1160 Blair Road

Traffic Impact Study

Archangel Raphael & St. Marina Coptic Orthodox Church

18 August 2023

The Power of Commitment

Executive Summary

GHD Limited is pleased to provide the following Traffic Impact Study for a proposed redevelopment of the existing Archangel Raphael & St. Marina Coptic Orthodox Church site located at 1160 Blair Road in the City of Burlington.

This report determines the site related traffic and subsequent traffic related impacts on the adjacent road network and site driveways during the weekday a.m. and p.m. peak hours, and Sunday morning peak hours. These impacts are based on the projected future background traffic and road network conditions derived for a 2028 future planning horizon year.

Based on the approved Terms of Reference for the study, the following intersections were included in the study area:

- Mainway and Blair Road
- Blair Road and Landmark Road
- Blair Road and the site accesses

The proposed site plan prepared by the Architect consists of the existing building with the proposed expansion. The site currently contains the Church and office space that is leased to outside tenants. The redevelopment of the subject site includes the relocation of the worship area within the new development portion of the site, renovating the existing worship area to a warehouse, and adding additional uses to the building including office space, daycare space, a banquet hall, and a recreational establishment.

Access to the subject site is proposed to be maintained via the two existing full-moves accesses along Blair Road.

Based on ITE Trip Generation rates using Land Use Code Land Use (LUC) 150 Warehousing, LUC 710 General Office Building, LUC 565 Daycare Center, and LUC 560 Church, the subject site is expected to generate a total of 109 two-way additional vehicle trips during the a.m. peak hour consisting of 75 inbound and 34 outbound trips. During the p.m. peak hour, it is expected to generate a total of 115 additional new two-way vehicle trips consisting of 38 inbound and 77 outbound trips. On Sundays, the proposed redevelopment is expected to generate a total of 163 two-way vehicle trips consisting of 78 inbound and 85 outbound trips.

Under existing traffic conditions, all intersections are operating at acceptable v/c ratios and levels of service during the a.m. peak and p.m. peak hours.

Under the 2028 future background conditions, with the addition of corridor growth and background development traffic, all intersections continue to operate with acceptable v/c ratios, delays and queuing.

With the addition of site generated traffic under the 2028 future total condition, all intersections continue to operate with acceptable v/c ratios, delays and queuing with the exception of the intersection of Mainway and Blair Road which is reporting the northbound approach operating with a v/c ratio of 1.03 LOS F during the p.m. peak hour.

Field studies confirmed that the northbound approach at Mainway and Blair Road operates in most cases as a separate northbound left-turn and right-turn when a northbound left-turning vehicle was stopped waiting for a gap and a northbound right-turning vehicle approaches the intersection. With the modified lane configuration in Synchro, the northbound left-turn movement continues to operate with a LOS F with approximately a two-minute delay.

The impact of site traffic at this intersection is noticeable and some increase in delays are expected for the northbound left turn, however, the movement continues to operate below its theoretical capacity with a v/c ratio less than 1.0. While not accounted for in the Synchro analysis, it is expected that the adjacent traffic signals at the north leg of Dillon Road will assist traffic making the northbound left from Blair Road to Mainway as traffic on Mainway is stopped periodically.

Application of the City of Burlington By-Law 2000 parking rates to the subject site results in a requirement of a minimum of 315 vehicular parking spaces (including 9 accessible parking spaces), 13 bicycle parking spaces, and 1 loading space shared between the proposed uses in the single building.

The subject site provides a total of 260 vehicular parking spaces, 9 barrier free spaces, 16 bicycle parking spaces and 1 loading space. The City's minimum By-Law requirements are satisfied with the exception of the vehicular parking space requirement.

The various uses proposed for the building are anticipated to operate during different times of the day. During the "business hours" (8 a.m. to 5 p.m.), the warehouse, offices, and daycare uses will all be operational. During weekday evenings (5 p.m. to 11:00 a.m.), the banquet hall and the recreational establishment may be operational. On Sundays, the Church will be the primary use that will be operational with the banquet hall and recreational establishment also being operational, however it will only be used as an ancilliary use by attendees from the Church and therefore will not generate additional parking requirements.

Based on the three operating periods, the "business hour" uses would require 145 spaces based on the City's Zoning Bylaw, the weekday evening uses requiring 120 spaces, and the Sunday uses requiring 50 spaces. With the provision of 260 parking spaces on the site, a surplus of parking spaces is expected at any given time throughout the week for the combined uses operating on the site.

TDM measures are proposed for the subject site to encourage employees to explore various modes of transportation in order to reduce their dependency on single occupancy vehicle trips. These measures include bicycle parking and education material along with preferred carpool parking spaces located near the entrances to the offices.

GHD assessed the site circulation for an emergency vehicle, waste collection truck, MSU truck, and passenger vehicles and confirmed no issues with the site circulation.

The traffic study confirms that the proposed redevelopment can be accommodated on the existing road network.

We trust that this satisfies your requirements, but do not hesitate to contact the undersigned if you have any questions.

Sincerely,

GHD





Rafael Andrenacci, B.Eng

Transportation Planner

William Maria, P. Eng.

Transportation Planning Lead

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1. Introduction

1.1 Retainer and Objective

GHD Limited was retained to prepare a Traffic Impact Study for the proposed redevelopment of the Archangel Raphael & St. Marina Coptic Orthodox Church site at 1160 Blair Road in the City of Burlington.

The site location is illustrated in **Figure 1**.

The purpose of this study is to:

- Establish baseline traffic conditions for the study area for the weekday and Sunday peak hours and determine future background operating conditions for a future planning horizon in 2028.
- Estimate the site trips generated by the proposed development and distribute the traffic to the adjacent road network.
- Determine future operating traffic conditions during the weekday peek periods through intersection capacity analysis.
- Review the minimum By-law parking requirement and parking provision and provide a comparison to the expected parking demand.
- Conduct a swept path analysis for the proposed site plan.
- Recommend TDM measures to reduce single occupancy vehicle trips to the site.

1.2 Study Team

The GHD team involved in the preparation of the study are:

- William Maria, P. Eng., Transportation Planning Lead
- Rafael Andrenacci, B.Eng., Transportation Planner



Figure 1 Site Location

2. Site Characteristics

2.1 Study Area

As per the agreed Terms of Reference for the study attached in **Appendix A**, the following intersections were included in the study area:

- Mainway and Blair Road
- Blair Road and Landmark Road/ South Site Access
- Blair Road and the North Site Access

2.2 Proposed Development Content

A site plan prepared by the Architect is shown in **Figure 2** and provided in **Appendix B**. It shows the addition, alterations, and renovations to the existing building, the demolition of part of the existing building and the new proposed addition. The redeveloped building consists of 10,340 m^2 of GFA, including 4,320 m^2 in the existing front end of the building and a 6,020 m^2 redevelopment of the back end.

The breakdown between the proposed uses are as follows:

- Total Worship Space: 1,380 m^2
    - New Worship Area: 825 m^2
    - Entrance: 230 m^2
    - Diocese offices: 325 m^2
- Office Areas: 4,160 m^2
    - 2,760 m^2 of existing GFA
    - 1,400 m^2 of new GFA
- Daycare: 400 m^2
- Warehouse: 250 m^2
- Banquet Hall: 700 m^2
- Recreational establishment: 900 m^2
- Common spaces: 2,550 m^2

Based on discussions with the client, the Church will have a service from 8:00 -11:00 a.m. on Sundays and a weekly service on Tuesdays from 6:00 – 8:00 a.m. The office, daycare, and industrial uses will all operate during typical business hours (from 8:00 a.m. to 5:00 p.m.). The banquet hall and recreational establishment (a gymnasium) will have its operations limited to weekday evenings and Sundays. Both the banquet hall and recreational establishment will be operated by volunteers from the Church and that would only be able to operate the facility during the evening from Monday to Friday. The banquet hall and recreational facility will also be used on Sundays, however these facilities will be used by the attendees of the church during or after the service and will not generate additional trips to the site.

The existing office component currently consists of 2,760 m^2 of GFA. Of the existing GFA, 90% of the space is currently occupied and fully operational and the traffic generated by this component was captured in the existing traffic volumes summarized in Section 3.4.

Access to the subject site is proposed to be maintained via the two existing driveways along Blair Road.

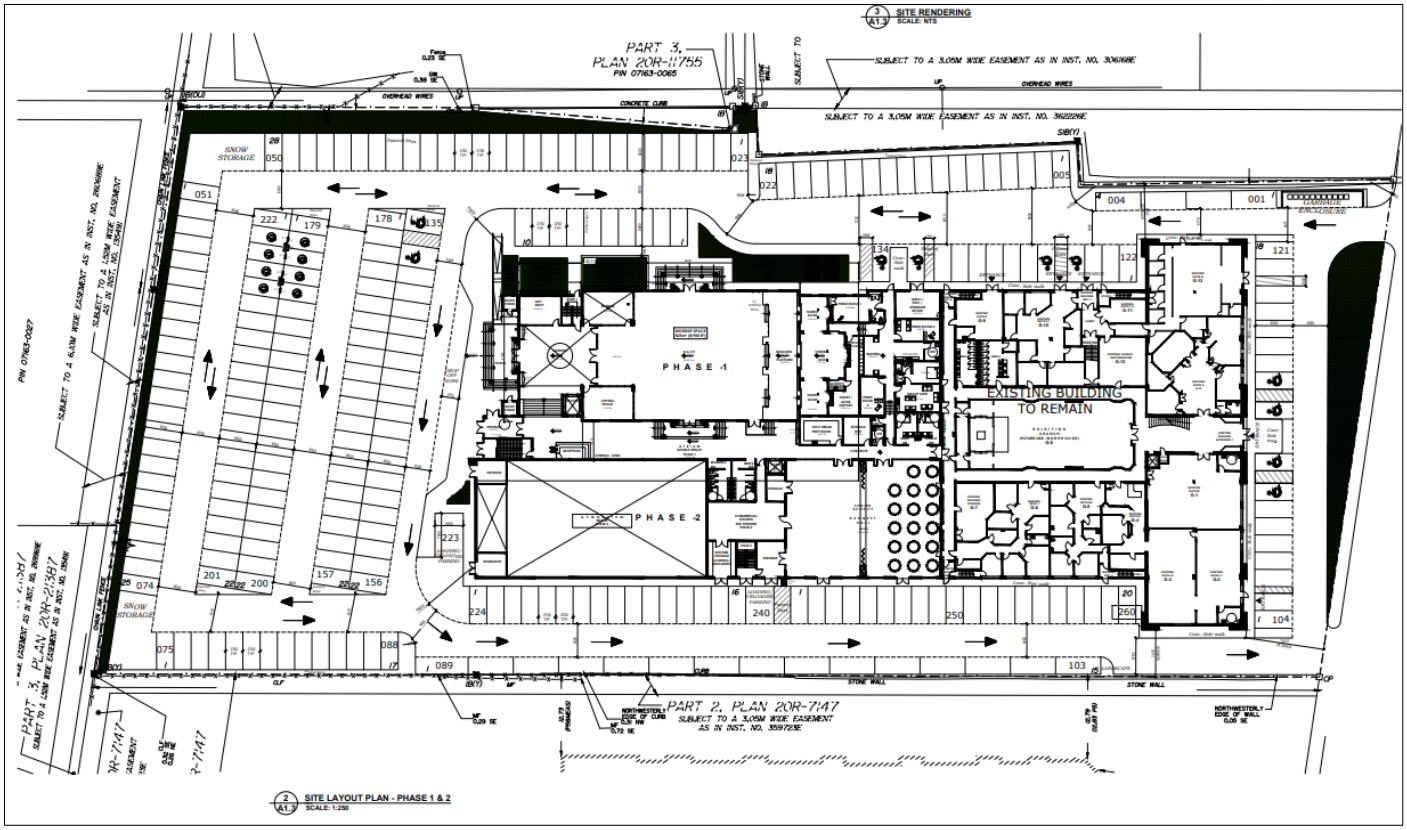


Figure 2 Proposed Site Plan

3. Existing Conditions

3.1 Existing Road Network

Mainway is an east/west industrial connector road under the jurisdiction of the City of Burlington. Within the study area, it has a four-lane cross-section. Its intersection with Blair Road is unsignalized with the stop-control only provided along the minor approach. The posted speed limit along Mainway is 60 km/h.

Blair Road is a north/south local road under the jurisdiction of the City of Burlington. Within the study area, it has a two-lane cross-section. Its intersections with both Mainway and Landmark are unsignalized with the stop-control only provided along the minor approach. The assumed posted speed limit along Blair Road is 50 km/h.

Landmark Road is an east/west local road under the jurisdiction of the City of Burlington. Within the study area, it has a two-lane cross-section. Its intersection with Blair Road is unsignalized with the stop-control only provided along the minor approach. The assumed posted speed limit along Landmark Road is 50 km/h.

The existing lane configurations and intersection control are shown in the figure below.

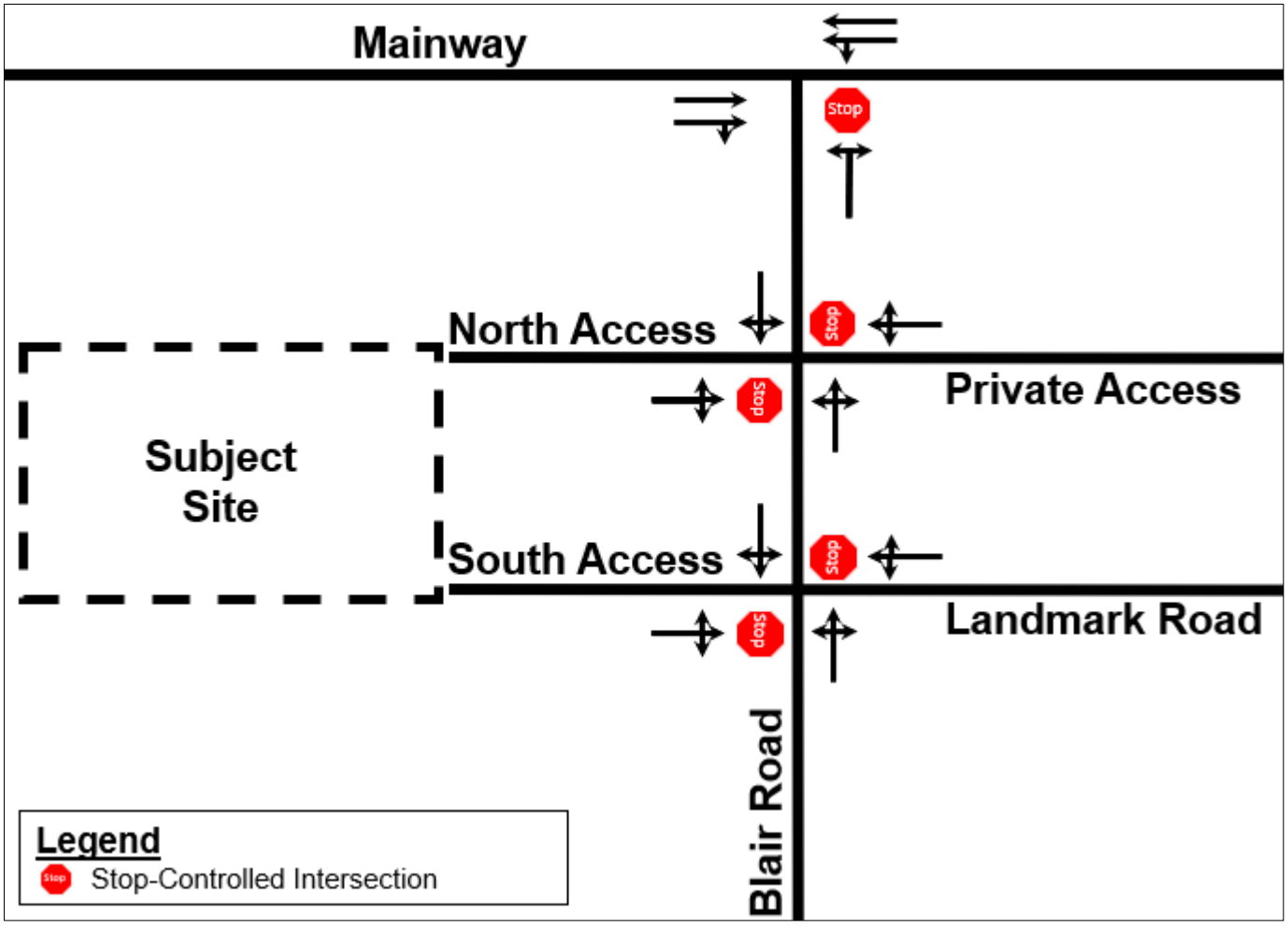


Figure 3 Existing Lane Configuration and Traffic Controls

3.2 Pedestrian and Bicycle Facilities

Within the study area, a sidewalk is provided along the north side of Mainway and an asphalt path is provided along the south side of the road, identified on the City's Official Plan as a bike lane. There is currently no pedestrian nor cycling facilities provided along either Blair Road or Landmark Road.

The pedestrian and bicycle routes are illustrated in the figure below.



Figure 4 Existing Active Transportation Facilities

3.3 Transit Services

Burlington Transit currently offers transit service along the following route within the study area:

Route 6 (**Headon**) operates in a general east/west direction along Mainway within the study area. The route provides service between the Burlington GO Station and the GO 407 Carpool Lot with a 30-minute headway during both the a.m. and p.m. peak hours. The nearest transit stop is located at Blair Road and Mainway, however it only services the eastbound/northbound portion of the route. The nearest westbound/southbound transit stop is provided at Dillon Road and Mainway, accessible via a signalized intersection.



Figure 5 Existing Transit Routes and Transit Stops

3.4 Existing Traffic Data

GHD contracted Spectrum Traffic Inc. to conduct updated turning movement counts at all the study intersections in August 2023. During the summer, Archangel Raphael & St. Marina Coptic Orthodox Church operates a summer camp for children and the trips generated by the camp were captured during the commuter a.m. and p.m. peak hours. These trips do not exist during the non-summer months, however GHD did not remove these from the road network to provide a more conservative estimate on the operation of the study intersections.

Weekday turning movement counts were conducted during the typical a.m. and p.m. peak hour between 7:00 a.m. and 9:00 a.m. and between 4:00 p.m. and 6:00 p.m. In addition to collecting updated turning movement counts during the weekday a.m. and p.m. peak hours, updated turning movement counts were also completed on Sunday during the Church's weekly service. The service starts at 8:00 a.m. and ends at 11:00 a.m. The client indicated that people begin arriving at the start of the service at 8:00 a.m. and begin departing at 11:00 a.m. The Sunday counts were therefore collected from 7:30 a.m. to 4:00 p.m. to determine the subject site's inbound and outbound peak hours. Based on the inbound volumes around 8:00 a.m. and the outbound volumes around 11:00 a.m. at the north site access (generates the greatest amount of traffic), the Sunday inbound peak was identified to occur from 8:15 a.m. to 9:15 a.m. and the Sunday outbound peak occurs from 10:45 a.m. to 11:45 a.m.

The baseline 2023 traffic volumes for the weekday a.m. and p.m. peak hours are summarized in **Figure 6**

for the weekday peak hours and **Figure 7** for the Sunday peak hours with the full turning movement counts provided in **Appendix C.**

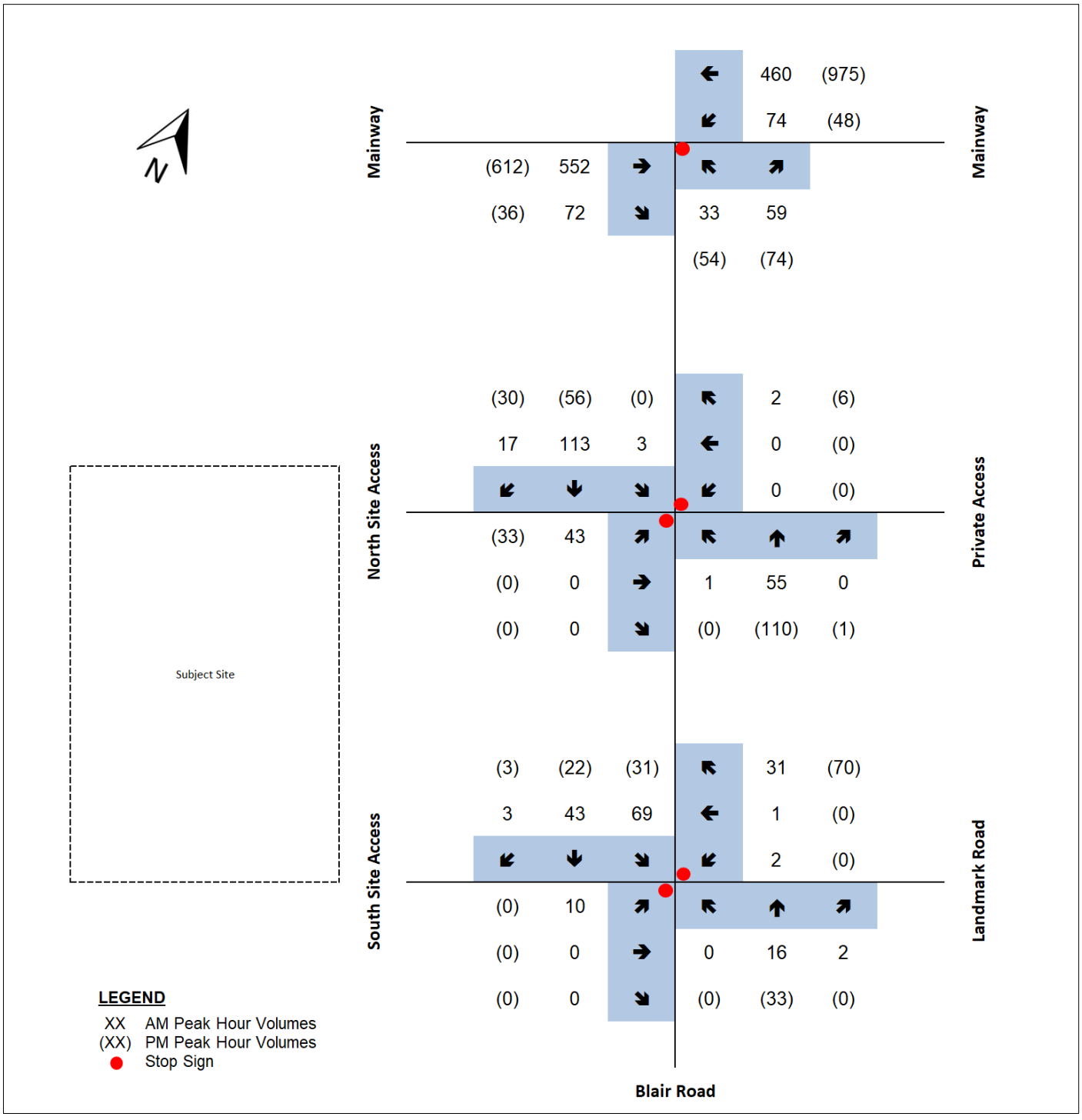


Figure 6 Baseline 2023 Traffic Volumes - Weekday

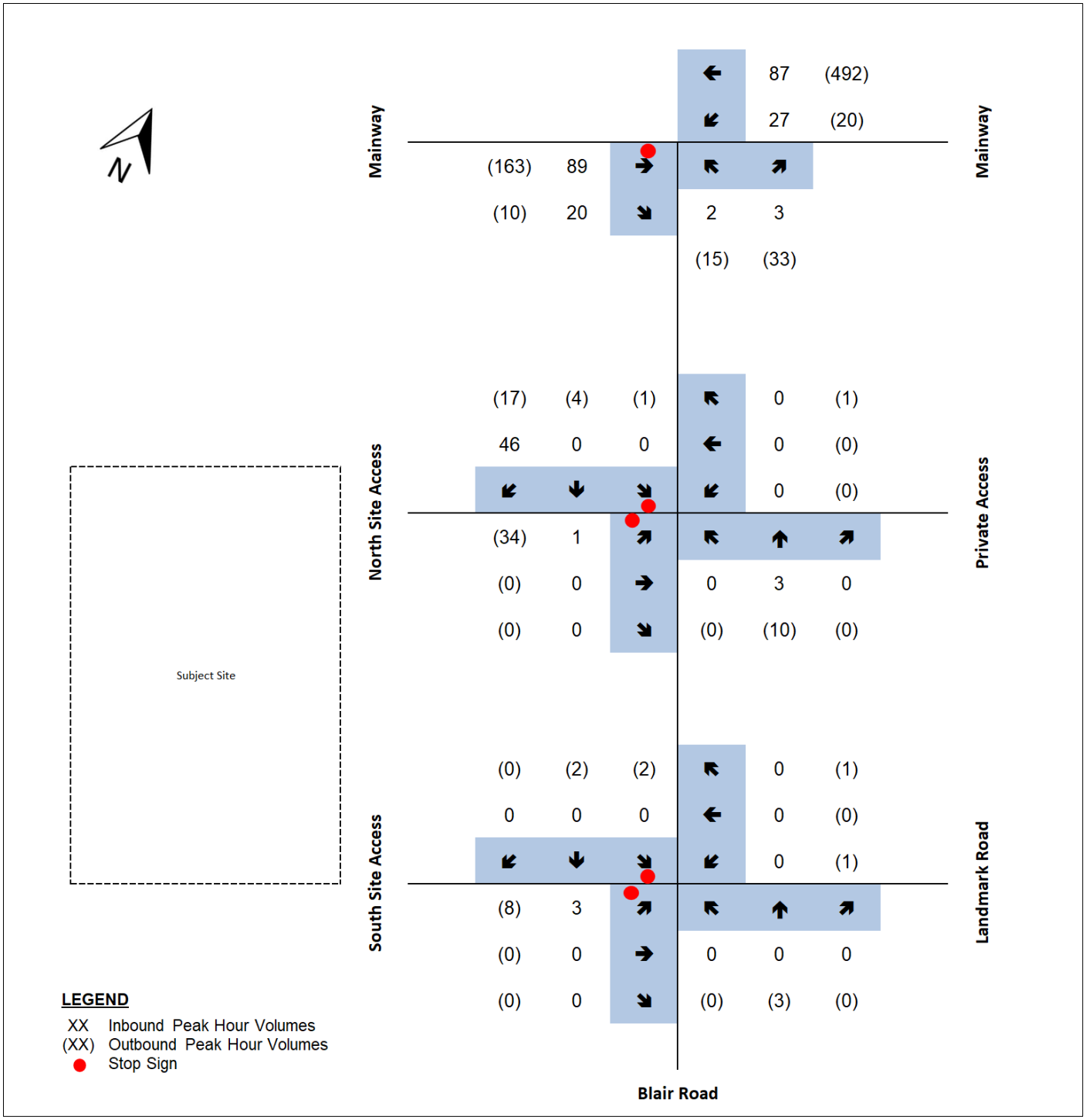


Figure 7 Baseline 2023 Traffic Volumes - Sunday

4. Future Conditions

4.1 Study Horizon Year

A future horizon year of 2028 representing five years from the date of the study was selected for the analysis of future traffic conditions, generally consistent with the Region's TIS Guidelines and was approved in the Terms of Reference.

4.2 Corridor Growth

A 1% growth rate was applied to all movements along each road within the study area to estimate corridor growth up to the future horizon years as agreed to in the Terms of Reference with City staff.

4.3 Background Development Traffic

GHD reviewed the City's development application portal to determine if there are any developments located near the subject site that would contribute traffic volumes at the study intersections. No developments were identified adjacent to the subject site that may contribute a significant volume of traffic in addition to the adopted corridor growth rate.

4.4 Future Background Traffic Volumes

The background traffic volumes for the 2028 horizon year were derived by applying the respective growth rates to the study area roads. The resulting 2028 future background traffic volumes are summarized in **Figure 8** for the weekday peak hours and **Figure 9** for the Sunday peak hours

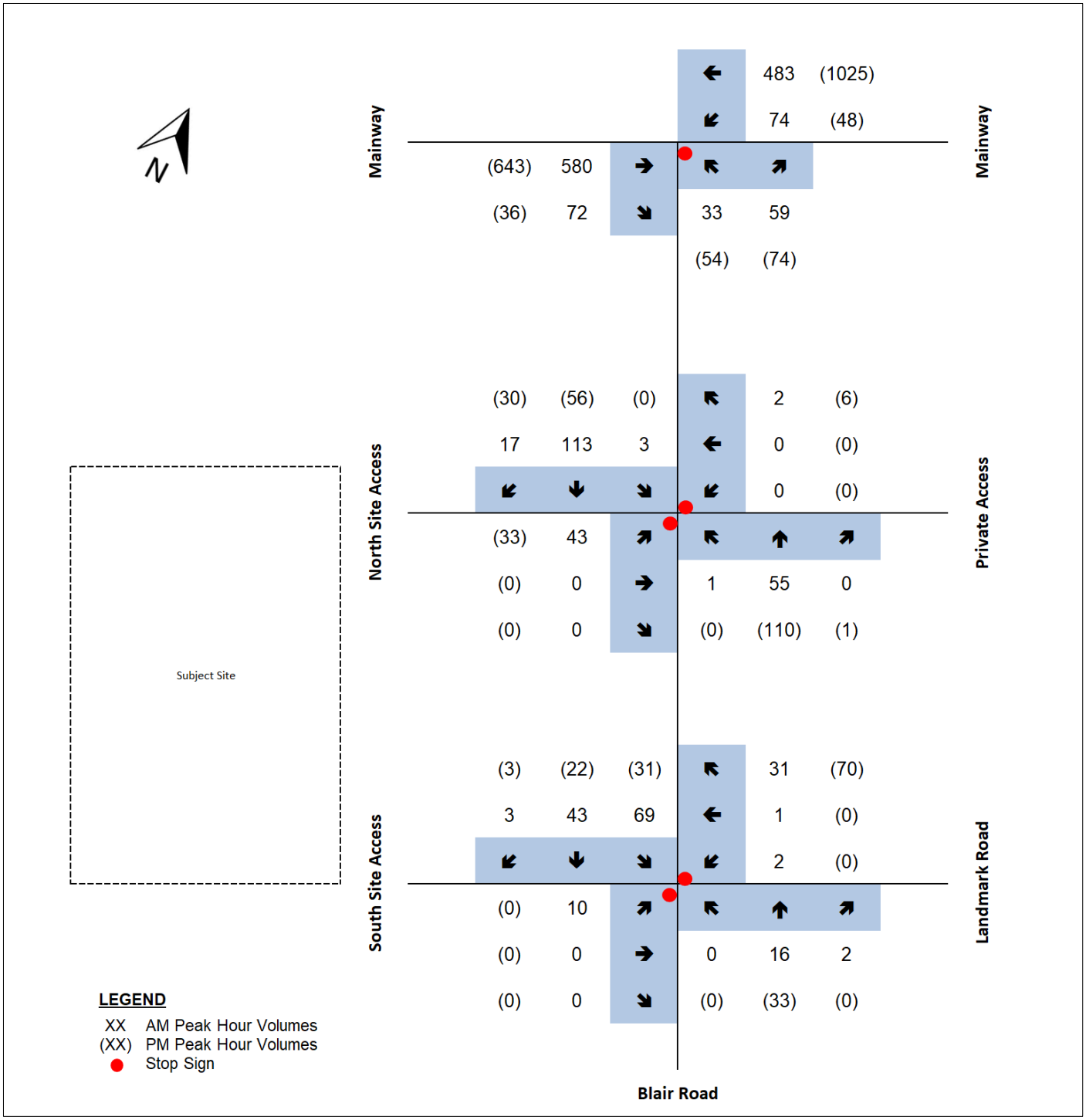


Figure 8 2028 Future Background Traffic Volumes - Weekday

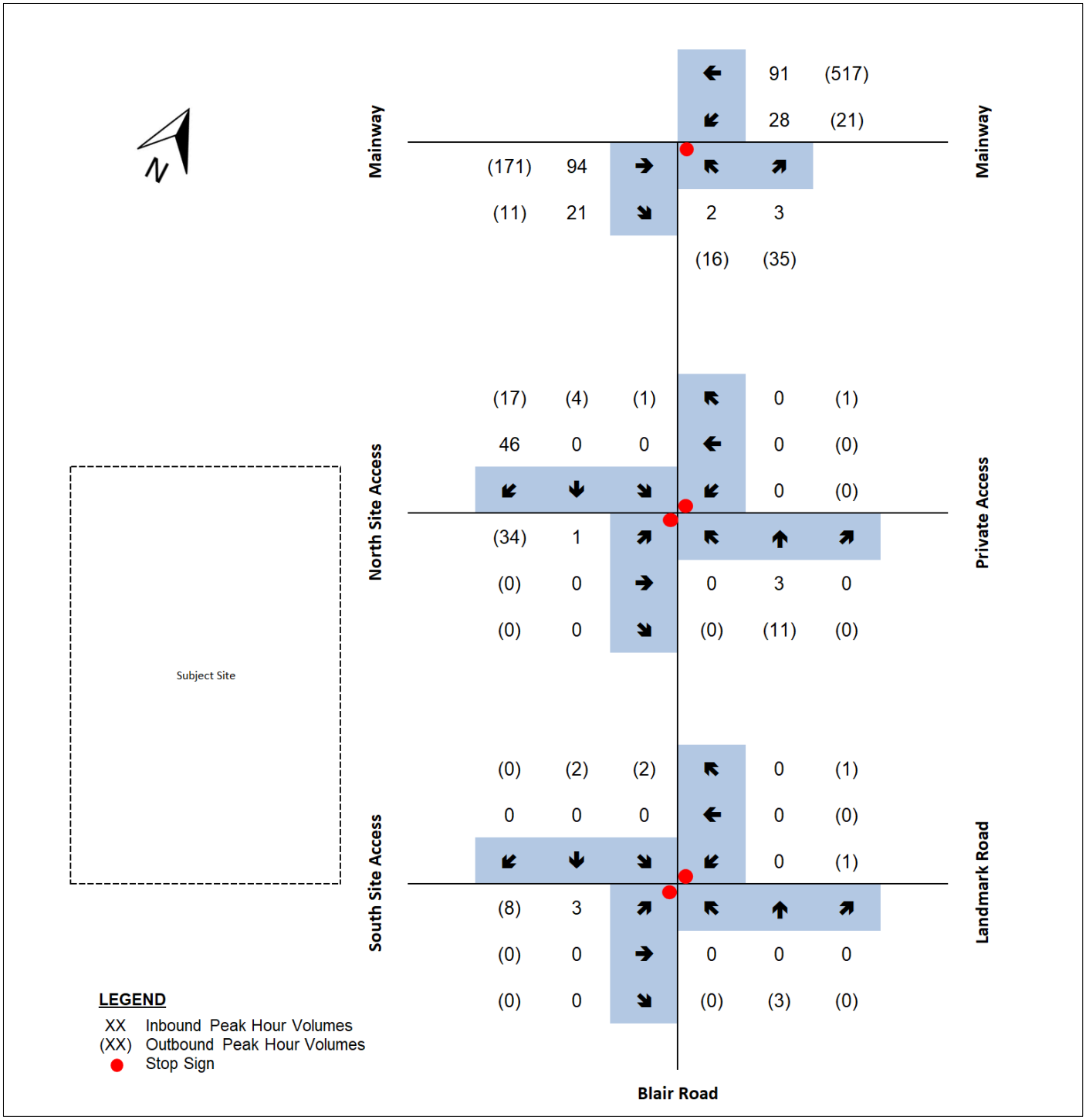


Figure 9 2028 Future Background Traffic Volumes - Sunday

5. Site Generated Traffic

5.1 Modal Split

To provide a more conservative analysis, no transit modal split reduction was applied to the estimated site generated trips.

5.2 Site Trip Generation

The proposed development consists of a place of worship with additional uses that include a warehouse, office space, daycare, a banquet hall, and a recreational establishment.

As stated in **Section 2.2**, the various uses proposed for the subject site will have varying operating hours. The warehouse, office, and daycare components of the subject site will operate during typical business hours (8:00 a.m.-5:00 p.m.) and will generate new two-way trips during the commuter a.m. and p.m. peak hours. The place of worship will have its weekly service from 8:00 a.m. to 11:00 a.m. on Sundays and will generate trips during the previously established “inbound” and “outbound” peak hours. The banquet hall and recreational establishment will operate only during the evening on weekdays and on Sundays once the service has concluded. As a result, those two uses will be considered as ancillary uses and will not generate new two-ways trips during either the commute peak hours or the Sunday peak hours.

