	47	36	0	17	159	127	286	343	
AM Peak	7	4	2	6	0	39	7	1	0	0	15	5	0	9	65	30	95	406	
PM Peak	1	2	3	5	0	8	26	0	4	0	14	14	0	2	29	50	79	460	

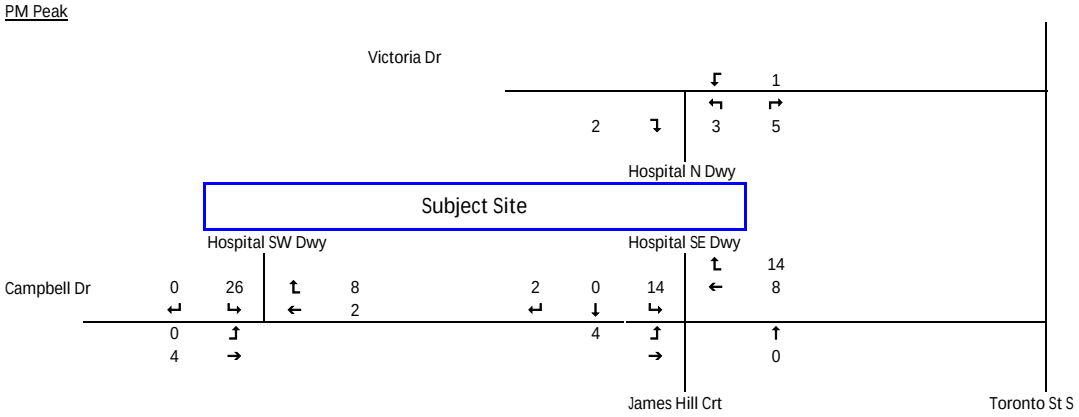
Notes: Subject site has a total approximate building size of 82,930 sf (North: 45,030 sf, South: 37,900 sf)

Peak Hour	Two-way Site Trips			Trip Rate		
	In	Out	Total	In	Out	Total
AM	65	30	95	0.78	0.36	1.14
PM	29	50	79	0.35	0.60	0.95

AM Peak



PM Peak



TURNING MOVEMENT COUNT

Project #: 24138.00.200.02

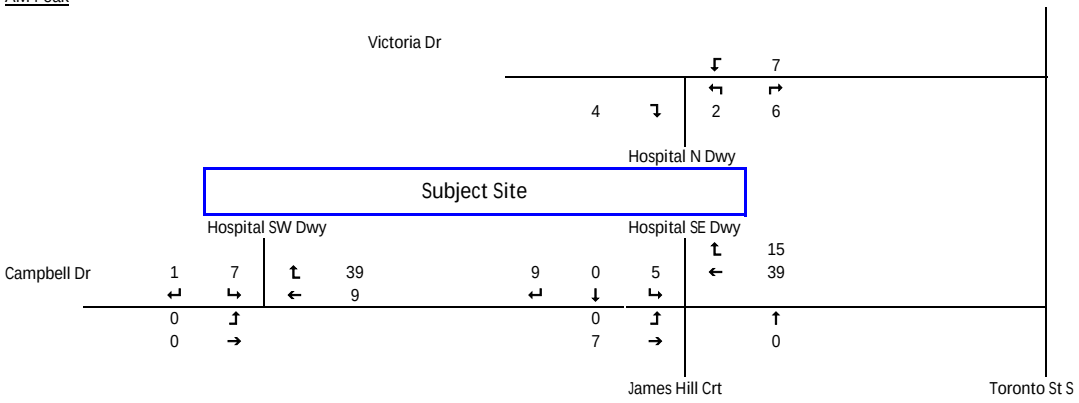
Source:	LEA	N/S Street:	Hospital Site Dwys (3)	Municipality:	Uxbridge	
Date:	Thurs. Sept. 21, 2023	E/W Street:	Victoria Dr & Campbell Dr	Province:	Ontario	

Time Start	North Dwy+Victoria Dr				Southwest Dwy+Campbell Dr				Southeast Dwy/James Hill Crt + Campbell Dr						Total				
	In		Out		In		Out		In			Out			In	Out	All	Hourly	
	Left	Right	Left	Right	Left	Right	Left	Right	Left	Thru'	Right	Left	Thru'	Right					
7:00	0	0	0	0	0	4	1	0	0	0	2	1	0	1	6	3	9		
7:15	1	0	0	0	0	3	2	0	0	0	0	1	0	1	4	4	8		
7:30	1	0	1	0	0	4	1	0	0	0	0	0	0	0	5	2	7		
7:45	4	0	0	0	0	11	0	0	0	0	1	1	0	0	16	1	17	41	
8:00	1	0	1	1	0	6	1	1	0	0	3	0	0	1	10	5	15	47	
8:15	0	0	0	1	0	9	3	0	0	0	1	2	0	1	10	7	17	56	
8:30	3	3	1	1	0	11	1	0	0	0	4	3	0	4	21	10	31	80	
8:45	3	1	0	3	0	13	2	0	0	0	7	0	0	3	24	8	32	95	<-- Peak Hour
16:00	1	0	0	0	1	1	6	1	0	0	3	1	0	0	6	8	14		
16:15	0	2	0	1	0	2	6	0	0	0	4	7	0	1	8	15	23		
16:30	0	0	2	0	0	0	6	0	2	0	4	3	0	0	6	11	17		
16:45	1	0	1	2	0	4	2	0	2	0	2	2	0	1	9	8	17	71	
17:00	0	0	0	2	0	2	12	0	0	0	4	2	0	0	6	16	22	79	
17:15	1	1	0	0	0	2	5	0	1	0	4	5	0	2	9	12	21	77	
17:30	0	0	0	0	0	2	2	0	2	0	3	2	0	0	7	4	11	71	
17:45	1	1	0	0	0	5	5	0	0	0	5	6	0	2	12	13	25	79	<-- Peak Hour
Total	17	8	6	11	1	79	55	2	7	0	47	36	0	17	159	127	286	343	
AM Peak	7	4	2	6	0	39	7	1	0	0	15	5	0	9	65	30	95	406	
PM Peak	1	2	3	5	0	8	26	0	4	0	14	14	0	2	29	50	79	460	

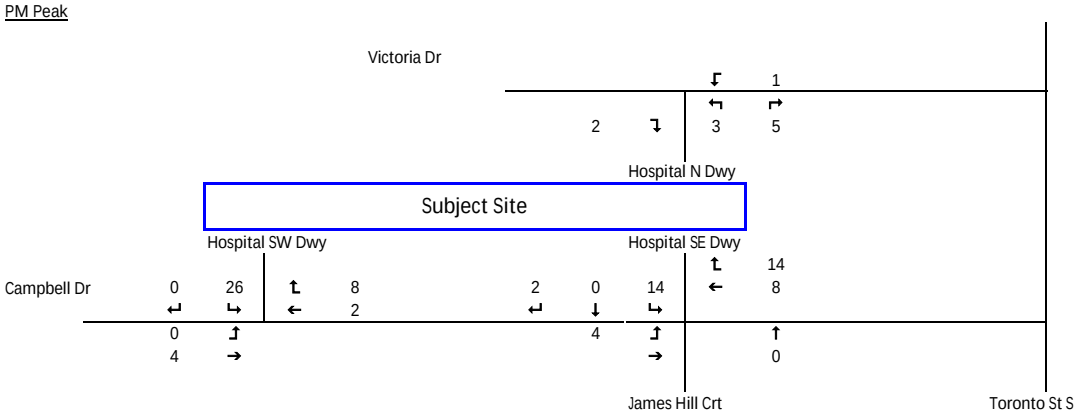
Notes: Subject site has a total approximate building size of 82,930 sf (North: 45,030 sf, South: 37,900 sf)

Peak Hour	Two-way Site Trips			Trip Rate		
	In	Out	Total	In	Out	Total
AM	65	30	95	0.78	0.36	1.14
PM	29	50	79	0.35	0.60	0.95

AM Peak



PM Peak



Originally from 24138

Existing Trip Rate

Peak Hour	Trip Rate		
	In	Out	Total
AM	0.78	0.36	1.14
PM	0.35	0.6	0.95

	sq m	sq ft	
Existing		45,030	*North building only (to remove), south building remains. *Estimated size via Google map measurements
Future	11,955	128,678	New building + 1 floor of LTC typical floor
EMS Remove		2,680	Estimated via Google maps
Net increase		80,968	118,868

New Site trips

Peak Hour	Two-way Trips		
	In	Out	Total
AM	63	29	92
PM	28	49	77

ITE

Beds

Existing 20

	In	Out	Total	Trip rate	% IB
AM	26	10	36	1.79	72%
PM	11	23	34	1.69	33%

Future 32

	In	Out	Total	Trip rate	% IB
AM	41	16	57	1.79	72%
PM	18	36	54	1.69	33%

Square footage

Existing (sf) 45,030

	In	Out	Total	Trip rate	% IB
AM	25	12	37	0.82	67%
PM	14	25	39	0.86	35%

Future (sf) 125,998

	In	Out	Total	Trip rate	% IB
AM	69	34	103	0.82	67%
PM	38	70	108	0.86	35%

MODAL SPLIT CALCULATIONS

Subject Site is in TTS Zone 1318

DISCRETIONARY

Fri Jul 26 2024 10:16:02 GMT-0400 (Eastern Daylight Time) - Run Time: 3016ms

Cross Tabulation Query Form - Trip - 2016

Row: 2006 GTA zone of destination - gta06_dest
Column: Primary travel mode of trip - mode_prime

Filters:
(2006 GTA zone of destination - gta06_dest In 1317-1318, and
Start time of trip - start_time 700-1900, and
Primary travel mode of trip - mode_prime In B,C,D,G,J,M,O,P,S,T,U,W, and
Regional municipality of household - region_hhld In 3)

Trip 2016
ROW : gta06_dest
COLUMN : mode_prime

gta06_dest	mode_prime	total
1317	D	296
1317	M	21
1317	P	72
1318	D	622
1318	P	123
1318	S	22

Raw Data

Zone of Origin	Mode	Total
1317	D	296
1317	M	21
1317	P	72
1318	D	622
1318	P	123
1318	S	22
	Total	1,156

Sorted

Zone of Origin	Mode	Total
1317	D	296
1318	D	622
1317	M	21
1317	P	72
1318	P	123
1318	S	22
	Total	1,156

Summary

Travel Mode	TTS Code	Value	Percent
Auto Driver	D+M	939	81%
Auto Passenger	P+T+U	195	17%
Transit	B+G+J+S	22	2%
Walk	W	0	0%
Cycle	C	0	0%
Other	O	0	0%
Total		1,156	100%

67% 35% 72% 33%

TRIP GENERATION COMPARISON

ITE11 LUC 610	AM			PM		
	In	Out	Total	In	Out	Total
Trip Rate	0.55	0.27	0.82	0.30	0.56	0.86
Site Trips (80,650 sf)	44	22	66	24	45	69

Proposed net increase size (sf)
80,650

Existing Trip Rate	AM			PM		
	In	Out	Total	In	Out	Total
Trip Rate	0.78	0.36	1.14	0.35	0.60	0.95
Vehicle Trips	63	29	92	28	46	75

	19	7	26	4	1	6

ITE11 LUC 610	AM			PM		
	In	Out	Total	In	Out	Total
Trip Rate (/bed)	1.29	0.5	1.79	0.56	1.13	1.69
Existing (20 Beds)	26	10	36	11	23	34
Future (32 Beds)	41	16	57	18	36	54
Net Change	**15**	**6**	**21**	**7**	**13**	**20**

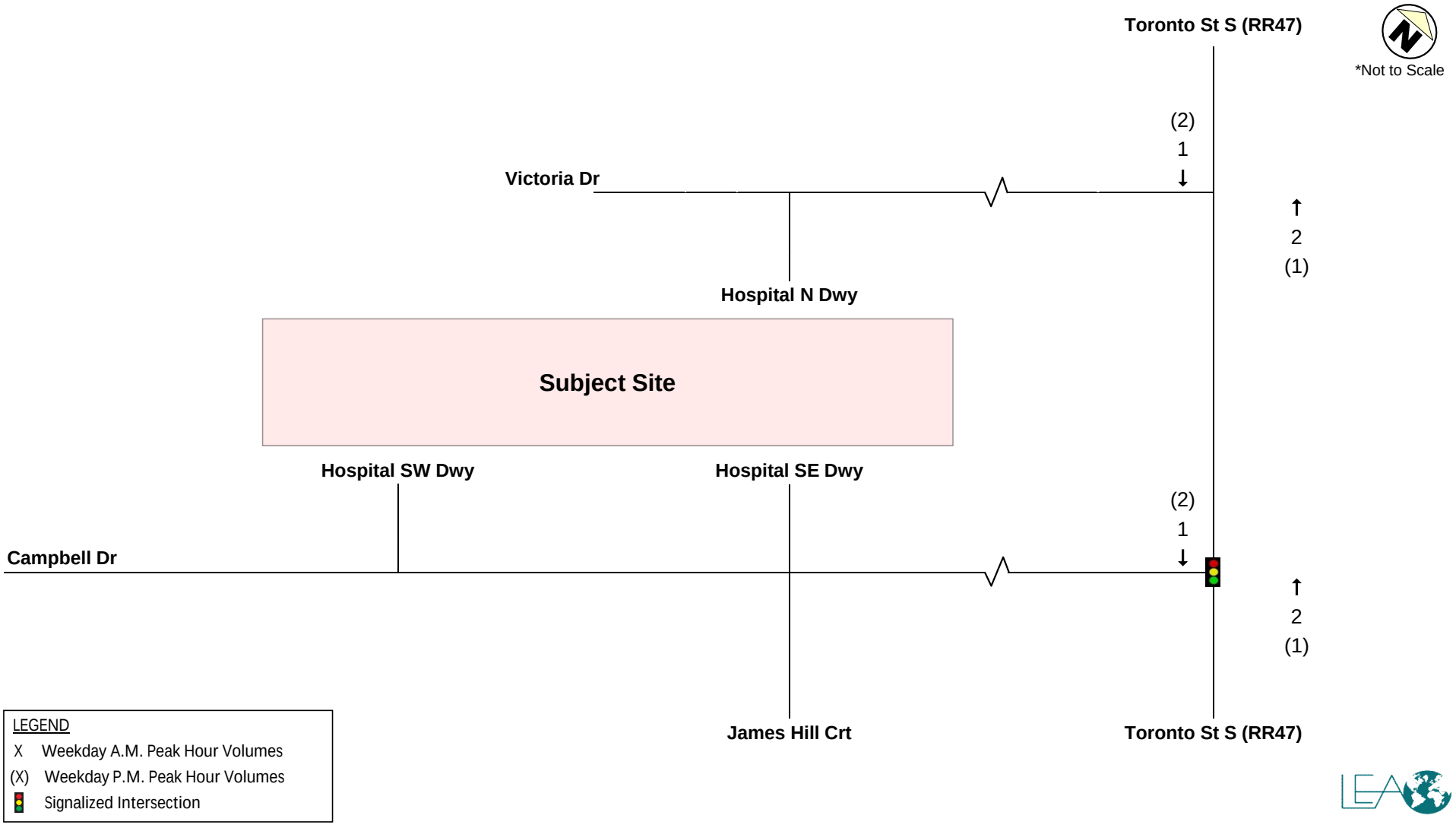
Future (50 Beds)	64	26	90	28	57	85	Net increase to hospital traffic
Net Change vs 32 beds	**23**	**10**	**33**	**10**	**21**	**31**	

	AM			PM		
	In	Out	Total	In	Out	Total
Existing Hospital	63	29	92	32	55	87
Hospital (ITE11 92,209 sf)	51	25	76	28	46	75
Hospital (50 beds)	64	26	90	28	57	85

Highest	1	-3	-2	-4	2	-2	Slightly more with using existing trips rates To apply existing trip rates for hospital site traffic.

APPENDIX D

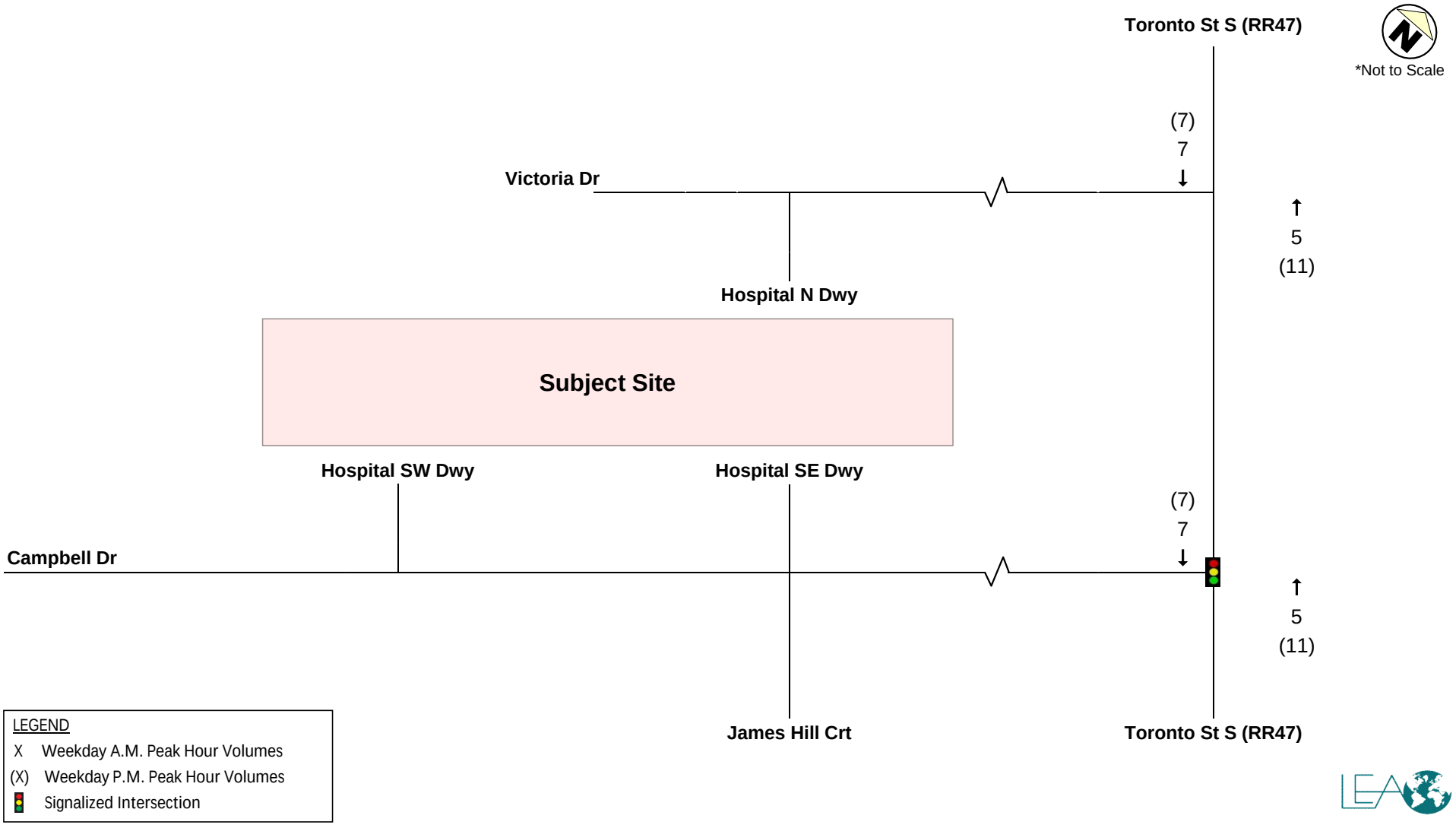
Background Developments



179-181 TORONTO ST SITE TRAFFIC
Proposed Mixed-Use Development
4 Campbell Dr (Uxbridge)

F:\24138\Traffic\TMD\[24138_TMD_July2024.xlsx]EXFBFT

Corridor Growth



CORRIDOR GROWTH (2027)
Proposed Mixed-Use Development
4 Campbell Dr (Uxbridge)

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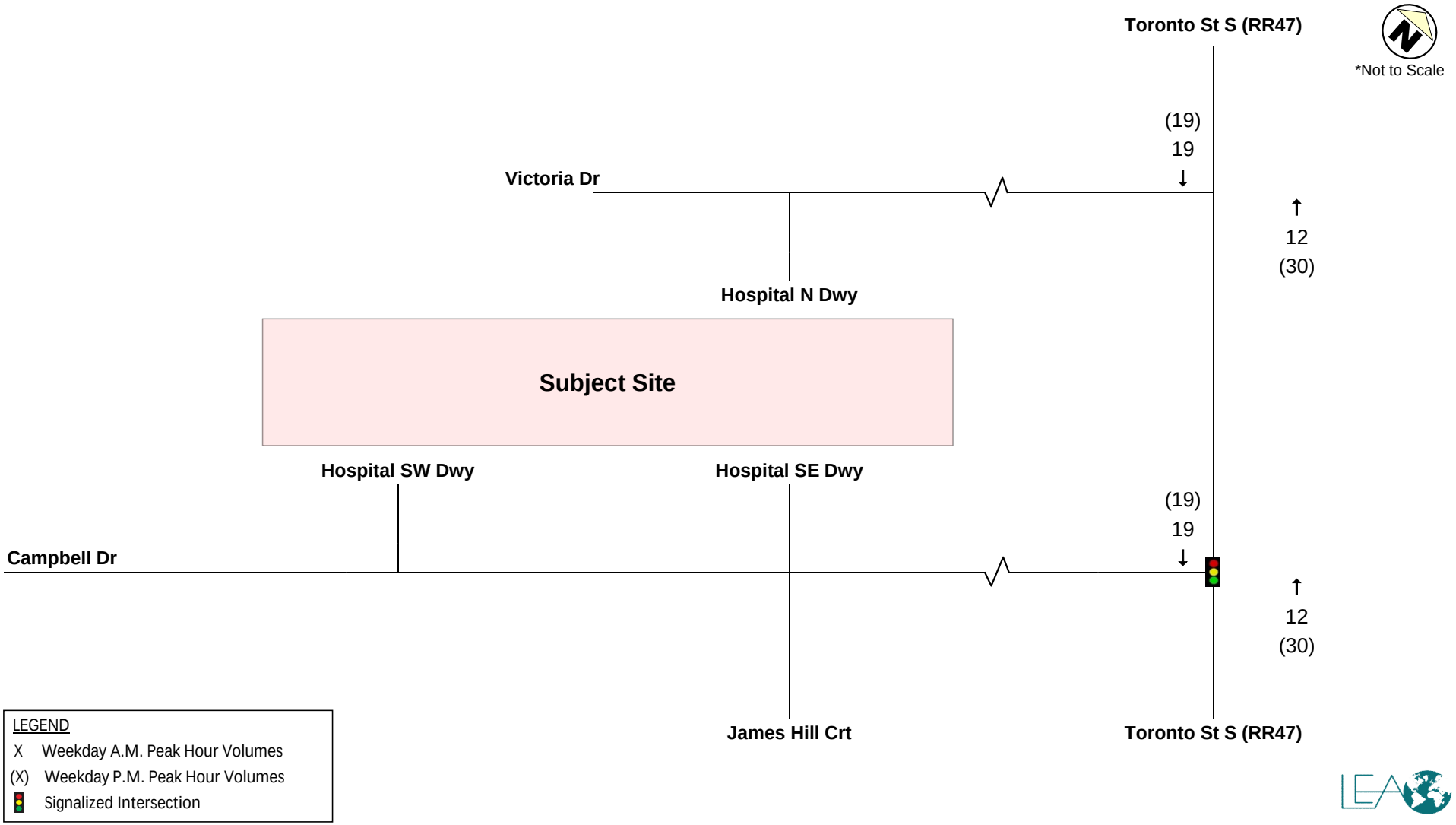

CORRIDOR GROWTH (2032)
Proposed Mixed-Use Development
4 Campbell Dr (Uxbridge)

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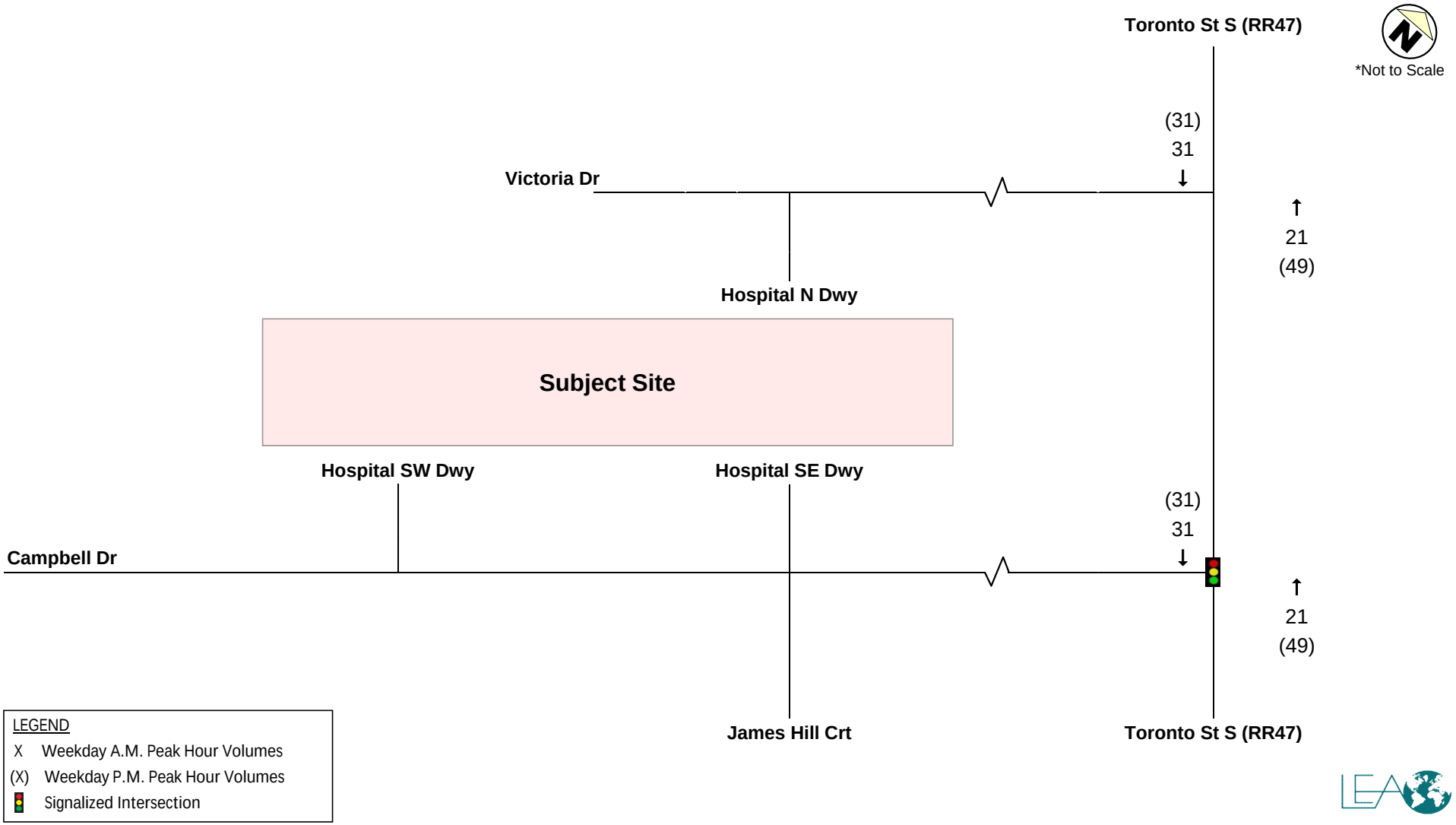


CORRIDOR GROWTH (2037)
Proposed Mixed-Use Development
4 Campbell Dr (Uxbridge)

F:\24138\Traffic\TMD\[24138_TMD_July2024.xlsx]EXFBFT

MTO Highway 12 Volumes between Highway 7 and Highway 48

Pages 369-370 (Pdf p 380-381)

Hwy No	Hwy. Type	Location Description	Year	SAWDT	WADT
12	KING	N JCT HWY 7	1988	5850	4250
			1989	5900	4350
			1990	6000	4450
			1991	5950	4450
			1992	5850	4500
			1993	7600	3250
			1994	8200	3500
			1995	8200	3400
			1996	5600	4250
			1997	6800	5150
			1998	6900	5150
			1999	6950	5250
			2000	7850	6000
			2001	7650	5850
			2002	7850	6050
			2003	7550	5800
			2004	7800	5950
			2005	7600	5950
			2006	7800	6050
			2007	8350	5850
			2008	8800	6300
			2009	7950	6200
			2010	8350	6500
			2011	9100	6650
			2012	9150	6750
			2013	10100	6800
			2014	10000	6950
			2015	9700	7050
			2016	9850	7150
			2017	9950	7700
			2018	10100	7750
			2019	10300	7900
			2020	10500	8150

ATR VOLUMES REVIEW

Toronto ST (RHWY 47) 100 m S of Douglas Rd

Station 7403

Start Date	End Date	24 Hour Total							Avg Day	Percentage Change	Percentage Change Overall (2022-2023)
June 14, 2022	June 20, 2022	Tues.	Wed.	Thurs.	Fri.	Sat.	Sun.	Mon.	16548	-	-0.06
		17307	17309	17696	18051	15314	13774	16397			
Aug 19, 2022	Aug 25, 2022	Fri.	Sat.	Sun.	Mon.	Tues.	Wed.	Thurs.	15282	-8%	
		16649	13817	12286	15322	16319	16199	16377			
Sept 15, 2022	Sept 21, 2022	Thurs.	Fri.	Sat.	Sun.	Mon.	Tues.	Wed.	15520	2%	
		16697	17119	14892	12792	15092	15872	16168			
April 13, 2023	April 19, 2023	Thurs.	Fri.	Sat.	Sun.	Mon.	Tues.	Wed.	15396	-1%	
		16777	16808	14922	12691	15042	15628	15895			
July 6, 2023	July 12, 2023	Thurs.	Fri.	Sat.	Sun.	Mon.	Tues.	Wed.	15143	-2%	
		16712	16423	12782	11463	16405	16173	16085			
Nov. 1, 2023	Nov. 7, 2023	Wed.	Thurs.	Fri.	Sat.	Sun.	Mon.	Tues.	15516	2%	
		15834	16733	16729	14680	12923	15974	15764			

APPENDIX E

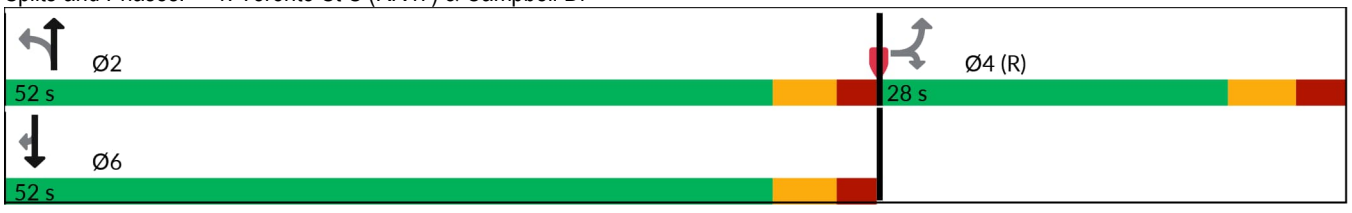
Existing Intersection Capacity Analysis

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	21	22	42	307	457	64
Future Volume (vph)	21	22	42	307	457	64
Lane Group Flow (vph)	23	24	47	341	508	71
Turn Type	Perm	Perm	Perm	NA	NA	Perm
Protected Phases				2	6	
Permitted Phases	4	4	2			6
Detector Phase	4	4	2	2	6	6
Switch Phase						
Minimum Initial (s)	7.0	7.0	20.0	20.0	20.0	20.0
Minimum Split (s)	25.0	25.0	42.2	42.2	42.2	42.2
Total Split (s)	28.0	28.0	52.0	52.0	52.0	52.0
Total Split (%)	35.0%	35.0%	65.0%	65.0%	65.0%	65.0%
Yellow Time (s)	4.0	4.0	3.9	3.9	3.9	3.9
All-Red Time (s)	3.0	3.0	2.3	2.3	2.3	2.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	6.2	6.2	6.2	6.2
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	None	None	Max	Max
v/c Ratio	0.05	0.06	0.12	0.33	0.48	0.09
Control Delay (s/veh)	22.6	9.9	8.9	10.2	12.0	4.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	22.6	9.9	8.9	10.2	12.0	4.3
Queue Length 50th (m)	2.8	0.0	3.2	26.4	44.0	1.9
Queue Length 95th (m)	8.4	5.6	8.4	42.4	67.7	7.2
Internal Link Dist (m)	124.6			593.6	63.9	
Turn Bay Length (m)	30.0		30.0			15.0
Base Capacity (vph)	452	387	381	1024	1054	829
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.06	0.12	0.33	0.48	0.09

Intersection Summary

Cycle Length: 80
Actuated Cycle Length: 80
Offset: 24 (30%), Referenced to phase 4:EBL and 8:, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated

Splits and Phases: 1: Toronto St S (RR47) & Campbell Dr



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	21	22	42	307	457	64
Future Volume (vph)	21	22	42	307	457	64
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	3.2	3.2	3.2	3.5	3.5	3.2
Total Lost time (s)	7.0	7.0	6.2	6.2	6.2	6.2
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.98	1.00	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1725	1410	1578	1789	1842	1417
Flt Permitted	0.95	1.00	0.40	1.00	1.00	1.00
Satd. Flow (perm)	1725	1410	666	1789	1842	1417
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	23	24	47	341	508	71
RTOR Reduction (vph)	0	18	0	0	0	18
Lane Group Flow (vph)	23	6	47	341	508	53
Confl. Peds. (#/hr)		1	6			6
Heavy Vehicles (%)	0%	7%	9%	5%	2%	6%
Turn Type	Perm	Perm	Perm	NA	NA	Perm
Protected Phases				2	6	
Permitted Phases	4	4	2			6
Actuated Green, G (s)	21.0	21.0	45.8	45.8	45.8	45.8
Effective Green, g (s)	21.0	21.0	45.8	45.8	45.8	45.8
Actuated g/C Ratio	0.26	0.26	0.57	0.57	0.57	0.57
Clearance Time (s)	7.0	7.0	6.2	6.2	6.2	6.2
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	452	370	381	1024	1054	811
v/s Ratio Prot				0.19	c0.28	
v/s Ratio Perm	c0.01	0.00	0.07			0.04
v/c Ratio	0.05	0.02	0.12	0.33	0.48	0.07
Uniform Delay, d1	22.1	21.9	7.9	9.0	10.1	7.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.2	0.1	0.1	0.2	1.6	0.2
Delay (s)	22.3	21.9	8.0	9.2	11.7	7.7
Level of Service	C	C	A	A	B	A
Approach Delay (s/veh)	22.1			9.1	11.2	
Approach LOS	C			A	B	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	10.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	13.2
Intersection Capacity Utilization	60.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	20	35	11	317	486	2
Future Vol, veh/h	20	35	11	317	486	2
Conflicting Peds, #/hr	0	0	3	0	0	3
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	15	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	45	0	0	5	26	0
Mvmt Flow	25	43	14	391	600	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1023	604	605	0	-	0
Stage 1	604	-	-	-	-	-
Stage 2	419	-	-	-	-	-
Critical Hdwy	6.85	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.85	-	-	-	-	-
Critical Hdwy Stg 2	5.85	-	-	-	-	-
Follow-up Hdwy	3.905	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	218	502	983	-	-	-
Stage 1	471	-	-	-	-	-
Stage 2	581	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	214	501	981	-	-	-
Mov Cap-2 Maneuver	214	-	-	-	-	-
Stage 1	463	-	-	-	-	-
Stage 2	580	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	18.4	0.3	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	981	-	337	-	-
HCM Lane V/C Ratio	0.014	-	0.201	-	-
HCM Ctrl Dly (s/v)	8.7	-	18.4	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q (veh)	0	-	0.7	-	-

Intersection	
Int Delay, s/veh	1.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	49	4	7	6	2	6
Future Vol, veh/h	49	4	7	6	2	6
Conflicting Peds, #/hr	0	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	65	65	65	65	65	65
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	75	6	11	9	3	9

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	81	0	109	79
Stage 1	-	-	-	-	78	-
Stage 2	-	-	-	-	31	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1529	-	893	987
Stage 1	-	-	-	-	950	-
Stage 2	-	-	-	-	997	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1529	-	887	986
Mov Cap-2 Maneuver	-	-	-	-	887	-
Stage 1	-	-	-	-	950	-
Stage 2	-	-	-	-	990	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	4	8.8
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	959	-	-	1529	-
HCM Lane V/C Ratio	0.013	-	-	0.007	-
HCM Ctrl Dly (s/v)	8.8	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q (veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	12	10	39	7	1
Future Vol, veh/h	0	12	10	39	7	1
Conflicting Peds, #/hr	2	0	0	2	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	75	75	75	75	75	75
Heavy Vehicles, %	0	0	0	5	14	0
Mvmt Flow	0	16	13	52	9	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	67	0	-	0	57	41
Stage 1	-	-	-	-	41	-
Stage 2	-	-	-	-	16	-
Critical Hdwy	4.1	-	-	-	6.54	6.2
Critical Hdwy Stg 1	-	-	-	-	5.54	-
Critical Hdwy Stg 2	-	-	-	-	5.54	-
Follow-up Hdwy	2.2	-	-	-	3.626	3.3
Pot Cap-1 Maneuver	1547	-	-	-	921	1036
Stage 1	-	-	-	-	952	-
Stage 2	-	-	-	-	977	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1545	-	-	-	919	1035
Mov Cap-2 Maneuver	-	-	-	-	919	-
Stage 1	-	-	-	-	951	-
Stage 2	-	-	-	-	976	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0	0	8.9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1545	-	-	-	932
HCM Lane V/C Ratio	-	-	-	-	0.011
HCM Ctrl Dly (s/v)	0	-	-	-	8.9
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q (veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	19	0	2	40	15	0	0	0	5	0	9
Future Vol, veh/h	0	19	0	2	40	15	0	0	0	5	0	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	1	1	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	75	75	75	75	75	75	75	75	75	75	75	75
Heavy Vehicles, %	0	5	0	0	3	0	0	0	0	0	0	11
Mvmt Flow	0	25	0	3	53	20	0	0	0	7	0	12

