January 12, 2024

Mr. Navid Lahouti, M. Eng
Laxim Inc. Managing Director

Afflatus Development Advisor.
8199 Yonge Street, Suite 405
Thornhill, ON L3T 2C6

Re: Proposed Residential Development
18642 Leslie Street (YR 12), Town of East Gwillimbury, York Region
Transportation Study

CGE Transportation Consulting is pleased to submit this Transportation Study for the proposed residential development situated at 18642 Leslie Street (YR 12) in the Town of East Gwillimbury, York Region.

The proposal features 18 duplex townhouses, a single triplex townhouse, and an existing heritage dwelling serving as a mixed-use live/work unit. The development plan also includes the provision of 47 parking spaces for residents and visitors.

Access to the site is proposed via a Right-in, Right-Out (RIRO) access connection to Leslie Street (YR 12).

The study shows that the anticipated site traffic volumes can be accommodated within the adjacent road network capacity and that no improvements are required. The study also confirms that the proposed number of parking spaces will adequately accommodate the developments' peak parking demands.

Should you have any questions regarding this study, please do not hesitate to contact the undersigned.

Yours truly,

CGE TRANSPORTATION CONSULTING

Casey Ge, P.Eng.
President

TABLE OF CONTENTS

Page

LIST OF TABLES

LIST OF FIGURES

TABLE OF APPENDICES

1.0 INTRODUCTION

CGE Transportation Consulting has been engaged by Laxim Inc. to prepare a Transportation Study in support of an Official Plan amendment to permit residential development. The project site is located at 18642 Leslie Street (YR 12) in the Town of East Gwillimbury, York Region. The subject lands are located on the west side of Leslie Street (YR 12), north of Manor Hampton Street.

Existing Site Description:

The site is bounded by residential and mixed-use developments to the north, south and west and Leslie Street (YR 12) to the east. It is currently zoned as “Mixed-Use One”. Presently, a heritage dwelling occupies the site, accessed via a full-movement connection to Leslie Street (YR 12). A portion of this heritage building will be preserved in the proposed development.

The location of the proposed development is illustrated in

Subject Site

Figure 1.

Development Proposal Description:

The proposal features 18 duplex townhouses, a single triplex townhouse, and an existing heritage dwelling serving as a mixed-use live/work unit. The development plan also includes the provision of 47 parking spaces for residents and visitors. Access to the development is proposed via a Right-In, Right-Out (RIRO) access connection to Leslie Street. Full Build for the project is targeted for 2028, with all components being developed in a single phase.

To meet the Region's requirements for the future expansion of Leslie Street (YR 12), expected to occur after the project's full completion, the site plan (referenced in **Figure 2**) delineates both the temporary and permanent RIRO access points. That is, there will be a temporary access point that will be used until Leslie Street is widened, after which a permanent RIRO access will be established.

Scope of Work:

During a pre-application consultation meeting, the Region recommended that the proposed access to Leslie Street (YR 12) be restricted to a Right-In, Right-Out (RIRO) configuration. Additionally, they noted that should the applicant opt for full-movement access at Leslie Street (YR 12), a Transportation Mobility Plan in line with the York Region Transportation Mobility Plan Guidelines for Development Applications (2016) will be necessary. The Region's comments are detailed in **Appendix A**.

Considering the development's commitment to a RIRO access and the projection that site traffic volumes will not exceed 25 vehicles per hour, this study presents a scoped traffic impact analysis. The analysis includes the following intersections.

The study area consists of the following intersections:

- Leslie Street (YR 12) & Colonel Wayling Boulevard/Manor Hampton Street
- Leslie Street (YR 12) & Site Access

- The study analyzed the following scenarios:
    - Existing 2023 Conditions
    - Future Background 2028 Conditions
    - Full Build 2028 Conditions
- The analysis has been conducted for both weekday AM and PM peak hours.

Subject Site

Figure 1 Site Location

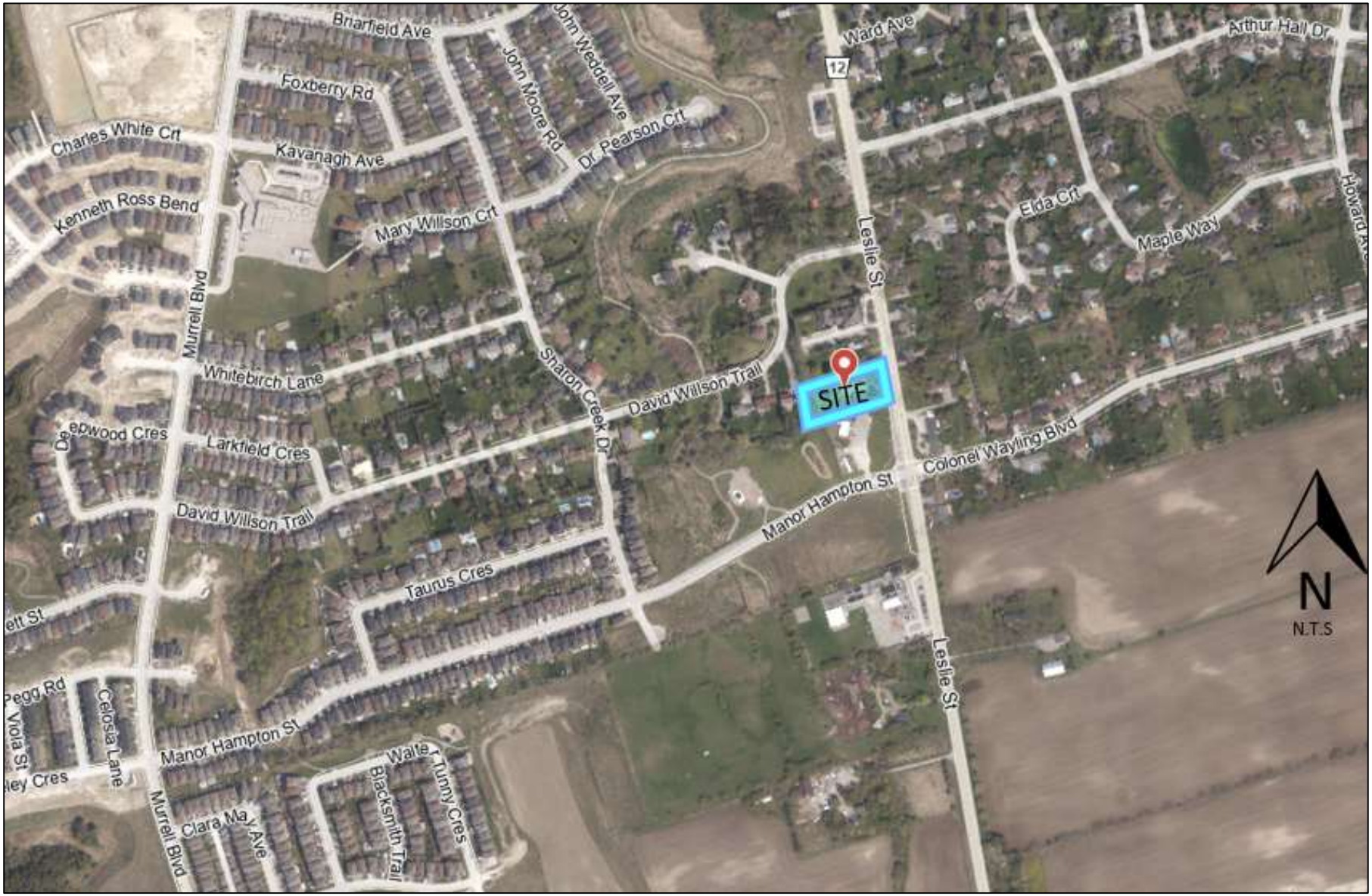
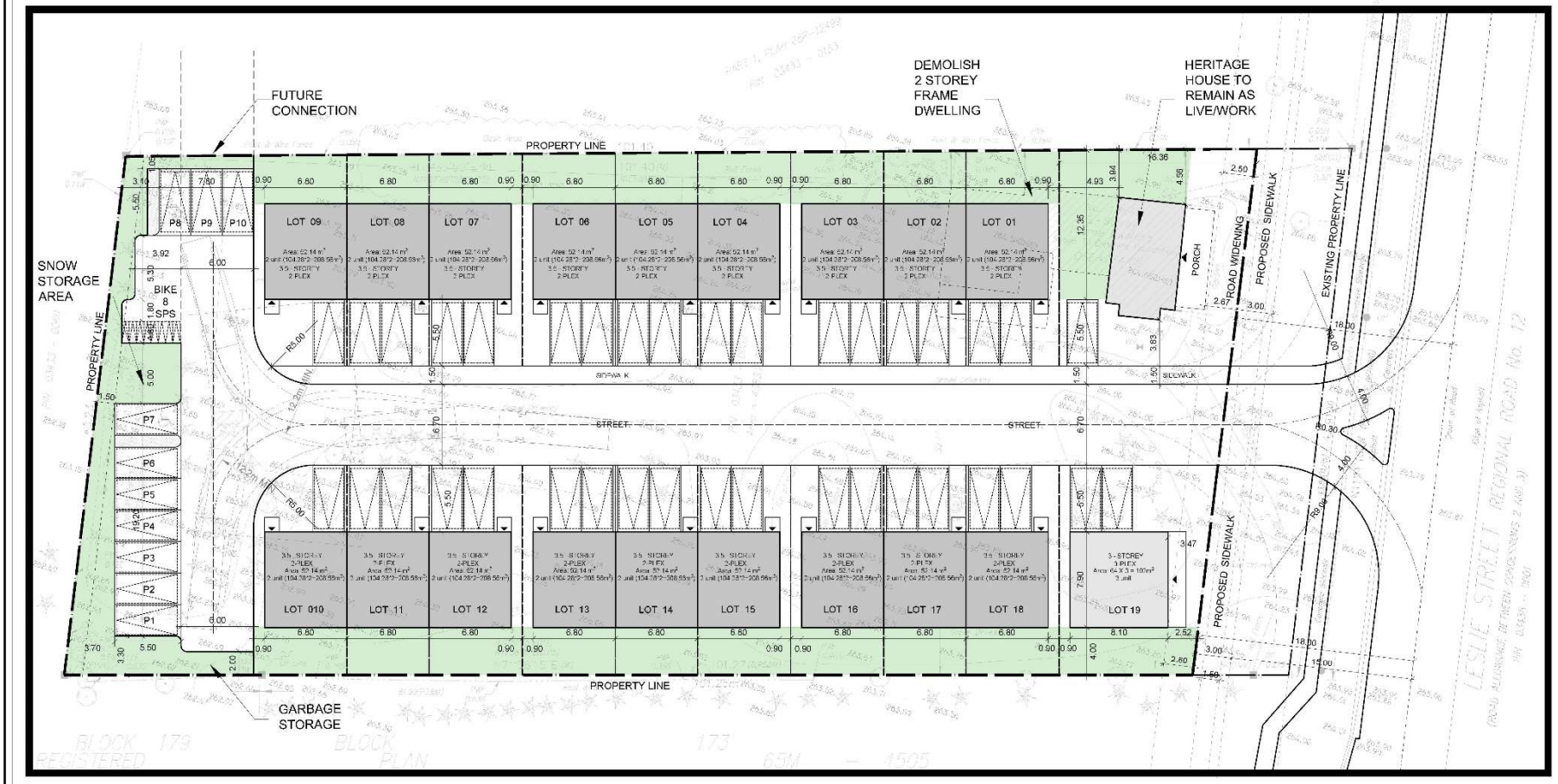
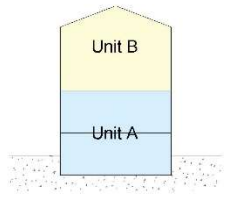


Figure 2 Proposed Site Plan





N

PROJECT NAME: 18642 Leslie St East Gwillimbury, Ontario	REVISION NO.:
SC: 1:250	DRAWN:
DRAWING TITLE: SITE PLAN	DWG NO.: A-01
SHEET SIZE: A0	
DATE: JANUARY 2024	

2.0 EXISTING AREA

2.1 Existing Roadway Conditions

The existing road network, lane configuration and existing traffic control for the study area are described below and shown in **Figure 3**.

Leslie Street (YR 12) is a two-lane north-south roadway and maintains a posted speed limit of 50 km/h in the vicinity of the site. It is functionally classified as a Major Arterial under the jurisdictional control of the Region. Within the study area, continuous sidewalks are provided along the west side of the street and a paved shoulder on the east side of the street.

Colonel Wayling Boulevard/Manor Hampton Street is a two-lane east-west roadway with a posted speed limit of 40 km/h and 50 km/h, respectively, in the vicinity of the site. Continuous sidewalks are provided along both sides of each street.

Leslie Street (YR 12) & Colonel Wayling Boulevard/Manor Hampton Street is a signalized intersection. All approaches consist of a left-turn lane, a through lane and a right-turn lane.

The proposed main access will be a Right-In, Right-Out (RIRO) access connection to Leslie Street (YR 12). It is located approximately 90 metres north of Leslie Street (YR 12) & Colonel Wayling Boulevard/Manor Hampton Street signalized intersection.

The *2023 10-Year Roads and Transit Growth Capital Construction Program* indicates that a section of Leslie Street (YR 12) adjacent to the site is slated for widening in 2031. Notably, due to the project's small scale and anticipated low traffic volumes of less than 25 vehicles per hour, full build conditions for this development are expected by 2028. Consequently, this study did not consider the 2031 road widening, as the development's completion is anticipated to precede it. However, in line with the Region's recommendations, the proposed development accounts for the right-of-way (ROW) needed for the anticipated expansion. The proposed site plan details both temporary and permanent Right-In, Right-Out (RIRO) access points to be used before and after the street widening, respectively.

2.2 Multi-Modal Transport

The area is currently served by York Region Transit, which operates bus route #050 (Queensway) along Leslie Street (YR 12) with an approximate 20-minute headway. Two bus stop locations are conveniently located within a 100-meter walking distance.

Continuous sidewalks can be found in the vicinity of the subject site as detailed above. Adjacent to the site, Leslie Street (YR 12) is currently equipped with a paved shoulder that can accommodate cyclists.

2.3 Traffic Volumes

Traffic data collection for the study area intersection was performed on May 25, 2023. **Figure 4** displays existing traffic volumes. The existing traffic volume counts and signal timing plans are shown in **Appendix B**

Figure 3 Existing Road Network

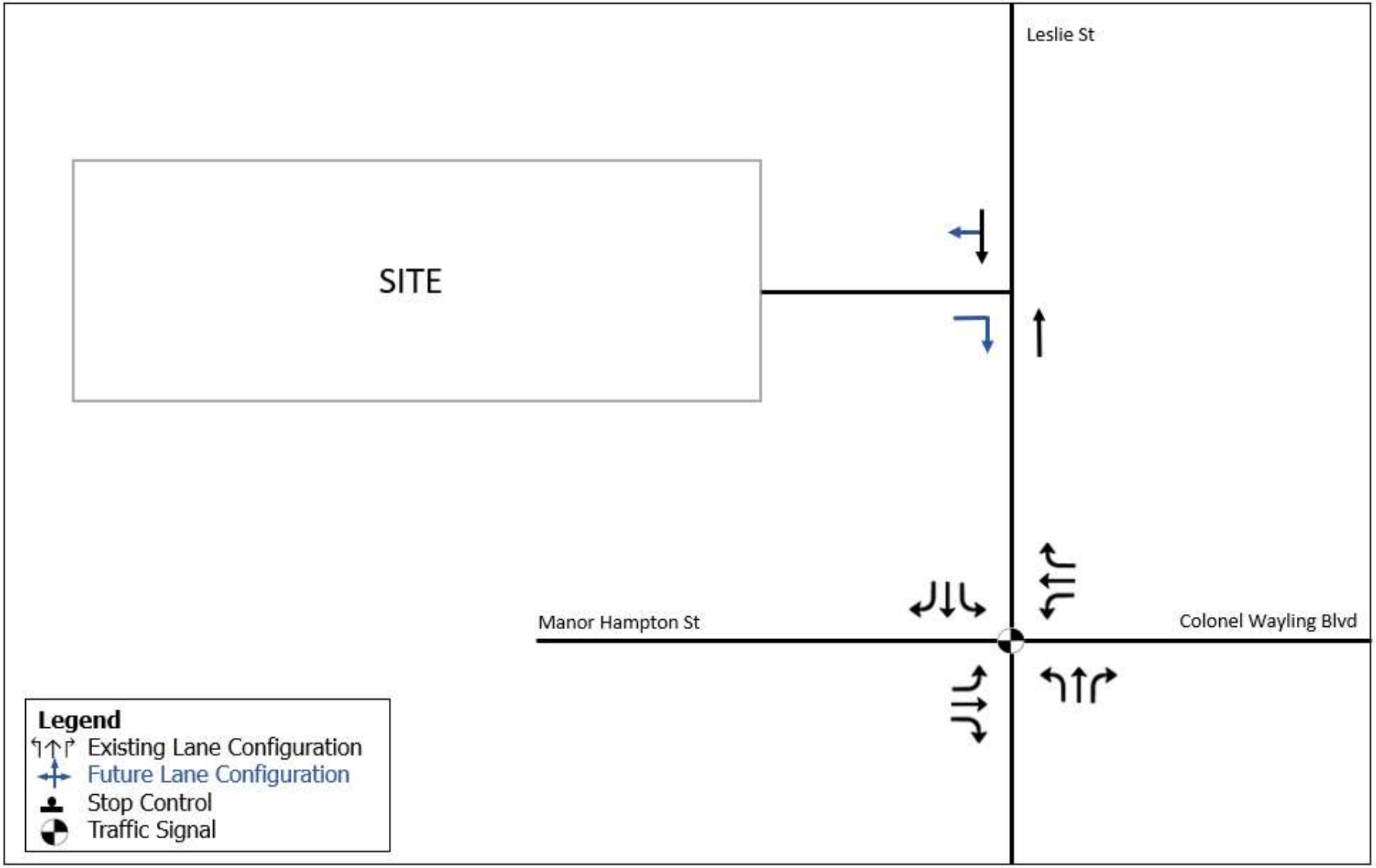
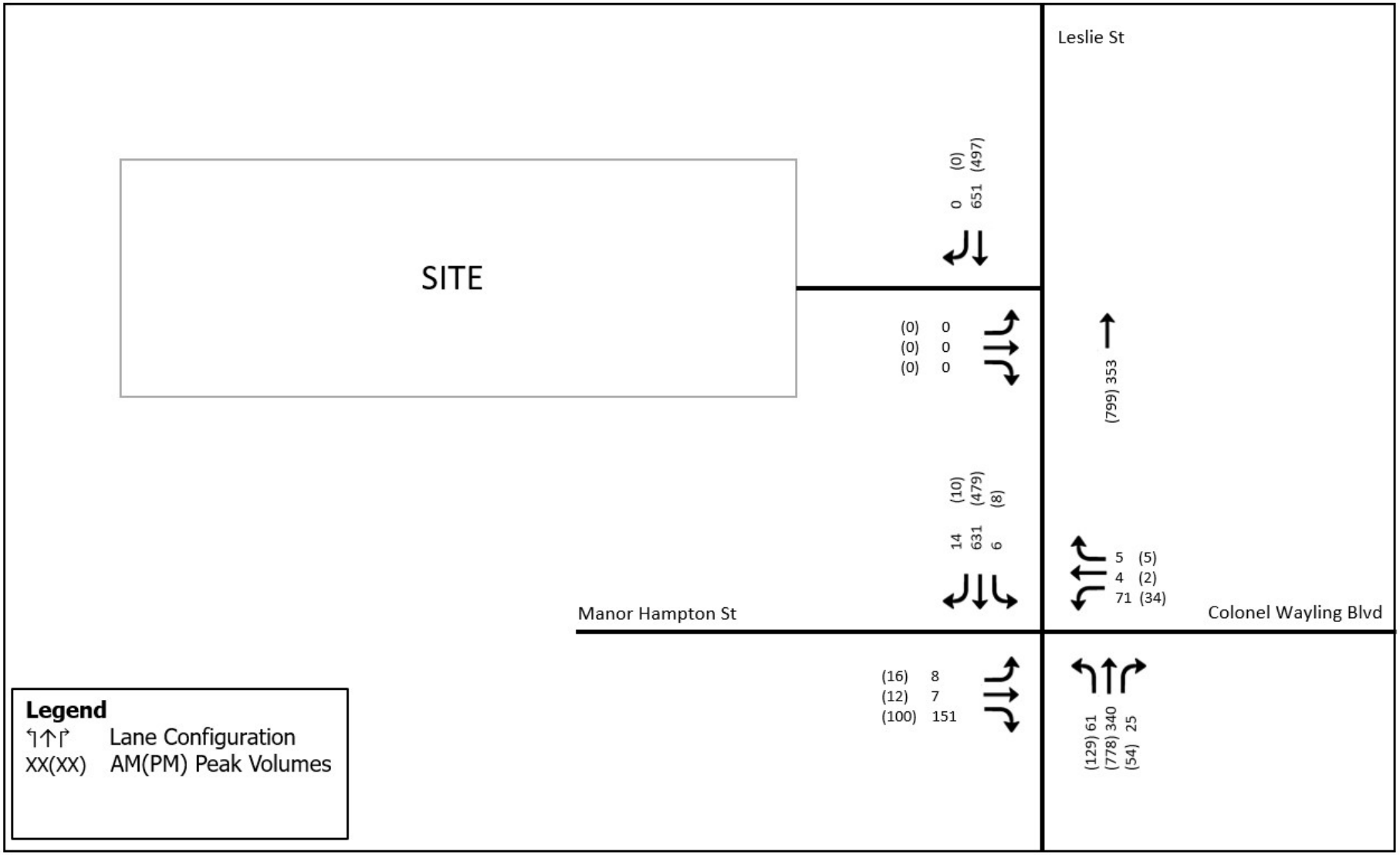