Site traffic generated by the proposed development for the weekday a.m. and p.m. peak hours was estimated by applying the trip rates for Land Use Code (LUC) 150 Warehousing, LUC 710 General Office Building, LUC 565 Daycare Center, and LUC 560 Church in the 11th Edition of the Trip Generation Manual published by the Institute of Transportation Engineers (ITE) for their respective uses. The total worship space consists of 1,380 m^2 of GFA with 825 m^2 of the space allocated to the new worship area and the remaining GFA allocated to the entrance area and diocese office. The trip generation estimates using LUC 560 only used the GFA allocated to the new worship area (825 m^2) as the entrance area and diocese are not expected to generate any additional peak hour trips.

The existing building provides a total of 2,760 m^2 of office space with 90% (2,484 m^2) currently occupied and fully operational. The trip generation for the office land use was completed for the remaining 10% (276 m^2 not currently occupied) and the 1,400 m^2 of new office GFA, for a total of 1,676 m^2 of office GFA.

A comparison of the fitted curve equations and average rates for each individual Land Use Code was completed, whichever calculation resulted in a greater trip generation was used as a conservative measure.

Table 1 summarizes the estimated trip generation for the subject site.

Table 1 Total Site Trip Generation

Land Use Code	GFA	Parameters	Peak Hour Trip Generation					
			Weekday AM			Weekday PM		
			In	Out	Total	In	Out	Total
Warehousing (Weekday)	2,690 ft^2 (250 m^2)	Trip Rate	6.689	2.230	8.919	2.973	7.061	10.034
		Trip Ratio	77%	23%	100%	28%	72%	100%
		New Trips	18	6	24	8	19	27
Office (Weekday)	18,040 ft^2 (1,676 m^2)	Trip Rate	1.829	0.277	2.106	0.388	1.829	2.217
		Trip Ratio	88%	12%	100%	17%	83%	100%
		New Trips	33	5	38	7	33	40
Daycare Center (Weekday)	4,306 ft^2 (400 m^2)	Trip Rate	5.574	5.342	10.916	5.342	5.806	11.148
		Trip Ratio	53%	47%	100%	47%	53%	100%
		New Trips	24	23	47	23	25	48
Church (Sunday Only)	8,880 ft^2 (825 m^2)	Trip Rate	8.784	9.571	18.355	N/A	N/A	N/A
		Trip Ratio	48%	53%	100%	N/A	N/A	N/A
		New Trips	78	85	163	N/A	N/A	N/A
Total Trips (Weekday)			**75**	**34**	**109**	**38**	**77**	**115**
Total Trips (Sunday)			**78**	**85**	**163**	**N/A**	**N/A**	**N/A**

The proposed redevelopment is expected to generate a total of 109 additional two-way vehicle trips during the a.m. peak hour consisting of 75 inbound and 34 outbound trips. During the p.m. peak hour, it is expected to generate 115 additional two-way vehicle trips consisting of 38 inbound and 77 outbound trips.

On Sunday, the proposed redevelopment is expected to generate a total of 163 two-way vehicle trips consisting of 78 inbound trips for the peak hour before the service and 85 outbound trips during the peak hour after the service.

5.3 Site Traffic Distribution and Assignment

The site generated traffic for the subject site was distributed based on the existing travel patterns at the intersection of Mainway and Blair Road. The surrounding developments consist of similar land uses as the subject site and as a result the same existing inbound and outbound east/west travel patterns at the intersection were used to establish the trip distribution (eastbound right-turn and westbound left-turn for the inbound movements and northbound left-turn and right-turn for the outbound movements).

The directional distribution was completed separately for the weekday a.m. and p.m. peak hours and the Sunday inbound and outbound peak hours and are provided in **Table 2** and **Table** 3 with the site generated traffic assignment to the study area road network for the weekday a.m. and p.m. peak hours provided in **Figure 10** (Weekday) and **Figure 11** (Sunday)**.**

Table 2 Site Traffic Distribution - Weekday

Peak Period	Direction	East (Mainway)	West (Mainway)	Total
AM	Inbound	51%	49%	100%
	Outbound	64%	36%	100%
PM	Inbound	57%	43%	100%
	Outbound	58%	42%	100%

Table 3 Site Traffic Directional - Sunday

Peak Period	Direction	East (Mainway)	West (Mainway)	Total
AM	Inbound	57%	43%	100%
	Outbound	60%	40%	100%
PM	Inbound	67%	33%	100%
	Outbound	69%	31%	100%

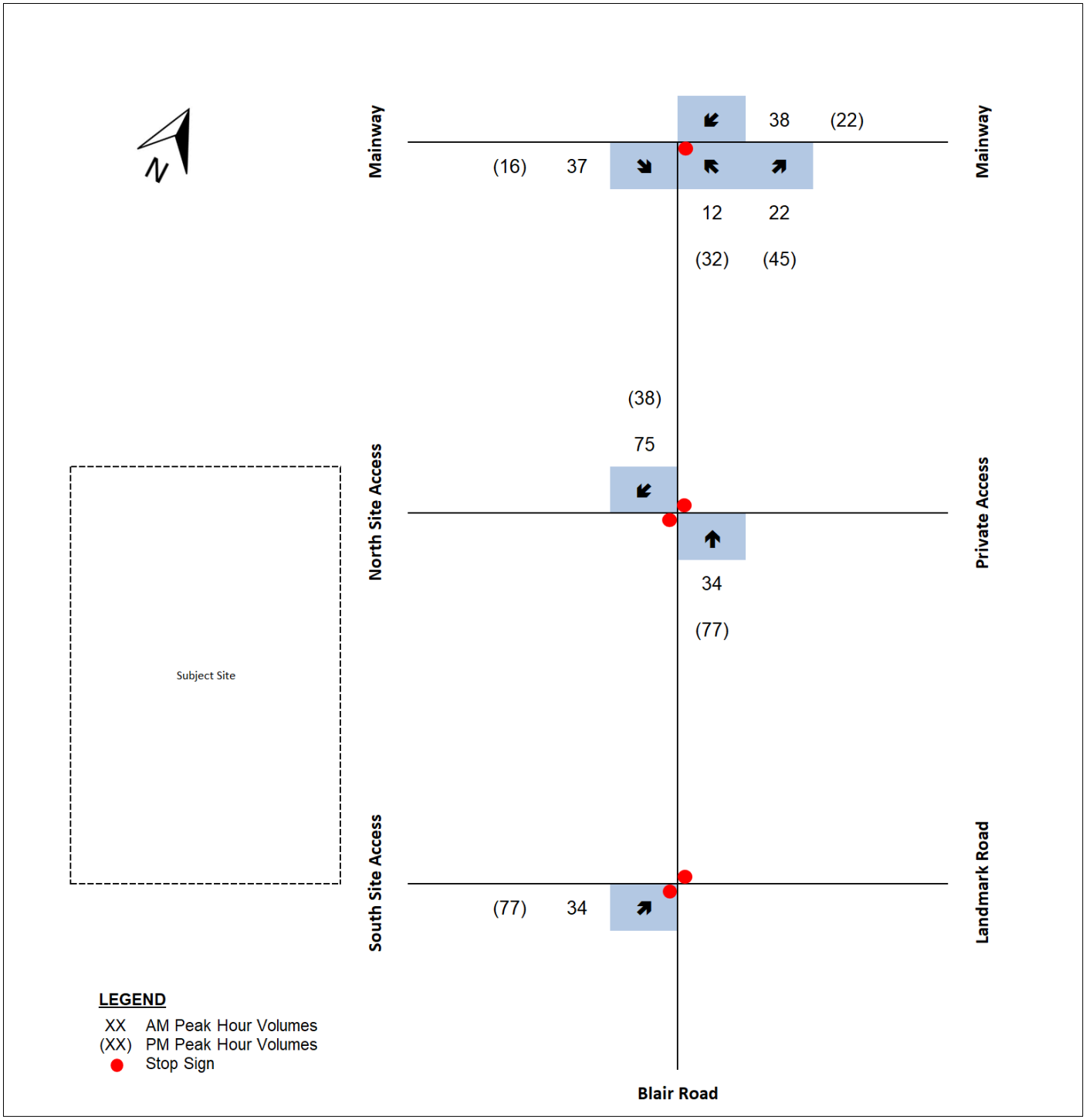


Figure 10 Total Site Trips – Weekday

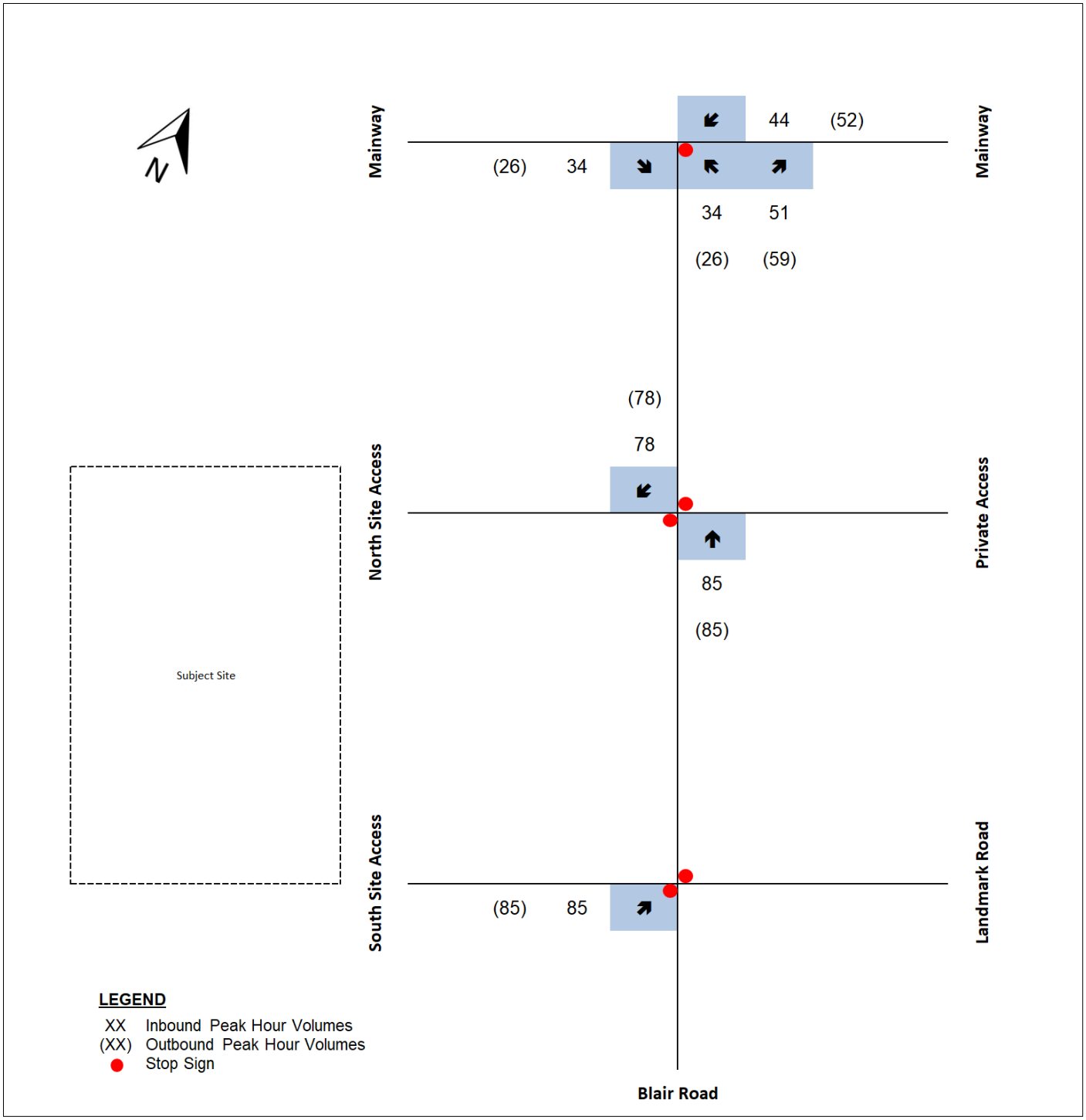


Figure 11 Total Site Trips - Sunday

6. Future Total Traffic

The future total traffic conditions in the weekday a.m. and p.m. peak hours for the 2028 planning horizon was derived by combining the projected future background traffic with the corresponding estimated site generated traffic. The

resulting traffic volumes are presented in **Figure 12** for the weekday peak hours and **Figure 13** for the Sunday peak hours.

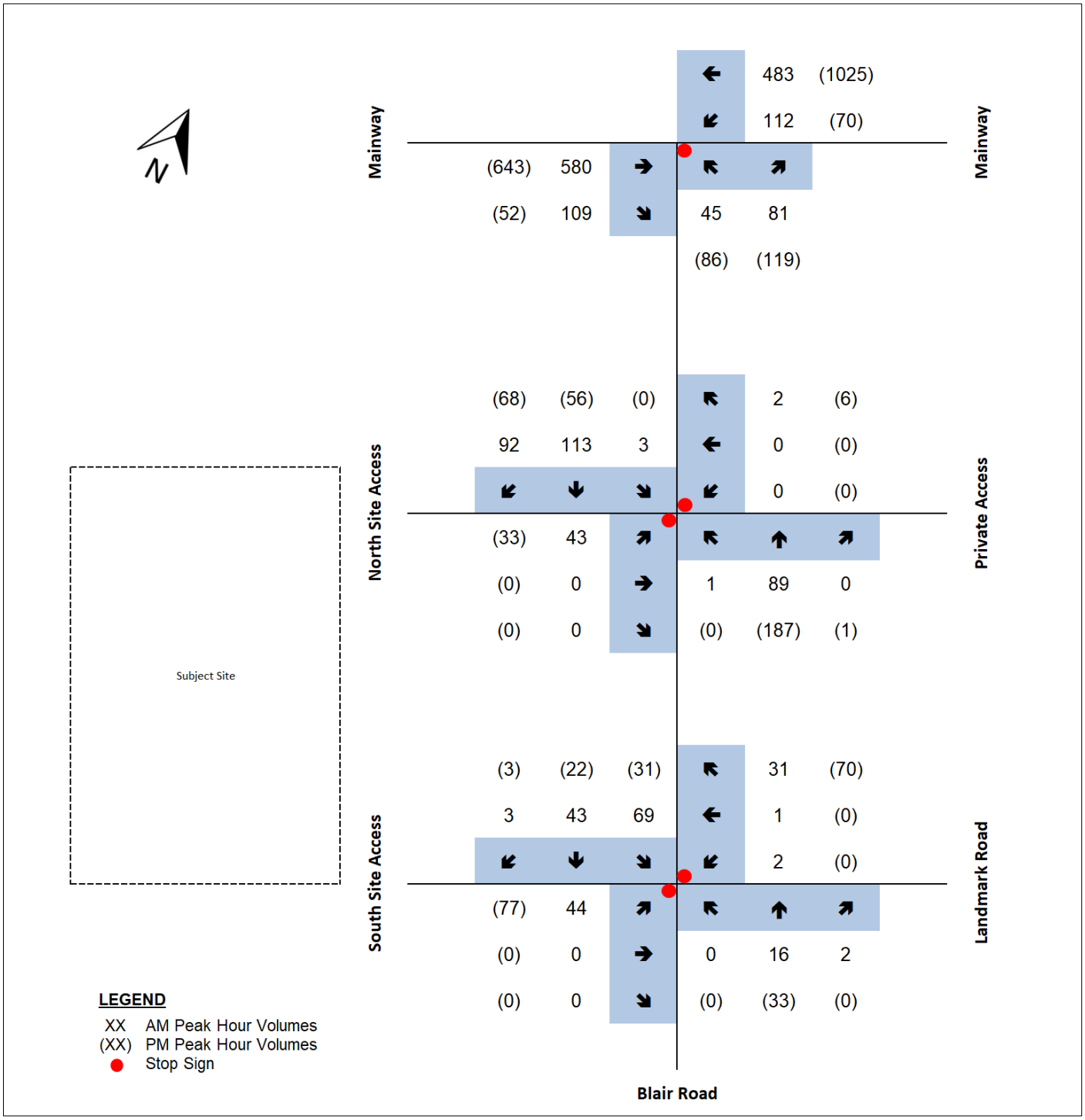


Figure 12 2028 Future Total Traffic Volumes - Weekday

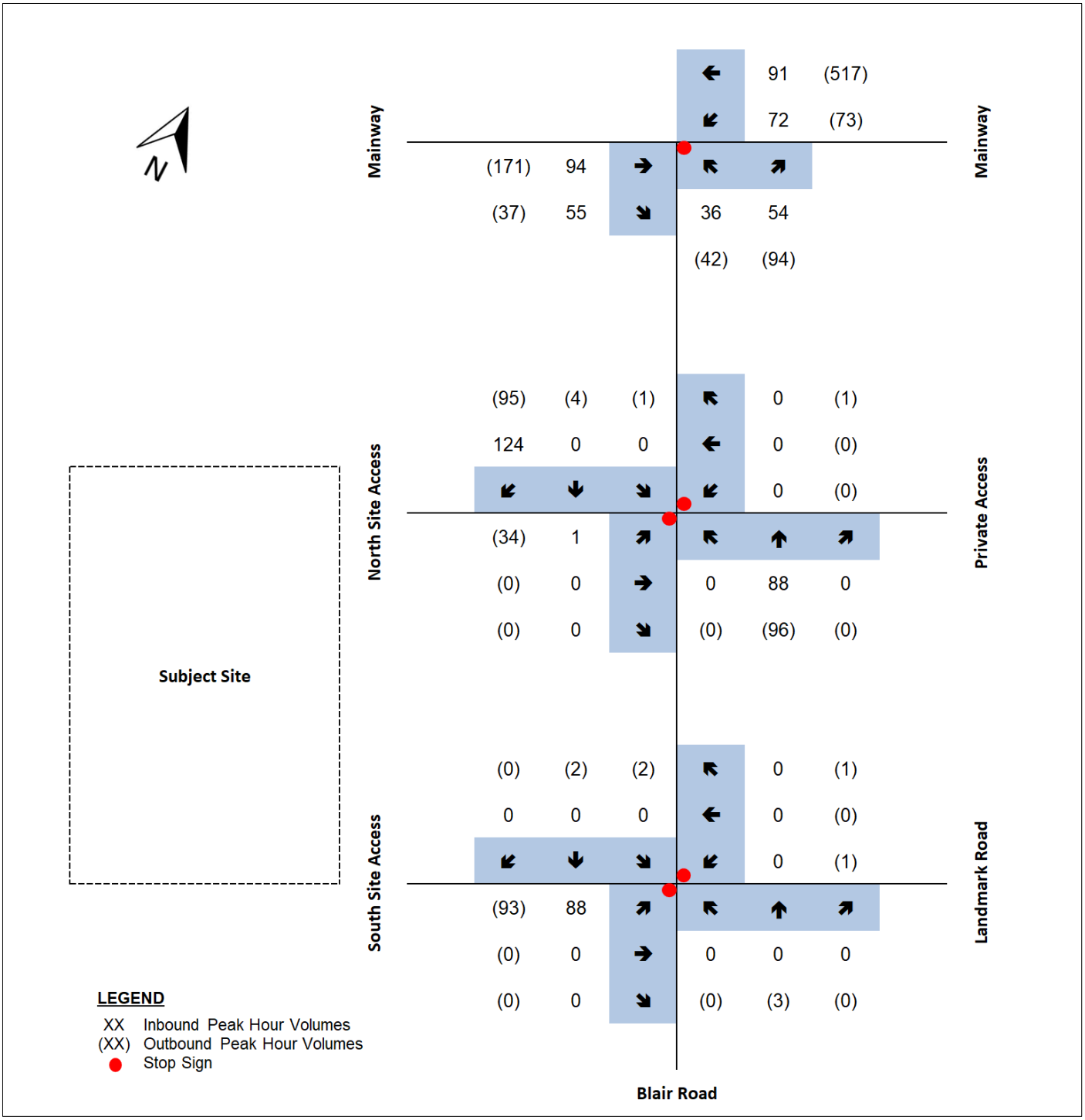


Figure 13 2028 Future Total Traffic Volumes - Sunday

7. Capacity Analysis

The capacity analysis identifies how well the intersections and driveways are operating. The analysis contained within this report utilized the Highway Capacity Manual (HCM) 2000 procedure within the Synchro Version 11 Software

package. The reported intersection volume-to-capacity ratios (v/c) are a measure of the saturation volume for each turning movement, while the levels-of-service (LOS) are a measure of the average delay for each turning movement. Queuing characteristics are reported as the predicted 95th percentile queue for each turning movement. Both pedestrian crossing volumes and heavy vehicle proportions are included in the analyses. The peak hour factors from the counts were used to analyze existing traffic conditions. Existing peak hour factors were also used for future traffic conditions.

The analysis includes identification and required modifications and improvements (if any) at intersections where the addition of background growth or background growth plus site-generated traffic volumes causes the following:

'Critical' intersections and movements for a signalized intersection include:

- V/C ratios for overall intersections operations, through movements, or shared through/turning movements increase to 0.85 or above;
- V/C ratios for exclusive movements increase to 0.95 or above; or
- 95th percentile queue length for individual movements that are projected to, or exceed, the storage length.

'Critical' intersections and movements for an unsignalized intersection include:

- Level of Services (LOS), based on average delay per vehicle, on individual movements exceeds LOS "E"; or
- Queue length for individual movements that exceeds the available queue storage.

The following tables summarize the HCM capacity results for the study intersections during the weekday a.m. and p.m. peak hours under existing (2023), future background (2028) and future total (2028) traffic conditions. The detailed calculation sheets are provided in **Appendix D**.

7.1 Mainway and Blair Road

Capacity analysis at this intersection during the weekday a.m. and p.m. peak hours for the existing, future background, and future total traffic conditions are summarized in **Table 4**. Capacity analysis for Sunday inbound and outbound traffic conditions is summarized in **Table 5**.

Table 4 Capacity analysis of Mainway and Blair Road - Weekday

Scenario	AM Peak Hour		PM Peak Hour	
	V/C (LOS) seconds	95th % Que.	V/C (LOS) seconds	95th % Que
Existing 2023	EBT = 0.25 (A) 0 EBTR = 0.18 (A) 0 WBTL = 0.1 (A) 4 WBT = 0.21 (A) 0 NBLR = 0.32 (C) 21	EBT = 0 m EBTR = 0 m WBTL = 5 m WBT = 0 m NBLR = 10 m	EBT = 0.26 (A) 0 EBTR = 0.15 (A) 0 WBTL = 0.06 (A) 2 WBT = 0.42 (A) 0 NBLR = 0.55 (E) 35	EBT = 0 m EBTR = 0 m WBTL = 5 m WBT = 0 m NBLR = 25 m
Future Background 2028	EBT = 0.26 (A) 0 EBTR = 0.18 (A) 0 WBTL = 0.1 (A) 4 WBT = 0.22 (A) 0 NBLR = 0.34 (C) 22	EBT = 0 m EBTR = 0 m WBTL = 5 m WBT = 0 m NBLR = 15 m	EBT = 0.27 (A) 0 EBTR = 0.16 (A) 0 WBTL = 0.06 (A) 2 WBT = 0.44 (A) 0 NBLR = 0.59 (E) 40	EBT = 0 m EBTR = 0 m WBTL = 5 m WBT = 0 m NBLR = 25 m
Future Total 2028	EBT = 0.26 (A) 0 EBTR = 0.21 (A) 0 WBTL = 0.16 (A) 5 WBT = 0.22 (A) 0 NBLR = 0.56 (D) 35	EBT = 0 m EBTR = 0 m WBTL = 5 m WBT = 0 m NBLR = 25 m	EBT = 0.27 (A) 0 EBTR = 0.17 (A) 0 WBTL = 0.09 (A) 2 WBT = 0.44 (A) 0 NBLR = **1.03** (**F**) 118	EBT = 0 m EBTR = 0 m WBTL = 5 m WBT = 0 m NBLR = 75 m

Scenario	AM Peak Hour		PM Peak Hour	
	V/C (LOS) seconds	95th % Que.	V/C (LOS) seconds	95th % Que
Future Total 2028 – Two Northbound Lanes	N/A	N/A	EBT = 0.27 (A) 0 EBTR = 0.17 (A) 0 WBTL = 0.09 (A) 2 WBT = 0.44 (A) 0 NBL = 0.83 (**F**) 114 NBR = 0.21 (A) 12	EBT = 0 m EBTR = 0 m WBTL = 5 m WBT = 0 m NBL = 40 m NBR = 5 m

Table 5 Capacity analysis of Mainway and Blair Road - Sunday

Scenario	Inbound		Outbound	
	V/C (LOS) seconds	95th % Que.	V/C (LOS) seconds	95th % Que
Existing 2023	EBT = 0.05 (A) 0 EBTR = 0.04 (A) 0 WBTL = 0.03 (A) 4 WBT = 0.05 (A) 0 NBLR = 0.01 (A) 10	EBT = 0 m EBTR = 0 m WBTL = 5 m WBT = 0 m NBLR = 5 m	EBT = 0.08 (A) 0 EBTR = 0.05 (A) 0 WBTL = 0.02 (A) 1 WBT = 0.25 (A) 0 NBLR = 0.09 (B) 11	EBT = 0 m EBTR = 0 m WBTL = 5 m WBT = 0 m NBLR = 5 m
Future Background 2028	EBT = 0.05 (A) 0 EBTR = 0.05 (A) 0 WBTL = 0.03 (A) 4 WBT = 0.05 (A) 0 NBLR = 0.01 (A) 10	EBT = 0 m EBTR = 0 m WBTL = 5 m WBT = 0 m NBLR = 5 m	EBT = 0.08 (A) 0 EBTR = 0.05 (A) 0 WBTL = 0.02 (A) 1 WBT = 0.25 (A) 0 NBLR = 0.09 (B) 11	EBT = 0 m EBTR = 0 m WBTL = 5 m WBT = 0 m NBLR = 5 m
Future Total 2028	EBT = 0.05 (A) 0 EBTR = 0.07 (A) 0 WBTL = 0.08 (A) 6 WBT = 0.05 (A) 0 NBLR = 0.19 (B) 12	EBT = 0 m EBTR = 0 m WBTL = 5 m WBT = 0 m NBLR = 5 m	EBT = 0.08 (A) 0 EBTR = 0.05 (A) 0 WBTL = 0.02 (A) 1 WBT = 0.25 (A) 0 NBLR = 0.09 (B) 11	EBT = 0 m EBTR = 0 m WBTL = 5 m WBT = 0 m NBLR = 5 m

Under existing conditions, the intersection at satisfactory levels with a maximum delay of 21 seconds during the a.m. peak hours and a 35 second delay during the p.m. peak hour. On Sundays, the intersection also operates at satisfactory levels with a maximum of 10 seconds during the inbound peak and 11 seconds during the outbound peak hour.

With the addition of corridor growth for the 2028 future background traffic scenario, the intersection continues to operate at satisfactory levels with the delay increasing by 1 second during the a.m. peak hour (22 seconds) and by 5 seconds during the p.m. peak hour (40 seconds). During the Sunday peaks, the maximum delay remains unchanged at 10 seconds during the inbound peak and 11 seconds during the outbound peak.

Under the 2028 future total traffic scenario, with the addition of site generated traffic, the intersection continues to operate at a satisfactory level during the a.m. peak hour with a reported 35 second delay. During the p.m. peak hour, the maximum approach delay increases to 118 seconds for the northbound direction while reporting a v/c ratio of 1.03 LOS F. During the Sunday inbound and outbound peak hours, the maximum delay increases by 2 seconds to 12 seconds during the inbound peak and remains unchanged at 11 seconds during the outbound peak. The reported p.m. peak hour capacity is however over stated as the Synchro model assumed a single northbound lane with shared left and right turns. However, based on field observations, multiple occurrences were recorded where a vehicle was queued waiting to turn left turning right would squeeze between the left turning vehicle and curb. With the intersection modelled with one northbound left-turn lane and one northbound right-turn lane, the northbound approach reports v/c ratios of 0.83 (left-turn) and 0.21 (right-turn) more accurately reflecting the existing condition. The northbound left-turn reports a 114 second delay with a reported 40 metre 95th percentile queue length.

The impact of site traffic at this intersection is noticeable and some increase in delays are expected for the northbound left turn, however, the movement continues to operate below its theoretical capacity with a v/c ratio less than 1.0. While not accounted for in the Synchro analysis, it is expected that the adjacent traffic signals at the Dillon Road will assist traffic making the northbound left from Blair Road to Mainway as traffic on Mainway is stopped periodically.

7.2 Blair Road and Landmark Road/South Site Access

Capacity analysis for this intersection during the weekday a.m. and p.m. peak hours for the existing, future background, and future total traffic conditions are summarized in **Table 6**. Capacity analysis for Sunday inbound and outbound traffic conditions is summarized in **Table 7**.

Table 6 Capacity analysis of Blair Road and Landmark Road/South Site Access - Weekday

Scenario	Am Peak Hour		PM Peak Hour	
	V/C (LOS) seconds	95th % Que.	V/C (LOS) seconds	95th % Que
Existing 2023	EBTLR = 0.02 (B) 11 WBTLR = 0.05 (A) 9 NBTLR = 0 (A) 0 SBTLR = 0.06 (A) 5	EBTLR = 5 m WBTLR = 5 m NBTLR = 0 m SBTLR = 5 m	EBTLR = 0.02 (A) 0 WBTLR = 0.07 (A) 9 NBTLR = 0 (A) 0 SBTLR = 0.02 (A) 4	EBTLR = 0 m WBTLR = 5 m NBTLR = 0 m SBTLR = 5 m
Future Background 2028	EBTLR = 0.02 (B) 11 WBTLR = 0.05 (A) 9 NBTLR = 0 (A) 0 SBTLR = 0.06 (A) 5	EBTLR = 5 m WBTLR = 5 m NBTLR = 0 m SBTLR = 5 m	EBTLR = 0.02 (A) 0 WBTLR = 0.07 (A) 9 NBTLR = 0 (A) 0 SBTLR = 0.02 (A) 4	EBTLR = 0 m WBTLR = 5 m NBTLR = 0 m SBTLR = 5 m
Future Total 2028	EBTLR = 0.11 (B) 12 WBTLR = 0.05 (A) 9 NBTLR = 0 (A) 0 SBTLR = 0.06 (A) 5	EBTLR = 5 m WBTLR = 5 m NBTLR = 0 m SBTLR = 5 m	EBTLR = 0.12 (B) 11 WBTLR = 0.07 (A) 9 NBTLR = 0 (A) 0 SBTLR = 0.02 (A) 4	EBTLR = 5 m WBTLR = 5 m NBTLR = 0 m SBTLR = 5 m

Table 7 Capacity analysis of Blair Road and Landmark Road/South Site Access - Sunday

Scenario	Inbound		Outbound	
	V/C (LOS) seconds	95th % Que.	V/C (LOS) seconds	95th % Que
Existing 2023	EBTLR = 0 (A) 8 WBTLR = 0.07 (A) 0 NBTLR = 0 (A) 0 SBTLR = 0 (A) 0	EBTLR = 5 m WBTLR = 0 m NBTLR = 0 m SBTLR = 0 m	EBTLR = 0.02 (A) 9 WBTLR = 0 (A) 8 NBTLR = 0 (A) 0 SBTLR = 0 (A) 4	EBTLR = 5 m WBTLR = 5 m NBTLR = 0 m SBTLR = 5 m
Future Background 2028	EBTLR = 0 (A) 8 WBTLR = 0.07 (A) 0 NBTLR = 0 (A) 0 SBTLR = 0 (A) 0	EBTLR = 5 m WBTLR = 0 m NBTLR = 0 m SBTLR = 0 m	EBTLR = 0.02 (A) 9 WBTLR = 0 (A) 8 NBTLR = 0 (A) 0 SBTLR = 0 (A) 4	EBTLR = 5 m WBTLR = 5 m NBTLR = 0 m SBTLR = 5 m
Future Total 2028	EBTLR = 0.11 (A) 9 WBTLR = 0.07 (A) 0 NBTLR = 0 (A) 0 SBTLR = 0 (A) 0	EBTLR = 5 m WBTLR = 0 m NBTLR = 0 m SBTLR = 0 m	EBTLR = 0.02 (A) 9 WBTLR = 0 (A) 8 NBTLR = 0 (A) 0 SBTLR = 0 (A) 4	EBTLR = 5 m WBTLR = 5 m NBTLR = 0 m SBTLR = 5 m

Under existing conditions, the intersection at satisfactory levels with a maximum delay of 11 seconds during the a.m. peak hour in the eastbound approach and a 9 second delay during the p.m. peak hour in the westbound approach. On Sundays, the intersection also operates at satisfactory levels with a maximum delay of 8 seconds during the inbound peak hour and 9 seconds during the outbound peak hour.

With the addition of corridor growth for the 2028 future background traffic scenario, the intersection continues to operate at satisfactory levels with the delays remaining unchanged during both the a.m. and p.m. peak hours. During

the Sunday peaks, the maximum delay also remains unchanged at 8 seconds during the inbound peak and 9 seconds during the outbound peak.

Under the 2028 future total traffic scenario, with the addition of site generated traffic, the intersection continues to operate at a satisfactory level during the a.m. and p.m. peak hours with a reported 12 second delay in the eastbound approach during the a.m. peak hour and 11 second during the p.m. peak hour. During the Sunday inbound and outbound peak hours, the maximum delay increased by 1 second to 9 seconds during the a.m. peak hour and remains unchanged at 9 seconds during the outbound peak.

7.3 Blair Road and the North Site Access

Capacity analysis for this intersection during the weekday a.m. and p.m. peak hours for the existing, future background, and future total traffic conditions are summarized in **Table 8**. Capacity analysis for Sunday inbound and outbound traffic conditions is summarized in **Table 9**.

Table 8 Capacity analysis of Blair Road and the North Site Access - Weekday

Scenario	Am Peak Hour		PM Peak Hour	
	V/C (LOS) seconds	95th % Que.	V/C (LOS) seconds	95th % Que
Existing 2023	EBTLR = 0.07 (B) 10 WBTLR = 0 (A) 9 NBTLR = 0 (A) 0 SBTLR = 0 (A) 0	EBTLR = 5 m WBTLR = 0 m NBTLR = 0 m SBTLR = 0 m	EBTLR = 0.05 (B) 10 WBTLR = 0.01 (A) 9 NBTLR = 0 (A) 0 SBTLR = 0 (A) 0	EBTLR = 5 m WBTLR = 5 m NBTLR = 0 m SBTLR = 0 m
Future Background 2028	EBTLR = 0.07 (B) 10 WBTLR = 0 (A) 9 NBTLR = 0 (A) 0 SBTLR = 0 (A) 0	EBTLR = 5 m WBTLR = 0 m NBTLR = 0 m SBTLR = 0 m	EBTLR = 0.05 (B) 10 WBTLR = 0.01 (A) 9 NBTLR = 0 (A) 0 SBTLR = 0 (A) 0	EBTLR = 5 m WBTLR = 5 m NBTLR = 0 m SBTLR = 0 m
Future Total 2028	EBTLR = 0.07 (B) 11 WBTLR = 0 (A) 9 NBTLR = 0 (A) 0 SBTLR = 0 (A) 0	EBTLR = 5 m WBTLR = 0 m NBTLR = 0 m SBTLR = 0 m	EBTLR = 0.06 (B) 11 WBTLR = 0.01 (A) 9 NBTLR = 0 (A) 0 SBTLR = 0 (A) 0	EBTLR = 5 m WBTLR = 5 m NBTLR = 0 m SBTLR = 0 m

Table 9 Capacity analysis of Blair Road and the North Site Access - Sunday

Scenario	Inbound		Outbound	
	V/C (LOS) seconds	95th % Que.	V/C (LOS) seconds	95th % Que
Existing 2023	EBTLR = 0 (A) 9 WBTLR = 0.01 (A) 0 NBTLR = 0 (A) 0 SBTLR = 0 (A) 0	EBTLR = 0 m WBTLR = 0 m NBTLR = 0 m SBTLR = 0 m	EBTLR = 0.05 (A) 9 WBTLR = 0 (A) 8 NBTLR = 0 (A) 0 SBTLR = 0 (A) 0	EBTLR = 5 m WBTLR = 0 m NBTLR = 0 m SBTLR = 0 m
Future Background 2028	EBTLR = 0 (A) 9 WBTLR = 0.01 (A) 0 NBTLR = 0 (A) 0 SBTLR = 0 (A) 0	EBTLR = 0 m WBTLR = 0 m NBTLR = 0 m SBTLR = 0 m	EBTLR = 0.05 (A) 9 WBTLR = 0 (A) 8 NBTLR = 0 (A) 0 SBTLR = 0 (A) 0	EBTLR = 5 m WBTLR = 0 m NBTLR = 0 m SBTLR = 0 m
Future Total 2028	EBTLR = 0 (A) 10 WBTLR = 0.01 (A) 0 NBTLR = 0 (A) 0 SBTLR = 0 (A) 0	EBTLR = 0 m WBTLR = 0 m NBTLR = 0 m SBTLR = 0 m	EBTLR = 0.05 (A) 9 WBTLR = 0 (A) 8 NBTLR = 0 (A) 0 SBTLR = 0 (A) 0	EBTLR = 5 m WBTLR = 0 m NBTLR = 0 m SBTLR = 0 m

Under existing conditions, the intersection at satisfactory levels with a maximum delay of 10 seconds during the a.m. and p.m. peak hours in the eastbound approach. On Sundays, the intersection also operates at satisfactory levels with a maximum delay of 9 seconds during the Church's inbound and outbound peak hours in the eastbound approach.

