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Proposed Office Building
2707 Solandt Road, Ottawa
Transportation Impact Assessment

Engineering excellence. Planning precision. Inspired landscapes.

Proposed Office Development
2707 Solandt Road

Transportation Impact Assessment

Prepared By:

NOVATECH
Suite 200, 240 Michael Cowpland Drive
Ottawa, Ontario
K2M 1P6

Dated: October 2019
Revised: January 2020

Novatech File: 119110
Ref: R-2019-125

NOVATECH
Engineers, Planners & Landscape Architects

January 17, 2020

City of Ottawa
Planning and Growth Management Department
110 Laurier Ave. W., 4th Floor,
Ottawa, Ontario K1P 1J1

Attention: **Ms. Neeti Paudel**
Project Manager, Infrastructure Approvals

Dear Ms. Paudel:

Reference: **2707 Solandt Road**
Transportation Impact Assessment
Novatech File No. 119110

We are pleased to submit the following revised Transportation Impact Assessment (TIA) in support of Site Plan Control and Zoning By-Law Amendment applications for the property located at 2707 Solandt Road, for your review and signoff. The structure and format of this report is in accordance with the City of Ottawa Transportation Impact Assessment Guidelines (June 2017).

The original TIA was submitted to the City of Ottawa in October 2019 in support of Site Plan Control and Zoning By-Law Amendment applications. This revised TIA has been submitted to respond to comments received from the City in December 2019 and reflect updates in the site plan.

If you have any questions or comments regarding this report, please feel free to contact Jennifer Luong, or the undersigned.

Yours truly,

NOVATECH

Joshua Audia, B.Sc.
E.I.T. | Transportation/Traffic

Suite 200, 240 Michael Cowpland Drive, Ottawa ON K2M 1P6 Tel: 613.254.9643 Fax: 613.254.5867 www.novatech-eng.com

TIA Plan Reports

On 14 June 2017, the Council of the City of Ottawa adopted new Transportation Impact Assessment (TIA) Guidelines. In adopting the guidelines, Council established a requirement for those preparing and delivering transportation impact assessments and reports to sign a letter of certification.

Individuals submitting TIA reports will be responsible for all aspects of development-related transportation assessment and reporting, and undertaking such work, in accordance and compliance with the City of Ottawa's Official Plan, the Transportation Master Plan and the Transportation Impact Assessment (2017) Guidelines.

By submitting the attached TIA report (and any associated documents) and signing this document, the individual acknowledges that s/he meets the four criteria listed below.

CERTIFICATION

1. I have reviewed and have a sound understanding of the objectives, needs and requirements of the City of Ottawa's Official Plan, Transportation Master Plan and the Transportation Impact Assessment (2017) Guidelines;
2. I have a sound knowledge of industry standard practice with respect to the preparation of transportation impact assessment reports, including multi modal level of service review;
3. I have substantial experience (more than 5 years) in undertaking and delivering transportation impact studies (analysis, reporting and geometric design) with strong background knowledge in transportation planning, engineering or traffic operations; and
4. I am either a licensed[1] or registered[2] professional in good standing, whose field of expertise [check √ appropriate field(s)] is either transportation engineering ☑ or transportation planning ☐.

[1,2] **License of registration body that oversees the profession is required to have a code of conduct and ethics guidelines that will ensure appropriate conduct and representation for transportation planning and/or transportation engineering works.**

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Planning and Growth Management
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Dated at Ottawa (City) this 17th day of January, 2020.

Name: Jennifer Luong, P.Eng.
(Please Print)

Professional Title: Senior Project Manager, Transportation/Traffic

Signature of Individual certifier that s/he meets the above four criteria

Office Contact Information (Please Print)	
Address:	240 Michael Cowpland Drive, Suite 200
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EXECUTIVE SUMMARY

This Transportation Impact Assessment has been prepared in support of Site Plan Control and Zoning By-Law Amendment applications for the properties located at 2707 Solandt Road. The site is currently occupied by an unused parking lot at 2505 Solandt Road, and currently vacant at 2707 Solandt Road.

