



Enhancing our communities



209806 Highway 26, Craigleith

TRAFFIC IMPACT BRIEF

Pinnacle Building Group Corp.

Document Control

File:

121258

Date:

September
8, 2022

Prepared by:

Tatham Engineering Limited
115 Sandford Fleming Drive, Suite 200
Collingwood, Ontario L9Y 5A6
T 705-444-2565
tathameng.com

Prepared for:

Pinnacle Building Group Corp.
1001 Durst Road
Waterloo, Ontario N2J 4G8

Authored by:	Reviewed by:
 	
Michael Cullip B.Eng. & Mgmt., M.Eng., P.Eng. Vice President	Randy Simpson B.A.Sc., P.Eng. Director, Manager - Land Development

Disclaimer	Copyright
The information contained in this document is solely for the use of the Client identified on the cover sheet for the purpose for which it has been prepared and Tatham Engineering Limited undertakes no duty to or accepts any responsibility to any third party who may rely upon this document.	This document may not be used for any purpose other than that provided in the contract between the Owner/Client and the Engineer nor may any section or element of this document be removed, reproduced, electronically stored or transmitted in any form without the express written consent of Tatham Engineering Limited.

Issue	Date	Description
1	September 8, 2022	Draft for client review

Document Contents

1	Introduction	1
2	Existing Conditions.....	2
2.1	Road Network	2
2.2	Transit Network	4
2.3	Traffic Volumes.....	4
2.4	Traffic Operations.....	5
3	Proposed Development	7
3.1	Location & Land-Use	7
3.2	Site Access.....	7
3.3	Site Circulation.....	8
3.4	Site Parking	9
3.5	Site Traffic.....	9
4	Future Conditions	11
4.1	Road Network	11
4.2	Traffic Volumes.....	12
4.3	Traffic Operations.....	12
4.4	Turn Lane Requirements	15
5	Summary.....	16



Tables

Table 1: Intersection Operations – 2022	6
Table 2: Road Operations – 2022.....	6
Table 3: Sight Line Assessment	8
Table 4: Trip Generation – 209806 Highway 26 (proposed use)	9
Table 5: Trip Generation – 209806 Highway 26 (previous use)	10
Table 6: Intersection Operations – 2025	13
Table 7: Intersection Operations – 2030	13
Table 8: Road Operations – 2025 & 2030	14
Table 7: Queue Operations – 2025 & 2030	15

Figures

Figure 1: Site Location	17
Figure 2: Area Road Network	18
Figure 3: Area Transit Network	21
Figure 4: Traffic Volumes – 2019.....	22
Figure 5: Traffic Volumes – 2022.....	23
Figure 6: Site Plan	24
Figure 7: Site Traffic Volumes.....	25
Figure 8: Traffic Volumes – 2025.....	26
Figure 9: Traffic Volumes – 2030.....	27

Appendices

Appendix A: Traffic Counts
Appendix B: Aquavil Traffic Volumes
Appendix C: Level of Service Definitions
Appendix D: Intersection Operations – 2022
Appendix E: Intersection Operations – 2025 & 2030



1 Introduction

Tatham Engineering Limited has been retained by Pinnacle Building Group Corp. to prepare a Traffic Impact Brief in support of site plan approval for the construction of a residential condominium development at 209806 and 209808 Highway 26 in the Town of The Blue Mountains. The location of the development site is illustrated in Figure 1.

The purpose of this study is to review the proposed development from a transportation perspective, addressing site traffic volumes, on-site circulation, parking requirements and potential impacts to the adjacent road system. Recognizing that the trip generation associated with the proposed expansion will not be significant, the scope of the study has been limited to a traffic brief with a focus on the following:

- existing conditions, including a description of the study area road network, traffic volumes, operations and planned/proposed improvements;
- details of the proposed development and anticipated trip generation;
- on-site circulation and parking provision; and
- transportation impacts associated with the proposed development.



2 Existing Conditions

This chapter will describe the road network, traffic volumes and operations for the existing conditions.

2.1 ROAD NETWORK

The road network to be addressed by this study consists of Highway 26, Blue Mountain Drive and Hope Street (the latter are considered in regards to their intersections with Highway 26 given the proximity of such to the subject site).

2.1.1 Road Sections

Mapping and photographs of the road network are provided in Figure 2 with further details provided below.

Highway 26

Key elements/characteristics of Highway 26 are as follows:

- under the jurisdiction of MTO and designated a Class 2B Arterial as per the MTO's *Highway Access Management Guideline*;
- oriented east-west through the study area;
- 1 travel lane per direction with paved shoulders on both sides and a rural cross-section;
- posted speed limit of 60 km/h through the study area;
- relatively straight and flat alignment within the immediate study area; and
- assumed planning capacity of 900 vehicles per hour per lane (vphpl) reflective of its arterial road designation.

Blue Mountain Drive

Blue Mountain Drive has the following characteristics:

- under the jurisdiction of the Town of The Blue Mountains and designated a local heritage road under the Town's *Official Plan*;
- oriented north-south upon its approach to Highway 26;
- 1 travel lane per direction with a rural cross-section with a paved road surface;
- assumed speed limit of 50 km/h as not otherwise posted;



- relatively straight and flat alignment at Highway 26; and
- assumed planning capacity of 400 vphpl reflective of its local road status.

Hope Street

Hope Street has the following characteristics:

- under the jurisdiction of the Town of The Blue Mountains and designated a local road under the Town's *Official Plan*;
- oriented north-south through the study area;
- 1 travel lane per direction with a rural cross-section complete with a paved road surface;
- posted speed limit of 50 km/h;
- relatively straight and flat alignment at Highway 26; and
- assumed planning capacity of 400 vphpl reflective of its local road designation.

2.1.2 Intersections

Highway 26 & Blue Mountain Drive

As illustrated in Figure 2, the intersection of Highway 26 with Blue Mountain Drive is a 3-leg intersection, having the following lane arrangement:

- the north approach (Blue Mountain Drive) has a single shared left-right lane operating under stop control;
- the west approach (Highway 26) has a shared left-through lane; and
- the east approach (Highway 26) has a through lane and an approximate 50 metre right taper.

Highway 26 & Hope Street

The intersection of Highway 26 with Hope Street is also a 3-leg intersection (see Figure 2), configured as follows:

- the south approach (Hope Street) has a single shared left-right lane operating under stop control;
- the west approach (Highway 26) has a shared through-right lane; and
- the east approach (Highway 26) has a shared left-through lane.



2.2 TRANSIT NETWORK

Blue Mountain Transit operates between the Blue Mountain Resort and Craigleith areas and the Town of Collingwood, including connections to the remaining transit routes within Collingwood and immediate areas (including Wasaga Beach) via the Collingwood Main Terminal. Through the study area, Blue Mountain Transit operates along Highway 26, Hope Street and Timmons Street as illustrated in Figure 3. The closest bus stop is provided on Timmons Street, approximately 430 metres from the subject site (refer to Figure 3). It is noted that service is provided in a loop within the Blue Mountain Resort and Craigleith area, operating in a clock-wise fashion (and thus only eastbound service is provided on Highway 26 in the area of the subject site).

2.3 TRAFFIC VOLUMES

Given the scope of study, new traffic counts were not undertaken as part of this study. Rather, traffic volumes were obtained from the *Aquavil Traffic Impact Study*¹ counted at the noted intersections on Friday July 5, 2019 and Saturday July 6, 2019. As noted in the referenced study, these counts are considered representative of peak summer weekend conditions and thus reflect a conservative approach given the increase in recreational and tourist traffic experienced in the area in the summer months.

The corresponding 2019 summer AM and PM weekday peak hour traffic volumes are illustrated in Figure 4 with corresponding count data provided in Appendix A. Given the residential nature of the subject development, consideration has only been given to the weekday AM and PM peak hours (ie. the commuter peaks); weekend conditions are typically only considered with commercial developments.

Traffic volumes for the 2022 horizon (representative of existing conditions) have also been determined from the *Aquavil Traffic Impact Study corresponding to the 2022 Future Background Traffic Volumes* (the associated figure is provided in Appendix B) which consider the following background developments:

- Eden Oak (assumed complete by 2022);
- Long Point Road Subdivision (assumed complete by 2022);
- Mountain House (completed);
- Parkbridge Craigleith (assumed completed by 2025); and
- Windfall (assumed Phase 4 completed by 2022, Phase 5 and 6 by 2025).

¹ *Aquavil Traffic Impact Study*. Crozier Consulting Engineers, September 2019.



While it is acknowledged that several of the above noted developments have not been advanced to the assumed levels, the 2022 traffic volumes as per the Aquavil study have nonetheless been adopted, thus reflective of a conservative approach. The resulting 2022 traffic volumes are illustrated in Figure 5.

2.4 TRAFFIC OPERATIONS

The assessment of existing conditions provides the baseline from which the future traffic volumes and operations can be assessed. Operations at the key intersections and along the key road sections have been considered as detailed in the following sections (as intersections are typically the bottleneck of the road system, their operations are more critical).

2.4.1 Intersection Operations

The intersection analyses were completed to investigate the operations of the Highway 26 intersections with Blue Mountain Drive and Hope Street considering:

- the 2022 traffic volumes (employing a minimum of 5 vehicles per movement);
- the existing intersection configurations and controls; and
- procedures outlined in the *2000 Highway Capacity Manual*² (using Synchro v.10 software).

For unsignalized intersections, the review considers the the following metrics for the critical, stop controlled movements/approaches and also the left turn movements (either separate or shared with the through lane):

- average delay (measured in seconds);
- level of service (LOS) - level of service 'A' corresponds to the best operating condition with minimal delays whereas level of service 'F' corresponds to poor operations resulting from high intersection delays (level of service definitions are provided in Appendix C); and
- volume to capacity (v/c) ratios - a v/c ratio of less than 1.0 indicates the intersection movement/approach is operating at less than capacity while v/c of 1.0 indicates capacity has been reached.

A summary of the 2022 intersection analyses is provided in Table 1; corresponding detailed operational worksheets are included in Appendix D. Based on the existing volumes, intersection configurations and controls, the study area intersections provide acceptable levels of service (LOS C or better) during both peak hours. As such, no intersection improvements are required to support the existing conditions.

² *Highway Capacity Manual*. Transportation Research Board, Washington DC, 2000.



Table 1: Intersection Operations – 2022

INTERSECTION, MOVEMENT & CONTROL			WEEKDAY AM PEAK HOUR			WEEKDAY PM PEAK HOUR		
			Delay	LOS	V/C	Delay	LOS	V/C
Highway 26 & Blue Mtn Drive	SB LR	stop	16	C	0.03	22	C	0.05
Highway 26 & Hope Street	NB LR	stop	17	C	0.03	23	C	0.05
L left lane T through lane R right lane LT left-through TR through-right LTR left-through-right								

2.4.2 Road Operations

Further to the intersection operations, consideration has also been given to the operations of Highway 26 considering the following:

- the peak hour peak directional traffic volumes;
- an assumed lane capacity of 900 vehicles per hour per lane (vphpl); and
- the provision of one through lane per direction.

The resulting road operations are summarized in Table 2. As noted, Highway 26 is currently operating at 78% or less of its assumed planning capacity and thus there is reserve capacity to accommodate additional growth.

Table 2: Road Operations – 2022

ROAD SECTION & CAPACITY		PEAK TRAFFIC VOLUMES		PEAK V/C RATIOS	
		WB	EB	WB	EB
Highway 26 east of Hope Drive	900 vphpl ¹	698	664	0.78	0.74
Highway 26 west of Blue Mountain Drive	900 vphpl ¹	687	607	0.76	0.67

¹ Capacity is denoted as vehicles per hour per direction



3 Proposed Development

This section will provide additional details with respect to the proposed development, including its location, the projected site generated traffic volumes and the assignment of such to the adjacent road network.

3.1 LOCATION & LAND-USE

The subject site is located at 209806 and 209808 Highway 26 in the Town of The Blue Mountains (Craigleith area) as per Figure 1. The property is bound by Highway 26 to the north, residential development to the west and south, and a gas station and commercial plaza to the east.

The proposed development will consist of 17 townhouse residential units (2 buildings of 5 units, 1 of 4 units and 1 of 3 units) as detailed in the site plan provided in Figure 6. Full build-out is assumed by 2025.

3.2 SITE ACCESS

3.2.1 Access Location & Configuration

The site will be served by a 6.0 metre wide condominium road with direct access to Highway 26. The access will coincide with the existing access, which serviced the previous motel use and is located as follows (all measures are centerline to centreline):

- 35 metres east of the next adjacent residential access on the south side of Highway 26;
- 15 metres east of Blue Mountain Drive located on the north side of Highway 26; and
- 38 metres west of the gas station access on the south side of Highway 26.

3.2.2 Access Spacing

The Transportation Association of Canada's (TAC) *Geometric Design Guide for Canadian Roads* suggests a spacing of 35 to 40 metres (measured centerline to centerline) between accesses along an arterial road. As noted, the location of the site access provides 35 metres of spacing between itself and the access to the west and 38 metres to the east. Given the TAC guidelines and in consideration of the limited traffic volumes expected to utilize the access points in question, the proposed location of the site access is considered appropriate.

While the access is only 15 metres east of the Blue Mountain Drive intersection, the configurations are offset such that there will be no overlap between opposing left turns. Furthermore, limited, if any traffic between the site and Blue Mountain Drive is expected. As further detailed in Section 4.1, the intersection of Blue Mountain Drive is anticipated to be closed as part of future road



improvements in the area and along the highway corridor (traffic will be diverted to a new road to be constructed opposite Hope Street). In this regard, proximity to Blue Mountain Drive is inconsequential.

3.2.3 Access Sightlines

An analysis of the available sight lines at the site access has been undertaken considering both minimum stopping sight distance and intersection sight distance as per TAC guidelines and defined below.

- Minimum stopping sight distance provides sufficient distance for an approaching motorist to observe a hazard in the road and bring their vehicle to a complete stop prior to the hazard.
- Intersection sight distance allows a vehicle to enter a main road from a side street (or site access) and attain the appropriate operating speed without significantly impacting the operating speed of an approaching vehicle.

The corresponding sight distance requirements (given the posted speed of 60 km/h on Highway 26, a design speed of 70 km/h has been employed) and available sight distances (as further evident in the photos of Figure 2) are provided in Table 3. As Highway 26 is relatively straight and flat through the study area, the available sight distances exceed the minimum stopping sight distance and the intersection sight distance requirements. Clear visibility is also provided to the adjacent intersections and access points. In this regard, the site access location is considered appropriate without the need for sight line improvements.

Table 3: Sight Line Assessment

LOCATION	DESIGN SPEED	STOPPING SIGHT DISTANCE	INTERSECTION SIGHT DISTANCE		SIGHT DISTANCE TO/FROM	
			Left Turn	Right Turn	East	West
Site Access	70 km/h	105 m	150 m	130 m	>300 m	>300 m

3.3 SITE CIRCULATION

3.3.1 Vehicle Circulation

At the south end of the site, a 'T' junction will be provided to access the visitor parking area and facilitate manoeuvring of vehicles, including the ability of service and emergency access vehicles to turn around (utilizing the 'T' junction to complete a 3-point turn). Combined with the 6.0 metre road width, this will ensure ready access and circulation within the site.



3.3.2 Pedestrian & Bicycle Circulation

Pedestrian and cyclist travel within the site will be accommodated via the internal condominium road given the limited volumes that will be served (ie. separate sidewalk and/or trail facilities will not be provided). The internal road provides direct access to Highway 26 to facilitate pedestrian and cyclist activity on the external road system.

3.4 SITE PARKING

As per the Town of the Blue Mountains Zoning By-law 2018-65, a residential townhouse must provide 2 parking spaces per unit.

Each residential unit will be provided with 2 parking spaces (1 on the driveway and 1 in the garage). In addition, 6 parking spaces will be provided in a dedicated visitor parking area at the end of the internal condominium road. In this regard, the proposed parking supply exceeds the overall Town requirements.

3.5 SITE TRAFFIC

3.5.1 Trip Generation

The number of vehicle trips to be generated by the proposed development for the weekday AM and PM peak hours has been determined based on type of use, development size, and trip generation rates as per the *ITE Trip Generation Manual, 11th Edition*. Based on the proposed development, trip rates for the following ITE land use category has been employed:

- *single family attached* - ITE code 215.

The associated trip rates and trip estimates are provided in Table 4. As indicated, the proposed development is expected to generate 8 trips during the AM peak hour and 10 trips during the PM peak hour, both of which are considered minor.

Table 4: Trip Generation – 209806 Highway 26 (proposed use)

LAND USE	VARIABLE	WEEKDAY AM PEAK HOUR			WEEKDAY PM PEAK HOUR		
		In	Out	Total	In	Out	Total
multifamily housing - low-rise (ITE 220)	trips/unit	0.15	0.33	0.48	0.32	0.25	0.57
proposed townhouses	17 units	2	6	8	6	4	10

Under the previous motel use (assuming 6 units), the site was expected to have generated in the order of 2 to 3 peak hour trips, as detailed in Table 5. In this regard, the incremental increase



resulting from the proposed development of the site will be somewhat less (6 to 8 vehicles during the peak hours).

Table 5: Trip Generation – 209806 Highway 26 (previous use)

LAND USE	VARIABLE	WEEKDAY AM PEAK HOUR			WEEKDAY PM PEAK HOUR		
		In	Out	Total	In	Out	Total
motel (ITE 220)	trips/unit	0.18	0.31	0.49	0.25	0.22	0.47
previous motel use	6 units	1	2	3	1	1	3

3.5.2 Trip Distribution & Assignment

The distribution of the site traffic volumes reflects the proximity of the development site to the Town of The Blue Mountains to the west and the Town of Collingwood to the east, and considers the assumptions of the *Aquavil Traffic Impact Study*. For purposes of this assessment, the following distribution has been assumed:

- 45% to/from the west via Highway 26; and
- 55% to/from the east via Highway 26.

The resulting site generated traffic assigned to the road network is illustrated in Figure 7.

Given the reduced site traffic volumes, changes to the above noted distribution would not have significant bearing on the associated traffic volumes.



4 Future Conditions

This chapter will address the resulting impacts of the proposed development on the adjacent road system. The following areas are to be addressed:

- operations at the study area road system and site access; and
- potential improvements to the study area road network, if necessary.

For the purpose of this study, 2025 and 2030 horizons have been considered to assess the impact of the development on the road network - 2025 represents the assumed full build-out of the site, whereas 2030 reflects a further 5-year horizon.

4.1 ROAD NETWORK

A Municipal Class Environmental Assessment (Class EA) was initiated in 2015 by the Town of The Blue Mountains, the County of Grey and the MTO to investigate improvements to the Highway 26 corridor and surrounding road networks between Grey Road 19 and Grey Road 21. As per information presented at the Public Information Centre, the following road system improvements have been identified within the study area:

- construction of a new road opposite Hope Street (as part of a future planned development);
- provision of left turn lanes on Highway 26 at Hope Street; and
- closure of Blue Mountain Drive at Highway 26 (to be connected to the new development road system to the east).

It is noted however that the Class EA is currently on hold pending completion of the Town's *Transportation Master Plan*. In this regard, there is some uncertainty as to the timing of the referenced improvements.