With the addition of corridor growth for the 2028 future background traffic scenario, the intersection continues to operate at satisfactory levels with the delays remaining unchanged during both the a.m. and p.m. peak hours. During the Sunday peaks, the maximum delay also remains unchanged at 9 seconds during the inbound and the outbound peaks.

Under the 2028 future total traffic scenario, with the addition of site generated traffic, the intersection continues to operate at a satisfactory level during the a.m. and p.m. peak hours with a reported 1 second increase during both peak hours (11 seconds). During the Sunday inbound peak hour, the maximum delay increased by one second to 10 seconds and remains unchanged at 9 seconds during the outbound peak.

8. Parking Review

GHD reviewed the City's current Zoning By-Law parking and loading requirements for the subject site.

8.1 City of Burlington Zoning By-Law 2000

8.1.1 Vehicular Parking

The current City of Burlington Zoning By-Law 2020 minimum parking requirements are found in Section 2.25.4, Table 1.2.6. The minimum By-Law requirement for the subject site is as follows:

- Place of Worship
    - 6 spaces per 100 m^2 of GFA
- Warehouse/Distribution Centre
    - 1.5 parking space per 100 m^2 of GFA
- Office
    - 3 parking spaces per 100 m^2 of GFA
- Day Care Centre
    - 4 parking space per 100 m^2 of GFA
- Convention/Conference/Banquet Centre
    - 10 parking spaces per 100 m^2 of GFA
- Recreational Establishment
    - 5.5 parking spaces per 100 m^2 of GFA

The minimum parking required for the subject site is as follows:

- Place of Worship
    - 6 spaces per 100 m^2 x 825 m^2 = 50 spaces
- Warehouse/Distribution Centre
    - 1.5 parking space per 100 m^2 x 250 m^2 = 4 spaces

- Office
    - 3 parking spaces per 100 m^2 x 4,160 m^2 = 125 spaces
- Day Care Centre
    - 4 parking space per 100 m^2 x 400 m^2 = 16 spaces
- Convention/Conference/Banquet Centre
    - 10 parking spaces per 100 m^2 x 700 m^2 = 70 spaces
- Recreational Establishment
    - 5.5 parking spaces per 100 m^2 x 900 m^2 = 50 spaces

In total, 315 vehicle parking spaces are required under the City's By-Law 2020 based on all the uses proposed on the site.

8.1.2 Accessible Parking

The minimum requirement for accessible parking spaces can also be found in the City of Burlington Zoning By-Law 2020, Section 2.26 (9), Table 1.2.7. The minimum By-Law requirement accessible parking for the subject site is based on the required number of parking spaces as follows:

- Required number of parking spaces:
    - 5 to 50 spaces: a minimum of 1 space
    - 51 to 90 spaces: a minimum of 2 spaces
    - Over 90 spaces: a minimum of 3% of required parking

The minimum number of accessible parking spaces required for the subject site is as follow:

- 3% of 315 spaces = 9 accessible parking spaces

In total, 9 accessible parking spaces are required under the City' current By-Law.

8.1.3 Bicycle Parking

Under the City's Zoning By-Law 2000, the minimum bicycle parking requirement can be found in Section 2.26 (10), Table 1.2.8. The minimum By-Law requirement bicycle parking for the subject site is based on the required number of parking spaces as follows:

- Retail, Retail Centre Service Commercial Office, Institutional
    - 2 spaces plus 1 space per 1,000 m^2 of GFA
- Industrial
    - 2 spaces plus 0.25 spaces per 1,000 m^2 of GFA

The minimum number of bicycle parking spaces required for the subject site is as follow:

- Place of Worship
    - 2 spaces plus 1 space per 1,000 m^2 of GFA x 1,380 m^2 = 3 spaces
- Office
    - 2 spaces plus 1 space per 1,000 m^2 of GFA x 4,160 m^2 = 6 spaces
- Daycare

- 2 spaces plus 1 space per 1,000 m^2 of GFA x 400 m^2 = 2 spaces

- Warehouse
  - 2 spaces plus 0.25 spaces per 1,000 m^2 of GFA x 250 m^2 = 2 spaces

In total, 13 bicycle parking spaces are required based on the City's Zoning By-law.

8.1.4 Loading Spaces

The minimum requirement for loading spaces is also found in the Zoning By-Law 2000, with the minimum loading space requirement found in Section 2.25.3. At least one off-street loading space shall be provided in conjunction with every principal building, including mixed-use buildings, but excluding residential buildings less than 4 storeys high.

With the proposed expansion of the subject site resulting in one principal building for the site, one off-street loading space is required.

8.2 Proposed Site Parking

The following table summarizes the minimum By-law requirements and the proposed parking/loading supply for the subject site.

Table 10 Parking Requirements and Provisions

Type	GFA	By-Law 2000 Requirement	Provided
Vehicle Parking	• Church: 1,380 m^2 • Warehouse: 250 m^2 • Office: 4,160 m^2 • Daycare: 400 m^2 • Banquet Hall: 700 m^2 • Recreational Establishment: 900 m^2	315 vehicle parking spaces	260 vehicle spaces
Barrier Free Parking		9 barrier free spaces	9 barrier free spaces
Bicycle Parking		13 bicycle parking spaces	16 bicycle parking spaces
Loading Spaces		1 loading space	1 loading space

The subject site meets or exceeds the City's Zoning By-Law requirement for barrier free spaces, bicycle parking, and loading spaces. The provision of 260 parking spaces represents a shortfall of 55 spaces from the By-law requirement, however justification is provided in **Section 9** for the reduction in parking spaces.

9. Parking Assessment

The subject site is seeking relief from the Zoning By-law to provide parking based on when the peak parking demand is expected for the different uses proposed on the site.

Through discussion with the client, three time periods were identified for assessment of the parking demand for each land use. The three time periods were identified as:

- Weekday business hours (8:00 a.m. to 5:00 p.m.)
- Weekday evenings (5:00 p.m. to 11:00 p.m.)
- Sundays

The warehouse, office, and daycare are all expected to operate during typical business hours from 8:00 a.m. to 5:00 p.m. The banquet hall and recreational establishment (gymnasium) will have its operations limited to only weekday evenings as it will be operated by volunteers from the Church who are only able to be present after 5:00 p.m. The banquet hall and gymnasium will also be operational on Sundays, however it will only be used by the people attending the Church's Sunday service and therefore would not generate additional parking from that generated by the Church.

Also, the Church provides its weekly liturgy on Sundays beginning at 8:00 a.m. and ending at 11:00 a.m. with attendees sometimes using the banquet hall and/or gymnasium after the Sunday service. The following table summarizes the anticipated time periods in which each land use is anticipated to operate within.

Table 11 Expected Operating Hours

Use	Weekday Business Hours (8:00 a.m. to 5:00 p.m.)	Weekday Evenings (5:00 p.m. to 11:00 p.m.)	Sundays (All day)
Worship Area	No	No	**Yes**
Office	**Yes**	No	No
Daycare	**Yes**	No	No
Warehouse	**Yes**	No	No
Banquet Hall	No	**Yes**	No
Gymnasium	No	**Yes**	No

Table 12 below summarizes the parking requirement for each land use during the three anticipated operating periods.

Table 12 By-law Parking Requirements based on GFA

Use	Weekday Business Hours (8:00 a.m. to 5:00 p.m.)	Weekday Evenings (5:00 p.m. to 11:00 p.m.)	Sundays (All day)
Worship Area	N/A	N/A	50 spaces
Office	125 spaces	N/A	N/A
Daycare	16 spaces	N/A	N/A
Warehouse	4 spaces	N/A	N/A
Banquet Hall	N/A	70 spaces	N/A
Gymnasium	N/A	50 spaces	N/A
Total	**145 spaces**	**120 spaces**	**50 spaces**

The subject site provides a total of 260 parking spaces that is available to shared between all proposed uses. The provision of 260 parking presents a shortfall of 55 spaces from the Zoning By-law requirement when considering all uses on the site. However, when separating the various uses based on their expected operating hours, a surplus of parking spaces is provided during each of the three time periods.

The weekday business hours and weekday evening periods do occur back-to-back (the former ending at 5:00 p.m. and the latter beginning at 5:00 p.m.), and when adding the two uses together it results in a minimum By-law requirement of 265 parking spaces. Despite a shortfall of 5 parking spaces between the two time periods, it is unlikely that all 145 parking spaces during the business hours will remain occupied at the same time as all 120 vehicles arrive resulting in a peak demand for 265 parking spaces on the site at the same time.

As a result, when considering the individual time of day when parking for each land use is expected to peak, the provision of 260 parking spaces for the subject site is expected to be sufficient to accommodate all land uses during the weekday and Sunday periods.

10. Travel Demand Management

10.1 Travel Demand Management

Travel Demand Management (TDM) refers to a variety of strategies to reduce congestion, minimize the number of single-occupant vehicles, encourage non-auto modes of travel, and reduce vehicle dependency to create a sustainable transportation system. TDM strategies have multiple benefits including the following:

- Reduced auto-related emissions to improve air quality;
- Decreased traffic congestion to reduce travel time;
- Increased travel options for businesses and commuters;
- Reduced personal transportation costs and energy consumptions; and
- Support Provincial smart growth objectives.

The combined benefits listed above will assist in creating a more active and livable community through improvements to overall active transportation standards for the local businesses and surrounding community.

10.2 Existing TDM Opportunities

10.2.1 Walking/Cycling

Sidewalks are currently provided along only the north side of Mainway with a bike lane provided on the south side of the road.

10.2.2 Transit

As previously discussed in **Section 3.3**, the subject site is serviced by Burlington Transit's Route 6. The nearest eastbound/northbound stop is located at the intersection of Mainway and Blair Road with the nearest westbound/southbound stop located at Mainway and Dillon Road. The route operates with 30-minute headways throughout the day.

10.3 Recommended TDM Measures

Table 13 Recommended TDM Strategies

TDM Measure	Responsibility	Cost	Note
Hard Measures			
Pedestrian connections	Applicant	Integrated into the overall development cost	Site plan includes a walkway system providing a connection to the existing and future pedestrian routes along the municipal right-of-way.
Bicycle Parking	Applicant	Integrated into the overall development cost	The subject site is proposing to provide a total of 16 bicycle parking spaces on the north side of the building, exceeding the minimum By-law requirement of 13 spaces.

11. Vehicle Swept Path Analysis

GHD undertook a vehicle swept path analysis to assess the site plan circulation for an emergency vehicles, waste collection vehicle and WB-20 trucks within the site. The results of the analysis are provided in **Appendix E** and illustrate that the site can sufficiently accommodate the aforementioned design vehicles with no issues.

A fire truck was analysed entering the site from the north driveway, circulating the site, and exiting the site in drawing AT-101. No conflicts were found with the manoeuvres.

The waste collection vehicle was analysed entering the site from the north driveway and circulating the site towards the waste collection area in drawing AT-102. Drawing AT-103 illustrates the path of the waste truck exiting the site. No conflicts were found with the manoeuvres.

An MSU truck was analysed entering the site from the north driveway and accessing the loading space on the west side of the building in drawing AT-104. Drawing AT-105 illustrates the path of the truck exiting the site. No conflicts were found with the manoeuvres.

A passenger vehicle was analysed entering the site from the north driveway and accessing the parking lot in drawing AT-106. Drawing AT-107 illustrates the path of the truck exiting the site. No conflicts were found with the manoeuvres.

12. Conclusion

The proposed site plan prepared by the Architect consists of the existing building with the proposed expansion. The site currently contains the Church and office space that is leased to outside tenants. The redevelopment of the subject site includes the relocation of the worship area within the new development portion of the site, renovating the existing worship area to a warehouse, and adding additional uses to the building including office space, daycare space, a banquet hall, and a recreational establishment.

Access to the subject site is proposed to be maintained via the two existing full-moves accesses along Blair Road.

Based on ITE Trip Generation rates using Land Use Code Land Use (LUC) 150 Warehousing, LUC 710 General Office Building, LUC 565 Daycare Center, and LUC 560 Church, the subject site is expected to generate a total of 109 two-way additional vehicle trips during the a.m. peak hour consisting of 75 inbound and 34 outbound trips. During the p.m. peak hour, it is expected to generate a total of 115 additional new two-way vehicle trips consisting of 38 inbound and 77 outbound trips. On Sundays, the proposed redevelopment is expected to generate a total of 163 two-way vehicle trips consisting of 78 inbound and 85 outbound trips.

Under existing traffic conditions, all intersections are operating at acceptable v/c ratios and levels of service during the a.m. peak and p.m. peak hours.

Under the 2028 future background conditions, with the addition of corridor growth and background development traffic, all intersections continue to operate with acceptable v/c ratios, delays and queuing.

With the addition of site generated traffic under the 2028 future total condition, all intersections continue to operate with acceptable v/c ratios, delays and queuing with the exception of the intersection of Mainway and Blair Road which is reporting the northbound approach operating with a v/c ratio of 1.03 LOS F during the p.m. peak hour.

A sensitivity analysis assuming a separate northbound left-turn and right-turn was completed. With the modified lane configuration in Synchro, the northbound left-turn movement continues to operate with a LOS F with approximately a two-minute delay however the v/c ratio and queuing is reduced.

The impact of site traffic at this intersection is noticeable and some increase in delays are expected for the northbound left turn, however, the movement continues to operate below its theoretical capacity with a v/c ratio less than 1.0. While not accounted for in the Synchro analysis, it is expected that the adjacent traffic signals at the north leg of Dillon Road will assist traffic making the northbound left from Blair Road to Mainway as traffic on Mainway is stopped periodically.

Application of the City of Burlington By-Law 2000 parking rates to the subject site results in a requirement of a minimum of 315 vehicular parking spaces (including 9 accessible parking spaces), 13 bicycle parking spaces, and 1 loading space shared between the proposed uses in the single building.

The subject site provides a total of 260 vehicular parking spaces, 9 barrier free spaces, 16 bicycle parking spaces and 1 loading space.

The various uses proposed for the subject site are anticipated to have non-overlapping peak parking demands during the day. During regular “business hours” (8 a.m. to 5 p.m.), the warehouse, offices, and daycare uses will all be operational. During weekday evenings (5 p.m. to 11:00 a.m.), the banquet hall and the recreational establishment may be operational and on Sundays, the Church will be the primary use that will be operational with the banquet hall and recreational establishment being ancilliary uses used by attendees from the Church and therefore will not generate additional parking requirements.

Based on the three operating periods, the “business hour” uses would require 145 spaces based on the City’s Zoning Bylaw, the weekday evening uses requiring 120 spaces, and the Sunday uses requiring 50 spaces. With the provision of 260 parking spaces on the site, a surplus of parking spaces is expected at any given time throughout the week for the combined uses operating on the site.

TDM measures are proposed for the subject site to encourage employees to explore various modes of transportation in order to reduce their dependency on single occupancy vehicle trips. These measures include bicycle parking and education material along with preferred carpool parking spaces located near the entrances to the offices.

GHD assessed the site circulation for an emergency vehicle, waste collection truck, MSU truck, and passenger vehicles and confirmed no issues with the site circulation.

The traffic study confirms that the proposed redevelopment can be accommodated on the existing road network.

Appendix A

Terms of Reference

Raf Andrenacci

From: Adiga, Smeeta <Smeeta.Adiga@burlington.ca>
Sent: Thursday, July 27, 2023 11:57 AM
To: Raf Andrenacci
Subject: RE: Terms of Reference - 1160 Blair Road

Hi Raf,

The Terms of Reference provided for the above-noted application seems satisfactory to me, except for a few minor notes and comments below (in red). Please proceed with preparing the report based on the amended TOR.

Thanks,

Smeeta Adiga
Transportation Planning Technologist
Transportation Services Department

P. 905 335 7600, ext 7691 | E. smeeta.adiga@burlington.ca
Address: 426 Brant Street P.O. Box 5013, Burlington, Ontario, L7R 3Z6

City of Burlington | www.burlington.ca

Our working hours may be different. You are not obligated to reply outside of your typical working hours.

City of Burlington | www.burlington.ca

From: Raf Andrenacci <Raf.Andrenacci@ghd.com>
Sent: Monday, July 24, 2023 8:55 AM
To: Adiga, Smeeta <Smeeta.Adiga@burlington.ca>; Huycke, Adam <adam.huycke@halton.ca>
Subject: Terms of Reference - 1160 Blair Road

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

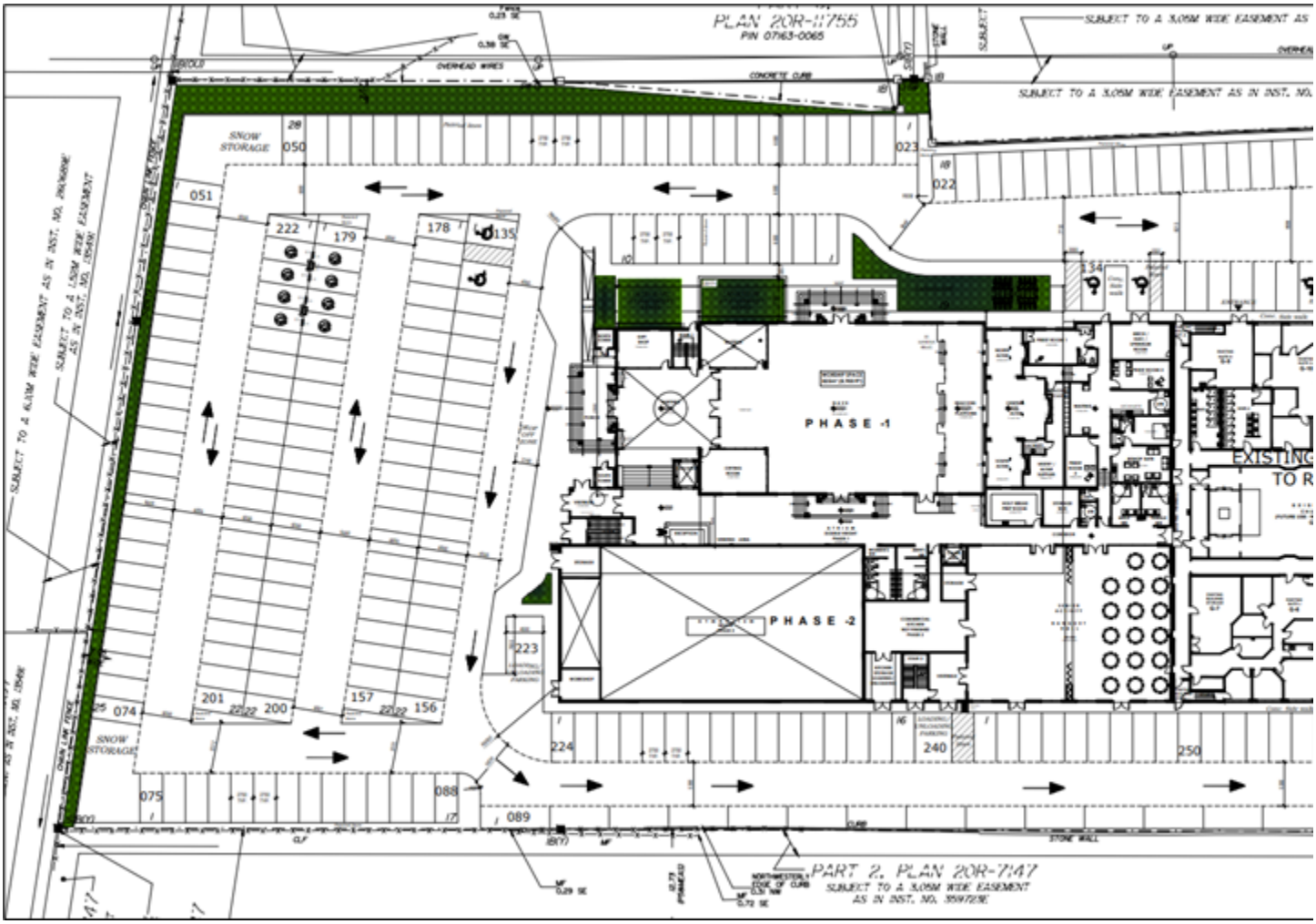
Hello,

GHD Inc. has been retained to prepare a Transportation Impact Study for a proposed redevelopment of a site at 1160 Blair Road in the City of Burlington that includes an expansion of the rear western portion of the existing building.



The proposed development currently consists of a two-storey building with the redevelopment of the property proposing to expand the rear of the building to include an expanded Banquet Hall, a new recreational facility, an expanded Place of Worship and new office space. The redevelopment of the property would keep the two-storey front eastern part of the building unchanged. A total of 276 parking spaces are proposed for the site.

Access is proposed to be maintained via the two full-moves driveways onto Blair Road.



In order to properly scope this project, we ask that the City and Region review and provide comments on the following scope and confirm if there are any additional items required as part of the study.

Study Horizon Year

2023 (existing), and 2028 (5 years from the date of the study).

Study intersections

- Mainway and Blair Road
- Blair Road and Landmark Road
- Blair Road and the two site accesses

Study Peak Hours

Weekday a.m. and p.m. peak hours and Sunday morning (corresponding with the hours of the Sunday Service). -

Traffic Data

Updated traffic counts at the existing study intersection will be undertaken during the weekday a.m. and p.m. peak hours and Sunday morning. Please confirm if updated traffic counts can be collected during the summer months. – It is advised to collect data once the school reopen. If the data collected during summer, addition of factors may be required.

Background Growth Rate

Will contact City and Region staff to determine appropriate growth rates to be used. – 1% annual growth rate

Background Development Traffic

City staff to advise if there are any proposed developments located in close proximity to the site that would contribute to additional trips along the study area road network and provide pertinent site trip data from any traffic studies. – Check City website for proposed development projects. https://www.burlington.ca/Modules/News/en/Development

Trip Generation
Will be completed using rates published by the ITE Trip Generation 11th Edition, LUC 560 (Church). – Trip Generation for Church can be used only for Sunday,(weekend),. Trip generation for banquet hall and office area may also need to include.

The directional distribution of traffic approaching and departing the site will be determined based on existing local patterns and first principles.

The analysis will Identify the transportation system requirements and other measures required to ensure the acceptable operation of the study intersections, including auxiliary turning lanes and other transportation infrastructure improvements.

TAC and city guidelines will be reviewed in order to complete an access management.
Review for the site access that reviews corner clearance, driveway spacing, auxiliary lanes, corner radii, and clear throat distance.

Complete AutoTurn assessment of the internal roadway for waste, emergency and passenger vehicles.

Existing TDM opportunities will be identified and future TDM opportunities will be recommended for site.

The parking supply will be reviewed in accordance with the City's Zoning By-law.

If the above scope is acceptable to the City and Region, it will form the basis of our scope of work.

Thank you,
Raf

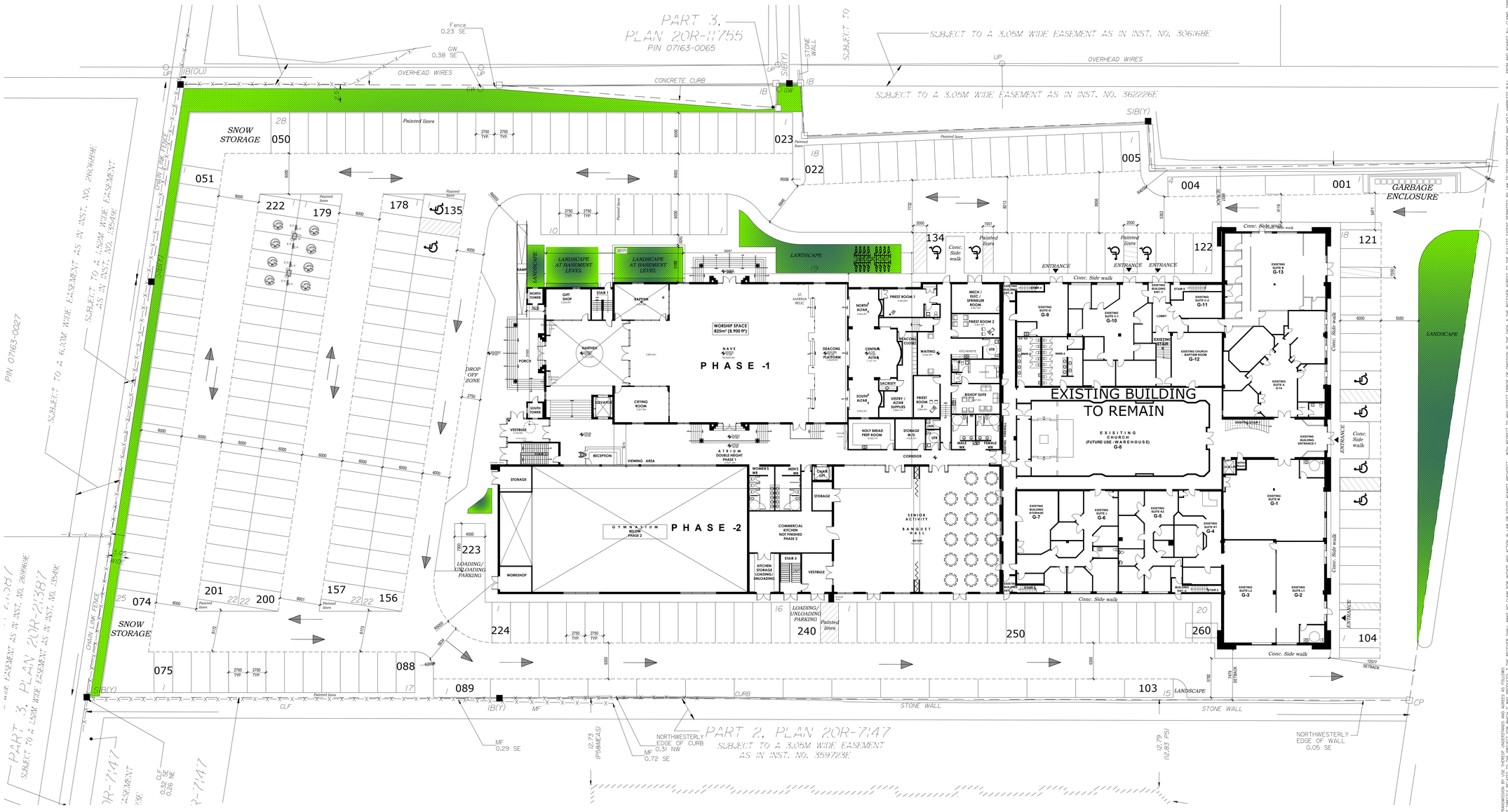
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Appendix B

Site Plan



3 **SITE RENDERING**
A1.3 SCALE: NTS



2 **SITE LAYOUT PLAN - PHASE 1 & 2**
A1.3 SCALE: 1:250

THE RECEIVER OF ELECTRONIC TRANSMISSION BY USE THEREOF UNDERSTANDS AND AGREES AS FOLLOWS: THE RECEIVER AGREES TO THE FULLEST EXTENT PERMITTED BY LAW TO DEFEND, INDEMNIFY AND HOLD HARMLESS R.A.I. FROM AND AGAINST ALL CLAIMS, DAMAGES, LIABILITIES AND COSTS, (INCLUDING REASONABLE ATTORNEY'S FEES AND COSTS OF DEFENSE) ARISING OUT OF OR RESULTING FROM THE USE OF ELECTRONIC DATA. THE RECEIVER AGREES TO THE FULLEST EXTENT PERMITTED BY LAW TO INDEMNIFY AND HOLD HARMLESS R.A.I. FROM AND AGAINST ALL CLAIMS, DAMAGES, LIABILITIES AND COSTS, (INCLUDING REASONABLE ATTORNEY'S FEES AND COSTS OF DEFENSE) ARISING OUT OF OR RESULTING FROM THE USE OF ELECTRONIC DATA. THE RECEIVER AGREES TO THE FULLEST EXTENT PERMITTED BY LAW TO DEFEND, INDEMNIFY AND HOLD HARMLESS R.A.I. FROM AND AGAINST ALL CLAIMS, DAMAGES, LIABILITIES AND COSTS, (INCLUDING REASONABLE ATTORNEY'S FEES AND COSTS OF DEFENSE) ARISING OUT OF OR RESULTING FROM THE USE OF ELECTRONIC DATA. THE RECEIVER AGREES TO THE FULLEST EXTENT PERMITTED BY LAW TO DEFEND, INDEMNIFY AND HOLD HARMLESS R.A.I. FROM AND AGAINST ALL CLAIMS, DAMAGES, LIABILITIES AND COSTS, (INCLUDING REASONABLE ATTORNEY'S FEES AND COSTS OF DEFENSE) ARISING OUT OF OR RESULTING FROM THE USE OF ELECTRONIC DATA.

NOTES:

PROJECT NORTH N TRUE NORTH

ARCHITECT
SAMER NESSIEM
TEL: (204) 509 4991
arsm.1160blair@gmail.com
118 John Frederick Drive
Ancaster, ON
L9G 0G5

SEAL

CONSULTANT

SEAL

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- THIS DRAWING SHALL NOT BE SCALED. FOLLOW GIVEN DIMENSIONS ONLY.
- THE CONTRACTOR SHALL SATISFY HIMSELF THAT ALL DIMENSIONS AND INFORMATION SHOWN ARE CORRECT.
- PRIOR TO COMMENCEMENT OF WORK, REPORT ANY DISCREPANCIES TO THE ARCHITECT.
- VARIATIONS AND MODIFICATIONS TO WORK SHALL NOT BE PERMITTED WITHOUT WRITTEN PERMISSION OF THE ARCHITECT.
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- THE ARCHITECT DOES NOT RETAIN THE CONSULTANTS AND THEREFORE IS NOT RESPONSIBLE FOR THE ACCURACY OF SURVEY, STRUCTURAL, MECHANICAL, ELECTRICAL, ETC. ENGINEERING INFORMATION SHOWN ON THE DRAWING. REFER TO THE APPROPRIATE ENGINEERING DRAWINGS BEFORE PROCEEDING WITH WORK.

NO.	REVISION	DATE	BY
4			
3			
2			
1			
0	PRE-CONSULTATION SUBMISSION	2023-02-23	JC/SN

CLIENT

ARSM COPTIC COMMUNITY CENTRE OF BURLINGTON
1160 BLAIR ROAD
BURLINGTON, ON. L7M 1K9
Tel: (905) 301 6924
E-mail: franthonywadie@gmail.com

PROJECT TITLE
ADDITION, ALTERATIONS AND RENOVATION

SHEET TITLE
PHASE 1 & 2
SITE LAYOUT PLAN

DRAWN BY: AR / SM	SCALE: AS SHOWN	SHEET NUMBER: A1.3
CHECKED BY: JC	CONTRACT DATE: 2022 08 08	
PROJECT NUMBER: 2022 - 137	REVISION: 06	

Appendix C

Traffic Data

Spectrum

Turning Movement Count
Location Name: BLAIR RD & LANDMARK RD (N)
Date: Tue, Aug 08, 2023 Deployment Lead: Walter Fugaj

GHD
UNIT 1 705 MILLCREEK DRIVE
MISSISSAUGA ONTARIO, L5N 5M4
CANADA

Turning Movement Count (2 . BLAIR RD & LANDMARK RD (N))

Start Time	N Approach BLAIR RD						E Approach EAST DRIVEWAY						S Approach BLAIR RD						W Approach LANDMARK RD (N)						Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Thru N:S	Left N:E	UTurn N:N	Peds N:	Approach Total	Right E:N	Thru E:W	Left E:S	UTurn E:E	Peds E:	Approach Total	Right S:E	Thru S:N	Left S:W	UTurn S:S	Peds S:	Approach Total	Right W:S	Thru W:E	Left W:N	UTurn W:W	Peds W:	Approach Total		
07:00:00	4	19	0	0	0	23	0	0	0	0	0	0	0	15	0	0	0	15	0	0	2	0	1	2	40	
07:15:00	6	23	0	0	0	29	0	0	0	0	1	0	0	14	0	0	0	14	1	0	1	0	0	2	45	
07:30:00	7	23	4	0	0	34	1	0	0	0	0	1	0	10	0	0	0	10	0	0	1	0	2	1	46	
07:45:00	2	32	3	0	0	37	0	0	0	0	0	0	0	11	0	1	0	12	0	0	1	0	0	1	50	181
08:00:00	4	16	0	0	0	20	1	0	0	0	0	1	0	11	0	0	0	11	0	0	21	0	0	21	53	194
08:15:00	5	33	1	0	0	39	0	0	0	0	0	0	0	9	0	0	0	9	0	0	16	0	0	16	64	213
08:30:00	5	23	2	0	0	30	0	0	0	0	2	0	0	15	1	0	0	16	0	0	5	0	0	5	51	218
08:45:00	3	41	0	0	0	44	1	0	0	0	0	1	0	20	0	0	0	20	0	0	1	0	0	1	66	234
BREAK																										
16:00:00	4	13	0	0	0	17	2	0	0	0	0	2	0	27	0	0	0	27	0	0	9	0	0	9	55	
16:15:00	3	11	0	0	0	14	2	0	0	0	0	2	1	22	0	0	0	23	0	0	9	0	0	9	48	
16:30:00	11	16	0	0	0	27	2	0	0	0	1	2	0	34	0	0	0	34	0	0	4	0	0	4	67	
16:45:00	12	16	0	0	0	28	0	0	0	0	0	0	0	27	0	0	0	27	0	0	11	0	0	11	66	236
17:00:00	0	9	0	0	0	9	1	0	0	0	0	1	0	24	0	0	0	24	0	0	5	0	0	5	39	220
17:15:00	2	11	0	0	0	13	0	0	0	0	0	0	0	10	0	0	0	10	0	0	0	0	0	0	23	195
17:30:00	1	9	0	0	0	10	0	0	0	0	0	0	0	9	0	0	0	9	0	0	6	0	0	6	25	153
17:45:00	6	12	0	0	0	18	1	0	0	0	0	1	0	9	0	0	0	9	0	0	5	0	1	5	33	120
Grand Total	75	307	10	0	0	392	11	0	0	0	4	11	1	267	1	1	0	270	1	0	97	0	4	98	**771**	-
Approach%	19.1%	78.3%	2.6%	0%		-	100%	0%	0%	0%		-	0.4%	98.9%	0.4%	0.4%		-	1%	0%	99%	0%		-	**-**	-
Totals %	9.7%	39.8%	1.3%	0%		50.8%	1.4%	0%	0%	0%		1.4%	0.1%	34.6%	0.1%	0.1%		35%	0.1%	0%	12.6%	0%		12.7%	**-**	-
Heavy	0	19	0	0		-	0	0	0	0		-	0	19	0	0		-	0	0	0	0		-	**-**	-
Heavy %	0%	6.2%	0%	0%		-	0%	0%	0%	0%		-	0%	7.1%	0%	0%		-	0%	0%	0%	0%		-	**-**	-
Bicycles	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	**-**	-
Bicycle %	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	**-**	-