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	73	0	0	25	0	0	100	104	26	95	94	63
Stage 1	-	-	-	-	-	-	25	25	-	69	69	-
Stage 2	-	-	-	-	-	-	75	79	-	26	25	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.31
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.399
Pot Cap-1 Maneuver	1540	-	-	1603	-	-	886	790	1056	893	800	977
Stage 1	-	-	-	-	-	-	998	878	-	946	841	-
Stage 2	-	-	-	-	-	-	939	833	-	997	878	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1540	-	-	1603	-	-	874	788	1055	891	798	977
Mov Cap-2 Maneuver	-	-	-	-	-	-	874	788	-	891	798	-
Stage 1	-	-	-	-	-	-	998	878	-	946	839	-
Stage 2	-	-	-	-	-	-	926	831	-	996	878	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0	0.3	0	8.9
HCM LOS			A	A

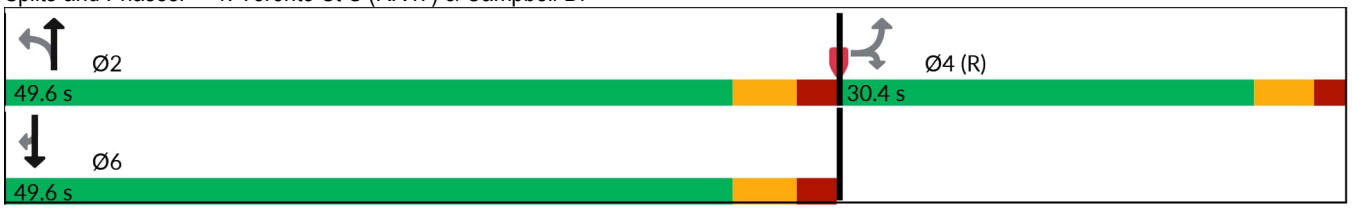
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1540	-	-	1603	-	-	944
HCM Lane V/C Ratio	-	-	-	-	0.002	-	-	0.02
HCM Ctrl Dly (s/v)	0	0	-	-	7.3	0	-	8.9
HCM Lane LOS	A	A	-	-	A	A	-	A
HCM 95th %tile Q (veh)	-	0	-	-	0	-	-	0.1

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	60	44	33	730	459	44
Future Volume (vph)	60	44	33	730	459	44
Lane Group Flow (vph)	61	45	34	745	468	45
Turn Type	Perm	Perm	Perm	NA	NA	Perm
Protected Phases				2	6	
Permitted Phases	4	4	2			6
Detector Phase	4	4	2	2	6	6
Switch Phase						
Minimum Initial (s)	7.0	7.0	20.0	20.0	20.0	20.0
Minimum Split (s)	23.5	23.5	42.2	42.2	42.2	42.2
Total Split (s)	30.4	30.4	49.6	49.6	49.6	49.6
Total Split (%)	38.0%	38.0%	62.0%	62.0%	62.0%	62.0%
Yellow Time (s)	3.6	3.6	3.9	3.9	3.9	3.9
All-Red Time (s)	1.9	1.9	2.3	2.3	2.3	2.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	6.2	6.2	6.2	6.2
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	None	None	None	None
v/c Ratio	0.10	0.08	0.11	0.85	0.53	0.06
Control Delay (s/veh)	19.2	7.0	10.6	28.0	16.4	5.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	19.2	7.0	10.6	28.0	16.4	5.4
Queue Length 50th (m)	6.4	0.0	2.7	95.4	47.9	1.4
Queue Length 95th (m)	15.6	7.1	6.9	131.0	66.2	5.8
Internal Link Dist (m)	124.6			593.6	63.9	
Turn Bay Length (m)	30.0		30.0			15.0
Base Capacity (vph)	637	559	366	999	999	787
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.08	0.09	0.75	0.47	0.06

Intersection Summary

Cycle Length: 80
Actuated Cycle Length: 80
Offset: 28 (35%), Referenced to phase 4:EBL and 8:, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated

Splits and Phases: 1: Toronto St S (RR47) & Campbell Dr



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	60	44	33	730	459	44
Future Volume (vph)	60	44	33	730	459	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	3.2	3.2	3.2	3.5	3.5	3.2
Total Lost time (s)	5.5	5.5	6.2	6.2	6.2	6.2
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.98	1.00	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1691	1410	1669	1842	1842	1429
Flt Permitted	0.95	1.00	0.38	1.00	1.00	1.00
Satd. Flow (perm)	1691	1410	676	1842	1842	1429
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	61	45	34	745	468	45
RTOR Reduction (vph)	0	28	0	0	0	14
Lane Group Flow (vph)	61	17	34	745	468	31
Confl. Peds. (#/hr)		1	7			7
Heavy Vehicles (%)	2%	7%	3%	2%	2%	5%
Turn Type	Perm	Perm	Perm	NA	NA	Perm
Protected Phases				2	6	
Permitted Phases	4	4	2			6
Actuated Green, G (s)	30.1	30.1	38.2	38.2	38.2	38.2
Effective Green, g (s)	30.1	30.1	38.2	38.2	38.2	38.2
Actuated g/C Ratio	0.38	0.38	0.48	0.48	0.48	0.48
Clearance Time (s)	5.5	5.5	6.2	6.2	6.2	6.2
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	636	530	322	879	879	682
v/s Ratio Prot				c0.40	0.25	
v/s Ratio Perm	c0.04	0.01	0.05			0.02
v/c Ratio	0.10	0.03	0.11	0.85	0.53	0.05
Uniform Delay, d1	16.1	15.8	11.5	18.3	14.6	11.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.3	0.1	0.1	7.6	0.6	0.0
Delay (s)	16.4	15.9	11.6	26.0	15.3	11.2
Level of Service	B	B	B	C	B	B
Approach Delay (s/veh)	16.2			25.3	14.9	
Approach LOS	B			C	B	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	20.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	11.7
Intersection Capacity Utilization	63.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	15	21	769	488	2
Future Vol, veh/h	2	15	21	769	488	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	15	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	7	0	1	3	50
Mvmt Flow	2	16	22	818	519	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1382	520	521	0	-	0
Stage 1	520	-	-	-	-	-
Stage 2	862	-	-	-	-	-
Critical Hdwy	6.4	6.27	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.363	2.2	-	-	-
Pot Cap-1 Maneuver	160	546	1056	-	-	-
Stage 1	601	-	-	-	-	-
Stage 2	417	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	157	546	1056	-	-	-
Mov Cap-2 Maneuver	157	-	-	-	-	-
Stage 1	588	-	-	-	-	-
Stage 2	417	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	13.9	0.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1056	-	423	-	-
HCM Lane V/C Ratio	0.021	-	0.043	-	-
HCM Ctrl Dly (s/v)	8.5	-	13.9	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q (veh)	0.1	-	0.1	-	-

Intersection	
Int Delay, s/veh	1.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	12	2	1	22	3	5
Future Vol, veh/h	12	2	1	22	3	5
Conflicting Peds, #/hr	0	0	0	0	5	4
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	71	71	71	71	71	71
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	17	3	1	31	4	7

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	20	0	57	23
Stage 1	-	-	-	-	19	-
Stage 2	-	-	-	-	38	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1609	-	955	1060
Stage 1	-	-	-	-	1009	-
Stage 2	-	-	-	-	990	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1609	-	950	1057
Mov Cap-2 Maneuver	-	-	-	-	950	-
Stage 1	-	-	-	-	1009	-
Stage 2	-	-	-	-	985	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.3	8.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1014	-	-	1609	-
HCM Lane V/C Ratio	0.011	-	-	0.001	-
HCM Ctrl Dly (s/v)	8.6	-	-	7.2	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q (veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	3.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	15	21	8	26	0
Future Vol, veh/h	0	15	21	8	26	0
Conflicting Peds, #/hr	2	0	0	2	1	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	76	76	76	76	76	76
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	20	28	11	34	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	41	0	-	0	57	36
Stage 1	-	-	-	-	36	-
Stage 2	-	-	-	-	21	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1581	-	-	-	955	1042
Stage 1	-	-	-	-	992	-
Stage 2	-	-	-	-	1007	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1579	-	-	-	953	1041
Mov Cap-2 Maneuver	-	-	-	-	953	-
Stage 1	-	-	-	-	991	-
Stage 2	-	-	-	-	1006	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0	0	8.9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1579	-	-	-	953
HCM Lane V/C Ratio	-	-	-	-	0.036
HCM Ctrl Dly (s/v)	0	-	-	-	8.9
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q (veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	37	0	4	27	14	0	0	1	14	0	2
Future Vol, veh/h	4	37	0	4	27	14	0	0	1	14	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	0	0	0	0	4	0	0	0	0	0	0	0
Mvmt Flow	5	45	0	5	33	17	0	0	1	17	0	2

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	50	0	0	45	0	0	108	115	45	108	107	42
Stage 1	-	-	-	-	-	-	55	55	-	52	52	-
Stage 2	-	-	-	-	-	-	53	60	-	56	55	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1570	-	-	1576	-	-	876	779	1031	876	787	1034
Stage 1	-	-	-	-	-	-	962	853	-	966	856	-
Stage 2	-	-	-	-	-	-	965	849	-	961	853	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1570	-	-	1576	-	-	870	774	1031	871	782	1034
Mov Cap-2 Maneuver	-	-	-	-	-	-	870	774	-	871	782	-
Stage 1	-	-	-	-	-	-	959	850	-	963	853	-
Stage 2	-	-	-	-	-	-	960	846	-	957	850	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.7	0.6	8.5	9.1
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1031	1570	-	-	1576	-	-	889
HCM Lane V/C Ratio	0.001	0.003	-	-	0.003	-	-	0.022
HCM Ctrl Dly (s/v)	8.5	7.3	0	-	7.3	0	-	9.1
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q (veh)	0	0	-	-	0	-	-	0.1

Existing - SimTraffic

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	7:15	7:15	7:15	7:15	7:15	7:15
End Time	8:45	8:45	8:45	8:45	8:45	8:45
Total Time (min)	90	90	90	90	90	90
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	1038	1077	1126	1038	1049	1066
Vehs Exited	1043	1069	1130	1037	1054	1066
Starting Vehs	35	28	36	31	32	30
Ending Vehs	30	36	32	32	27	28
Travel Distance (km)	1152	1182	1266	1164	1140	1181
Travel Time (hr)	30.0	30.7	33.1	30.3	30.2	30.9
Total Delay (hr)	4.2	4.2	4.7	4.3	4.4	4.4
Total Stops	489	505	509	461	512	495
Fuel Used (l)	88.2	91.5	97.7	89.7	88.9	91.2

Interval #0 Information Seeding

Start Time	7:15
End Time	7:45
Total Time (min)	30

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	7:45
End Time	8:45
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	1038	1077	1126	1038	1049	1066
Vehs Exited	1043	1069	1130	1037	1054	1066
Starting Vehs	35	28	36	31	32	30
Ending Vehs	30	36	32	32	27	28
Travel Distance (km)	1152	1182	1266	1164	1140	1181
Travel Time (hr)	30.0	30.7	33.1	30.3	30.2	30.9
Total Delay (hr)	4.2	4.2	4.7	4.3	4.4	4.4
Total Stops	489	505	509	461	512	495
Fuel Used (l)	88.2	91.5	97.7	89.7	88.9	91.2

Arterial Level of Service: EB Victoria Dr

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed	Run 1 Speed	Run 1 Delay
Hospital N Dwy	3	0.0	7.8	0.1	44	45	0.0
Toronto St S (RR47)	2	12.1	18.6	0.1	17	17	12.7
Total		12.1	26.4	0.2	25	25	12.7

Arterial Level of Service: EB Victoria Dr

Cross Street	Run 2 Speed	Run 2 Delay	Run 3 Speed	Run 3 Delay	Run 4 Speed	Run 4 Delay	Run 5 Speed
Hospital N Dwy	44	0.0	44	0.0	43	0.0	43
Toronto St S (RR47)	20	9.0	17	11.6	15	14.0	17
Total	28	9.0	25	11.6	23	14.0	25

Arterial Level of Service: NB Victoria Dr

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed	Run 1 Speed	Run 1 Delay
Hospital N Dwy	3	0.1	7.6	0.1	41	33	0.1
Total		0.1	7.6	0.1	41	33	0.1

Arterial Level of Service: NB Victoria Dr

Cross Street	Run 2 Speed	Run 2 Delay	Run 3 Speed	Run 3 Delay	Run 4 Speed	Run 4 Delay	Run 5 Speed
Hospital N Dwy	388	0.0	33	0.1	35	0.1	33
Total	388	0.0	33	0.1	35	0.1	33

Intersection: 1: Toronto St S (RR47) & Campbell Dr

Movement	EB	EB	NB	NB	SB	SB
Directions Served	L	R	L	T	T	R
Maximum Queue (m)	15.1	17.6	19.4	52.4	74.1	50.6
Average Queue (m)	4.9	4.2	7.3	22.7	40.4	8.7
95th Queue (m)	12.7	13.2	17.0	42.7	71.3	27.1
Link Distance (m)		126.5		604.2	75.6	
Upstream Blk Time (%)					0	
Queuing Penalty (veh)					2	
Storage Bay Dist (m)	30.0		30.0			15.0
Storage Blk Time (%)				3	24	1
Queuing Penalty (veh)				1	15	3

Intersection: 2: Toronto St S (RR47) & Victoria Dr

Movement	EB	NB	SB
Directions Served	LR	L	TR
Maximum Queue (m)	27.4	7.4	26.1
Average Queue (m)	10.2	1.1	1.6
95th Queue (m)	20.9	6.0	15.4
Link Distance (m)	69.9		671.0
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (m)		15.0	
Storage Blk Time (%)		0	
Queuing Penalty (veh)		0	

Intersection: 3: Hospital N Dwy & Victoria Dr

Movement	WB	NB
Directions Served	LT	LR
Maximum Queue (m)	1.8	8.7
Average Queue (m)	0.1	2.0
95th Queue (m)	1.3	7.9
Link Distance (m)	69.9	29.1
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 4: Campbell Dr & Hospital SW Dwy

Movement	SB
Directions Served	LR
Maximum Queue (m)	17.4
Average Queue (m)	2.6
95th Queue (m)	10.6
Link Distance (m)	52.8
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (m)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 5: James Hill Ct./Hospital SE Dwy & Campbell Dr

Movement	SB
Directions Served	LTR
Maximum Queue (m)	18.4
Average Queue (m)	4.0
95th Queue (m)	12.8
Link Distance (m)	40.6
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (m)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 22

Intersection: 1: Toronto St S (RR47) & Campbell Dr

Phase	2	4	6
Movement(s) Served	NBTL	EBL	SBT
Maximum Green (s)	45.8	21.0	45.8
Minimum Green (s)	20.0	7.0	20.0
Recall	None	C-Max	Max
Avg. Green (s)	-13.8	-8.1	-13.8
g/C Ratio	NA	NA	NA
Cycles Skipped (%)	0	0	0
Cycles @ Minimum (%)	0	0	0
Cycles Maxed Out (%)	100	100	100
Cycles with Peds (%)	0	0	9

Controller Summary
Average Cycle Length (s): -9.4

Number of Complete Cycles : 44

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	4:00	4:00	4:00	4:00	4:00	4:00
End Time	5:30	5:30	5:30	5:30	5:30	5:30
Total Time (min)	90	90	90	90	90	90
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	1444	1442	1363	1427	1443	1423
Vehs Exited	1447	1436	1376	1436	1450	1428
Starting Vehs	52	55	54	52	54	52
Ending Vehs	49	61	41	43	47	47
Travel Distance (km)	1855	1860	1750	1841	1839	1829
Travel Time (hr)	51.9	52.3	49.0	51.8	51.1	51.2
Total Delay (hr)	11.3	11.9	10.8	11.6	11.1	11.3
Total Stops	929	991	926	1007	972	966
Fuel Used (l)	143.3	143.5	134.8	141.7	141.0	140.9

Interval #0 Information Seeding

Start Time	4:00
End Time	4:30
Total Time (min)	30

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	4:30
End Time	5:30
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	1444	1442	1363	1427	1443	1423
Vehs Exited	1447	1436	1376	1436	1450	1428
Starting Vehs	52	55	54	52	54	52
Ending Vehs	49	61	41	43	47	47
Travel Distance (km)	1855	1860	1750	1841	1839	1829
Travel Time (hr)	51.9	52.3	49.0	51.8	51.1	51.2
Total Delay (hr)	11.3	11.9	10.8	11.6	11.1	11.3
Total Stops	929	991	926	1007	972	966
Fuel Used (l)	143.3	143.5	134.8	141.7	141.0	140.9

Arterial Level of Service: EB Campbell Dr

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed	Run 1 Speed	Run 1 Delay
Hospital SW Dwy	4	0.0	28.0	0.3	40	41	0.1
James Hill Ct.	5	0.1	5.3	0.1	41	40	0.2
Toronto St S (RR47)	1	18.6	30.8	0.1	19	20	16.6
Total		18.7	64.0	0.5	30	32	16.8

Arterial Level of Service: EB Campbell Dr

Cross Street	Run 2 Speed	Run 2 Delay	Run 3 Speed	Run 3 Delay	Run 4 Speed	Run 4 Delay	Run 5 Speed
Hospital SW Dwy	42	0.0	39	0.3	41	0.0	40
James Hill Ct.	42	0.0	41	0.1	42	0.0	40
Toronto St S (RR47)	18	20.3	20	17.2	18	19.3	19
Total	30	20.4	31	17.6	30	19.3	30

Arterial Level of Service: WB Campbell Dr

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed	Run 1 Speed	Run 1 Delay
Hospital SE Dwy	5	0.4	12.6	0.1	42	43	0.4
Hospital SW Dwy	4	0.1	5.2	0.1	42	41	0.0
Total		0.5	17.8	0.2	42	42	0.4

Arterial Level of Service: WB Campbell Dr

Cross Street	Run 2 Speed	Run 2 Delay	Run 3 Speed	Run 3 Delay	Run 4 Speed	Run 4 Delay	Run 5 Speed
Hospital SE Dwy	43	0.4	40	0.5	43	0.4	44
Hospital SW Dwy	45	0.1	39	0.1	40	0.0	43
Total	44	0.5	40	0.6	42	0.5	44

Intersection: 1: Toronto St S (RR47) & Campbell Dr

Movement	EB	EB	NB	NB	SB	SB
Directions Served	L	R	L	T	T	R
Maximum Queue (m)	22.8	17.3	64.8	151.6	78.8	43.2
Average Queue (m)	8.9	5.9	11.3	85.6	47.2	8.3
95th Queue (m)	19.0	15.2	38.9	136.3	76.5	30.2
Link Distance (m)		126.5		604.2	75.6	
Upstream Blk Time (%)					1	
Queuing Penalty (veh)					4	
Storage Bay Dist (m)	30.0		30.0			15.0
Storage Blk Time (%)	0		0	33	33	0
Queuing Penalty (veh)	0		0	11	15	1

Intersection: 2: Toronto St S (RR47) & Victoria Dr

Movement	EB	NB	SB
Directions Served	LR	L	TR
Maximum Queue (m)	16.7	13.3	20.0
Average Queue (m)	3.4	2.6	0.8
95th Queue (m)	11.8	9.8	8.1
Link Distance (m)	69.9		671.0
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (m)		15.0	
Storage Blk Time (%)		0	
Queuing Penalty (veh)		1	

Intersection: 3: Hospital N Dwy & Victoria Dr

Movement	NB
Directions Served	LR
Maximum Queue (m)	8.7
Average Queue (m)	1.7
95th Queue (m)	7.4
Link Distance (m)	29.1
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (m)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 4: Campbell Dr & Hospital SW Dwy

Movement	SB
Directions Served	LR
Maximum Queue (m)	12.0
Average Queue (m)	6.0
95th Queue (m)	13.1
Link Distance (m)	52.8
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (m)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 5: James Hill Ct./Hospital SE Dwy & Campbell Dr

Movement	NB	SB
Directions Served	LTR	LTR
Maximum Queue (m)	6.8	10.2
Average Queue (m)	0.3	3.7
95th Queue (m)	3.0	10.8
Link Distance (m)	90.0	40.6
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 32

Intersection: 1: Toronto St S (RR47) & Campbell Dr

Phase	2	4	6
Movement(s) Served	NBTL	EBL	SBT
Maximum Green (s)	43.4	24.9	43.4
Minimum Green (s)	20.0	7.0	20.0
Recall	None	C-Max	None
Avg. Green (s)	8.7	0.6	8.7
g/C Ratio	NA	NA	NA
Cycles Skipped (%)	0	0	0
Cycles @ Minimum (%)	0	0	0
Cycles Maxed Out (%)	44	100	44
Cycles with Peds (%)	0	0	16

Controller Summary
Average Cycle Length (s): -9.4

Number of Complete Cycles : 44

APPENDIX F

2027 Intersection Capacity Analysis

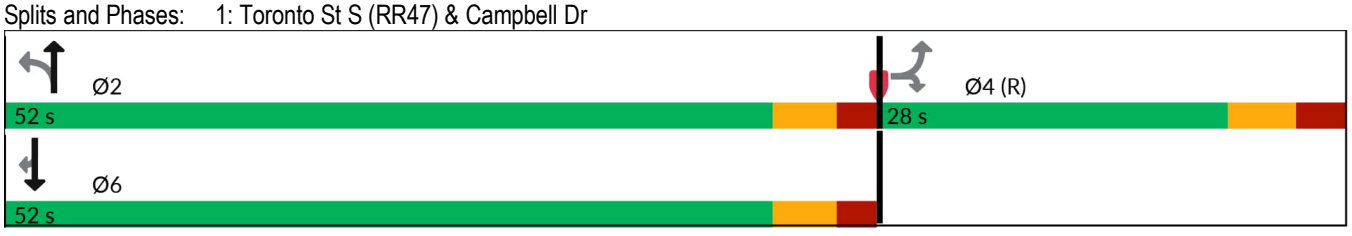
Future Background

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	21	22	42	314	465	64
Future Volume (vph)	21	22	42	314	465	64
Lane Group Flow (vph)	23	24	47	349	517	71
Turn Type	Perm	Perm	Perm	NA	NA	Perm
Protected Phases				2	6	
Permitted Phases	4	4	2			6
Detector Phase	4	4	2	2	6	6
Switch Phase						
Minimum Initial (s)	7.0	7.0	20.0	20.0	20.0	20.0
Minimum Split (s)	25.0	25.0	42.2	42.2	42.2	42.2
Total Split (s)	28.0	28.0	52.0	52.0	52.0	52.0
Total Split (%)	35.0%	35.0%	65.0%	65.0%	65.0%	65.0%
Yellow Time (s)	4.0	4.0	3.9	3.9	3.9	3.9
All-Red Time (s)	3.0	3.0	2.3	2.3	2.3	2.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	6.2	6.2	6.2	6.2
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	None	None	Max	Max
v/c Ratio	0.05	0.06	0.13	0.34	0.49	0.09
Control Delay (s/veh)	22.6	9.9	9.0	10.3	12.2	4.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	22.6	9.9	9.0	10.3	12.2	4.3
Queue Length 50th (m)	2.8	0.0	3.2	27.2	45.1	1.9
Queue Length 95th (m)	8.4	5.6	8.4	43.5	69.3	7.2
Internal Link Dist (m)	124.6			593.6	63.9	
Turn Bay Length (m)	30.0		30.0			15.0
Base Capacity (vph)	452	387	374	1024	1054	829
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.06	0.13	0.34	0.49	0.09

Intersection Summary

Cycle Length: 80
Actuated Cycle Length: 80
Offset: 24 (30%), Referenced to phase 4:EBL and 8:, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated

Splits and Phases: 1: Toronto St S (RR47) & Campbell Dr



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	21	22	42	314	465	64
Future Volume (vph)	21	22	42	314	465	64
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	3.2	3.2	3.2	3.5	3.5	3.2
Total Lost time (s)	7.0	7.0	6.2	6.2	6.2	6.2
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.98	1.00	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1725	1410	1578	1789	1842	1417
Flt Permitted	0.95	1.00	0.39	1.00	1.00	1.00
Satd. Flow (perm)	1725	1410	655	1789	1842	1417
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	23	24	47	349	517	71
RTOR Reduction (vph)	0	18	0	0	0	18
Lane Group Flow (vph)	23	6	47	349	517	53
Confl. Peds. (#/hr)		1	6			6
Heavy Vehicles (%)	0%	7%	9%	5%	2%	6%
Turn Type	Perm	Perm	Perm	NA	NA	Perm
Protected Phases				2	6	
Permitted Phases	4	4	2			6
Actuated Green, G (s)	21.0	21.0	45.8	45.8	45.8	45.8
Effective Green, g (s)	21.0	21.0	45.8	45.8	45.8	45.8
Actuated g/C Ratio	0.26	0.26	0.57	0.57	0.57	0.57
Clearance Time (s)	7.0	7.0	6.2	6.2	6.2	6.2
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	452	370	374	1024	1054	811
v/s Ratio Prot				0.20	c0.28	
v/s Ratio Perm	c0.01	0.00	0.07			0.04
v/c Ratio	0.05	0.02	0.13	0.34	0.49	0.07
Uniform Delay, d1	22.1	21.9	7.9	9.1	10.2	7.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.2	0.1	0.2	0.2	1.6	0.2
Delay (s)	22.3	21.9	8.0	9.3	11.8	7.7
Level of Service	C	C	A	A	B	A
Approach Delay (s/veh)	22.1			9.1	11.3	
Approach LOS	C			A	B	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	11.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	13.2
Intersection Capacity Utilization	60.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	20	35	11	324	494	2
Future Vol, veh/h	20	35	11	324	494	2
Conflicting Peds, #/hr	0	0	3	0	0	3
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	15	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	45	0	0	5	26	0
Mvmt Flow	25	43	14	400	610	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1042	614	615	0	-	0
Stage 1	614	-	-	-	-	-
Stage 2	428	-	-	-	-	-
Critical Hdwy	6.85	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.85	-	-	-	-	-
Critical Hdwy Stg 2	5.85	-	-	-	-	-
Follow-up Hdwy	3.905	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	212	496	974	-	-	-
Stage 1	466	-	-	-	-	-
Stage 2	575	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	208	495	972	-	-	-
Mov Cap-2 Maneuver	208	-	-	-	-	-
Stage 1	459	-	-	-	-	-
Stage 2	574	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	18.7	0.3	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	972	-	330	-	-
HCM Lane V/C Ratio	0.014	-	0.206	-	-
HCM Ctrl Dly (s/v)	8.8	-	18.7	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q (veh)	0	-	0.8	-	-

Intersection	
Int Delay, s/veh	1.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	49	4	7	6	2	6
Future Vol, veh/h	49	4	7	6	2	6
Conflicting Peds, #/hr	0	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	65	65	65	65	65	65
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	75	6	11	9	3	9

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	81	0	109	79
Stage 1	-	-	-	-	78	-
Stage 2	-	-	-	-	31	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1529	-	893	987
Stage 1	-	-	-	-	950	-
Stage 2	-	-	-	-	997	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1529	-	887	986
Mov Cap-2 Maneuver	-	-	-	-	887	-
Stage 1	-	-	-	-	950	-
Stage 2	-	-	-	-	990	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	4	8.8
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	959	-	-	1529	-
HCM Lane V/C Ratio	0.013	-	-	0.007	-
HCM Ctrl Dly (s/v)	8.8	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q (veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	12	10	39	7	1
Future Vol, veh/h	0	12	10	39	7	1
Conflicting Peds, #/hr	2	0	0	2	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	75	75	75	75	75	75
Heavy Vehicles, %	0	0	0	5	14	0
Mvmt Flow	0	16	13	52	9	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	67	0	-	0	57	41
Stage 1	-	-	-	-	41	-
Stage 2	-	-	-	-	16	-
Critical Hdwy	4.1	-	-	-	6.54	6.2
Critical Hdwy Stg 1	-	-	-	-	5.54	-
Critical Hdwy Stg 2	-	-	-	-	5.54	-
Follow-up Hdwy	2.2	-	-	-	3.626	3.3
Pot Cap-1 Maneuver	1547	-	-	-	921	1036
Stage 1	-	-	-	-	952	-
Stage 2	-	-	-	-	977	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1545	-	-	-	919	1035
Mov Cap-2 Maneuver	-	-	-	-	919	-
Stage 1	-	-	-	-	951	-
Stage 2	-	-	-	-	976	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0	0	8.9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1545	-	-	-	932
HCM Lane V/C Ratio	-	-	-	-	0.011
HCM Ctrl Dly (s/v)	0	-	-	-	8.9
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q (veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	19	0	2	40	15	0	0	0	5	0	9
Future Vol, veh/h	0	19	0	2	40	15	0	0	0	5	0	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	1	1	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	75	75	75	75	75	75	75	75	75	75	75	75
Heavy Vehicles, %	0	5	0	0	3	0	0	0	0	0	0	11
Mvmt Flow	0	25	0	3	53	20	0	0	0	7	0	12

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	73	0	0	25	0	0	100	104	26	95	94	63
Stage 1	-	-	-	-	-	-	25	25	-	69	69	-
Stage 2	-	-	-	-	-	-	75	79	-	26	25	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.31
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.399
Pot Cap-1 Maneuver	1540	-	-	1603	-	-	886	790	1056	893	800	977
Stage 1	-	-	-	-	-	-	998	878	-	946	841	-
Stage 2	-	-	-	-	-	-	939	833	-	997	878	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1540	-	-	1603	-	-	874	788	1055	891	798	977
Mov Cap-2 Maneuver	-	-	-	-	-	-	874	788	-	891	798	-
Stage 1	-	-	-	-	-	-	998	878	-	946	839	-
Stage 2	-	-	-	-	-	-	926	831	-	996	878	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0	0.3	0	8.9
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1540	-	-	1603	-	-	944
HCM Lane V/C Ratio	-	-	-	-	0.002	-	-	0.02
HCM Ctrl Dly (s/v)	0	0	-	-	7.3	0	-	8.9
HCM Lane LOS	A	A	-	-	A	A	-	A
HCM 95th %tile Q (veh)	-	0	-	-	0	-	-	0.1

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	60	44	33	742	468	44
Future Volume (vph)	60	44	33	742	468	44
Lane Group Flow (vph)	61	45	34	757	478	45
Turn Type	Perm	Perm	Perm	NA	NA	Perm
Protected Phases				2	6	
Permitted Phases	4	4	2			6
Detector Phase	4	4	2	2	6	6
Switch Phase						
Minimum Initial (s)	7.0	7.0	20.0	20.0	20.0	20.0
Minimum Split (s)	23.5	23.5	42.2	42.2	42.2	42.2
Total Split (s)	30.4	30.4	49.6	49.6	49.6	49.6
Total Split (%)	38.0%	38.0%	62.0%	62.0%	62.0%	62.0%
Yellow Time (s)	3.6	3.6	3.9	3.9	3.9	3.9
All-Red Time (s)	1.9	1.9	2.3	2.3	2.3	2.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	6.2	6.2	6.2	6.2
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	None	None	None	None
v/c Ratio	0.10	0.08	0.11	0.85	0.54	0.06
Control Delay (s/veh)	19.4	7.0	10.5	28.3	16.3	5.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	19.4	7.0	10.5	28.3	16.3	5.3
Queue Length 50th (m)	6.5	0.0	2.7	96.7	48.5	1.4
Queue Length 95th (m)	15.6	7.1	6.9	135.1	68.0	5.8
Internal Link Dist (m)	124.6			593.6	63.9	
Turn Bay Length (m)	30.0		30.0			15.0
Base Capacity (vph)	629	553	360	999	999	787
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.08	0.09	0.76	0.48	0.06

Intersection Summary

Cycle Length: 80
Actuated Cycle Length: 80
Offset: 28 (35%), Referenced to phase 4:EBL and 8:, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated

Splits and Phases: 1: Toronto St S (RR47) & Campbell Dr

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	60	44	33	742	468	44
Future Volume (vph)	60	44	33	742	468	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	3.2	3.2	3.2	3.5	3.5	3.2
Total Lost time (s)	5.5	5.5	6.2	6.2	6.2	6.2
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.98	1.00	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1691	1410	1669	1842	1842	1429
Flt Permitted	0.95	1.00	0.38	1.00	1.00	1.00
Satd. Flow (perm)	1691	1410	664	1842	1842	1429
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	61	45	34	757	478	45
RTOR Reduction (vph)	0	28	0	0	0	14
Lane Group Flow (vph)	61	17	34	757	478	31
Confl. Peds. (#/hr)		1	7			7
Heavy Vehicles (%)	2%	7%	3%	2%	2%	5%
Turn Type	Perm	Perm	Perm	NA	NA	Perm
Protected Phases				2	6	
Permitted Phases	4	4	2			6
Actuated Green, G (s)	29.8	29.8	38.5	38.5	38.5	38.5
Effective Green, g (s)	29.8	29.8	38.5	38.5	38.5	38.5
Actuated g/C Ratio	0.37	0.37	0.48	0.48	0.48	0.48
Clearance Time (s)	5.5	5.5	6.2	6.2	6.2	6.2
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	629	525	319	886	886	687
v/s Ratio Prot				c0.41	0.26	
v/s Ratio Perm	c0.04	0.01	0.05			0.02
v/c Ratio	0.10	0.03	0.11	0.85	0.54	0.05
Uniform Delay, d1	16.3	15.9	11.3	18.3	14.5	11.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.3	0.1	0.1	8.1	0.6	0.0
Delay (s)	16.6	16.1	11.5	26.3	15.2	11.0
Level of Service	B	B	B	C	B	B
Approach Delay (s/veh)	16.4			25.7	14.8	
Approach LOS	B			C	B	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	21.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	11.7
Intersection Capacity Utilization	63.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	15	21	781	497	2
Future Vol, veh/h	2	15	21	781	497	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	15	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	7	0	1	3	50
Mvmt Flow	2	16	22	831	529	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1405	530	531	0	-	0
Stage 1	530	-	-	-	-	-
Stage 2	875	-	-	-	-	-
Critical Hdwy	6.4	6.27	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.363	2.2	-	-	-
Pot Cap-1 Maneuver	155	539	1047	-	-	-
Stage 1	594	-	-	-	-	-
Stage 2	411	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	152	539	1047	-	-	-
Mov Cap-2 Maneuver	152	-	-	-	-	-
Stage 1	582	-	-	-	-	-
Stage 2	411	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	14.1	0.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1047	-	415	-	-
HCM Lane V/C Ratio	0.021	-	0.044	-	-
HCM Ctrl Dly (s/v)	8.5	-	14.1	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q (veh)	0.1	-	0.1	-	-

Intersection	
Int Delay, s/veh	1.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	12	2	1	22	3	5
Future Vol, veh/h	12	2	1	22	3	5
Conflicting Peds, #/hr	0	0	0	0	5	4
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	71	71	71	71	71	71
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	17	3	1	31	4	7

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	20	0	57	23
Stage 1	-	-	-	-	19	-
Stage 2	-	-	-	-	38	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1609	-	955	1060
Stage 1	-	-	-	-	1009	-
Stage 2	-	-	-	-	990	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1609	-	950	1057
Mov Cap-2 Maneuver	-	-	-	-	950	-
Stage 1	-	-	-	-	1009	-
Stage 2	-	-	-	-	985	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.3	8.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1014	-	-	1609	-
HCM Lane V/C Ratio	0.011	-	-	0.001	-
HCM Ctrl Dly (s/v)	8.6	-	-	7.2	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q (veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	3.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	15	21	8	26	0
Future Vol, veh/h	0	15	21	8	26	0
Conflicting Peds, #/hr	2	0	0	2	1	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	76	76	76	76	76	76
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	20	28	11	34	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	41	0	-	0	57	36
Stage 1	-	-	-	-	36	-
Stage 2	-	-	-	-	21	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1581	-	-	-	955	1042
Stage 1	-	-	-	-	992	-
Stage 2	-	-	-	-	1007	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1579	-	-	-	953	1041
Mov Cap-2 Maneuver	-	-	-	-	953	-
Stage 1	-	-	-	-	991	-
Stage 2	-	-	-	-	1006	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0	0	8.9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1579	-	-	-	953
HCM Lane V/C Ratio	-	-	-	-	0.036
HCM Ctrl Dly (s/v)	0	-	-	-	8.9
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q (veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	4	37	0	4	27	14	0	0	1	14	0	2
Future Vol, veh/h	4	37	0	4	27	14	0	0	1	14	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	0	0	0	0	4	0	0	0	0	0	0	0
Mvmt Flow	5	45	0	5	33	17	0	0	1	17	0	2

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	50	0	0	45	0	0	108	115	45	108	107	42
Stage 1	-	-	-	-	-	-	55	55	-	52	52	-
Stage 2	-	-	-	-	-	-	53	60	-	56	55	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1570	-	-	1576	-	-	876	779	1031	876	787	1034
Stage 1	-	-	-	-	-	-	962	853	-	966	856	-
Stage 2	-	-	-	-	-	-	965	849	-	961	853	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1570	-	-	1576	-	-	870	774	1031	871	782	1034
Mov Cap-2 Maneuver	-	-	-	-	-	-	870	774	-	871	782	-
Stage 1	-	-	-	-	-	-	959	850	-	963	853	-
Stage 2	-	-	-	-	-	-	960	846	-	957	850	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.7	0.6	8.5	9.1
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1031	1570	-	-	1576	-	-	889
HCM Lane V/C Ratio	0.001	0.003	-	-	0.003	-	-	0.022
HCM Ctrl Dly (s/v)	8.5	7.3	0	-	7.3	0	-	9.1
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q (veh)	0	0	-	-	0	-	-	0.1