As part of the *Aquavil Traffic Impact Study*, the construction of the new road opposite Hope Street was identified in conjunction with Phase 1 of the development, including the following turn lanes:

- eastbound left turn lane with 25 metre storage length;
- westbound left turn lane with 15 metre storage length; and
- westbound right turn lane with 15 metre storage length.



4.2 TRAFFIC VOLUMES

Traffic volumes for the 2025 and 2030 horizon years have been determined from volume projections as provided in the *Aquavil Traffic Impact Study* (included in Appendix B), which considered the following:

- an annual background growth rate of 1.5%;
- development specific growth associated with those developments previously identified; and
- additional growth associated with the Aquavil development.

With respect to the Aquavil development, the noted study assumed Phase 1 completion by 2022 and Phase 2 (full build) by 2025. Recognizing that such have not been advanced to the noted levels, the horizons have been shifted to 2025 and 2030 respectively.

The total traffic volumes for the 2025 and 2030 horizons are provided in Figure 8 and Figure 9 respectively. As evident in the figures, a new road has been assumed opposite Hope Street (as per the Aquavil development) and the intersection of Blue Mountain Drive with Highway 26 has been maintained.

4.3 TRAFFIC OPERATIONS

4.3.1 Intersection Operations

The intersections of Highway 26 with Blue Mountain Drive, Hope Street and the site access have been analyzed for the 2025 and 2030 conditions, the results of which are summarized in Table 6 and

Table 7 with detailed worksheets provided in Appendix E. The intersection improvements as identified in the *Aquavil Traffic Impact Study* at the Hope Street intersection have been included in the assessment (construction of the north leg, eastbound left and westbound left and right turn lanes). A minimum of 5 vehicles per movement has also been assumed.

The intersection of Hope Street with Highway 26 will experience increased delays in the southbound direction during the 2025 PM peak hour and similarly southbound and northbound directions during the 2030 PM peak hour. This was acknowledged in the *Aquavil Traffic Impact Study*, attributed to the increased volumes on Highway 26 (particularly during the summer weekends) that reduces the availability of appropriate gaps in the through traffic stream to facilitate safe turning manoeuvres from the intersecting side streets. In context of the proposed redevelopment of 209806 Highway 26, the subject site will have little bearing on the Hope Street intersection operations in that minimal additional traffic volumes will result and thus the need for future improvements has not been considered further.



Table 6: Intersection Operations - 2025

INTERSECTION, MOVEMENT & CONTROL			WEEKDAY AM PEAK HOUR			WEEKDAY PM PEAK HOUR		
			Delay	LOS	V/C	Delay	LOS	V/C
Highway 26 & Blue Mtn Drive	SB LR	stop	18	C	0.04	28	D	0.06
Highway 26 & Hope Street	SB LTR	stop	33	D	0.38	73	F	0.52
	NB LTR	stop	25	C	0.09	50	E	0.16
Highway 26 & Site Access	NB LR	stop	19	C	0.04	28	D	0.06
L left lane T through lane R right lane LT left-through TR through-right LTR left-through-right								

Table 7: Intersection Operations - 2030

INTERSECTION, MOVEMENT & CONTROL			WEEKDAY AM PEAK HOUR			WEEKDAY PM PEAK HOUR		
			Delay	LOS	V/C	Delay	LOS	V/C
Highway 26 & Blue Mtn Drive	SB LR	stop	22	C	0.04	39	E	0.09
Highway 26 & Hope Street	SB LTR	stop	47	E	0.49	167	F	0.82
	NB LTR	stop	31	D	0.11	82	F	0.25
Highway 26 & Site Access	NB LR	stop	23	C	0.05	39	E	0.09
L left lane T through lane R right lane LT left-through TR through-right LTR left-through-right								

Acceptable operations are projected for the Blue Mountain Drive intersection during both the AM and PM peak hours of the 2025 and 2030 horizons.

Similarly, acceptable operations are projected for the site access intersection with Highway 26, suggesting that vehicles can enter and exit the site accordingly (recall the operations reflect a minimum of 5 vehicle per hour for each site access movement, thus reflective of the worse case - actual operations are likely to be improved over those reported).

4.3.2 Road Operations

The operations of Highway 26 across the front of the development site were again investigated considering the 2025 and 2030 traffic volumes (the more critical horizon), a summary of which is



provided in Table 8. As noted, during the 2025 horizon, Highway 26 will continue to operate at levels less than the theoretical planning capacity of 900 vphpl (v/c ratios of 0.91 or less). However, during the 2030 horizon, the capacity will be reached or exceeded (v/c ratios of 0.97 to 1.05). The latter is a reflection of the assumed continued growth in the highway volumes and the additional traffic to be generated by the background developments, and thus not precipitated by the subject site. As previously noted, the intersections will serve as the bottlenecks of the transportation system and provided they can operate acceptably, so too will the highway itself.

Table 8: Road Operations – 2025 & 2030

ROAD SECTION & CAPACITY			PEAK TRAFFIC VOLUMES		PEAK V/C RATIOS	
			WB	EB	WB	EB
2025	Highway 26 east of Hope Drive	900 vphpl ¹	815	746	0.91	0.83
	Highway 26 west of Blue Mountain Drive	900 vphpl ¹	782	740	0.87	0.82
2030	Highway 26 east of Hope Drive	900 vphpl ¹	943	877	1.05	0.97
	Highway 26 west of Blue Mountain Drive	900 vphpl ¹	909	870	1.01	0.97

¹ Capacity is denoted as vehicles per hour per direction

4.3.3 Queue Operations

Queue operations have also been considered for the following movements:

- northbound left and right turns (combined movement) from the site; and
- westbound left turn to the site.

The results of the queue operations are summarized in Table 9 for the following measures:

- the probability of a queue free state (ie. no queue); and
- the 95th percentile queue, which will only be exceeded 5% of the time.



Table 9: Queue Operations – 2025 & 2030

YEAR, INTERSECTION, CONTROL & MOVEMENT			WEEKDAY AM PEAK HOUR		WEEKDAY PM PEAK HOUR	
			P0%	95 th	P0%	95 th
2025	Site Access & Hwy 26	NB Left + Right	97-99%	1 m	95-99%	2 m
		WB Left	99	<1	99	<1
2030	Site Access & Hwy 26	NB Left + Right	97-99%	1	93-98	2
		WB Left	99	<1	99	<1

P0% - probably of no queue (%) 95th - 95th percentile queue (metres)

As noted, the occurrence of queues will be minimal as will the anticipated 95th percentile queue lengths. In this regard, the proposed site access queue operations are not expected to have any adverse impacts to the operations of Highway 26 or the immediately adjacent site access points. Corresponding queue measures are indicated on the worksheets provided in Appendix D.

4.4 TURN LANE REQUIREMENTS

Notwithstanding the acceptable traffic operations, the need for exclusive turn lanes to service the site have been considered.

4.4.1 Right Turn Lanes

Right turn lanes are generally warranted where right turn volumes exceed 60 vehicles per hour and/or impede through traffic. In considering this threshold and the projected right turn volumes, an eastbound right turn lane on Highway 26 to serve the site access is not required.

4.4.2 Left Turn Lanes

The need for left turn lanes is based on the volume of left turns, the advancing volumes (same direction as the left turns), the opposing volumes and the design speed. As the projected westbound left turn volumes are relatively low (1 to 3 turns per hour), a left turn lane on Highway 26 to serve the site access is not required.



5 Summary

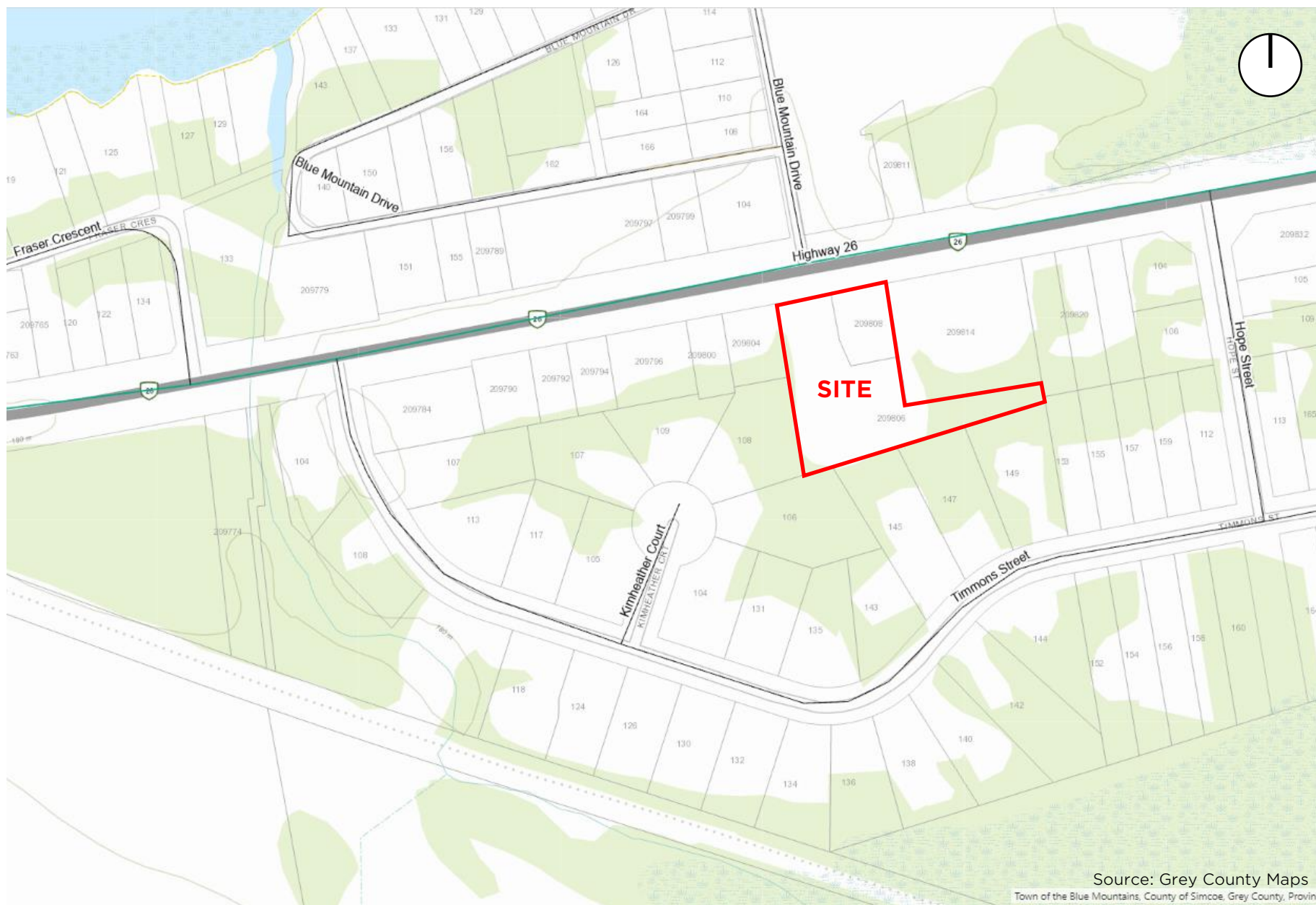
Given the limited traffic volume to be generated by the development of the site and in considering the traffic volumes on the road system, such will not have any significant operational impacts on the operations of Highway 26 and the surrounding lands. The operational assessment of the site access indicates that the intersection will experience adequate levels of service and average traffic delays for the northbound movements exiting the site through the 2030 horizon year. Therefore no operational improvements are required.

The proposed location for the site access was also reviewed to ensure the provision of adequate spacing between the site access and adjacent intersections/access points. In consideration of the projected traffic volumes and the Transportation Association of Canada's driveway spacing guidelines for accesses onto an arterial road, and recognizing that the intersection of Blue Mountain Drive is to be closed in the near future (located 15 metres west of the site access), the proposed location for the site access is considered appropriate. Furthermore, a review of the expected traffic queues indicates that such will be minimal and thus no interference is expected to highway operations and/or adjacent access operations.

Given the minimal left and right turn volumes into the site from Highway 26, neither a left turn lane nor a right turn lane is required at the site access.

The available sight lines on Highway 26 to the east and west of the site access exceed the minimum stopping sight distance requirement for a design speed of 70 km/h. Vehicles manoeuvring to and from the site can do so in a safe and efficient manner. As such, no further improvements are required to address sight line constraints.





209806 HIGHWAY 26, CRAIGLEITH

Figure 1: Site Location





209806 HIGHWAY 26, CRAIGLEITH

Figure 2A: Area Road Network

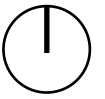




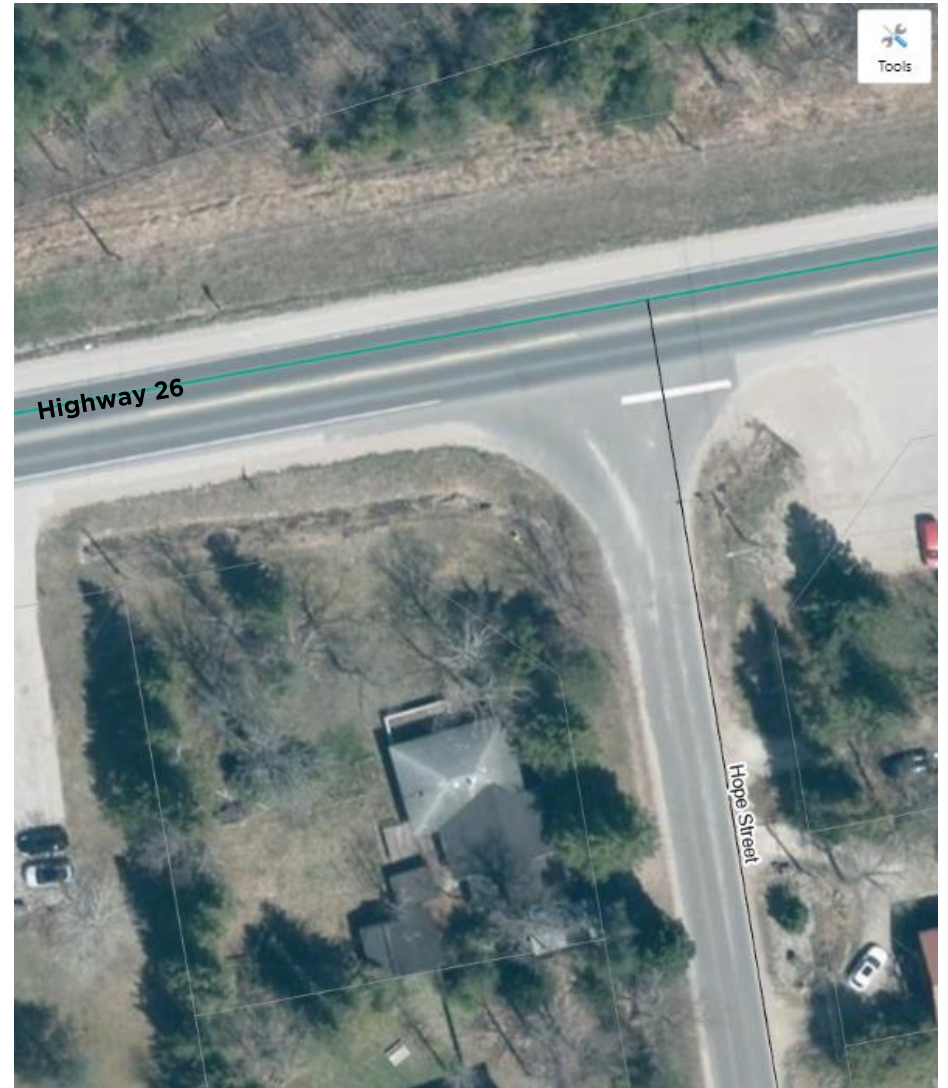
↑ Blue Mountain Drive & Site Access intersections with Hwy 26