Figure 4 Existing Traffic Volumes



3.0 METHODOLOGY

3.1 Base Assumptions

Intersection capacity analysis was conducted using Synchro v11.0. Trip generation for the proposed development was calculated using the 11th edition of the Institute of Transportation Engineers (ITE) *Trip Generation Manual*.

The input parameters for Synchro, used in conducting the intersection capacity analysis, were based on the recommendations contained in the Region's *Mobility Plan Guidelines for Development Applications.*

Right-turn Lane requirements on Leslie Street were examined using the recommendations in the Regions' *Access Guidelines for Regional Roads.*

3.2 Background Developments

An examination of the Town's planning website indicates that multiple developments are underway near the site. For the purposes of this study, we included only those developments anticipated to be completed by 2028, excluding others with expected full build-out dates beyond that year. The trips from the following background developments are included in **Figure 5**.

- Sharon Corners Development – Retirement Home
- Sharonvit Estates Inc – Residential Development
- Acorn Development Corporation – Residential Development

3.3 Background Growth

Existing traffic volumes were adjusted by an increase of 1.25% annually to estimate background growth for 2028 traffic volumes.

3.4 Site Trip Generation

The proposal features 18 duplex townhouses, a single triplex townhouse, and an existing heritage dwelling serving as a mixed-use live/work unit.

The *ITE Trip Generation Manual, 11th Edition* was used to estimate the projected trips by this development. **Table 2** contains the summary of the land uses and sizes used for the trip generation estimates.

Table 1 Estimated Traffic Generation – Proposed Development

Land Use	Size	Parameter	AM Peak Hour			PM Peak Hour		
			IN	OUT	TOTAL	IN	OUT	TOTAL
Single-Family Attached Housing (High-Rise) LUC 221	39 Dwelling Units	Gross Trips	5	14	19	13	9	22
		Rate (trips/unit)	0.13	0.36	0.49	0.33	0.23	0.56
Live/Work Unit LUC 215/LUC 712	1 Dwelling Units	Gross Trips	0	1	1	1	0	1
		Rate (trips/unit)	0.00	1.00	1.00	1.00	0.00	1.00
	100 m^2 Small Office Building	Gross Trips	1	1	2	1	1	2
		Rate (trips/unit)	1.00	1.00	2.00	1.00	1.00	2.00
Total New Peak Hour Trips to Adjacent Network			**6**	**16**	**22**	**15**	**10**	**25**

The trip generation analysis results indicate that the proposed development is anticipated to generate 22 and 25 new two-way trips to the adjacent network during the weekday AM and PM peak hours, respectively.

3.5 Trip Distribution

Trips for this proposed development were assigned to the surrounding roadway network based on engineering judgement and existing traffic patterns.

The proposed trip distribution for this project is:

- 40% to/from north on Leslie Street (YR 12)
- 45% to/from south on Leslie Street (YR 12)
- 5% to/from east on Colonel Wayling Boulevard
- 10% to/from west on Manor Hampton Street

The project site trips are shown in **Figure 6**. Future Background volumes for 2028 are shown in **Figure 7.** Full Build 2028 volumes are shown in **Figure 8.**

Figure 5 Background Development Trips

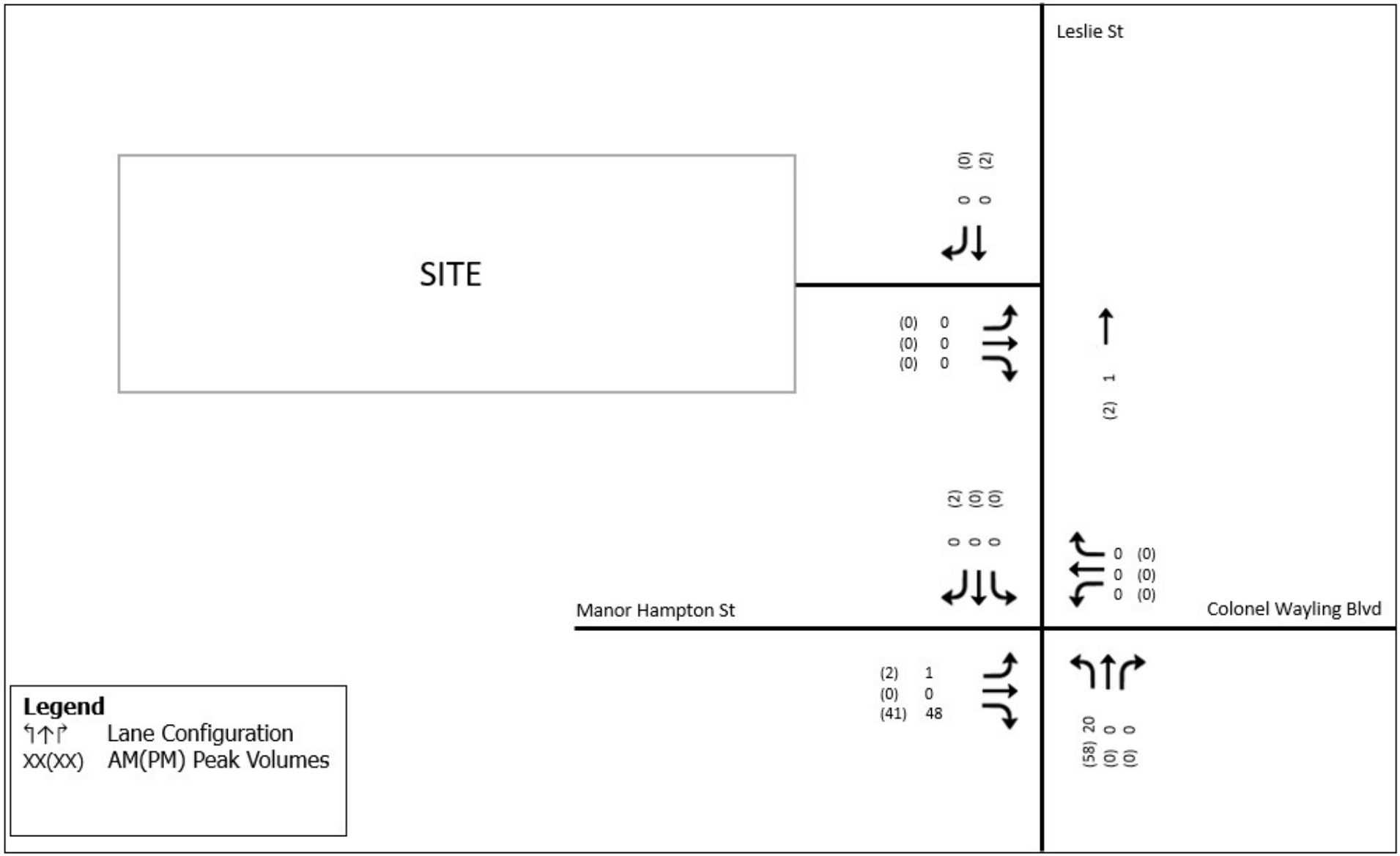


Figure 6 Project Site Trips

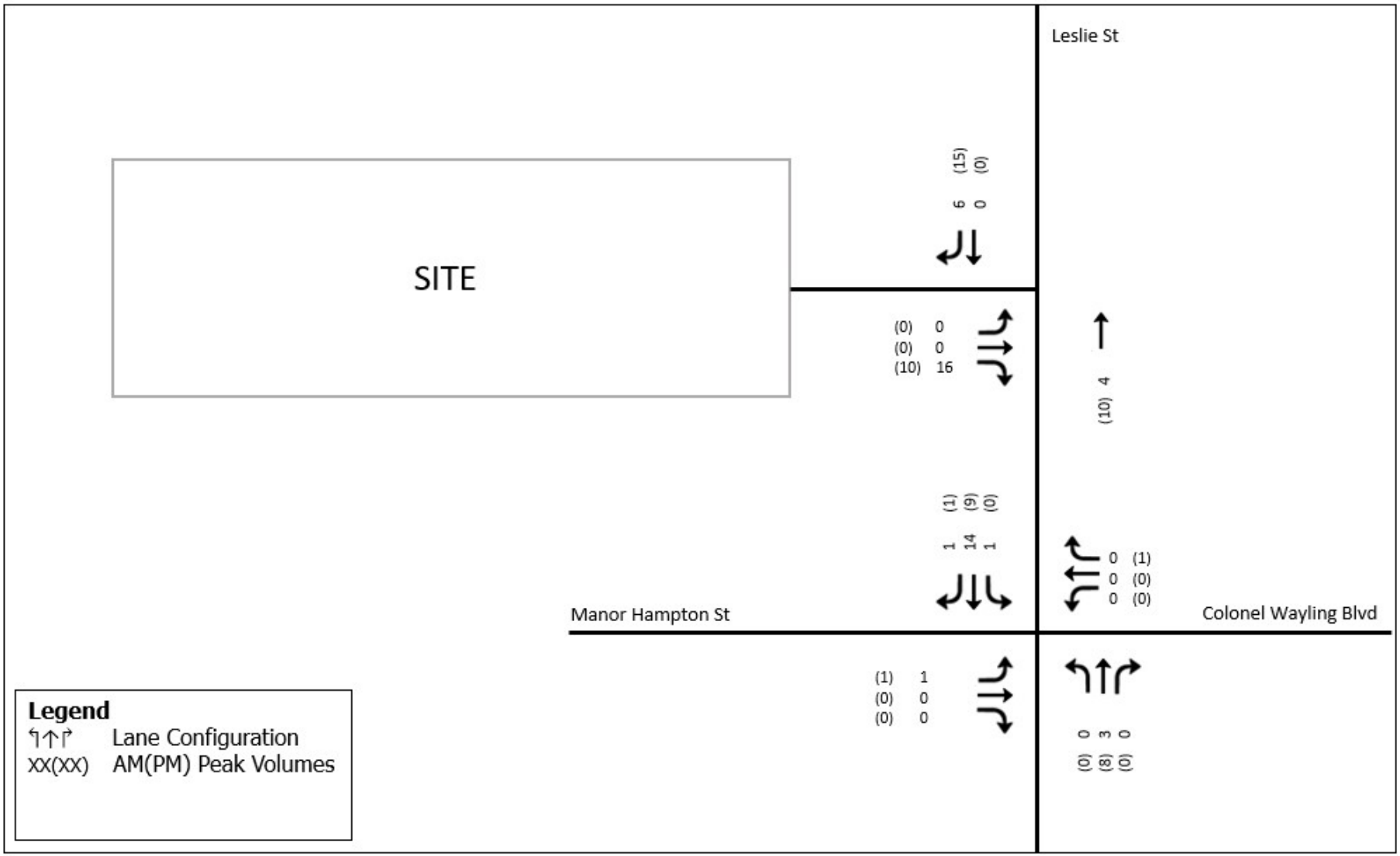


Figure 7 Future Background 2028 Volumes

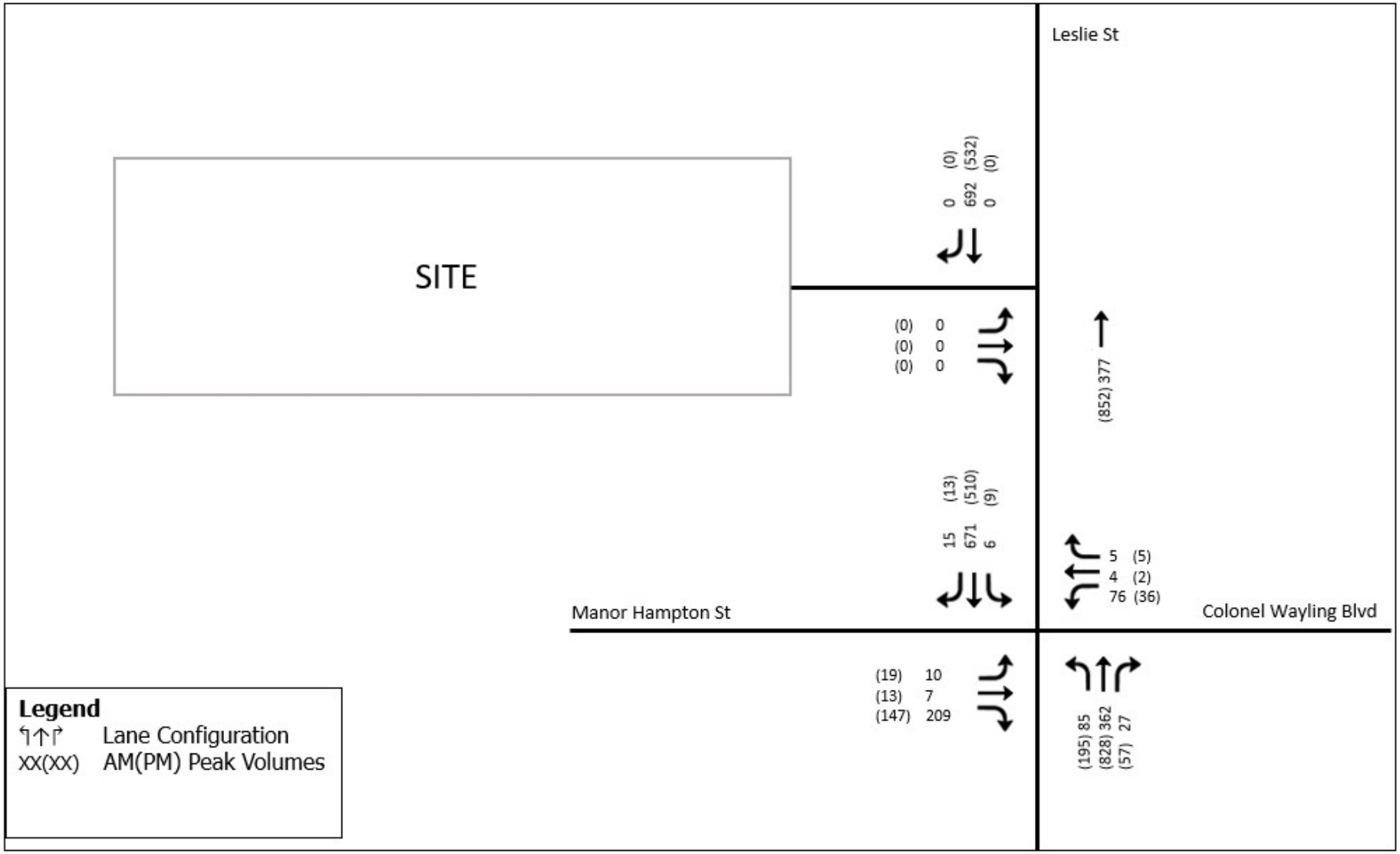
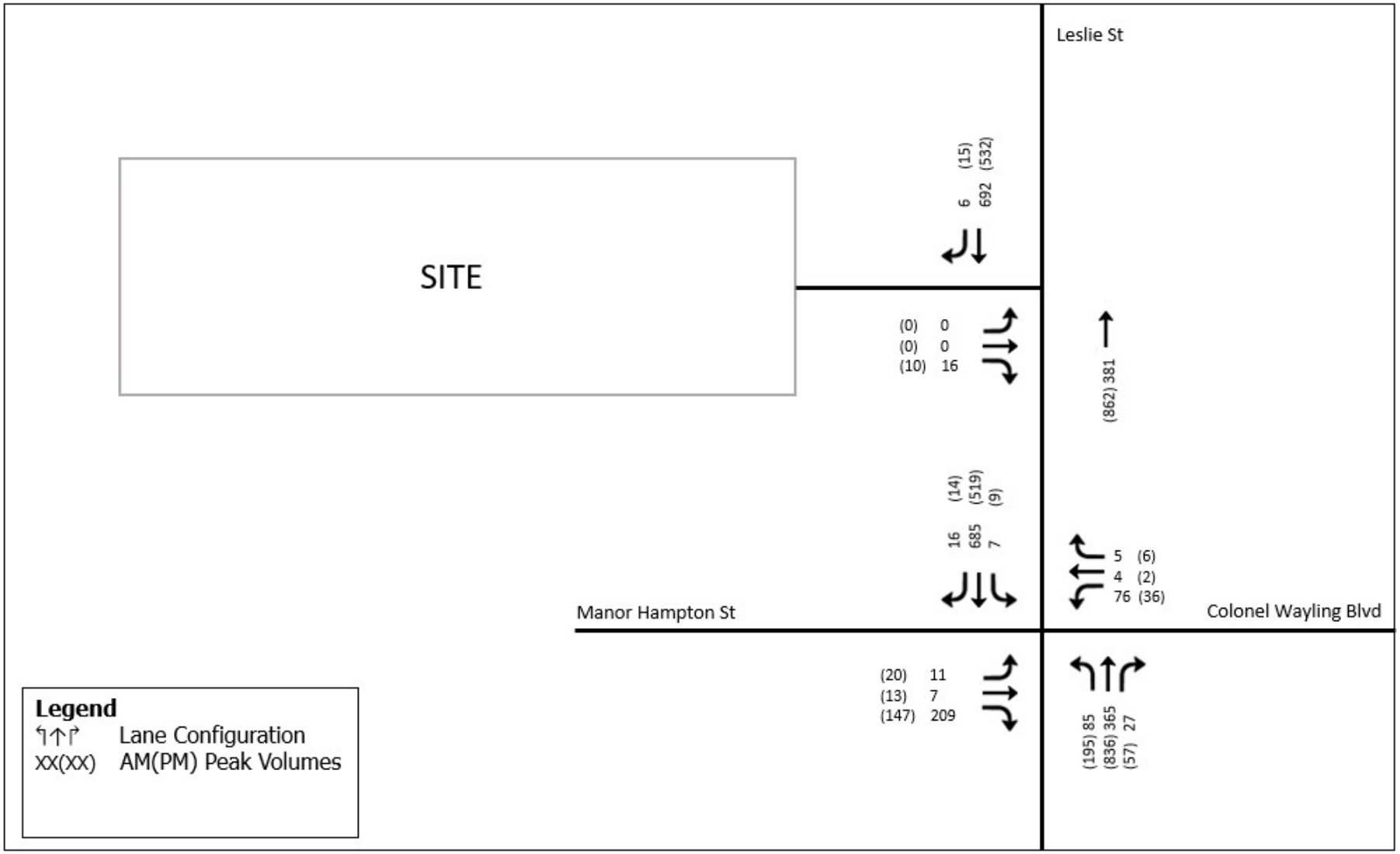