The proposed development will include an 8-storey, 198,615 ft^2 office building at 2707 Solandt Road, and will connect to the existing parking lot located at 2505 Solandt Road. As the parking lot at 2505 Solandt Road was previously approved in 2009 (SP D07-12-06-007), the Site Plan and re-zoning applications relate to the 2707 Solandt Road property only. A total of 587 parking spaces will be provided on the two sites combined. Access to the proposed development will be provided via two existing driveways to the parking lot at 2505 Solandt Road and two new driveways to 2707 Solandt Road.

The study area for this report will include the roadways March Road, Carling Avenue, Terry Fox Drive, Solandt Road, and Legget Drive, and the signalized intersections at March Road/Solandt Road, Legget Drive/Solandt Road, and March Road/Carling Avenue/Station Road, and the unsignalized intersection at Legget Drive/Terry Fox Drive. The selected time periods for the analysis are the weekday AM and PM peak hours, as they represent the 'worst case' combination of site generated traffic and adjacent street traffic. The proposed development is expected to be completed in one phase, potentially opening in 2021. Therefore, this TIA will perform analysis for the weekday AM and PM peak periods in the buildout year 2021, and the horizon year 2026.

The conclusions and recommendations of this TIA can be summarized as follows:

Forecasting

- The proposed development is estimated to generate 274 person trips in the AM peak hour and 282 person trips in the PM peak hour, including 164 vehicle trips in the AM peak hour and 169 vehicle trips in the PM peak hour.

Development Design and Parking

- Pedestrian facilities will be provided between the building entrances and the parking areas. A pedestrian facility connecting from the existing sidewalk on the north side of Solandt Road will be aligned with the main entrance of the proposed office building, providing the most direct route between the sidewalk and main entrance.

- The nearest transit stop (Stop #7548) is approximately 100m from the main entrance to the proposed office building.

- All required TDM-supportive design and infrastructure measures in the TDM checklist are met by the proposed development.

- The fire route for the proposed development includes the perimeter of 2707 Solandt Road and the drop-off loop at the main entrance. Fire trucks can be accommodated by the proposed accesses.

- Garbage collection, loading, and deliveries will be accommodated directly north of the proposed office building and directly west of the parking area north of the building. Two loading spaces will be provided, meeting the minimum requirements of the ZBL.

- Approximately 587 vehicle parking spaces and 80 bicycle parking spaces are proposed for the subject site, meeting the requirements of the ZBL.

Boundary Streets

- Results of the segment MMLOS analysis can be summarized as follows:
    - The north side of Solandt Road meets the target PLOS C, but the south side does not;
    - Solandt Road meets the target BLOS E;
    - Solandt Road achieves a TLOS D, equal to the target suggested for Transit Priority routes with isolated measures;
    - Solandt Road meets the target TkLOS D;
    - Solandt Road meets the target Auto LOS D.

- The south side of Solandt Road does not include a sidewalk. Based on Exhibit 4 of the MMLOS guidelines, the target PLOS C can be achieved by providing a sidewalk with a minimum width of 1.5m and minimum boulevard of 0.5m, or a sidewalk with a minimum width of 1.8m and no boulevard. As the subject site fronts onto the north side of Solandt Road, this improvement is identified for the City's consideration as funding becomes available.

Access Design

- The proposed accesses to 2707 Solandt Road meet all relevant requirements outlined in the City's *Private Approach By-Law* and *Zoning By-Law*.

Transportation Demand Management

- While the proponent is anticipated to maintain ownership of the development once occupied, many of the measures included in the *TDM Measures Checklist* are more appropriate for the future office tenant(s) to consider. At this stage, the proponent has agreed to consider the following measures upon opening of the proposed development:
    - Display local area maps with walking/cycling access routes and key destinations at major entrances;
    - Display relevant transit schedules and route maps at entrances.