209806 HIGHWAY 26, CRAIGLEITH

Figure 2B: Area Road Network



↓ Hope Street intersection with Hwy 26





**Site
Access**

**Blue
Mountain
Drive**

↑ Looking west along Highway 26 from the site

↓ Looking east along Highway 26 from the site



**Site
Access**

209806 HIGHWAY 26, CRAIGLEITH

Figure 2C: Area Road Network

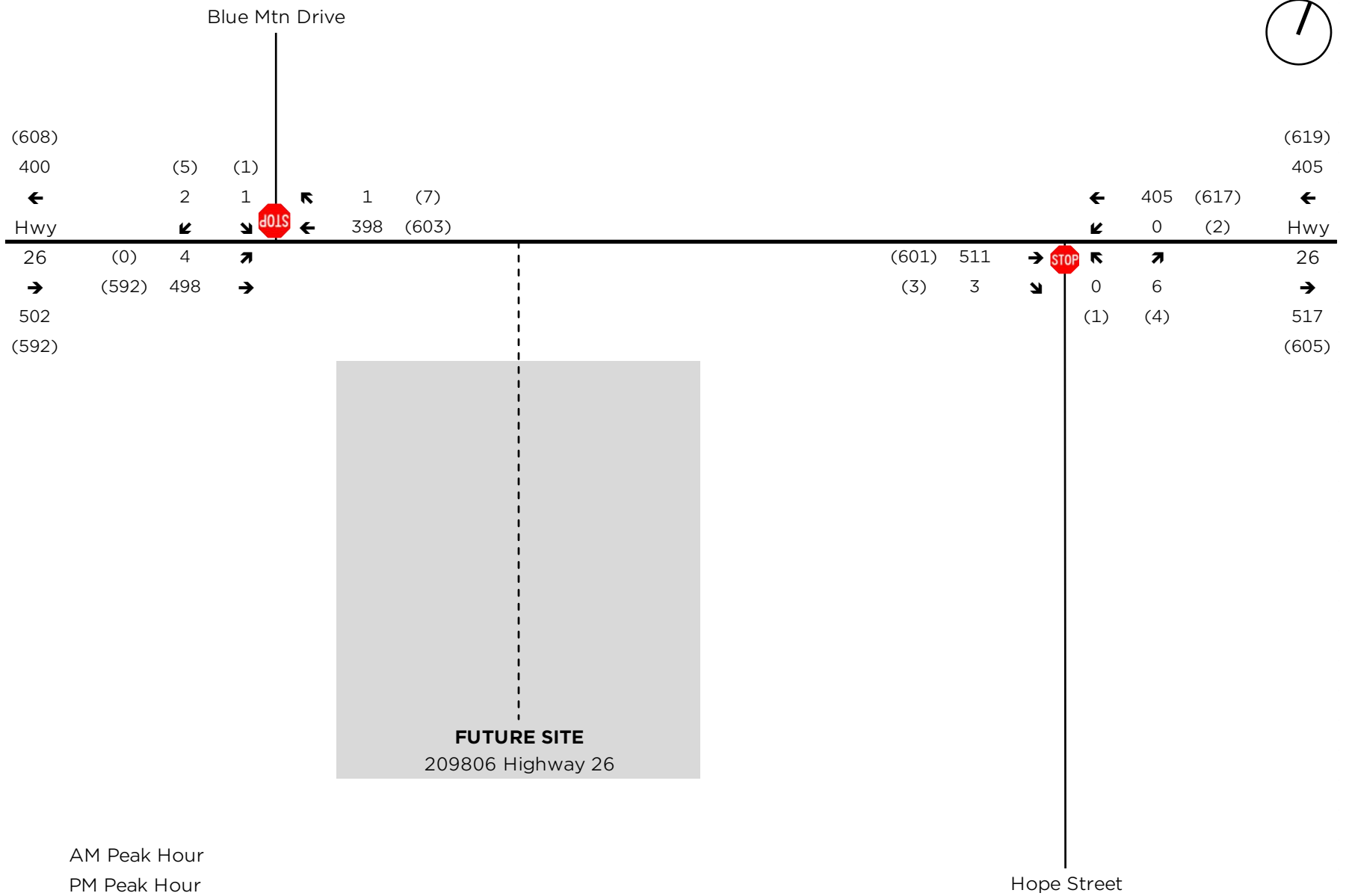




209806 HIGHWAY 26, CRAIGLEITH

Figure 3: Area Transit Network

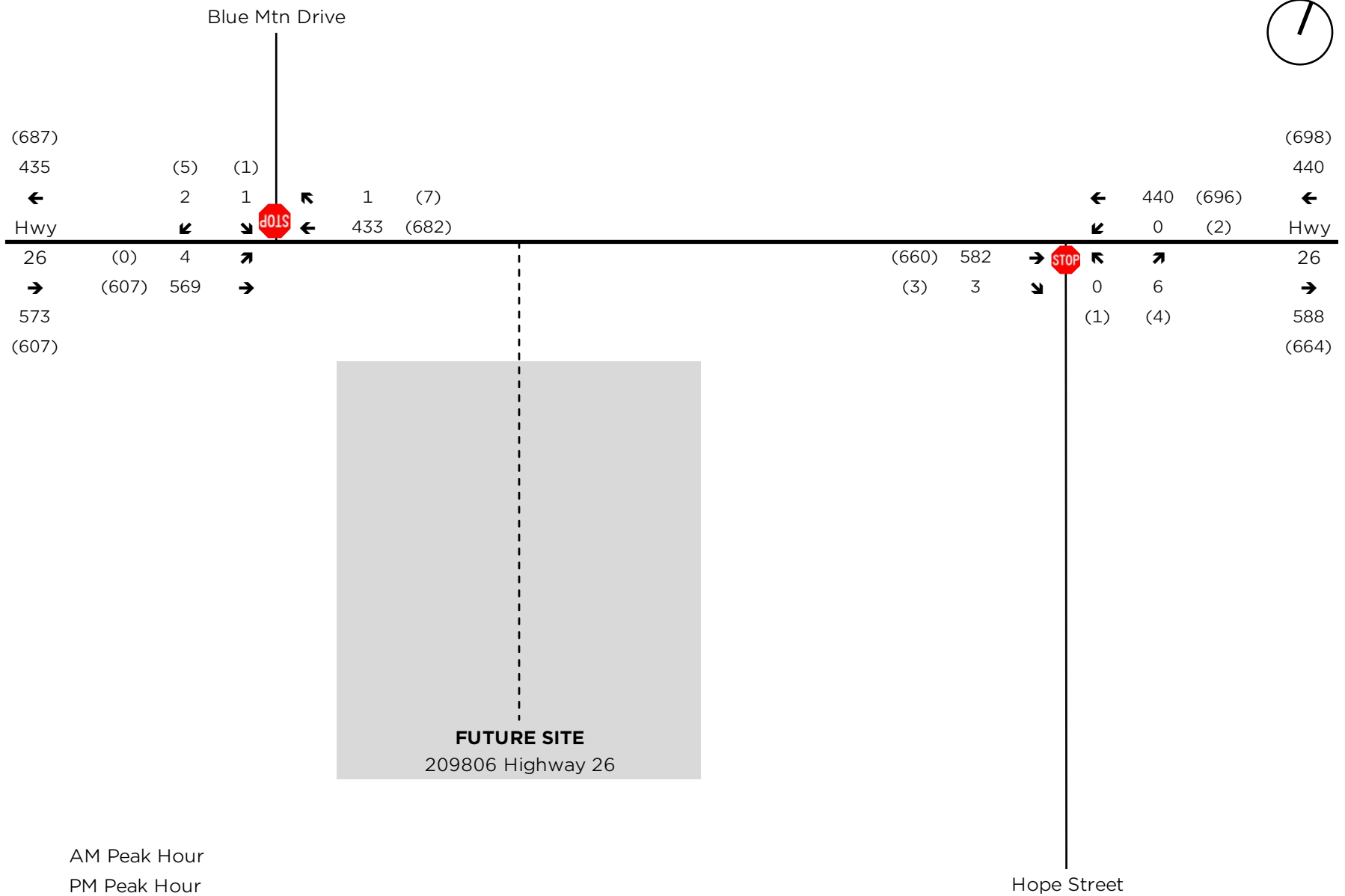




209806 HIGHWAY 26, CRAIGLEITH

Figure 4: Traffic Volumes - 2019

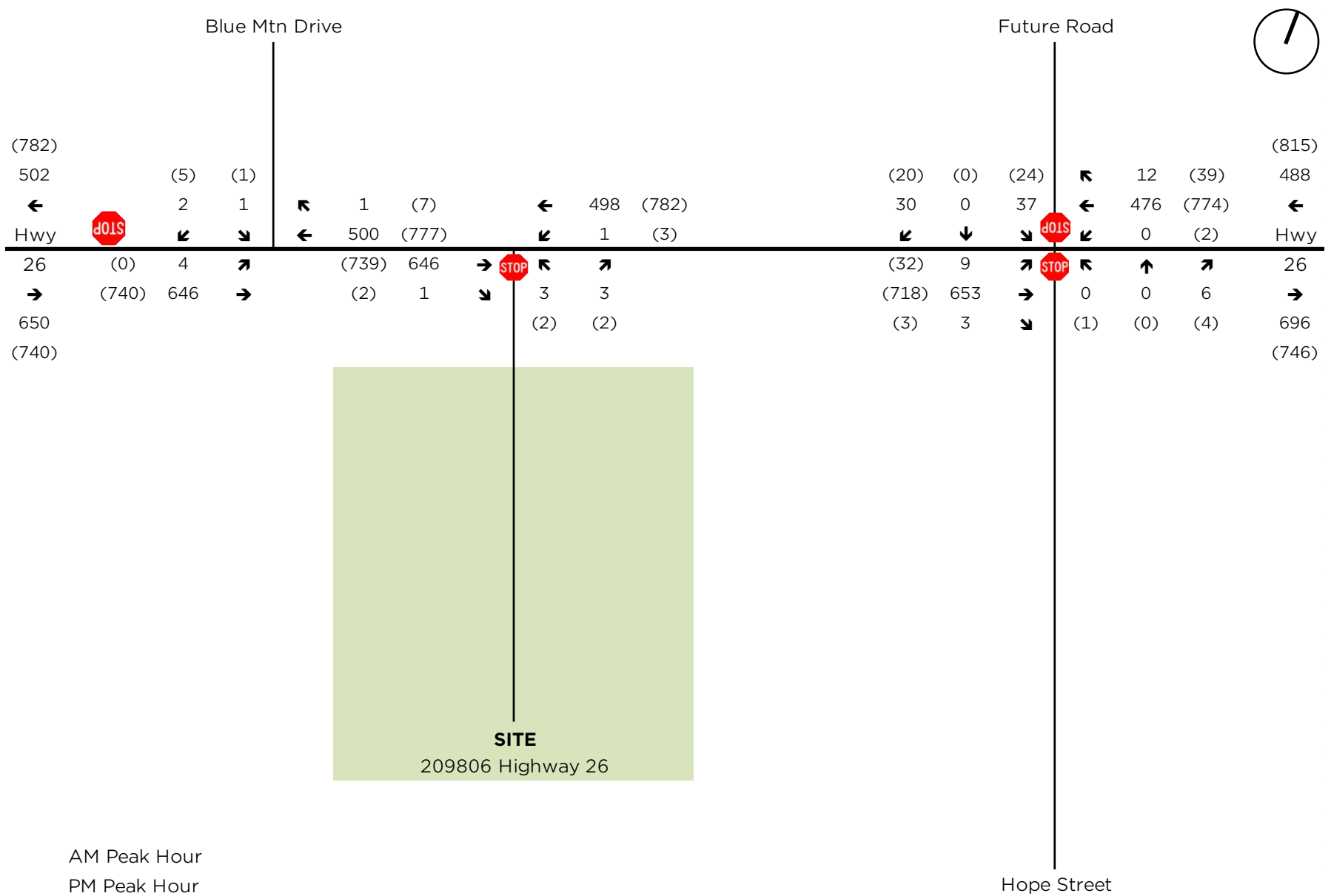




209806 HIGHWAY 26, CRAIGLEITH

Figure 5: Traffic Volumes - 2022

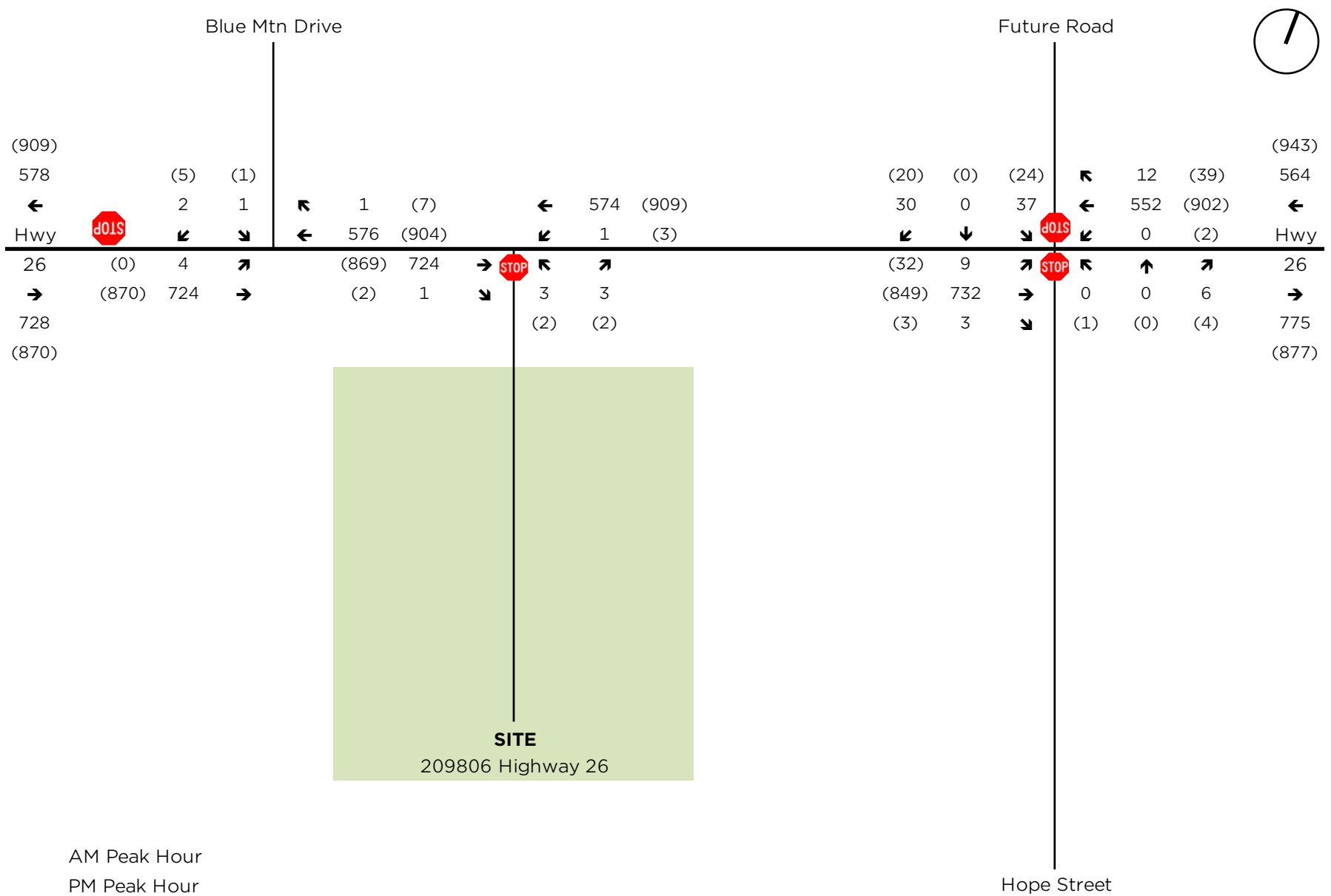




209806 HIGHWAY 26, CRAIGLEITH

Figure 8: Traffic Volumes - 2025





209806 HIGHWAY 26, CRAIGLEITH

Figure 9: Traffic Volumes - 2030



Appendix A: Traffic Counts



Turning Movement Count (1 . HWY 26 & BLUE MOUNTAIN DR)

Start Time	N Approach					E Approach					W Approach					Int. Total (15 min)	Int. Total (1 hr)	
	Right N:W	Left N:E	UTurn N:N	Peds N:	Approach Total	Right E:N	Thru E:W	UTurn E:E	Peds E:	Approach Total	Thru W:E	Left W:N	UTurn W:W	Peds W:	Approach Total			
06:00:00	0	0	0	0	0	0	20	0	0	20	19	0	0	0	0	19	39	
06:15:00	0	0	0	0	0	0	27	0	0	27	42	0	0	0	0	42	69	
06:30:00	0	0	0	0	0	0	55	0	0	55	40	0	0	0	0	40	95	
06:45:00	0	0	0	0	0	0	58	0	0	58	74	0	0	0	0	74	132	335
07:00:00	0	1	0	0	1	1	72	0	0	73	64	1	0	0	0	65	139	435
07:15:00	0	1	0	0	1	0	72	0	0	72	64	0	0	0	0	64	137	503
07:30:00	0	0	0	0	0	0	105	0	0	105	93	0	0	0	0	93	198	606
07:45:00	0	0	0	0	0	0	76	0	0	76	82	0	0	0	0	82	158	632
08:00:00	1	1	0	0	2	0	95	0	0	95	96	0	0	0	0	96	193	686
08:15:00	0	1	0	0	1	1	118	0	0	119	94	0	0	0	0	94	214	763
08:30:00	0	1	0	0	1	0	104	0	0	104	111	0	0	0	0	111	216	781
08:45:00	0	1	0	0	1	1	100	0	0	101	123	0	0	0	0	123	225	848
09:00:00	1	1	0	0	2	0	106	0	0	106	102	0	0	0	0	102	210	865
09:15:00	0	0	0	0	0	0	104	0	0	104	116	0	0	0	0	116	220	871
09:30:00	0	0	0	0	0	0	100	0	0	100	140	0	0	0	0	140	240	895
09:45:00	1	0	0	0	1	1	88	0	0	89	140	4	0	0	0	144	234	904

BREAK

15:00:00	0	0	0	0	0	2	148	1	0	151	134	0	0	0	134	285	
15:15:00	1	3	0	0	4	0	133	0	0	133	147	2	0	0	149	286	
15:30:00	0	1	0	0	1	0	154	0	0	154	138	0	0	0	138	293	
15:45:00	1	0	0	0	1	1	146	0	0	147	153	0	0	0	153	301	1165
16:00:00	0	1	0	0	1	3	145	0	0	148	131	0	0	0	131	280	1160
16:15:00	2	0	0	0	2	2	162	0	0	164	162	0	0	0	162	328	1202
16:30:00	2	0	0	0	2	1	150	0	0	151	146	0	0	0	146	299	1208



16:45:00	1	2	0	0	0	3	0	140	0	0	140	142	1	0	0	143	286	1193
17:00:00	0	0	0	0	0	0	1	133	0	0	134	134	0	0	0	134	268	1181
17:15:00	0	0	0	0	0	0	5	155	0	0	160	153	2	0	0	155	315	1168
17:30:00	3	3	0	0	0	6	1	151	0	0	152	132	1	0	0	133	291	1160
17:45:00	0	1	0	0	0	1	1	153	0	0	154	107	1	0	0	108	263	1137
18:00:00	0	4	0	0	0	4	4	132	0	0	136	114	0	0	0	114	254	1123
18:15:00	0	1	0	0	0	1	1	114	0	0	115	105	1	0	0	106	222	1030
18:30:00	0	2	0	0	0	2	2	117	0	0	119	74	0	0	0	74	195	934
18:45:00	0	2	0	0	0	2	1	103	0	0	104	96	1	0	0	97	203	874
Grand Total	13	27	0	0	0	40	29	3536	1	0	3566	3468	14	0	0	3482	7088	-

Approach%	32.5%	67.5%	0%	0%	0%	-	0.8%	99.2%	0%	-	-	99.6%	0.4%	0%	-	-	-	-
Totals %	0.2%	0.4%	0%	0%	0%	0.6%	0.4%	49.9%	0%	50.3%	48.9%	0.2%	0%	0%	49.1%	-	-	-
Heavy	1	0	0	0	0	-	1	113	0	-	-	117	0	0	-	-	-	-
Heavy %	7.7%	0%	0%	0%	0%	-	3.4%	3.2%	0%	-	-	3.4%	0%	0%	-	-	-	-
Bicycles	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycle %	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Peak Hour: 09:00 AM - 10:00 AM Weather: Clear Sky (19.93 °C)

Start Time	N Approach				E Approach				W Approach				Int. Total (15 min)
	Right	Left	UTurn	Peds	Right	Thru	UTurn	Peds	Thru	Left	UTurn	Peds	
	Approach Total	Approach Total	Approach Total	Approach Total	Approach Total	Approach Total	Approach Total	Approach Total	Approach Total	Approach Total	Approach Total	Approach Total	
09:00:00	1	1	0	0	0	106	0	0	102	0	0	0	210
09:15:00	0	0	0	0	0	104	0	0	116	0	0	0	220
09:30:00	0	0	0	0	0	100	0	0	140	0	0	0	240
09:45:00	1	0	0	0	1	88	0	0	140	4	0	0	234
Grand Total	2	1	0	0	3	398	0	0	498	4	0	0	904
Approach%	66.7%	33.3%	0%		-	99.7%	0%		99.2%	0.8%	0%		-
Totals %	0.2%	0.1%	0%		0.3%	44%	0%		55.1%	0.4%	0%		55.5%
PHF	0.5	0.25	0		0.38	0.94	0		0.89	0.25	0		0.87
Heavy	0	0	0		0	21	0		30	0	0		30
Heavy %	0%	0%	0%		0%	5.3%	0%		6%	0%	0%		6%
Lights	2	1	0		3	376	0		468	4	0		472
Lights %	100%	100%	0%		100%	94.5%	0%		94%	100%	0%		94%
Single-Unit Trucks	0	0	0		0	15	0		22	0	0		22
Single-Unit Trucks %	0%	0%	0%		0%	3.8%	0%		4.4%	0%	0%		4.4%
Buses	0	0	0		0	0	0		0	0	0		0
Buses %	0%	0%	0%		0%	0%	0%		0%	0%	0%		0%
Articulated Trucks	0	0	0		0	6	0		8	0	0		8
Articulated Trucks %	0%	0%	0%		0%	1.5%	0%		1.6%	0%	0%		1.6%
Bicycles on Road	0	0	0		0	1	0		0	0	0		0
Bicycles on Road %	0%	0%	0%		0%	0.3%	0%		0%	0%	0%		0%