Figure 8 Full Build 2028 Volumes



4.0 TURN LANE/ACCCESS MANAGEMENT

4.1 Right-Turn Lane

As per York Region's *Access Guidelines for Regional Roads*, an exclusive right-turn lane is typically needed when 100 or more right-turning vehicles are expected. **Table 2** shows the volumes used in the analysis.

Table 2 Right-Turn Lane Analysis

Driveway	Approach	AM Volume	PM Volume	Hourly Threshold	Turn Lane needed?
Leslie St (YR 12) & Site Access	SB	6	15	100	No

According to trip generation estimates, the highest right-turn movement will be 15 vph in the PM peak hour. This does not meet the Region's threshold for a right-turn lane. A southbound right-turn lane is not required at the access connection to Leslie Street (YR 12).

4.2 Intersection/Decision Sight Distance

Minimum sight distance requirements were evaluated based on the guidelines provided in the Transportation Association of Canada's *Geometric Design Guide for Canadian Roads, Chapter 9, Intersections (2017)*.

For a conservative analysis, the sight distance evaluation was conducted using a design speed of posted speed + 10 km/h and was calculated using the following formula.

$$ISD = 0.278\, V_{major}\, t_g \qquad (9.9.1)$$

Where:

ISD = intersection sight distance (length of the leg of sight triangle along the major road) (m)

V_{major} = design speed of the major road (km/h)

t_g = time gap for minor road vehicle to enter the major road (s)

Design Vehicle	Time Gap (t_g)(s) at Design Speed of Major Road
Passenger car	7.5
Single-unit truck	9.5
Combination truck (WB 19 and WB 20)	11.5
Longer truck	To be established by road authority

The calculated intersection sight distance using the above formula and parameters results in the following:

- Passenger vehicle: 0.278*60*7.5 = 125.1 metres
- Delivery vehicle: 0.278*60*9.5 = 158.46 metres

Table 3 Sightline Distance Review at Leslie Street

Intersection	Speed		Decision Sightline		
	Posted	Design	Required	Meets Requirements?	
				North	South
Leslie Street and Site Access	50 km/h	60 km/h	159 m	Yes +200 m	Yes +200 m

Field observations show that there are no sight distance obstructions that obscure the view of vehicles at the proposed driveway.

Leslie Street (YR 12) at Site Access looking north

Leslie Street (YR 12) at Site Access looking south

4.3 Site Circulation Analysis

To ensure the feasibility of the proposed driveway connection, parking spaces, and garbage loading area, an AutoTURN swept path analysis was conducted. This analysis generated vehicular turning templates to confirm the accessibility of these areas.

The results of the AutoTURN analysis demonstrate that the design accommodates the necessary vehicle movements effectively. Detailed diagrams from this analysis are provided in **Appendix C**.

4.4 Access Spacing

The proposed RIRO access will be located approximately 90 metres north of Leslie Street (YR 12) & Colonel Wayling Boulevard/Manor Hampton Street signalized intersection meeting the requirements presented in the Region's access guidelines.

Existing Building and Site Access

5.0 CAPACITY ANALYSIS

The Transportation Research Board's Highway Capacity Manual (HCM) utilizes a term "level of service" (LOS) to measure how traffic operates in intersections. There are currently six levels of service ranging from A to F. Level of Service "A" represents the best conditions and Level of Service "F" represents the worst. Synchro software was used to determine the level of service for intersections in the study area. All worksheet reports from the analyses can be found in **Appendix D**.

Table 4 shows the control delay per vehicle associated with LOS A through F for signalized and unsignalized intersections.

Table 4 Highway Capacity Manual Levels of Service and Control Delay

Signalized Intersection		Unsignalized Intersection	
Level of Service	**Control Delay per Vehicle (sec)**	**Level of Service**	**Control Delay per Vehicle (sec)**
A	≤ 10	A	≤ 10
B	> 10 and ≤ 20	B	> 10 and ≤ 15
C	> 20 and ≤ 35	C	> 15 and ≤ 25
D	> 35 and ≤ 55	D	> 25 and ≤ 35
E	> 55 and ≤ 80	E	> 35 and ≤ 50
F	> 80	F	> 50

The following assumptions were made to calibrate Synchro model:

- Saturation flow of 2,000 vphpl was used for all movements in Regional intersections.
- Peak Hour Factors (PHFs) were calculated for the intersection based off the 15-minute intervals of the turning movement counts.
- Truck percentages, pedestrian and cyclist counts was derived from collected turning movement counts.

5.1 Capacity Analysis Results

Table 5 shows the LOS, control delay, and 95th percentile queue length for existing, future background, future total and future year conditions.

Table 5 Intersection LOS, Delay, and Queue by Movement

Intersection	Existing 2023 Traffic Conditions		Future Background 2028 Traffic Conditions		Full Build 228 Traffic Conditions	
	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
Leslie St & Manor Hampton St/Colonel Wayling Blvd	No Critical Movement	No Critical Movement	No Critical Movement	No Critical Movement	No Critical Movement	No Critical Movement
Overall	**B (12.8s)**	**A (9.5s)**	**B (14.3s)**	**B (11.7s)**	**B (14.4s)**	**B (11.8s)**
Leslie St & RIRO Site Access					A (0.2s)	A (0.1s)

Our analysis concludes that the proposed development will have no significant impact on traffic movements at the study area's intersections. The planned Right-In, Right-Out (RIRO) access is expected to operate under excellent conditions, and the minimal queues at the intersection will not interfere with the operation of the adjacent signalized intersection of Leslie Street (YR 12) and Manor Hampton Street/Colonel Wayling Boulevard. Consequently, no additional traffic improvements are deemed necessary for this development.

6.0 PARKING & LOADING REQUIREMENTS

In accordance with the Town's Zoning By-law 2018-043 parking requirements, the applicable rates for the proposed development provided in **Table 6**.

Table 6 Zoning By-law 2018-043 Parking Requirements

Vehicle Parking				
Category	**Size**	**Required**		**Provided**
		Rate	**Spaces**	**Spaces**
Multiple Dwelling (Resident)	39 Units	1.0 space for every dwelling unit	39	36
Apartment Dwelling (Visitor)		0.25 space for every dwelling unit	10	10
Live/Work Unit (Accessory Apartment)	1 Unit	1 in addition to the required parking for the dwelling unit	1	1
Total Parking		**49**		**47**

The proposed development plans include 49 vehicle parking spaces and eight bicycle parking spaces, resulting in a deficiency of only two vehicle parking spaces, or a 4% shortfall from the By-law requirements. Typically, a parking justification analysis would be required for a deficiency of 10% or more. Therefore, it is recommended to seek a waiver for this minor vehicle parking deficiency.

7.0 TRANSPORTATION DEMAND MANAGEMENT (TDM) PLAN

7.1 TDM Strategies

Transportation 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; and
- Reduced personal transportation costs and energy consumptions.

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

Typical TDM measures include:

- Carpool/vanpool ride sharing, with emergency ride home;
- High-occupancy vehicle (HOV) lanes in existing rights-of-way for bus, taxis, and cars with three or more occupants;
- Bicycle and pedestrian programs;
- Promotion of public transit, including employer transit fare incentives;
- Parking supply and management strategies;
- Use of “smart card” technology and other advances in the pricing and marketing of transportation services;
- Establishment of Transportation Management Associations (TMAs) in employment areas and car-sharing organizations in residential areas;
- Programs to promote flexible working hours and telecommuting; and,
- Application of incident management systems and Intelligent Transportation System (ITS) innovations.

Development of site-specific TDM measures for the proposed site is based on a 2028 planning horizon. There, in the context that the primary objective is to reduce single-occupancy vehicle use, the plan will review opportunities to set realistic targets for increased use of carpooling, transit, cycling, and walking trips.

The Regular Route's current transit stop is located approximately 200 metres (walking distance) from the subject site.

7.2 Communication Strategy

The developer will develop a Communication Strategy to document the steps that will need to

be undertaken at the appropriate time to assist York Region and the Town of East Gwillimbury to effectively deliver Information Packages that include a community map, York Region Transit route maps, GO Transit route maps and schedules, information on York Region Smart Commute and its programs and pre-loaded PRESTO Cards to residents.

This communication strategy shall also include a physical location for distribution of the Information Packages and pre-loaded PRESTO Cards. The applicant will be responsible for the coordination and for providing a venue for the distribution of the PRESTO cards.

Each event will be approximately 2 hours of staff time, can serve all 40 residential units. The applicant shall coordinate specific event details with York Region/York Region Transit staff allowing a minimum of 2 months' notice (value to be determined). This outreach event is recommended to extend the invite to the Region, York Region Transit, and Town of East Gwillimbury staff to answer any questions regarding the existing and future transit and active transportation facilities within the vicinity of the subject site.

7.3 TDM Monitoring and Measure Success

Site Assessment:

York Region should schedule an onsite assessment with the developer to understand infrastructure accessibility of all commuting modes and surrounding land uses (trails and cycle lanes etc.). The review will help guide cost-effective transportation strategies that could reduce auto trips.

Baseline Commute Survey:

York Region, in collaboration with the residents, should conduct a confidential transportation survey amongst all residents in the proposed residential development. The comprehensive survey will provide a measure of current commuter traffic patterns, modes of transportation, behaviors, and perceptions for the area.

Results will also assist in identifying the demand for sustainable transportation options and opportunities to provide better site access and reduce auto trips (such as, a resident initiated car- pooling program).

Follow-up Commuter Survey:

York Region, in collaboration with residents, should conduct a follow-up TDM survey two years after the baseline commuter survey. Results will identify areas of success and improvement for sustainable options for the development and surrounding area. A revised work plan could be developed with strategies to improve sustainable transportation that meets the needs of the residents.

7.4 Summary of the TDM Checklist

York Region, in consultation with local municipalities, has developed a Transportation Demand Management checklist to assist in the development of a comprehensive TDM Plan. York Region and local municipalities will consider other recommendations beyond the requirements outlined in the checklist, as long as it meets the objectives of the Regional and local municipal Official Plans and policies.

The proposed TDM measures that can be implemented by the Developer, organized as outlined in Table 13 in the Region's Transportation Mobility Plan Guidelines (i.e., the TDM Checklist) and includes the associated costs and implementation plan. The implementation plan is shown below in **Table 7**.

Table 7 Transportation Demand Management Plan Summary

TDM Measure	Unit Price	Quantity	Total Cost	Cost Borne By
Active Transportation (Pedestrian and Cycling) connections including: • Internal pedestrian/cycling circulation via sidewalks, bike lanes or multi-use paths. • Pedestrian/cycling connections to transit facilities. • Fine-grid Active Transportation Network.				Included in Construction Cost
PRESTO Cards (Transit incentive)	$154[1]	40	$6,160	Applicant
TDM Information Package (YRT Maps, Cycling and Trail Maps, GO Schedules)	$10	40	$400	Applicant
Monitoring Program and Travel Survey/Report	$3,000	2	$6,000	Applicant
TDM Event (Information Session)	$3,000	1	$3,000	Applicant
Membership with Smart Commute			TBD	Applicant
Illumination of pedestrian/cycling connections				Included in Construction Cost
Outreach Program			TBD	Cost to be assumed by York Region and/or City of Richmond Hill should they decide to start such programs.
Total Cost to Applicant			**$15,560**	

The overall cost for the TDM measures associated with the proposed residential development is estimated at $15,560 for the applicant.

[1] *Effective January 23, 2023 (YRT Website)*

8.0 SUMMARY AND CONCLUSIONS

This Transportation Study is in support of an Official Plan to permit a residential development. The project site is located at 18642 Leslie Street (YR 12) in the Town of East Gwillimbury, York Region. The subject lands are located on the west side of Leslie Street (YR 12), north of Manor Hampton Street.

Proposed Development

The proposal features 18 duplex townhouses, a single triplex townhouse, and an existing heritage dwelling serving as a mixed-use live/work unit. The development plan also includes the provision of 47 parking spaces for residents and visitors. Access to the development is proposed via a Right-In, Right-Out (RIRO) access connection to Leslie Street.

Trip Generation

The trip generation analysis results indicate that the proposed development is anticipated to generate 22 and 25 new two-way trips to the adjacent network during the weekday AM and PM peak hours, respectively.

Turn Lanes

According to trip generation estimates, the highest right-turn movement will be 15 vph in the PM peak hour. This does not meet the Region's threshold for a right-turn lane. A southbound right-turn lane is not required at the access connection to Leslie Street (YR 12).

Parking and TDM

The proposed development plans include 49 vehicle parking spaces and eight bicycle parking spaces, resulting in a deficiency of only two vehicular parking spaces, or a 4% shortfall from the By-law requirements. Typically, a parking justification analysis would be required for a deficiency of 10% or more. Therefore, it is recommended to seek a waiver for this minor deficiency.

Additionally, the study outlines a commitment to Transportation Demand Management (TDM) efforts. These efforts are expected to further reduce parking demand, making the proposed parking supply adequate to meet the parking demands of the proposed development.

Appendix A:

York Region Comments

David McKay

From: Navid Lahouti <nl@laxim.ca>
Sent: May-01-23 2:28 PM
To: David McKay
Cc: Jay Murray; Ali Asadinik; PK; Khurram Tunio; Brent Layton
Subject: Fw: Development Review Committee - PSC.23.E.0120 (18642 Leslie Street)
Attachments: image002.jpg; DS-207.pdf; PSC.23.E.0120 Checklist.pdf; OPA checklist.pdf

Hi All,

Please see some region's comments after the precon Khurram at Crozier forwarded to us so everyone is updated on this.

Thanks,
Navid
--
Navid Lahouti, M. Eng.
Laxim Inc. Managing Director
Afflatus Development Advisor
8199 Yonge Street Suite 405
Thornhill, ON
Cell:416-220-0123
www.afflatusconsulting.ca

From: Abbas, Asif <Asif.Abbas@york.ca>
Sent: Friday, April 28, 2023 4:20 PM
To: Greco, Antonio <AGreco@eastgwillimbury.ca>
Subject: RE: Development Review Committee - PSC.23.E.0120 (18642 Leslie Street)

Hi Antonio,

Thank you for inviting York Region to the above noted Pre-Consultation meeting. We understand the purpose of this meeting is to discuss a proposed development to facilitate 38 stacked townhouse units. Existing heritage house is proposed to remain and be converted to commercial use. Based on our review, York Region provides the following comments:

18642 Leslie Street:

- **Regional Planning Comments**:
  Regional Official Plan, 2022
  - The subject lands are located within the Urban on the Regional Structure Map (Map 1). The lands are designated “Community Area” (Map 1A) and within the Built Up Area (Map 1B). Any proposed development needs to be in keeping with the applicable Provincial Plans, Regional and Local Official Plan policies.

- **Transportation Planning**
  - The applicant will be required to provide a basic 36 metre right-of-way for this section of Leslie Street. All property lines shall be referenced from a point 18.0 metres from the centerline of construction on Leslie Street and any lands required for additional turn lanes at the intersections will be conveyed to York Region for public highway purposes, free of all costs and encumbrances, to the satisfaction of York Region Solicitor. It should be noted that based on the Region's Official Plan the right-of-way requirement has been reduced from the maximum of 41.0 m right-of-way that the Region is entitled to obtain. An updated site plan shall be provided.
  - Do to the spacing of the access on Leslie Street, the access will be restricted to right-In right Out. The access shall be consistent with the Region's Access Guidelines (2020).
  - The applicant shall update the site plan to demonstrate that the development will protect for a potential vehicular interconnection with to the lands to the north, should these lands redevelop in the future with a compatible land use. The Site Plan shall label the location of where the future interconnection is protected for.
  - The Site Plan shall be updated to demonstrate that minimum 5 x 5 metre daylight triangle are provided for both corners at the proposed driveway to Leslie Street, such that no part of the building or other object is located within the triangles that may obstruct access sightlines.
  - The applicant shall provide a platform for a future minimum 3.0 metre wide Multi Use Path along the site frontage of Leslie Street. This shall be labelled on the site plan.
  - The Site Statistics shall be updated to include the existing heritage house land use, which is understood to be converted to commercial use.
  - Subject to satisfying all of the pre-submission transportation comments above, a comprehensive Transportation Mobility Plan may not be required for this development. However, should the applicant pursue a full-movement access at Leslie Street then a scoped down Transportation Mobility Plan, consistent with the basic principles of the York Region Transportation Mobility Plan Guidelines for Development Applications (2016), will be required.
  - The Region will review and provide further comments and conditions once a formal application has been submitted.