- The proposed development also incorporates many 'basic' or 'better' measures outlined in the *TDM-Supportive Development Design Checklist* in addition to meeting all the required measures, including:
    - Locating the building close to the street, with entrances located to minimize walking distances to sidewalks and transit stops/stations, and doors and windows located to ensure visibility of pedestrians from the building, for their security and comfort;
    - Providing safe, direct and attractive routes from building entrances to nearby stops;
    - Providing lighting, landscaping and benches along walking and cycling routes between building entrances and streets, sidewalks and trails;
    - Providing bicycle parking spaces equivalent to the expected number of commuter plus customer/visitor cyclists;
    - Providing a designated area for carpool drivers (plus taxis and ride-hailing services) to drop off or pick up passengers.

Transit

- The proposed development is estimated to generate 14 transit trips in both the AM and PM peak hour, based on existing transit shares. Based on these volumes, no capacity problems are anticipated on the bus routes or at the bus stops within the study area.

- The proposed development is estimated to generate 58 and 59 transit trips in the AM and PM peak hours, based on a future 21% transit share target. This is identified to assist OC Transpo in determining future transit capacity requirements.

Intersection Design

- Results of the intersection MMLOS analysis can be summarized as follows:
    - No intersections meet the target PLOS C;
    - No intersections meet the target BLOS C;
    - No intersections with targets meet the target TLOS B;
    - March Road/Solandt Road meets the target TkLOS B and Legget Drive/Solandt Road meets the target TkLOS D, while March Road/Carling Avenue/Station Road does not meet the target TkLOS B;
    - No intersections meet the target Auto LOS D.

- Pedestrian Level of Service
    - All approaches at March Road/Solandt Road, Legget Drive/Solandt Road, and March Road/Carling Avenue/Station Road have a cross-section with a width equivalent to six lanes crossed or more. There is limited opportunity in improving the PLOS at each approach without reducing the number of travel lanes, restricting turning movements, or reducing curb radii. There is also limited opportunity in improving the delay score for pedestrians without incurring major delays for vehicles.

- Bicycle Level of Service
    - At March Road/Solandt Road, the east approach does not meet the target BLOS based on left turn characteristics and the north, south, and west approaches do not meet the target BLOS based on both left and right turn characteristics. There may be opportunity for two-stage left-turn bike boxes at all approaches, and is identified for the City's consideration. Providing bike lanes on Solandt Road (as identified in the 2013 Ottawa Cycling Plan) may also improve the level of comfort for cyclists.

    - At Legget Drive/Solandt Road, all approaches do not meet the target BLOS based on left turn characteristics. Providing bike lanes and narrowing the existing travel lanes may be sufficient in lowering the operating speeds of Legget Drive and Solandt Road, and improve the level of comfort for cyclists.

    - At March Road/Carling Avenue/Station Road, the north approach does not meet the target BLOS based on left turn characteristics, and the south approach does not meet the target BLOS based on both left and right turn characteristics. There may be opportunity for two-stage left-turn bike boxes for north-south cyclists, and is identified for the City's consideration.

- Transit Level of Service
    - Approaches on March Road at Solandt Road and Carling Avenue/Station Road do not meet the target TLOS B. The City's RTTP Network Concept includes at-grade BRT on March Road throughout the study area, while the Affordable Network includes at-grade BRT south of Solandt Road, and transit priority signals and queue jump lanes, which will allow for future conversion to BRT. Delays for transit vehicles are anticipated to improve as a result of these projects.

- Truck Level of Service
    - The north approach of March Road/Carling Avenue/Station Road does not meet the target TkLOS B. As this approach involves right turning trucks onto Station Road from March Road, it is anticipated that the number of trucks turning onto Station Road is limited. Therefore, no recommendations have been made.

- In existing traffic conditions, capacity issues have been identified for the following movements. To achieve the target Auto LOS D, an approximate reduction in peak hour traffic volumes for the following movements are required:
    - March Road/Solandt Road
        - Northbound left turn (AM peak hour): 110 vehicles;
        - Northbound through (PM peak hour): 330 vehicles;
        - Southbound through (AM peak hour): 270 vehicles;
        - Eastbound right turn (PM peak hour): 360 vehicles;
        - Westbound left turn (PM peak hour): 70 vehicles.
    - Legget Drive/Solandt Road
        - Southbound through/right turn (PM peak hour): 110 vehicles.
    - March Road/Carling Avenue/Station Road
        - Northbound through (AM peak hour): 380 vehicles;
        - Southbound through (PM peak hour): 180 vehicles.
    - Legget Drive/Terry Fox Drive
        - Northbound left turn/right turn (PM peak hour): 130 vehicles.