Future Background SimTraffic

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	7:15	7:15	7:15	7:15	7:15	7:15
End Time	8:45	8:45	8:45	8:45	8:45	8:45
Total Time (min)	90	90	90	90	90	90
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	1079	1099	1065	1055	1028	1064
Vehs Exited	1080	1082	1068	1070	1032	1066
Starting Vehs	30	13	32	41	31	29
Ending Vehs	29	30	29	26	27	27
Travel Distance (km)	1198	1216	1194	1194	1147	1190
Travel Time (hr)	31.3	32.3	31.0	31.0	29.8	31.1
Total Delay (hr)	4.5	4.9	4.2	4.2	4.1	4.4
Total Stops	478	559	470	483	463	492
Fuel Used (l)	91.5	92.9	90.6	91.1	87.0	90.6

Interval #0 Information Seeding

Start Time	7:15
End Time	7:45
Total Time (min)	30

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	7:45
End Time	8:45
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	1079	1099	1065	1055	1028	1064
Vehs Exited	1080	1082	1068	1070	1032	1066
Starting Vehs	30	13	32	41	31	29
Ending Vehs	29	30	29	26	27	27
Travel Distance (km)	1198	1216	1194	1194	1147	1190
Travel Time (hr)	31.3	32.3	31.0	31.0	29.8	31.1
Total Delay (hr)	4.5	4.9	4.2	4.2	4.1	4.4
Total Stops	478	559	470	483	463	492
Fuel Used (l)	91.5	92.9	90.6	91.1	87.0	90.6

Arterial Level of Service: EB Campbell Dr

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed	Run 1 Speed	Run 1 Delay
Hospital SW Dwy	4	0.0	29.2	0.3	39	41	0.0
James Hill Ct.	5	0.0	5.5	0.1	40	42	0.0
Toronto St S (RR47)	1	21.7	34.2	0.1	17	19	18.5
Total		21.7	68.8	0.5	28	31	18.5

Arterial Level of Service: EB Campbell Dr

Cross Street	Run 2 Speed	Run 2 Delay	Run 3 Speed	Run 3 Delay	Run 4 Speed	Run 4 Delay	Run 5 Speed
Hospital SW Dwy	42	0.0	40	0.0	39	0.0	40
James Hill Ct.	43	0.0	41	0.0	40	0.0	42
Toronto St S (RR47)	16	23.8	23	15.0	18	20.3	13
Total	28	23.8	33	15.0	29	20.3	26

Arterial Level of Service: WB Campbell Dr

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed	Run 1 Speed	Run 1 Delay
Hospital SE Dwy	5	0.3	12.0	0.1	44	45	0.3
Hospital SW Dwy	4	0.2	5.3	0.1	41	43	0.0
Total		0.6	17.3	0.2	43	44	0.3

Arterial Level of Service: WB Campbell Dr

Cross Street	Run 2 Speed	Run 2 Delay	Run 3 Speed	Run 3 Delay	Run 4 Speed	Run 4 Delay	Run 5 Speed
Hospital SE Dwy	44	0.4	43	0.3	46	0.3	46
Hospital SW Dwy	38	0.4	42	0.1	37	0.5	41
Total	42	0.8	43	0.5	43	0.8	45

Intersection: 1: Toronto St S (RR47) & Campbell Dr

Movement	EB	EB	NB	NB	SB	SB
Directions Served	L	R	L	T	T	R
Maximum Queue (m)	14.1	16.3	30.3	54.5	72.6	50.4
Average Queue (m)	3.8	4.1	8.2	25.3	37.4	7.8
95th Queue (m)	11.2	12.8	21.2	46.4	63.0	27.3
Link Distance (m)		126.5		604.2	75.6	
Upstream Blk Time (%)					0	
Queuing Penalty (veh)					1	
Storage Bay Dist (m)	30.0		30.0			15.0
Storage Blk Time (%)			0	4	24	0
Queuing Penalty (veh)			1	2	15	1

Intersection: 2: Toronto St S (RR47) & Victoria Dr

Movement	EB	NB	SB
Directions Served	LR	L	TR
Maximum Queue (m)	25.0	11.7	12.0
Average Queue (m)	10.3	1.4	0.4
95th Queue (m)	21.0	7.3	8.5
Link Distance (m)	69.9		671.0
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (m)		15.0	
Storage Blk Time (%)		0	
Queuing Penalty (veh)		0	

Intersection: 3: Hospital N Dwy & Victoria Dr

Movement	NB
Directions Served	LR
Maximum Queue (m)	8.7
Average Queue (m)	2.2
95th Queue (m)	8.4
Link Distance (m)	29.1
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (m)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 4: Campbell Dr & Hospital SW Dwy

Movement	SB
Directions Served	LR
Maximum Queue (m)	13.0
Average Queue (m)	2.3
95th Queue (m)	9.6
Link Distance (m)	52.8
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (m)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 5: James Hill Ct./Hospital SE Dwy & Campbell Dr

Movement	SB
Directions Served	LTR
Maximum Queue (m)	13.0
Average Queue (m)	3.1
95th Queue (m)	10.8
Link Distance (m)	40.6
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (m)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 21

Intersection: 1: Toronto St S (RR47) & Campbell Dr

Phase	2	4	6
Movement(s) Served	NBTL	EBL	SBT
Maximum Green (s)	45.8	21.0	45.8
Minimum Green (s)	20.0	7.0	20.0
Recall	None	C-Max	Max
Avg. Green (s)	-13.8	-8.1	-13.8
g/C Ratio	NA	NA	NA
Cycles Skipped (%)	0	0	0
Cycles @ Minimum (%)	0	0	0
Cycles Maxed Out (%)	100	100	100
Cycles with Peds (%)	0	0	9

Controller Summary
Average Cycle Length (s): -9.4

Number of Complete Cycles : 44

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	4:30	4:30	4:30	4:30	4:30	4:30
End Time	6:00	6:00	6:00	6:00	6:00	6:00
Total Time (min)	90	90	90	90	90	90
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	1413	1419	1361	1418	1451	1412
Vehs Exited	1418	1420	1369	1416	1450	1413
Starting Vehs	55	50	47	42	46	48
Ending Vehs	50	49	39	44	47	45
Travel Distance (km)	1807	1829	1749	1827	1870	1816
Travel Time (hr)	51.2	50.9	49.5	52.0	52.2	51.2
Total Delay (hr)	11.6	11.2	11.4	12.1	11.5	11.5
Total Stops	1018	956	961	1021	988	988
Fuel Used (l)	140.0	141.6	135.5	141.9	143.1	140.4

Interval #0 Information Seeding

Start Time	4:30
End Time	5:00
Total Time (min)	30

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	5:00
End Time	6:00
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	1413	1419	1361	1418	1451	1412
Vehs Exited	1418	1420	1369	1416	1450	1413
Starting Vehs	55	50	47	42	46	48
Ending Vehs	50	49	39	44	47	45
Travel Distance (km)	1807	1829	1749	1827	1870	1816
Travel Time (hr)	51.2	50.9	49.5	52.0	52.2	51.2
Total Delay (hr)	11.6	11.2	11.4	12.1	11.5	11.5
Total Stops	1018	956	961	1021	988	988
Fuel Used (l)	140.0	141.6	135.5	141.9	143.1	140.4

Arterial Level of Service: EB Campbell Dr

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed	Run 1 Speed	Run 1 Delay
Hospital SW Dwy	4	0.0	26.9	0.3	42	43	0.0
James Hill Ct.	5	0.0	5.4	0.1	40	40	0.0
Toronto St S (RR47)	1	16.3	28.3	0.1	21	21	16.1
Total		16.3	60.6	0.5	32	33	16.1

Arterial Level of Service: EB Campbell Dr

Cross Street	Run 2 Speed	Run 2 Delay	Run 3 Speed	Run 3 Delay	Run 4 Speed	Run 4 Delay	Run 5 Speed
Hospital SW Dwy	43	0.0	42	0.0	41	0.0	41
James Hill Ct.	42	0.0	44	0.0	42	0.0	41
Toronto St S (RR47)	21	14.8	21	16.8	19	18.8	23
Total	33	14.8	32	16.8	31	18.8	33

Arterial Level of Service: WB Campbell Dr

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed	Run 1 Speed	Run 1 Delay
Hospital SE Dwy	5	0.4	12.4	0.1	43	44	0.4
Hospital SW Dwy	4	0.0	5.3	0.1	41	40	0.0
Total		0.4	17.7	0.2	43	43	0.4

Arterial Level of Service: WB Campbell Dr

Cross Street	Run 2 Speed	Run 2 Delay	Run 3 Speed	Run 3 Delay	Run 4 Speed	Run 4 Delay	Run 5 Speed
Hospital SE Dwy	44	0.4	41	0.3	43	0.3	44
Hospital SW Dwy	43	0.0	40	0.0	40	0.0	45
Total	44	0.4	41	0.3	42	0.3	44

Intersection: 1: Toronto St S (RR47) & Campbell Dr

Movement	EB	EB	NB	NB	SB	SB
Directions Served	L	R	L	T	T	R
Maximum Queue (m)	20.8	20.8	57.3	161.7	79.8	55.2
Average Queue (m)	7.6	6.4	11.8	91.9	46.9	6.5
95th Queue (m)	17.5	16.7	40.9	142.9	76.0	26.1
Link Distance (m)		126.5		604.2	75.6	
Upstream Blk Time (%)					1	
Queuing Penalty (veh)					4	
Storage Bay Dist (m)	30.0		30.0			15.0
Storage Blk Time (%)	0	0	0	35	34	0
Queuing Penalty (veh)	0	0	0	12	15	1

Intersection: 2: Toronto St S (RR47) & Victoria Dr

Movement	EB	NB	SB
Directions Served	LR	L	TR
Maximum Queue (m)	14.9	11.9	30.4
Average Queue (m)	3.8	2.6	1.6
95th Queue (m)	11.9	9.5	12.5
Link Distance (m)	69.9		671.0
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (m)		15.0	
Storage Blk Time (%)		0	
Queuing Penalty (veh)		0	

Intersection: 3: Hospital N Dwy & Victoria Dr

Movement	NB
Directions Served	LR
Maximum Queue (m)	8.7
Average Queue (m)	2.2
95th Queue (m)	8.5
Link Distance (m)	29.1
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (m)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 4: Campbell Dr & Hospital SW Dwy

Movement	SB
Directions Served	LR
Maximum Queue (m)	12.0
Average Queue (m)	5.8
95th Queue (m)	13.1
Link Distance (m)	52.8
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (m)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 5: James Hill Ct./Hospital SE Dwy & Campbell Dr

Movement	WB	NB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (m)	1.8	6.6	8.9
Average Queue (m)	0.1	0.3	3.7
95th Queue (m)	1.3	3.0	10.7
Link Distance (m)	126.5	90.0	40.6
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (m)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Network Summary

Network wide Queuing Penalty: 33

Intersection: 1: Toronto St S (RR47) & Campbell Dr

Phase	2	4	6
Movement(s) Served	NBTL	EBL	SBT
Maximum Green (s)	43.4	24.9	43.4
Minimum Green (s)	20.0	7.0	20.0
Recall	None	C-Max	None
Avg. Green (s)	7.9	1.4	7.9
g/C Ratio	NA	NA	NA
Cycles Skipped (%)	0	0	0
Cycles @ Minimum (%)	2	0	2
Cycles Maxed Out (%)	50	100	50
Cycles with Peds (%)	0	2	14

Controller Summary
Average Cycle Length (s): -9.4

Number of Complete Cycles : 44

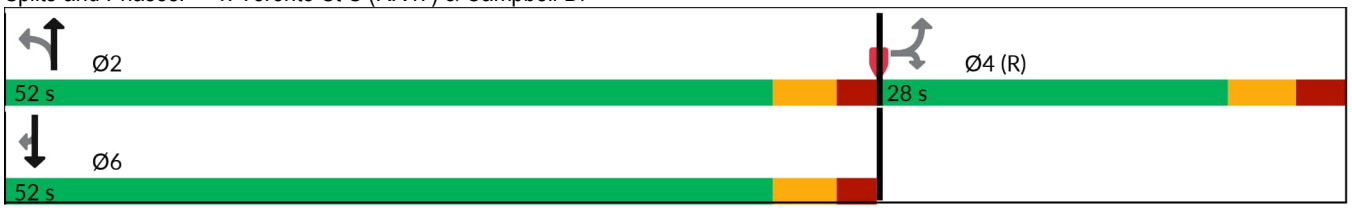
Future Total

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	32	32	92	316	474	137
Future Volume (vph)	32	32	92	316	474	137
Lane Group Flow (vph)	36	36	102	351	527	152
Turn Type	Perm	Perm	Perm	NA	NA	Perm
Protected Phases				2	6	
Permitted Phases	4	4	2			6
Detector Phase	4	4	2	2	6	6
Switch Phase						
Minimum Initial (s)	7.0	7.0	20.0	20.0	20.0	20.0
Minimum Split (s)	25.0	25.0	42.2	42.2	42.2	42.2
Total Split (s)	28.0	28.0	52.0	52.0	52.0	52.0
Total Split (%)	35.0%	35.0%	65.0%	65.0%	65.0%	65.0%
Yellow Time (s)	4.0	4.0	3.9	3.9	3.9	3.9
All-Red Time (s)	3.0	3.0	2.3	2.3	2.3	2.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	6.2	6.2	6.2	6.2
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	None	None	Max	Max
v/c Ratio	0.08	0.09	0.26	0.34	0.50	0.17
Control Delay (s/veh)	22.9	8.8	10.9	10.2	12.2	4.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	22.9	8.8	10.9	10.2	12.2	4.3
Queue Length 50th (m)	4.3	0.0	7.6	27.4	46.1	4.3
Queue Length 95th (m)	11.5	6.9	16.8	43.6	70.8	12.2
Internal Link Dist (m)	124.6			593.6	63.9	
Turn Bay Length (m)	30.0		30.0			15.0
Base Capacity (vph)	452	407	385	1034	1064	880
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.09	0.26	0.34	0.50	0.17

Intersection Summary

Cycle Length: 80
Actuated Cycle Length: 80
Offset: 24 (30%), Referenced to phase 4:EBL and 8:, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated

Splits and Phases: 1: Toronto St S (RR47) & Campbell Dr



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	32	32	92	316	474	137
Future Volume (vph)	32	32	92	316	474	137
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	3.2	3.2	3.2	3.5	3.5	3.2
Total Lost time (s)	7.0	7.0	6.2	6.2	6.2	6.2
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.98	1.00	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1725	1451	1654	1807	1860	1473
Flt Permitted	0.95	1.00	0.39	1.00	1.00	1.00
Satd. Flow (perm)	1725	1451	674	1807	1860	1473
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	36	36	102	351	527	152
RTOR Reduction (vph)	0	27	0	0	0	37
Lane Group Flow (vph)	36	9	102	351	527	115
Confl. Peds. (#/hr)		1	6			6
Heavy Vehicles (%)	0%	4%	4%	4%	1%	2%
Turn Type	Perm	Perm	Perm	NA	NA	Perm
Protected Phases				2	6	
Permitted Phases	4	4	2			6
Actuated Green, G (s)	21.0	21.0	45.8	45.8	45.8	45.8
Effective Green, g (s)	21.0	21.0	45.8	45.8	45.8	45.8
Actuated g/C Ratio	0.26	0.26	0.57	0.57	0.57	0.57
Clearance Time (s)	7.0	7.0	6.2	6.2	6.2	6.2
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	452	380	385	1034	1064	843
v/s Ratio Prot				0.19	c0.28	
v/s Ratio Perm	c0.02	0.01	0.15			0.08
v/c Ratio	0.08	0.02	0.26	0.34	0.50	0.14
Uniform Delay, d1	22.2	21.9	8.6	9.1	10.2	7.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.3	0.1	0.4	0.2	1.6	0.3
Delay (s)	22.6	22.0	9.0	9.3	11.9	8.3
Level of Service	C	C	A	A	B	A
Approach Delay (s/veh)	22.3			9.2	11.0	
Approach LOS	C			A	B	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	11.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	13.2
Intersection Capacity Utilization	77.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	22	44	13	335	567	16
Future Vol, veh/h	22	44	13	335	567	16
Conflicting Peds, #/hr	0	0	3	0	0	3
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	15	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	40	0	0	4	22	0
Mvmt Flow	27	54	16	414	700	20

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1159	713	723	0	-	0
Stage 1	713	-	-	-	-	-
Stage 2	446	-	-	-	-	-
Critical Hdwy	6.8	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.86	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	182	435	889	-	-	-
Stage 1	423	-	-	-	-	-
Stage 2	572	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	178	434	887	-	-	-
Mov Cap-2 Maneuver	178	-	-	-	-	-
Stage 1	415	-	-	-	-	-
Stage 2	571	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	22	0.3	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	887	-	293	-	-
HCM Lane V/C Ratio	0.018	-	0.278	-	-
HCM Ctrl Dly (s/v)	9.1	-	22	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q (veh)	0.1	-	1.1	-	-

Intersection	
Int Delay, s/veh	3.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	49	13	23	6	6	17
Future Vol, veh/h	49	13	23	6	6	17
Conflicting Peds, #/hr	0	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	65	65	65	65	65	65
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	75	20	35	9	9	26

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	95	0	164	86
Stage 1	-	-	-	-	85	-
Stage 2	-	-	-	-	79	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1512	-	831	978
Stage 1	-	-	-	-	943	-
Stage 2	-	-	-	-	949	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1512	-	812	977
Mov Cap-2 Maneuver	-	-	-	-	812	-
Stage 1	-	-	-	-	943	-
Stage 2	-	-	-	-	927	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	5.9	9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	928	-	-	1512	-
HCM Lane V/C Ratio	0.038	-	-	0.023	-
HCM Ctrl Dly (s/v)	9	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q (veh)	0.1	-	-	0.1	-

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	12	27	128	19	3
Future Vol, veh/h	0	12	27	128	19	3
Conflicting Peds, #/hr	2	0	0	2	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	75	75	75	75	75	75
Heavy Vehicles, %	0	0	0	1	5	0
Mvmt Flow	0	16	36	171	25	4

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	209	0	-	0	140	124
Stage 1	-	-	-	-	124	-
Stage 2	-	-	-	-	16	-
Critical Hdwy	4.1	-	-	-	6.45	6.2
Critical Hdwy Stg 1	-	-	-	-	5.45	-
Critical Hdwy Stg 2	-	-	-	-	5.45	-
Follow-up Hdwy	2.2	-	-	-	3.545	3.3
Pot Cap-1 Maneuver	1374	-	-	-	846	932
Stage 1	-	-	-	-	894	-
Stage 2	-	-	-	-	999	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1372	-	-	-	844	931
Mov Cap-2 Maneuver	-	-	-	-	844	-
Stage 1	-	-	-	-	893	-
Stage 2	-	-	-	-	998	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0	0	9.4
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1372	-	-	-	855
HCM Lane V/C Ratio	-	-	-	-	0.034
HCM Ctrl Dly (s/v)	0	-	-	-	9.4
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q (veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	31	0	2	129	49	0	0	0	14	0	26
Future Vol, veh/h	0	31	0	2	129	49	0	0	0	14	0	26
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	1	1	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	75	75	75	75	75	75	75	75	75	75	75	75
Heavy Vehicles, %	0	3	0	0	0	0	0	0	0	0	0	3
Mvmt Flow	0	41	0	3	172	65	0	0	0	19	0	35

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	237	0	0	41	0	0	269	284	42	253	252	205
Stage 1	-	-	-	-	-	-	41	41	-	211	211	-
Stage 2	-	-	-	-	-	-	228	243	-	42	41	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.327
Pot Cap-1 Maneuver	1342	-	-	1581	-	-	688	628	1034	704	655	833
Stage 1	-	-	-	-	-	-	979	865	-	796	731	-
Stage 2	-	-	-	-	-	-	779	708	-	978	865	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1342	-	-	1581	-	-	658	627	1033	703	654	833
Mov Cap-2 Maneuver	-	-	-	-	-	-	658	627	-	703	654	-
Stage 1	-	-	-	-	-	-	979	865	-	796	730	-
Stage 2	-	-	-	-	-	-	745	707	-	977	865	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0	0.1	0	9.9
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1342	-	-	1581	-	-	782
HCM Lane V/C Ratio	-	-	-	-	0.002	-	-	0.068
HCM Ctrl Dly (s/v)	0	0	-	-	7.3	0	-	9.9
HCM Lane LOS	A	A	-	-	A	A	-	A
HCM 95th %tile Q (veh)	-	0	-	-	0	-	-	0.2

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	114	84	57	745	480	78
Future Volume (vph)	114	84	57	745	480	78
Lane Group Flow (vph)	116	86	58	760	490	80
Turn Type	Perm	Perm	Perm	NA	NA	Perm
Protected Phases				2	6	
Permitted Phases	4	4	2			6
Detector Phase	4	4	2	2	6	6
Switch Phase						
Minimum Initial (s)	7.0	7.0	20.0	20.0	20.0	20.0
Minimum Split (s)	41.5	41.5	42.2	42.2	42.2	42.2
Total Split (s)	30.4	30.4	49.6	49.6	49.6	49.6
Total Split (%)	38.0%	38.0%	62.0%	62.0%	62.0%	62.0%
Yellow Time (s)	3.6	3.6	3.9	3.9	3.9	3.9
All-Red Time (s)	1.9	1.9	2.3	2.3	2.3	2.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	6.2	6.2	6.2	6.2
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	None	None	None	None
v/c Ratio	0.18	0.14	0.18	0.85	0.55	0.11
Control Delay (s/veh)	19.9	5.7	11.8	28.0	16.5	5.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	19.9	5.7	11.8	28.0	16.5	5.2
Queue Length 50th (m)	12.7	0.0	4.8	96.4	49.8	2.6
Queue Length 95th (m)	26.5	9.6	10.8	134.4	69.9	8.5
Internal Link Dist (m)	124.6			593.6	63.9	
Turn Bay Length (m)	30.0		30.0			15.0
Base Capacity (vph)	637	600	355	1009	1009	819
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.14	0.16	0.75	0.49	0.10

Intersection Summary

Cycle Length: 80
Actuated Cycle Length: 80
Offset: 28 (35%), Referenced to phase 4:EBL and 8:, Start of Green
Natural Cycle: 85
Control Type: Actuated-Coordinated

Splits and Phases: 1: Toronto St S (RR47) & Campbell Dr

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	114	84	57	745	480	78
Future Volume (vph)	114	84	57	745	480	78
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	3.2	3.2	3.2	3.5	3.5	3.2
Total Lost time (s)	5.5	5.5	6.2	6.2	6.2	6.2
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.98	1.00	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1708	1465	1702	1860	1860	1471
Flt Permitted	0.95	1.00	0.37	1.00	1.00	1.00
Satd. Flow (perm)	1708	1465	657	1860	1860	1471
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	116	86	58	760	490	80
RTOR Reduction (vph)	0	54	0	0	0	24
Lane Group Flow (vph)	116	32	58	760	490	56
Confl. Peds. (#/hr)		1	7			7
Heavy Vehicles (%)	1%	3%	1%	1%	1%	2%
Turn Type	Perm	Perm	Perm	NA	NA	Perm
Protected Phases				2	6	
Permitted Phases	4	4	2			6
Actuated Green, G (s)	29.9	29.9	38.4	38.4	38.4	38.4
Effective Green, g (s)	29.9	29.9	38.4	38.4	38.4	38.4
Actuated g/C Ratio	0.37	0.37	0.48	0.48	0.48	0.48
Clearance Time (s)	5.5	5.5	6.2	6.2	6.2	6.2
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	638	547	315	892	892	706
v/s Ratio Prot				c0.41	0.26	
v/s Ratio Perm	c0.07	0.02	0.09			0.04
v/c Ratio	0.18	0.06	0.18	0.85	0.55	0.08
Uniform Delay, d1	16.8	16.0	11.9	18.3	14.7	11.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.6	0.2	0.3	7.9	0.7	0.0
Delay (s)	17.5	16.2	12.1	26.2	15.4	11.3
Level of Service	B	B	B	C	B	B
Approach Delay (s/veh)	16.9			25.2	14.8	
Approach LOS	B			C	B	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	20.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	11.7
Intersection Capacity Utilization	72.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	27	24	835	531	2
Future Vol, veh/h	2	27	24	835	531	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	15	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	3	0	0	2	50
Mvmt Flow	2	29	26	888	565	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1506	566	567	0	-	0
Stage 1	566	-	-	-	-	-
Stage 2	940	-	-	-	-	-
Critical Hdwy	6.4	6.23	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.327	2.2	-	-	-
Pot Cap-1 Maneuver	135	522	1015	-	-	-
Stage 1	572	-	-	-	-	-
Stage 2	383	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	131	522	1015	-	-	-
Mov Cap-2 Maneuver	131	-	-	-	-	-
Stage 1	557	-	-	-	-	-
Stage 2	383	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	14	0.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1015	-	433	-	-
HCM Lane V/C Ratio	0.025	-	0.071	-	-
HCM Ctrl Dly (s/v)	8.6	-	14	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q (veh)	0.1	-	0.2	-	-

Intersection	
Int Delay, s/veh	3.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	12	7	4	22	10	17
Future Vol, veh/h	12	7	4	22	10	17
Conflicting Peds, #/hr	0	0	0	0	5	4
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	71	71	71	71	71	71
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	17	10	6	31	14	24

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	27	0	70	26
Stage 1	-	-	-	-	22	-
Stage 2	-	-	-	-	48	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1600	-	939	1056
Stage 1	-	-	-	-	1006	-
Stage 2	-	-	-	-	980	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1600	-	931	1053
Mov Cap-2 Maneuver	-	-	-	-	931	-
Stage 1	-	-	-	-	1006	-
Stage 2	-	-	-	-	972	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	1.1	8.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1004	-	-	1600	-
HCM Lane V/C Ratio	0.038	-	-	0.004	-
HCM Ctrl Dly (s/v)	8.7	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q (veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	4.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	26	26	30	87	0
Future Vol, veh/h	0	26	26	30	87	0
Conflicting Peds, #/hr	2	0	0	2	1	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	76	76	76	76	76	76
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	34	34	39	114	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	75	0	-	0	91	56
Stage 1	-	-	-	-	56	-
Stage 2	-	-	-	-	35	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1537	-	-	-	914	1016
Stage 1	-	-	-	-	972	-
Stage 2	-	-	-	-	993	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1535	-	-	-	912	1015
Mov Cap-2 Maneuver	-	-	-	-	912	-
Stage 1	-	-	-	-	971	-
Stage 2	-	-	-	-	992	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0	0	9.5
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1535	-	-	-	912
HCM Lane V/C Ratio	-	-	-	-	0.126
HCM Ctrl Dly (s/v)	0	-	-	-	9.5
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q (veh)	0	-	-	-	0.4

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	98	0	4	49	50	0	0	1	47	0	7
Future Vol, veh/h	15	98	0	4	49	50	0	0	1	47	0	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	0	0	0	0	2	0	0	0	0	0	0	0
Mvmt Flow	18	118	0	5	59	60	0	0	1	57	0	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	119	0	0	118	0	0	257	283	118	254	253	89
Stage 1	-	-	-	-	-	-	154	154	-	99	99	-
Stage 2	-	-	-	-	-	-	103	129	-	155	154	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1482	-	-	1483	-	-	700	629	939	703	654	975
Stage 1	-	-	-	-	-	-	853	774	-	912	817	-
Stage 2	-	-	-	-	-	-	908	793	-	852	774	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1482	-	-	1483	-	-	685	618	939	693	643	975
Mov Cap-2 Maneuver	-	-	-	-	-	-	685	618	-	693	643	-
Stage 1	-	-	-	-	-	-	842	764	-	900	814	-
Stage 2	-	-	-	-	-	-	897	790	-	840	764	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	1	0.3	8.8	10.5
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	939	1482	-	-	1483	-	-	720
HCM Lane V/C Ratio	0.001	0.012	-	-	0.003	-	-	0.09
HCM Ctrl Dly (s/v)	8.8	7.5	0	-	7.4	0	-	10.5
HCM Lane LOS	A	A	A	-	A	A	-	B
HCM 95th %tile Q (veh)	0	0	-	-	0	-	-	0.3

Future Total SimTraffic

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	7:15	7:15	7:15	7:15	7:15	7:15
End Time	8:45	8:45	8:45	8:45	8:45	8:45
Total Time (min)	90	90	90	90	90	90
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	1235	1276	1327	1266	1314	1283
Vehs Exited	1230	1271	1317	1260	1314	1279
Starting Vehs	36	28	27	29	28	27
Ending Vehs	41	33	37	35	28	34
Travel Distance (km)	1312	1346	1406	1358	1403	1365
Travel Time (hr)	35.1	36.2	37.7	36.7	37.9	36.7
Total Delay (hr)	5.1	5.4	5.7	5.6	5.8	5.5
Total Stops	664	647	663	698	665	668
Fuel Used (l)	102.3	105.1	108.9	106.0	108.7	106.2

Interval #0 Information Seeding

Start Time	7:15
End Time	7:45
Total Time (min)	30

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	7:45
End Time	8:45
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	1235	1276	1327	1266	1314	1283
Vehs Exited	1230	1271	1317	1260	1314	1279
Starting Vehs	36	28	27	29	28	27
Ending Vehs	41	33	37	35	28	34
Travel Distance (km)	1312	1346	1406	1358	1403	1365
Travel Time (hr)	35.1	36.2	37.7	36.7	37.9	36.7
Total Delay (hr)	5.1	5.4	5.7	5.6	5.8	5.5
Total Stops	664	647	663	698	665	668
Fuel Used (l)	102.3	105.1	108.9	106.0	108.7	106.2

Arterial Level of Service: EB Campbell Dr

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed	Run 1 Speed	Run 1 Delay
Hospital SW Dwy	4	0.0	27.4	0.3	41	39	0.0
James Hill Ct.	5	0.0	5.1	0.1	42	40	0.0
Toronto St S (RR47)	1	22.0	34.7	0.1	16	20	15.6
Total		22.0	67.2	0.5	28	30	15.6

Arterial Level of Service: EB Campbell Dr

Cross Street	Run 2 Speed	Run 2 Delay	Run 3 Speed	Run 3 Delay	Run 4 Speed	Run 4 Delay	Run 5 Speed
Hospital SW Dwy	41	0.0	41	0.0	41	0.0	40
James Hill Ct.	42	0.0	42	0.0	42	0.0	45
Toronto St S (RR47)	14	26.5	14	26.9	17	20.3	15
Total	27	26.5	26	26.9	29	20.3	28

Arterial Level of Service: WB Campbell Dr

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed	Run 1 Speed	Run 1 Delay
Hospital SE Dwy	5	0.5	14.1	0.1	38	38	0.6
Hospital SW Dwy	4	0.8	6.3	0.1	35	33	1.2
Total		1.3	20.3	0.2	37	36	1.7

Arterial Level of Service: WB Campbell Dr

Cross Street	Run 2 Speed	Run 2 Delay	Run 3 Speed	Run 3 Delay	Run 4 Speed	Run 4 Delay	Run 5 Speed
Hospital SE Dwy	39	0.5	39	0.5	38	0.6	38
Hospital SW Dwy	37	0.4	36	0.8	35	0.9	37
Total	38	0.9	38	1.3	37	1.4	38

Intersection: 1: Toronto St S (RR47) & Campbell Dr

Movement	EB	EB	NB	NB	SB	SB
Directions Served	L	R	L	T	T	R
Maximum Queue (m)	18.4	14.1	30.7	62.6	76.9	51.2
Average Queue (m)	5.8	4.9	14.7	25.2	41.4	11.8
95th Queue (m)	14.3	12.9	25.8	50.9	73.5	31.0
Link Distance (m)		126.5		604.2	75.6	
Upstream Blk Time (%)					1	
Queuing Penalty (veh)					3	
Storage Bay Dist (m)	30.0		30.0			15.0
Storage Blk Time (%)			0	4	25	1
Queuing Penalty (veh)			1	4	34	7

Intersection: 2: Toronto St S (RR47) & Victoria Dr

Movement	EB	NB	SB
Directions Served	LR	L	TR
Maximum Queue (m)	30.1	12.7	35.7
Average Queue (m)	10.8	2.1	2.6
95th Queue (m)	22.5	8.7	16.2
Link Distance (m)	69.9		671.0
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (m)		15.0	
Storage Blk Time (%)		0	
Queuing Penalty (veh)		1	

Intersection: 3: Hospital N Dwy & Victoria Dr

Movement	WB	NB
Directions Served	LT	LR
Maximum Queue (m)	5.5	11.9
Average Queue (m)	0.2	4.3
95th Queue (m)	2.3	11.9
Link Distance (m)	69.9	29.1
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 4: Campbell Dr & Hospital SW Dwy

Movement	SB
Directions Served	LR
Maximum Queue (m)	13.5
Average Queue (m)	5.1
95th Queue (m)	12.6
Link Distance (m)	52.8
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (m)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 5: James Hill Ct./Hospital SE Dwy & Campbell Dr

Movement	WB	SB
Directions Served	LTR	LTR
Maximum Queue (m)	1.8	16.2
Average Queue (m)	0.1	7.6
95th Queue (m)	1.3	14.4
Link Distance (m)	126.5	40.6
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 50

Intersection: 1: Toronto St S (RR47) & Campbell Dr

Phase	2	4	6
Movement(s) Served	NBTL	EBL	SBT
Maximum Green (s)	45.8	21.0	45.8
Minimum Green (s)	20.0	7.0	20.0
Recall	None	C-Max	Max
Avg. Green (s)	-13.8	-8.1	-13.8
g/C Ratio	NA	NA	NA
Cycles Skipped (%)	0	0	0
Cycles @ Minimum (%)	0	0	0
Cycles Maxed Out (%)	100	100	100
Cycles with Peds (%)	0	2	9

Controller Summary
Average Cycle Length (s): -9.4

Number of Complete Cycles : 44

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	4:00	4:00	4:00	4:00	4:00	4:00
End Time	5:30	5:30	5:30	5:30	5:30	5:30
Total Time (min)	90	90	90	90	90	90
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	1614	1639	1591	1568	1592	1599
Vehs Exited	1622	1641	1600	1570	1572	1602
Starting Vehs	63	56	79	58	52	58
Ending Vehs	55	54	70	56	72	57
Travel Distance (km)	1980	2011	1948	1958	1957	1971
Travel Time (hr)	57.6	57.3	56.7	55.8	55.9	56.7
Total Delay (hr)	14.1	13.1	13.7	12.9	12.9	13.3
Total Stops	1314	1246	1345	1181	1221	1263
Fuel Used (l)	156.1	157.5	153.9	152.0	152.8	154.5

Interval #0 Information Seeding

Start Time	4:00
End Time	4:30
Total Time (min)	30

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	4:30
End Time	5:30
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	1614	1639	1591	1568	1592	1599
Vehs Exited	1622	1641	1600	1570	1572	1602
Starting Vehs	63	56	79	58	52	58
Ending Vehs	55	54	70	56	72	57
Travel Distance (km)	1980	2011	1948	1958	1957	1971
Travel Time (hr)	57.6	57.3	56.7	55.8	55.9	56.7
Total Delay (hr)	14.1	13.1	13.7	12.9	12.9	13.3
Total Stops	1314	1246	1345	1181	1221	1263
Fuel Used (l)	156.1	157.5	153.9	152.0	152.8	154.5

Arterial Level of Service: EB Campbell Dr

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed	Run 1 Speed	Run 1 Delay
Hospital SW Dwy	4	0.1	28.2	0.3	40	40	0.2
James Hill Ct.	5	0.1	5.2	0.1	42	40	0.1
Toronto St S (RR47)	1	20.0	32.7	0.1	17	18	19.3
Total		20.2	66.0	0.5	29	30	19.6

Arterial Level of Service: EB Campbell Dr

Cross Street	Run 2 Speed	Run 2 Delay	Run 3 Speed	Run 3 Delay	Run 4 Speed	Run 4 Delay	Run 5 Speed
Hospital SW Dwy	39	0.3	40	0.2	41	0.0	40
James Hill Ct.	41	0.1	41	0.0	41	0.1	43
Toronto St S (RR47)	16	22.0	18	18.8	17	19.9	17
Total	28	22.4	30	19.1	29	20.0	29

Arterial Level of Service: WB Campbell Dr

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed	Run 1 Speed	Run 1 Delay
Hospital SE Dwy	5	0.6	13.4	0.1	40	40	0.8
Hospital SW Dwy	4	0.3	5.5	0.1	39	41	0.3
Total		1.0	18.9	0.2	40	41	1.0

Arterial Level of Service: WB Campbell Dr

Cross Street	Run 2 Speed	Run 2 Delay	Run 3 Speed	Run 3 Delay	Run 4 Speed	Run 4 Delay	Run 5 Speed
Hospital SE Dwy	40	0.5	38	0.6	41	0.4	40
Hospital SW Dwy	38	0.4	39	0.5	39	0.3	39
Total	40	0.9	38	1.2	40	0.7	40

Intersection: 1: Toronto St S (RR47) & Campbell Dr

Movement	EB	EB	NB	NB	SB	SB
Directions Served	L	R	L	T	T	R
Maximum Queue (m)	31.8	31.3	64.8	195.8	79.1	54.8
Average Queue (m)	14.7	10.4	22.0	93.7	46.8	10.0
95th Queue (m)	27.4	22.0	59.1	162.7	76.2	33.2
Link Distance (m)		126.5		604.2	75.6	
Upstream Blk Time (%)					1	
Queuing Penalty (veh)					5	
Storage Bay Dist (m)	30.0		30.0			15.0
Storage Blk Time (%)	0	0	1	35	35	1
Queuing Penalty (veh)	0	0	7	20	27	3