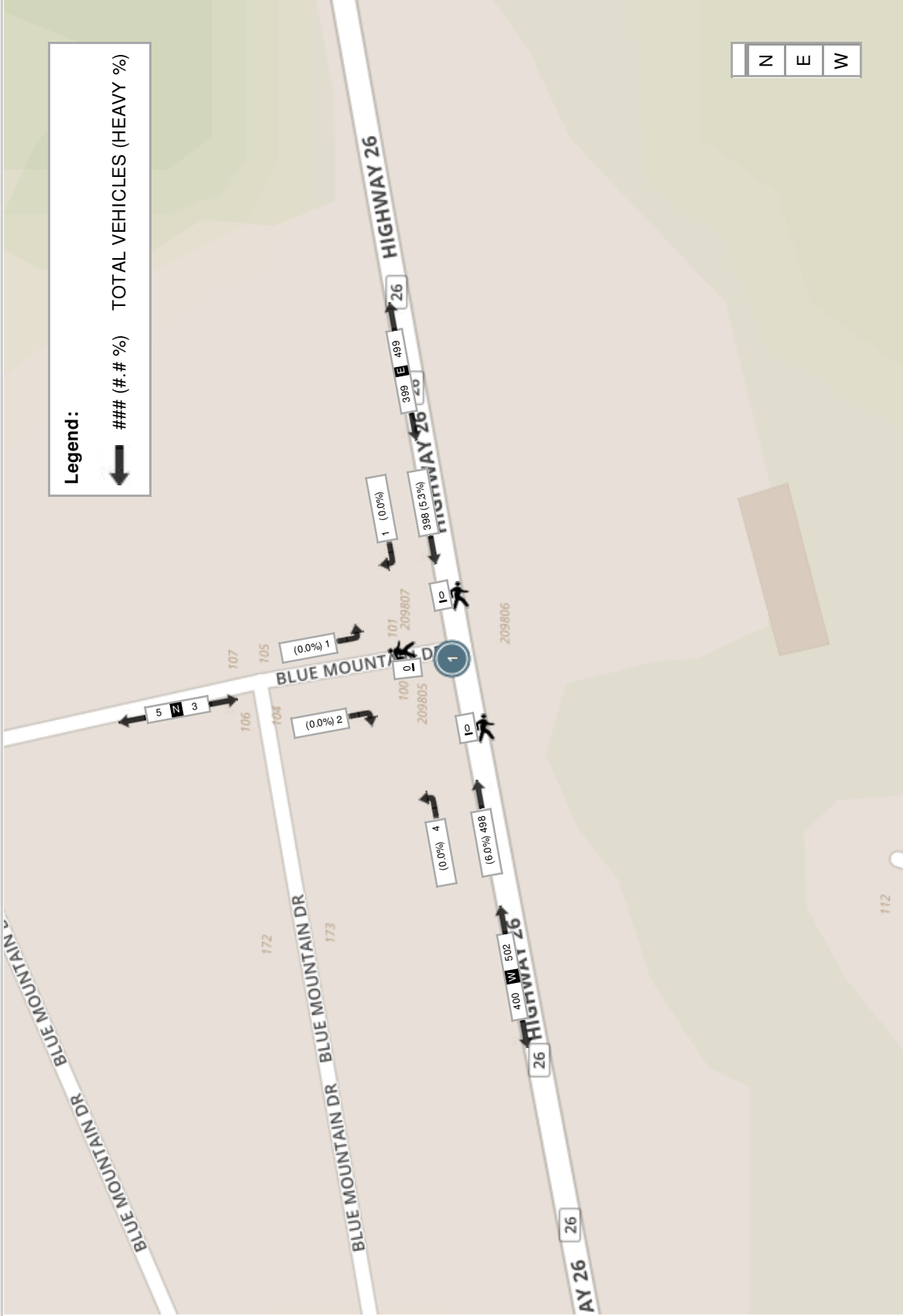


Peak Hour: 03:45 PM - 04:45 PM Weather: Few Clouds (29.54 °C)

Start Time	N Approach					E Approach					W Approach					Int. Total (15 min)
	Right	Left	UTurn	Peds	Approach Total	Right	Thru	UTurn	Peds	Approach Total	Thru	Left	UTurn	Peds	Approach Total	
15:45:00	1	0	0	0	1	1	146	0	0	147	153	0	0	0	153	301
16:00:00	0	1	0	0	1	3	145	0	0	148	131	0	0	0	131	280
16:15:00	2	0	0	0	2	2	162	0	0	164	162	0	0	0	162	328
16:30:00	2	0	0	0	2	1	150	0	0	151	146	0	0	0	146	299
Grand Total	5	1	0	0	6	7	603	0	0	610	592	0	0	0	592	1208
Approach%	83.3%	16.7%	0%		-	1.1%	98.9%	0%		-	100%	0%	0%		-	-
Totals %	0.4%	0.1%	0%		0.5%	0.6%	49.9%	0%		50.5%	49%	0%	0%		49%	-
PHF	0.63	0.25	0		0.75	0.58	0.93	0		0.93	0.91	0	0		0.91	-
Heavy	1	0	0		1	1	5	0		6	22	0	0		22	-
Heavy %	20%	0%	0%		16.7%	14.3%	0.8%	0%		1%	3.7%	0%	0%		3.7%	-
Lights	4	1	0		5	5	596	0		601	569	0	0		569	-
Lights %	80%	100%	0%		83.3%	71.4%	98.8%	0%		98.5%	96.1%	0%	0%		96.1%	-
Single-Unit Trucks	1	0	0		1	1	3	0		4	19	0	0		19	-
Single-Unit Trucks %	20%	0%	0%		16.7%	14.3%	0.5%	0%		0.7%	3.2%	0%	0%		3.2%	-
Buses	0	0	0		0	0	1	0		1	0	0	0		0	-
Buses %	0%	0%	0%		0%	0%	0.2%	0%		0.2%	0%	0%	0%		0%	-
Articulated Trucks	0	0	0		0	0	1	0		1	3	0	0		3	-
Articulated Trucks %	0%	0%	0%		0%	0%	0.2%	0%		0.2%	0.5%	0%	0%		0.5%	-
Bicycles on Road	0	0	0		0	1	2	0		3	1	0	0		1	-
Bicycles on Road %	0%	0%	0%		0%	14.3%	0.3%	0%		0.5%	0.2%	0%	0%		0.2%	-

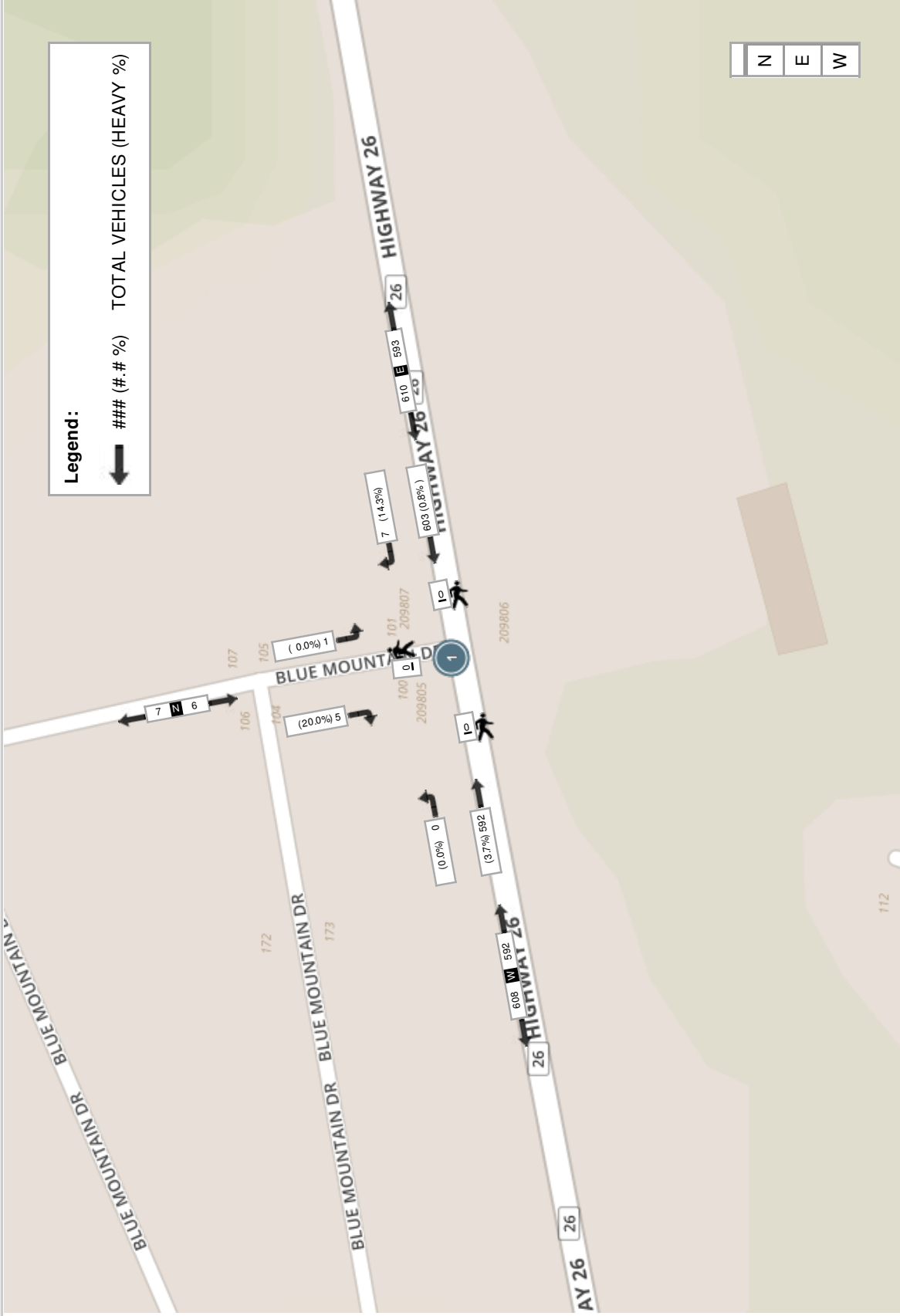


Peak Hour: 09:00 AM - 10:00 AM Weather: Clear Sky (19.93 °C)





Peak Hour: 03:45 PM - 04:45 PM Weather: Few Clouds (29.54 °C)





Turning Movement Count (1 . HWY 26 & BLUE MOUNTAIN DR)

Start Time	N Approach					E Approach					W Approach					Int. Total (15 min)	Int. Total (1 hr)	
	Right N:W	Left N:E	UTurn N:N	Peds N:	Approach Total	Right E:N	Thru E:W	UTurn E:E	Peds E:	Approach Total	Thru W:E	Left W:N	UTurn W:W	Peds W:	Approach Total			
10:00:00	0	1	0	0	1	0	113	0	0	113	120	0	0	0	0	120	234	
10:15:00	1	0	0	0	1	0	127	0	0	127	123	0	0	0	0	123	251	
10:30:00	0	1	0	0	1	0	104	0	0	104	138	0	0	0	0	138	243	
10:45:00	1	0	0	0	1	0	110	0	0	110	117	1	0	0	0	118	229	957
11:00:00	2	1	0	0	3	0	115	0	0	115	144	0	0	0	0	144	262	985
11:15:00	1	0	0	0	1	2	140	0	0	142	132	0	0	0	0	132	275	1009
11:30:00	0	1	0	0	1	1	111	0	0	112	123	0	0	0	1	123	236	1002
11:45:00	0	0	0	0	0	2	143	0	0	145	141	0	0	0	0	141	286	1059
12:00:00	1	1	0	0	2	2	135	0	0	137	136	1	0	0	0	137	276	1073
12:15:00	0	1	0	0	1	0	165	0	0	165	147	1	0	0	0	148	314	1112
12:30:00	1	1	0	0	2	3	151	0	0	154	117	0	0	0	0	117	273	1149
12:45:00	0	1	0	0	1	1	155	0	0	156	159	1	0	0	0	160	317	1180
13:00:00	0	1	0	0	1	0	141	0	0	141	119	0	0	0	0	119	261	1165
13:15:00	0	1	0	0	1	3	183	0	0	186	136	0	0	0	0	136	323	1174
13:30:00	1	1	0	0	2	3	174	0	0	177	130	3	0	0	0	133	312	1213
13:45:00	0	3	0	0	3	3	154	0	0	157	112	0	0	0	0	112	272	1168
14:00:00	1	2	0	0	3	3	162	0	0	165	92	0	0	0	0	92	260	1167
14:15:00	1	1	0	0	2	1	141	0	0	142	120	1	0	0	0	121	265	1109
14:30:00	2	0	0	0	2	2	143	0	0	145	129	1	0	0	0	130	277	1074
14:45:00	0	3	0	0	3	1	146	0	0	147	106	0	0	0	0	106	256	1058
15:00:00	0	0	0	0	0	0	123	0	0	123	128	0	0	0	0	128	251	1049
15:15:00	0	1	0	0	1	1	125	0	0	126	117	1	0	0	0	118	245	1029
15:30:00	1	0	0	0	1	2	145	0	0	147	100	1	0	0	1	101	249	1001
15:45:00	1	0	0	0	1	2	142	0	0	144	123	8	0	0	0	131	276	1021



16:00:00	0	0	0	0	0	0	0	0	0	128	0	0	0	0	128	115	1	0	0	0	116	244	1014
16:15:00	0	3	0	0	0	3	0	0	0	126	3	0	0	0	129	129	0	0	0	0	129	261	1030
16:30:00	0	1	0	0	0	1	0	0	0	103	0	0	0	0	103	112	0	0	0	0	112	216	997
16:45:00	2	2	0	0	2	4	0	0	0	122	1	0	0	0	123	114	0	0	2	0	114	241	962
17:00:00	0	1	0	0	0	1	0	0	0	113	1	0	0	0	114	90	1	0	0	0	91	206	924
17:15:00	0	0	0	0	0	0	0	0	0	96	0	0	0	0	96	103	0	0	0	0	103	199	862
17:30:00	0	1	0	0	1	1	0	0	0	86	1	0	0	0	87	126	0	0	1	0	126	214	860
17:45:00	0	3	0	0	0	3	0	0	0	97	0	0	0	0	97	93	2	0	0	0	95	195	814
Grand Total	16	32	0	0	3	48	0	0	0	4219	43	0	0	0	4257	3891	23	0	5	3914	8219	-	-

Approach%	33.3%	66.7%	0%	0%	0%	-	1%	99.1%	0%	-	99.4%	0.6%	0%	-	-	-	-	-	-	-	-	-	-
Totals %	0.2%	0.4%	0%	0%	0%	0.6%	0.5%	51.3%	0%	51.8%	47.3%	0.3%	0%	47.6%	-	-	-	-	-	-	-	-	-
Heavy	0	0	0	0	0	-	0	32	0	-	36	0	0	-	-	-	-	-	-	-	-	-	-
Heavy %	0%	0%	0%	0%	0%	-	0%	0.8%	0%	-	0.9%	0%	0%	-	-	-	-	-	-	-	-	-	-
Bicycles	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycle %	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

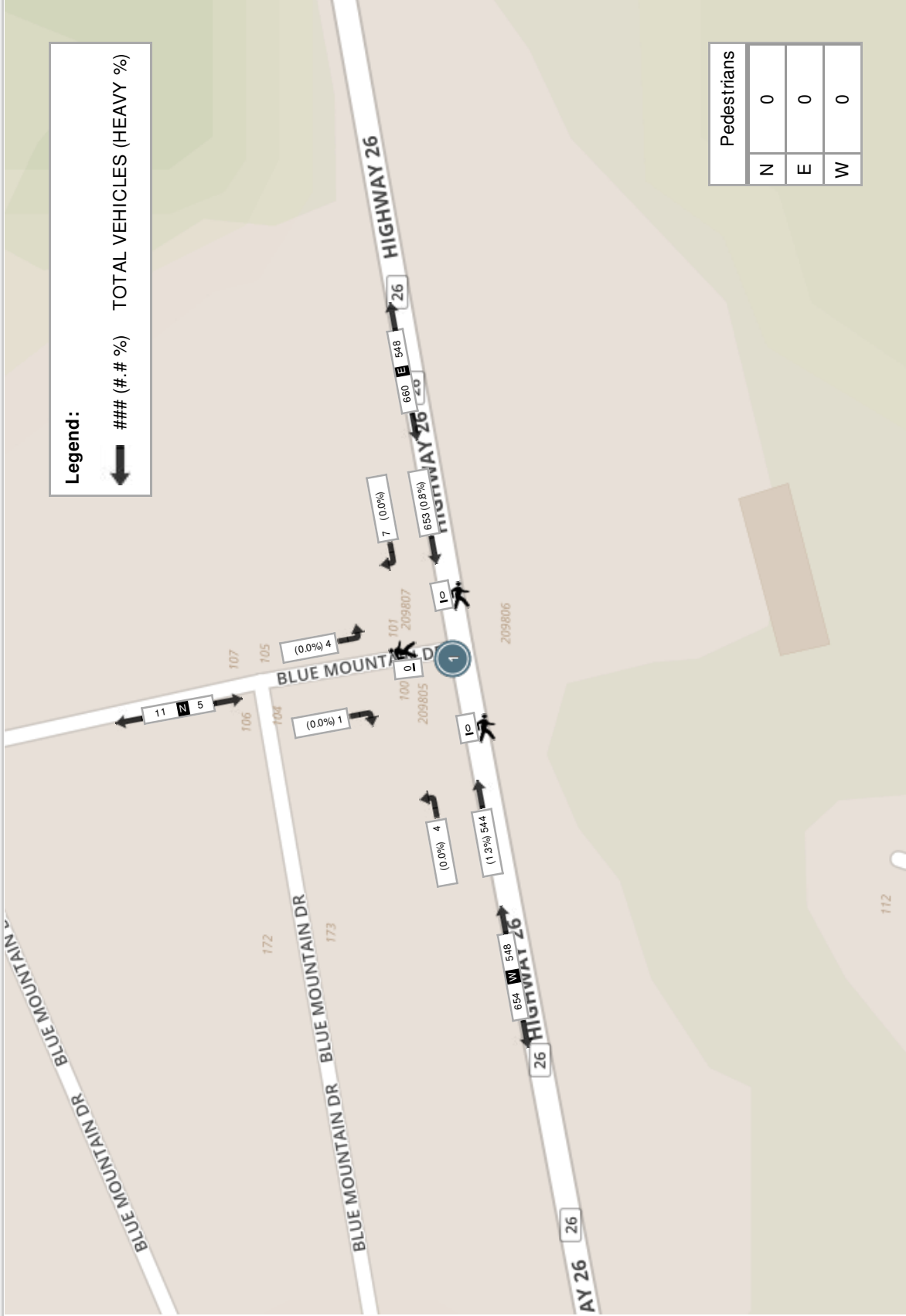


Peak Hour: 12:45 PM - 01:45 PM Weather: Mist (22.43 °C)