Peak Hour: 08:00 AM - 09:00 AM **Weather: Overcast Clouds (17.82 °C)**

Start Time	N Approach BLAIR RD						E Approach EAST DRIVEWAY						S Approach BLAIR RD						W Approach LANDMARK RD (N)						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
08:00:00	4	16	0	0	0	20	1	0	0	0	0	1	0	11	0	0	0	11	0	0	21	0	0	21	53
08:15:00	5	33	1	0	0	39	0	0	0	0	0	0	0	9	0	0	0	9	0	0	16	0	0	16	64
08:30:00	5	23	2	0	0	30	0	0	0	0	2	0	0	15	1	0	0	16	0	0	5	0	0	5	51
08:45:00	3	41	0	0	0	44	1	0	0	0	0	1	0	20	0	0	0	20	0	0	1	0	0	1	66
Grand Total	17	113	3	0	0	133	2	0	0	0	2	2	0	55	1	0	0	56	0	0	43	0	0	43	**234**
Approach%	12.8%	85%	2.3%	0%		-	100%	0%	0%	0%		-	0%	98.2%	1.8%	0%		-	0%	0%	100%	0%		-	**-**
Totals %	7.3%	48.3%	1.3%	0%		56.8%	0.9%	0%	0%	0%		0.9%	0%	23.5%	0.4%	0%		23.9%	0%	0%	18.4%	0%		18.4%	**-**
PHF	0.85	0.69	0.38	0		0.76	0.5	0	0	0		0.5	0	0.69	0.25	0		0.7	0	0	0.51	0		0.51	**-**
Heavy	0	9	0	0		9	0	0	0	0		0	0	6	0	0		6	0	0	0	0		0	**-**
Heavy %	0%	8%	0%	0%		6.8%	0%	0%	0%	0%		0%	0%	10.9%	0%	0%		10.7%	0%	0%	0%	0%		0%	**-**
Lights	17	104	3	0		124	2	0	0	0		2	0	49	1	0		50	0	0	43	0		43	**-**
Lights %	100%	92%	100%	0%		93.2%	100%	0%	0%	0%		100%	0%	89.1%	100%	0%		89.3%	0%	0%	100%	0%		100%	**-**
Single-Unit Trucks	0	2	0	0		2	0	0	0	0		0	0	3	0	0		3	0	0	0	0		0	**-**
Single-Unit Trucks %	0%	1.8%	0%	0%		1.5%	0%	0%	0%	0%		0%	0%	5.5%	0%	0%		5.4%	0%	0%	0%	0%		0%	**-**
Articulated Trucks	0	7	0	0		7	0	0	0	0		0	0	3	0	0		3	0	0	0	0		0	**-**
Articulated Trucks %	0%	6.2%	0%	0%		5.3%	0%	0%	0%	0%		0%	0%	5.5%	0%	0%		5.4%	0%	0%	0%	0%		0%	**-**
Bicycles on Road	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	**-**
Bicycles on Road %	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	**-**
Pedestrians	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	0	-	-	-	-	-	0	-	**-**
Pedestrians%	-	-	-	-	0%		-	-	-	-	100%		-	-	-	-	0%		-	-	-	-	0%		**-**

Spectrum

Turning Movement Count
Location Name: BLAIR RD & LANDMARK RD (N)
Date: Tue, Aug 08, 2023 Deployment Lead: Walter Fugaj

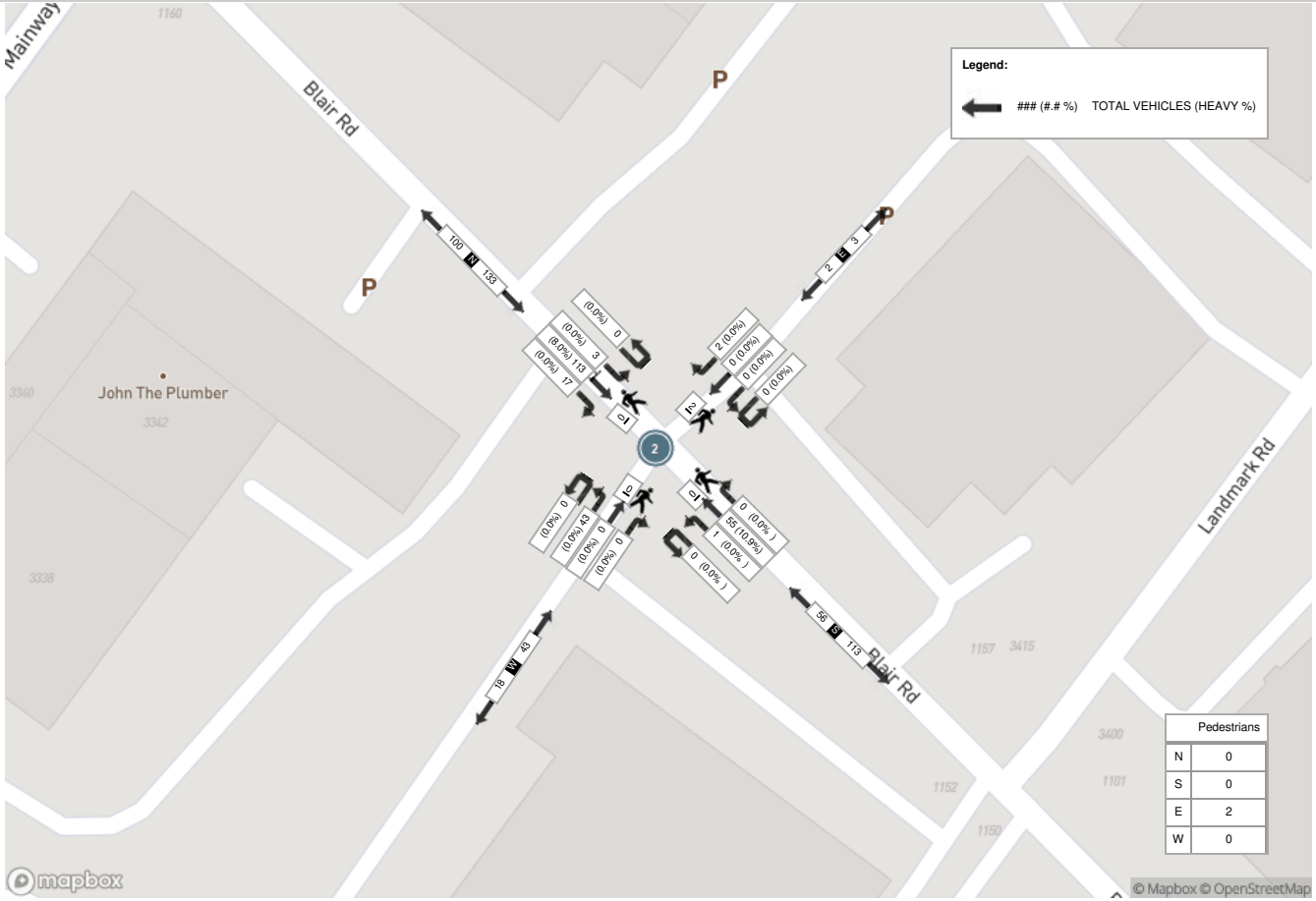
GHD
UNIT 1 705 MILLCREEK DRIVE
MISSISSAUGA ONTARIO, L5N 5M4
CANADA

Peak Hour: 04:00 PM - 05:00 PM Weather: Overcast Clouds (25.56 °C)

Start Time	N Approach BLAIR RD						E Approach EAST DRIVEWAY						S Approach BLAIR RD						W Approach LANDMARK RD (N)						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
16:00:00	4	13	0	0	0	17	2	0	0	0	0	2	0	27	0	0	0	27	0	0	9	0	0	9	55
16:15:00	3	11	0	0	0	14	2	0	0	0	0	2	1	22	0	0	0	23	0	0	9	0	0	9	48
16:30:00	11	16	0	0	0	27	2	0	0	0	1	2	0	34	0	0	0	34	0	0	4	0	0	4	67
16:45:00	12	16	0	0	0	28	0	0	0	0	0	0	0	27	0	0	0	27	0	0	11	0	0	11	66
Grand Total	30	56	0	0	0	86	6	0	0	0	1	6	1	110	0	0	0	111	0	0	33	0	0	33	**236**
Approach%	34.9%	65.1%	0%	0%		-	100%	0%	0%	0%		-	0.9%	99.1%	0%	0%		-	0%	0%	100%	0%		-	**-**
Totals %	12.7%	23.7%	0%	0%		36.4%	2.5%	0%	0%	0%		2.5%	0.4%	46.6%	0%	0%		47%	0%	0%	14%	0%		14%	**-**
PHF	0.63	0.88	0	0		0.77	0.75	0	0	0		0.75	0.25	0.81	0	0		0.82	0	0	0.75	0		0.75	**-**
Heavy	0	1	0	0		1	0	0	0	0		0	0	2	0	0		2	0	0	0	0		0	**-**
Heavy %	0%	1.8%	0%	0%		1.2%	0%	0%	0%	0%		0%	0%	1.8%	0%	0%		1.8%	0%	0%	0%	0%		0%	**-**
Lights	30	55	0	0		85	6	0	0	0		6	1	108	0	0		109	0	0	32	0		32	**-**
Lights %	100%	98.2%	0%	0%		98.8%	100%	0%	0%	0%		100%	100%	98.2%	0%	0%		98.2%	0%	0%	97%	0%		97%	**-**
Single-Unit Trucks	0	1	0	0		1	0	0	0	0		0	0	2	0	0		2	0	0	0	0		0	**-**
Single-Unit Trucks %	0%	1.8%	0%	0%		1.2%	0%	0%	0%	0%		0%	0%	1.8%	0%	0%		1.8%	0%	0%	0%	0%		0%	**-**
Articulated Trucks	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	**-**
Articulated Trucks %	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	**-**
Bicycles on Road	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	1	0		1	**-**
Bicycles on Road %	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	3%	0%		3%	**-**
Pedestrians	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	**-**
Pedestrians%	-	-	-	-	0%		-	-	-	-	100%		-	-	-	-	0%		-	-	-	-	0%		**-**

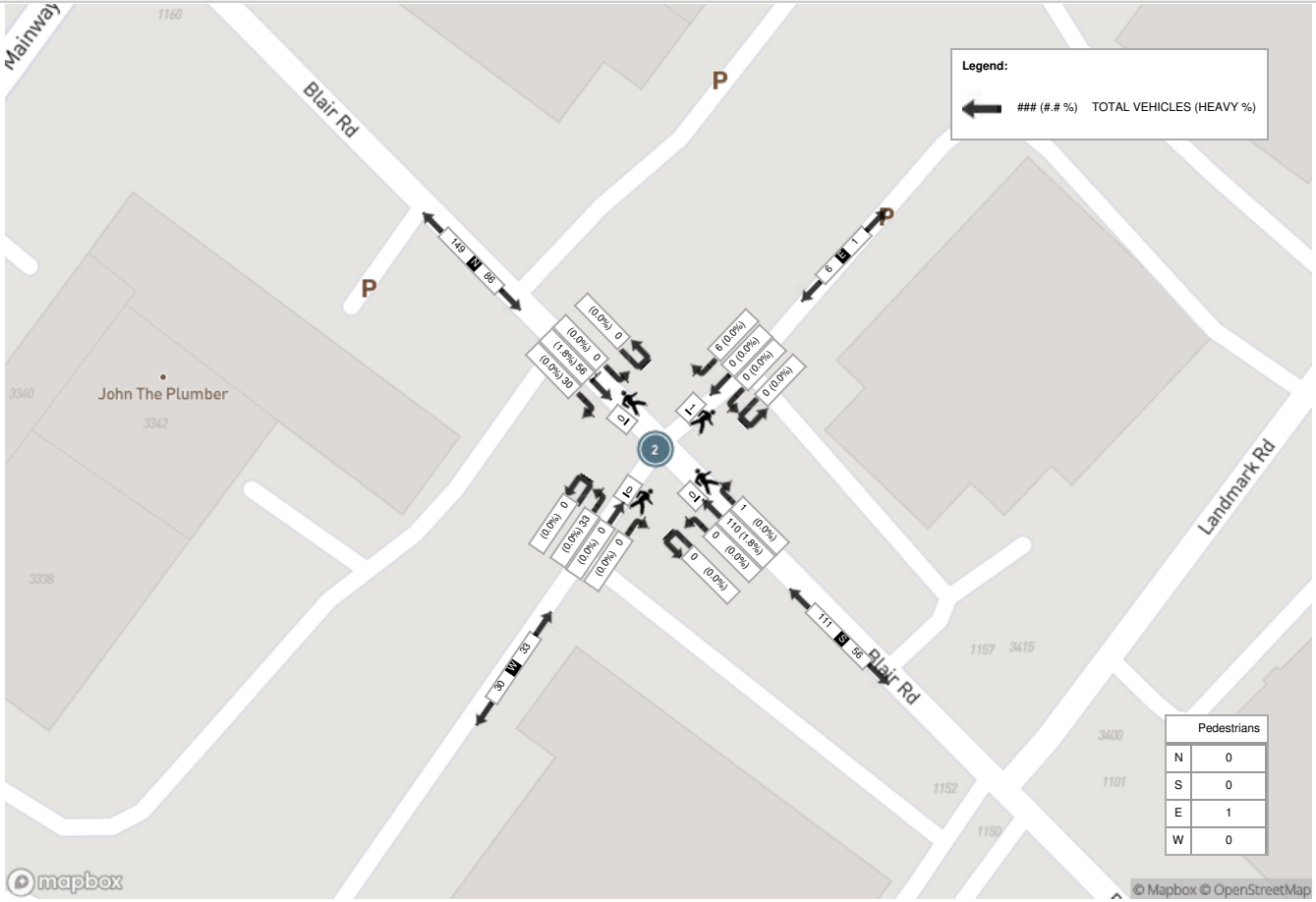
GHD
UNIT 1 705 MILLCREEK DRIVE
MISSISSAUGA ONTARIO, L5N 5M4
CANADA

Peak Hour: 08:00 AM - 09:00 AM **Weather: Overcast Clouds (17.82 °C)**



GHD
UNIT 1 705 MILLCREEK DRIVE
MISSISSAUGA ONTARIO, L5N 5M4
CANADA

Peak Hour: 04:00 PM - 05:00 PM Weather: Overcast Clouds (25.56 °C)



Spectrum

Turning Movement Count
Location Name: BLAIR RD & LANDMARK RD (S) / SOUTH SITE ACCESS
Date: Tue, Aug 08, 2023 Deployment Lead: Walter Fugaj

GHD
UNIT 1 705 MILLCREEK DRIVE
MISSISSAUGA ONTARIO, L5N 5M4
CANADA

Turning Movement Count (3 . BLAIR RD & LANDMARK RD (S) / SOUTH SITE ACCESS)

Start Time	N Approach BLAIR RD						E Approach LANDMARK RD (S)						S Approach BLAIR RD						W Approach LANDMARK RD (S)						Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Thru N:S	Left N:E	UTurn N:N	Peds N:	Approach Total	Right E:N	Thru E:W	Left E:S	UTurn E:E	Peds E:	Approach Total	Right S:E	Thru S:N	Left S:W	UTurn S:S	Peds S:	Approach Total	Right W:S	Thru W:E	Left W:N	UTurn W:W	Peds W:	Approach Total		
07:00:00	0	12	7	0	0	19	5	0	0	0	0	5	0	10	0	0	0	10	0	0	0	0	0	0	34	
07:15:00	4	8	12	0	0	24	5	0	0	0	0	5	0	9	0	0	0	9	0	0	0	0	0	0	38	
07:30:00	1	13	10	0	0	24	5	0	0	0	0	5	0	4	0	0	0	4	0	0	1	0	2	1	34	
07:45:00	3	10	19	0	0	32	7	0	0	0	0	7	1	4	0	0	0	5	0	0	1	0	0	1	45	151
08:00:00	3	4	9	0	0	16	5	0	1	0	0	6	0	4	0	0	0	4	0	0	3	0	0	3	29	146
08:15:00	0	16	18	0	0	34	7	0	0	0	0	7	1	3	0	0	0	4	0	0	0	0	0	0	45	153
08:30:00	0	9	15	0	0	24	6	1	0	0	0	7	0	6	0	0	0	6	0	0	4	0	0	4	41	160
08:45:00	0	14	27	0	0	41	13	0	1	0	0	14	1	3	0	0	2	4	0	0	3	0	0	3	62	177
BREAK																										
16:00:00	0	4	9	0	0	13	23	0	0	0	0	23	0	3	0	0	0	3	0	0	1	0	0	1	40	
16:15:00	2	3	6	0	0	11	16	0	0	0	0	16	0	6	0	1	0	7	0	0	1	0	0	1	35	
16:30:00	1	7	8	0	0	16	18	0	0	0	0	18	0	12	0	0	0	12	0	0	4	0	0	4	50	
16:45:00	0	8	8	0	0	16	13	0	0	0	1	13	0	12	0	0	0	12	0	0	2	0	0	2	43	168
17:00:00	2	4	3	0	0	9	15	0	0	0	0	15	0	8	0	0	0	8	0	0	1	0	0	1	33	161
17:15:00	0	6	5	0	0	11	5	0	0	0	0	5	0	5	0	0	0	5	1	0	0	0	0	1	22	148
17:30:00	0	8	1	0	0	9	4	0	0	0	0	4	0	5	0	0	0	5	0	0	0	0	0	0	18	116
17:45:00	0	12	0	0	0	12	6	0	0	0	0	6	0	1	0	0	0	1	0	0	2	0	0	2	21	94
Grand Total	16	138	157	0	0	311	153	1	2	0	1	156	3	95	0	1	2	99	1	0	23	0	2	24	**590**	-
Approach%	5.1%	44.4%	50.5%	0%		-	98.1%	0.6%	1.3%	0%		-	3%	96%	0%	1%		-	4.2%	0%	95.8%	0%		-	**-**	-
Totals %	2.7%	23.4%	26.6%	0%		52.7%	25.9%	0.2%	0.3%	0%		26.4%	0.5%	16.1%	0%	0.2%		16.8%	0.2%	0%	3.9%	0%		4.1%	**-**	-
Heavy	0	15	4	0		-	5	0	1	0		-	0	14	0	0		-	0	0	0	0		-	**-**	-
Heavy %	0%	10.9%	2.5%	0%		-	3.3%	0%	50%	0%		-	0%	14.7%	0%	0%		-	0%	0%	0%	0%		-	**-**	-
Bicycles	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	**-**	-
Bicycle %	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	**-**	-

GHD
UNIT 1 705 MILLCREEK DRIVE
MISSISSAUGA ONTARIO, L5N 5M4
CANADA

Peak Hour: 08:00 AM - 09:00 AM Weather: Overcast Clouds (17.82 °C)

Start Time	N Approach BLAIR RD						E Approach LANDMARK RD (S)						S Approach BLAIR RD						W Approach LANDMARK RD (S)						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
08:00:00	3	4	9	0	0	16	5	0	1	0	0	6	0	4	0	0	0	4	0	0	3	0	0	3	29
08:15:00	0	16	18	0	0	34	7	0	0	0	0	7	1	3	0	0	0	4	0	0	0	0	0	0	45
08:30:00	0	9	15	0	0	24	6	1	0	0	0	7	0	6	0	0	0	6	0	0	4	0	0	4	41
08:45:00	0	14	27	0	0	41	13	0	1	0	0	14	1	3	0	0	2	4	0	0	3	0	0	3	62
Grand Total	3	43	69	0	0	115	31	1	2	0	0	34	2	16	0	0	2	18	0	0	10	0	0	10	**177**
Approach%	2.6%	37.4%	60%	0%		-	91.2%	2.9%	5.9%	0%		-	11.1%	88.9%	0%	0%		-	0%	0%	100%	0%		-	**-**
Totals %	1.7%	24.3%	39%	0%		65%	17.5%	0.6%	1.1%	0%		19.2%	1.1%	9%	0%	0%		10.2%	0%	0%	5.6%	0%		5.6%	**-**
PHF	0.25	0.67	0.64	0		0.7	0.6	0.25	0.5	0		0.61	0.5	0.67	0	0		0.75	0	0	0.63	0		0.63	**-**
Heavy	0	7	2	0		9	1	0	1	0		2	0	5	0	0		5	0	0	0	0		0	**-**
Heavy %	0%	16.3%	2.9%	0%		7.8%	3.2%	0%	50%	0%		5.9%	0%	31.3%	0%	0%		27.8%	0%	0%	0%	0%		0%	**-**
Lights	3	36	67	0		106	30	1	1	0		32	2	11	0	0		13	0	0	10	0		10	**-**
Lights %	100%	83.7%	97.1%	0%		92.2%	96.8%	100%	50%	0%		94.1%	100%	68.8%	0%	0%		72.2%	0%	0%	100%	0%		100%	**-**
Single-Unit Trucks	0	1	1	0		2	1	0	1	0		2	0	3	0	0		3	0	0	0	0		0	**-**
Single-Unit Trucks %	0%	2.3%	1.4%	0%		1.7%	3.2%	0%	50%	0%		5.9%	0%	18.8%	0%	0%		16.7%	0%	0%	0%	0%		0%	**-**
Articulated Trucks	0	6	1	0		7	0	0	0	0		0	0	2	0	0		2	0	0	0	0		0	**-**
Articulated Trucks %	0%	14%	1.4%	0%		6.1%	0%	0%	0%	0%		0%	0%	12.5%	0%	0%		11.1%	0%	0%	0%	0%		0%	**-**
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	0	-	**-**
Pedestrians%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	100%		-	-	-	-	0%		**-**

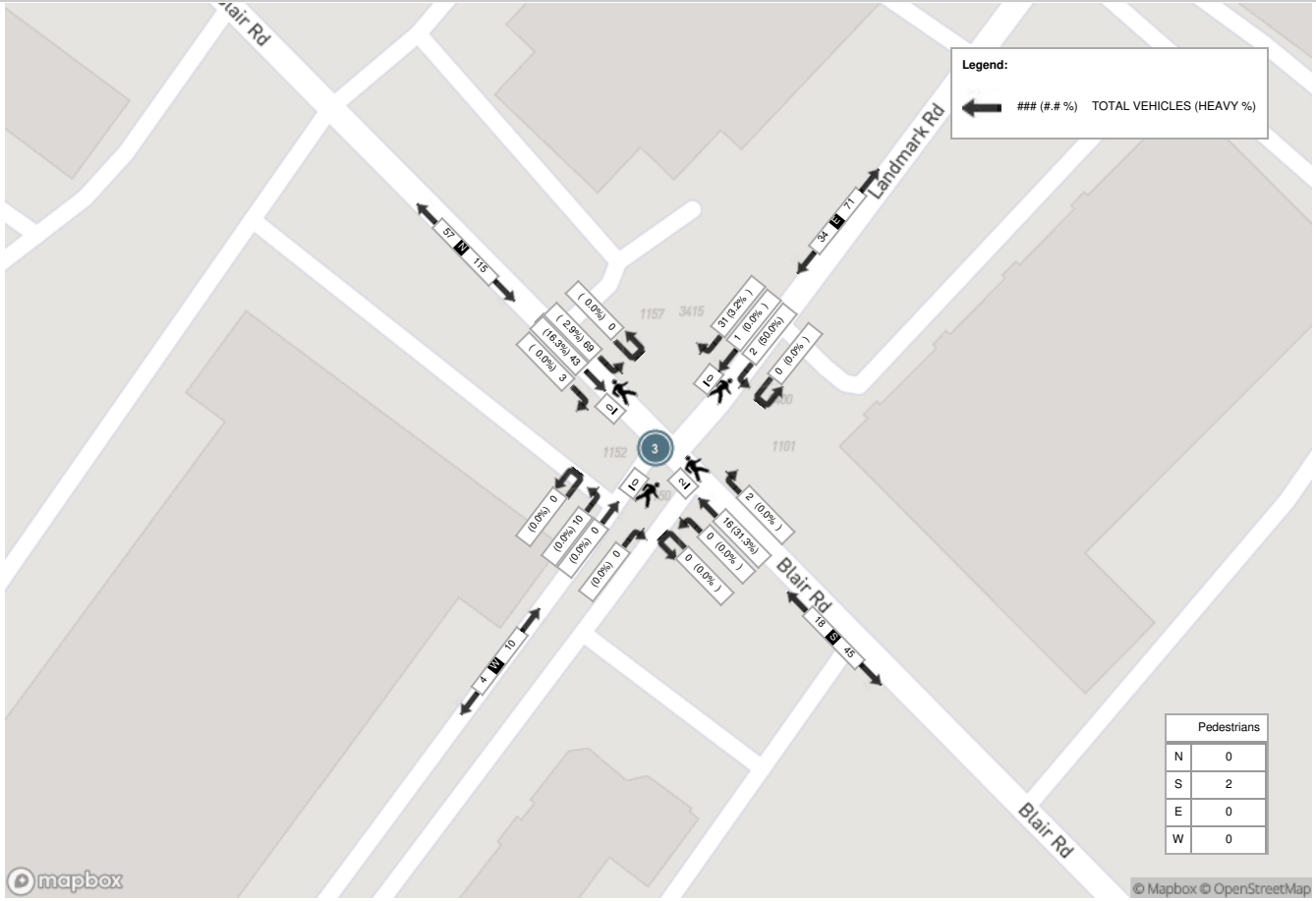
GHD
UNIT 1 705 MILLCREEK DRIVE
MISSISSAUGA ONTARIO, L5N 5M4
CANADA

Peak Hour: 04:00 PM - 05:00 PM Weather: Overcast Clouds (25.56 °C)

Start Time	N Approach BLAIR RD						E Approach LANDMARK RD (S)						S Approach BLAIR RD						W Approach LANDMARK RD (S)						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
16:00:00	0	4	9	0	0	13	23	0	0	0	0	23	0	3	0	0	0	3	0	0	1	0	0	1	40
16:15:00	2	3	6	0	0	11	16	0	0	0	0	16	0	6	0	1	0	7	0	0	1	0	0	1	35
16:30:00	1	7	8	0	0	16	18	0	0	0	0	18	0	12	0	0	0	12	0	0	4	0	0	4	50
16:45:00	0	8	8	0	0	16	13	0	0	0	1	13	0	12	0	0	0	12	0	0	2	0	0	2	43
Grand Total	3	22	31	0	0	56	70	0	0	0	1	70	0	33	0	1	0	34	0	0	8	0	0	8	**168**
Approach%	5.4%	39.3%	55.4%	0%		-	100%	0%	0%	0%		-	0%	97.1%	0%	2.9%		-	0%	0%	100%	0%		-	**-**
Totals %	1.8%	13.1%	18.5%	0%		33.3%	41.7%	0%	0%	0%		41.7%	0%	19.6%	0%	0.6%		20.2%	0%	0%	4.8%	0%		4.8%	**-**
PHF	0.38	0.69	0.86	0		0.88	0.76	0	0	0		0.76	0	0.69	0	0.25		0.71	0	0	0.5	0		0.5	**-**
Heavy	0	1	0	0		1	0	0	0	0		0	0	2	0	0		2	0	0	0	0		0	**-**
Heavy %	0%	4.5%	0%	0%		1.8%	0%	0%	0%	0%		0%	0%	6.1%	0%	0%		5.9%	0%	0%	0%	0%		0%	**-**
Lights	3	21	31	0		55	70	0	0	0		70	0	31	0	1		32	0	0	8	0		8	**-**
Lights %	100%	95.5%	100%	0%		98.2%	100%	0%	0%	0%		100%	0%	93.9%	0%	100%		94.1%	0%	0%	100%	0%		100%	**-**
Single-Unit Trucks	0	1	0	0		1	0	0	0	0		0	0	2	0	0		2	0	0	0	0		0	**-**
Single-Unit Trucks %	0%	4.5%	0%	0%		1.8%	0%	0%	0%	0%		0%	0%	6.1%	0%	0%		5.9%	0%	0%	0%	0%		0%	**-**
Articulated Trucks	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	**-**
Articulated Trucks %	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	**-**
Pedestrians	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	**-**
Pedestrians%	-	-	-	-	0%		-	-	-	-	100%		-	-	-	-	0%		-	-	-	-	0%		**-**

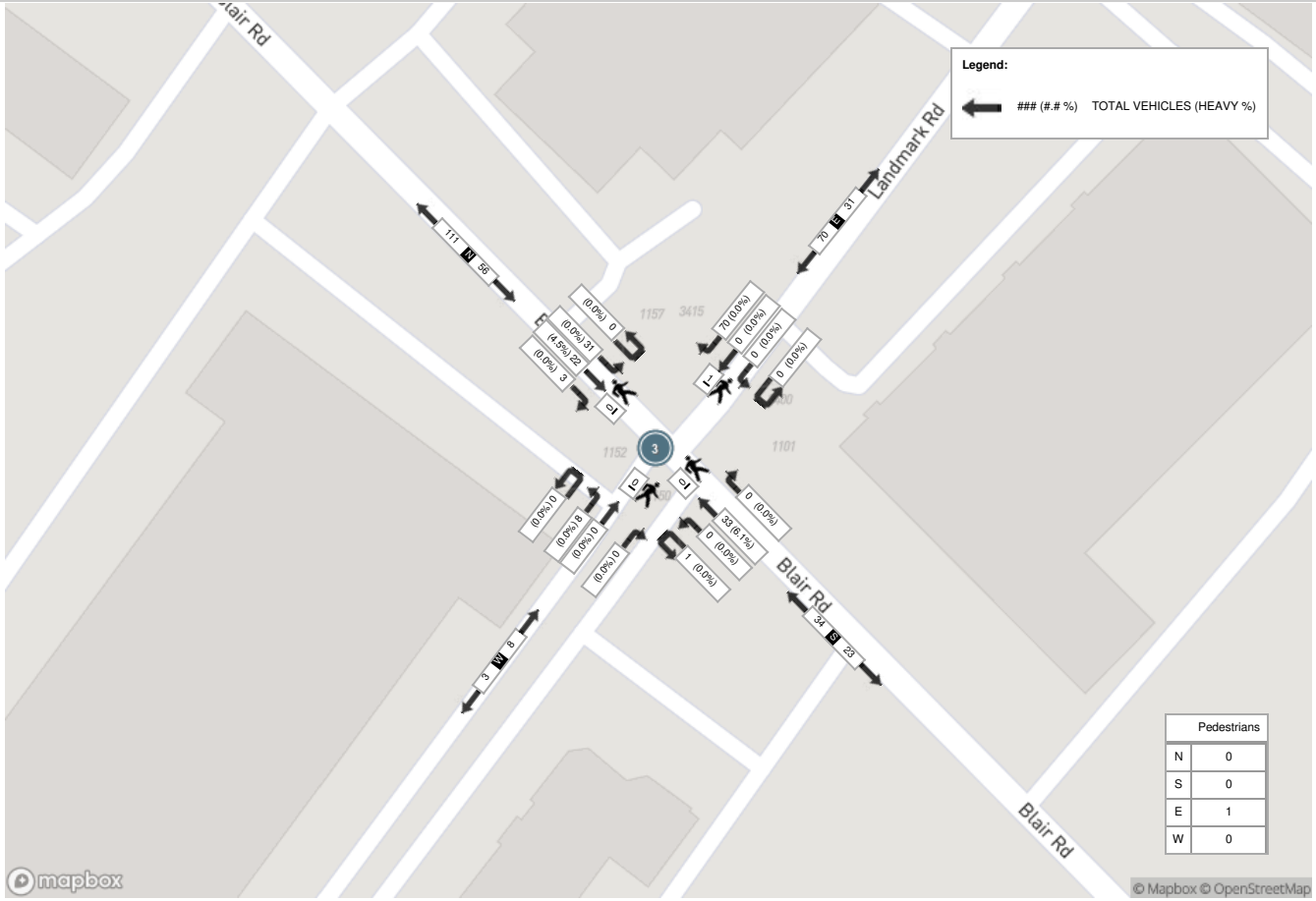
GHD
UNIT 1 705 MILLCREEK DRIVE
MISSISSAUGA ONTARIO, L5N 5M4
CANADA

Peak Hour: 08:00 AM - 09:00 AM **Weather: Overcast Clouds (17.82 °C)**



GHD
UNIT 1 705 MILLCREEK DRIVE
MISSISSAUGA ONTARIO, L5N 5M4
CANADA

Peak Hour: 04:00 PM - 05:00 PM **Weather: Overcast Clouds (25.56 °C)**



GHD
UNIT 1 705 MILLCREEK DRIVE
MISSISSAUGA ONTARIO, L5N 5M4
CANADA

Turning Movement Count (1 . MAINWAY & BLAIR ROAD)

Start Time	E Approach MAINWAY					S Approach BLAIR RD					W Approach MAINWAY					Int. Total (15 min)	Int. Total (1 hr)
	Thru E:W	Left E:S	UTurn E:E	Peds E:	Approach Total	Right S:E	Left S:W	UTurn S:S	Peds S:	Approach Total	Right W:S	Thru W:E	UTurn W:W	Peds W:	Approach Total		
07:00:00	38	9	0	0	47	10	5	0	0	15	15	58	0	0	73	135	
07:15:00	52	15	0	0	67	9	3	0	0	12	15	83	0	0	98	177	
07:30:00	56	14	0	0	70	5	6	0	0	11	21	84	0	0	105	186	
07:45:00	88	21	0	1	109	7	3	0	0	10	16	118	0	0	134	253	751
08:00:00	86	11	0	1	97	21	11	0	0	32	11	116	0	1	127	256	872
08:15:00	92	18	0	0	110	12	10	0	0	22	26	94	0	0	120	252	947
08:30:00	118	13	1	0	132	12	7	0	0	19	18	119	0	2	137	288	1049
08:45:00	104	31	0	0	135	14	5	0	0	19	17	151	0	0	168	322	1118
BREAK																	
16:00:00	166	13	0	0	179	30	12	0	0	42	6	149	0	2	155	376	
16:15:00	148	9	0	0	157	16	16	0	0	32	6	128	0	3	134	323	
16:30:00	180	16	0	0	196	29	17	0	0	46	15	155	0	0	170	412	
16:45:00	221	18	0	0	239	20	15	0	0	35	11	135	0	0	146	420	1531
17:00:00	229	3	0	2	232	19	17	0	0	36	6	139	0	3	145	413	1568
17:15:00	218	11	0	0	229	6	5	0	0	11	4	103	0	0	107	347	1592
17:30:00	160	7	0	0	167	13	5	0	0	18	3	103	0	0	106	291	1471
17:45:00	177	16	0	0	193	12	4	0	0	16	5	90	0	1	95	304	1355
Grand Total	2133	225	1	4	2359	235	141	0	0	376	195	1825	0	12	2020	**4755**	-
Approach%	90.4%	9.5%	0%		-	62.5%	37.5%	0%		-	9.7%	90.3%	0%		-	**-**	-
Totals %	44.9%	4.7%	0%		49.6%	4.9%	3%	0%		7.9%	4.1%	38.4%	0%		42.5%	**-**	-
Heavy	57	12	0		-	8	2	0		-	5	59	0		-	**-**	-
Heavy %	2.7%	5.3%	0%		-	3.4%	1.4%	0%		-	2.6%	3.2%	0%		-	**-**	-
Bicycles	-	-	-		-	-	-	-		-	-	-	-		-	**-**	-
Bicycle %	-	-	-		-	-	-	-		-	-	-	-		-	**-**	-

Peak Hour: 08:00 AM - 09:00 AM Weather: Overcast Clouds (17.82 °C)