Intersection: 2: Toronto St S (RR47) & Victoria Dr

Movement	EB	NB	SB
Directions Served	LR	L	TR
Maximum Queue (m)	17.3	10.8	20.3
Average Queue (m)	6.6	2.4	1.3
95th Queue (m)	15.6	9.2	10.9
Link Distance (m)	69.9		671.0
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (m)		15.0	
Storage Blk Time (%)		0	
Queuing Penalty (veh)		1	

Intersection: 3: Hospital N Dwy & Victoria Dr

Movement	NB
Directions Served	LR
Maximum Queue (m)	11.9
Average Queue (m)	5.4
95th Queue (m)	12.9
Link Distance (m)	29.1
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (m)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 4: Campbell Dr & Hospital SW Dwy

Movement	SB
Directions Served	LR
Maximum Queue (m)	17.9
Average Queue (m)	9.5
95th Queue (m)	14.5
Link Distance (m)	52.8
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (m)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 5: James Hill Ct./Hospital SE Dwy & Campbell Dr

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (m)	9.1	5.5	6.8	16.1
Average Queue (m)	1.0	0.2	0.3	7.5
95th Queue (m)	5.7	2.6	2.8	13.8
Link Distance (m)	41.0	126.5	90.0	40.6
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 63

Intersection: 1: Toronto St S (RR47) & Campbell Dr

Phase	2	4	6
Movement(s) Served	NBTL	EBL	SBT
Maximum Green (s)	43.4	24.9	43.4
Minimum Green (s)	20.0	7.0	20.0
Recall	None	C-Max	None
Avg. Green (s)	9.1	0.4	9.1
g/C Ratio	NA	NA	NA
Cycles Skipped (%)	0	0	0
Cycles @ Minimum (%)	0	0	0
Cycles Maxed Out (%)	47	100	47
Cycles with Peds (%)	0	2	13

Controller Summary
Average Cycle Length (s): -9.4

Number of Complete Cycles : 44

APPENDIX G

2032 Intersection Capacity Analysis

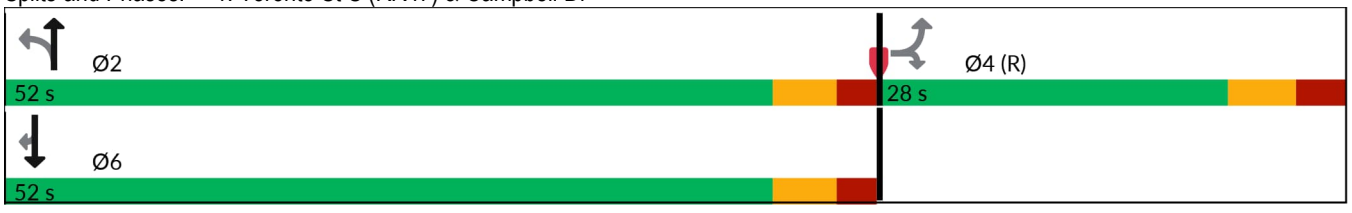
Future Background

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	21	22	42	321	477	64
Future Volume (vph)	21	22	42	321	477	64
Lane Group Flow (vph)	23	24	47	357	530	71
Turn Type	Perm	Perm	Perm	NA	NA	Perm
Protected Phases				2	6	
Permitted Phases	4	4	2			6
Detector Phase	4	4	2	2	6	6
Switch Phase						
Minimum Initial (s)	7.0	7.0	20.0	20.0	20.0	20.0
Minimum Split (s)	25.0	25.0	42.2	42.2	42.2	42.2
Total Split (s)	28.0	28.0	52.0	52.0	52.0	52.0
Total Split (%)	35.0%	35.0%	65.0%	65.0%	65.0%	65.0%
Yellow Time (s)	4.0	4.0	3.9	3.9	3.9	3.9
All-Red Time (s)	3.0	3.0	2.3	2.3	2.3	2.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	6.2	6.2	6.2	6.2
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	None	None	Max	Max
v/c Ratio	0.05	0.06	0.13	0.35	0.50	0.09
Control Delay (s/veh)	22.6	9.9	9.0	10.3	12.4	4.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	22.6	9.9	9.0	10.3	12.4	4.4
Queue Length 50th (m)	2.8	0.0	3.2	28.0	46.7	1.9
Queue Length 95th (m)	8.4	5.6	8.4	44.6	71.8	7.3
Internal Link Dist (m)	124.6			593.6	63.9	
Turn Bay Length (m)	30.0		30.0			15.0
Base Capacity (vph)	452	387	365	1024	1054	828
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.06	0.13	0.35	0.50	0.09

Intersection Summary

Cycle Length: 80
Actuated Cycle Length: 80
Offset: 24 (30%), Referenced to phase 4:EBL and 8:, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated

Splits and Phases: 1: Toronto St S (RR47) & Campbell Dr



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	21	22	42	321	477	64
Future Volume (vph)	21	22	42	321	477	64
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	3.2	3.2	3.2	3.5	3.5	3.2
Total Lost time (s)	7.0	7.0	6.2	6.2	6.2	6.2
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.98	1.00	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1725	1410	1578	1789	1842	1417
Flt Permitted	0.95	1.00	0.38	1.00	1.00	1.00
Satd. Flow (perm)	1725	1410	639	1789	1842	1417
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	23	24	47	357	530	71
RTOR Reduction (vph)	0	18	0	0	0	18
Lane Group Flow (vph)	23	6	47	357	530	53
Confl. Peds. (#/hr)		1	6			6
Heavy Vehicles (%)	0%	7%	9%	5%	2%	6%
Turn Type	Perm	Perm	Perm	NA	NA	Perm
Protected Phases				2	6	
Permitted Phases	4	4	2			6
Actuated Green, G (s)	21.0	21.0	45.8	45.8	45.8	45.8
Effective Green, g (s)	21.0	21.0	45.8	45.8	45.8	45.8
Actuated g/C Ratio	0.26	0.26	0.57	0.57	0.57	0.57
Clearance Time (s)	7.0	7.0	6.2	6.2	6.2	6.2
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	452	370	365	1024	1054	811
v/s Ratio Prot				0.20	c0.29	
v/s Ratio Perm	c0.01	0.00	0.07			0.04
v/c Ratio	0.05	0.02	0.13	0.35	0.50	0.07
Uniform Delay, d1	22.1	21.9	7.9	9.1	10.3	7.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.2	0.1	0.2	0.2	1.7	0.2
Delay (s)	22.3	21.9	8.1	9.3	12.0	7.8
Level of Service	C	C	A	A	B	A
Approach Delay (s/veh)	22.1			9.2	11.5	
Approach LOS	C			A	B	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	11.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	13.2
Intersection Capacity Utilization	60.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	20	35	11	331	506	2
Future Vol, veh/h	20	35	11	331	506	2
Conflicting Peds, #/hr	0	0	3	0	0	3
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	15	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	45	0	0	5	26	0
Mvmt Flow	25	43	14	409	625	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1066	629	630	0	-	0
Stage 1	629	-	-	-	-	-
Stage 2	437	-	-	-	-	-
Critical Hdwy	6.85	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.85	-	-	-	-	-
Critical Hdwy Stg 2	5.85	-	-	-	-	-
Follow-up Hdwy	3.905	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	205	486	962	-	-	-
Stage 1	458	-	-	-	-	-
Stage 2	569	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	201	485	960	-	-	-
Mov Cap-2 Maneuver	201	-	-	-	-	-
Stage 1	450	-	-	-	-	-
Stage 2	568	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	19.3	0.3	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	960	-	320	-	-
HCM Lane V/C Ratio	0.014	-	0.212	-	-
HCM Ctrl Dly (s/v)	8.8	-	19.3	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q (veh)	0	-	0.8	-	-

Intersection	
Int Delay, s/veh	1.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	49	4	7	6	2	6
Future Vol, veh/h	49	4	7	6	2	6
Conflicting Peds, #/hr	0	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	65	65	65	65	65	65
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	75	6	11	9	3	9

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	81	0	109	79
Stage 1	-	-	-	-	78	-
Stage 2	-	-	-	-	31	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1529	-	893	987
Stage 1	-	-	-	-	950	-
Stage 2	-	-	-	-	997	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1529	-	887	986
Mov Cap-2 Maneuver	-	-	-	-	887	-
Stage 1	-	-	-	-	950	-
Stage 2	-	-	-	-	990	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	4	8.8
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	959	-	-	1529	-
HCM Lane V/C Ratio	0.013	-	-	0.007	-
HCM Ctrl Dly (s/v)	8.8	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q (veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	12	10	39	7	1
Future Vol, veh/h	0	12	10	39	7	1
Conflicting Peds, #/hr	2	0	0	2	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	75	75	75	75	75	75
Heavy Vehicles, %	0	0	0	5	14	0
Mvmt Flow	0	16	13	52	9	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	67	0	-	0	57	41
Stage 1	-	-	-	-	41	-
Stage 2	-	-	-	-	16	-
Critical Hdwy	4.1	-	-	-	6.54	6.2
Critical Hdwy Stg 1	-	-	-	-	5.54	-
Critical Hdwy Stg 2	-	-	-	-	5.54	-
Follow-up Hdwy	2.2	-	-	-	3.626	3.3
Pot Cap-1 Maneuver	1547	-	-	-	921	1036
Stage 1	-	-	-	-	952	-
Stage 2	-	-	-	-	977	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1545	-	-	-	919	1035
Mov Cap-2 Maneuver	-	-	-	-	919	-
Stage 1	-	-	-	-	951	-
Stage 2	-	-	-	-	976	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0	0	8.9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1545	-	-	-	932
HCM Lane V/C Ratio	-	-	-	-	0.011
HCM Ctrl Dly (s/v)	0	-	-	-	8.9
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q (veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	19	0	2	40	15	0	0	0	5	0	9
Future Vol, veh/h	0	19	0	2	40	15	0	0	0	5	0	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	1	1	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	75	75	75	75	75	75	75	75	75	75	75	75
Heavy Vehicles, %	0	5	0	0	3	0	0	0	0	0	0	11
Mvmt Flow	0	25	0	3	53	20	0	0	0	7	0	12

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	73	0	0	25	0	0	100	104	26	95	94	63
Stage 1	-	-	-	-	-	-	25	25	-	69	69	-
Stage 2	-	-	-	-	-	-	75	79	-	26	25	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.31
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.399
Pot Cap-1 Maneuver	1540	-	-	1603	-	-	886	790	1056	893	800	977
Stage 1	-	-	-	-	-	-	998	878	-	946	841	-
Stage 2	-	-	-	-	-	-	939	833	-	997	878	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1540	-	-	1603	-	-	874	788	1055	891	798	977
Mov Cap-2 Maneuver	-	-	-	-	-	-	874	788	-	891	798	-
Stage 1	-	-	-	-	-	-	998	878	-	946	839	-
Stage 2	-	-	-	-	-	-	926	831	-	996	878	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0	0.3	0	8.9
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1540	-	-	1603	-	-	944
HCM Lane V/C Ratio	-	-	-	-	0.002	-	-	0.02
HCM Ctrl Dly (s/v)	0	0	-	-	7.3	0	-	8.9
HCM Lane LOS	A	A	-	-	A	A	-	A
HCM 95th %tile Q (veh)	-	0	-	-	0	-	-	0.1

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	60	44	33	761	480	44
Future Volume (vph)	60	44	33	761	480	44
Lane Group Flow (vph)	61	45	34	777	490	45
Turn Type	Perm	Perm	Perm	NA	NA	Perm
Protected Phases				2	6	
Permitted Phases	4	4	2			6
Detector Phase	4	4	2	2	6	6
Switch Phase						
Minimum Initial (s)	7.0	7.0	20.0	20.0	20.0	20.0
Minimum Split (s)	23.5	23.5	42.2	42.2	42.2	42.2
Total Split (s)	30.4	30.4	49.6	49.6	49.6	49.6
Total Split (%)	38.0%	38.0%	62.0%	62.0%	62.0%	62.0%
Yellow Time (s)	3.6	3.6	3.9	3.9	3.9	3.9
All-Red Time (s)	1.9	1.9	2.3	2.3	2.3	2.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	6.2	6.2	6.2	6.2
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	None	None	None	None
v/c Ratio	0.10	0.08	0.11	0.86	0.54	0.06
Control Delay (s/veh)	19.6	7.1	10.3	28.6	16.1	5.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	19.6	7.1	10.3	28.6	16.1	5.4
Queue Length 50th (m)	6.6	0.0	2.6	98.2	48.7	1.4
Queue Length 95th (m)	15.6	7.1	6.9	141.7	70.1	5.8
Internal Link Dist (m)	124.6			593.6	63.9	
Turn Bay Length (m)	30.0		30.0			15.0
Base Capacity (vph)	615	542	355	999	999	787
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.08	0.10	0.78	0.49	0.06

Intersection Summary

Cycle Length: 80
Actuated Cycle Length: 80
Offset: 28 (35%), Referenced to phase 4:EBL and 8:, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated

Splits and Phases: 1: Toronto St S (RR47) & Campbell Dr

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	60	44	33	761	480	44
Future Volume (vph)	60	44	33	761	480	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	3.2	3.2	3.2	3.5	3.5	3.2
Total Lost time (s)	5.5	5.5	6.2	6.2	6.2	6.2
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.98	1.00	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1691	1410	1669	1842	1842	1429
Flt Permitted	0.95	1.00	0.37	1.00	1.00	1.00
Satd. Flow (perm)	1691	1410	655	1842	1842	1429
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	61	45	34	777	490	45
RTOR Reduction (vph)	0	29	0	0	0	13
Lane Group Flow (vph)	61	16	34	777	490	32
Confl. Peds. (#/hr)		1	7			7
Heavy Vehicles (%)	2%	7%	3%	2%	2%	5%
Turn Type	Perm	Perm	Perm	NA	NA	Perm
Protected Phases				2	6	
Permitted Phases	4	4	2			6
Actuated Green, G (s)	29.1	29.1	39.2	39.2	39.2	39.2
Effective Green, g (s)	29.1	29.1	39.2	39.2	39.2	39.2
Actuated g/C Ratio	0.36	0.36	0.49	0.49	0.49	0.49
Clearance Time (s)	5.5	5.5	6.2	6.2	6.2	6.2
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	615	512	320	902	902	700
v/s Ratio Prot				c0.42	0.27	
v/s Ratio Perm	c0.04	0.01	0.05			0.02
v/c Ratio	0.10	0.03	0.11	0.86	0.54	0.05
Uniform Delay, d1	16.8	16.4	11.0	18.0	14.2	10.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.3	0.1	0.1	8.5	0.7	0.0
Delay (s)	17.1	16.5	11.1	26.5	14.8	10.7
Level of Service	B	B	B	C	B	B
Approach Delay (s/veh)	16.9			25.8	14.5	
Approach LOS	B			C	B	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	21.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	11.7
Intersection Capacity Utilization	64.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	15	21	800	509	2
Future Vol, veh/h	2	15	21	800	509	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	15	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	7	0	1	3	50
Mvmt Flow	2	16	22	851	541	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1437	542	543	0	-	0
Stage 1	542	-	-	-	-	-
Stage 2	895	-	-	-	-	-
Critical Hdwy	6.4	6.27	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.363	2.2	-	-	-
Pot Cap-1 Maneuver	148	531	1036	-	-	-
Stage 1	587	-	-	-	-	-
Stage 2	402	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	145	531	1036	-	-	-
Mov Cap-2 Maneuver	145	-	-	-	-	-
Stage 1	575	-	-	-	-	-
Stage 2	402	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	14.3	0.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1036	-	404	-	-
HCM Lane V/C Ratio	0.022	-	0.045	-	-
HCM Ctrl Dly (s/v)	8.6	-	14.3	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q (veh)	0.1	-	0.1	-	-

Intersection	
Int Delay, s/veh	1.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	12	2	1	22	3	5
Future Vol, veh/h	12	2	1	22	3	5
Conflicting Peds, #/hr	0	0	0	0	5	4
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	71	71	71	71	71	71
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	17	3	1	31	4	7

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	20	0	57	23
Stage 1	-	-	-	-	19	-
Stage 2	-	-	-	-	38	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1609	-	955	1060
Stage 1	-	-	-	-	1009	-
Stage 2	-	-	-	-	990	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1609	-	950	1057
Mov Cap-2 Maneuver	-	-	-	-	950	-
Stage 1	-	-	-	-	1009	-
Stage 2	-	-	-	-	985	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.3	8.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1014	-	-	1609	-
HCM Lane V/C Ratio	0.011	-	-	0.001	-
HCM Ctrl Dly (s/v)	8.6	-	-	7.2	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q (veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	3.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	15	21	8	26	0
Future Vol, veh/h	0	15	21	8	26	0
Conflicting Peds, #/hr	2	0	0	2	1	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	76	76	76	76	76	76
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	20	28	11	34	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	41	0	-	0	57	36
Stage 1	-	-	-	-	36	-
Stage 2	-	-	-	-	21	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1581	-	-	-	955	1042
Stage 1	-	-	-	-	992	-
Stage 2	-	-	-	-	1007	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1579	-	-	-	953	1041
Mov Cap-2 Maneuver	-	-	-	-	953	-
Stage 1	-	-	-	-	991	-
Stage 2	-	-	-	-	1006	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0	0	8.9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1579	-	-	-	953
HCM Lane V/C Ratio	-	-	-	-	0.036
HCM Ctrl Dly (s/v)	0	-	-	-	8.9
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q (veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	37	0	4	27	14	0	0	1	14	0	2
Future Vol, veh/h	4	37	0	4	27	14	0	0	1	14	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	0	0	0	0	4	0	0	0	0	0	0	0
Mvmt Flow	5	45	0	5	33	17	0	0	1	17	0	2

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	50	0	0	45	0	0	108	115	45	108	107	42
Stage 1	-	-	-	-	-	-	55	55	-	52	52	-
Stage 2	-	-	-	-	-	-	53	60	-	56	55	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1570	-	-	1576	-	-	876	779	1031	876	787	1034
Stage 1	-	-	-	-	-	-	962	853	-	966	856	-
Stage 2	-	-	-	-	-	-	965	849	-	961	853	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1570	-	-	1576	-	-	870	774	1031	871	782	1034
Mov Cap-2 Maneuver	-	-	-	-	-	-	870	774	-	871	782	-
Stage 1	-	-	-	-	-	-	959	850	-	963	853	-
Stage 2	-	-	-	-	-	-	960	846	-	957	850	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.7	0.6	8.5	9.1
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1031	1570	-	-	1576	-	-	889
HCM Lane V/C Ratio	0.001	0.003	-	-	0.003	-	-	0.022
HCM Ctrl Dly (s/v)	8.5	7.3	0	-	7.3	0	-	9.1
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q (veh)	0	0	-	-	0	-	-	0.1

Future Background SimTraffic

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	7:15	7:15	7:15	7:15	7:15	7:15
End Time	8:45	8:45	8:45	8:45	8:45	8:45
Total Time (min)	90	90	90	90	90	90
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	1071	1134	1205	1087	1141	1127
Vehs Exited	1088	1121	1207	1082	1142	1127
Starting Vehs	45	27	33	27	32	32
Ending Vehs	28	40	31	32	31	31
Travel Distance (km)	1207	1234	1335	1205	1257	1248
Travel Time (hr)	31.4	32.1	35.3	31.2	33.5	32.7
Total Delay (hr)	4.4	4.4	5.3	4.3	5.0	4.7
Total Stops	491	506	580	483	542	519
Fuel Used (l)	91.1	94.7	102.7	92.7	97.6	95.8

Interval #0 Information Seeding

Start Time	7:15
End Time	7:45
Total Time (min)	30

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	7:45
End Time	8:45
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	1071	1134	1205	1087	1141	1127
Vehs Exited	1088	1121	1207	1082	1142	1127
Starting Vehs	45	27	33	27	32	32
Ending Vehs	28	40	31	32	31	31
Travel Distance (km)	1207	1234	1335	1205	1257	1248
Travel Time (hr)	31.4	32.1	35.3	31.2	33.5	32.7
Total Delay (hr)	4.4	4.4	5.3	4.3	5.0	4.7
Total Stops	491	506	580	483	542	519
Fuel Used (l)	91.1	94.7	102.7	92.7	97.6	95.8

Arterial Level of Service: NB Toronto St S (RR47)

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed	Run 1 Speed	Run 1 Delay
Campbell Dr	1	10.0	53.6	0.6	42	42	9.2
Victoria Dr	2	1.1	9.7	0.1	33	33	1.1
Total		11.1	63.3	0.7	40	41	10.2

Arterial Level of Service: NB Toronto St S (RR47)

Cross Street	Run 2 Speed	Run 2 Delay	Run 3 Speed	Run 3 Delay	Run 4 Speed	Run 4 Delay	Run 5 Speed
Campbell Dr	42	9.7	42	10.4	42	9.2	41
Victoria Dr	33	1.1	33	1.1	33	1.1	32
Total	40	10.8	40	11.6	41	10.4	39

Arterial Level of Service: SB Toronto St S (RR47)

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed	Run 1 Speed	Run 1 Delay
Victoria Dr	2	3.3	63.8	0.7	39	39	3.0
Campbell Dr	1	8.0	14.9	0.1	22	21	8.3
Total		11.3	78.7	0.8	36	36	11.3

Arterial Level of Service: SB Toronto St S (RR47)

Cross Street	Run 2 Speed	Run 2 Delay	Run 3 Speed	Run 3 Delay	Run 4 Speed	Run 4 Delay	Run 5 Speed
Victoria Dr	39	3.1	38	4.0	39	3.3	39
Campbell Dr	23	7.3	22	7.7	22	7.6	20
Total	36	10.4	35	11.8	36	10.9	35

Intersection: 1: Toronto St S (RR47) & Campbell Dr

Movement	EB	EB	NB	NB	SB	SB
Directions Served	L	R	L	T	T	R
Maximum Queue (m)	16.8	17.0	25.3	56.4	78.2	47.6
Average Queue (m)	4.6	4.0	8.0	24.7	41.5	9.3
95th Queue (m)	12.8	12.3	18.9	46.8	72.8	31.2
Link Distance (m)		126.5		604.2	75.6	
Upstream Blk Time (%)					1	
Queuing Penalty (veh)					3	
Storage Bay Dist (m)	30.0		30.0			15.0
Storage Blk Time (%)			0	4	24	1
Queuing Penalty (veh)			1	2	16	3

Intersection: 2: Toronto St S (RR47) & Victoria Dr

Movement	EB	NB	SB
Directions Served	LR	L	TR
Maximum Queue (m)	25.8	9.5	36.2
Average Queue (m)	10.1	1.2	2.9
95th Queue (m)	20.2	6.5	22.3
Link Distance (m)	69.9		671.0
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (m)		15.0	
Storage Blk Time (%)		0	
Queuing Penalty (veh)		0	

Intersection: 3: Hospital N Dwy & Victoria Dr

Movement	WB	NB
Directions Served	LT	LR
Maximum Queue (m)	1.7	10.1
Average Queue (m)	0.1	2.0
95th Queue (m)	1.2	8.2
Link Distance (m)	69.9	29.1
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 4: Campbell Dr & Hospital SW Dwy

Movement	SB
Directions Served	LR
Maximum Queue (m)	15.2
Average Queue (m)	3.0
95th Queue (m)	10.8
Link Distance (m)	52.8
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (m)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 5: James Hill Ct./Hospital SE Dwy & Campbell Dr

Movement	SB
Directions Served	LTR
Maximum Queue (m)	14.2
Average Queue (m)	3.8
95th Queue (m)	11.8
Link Distance (m)	40.6
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (m)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 24

Intersection: 1: Toronto St S (RR47) & Campbell Dr

Phase	2	4	6
Movement(s) Served	NBTL	EBL	SBT
Maximum Green (s)	45.8	21.0	45.8
Minimum Green (s)	20.0	7.0	20.0
Recall	None	C-Max	Max
Avg. Green (s)	-13.8	-8.1	-13.8
g/C Ratio	NA	NA	NA
Cycles Skipped (%)	0	0	0
Cycles @ Minimum (%)	0	0	0
Cycles Maxed Out (%)	100	100	100
Cycles with Peds (%)	0	0	11

Controller Summary
Average Cycle Length (s): -9.4

Number of Complete Cycles : 44

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	4:00	4:00	4:00	4:00	4:00	4:00
End Time	5:30	5:30	5:30	5:30	5:30	5:30
Total Time (min)	90	90	90	90	90	90
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	1423	1513	1405	1456	1492	1456
Vehs Exited	1423	1498	1423	1443	1477	1454
Starting Vehs	65	55	56	50	57	57
Ending Vehs	65	70	38	63	72	60
Travel Distance (km)	1835	1959	1818	1862	1914	1878
Travel Time (hr)	51.2	55.5	51.0	52.7	56.7	53.4
Total Delay (hr)	11.1	12.9	11.4	11.8	15.0	12.4
Total Stops	927	1052	978	1029	1213	1038
Fuel Used (l)	140.8	151.5	141.0	143.9	148.9	145.2

Interval #0 Information Seeding

Start Time	4:00
End Time	4:30
Total Time (min)	30

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	4:30
End Time	5:30
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	1423	1513	1405	1456	1492	1456
Vehs Exited	1423	1498	1423	1443	1477	1454
Starting Vehs	65	55	56	50	57	57
Ending Vehs	65	70	38	63	72	60
Travel Distance (km)	1835	1959	1818	1862	1914	1878
Travel Time (hr)	51.2	55.5	51.0	52.7	56.7	53.4
Total Delay (hr)	11.1	12.9	11.4	11.8	15.0	12.4
Total Stops	927	1052	978	1029	1213	1038
Fuel Used (l)	140.8	151.5	141.0	143.9	148.9	145.2

Arterial Level of Service: EB Campbell Dr

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed	Run 1 Speed	Run 1 Delay
Hospital SW Dwy	4	0.0	27.2	0.3	41	40	0.0
James Hill Ct.	5	0.0	5.0	0.1	43	42	0.0
Toronto St S (RR47)	1	18.1	30.2	0.1	19	21	16.3
Total		18.1	62.4	0.5	31	32	16.3

Arterial Level of Service: EB Campbell Dr

Cross Street	Run 2 Speed	Run 2 Delay	Run 3 Speed	Run 3 Delay	Run 4 Speed	Run 4 Delay	Run 5 Speed
Hospital SW Dwy	41	0.0	40	0.2	40	0.0	40
James Hill Ct.	42	0.0	46	0.1	42	0.0	41
Toronto St S (RR47)	18	19.9	20	16.8	20	17.5	17
Total	30	19.9	31	17.1	31	17.5	29

Arterial Level of Service: WB Campbell Dr

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed	Run 1 Speed	Run 1 Delay
Hospital SE Dwy	5	0.4	12.7	0.1	42	43	0.4
Hospital SW Dwy	4	0.1	5.4	0.1	40	39	0.0
Total		0.5	18.1	0.2	42	42	0.4

Arterial Level of Service: WB Campbell Dr

Cross Street	Run 2 Speed	Run 2 Delay	Run 3 Speed	Run 3 Delay	Run 4 Speed	Run 4 Delay	Run 5 Speed
Hospital SE Dwy	44	0.5	40	0.4	43	0.4	40
Hospital SW Dwy	42	0.1	41	0.0	38	0.3	43
Total	44	0.6	40	0.4	41	0.7	41

Intersection: 1: Toronto St S (RR47) & Campbell Dr

Movement	EB	EB	NB	NB	SB	SB
Directions Served	L	R	L	T	T	R
Maximum Queue (m)	20.6	21.2	54.9	176.4	79.9	44.7
Average Queue (m)	8.4	5.7	11.5	94.5	46.5	6.2
95th Queue (m)	18.2	15.6	39.8	164.1	73.6	22.1
Link Distance (m)		126.5		604.2	75.6	
Upstream Blk Time (%)					1	
Queuing Penalty (veh)					5	
Storage Bay Dist (m)	30.0		30.0			15.0
Storage Blk Time (%)	0	0	0	36	35	0
Queuing Penalty (veh)	0	0	0	12	15	1

Intersection: 2: Toronto St S (RR47) & Victoria Dr

Movement	EB	NB	SB
Directions Served	LR	L	TR
Maximum Queue (m)	12.0	12.8	27.4
Average Queue (m)	4.5	2.8	1.3
95th Queue (m)	12.2	10.1	10.8
Link Distance (m)	69.9		671.0
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (m)		15.0	
Storage Blk Time (%)		0	
Queuing Penalty (veh)		1	

Intersection: 3: Hospital N Dwy & Victoria Dr

Movement	NB
Directions Served	LR
Maximum Queue (m)	8.7
Average Queue (m)	2.2
95th Queue (m)	8.3
Link Distance (m)	29.1
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (m)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 4: Campbell Dr & Hospital SW Dwy

Movement	WB	SB
Directions Served	TR	LR
Maximum Queue (m)	3.4	10.6
Average Queue (m)	0.1	5.7
95th Queue (m)	2.4	12.8
Link Distance (m)	41.0	52.8
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 5: James Hill Ct./Hospital SE Dwy & Campbell Dr

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (m)	3.6	1.8	5.2	10.3
Average Queue (m)	0.1	0.1	0.3	3.7
95th Queue (m)	1.8	1.3	2.8	10.8
Link Distance (m)	41.0	126.5	90.0	40.6
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 34

Intersection: 1: Toronto St S (RR47) & Campbell Dr

Phase	2	4	6
Movement(s) Served	NBTL	EBL	SBT
Maximum Green (s)	43.4	24.9	43.4
Minimum Green (s)	20.0	7.0	20.0
Recall	None	C-Max	None
Avg. Green (s)	9.0	0.4	9.0
g/C Ratio	NA	NA	NA
Cycles Skipped (%)	0	0	0
Cycles @ Minimum (%)	0	0	0
Cycles Maxed Out (%)	49	100	49
Cycles with Peds (%)	0	2	13

Controller Summary
Average Cycle Length (s): -9.4

Number of Complete Cycles : 44

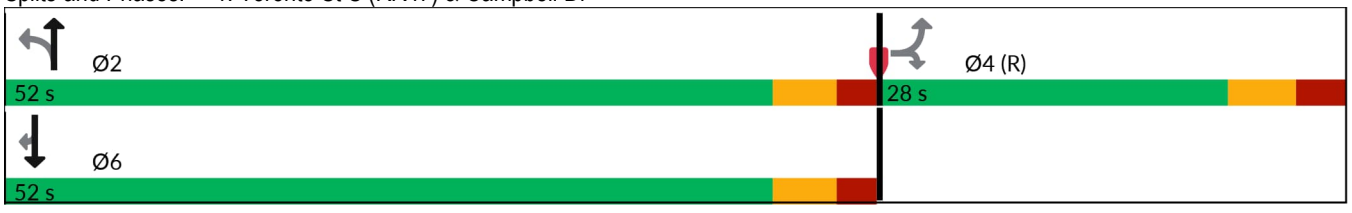
Future Total

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	32	32	92	323	486	137
Future Volume (vph)	32	32	92	323	486	137
Lane Group Flow (vph)	36	36	102	359	540	152
Turn Type	Perm	Perm	Perm	NA	NA	Perm
Protected Phases				2	6	
Permitted Phases	4	4	2			6
Detector Phase	4	4	2	2	6	6
Switch Phase						
Minimum Initial (s)	7.0	7.0	20.0	20.0	20.0	20.0
Minimum Split (s)	25.0	25.0	42.2	42.2	42.2	42.2
Total Split (s)	28.0	28.0	52.0	52.0	52.0	52.0
Total Split (%)	35.0%	35.0%	65.0%	65.0%	65.0%	65.0%
Yellow Time (s)	4.0	4.0	3.9	3.9	3.9	3.9
All-Red Time (s)	3.0	3.0	2.3	2.3	2.3	2.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	6.2	6.2	6.2	6.2
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	None	None	Max	Max
v/c Ratio	0.08	0.09	0.27	0.35	0.51	0.17
Control Delay (s/veh)	22.9	8.8	11.1	10.3	12.4	4.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	22.9	8.8	11.1	10.3	12.4	4.4
Queue Length 50th (m)	4.3	0.0	7.6	28.0	47.7	4.4
Queue Length 95th (m)	11.5	6.9	17.1	44.7	73.1	12.4
Internal Link Dist (m)	124.6			593.6	63.9	
Turn Bay Length (m)	30.0		30.0			15.0
Base Capacity (vph)	452	407	375	1034	1064	879
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.09	0.27	0.35	0.51	0.17

Intersection Summary

Cycle Length: 80
Actuated Cycle Length: 80
Offset: 24 (30%), Referenced to phase 4:EBL and 8:, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated

Splits and Phases: 1: Toronto St S (RR47) & Campbell Dr



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	32	32	92	323	486	137
Future Volume (vph)	32	32	92	323	486	137
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	3.2	3.2	3.2	3.5	3.5	3.2
Total Lost time (s)	7.0	7.0	6.2	6.2	6.2	6.2
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.98	1.00	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1725	1451	1654	1807	1860	1473
Flt Permitted	0.95	1.00	0.38	1.00	1.00	1.00
Satd. Flow (perm)	1725	1451	657	1807	1860	1473
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	36	36	102	359	540	152
RTOR Reduction (vph)	0	27	0	0	0	36
Lane Group Flow (vph)	36	9	102	359	540	116
Confl. Peds. (#/hr)		1	6			6
Heavy Vehicles (%)	0%	4%	4%	4%	1%	2%
Turn Type	Perm	Perm	Perm	NA	NA	Perm
Protected Phases				2	6	
Permitted Phases	4	4	2			6
Actuated Green, G (s)	21.0	21.0	45.8	45.8	45.8	45.8
Effective Green, g (s)	21.0	21.0	45.8	45.8	45.8	45.8
Actuated g/C Ratio	0.26	0.26	0.57	0.57	0.57	0.57
Clearance Time (s)	7.0	7.0	6.2	6.2	6.2	6.2
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	452	380	376	1034	1064	843
v/s Ratio Prot				0.20	c0.29	
v/s Ratio Perm	c0.02	0.01	0.16			0.08
v/c Ratio	0.08	0.02	0.27	0.35	0.51	0.14
Uniform Delay, d1	22.2	21.9	8.7	9.1	10.3	7.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.3	0.1	0.4	0.2	1.7	0.3
Delay (s)	22.6	22.0	9.0	9.3	12.0	8.3
Level of Service	C	C	A	A	B	A
Approach Delay (s/veh)	22.3			9.3	11.2	
Approach LOS	C			A	B	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	11.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	13.2
Intersection Capacity Utilization	77.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	22	44	13	342	579	16
Future Vol, veh/h	22	44	13	342	579	16
Conflicting Peds, #/hr	0	0	3	0	0	3
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	15	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	40	0	0	4	22	0
Mvmt Flow	27	54	16	422	715	20

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1182	728	738	0	-	0
Stage 1	728	-	-	-	-	-
Stage 2	454	-	-	-	-	-
Critical Hdwy	6.8	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.86	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	176	427	877	-	-	-
Stage 1	416	-	-	-	-	-
Stage 2	567	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	172	426	875	-	-	-
Mov Cap-2 Maneuver	172	-	-	-	-	-
Stage 1	408	-	-	-	-	-
Stage 2	566	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	22.6	0.3	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	875	-	285	-	-
HCM Lane V/C Ratio	0.018	-	0.286	-	-
HCM Ctrl Dly (s/v)	9.2	-	22.6	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q (veh)	0.1	-	1.1	-	-

Intersection	
Int Delay, s/veh	3.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	49	13	23	6	6	17
Future Vol, veh/h	49	13	23	6	6	17
Conflicting Peds, #/hr	0	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	65	65	65	65	65	65
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	75	20	35	9	9	26

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	95	0	164	86
Stage 1	-	-	-	-	85	-
Stage 2	-	-	-	-	79	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1512	-	831	978
Stage 1	-	-	-	-	943	-
Stage 2	-	-	-	-	949	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1512	-	812	977
Mov Cap-2 Maneuver	-	-	-	-	812	-
Stage 1	-	-	-	-	943	-
Stage 2	-	-	-	-	927	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	5.9	9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	928	-	-	1512	-
HCM Lane V/C Ratio	0.038	-	-	0.023	-
HCM Ctrl Dly (s/v)	9	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q (veh)	0.1	-	-	0.1	-

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	12	27	128	19	3
Future Vol, veh/h	0	12	27	128	19	3
Conflicting Peds, #/hr	2	0	0	2	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	75	75	75	75	75	75
Heavy Vehicles, %	0	0	0	1	5	0
Mvmt Flow	0	16	36	171	25	4

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	209	0	-	0	140	124
Stage 1	-	-	-	-	124	-
Stage 2	-	-	-	-	16	-
Critical Hdwy	4.1	-	-	-	6.45	6.2
Critical Hdwy Stg 1	-	-	-	-	5.45	-
Critical Hdwy Stg 2	-	-	-	-	5.45	-
Follow-up Hdwy	2.2	-	-	-	3.545	3.3
Pot Cap-1 Maneuver	1374	-	-	-	846	932
Stage 1	-	-	-	-	894	-
Stage 2	-	-	-	-	999	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1372	-	-	-	844	931
Mov Cap-2 Maneuver	-	-	-	-	844	-
Stage 1	-	-	-	-	893	-
Stage 2	-	-	-	-	998	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0	0	9.4
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1372	-	-	-	855
HCM Lane V/C Ratio	-	-	-	-	0.034
HCM Ctrl Dly (s/v)	0	-	-	-	9.4
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q (veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	31	0	2	129	49	0	0	0	14	0	26
Future Vol, veh/h	0	31	0	2	129	49	0	0	0	14	0	26
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	1	1	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	75	75	75	75	75	75	75	75	75	75	75	75
Heavy Vehicles, %	0	3	0	0	0	0	0	0	0	0	0	3
Mvmt Flow	0	41	0	3	172	65	0	0	0	19	0	35