- **Development Engineering Comments**:
  - Attached is a checklist of submission requirements for the proposed site plan application. As per Transportation Planning's comments the new entrance will need to follow DS 207.
  - A minimum site plan review fee of $3,800 will be applicable.

- **Servicing- Infrastructure Asset Management (IAM)**:
  - It is IAMs understanding that the development will connect to local infrastructure in the area. The following are IAM's requirements for the proposed development application:]

  - Prior to final approval, the Town of East Gwillimbury shall confirm to the Region that municipal water servicing allocation has been set aside for the residential development from the remaining capacity assigned to the Town. If the Town does not grant this development allocation from the existing capacity assignments to date, the proposal may require additional Regional infrastructure based on conditions of future capacity assignments.

  - A functional servicing report and site servicing plan is to be submitted to support the development application. The report should detail, at a minimum, anticipated water and wastewater demands and servicing pressures, how the services will be provided, including engineering drawings of proposed service connections to the local municipal systems, downstream capacity analyses, hydrant flow test, etc.

<u>Proximity to Regional Infrastructure</u>

- The Owner is advised that the Regional 600mm watermain on Leslie Street, is in close proximity, east of the development. The integrity of the above Regional infrastructure shall be protected and maintained at all times during construction and grading of the proposed development.

- Please be advised that any works in close proximity to the region's watermain or related to crossing the regional watermain will require a separate engineering approval. These works shall be designed and installed to the satisfaction of the Region. The Owner shall submit detailed engineering drawings showing the plan and profile views of the proposed works, including the crossing details, to the Region for review and approval prior to construction. Further details, including the regional inspection and compliance requirements, will be provided as part of the engineering approval to be issued at a later time.

- Conceptually we have no issues with a townhouse infill development at 18642 Leslie Street. There are Town WM and SAN services on the east side of Leslie and further south at the Manor Hampton intersection. The WM crossing may be acceptable. The proposed SAN should have an alignment west of the Regional 600mm and avoid the double crossing if feasible. Regional acceptance of this proposal will be contingent on the submittal of all supporting engineering documentation to the satisfaction of IAM.

Complete Application Requirements:

- In addition to a digital copy of all the information submitted to the Town provided as part of the circulation package in support of a Complete Application, we also require the following items should an OPA and ZBA be required to facilitate the proposed development
- A Planning Justification Report
- Draft OPA, including Schedules
- Draft ZBA, including Schedules
- OPA checklist

- Fee will be determined once required applications have been determined. All applications are subject to York Region Development Application Review Fees. Please refer to York Region's Development Application Fees on our Development Planning Review webpage for fee information, payment methods and details. Fees paid by cheque need to be made payable to "The Regional Municipality of York".

Please be advised that the comments above are based upon the information provided as part of this pre-consultation meeting request. Should the scope of the proposal change and/or should it be determined that additional approvals are required under the Planning Act, our comments and requirements may be subject to change.

Please contact myself should you or the applicant have any questions regarding this e-mail or wish to discuss this proposal further. Additional information can also be found on York Region's Development Planning Review page.

Regards,

Asif Abbas, RPP, MCIP | Planner, Planning and Economic Development Branch, Corporate Services

---

1-877-464-9675 ext. 77271

Our Mission: **Working together to serve our thriving communities – today and tomorrow**

From: Greco, Antonio <AGreco@eastgwillimbury.ca>
Sent: Monday, April 10, 2023 10:32 AM
To: Stevenson-Byers, Brittny <BStevensonByers@eastgwillimbury.ca>; Brake, Kevin <kbrake@eastgwillimbury.ca>; Shawna Davidson <shawna.davidson@eastgwillimbury.ca>; Gates, Janet <jgates@eastgwillimbury.ca>; Huber, Chelsea <chuber@eastgwillimbury.ca>; Mazzotta, Frank <fmazzotta@eastgwillimbury.ca>; Peter

<pneuman@eastgwillimbury.ca>; Massadeh, Jamal <JMassadeh@eastgwillimbury.ca>; Mercer, Paul <PMercer@eastgwillimbury.ca>; Nichols, Jennifer <jnichols@eastgwillimbury.ca>; Burns, Chris <CBurns@eastgwillimbury.ca>; Andrea Staples <astaples@eastgwillimbury.ca>; Dachs, Kirsten <KDachs@eastgwillimbury.ca>; Fraser, Stephanie <SFraser@eastgwillimbury.ca>; Zanjanchi, Pardis <pzanjanchi@eastgwillimbury.ca>; Development Services <developmentservices@york.ca>; info@lsrca.on.ca; Amy Knapp <A.Knapp@lsrca.on.ca>; Laura Tafreshi <L.Tafreshi@lsrca.on.ca>; Catherwood, Trevor <Trevor.Catherwood@york.ca>; Ingram, Janis <JIngram@eastgwillimbury.ca>; Laura Tafreshi <L.Tafreshi@lsrca.on.ca>
Subject: Development Review Committee - April 13, 2023

Hello everyone,

The next DRC meeting via Teams is Thursday, April 13, 2023 at 9:30am.

Please see attached the following agenda, as we have three (3) items for discussion.

Please note the Applicants will join us via Teams.

1. Part Lot 117, Concession 1 WY (West side of 72, 70, 68, 64 & 62 Oak Ave) – Proposed detached dwelling unit with a driveway access on an unopened municipal ROW. (Planner: Antonio)

2. 18642 Leslie Street - Proposed stacked townhouse development consisting of 17 lots and 55 parking spaces. Heritage house is proposed to remain and be converted to commercial use. (Planner: Victoria)

3. 1 River Drive - Proposed interior renovations to divide the existing retail space into 3 separate retail unites. Exterior design upgrades and parking lot improvements. (Planner: Pardis)

Please find below a link to the submitted materials for your review and comment.

DRC Agenda

Regards,

Antonio Greco
Senior Planner
Town of East Gwillimbury
19000 Leslie Street, Sharon, Ontario L0G 1V0
905-478-4283 Ext. 1459 | Fax: 905-478-2808
agreco@eastgwillimbury.ca

Appendix B:

Traffic Volumes
Signal Timing Plan

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Project #23-153 - CGE Transportation Consulting

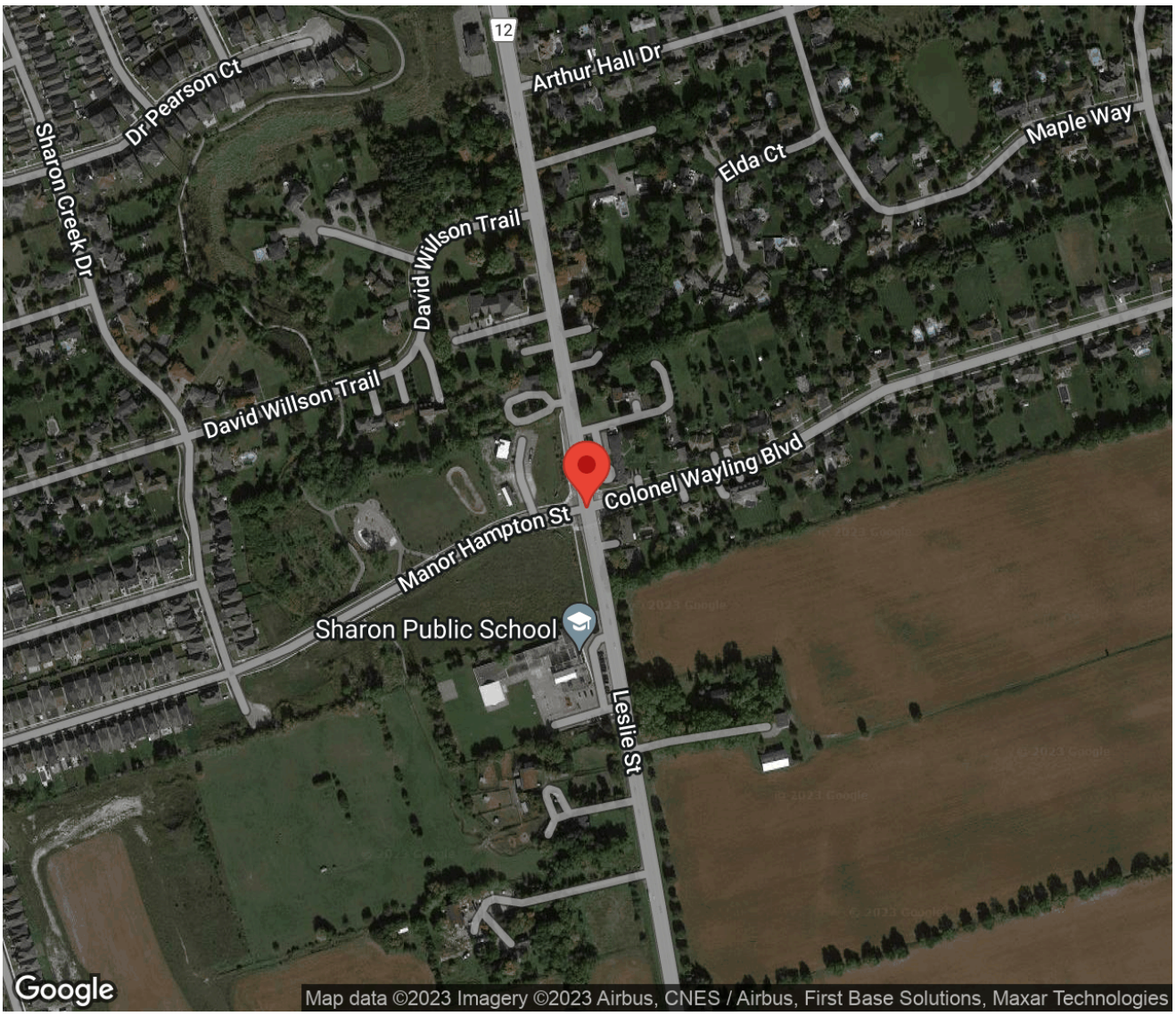
Intersection Count Report

Intersection:	Leslie St & Colonel Wayling Blvd - Manor Hampton St
Municipality:	Sharon
Count Date:	Thursday, May 25, 2023
Site Code:	2315300001
Count Categories:	Cars, Trucks, Bicycles, Pedestrians
Count Period:	07:00-09:00, 16:00-18:00
Weather:	Clear
Comments:	

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Map

Intersection:	Leslie St & Colonel Wayling Blvd - Manor Hampton St
Site Code:	2315300001
Municipality:	Sharon
Count Date:	May 25, 2023



Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Summary

Intersection:	Leslie St & Colonel Wayling Blvd - Manor Hampton St
Site Code:	2315300001
Municipality:	Sharon
Count Date:	May 25, 2023

Leslie St - Traffic Summary

	North Approach Totals						South Approach Totals						
	Includes Cars, Trucks, Bicycles						Includes Cars, Trucks, Bicycles						
Hour	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds	Total
07:00 - 08:00	0	536	5	0	541	0	23	189	19	0	231	0	772
08:00 - 09:00	6	631	14	0	651	0	61	340	25	0	426	28	1077
BREAK													
16:00 - 17:00	9	471	9	0	489	3	117	713	56	0	886	0	1375
17:00 - 18:00	5	457	7	0	469	1	125	743	44	0	912	0	1381
GRAND TOTAL	**20**	**2095**	**35**	**0**	**2150**	**4**	**326**	**1985**	**144**	**0**	**2455**	**28**	**4605**

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Summary

Intersection:	Leslie St & Colonel Wayling Blvd - Manor Hampton St
Site Code:	2315300001
Municipality:	Sharon
Count Date:	May 25, 2023

Colonel Wayling Blvd - Traffic Summary

	East Approach Totals						West Approach Totals						
	Includes Cars, Trucks, Bicycles						Includes Cars, Trucks, Bicycles						
Hour	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds	Total
07:00 - 08:00	35	0	1	0	36	0	0	2	92	0	94	0	130
08:00 - 09:00	71	4	5	0	80	9	8	7	151	0	166	6	246
BREAK													
16:00 - 17:00	33	2	4	0	39	0	15	16	77	0	108	5	147
17:00 - 18:00	38	4	5	0	47	1	12	13	95	0	120	1	167
GRAND TOTAL	**177**	**10**	**15**	**0**	**202**	**10**	**35**	**38**	**415**	**0**	**488**	**12**	**690**

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Data

Intersection: Leslie St & Colonel Wayling Blvd - Manor Hampton St
Site Code: 2315300001
Municipality: Sharon
Count Date: May 25, 2023

North Approach - Leslie St

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	
07:00	0	84	1	0	85	0	5	0	0	5	0	0	0	0	0	0
07:15	0	122	0	0	122	0	5	0	0	5	0	0	0	0	0	0
07:30	0	147	0	0	147	0	9	1	0	10	0	0	0	0	0	0
07:45	0	159	3	0	162	0	5	0	0	5	0	0	0	0	0	0
08:00	2	174	4	0	180	0	3	1	0	4	0	0	0	0	0	0
08:15	0	129	2	0	131	0	8	0	0	8	0	0	0	0	0	0
08:30	2	139	2	0	143	0	6	0	0	6	0	0	0	0	0	0
08:45	2	160	5	0	167	0	12	0	0	12	0	0	0	0	0	0
SUBTOTAL	6	1114	17	0	1137	0	53	2	0	55	0	0	0	0	0	0

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Data

Intersection: Leslie St & Colonel Wayling Blvd - Manor Hampton St
Site Code: 2315300001
Municipality: Sharon
Count Date: May 25, 2023

North Approach - Leslie St

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	
16:00	4	84	1	0	89	0	7	0	0	7	0	0	0	0	0	2
16:15	1	123	2	0	126	0	8	0	0	8	0	0	0	0	0	1
16:30	3	115	4	0	122	0	4	0	0	4	0	0	0	0	0	0
16:45	1	128	2	0	131	0	2	0	0	2	0	0	0	0	0	0
17:00	3	111	0	0	114	0	3	0	0	3	0	0	0	0	0	0
17:15	1	115	4	0	120	0	1	0	0	1	0	0	0	0	0	0
17:30	0	111	2	0	113	0	3	0	0	3	0	0	0	0	0	1
17:45	1	110	1	0	112	0	3	0	0	3	0	0	0	0	0	0
SUBTOTAL	14	897	16	0	927	0	31	0	0	31	0	0	0	0	0	4
GRAND TOTAL	20	2011	33	0	2064	0	84	2	0	86	0	0	0	0	0	4

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Data

Intersection: Leslie St & Colonel Wayling Blvd - Manor Hampton St
Site Code: 2315300001
Municipality: Sharon
Count Date: May 25, 2023

South Approach - Leslie St

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	
07:00	2	39	4	0	45	0	6	0	0	6	0	0	0	0	0	0
07:15	4	32	2	0	38	0	2	0	0	2	0	0	0	0	0	0
07:30	4	42	2	0	48	1	4	0	0	5	0	0	0	0	0	0
07:45	10	59	11	0	80	2	5	0	0	7	0	0	0	0	0	0
08:00	7	49	5	0	61	0	8	0	0	8	0	0	0	0	0	0
08:15	14	80	6	0	100	0	3	0	0	3	0	0	0	0	0	0
08:30	23	88	4	0	115	0	3	0	0	3	0	0	0	0	0	3
08:45	16	104	10	0	130	1	5	0	0	6	0	0	0	0	0	25
SUBTOTAL	80	493	44	0	617	4	36	0	0	40	0	0	0	0	0	28

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Data

Intersection: Leslie St & Colonel Wayling Blvd - Manor Hampton St
Site Code: 2315300001
Municipality: Sharon
Count Date: May 25, 2023

South Approach - Leslie St

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	
16:00	26	160	9	0	195	1	10	0	0	11	0	0	0	0	0	0
16:15	30	165	15	0	210	0	4	1	0	5	0	0	0	0	0	0
16:30	29	172	17	0	218	0	3	0	0	3	0	0	0	0	0	0
16:45	31	198	14	0	243	0	1	0	0	1	0	0	0	0	0	0
17:00	32	195	11	0	238	0	1	0	0	1	0	0	0	0	0	0
17:15	37	206	12	0	255	0	2	0	0	2	0	0	0	0	0	0
17:30	30	167	12	0	209	0	2	0	0	2	0	0	0	0	0	0
17:45	26	169	9	0	204	0	1	0	0	1	0	0	0	0	0	0
SUBTOTAL	241	1432	99	0	1772	1	24	1	0	26	0	0	0	0	0	0
GRAND TOTAL	**321**	**1925**	**143**	**0**	**2389**	**5**	**60**	**1**	**0**	**66**	**0**	**0**	**0**	**0**	**0**	**28**

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Data

Intersection: Leslie St & Colonel Wayling Blvd - Manor Hampton St
Site Code: 2315300001
Municipality: Sharon
Count Date: May 25, 2023

East Approach - Colonel Wayling Blvd

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	
07:00	8	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0
07:15	2	0	1	0	3	0	0	0	0	0	0	0	0	0	0	0
07:30	8	0	0	0	8	1	0	0	0	1	0	0	0	0	0	0
07:45	16	0	0	0	16	0	0	0	0	0	0	0	0	0	0	0
08:00	13	1	2	0	16	0	0	0	0	0	0	0	0	0	0	0
08:15	18	0	1	0	19	0	0	0	0	0	0	0	0	0	0	0
08:30	15	3	1	0	19	1	0	0	0	1	0	0	0	0	0	1
08:45	23	0	1	0	24	1	0	0	0	1	0	0	0	0	0	8
SUBTOTAL	103	4	6	0	113	3	0	0	0	3	0	0	0	0	0	9

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Data

Intersection: Leslie St & Colonel Wayling Blvd - Manor Hampton St
Site Code: 2315300001
Municipality: Sharon
Count Date: May 25, 2023