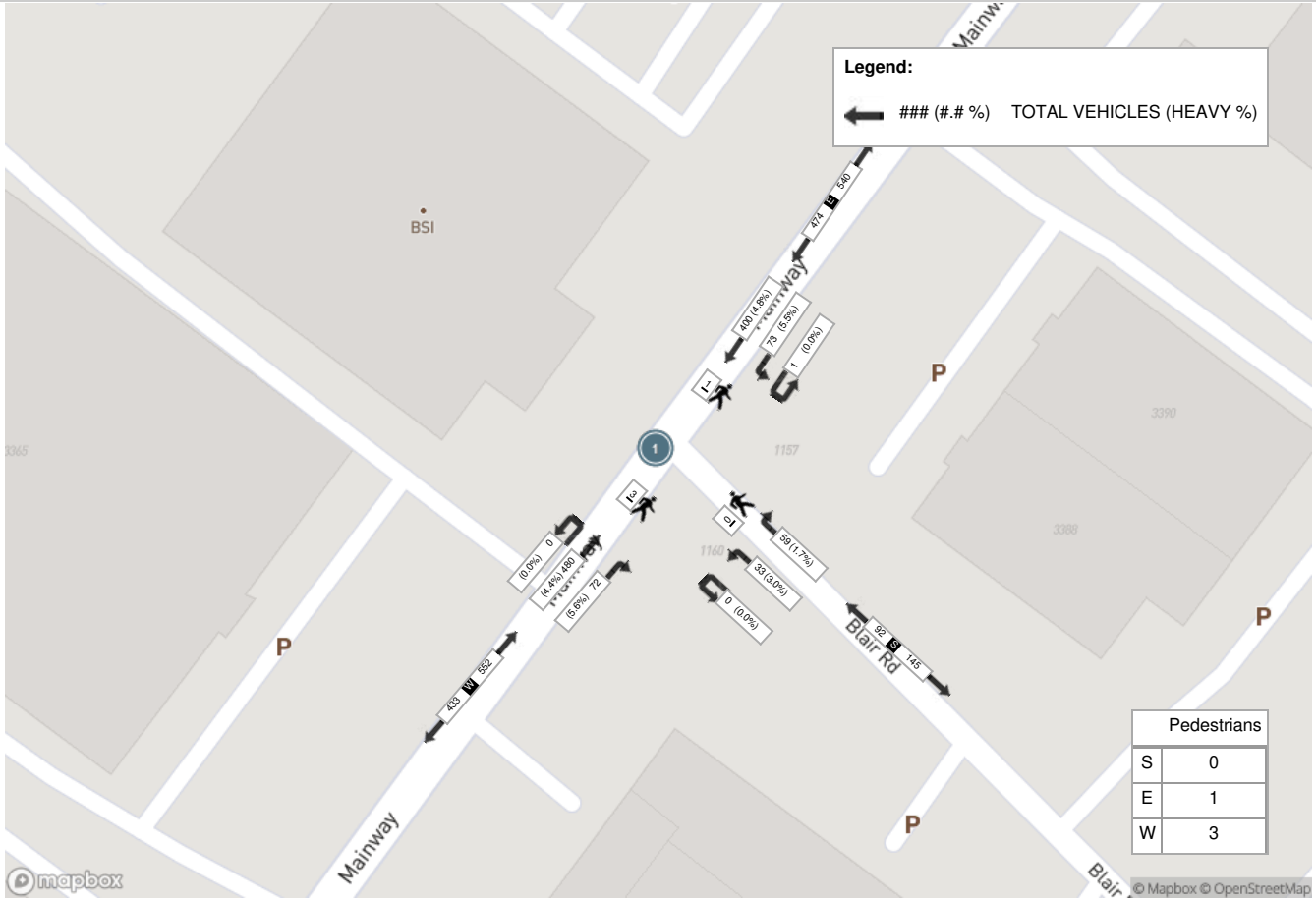
Start Time	E Approach MAINWAY					S Approach BLAIR RD					W Approach MAINWAY					Int. Total (15 min)
	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	Right	Thru	UTurn	Peds	Approach Total	
08:00:00	86	11	0	1	97	21	11	0	0	32	11	116	0	1	127	256
08:15:00	92	18	0	0	110	12	10	0	0	22	26	94	0	0	120	252
08:30:00	118	13	1	0	132	12	7	0	0	19	18	119	0	2	137	288
08:45:00	104	31	0	0	135	14	5	0	0	19	17	151	0	0	168	322
Grand Total	400	73	1	1	474	59	33	0	0	92	72	480	0	3	552	**1118**
Approach%	84.4%	15.4%	0.2%		-	64.1%	35.9%	0%		-	13%	87%	0%		-	**-**
Totals %	35.8%	6.5%	0.1%		42.4%	5.3%	3%	0%		8.2%	6.4%	42.9%	0%		49.4%	**-**
PHF	0.85	0.59	0.25		0.88	0.7	0.75	0		0.72	0.69	0.79	0		0.82	**-**
Heavy	19	4	0		23	1	1	0		2	4	21	0		25	**-**
Heavy %	4.8%	5.5%	0%		4.9%	1.7%	3%	0%		2.2%	5.6%	4.4%	0%		4.5%	**-**
Lights	380	69	1		450	58	32	0		90	68	459	0		527	**-**
Lights %	95%	94.5%	100%		94.9%	98.3%	97%	0%		97.8%	94.4%	95.6%	0%		95.5%	**-**
Single-Unit Trucks	18	4	0		22	1	1	0		2	4	19	0		23	**-**
Single-Unit Trucks %	4.5%	5.5%	0%		4.6%	1.7%	3%	0%		2.2%	5.6%	4%	0%		4.2%	**-**
Buses	1	0	0		1	0	0	0		0	0	2	0		2	**-**
Buses %	0.3%	0%	0%		0.2%	0%	0%	0%		0%	0%	0.4%	0%		0.4%	**-**
Bicycles on Road	1	0	0		1	0	0	0		0	0	0	0		0	**-**
Bicycles on Road %	0.3%	0%	0%		0.2%	0%	0%	0%		0%	0%	0%	0%		0%	**-**
Pedestrians	-	-	-	1	-	-	-	-	0	-	-	-	-	3	-	**-**
Pedestrians%	-	-	-	25%		-	-	-	0%		-	-	-	75%		**-**

Peak Hour: 04:30 PM - 05:30 PM Weather: Overcast Clouds (25.56 °C)

Start Time	E Approach MAINWAY					S Approach BLAIR RD					W Approach MAINWAY					Int. Total (15 min)
	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	Right	Thru	UTurn	Peds	Approach Total	
16:30:00	180	16	0	0	196	29	17	0	0	46	15	155	0	0	170	412
16:45:00	221	18	0	0	239	20	15	0	0	35	11	135	0	0	146	420
17:00:00	229	3	0	2	232	19	17	0	0	36	6	139	0	3	145	413
17:15:00	218	11	0	0	229	6	5	0	0	11	4	103	0	0	107	347
Grand Total	848	48	0	2	896	74	54	0	0	128	36	532	0	3	568	**1592**
Approach%	94.6%	5.4%	0%		-	57.8%	42.2%	0%		-	6.3%	93.7%	0%		-	**-**
Totals %	53.3%	3%	0%		56.3%	4.6%	3.4%	0%		8%	2.3%	33.4%	0%		35.7%	**-**
PHF	0.93	0.67	0		0.94	0.64	0.79	0		0.7	0.6	0.86	0		0.84	**-**
Heavy	11	0	0		11	0	1	0		1	0	16	0		16	**-**
Heavy %	1.3%	0%	0%		1.2%	0%	1.9%	0%		0.8%	0%	3%	0%		2.8%	**-**
Lights	835	48	0		883	74	53	0		127	36	515	0		551	**-**
Lights %	98.5%	100%	0%		98.5%	100%	98.1%	0%		99.2%	100%	96.8%	0%		97%	**-**
Single-Unit Trucks	9	0	0		9	0	1	0		1	0	13	0		13	**-**
Single-Unit Trucks %	1.1%	0%	0%		1%	0%	1.9%	0%		0.8%	0%	2.4%	0%		2.3%	**-**
Buses	2	0	0		2	0	0	0		0	0	3	0		3	**-**
Buses %	0.2%	0%	0%		0.2%	0%	0%	0%		0%	0%	0.6%	0%		0.5%	**-**
Bicycles on Road	2	0	0		2	0	0	0		0	0	1	0		1	**-**
Bicycles on Road %	0.2%	0%	0%		0.2%	0%	0%	0%		0%	0%	0.2%	0%		0.2%	**-**
Pedestrians	-	-	-	2	-	-	-	-	0	-	-	-	-	3	-	**-**
Pedestrians%	-	-	-	40%		-	-	-	0%		-	-	-	60%		**-**

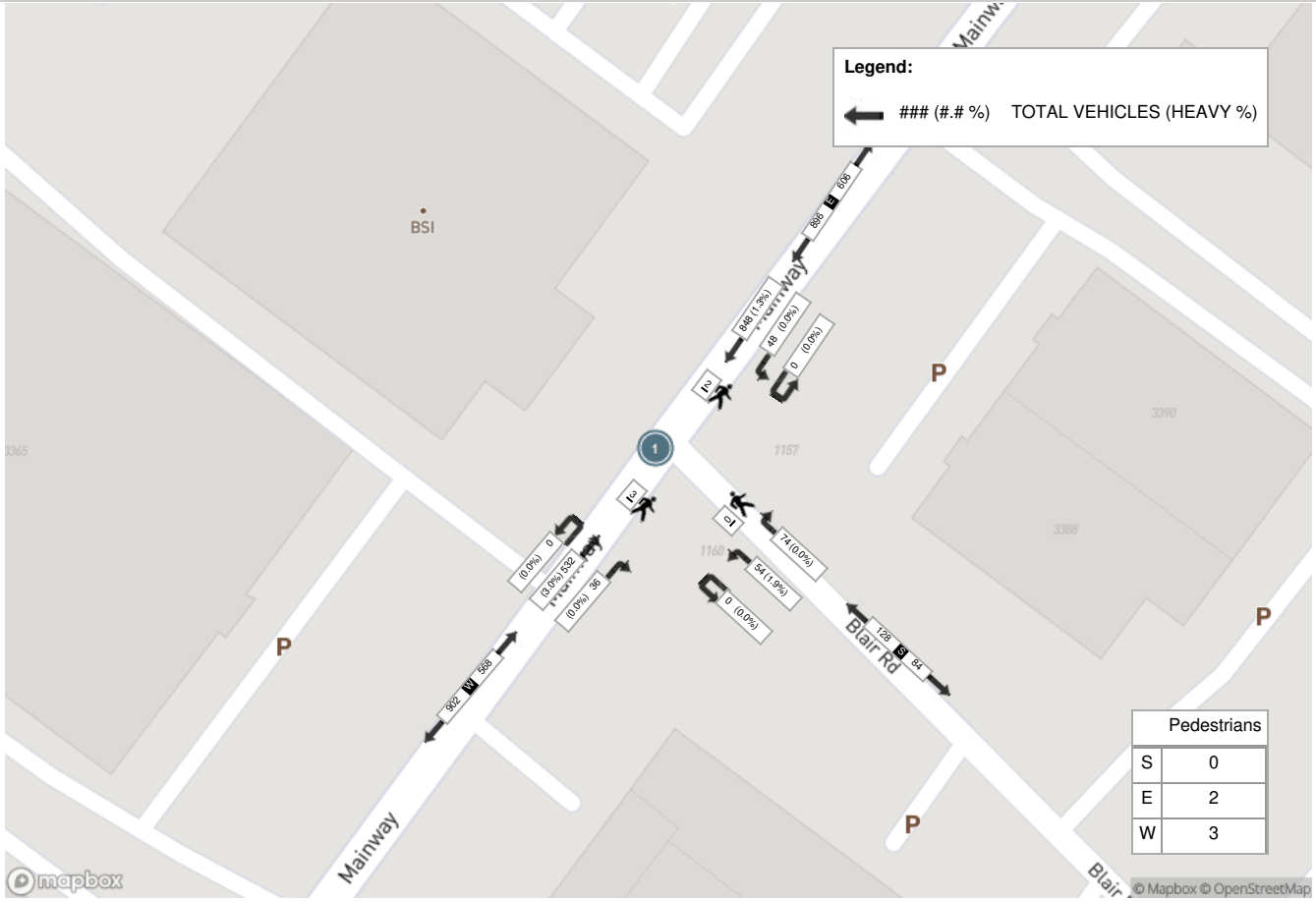
GHD
UNIT 1 705 MILLCREEK DRIVE
MISSISSAUGA ONTARIO, L5N 5M4
CANADA

Peak Hour: 08:00 AM - 09:00 AM Weather: Overcast Clouds (17.82 °C)



GHD
UNIT 1 705 MILLCREEK DRIVE
MISSISSAUGA ONTARIO, L5N 5M4
CANADA

Peak Hour: 04:30 PM - 05:30 PM Weather: Overcast Clouds (25.56 °C)



Turning Movement Count (2 . BLAIR RD & LANDMARK RD (N))

Start Time	N Approach BLAIR RD						E Approach EAST DRIVEWAY						S Approach BLAIR RD						W Approach LANDMARK RD (N)						Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Thru N:S	Left N:E	UTurn N:N	Peds N:	Approach Total	Right E:N	Thru E:W	Left E:S	UTurn E:E	Peds E:	Approach Total	Right S:E	Thru S:N	Left S:W	UTurn S:S	Peds S:	Approach Total	Right W:S	Thru W:E	Left W:N	UTurn W:W	Peds W:	Approach Total		
07:30:00	4	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	
07:45:00	4	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	
08:00:00	6	0	0	0	0	6	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	7	
08:15:00	12	0	0	0	0	12	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	13	28
08:30:00	11	0	0	0	0	11	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	12	36
08:45:00	10	0	0	0	0	10	0	0	0	0	0	0	0	1	0	0	0	1	0	0	1	0	0	1	12	44
09:00:00	13	0	0	0	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	50
09:15:00	8	2	0	0	0	10	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	11	48
09:30:00	5	3	0	0	0	8	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	9	45
09:45:00	1	0	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	35
10:00:00	2	2	0	0	0	4	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	6	28
10:15:00	1	1	0	0	0	2	0	0	0	0	0	0	0	2	0	0	0	2	0	0	1	0	0	1	5	22
10:30:00	1	1	0	0	0	2	0	0	0	0	0	0	0	3	0	0	0	3	0	0	3	0	0	3	8	21
10:45:00	2	1	0	0	0	3	0	0	0	0	0	0	0	1	0	0	0	1	0	0	5	0	0	5	9	28
11:00:00	0	1	0	1	0	2	1	0	0	0	0	1	0	2	0	0	0	2	0	0	14	0	7	14	19	41
11:15:00	10	0	0	0	0	10	0	0	0	0	0	0	0	2	0	0	0	2	0	0	10	0	2	10	22	58
11:30:00	5	2	0	0	0	7	0	0	0	0	0	0	0	5	0	0	0	5	0	0	5	0	0	5	17	67
11:45:00	11	0	0	0	0	11	0	0	0	0	0	0	0	1	0	0	0	1	0	0	2	0	0	2	14	72
12:00:00	9	2	0	0	0	11	0	0	0	0	0	0	0	9	0	0	0	9	0	0	6	0	8	6	26	79
12:15:00	3	2	0	1	0	6	0	0	0	0	0	0	0	1	0	0	0	1	0	0	4	0	0	4	11	68
12:30:00	1	0	0	0	0	1	0	0	0	0	0	0	0	2	0	0	0	2	0	0	2	0	0	2	5	56
12:45:00	3	1	0	0	0	4	0	0	0	0	0	0	0	1	0	0	0	1	0	0	1	0	0	1	6	48
13:00:00	2	1	0	1	0	4	0	0	0	0	0	0	0	4	0	0	0	4	0	0	15	0	0	15	23	45
13:15:00	2	1	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0	11	14	48
13:30:00	3	1	0	0	0	4	0	0	0	0	0	0	0	1	0	0	0	1	0	0	4	0	0	4	9	52
13:45:00	1	0	0	0	0	1	0	0	0	0	0	0	0	2	0	0	0	2	0	0	3	0	0	3	6	52
14:00:00	2	0	0	0	0	2	0	0	0	0	0	0	0	2	0	0	0	2	0	0	3	0	0	3	7	36
14:15:00	1	1	0	0	0	2	0	0	0	0	0	0	0	4	0	0	0	4	0	0	8	0	0	8	14	36
14:30:00	1	1	0	0	0	2	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	3	30
14:45:00	0	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	2	0	0	2	4	28
15:00:00	0	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	2	23
15:15:00	1	3	0	0	0	4	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	4	0	6	15
15:30:00	1	1	0	1	0	3	0	0	0	0	0	0	0	2	0	0	0	2	0	0	1	0	0	1	6	18
15:45:00	2	0	0	0	0	2	0	0	0	0	0	0	0	1	0	0	0	1	0	0	2	0	0	2	5	19
Grand Total	138	29	1	4	0	172	1	0	0	0	0	1	0	57	1	0	0	58	0	0	103	0	21	103	**334**	-
Approach%	80.2%	16.9%	0.6%	2.3%		-	100%	0%	0%	0%		-	0%	98.3%	1.7%	0%		-	0%	0%	100%	0%		-	**-**	-
Totals %	41.3%	8.7%	0.3%	1.2%		51.5%	0.3%	0%	0%	0%		0.3%	0%	17.1%	0.3%	0%		17.4%	0%	0%	30.8%	0%		30.8%	**-**	-
Heavy	0	0	0	0		-	0	0	0	0		-	0	1	0	0		-	0	0	0	0		-	**-**	-
Heavy %	0%	0%	0%	0%		-	0%	0%	0%	0%		-	0%	1.8%	0%	0%		-	0%	0%	0%	0%		-	**-**	-
Bicycles	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	**-**	-
Bicycle %	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	**-**	-

Spectrum

Turning Movement Count
Location Name: BLAIR RD & LANDMARK RD (N)
Date: Sun, Aug 06, 2023 Deployment Lead: Walter Fugaj

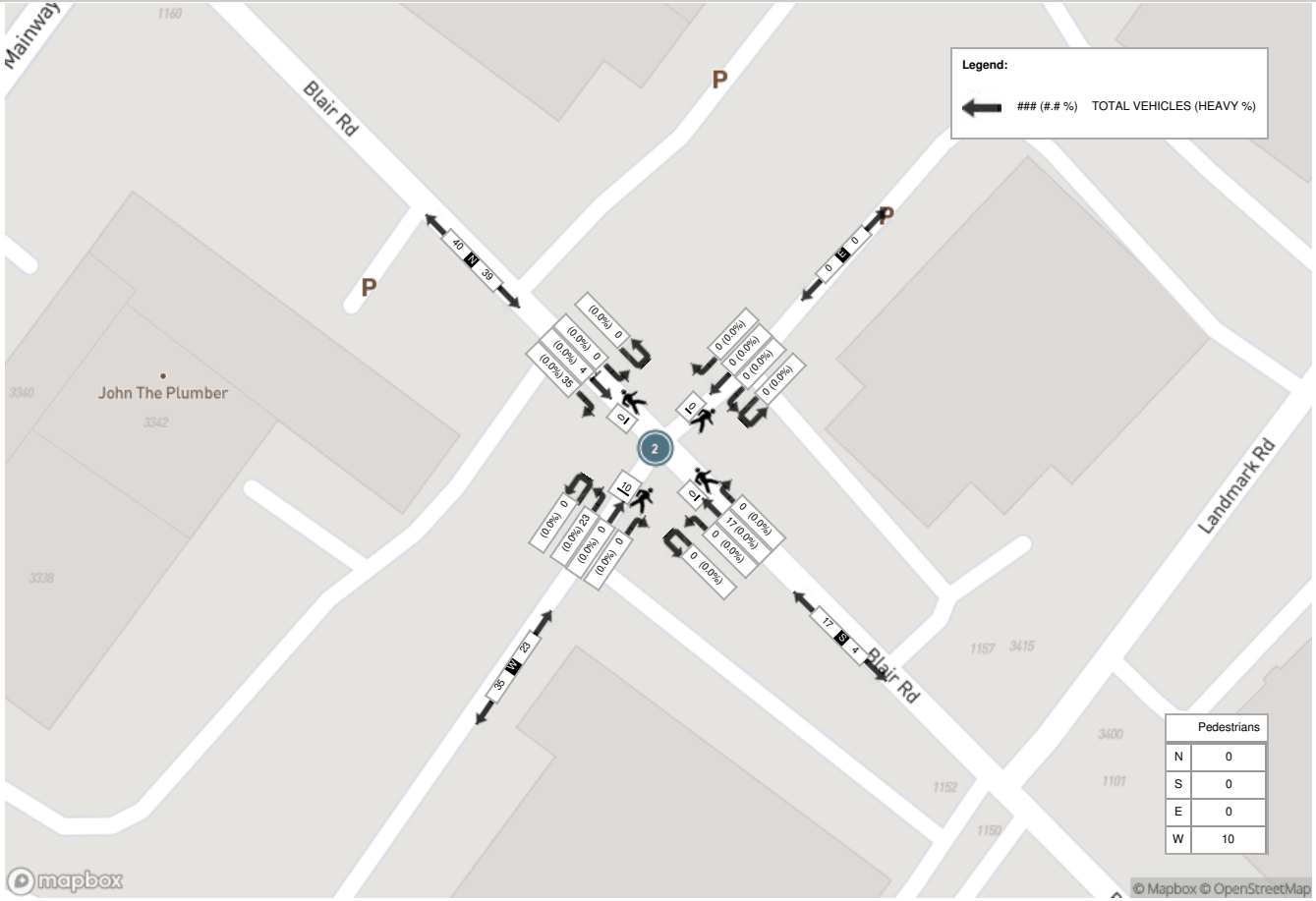
GHD
UNIT 1 705 MILLCREEK DRIVE
MISSISSAUGA ONTARIO, L5N 5M4
CANADA

Peak Hour: 11:15 AM - 12:15 PM Weather: Scattered Clouds (17.6 °C)

Start Time	N Approach BLAIR RD						E Approach EAST DRIVEWAY						S Approach BLAIR RD						W Approach LANDMARK RD (N)						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
11:15:00	10	0	0	0	0	10	0	0	0	0	0	0	0	2	0	0	0	2	0	0	10	0	2	10	22
11:30:00	5	2	0	0	0	7	0	0	0	0	0	0	0	5	0	0	0	5	0	0	5	0	0	5	17
11:45:00	11	0	0	0	0	11	0	0	0	0	0	0	0	1	0	0	0	1	0	0	2	0	0	2	14
12:00:00	9	2	0	0	0	11	0	0	0	0	0	0	0	9	0	0	0	9	0	0	6	0	8	6	26
Grand Total	35	4	0	0	0	39	0	0	0	0	0	0	0	17	0	0	0	17	0	0	23	0	10	23	**79**
Approach%	89.7%	10.3%	0%	0%		-	0%	0%	0%	0%		-	0%	100%	0%	0%		-	0%	0%	100%	0%		-	**-**
Totals %	44.3%	5.1%	0%	0%		49.4%	0%	0%	0%	0%		0%	0%	21.5%	0%	0%		21.5%	0%	0%	29.1%	0%		29.1%	**-**
PHF	0.8	0.5	0	0		0.89	0	0	0	0		0	0	0.47	0	0		0.47	0	0	0.58	0		0.58	**-**
Heavy	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	**-**
Heavy %	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	**-**
Lights	35	4	0	0		39	0	0	0	0		0	0	17	0	0		17	0	0	23	0		23	**-**
Lights %	100%	100%	0%	0%		100%	0%	0%	0%	0%		0%	0%	100%	0%	0%		100%	0%	0%	100%	0%		100%	**-**
Buses	0	0	0	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%	**-**
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	10	-	**-**
Pedestrians%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	100%		**-**

GHD
UNIT 1 705 MILLCREEK DRIVE
MISSISSAUGA ONTARIO, L5N 5M4
CANADA

Peak Hour: 11:15 AM - 12:15 PM Weather: Scattered Clouds (17.6 °C)



Spectrum

Turning Movement Count
Location Name: BLAIR RD & LANDMARK RD (S) / SOUTH SITE ACCESS
Date: Sun, Aug 06, 2023 Deployment Lead: Walter Fugaj

GHD
UNIT 1 705 MILLCREEK DRIVE
MISSISSAUGA ONTARIO, L5N 5M4
CANADA

Turning Movement Count (3 . BLAIR RD & LANDMARK RD (S) / SOUTH SITE ACCESS)

Start Time	N Approach BLAIR RD						E Approach LANDMARK RD (S)						S Approach BLAIR RD						W Approach LANDMARK RD (S)						Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Thru N:S	Left N:E	UTurn N:N	Peds N:	Approach Total	Right E:N	Thru E:W	Left E:S	UTurn E:E	Peds E:	Approach Total	Right S:E	Thru S:N	Left S:W	UTurn S:S	Peds S:	Approach Total	Right W:S	Thru W:E	Left W:N	UTurn W:W	Peds W:	Approach Total		
07:30:00	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	
07:45:00	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	
08:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	
08:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	2
08:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	3
08:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	4
09:00:00	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	3
09:15:00	1	0	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	3	5
09:30:00	1	2	0	1	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	5	9
09:45:00	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	8
10:00:00	0	2	0	0	0	2	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	4	12
10:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2	11
10:30:00	1	1	0	0	0	2	0	0	0	0	0	0	0	1	0	0	0	1	0	0	2	0	0	2	5	11
10:45:00	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2	13
11:00:00	0	0	1	0	0	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1	3	12
11:15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	1	1	0	2	3	13
11:30:00	0	1	1	0	0	2	0	0	1	0	0	1	0	2	0	0	0	2	0	0	3	1	2	4	9	17
11:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	16
12:00:00	0	1	1	0	0	2	1	0	0	0	0	1	0	2	0	0	0	2	0	0	6	0	0	6	11	24
12:15:00	0	1	1	0	0	2	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	3	24
12:30:00	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1	2	17
12:45:00	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2	18
13:00:00	0	0	1	1	0	2	1	0	0	0	0	1	0	1	0	0	0	1	0	0	2	0	0	2	6	13
13:15:00	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	11
13:30:00	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2	11
13:45:00	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1	2	11
14:00:00	0	0	0	0	0	0	3	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3	8
14:15:00	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	5	12
14:30:00	0	0	1	0	0	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2	12
14:45:00	0	0	1	0	0	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2	12
15:00:00	0	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	2	11
15:15:00	2	0	1	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	5	11
15:30:00	0	0	2	0	0	2	1	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1	4	13
15:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	12
Grand Total	5	11	14	2	0	32	12	0	1	0	0	13	0	10	0	0	0	10	0	0	37	2	2	39	**94**	-
Approach%	15.6%	34.4%	43.8%	6.3%		-	92.3%	0%	7.7%	0%		-	0%	100%	0%	0%		-	0%	0%	94.9%	5.1%		-	**-**	-
Totals %	5.3%	11.7%	14.9%	2.1%		34%	12.8%	0%	1.1%	0%		13.8%	0%	10.6%	0%	0%		10.6%	0%	0%	39.4%	2.1%		41.5%	**-**	-
Heavy	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	**-**	-
Heavy %	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	**-**	-
Bicycles	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	**-**	-
Bicycle %	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	**-**	-

Spectrum

Turning Movement Count
Location Name: BLAIR RD & LANDMARK RD (S) / SOUTH SITE ACCESS
Date: Sun, Aug 06, 2023 Deployment Lead: Walter Fugaj

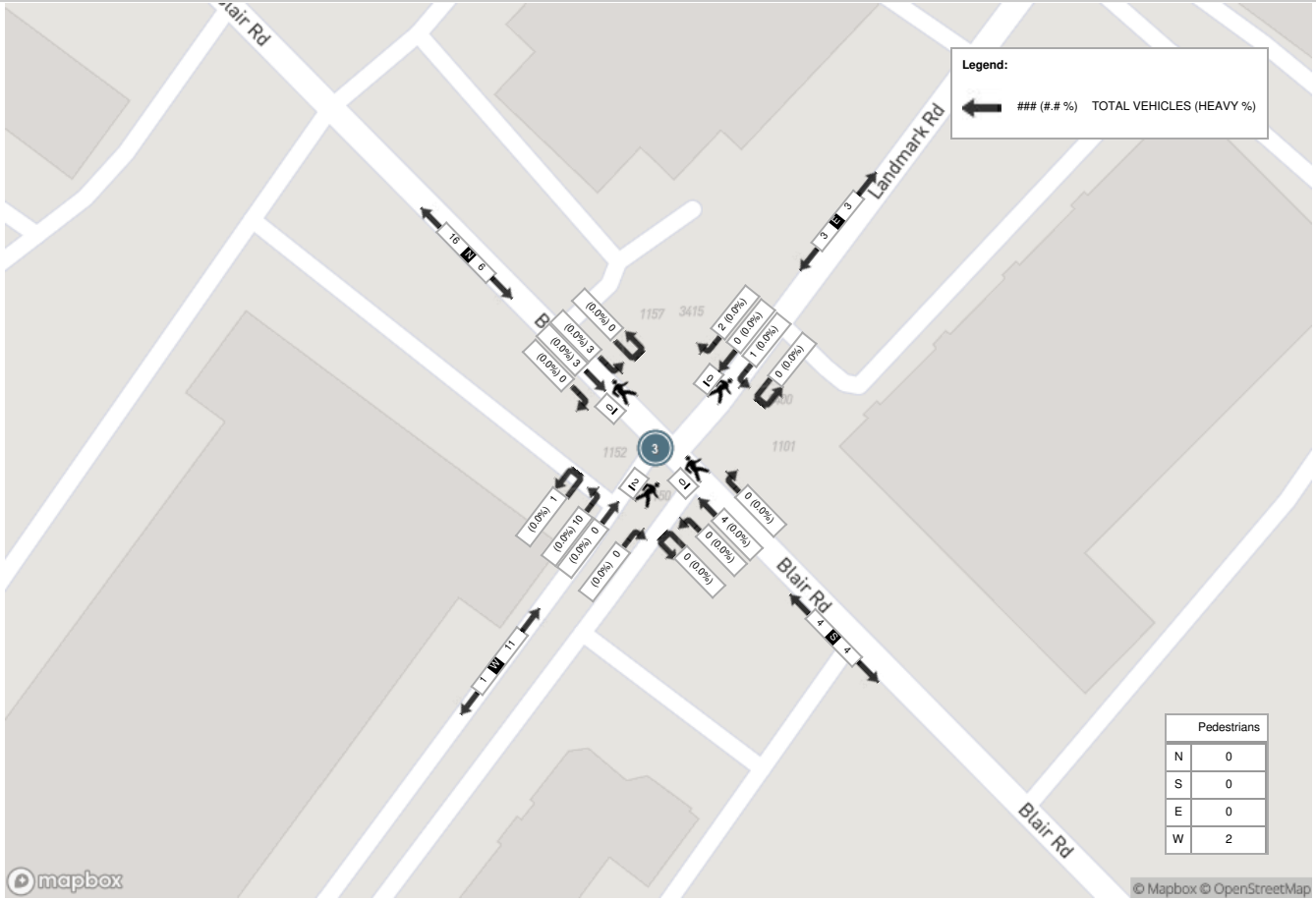
GHD
UNIT 1 705 MILLCREEK DRIVE
MISSISSAUGA ONTARIO, L5N 5M4
CANADA

Peak Hour: 11:30 AM - 12:30 PM Weather: Scattered Clouds (17.6 °C)

Start Time	N Approach BLAIR RD						E Approach LANDMARK RD (S)						S Approach BLAIR RD						W Approach LANDMARK RD (S)						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
11:30:00	0	1	1	0	0	2	0	0	1	0	0	1	0	2	0	0	0	2	0	0	3	1	2	4	9
11:45:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
12:00:00	0	1	1	0	0	2	1	0	0	0	0	1	0	2	0	0	0	2	0	0	6	0	0	6	11
12:15:00	0	1	1	0	0	2	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	3
Grand Total	0	3	3	0	0	6	2	0	1	0	0	3	0	4	0	0	0	4	0	0	10	1	2	11	**24**
Approach%	0%	50%	50%	0%		-	66.7%	0%	33.3%	0%		-	0%	100%	0%	0%		-	0%	0%	90.9%	9.1%		-	**-**
Totals %	0%	12.5%	12.5%	0%		25%	8.3%	0%	4.2%	0%		12.5%	0%	16.7%	0%	0%		16.7%	0%	0%	41.7%	4.2%		45.8%	**-**
PHF	0	0.75	0.75	0		0.75	0.5	0	0.25	0		0.75	0	0.5	0	0		0.5	0	0	0.42	0.25		0.46	**-**
Heavy	-	-	-	-			-	-	-	-			-	-	-	-			-	-	-	-			**-**
Heavy %	-	-	-	-		%	-	-	-	-		%	-	-	-	-		%	-	-	-	-		%	**-**
Lights	0	3	3	0		6	2	0	1	0		3	0	4	0	0		4	0	0	10	1		11	**-**
Lights %	0%	100%	100%	0%		100%	100%	0%	100%	0%		100%	0%	100%	0%	0%		100%	0%	0%	100%	100%		100%	**-**
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	2	-	**-**
Pedestrians%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	100%		**-**

GHD
UNIT 1 705 MILLCREEK DRIVE
MISSISSAUGA ONTARIO, L5N 5M4
CANADA

Peak Hour: 11:30 AM - 12:30 PM Weather: Scattered Clouds (17.6 °C)



GHD
UNIT 1 705 MILLCREEK DRIVE
MISSISSAUGA ONTARIO, L5N 5M4
CANADA

Turning Movement Count (1 . MAINWAY & BLAIR ROAD)

Start Time	E Approach MAINWAY					S Approach BLAIR RD					W Approach MAINWAY					Int. Total (15 min)	Int. Total (1 hr)
	Thru E:W	Left E:S	UTurn E:E	Peds E:	Approach Total	Right S:E	Left S:W	UTurn S:S	Peds S:	Approach Total	Right W:S	Thru W:E	UTurn W:W	Peds W:	Approach Total		
07:30:00	9	3	0	0	12	0	0	0	0	0	1	16	0	0	17	29	
07:45:00	11	2	0	0	13	0	0	0	0	0	2	22	0	0	24	37	
08:00:00	14	5	0	0	19	1	0	0	0	1	1	18	0	0	19	39	
08:15:00	15	7	0	0	22	0	1	0	0	1	7	12	0	0	19	42	147
08:30:00	18	8	0	0	26	1	0	0	1	1	3	20	0	0	23	50	168
08:45:00	17	3	0	0	20	1	1	0	0	2	7	24	0	0	31	53	184
09:00:00	37	9	0	0	46	1	0	0	0	1	3	33	0	0	36	83	228
09:15:00	32	9	0	0	41	1	0	0	0	1	2	31	0	0	33	75	261
09:30:00	41	3	0	0	44	1	0	0	1	1	6	25	0	0	31	76	287
09:45:00	42	1	0	0	43	0	0	0	1	0	0	22	0	0	22	65	299
10:00:00	43	1	0	0	44	0	1	0	0	1	3	40	0	0	43	88	304
10:15:00	62	2	0	0	64	3	0	0	0	3	1	38	0	0	39	106	335
10:30:00	71	2	0	0	73	4	3	0	0	7	0	43	0	0	43	123	382
10:45:00	91	5	0	0	96	3	2	0	1	5	3	39	0	0	42	143	460
11:00:00	175	1	0	0	176	12	7	0	0	19	2	36	0	0	38	233	605
11:15:00	119	7	0	0	126	8	3	0	0	11	3	44	0	0	47	184	683
11:30:00	108	6	1	0	115	10	3	0	0	13	2	44	0	0	46	174	734
11:45:00	264	7	0	0	271	1	2	0	0	3	4	44	0	0	48	322	913
12:00:00	201	7	0	0	208	10	5	0	0	15	5	44	0	0	49	272	952
12:15:00	165	3	0	0	168	5	2	0	0	7	2	54	0	0	56	231	999
12:30:00	240	1	0	0	241	4	3	0	0	7	1	43	0	0	44	292	1117
12:45:00	131	5	0	0	136	3	2	0	1	5	1	63	0	0	64	205	1000
13:00:00	183	2	0	0	185	16	6	0	2	22	3	52	0	0	55	262	990
13:15:00	243	1	0	0	244	7	4	0	0	11	2	49	0	0	51	306	1065
13:30:00	168	5	0	0	173	4	1	0	1	5	0	40	0	0	40	218	991
13:45:00	178	1	0	0	179	3	2	0	0	5	0	49	0	0	49	233	1019
14:00:00	142	3	0	0	145	2	3	0	0	5	0	42	0	0	42	192	949
14:15:00	240	3	0	0	243	5	6	0	0	11	1	50	0	0	51	305	948
14:30:00	184	2	0	0	186	2	2	0	2	4	1	45	0	0	46	236	966
14:45:00	157	0	0	0	157	4	2	0	4	6	1	53	0	0	54	217	950
15:00:00	319	0	0	0	319	0	1	0	0	1	1	59	0	0	60	380	1138
15:15:00	188	4	0	0	192	3	0	0	0	3	1	50	0	0	51	246	1079
15:30:00	65	4	0	0	69	3	1	0	0	4	1	42	0	0	43	116	959
15:45:00	81	1	1	0	83	0	3	0	0	3	1	49	0	0	50	136	878