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	237	0	0	41	0	0	269	284	42	253	252	205
Stage 1	-	-	-	-	-	-	41	41	-	211	211	-
Stage 2	-	-	-	-	-	-	228	243	-	42	41	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.327
Pot Cap-1 Maneuver	1342	-	-	1581	-	-	688	628	1034	704	655	833
Stage 1	-	-	-	-	-	-	979	865	-	796	731	-
Stage 2	-	-	-	-	-	-	779	708	-	978	865	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1342	-	-	1581	-	-	658	627	1033	703	654	833
Mov Cap-2 Maneuver	-	-	-	-	-	-	658	627	-	703	654	-
Stage 1	-	-	-	-	-	-	979	865	-	796	730	-
Stage 2	-	-	-	-	-	-	745	707	-	977	865	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0	0.1	0	9.9
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1342	-	-	1581	-	-	782
HCM Lane V/C Ratio	-	-	-	-	0.002	-	-	0.068
HCM Ctrl Dly (s/v)	0	0	-	-	7.3	0	-	9.9
HCM Lane LOS	A	A	-	-	A	A	-	A
HCM 95th %tile Q (veh)	-	0	-	-	0	-	-	0.2

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	114	84	57	764	492	78
Future Volume (vph)	114	84	57	764	492	78
Lane Group Flow (vph)	116	86	58	780	502	80
Turn Type	Perm	Perm	Perm	NA	NA	Perm
Protected Phases				2	6	
Permitted Phases	4	4	2			6
Detector Phase	4	4	2	2	6	6
Switch Phase						
Minimum Initial (s)	7.0	7.0	20.0	20.0	20.0	20.0
Minimum Split (s)	23.5	23.5	42.2	42.2	42.2	42.2
Total Split (s)	30.4	30.4	49.6	49.6	49.6	49.6
Total Split (%)	38.0%	38.0%	62.0%	62.0%	62.0%	62.0%
Yellow Time (s)	3.6	3.6	3.9	3.9	3.9	3.9
All-Red Time (s)	1.9	1.9	2.3	2.3	2.3	2.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	6.2	6.2	6.2	6.2
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	None	None	None	None
v/c Ratio	0.19	0.15	0.18	0.86	0.55	0.11
Control Delay (s/veh)	20.2	5.7	11.6	28.4	16.4	5.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	20.2	5.7	11.6	28.4	16.4	5.3
Queue Length 50th (m)	12.9	0.0	4.7	98.6	50.5	2.6
Queue Length 95th (m)	26.5	9.6	10.9	140.7	71.8	8.6
Internal Link Dist (m)	124.6			593.6	63.9	
Turn Bay Length (m)	30.0		30.0			15.0
Base Capacity (vph)	625	590	350	1009	1009	818
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.15	0.17	0.77	0.50	0.10

Intersection Summary

Cycle Length: 80
Actuated Cycle Length: 80
Offset: 28 (35%), Referenced to phase 4:EBL and 8:, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated

Splits and Phases: 1: Toronto St S (RR47) & Campbell Dr

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	114	84	57	764	492	78
Future Volume (vph)	114	84	57	764	492	78
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	3.2	3.2	3.2	3.5	3.5	3.2
Total Lost time (s)	5.5	5.5	6.2	6.2	6.2	6.2
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.98	1.00	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1708	1465	1702	1860	1860	1471
Flt Permitted	0.95	1.00	0.36	1.00	1.00	1.00
Satd. Flow (perm)	1708	1465	646	1860	1860	1471
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	116	86	58	780	502	80
RTOR Reduction (vph)	0	55	0	0	0	23
Lane Group Flow (vph)	116	31	58	780	502	57
Confl. Peds. (#/hr)		1	7			7
Heavy Vehicles (%)	1%	3%	1%	1%	1%	2%
Turn Type	Perm	Perm	Perm	NA	NA	Perm
Protected Phases				2	6	
Permitted Phases	4	4	2			6
Actuated Green, G (s)	29.3	29.3	39.0	39.0	39.0	39.0
Effective Green, g (s)	29.3	29.3	39.0	39.0	39.0	39.0
Actuated g/C Ratio	0.37	0.37	0.49	0.49	0.49	0.49
Clearance Time (s)	5.5	5.5	6.2	6.2	6.2	6.2
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	625	536	314	906	906	717
v/s Ratio Prot				c0.42	0.27	
v/s Ratio Perm	c0.07	0.02	0.09			0.04
v/c Ratio	0.19	0.06	0.18	0.86	0.55	0.08
Uniform Delay, d1	17.2	16.4	11.5	18.1	14.4	10.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.7	0.2	0.3	8.4	0.7	0.0
Delay (s)	17.9	16.6	11.8	26.5	15.1	11.0
Level of Service	B	B	B	C	B	B
Approach Delay (s/veh)	17.4			25.5	14.6	
Approach LOS	B			C	B	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	20.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	11.7
Intersection Capacity Utilization	72.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	27	24	854	543	2
Future Vol, veh/h	2	27	24	854	543	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	15	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	3	0	0	2	50
Mvmt Flow	2	29	26	909	578	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1540	579	580	0	-	0
Stage 1	579	-	-	-	-	-
Stage 2	961	-	-	-	-	-
Critical Hdwy	6.4	6.23	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.327	2.2	-	-	-
Pot Cap-1 Maneuver	128	513	1004	-	-	-
Stage 1	564	-	-	-	-	-
Stage 2	374	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	125	513	1004	-	-	-
Mov Cap-2 Maneuver	125	-	-	-	-	-
Stage 1	549	-	-	-	-	-
Stage 2	374	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	14.2	0.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1004	-	423	-	-
HCM Lane V/C Ratio	0.025	-	0.073	-	-
HCM Ctrl Dly (s/v)	8.7	-	14.2	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q (veh)	0.1	-	0.2	-	-

Intersection	
Int Delay, s/veh	3.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	12	7	4	22	10	17
Future Vol, veh/h	12	7	4	22	10	17
Conflicting Peds, #/hr	0	0	0	0	5	4
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	71	71	71	71	71	71
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	17	10	6	31	14	24

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	27	0	70	26
Stage 1	-	-	-	-	22	-
Stage 2	-	-	-	-	48	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1600	-	939	1056
Stage 1	-	-	-	-	1006	-
Stage 2	-	-	-	-	980	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1600	-	931	1053
Mov Cap-2 Maneuver	-	-	-	-	931	-
Stage 1	-	-	-	-	1006	-
Stage 2	-	-	-	-	972	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	1.1	8.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1004	-	-	1600	-
HCM Lane V/C Ratio	0.038	-	-	0.004	-
HCM Ctrl Dly (s/v)	8.7	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q (veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	4.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	26	26	30	87	0
Future Vol, veh/h	0	26	26	30	87	0
Conflicting Peds, #/hr	2	0	0	2	1	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	76	76	76	76	76	76
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	34	34	39	114	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	75	0	-	0	91	56
Stage 1	-	-	-	-	56	-
Stage 2	-	-	-	-	35	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1537	-	-	-	914	1016
Stage 1	-	-	-	-	972	-
Stage 2	-	-	-	-	993	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1535	-	-	-	912	1015
Mov Cap-2 Maneuver	-	-	-	-	912	-
Stage 1	-	-	-	-	971	-
Stage 2	-	-	-	-	992	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0	0	9.5
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1535	-	-	-	912
HCM Lane V/C Ratio	-	-	-	-	0.126
HCM Ctrl Dly (s/v)	0	-	-	-	9.5
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q (veh)	0	-	-	-	0.4

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	98	0	4	49	50	0	0	1	47	0	7
Future Vol, veh/h	15	98	0	4	49	50	0	0	1	47	0	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	0	0	0	0	2	0	0	0	0	0	0	0
Mvmt Flow	18	118	0	5	59	60	0	0	1	57	0	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	119	0	0	118	0	0	257	283	118	254	253	89
Stage 1	-	-	-	-	-	-	154	154	-	99	99	-
Stage 2	-	-	-	-	-	-	103	129	-	155	154	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1482	-	-	1483	-	-	700	629	939	703	654	975
Stage 1	-	-	-	-	-	-	853	774	-	912	817	-
Stage 2	-	-	-	-	-	-	908	793	-	852	774	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1482	-	-	1483	-	-	685	618	939	693	643	975
Mov Cap-2 Maneuver	-	-	-	-	-	-	685	618	-	693	643	-
Stage 1	-	-	-	-	-	-	842	764	-	900	814	-
Stage 2	-	-	-	-	-	-	897	790	-	840	764	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	1	0.3	8.8	10.5
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	939	1482	-	-	1483	-	-	720
HCM Lane V/C Ratio	0.001	0.012	-	-	0.003	-	-	0.09
HCM Ctrl Dly (s/v)	8.8	7.5	0	-	7.4	0	-	10.5
HCM Lane LOS	A	A	A	-	A	A	-	B
HCM 95th %tile Q (veh)	0	0	-	-	0	-	-	0.3

Future Total SimTraffic

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	7:15	7:15	7:15	7:15	7:15	7:15
End Time	8:45	8:45	8:45	8:45	8:45	8:45
Total Time (min)	90	90	90	90	90	90
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	1303	1285	1312	1326	1315	1309
Vehs Exited	1298	1291	1335	1334	1318	1315
Starting Vehs	34	34	57	39	37	39
Ending Vehs	39	28	34	31	34	32
Travel Distance (km)	1386	1381	1398	1416	1408	1398
Travel Time (hr)	37.4	37.3	37.7	37.6	38.1	37.6
Total Delay (hr)	5.6	5.7	5.8	5.4	5.9	5.7
Total Stops	655	649	684	685	713	678
Fuel Used (l)	109.0	108.6	109.1	110.2	110.8	109.5

Interval #0 Information Seeding

Start Time	7:15
End Time	7:45
Total Time (min)	30

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	7:45
End Time	8:45
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	1303	1285	1312	1326	1315	1309
Vehs Exited	1298	1291	1335	1334	1318	1315
Starting Vehs	34	34	57	39	37	39
Ending Vehs	39	28	34	31	34	32
Travel Distance (km)	1386	1381	1398	1416	1408	1398
Travel Time (hr)	37.4	37.3	37.7	37.6	38.1	37.6
Total Delay (hr)	5.6	5.7	5.8	5.4	5.9	5.7
Total Stops	655	649	684	685	713	678
Fuel Used (l)	109.0	108.6	109.1	110.2	110.8	109.5

Arterial Level of Service: EB Campbell Dr

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed	Run 1 Speed	Run 1 Delay
Hospital SW Dwy	4	0.1	28.2	0.3	40	42	0.0
James Hill Ct.	5	0.1	5.3	0.1	41	41	0.0
Toronto St S (RR47)	1	24.1	36.6	0.1	15	18	19.0
Total		24.2	70.1	0.5	27	30	19.1

Arterial Level of Service: EB Campbell Dr

Cross Street	Run 2 Speed	Run 2 Delay	Run 3 Speed	Run 3 Delay	Run 4 Speed	Run 4 Delay	Run 5 Speed
Hospital SW Dwy	41	0.4	39	0.1	38	0.0	40
James Hill Ct.	40	0.3	40	0.0	39	0.0	41
Toronto St S (RR47)	15	24.5	13	31.2	16	22.0	15
Total	28	25.2	24	31.2	27	22.0	28

Arterial Level of Service: WB Campbell Dr

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed	Run 1 Speed	Run 1 Delay
Hospital SE Dwy	5	0.6	14.2	0.1	38	37	0.5
Hospital SW Dwy	4	0.6	6.0	0.1	36	37	0.6
Total		1.2	20.3	0.2	37	37	1.2

Arterial Level of Service: WB Campbell Dr

Cross Street	Run 2 Speed	Run 2 Delay	Run 3 Speed	Run 3 Delay	Run 4 Speed	Run 4 Delay	Run 5 Speed
Hospital SE Dwy	37	0.6	37	0.6	39	0.5	38
Hospital SW Dwy	35	0.7	36	0.8	37	0.6	37
Total	36	1.3	37	1.3	38	1.1	38

Intersection: 1: Toronto St S (RR47) & Campbell Dr

Movement	EB	EB	NB	NB	SB	SB
Directions Served	L	R	L	T	T	R
Maximum Queue (m)	18.0	19.2	34.1	50.5	76.6	63.8
Average Queue (m)	6.3	5.3	15.6	23.2	43.1	14.5
95th Queue (m)	15.3	14.4	28.7	44.2	74.7	39.0
Link Distance (m)		126.5		604.2	75.6	
Upstream Blk Time (%)					0	
Queuing Penalty (veh)					2	
Storage Bay Dist (m)	30.0		30.0			15.0
Storage Blk Time (%)			1	4	25	1
Queuing Penalty (veh)			4	3	34	7

Intersection: 2: Toronto St S (RR47) & Victoria Dr

Movement	EB	NB	SB
Directions Served	LR	L	TR
Maximum Queue (m)	22.7	12.8	29.2
Average Queue (m)	10.5	2.1	2.0
95th Queue (m)	19.5	8.8	15.9
Link Distance (m)	69.9		671.0
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (m)		15.0	
Storage Blk Time (%)		0	
Queuing Penalty (veh)		0	

Intersection: 3: Hospital N Dwy & Victoria Dr

Movement	WB	NB
Directions Served	LT	LR
Maximum Queue (m)	9.1	13.0
Average Queue (m)	0.4	4.4
95th Queue (m)	3.6	11.9
Link Distance (m)	69.9	29.1
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 4: Campbell Dr & Hospital SW Dwy

Movement	SB
Directions Served	LR
Maximum Queue (m)	16.7
Average Queue (m)	5.0
95th Queue (m)	13.3
Link Distance (m)	52.8
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (m)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 5: James Hill Ct./Hospital SE Dwy & Campbell Dr

Movement	SB
Directions Served	LTR
Maximum Queue (m)	15.8
Average Queue (m)	7.2
95th Queue (m)	14.4
Link Distance (m)	40.6
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (m)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 50

Intersection: 1: Toronto St S (RR47) & Campbell Dr

Phase	2	4	6
Movement(s) Served	NBTL	EBL	SBT
Maximum Green (s)	45.8	21.0	45.8
Minimum Green (s)	20.0	7.0	20.0
Recall	None	C-Max	Max
Avg. Green (s)	-13.8	-8.1	-13.8
g/C Ratio	NA	NA	NA
Cycles Skipped (%)	0	0	0
Cycles @ Minimum (%)	0	0	0
Cycles Maxed Out (%)	100	100	100
Cycles with Peds (%)	0	0	11

Controller Summary
Average Cycle Length (s): -9.4

Number of Complete Cycles : 44

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	4:00	4:00	4:00	4:00	4:00	4:00
End Time	5:30	5:30	5:30	5:30	5:30	5:30
Total Time (min)	90	90	90	90	90	90
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	1679	1711	1642	1615	1649	1660
Vehs Exited	1683	1707	1653	1617	1658	1665
Starting Vehs	63	56	81	57	60	63
Ending Vehs	59	60	70	55	51	57
Travel Distance (km)	2052	2089	2026	2008	2042	2043
Travel Time (hr)	59.8	58.6	60.0	56.1	58.4	58.6
Total Delay (hr)	14.7	12.7	15.2	12.0	13.6	13.6
Total Stops	1392	1228	1418	1157	1282	1294
Fuel Used (l)	161.3	162.9	160.0	153.7	159.1	159.4

Interval #0 Information Seeding

Start Time	4:00
End Time	4:30
Total Time (min)	30

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	4:30
End Time	5:30
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	1679	1711	1642	1615	1649	1660
Vehs Exited	1683	1707	1653	1617	1658	1665
Starting Vehs	63	56	81	57	60	63
Ending Vehs	59	60	70	55	51	57
Travel Distance (km)	2052	2089	2026	2008	2042	2043
Travel Time (hr)	59.8	58.6	60.0	56.1	58.4	58.6
Total Delay (hr)	14.7	12.7	15.2	12.0	13.6	13.6
Total Stops	1392	1228	1418	1157	1282	1294
Fuel Used (l)	161.3	162.9	160.0	153.7	159.1	159.4

Arterial Level of Service: EB Campbell Dr

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed	Run 1 Speed	Run 1 Delay
Hospital SW Dwy	4	0.1	27.7	0.3	41	40	0.0
James Hill Ct.	5	0.1	5.2	0.1	42	40	0.2
Toronto St S (RR47)	1	19.6	32.3	0.1	17	19	16.9
Total		19.8	65.2	0.5	29	31	17.1

Arterial Level of Service: EB Campbell Dr

Cross Street	Run 2 Speed	Run 2 Delay	Run 3 Speed	Run 3 Delay	Run 4 Speed	Run 4 Delay	Run 5 Speed
Hospital SW Dwy	40	0.1	39	0.1	40	0.1	39
James Hill Ct.	43	0.1	40	0.1	41	0.0	42
Toronto St S (RR47)	16	21.2	16	21.4	20	15.9	16
Total	28	21.4	28	21.7	31	16.0	28

Arterial Level of Service: WB Campbell Dr

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed	Run 1 Speed	Run 1 Delay
Hospital SE Dwy	5	0.6	13.4	0.1	40	40	0.5
Hospital SW Dwy	4	0.4	5.6	0.1	39	43	0.2
Total		0.9	19.0	0.2	40	41	0.7

Arterial Level of Service: WB Campbell Dr

Cross Street	Run 2 Speed	Run 2 Delay	Run 3 Speed	Run 3 Delay	Run 4 Speed	Run 4 Delay	Run 5 Speed
Hospital SE Dwy	40	0.7	38	0.5	40	0.5	40
Hospital SW Dwy	39	0.4	38	0.7	38	0.3	39
Total	40	1.1	38	1.2	39	0.8	40

Intersection: 1: Toronto St S (RR47) & Campbell Dr

Movement	EB	EB	NB	NB	SB	SB
Directions Served	L	R	L	T	T	R
Maximum Queue (m)	30.3	31.8	64.8	186.2	79.2	55.8
Average Queue (m)	13.9	10.7	23.4	94.0	47.8	11.5
95th Queue (m)	26.5	22.7	60.7	166.2	78.3	36.6
Link Distance (m)		126.5		604.2	75.6	
Upstream Blk Time (%)					1	
Queuing Penalty (veh)					6	
Storage Bay Dist (m)	30.0		30.0			15.0
Storage Blk Time (%)	0	0	0	35	33	1
Queuing Penalty (veh)	0	0	2	20	26	3

Intersection: 2: Toronto St S (RR47)/Toronto St S & Victoria Dr

Movement	EB	NB	SB
Directions Served	LR	L	TR
Maximum Queue (m)	19.6	10.6	32.2
Average Queue (m)	6.7	2.8	1.9
95th Queue (m)	15.8	9.9	13.4
Link Distance (m)	69.9		671.0
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (m)		15.0	
Storage Blk Time (%)		0	
Queuing Penalty (veh)		1	

Intersection: 3: Hospital N Dwy & Victoria Dr

Movement	WB	NB
Directions Served	LT	LR
Maximum Queue (m)	1.8	13.4
Average Queue (m)	0.1	5.6
95th Queue (m)	1.3	13.1
Link Distance (m)	69.9	29.1
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 4: Campbell Dr & Hospital SW Dwy

Movement	SB
Directions Served	LR
Maximum Queue (m)	17.7
Average Queue (m)	9.5
95th Queue (m)	14.3
Link Distance (m)	52.8
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (m)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 5: James Hill Ct./Hospital SE Dwy & Campbell Dr

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (m)	11.6	3.6	6.8	15.9
Average Queue (m)	0.8	0.2	0.3	7.9
95th Queue (m)	5.5	2.2	2.8	13.6
Link Distance (m)	41.0	126.5	90.0	40.6
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 58

Intersection: 1: Toronto St S (RR47) & Campbell Dr

Phase	2	4	6
Movement(s) Served	NBTL	EBL	SBT
Maximum Green (s)	43.4	24.9	43.4
Minimum Green (s)	20.0	7.0	20.0
Recall	None	C-Max	None
Avg. Green (s)	10.4	-1.0	10.4
g/C Ratio	NA	NA	NA
Cycles Skipped (%)	0	0	0
Cycles @ Minimum (%)	0	0	0
Cycles Maxed Out (%)	58	100	58
Cycles with Peds (%)	0	2	13

Controller Summary
Average Cycle Length (s): -9.4

Number of Complete Cycles : 44

APPENDIX H

2037 Intersection Capacity Analysis

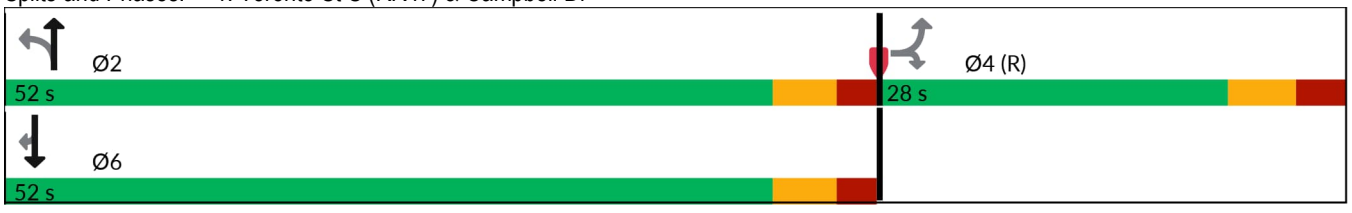
Future Background

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	21	22	42	330	489	64
Future Volume (vph)	21	22	42	330	489	64
Lane Group Flow (vph)	23	24	47	367	543	71
Turn Type	Perm	Perm	Perm	NA	NA	Perm
Protected Phases				2	6	
Permitted Phases	4	4	2			6
Detector Phase	4	4	2	2	6	6
Switch Phase						
Minimum Initial (s)	7.0	7.0	20.0	20.0	20.0	20.0
Minimum Split (s)	25.0	25.0	42.2	42.2	42.2	42.2
Total Split (s)	28.0	28.0	52.0	52.0	52.0	52.0
Total Split (%)	35.0%	35.0%	65.0%	65.0%	65.0%	65.0%
Yellow Time (s)	4.0	4.0	3.9	3.9	3.9	3.9
All-Red Time (s)	3.0	3.0	2.3	2.3	2.3	2.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	6.2	6.2	6.2	6.2
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	None	None	Max	Max
v/c Ratio	0.05	0.06	0.13	0.36	0.52	0.09
Control Delay (s/veh)	22.6	9.9	9.1	10.4	12.6	4.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	22.6	9.9	9.1	10.4	12.6	4.5
Queue Length 50th (m)	2.8	0.0	3.2	29.0	48.2	2.0
Queue Length 95th (m)	8.4	5.6	8.5	46.1	74.2	7.3
Internal Link Dist (m)	124.6			593.6	63.9	
Turn Bay Length (m)	30.0		30.0			15.0
Base Capacity (vph)	452	387	356	1024	1054	828
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.06	0.13	0.36	0.52	0.09

Intersection Summary

Cycle Length: 80
Actuated Cycle Length: 80
Offset: 24 (30%), Referenced to phase 4:EBL and 8:, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated

Splits and Phases: 1: Toronto St S (RR47) & Campbell Dr



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	21	22	42	330	489	64
Future Volume (vph)	21	22	42	330	489	64
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	3.2	3.2	3.2	3.5	3.5	3.2
Total Lost time (s)	7.0	7.0	6.2	6.2	6.2	6.2
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.98	1.00	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1725	1410	1578	1789	1842	1417
Flt Permitted	0.95	1.00	0.38	1.00	1.00	1.00
Satd. Flow (perm)	1725	1410	623	1789	1842	1417
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	23	24	47	367	543	71
RTOR Reduction (vph)	0	18	0	0	0	17
Lane Group Flow (vph)	23	6	47	367	543	54
Confl. Peds. (#/hr)		1	6			6
Heavy Vehicles (%)	0%	7%	9%	5%	2%	6%
Turn Type	Perm	Perm	Perm	NA	NA	Perm
Protected Phases				2	6	
Permitted Phases	4	4	2			6
Actuated Green, G (s)	21.0	21.0	45.8	45.8	45.8	45.8
Effective Green, g (s)	21.0	21.0	45.8	45.8	45.8	45.8
Actuated g/C Ratio	0.26	0.26	0.57	0.57	0.57	0.57
Clearance Time (s)	7.0	7.0	6.2	6.2	6.2	6.2
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	452	370	356	1024	1054	811
v/s Ratio Prot				0.21	c0.29	
v/s Ratio Perm	c0.01	0.00	0.08			0.04
v/c Ratio	0.05	0.02	0.13	0.36	0.52	0.07
Uniform Delay, d1	22.1	21.9	7.9	9.2	10.4	7.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.2	0.1	0.2	0.2	1.8	0.2
Delay (s)	22.3	21.9	8.1	9.4	12.2	7.8
Level of Service	C	C	A	A	B	A
Approach Delay (s/veh)	22.1			9.3	11.7	
Approach LOS	C			A	B	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	11.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	13.2
Intersection Capacity Utilization	60.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	20	35	11	340	518	2
Future Vol, veh/h	20	35	11	340	518	2
Conflicting Peds, #/hr	0	0	3	0	0	3
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	15	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	45	0	0	5	26	0
Mvmt Flow	25	43	14	420	640	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1092	644	645	0	-	0
Stage 1	644	-	-	-	-	-
Stage 2	448	-	-	-	-	-
Critical Hdwy	6.85	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.85	-	-	-	-	-
Critical Hdwy Stg 2	5.85	-	-	-	-	-
Follow-up Hdwy	3.905	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	197	476	950	-	-	-
Stage 1	450	-	-	-	-	-
Stage 2	562	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	193	475	948	-	-	-
Mov Cap-2 Maneuver	193	-	-	-	-	-
Stage 1	442	-	-	-	-	-
Stage 2	561	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	19.8	0.3	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	948	-	310	-	-
HCM Lane V/C Ratio	0.014	-	0.219	-	-
HCM Ctrl Dly (s/v)	8.9	-	19.8	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q (veh)	0	-	0.8	-	-

Intersection	
Int Delay, s/veh	1.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	49	4	7	6	2	6
Future Vol, veh/h	49	4	7	6	2	6
Conflicting Peds, #/hr	0	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	65	65	65	65	65	65
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	75	6	11	9	3	9

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	81	0	109	79
Stage 1	-	-	-	-	78	-
Stage 2	-	-	-	-	31	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1529	-	893	987
Stage 1	-	-	-	-	950	-
Stage 2	-	-	-	-	997	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1529	-	887	986
Mov Cap-2 Maneuver	-	-	-	-	887	-
Stage 1	-	-	-	-	950	-
Stage 2	-	-	-	-	990	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	4	8.8
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	959	-	-	1529	-
HCM Lane V/C Ratio	0.013	-	-	0.007	-
HCM Ctrl Dly (s/v)	8.8	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q (veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	12	10	39	7	1
Future Vol, veh/h	0	12	10	39	7	1
Conflicting Peds, #/hr	2	0	0	2	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	75	75	75	75	75	75
Heavy Vehicles, %	0	0	0	5	14	0
Mvmt Flow	0	16	13	52	9	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	67	0	-	0	57	41
Stage 1	-	-	-	-	41	-
Stage 2	-	-	-	-	16	-
Critical Hdwy	4.1	-	-	-	6.54	6.2
Critical Hdwy Stg 1	-	-	-	-	5.54	-
Critical Hdwy Stg 2	-	-	-	-	5.54	-
Follow-up Hdwy	2.2	-	-	-	3.626	3.3
Pot Cap-1 Maneuver	1547	-	-	-	921	1036
Stage 1	-	-	-	-	952	-
Stage 2	-	-	-	-	977	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1545	-	-	-	919	1035
Mov Cap-2 Maneuver	-	-	-	-	919	-
Stage 1	-	-	-	-	951	-
Stage 2	-	-	-	-	976	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0	0	8.9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1545	-	-	-	932
HCM Lane V/C Ratio	-	-	-	-	0.011
HCM Ctrl Dly (s/v)	0	-	-	-	8.9
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q (veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	19	0	2	40	15	0	0	0	5	0	9
Future Vol, veh/h	0	19	0	2	40	15	0	0	0	5	0	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	1	1	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	75	75	75	75	75	75	75	75	75	75	75	75
Heavy Vehicles, %	0	5	0	0	3	0	0	0	0	0	0	11
Mvmt Flow	0	25	0	3	53	20	0	0	0	7	0	12

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	73	0	0	25	0	0	100	104	26	95	94	63
Stage 1	-	-	-	-	-	-	25	25	-	69	69	-
Stage 2	-	-	-	-	-	-	75	79	-	26	25	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.31
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.399
Pot Cap-1 Maneuver	1540	-	-	1603	-	-	886	790	1056	893	800	977
Stage 1	-	-	-	-	-	-	998	878	-	946	841	-
Stage 2	-	-	-	-	-	-	939	833	-	997	878	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1540	-	-	1603	-	-	874	788	1055	891	798	977
Mov Cap-2 Maneuver	-	-	-	-	-	-	874	788	-	891	798	-
Stage 1	-	-	-	-	-	-	998	878	-	946	839	-
Stage 2	-	-	-	-	-	-	926	831	-	996	878	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0	0.3	0	8.9
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1540	-	-	1603	-	-	944
HCM Lane V/C Ratio	-	-	-	-	0.002	-	-	0.02
HCM Ctrl Dly (s/v)	0	0	-	-	7.3	0	-	8.9
HCM Lane LOS	A	A	-	-	A	A	-	A
HCM 95th %tile Q (veh)	-	0	-	-	0	-	-	0.1

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	60	44	33	780	492	44
Future Volume (vph)	60	44	33	780	492	44
Lane Group Flow (vph)	61	45	34	796	502	45
Turn Type	Perm	Perm	Perm	NA	NA	Perm
Protected Phases				2	6	
Permitted Phases	4	4	2			6
Detector Phase	4	4	2	2	6	6
Switch Phase						
Minimum Initial (s)	7.0	7.0	20.0	20.0	20.0	20.0
Minimum Split (s)	23.5	23.5	42.2	42.2	42.2	42.2
Total Split (s)	30.4	30.4	49.6	49.6	49.6	49.6
Total Split (%)	38.0%	38.0%	62.0%	62.0%	62.0%	62.0%
Yellow Time (s)	3.6	3.6	3.9	3.9	3.9	3.9
All-Red Time (s)	1.9	1.9	2.3	2.3	2.3	2.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	6.2	6.2	6.2	6.2
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	None	None	None	None
v/c Ratio	0.10	0.08	0.11	0.87	0.55	0.06
Control Delay (s/veh)	19.8	7.1	10.2	29.3	16.0	5.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	19.8	7.1	10.2	29.3	16.0	5.4
Queue Length 50th (m)	6.7	0.0	2.6	100.4	49.5	1.5
Queue Length 95th (m)	15.6	7.1	7.0	147.8	72.4	5.9
Internal Link Dist (m)	124.6			593.6	63.9	
Turn Bay Length (m)	30.0		30.0			15.0
Base Capacity (vph)	605	533	348	999	999	786
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.08	0.10	0.80	0.50	0.06

Intersection Summary

Cycle Length: 80
Actuated Cycle Length: 80
Offset: 28 (35%), Referenced to phase 4:EBL and 8:, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated

Splits and Phases: 1: Toronto St S (RR47) & Campbell Dr

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	60	44	33	780	492	44
Future Volume (vph)	60	44	33	780	492	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	3.2	3.2	3.2	3.5	3.5	3.2
Total Lost time (s)	5.5	5.5	6.2	6.2	6.2	6.2
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.98	1.00	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1691	1410	1669	1842	1842	1429
Flt Permitted	0.95	1.00	0.37	1.00	1.00	1.00
Satd. Flow (perm)	1691	1410	643	1842	1842	1429
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	61	45	34	796	502	45
RTOR Reduction (vph)	0	29	0	0	0	13
Lane Group Flow (vph)	61	16	34	796	502	32
Confl. Peds. (#/hr)		1	7			7
Heavy Vehicles (%)	2%	7%	3%	2%	2%	5%
Turn Type	Perm	Perm	Perm	NA	NA	Perm
Protected Phases				2	6	
Permitted Phases	4	4	2			6
Actuated Green, G (s)	28.6	28.6	39.7	39.7	39.7	39.7
Effective Green, g (s)	28.6	28.6	39.7	39.7	39.7	39.7
Actuated g/C Ratio	0.36	0.36	0.50	0.50	0.50	0.50
Clearance Time (s)	5.5	5.5	6.2	6.2	6.2	6.2
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	604	504	319	914	914	709
v/s Ratio Prot				c0.43	0.27	
v/s Ratio Perm	c0.04	0.01	0.05			0.02
v/c Ratio	0.10	0.03	0.11	0.87	0.55	0.05
Uniform Delay, d1	17.1	16.7	10.7	17.9	14.0	10.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.3	0.1	0.1	9.1	0.7	0.0
Delay (s)	17.5	16.8	10.9	27.0	14.6	10.4
Level of Service	B	B	B	C	B	B
Approach Delay (s/veh)	17.2			26.3	14.3	
Approach LOS	B			C	B	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	21.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	11.7
Intersection Capacity Utilization	65.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	15	21	819	521	2
Future Vol, veh/h	2	15	21	819	521	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	15	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	7	0	1	3	50
Mvmt Flow	2	16	22	871	554	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1470	555	556	0	-	0
Stage 1	555	-	-	-	-	-
Stage 2	915	-	-	-	-	-
Critical Hdwy	6.4	6.27	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.363	2.2	-	-	-
Pot Cap-1 Maneuver	142	522	1025	-	-	-
Stage 1	579	-	-	-	-	-
Stage 2	394	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	139	522	1025	-	-	-
Mov Cap-2 Maneuver	139	-	-	-	-	-
Stage 1	567	-	-	-	-	-
Stage 2	394	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	14.6	0.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1025	-	394	-	-
HCM Lane V/C Ratio	0.022	-	0.046	-	-
HCM Ctrl Dly (s/v)	8.6	-	14.6	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q (veh)	0.1	-	0.1	-	-

Intersection	
Int Delay, s/veh	1.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	12	2	1	22	3	5
Future Vol, veh/h	12	2	1	22	3	5
Conflicting Peds, #/hr	0	0	0	0	5	4
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	71	71	71	71	71	71
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	17	3	1	31	4	7

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	20	0	57	23
Stage 1	-	-	-	-	19	-
Stage 2	-	-	-	-	38	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1609	-	955	1060
Stage 1	-	-	-	-	1009	-
Stage 2	-	-	-	-	990	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1609	-	950	1057
Mov Cap-2 Maneuver	-	-	-	-	950	-
Stage 1	-	-	-	-	1009	-
Stage 2	-	-	-	-	985	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.3	8.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1014	-	-	1609	-
HCM Lane V/C Ratio	0.011	-	-	0.001	-
HCM Ctrl Dly (s/v)	8.6	-	-	7.2	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q (veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	3.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	15	21	8	26	0
Future Vol, veh/h	0	15	21	8	26	0
Conflicting Peds, #/hr	2	0	0	2	1	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	76	76	76	76	76	76
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	20	28	11	34	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	41	0	-	0	57	36
Stage 1	-	-	-	-	36	-
Stage 2	-	-	-	-	21	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1581	-	-	-	955	1042
Stage 1	-	-	-	-	992	-
Stage 2	-	-	-	-	1007	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1579	-	-	-	953	1041
Mov Cap-2 Maneuver	-	-	-	-	953	-
Stage 1	-	-	-	-	991	-
Stage 2	-	-	-	-	1006	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0	0	8.9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1579	-	-	-	953
HCM Lane V/C Ratio	-	-	-	-	0.036
HCM Ctrl Dly (s/v)	0	-	-	-	8.9
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q (veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	37	0	4	27	14	0	0	1	14	0	2
Future Vol, veh/h	4	37	0	4	27	14	0	0	1	14	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	0	0	0	0	4	0	0	0	0	0	0	0
Mvmt Flow	5	45	0	5	33	17	0	0	1	17	0	2

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	50	0	0	45	0	0	108	115	45	108	107	42
Stage 1	-	-	-	-	-	-	55	55	-	52	52	-
Stage 2	-	-	-	-	-	-	53	60	-	56	55	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1570	-	-	1576	-	-	876	779	1031	876	787	1034
Stage 1	-	-	-	-	-	-	962	853	-	966	856	-
Stage 2	-	-	-	-	-	-	965	849	-	961	853	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1570	-	-	1576	-	-	870	774	1031	871	782	1034
Mov Cap-2 Maneuver	-	-	-	-	-	-	870	774	-	871	782	-
Stage 1	-	-	-	-	-	-	959	850	-	963	853	-
Stage 2	-	-	-	-	-	-	960	846	-	957	850	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.7	0.6	8.5	9.1
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1031	1570	-	-	1576	-	-	889
HCM Lane V/C Ratio	0.001	0.003	-	-	0.003	-	-	0.022
HCM Ctrl Dly (s/v)	8.5	7.3	0	-	7.3	0	-	9.1
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q (veh)	0	0	-	-	0	-	-	0.1

Future Background SimTraffic

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	7:15	7:15	7:15	7:15	7:15	7:15
End Time	8:45	8:45	8:45	8:45	8:45	8:45
Total Time (min)	90	90	90	90	90	90
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	1081	1164	1116	1093	1115	1116
Vehs Exited	1079	1153	1112	1101	1118	1113
Starting Vehs	35	18	27	38	33	27
Ending Vehs	37	29	31	30	30	32
Travel Distance (km)	1214	1307	1236	1242	1249	1250
Travel Time (hr)	31.7	34.6	32.0	32.5	32.6	32.7
Total Delay (hr)	4.5	5.4	4.5	4.6	4.7	4.7
Total Stops	496	571	499	496	512	513
Fuel Used (l)	92.7	100.9	94.1	94.8	95.0	95.5

Interval #0 Information Seeding

Start Time	7:15
End Time	7:45
Total Time (min)	30

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	7:45
End Time	8:45
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	1081	1164	1116	1093	1115	1116
Vehs Exited	1079	1153	1112	1101	1118	1113
Starting Vehs	35	18	27	38	33	27
Ending Vehs	37	29	31	30	30	32
Travel Distance (km)	1214	1307	1236	1242	1249	1250
Travel Time (hr)	31.7	34.6	32.0	32.5	32.6	32.7
Total Delay (hr)	4.5	5.4	4.5	4.6	4.7	4.7
Total Stops	496	571	499	496	512	513
Fuel Used (l)	92.7	100.9	94.1	94.8	95.0	95.5