Start Time	N Approach					E Approach					W Approach					Int. Total (15 min)
	Right	Left	UTurn	Peds	Approach Total	Right	Thru	UTurn	Peds	Approach Total	Thru	Left	UTurn	Peds	Approach Total	
12:45:00	0	1	0	0	1	1	155	0	0	156	159	1	0	0	160	317
13:00:00	0	1	0	0	1	0	141	0	0	141	119	0	0	0	119	261
13:15:00	0	1	0	0	1	3	183	0	0	186	136	0	0	0	136	323
13:30:00	1	1	0	0	2	3	174	0	0	177	130	3	0	0	133	312
Grand Total	1	4	0	0	5	7	653	0	0	660	544	4	0	0	548	1213
Approach%	20%	80%	0%		-	1.1%	98.9%	0%		-	99.3%	0.7%	0%		-	-
Totals %	0.1%	0.3%	0%		0.4%	0.6%	53.8%	0%		54.4%	44.8%	0.3%	0%		45.2%	-
PHF	0.25	1	0		0.63	0.58	0.89	0		0.89	0.86	0.33	0		0.86	-
Heavy	0	0	0		0	0	5	0		5	7	0	0		7	-
Heavy %	0%	0%	0%		0%	0%	0.8%	0%		0.8%	1.3%	0%	0%		1.3%	-
Lights	1	4	0		5	7	640	0		647	537	1	0		538	-
Lights %	100%	100%	0%		100%	100%	98%	0%		98%	98.7%	25%	0%		98.2%	-
Single-Unit Trucks	0	0	0		0	0	3	0		3	6	0	0		6	-
Single-Unit Trucks %	0%	0%	0%		0%	0%	0.5%	0%		0.5%	1.1%	0%	0%		1.1%	-
Buses	0	0	0		0	0	1	0		1	0	0	0		0	-
Buses %	0%	0%	0%		0%	0%	0.2%	0%		0.2%	0%	0%	0%		0%	-
Articulated Trucks	0	0	0		0	0	1	0		1	1	0	0		1	-
Articulated Trucks %	0%	0%	0%		0%	0%	0.2%	0%		0.2%	0.2%	0%	0%		0.2%	-
Bicycles on Road	0	0	0		0	0	8	0		8	0	3	0		3	-
Bicycles on Road %	0%	0%	0%		0%	0%	1.2%	0%		1.2%	0%	75%	0%		0.5%	-
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
Pedestrians%	-	-	-	0%	-	-	-	-	0%	-	-	-	-	0%	-	-



Peak Hour: 12:45 PM - 01:45 PM Weather: Mist (22.43 °C)





Turning Movement Count (2 . HWY 26 & HOPE ST)

Start Time	E Approach					S Approach					W Approach					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		
06:00:00	20	0	0	0	20	1	0	0	0	1	0	20	0	0	20	41	
06:15:00	27	0	0	0	27	0	0	0	0	0	0	40	0	0	40	67	
06:30:00	53	0	0	0	53	0	0	0	0	0	0	43	0	0	43	96	
06:45:00	59	0	0	0	59	0	1	0	0	1	0	71	0	0	71	131	335
07:00:00	73	1	0	0	74	0	0	0	0	0	0	57	0	0	57	131	425
07:15:00	75	0	0	0	75	1	1	0	0	2	0	74	0	0	74	151	509
07:30:00	94	0	0	0	94	2	0	0	0	2	0	89	0	0	89	185	598
07:45:00	81	1	0	0	82	2	0	0	0	2	0	77	0	0	77	161	628
08:00:00	99	0	0	0	99	0	0	0	0	0	0	96	0	0	96	195	692
08:15:00	123	1	0	0	124	0	1	0	0	1	0	97	0	0	97	222	763
08:30:00	104	1	0	0	105	1	1	0	0	2	0	118	0	0	118	225	803
08:45:00	103	1	0	0	104	0	0	0	0	0	0	124	0	0	124	228	870
09:00:00	105	0	0	0	105	0	0	0	0	0	1	105	0	0	106	211	886
09:15:00	112	0	0	0	112	0	0	0	0	0	1	118	0	0	119	231	895
09:30:00	99	0	0	0	99	2	0	0	0	2	0	142	0	0	142	243	913
09:45:00	89	0	0	0	89	4	0	0	0	4	1	146	0	0	147	240	925

BREAK

15:00:00	155	2	0	0	157	0	0	0	0	0	1	133	0	0	134	291	
15:15:00	133	0	0	0	133	0	0	0	0	0	2	151	0	0	153	286	
15:30:00	152	0	0	0	152	1	0	0	0	1	0	139	0	0	139	292	
15:45:00	150	0	0	0	150	1	1	0	0	2	1	151	0	0	152	304	1173
16:00:00	154	1	0	0	155	1	0	0	0	1	1	137	0	0	138	294	1176
16:15:00	167	0	0	0	167	1	0	0	0	1	0	155	0	0	155	323	1213
16:30:00	146	1	0	0	147	1	0	0	0	1	1	158	0	0	159	307	1228



Turning Movement Count

Location Name: HWY 26 & HOPE ST

Date: Fri, Jul 05, 2019 Deployment Lead: Walter Fugaj

Crozier & Associates

,,

16:45:00	143	0	0	0	0	0	0	0	0	0	0	0	139	282	1206
17:00:00	137	2	0	0	0	0	0	0	0	0	1	129	0	269	1181
17:15:00	162	1	0	0	0	0	0	0	0	1	2	160	0	326	1184
17:30:00	153	1	0	0	0	0	0	0	0	3	0	130	0	287	1164
17:45:00	154	0	0	0	0	0	0	0	0	2	0	119	0	275	1157
18:00:00	131	1	0	0	0	0	0	0	0	0	1	112	0	245	1133
18:15:00	118	1	0	0	0	0	0	0	0	0	0	109	0	228	1035
18:30:00	124	1	0	0	0	0	0	0	0	3	0	75	0	203	951
18:45:00	98	0	0	0	0	0	0	0	0	2	1	97	0	198	874
Grand Total	3593	16	0	0	0	0	0	0	0	34	14	3511	0	7168	-

Approach%	99.6%	0.4%	0%	0%	73.5%	26.5%	0%	-	0.4%	99.6%	0%	-	-	-	-
Totals %	50.1%	0.2%	0%	0%	0.3%	0.1%	0%	50.3%	0.2%	49%	0%	49.2%	-	-	-
Heavy	117	1	0	0	8	0	0	-	1	120	0	-	-	-	-
Heavy %	3.3%	6.3%	0%	0%	32%	0%	0%	-	7.1%	3.4%	0%	-	-	-	-
Bicycles	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycle %	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Peak Hour: 09:00 AM - 10:00 AM Weather: Clear Sky (19.93 °C)

Start Time	E Approach					S Approach					W Approach					Int. Total (15 min)
	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	Right	Thru	UTurn	Peds	Approach Total	
09:00:00	105	0	0	0	105	0	0	0	0	0	1	105	0	0	106	211
09:15:00	112	0	0	0	112	0	0	0	0	0	1	118	0	0	119	231
09:30:00	99	0	0	0	99	2	0	0	0	2	0	142	0	0	142	243
09:45:00	89	0	0	0	89	4	0	0	0	4	1	146	0	0	147	240
Grand Total	405	0	0	0	405	6	0	0	0	6	3	511	0	0	514	925
Approach%	100%	0%	0%	0%	-	100%	0%	0%	0%	-	0.6%	99.4%	0%		-	-
Totals %	43.8%	0%	0%	0%	43.8%	0.6%	0%	0%	0%	0.6%	0.3%	55.2%	0%		55.6%	-
PHF	0.9	0	0	0	0.9	0.38	0	0	0	0.38	0.75	0.88	0		0.87	-
Heavy	25	0	0	0	25	1	0	0	0	1	1	32	0		33	-
Heavy %	6.2%	0%	0%	0%	6.2%	16.7%	0%	0%	0%	16.7%	33.3%	6.3%	0%		6.4%	-
Lights	379	0	0	0	379	5	0	0	0	5	2	479	0		481	-
Lights %	93.6%	0%	0%	0%	93.6%	83.3%	0%	0%	0%	83.3%	66.7%	93.7%	0%		93.6%	-
Single-Unit Trucks	19	0	0	0	19	0	0	0	0	0	1	23	0		24	-
Single-Unit Trucks %	4.7%	0%	0%	0%	4.7%	0%	0%	0%	0%	0%	33.3%	4.5%	0%		4.7%	-
Buses	0	0	0	0	0	1	0	0	0	1	0	1	0		1	-
Buses %	0%	0%	0%	0%	0%	16.7%	0%	0%	0%	16.7%	0%	0.2%	0%		0.2%	-
Articulated Trucks	6	0	0	0	6	0	0	0	0	0	0	8	0		8	-
Articulated Trucks %	1.5%	0%	0%	0%	1.5%	0%	0%	0%	0%	0%	0%	1.6%	0%		1.6%	-
Bicycles on Road	1	0	0	0	1	0	0	0	0	0	0	0	0		0	-
Bicycles on Road %	0.2%	0%	0%	0%	0.2%	0%	0%	0%	0%	0%	0%	0%	0%		0%	-

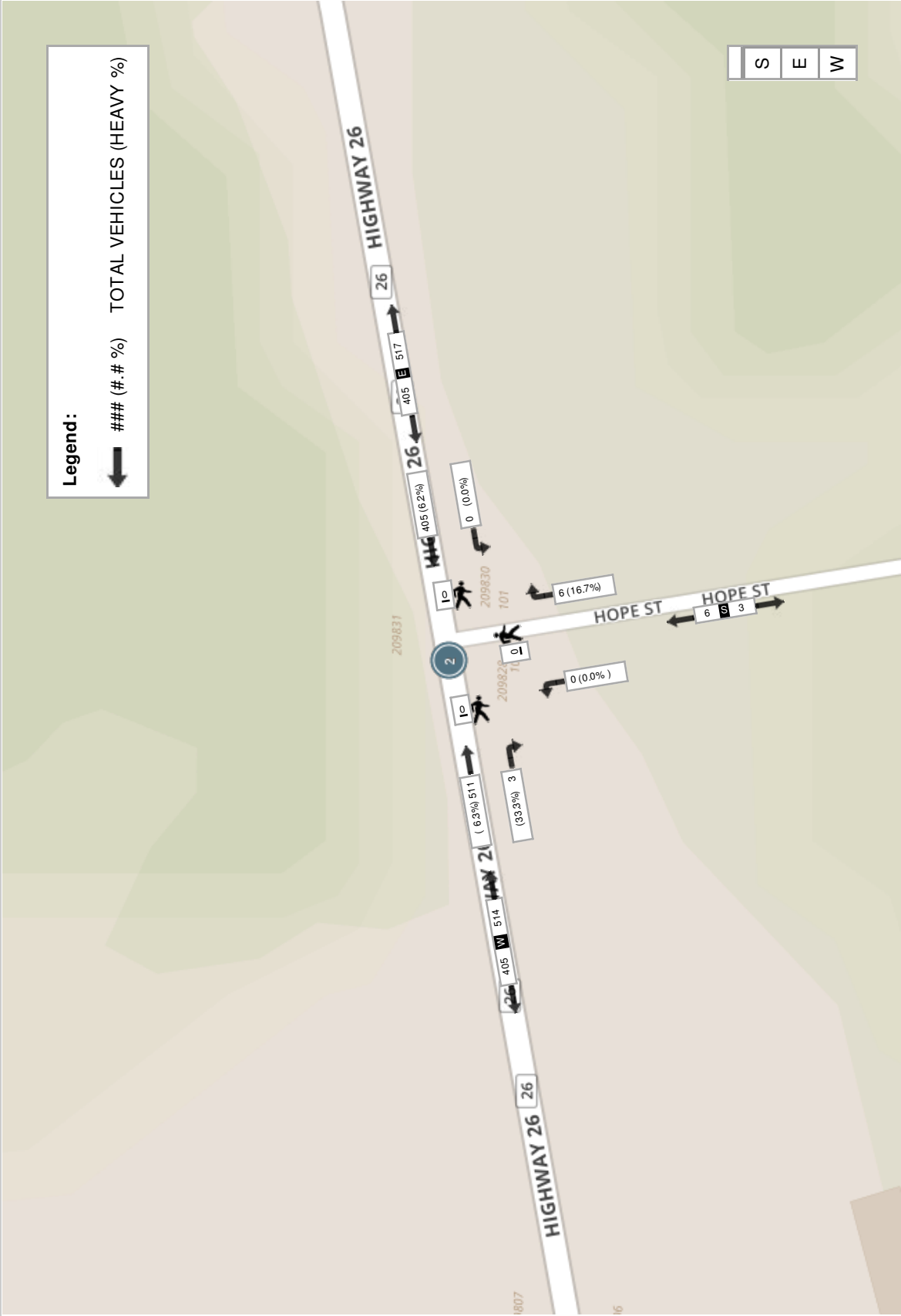


Peak Hour: 03:45 PM - 04:45 PM Weather: Few Clouds (29.54 °C)

Start Time	E Approach					S Approach					W Approach					Int. Total (15 min)
	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	Right	Thru	UTurn	Peds	Approach Total	
15:45:00	150	0	0	0	150	1	1	0	0	2	1	151	0	0	152	304
16:00:00	154	1	0	0	155	1	0	0	0	1	1	137	0	0	138	294
16:15:00	167	0	0	0	167	1	0	0	0	1	0	155	0	0	155	323
16:30:00	146	1	0	0	147	1	0	0	0	1	1	158	0	0	159	307
Grand Total	617	2	0	0	619	4	1	0	0	5	3	601	0	0	604	1228
Approach%	99.7%	0.3%	0%		-	80%	20%	0%		-	0.5%	99.5%	0%		-	-
Totals %	50.2%	0.2%	0%		50.4%	0.3%	0.1%	0%		0.4%	0.2%	48.9%	0%		49.2%	-
PHF	0.92	0.5	0		0.93	1	0.25	0		0.63	0.75	0.95	0		0.95	-
Heavy	8	0	0		8	2	0	0		2	0	22	0		22	-
Heavy %	1.3%	0%	0%		1.3%	50%	0%	0%		40%	0%	3.7%	0%		3.6%	-
Lights	606	2	0		608	2	1	0		3	3	578	0		581	-
Lights %	98.2%	100%	0%		98.2%	50%	100%	0%		60%	100%	96.2%	0%		96.2%	-
Single-Unit Trucks	6	0	0		6	1	0	0		1	0	20	0		20	-
Single-Unit Trucks %	1%	0%	0%		1%	25%	0%	0%		20%	0%	3.3%	0%		3.3%	-
Buses	1	0	0		1	1	0	0		1	0	0	0		0	-
Buses %	0.2%	0%	0%		0.2%	25%	0%	0%		20%	0%	0%	0%		0%	-
Articulated Trucks	1	0	0		1	0	0	0		0	0	2	0		2	-
Articulated Trucks %	0.2%	0%	0%		0.2%	0%	0%	0%		0%	0%	0.3%	0%		0.3%	-
Bicycles on Road	3	0	0		3	0	0	0		0	0	1	0		1	-
Bicycles on Road %	0.5%	0%	0%		0.5%	0%	0%	0%		0%	0%	0.2%	0%		0.2%	-

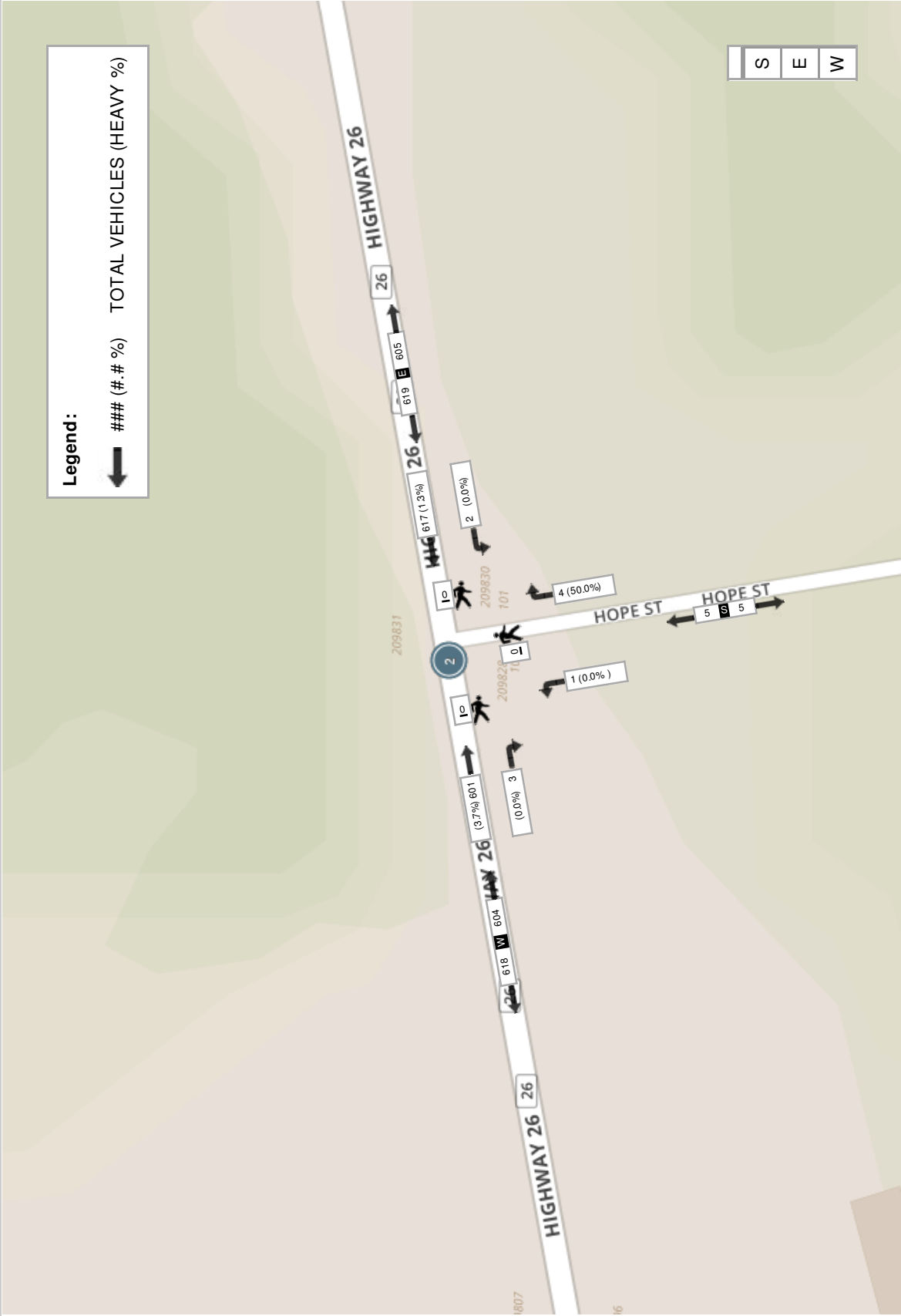


Peak Hour: 09:00 AM - 10:00 AM Weather: Clear Sky (19.93 °C)





Peak Hour: 03:45 PM - 04:45 PM Weather: Few Clouds (29.54 °C)





Turning Movement Count (2 . HWY 26 & HOPE ST)