GHD
UNIT 1 705 MILLCREEK DRIVE
MISSISSAUGA ONTARIO, L5N 5M4
CANADA

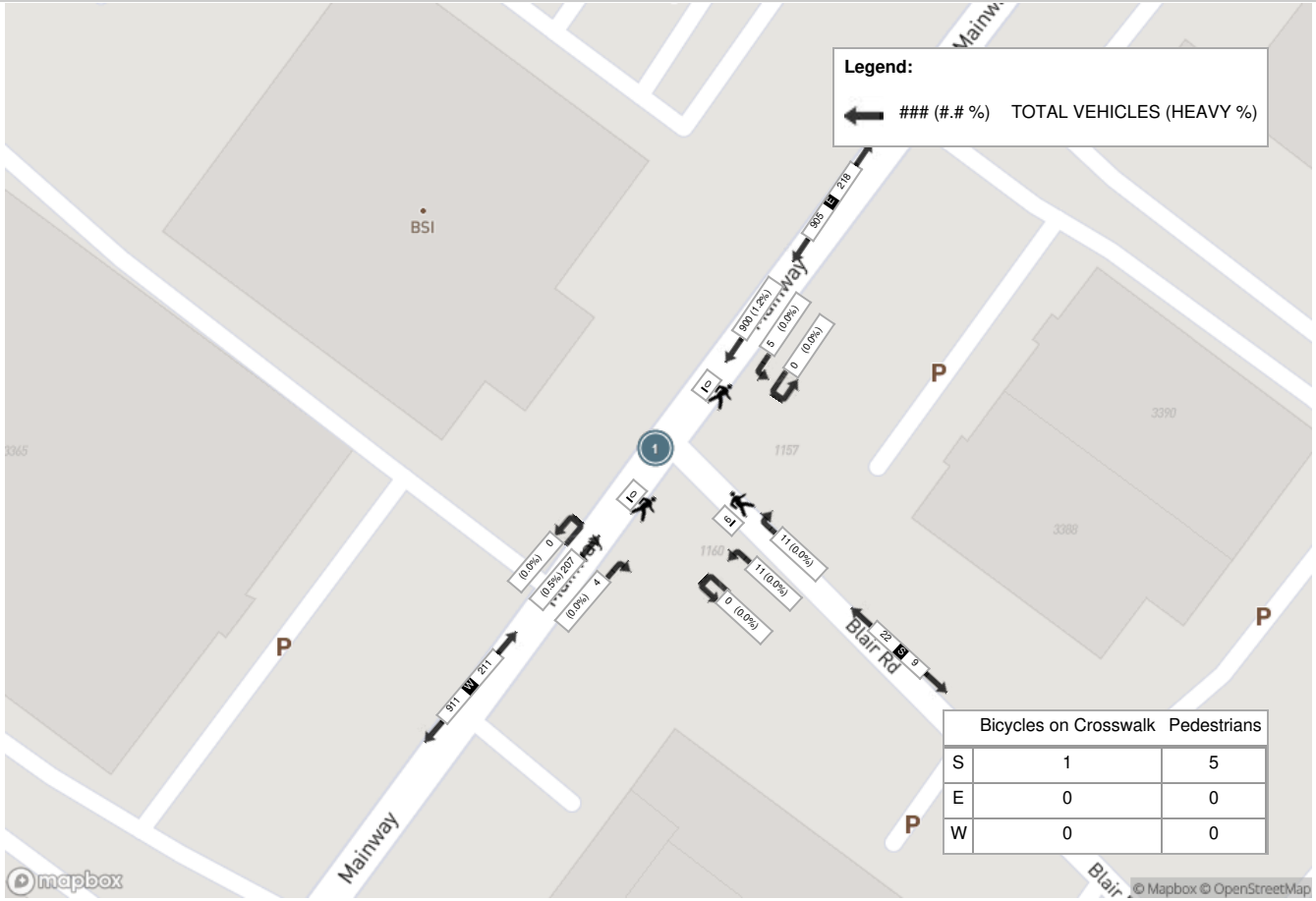
Grand Total	4054	123	2	0	4179	118	66	0	14	184	71	1335	0	0	1406	**5769**	-
Approach%	97%	2.9%	0%		-	64.1%	35.9%	0%		-	5%	95%	0%		-	**-**	-
Totals %	70.3%	2.1%	0%		72.4%	2%	1.1%	0%		3.2%	1.2%	23.1%	0%		24.4%	**-**	-
Heavy	37	1	0		-	1	2	0		-	1	14	0		-	**-**	-
Heavy %	0.9%	0.8%	0%		-	0.8%	3%	0%		-	1.4%	1%	0%		-	**-**	-
Bicycles	-	-	-		-	-	-	-		-	-	-	-		-	**-**	-
Bicycle %	-	-	-		-	-	-	-		-	-	-	-		-	**-**	-

Peak Hour: 02:15 PM - 03:15 PM Weather: Scattered Clouds (17.6 °C)

Start Time	E Approach MAINWAY					S Approach BLAIR RD					W Approach MAINWAY					Int. Total (15 min)
	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	Right	Thru	UTurn	Peds	Approach Total	
14:15:00	240	3	0	0	243	5	6	0	0	11	1	50	0	0	51	305
14:30:00	184	2	0	0	186	2	2	0	2	4	1	45	0	0	46	236
14:45:00	157	0	0	0	157	4	2	0	4	6	1	53	0	0	54	217
15:00:00	319	0	0	0	319	0	1	0	0	1	1	59	0	0	60	380
Grand Total	900	5	0	0	905	11	11	0	6	22	4	207	0	0	211	**1138**
Approach%	99.4%	0.6%	0%		-	50%	50%	0%		-	1.9%	98.1%	0%		-	**-**
Totals %	79.1%	0.4%	0%		79.5%	1%	1%	0%		1.9%	0.4%	18.2%	0%		18.5%	**-**
PHF	0.71	0.42	0		0.71	0.55	0.46	0		0.5	1	0.88	0		0.88	**-**
Heavy	11	0	0		11	0	0	0		0	0	1	0		1	**-**
Heavy %	1.2%	0%	0%		1.2%	0%	0%	0%		0%	0%	0.5%	0%		0.5%	**-**
Lights	889	5	0		894	11	11	0		22	4	206	0		210	**-**
Lights %	98.8%	100%	0%		98.8%	100%	100%	0%		100%	100%	99.5%	0%		99.5%	**-**
Single-Unit Trucks	3	0	0		3	0	0	0		0	0	0	0		0	**-**
Single-Unit Trucks %	0.3%	0%	0%		0.3%	0%	0%	0%		0%	0%	0%	0%		0%	**-**
Buses	1	0	0		1	0	0	0		0	0	1	0		1	**-**
Buses %	0.1%	0%	0%		0.1%	0%	0%	0%		0%	0%	0.5%	0%		0.5%	**-**
Articulated Trucks	7	0	0		7	0	0	0		0	0	0	0		0	**-**
Articulated Trucks %	0.8%	0%	0%		0.8%	0%	0%	0%		0%	0%	0%	0%		0%	**-**
Bicycles on Road	0	0	0		0	0	0	0		0	0	0	0		0	**-**
Bicycles on Road %	0%	0%	0%		0%	0%	0%	0%		0%	0%	0%	0%		0%	**-**
Pedestrians	-	-	-	0	-	-	-	-	5	-	-	-	-	0	-	**-**
Pedestrians%	-	-	-	0%		-	-	-	83.3%		-	-	-	0%		**-**
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	1	-	-	-	-	0	-	**-**
Bicycles on Crosswalk%	-	-	-	0%		-	-	-	16.7%		-	-	-	0%		**-**

GHD
UNIT 1 705 MILLCREEK DRIVE
MISSISSAUGA ONTARIO, L5N 5M4
CANADA

Peak Hour: 02:15 PM - 03:15 PM Weather: Scattered Clouds (17.6 °C)



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

Appendix D

Synchro Outputs



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	552	72	74	460	33	59
Future Volume (vph)	552	72	74	460	33	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)		0.0	0.0		15.0	0.0
Storage Lanes		0	0		0	0
Taper Length (m)			7.6		7.6	
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt	0.983				0.913	
Flt Protected				0.993	0.983	
Satd. Flow (prot)	3442	0	0	3424	1684	0
Flt Permitted				0.993	0.983	
Satd. Flow (perm)	3442	0	0	3424	1684	0
Link Speed (k/h)	60			60	50	
Link Distance (m)	373.9			210.6	120.9	
Travel Time (s)	22.4			12.6	8.7	
Confl. Peds. (#/hr)					3	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	4%	6%	5%	6%	3%	2%
Adj. Flow (vph)	642	84	86	535	38	69
Shared Lane Traffic (%)						
Lane Group Flow (vph)	726	0	0	621	107	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.9			4.9	4.9	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	

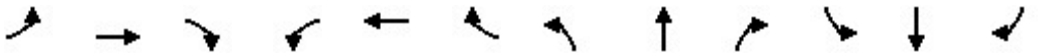
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	47.9%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	552	72	74	460	33	59
Future Volume (Veh/h)	552	72	74	460	33	59
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	642	84	86	535	38	69
Pedestrians	3					
Lane Width (m)	3.7					
Walking Speed (m/s)	1.1					
Percent Blockage	0					
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			726		1126	363
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			726		1126	363
tC, single (s)			4.2		6.9	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			90		78	89
cM capacity (veh/h)			853		177	634

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	428	298	264	357	107
Volume Left	0	0	86	0	38
Volume Right	0	84	0	0	69
cSH	1700	1700	853	1700	330
Volume to Capacity	0.25	0.18	0.10	0.21	0.32
Queue Length 95th (m)	0.0	0.0	2.5	0.0	10.4
Control Delay (s)	0.0	0.0	3.9	0.0	21.0
Lane LOS			A		C
Approach Delay (s)	0.0		1.7		21.0
Approach LOS					C

Intersection Summary			
Average Delay	2.3		
Intersection Capacity Utilization	47.9%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	0	0	2	1	31	0	16	2	69	43	3
Future Volume (vph)	10	0	0	2	1	31	0	16	2	69	43	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.876			0.984			0.997	
Flt Protected		0.950			0.997						0.971	
Satd. Flow (prot)	0	1825	0	0	1585	0	0	1484	0	0	1725	0
Flt Permitted		0.950			0.997						0.971	
Satd. Flow (perm)	0	1825	0	0	1585	0	0	1484	0	0	1725	0
Link Speed (k/h)		48			50			50			50	
Link Distance (m)		53.3			218.0			126.7			75.7	
Travel Time (s)		4.0			15.7			9.1			5.5	
Peak Hour Factor	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
Heavy Vehicles (%)	0%	0%	0%	50%	0%	3%	0%	31%	0%	3%	16%	0%
Adj. Flow (vph)	14	0	0	3	1	44	0	23	3	97	61	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	14	0	0	48	0	0	26	0	0	162	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.9			4.9			4.9			4.9	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 24.0%		ICU Level of Service A	
Analysis Period (min) 15			

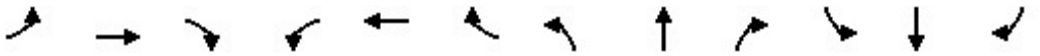
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	0	0	2	1	31	0	16	2	69	43	3
Future Volume (Veh/h)	10	0	0	2	1	31	0	16	2	69	43	3
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
Hourly flow rate (vph)	14	0	0	3	1	44	0	23	3	97	61	4
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	326	283	63	282	284	24	65			26		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	326	283	63	282	284	24	65			26		
tC, single (s)	7.1	6.5	6.2	7.6	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	4.0	4.0	3.3	2.2			2.2		
p0 queue free %	98	100	100	99	100	96	100			94		
cM capacity (veh/h)	575	591	1007	557	590	1049	1550			1582		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	14	48	26	162
Volume Left	14	3	0	97
Volume Right	0	44	3	4
cSH	575	979	1550	1582
Volume to Capacity	0.02	0.05	0.00	0.06
Queue Length 95th (m)	0.6	1.2	0.0	1.5
Control Delay (s)	11.4	8.9	0.0	4.6
Lane LOS	B	A		A
Approach Delay (s)	11.4	8.9	0.0	4.6
Approach LOS	B	A		

Intersection Summary				
Average Delay	5.3			
Intersection Capacity Utilization	24.0%	ICU Level of Service	A	
Analysis Period (min)	15			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	43	0	0	0	0	2	1	55	0	3	113	17
Future Volume (vph)	43	0	0	0	0	2	1	55	0	3	113	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.865						0.982	
Flt Protected		0.950						0.999			0.999	
Satd. Flow (prot)	0	1825	0	0	1662	0	0	1732	0	0	1765	0
Flt Permitted		0.950						0.999			0.999	
Satd. Flow (perm)	0	1825	0	0	1662	0	0	1732	0	0	1765	0
Link Speed (k/h)		48			48			50			50	
Link Distance (m)		66.5			60.2			75.7			120.9	
Travel Time (s)		5.0			4.5			5.5			8.7	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	11%	0%	0%	8%	0%
Adj. Flow (vph)	49	0	0	0	0	2	1	63	0	3	130	20
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	49	0	0	2	0	0	64	0	0	153	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.9			4.9			4.9			4.9	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 24.3%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	0	0	0	0	2	1	55	0	3	113	17
Future Volume (Veh/h)	43	0	0	0	0	2	1	55	0	3	113	17
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	49	0	0	0	0	2	1	63	0	3	130	20
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	213	211	140	211	221	63	150			63		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	213	211	140	211	221	63	150			63		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	93	100	100	100	100	100	100			100		
cM capacity (veh/h)	745	688	913	749	679	1007	1444			1553		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	49	2	64	153
Volume Left	49	0	1	3
Volume Right	0	2	0	20
cSH	745	1007	1444	1553
Volume to Capacity	0.07	0.00	0.00	0.00
Queue Length 95th (m)	1.6	0.0	0.0	0.0
Control Delay (s)	10.2	8.6	0.1	0.2
Lane LOS	B	A	A	A
Approach Delay (s)	10.2	8.6	0.1	0.2
Approach LOS	B	A		

Intersection Summary				
Average Delay	2.0			
Intersection Capacity Utilization	24.3%	ICU Level of Service	A	
Analysis Period (min)	15			



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	611	36	48	975	54	74
Future Volume (vph)	611	36	48	975	54	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)		0.0	0.0		15.0	0.0
Storage Lanes		0	0		0	0
Taper Length (m)			7.6		7.6	
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt	0.992				0.922	
Flt Protected				0.998	0.979	
Satd. Flow (prot)	3521	0	0	3608	1719	0
Flt Permitted				0.998	0.979	
Satd. Flow (perm)	3521	0	0	3608	1719	0
Link Speed (k/h)	60			60	50	
Link Distance (m)	373.9			210.6	120.9	
Travel Time (s)	22.4			12.6	8.7	
Confl. Peds. (#/hr)					3	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	0%	0%	1%	2%	0%
Adj. Flow (vph)	664	39	52	1060	59	80
Shared Lane Traffic (%)						
Lane Group Flow (vph)	703	0	0	1112	139	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.9			4.9	4.9	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	

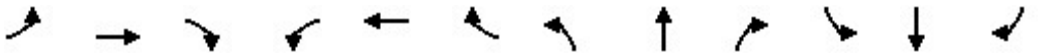
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 64.4%		ICU Level of Service C	
Analysis Period (min) 15			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	611	36	48	975	54	74
Future Volume (Veh/h)	611	36	48	975	54	74
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	664	39	52	1060	59	80
Pedestrians	3			2		
Lane Width (m)	3.7			3.7		
Walking Speed (m/s)	1.1			1.1		
Percent Blockage	0			0		
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			703		1320	354
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			703		1320	354
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			94		58	88
cM capacity (veh/h)			904		139	647

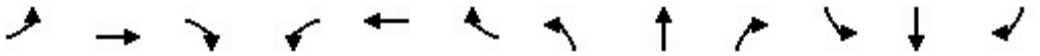
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	443	260	405	707	139
Volume Left	0	0	52	0	59
Volume Right	0	39	0	0	80
cSH	1700	1700	904	1700	254
Volume to Capacity	0.26	0.15	0.06	0.42	0.55
Queue Length 95th (m)	0.0	0.0	1.4	0.0	22.8
Control Delay (s)	0.0	0.0	1.8	0.0	35.1
Lane LOS			A		E
Approach Delay (s)	0.0		0.6		35.1
Approach LOS					E

Intersection Summary			
Average Delay	2.9		
Intersection Capacity Utilization	64.4%	ICU Level of Service	C
Analysis Period (min)	15		



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	0	70	0	33	0	31	22	3
Future Volume (vph)	0	0	0	0	0	70	0	33	0	31	22	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt					0.865						0.993	
Flt Protected											0.973	
Satd. Flow (prot)	0	1921	0	0	1662	0	0	1812	0	0	1820	0
Flt Permitted											0.973	
Satd. Flow (perm)	0	1921	0	0	1662	0	0	1812	0	0	1820	0
Link Speed (k/h)		48			50			50			50	
Link Distance (m)		53.3			218.0			126.7			75.7	
Travel Time (s)		4.0			15.7			9.1			5.5	
Confl. Peds. (#/hr)									1	1		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	6%	0%	0%	5%	0%
Adj. Flow (vph)	0	0	0	0	0	76	0	36	0	34	24	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	76	0	0	36	0	0	61	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.9			4.9			4.9			4.9	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 20.7%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	0	0	70	0	33	0	31	22	3
Future Volume (Veh/h)	0	0	0	0	0	70	0	33	0	31	22	3
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	0	0	76	0	36	0	34	24	3
Pedestrians					1							
Lane Width (m)					3.7							
Walking Speed (m/s)					1.1							
Percent Blockage					0							
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	206	130	26	130	132	37	27			37		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	206	130	26	130	132	37	27			37		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	100	100	93	100			98		
cM capacity (veh/h)	689	747	1056	831	745	1040	1600			1585		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	0	76	36	61
Volume Left	0	0	0	34
Volume Right	0	76	0	3
cSH	1700	1040	1600	1585
Volume to Capacity	0.02	0.07	0.00	0.02
Queue Length 95th (m)	0.0	1.8	0.0	0.5
Control Delay (s)	0.0	8.7	0.0	4.2
Lane LOS	A	A		A
Approach Delay (s)	0.0	8.7	0.0	4.2
Approach LOS	A	A		

Intersection Summary				
Average Delay	5.3			
Intersection Capacity Utilization	20.7%	ICU Level of Service	A	
Analysis Period (min)	15			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	0	0	0	0	6	0	110	1	0	56	30
Future Volume (vph)	33	0	0	0	0	6	0	110	1	0	56	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt					0.865			0.999			0.953	
Flt Protected		0.950										
Satd. Flow (prot)	0	1825	0	0	1662	0	0	1882	0	0	1807	0
Flt Permitted		0.950										
Satd. Flow (perm)	0	1825	0	0	1662	0	0	1882	0	0	1807	0
Link Speed (k/h)		48			48			50			50	
Link Distance (m)		66.5			60.2			75.7			120.9	
Travel Time (s)		5.0			4.5			5.5			8.7	
Confl. Peds. (#/hr)									1	1		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	2%	0%
Adj. Flow (vph)	36	0	0	0	0	7	0	120	1	0	61	33
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	36	0	0	7	0	0	121	0	0	94	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.9			4.9			4.9			4.9	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	21.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	33	0	0	0	0	6	0	110	1	0	56	30
Future Volume (Veh/h)	33	0	0	0	0	6	0	110	1	0	56	30
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	36	0	0	0	0	7	0	120	1	0	61	33
Pedestrians					1							
Lane Width (m)					3.7							
Walking Speed (m/s)					1.1							
Percent Blockage					0							
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	205	200	78	199	216	122	94			122		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	205	200	78	199	216	122	94			122		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	95	100	100	100	100	99	100			100		
cM capacity (veh/h)	751	699	989	763	685	934	1513			1476		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	36	7	121	94
Volume Left	36	0	0	0
Volume Right	0	7	1	33
cSH	751	934	1513	1476
Volume to Capacity	0.05	0.01	0.00	0.00
Queue Length 95th (m)	1.1	0.2	0.0	0.0
Control Delay (s)	10.0	8.9	0.0	0.0
Lane LOS	B	A		
Approach Delay (s)	10.0	8.9	0.0	0.0
Approach LOS	B	A		

Intersection Summary				
Average Delay	1.6			
Intersection Capacity Utilization	21.3%	ICU Level of Service	A	
Analysis Period (min)	15			



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	89	20	27	87	2	3
Future Volume (vph)	89	20	27	87	2	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)		0.0	0.0		15.0	0.0
Storage Lanes		0	0		0	0
Taper Length (m)			7.6		7.6	
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt	0.973				0.923	
Flt Protected				0.988	0.979	
Satd. Flow (prot)	3482	0	0	3536	1702	0
Flt Permitted				0.988	0.979	
Satd. Flow (perm)	3482	0	0	3536	1702	0
Link Speed (k/h)	60			60	50	
Link Distance (m)	373.9			210.6	120.9	
Travel Time (s)	22.4			12.6	8.7	
Peak Hour Factor	0.68	0.68	0.68	0.68	0.68	0.68
Adj. Flow (vph)	131	29	40	128	3	4
Shared Lane Traffic (%)						
Lane Group Flow (vph)	160	0	0	168	7	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.9			4.9	4.9	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	

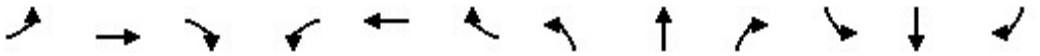
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 18.2%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	89	20	27	87	2	3
Future Volume (Veh/h)	89	20	27	87	2	3
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.68	0.68	0.68	0.68	0.68	0.68
Hourly flow rate (vph)	131	29	40	128	3	4
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			160		290	80
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			160		290	80
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			97		100	100
cM capacity (veh/h)			1417		658	964

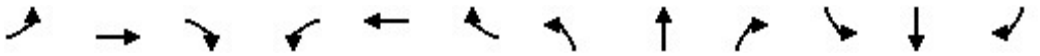
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	87	73	83	85	7
Volume Left	0	0	40	0	3
Volume Right	0	29	0	0	4
cSH	1700	1700	1417	1700	804
Volume to Capacity	0.05	0.04	0.03	0.05	0.01
Queue Length 95th (m)	0.0	0.0	0.7	0.0	0.2
Control Delay (s)	0.0	0.0	3.8	0.0	9.5
Lane LOS			A		A
Approach Delay (s)	0.0		1.9		9.5
Approach LOS					A

Intersection Summary			
Average Delay	1.1		
Intersection Capacity Utilization	18.2%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	0	0	0	0	0	0	0	0	0	0	0
Future Volume (vph)	3	0	0	0	0	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt												
Flt Protected		0.950										
Satd. Flow (prot)	0	1789	0	0	1883	0	0	1883	0	0	1883	0
Flt Permitted		0.950										
Satd. Flow (perm)	0	1789	0	0	1883	0	0	1883	0	0	1883	0
Link Speed (k/h)		48			50			50			50	
Link Distance (m)		53.3			218.0			126.7			75.7	
Travel Time (s)		4.0			15.7			9.1			5.5	
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Adj. Flow (vph)	4	0	0	0	0	0	0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	4	0	0	0	0	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.9			4.9			4.9			4.9	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

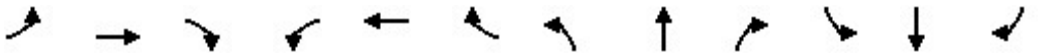
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 6.7%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	0	0	0	0	0	0	0	0	0	0	0
Future Volume (Veh/h)	3	0	0	0	0	0	0	0	0	0	0	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Hourly flow rate (vph)	4	0	0	0	0	0	0	0	0	0	0	0
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	0	0	0	0	0	0	0			0		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	0	0	0	0	0	0	0			0		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	100	100	100	100			100		
cM capacity (veh/h)	1023	896	1085	1023	896	1085	1623			1623		

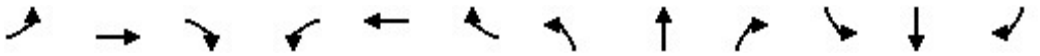
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	4	0	0	0
Volume Left	4	0	0	0
Volume Right	0	0	0	0
cSH	1023	1700	1700	1700
Volume to Capacity	0.00	0.00	0.00	0.00
Queue Length 95th (m)	0.1	0.0	0.0	0.0
Control Delay (s)	8.5	0.0	0.0	0.0
Lane LOS	A	A		
Approach Delay (s)	8.5	0.0	0.0	0.0
Approach LOS	A	A		

Intersection Summary				
Average Delay	8.5			
Intersection Capacity Utilization	6.7%	ICU Level of Service	A	
Analysis Period (min)	15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	0	0	0	0	0	0	3	0	0	0	46
Future Volume (vph)	1	0	0	0	0	0	0	3	0	0	0	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt											0.865	
Flt Protected		0.950										
Satd. Flow (prot)	0	1789	0	0	1883	0	0	1883	0	0	1629	0
Flt Permitted		0.950										
Satd. Flow (perm)	0	1789	0	0	1883	0	0	1883	0	0	1629	0
Link Speed (k/h)		48			48			50			50	
Link Distance (m)		66.5			60.2			75.7			120.9	
Travel Time (s)		5.0			4.5			5.5			8.7	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	1	0	0	0	0	0	0	3	0	0	0	48
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1	0	0	0	0	0	3	0	0	48	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.9			4.9			4.9			4.9	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 13.3%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	0	0	0	0	0	0	3	0	0	0	46
Future Volume (Veh/h)	1	0	0	0	0	0	0	3	0	0	0	46
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	1	0	0	0	0	0	0	3	0	0	0	48
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	27	27	24	27	51	3	48			3		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	27	27	24	27	51	3	48			3		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	100	100	100	100			100		
cM capacity (veh/h)	983	866	1052	983	840	1081	1559			1619		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	1	0	3	48
Volume Left	1	0	0	0
Volume Right	0	0	0	48
cSH	983	1700	1559	1619
Volume to Capacity	0.00	0.00	0.00	0.00
Queue Length 95th (m)	0.0	0.0	0.0	0.0
Control Delay (s)	8.7	0.0	0.0	0.0
Lane LOS	A	A		
Approach Delay (s)	8.7	0.0	0.0	0.0
Approach LOS	A	A		

Intersection Summary				
Average Delay	0.2			
Intersection Capacity Utilization	13.3%	ICU Level of Service	A	
Analysis Period (min)	15			



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	163	10	20	492	15	33
Future Volume (vph)	163	10	20	492	15	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)		0.0	0.0		15.0	0.0
Storage Lanes		0	0		0	0
Taper Length (m)			7.6		7.6	
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt	0.991				0.907	
Flt Protected				0.998	0.985	
Satd. Flow (prot)	3546	0	0	3571	1683	0
Flt Permitted				0.998	0.985	
Satd. Flow (perm)	3546	0	0	3571	1683	0
Link Speed (k/h)	60			60	50	
Link Distance (m)	373.9			210.6	120.9	
Travel Time (s)	22.4			12.6	8.7	
Confl. Peds. (#/hr)		1	1			
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78
Adj. Flow (vph)	209	13	26	631	19	42
Shared Lane Traffic (%)						
Lane Group Flow (vph)	222	0	0	657	61	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.9			4.9	4.9	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	

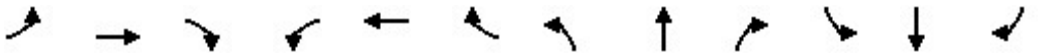
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 32.6%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	163	10	20	492	15	33
Future Volume (Veh/h)	163	10	20	492	15	33
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78
Hourly flow rate (vph)	209	13	26	631	19	42
Pedestrians					1	
Lane Width (m)					3.7	
Walking Speed (m/s)					1.1	
Percent Blockage					0	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			223		584	112
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			223		584	112
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			98		96	95
cM capacity (veh/h)			1342		434	919

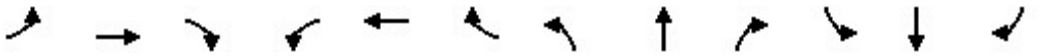
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	139	83	236	421	61
Volume Left	0	0	26	0	19
Volume Right	0	13	0	0	42
cSH	1700	1700	1342	1700	681
Volume to Capacity	0.08	0.05	0.02	0.25	0.09
Queue Length 95th (m)	0.0	0.0	0.5	0.0	2.2
Control Delay (s)	0.0	0.0	1.0	0.0	10.8
Lane LOS			A		B
Approach Delay (s)	0.0		0.4		10.8
Approach LOS					B

Intersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	32.6%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	0	0	1	0	1	0	3	0	2	2	0
Future Volume (vph)	8	0	0	1	0	1	0	3	0	2	2	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt					0.932							
Flt Protected		0.950			0.976						0.976	
Satd. Flow (prot)	0	1789	0	0	1713	0	0	1883	0	0	1838	0
Flt Permitted		0.950			0.976						0.976	
Satd. Flow (perm)	0	1789	0	0	1713	0	0	1883	0	0	1838	0
Link Speed (k/h)		48			50			50			50	
Link Distance (m)		53.3			218.0			126.7			75.7	
Travel Time (s)		4.0			15.7			9.1			5.5	
Confl. Peds. (#/hr)							2					2
Peak Hour Factor	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47
Adj. Flow (vph)	17	0	0	2	0	2	0	6	0	4	4	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	17	0	0	4	0	0	6	0	0	8	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.9			4.9			4.9			4.9	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

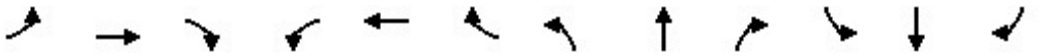
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	14.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	0	0	1	0	1	0	3	0	2	2	0
Future Volume (Veh/h)	8	0	0	1	0	1	0	3	0	2	2	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47
Hourly flow rate (vph)	17	0	0	2	0	2	0	6	0	4	4	0
Pedestrians		2										
Lane Width (m)		3.7										
Walking Speed (m/s)		1.1										
Percent Blockage		0										
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	22	20	6	18	20	6	6			6		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	22	20	6	18	20	6	6			6		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	98	100	100	100	100	100	100			100		
cM capacity (veh/h)	983	870	1075	993	870	1077	1612			1615		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	17	4	6	8
Volume Left	17	2	0	4
Volume Right	0	2	0	0
cSH	983	1033	1612	1615
Volume to Capacity	0.02	0.00	0.00	0.00
Queue Length 95th (m)	0.4	0.1	0.0	0.1
Control Delay (s)	8.7	8.5	0.0	3.6
Lane LOS	A	A		A
Approach Delay (s)	8.7	8.5	0.0	3.6
Approach LOS	A	A		

Intersection Summary				
Average Delay	6.0			
Intersection Capacity Utilization	14.0%	ICU Level of Service	A	
Analysis Period (min)	15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	34	0	0	0	0	1	0	10	0	1	4	17
Future Volume (vph)	34	0	0	0	0	1	0	10	0	1	4	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt					0.865						0.894	
Flt Protected		0.950									0.998	
Satd. Flow (prot)	0	1789	0	0	1629	0	0	1883	0	0	1680	0
Flt Permitted		0.950									0.998	
Satd. Flow (perm)	0	1789	0	0	1629	0	0	1883	0	0	1680	0
Link Speed (k/h)		48			48			50			50	
Link Distance (m)		66.5			60.2			75.7			120.9	
Travel Time (s)		5.0			4.5			5.5			8.7	
Confl. Peds. (#/hr)							9					9
Peak Hour Factor	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76
Adj. Flow (vph)	45	0	0	0	0	1	0	13	0	1	5	22
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	45	0	0	1	0	0	13	0	0	28	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.9			4.9			4.9			4.9	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	21.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	34	0	0	0	0	1	0	10	0	1	4	17
Future Volume (Veh/h)	34	0	0	0	0	1	0	10	0	1	4	17
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76
Hourly flow rate (vph)	45	0	0	0	0	1	0	13	0	1	5	22
Pedestrians		9										
Lane Width (m)		3.7										
Walking Speed (m/s)		1.1										
Percent Blockage		1										
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	41	40	25	31	51	13	36			13		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	41	40	25	31	51	13	36			13		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	95	100	100	100	100	100	100			100		
cM capacity (veh/h)	946	844	1042	970	832	1067	1561			1606		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	45	1	13	28
Volume Left	45	0	0	1
Volume Right	0	1	0	22
cSH	946	1067	1561	1606
Volume to Capacity	0.05	0.00	0.00	0.00
Queue Length 95th (m)	1.1	0.0	0.0	0.0
Control Delay (s)	9.0	8.4	0.0	0.3
Lane LOS	A	A		A
Approach Delay (s)	9.0	8.4	0.0	0.3
Approach LOS	A	A		

Intersection Summary				
Average Delay	4.8			
Intersection Capacity Utilization	21.1%	ICU Level of Service	A	
Analysis Period (min)	15			



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	580	72	74	483	33	59
Future Volume (vph)	580	72	74	483	33	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)		0.0	0.0		15.0	0.0
Storage Lanes		0	0		0	0
Taper Length (m)			7.6		7.6	
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt	0.983				0.913	
Flt Protected				0.993	0.983	
Satd. Flow (prot)	3443	0	0	3424	1684	0
Flt Permitted				0.993	0.983	
Satd. Flow (perm)	3443	0	0	3424	1684	0
Link Speed (k/h)	60			60	50	
Link Distance (m)	373.9			210.6	120.9	
Travel Time (s)	22.4			12.6	8.7	
Confl. Peds. (#/hr)					3	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	4%	6%	5%	6%	3%	2%
Adj. Flow (vph)	674	84	86	562	38	69
Shared Lane Traffic (%)						
Lane Group Flow (vph)	758	0	0	648	107	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.9			4.9	4.9	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	

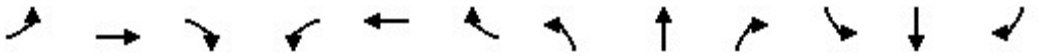
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 49.3%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	580	72	74	483	33	59
Future Volume (Veh/h)	580	72	74	483	33	59
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	674	84	86	562	38	69
Pedestrians	3					
Lane Width (m)	3.7					
Walking Speed (m/s)	1.1					
Percent Blockage	0					
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			758		1172	379
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			758		1172	379
tC, single (s)			4.2		6.9	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			90		77	89
cM capacity (veh/h)			830		164	619

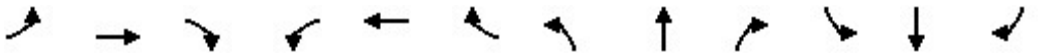
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	449	309	273	375	107
Volume Left	0	0	86	0	38
Volume Right	0	84	0	0	69
cSH	1700	1700	830	1700	312
Volume to Capacity	0.26	0.18	0.10	0.22	0.34
Queue Length 95th (m)	0.0	0.0	2.6	0.0	11.2
Control Delay (s)	0.0	0.0	3.9	0.0	22.4
Lane LOS			A		C
Approach Delay (s)	0.0		1.6		22.4
Approach LOS					C

Intersection Summary			
Average Delay	2.3		
Intersection Capacity Utilization	49.3%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	0	0	2	1	31	0	16	2	69	43	3
Future Volume (vph)	10	0	0	2	1	31	0	16	2	69	43	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.876			0.984			0.997	
Flt Protected		0.950			0.997						0.971	
Satd. Flow (prot)	0	1825	0	0	1585	0	0	1484	0	0	1725	0
Flt Permitted		0.950			0.997						0.971	
Satd. Flow (perm)	0	1825	0	0	1585	0	0	1484	0	0	1725	0
Link Speed (k/h)		48			50			50			50	
Link Distance (m)		53.3			218.0			126.7			75.7	
Travel Time (s)		4.0			15.7			9.1			5.5	
Peak Hour Factor	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
Heavy Vehicles (%)	0%	0%	0%	50%	0%	3%	0%	31%	0%	3%	16%	0%
Adj. Flow (vph)	14	0	0	3	1	44	0	23	3	97	61	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	14	0	0	48	0	0	26	0	0	162	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.9			4.9			4.9			4.9	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

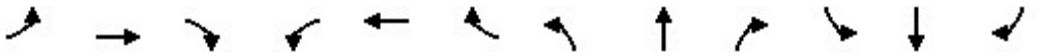
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 24.0%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	0	0	2	1	31	0	16	2	69	43	3
Future Volume (Veh/h)	10	0	0	2	1	31	0	16	2	69	43	3
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
Hourly flow rate (vph)	14	0	0	3	1	44	0	23	3	97	61	4
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	326	283	63	282	284	24	65			26		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	326	283	63	282	284	24	65			26		
tC, single (s)	7.1	6.5	6.2	7.6	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	4.0	4.0	3.3	2.2			2.2		
p0 queue free %	98	100	100	99	100	96	100			94		
cM capacity (veh/h)	575	591	1007	557	590	1049	1550			1582		

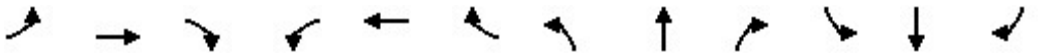
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	14	48	26	162
Volume Left	14	3	0	97
Volume Right	0	44	3	4
cSH	575	979	1550	1582
Volume to Capacity	0.02	0.05	0.00	0.06
Queue Length 95th (m)	0.6	1.2	0.0	1.5
Control Delay (s)	11.4	8.9	0.0	4.6
Lane LOS	B	A		A
Approach Delay (s)	11.4	8.9	0.0	4.6
Approach LOS	B	A		