- The existing conditions indicate a need for additional through capacity along the March Road corridor to relieve congestion, as well as dual northbound left turn lanes. It is anticipated that optimizing the signal timing will not mitigate the failing conditions.

- The functional design of the future median BRT lanes on March Road include additional transit lanes on March Road, and includes the removal of one of the westbound left turn lanes on Solandt Road. As the westbound left turn on Solandt Road is already identified as operating over-capacity, removal of one left turn lane is anticipated to cause significant operational and queueing issues, and will likely affect operations upstream at Legget Drive/ Solandt Road.

- The existing conditions indicate an auxiliary southbound right turn lane at Legget Drive/ Solandt Road may improve the over-capacity southbound through/right turn lane. Based on the TAC *Geometric Design Guide for Canadian Roads*, approximately 105m of right turn lane storage would be required.

- At Legget Drive/Terry Fox Drive, TAC identifies that a 15m westbound left turn lane and 125m eastbound right turn lane are warranted. While the Legget Drive/Terry Fox Drive intersection

does not meet the warrants for all-way stop control or signalization, it is recommended that the City monitor the intersection, as signalization may still be appropriate from a safety perspective based on delay.

- In the 2021 background and total traffic conditions, Synchro identifies marginal improvements for most movements in the study area despite anticipated background growth and site-generated traffic, due to differences in the Peak Hour Factor parameter.

- Compared to the existing geometry, providing dual northbound left turn lanes at March Road/ Solandt Road and a southbound right turn lane at Legget Drive/Solandt Road is anticipated to mitigate those failing movements in the AM and PM peak hours, respectively. Signalizing Legget Drive/Terry Fox Drive and providing westbound left turn and eastbound right turn lanes is anticipated to mitigate the failing northbound left turn/right turn movement in the PM peak hour.

- It has been assumed that median BRT lanes on the March Road corridor will be operational by the 2026 horizon year. Synchro identifies that the effects of KNUEA-generated traffic, general background growth, the reduction in traffic volumes to reflect increased transit ridership, and the approved intersection geometry with median BRT lanes approximately offset one another.

- In the 2026 background traffic conditions, capacity issues have been identified for the following movements. To achieve the target Auto LOS D, an approximate reduction in peak hour traffic volumes for the following movements are required, based on the approved intersection geometry:
    - March Road/Solandt Road
        - Northbound left turn (AM peak hour): 40 vehicles;
        - Northbound through (PM peak hour): 320 vehicles;
        - Southbound through (AM peak hour): 490 vehicles;
        - Eastbound right turn (PM peak hour): 240 vehicles;
        - Westbound left turn (PM peak hour): 190 vehicles.
    - March Road/Carling Avenue/Station Road
        - Northbound through (AM peak hour): 270 vehicles.
    - Legget Drive/Terry Fox Drive
        - Northbound left turn/right turn (PM peak hour): 55 vehicles.

- As with the existing conditions, the 2026 traffic conditions indicate a need for additional through capacity along the March Road corridor to relieve congestion, as well as dual northbound left turn lanes at Solandt Road. Capacity issues are anticipated for the eastbound right turn movement and the westbound left turn movement at March Road/Solandt Road. Removal of one of the westbound left turn lanes is anticipated to significantly impact that movement, and will likely impact operations at the upstream intersection of Legget Drive/ Solandt Road.

- Providing dual westbound left turn lanes at March Road/Solandt Road improves the westbound left turn movement, but downgrades the intersection as a whole due to the introduction of a protected left turn phase. In this condition, a reduction of 500 northbound through vehicles, 250 eastbound right turning vehicles, and 130 westbound left turning vehicles would be required. Consistent with the functional design for median BRT lanes on

March Road, a single westbound left turn lane, through lane, and right turn lane continue to be recommended.