Start Time	E Approach					S Approach					W Approach					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		
10:00:00	122	3	0	0	125	1	0	0	0	1	0	106	0	0	106	232	
10:15:00	126	1	0	0	127	2	0	0	0	2	2	143	0	0	145	274	
10:30:00	105	0	0	0	105	2	2	0	0	4	1	126	0	0	127	236	
10:45:00	108	0	0	0	108	1	1	0	0	2	0	127	0	0	127	237	979
11:00:00	115	0	0	0	115	1	1	0	0	2	0	146	0	0	146	263	1010
11:15:00	140	0	0	0	140	0	1	0	0	1	1	134	0	0	135	276	1012
11:30:00	106	1	0	0	107	4	1	0	2	5	0	122	0	0	122	234	1010
11:45:00	141	2	0	0	143	0	0	0	0	0	2	144	0	0	146	289	1062
12:00:00	118	0	0	0	118	1	0	0	0	1	2	135	0	0	137	256	1055
12:15:00	151	1	0	0	152	1	0	0	0	1	0	147	0	0	147	300	1079
12:30:00	159	2	0	0	161	2	1	0	2	3	1	122	0	0	123	287	1132
12:45:00	148	0	0	0	148	0	0	0	0	0	0	150	0	0	150	298	1141
13:00:00	137	0	0	0	137	3	1	0	0	4	2	128	0	0	130	271	1156
13:15:00	177	3	0	0	180	0	0	0	0	0	1	137	0	0	138	318	1174
13:30:00	169	3	0	0	172	0	0	0	0	0	0	126	0	0	126	298	1185
13:45:00	150	0	0	0	150	5	2	0	0	7	2	111	0	0	113	270	1157
14:00:00	166	1	0	0	167	0	0	0	0	0	0	105	0	0	105	272	1158
14:15:00	146	1	0	0	147	0	0	0	0	0	0	114	0	0	114	261	1101
14:30:00	146	1	0	0	147	2	0	0	0	2	1	132	0	0	133	282	1085
14:45:00	144	0	0	0	144	1	0	0	0	1	1	107	0	0	108	253	1068
15:00:00	120	2	0	0	122	1	2	0	0	3	0	123	0	0	123	248	1044
15:15:00	125	3	0	0	128	4	0	0	0	4	0	118	0	0	118	250	1033
15:30:00	139	2	0	0	141	0	1	0	0	1	0	94	0	0	94	236	987
15:45:00	125	0	0	0	125	1	1	0	0	2	0	110	0	0	110	237	971



Turning Movement Count

Location Name: HWY 26 & HOPE ST

Date: Sat, Jul 06, 2019 Deployment Lead: Walter Fugaj

Crozier & Associates

,,

16:00:00	138	0	0	0	0	0	0	0	1	138	1	0	0	0	0	2	122	0	0	124	263	986
16:15:00	125	1	0	0	0	0	0	0	3	126	3	0	0	0	0	2	116	0	0	118	247	983
16:30:00	97	1	0	0	0	0	0	0	3	98	3	0	0	0	0	0	115	0	0	115	216	963
16:45:00	123	1	0	0	0	0	0	0	1	124	1	0	0	0	0	1	113	0	0	114	239	965
17:00:00	111	1	0	0	0	0	0	0	1	112	1	0	0	0	0	0	85	0	0	85	198	900
17:15:00	102	0	0	0	0	0	0	0	0	102	0	0	0	0	0	2	97	0	0	99	201	854
17:30:00	82	1	0	0	0	0	0	0	1	83	1	1	0	0	0	1	127	0	0	128	213	851
17:45:00	100	0	0	0	0	0	0	0	1	100	1	0	0	0	0	0	91	0	0	91	192	804
Grand Total	4161	31	0	0	0	0	0	0	43	4192	15	0	0	4	58	24	3873	0	0	3897	8147	-

Approach%	99.3%	0.7%	0%	-	74.1%	25.9%	0%	-	0.6%	99.4%	0%	-	-	-	-	-	-	-	-	-	-	-
Totals %	51.1%	0.4%	0%	51.5%	0.5%	0.2%	0%	0.7%	0.3%	47.5%	0%	47.8%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Heavy	33	0	0	-	7	0	0	-	0	53	0	-	-	-	-	-	-	-	-	-	-	-
Heavy %	0.8%	0%	0%	-	16.3%	0%	0%	-	0%	1.4%	0%	-	-	-	-	-	-	-	-	-	-	-
Bicycles	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycle %	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Peak Hour: 12:45 PM - 01:45 PM Weather: Mist (22.43 °C)

Start Time	E Approach					S Approach					W Approach					Int. Total (15 min)
	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	Right	Thru	UTurn	Peds	Approach Total	
12:45:00	148	0	0	0	148	0	0	0	0	0	0	150	0	0	150	298
13:00:00	137	0	0	0	137	3	1	0	0	4	2	128	0	0	130	271
13:15:00	177	3	0	0	180	0	0	0	0	0	1	137	0	0	138	318
13:30:00	169	3	0	0	172	0	0	0	0	0	0	126	0	0	126	298
Grand Total	631	6	0	0	637	3	1	0	0	4	3	541	0	0	544	1185
Approach%	99.1%	0.9%	0%		-	75%	25%	0%		-	0.6%	99.4%	0%		-	-
Totals %	53.2%	0.5%	0%		53.8%	0.3%	0.1%	0%		0.3%	0.3%	45.7%	0%		45.9%	-
PHF	0.89	0.5	0		0.88	0.25	0.25	0		0.25	0.38	0.9	0		0.91	-
Heavy	5	0	0		5	0	0	0		0	0	11	0		11	-
Heavy %	0.8%	0%	0%		0.8%	0%	0%	0%		0%	0%	2%	0%		2%	-
Lights	622	6	0		628	3	1	0		4	3	530	0		533	-
Lights %	98.6%	100%	0%		98.6%	100%	100%	0%		100%	100%	98%	0%		98%	-
Single-Unit Trucks	3	0	0		3	0	0	0		0	0	10	0		10	-
Single-Unit Trucks %	0.5%	0%	0%		0.5%	0%	0%	0%		0%	0%	1.8%	0%		1.8%	-
Buses	1	0	0		1	0	0	0		0	0	0	0		0	-
Buses %	0.2%	0%	0%		0.2%	0%	0%	0%		0%	0%	0%	0%		0%	-
Articulated Trucks	1	0	0		1	0	0	0		0	0	1	0		1	-
Articulated Trucks %	0.2%	0%	0%		0.2%	0%	0%	0%		0%	0%	0.2%	0%		0.2%	-
Bicycles on Road	4	0	0		4	0	0	0		0	0	0	0		0	-
Bicycles on Road %	0.6%	0%	0%		0.6%	0%	0%	0%		0%	0%	0%	0%		0%	-
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
Pedestrians%	-	-	-	0%	-	-	-	-	0%	-	-	-	-	0%	-	-

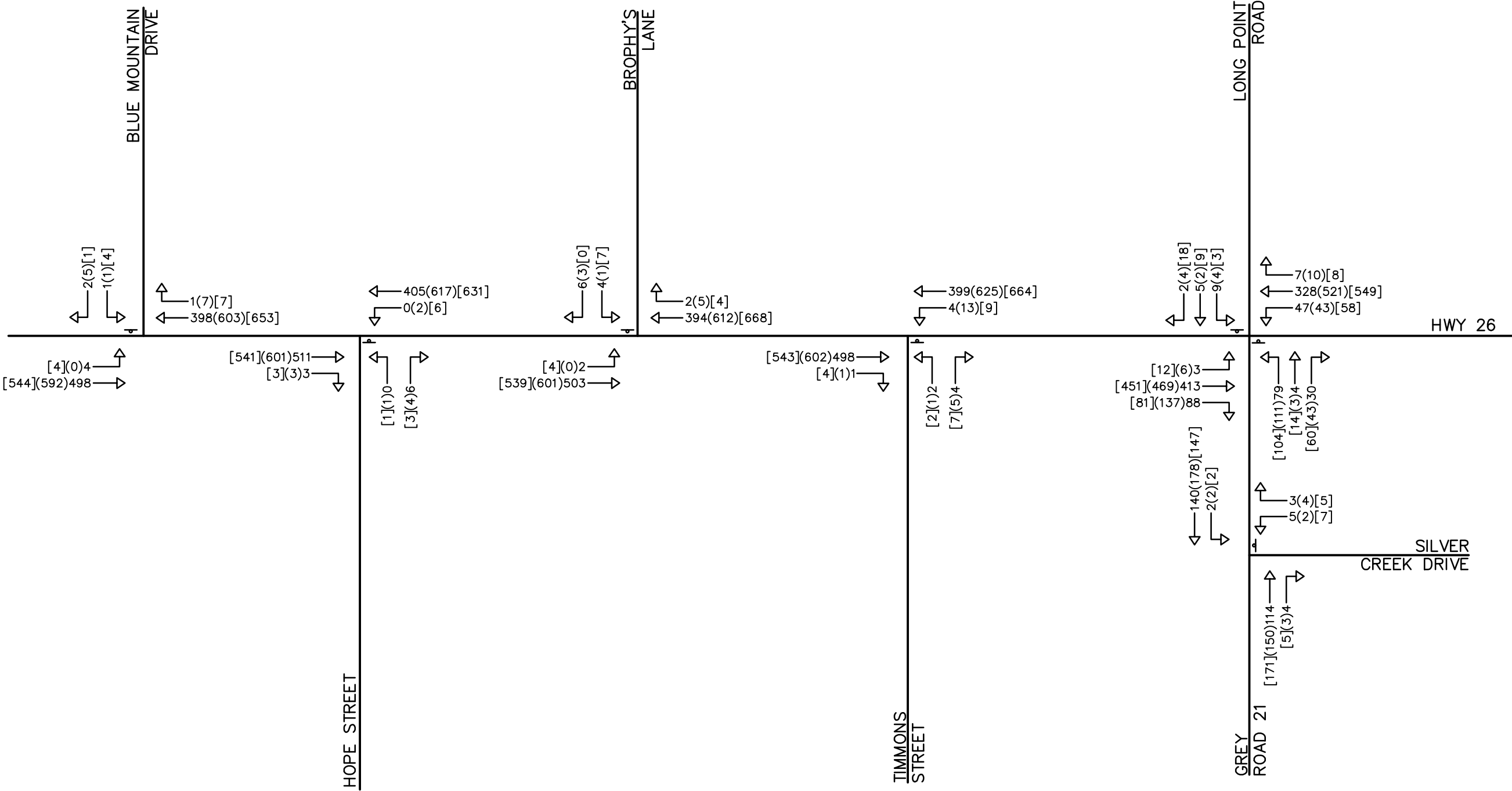


Peak Hour: 12:45 PM - 01:45 PM Weather: Mist (22.43 °C)



Appendix B: Aquavil Traffic Volumes

NOTE:
THIS FIGURE IS SCHEMATIC ONLY
AND IS NOT TO BE SCALED.



LEGEND:

 SIGNAL CONTROL

 STOP CONTROL

AM(PM)[SAT] WEEKDAY AM(WEEKDAY PM)[SATURDAY]

AQUAVIL
TOWN OF THE BLUE MOUNTAINS

2019 EXISTING TRAFFIC VOLUMES

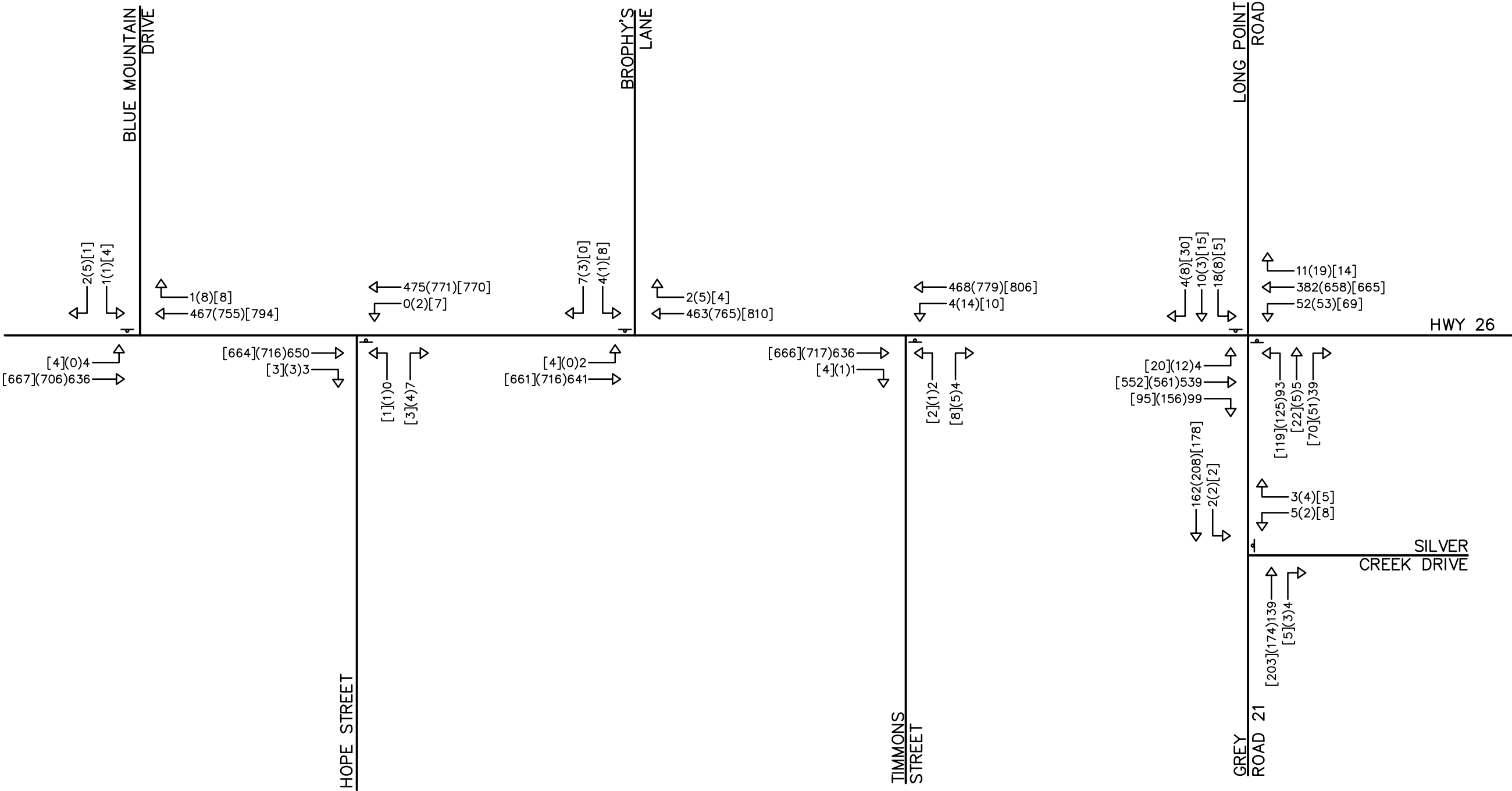


CROZIER & ASSOCIATES
Consulting Engineers

2800 High Point Drive
Suite 100
Milton, ON L9T 6P4
905 875-0026 T
905 875-4915 F
www.cfcrozier.ca

Drawn	M.J.	Design	M.F.	Project No.	876-4866	
Check	M.F.	Check	M.F.	Scale	N.T.S	
					Dwg.	FIG. 4

NOTE:
THIS FIGURE IS SCHEMATIC ONLY
AND IS NOT TO BE SCALED.



LEGEND:

 SIGNAL CONTROL

 STOP CONTROL

AM(PM)[SAT] WEEKDAY AM(WEEKDAY PM)[SATURDAY]

AQUAVIL
TOWN OF THE BLUE MOUNTAINS

2025 FUTURE BACKGROUND
TRAFFIC VOLUMES

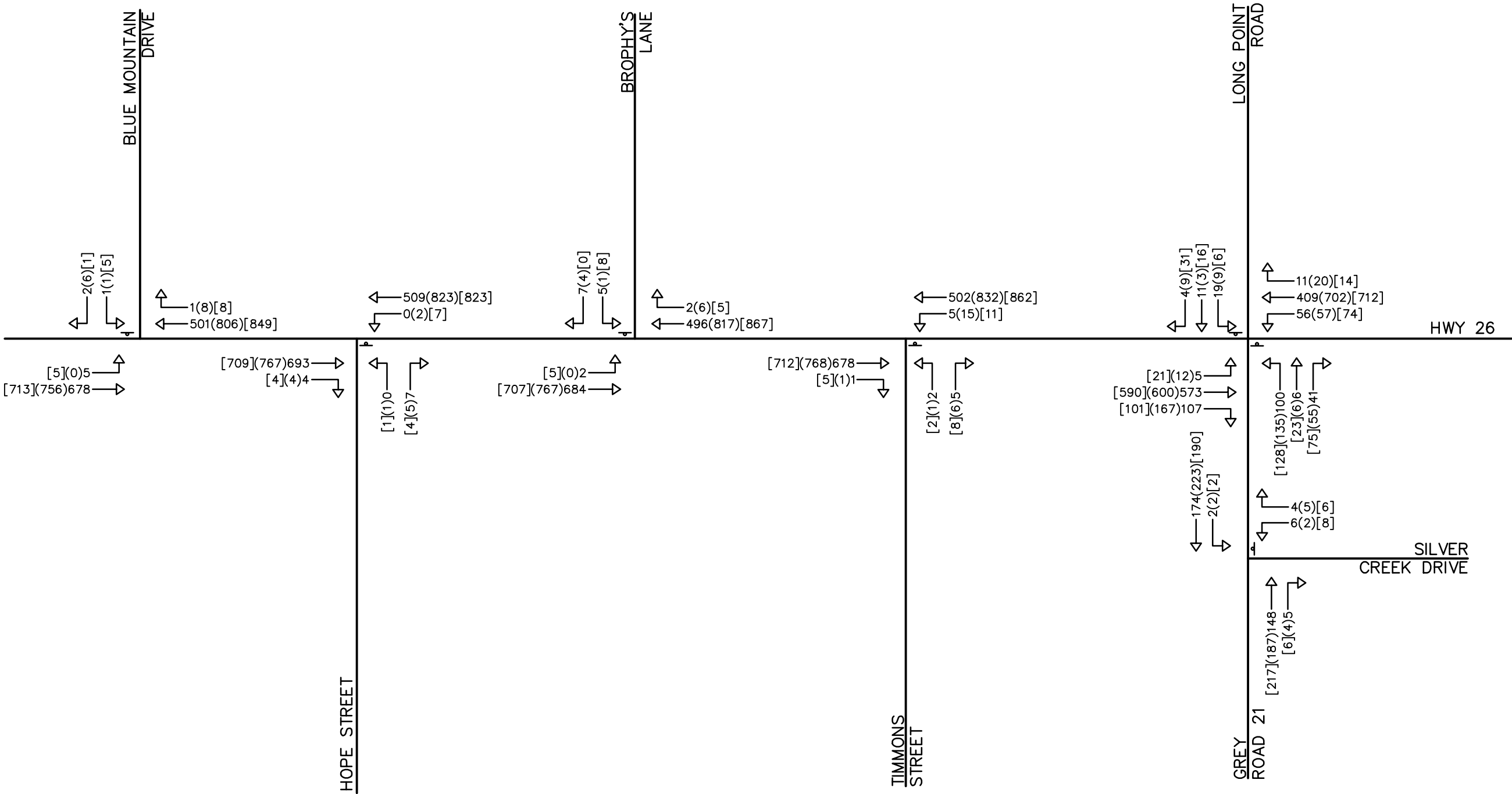


CROZIER & ASSOCIATES
Consulting Engineers

2800 High Point Drive
Suite 100
Milton, ON L9T 6P4
905 875-0026 T
905 875-4915 F
www.cfcrozier.ca

Drawn	M.J.	Design	M.F.	Project No.	876-4866	
Check	M.F.	Check	M.F.	Scale	N.T.S	
					Dwg.	FIG. 8

NOTE:
THIS FIGURE IS SCHEMATIC ONLY
AND IS NOT TO BE SCALED.