Intersection Summary				
Average Delay	5.3			
Intersection Capacity Utilization	24.0%	ICU Level of Service	A	
Analysis Period (min)	15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	43	0	0	0	0	2	1	55	0	3	113	17
Future Volume (vph)	43	0	0	0	0	2	1	55	0	3	113	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.865						0.982	
Flt Protected		0.950						0.999			0.999	
Satd. Flow (prot)	0	1825	0	0	1662	0	0	1732	0	0	1765	0
Flt Permitted		0.950						0.999			0.999	
Satd. Flow (perm)	0	1825	0	0	1662	0	0	1732	0	0	1765	0
Link Speed (k/h)		48			48			50			50	
Link Distance (m)		66.5			60.2			75.7			120.9	
Travel Time (s)		5.0			4.5			5.5			8.7	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	11%	0%	0%	8%	0%
Adj. Flow (vph)	49	0	0	0	0	2	1	63	0	3	130	20
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	49	0	0	2	0	0	64	0	0	153	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.9			4.9			4.9			4.9	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 24.3%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	0	0	0	0	2	1	55	0	3	113	17
Future Volume (Veh/h)	43	0	0	0	0	2	1	55	0	3	113	17
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	49	0	0	0	0	2	1	63	0	3	130	20
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	213	211	140	211	221	63	150			63		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	213	211	140	211	221	63	150			63		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	93	100	100	100	100	100	100			100		
cM capacity (veh/h)	745	688	913	749	679	1007	1444			1553		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	49	2	64	153
Volume Left	49	0	1	3
Volume Right	0	2	0	20
cSH	745	1007	1444	1553
Volume to Capacity	0.07	0.00	0.00	0.00
Queue Length 95th (m)	1.6	0.0	0.0	0.0
Control Delay (s)	10.2	8.6	0.1	0.2
Lane LOS	B	A	A	A
Approach Delay (s)	10.2	8.6	0.1	0.2
Approach LOS	B	A		

Intersection Summary				
Average Delay	2.0			
Intersection Capacity Utilization	24.3%	ICU Level of Service	A	
Analysis Period (min)	15			



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	643	36	48	1024	54	74
Future Volume (vph)	643	36	48	1024	54	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)		0.0	0.0		15.0	0.0
Storage Lanes		0	0		0	0
Taper Length (m)			7.6		7.6	
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt	0.992				0.922	
Flt Protected				0.998	0.979	
Satd. Flow (prot)	3521	0	0	3608	1719	0
Flt Permitted				0.998	0.979	
Satd. Flow (perm)	3521	0	0	3608	1719	0
Link Speed (k/h)	60			60	50	
Link Distance (m)	373.9			210.6	120.9	
Travel Time (s)	22.4			12.6	8.7	
Confl. Peds. (#/hr)					3	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	0%	0%	1%	2%	0%
Adj. Flow (vph)	699	39	52	1113	59	80
Shared Lane Traffic (%)						
Lane Group Flow (vph)	738	0	0	1165	139	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.9			4.9	4.9	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	

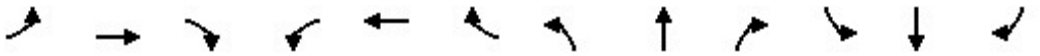
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	66.6%	ICU Level of Service	C
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	643	36	48	1024	54	74
Future Volume (Veh/h)	643	36	48	1024	54	74
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	699	39	52	1113	59	80
Pedestrians	3			2		
Lane Width (m)	3.7			3.7		
Walking Speed (m/s)	1.1			1.1		
Percent Blockage	0			0		
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			738		1382	371
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			738		1382	371
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			94		53	87
cM capacity (veh/h)			877		127	631

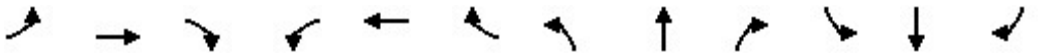
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	466	272	423	742	139
Volume Left	0	0	52	0	59
Volume Right	0	39	0	0	80
cSH	1700	1700	877	1700	234
Volume to Capacity	0.27	0.16	0.06	0.44	0.59
Queue Length 95th (m)	0.0	0.0	1.4	0.0	25.8
Control Delay (s)	0.0	0.0	1.8	0.0	40.5
Lane LOS			A		E
Approach Delay (s)	0.0		0.6		40.5
Approach LOS					E

Intersection Summary			
Average Delay	3.1		
Intersection Capacity Utilization	66.6%	ICU Level of Service	C
Analysis Period (min)	15		



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	0	70	0	33	0	31	22	3
Future Volume (vph)	0	0	0	0	0	70	0	33	0	31	22	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt					0.865						0.993	
Flt Protected											0.973	
Satd. Flow (prot)	0	1921	0	0	1662	0	0	1812	0	0	1820	0
Flt Permitted											0.973	
Satd. Flow (perm)	0	1921	0	0	1662	0	0	1812	0	0	1820	0
Link Speed (k/h)		48			50			50			50	
Link Distance (m)		53.3			218.0			126.7			75.7	
Travel Time (s)		4.0			15.7			9.1			5.5	
Confl. Peds. (#/hr)									1	1		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	6%	0%	0%	5%	0%
Adj. Flow (vph)	0	0	0	0	0	76	0	36	0	34	24	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	76	0	0	36	0	0	61	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.9			4.9			4.9			4.9	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 20.7%		ICU Level of Service A	
Analysis Period (min) 15			



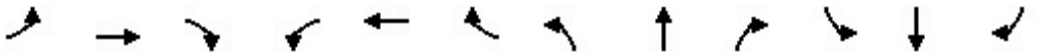
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	0	0	70	0	33	0	31	22	3
Future Volume (Veh/h)	0	0	0	0	0	70	0	33	0	31	22	3
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	0	0	76	0	36	0	34	24	3
Pedestrians					1							
Lane Width (m)					3.7							
Walking Speed (m/s)					1.1							
Percent Blockage					0							
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	206	130	26	130	132	37	27			37		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	206	130	26	130	132	37	27			37		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	100	100	93	100			98		
cM capacity (veh/h)	689	747	1056	831	745	1040	1600			1585		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	0	76	36	61
Volume Left	0	0	0	34
Volume Right	0	76	0	3
cSH	1700	1040	1600	1585
Volume to Capacity	0.02	0.07	0.00	0.02
Queue Length 95th (m)	0.0	1.8	0.0	0.5
Control Delay (s)	0.0	8.7	0.0	4.2
Lane LOS	A	A		A
Approach Delay (s)	0.0	8.7	0.0	4.2
Approach LOS	A	A		

Intersection Summary				
Average Delay	5.3			
Intersection Capacity Utilization	20.7%	ICU Level of Service	A	
Analysis Period (min)	15			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	0	0	0	0	6	0	110	1	0	56	30
Future Volume (vph)	33	0	0	0	0	6	0	110	1	0	56	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt					0.865			0.999			0.953	
Flt Protected		0.950										
Satd. Flow (prot)	0	1825	0	0	1662	0	0	1882	0	0	1807	0
Flt Permitted		0.950										
Satd. Flow (perm)	0	1825	0	0	1662	0	0	1882	0	0	1807	0
Link Speed (k/h)		48			48			50			50	
Link Distance (m)		66.5			60.2			75.7			120.9	
Travel Time (s)		5.0			4.5			5.5			8.7	
Confl. Peds. (#/hr)									1	1		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	2%	0%
Adj. Flow (vph)	36	0	0	0	0	7	0	120	1	0	61	33
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	36	0	0	7	0	0	121	0	0	94	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.9			4.9			4.9			4.9	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	21.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	33	0	0	0	0	6	0	110	1	0	56	30
Future Volume (Veh/h)	33	0	0	0	0	6	0	110	1	0	56	30
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	36	0	0	0	0	7	0	120	1	0	61	33
Pedestrians					1							
Lane Width (m)					3.7							
Walking Speed (m/s)					1.1							
Percent Blockage					0							
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	205	200	78	199	216	122	94			122		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	205	200	78	199	216	122	94			122		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	95	100	100	100	100	99	100			100		
cM capacity (veh/h)	751	699	989	763	685	934	1513			1476		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	36	7	121	94
Volume Left	36	0	0	0
Volume Right	0	7	1	33
cSH	751	934	1513	1476
Volume to Capacity	0.05	0.01	0.00	0.00
Queue Length 95th (m)	1.1	0.2	0.0	0.0
Control Delay (s)	10.0	8.9	0.0	0.0
Lane LOS	B	A		
Approach Delay (s)	10.0	8.9	0.0	0.0
Approach LOS	B	A		

Intersection Summary				
Average Delay	1.6			
Intersection Capacity Utilization	21.3%	ICU Level of Service	A	
Analysis Period (min)	15			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	93	21	28	91	2	3
Future Volume (vph)	93	21	28	91	2	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)		0.0	0.0		15.0	0.0
Storage Lanes		0	0		0	0
Taper Length (m)			7.6		7.6	
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt	0.972				0.923	
Flt Protected				0.988	0.979	
Satd. Flow (prot)	3478	0	0	3536	1702	0
Flt Permitted				0.988	0.979	
Satd. Flow (perm)	3478	0	0	3536	1702	0
Link Speed (k/h)	60			60	50	
Link Distance (m)	373.9			210.6	120.9	
Travel Time (s)	22.4			12.6	8.7	
Peak Hour Factor	0.68	0.68	0.68	0.68	0.68	0.68
Adj. Flow (vph)	137	31	41	134	3	4
Shared Lane Traffic (%)						
Lane Group Flow (vph)	168	0	0	175	7	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.9			4.9	4.9	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	

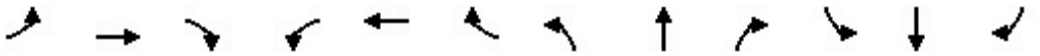
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 18.2%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	93	21	28	91	2	3
Future Volume (Veh/h)	93	21	28	91	2	3
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.68	0.68	0.68	0.68	0.68	0.68
Hourly flow rate (vph)	137	31	41	134	3	4
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			168		302	84
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			168		302	84
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			97		100	100
cM capacity (veh/h)			1407		647	958

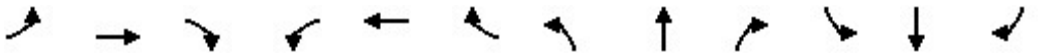
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	91	77	86	89	7
Volume Left	0	0	41	0	3
Volume Right	0	31	0	0	4
cSH	1700	1700	1407	1700	794
Volume to Capacity	0.05	0.05	0.03	0.05	0.01
Queue Length 95th (m)	0.0	0.0	0.7	0.0	0.2
Control Delay (s)	0.0	0.0	3.8	0.0	9.6
Lane LOS			A		A
Approach Delay (s)	0.0		1.8		9.6
Approach LOS					A

Intersection Summary			
Average Delay	1.1		
Intersection Capacity Utilization	18.2%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	0	0	0	0	0	0	0	0	0	0	0
Future Volume (vph)	3	0	0	0	0	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt												
Flt Protected		0.950										
Satd. Flow (prot)	0	1789	0	0	1883	0	0	1883	0	0	1883	0
Flt Permitted		0.950										
Satd. Flow (perm)	0	1789	0	0	1883	0	0	1883	0	0	1883	0
Link Speed (k/h)		48			50			50			50	
Link Distance (m)		53.3			218.0			126.7			75.7	
Travel Time (s)		4.0			15.7			9.1			5.5	
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Adj. Flow (vph)	4	0	0	0	0	0	0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	4	0	0	0	0	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.9			4.9			4.9			4.9	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

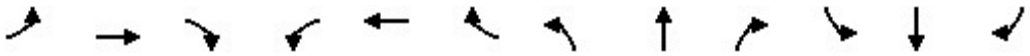
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 6.7%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	0	0	0	0	0	0	0	0	0	0	0
Future Volume (Veh/h)	3	0	0	0	0	0	0	0	0	0	0	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Hourly flow rate (vph)	4	0	0	0	0	0	0	0	0	0	0	0
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	0	0	0	0	0	0	0			0		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	0	0	0	0	0	0	0			0		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	100	100	100	100			100		
cM capacity (veh/h)	1023	896	1085	1023	896	1085	1623			1623		

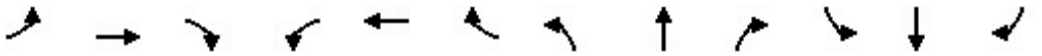
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	4	0	0	0
Volume Left	4	0	0	0
Volume Right	0	0	0	0
cSH	1023	1700	1700	1700
Volume to Capacity	0.00	0.07	0.00	0.00
Queue Length 95th (m)	0.1	0.0	0.0	0.0
Control Delay (s)	8.5	0.0	0.0	0.0
Lane LOS	A	A		
Approach Delay (s)	8.5	0.0	0.0	0.0
Approach LOS	A	A		

Intersection Summary				
Average Delay	8.5			
Intersection Capacity Utilization	6.7%	ICU Level of Service	A	
Analysis Period (min)	15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	0	0	0	0	0	0	3	0	0	0	46
Future Volume (vph)	1	0	0	0	0	0	0	3	0	0	0	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt											0.865	
Flt Protected		0.950										
Satd. Flow (prot)	0	1789	0	0	1883	0	0	1883	0	0	1629	0
Flt Permitted		0.950										
Satd. Flow (perm)	0	1789	0	0	1883	0	0	1883	0	0	1629	0
Link Speed (k/h)		48			48			50			50	
Link Distance (m)		66.5			60.2			75.7			120.9	
Travel Time (s)		5.0			4.5			5.5			8.7	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	1	0	0	0	0	0	0	3	0	0	0	48
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1	0	0	0	0	0	3	0	0	48	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.9			4.9			4.9			4.9	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 13.3%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	0	0	0	0	0	0	3	0	0	0	46
Future Volume (Veh/h)	1	0	0	0	0	0	0	3	0	0	0	46
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	1	0	0	0	0	0	0	3	0	0	0	48
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	27	27	24	27	51	3	48			3		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	27	27	24	27	51	3	48			3		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	100	100	100	100			100		
cM capacity (veh/h)	983	866	1052	983	840	1081	1559			1619		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	1	0	3	48
Volume Left	1	0	0	0
Volume Right	0	0	0	48
cSH	983	1700	1559	1619
Volume to Capacity	0.00	0.01	0.00	0.00
Queue Length 95th (m)	0.0	0.0	0.0	0.0
Control Delay (s)	8.7	0.0	0.0	0.0
Lane LOS	A	A		
Approach Delay (s)	8.7	0.0	0.0	0.0
Approach LOS	A	A		

Intersection Summary				
Average Delay	0.2			
Intersection Capacity Utilization	13.3%	ICU Level of Service	A	
Analysis Period (min)	15			



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	163	10	20	492	15	33
Future Volume (vph)	163	10	20	492	15	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)		0.0	0.0		15.0	0.0
Storage Lanes		0	0		0	0
Taper Length (m)			7.6		7.6	
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt	0.991				0.907	
Flt Protected				0.998	0.985	
Satd. Flow (prot)	3546	0	0	3571	1683	0
Flt Permitted				0.998	0.985	
Satd. Flow (perm)	3546	0	0	3571	1683	0
Link Speed (k/h)	60			60	50	
Link Distance (m)	373.9			210.6	120.9	
Travel Time (s)	22.4			12.6	8.7	
Confl. Peds. (#/hr)		1	1			
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78
Adj. Flow (vph)	209	13	26	631	19	42
Shared Lane Traffic (%)						
Lane Group Flow (vph)	222	0	0	657	61	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.9			4.9	4.9	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	

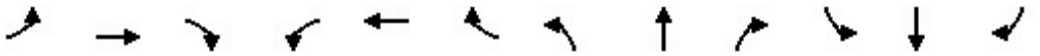
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 32.6%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	163	10	20	492	15	33
Future Volume (Veh/h)	163	10	20	492	15	33
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78
Hourly flow rate (vph)	209	13	26	631	19	42
Pedestrians					1	
Lane Width (m)					3.7	
Walking Speed (m/s)					1.1	
Percent Blockage					0	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			223		584	112
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			223		584	112
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			98		96	95
cM capacity (veh/h)			1342		434	919

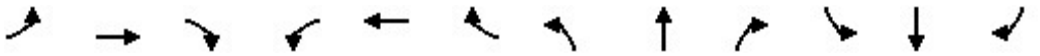
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	139	83	236	421	61
Volume Left	0	0	26	0	19
Volume Right	0	13	0	0	42
cSH	1700	1700	1342	1700	681
Volume to Capacity	0.08	0.05	0.02	0.25	0.09
Queue Length 95th (m)	0.0	0.0	0.5	0.0	2.2
Control Delay (s)	0.0	0.0	1.0	0.0	10.8
Lane LOS			A		B
Approach Delay (s)	0.0		0.4		10.8
Approach LOS					B

Intersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	32.6%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	0	0	1	0	1	0	3	0	2	2	0
Future Volume (vph)	8	0	0	1	0	1	0	3	0	2	2	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt					0.932							
Flt Protected		0.950			0.976						0.976	
Satd. Flow (prot)	0	1789	0	0	1713	0	0	1883	0	0	1838	0
Flt Permitted		0.950			0.976						0.976	
Satd. Flow (perm)	0	1789	0	0	1713	0	0	1883	0	0	1838	0
Link Speed (k/h)		48			50			50			50	
Link Distance (m)		53.3			218.0			126.7			75.7	
Travel Time (s)		4.0			15.7			9.1			5.5	
Confl. Peds. (#/hr)							2					2
Peak Hour Factor	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47
Adj. Flow (vph)	17	0	0	2	0	2	0	6	0	4	4	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	17	0	0	4	0	0	6	0	0	8	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.9			4.9			4.9			4.9	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

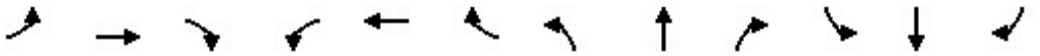
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	14.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	0	0	1	0	1	0	3	0	2	2	0
Future Volume (Veh/h)	8	0	0	1	0	1	0	3	0	2	2	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47
Hourly flow rate (vph)	17	0	0	2	0	2	0	6	0	4	4	0
Pedestrians		2										
Lane Width (m)		3.7										
Walking Speed (m/s)		1.1										
Percent Blockage		0										
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	22	20	6	18	20	6	6			6		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	22	20	6	18	20	6	6			6		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	98	100	100	100	100	100	100			100		
cM capacity (veh/h)	983	870	1075	993	870	1077	1612			1615		

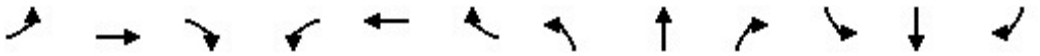
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	17	4	6	8
Volume Left	17	2	0	4
Volume Right	0	2	0	0
cSH	983	1033	1612	1615
Volume to Capacity	0.02	0.00	0.00	0.00
Queue Length 95th (m)	0.4	0.1	0.0	0.1
Control Delay (s)	8.7	8.5	0.0	3.6
Lane LOS	A	A		A
Approach Delay (s)	8.7	8.5	0.0	3.6
Approach LOS	A	A		

Intersection Summary				
Average Delay	6.0			
Intersection Capacity Utilization	14.0%	ICU Level of Service	A	
Analysis Period (min)	15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	34	0	0	0	0	1	0	10	0	1	4	17
Future Volume (vph)	34	0	0	0	0	1	0	10	0	1	4	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt					0.865						0.894	
Flt Protected		0.950									0.998	
Satd. Flow (prot)	0	1789	0	0	1629	0	0	1883	0	0	1680	0
Flt Permitted		0.950									0.998	
Satd. Flow (perm)	0	1789	0	0	1629	0	0	1883	0	0	1680	0
Link Speed (k/h)		48			48			50			50	
Link Distance (m)		66.5			60.2			75.7			120.9	
Travel Time (s)		5.0			4.5			5.5			8.7	
Confl. Peds. (#/hr)							9					9
Peak Hour Factor	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76
Adj. Flow (vph)	45	0	0	0	0	1	0	13	0	1	5	22
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	45	0	0	1	0	0	13	0	0	28	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.9			4.9			4.9			4.9	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	21.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	34	0	0	0	0	1	0	10	0	1	4	17
Future Volume (Veh/h)	34	0	0	0	0	1	0	10	0	1	4	17
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76
Hourly flow rate (vph)	45	0	0	0	0	1	0	13	0	1	5	22
Pedestrians		9										
Lane Width (m)		3.7										
Walking Speed (m/s)		1.1										
Percent Blockage		1										
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	41	40	25	31	51	13	36			13		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	41	40	25	31	51	13	36			13		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	95	100	100	100	100	100	100			100		
cM capacity (veh/h)	946	844	1042	970	832	1067	1561			1606		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	45	1	13	28
Volume Left	45	0	0	1
Volume Right	0	1	0	22
cSH	946	1067	1561	1606
Volume to Capacity	0.05	0.00	0.00	0.00
Queue Length 95th (m)	1.1	0.0	0.0	0.0
Control Delay (s)	9.0	8.4	0.0	0.3
Lane LOS	A	A		A
Approach Delay (s)	9.0	8.4	0.0	0.3
Approach LOS	A	A		

Intersection Summary				
Average Delay	4.8			
Intersection Capacity Utilization	21.1%	ICU Level of Service	A	
Analysis Period (min)	15			



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	580	109	112	483	45	81
Future Volume (vph)	580	109	112	483	45	81
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)		0.0	0.0		15.0	0.0
Storage Lanes		0	0		0	0
Taper Length (m)			7.6		7.6	
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt	0.976				0.913	
Flt Protected				0.991	0.983	
Satd. Flow (prot)	3415	0	0	3419	1684	0
Flt Permitted				0.991	0.983	
Satd. Flow (perm)	3415	0	0	3419	1684	0
Link Speed (k/h)	60			60	50	
Link Distance (m)	373.9			210.6	120.9	
Travel Time (s)	22.4			12.6	8.7	
Confl. Peds. (#/hr)					3	1
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	4%	6%	5%	6%	3%	2%
Adj. Flow (vph)	674	127	130	562	52	94
Shared Lane Traffic (%)						
Lane Group Flow (vph)	801	0	0	692	146	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.9			4.9	4.9	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	

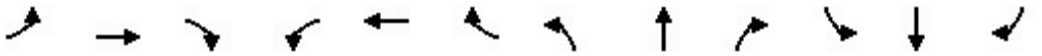
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 53.8%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	580	109	112	483	45	81
Future Volume (Veh/h)	580	109	112	483	45	81
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	674	127	130	562	52	94
Pedestrians	3			1		
Lane Width (m)	3.7			3.7		
Walking Speed (m/s)	1.1			1.1		
Percent Blockage	0			0		
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			801		1282	402
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			801		1282	402
tC, single (s)			4.2		6.9	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			84		60	84
cM capacity (veh/h)			799		130	598

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	449	352	317	375	146
Volume Left	0	0	130	0	52
Volume Right	0	127	0	0	94
cSH	1700	1700	799	1700	262
Volume to Capacity	0.26	0.21	0.16	0.22	0.56
Queue Length 95th (m)	0.0	0.0	4.4	0.0	23.6
Control Delay (s)	0.0	0.0	5.4	0.0	34.7
Lane LOS			A		D
Approach Delay (s)	0.0		2.5		34.7
Approach LOS					D

Intersection Summary			
Average Delay	4.1		
Intersection Capacity Utilization	53.8%	ICU Level of Service	A
Analysis Period (min)	15		



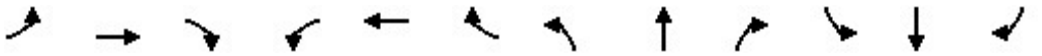
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	44	0	0	2	1	31	0	16	2	69	43	3
Future Volume (vph)	44	0	0	2	1	31	0	16	2	69	43	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt					0.876			0.984			0.997	
Flt Protected		0.950			0.997						0.971	
Satd. Flow (prot)	0	1825	0	0	1585	0	0	1484	0	0	1725	0
Flt Permitted		0.950			0.997						0.971	
Satd. Flow (perm)	0	1825	0	0	1585	0	0	1484	0	0	1725	0
Link Speed (k/h)		48			50			50			50	
Link Distance (m)		53.3			218.0			126.7			75.7	
Travel Time (s)		4.0			15.7			9.1			5.5	
Confl. Peds. (#/hr)			2									
Peak Hour Factor	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
Heavy Vehicles (%)	0%	0%	0%	50%	0%	3%	0%	31%	0%	3%	16%	0%
Adj. Flow (vph)	62	0	0	3	1	44	0	23	3	97	61	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	62	0	0	48	0	0	26	0	0	162	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.9			4.9			4.9			4.9	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 29.0%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	44	0	0	2	1	31	0	16	2	69	43	3
Future Volume (Veh/h)	44	0	0	2	1	31	0	16	2	69	43	3
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
Hourly flow rate (vph)	62	0	0	3	1	44	0	23	3	97	61	4
Pedestrians								2				
Lane Width (m)								3.7				
Walking Speed (m/s)								1.1				
Percent Blockage								0				
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	326	283	65	284	284	24	65			26		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	326	283	65	284	284	24	65			26		
tC, single (s)	7.1	6.5	6.2	7.6	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	4.0	4.0	3.3	2.2			2.2		
p0 queue free %	89	100	100	99	100	96	100			94		
cM capacity (veh/h)	575	591	1003	554	590	1049	1550			1582		

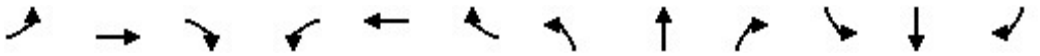
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	62	48	26	162
Volume Left	62	3	0	97
Volume Right	0	44	3	4
cSH	575	979	1550	1582
Volume to Capacity	0.11	0.05	0.00	0.06
Queue Length 95th (m)	2.7	1.2	0.0	1.5
Control Delay (s)	12.0	8.9	0.0	4.6
Lane LOS	B	A		A
Approach Delay (s)	12.0	8.9	0.0	4.6
Approach LOS	B	A		

Intersection Summary				
Average Delay	6.4			
Intersection Capacity Utilization	29.0%	ICU Level of Service	A	
Analysis Period (min)	15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	43	0	0	0	0	2	1	89	0	3	113	92
Future Volume (vph)	43	0	0	0	0	2	1	89	0	3	113	92
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt					0.865						0.940	
Flt Protected		0.950									0.999	
Satd. Flow (prot)	0	1825	0	0	1662	0	0	1732	0	0	1729	0
Flt Permitted		0.950									0.999	
Satd. Flow (perm)	0	1825	0	0	1662	0	0	1732	0	0	1729	0
Link Speed (k/h)		48			48			50			50	
Link Distance (m)		66.5			60.2			75.7			120.9	
Travel Time (s)		5.0			4.5			5.5			8.7	
Confl. Peds. (#/hr)									2	2		
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	11%	0%	0%	8%	0%
Adj. Flow (vph)	49	0	0	0	0	2	1	102	0	3	130	106
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	49	0	0	2	0	0	103	0	0	239	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.9			4.9			4.9			4.9	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 29.2%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	0	0	0	0	2	1	89	0	3	113	92
Future Volume (Veh/h)	43	0	0	0	0	2	1	89	0	3	113	92
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	49	0	0	0	0	2	1	102	0	3	130	106
Pedestrians					2							
Lane Width (m)					3.7							
Walking Speed (m/s)					1.1							
Percent Blockage					0							
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	295	295	183	295	348	104	236			104		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	295	295	183	295	348	104	236			104		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	93	100	100	100	100	100	100			100		
cM capacity (veh/h)	657	617	865	658	576	954	1343			1497		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	49	2	103	239
Volume Left	49	0	1	3
Volume Right	0	2	0	106
cSH	657	954	1343	1497
Volume to Capacity	0.07	0.00	0.00	0.00
Queue Length 95th (m)	1.8	0.0	0.0	0.0
Control Delay (s)	10.9	8.8	0.1	0.1
Lane LOS	B	A	A	A
Approach Delay (s)	10.9	8.8	0.1	0.1
Approach LOS	B	A		

Intersection Summary				
Average Delay	1.5			
Intersection Capacity Utilization	29.2%	ICU Level of Service	A	
Analysis Period (min)	15			



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	643	52	70	1024	86	119
Future Volume (vph)	643	52	70	1024	86	119
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)		0.0	0.0		15.0	0.0
Storage Lanes		0	0		0	0
Taper Length (m)			7.6		7.6	
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt	0.989				0.922	
Flt Protected				0.997	0.979	
Satd. Flow (prot)	3513	0	0	3605	1720	0
Flt Permitted				0.997	0.979	
Satd. Flow (perm)	3513	0	0	3605	1720	0
Link Speed (k/h)	60			60	50	
Link Distance (m)	373.9			210.6	120.9	
Travel Time (s)	22.4			12.6	8.7	
Confl. Peds. (#/hr)					3	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	0%	0%	1%	2%	0%
Adj. Flow (vph)	699	57	76	1113	93	129
Shared Lane Traffic (%)						
Lane Group Flow (vph)	756	0	0	1189	222	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.9			4.9	4.9	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	

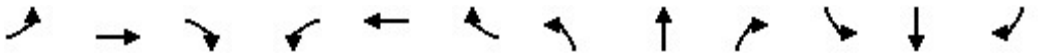
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	72.0%	ICU Level of Service	C
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	643	52	70	1024	86	119
Future Volume (Veh/h)	643	52	70	1024	86	119
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	699	57	76	1113	93	129
Pedestrians	3			2		
Lane Width (m)	3.7			3.7		
Walking Speed (m/s)	1.1			1.1		
Percent Blockage	0			0		
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			756		1439	380
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			756		1439	380
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			91		17	79
cM capacity (veh/h)			864		113	622

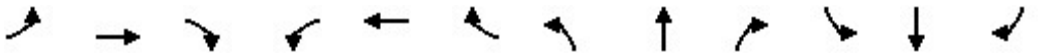
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	466	290	447	742	222
Volume Left	0	0	76	0	93
Volume Right	0	57	0	0	129
cSH	1700	1700	864	1700	215
Volume to Capacity	0.27	0.17	0.09	0.44	1.03
Queue Length 95th (m)	0.0	0.0	2.2	0.0	72.8
Control Delay (s)	0.0	0.0	2.5	0.0	117.9
Lane LOS			A		F
Approach Delay (s)	0.0		0.9		117.9
Approach LOS					F

Intersection Summary			
Average Delay	12.6		
Intersection Capacity Utilization	72.0%	ICU Level of Service	C
Analysis Period (min)	15		



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	77	0	0	0	0	70	0	33	0	31	22	3
Future Volume (vph)	77	0	0	0	0	70	0	33	0	31	22	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt					0.865						0.993	
Flt Protected		0.950									0.973	
Satd. Flow (prot)	0	1825	0	0	1662	0	0	1812	0	0	1820	0
Flt Permitted		0.950									0.973	
Satd. Flow (perm)	0	1825	0	0	1662	0	0	1812	0	0	1820	0
Link Speed (k/h)		48			50			50			50	
Link Distance (m)		53.3			218.0			126.7			75.7	
Travel Time (s)		4.0			15.7			9.1			5.5	
Confl. Peds. (#/hr)									1	1		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	6%	0%	0%	5%	0%
Adj. Flow (vph)	84	0	0	0	0	76	0	36	0	34	24	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	84	0	0	76	0	0	36	0	0	61	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.9			4.9			4.9			4.9	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

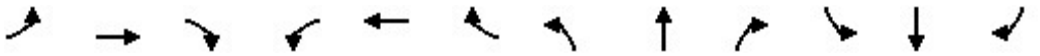
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 27.3%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	77	0	0	0	0	70	0	33	0	31	22	3
Future Volume (Veh/h)	77	0	0	0	0	70	0	33	0	31	22	3
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	84	0	0	0	0	76	0	36	0	34	24	3
Pedestrians					1							
Lane Width (m)					3.7							
Walking Speed (m/s)					1.1							
Percent Blockage					0							
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	206	130	26	130	132	37	27			37		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	206	130	26	130	132	37	27			37		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	88	100	100	100	100	93	100			98		
cM capacity (veh/h)	689	747	1056	831	745	1040	1600			1585		

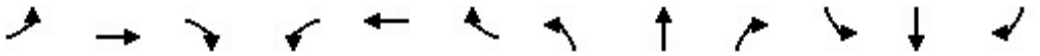
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	84	76	36	61
Volume Left	84	0	0	34
Volume Right	0	76	0	3
cSH	689	1040	1600	1585
Volume to Capacity	0.12	0.07	0.00	0.02
Queue Length 95th (m)	3.1	1.8	0.0	0.5
Control Delay (s)	10.9	8.7	0.0	4.2
Lane LOS	B	A		A
Approach Delay (s)	10.9	8.7	0.0	4.2
Approach LOS	B	A		

Intersection Summary				
Average Delay	7.1			
Intersection Capacity Utilization	27.3%	ICU Level of Service		A
Analysis Period (min)	15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	0	0	0	0	6	0	187	1	0	56	68
Future Volume (vph)	33	0	0	0	0	6	0	187	1	0	56	68
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt					0.865			0.999			0.926	
Flt Protected		0.950										
Satd. Flow (prot)	0	1825	0	0	1662	0	0	1882	0	0	1763	0
Flt Permitted		0.950										
Satd. Flow (perm)	0	1825	0	0	1662	0	0	1882	0	0	1763	0
Link Speed (k/h)		48			48			50			50	
Link Distance (m)		66.5			60.2			75.7			120.9	
Travel Time (s)		5.0			4.5			5.5			8.7	
Confl. Peds. (#/hr)									1	1		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	2%	0%
Adj. Flow (vph)	36	0	0	0	0	7	0	203	1	0	61	74
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	36	0	0	7	0	0	204	0	0	135	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.9			4.9			4.9			4.9	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 25.2%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	33	0	0	0	0	6	0	187	1	0	56	68
Future Volume (Veh/h)	33	0	0	0	0	6	0	187	1	0	56	68
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	36	0	0	0	0	7	0	203	1	0	61	74
Pedestrians					1							
Lane Width (m)					3.7							
Walking Speed (m/s)					1.1							
Percent Blockage					0							
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	308	303	98	302	340	204	135			205		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	308	303	98	302	340	204	135			205		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	94	100	100	100	100	99	100			100		
cM capacity (veh/h)	642	613	963	653	585	840	1462			1377		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	36	7	204	135
Volume Left	36	0	0	0
Volume Right	0	7	1	74
cSH	642	840	1462	1377
Volume to Capacity	0.06	0.01	0.00	0.00
Queue Length 95th (m)	1.4	0.2	0.0	0.0
Control Delay (s)	10.9	9.3	0.0	0.0
Lane LOS	B	A		
Approach Delay (s)	10.9	9.3	0.0	0.0
Approach LOS	B	A		

Intersection Summary				
Average Delay	1.2			
Intersection Capacity Utilization	25.2%	ICU Level of Service	A	
Analysis Period (min)	15			



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	93	55	72	91	36	54
Future Volume (vph)	93	55	72	91	36	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)		0.0	0.0		15.0	0.0
Storage Lanes		0	0		0	0
Taper Length (m)			7.6		7.6	
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt	0.944				0.919	
Flt Protected				0.978	0.980	
Satd. Flow (prot)	3378	0	0	3500	1696	0
Flt Permitted				0.978	0.980	
Satd. Flow (perm)	3378	0	0	3500	1696	0
Link Speed (k/h)	60			60	50	
Link Distance (m)	373.9			210.6	120.9	
Travel Time (s)	22.4			12.6	8.7	
Peak Hour Factor	0.68	0.68	0.68	0.68	0.68	0.68
Adj. Flow (vph)	137	81	106	134	53	79
Shared Lane Traffic (%)						
Lane Group Flow (vph)	218	0	0	240	132	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.9			4.9	4.9	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	

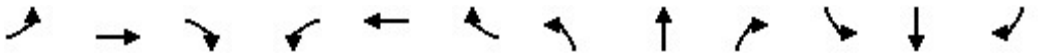
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 24.3%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	93	55	72	91	36	54
Future Volume (Veh/h)	93	55	72	91	36	54
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.68	0.68	0.68	0.68	0.68	0.68
Hourly flow rate (vph)	137	81	106	134	53	79
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			218		456	109
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			218		456	109
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			92		89	91
cM capacity (veh/h)			1349		491	924