East Approach - Colonel Wayling Blvd

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	
16:00	5	0	1	0	6	0	0	0	0	0	0	0	0	0	0	0
16:15	12	1	1	0	14	0	0	0	0	0	0	0	0	0	0	0
16:30	9	0	1	0	10	0	0	0	0	0	0	0	0	0	0	0
16:45	7	1	1	0	9	0	0	0	0	0	0	0	0	0	0	0
17:00	6	1	1	0	8	0	0	0	0	0	0	0	0	0	0	0
17:15	12	0	2	0	14	0	0	0	0	0	0	0	0	0	0	1
17:30	8	2	2	0	12	0	0	0	0	0	0	0	0	0	0	0
17:45	11	1	0	0	12	0	0	0	0	0	1	0	0	0	1	0
SUBTOTAL	70	6	9	0	85	0	0	0	0	0	1	0	0	0	1	1
GRAND TOTAL	173	10	15	0	198	3	0	0	0	3	1	0	0	0	1	10

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Data

Intersection: Leslie St & Colonel Wayling Blvd - Manor Hampton St
Site Code: 2315300001
Municipality: Sharon
Count Date: May 25, 2023

West Approach - Manor Hampton St

Start Time	Cars				Total	Trucks				Total	Bicycles				Total	Total Peds
07:00	0	0	18	0	18	0	0	1	0	1	0	0	0	0	0	0
07:15	0	0	21	0	21	0	0	0	0	0	0	0	0	0	0	0
07:30	0	2	24	0	26	0	0	0	0	0	0	0	0	0	0	0
07:45	0	0	28	0	28	0	0	0	0	0	0	0	0	0	0	0
08:00	1	0	43	0	44	0	0	1	0	1	0	0	0	0	0	1
08:15	2	0	27	0	29	0	0	1	0	1	0	0	0	0	0	0
08:30	3	0	36	0	39	0	0	0	0	0	0	0	0	0	0	1
08:45	2	7	41	0	50	0	0	2	0	2	0	0	0	0	0	4
SUBTOTAL	8	9	238	0	255	0	0	5	0	5	0	0	0	0	0	6

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Data

Intersection: Leslie St & Colonel Wayling Blvd - Manor Hampton St
Site Code: 2315300001
Municipality: Sharon
Count Date: May 25, 2023

West Approach - Manor Hampton St

Start Time	Cars				Total	Trucks				Total	Bicycles				Total	Total Peds
16:00	2	5	15	0	22	0	0	0	0	0	0	0	0	0	0	4
16:15	4	5	17	0	26	0	0	1	0	1	0	0	0	0	0	0
16:30	4	4	24	0	32	0	0	0	0	0	0	0	0	0	0	1
16:45	5	2	19	0	26	0	0	0	0	0	0	0	1	0	1	0
17:00	4	2	15	0	21	0	0	0	0	0	0	0	0	0	0	1
17:15	3	4	40	0	47	0	0	1	0	1	0	0	0	0	0	0
17:30	4	2	22	0	28	0	0	0	0	0	0	0	0	0	0	0
17:45	1	5	17	0	23	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	27	29	169	0	225	0	0	2	0	2	0	0	1	0	1	6
GRAND TOTAL	35	38	407	0	480	0	0	7	0	7	0	0	1	0	1	12

Peak Hour Diagram

Specified Period
From: 07:00:00
To: 09:00:00

One Hour Peak
From: 08:00:00
To: 09:00:00

Intersection: Leslie St & Colonel Wayling Blvd - Manor Hampton St
Site Code: 2315300001
Count Date: May 25, 2023

Weather conditions: Clear

**** Signalized Intersection ****

Major Road: Leslie St runs N/S

North Approach

	Out	In	Total
Cars	621	334	955
Trucks	30	19	49
Bicycles	0	0	0
	651	**353**	**1004**

Leslie St

Bicycles	0	0	0	0
Trucks	1	29	0	0
Cars	13	602	6	0
Totals	**14**	**631**	**6**	**0**

Peds: 0

East Approach

	Out	In	Total
Cars	78	38	116
Trucks	2	0	2
Bicycles	0	0	0
	80	**38**	**118**

Manor Hampton St

Bicycles	Trucks	Cars	Totals	
0	0	0	**0**	
0	0	8	**8**	
0	0	7	**7**	
0	4	147	**151**	

Peds: 6

Peds: 9

Colonel Wayling Blvd

	Totals	Cars	Trucks	Bicycles
	0	0	0	0
	5	5	0	0
	4	4	0	0
	71	69	2	0

Peds: 28

West Approach

	Out	In	Total
Cars	162	77	239
Trucks	4	2	6
Bicycles	0	0	0
	166	**79**	**245**

Totals	**61**	**340**	**25**	**0**
Cars	60	321	25	0
Trucks	1	19	0	0
Bicycles	0	0	0	0

South Approach

	Out	In	Total
Cars	406	818	1224
Trucks	20	35	55
Bicycles	0	0	0
	426	**853**	**1279**

Leslie St

Cars - Trucks - Bicycles

Comments

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Peak Hour Summary

Intersection: Leslie St & Colonel Wayling Blvd - Manor Hampton St
Site Code: 2315300001
Count Date: May 25, 2023
Period: 07:00 - 09:00

Peak Hour Data (08:00 - 09:00)

Start Time	North Approach Leslie St						South Approach Leslie St						East Approach Colonel Wayling Blvd						West Approach Manor Hampton St						Total Vehicles
					Peds	Total					Peds	Total					Peds	Total					Peds	Total	
08:00	2	177	5	0	0	184	7	57	5	0	0	69	13	1	2	0	0	16	1	0	44	0	1	45	314
08:15	0	137	2	0	0	139	14	83	6	0	0	103	18	0	1	0	0	19	2	0	28	0	0	30	291
08:30	2	145	2	0	0	149	23	91	4	0	3	118	16	3	1	0	1	20	3	0	36	0	1	39	326
08:45	2	172	5	0	0	179	17	109	10	0	25	136	24	0	1	0	8	25	2	7	43	0	4	52	392
Grand Total	**6**	**631**	**14**	**0**	**0**	**651**	**61**	**340**	**25**	**0**	**28**	**426**	**71**	**4**	**5**	**0**	**9**	**80**	**8**	**7**	**151**	**0**	**6**	**166**	**1323**
Approach %	0.9	96.9	2.2	0		-	14.3	79.8	5.9	0		-	88.8	5	6.3	0		-	4.8	4.2	91	0		-	
Totals %	0.5	47.7	1.1	0		49.2	4.6	25.7	1.9	0		32.2	5.4	0.3	0.4	0		6	0.6	0.5	11.4	0		12.5	
PHF	**0.75**	**0.89**	**0.7**	**0**		**0.88**	**0.66**	**0.78**	**0.63**	**0**		**0.78**	**0.74**	**0.33**	**0.63**	**0**		**0.8**	**0.67**	**0.25**	**0.86**	**0**		**0.8**	**0.84**
Cars	6	602	13	0		621	60	321	25	0		406	69	4	5	0		78	8	7	147	0		162	1267
% Cars	100	95.4	92.9	0		95.4	98.4	94.4	100	0		95.3	97.2	100	100	0		97.5	100	100	97.4	0		97.6	95.8
Trucks	0	29	1	0		30	1	19	0	0		20	2	0	0	0		2	0	0	4	0		4	56
% Trucks	0	4.6	7.1	0		4.6	1.6	5.6	0	0		4.7	2.8	0	0	0		2.5	0	0	2.6	0		2.4	4.2
Bicycles	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0
% Bicycles	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0
Peds					0	-					28	-					9	-					6	-	43
% Peds					0	-					65.1	-					20.9	-					14	-	

Peak Hour Diagram

Specified Period
From: 16:00:00
To: 18:00:00

One Hour Peak
From: 16:30:00
To: 17:30:00

Intersection: Leslie St & Colonel Wayling Blvd - Manor Hampton St
Site Code: 2315300001
Count Date: May 25, 2023

Weather conditions: Clear

**** Signalized Intersection ****

Major Road: Leslie St runs N/S

North Approach

	Out	In	Total
Cars	487	792	1279
Trucks	10	7	17
Bicycles	0	0	0
	497	**799**	**1296**

Leslie St

Bicycles	0	0	0	0
Trucks	0	10	0	0
Cars	10	469	8	0
Totals	**10**	**479**	**8**	**0**

Peds: 0

East Approach

	Out	In	Total
Cars	41	74	115
Trucks	0	0	0
Bicycles	0	0	0
	41	**74**	**115**

Manor Hampton St

Bicycles	Trucks	Cars	Totals	
0	0	0	**0**	
0	0	16	**16**	
0	0	12	**12**	
1	1	98	**100**	

Peds: 2

Peds: 1

Colonel Wayling Blvd

	Totals	Cars	Trucks	Bicycles
	0	0	0	0
	5	5	0	0
	2	2	0	0
	34	34	0	0

Peds: 0

West Approach

	Out	In	Total
Cars	126	141	267
Trucks	1	0	1
Bicycles	1	0	1
	128	**141**	**269**

Totals	**129**	**778**	**54**	**0**
Cars	129	771	54	0
Trucks	0	7	0	0
Bicycles	0	0	0	0

Leslie St

South Approach

	Out	In	Total
Cars	954	601	1555
Trucks	7	11	18
Bicycles	0	1	1
	961	**613**	**1574**

Cars - Trucks - Bicycles

Comments

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Peak Hour Summary

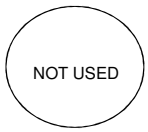
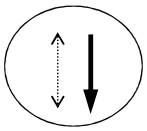
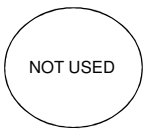
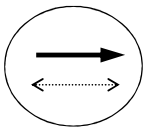
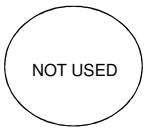
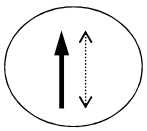
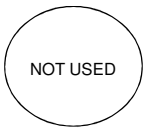
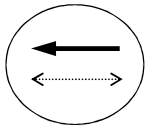
Intersection: Leslie St & Colonel Wayling Blvd - Manor Hampton St
Site Code: 2315300001
Count Date: May 25, 2023
Period: 16:00 - 18:00

Peak Hour Data (16:30 - 17:30)

Start Time	North Approach Leslie St						South Approach Leslie St						East Approach Colonel Wayling Blvd						West Approach Manor Hampton St						Total Vehicles
					Peds	Total					Peds	Total					Peds	Total					Peds	Total	
16:30	3	119	4	0	0	126	29	175	17	0	0	221	9	0	1	0	0	10	4	4	24	0	1	32	389
16:45	1	130	2	0	0	133	31	199	14	0	0	244	7	1	1	0	0	9	5	2	20	0	0	27	413
17:00	3	114	0	0	0	117	32	196	11	0	0	239	6	1	1	0	0	8	4	2	15	0	1	21	385
17:15	1	116	4	0	0	121	37	208	12	0	0	257	12	0	2	0	1	14	3	4	41	0	0	48	440
Grand Total	**8**	**479**	**10**	**0**	**0**	**497**	**129**	**778**	**54**	**0**	**0**	**961**	**34**	**2**	**5**	**0**	**1**	**41**	**16**	**12**	**100**	**0**	**2**	**128**	**1627**
Approach %	1.6	96.4	2	0		-	13.4	81	5.6	0		-	82.9	4.9	12.2	0		-	12.5	9.4	78.1	0		-	
Totals %	0.5	29.4	0.6	0		30.5	7.9	47.8	3.3	0		59.1	2.1	0.1	0.3	0		2.5	1	0.7	6.1	0		7.9	
PHF	**0.67**	**0.92**	**0.63**	**0**		**0.93**	**0.87**	**0.94**	**0.79**	**0**		**0.93**	**0.71**	**0.5**	**0.63**	**0**		**0.73**	**0.8**	**0.75**	**0.61**	**0**		**0.67**	**0.92**
Cars	8	469	10	0		487	129	771	54	0		954	34	2	5	0		41	16	12	98	0		126	1608
% Cars	100	97.9	100	0		98	100	99.1	100	0		99.3	100	100	100	0		100	100	100	98	0		98.4	98.8
Trucks	0	10	0	0		10	0	7	0	0		7	0	0	0	0		0	0	0	1	0		1	18
% Trucks	0	2.1	0	0		2	0	0.9	0	0		0.7	0	0	0	0		0	0	0	1	0		0.8	1.1
Bicycles	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	1	0		1	1
% Bicycles	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	1	0		0.8	0.1
Peds					0	-					0	-					1	-					2	-	3
% Peds					0	-					0	-					33.3	-					66.7	-	

LOCATION:	**Leslie St (YR 12) & Colonel Wayling Blvd / Man**	***MUNICIPALITY:***	**East Gwilliumbury**
CTCS:	**824**	***COMPUTER SYSTEM:***	**Centracs**
MODE/COMMENT:	**SA with APS**	***CONTROLLER/CABINET TYPE:***	**Econolite Cobalt / TS2T1**
PREPARED/CHECKED BY:	**MQL**	***CONFLICT FLASH:***	**Red & Red**
PREPARATION DATE:	**August 17, 2020**	***DESIGN WALK SPEED:***	**1.0 m/s (FDW based on full crossing at 1.2 m/s)**
IMPLEMENTATION DATE:	**August 17, 2020**		

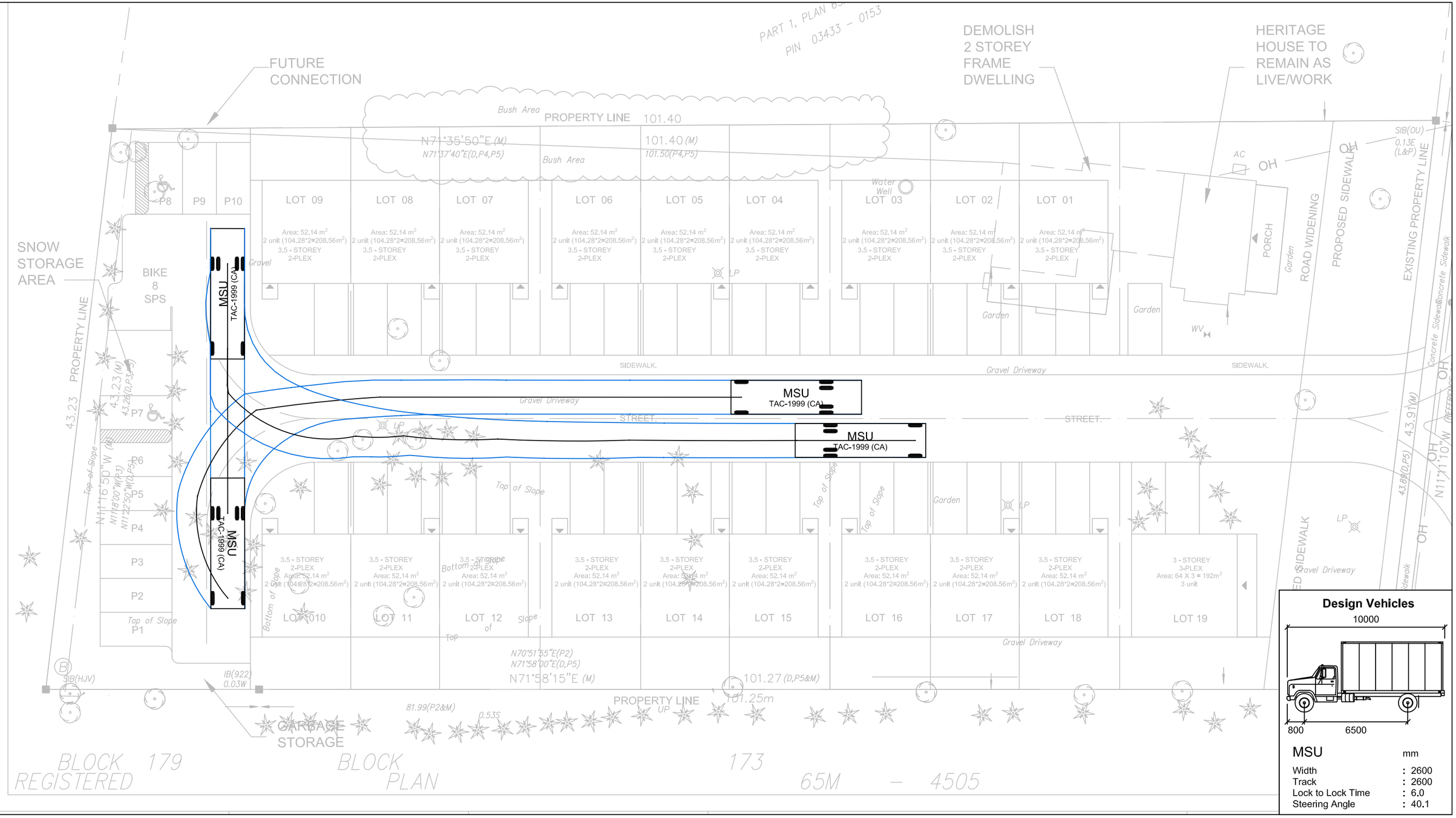
N

NEMA Phase (York)		**AM** **07:00-9:30, M-F**	**Free** **All Other Times**	**Phase Mode (Fixed/Demanded/Callable)**	**Remarks**
	Local Plan	Pattern 1	Pattern 99		
	System Plan	Plan 1	Plan 99		
	WLK FDW MIN EXT MAX1 MAX2 AMB ALR SPLIT				Pedestrian Minimums: NSWK = 7 sec., NSFD = 20 sec. EWWK = 7 sec., EWFD = 22 sec. **Emergency vehicle pre-emption 3:** Serve NSG/NSDW min 20 secs and up to 100 secs if there are continuous emergency calls in NS direction.
2. Southbound  Leslie St	WLK 7 FDW 20 MIN 30 EXT 0 MAX1 30 MAX2 0 AMB 4.0 ALR 3.0 SPLIT	**82**	**0**	Fixed	EW phase is callable by vehicle or pedestrian actuation. If a vehicle call is received, the minimum EWG is served. If ongoing vehicle demand exists on the stopbar loop, the EWG is capable of providing vehicle extensions up to the maximum green split during coordinated operation or MAX1 during Free operation. If a pedestrian call is received, the pedestrian minimum will be served. The EWWK & EWFD are only displayed on the pedestrian signal heads if a pedestrian call is received. Extension time is based on vehicle demand. Unused extension time is given to the NSG.
3. 	WLK FDW MIN EXT MAX1 MAX2 AMB ALR SPLIT				During free plan, signal rests in NSWK and does not cycle through NSFD unless there is side street vehicle or pedestrian demand.
4. Eastbound  Manor Hampton	WLK 7 FDW 22 MIN 10 EXT 3 MAX1 20 MAX2 0 AMB 3.5 ALR 4.0 SPLIT	**38**	**0**	Callable by stopbar loop and/or pushbutton; Extendable by stopbar loop.	NSFD reverts to NSWK if there is no side street demand at the end of the NSFD. Reduce ph2/6 MIN & MAX1 to reduce side street wait time during night and OFF peak hours.
	WLK FDW MIN EXT MAX1 MAX2 AMB ALR SPLIT				
6. Northbound  Leslie St	WLK 7 FDW 20 MIN 30 EXT 0 MAX1 30 MAX2 0 AMB 4.0 ALR 3.0 SPLIT	**82**	**0**	Fixed	
	WLK FDW MIN EXT MAX1 MAX2 AMB ALR SPLIT				**LEGEND:** SA - Semi-Actuated signal FA - Fully Actuated signal WLK - Walk time FDW - Flashing Don't Walk time MIN - Minimum green time EXT - Extension time MAX1 - Maximum green time 1 MAX2 - Maximum green time 2 AMB - Amber ALR -All Red CL - Cycle Length OF - Offset VP - Vehicle Permissive NSWK - North/South Walk EWWK - East/West Walk NSG - North/South Green EWG - East/West Green NSFD - North/South Flashing Don't Walk EWFD - East/West Flashing Don't Walk TSP - Transit Signal Priority APS - Audible Pedestrian Signal
8. Westbound  Stellar Dr	WLK 7 FDW 22 MIN 10 EXT 3 MAX1 20 MAX2 0 AMB 3.5 ALR 4.0 SPLIT	**38**	**0**	Callable by stopbar loop and/or pushbutton; Extendable by stopbar loop.	
	CL OF VP	**120** **0** 20	**0 (FREE)** **0 (FREE)** 0 (FREE)		

NOTES:

Appendix C:

AutoTURN Swept Path Analysis



Design Vehicles

10000

800 6500

MSU	mm
Width	: 2600
Track	: 2600
Lock to Lock Time	: 6.0
Steering Angle	: 40.1

TRANSPORTATION CONSULTING

18642 Leslie Street, Town of East Gwillimbury

Swept Path Analysis
(Refuse Truck)

Date: January 2024
Revised:

Drawing No.: SPA-01

Scale: N.T.S.