Arterial Level of Service: EB Campbell Dr

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed	Run 1 Speed	Run 1 Delay
Hospital SW Dwy	4	0.0	27.3	0.3	41	42	0.0
James Hill Ct.	5	0.0	5.1	0.1	42	43	0.0
Toronto St S (RR47)	1	24.4	36.4	0.1	16	18	21.3
Total		24.4	68.8	0.5	28	30	21.4

Arterial Level of Service: EB Campbell Dr

Cross Street	Run 2 Speed	Run 2 Delay	Run 3 Speed	Run 3 Delay	Run 4 Speed	Run 4 Delay	Run 5 Speed
Hospital SW Dwy	42	0.0	40	0.0	38	0.0	41
James Hill Ct.	43	0.0	42	0.0	39	0.0	42
Toronto St S (RR47)	15	27.8	19	19.9	17	20.7	13
Total	27	27.8	31	19.9	28	20.7	26

Arterial Level of Service: WB Campbell Dr

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed	Run 1 Speed	Run 1 Delay
Hospital SE Dwy	5	0.3	11.9	0.1	45	45	0.3
Hospital SW Dwy	4	0.2	5.6	0.1	39	42	0.0
Total		0.6	17.5	0.2	43	44	0.3

Arterial Level of Service: WB Campbell Dr

Cross Street	Run 2 Speed	Run 2 Delay	Run 3 Speed	Run 3 Delay	Run 4 Speed	Run 4 Delay	Run 5 Speed
Hospital SE Dwy	44	0.4	43	0.3	47	0.4	45
Hospital SW Dwy	39	0.4	41	0.0	37	0.7	42
Total	43	0.8	42	0.3	43	1.0	44

Intersection: 1: Toronto St S (RR47) & Campbell Dr

Movement	EB	EB	NB	NB	SB	SB
Directions Served	L	R	L	T	T	R
Maximum Queue (m)	15.6	13.7	22.1	57.0	80.1	55.2
Average Queue (m)	4.7	4.0	7.7	26.2	41.6	10.2
95th Queue (m)	12.8	12.4	19.4	48.1	70.9	34.3
Link Distance (m)		126.5		604.2	75.6	
Upstream Blk Time (%)					0	
Queuing Penalty (veh)					2	
Storage Bay Dist (m)	30.0		30.0			15.0
Storage Blk Time (%)			0	5	24	0
Queuing Penalty (veh)			1	2	15	1

Intersection: 2: Toronto St S (RR47) & Victoria Dr

Movement	EB	NB	SB
Directions Served	LR	L	TR
Maximum Queue (m)	30.1	15.3	23.4
Average Queue (m)	10.6	1.8	1.2
95th Queue (m)	22.0	8.5	9.6
Link Distance (m)	69.9		671.0
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (m)		15.0	
Storage Blk Time (%)		0	
Queuing Penalty (veh)		0	

Intersection: 3: Hospital N Dwy & Victoria Dr

Movement	WB	NB
Directions Served	LT	LR
Maximum Queue (m)	3.7	8.7
Average Queue (m)	0.1	1.9
95th Queue (m)	1.9	7.8
Link Distance (m)	69.9	29.1
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 4: Campbell Dr & Hospital SW Dwy

Movement	WB	SB
Directions Served	TR	LR
Maximum Queue (m)	1.8	10.0
Average Queue (m)	0.1	2.1
95th Queue (m)	1.3	8.3
Link Distance (m)	41.0	52.8
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 5: James Hill Ct./Hospital SE Dwy & Campbell Dr

Movement	WB	SB
Directions Served	LTR	LTR
Maximum Queue (m)	1.8	11.2
Average Queue (m)	0.1	3.2
95th Queue (m)	1.3	10.4
Link Distance (m)	126.5	40.6
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 22

Intersection: 1: Toronto St S (RR47) & Campbell Dr

Phase	2	4	6
Movement(s) Served	NBTL	EBL	SBT
Maximum Green (s)	45.8	21.0	45.8
Minimum Green (s)	20.0	7.0	20.0
Recall	None	C-Max	Max
Avg. Green (s)	-13.8	-8.1	-13.8
g/C Ratio	NA	NA	NA
Cycles Skipped (%)	0	0	0
Cycles @ Minimum (%)	0	0	0
Cycles Maxed Out (%)	100	100	100
Cycles with Peds (%)	0	2	9

Controller Summary
Average Cycle Length (s): -9.4

Number of Complete Cycles : 44

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	4:00	4:00	4:00	4:00	4:00	4:00
End Time	5:30	5:30	5:30	5:30	5:30	5:30
Total Time (min)	90	90	90	90	90	90
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	1454	1534	1430	1466	1539	1483
Vehs Exited	1454	1551	1444	1450	1515	1483
Starting Vehs	65	70	56	44	55	58
Ending Vehs	65	53	42	60	79	57
Travel Distance (km)	1878	2004	1850	1875	1959	1913
Travel Time (hr)	53.0	57.2	52.8	54.6	56.8	54.9
Total Delay (hr)	11.9	13.5	12.4	13.5	14.0	13.1
Total Stops	994	1115	1048	1126	1149	1084
Fuel Used (l)	145.0	156.7	144.3	146.9	151.9	148.9

Interval #0 Information Seeding

Start Time	4:00
End Time	4:30
Total Time (min)	30

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	4:30
End Time	5:30
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	1454	1534	1430	1466	1539	1483
Vehs Exited	1454	1551	1444	1450	1515	1483
Starting Vehs	65	70	56	44	55	58
Ending Vehs	65	53	42	60	79	57
Travel Distance (km)	1878	2004	1850	1875	1959	1913
Travel Time (hr)	53.0	57.2	52.8	54.6	56.8	54.9
Total Delay (hr)	11.9	13.5	12.4	13.5	14.0	13.1
Total Stops	994	1115	1048	1126	1149	1084
Fuel Used (l)	145.0	156.7	144.3	146.9	151.9	148.9

Arterial Level of Service: EB Victoria Dr

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed	Run 1 Speed	Run 1 Delay
Hospital N Dwy	3	0.0	8.0	0.1	43	44	0.0
Toronto St S (RR47)	2	13.9	20.6	0.1	15	26	4.5
Total		13.9	28.6	0.2	23	33	4.5

Arterial Level of Service: EB Victoria Dr

Cross Street	Run 2 Speed	Run 2 Delay	Run 3 Speed	Run 3 Delay	Run 4 Speed	Run 4 Delay	Run 5 Speed
Hospital N Dwy	46	0.0	43	0.0	43	0.0	43
Toronto St S (RR47)	16	10.7	11	20.2	-	-	7
Total	25	10.7	18	20.2	83	0.0	13

Arterial Level of Service: NB Victoria Dr

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed	Run 1 Speed	Run 1 Delay
Hospital N Dwy	3	0.1	8.4	0.1	37	84	0.0
Total		0.1	8.4	0.1	37	84	0.0

Arterial Level of Service: NB Victoria Dr

Cross Street	Run 2 Speed	Run 2 Delay	Run 3 Speed	Run 3 Delay	Run 4 Speed	Run 4 Delay	Run 5 Speed
Hospital N Dwy	32	0.1	35	0.1	34	0.1	43
Total	32	0.1	35	0.1	34	0.1	43

Intersection: 1: Toronto St S (RR47) & Campbell Dr

Movement	EB	EB	NB	NB	SB	SB
Directions Served	L	R	L	T	T	R
Maximum Queue (m)	23.1	19.8	64.8	189.6	80.0	46.7
Average Queue (m)	8.7	6.6	13.0	101.7	47.9	7.6
95th Queue (m)	18.9	16.4	44.0	169.1	76.7	28.9
Link Distance (m)		126.5		604.2	75.6	
Upstream Blk Time (%)					1	
Queuing Penalty (veh)					6	
Storage Bay Dist (m)	30.0		30.0			15.0
Storage Blk Time (%)	0			36	34	0
Queuing Penalty (veh)	0			12	15	2

Intersection: 2: Toronto St S (RR47) & Victoria Dr

Movement	EB	NB	SB
Directions Served	LR	L	TR
Maximum Queue (m)	13.4	10.4	48.4
Average Queue (m)	4.0	2.8	3.2
95th Queue (m)	11.9	9.8	23.2
Link Distance (m)	69.9		671.0
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (m)		15.0	
Storage Blk Time (%)		0	
Queuing Penalty (veh)		0	

Intersection: 3: Hospital N Dwy & Victoria Dr

Movement	NB
Directions Served	LR
Maximum Queue (m)	8.8
Average Queue (m)	1.8
95th Queue (m)	7.6
Link Distance (m)	29.1
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (m)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 4: Campbell Dr & Hospital SW Dwy

Movement	SB
Directions Served	LR
Maximum Queue (m)	9.0
Average Queue (m)	5.2
95th Queue (m)	12.3
Link Distance (m)	52.8
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (m)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 5: James Hill Ct./Hospital SE Dwy & Campbell Dr

Movement	EB	NB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (m)	1.8	3.4	10.3
Average Queue (m)	0.1	0.1	3.6
95th Queue (m)	1.3	1.7	10.7
Link Distance (m)	41.0	90.0	40.6
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (m)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Network Summary

Network wide Queuing Penalty: 36

Intersection: 1: Toronto St S (RR47) & Campbell Dr

Phase	2	4	6
Movement(s) Served	NBTL	EBL	SBT
Maximum Green (s)	43.4	24.9	43.4
Minimum Green (s)	20.0	7.0	20.0
Recall	None	C-Max	None
Avg. Green (s)	9.6	-0.1	9.6
g/C Ratio	NA	NA	NA
Cycles Skipped (%)	0	0	0
Cycles @ Minimum (%)	0	0	0
Cycles Maxed Out (%)	58	100	58
Cycles with Peds (%)	0	0	11

Controller Summary
Average Cycle Length (s): -9.4

Number of Complete Cycles : 44

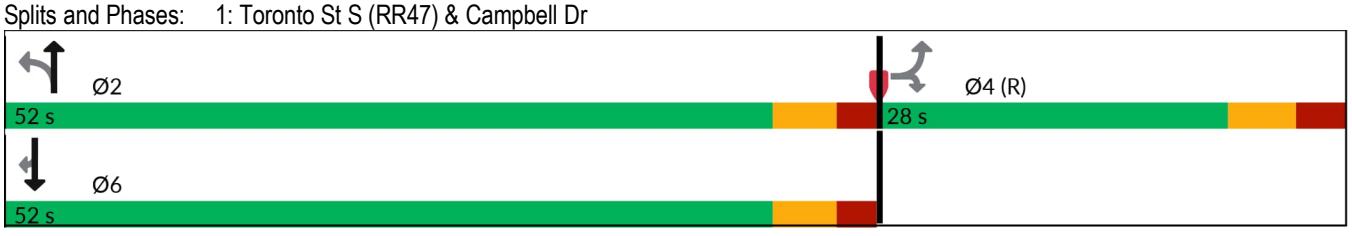
Future Total

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	32	32	92	332	498	137
Future Volume (vph)	32	32	92	332	498	137
Lane Group Flow (vph)	36	36	102	369	553	152
Turn Type	Perm	Perm	Perm	NA	NA	Perm
Protected Phases				2	6	
Permitted Phases	4	4	2			6
Detector Phase	4	4	2	2	6	6
Switch Phase						
Minimum Initial (s)	7.0	7.0	20.0	20.0	20.0	20.0
Minimum Split (s)	25.0	25.0	42.2	42.2	42.2	42.2
Total Split (s)	28.0	28.0	52.0	52.0	52.0	52.0
Total Split (%)	35.0%	35.0%	65.0%	65.0%	65.0%	65.0%
Yellow Time (s)	4.0	4.0	3.9	3.9	3.9	3.9
All-Red Time (s)	3.0	3.0	2.3	2.3	2.3	2.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	6.2	6.2	6.2	6.2
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	None	None	Max	Max
v/c Ratio	0.08	0.09	0.28	0.36	0.52	0.17
Control Delay (s/veh)	22.9	8.8	11.3	10.4	12.6	4.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	22.9	8.8	11.3	10.4	12.6	4.5
Queue Length 50th (m)	4.3	0.0	7.6	29.1	49.3	4.5
Queue Length 95th (m)	11.5	6.9	17.2	46.2	75.5	12.6
Internal Link Dist (m)	124.6			593.6	63.9	
Turn Bay Length (m)	30.0		30.0			15.0
Base Capacity (vph)	452	407	366	1034	1064	878
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.09	0.28	0.36	0.52	0.17

Intersection Summary

Cycle Length: 80
Actuated Cycle Length: 80
Offset: 24 (30%), Referenced to phase 4:EBL and 8:, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated

Splits and Phases: 1: Toronto St S (RR47) & Campbell Dr



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	32	32	92	332	498	137
Future Volume (vph)	32	32	92	332	498	137
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	3.2	3.2	3.2	3.5	3.5	3.2
Total Lost time (s)	7.0	7.0	6.2	6.2	6.2	6.2
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.98	1.00	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1725	1451	1654	1807	1860	1473
Flt Permitted	0.95	1.00	0.37	1.00	1.00	1.00
Satd. Flow (perm)	1725	1451	640	1807	1860	1473
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	36	36	102	369	553	152
RTOR Reduction (vph)	0	27	0	0	0	35
Lane Group Flow (vph)	36	9	102	369	553	117
Confl. Peds. (#/hr)		1	6			6
Heavy Vehicles (%)	0%	4%	4%	4%	1%	2%
Turn Type	Perm	Perm	Perm	NA	NA	Perm
Protected Phases				2	6	
Permitted Phases	4	4	2			6
Actuated Green, G (s)	21.0	21.0	45.8	45.8	45.8	45.8
Effective Green, g (s)	21.0	21.0	45.8	45.8	45.8	45.8
Actuated g/C Ratio	0.26	0.26	0.57	0.57	0.57	0.57
Clearance Time (s)	7.0	7.0	6.2	6.2	6.2	6.2
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	452	380	366	1034	1064	843
v/s Ratio Prot				0.20	c0.30	
v/s Ratio Perm	c0.02	0.01	0.16			0.08
v/c Ratio	0.08	0.02	0.28	0.36	0.52	0.14
Uniform Delay, d1	22.2	21.9	8.7	9.2	10.4	7.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.3	0.1	0.4	0.2	1.8	0.3
Delay (s)	22.6	22.0	9.1	9.4	12.2	8.3
Level of Service	C	C	A	A	B	A
Approach Delay (s/veh)	22.3			9.3	11.4	
Approach LOS	C			A	B	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	11.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	13.2
Intersection Capacity Utilization	77.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	22	44	13	351	591	16
Future Vol, veh/h	22	44	13	351	591	16
Conflicting Peds, #/hr	0	0	3	0	0	3
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	15	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	40	0	0	4	22	0
Mvmt Flow	27	54	16	433	730	20

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1208	743	753	0	-	0
Stage 1	743	-	-	-	-	-
Stage 2	465	-	-	-	-	-
Critical Hdwy	6.8	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.86	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	170	418	866	-	-	-
Stage 1	409	-	-	-	-	-
Stage 2	560	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	166	417	864	-	-	-
Mov Cap-2 Maneuver	166	-	-	-	-	-
Stage 1	400	-	-	-	-	-
Stage 2	559	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	23.3	0.3	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	864	-	277	-	-
HCM Lane V/C Ratio	0.019	-	0.294	-	-
HCM Ctrl Dly (s/v)	9.2	-	23.3	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q (veh)	0.1	-	1.2	-	-

Intersection	
Int Delay, s/veh	3.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	49	13	23	6	6	17
Future Vol, veh/h	49	13	23	6	6	17
Conflicting Peds, #/hr	0	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	65	65	65	65	65	65
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	75	20	35	9	9	26

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	95	0	164	86
Stage 1	-	-	-	-	85	-
Stage 2	-	-	-	-	79	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1512	-	831	978
Stage 1	-	-	-	-	943	-
Stage 2	-	-	-	-	949	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1512	-	812	977
Mov Cap-2 Maneuver	-	-	-	-	812	-
Stage 1	-	-	-	-	943	-
Stage 2	-	-	-	-	927	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	5.9	9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	928	-	-	1512	-
HCM Lane V/C Ratio	0.038	-	-	0.023	-
HCM Ctrl Dly (s/v)	9	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q (veh)	0.1	-	-	0.1	-

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	12	27	128	19	3
Future Vol, veh/h	0	12	27	128	19	3
Conflicting Peds, #/hr	2	0	0	2	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	75	75	75	75	75	75
Heavy Vehicles, %	0	0	0	1	5	0
Mvmt Flow	0	16	36	171	25	4

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	209	0	-	0	140	124
Stage 1	-	-	-	-	124	-
Stage 2	-	-	-	-	16	-
Critical Hdwy	4.1	-	-	-	6.45	6.2
Critical Hdwy Stg 1	-	-	-	-	5.45	-
Critical Hdwy Stg 2	-	-	-	-	5.45	-
Follow-up Hdwy	2.2	-	-	-	3.545	3.3
Pot Cap-1 Maneuver	1374	-	-	-	846	932
Stage 1	-	-	-	-	894	-
Stage 2	-	-	-	-	999	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1372	-	-	-	844	931
Mov Cap-2 Maneuver	-	-	-	-	844	-
Stage 1	-	-	-	-	893	-
Stage 2	-	-	-	-	998	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0	0	9.4
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1372	-	-	-	855
HCM Lane V/C Ratio	-	-	-	-	0.034
HCM Ctrl Dly (s/v)	0	-	-	-	9.4
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q (veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	31	0	2	129	49	0	0	0	14	0	26
Future Vol, veh/h	0	31	0	2	129	49	0	0	0	14	0	26
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	1	1	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	75	75	75	75	75	75	75	75	75	75	75	75
Heavy Vehicles, %	0	3	0	0	0	0	0	0	0	0	0	3
Mvmt Flow	0	41	0	3	172	65	0	0	0	19	0	35

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	237	0	0	41	0	0	269	284	42	253	252	205
Stage 1	-	-	-	-	-	-	41	41	-	211	211	-
Stage 2	-	-	-	-	-	-	228	243	-	42	41	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.327
Pot Cap-1 Maneuver	1342	-	-	1581	-	-	688	628	1034	704	655	833
Stage 1	-	-	-	-	-	-	979	865	-	796	731	-
Stage 2	-	-	-	-	-	-	779	708	-	978	865	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1342	-	-	1581	-	-	658	627	1033	703	654	833
Mov Cap-2 Maneuver	-	-	-	-	-	-	658	627	-	703	654	-
Stage 1	-	-	-	-	-	-	979	865	-	796	730	-
Stage 2	-	-	-	-	-	-	745	707	-	977	865	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0	0.1	0	9.9
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1342	-	-	1581	-	-	782
HCM Lane V/C Ratio	-	-	-	-	0.002	-	-	0.068
HCM Ctrl Dly (s/v)	0	0	-	-	7.3	0	-	9.9
HCM Lane LOS	A	A	-	-	A	A	-	A
HCM 95th %tile Q (veh)	-	0	-	-	0	-	-	0.2

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	114	84	57	783	504	78
Future Volume (vph)	114	84	57	783	504	78
Lane Group Flow (vph)	116	86	58	799	514	80
Turn Type	Perm	Perm	Perm	NA	NA	Perm
Protected Phases				2	6	
Permitted Phases	4	4	2			6
Detector Phase	4	4	2	2	6	6
Switch Phase						
Minimum Initial (s)	7.0	7.0	20.0	20.0	20.0	20.0
Minimum Split (s)	23.5	23.5	42.2	42.2	42.2	42.2
Total Split (s)	30.4	30.4	49.6	49.6	49.6	49.6
Total Split (%)	38.0%	38.0%	62.0%	62.0%	62.0%	62.0%
Yellow Time (s)	3.6	3.6	3.9	3.9	3.9	3.9
All-Red Time (s)	1.9	1.9	2.3	2.3	2.3	2.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	6.2	6.2	6.2	6.2
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	None	None	None	None
v/c Ratio	0.19	0.15	0.18	0.87	0.56	0.11
Control Delay (s/veh)	20.4	5.8	11.5	28.9	16.2	5.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	20.4	5.8	11.5	28.9	16.2	5.3
Queue Length 50th (m)	13.1	0.0	4.6	100.6	51.0	2.6
Queue Length 95th (m)	26.5	9.6	10.9	147.2	74.2	8.7
Internal Link Dist (m)	124.6			593.6	63.9	
Turn Bay Length (m)	30.0		30.0			15.0
Base Capacity (vph)	613	581	345	1009	1009	818
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.15	0.17	0.79	0.51	0.10

Intersection Summary

Cycle Length: 80
Actuated Cycle Length: 80
Offset: 28 (35%), Referenced to phase 4:EBL and 8:, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated

Splits and Phases: 1: Toronto St S (RR47) & Campbell Dr

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	114	84	57	783	504	78
Future Volume (vph)	114	84	57	783	504	78
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	3.2	3.2	3.2	3.5	3.5	3.2
Total Lost time (s)	5.5	5.5	6.2	6.2	6.2	6.2
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.98	1.00	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1708	1465	1702	1860	1860	1471
Flt Permitted	0.95	1.00	0.35	1.00	1.00	1.00
Satd. Flow (perm)	1708	1465	636	1860	1860	1471
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	116	86	58	799	514	80
RTOR Reduction (vph)	0	55	0	0	0	22
Lane Group Flow (vph)	116	31	58	799	514	58
Confl. Peds. (#/hr)		1	7			7
Heavy Vehicles (%)	1%	3%	1%	1%	1%	2%
Turn Type	Perm	Perm	Perm	NA	NA	Perm
Protected Phases				2	6	
Permitted Phases	4	4	2			6
Actuated Green, G (s)	28.7	28.7	39.6	39.6	39.6	39.6
Effective Green, g (s)	28.7	28.7	39.6	39.6	39.6	39.6
Actuated g/C Ratio	0.36	0.36	0.50	0.50	0.50	0.50
Clearance Time (s)	5.5	5.5	6.2	6.2	6.2	6.2
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	612	525	314	920	920	728
v/s Ratio Prot				c0.43	0.28	
v/s Ratio Perm	c0.07	0.02	0.09			0.04
v/c Ratio	0.19	0.06	0.18	0.87	0.56	0.08
Uniform Delay, d1	17.6	16.8	11.2	17.9	14.1	10.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.7	0.2	0.3	8.7	0.7	0.0
Delay (s)	18.3	17.0	11.5	26.6	14.8	10.7
Level of Service	B	B	B	C	B	B
Approach Delay (s/veh)	17.8			25.6	14.3	
Approach LOS	B			C	B	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	20.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	11.7
Intersection Capacity Utilization	72.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	27	24	873	555	2
Future Vol, veh/h	2	27	24	873	555	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	15	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	3	0	0	2	50
Mvmt Flow	2	29	26	929	590	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1572	591	592	0	-	0
Stage 1	591	-	-	-	-	-
Stage 2	981	-	-	-	-	-
Critical Hdwy	6.4	6.23	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.327	2.2	-	-	-
Pot Cap-1 Maneuver	123	505	994	-	-	-
Stage 1	557	-	-	-	-	-
Stage 2	366	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	120	505	994	-	-	-
Mov Cap-2 Maneuver	120	-	-	-	-	-
Stage 1	543	-	-	-	-	-
Stage 2	366	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	14.4	0.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	994	-	414	-	-
HCM Lane V/C Ratio	0.026	-	0.075	-	-
HCM Ctrl Dly (s/v)	8.7	-	14.4	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q (veh)	0.1	-	0.2	-	-

Intersection	
Int Delay, s/veh	3.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	12	7	4	22	10	17
Future Vol, veh/h	12	7	4	22	10	17
Conflicting Peds, #/hr	0	0	0	0	5	4
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	71	71	71	71	71	71
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	17	10	6	31	14	24

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	27	0	70	26
Stage 1	-	-	-	-	22	-
Stage 2	-	-	-	-	48	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1600	-	939	1056
Stage 1	-	-	-	-	1006	-
Stage 2	-	-	-	-	980	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1600	-	931	1053
Mov Cap-2 Maneuver	-	-	-	-	931	-
Stage 1	-	-	-	-	1006	-
Stage 2	-	-	-	-	972	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	1.1	8.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1004	-	-	1600	-
HCM Lane V/C Ratio	0.038	-	-	0.004	-
HCM Ctrl Dly (s/v)	8.7	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q (veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	4.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	26	26	30	87	0
Future Vol, veh/h	0	26	26	30	87	0
Conflicting Peds, #/hr	2	0	0	2	1	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	76	76	76	76	76	76
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	34	34	39	114	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	75	0	-	0	91	56
Stage 1	-	-	-	-	56	-
Stage 2	-	-	-	-	35	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1537	-	-	-	914	1016
Stage 1	-	-	-	-	972	-
Stage 2	-	-	-	-	993	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1535	-	-	-	912	1015
Mov Cap-2 Maneuver	-	-	-	-	912	-
Stage 1	-	-	-	-	971	-
Stage 2	-	-	-	-	992	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0	0	9.5
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1535	-	-	-	912
HCM Lane V/C Ratio	-	-	-	-	0.126
HCM Ctrl Dly (s/v)	0	-	-	-	9.5
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q (veh)	0	-	-	-	0.4

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	98	0	4	49	50	0	0	1	47	0	7
Future Vol, veh/h	15	98	0	4	49	50	0	0	1	47	0	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	0	0	0	0	2	0	0	0	0	0	0	0
Mvmt Flow	18	118	0	5	59	60	0	0	1	57	0	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	119	0	0	118	0	0	257	283	118	254	253	89
Stage 1	-	-	-	-	-	-	154	154	-	99	99	-
Stage 2	-	-	-	-	-	-	103	129	-	155	154	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1482	-	-	1483	-	-	700	629	939	703	654	975
Stage 1	-	-	-	-	-	-	853	774	-	912	817	-
Stage 2	-	-	-	-	-	-	908	793	-	852	774	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1482	-	-	1483	-	-	685	618	939	693	643	975
Mov Cap-2 Maneuver	-	-	-	-	-	-	685	618	-	693	643	-
Stage 1	-	-	-	-	-	-	842	764	-	900	814	-
Stage 2	-	-	-	-	-	-	897	790	-	840	764	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	1	0.3	8.8	10.5
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	939	1482	-	-	1483	-	-	720
HCM Lane V/C Ratio	0.001	0.012	-	-	0.003	-	-	0.09
HCM Ctrl Dly (s/v)	8.8	7.5	0	-	7.4	0	-	10.5
HCM Lane LOS	A	A	A	-	A	A	-	B
HCM 95th %tile Q (veh)	0	0	-	-	0	-	-	0.3

Future Total SimTraffic

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	7:15	7:15	7:15	7:15	7:15	7:15
End Time	8:45	8:45	8:45	8:45	8:45	8:45
Total Time (min)	90	90	90	90	90	90
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	1285	1306	1366	1351	1314	1324
Vehs Exited	1280	1312	1388	1366	1321	1334
Starting Vehs	34	35	55	48	40	41
Ending Vehs	39	29	33	33	33	34
Travel Distance (km)	1368	1409	1459	1450	1417	1421
Travel Time (hr)	36.8	38.0	39.4	39.0	38.3	38.3
Total Delay (hr)	5.4	5.9	6.1	5.9	5.8	5.8
Total Stops	643	669	687	712	707	683
Fuel Used (l)	107.1	110.6	114.3	112.7	110.4	111.0

Interval #0 Information Seeding

Start Time	7:15
End Time	7:45
Total Time (min)	30

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	7:45
End Time	8:45
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	1285	1306	1366	1351	1314	1324
Vehs Exited	1280	1312	1388	1366	1321	1334
Starting Vehs	34	35	55	48	40	41
Ending Vehs	39	29	33	33	33	34
Travel Distance (km)	1368	1409	1459	1450	1417	1421
Travel Time (hr)	36.8	38.0	39.4	39.0	38.3	38.3
Total Delay (hr)	5.4	5.9	6.1	5.9	5.8	5.8
Total Stops	643	669	687	712	707	683
Fuel Used (l)	107.1	110.6	114.3	112.7	110.4	111.0

Arterial Level of Service: EB Campbell Dr

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed	Run 1 Speed	Run 1 Delay
Hospital SW Dwy	4	0.0	28.8	0.3	39	43	0.0
James Hill Ct.	5	0.0	5.4	0.1	40	40	0.0
Toronto St S (RR47)	1	24.3	36.8	0.1	15	21	16.3
Total		24.3	71.0	0.5	27	33	16.3

Arterial Level of Service: EB Campbell Dr

Cross Street	Run 2 Speed	Run 2 Delay	Run 3 Speed	Run 3 Delay	Run 4 Speed	Run 4 Delay	Run 5 Speed
Hospital SW Dwy	41	0.0	39	0.1	39	0.0	41
James Hill Ct.	42	0.0	41	0.0	40	0.0	42
Toronto St S (RR47)	17	21.1	13	30.9	15	25.7	16
Total	29	21.1	25	31.0	26	25.7	28

Arterial Level of Service: WB Campbell Dr

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed	Run 1 Speed	Run 1 Delay
Hospital SE Dwy	5	0.6	14.3	0.1	37	37	0.6
Hospital SW Dwy	4	0.6	6.0	0.1	36	35	0.9
Total		1.2	20.3	0.2	37	36	1.5

Arterial Level of Service: WB Campbell Dr

Cross Street	Run 2 Speed	Run 2 Delay	Run 3 Speed	Run 3 Delay	Run 4 Speed	Run 4 Delay	Run 5 Speed
Hospital SE Dwy	37	0.5	37	0.6	39	0.5	38
Hospital SW Dwy	37	0.4	38	0.5	36	0.8	37
Total	37	0.9	37	1.1	38	1.3	37

Intersection: 1: Toronto St S (RR47) & Campbell Dr

Movement	EB	EB	NB	NB	SB	SB
Directions Served	L	R	L	T	T	R
Maximum Queue (m)	17.2	19.2	34.2	55.6	76.7	55.3
Average Queue (m)	6.1	5.5	15.3	24.2	40.8	13.3
95th Queue (m)	15.0	14.6	28.3	46.4	69.7	34.9
Link Distance (m)		126.5		604.2	75.6	
Upstream Blk Time (%)					0	
Queuing Penalty (veh)					2	
Storage Bay Dist (m)	30.0		30.0			15.0
Storage Blk Time (%)			1	4	25	1
Queuing Penalty (veh)			3	4	34	6

Intersection: 2: Toronto St S (RR47) & Victoria Dr

Movement	EB	NB	SB
Directions Served	LR	L	TR
Maximum Queue (m)	24.6	11.8	35.8
Average Queue (m)	10.5	1.9	2.3
95th Queue (m)	20.7	8.4	20.1
Link Distance (m)	69.9		671.0
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (m)		15.0	
Storage Blk Time (%)		0	
Queuing Penalty (veh)		0	

Intersection: 3: Hospital N Dwy & Victoria Dr

Movement	WB	NB
Directions Served	LT	LR
Maximum Queue (m)	7.1	11.8
Average Queue (m)	0.4	4.3
95th Queue (m)	3.2	11.7
Link Distance (m)	69.9	29.1
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 4: Campbell Dr & Hospital SW Dwy

Movement	SB
Directions Served	LR
Maximum Queue (m)	15.6
Average Queue (m)	5.1
95th Queue (m)	13.5
Link Distance (m)	52.8
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (m)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 5: James Hill Ct./Hospital SE Dwy & Campbell Dr

Movement	WB	SB
Directions Served	LTR	LTR
Maximum Queue (m)	1.8	14.4
Average Queue (m)	0.1	7.1
95th Queue (m)	1.3	14.1
Link Distance (m)	126.5	40.6
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 49

Intersection: 1: Toronto St S (RR47) & Campbell Dr

Phase	2	4	6
Movement(s) Served	NBTL	EBL	SBT
Maximum Green (s)	45.8	21.0	45.8
Minimum Green (s)	20.0	7.0	20.0
Recall	None	C-Max	Max
Avg. Green (s)	-13.8	-8.1	-13.8
g/C Ratio	NA	NA	NA
Cycles Skipped (%)	0	0	0
Cycles @ Minimum (%)	0	0	0
Cycles Maxed Out (%)	100	100	100
Cycles with Peds (%)	0	2	14

Controller Summary
Average Cycle Length (s): -9.4

Number of Complete Cycles : 44

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	4:00	4:00	4:00	4:00	4:00	4:00
End Time	5:30	5:30	5:30	5:30	5:30	5:30
Total Time (min)	90	90	90	90	90	90
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	1692	1693	1689	1630	1687	1676
Vehs Exited	1699	1689	1715	1640	1681	1685
Starting Vehs	67	58	87	65	62	65
Ending Vehs	60	62	61	55	68	61
Travel Distance (km)	2094	2088	2088	2046	2096	2082
Travel Time (hr)	62.8	59.6	63.9	58.0	60.9	61.0
Total Delay (hr)	16.7	13.6	18.1	13.2	14.9	15.3
Total Stops	1496	1248	1635	1203	1371	1389
Fuel Used (l)	165.9	164.2	166.7	157.9	163.5	163.6

Interval #0 Information Seeding

Start Time	4:00
End Time	4:30
Total Time (min)	30

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	4:30
End Time	5:30
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	1692	1693	1689	1630	1687	1676
Vehs Exited	1699	1689	1715	1640	1681	1685
Starting Vehs	67	58	87	65	62	65
Ending Vehs	60	62	61	55	68	61
Travel Distance (km)	2094	2088	2088	2046	2096	2082
Travel Time (hr)	62.8	59.6	63.9	58.0	60.9	61.0
Total Delay (hr)	16.7	13.6	18.1	13.2	14.9	15.3
Total Stops	1496	1248	1635	1203	1371	1389
Fuel Used (l)	165.9	164.2	166.7	157.9	163.5	163.6

Arterial Level of Service: EB Campbell Dr

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed	Run 1 Speed	Run 1 Delay
Hospital SW Dwy	4	0.1	28.5	0.3	39	40	0.1
James Hill Ct.	5	0.0	5.3	0.1	41	41	0.1
Toronto St S (RR47)	1	19.7	32.4	0.1	17	19	18.5
Total		19.9	66.1	0.5	29	30	18.7

Arterial Level of Service: EB Campbell Dr

Cross Street	Run 2 Speed	Run 2 Delay	Run 3 Speed	Run 3 Delay	Run 4 Speed	Run 4 Delay	Run 5 Speed
Hospital SW Dwy	39	0.0	41	0.2	40	0.2	38
James Hill Ct.	40	0.0	42	0.0	40	0.0	39
Toronto St S (RR47)	16	20.6	16	22.9	21	14.4	16
Total	28	20.7	28	23.1	32	14.6	28

Arterial Level of Service: WB Campbell Dr

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed	Run 1 Speed	Run 1 Delay
Hospital SE Dwy	5	0.5	13.5	0.1	40	41	0.3
Hospital SW Dwy	4	0.1	5.5	0.1	40	41	0.1
Total		0.6	19.0	0.2	40	41	0.4

Arterial Level of Service: WB Campbell Dr

Cross Street	Run 2 Speed	Run 2 Delay	Run 3 Speed	Run 3 Delay	Run 4 Speed	Run 4 Delay	Run 5 Speed
Hospital SE Dwy	41	0.5	38	0.5	39	0.5	40
Hospital SW Dwy	38	0.3	41	0.1	40	0.1	40
Total	40	0.8	39	0.6	39	0.5	40

Intersection: 1: Toronto St S (RR47) & Campbell Dr

Movement	EB	EB	NB	NB	SB	SB
Directions Served	L	R	L	T	T	R
Maximum Queue (m)	31.9	25.9	64.9	217.0	78.8	56.0
Average Queue (m)	13.9	9.7	22.1	111.0	46.5	13.4
95th Queue (m)	26.6	19.2	58.5	202.0	77.3	43.5
Link Distance (m)		126.5		604.2	75.6	
Upstream Blk Time (%)					1	
Queuing Penalty (veh)					8	
Storage Bay Dist (m)	30.0		30.0			15.0
Storage Blk Time (%)	1	0	1	36	33	1
Queuing Penalty (veh)	0	0	11	21	25	3

Intersection: 2: Toronto St S (RR47) & Victoria Dr

Movement	EB	NB	SB
Directions Served	LR	L	TR
Maximum Queue (m)	21.0	9.3	34.4
Average Queue (m)	6.4	2.7	2.3
95th Queue (m)	15.6	9.6	15.2
Link Distance (m)	69.9		671.0
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (m)		15.0	
Storage Blk Time (%)		0	
Queuing Penalty (veh)		0	

Intersection: 3: Hospital N Dwy & Victoria Dr

Movement	EB	NB
Directions Served	TR	LR
Maximum Queue (m)	1.9	11.9
Average Queue (m)	0.1	6.1
95th Queue (m)	1.3	13.5
Link Distance (m)	84.2	29.1
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (m)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 4: Campbell Dr & Hospital SW Dwy

Movement	SB
Directions Served	LR
Maximum Queue (m)	17.7
Average Queue (m)	9.5
95th Queue (m)	14.7
Link Distance (m)	52.8
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (m)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 5: James Hill Ct./Hospital SE Dwy & Campbell Dr

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (m)	9.0	1.8	6.8	15.9
Average Queue (m)	0.5	0.1	0.3	7.5
95th Queue (m)	4.1	1.3	2.8	13.6
Link Distance (m)	41.0	126.5	90.0	40.6
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 69