LEGEND:

SIGNAL CONTROL

STOP CONTROL

AM(PM)[SAT] WEEKDAY AM(WEEKDAY PM)[SATURDAY]

AQUAVIL
TOWN OF THE BLUE MOUNTAINS

2030 FUTURE BACKGROUND
TRAFFIC VOLUMES

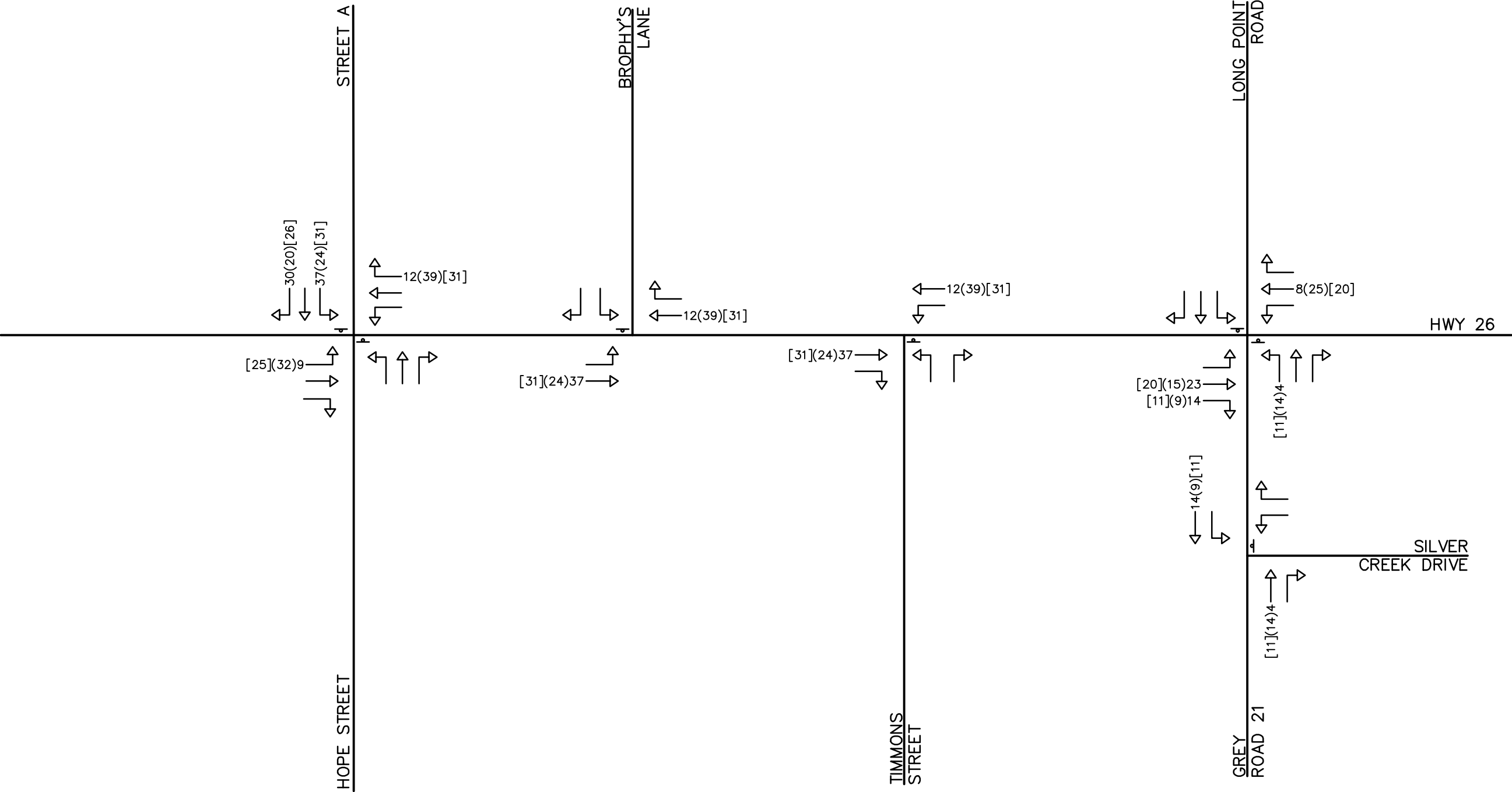


CROZIER & ASSOCIATES
Consulting Engineers

2800 High Point Drive
Suite 100
Milton, ON L9T 6P4
905 875-0026 T
905 875-4915 F
www.cfcrozier.ca

Drawn	M.J.	Design	M.F.	Project No.	876-4866
Check	M.F.	Check	M.F.	Scale	N.T.S
				Dwg.	FIG. 9

NOTE:
THIS FIGURE IS SCHEMATIC ONLY
AND IS NOT TO BE SCALED.



LEGEND:



SIGNAL CONTROL



STOP CONTROL

AM(PM)[SAT] WEEKDAY AM(WEEKDAY PM)[SATURDAY]

AQUAVIL
TOWN OF THE BLUE MOUNTAINS

PHASE 1 RESIDENTIAL TRIP ASSIGNMENT

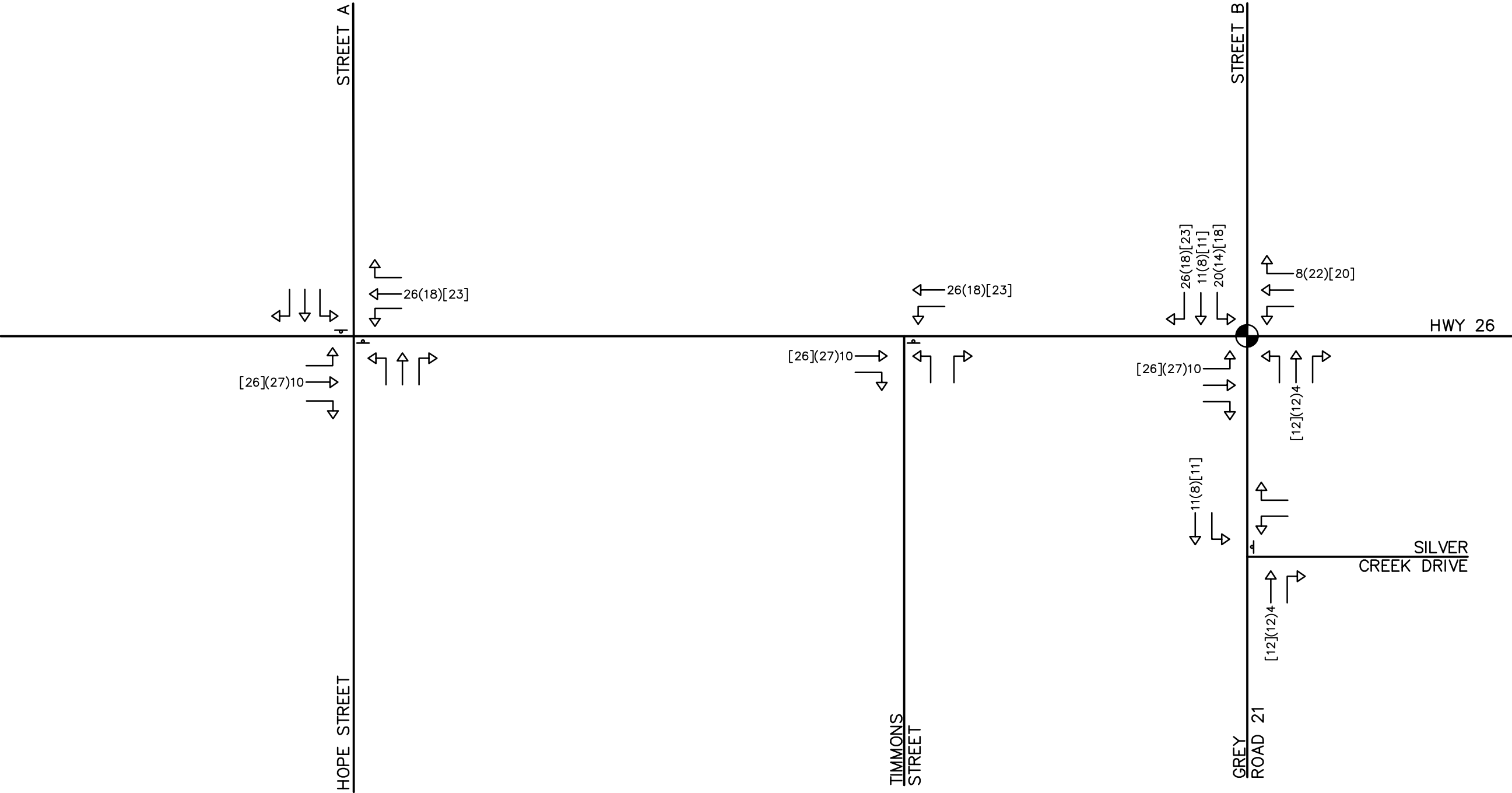


CROZIER & ASSOCIATES
Consulting Engineers

2800 High Point Drive
Suite 100
Milton, ON L9T 6P4
905 875-0026 T
905 875-4915 F
www.cfcrozier.ca

Drawn	M.J.	Design	M.F.	Project No.	876-4866	
Check	M.F.	Check	M.F.	Scale	N.T.S	Dwg. FIG. 16

NOTE:
THIS FIGURE IS SCHEMATIC ONLY
AND IS NOT TO BE SCALED.



LEGEND:

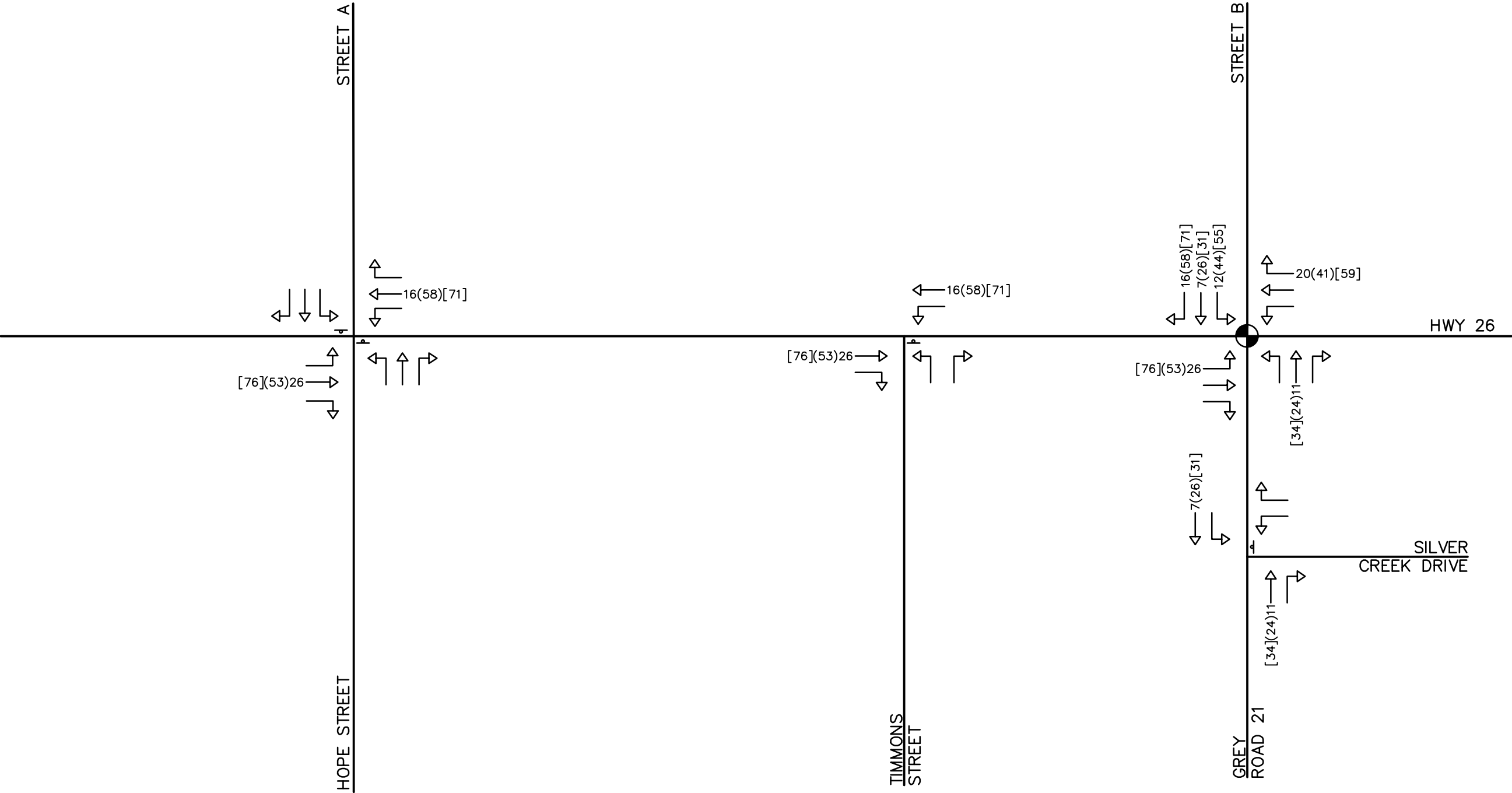
 SIGNAL CONTROL

 STOP CONTROL

AM(PM)[SAT] WEEKDAY AM(WEEKDAY PM)[SATURDAY]

AQUAVIL TOWN OF THE BLUE MOUNTAINS				 CROZIER & ASSOCIATES Consulting Engineers		2800 High Point Drive Suite 100 Milton, ON L9T 6P4 905 875-0026 T 905 875-4915 F www.cfcrozier.ca					
PHASE 2 RESIDENTIAL TRIP ASSIGNMENT				Drawn	M.J.	Design	M.F.	Project No.	876-4866		
				Check	M.F.	Check	M.F.	Scale	N.T.S	Dwg.	FIG. 17

NOTE:
THIS FIGURE IS SCHEMATIC ONLY
AND IS NOT TO BE SCALED.



LEGEND:

 SIGNAL CONTROL

 STOP CONTROL

AM(PM)[SAT] WEEKDAY AM(WEEKDAY PM)[SATURDAY]

AQUAVIL
TOWN OF THE BLUE MOUNTAINS

PHASE 2 PRIMARY COMMERCIAL
TRIP ASSIGNMENT

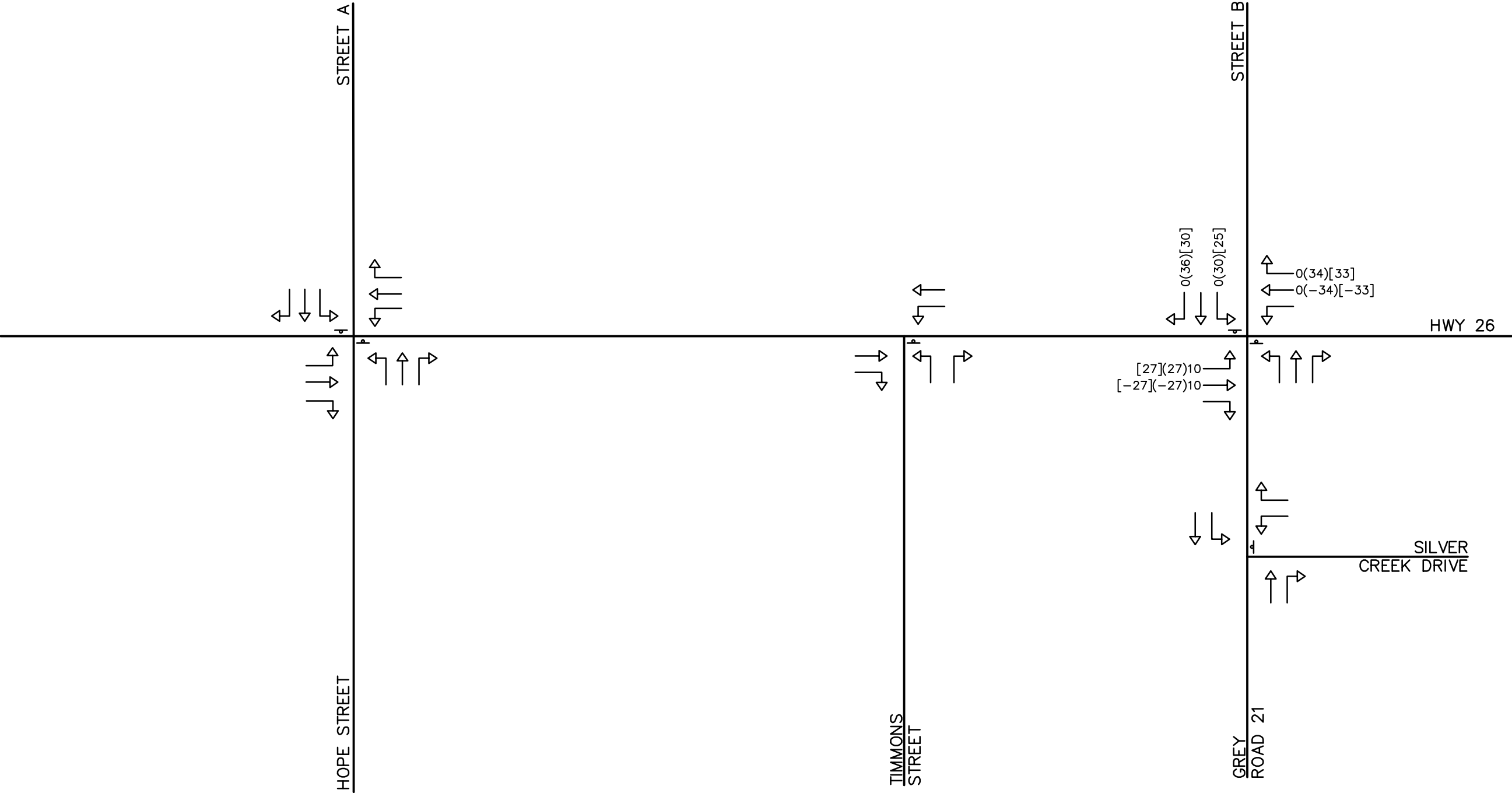


CROZIER & ASSOCIATES
Consulting Engineers

2800 High Point Drive
Suite 100
Milton, ON L9T 6P4
905 875-0026 T
905 875-4915 F
www.cfcrozier.ca

Drawn	M.J.	Design	M.F.	Project No.	876-4866
Check	M.F.	Check	M.F.	Scale	N.T.S
				Dwg.	FIG. 18

NOTE:
THIS FIGURE IS SCHEMATIC ONLY
AND IS NOT TO BE SCALED.



LEGEND:

 SIGNAL CONTROL

 STOP CONTROL

AM(PM)[SAT] WEEKDAY AM(WEEKDAY PM)[SATURDAY]

AQUAVIL
TOWN OF THE BLUE MOUNTAINS

PHASE 2 PASS-BY COMMERCIAL TRIP
ASSIGNMENT



CROZIER & ASSOCIATES
Consulting Engineers

2800 High Point Drive
Suite 100
Milton, ON L9T 6P4
905 875-0026 T
905 875-4915 F
www.cfcrozier.ca

Drawn	M.J.	Design	M.F.	Project No.	876-4866	
Check	M.F.	Check	M.F.	Scale	N.T.S	
					Dwg.	FIG. 19

Appendix C: Level of Service Definitions

Level of Service - Unsignalized Intersections

Level of Service (LOS) for unsignalized intersections is defined in terms of control delay for each critical lane. Control delay include initial deceleration, queue move-up time, stopped delay, and final acceleration delay, and is a function of the service rate or capacity of the approach and degree of saturation.