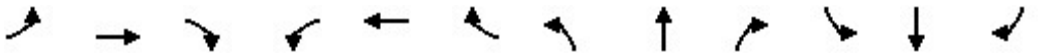
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	91	127	151	89	132
Volume Left	0	0	106	0	53
Volume Right	0	81	0	0	79
cSH	1700	1700	1349	1700	682
Volume to Capacity	0.05	0.07	0.08	0.05	0.19
Queue Length 95th (m)	0.0	0.0	1.9	0.0	5.4
Control Delay (s)	0.0	0.0	5.7	0.0	11.5
Lane LOS			A		B
Approach Delay (s)	0.0		3.6		11.5
Approach LOS					B

Intersection Summary			
Average Delay	4.0		
Intersection Capacity Utilization	24.3%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	88	0	0	0	0	0	0	0	0	0	0	0
Future Volume (vph)	88	0	0	0	0	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt												
Flt Protected		0.950										
Satd. Flow (prot)	0	1789	0	0	1883	0	0	1883	0	0	1883	0
Flt Permitted		0.950										
Satd. Flow (perm)	0	1789	0	0	1883	0	0	1883	0	0	1883	0
Link Speed (k/h)		48			50			50			50	
Link Distance (m)		53.3			218.0			126.7			75.7	
Travel Time (s)		4.0			15.7			9.1			5.5	
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Adj. Flow (vph)	117	0	0	0	0	0	0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	117	0	0	0	0	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.9			4.9			4.9			4.9	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

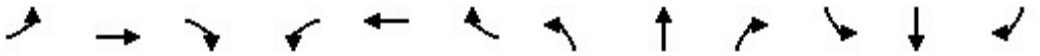
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 8.2%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	88	0	0	0	0	0	0	0	0	0	0	0
Future Volume (Veh/h)	88	0	0	0	0	0	0	0	0	0	0	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Hourly flow rate (vph)	117	0	0	0	0	0	0	0	0	0	0	0
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	0	0	0	0	0	0	0			0		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	0	0	0	0	0	0	0			0		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	89	100	100	100	100	100	100			100		
cM capacity (veh/h)	1023	896	1085	1023	896	1085	1623			1623		

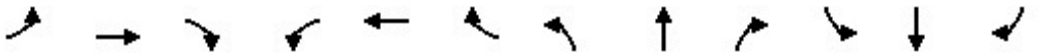
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	117	0	0	0
Volume Left	117	0	0	0
Volume Right	0	0	0	0
cSH	1023	1700	1700	1700
Volume to Capacity	0.11	0.07	0.00	0.00
Queue Length 95th (m)	2.9	0.0	0.0	0.0
Control Delay (s)	9.0	0.0	0.0	0.0
Lane LOS	A	A		
Approach Delay (s)	9.0	0.0	0.0	0.0
Approach LOS	A	A		

Intersection Summary				
Average Delay	9.0			
Intersection Capacity Utilization	8.2%	ICU Level of Service	A	
Analysis Period (min)	15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	0	0	0	0	0	0	88	0	0	0	124
Future Volume (vph)	1	0	0	0	0	0	0	88	0	0	0	124
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt											0.865	
Flt Protected		0.950										
Satd. Flow (prot)	0	1789	0	0	1883	0	0	1883	0	0	1629	0
Flt Permitted		0.950										
Satd. Flow (perm)	0	1789	0	0	1883	0	0	1883	0	0	1629	0
Link Speed (k/h)		48			48			50			50	
Link Distance (m)		66.5			60.2			75.7			120.9	
Travel Time (s)		5.0			4.5			5.5			8.7	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	1	0	0	0	0	0	0	92	0	0	0	129
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1	0	0	0	0	0	92	0	0	129	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.9			4.9			4.9			4.9	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 17.7%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	0	0	0	0	0	0	88	0	0	0	124
Future Volume (Veh/h)	1	0	0	0	0	0	0	88	0	0	0	124
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	1	0	0	0	0	0	0	92	0	0	0	129
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	156	156	64	156	221	92	129			92		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	156	156	64	156	221	92	129			92		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	100	100	100	100			100		
cM capacity (veh/h)	810	735	1000	810	678	965	1457			1503		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	1	0	92	129
Volume Left	1	0	0	0
Volume Right	0	0	0	129
cSH	810	1700	1457	1503
Volume to Capacity	0.00	0.01	0.00	0.00
Queue Length 95th (m)	0.0	0.0	0.0	0.0
Control Delay (s)	9.5	0.0	0.0	0.0
Lane LOS	A	A		
Approach Delay (s)	9.5	0.0	0.0	0.0
Approach LOS	A	A		

Intersection Summary				
Average Delay	0.0			
Intersection Capacity Utilization	17.7%	ICU Level of Service	A	
Analysis Period (min)	15			



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	163	10	20	492	15	33
Future Volume (vph)	163	10	20	492	15	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)		0.0	0.0		15.0	0.0
Storage Lanes		0	0		0	0
Taper Length (m)			7.6		7.6	
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt	0.991				0.907	
Flt Protected				0.998	0.985	
Satd. Flow (prot)	3546	0	0	3571	1683	0
Flt Permitted				0.998	0.985	
Satd. Flow (perm)	3546	0	0	3571	1683	0
Link Speed (k/h)	60			60	50	
Link Distance (m)	373.9			210.6	120.9	
Travel Time (s)	22.4			12.6	8.7	
Confl. Peds. (#/hr)		1	1			
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78
Adj. Flow (vph)	209	13	26	631	19	42
Shared Lane Traffic (%)						
Lane Group Flow (vph)	222	0	0	657	61	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	3.7	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.9			4.9	4.9	
Two way Left Turn Lane						
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	

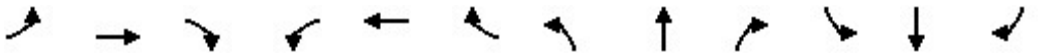
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 32.6%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	163	10	20	492	15	33
Future Volume (Veh/h)	163	10	20	492	15	33
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78
Hourly flow rate (vph)	209	13	26	631	19	42
Pedestrians					1	
Lane Width (m)					3.7	
Walking Speed (m/s)					1.1	
Percent Blockage					0	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			223		584	112
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			223		584	112
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			98		96	95
cM capacity (veh/h)			1342		434	919

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	139	83	236	421	61
Volume Left	0	0	26	0	19
Volume Right	0	13	0	0	42
cSH	1700	1700	1342	1700	681
Volume to Capacity	0.08	0.05	0.02	0.25	0.09
Queue Length 95th (m)	0.0	0.0	0.5	0.0	2.2
Control Delay (s)	0.0	0.0	1.0	0.0	10.8
Lane LOS			A		B
Approach Delay (s)	0.0		0.4		10.8
Approach LOS					B

Intersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	32.6%	ICU Level of Service	A
Analysis Period (min)	15		



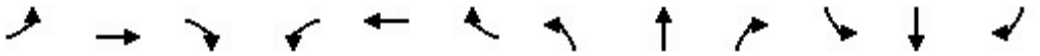
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	0	0	1	0	1	0	3	0	2	2	0
Future Volume (vph)	8	0	0	1	0	1	0	3	0	2	2	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt					0.932							
Flt Protected		0.950			0.976						0.976	
Satd. Flow (prot)	0	1789	0	0	1713	0	0	1883	0	0	1838	0
Flt Permitted		0.950			0.976						0.976	
Satd. Flow (perm)	0	1789	0	0	1713	0	0	1883	0	0	1838	0
Link Speed (k/h)		48			50			50			50	
Link Distance (m)		53.3			218.0			126.7			75.7	
Travel Time (s)		4.0			15.7			9.1			5.5	
Confl. Peds. (#/hr)							2					2
Peak Hour Factor	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47
Adj. Flow (vph)	17	0	0	2	0	2	0	6	0	4	4	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	17	0	0	4	0	0	6	0	0	8	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.9			4.9			4.9			4.9	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	14.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	0	0	1	0	1	0	3	0	2	2	0
Future Volume (Veh/h)	8	0	0	1	0	1	0	3	0	2	2	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47
Hourly flow rate (vph)	17	0	0	2	0	2	0	6	0	4	4	0
Pedestrians		2										
Lane Width (m)		3.7										
Walking Speed (m/s)		1.1										
Percent Blockage		0										
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	22	20	6	18	20	6	6			6		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	22	20	6	18	20	6	6			6		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	98	100	100	100	100	100	100			100		
cM capacity (veh/h)	983	870	1075	993	870	1077	1612			1615		

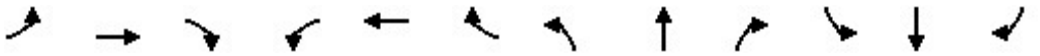
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	17	4	6	8
Volume Left	17	2	0	4
Volume Right	0	2	0	0
cSH	983	1033	1612	1615
Volume to Capacity	0.02	0.00	0.00	0.00
Queue Length 95th (m)	0.4	0.1	0.0	0.1
Control Delay (s)	8.7	8.5	0.0	3.6
Lane LOS	A	A		A
Approach Delay (s)	8.7	8.5	0.0	3.6
Approach LOS	A	A		

Intersection Summary				
Average Delay	6.0			
Intersection Capacity Utilization	14.0%	ICU Level of Service	A	
Analysis Period (min)	15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	34	0	0	0	0	1	0	10	0	1	4	17
Future Volume (vph)	34	0	0	0	0	1	0	10	0	1	4	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt					0.865						0.894	
Flt Protected		0.950									0.998	
Satd. Flow (prot)	0	1789	0	0	1629	0	0	1883	0	0	1680	0
Flt Permitted		0.950									0.998	
Satd. Flow (perm)	0	1789	0	0	1629	0	0	1883	0	0	1680	0
Link Speed (k/h)		48			48			50			50	
Link Distance (m)		66.5			60.2			75.7			120.9	
Travel Time (s)		5.0			4.5			5.5			8.7	
Confl. Peds. (#/hr)							9					9
Peak Hour Factor	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76
Adj. Flow (vph)	45	0	0	0	0	1	0	13	0	1	5	22
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	45	0	0	1	0	0	13	0	0	28	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.9			4.9			4.9			4.9	
Two way Left Turn Lane												
Headway Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	21.1%	ICU Level of Service	A
Analysis Period (min)	15		



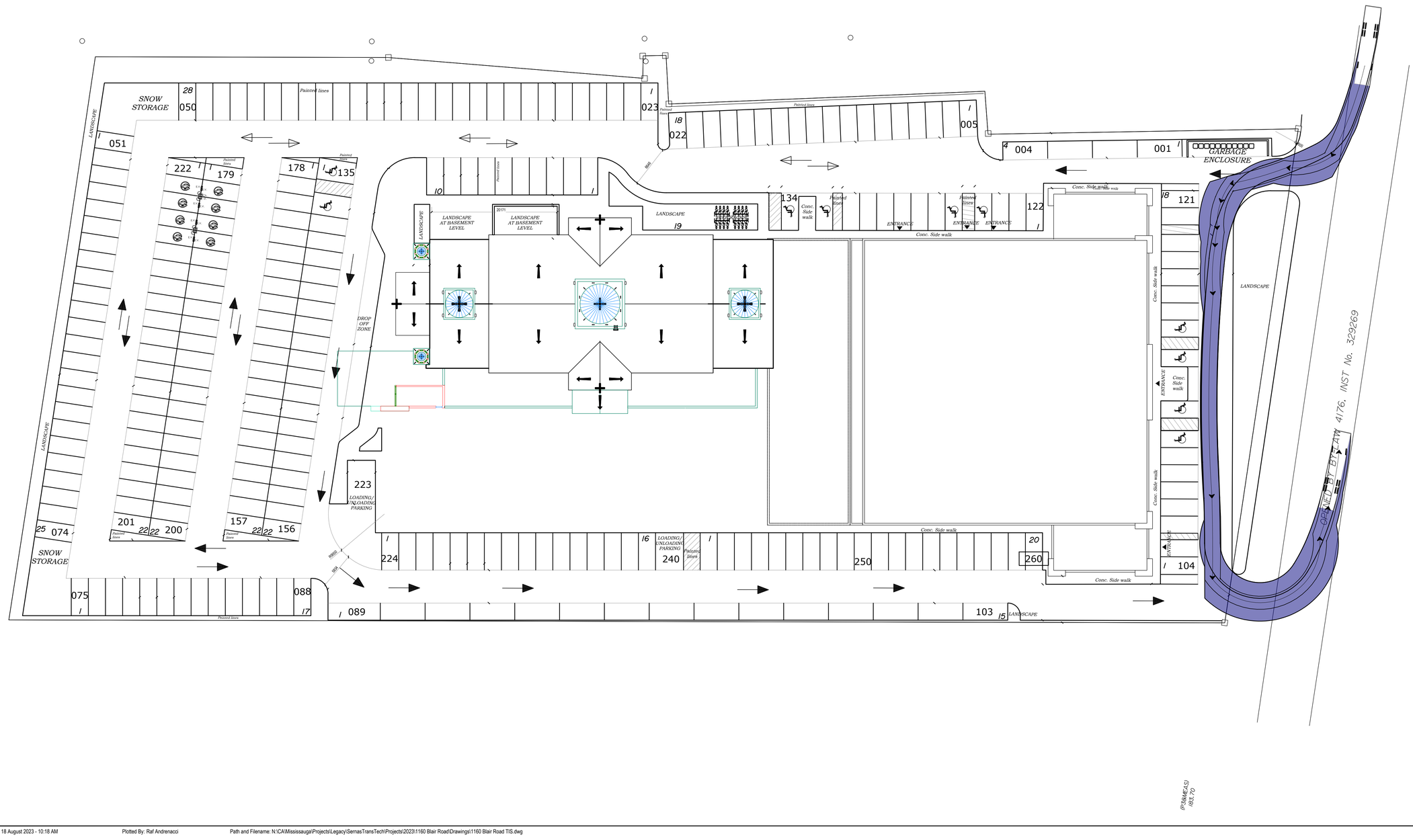
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	34	0	0	0	0	1	0	10	0	1	4	17
Future Volume (Veh/h)	34	0	0	0	0	1	0	10	0	1	4	17
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76
Hourly flow rate (vph)	45	0	0	0	0	1	0	13	0	1	5	22
Pedestrians		9										
Lane Width (m)		3.7										
Walking Speed (m/s)		1.1										
Percent Blockage		1										
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	41	40	25	31	51	13	36			13		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	41	40	25	31	51	13	36			13		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	95	100	100	100	100	100	100			100		
cM capacity (veh/h)	946	844	1042	970	832	1067	1561			1606		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	45	1	13	28
Volume Left	45	0	0	1
Volume Right	0	1	0	22
cSH	946	1067	1561	1606
Volume to Capacity	0.05	0.00	0.00	0.00
Queue Length 95th (m)	1.1	0.0	0.0	0.0
Control Delay (s)	9.0	8.4	0.0	0.3
Lane LOS	A	A		A
Approach Delay (s)	9.0	8.4	0.0	0.3
Approach LOS	A	A		

Intersection Summary				
Average Delay	4.8			
Intersection Capacity Utilization	21.1%	ICU Level of Service	A	
Analysis Period (min)	15			

Appendix E

AutoTURN Swept Path Analysis



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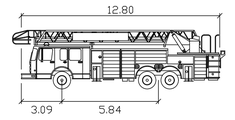
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Aug. 18, 2023
W.C. MARIA
PROVINCE OF ONTARIO

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0 25mm



Aerial Fire

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

No.	Issue	Checked	Approved	Date
1	First Submission	W.M	W.M	10/28/21

Author	R.A	Designer	R.A
Drafting Check	W.M	Design Check	W.M
Project Manager	W.M	Project Director	W.M

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ARCHANGEL RAPHAEL & ST. MARINA COPTIC ORTHODOX CHURCH

Project

1160 BLAIR ROAD

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October 28, 2021	NTS

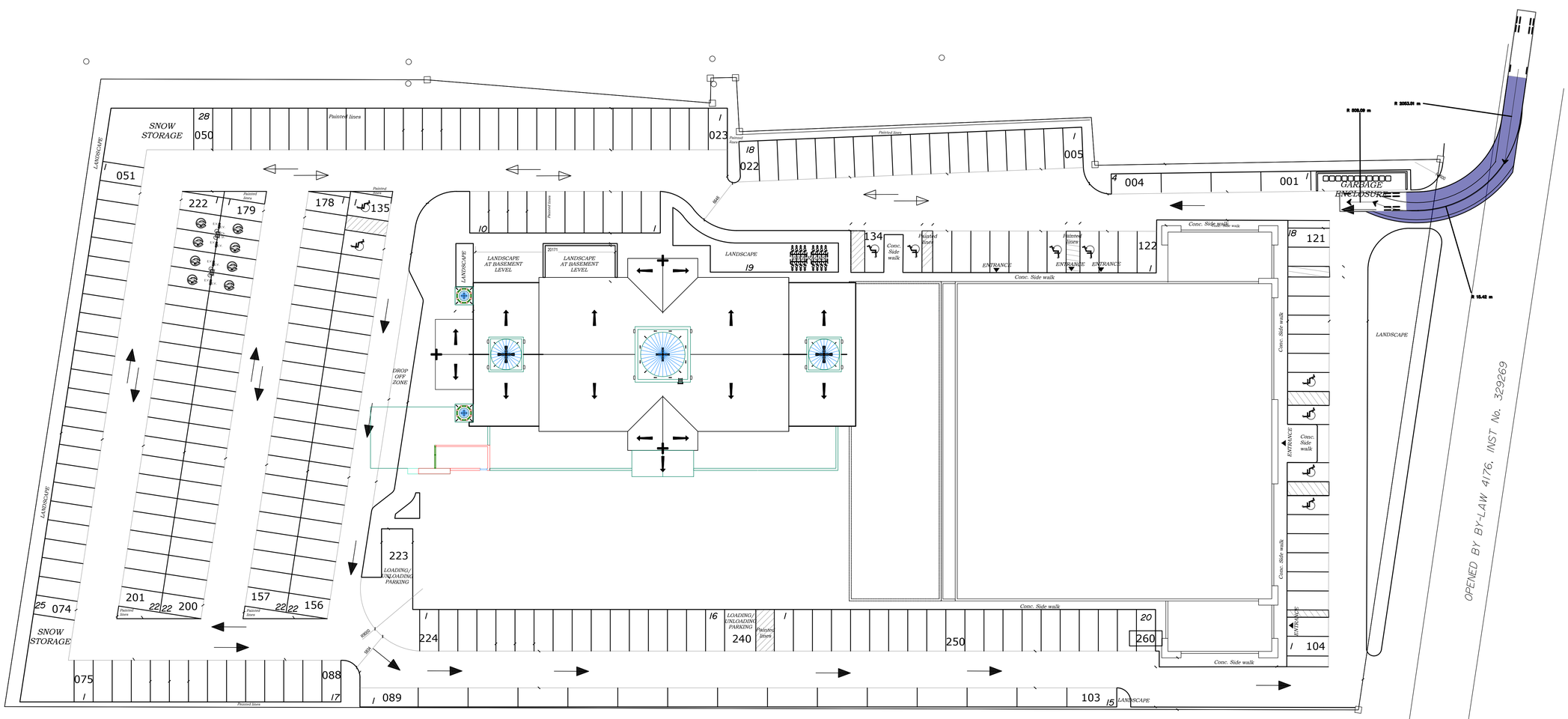
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Title

VEHICLE MANEUVERING DIAGRAM - FIRE TRUCK

Size
ANSI D

Sheet No.
AT-101



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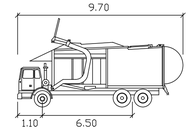
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Halton-Front-End

	meters
Width	: 2.70
Track	: 2.70
Lock to Lock Time	6.0
Steering Angle	: 30.0

No.	Issue	Checked	Approved	Date
1	First Submission	W.M	W.M	10/28/21

Author	R.A	Designer	R.A
Drafting Check	W.M	Design Check	W.M
Project Manager	W.M	Project Director	W.M

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Project

1160 BLAIR ROAD

Date	Scale
October 28, 2021	NTS

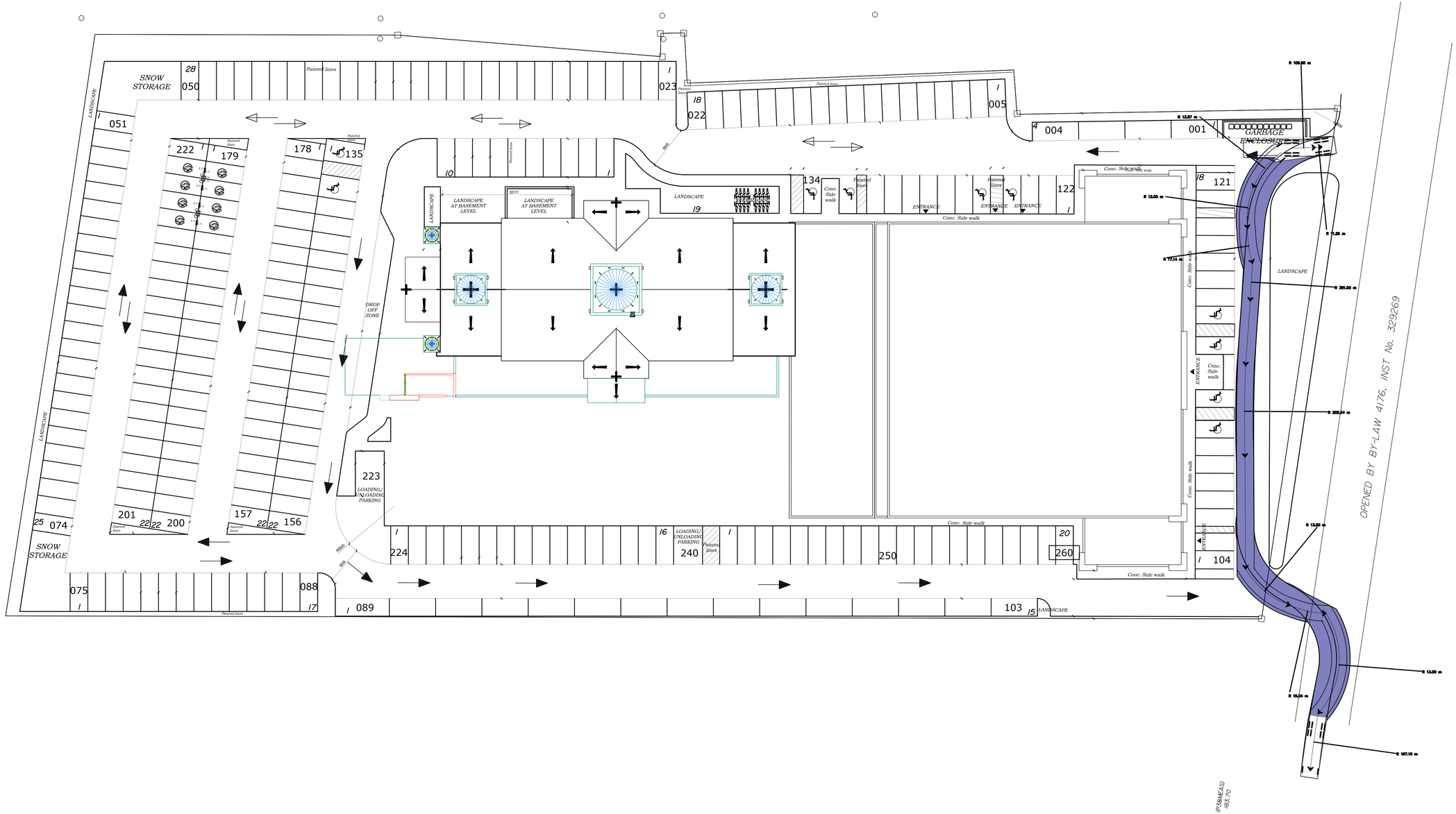
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Title

VEHICLE MANEUVERING DIAGRAM - WASTE COLLECTION (INBOUND)

Size
ANSI D

Sheet No.
AT-102



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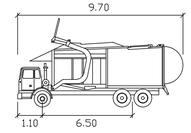
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0 25mm



Halton-Front-End
meters

Width	: 2.70
Track	: 2.70
Lock to Lock Time	6.0
Steering Angle	: 30.0

No.	Issue	Checked	Approved	Date
1	First Submission	W.M	W.M	10/28/21

Author	R.A	Designer	R.A
Drafting Check	W.M	Design Check	W.M
Project Manager	W.M	Project Director	W.M

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Date October 28, 2021

Scale NTS

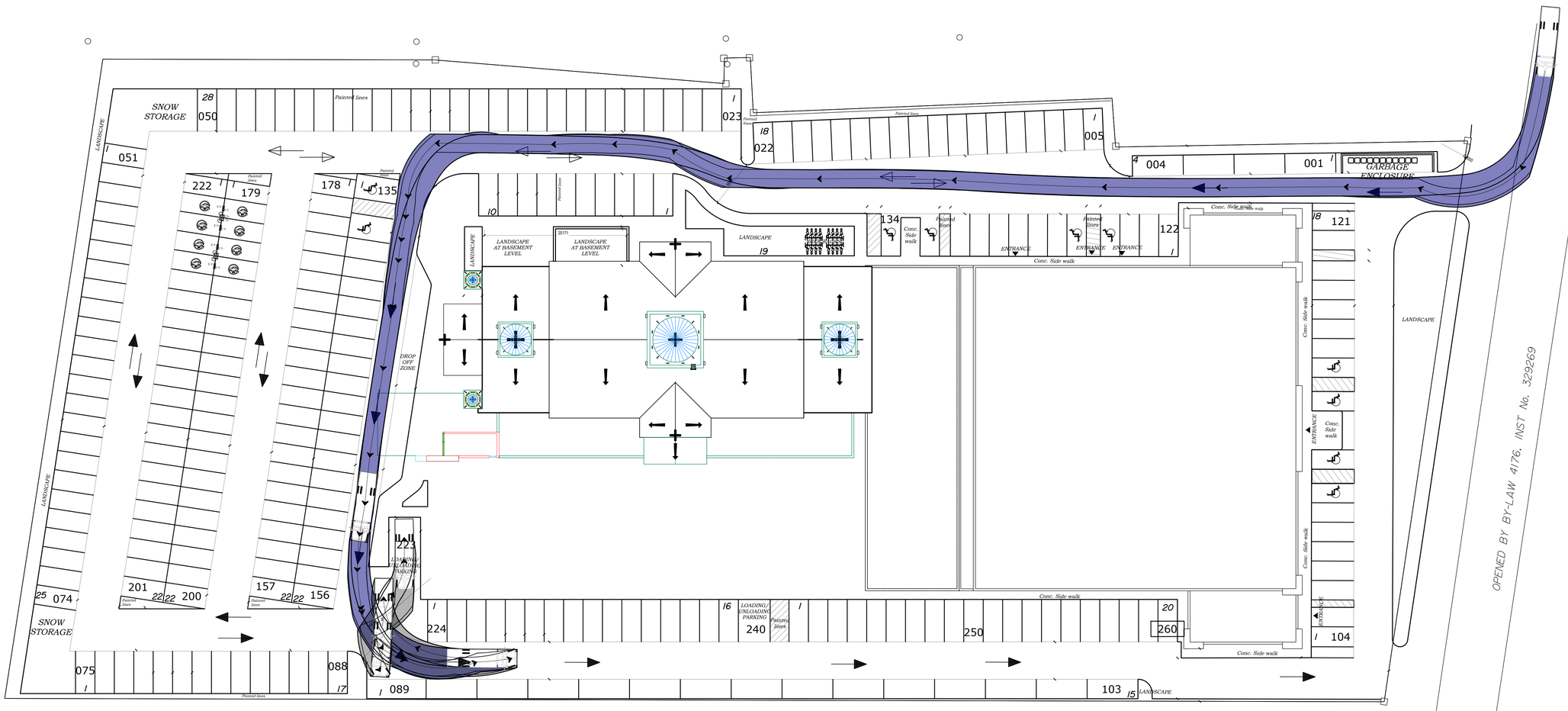
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Title

VEHICLE MANEUVERING DIAGRAM - WASTE COLLECTION (OUTBOUND)

Size ANSI D

Sheet No. AT-103



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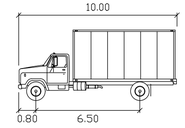
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0 25mm



MSU

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

No.	Issue	Checked	Approved	Date
1	First Submission	W.M	W.M	10/28/21

Author	R.A	Designer	R.A
Drafting Check	W.M	Design Check	W.M
Project Manager	W.M	Project Director	W.M

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Title

VEHICLE MANEUVERING DIAGRAM - MSU TRUCK (INBOUND)

Size
ANSI D

Sheet No.
AT-104

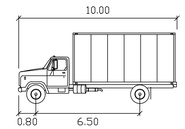


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Bar is 25mm on original size sheet
0 25mm



MSU

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

No.	Issue	Checked	Approved	Date
1	First Submission	W.M	W.M	10/28/21

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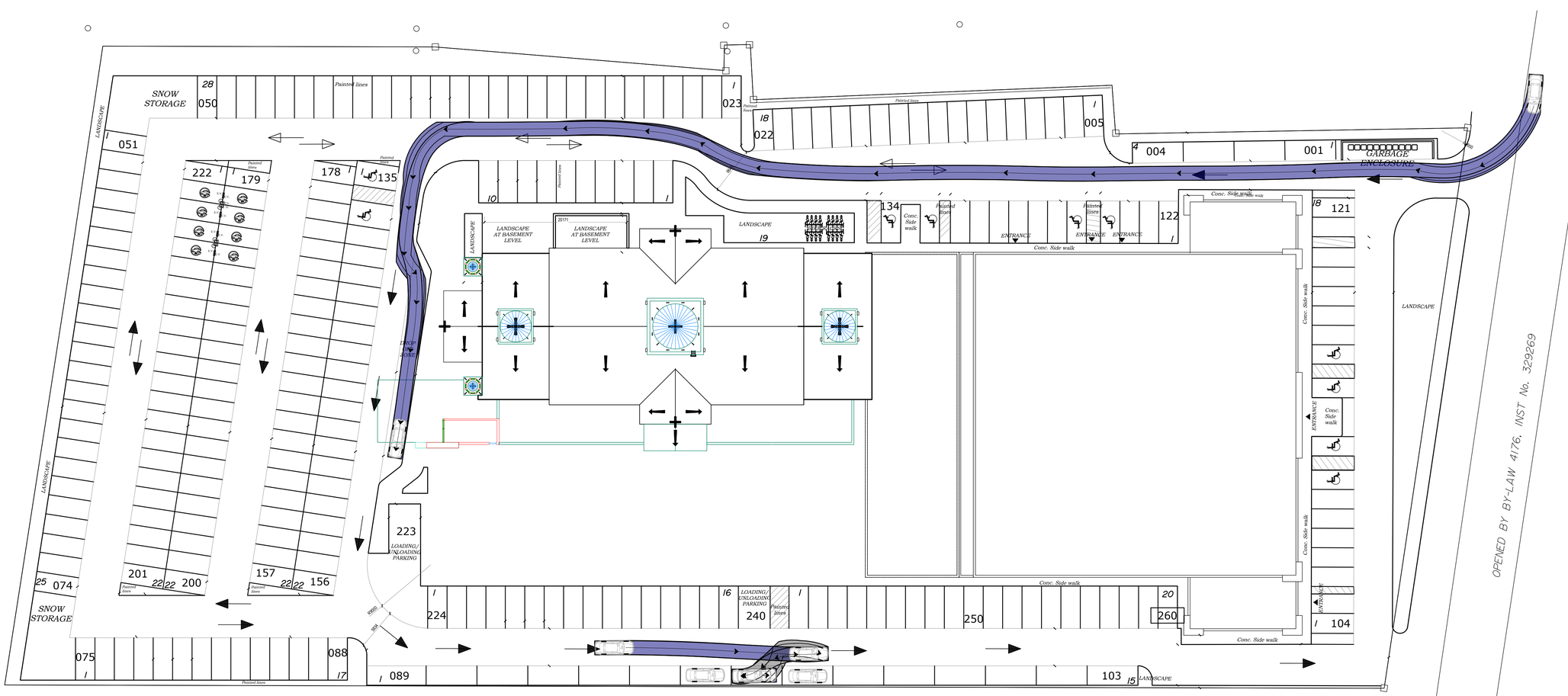
Project
1160 BLAIR ROAD

Date: October 28, 2021
Scale: NTS
Project No.: -

Title
VEHICLE MANEUVERING DIAGRAM - MSU TRUCK (OUTBOUND)

Size: ANSI D

Sheet No.
AT-105



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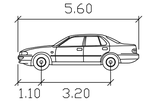
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P

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

No.	Issue	Checked	Approved	Date
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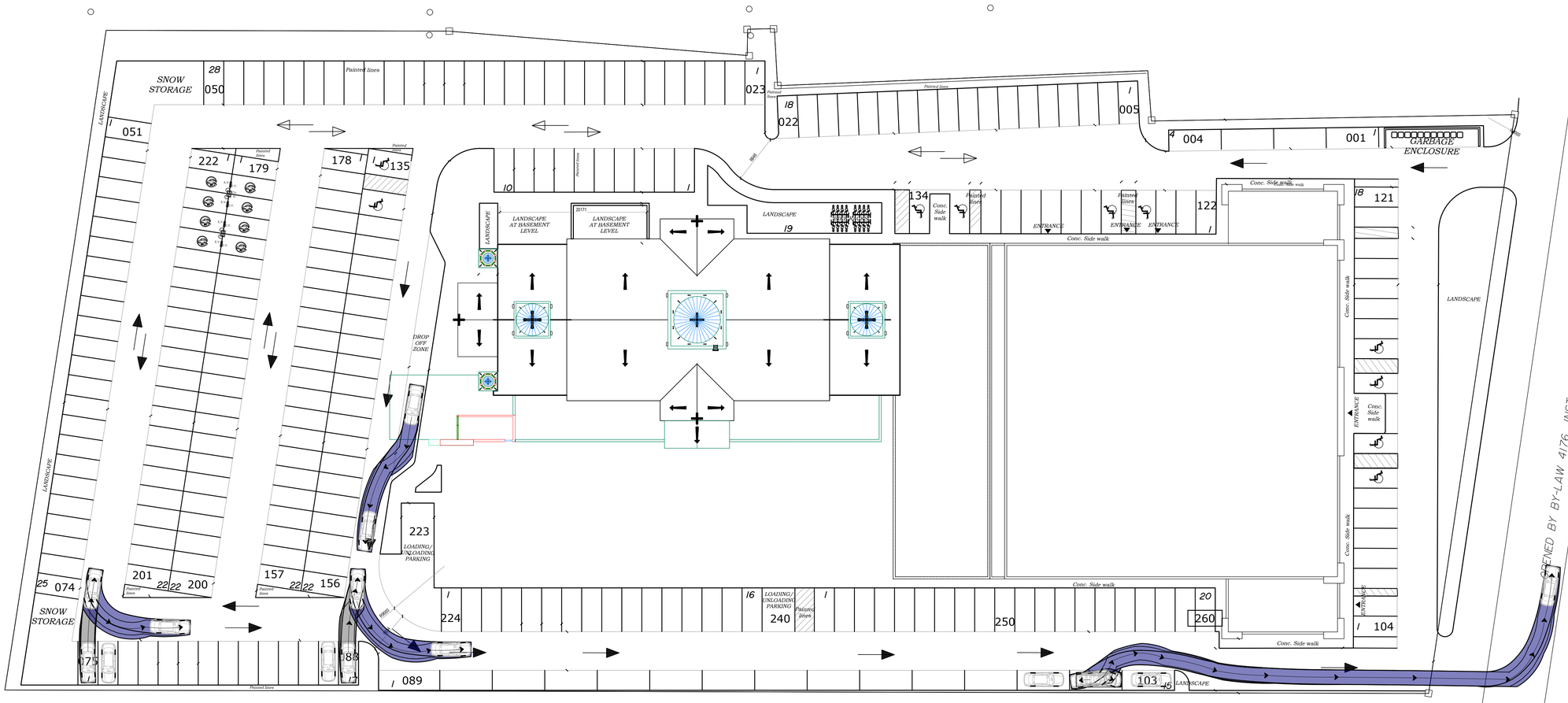
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Title

VEHICLE MANEUVERING DIAGRAM - PASSENGER VEHICLE (INBOUND)

Size
ANSI D

Sheet No.
AT-106

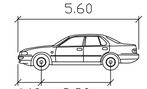


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P

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

No.	Issue	Checked	Approved	Date
1	First Submission	W.M	W.M	10/28/21

Author	R.A	Designer	R.A
Drafting Check	W.M	Design Check	W.M
Project Manager	W.M	Project Director	W.M

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Title
VEHICLE MANEUVERING DIAGRAM - PASSENGER VEHICLE (OUTBOUND)

Size: ANSI D

Sheet No.: AT-107



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