Intersection: 1: Toronto St S (RR47) & Campbell Dr

Phase	2	4	6
Movement(s) Served	NBTL	EBL	SBT
Maximum Green (s)	43.4	24.9	43.4
Minimum Green (s)	20.0	7.0	20.0
Recall	None	C-Max	None
Avg. Green (s)	11.0	-1.6	11.0
g/C Ratio	NA	NA	NA
Cycles Skipped (%)	0	0	0
Cycles @ Minimum (%)	0	0	0
Cycles Maxed Out (%)	67	100	67
Cycles with Peds (%)	0	2	11

Controller Summary
Average Cycle Length (s): -9.4

Number of Complete Cycles : 44

APPENDIX I

Detailed ITE Parking Generation Calculations

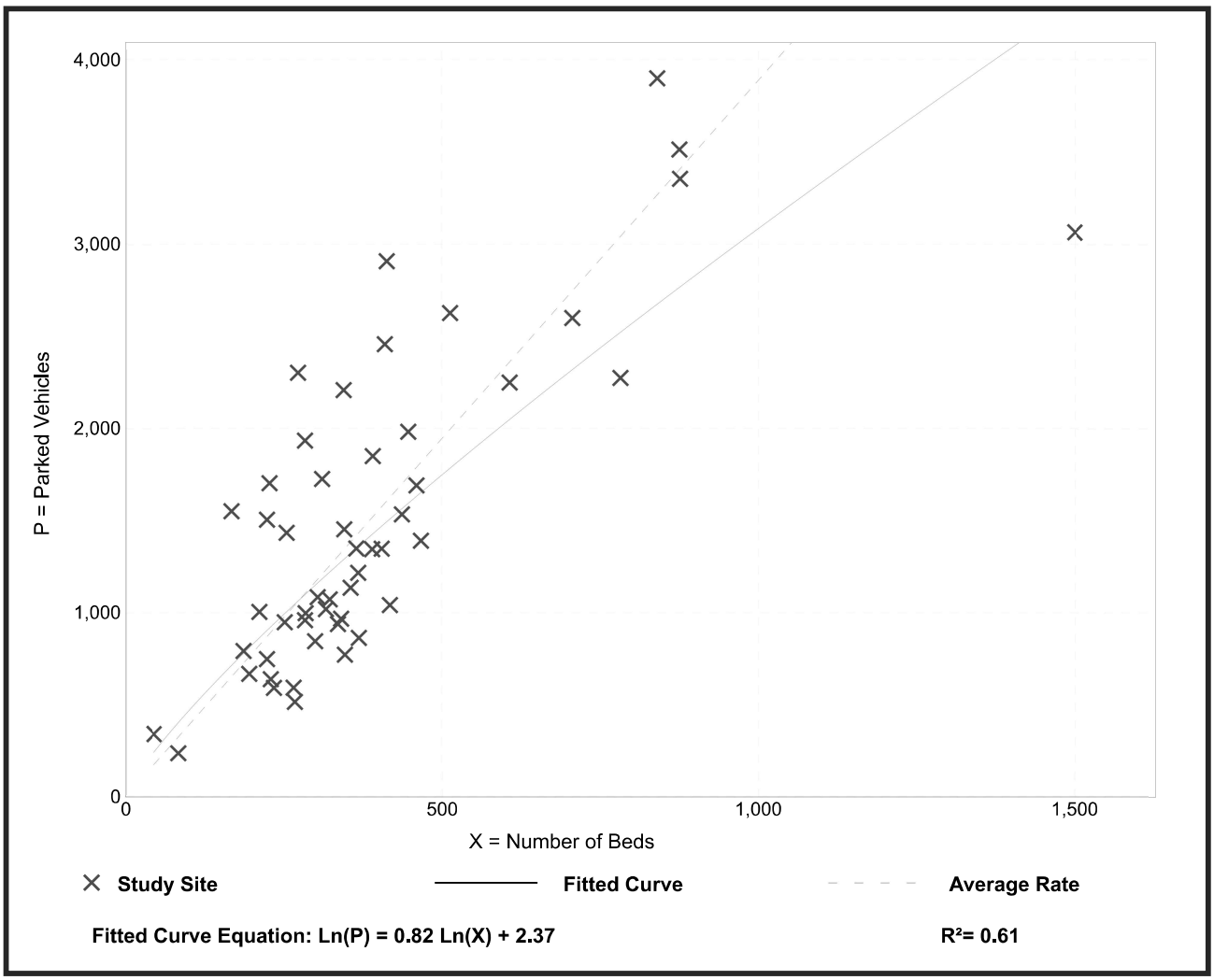
Hospital
(610)

Peak Period Parking Demand vs: **Beds**
On a: **Weekday (Monday - Friday)**
Setting/Location: **General Urban/Suburban**
Number of Studies: 51
Avg. Num. of Beds: 390

Peak Period Parking Demand per Bed

Average Rate	Range of Rates	33rd / 85th Percentile	95% Confidence Interval	Standard Deviation (Coeff. of Variation)
3.89	1.93 - 9.23	3.31 / 6.46	3.48 - 4.3	1.50 (39%)

Data Plot and Equation



Fitted Curve Equation: Ln(P) = 0.82 Ln(X) + 2.37

R^2= 0.61

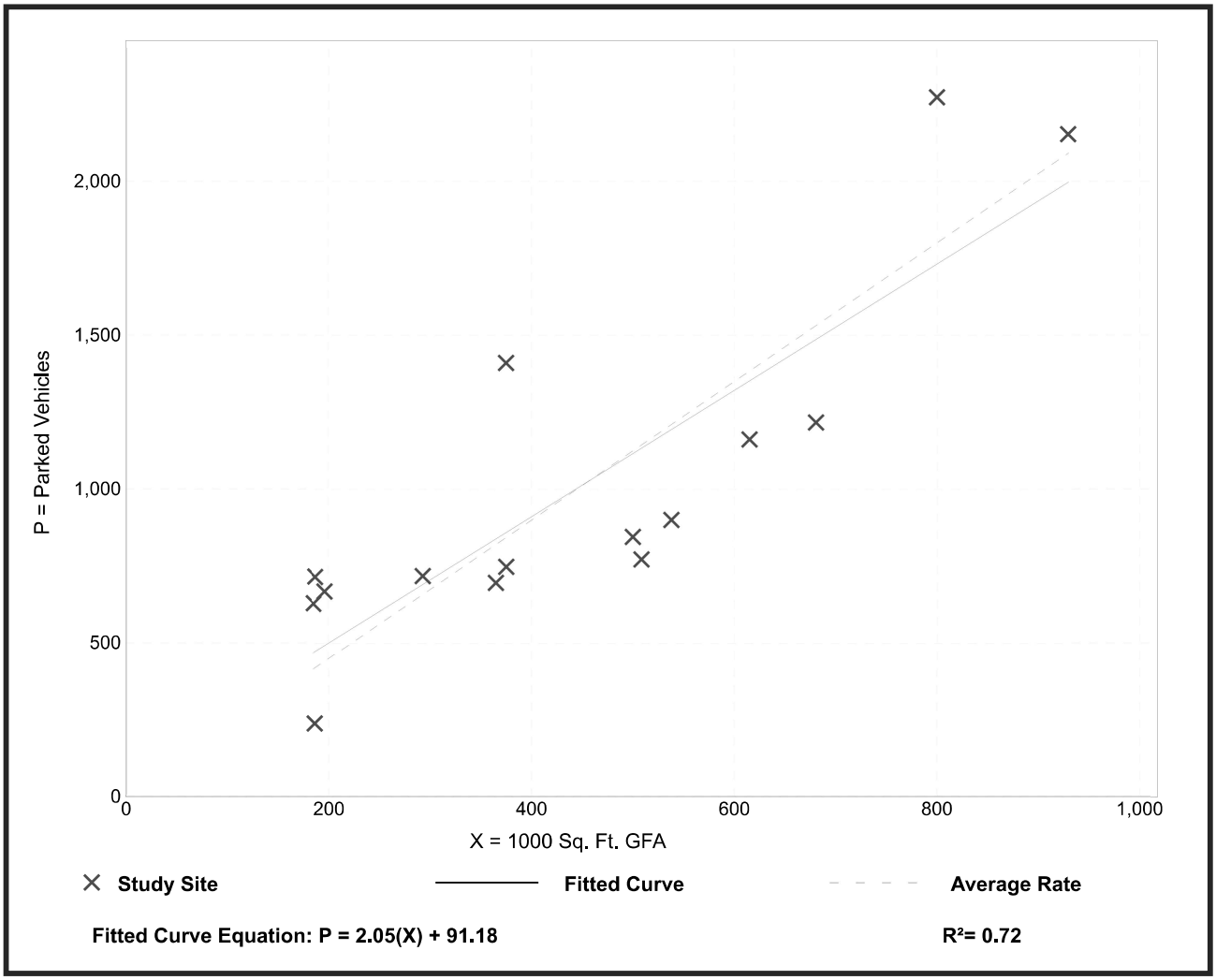
Hospital
(610)

Peak Period Parking Demand vs: **1000 Sq. Ft. GFA**
On a: **Weekday (Monday - Friday)**
Setting/Location: **General Urban/Suburban**
Number of Studies: 15
Avg. 1000 Sq. Ft. GFA: 449

Peak Period Parking Demand per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	33rd / 85th Percentile	95% Confidence Interval	Standard Deviation (Coeff. of Variation)
2.25	1.28 - 3.83	1.82 / 3.62	***	0.71 (32%)

Data Plot and Equation



Nursing Home
(620)

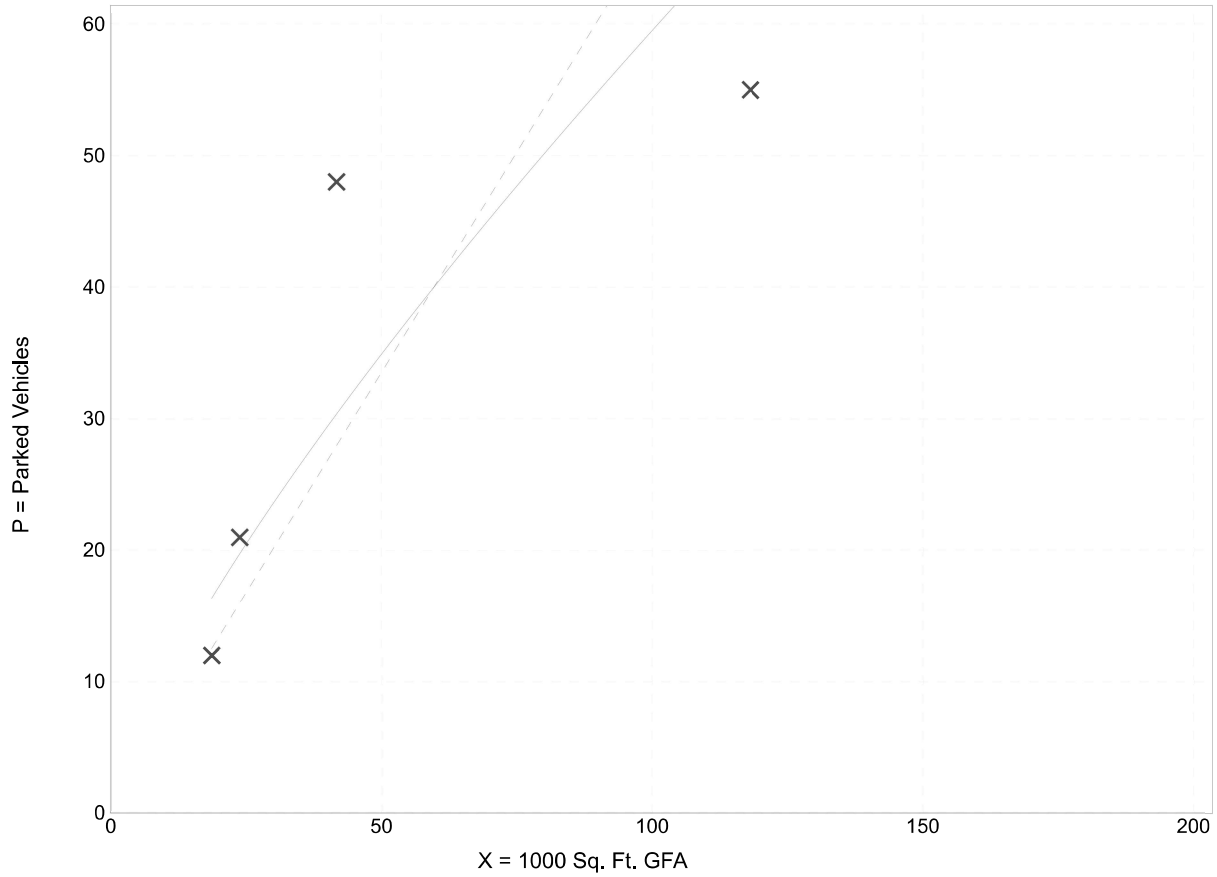
Peak Period Parking Demand vs: **1000 Sq. Ft. GFA**
On a: **Weekday (Monday - Friday)**
Setting/Location: **General Urban/Suburban**
Number of Studies: 4
Avg. 1000 Sq. Ft. GFA: 51

Peak Period Parking Demand per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	33rd / 85th Percentile	95% Confidence Interval	Standard Deviation (Coeff. of Variation)
0.67	0.47 - 1.15	0.58 / 1.15	***	0.32 (48%)

Data Plot and Equation

Caution – Small Sample Size



Fitted Curve Equation: Ln(P) = 0.77 Ln(X) + 0.54

R^2= 0.77

Nursing Home
(620)

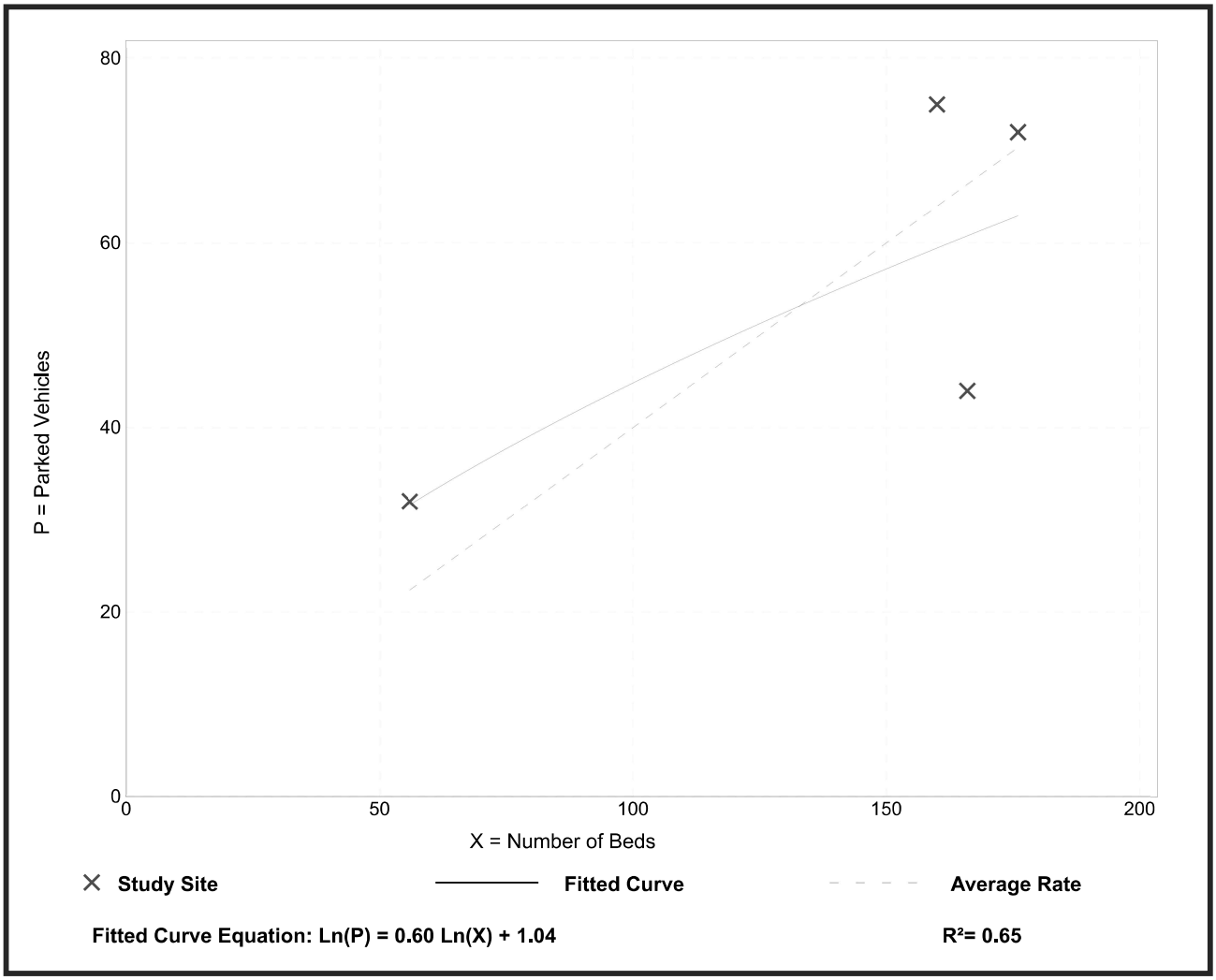
Peak Period Parking Demand vs: **Beds**
On a: **Weekday (Monday - Friday)**
Setting/Location: **General Urban/Suburban**
Number of Studies: 4
Avg. Num. of Beds: 140

Peak Period Parking Demand per Bed

Average Rate	Range of Rates	33rd / 85th Percentile	95% Confidence Interval	Standard Deviation (Coeff. of Variation)
0.40	0.27 - 0.57	0.36 / 0.57	***	0.11 (28%)

Data Plot and Equation

Caution – Small Sample Size



Fitted Curve Equation: Ln(P) = 0.60 Ln(X) + 1.04

R^2= 0.65

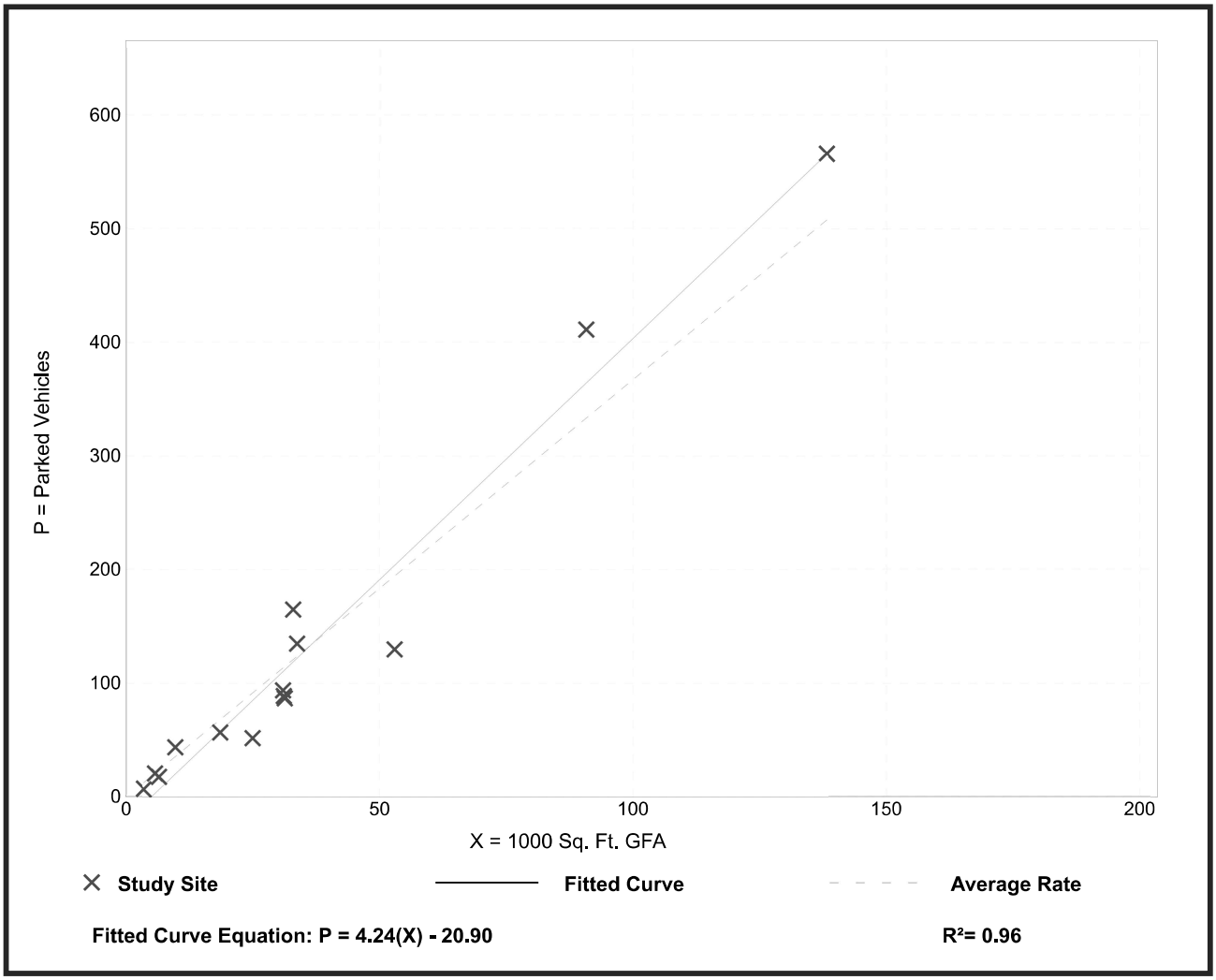
Walk-In Clinic
(630)

Peak Period Parking Demand vs: **1000 Sq. Ft. GFA**
On a: **Weekday (Monday - Friday)**
Setting/Location: **General Urban/Suburban**
Number of Studies: 14
Avg. 1000 Sq. Ft. GFA: 37

Peak Period Parking Demand per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	33rd / 85th Percentile	95% Confidence Interval	Standard Deviation (Coeff. of Variation)
3.67	2.00 - 5.00	2.77 / 4.52	***	0.90 (25%)

Data Plot and Equation

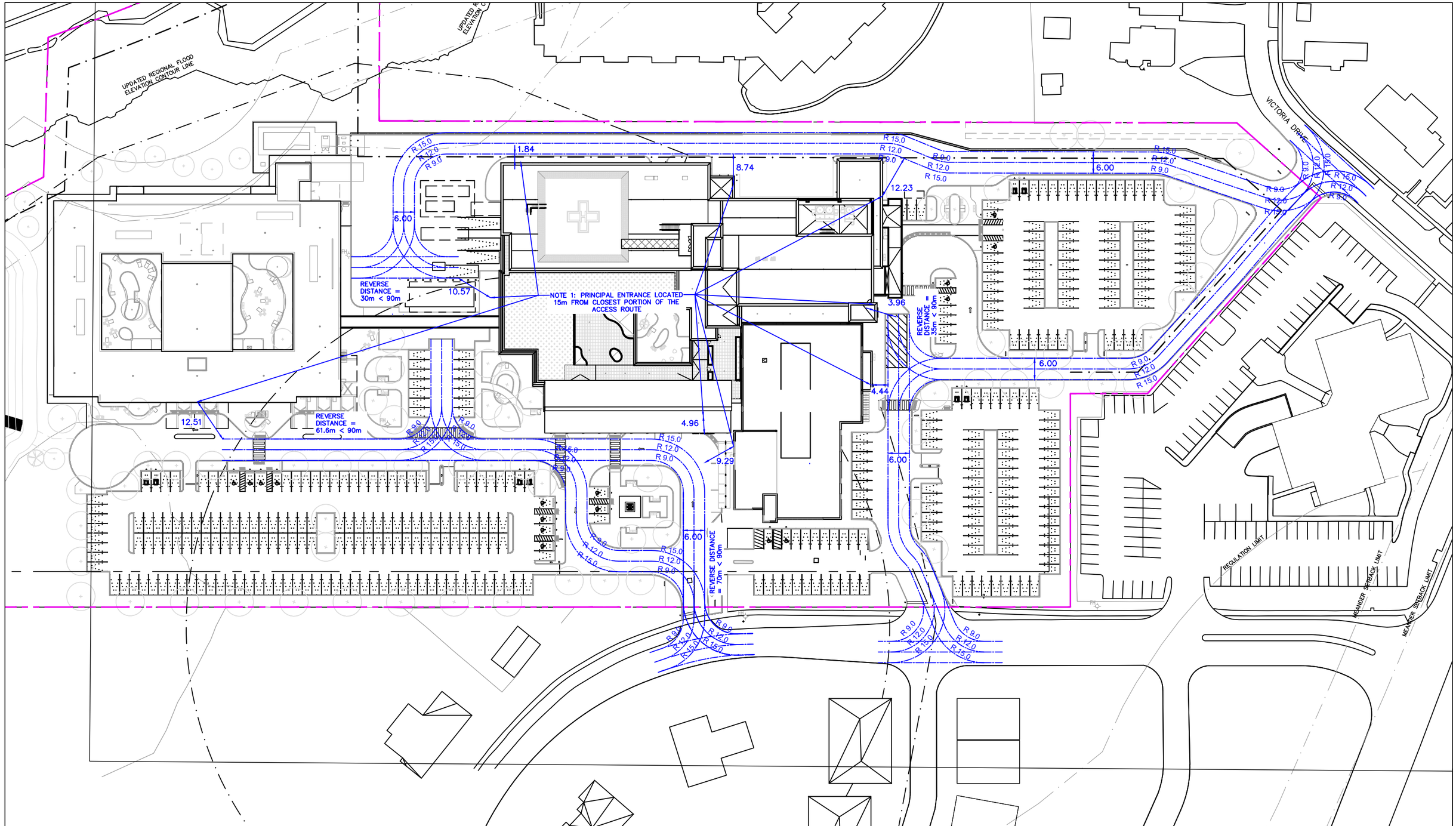


Fitted Curve Equation: P = 4.24(X) - 20.90

R^2= 0.96

APPENDIX J

Functional Design Review



PLOT DATE: June 12, 2025

DRAWN BY: C.T.

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Project No.
24138

Date
JUN 12, 2025

4 CAMPBELL DRIVE
UXBRIDGE ONTARIO

8 0 8 16 24m
1:800

FIRE ROUTE

Drawing No.
001

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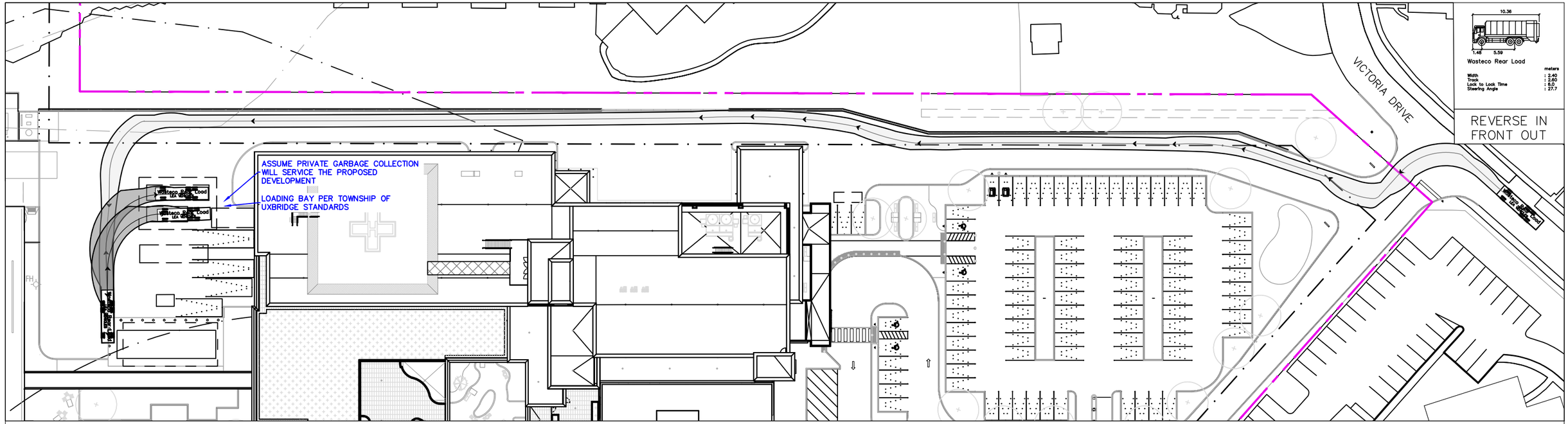

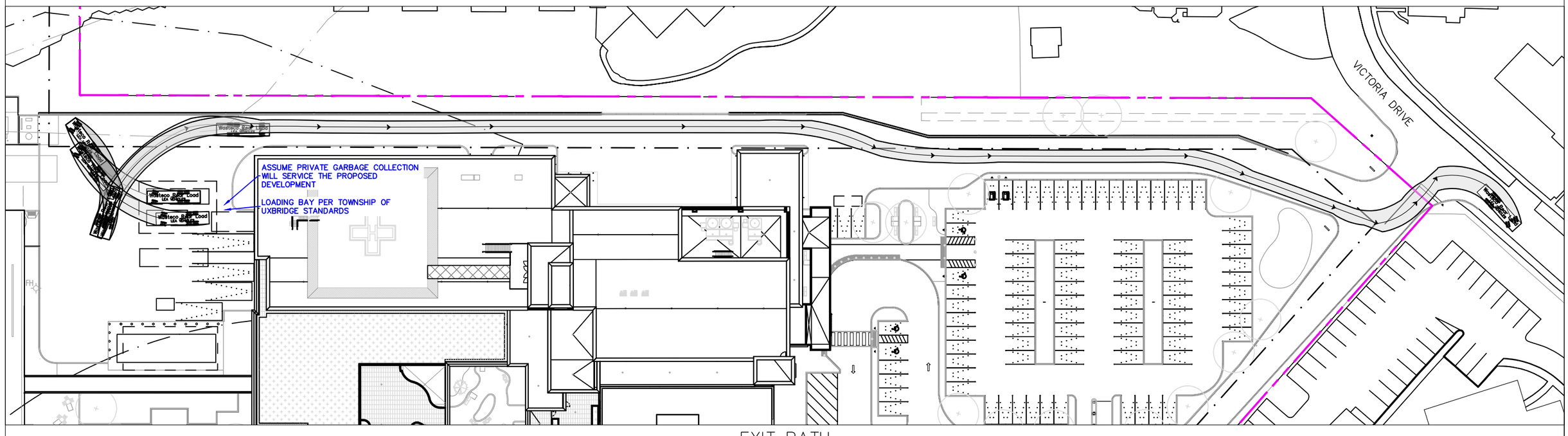

PLOT DATE: June 12, 2025

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Date JUN 12, 2025

4 CAMPBELL DRIVE
UXBRIDGE ONTARIO

7 0 7 14 21m
1:700

PROPOSED DEVELOPMENT
REAR PACKER GARBAGE TRUCK ENTRY AND EXIT PATHS

Drawing No. 002

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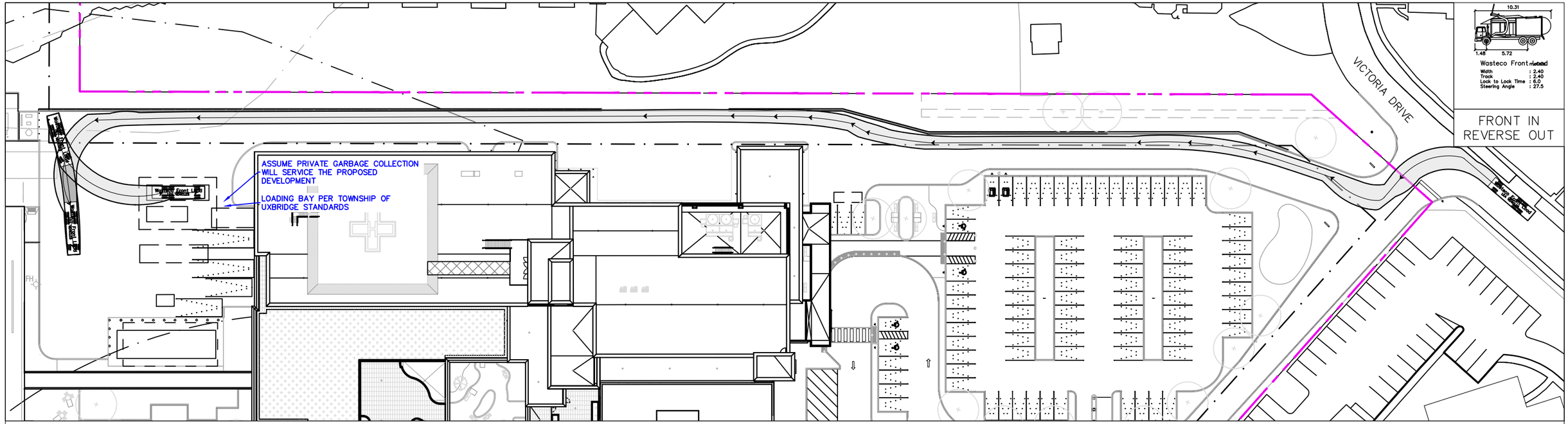

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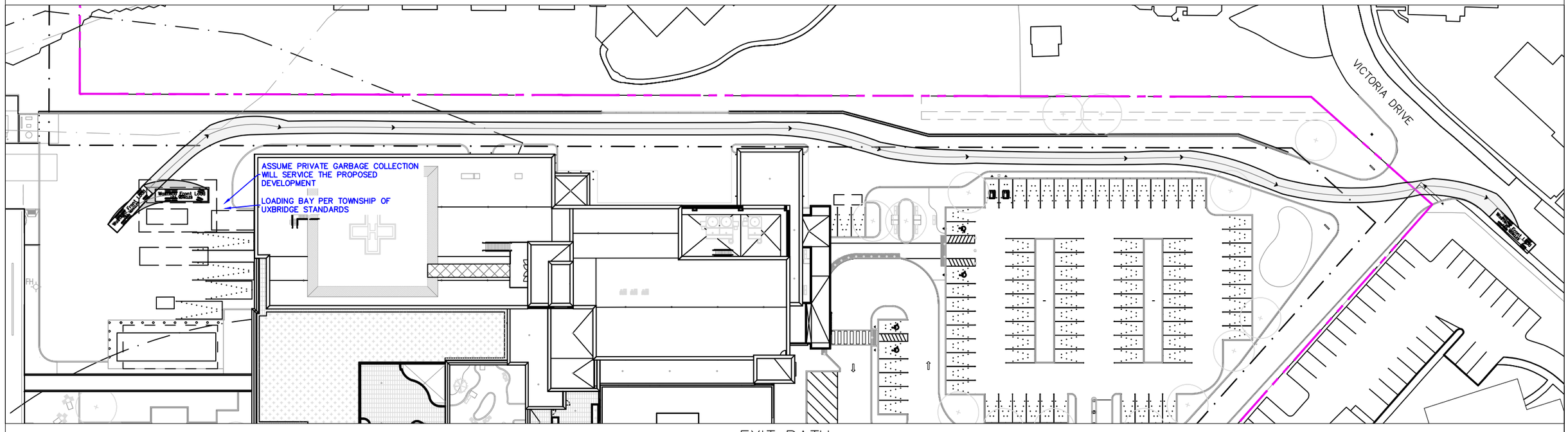

EXIT PATH

PLOT DATE: June 12, 2025

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Date JUN. 12, 2025

4 CAMPBELL DRIVE
UXBRIDGE ONTARIO

7 0 7 14 21m
1:700

PROPOSED DEVELOPMENT FRONT LOADER GARBAGE TRUCK ENTRY AND EXIT PATHS

Drawing No. 003

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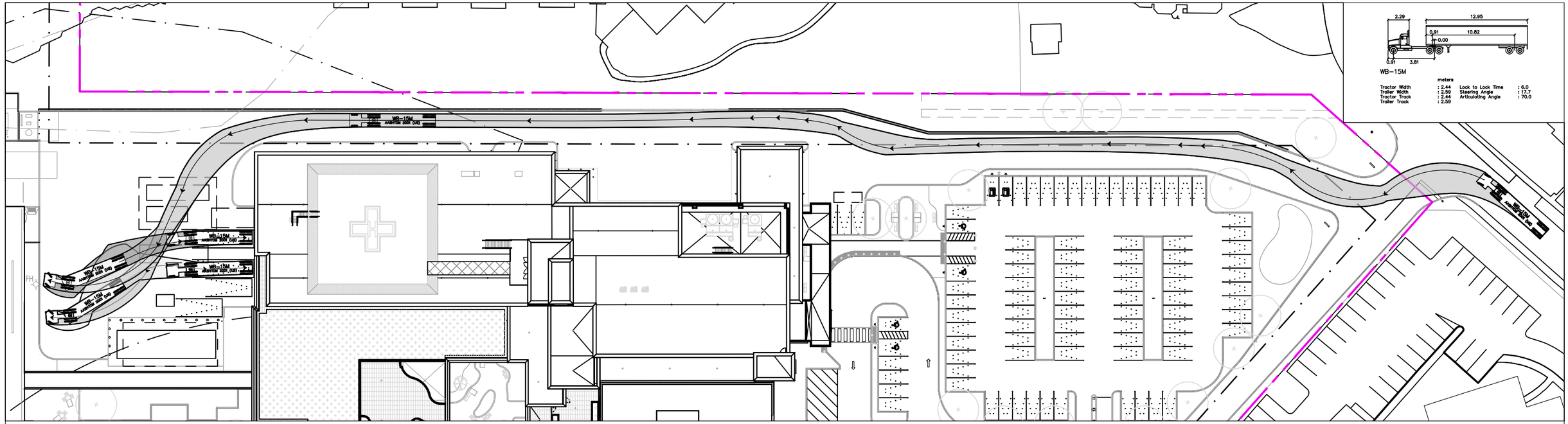