N
Project North

FUTURE CONNECTION

DEMOLISH 2 STOREY FRAME DWELLING

HERITAGE HOUSE TO REMAIN AS LIVE/WORK

SNOW STORAGE AREA

PROPERTY LINE 101.40

N71°35'50"E (M)
N71°37'40"E(D,P4,P5)

101.40 (M)
101.50(P4,P5)

Bush Area

PART 1, PLAN 65
PIN 03433 – 0153

P9 P10 P7 P6 P5 P4 P3 P2

LOT 09 LOT 08 LOT 07 LOT 06 LOT 05 LOT 04 LOT 03 LOT 02 LOT 01

Area: 52.14 m² 2 unit (104.28*2=208.56m²) 3.5 - STOREY 2-PLEX

P TAC-1999 (CA)

SUV (TYP.) Custom

Gravel

Water Well

LP

Garden

PORCH

ROAD WIDENING

PROPOSED SIDEWALK

EXISTING PROPERTY LINE

Concrete Sidewalk

SIB(OU) 0.13E (L&P)

AC OH

WV

SIDEWALK.

Gravel Driveway

STREET.

Top of Slope

Bottom of Slope

LOT 010 LOT 11 LOT 12 LOT 13 LOT 14 LOT 15 LOT 16 LOT 17 LOT 18 LOT 19

3 - STOREY 3-PLEX Area: 64 X 3 = 192m² 3 unit

N70°51'55"E(P2)
N71°58'00"E(D,P5)
N71°58'15"E (M)

101.27 (D,P5&M)
101.25m

PROPERTY LINE UP

81.99(P2&M) 0.53S

SIB(HJV) IB(922 0.03W

GARBAGE STORAGE

43.23 PROPERTY LINE

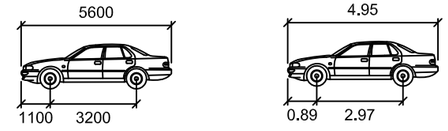
43.23 (M) 43.28(D,P3,P4)

N11°16'50"W (M) N11°18'00"W(P3) N11°22'50"W(D,P5)

43.91(M) 43.88(D,P5) N11°11'10"W

BLOCK 179 REGISTERED PLAN 65M – 4505 BLOCK 173

Design Vehicles



P	mm	SUV (TYP.)	meters
Width	: 2000	Width	: 2.00
Track	: 2000	Track	: 2.00
Lock to Lock Time	: 6.0	Lock to Lock Time	: 6.0
Steering Angle	: 36.2	Steering Angle	: 49.5

CGE TRANSPORTATION CONSULTING

18642 Leslie Street, Town of East Gwillimbury

Swept Path Analysis
(Passenger Vehicle)

Date: January 2024
Revised:

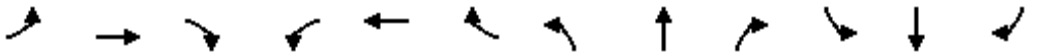
Drawing No.: SPA-02

Scale: N.T.S.

N
Project North

Appendix D:

Synchro Analysis Output

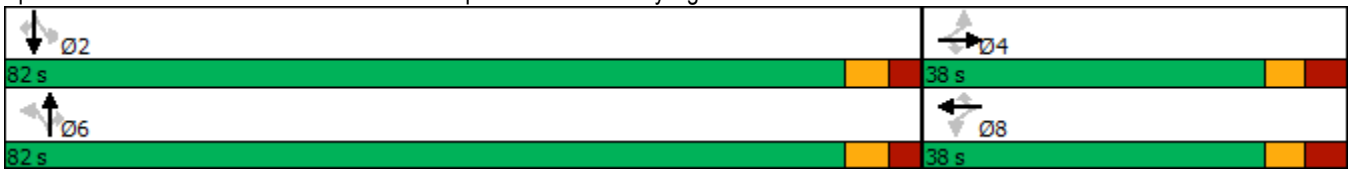


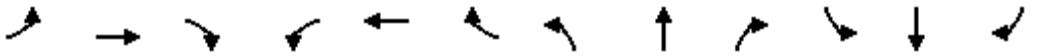
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	7	151	71	4	5	61	340	25	6	631	14
Future Volume (vph)	8	7	151	71	4	5	61	340	25	6	631	14
Ideal Flow (vphpl)	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
Storage Length (m)	55.0		35.0	55.0		35.0	55.0		55.0	40.0		40.0
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
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			0.92	0.94			0.99		0.96	0.99		0.97
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1921	2022	1669	1865	2022	1719	1883	1908	1719	1921	1926	1587
Flt Permitted	0.754			0.752			0.320			0.519		
Satd. Flow (perm)	1525	2022	1541	1392	2022	1719	629	1908	1651	1039	1926	1535
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			180			36			41			41
Link Speed (k/h)		40			50			50			50	
Link Distance (m)		149.9			145.4			231.5			93.1	
Travel Time (s)		13.5			10.5			16.7			6.7	
Confl. Peds. (#/hr)			28	28			6		9	9		6
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles (%)	0%	0%	3%	3%	0%	0%	2%	6%	0%	0%	5%	7%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	3
Adj. Flow (vph)	10	8	180	85	5	6	73	405	30	7	751	17
Shared Lane Traffic (%)												
Lane Group Flow (vph)	10	8	180	85	5	6	73	405	30	7	751	17
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			6			2	
Permitted Phases	4		4	8		8	6		6	2		2
Detector Phase	4	4	4	8	8	8	6	6	6	2	2	2
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	30.0	30.0	30.0	30.0	30.0	30.0
Minimum Split (s)	36.5	36.5	36.5	36.5	36.5	36.5	37.0	37.0	37.0	37.0	37.0	37.0
Total Split (s)	38.0	38.0	38.0	38.0	38.0	38.0	82.0	82.0	82.0	82.0	82.0	82.0
Total Split (%)	31.7%	31.7%	31.7%	31.7%	31.7%	31.7%	68.3%	68.3%	68.3%	68.3%	68.3%	68.3%
Maximum Green (s)	30.5	30.5	30.5	30.5	30.5	30.5	75.0	75.0	75.0	75.0	75.0	75.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.5	7.5	7.5	7.5	7.5	7.0	7.0	7.0	7.0	7.0	7.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	Max	Max	Max	Max	Max	Max
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	22.0	22.0	22.0	22.0	22.0	22.0	20.0	20.0	20.0	20.0	20.0	20.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Act Effct Green (s)	12.3	12.3	12.3	12.3	12.3	12.3	76.7	76.7	76.7	76.7	76.7	76.7
Actuated g/C Ratio	0.12	0.12	0.12	0.12	0.12	0.12	0.74	0.74	0.74	0.74	0.74	0.74

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.06	0.03	0.53	0.52	0.02	0.03	0.16	0.29	0.02	0.01	0.53	0.01
Control Delay	39.6	39.1	12.1	53.5	38.8	0.2	5.4	5.3	1.0	4.2	7.7	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.6	39.1	12.1	53.5	38.8	0.2	5.4	5.3	1.0	4.2	7.7	0.4
LOS	D	D	B	D	D	A	A	A	A	A	A	A
Approach Delay		14.6			49.4			5.1			7.5	
Approach LOS		B			D			A			A	
Queue Length 50th (m)	1.8	1.4	0.0	16.0	0.9	0.0	3.5	21.6	0.0	0.3	51.8	0.0
Queue Length 95th (m)	6.1	5.2	14.9	28.6	3.9	0.0	8.7	36.2	1.5	1.5	81.0	0.4
Internal Link Dist (m)		125.9			121.4			207.5			69.1	
Turn Bay Length (m)	55.0		35.0	55.0		35.0	55.0		55.0	40.0		40.0
Base Capacity (vph)	449	596	581	410	596	532	466	1413	1234	770	1427	1148
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.01	0.31	0.21	0.01	0.01	0.16	0.29	0.02	0.01	0.53	0.01

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 103.5			
Natural Cycle: 75			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.53			
Intersection Signal Delay: 10.1		Intersection LOS: B	
Intersection Capacity Utilization 85.9%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 1: Leslie St & Manor Hampton St/Colonel Wayling Blvd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	7	151	71	4	5	61	340	25	6	631	14
Future Volume (vph)	8	7	151	71	4	5	61	340	25	6	631	14
Ideal Flow (vphpl)	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
Total Lost time (s)	7.5	7.5	7.5	7.5	7.5	7.5	7.0	7.0	7.0	7.0	7.0	7.0
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
Frpb, ped/bikes	1.00	1.00	0.93	1.00	1.00	1.00	1.00	1.00	0.96	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.99	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1921	2022	1554	1773	2022	1719	1878	1908	1655	1903	1926	1538
Flt Permitted	0.75	1.00	1.00	0.75	1.00	1.00	0.32	1.00	1.00	0.52	1.00	1.00
Satd. Flow (perm)	1526	2022	1554	1404	2022	1719	632	1908	1655	1039	1926	1538
Peak-hour factor, PHF	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	10	8	180	85	5	6	73	405	30	7	751	17
RTOR Reduction (vph)	0	0	159	0	0	5	0	0	8	0	0	4
Lane Group Flow (vph)	10	8	21	85	5	1	73	405	22	7	751	13
Confl. Peds. (#/hr)			28	28			6		9	9		6
Heavy Vehicles (%)	0%	0%	3%	3%	0%	0%	2%	6%	0%	0%	5%	7%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	3
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			6			2	
Permitted Phases	4		4	8		8	6		6	2		2
Actuated Green, G (s)	12.3	12.3	12.3	12.3	12.3	12.3	76.7	76.7	76.7	76.7	76.7	76.7
Effective Green, g (s)	12.3	12.3	12.3	12.3	12.3	12.3	76.7	76.7	76.7	76.7	76.7	76.7
Actuated g/C Ratio	0.12	0.12	0.12	0.12	0.12	0.12	0.74	0.74	0.74	0.74	0.74	0.74
Clearance Time (s)	7.5	7.5	7.5	7.5	7.5	7.5	7.0	7.0	7.0	7.0	7.0	7.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	181	240	184	166	240	204	468	1413	1226	769	1427	1139
v/s Ratio Prot		0.00			0.00			0.21			c0.39	
v/s Ratio Perm	0.01		0.01	c0.06		0.00	0.12		0.01	0.01		0.01
v/c Ratio	0.06	0.03	0.12	0.51	0.02	0.00	0.16	0.29	0.02	0.01	0.53	0.01
Uniform Delay, d1	40.4	40.3	40.7	42.8	40.3	40.2	3.9	4.4	3.5	3.5	5.7	3.5
Progression 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
Incremental Delay, d2	0.1	0.1	0.3	2.7	0.0	0.0	0.7	0.5	0.0	0.0	1.4	0.0
Delay (s)	40.6	40.4	41.0	45.4	40.3	40.2	4.6	4.9	3.5	3.5	7.1	3.5
Level of Service	D	D	D	D	D	D	A	A	A	A	A	A
Approach Delay (s)		41.0			44.8			4.8			7.0	
Approach LOS		D			D			A			A	

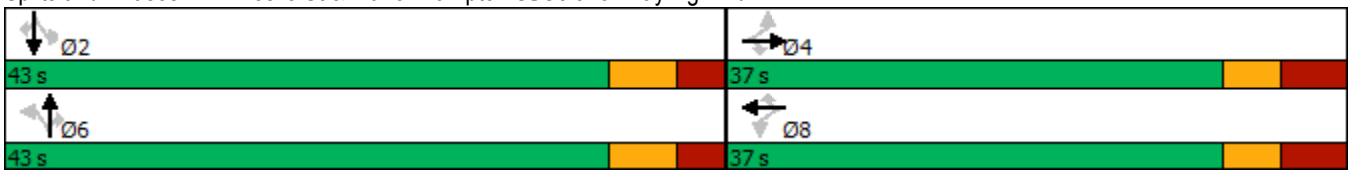
Intersection Summary			
HCM 2000 Control Delay	12.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	103.5	Sum of lost time (s)	14.5
Intersection Capacity Utilization	85.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

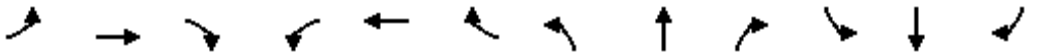
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	16	12	100	34	2	5	129	778	54	8	479	10
Future Volume (vph)	16	12	100	34	2	5	129	778	54	8	479	10
Ideal Flow (vphpl)	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
Storage Length (m)	55.0		35.0	55.0		35.0	55.0		55.0	40.0		40.0
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
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			0.98				1.00		0.98			0.98
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1921	2022	1702	1865	2022	1719	1921	2002	1719	1729	2022	1698
Flt Permitted	0.757			0.749			0.447			0.240		
Satd. Flow (perm)	1531	2022	1666	1471	2022	1719	903	2002	1681	437	2022	1659
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			109			55			61			61
Link Speed (k/h)		40			50			50			50	
Link Distance (m)		149.9			145.4			231.5			93.1	
Travel Time (s)		13.5			10.5			16.7			6.7	
Confl. Peds. (#/hr)							2		1	1		2
Confl. Bikes (#/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%	1%	3%	0%	0%	0%	1%	0%	0%	0%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	3
Parking (#/hr)										0		
Adj. Flow (vph)	17	13	109	37	2	5	140	846	59	9	521	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	17	13	109	37	2	5	140	846	59	9	521	11
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			6			2	
Permitted Phases	4		4	8		8	6		6	2		2
Detector Phase	4	4	4	8	8	8	6	6	6	2	2	2
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	30.0	30.0	30.0	30.0	30.0	30.0
Minimum Split (s)	36.5	36.5	36.5	36.5	36.5	36.5	37.0	37.0	37.0	37.0	37.0	37.0
Total Split (s)	37.0	37.0	37.0	37.0	37.0	37.0	43.0	43.0	43.0	43.0	43.0	43.0
Total Split (%)	46.3%	46.3%	46.3%	46.3%	46.3%	46.3%	53.8%	53.8%	53.8%	53.8%	53.8%	53.8%
Maximum Green (s)	29.5	29.5	29.5	29.5	29.5	29.5	36.0	36.0	36.0	36.0	36.0	36.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.5	7.5	7.5	7.5	7.5	7.0	7.0	7.0	7.0	7.0	7.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	Max	Max	Max	Max	Max	Max
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	22.0	22.0	22.0	22.0	22.0	22.0	20.0	20.0	20.0	20.0	20.0	20.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effct Green (s)	10.1	10.1	10.1	10.1	10.1	10.1	43.1	43.1	43.1	43.1	43.1	43.1
Actuated g/C Ratio	0.16	0.16	0.16	0.16	0.16	0.16	0.69	0.69	0.69	0.69	0.69	0.69
v/c Ratio	0.07	0.04	0.30	0.16	0.01	0.02	0.22	0.61	0.05	0.03	0.37	0.01
Control Delay	22.3	21.7	8.1	24.0	21.0	0.0	6.9	10.1	1.8	5.5	6.9	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.3	21.7	8.1	24.0	21.0	0.0	6.9	10.1	1.8	5.5	6.9	0.0
LOS	C	C	A	C	C	A	A	B	A	A	A	A
Approach Delay		11.1			21.1			9.2			6.7	
Approach LOS		B			C			A			A	
Queue Length 50th (m)	1.6	1.2	0.0	3.6	0.2	0.0	6.5	57.4	0.0	0.4	27.4	0.0
Queue Length 95th (m)	6.1	5.1	10.8	10.4	1.7	0.0	14.4	94.6	3.3	1.8	44.6	0.0
Internal Link Dist (m)		125.9			121.4			207.5			69.1	
Turn Bay Length (m)	55.0		35.0	55.0		35.0	55.0		55.0	40.0		40.0
Base Capacity (vph)	727	960	848	698	960	845	623	1381	1178	301	1395	1163
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.01	0.13	0.05	0.00	0.01	0.22	0.61	0.05	0.03	0.37	0.01

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 62.5			
Natural Cycle: 80			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.61			
Intersection Signal Delay: 8.9		Intersection LOS: A	
Intersection Capacity Utilization 90.3%		ICU Level of Service E	
Analysis Period (min) 15			