- In the 2026 total traffic conditions, marginal increases to the v/c ratios and queue lengths within the study area are anticipated as a result of site-generated traffic. Expressed as a percentage, site-generated traffic accounts for approximately 2 to 3% of total peak hour volumes at March Road/Solandt Road, March Road/Carling Avenue/Station Road, and Legget Drive/Terry Fox Drive, and approximately 10% of total peak hour intersection volumes at Legget Drive/Solandt Road.

- No roadway modifications are recommended to accommodate development-related traffic, as none are required.

- No operational concerns are anticipated on Solandt Road at any of the accesses to the proposed development.

1.0 INTRODUCTION

This Transportation Impact Assessment has been prepared in support of Site Plan Control and Zoning By-Law Amendment applications for the property located at 2707 Solandt Road. The site is currently vacant.

The subject site is surrounded by the following:

- The Marshes Golf Club to the north and east;
- Solandt Road, followed by offices to the south;
- Offices, followed by Legget Drive to the west.

A view of the subject site is provided in **Figure 1**.

2.0 PROPOSED DEVELOPMENT

The proposed development will include an 8-storey, 198,615 ft^2 office building at 2707 Solandt Road, and will connect to the existing parking lot located at 2505 Solandt Road. As the parking lot at 2505 Solandt Road was previously approved in 2009 (SP D07-12-06-007), the Site Plan and re-zoning applications relate to the 2707 Solandt Road property only. A total of 587 parking spaces will be provided on the two sites combined. Access to the proposed development will be provided via two existing driveways to the parking lot at 2505 Solandt Road and two new driveways to 2707 Solandt Road. It is anticipated that the proposed development may be constructed in a single phase, with full occupancy in 2021.

The proposed development is designated as 'Urban Employment Area' in Schedule B of the City of Ottawa's Official Plan. The implemented zoning for the subject site is 'Business Park Industrial Zone (Kanata North Business Park)' (IP6). The proposed development is permitted under the implemented zoning, however a Zoning By-Law Amendment is required to seek relief of the current height limit of 22m.

A copy of the concept plan is included in **Appendix A**.

3.0 SCREENING

The City's 2017 TIA Guidelines identify three triggers for completing a TIA report, including trip generation, location, and safety. The criteria for each trigger are outlined in the City's TIA Screening Form. A copy of the TIA Screening Form is included in **Appendix B**. The trigger results are as follows:

- Trip Generation Trigger – The development is anticipated to generate over 60 peak hour person trips; further assessment is required based on this trigger.

- Location Triggers – The development is not located within a Design Priority Area or Transit-Oriented Development zone, and does not propose a new driveway to a boundary street designated as part of the City's Rapid Transit, Transit Priority, or Spine Cycling networks; further assessment is not required based on this trigger.

- Safety Triggers – No safety triggers outlined in the TIA Screening Form are met; further assessment is not required based on this trigger.

Figure 1: View of the Subject Site

4.0 SCOPING

4.1 Existing Conditions

4.1.1 Roadways

All roadways within the study area fall under the jurisdiction of the City of Ottawa.

March Road is an arterial roadway that generally runs on a north-south alignment within the study area, running between Dunrobin Road and Highway 417. West of Dunrobin Road, the roadway runs on an east-west alignment until Appleton Sideroad in Almonte, where it continues as Ottawa Street. South of Highway 417, the roadway continues on a north-south alignment as Eagleson Road. Within the study area, March Road has a four-lane divided urban cross-section, sidewalks on both sides of the roadway, on-street bike lanes, and a posted speed limit of 80 km/h. March Road is classified as a truck route, allowing full loads. Street parking is not permitted.

Carling Avenue is an arterial roadway that generally runs on an east-west alignment within the study area, running between March Road and Bronson Avenue. West of March Road, the roadway continues as Station Road. Within the study area, Carling Avenue has a two-lane undivided rural cross-section, no sidewalks, and a posted speed limit of 60 km/h. Carling Avenue is classified as a truck route, allowing restricted loads. Approximately 100m east of the intersection with March Road, street parking is permitted in the paved shoulder on both sides of the roadway for a distance of approximately 150m.