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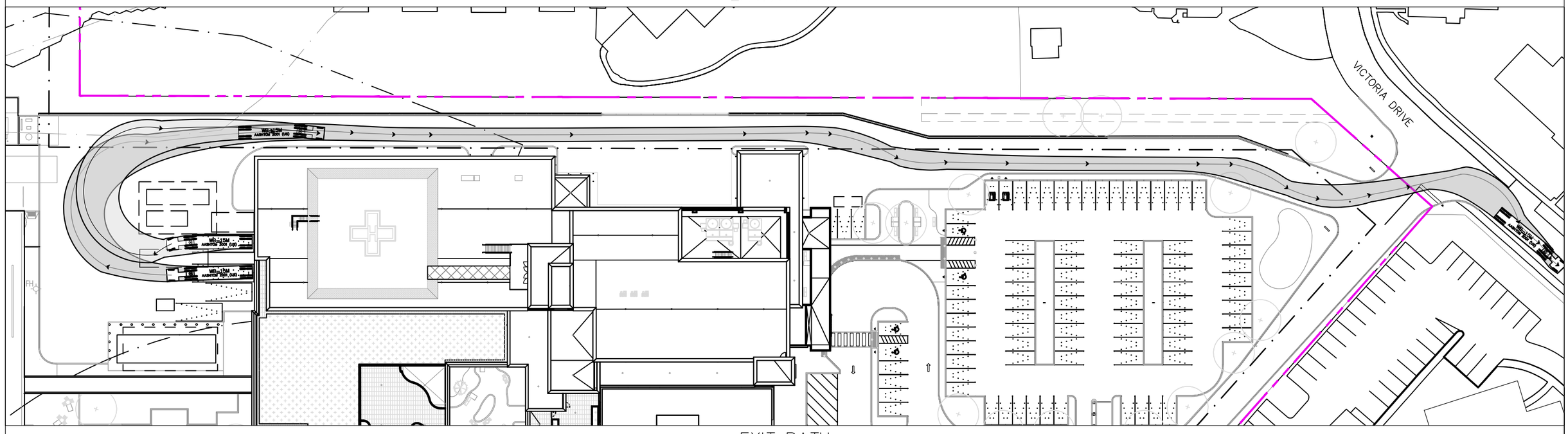

EXIT PATH

WB-15M

meters

Tractor Width	: 2.44	Lock to Lock Time	: 6.0
Trailer Width	: 2.59	Steering Angle	: 17.7
Tractor Track	: 2.44	Articulating Angle	: 70.0
Trailer Track	: 2.59		

PLOT DATE: June 12, 2025

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4 CAMPBELL DRIVE
UXBRIDGE ONTARIO

7 0 7 14 21m
1:700

PROPOSED DEVELOPMENT
WB-15 TRUCK
ENTRY AND EXIT PATHS

Drawing No. 004

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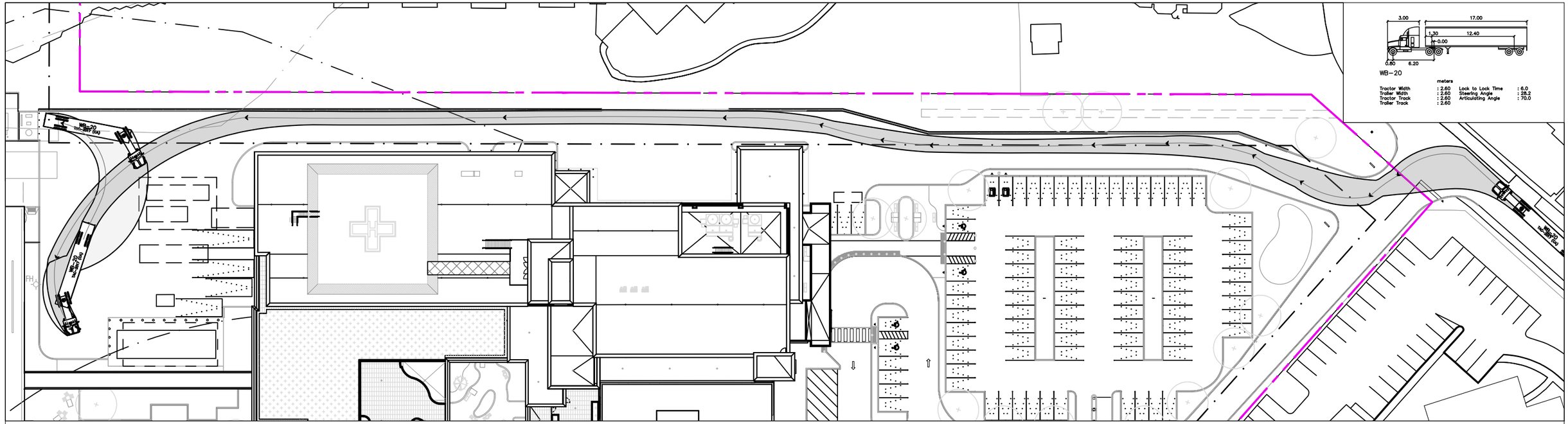

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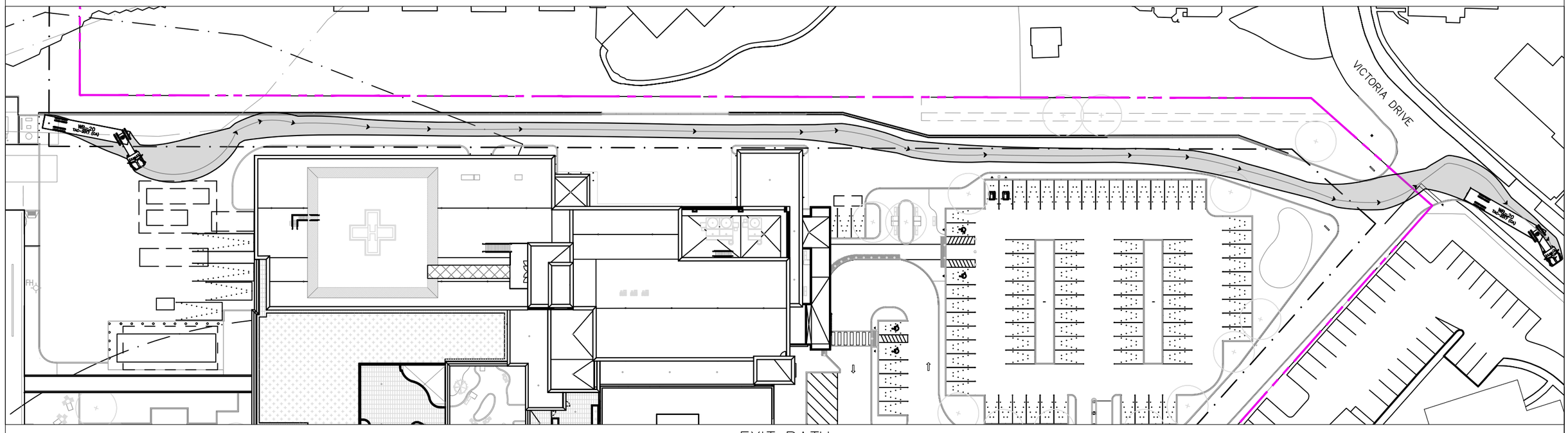

EXIT PATH

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Date JUN 12, 2025

4 CAMPBELL DRIVE
UXBRIDGE ONTARIO

7 0 7 14 21m
1:700

PROPOSED DEVELOPMENT
WB-20 TRUCK
ENTRY AND EXIT PATHS

Drawing No. 005

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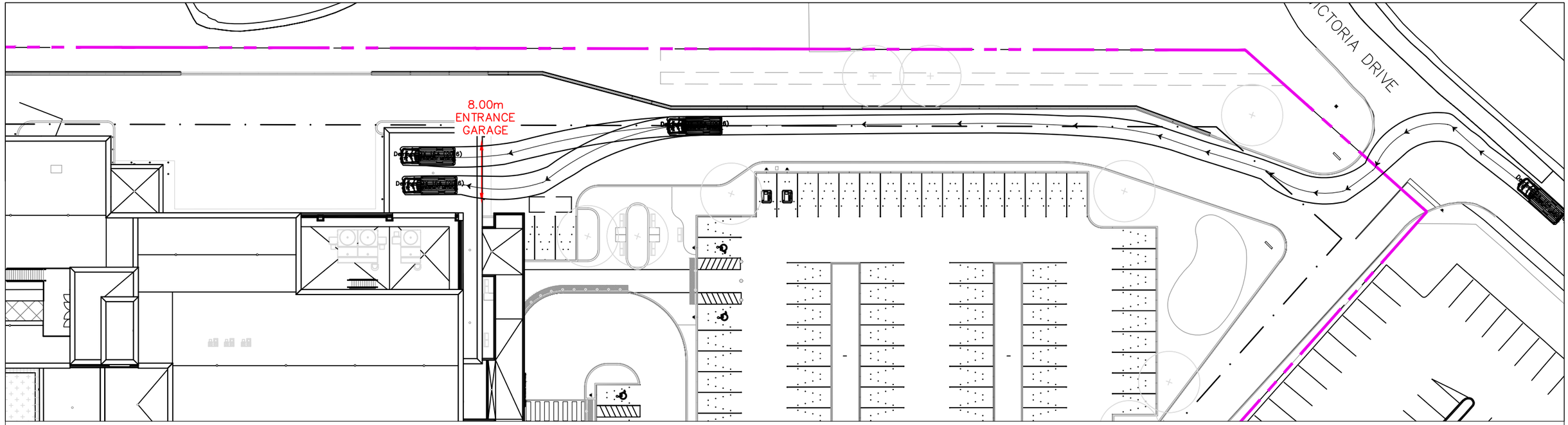

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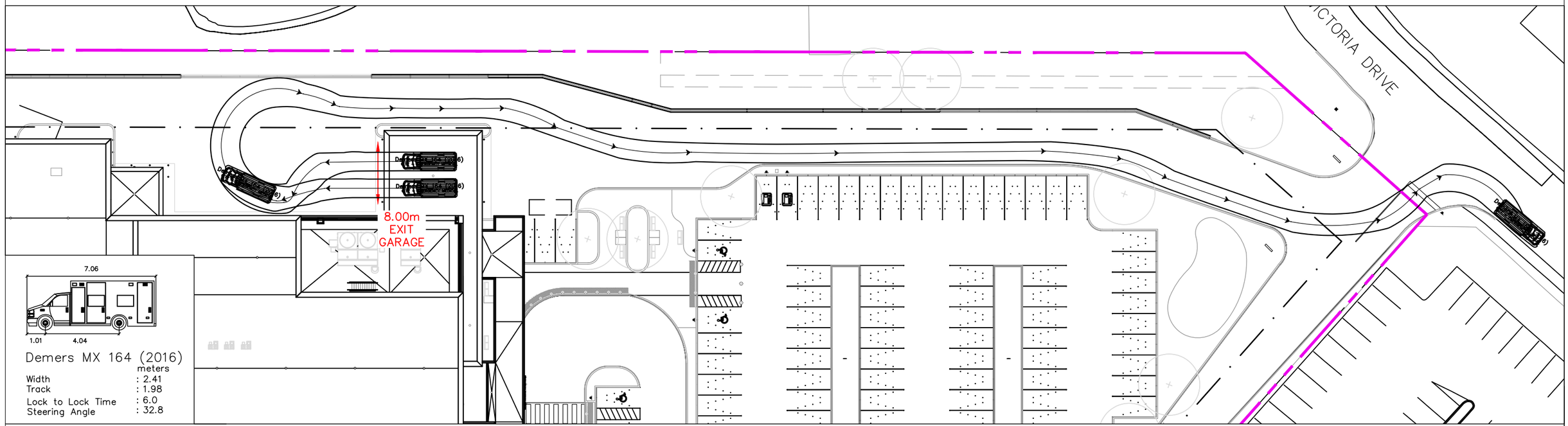

EXIT PATH

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Date JUN 12, 2025

4 CAMPBELL DRIVE
UXBRIDGE ONTARIO

5 0 5 10 15m
1:500

AMBULANCE ENTRY/EXIT PATHS

Drawing No. 006

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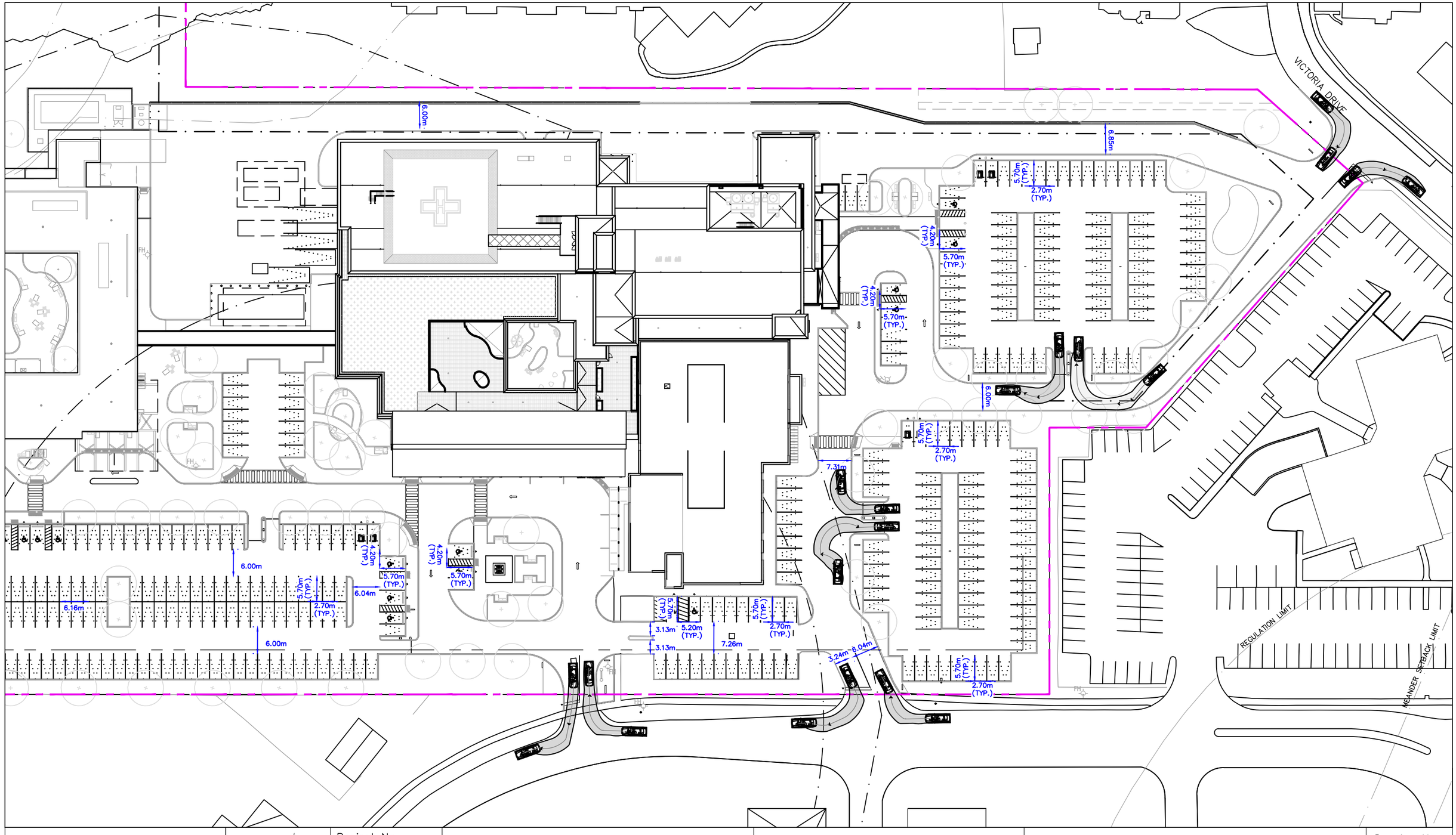

PLOT DATE: June 12, 2025

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Date JUN 12, 2025

4 CAMPBELL DRIVE
UXBRIDGE ONTARIO

8 0 8 16 24m
1:800

PARKING ANALYSIS GROUND FLOOR

Drawing No. 007

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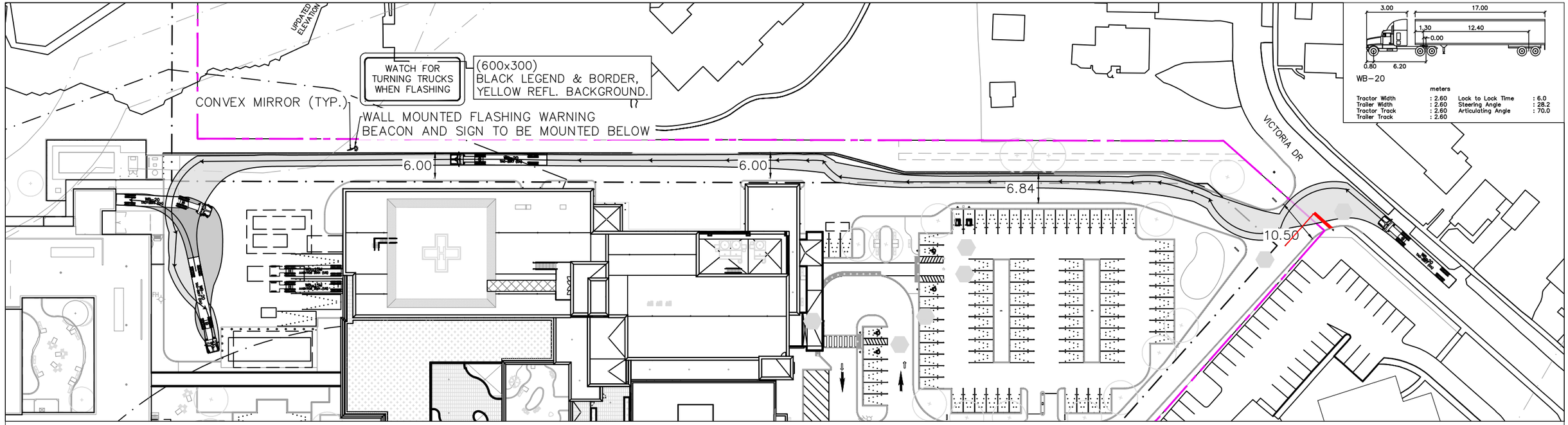
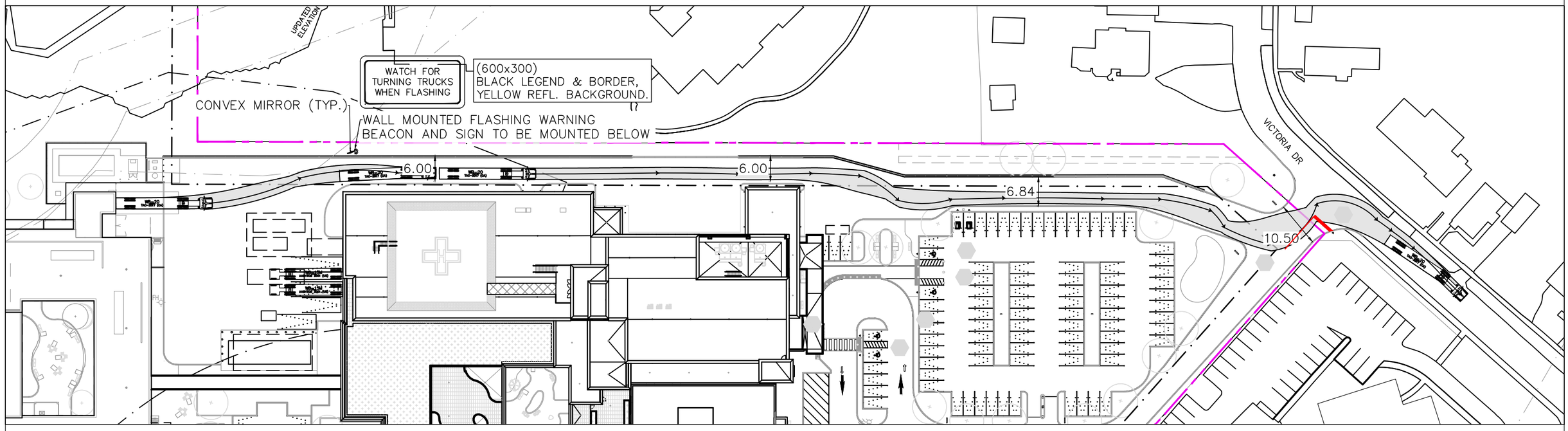


ENTRY PATH



EXIT PATH

PLOT DATE: June 12, 2025

DRAWN BY: H.S.

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Project No. 25258

Date JUN 12, 2025

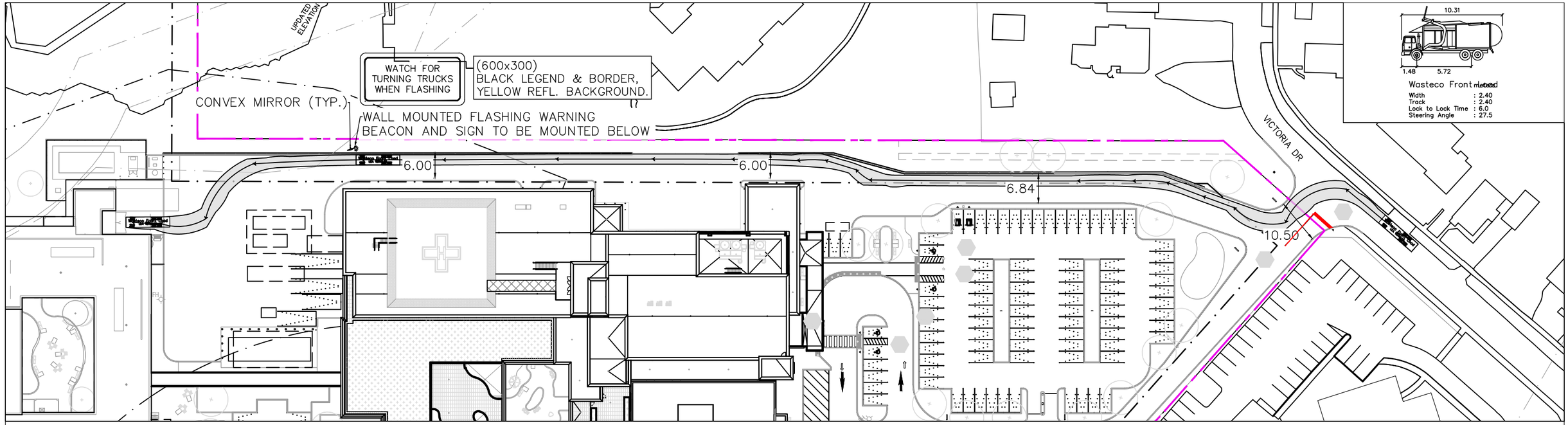
4 CAMPBELL DRIVE
UXBRIDGE ONTARIO

9 0 9 18 27m
1:900

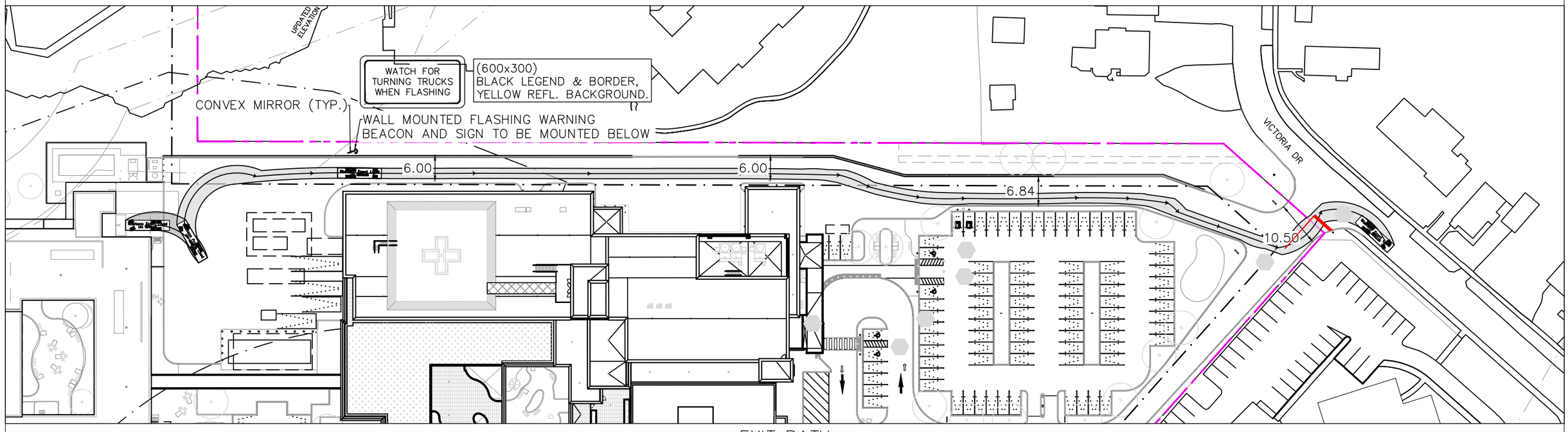
LTC DEVELOPMENT
WB-20 TRUCK
ENTRY AND EXIT PATHS

Drawing No. 008

DRAWING NAME: F:\25258\Drafting\25258WF005.dwg



ENTRY PATH



EXIT PATH

DRAWN BY: H.S. PLOT DATE: June 12, 2025

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Project No. 25258

Date JUN 12, 2025

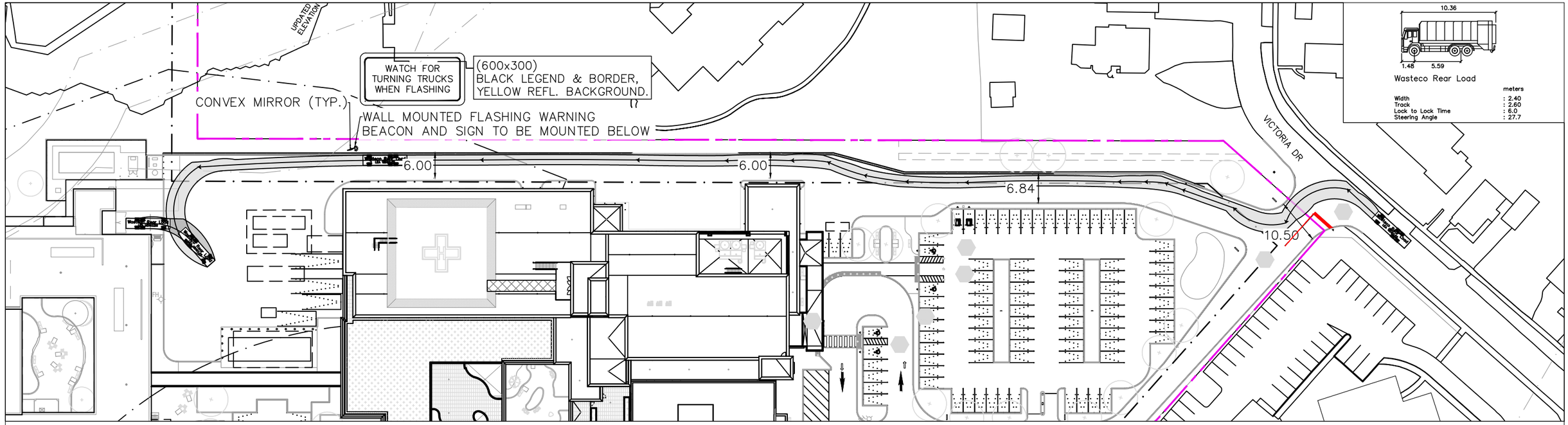
4 CAMPBELL DRIVE
UXBRIDGE ONTARIO

9 0 9 18 27m
1:900

LTC DEVELOPMENT
WASTECO FRONT GARBAGE TRUCK ENTRY AND EXIT PATHS

Drawing No. 009

DRAWING NAME: F:\25258\Drafting\25258WF005.dwg



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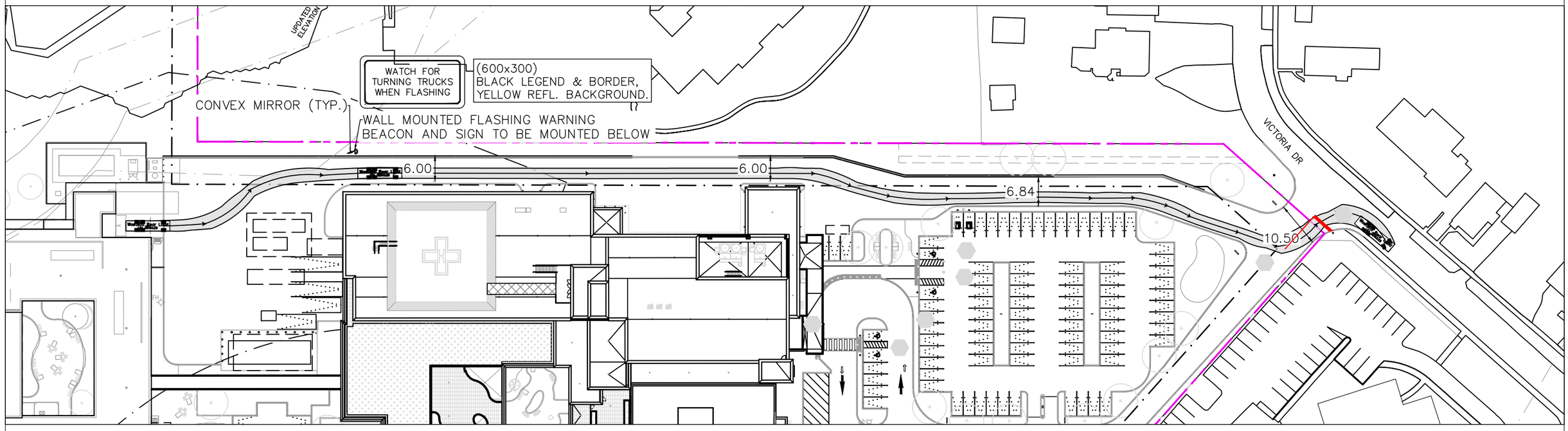

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4 CAMPBELL DRIVE
UXBRIDGE ONTARIO

9 0 9 18 27m
1:900

LTC DEVELOPMENT
WASTECO REAR GARBAGE TRUCK ENTRY AND EXIT PATHS

Drawing No. 010

DRAWING NAME: F:\25258\Drafting\25258WF005.dwg

NOTE: CROSSWALK PAVEMENT MARKING AS PER DETAIL A AND ACCESSIBILITY PAVEMENT MARKING AS PER DETAIL B

UPDATED REGIONAL FLOOD ELEVATION CONTOUR LINE

UPDATED REGIONAL FLOOD ELEVATION CONTOUR LINE

VICTORIA DR

10.00m

10.00m

1.00m

1.00m

CAMPBELL DR

REGULATION LIMIT

MEANDER SETBACK LIMIT

MEANDER SETBACK LIMIT

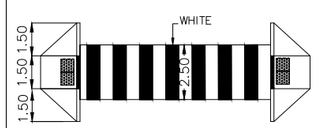
PAVEMENT MARKING & SIGNAGE	
1	SOLID WHITE, 60cm
2	SOLID YELLOW, 10cm
3	SOLID WHITE, 10cm
4	SYMBOL AS SHOWN (TYP.)
5	HATCHING AS SHOWN (TYP.)
X	SIGN NUMBER
	POLE MOUNTED SIGN

SIGN	LOCATION	QUANTITY REQUIRED	COLOURS
STOP	1	3	Ra-1 (600x600) LEGEND & BORDER – WHITE REFL. BACKGROUND – RED REFL.
FIRE ACCESS ROUTE	2	23	(300x450) BLACK LEGEND & BORDER, RED REFL. ANNULAR BAND AND INTERDICTORY STROKE, WHITE REFL. BACKGROUND.
LOADING ZONE	3	1	(300x450) RED REFL. INTERDICTORY SYMBOL, BLACK LEGEND & BORDER, WHITE REFL. BACKGROUND.
BY PERMIT ONLY	4	16	Rb-93 DISABLE PARKING PERMIT SIGN (30X45cm)
DROP-OFF AREA MAX. 5 MINUTES WAITING	5	0	(300x450) BLACK LEGEND & BORDER, WHITE REFL. BACKGROUND.
STOP FOR PEDESTRIANS	6	8	Wc-7 (750x750) BLACK SYMBOL & BORDER, YELLOW REFL. BACKGROUND.
	7	0	Rb-51 (300x300) RED REFL. INTERDICTORY SYMBOL BLACK LEGEND, RED BORDER WHITE REFL. BACKGROUND
VAN ACCESSIBLE	8	0	BLACK LEGEND & BORDER, WHITE REFL. BACKGROUND.
ELECTRIC VEHICLE CHARGING	9	8	WHITE REFL. SYMBOL & BORDER GREEN REFL. BACKGROUND
	10	0	Rb-12 NO LEFT TURN SIGN (60X60cm)
WRONG WAY	11	4	Rb-20 DO NOT ENTER/WRONG WAY SIGN (60X120cm)
	12	1	Rb-21 ONE-WAY SIGN (30X90cm)

NOTES:

- ALL SIGNS ARE STEEL POST-MOUNTED, UNLESS OTHERWISE INDICATED.
- UNDERSIDES OF ALL SIGNS TO BE LOCATED MIN. 2.0m ABOVE TOP OF PAVEMENT OR TOP OF SIDEWALK UNLESS STATED OTHERWISE. ALL SIGNS ARE PER "ONTARIO TRAFFIC MANUAL", LATEST EDITION.
- ALL PAVEMENT MARKINGS SHALL BE MADE IN ACCORDANCE WITH ONTARIO TRAFFIC MANUAL, BOOK 5 AND 11.

DETAIL A – CROSSWALK DESIGN AS PER TAC GUIDELINES



DETAIL B – PAVEMENT MARKING DETAIL (AS PER AODA)

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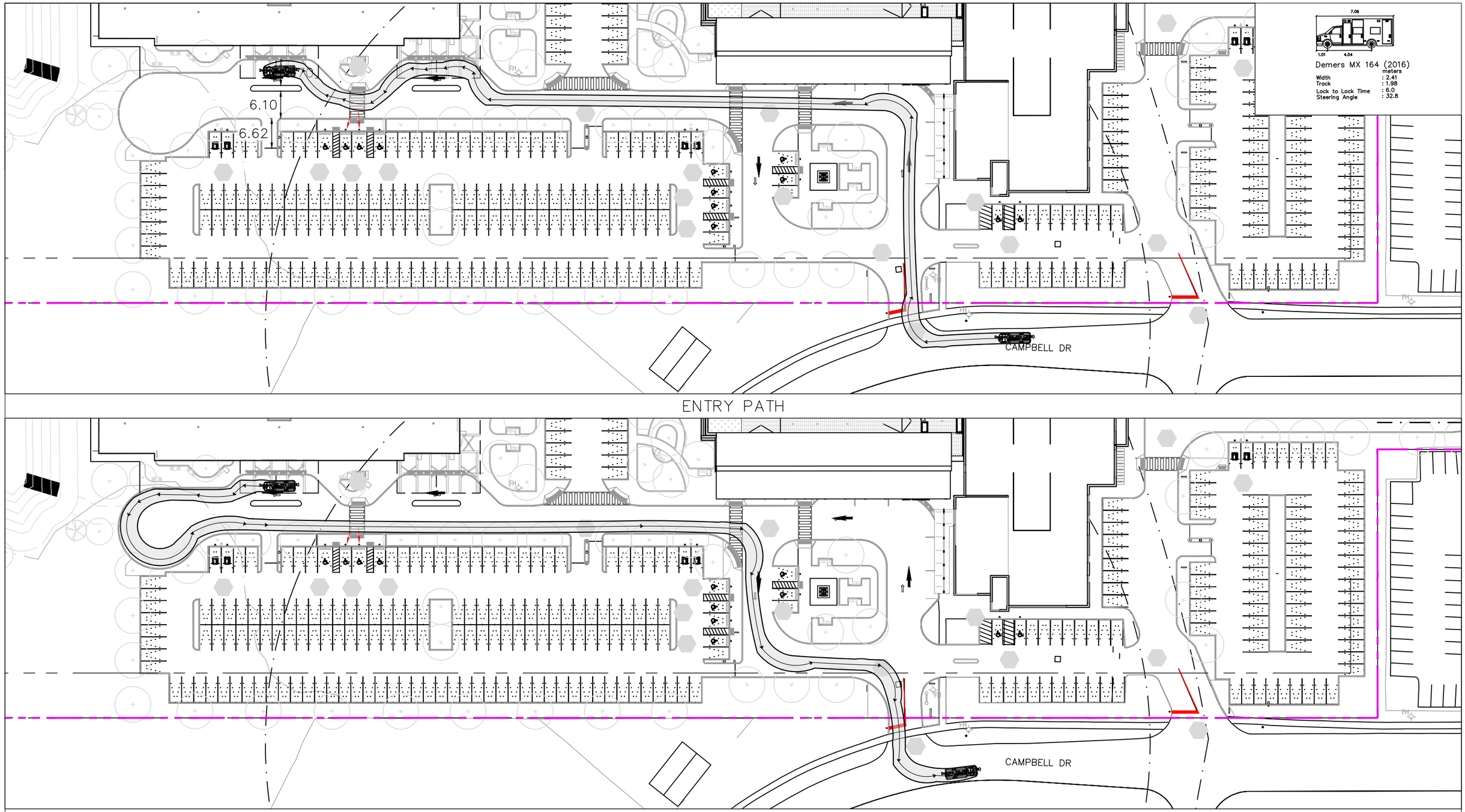
4 CAMPBELL DRIVE
UXBRIDGE ONTARIO

12 0 12 24 36m
1:1200

OAK VALLEY HEALTH CAMPUS
PAVEMENT MARKING & SIGNAGE PLAN

Drawing No. 011

DRAWING NAME: F:\25258\Drafting\25258WF005.dwg



ENTRY PATH

CAMPBELL DR

EXIT PATH

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4 CAMPBELL DRIVE
UXBRIDGE ONTARIO

9 0 9 18 27m
1:900

LTC DEVELOPMENT AMBULANCE ENTRY AND EXIT PATHS

Drawing No. 012

DRAWING NAME: F:\25258\Drafting\25258WF005.dwg