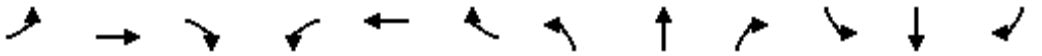
Splits and Phases: 1: Leslie St & Manor Hampton St/Colonel Wayling Blvd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	16	12	100	34	2	5	129	778	54	8	479	10
Future Volume (vph)	16	12	100	34	2	5	129	778	54	8	479	10
Ideal Flow (vphpl)	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
Total Lost time (s)	7.5	7.5	7.5	7.5	7.5	7.5	7.0	7.0	7.0	7.0	7.0	7.0
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
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	1.00	1.00	1.00	0.98	1.00	1.00	0.98
Flpb, ped/bikes	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	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1921	2022	1663	1865	2022	1719	1919	2002	1682	1729	2022	1660
Flt Permitted	0.76	1.00	1.00	0.75	1.00	1.00	0.45	1.00	1.00	0.24	1.00	1.00
Satd. Flow (perm)	1530	2022	1663	1471	2022	1719	903	2002	1682	437	2022	1660
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	17	13	109	37	2	5	140	846	59	9	521	11
RTOR Reduction (vph)	0	0	96	0	0	4	0	0	21	0	0	4
Lane Group Flow (vph)	17	13	13	37	2	1	140	846	38	9	521	7
Confl. Peds. (#/hr)							2		1	1		2
Confl. Bikes (#/hr)			1						1			
Heavy Vehicles (%)	0%	0%	1%	3%	0%	0%	0%	1%	0%	0%	0%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	3
Parking (#/hr)										0		
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			6			2	
Permitted Phases	4		4	8		8	6		6	2		2
Actuated Green, G (s)	7.9	7.9	7.9	7.9	7.9	7.9	41.6	41.6	41.6	41.6	41.6	41.6
Effective Green, g (s)	7.9	7.9	7.9	7.9	7.9	7.9	41.6	41.6	41.6	41.6	41.6	41.6
Actuated g/C Ratio	0.12	0.12	0.12	0.12	0.12	0.12	0.65	0.65	0.65	0.65	0.65	0.65
Clearance Time (s)	7.5	7.5	7.5	7.5	7.5	7.5	7.0	7.0	7.0	7.0	7.0	7.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	188	249	205	181	249	212	586	1301	1093	284	1314	1079
v/s Ratio Prot		0.01			0.00			c0.42			0.26	
v/s Ratio Perm	0.01		0.01	c0.03		0.00	0.16		0.02	0.02		0.00
v/c Ratio	0.09	0.05	0.07	0.20	0.01	0.00	0.24	0.65	0.04	0.03	0.40	0.01
Uniform Delay, d1	24.9	24.7	24.8	25.2	24.6	24.6	4.6	6.8	4.0	4.0	5.3	3.9
Progression 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
Incremental Delay, d2	0.2	0.1	0.1	0.6	0.0	0.0	1.0	2.5	0.1	0.2	0.9	0.0
Delay (s)	25.1	24.8	24.9	25.8	24.6	24.6	5.6	9.3	4.1	4.2	6.2	3.9
Level of Service	C	C	C	C	C	C	A	A	A	A	A	A
Approach Delay (s)		24.9			25.6			8.5			6.1	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	9.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	64.0	Sum of lost time (s)	14.5
Intersection Capacity Utilization	90.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

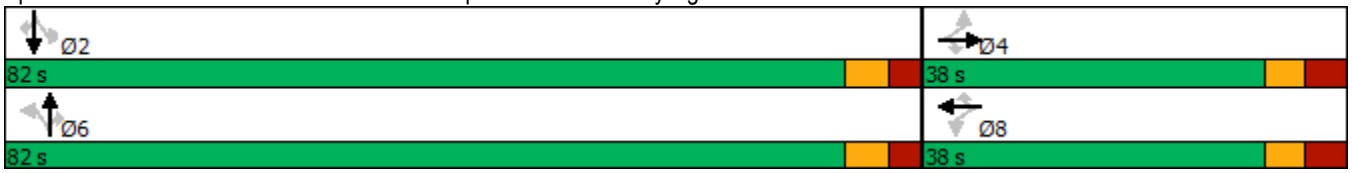


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	7	209	76	4	5	85	362	27	6	671	15
Future Volume (vph)	10	7	209	76	4	5	85	362	27	6	671	15
Ideal Flow (vphpl)	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
Storage Length (m)	55.0		35.0	55.0		35.0	55.0		55.0	40.0		40.0
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
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			0.92	0.94			0.99		0.96	0.99		0.97
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1921	2022	1669	1865	2022	1719	1883	1908	1719	1921	1926	1587
Flt Permitted	0.754			0.752			0.292			0.501		
Satd. Flow (perm)	1525	2022	1541	1392	2022	1719	574	1908	1651	1003	1926	1535
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			199			36			41			41
Link Speed (k/h)		40			50			50			50	
Link Distance (m)		149.9			145.4			231.5			93.1	
Travel Time (s)		13.5			10.5			16.7			6.7	
Confl. Peds. (#/hr)			28	28			6		9	9		6
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles (%)	0%	0%	3%	3%	0%	0%	2%	6%	0%	0%	5%	7%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	3
Adj. Flow (vph)	12	8	249	90	5	6	101	431	32	7	799	18
Shared Lane Traffic (%)												
Lane Group Flow (vph)	12	8	249	90	5	6	101	431	32	7	799	18
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			6			2	
Permitted Phases	4		4	8		8	6		6	2		2
Detector Phase	4	4	4	8	8	8	6	6	6	2	2	2
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	30.0	30.0	30.0	30.0	30.0	30.0
Minimum Split (s)	36.5	36.5	36.5	36.5	36.5	36.5	37.0	37.0	37.0	37.0	37.0	37.0
Total Split (s)	38.0	38.0	38.0	38.0	38.0	38.0	82.0	82.0	82.0	82.0	82.0	82.0
Total Split (%)	31.7%	31.7%	31.7%	31.7%	31.7%	31.7%	68.3%	68.3%	68.3%	68.3%	68.3%	68.3%
Maximum Green (s)	30.5	30.5	30.5	30.5	30.5	30.5	75.0	75.0	75.0	75.0	75.0	75.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.5	7.5	7.5	7.5	7.5	7.0	7.0	7.0	7.0	7.0	7.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	Max	Max	Max	Max	Max	Max
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	22.0	22.0	22.0	22.0	22.0	22.0	20.0	20.0	20.0	20.0	20.0	20.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Act Effct Green (s)	12.7	12.7	12.7	12.7	12.7	12.7	75.1	75.1	75.1	75.1	75.1	75.1
Actuated g/C Ratio	0.12	0.12	0.12	0.12	0.12	0.12	0.73	0.73	0.73	0.73	0.73	0.73

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.06	0.03	0.68	0.52	0.02	0.02	0.24	0.31	0.03	0.01	0.57	0.02
Control Delay	39.5	38.7	20.7	53.1	38.5	0.2	6.6	5.7	1.2	4.5	8.5	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.5	38.7	20.7	53.1	38.5	0.2	6.6	5.7	1.2	4.5	8.5	0.4
LOS	D	D	C	D	D	A	A	A	A	A	A	A
Approach Delay		22.0			49.2			5.6			8.3	
Approach LOS		C			D			A			A	
Queue Length 50th (m)	2.1	1.4	9.1	17.0	0.9	0.0	5.3	23.9	0.0	0.3	58.6	0.0
Queue Length 95th (m)	6.9	5.2	27.4	29.9	3.9	0.0	13.0	40.9	1.8	1.6	94.0	0.5
Internal Link Dist (m)		125.9			121.4			207.5			69.1	
Turn Bay Length (m)	55.0		35.0	55.0		35.0	55.0		55.0	40.0		40.0
Base Capacity (vph)	454	603	599	415	603	537	421	1401	1223	736	1414	1138
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.01	0.42	0.22	0.01	0.01	0.24	0.31	0.03	0.01	0.57	0.02

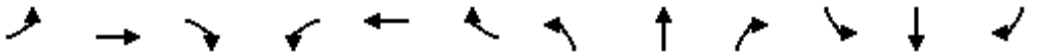
Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 102.3			
Natural Cycle: 80			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.68			
Intersection Signal Delay: 11.9		Intersection LOS: B	
Intersection Capacity Utilization 94.4%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 1: Leslie St & Manor Hampton St/Colonel Wayling Blvd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	7	209	76	4	5	85	362	27	6	671	15
Future Volume (vph)	10	7	209	76	4	5	85	362	27	6	671	15
Ideal Flow (vphpl)	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
Total Lost time (s)	7.5	7.5	7.5	7.5	7.5	7.5	7.0	7.0	7.0	7.0	7.0	7.0
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
Frpb, ped/bikes	1.00	1.00	0.93	1.00	1.00	1.00	1.00	1.00	0.96	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.99	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1921	2022	1555	1774	2022	1719	1878	1908	1656	1904	1926	1538
Flt Permitted	0.75	1.00	1.00	0.75	1.00	1.00	0.29	1.00	1.00	0.50	1.00	1.00
Satd. Flow (perm)	1526	2022	1555	1405	2022	1719	578	1908	1656	1004	1926	1538
Peak-hour factor, PHF	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	12	8	249	90	5	6	101	431	32	7	799	18
RTOR Reduction (vph)	0	0	174	0	0	5	0	0	9	0	0	5
Lane Group Flow (vph)	12	8	75	90	5	1	101	431	23	7	799	13
Confl. Peds. (#/hr)			28	28			6		9	9		6
Heavy Vehicles (%)	0%	0%	3%	3%	0%	0%	2%	6%	0%	0%	5%	7%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	3
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			6			2	
Permitted Phases	4		4	8		8	6		6	2		2
Actuated Green, G (s)	12.7	12.7	12.7	12.7	12.7	12.7	75.1	75.1	75.1	75.1	75.1	75.1
Effective Green, g (s)	12.7	12.7	12.7	12.7	12.7	12.7	75.1	75.1	75.1	75.1	75.1	75.1
Actuated g/C Ratio	0.12	0.12	0.12	0.12	0.12	0.12	0.73	0.73	0.73	0.73	0.73	0.73
Clearance Time (s)	7.5	7.5	7.5	7.5	7.5	7.5	7.0	7.0	7.0	7.0	7.0	7.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	189	251	193	174	251	213	424	1400	1215	737	1413	1129
v/s Ratio Prot		0.00			0.00			0.23			c0.41	
v/s Ratio Perm	0.01		0.05	c0.06		0.00	0.17		0.01	0.01		0.01
v/c Ratio	0.06	0.03	0.39	0.52	0.02	0.00	0.24	0.31	0.02	0.01	0.57	0.01
Uniform Delay, d1	39.6	39.4	41.2	41.9	39.3	39.3	4.4	4.7	3.7	3.6	6.2	3.6
Progression 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
Incremental Delay, d2	0.1	0.1	1.3	2.6	0.0	0.0	1.3	0.6	0.0	0.0	1.6	0.0
Delay (s)	39.7	39.4	42.5	44.5	39.4	39.3	5.7	5.2	3.7	3.7	7.8	3.7
Level of Service	D	D	D	D	D	D	A	A	A	A	A	A
Approach Delay (s)		42.3			43.9			5.2			7.7	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	14.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	102.3	Sum of lost time (s)	14.5
Intersection Capacity Utilization	94.4%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

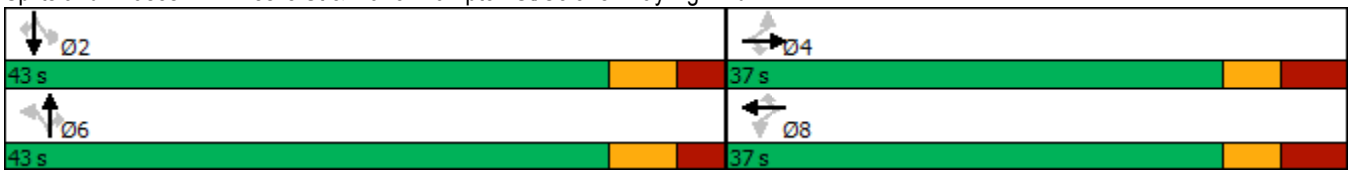


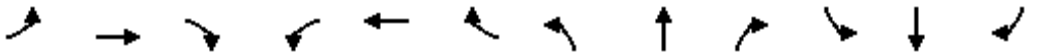
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	13	147	36	2	5	195	828	57	9	510	13
Future Volume (vph)	19	13	147	36	2	5	195	828	57	9	510	13
Ideal Flow (vphpl)	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
Storage Length (m)	55.0		35.0	55.0		35.0	55.0		55.0	40.0		40.0
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
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			0.98				1.00		0.98			0.98
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1921	2022	1702	1865	2022	1719	1921	2002	1719	1729	2022	1698
Flt Permitted	0.757			0.748			0.411			0.183		
Satd. Flow (perm)	1531	2022	1666	1469	2022	1719	830	2002	1681	333	2022	1659
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			160			55			61			61
Link Speed (k/h)		40			50			50			50	
Link Distance (m)		149.9			145.4			231.5			93.1	
Travel Time (s)		13.5			10.5			16.7			6.7	
Confl. Peds. (#/hr)							2		1	1		2
Confl. Bikes (#/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%	1%	3%	0%	0%	0%	1%	0%	0%	0%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	3
Parking (#/hr)										0		
Adj. Flow (vph)	21	14	160	39	2	5	212	900	62	10	554	14
Shared Lane Traffic (%)												
Lane Group Flow (vph)	21	14	160	39	2	5	212	900	62	10	554	14
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			6			2	
Permitted Phases	4		4	8		8	6		6	2		2
Detector Phase	4	4	4	8	8	8	6	6	6	2	2	2
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	30.0	30.0	30.0	30.0	30.0	30.0
Minimum Split (s)	36.5	36.5	36.5	36.5	36.5	36.5	37.0	37.0	37.0	37.0	37.0	37.0
Total Split (s)	37.0	37.0	37.0	37.0	37.0	37.0	43.0	43.0	43.0	43.0	43.0	43.0
Total Split (%)	46.3%	46.3%	46.3%	46.3%	46.3%	46.3%	53.8%	53.8%	53.8%	53.8%	53.8%	53.8%
Maximum Green (s)	29.5	29.5	29.5	29.5	29.5	29.5	36.0	36.0	36.0	36.0	36.0	36.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.5	7.5	7.5	7.5	7.5	7.0	7.0	7.0	7.0	7.0	7.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	Max	Max	Max	Max	Max	Max
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	22.0	22.0	22.0	22.0	22.0	22.0	20.0	20.0	20.0	20.0	20.0	20.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effct Green (s)	10.1	10.1	10.1	10.1	10.1	10.1	39.4	39.4	39.4	39.4	39.4	39.4
Actuated g/C Ratio	0.16	0.16	0.16	0.16	0.16	0.16	0.61	0.61	0.61	0.61	0.61	0.61
v/c Ratio	0.09	0.04	0.40	0.17	0.01	0.02	0.42	0.73	0.06	0.05	0.45	0.01
Control Delay	22.5	21.8	7.9	23.9	21.0	0.0	9.7	13.4	1.9	5.9	8.1	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.5	21.8	7.9	23.9	21.0	0.0	9.7	13.4	1.9	5.9	8.1	0.0
LOS	C	C	A	C	C	A	A	B	A	A	A	A
Approach Delay		10.5			21.1			12.1			7.9	
Approach LOS		B			C			B			A	
Queue Length 50th (m)	2.0	1.3	0.0	3.8	0.2	0.0	11.2	64.1	0.1	0.4	29.9	0.0
Queue Length 95th (m)	7.0	5.3	13.2	10.7	1.7	0.0	24.5	106.5	3.5	2.1	48.4	0.0
Internal Link Dist (m)		125.9			121.4			207.5			69.1	
Turn Bay Length (m)	55.0		35.0	55.0		35.0	55.0		55.0	40.0		40.0
Base Capacity (vph)	710	937	858	681	937	826	510	1231	1056	204	1243	1043
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.01	0.19	0.06	0.00	0.01	0.42	0.73	0.06	0.05	0.45	0.01

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 64.1			
Natural Cycle: 80			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.73			
Intersection Signal Delay: 10.9		Intersection LOS: B	
Intersection Capacity Utilization 92.9%		ICU Level of Service F	
Analysis Period (min) 15			

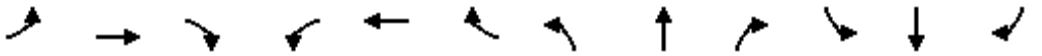
Splits and Phases: 1: Leslie St & Manor Hampton St/Colonel Wayling Blvd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	13	147	36	2	5	195	828	57	9	510	13
Future Volume (vph)	19	13	147	36	2	5	195	828	57	9	510	13
Ideal Flow (vphpl)	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
Total Lost time (s)	7.5	7.5	7.5	7.5	7.5	7.5	7.0	7.0	7.0	7.0	7.0	7.0
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
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	1.00	1.00	1.00	0.98	1.00	1.00	0.98
Flpb, ped/bikes	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	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1921	2022	1664	1865	2022	1719	1919	2002	1681	1729	2022	1660
Flt Permitted	0.76	1.00	1.00	0.75	1.00	1.00	0.41	1.00	1.00	0.18	1.00	1.00
Satd. Flow (perm)	1530	2022	1664	1469	2022	1719	831	2002	1681	333	2022	1660
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	21	14	160	39	2	5	212	900	62	10	554	14
RTOR Reduction (vph)	0	0	135	0	0	4	0	0	23	0	0	5
Lane Group Flow (vph)	21	14	25	39	2	1	212	900	39	10	554	9
Confl. Peds. (#/hr)							2		1	1		2
Confl. Bikes (#/hr)			1						1			
Heavy Vehicles (%)	0%	0%	1%	3%	0%	0%	0%	1%	0%	0%	0%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	3
Parking (#/hr)										0		
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			6			2	
Permitted Phases	4		4	8		8	6		6	2		2
Actuated Green, G (s)	10.1	10.1	10.1	10.1	10.1	10.1	39.4	39.4	39.4	39.4	39.4	39.4
Effective Green, g (s)	10.1	10.1	10.1	10.1	10.1	10.1	39.4	39.4	39.4	39.4	39.4	39.4
Actuated g/C Ratio	0.16	0.16	0.16	0.16	0.16	0.16	0.62	0.62	0.62	0.62	0.62	0.62
Clearance Time (s)	7.5	7.5	7.5	7.5	7.5	7.5	7.0	7.0	7.0	7.0	7.0	7.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	241	319	262	231	319	271	511	1232	1034	205	1244	1021
v/s Ratio Prot		0.01			0.00			c0.45			0.27	
v/s Ratio Perm	0.01		0.02	c0.03		0.00	0.26		0.02	0.03		0.01
v/c Ratio	0.09	0.04	0.10	0.17	0.01	0.00	0.41	0.73	0.04	0.05	0.45	0.01
Uniform Delay, d1	23.0	22.9	23.0	23.3	22.7	22.7	6.3	8.6	4.8	4.9	6.5	4.8
Progression 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
Incremental Delay, d2	0.2	0.1	0.2	0.3	0.0	0.0	2.5	3.8	0.1	0.4	1.2	0.0
Delay (s)	23.2	22.9	23.2	23.7	22.7	22.7	8.8	12.4	4.9	5.3	7.7	4.8
Level of Service	C	C	C	C	C	C	A	B	A	A	A	A
Approach Delay (s)		23.2			23.5			11.4			7.6	
Approach LOS		C			C			B			A	