Terry Fox Drive is a major collector roadway that generally runs on an east-west alignment within the study area. Overall, Terry Fox Drive is generally an arterial roadway and largely runs on a north-south alignment between Herzberg Road and Eagleson Road. Within the study area, Terry Fox Drive has a two-lane divided urban cross-section, sidewalks on the south side of the roadway, on-street bike lanes, and a posted speed limit of 50 km/h. Between March Road and Herzberg Road, Terry Fox Drive is not classified as a truck route. Street parking is not permitted.

Solandt Road is a collector roadway that generally runs on an east-west alignment, starting at Hines Road and terminating approximately 450m east of Legget Drive. Within the study area, Solandt Road has a two-lane urban cross-section and an unposted regulatory speed limit of 50 km/h under the Highway Traffic Act. Sidewalks are provided along the north side for the entire distance of Solandt Road, as well as the south side between March Road and Legget Drive. Solandt Road is not classified as a truck route. Street parking is permitted. The right-of-way (ROW) at the subject site is approximately 26m. A ROW protection of 24m is identified in the City's Official Plan, and therefore no widening is required.

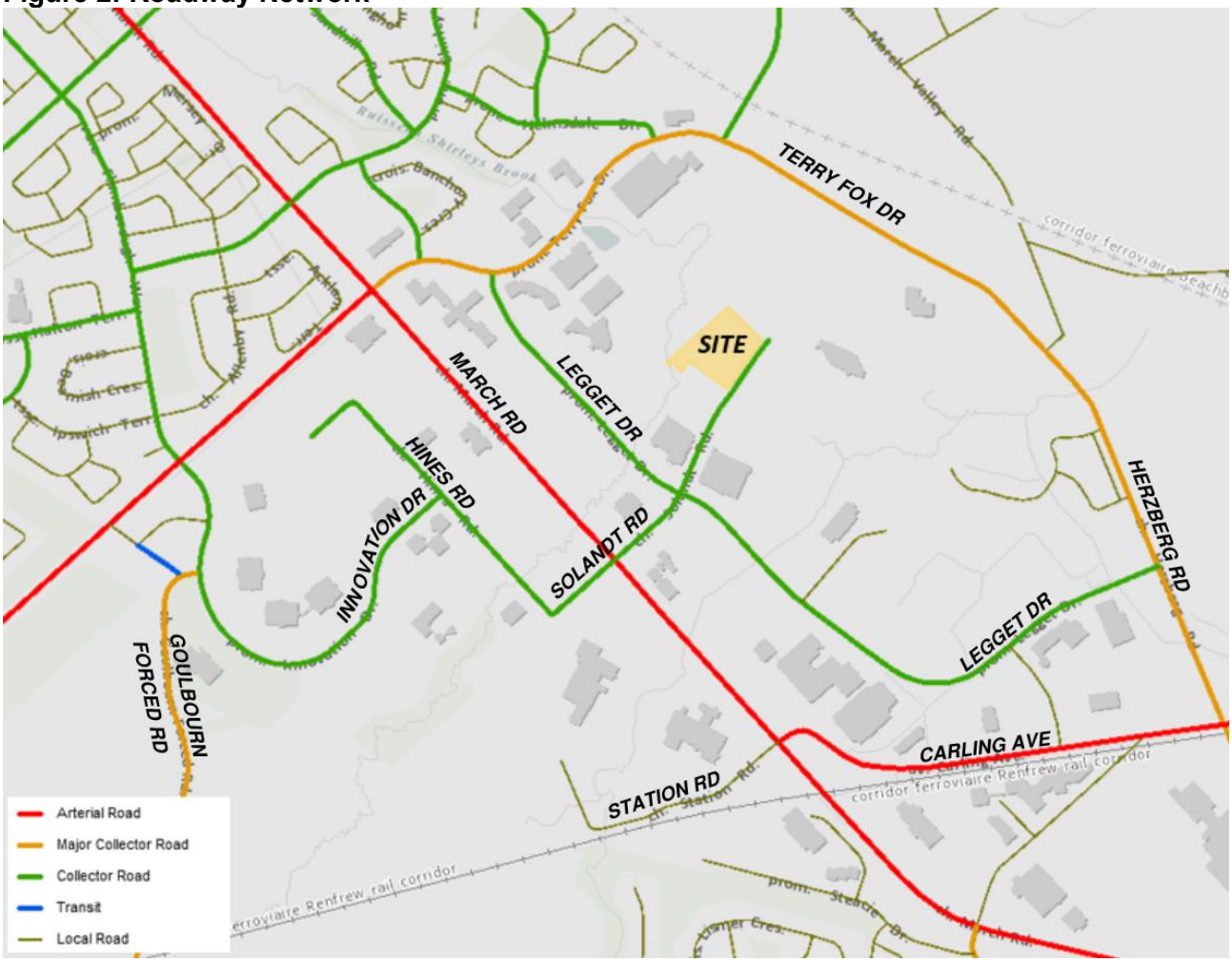
Legget Drive is a collector roadway that generally runs on a north-south alignment within the study area, running between Terry Fox Drive and Herzberg Road. Within the study area, Legget Drive has a two-lane urban cross-section, on-street bike lanes north of Solandt Road and a posted speed limit of 50 km/h. Sidewalks are provided along the east side for the entire distance of Legget Drive, as well as the west side between Solandt Road and Herzberg Road. Legget Drive is not classified as a truck route. Within the vicinity of the subject site, street parking is permitted on the east side of Legget Drive north of Solandt Road, and permitted on both sides of Legget Drive south of Solandt Road.