The following table describes in detail the characteristics of each level:

LOS	Description of Traffic Operations	Delay (sec/veh)
A	Little or no delays	$0 < d \leq 10$
B	Short traffic delays	$10 < d \leq 15$
C	Average traffic delays	$15 < d \leq 25$
D	Long traffic delays	$25 < d \leq 35$
E	Very long traffic delays	$35 < d \leq 50$
F	Extreme delays with queuing which may cause congestion affecting other traffic movements in the intersection	$d > 50$

source: 2010 Highway Capacity Manual

Level of Service - Signalized Intersections

Level of Service (LOS) for signalized intersections is defined in terms of delay, which is made up of a number of factors that relate to control, geometrics, traffic, and incidents. Only the portion of total delay attributed to the control facility is quantified. This control delay includes initial deceleration, queue move-up time, stopped delay, and final acceleration delay.

The following table describes in detail the characteristics of each level:

LOS	Description of Traffic Operations	Delay (sec/veh)
A	Describes operations with very low control delay, up to 10 seconds/vehicle. This level of service occurs when progression is extremely favourable and most vehicles arrive during the green phase. Most vehicles do not stop at all at this LOS. Short cycle lengths may also contribute to low delay.	$d \leq 10$
B	Describes operations with control delay greater than 10 seconds and up to 20 seconds/vehicle. This level generally occurs with good progression, short cycle lengths, or both. More vehicles stop at this level than at LOS A, causing longer average delays.	$10 < d \leq 20$
C	Describes operations with control delay greater than 20 seconds and up to 35 seconds/vehicle. These higher delays may result from fair progression, longer cycle lengths, or both. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant, though many still pass through the intersection without stopping.	$20 < d \leq 35$
D	Describes operations with control delay greater than 35 seconds and up to 55 seconds/vehicle. At level D, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavourable progression, long cycle lengths, or high v/c ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures become noticeable.	$35 < d \leq 55$
E	Describes operations with control delay greater than 55 seconds and up to 80 seconds/vehicle. This level is considered by many agencies to be the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths, and high v/c ratios. Individual cycle failures are frequent occurrences.	$55 < d \leq 80$
F	LOS F describes operations with control delay in excess of 80 seconds/vehicle. This oversaturation, considered to be unacceptable to most drivers, occurs when arrival flow rates exceed the design capacity of the intersection. It may also occur at high v/c ratios below 1.0 with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing factors to such high delay levels.	$d > 80$

source: 2010 Highway Capacity Manual

Appendix D: Intersection Operations - 2022

HCM Unsignalized Intersection Capacity Analysis

2022 AM Peak Hour

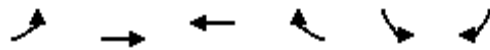
1: Hope St & Hwy 26

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	582	5	5	440	5	5
Future Volume (Veh/h)	582	5	5	440	5	5
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)	633	5	5	478	5	5
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			638		1124	636
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			638		1124	636
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		98	99
cM capacity (veh/h)			946		226	478
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	638	483	10			
Volume Left	0	5	5			
Volume Right	5	0	5			
cSH	1700	946	307			
Volume to Capacity	0.38	0.01	0.03			
Queue Length 95th (m)	0.0	0.1	0.8			
Control Delay (s)	0.0	0.2	17.1			
Lane LOS		A	C			
Approach Delay (s)	0.0	0.2	17.1			
Approach LOS			C			
Intersection Summary						
Average Delay			0.2			
Intersection Capacity Utilization			40.9%	ICU Level of Service		A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

2022 AM Peak Hour

2: Hwy 26 & Blue Mtn Dr



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	5	569	433	5	5	5
Future Volume (Veh/h)	5	569	433	5	5	5
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)	5	618	471	5	5	5
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh						
Upstream signal (m)			17			
pX, platoon unblocked						
vC, conflicting volume	476				1102	474
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	476				1102	474
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				98	99
cM capacity (veh/h)	1086				233	591
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	623	476	10			
Volume Left	5	0	5			
Volume Right	0	5	5			
cSH	1086	1700	334			
Volume to Capacity	0.00	0.28	0.03			
Queue Length 95th (m)	0.1	0.0	0.7			
Control Delay (s)	0.1	0.0	16.1			
Lane LOS	A		C			
Approach Delay (s)	0.1	0.0	16.1			
Approach LOS			C			
Intersection Summary						
Average Delay			0.2			
Intersection Capacity Utilization			43.9%	ICU Level of Service	A	
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

2022 PM Peak Hour

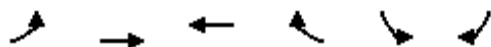
1: Hope St & Hwy 26

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	660	5	5	696	5	5
Future Volume (Veh/h)	660	5	5	696	5	5
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)	717	5	5	757	5	5
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			722		1486	720
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			722		1486	720
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		96	99
cM capacity (veh/h)			880		136	428
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	722	762	10			
Volume Left	0	5	5			
Volume Right	5	0	5			
cSH	1700	880	207			
Volume to Capacity	0.42	0.01	0.05			
Queue Length 95th (m)	0.0	0.1	1.2			
Control Delay (s)	0.0	0.2	23.3			
Lane LOS		A	C			
Approach Delay (s)	0.0	0.2	23.3			
Approach LOS			C			
Intersection Summary						
Average Delay			0.2			
Intersection Capacity Utilization			50.6%	ICU Level of Service		A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

2022 PM Peak Hour

2: Hwy 26 & Blue Mtn Dr



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↩	↩		↩	
Traffic Volume (veh/h)	5	607	682	7	5	5
Future Volume (Veh/h)	5	607	682	7	5	5
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)	5	660	741	8	5	5
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (m)			17			
pX, platoon unblocked						
vC, conflicting volume	749				1415	745
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	749				1415	745
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				97	99
cM capacity (veh/h)	860				151	414
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	665	749	10			
Volume Left	5	0	5			
Volume Right	0	8	5			
cSH	860	1700	221			
Volume to Capacity	0.01	0.44	0.05			
Queue Length 95th (m)	0.1	0.0	1.1			
Control Delay (s)	0.2	0.0	22.1			
Lane LOS	A		C			
Approach Delay (s)	0.2	0.0	22.1			
Approach LOS			C			
Intersection Summary						
Average Delay			0.2			
Intersection Capacity Utilization			46.3%	ICU Level of Service		A
Analysis Period (min)			15			

Appendix E: Intersection Operations – 2025 & 2030

HCM Unsignalized Intersection Capacity Analysis

2025 AM Peak Hour

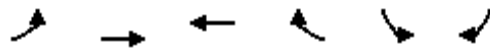
1: Hope St & Hwy 26

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	653	5	5	476	12	5	5	6	37	5	30
Future Volume (Veh/h)	9	653	5	5	476	12	5	5	6	37	5	30
Sign Control	Free			Free			Stop			Stop		
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)	10	710	5	5	517	13	5	5	7	40	5	33
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	530			715			1295	1272	712	1266	1262	517
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	530			715			1295	1272	712	1266	1262	517
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			99			96	97	98	71	97	94
cM capacity (veh/h)	1037			885			127	165	432	138	167	558
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1	SB 1					
Volume Total	10	715	5	517	13	17	78					
Volume Left	10	0	5	0	0	5	40					
Volume Right	0	5	0	0	13	7	33					
cSH	1037	1700	885	1700	1700	198	206					
Volume to Capacity	0.01	0.42	0.01	0.30	0.01	0.09	0.38					
Queue Length 95th (m)	0.2	0.0	0.1	0.0	0.0	2.1	12.6					
Control Delay (s)	8.5	0.0	9.1	0.0	0.0	24.9	32.7					
Lane LOS	A		A			C	D					
Approach Delay (s)	0.1		0.1			24.9	32.7					
Approach LOS						C	D					
Intersection Summary												
Average Delay	2.3											
Intersection Capacity Utilization	48.2%			ICU Level of Service					A			
Analysis Period (min)	15											

HCM Unsignalized Intersection Capacity Analysis

2025 AM Peak Hour

2: Hwy 26 & Blue Mtn Dr



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	5	646	499	5	5	5
Future Volume (Veh/h)	5	646	499	5	5	5
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)	5	702	542	5	5	5
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	547				1256	544
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	547				1256	544
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				97	99
cM capacity (veh/h)	1022				188	539
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	707	547	10			
Volume Left	5	0	5			
Volume Right	0	5	5			
cSH	1022	1700	279			
Volume to Capacity	0.00	0.32	0.04			
Queue Length 95th (m)	0.1	0.0	0.8			
Control Delay (s)	0.1	0.0	18.4			
Lane LOS	A		C			
Approach Delay (s)	0.1	0.0	18.4			
Approach LOS			C			
Intersection Summary						
Average Delay			0.2			
Intersection Capacity Utilization			48.0%		ICU Level of Service	
Analysis Period (min)			15		A	

HCM Unsignalized Intersection Capacity Analysis

2025 AM Peak Hour

3: Site & Hwy 26

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	646	5	5	498	5	5
Future Volume (Veh/h)	646	5	5	498	5	5
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)	702	5	5	541	5	5
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			707		1256	704
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			707		1256	704
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		97	99
cM capacity (veh/h)			891		188	437
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	707	546	10			
Volume Left	0	5	5			
Volume Right	5	0	5			
cSH	1700	891	263			
Volume to Capacity	0.42	0.01	0.04			
Queue Length 95th (m)	0.0	0.1	0.9			
Control Delay (s)	0.0	0.2	19.2			
Lane LOS		A	C			
Approach Delay (s)	0.0	0.2	19.2			
Approach LOS			C			
Intersection Summary						
Average Delay			0.2			
Intersection Capacity Utilization			44.3%	ICU Level of Service		A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

2025 PM Peak Hour

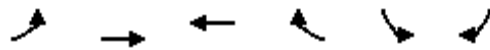
1: Hope St & Hwy 26

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	718	5	5	774	39	5	5	5	24	5	20
Future Volume (Veh/h)	32	718	5	5	774	39	5	5	5	24	5	20
Sign Control	Free			Free			Stop			Stop		
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)	35	780	5	5	841	42	5	5	5	26	5	22
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	883			785			1728	1746	782	1708	1706	841
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	883			785			1728	1746	782	1708	1706	841
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	95			99			92	94	99	60	94	94
cM capacity (veh/h)	766			834			60	82	394	65	87	365
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1	SB 1					
Volume Total	35	785	5	841	42	15	53					
Volume Left	35	0	5	0	0	5	26					
Volume Right	0	5	0	0	42	5	22					
cSH	766	1700	834	1700	1700	95	102					
Volume to Capacity	0.05	0.46	0.01	0.49	0.02	0.16	0.52					
Queue Length 95th (m)	1.1	0.0	0.1	0.0	0.0	4.0	17.8					
Control Delay (s)	9.9	0.0	9.3	0.0	0.0	49.6	73.2					
Lane LOS	A		A			E	F					
Approach Delay (s)	0.4		0.1			49.6	73.2					
Approach LOS						E	F					
Intersection Summary												
Average Delay	2.8											
Intersection Capacity Utilization	51.8%			ICU Level of Service			A					
Analysis Period (min)	15											

HCM Unsignalized Intersection Capacity Analysis

2025 PM Peak Hour

2: Hwy 26 & Blue Mtn Dr



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	5	740	777	7	5	5
Future Volume (Veh/h)	5	740	777	7	5	5
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)	5	804	845	8	5	5
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	853				1663	849
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	853				1663	849
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				95	99
cM capacity (veh/h)	786				106	361
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	809	853	10			
Volume Left	5	0	5			
Volume Right	0	8	5			
cSH	786	1700	164			
Volume to Capacity	0.01	0.50	0.06			
Queue Length 95th (m)	0.1	0.0	1.5			
Control Delay (s)	0.2	0.0	28.4			
Lane LOS	A		D			
Approach Delay (s)	0.2	0.0	28.4			
Approach LOS			D			
Intersection Summary						
Average Delay			0.3			
Intersection Capacity Utilization			52.9%		ICU Level of Service	
Analysis Period (min)			15		A	

HCM Unsignalized Intersection Capacity Analysis

2025 PM Peak Hour

3: Site & Hwy 26

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	739	5	5	782	5	5
Future Volume (Veh/h)	739	5	5	782	5	5
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)	803	5	5	850	5	5
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			808		1666	806
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			808		1666	806
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		95	99
cM capacity (veh/h)			817		106	382
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	808	855	10			
Volume Left	0	5	5			
Volume Right	5	0	5			
cSH	1700	817	166			
Volume to Capacity	0.48	0.01	0.06			
Queue Length 95th (m)	0.0	0.1	1.5			
Control Delay (s)	0.0	0.2	28.1			
Lane LOS		A	D			
Approach Delay (s)	0.0	0.2	28.1			
Approach LOS			D			
Intersection Summary						
Average Delay			0.3			
Intersection Capacity Utilization			55.1%	ICU Level of Service		B
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

2030 AM Peak Hour

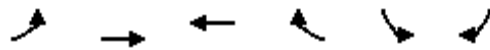
1: Hope St & Hwy 26

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	732	5	5	552	12	5	5	6	37	5	30
Future Volume (Veh/h)	9	732	5	5	552	12	5	5	6	37	5	30
Sign Control	Free			Free			Stop			Stop		
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)	10	796	5	5	600	13	5	5	7	40	5	33
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	613			801			1464	1442	798	1436	1431	600
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	613			801			1464	1442	798	1436	1431	600
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			99			95	96	98	62	96	93
cM capacity (veh/h)	966			822			95	130	386	105	132	501
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1	SB 1					
Volume Total	10	801	5	600	13	17	78					
Volume Left	10	0	5	0	0	5	40					
Volume Right	0	5	0	0	13	7	33					
cSH	966	1700	822	1700	1700	156	161					
Volume to Capacity	0.01	0.47	0.01	0.35	0.01	0.11	0.49					
Queue Length 95th (m)	0.2	0.0	0.1	0.0	0.0	2.7	17.6					
Control Delay (s)	8.8	0.0	9.4	0.0	0.0	30.9	46.9					
Lane LOS	A		A			D	E					
Approach Delay (s)	0.1		0.1			30.9	46.9					
Approach LOS						D	E					
Intersection Summary												
Average Delay	2.8											
Intersection Capacity Utilization	52.4%			ICU Level of Service			A					
Analysis Period (min)	15											

HCM Unsignalized Intersection Capacity Analysis

2030 AM Peak Hour

2: Hwy 26 & Blue Mtn Dr



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	5	724	575	5	5	5
Future Volume (Veh/h)	5	724	575	5	5	5
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)	5	787	625	5	5	5
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	630				1424	628
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	630				1424	628
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				97	99
cM capacity (veh/h)	952				149	483
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	792	630	10			
Volume Left	5	0	5			
Volume Right	0	5	5			
cSH	952	1700	227			
Volume to Capacity	0.01	0.37	0.04			
Queue Length 95th (m)	0.1	0.0	1.0			
Control Delay (s)	0.1	0.0	21.6			
Lane LOS	A		C			
Approach Delay (s)	0.1	0.0	21.6			
Approach LOS			C			
Intersection Summary						
Average Delay			0.2			
Intersection Capacity Utilization			52.1%		ICU Level of Service	
Analysis Period (min)			15		A	

HCM Unsignalized Intersection Capacity Analysis

2030 AM Peak Hour

3: Site & Hwy 26

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	724	5	5	574	5	5
Future Volume (Veh/h)	724	5	5	574	5	5
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)	787	5	5	624	5	5
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			792		1424	790
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			792		1424	790
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		97	99
cM capacity (veh/h)			829		149	390
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	792	629	10			
Volume Left	0	5	5			
Volume Right	5	0	5			
cSH	1700	829	215			
Volume to Capacity	0.47	0.01	0.05			
Queue Length 95th (m)	0.0	0.1	1.1			
Control Delay (s)	0.0	0.2	22.5			
Lane LOS		A	C			
Approach Delay (s)	0.0	0.2	22.5			
Approach LOS			C			
Intersection Summary						
Average Delay			0.2			
Intersection Capacity Utilization			48.4%	ICU Level of Service		A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

2030 PM Peak Hour

1: Hope St & Hwy 26

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	849	5	5	902	39	5	5	5	24	5	20
Future Volume (Veh/h)	32	849	5	5	902	39	5	5	5	24	5	20
Sign Control	Free			Free			Stop			Stop		
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)	35	923	5	5	980	42	5	5	5	26	5	22
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	1022			928			2010	2028	926	1990	1988	980
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1022			928			2010	2028	926	1990	1988	980
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	95			99			86	91	98	34	91	93
cM capacity (veh/h)	679			737			36	54	326	40	57	303
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1	SB 1					
Volume Total	35	928	5	980	42	15	53					
Volume Left	35	0	5	0	0	5	26					
Volume Right	0	5	0	0	42	5	22					
cSH	679	1700	737	1700	1700	61	65					
Volume to Capacity	0.05	0.55	0.01	0.58	0.02	0.25	0.82					
Queue Length 95th (m)	1.2	0.0	0.2	0.0	0.0	6.5	28.7					
Control Delay (s)	10.6	0.0	9.9	0.0	0.0	82.0	167.3					
Lane LOS	B		A			F	F					
Approach Delay (s)	0.4		0.0			82.0	167.3					
Approach LOS						F	F					
Intersection Summary												
Average Delay				5.1								
Intersection Capacity Utilization				58.5%	ICU Level of Service				B			
Analysis Period (min)				15								

HCM Unsignalized Intersection Capacity Analysis

2030 PM Peak Hour

2: Hwy 26 & Blue Mtn Dr



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	5	870	904	7	5	5
Future Volume (Veh/h)	5	870	904	7	5	5
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)	5	946	983	8	5	5
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	991				1943	987
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	991				1943	987
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				93	98
cM capacity (veh/h)	698				71	300
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	951	991	10			
Volume Left	5	0	5			
Volume Right	0	8	5			
cSH	698	1700	115			
Volume to Capacity	0.01	0.58	0.09			
Queue Length 95th (m)	0.2	0.0	2.1			
Control Delay (s)	0.2	0.0	39.3			
Lane LOS	A		E			
Approach Delay (s)	0.2	0.0	39.3			
Approach LOS			E			
Intersection Summary						
Average Delay			0.3			
Intersection Capacity Utilization			59.8%	ICU Level of Service		B
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

2030 PM Peak Hour

3: Site & Hwy 26

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	869	5	5	909	5	5
Future Volume (Veh/h)	869	5	5	909	5	5
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)	945	5	5	988	5	5
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			950		1946	948
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			950		1946	948
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		93	98
cM capacity (veh/h)			723		71	316
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	950	993	10			
Volume Left	0	5	5			
Volume Right	5	0	5			
cSH	1700	723	116			
Volume to Capacity	0.56	0.01	0.09			
Queue Length 95th (m)	0.0	0.2	2.1			
Control Delay (s)	0.0	0.2	39.1			
Lane LOS		A	E			
Approach Delay (s)	0.0	0.2	39.1			
Approach LOS			E			
Intersection Summary						
Average Delay			0.3			
Intersection Capacity Utilization			61.8%	ICU Level of Service		B
Analysis Period (min)			15			