Intersection Summary			
HCM 2000 Control Delay	11.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	64.0	Sum of lost time (s)	14.5
Intersection Capacity Utilization	92.9%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

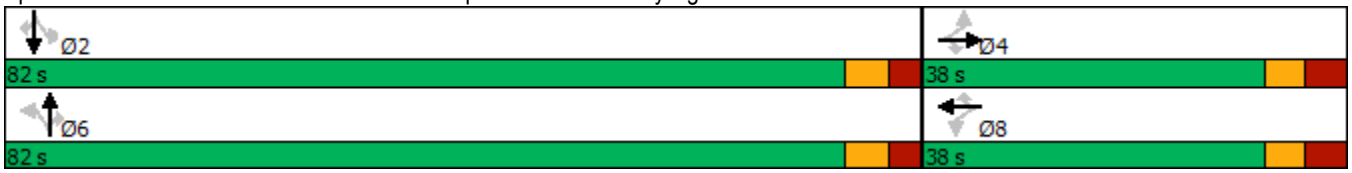


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	7	209	76	4	5	85	365	27	7	685	16
Future Volume (vph)	11	7	209	76	4	5	85	365	27	7	685	16
Ideal Flow (vphpl)	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
Storage Length (m)	55.0		35.0	55.0		35.0	55.0		55.0	40.0		40.0
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
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			0.92	0.94			0.99		0.96	0.99		0.97
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1921	2022	1669	1865	2022	1719	1883	1908	1719	1921	1926	1587
Flt Permitted	0.754			0.752			0.284			0.498		
Satd. Flow (perm)	1525	2022	1541	1392	2022	1719	558	1908	1651	998	1926	1535
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			192			36			41			41
Link Speed (k/h)		40			50			50			50	
Link Distance (m)		149.9			145.4			231.5			93.1	
Travel Time (s)		13.5			10.5			16.7			6.7	
Confl. Peds. (#/hr)			28	28			6		9	9		6
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles (%)	0%	0%	3%	3%	0%	0%	2%	6%	0%	0%	5%	7%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	3
Adj. Flow (vph)	13	8	249	90	5	6	101	435	32	8	815	19
Shared Lane Traffic (%)												
Lane Group Flow (vph)	13	8	249	90	5	6	101	435	32	8	815	19
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			6			2	
Permitted Phases	4		4	8		8	6		6	2		2
Detector Phase	4	4	4	8	8	8	6	6	6	2	2	2
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	30.0	30.0	30.0	30.0	30.0	30.0
Minimum Split (s)	36.5	36.5	36.5	36.5	36.5	36.5	37.0	37.0	37.0	37.0	37.0	37.0
Total Split (s)	38.0	38.0	38.0	38.0	38.0	38.0	82.0	82.0	82.0	82.0	82.0	82.0
Total Split (%)	31.7%	31.7%	31.7%	31.7%	31.7%	31.7%	68.3%	68.3%	68.3%	68.3%	68.3%	68.3%
Maximum Green (s)	30.5	30.5	30.5	30.5	30.5	30.5	75.0	75.0	75.0	75.0	75.0	75.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.5	7.5	7.5	7.5	7.5	7.0	7.0	7.0	7.0	7.0	7.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	Max	Max	Max	Max	Max	Max
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	22.0	22.0	22.0	22.0	22.0	22.0	20.0	20.0	20.0	20.0	20.0	20.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Act Effct Green (s)	12.8	12.8	12.8	12.8	12.8	12.8	75.1	75.1	75.1	75.1	75.1	75.1
Actuated g/C Ratio	0.12	0.12	0.12	0.12	0.12	0.12	0.73	0.73	0.73	0.73	0.73	0.73

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.07	0.03	0.69	0.52	0.02	0.02	0.25	0.31	0.03	0.01	0.58	0.02
Control Delay	39.5	38.6	22.1	52.8	38.2	0.2	6.8	5.7	1.2	4.6	8.8	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.5	38.6	22.1	52.8	38.2	0.2	6.8	5.7	1.2	4.6	8.8	0.5
LOS	D	D	C	D	D	A	A	A	A	A	A	A
Approach Delay		23.5			49.0			5.7			8.5	
Approach LOS		C			D			A			A	
Queue Length 50th (m)	2.3	1.4	10.5	17.0	0.9	0.0	5.3	24.2	0.0	0.4	60.7	0.0
Queue Length 95th (m)	7.1	5.2	29.1	29.9	3.9	0.0	13.4	42.1	1.8	1.7	98.9	0.5
Internal Link Dist (m)		125.9			121.4			207.5			69.1	
Turn Bay Length (m)	55.0		35.0	55.0		35.0	55.0		55.0	40.0		40.0
Base Capacity (vph)	454	602	593	414	602	537	409	1400	1222	732	1413	1137
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.01	0.42	0.22	0.01	0.01	0.25	0.31	0.03	0.01	0.58	0.02

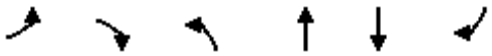
Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 102.4			
Natural Cycle: 90			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.69			
Intersection Signal Delay: 12.2		Intersection LOS: B	
Intersection Capacity Utilization 95.1%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 1: Leslie St & Manor Hampton St/Colonel Wayling Blvd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	7	209	76	4	5	85	365	27	7	685	16
Future Volume (vph)	11	7	209	76	4	5	85	365	27	7	685	16
Ideal Flow (vphpl)	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
Total Lost time (s)	7.5	7.5	7.5	7.5	7.5	7.5	7.0	7.0	7.0	7.0	7.0	7.0
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
Frpb, ped/bikes	1.00	1.00	0.93	1.00	1.00	1.00	1.00	1.00	0.96	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.99	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1921	2022	1555	1774	2022	1719	1879	1908	1656	1904	1926	1538
Flt Permitted	0.75	1.00	1.00	0.75	1.00	1.00	0.28	1.00	1.00	0.50	1.00	1.00
Satd. Flow (perm)	1526	2022	1555	1405	2022	1719	561	1908	1656	999	1926	1538
Peak-hour factor, PHF	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	13	8	249	90	5	6	101	435	32	8	815	19
RTOR Reduction (vph)	0	0	168	0	0	5	0	0	9	0	0	5
Lane Group Flow (vph)	13	8	81	90	5	1	101	435	23	8	815	14
Confl. Peds. (#/hr)			28	28			6		9	9		6
Heavy Vehicles (%)	0%	0%	3%	3%	0%	0%	2%	6%	0%	0%	5%	7%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	3
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			6			2	
Permitted Phases	4		4	8		8	6		6	2		2
Actuated Green, G (s)	12.8	12.8	12.8	12.8	12.8	12.8	75.1	75.1	75.1	75.1	75.1	75.1
Effective Green, g (s)	12.8	12.8	12.8	12.8	12.8	12.8	75.1	75.1	75.1	75.1	75.1	75.1
Actuated g/C Ratio	0.12	0.12	0.12	0.12	0.12	0.12	0.73	0.73	0.73	0.73	0.73	0.73
Clearance Time (s)	7.5	7.5	7.5	7.5	7.5	7.5	7.0	7.0	7.0	7.0	7.0	7.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	190	252	194	175	252	214	411	1399	1214	732	1412	1127
v/s Ratio Prot		0.00			0.00			0.23			c0.42	
v/s Ratio Perm	0.01		0.05	c0.06		0.00	0.18		0.01	0.01		0.01
v/c Ratio	0.07	0.03	0.42	0.51	0.02	0.00	0.25	0.31	0.02	0.01	0.58	0.01
Uniform Delay, d1	39.5	39.4	41.4	41.9	39.3	39.2	4.4	4.7	3.7	3.7	6.3	3.7
Progression 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
Incremental Delay, d2	0.2	0.1	1.5	2.5	0.0	0.0	1.4	0.6	0.0	0.0	1.7	0.0
Delay (s)	39.7	39.4	42.8	44.4	39.3	39.2	5.9	5.3	3.7	3.7	8.0	3.7
Level of Service	D	D	D	D	D	D	A	A	A	A	A	A
Approach Delay (s)		42.6			43.9			5.3			7.9	
Approach LOS		D			D			A			A	

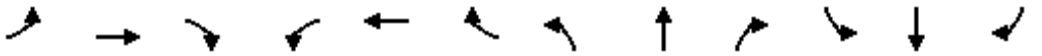
Intersection Summary			
HCM 2000 Control Delay	14.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	102.4	Sum of lost time (s)	14.5
Intersection Capacity Utilization	95.1%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	16	0	381	692	6
Future Volume (Veh/h)	0	16	0	381	692	6
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	17	0	414	752	7
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)				93		
pX, platoon unblocked	0.92					
vC, conflicting volume	1170	756	759			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1142	756	759			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	96	100			
cM capacity (veh/h)	206	408	862			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	17	414	759
Volume Left	0	0	0
Volume Right	17	0	7
cSH	408	1700	1700
Volume to Capacity	0.04	0.24	0.45
Queue Length 95th (m)	1.0	0.0	0.0
Control Delay (s)	14.2	0.0	0.0
Lane LOS	B		
Approach Delay (s)	14.2	0.0	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	44.9%	ICU Level of Service	A
Analysis Period (min)	15		

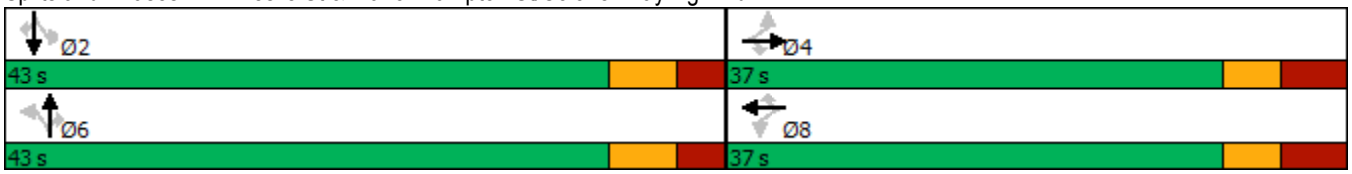


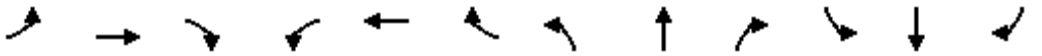
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	13	147	36	2	6	195	836	57	9	519	14
Future Volume (vph)	20	13	147	36	2	6	195	836	57	9	519	14
Ideal Flow (vphpl)	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
Storage Length (m)	55.0		35.0	55.0		35.0	55.0		55.0	40.0		40.0
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
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			0.98				1.00		0.98			0.98
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1921	2022	1702	1865	2022	1719	1921	2002	1719	1729	2022	1698
Flt Permitted	0.757			0.748			0.404			0.177		
Satd. Flow (perm)	1531	2022	1666	1469	2022	1719	816	2002	1681	322	2022	1659
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			160			55			61			61
Link Speed (k/h)		40			50			50			50	
Link Distance (m)		149.9			145.4			231.5			93.1	
Travel Time (s)		13.5			10.5			16.7			6.7	
Confl. Peds. (#/hr)							2		1	1		2
Confl. Bikes (#/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%	1%	3%	0%	0%	0%	1%	0%	0%	0%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	3
Parking (#/hr)										0		
Adj. Flow (vph)	22	14	160	39	2	7	212	909	62	10	564	15
Shared Lane Traffic (%)												
Lane Group Flow (vph)	22	14	160	39	2	7	212	909	62	10	564	15
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			6			2	
Permitted Phases	4		4	8		8	6		6	2		2
Detector Phase	4	4	4	8	8	8	6	6	6	2	2	2
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	30.0	30.0	30.0	30.0	30.0	30.0
Minimum Split (s)	36.5	36.5	36.5	36.5	36.5	36.5	37.0	37.0	37.0	37.0	37.0	37.0
Total Split (s)	37.0	37.0	37.0	37.0	37.0	37.0	43.0	43.0	43.0	43.0	43.0	43.0
Total Split (%)	46.3%	46.3%	46.3%	46.3%	46.3%	46.3%	53.8%	53.8%	53.8%	53.8%	53.8%	53.8%
Maximum Green (s)	29.5	29.5	29.5	29.5	29.5	29.5	36.0	36.0	36.0	36.0	36.0	36.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.5	7.5	7.5	7.5	7.5	7.0	7.0	7.0	7.0	7.0	7.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	Max	Max	Max	Max	Max	Max
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	22.0	22.0	22.0	22.0	22.0	22.0	20.0	20.0	20.0	20.0	20.0	20.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effct Green (s)	10.1	10.1	10.1	10.1	10.1	10.1	39.4	39.4	39.4	39.4	39.4	39.4
Actuated g/C Ratio	0.16	0.16	0.16	0.16	0.16	0.16	0.61	0.61	0.61	0.61	0.61	0.61
v/c Ratio	0.09	0.04	0.40	0.17	0.01	0.02	0.42	0.74	0.06	0.05	0.45	0.01
Control Delay	22.6	21.8	7.9	23.9	21.0	0.2	9.9	13.7	1.9	6.0	8.2	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.6	21.8	7.9	23.9	21.0	0.2	9.9	13.7	1.9	6.0	8.2	0.0
LOS	C	C	A	C	C	A	A	B	A	A	A	A
Approach Delay		10.6			20.3			12.4			7.9	
Approach LOS		B			C			B			A	
Queue Length 50th (m)	2.1	1.3	0.0	3.8	0.2	0.0	11.2	65.2	0.1	0.4	30.5	0.0
Queue Length 95th (m)	7.3	5.3	13.2	10.7	1.7	0.0	24.8	108.7	3.5	2.1	49.6	0.0
Internal Link Dist (m)		125.9			121.4			207.5			69.1	
Turn Bay Length (m)	55.0		35.0	55.0		35.0	55.0		55.0	40.0		40.0
Base Capacity (vph)	710	937	858	681	937	826	501	1231	1056	197	1243	1043
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.01	0.19	0.06	0.00	0.01	0.42	0.74	0.06	0.05	0.45	0.01

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 64.1			
Natural Cycle: 80			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.74			
Intersection Signal Delay: 11.1		Intersection LOS: B	
Intersection Capacity Utilization 93.3%		ICU Level of Service F	
Analysis Period (min) 15			

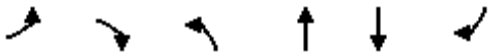
Splits and Phases: 1: Leslie St & Manor Hampton St/Colonel Wayling Blvd





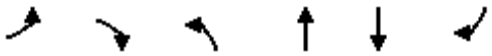
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	13	147	36	2	6	195	836	57	9	519	14
Future Volume (vph)	20	13	147	36	2	6	195	836	57	9	519	14
Ideal Flow (vphpl)	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
Total Lost time (s)	7.5	7.5	7.5	7.5	7.5	7.5	7.0	7.0	7.0	7.0	7.0	7.0
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
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	1.00	1.00	1.00	0.98	1.00	1.00	0.98
Flpb, ped/bikes	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	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1921	2022	1664	1865	2022	1719	1919	2002	1681	1729	2022	1660
Flt Permitted	0.76	1.00	1.00	0.75	1.00	1.00	0.40	1.00	1.00	0.18	1.00	1.00
Satd. Flow (perm)	1530	2022	1664	1469	2022	1719	816	2002	1681	323	2022	1660
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	22	14	160	39	2	7	212	909	62	10	564	15
RTOR Reduction (vph)	0	0	135	0	0	6	0	0	23	0	0	6
Lane Group Flow (vph)	22	14	25	39	2	1	212	909	39	10	564	9
Confl. Peds. (#/hr)							2		1	1		2
Confl. Bikes (#/hr)			1						1			
Heavy Vehicles (%)	0%	0%	1%	3%	0%	0%	0%	1%	0%	0%	0%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	3
Parking (#/hr)										0		
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			6			2	
Permitted Phases	4		4	8		8	6		6	2		2
Actuated Green, G (s)	10.1	10.1	10.1	10.1	10.1	10.1	39.4	39.4	39.4	39.4	39.4	39.4
Effective Green, g (s)	10.1	10.1	10.1	10.1	10.1	10.1	39.4	39.4	39.4	39.4	39.4	39.4
Actuated g/C Ratio	0.16	0.16	0.16	0.16	0.16	0.16	0.62	0.62	0.62	0.62	0.62	0.62
Clearance Time (s)	7.5	7.5	7.5	7.5	7.5	7.5	7.0	7.0	7.0	7.0	7.0	7.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	241	319	262	231	319	271	502	1232	1034	198	1244	1021
v/s Ratio Prot		0.01			0.00			c0.45			0.28	
v/s Ratio Perm	0.01		0.02	c0.03		0.00	0.26		0.02	0.03		0.01
v/c Ratio	0.09	0.04	0.10	0.17	0.01	0.00	0.42	0.74	0.04	0.05	0.45	0.01
Uniform Delay, d1	23.0	22.9	23.0	23.3	22.7	22.7	6.4	8.7	4.8	4.9	6.6	4.8
Progression 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
Incremental Delay, d2	0.2	0.1	0.2	0.3	0.0	0.0	2.6	4.0	0.1	0.5	1.2	0.0
Delay (s)	23.2	22.9	23.2	23.7	22.7	22.7	9.0	12.6	4.9	5.4	7.8	4.8
Level of Service	C	C	C	C	C	C	A	B	A	A	A	A
Approach Delay (s)		23.2			23.5			11.6			7.6	
Approach LOS		C			C			B			A	

Intersection Summary			
HCM 2000 Control Delay	11.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	64.0	Sum of lost time (s)	14.5
Intersection Capacity Utilization	93.3%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	10	0	862	532	15
Future Volume (vph)	0	10	0	862	532	15
Ideal Flow (vphpl)	2000	2000	2000	2000	2000	2000
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.865			0.996	
Flt Protected						
Satd. Flow (prot)	0	1715	0	1983	1975	0
Flt Permitted						
Satd. Flow (perm)	0	1715	0	1983	1975	0
Link Speed (k/h)	48			48	48	
Link Distance (m)	32.0			93.1	188.8	
Travel Time (s)	2.4			7.0	14.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	11	0	937	578	16
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	11	0	937	594	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 46.4%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	10	0	862	532	15
Future Volume (Veh/h)	0	10	0	862	532	15
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	11	0	937	578	16
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)				93		
pX, platoon unblocked	0.61					
vC, conflicting volume	1523	586	594			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1538	586	594			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	98	100			
cM capacity (veh/h)	78	510	982			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	11	937	594
Volume Left	0	0	0
Volume Right	11	0	16
cSH	510	1700	1700
Volume to Capacity	0.02	0.55	0.35
Queue Length 95th (m)	0.5	0.0	0.0
Control Delay (s)	12.2	0.0	0.0
Lane LOS	B		
Approach Delay (s)	12.2	0.0	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	46.4%	ICU Level of Service	A
Analysis Period (min)	15		