Station Road is a dead-end local roadway that generally runs on an east-west alignment, starting at March Road and terminating approximately 500m west of March Road. East of March Road, the

roadway continues as Carling Avenue. Within the study area, Station Road has a two-lane rural cross-section, no sidewalks, and an unposted regulatory speed limit of 50 km/h. Station Road is not classified as a truck route. Street parking is permitted.

The roadway network of the greater area surrounding the subject site is illustrated in **Figure 2**.

Figure 2: Roadway Network



4.1.2 Driveways

The City of Ottawa's 2017 TIA Guidelines requires a review of driveways on the boundary streets within 200m of any proposed access, which can be described as follows.

Solandt Road, North Side:

- One driveway to an office development at 425 Legget Drive

Solandt Road, South Side:

- One driveway to an office development at 415 Legget Drive & 2700 Solandt Road
- Two driveways to an office development at 2500 Solandt Road

4.1.3 Intersections

March Road/Solandt Road

- Signalized four-legged intersection
- North/South Approaches (March Road): one left turn lane, two through lanes, one channelized right turn lane, and bike lanes
- East Approach (Solandt Road): two left turn lanes, and one shared through/ channelized right turn lane
- West Approach (Solandt Road): one left turn lane, one through lane, and one channelized right turn lane

Legget Drive/Solandt Road

- Signalized four-legged intersection
- North/South Approaches (Legget Drive): one left turn lane and one shared through/right turn lane
- East/West Approaches (Solandt Road): one left turn lane and one shared through/right turn lane

March Road/Carling Avenue/Station Road

- Signalized four-legged intersection
- North Approach (March Road): two left turn lanes, two through lanes, one right turn lane, and a bike lane
- South Approach (March Road): one slotted left turn lane, two through lanes, one channelized right turn lane, and a bike lane
- East/West Approaches (Carling Avenue/Station Road): one shared left turn/through lane and one channelized right turn lane

Legget Drive/Terry Fox Drive

- Unsignalized three-legged intersection
- South Approach (Legget Drive):
  one shared left turn/right turn lane and a bike lane
- East Approach (Terry Fox Drive):
  one shared left turn/through lane and a bike lane
- West Approach (Terry Fox Drive):
  one shared through/right turn lane and a bike lane

4.1.4 Pedestrian and Cycling Facilities

Concrete sidewalks are provided on both sides of March Road, and asphalt sidewalks are provided on the south side of Terry Fox Drive, and on one or both sides of Solandt Road and Legget Drive, as described in Section 4.1.1. Bike lanes are provided on March Road, Terry Fox Drive, and Legget Drive between Terry Fox Drive and approximately 70m north of Solandt Road. Paved shoulders are provided on Carling Avenue. There are no dedicated cycling facilities on Solandt Road or Station Road.

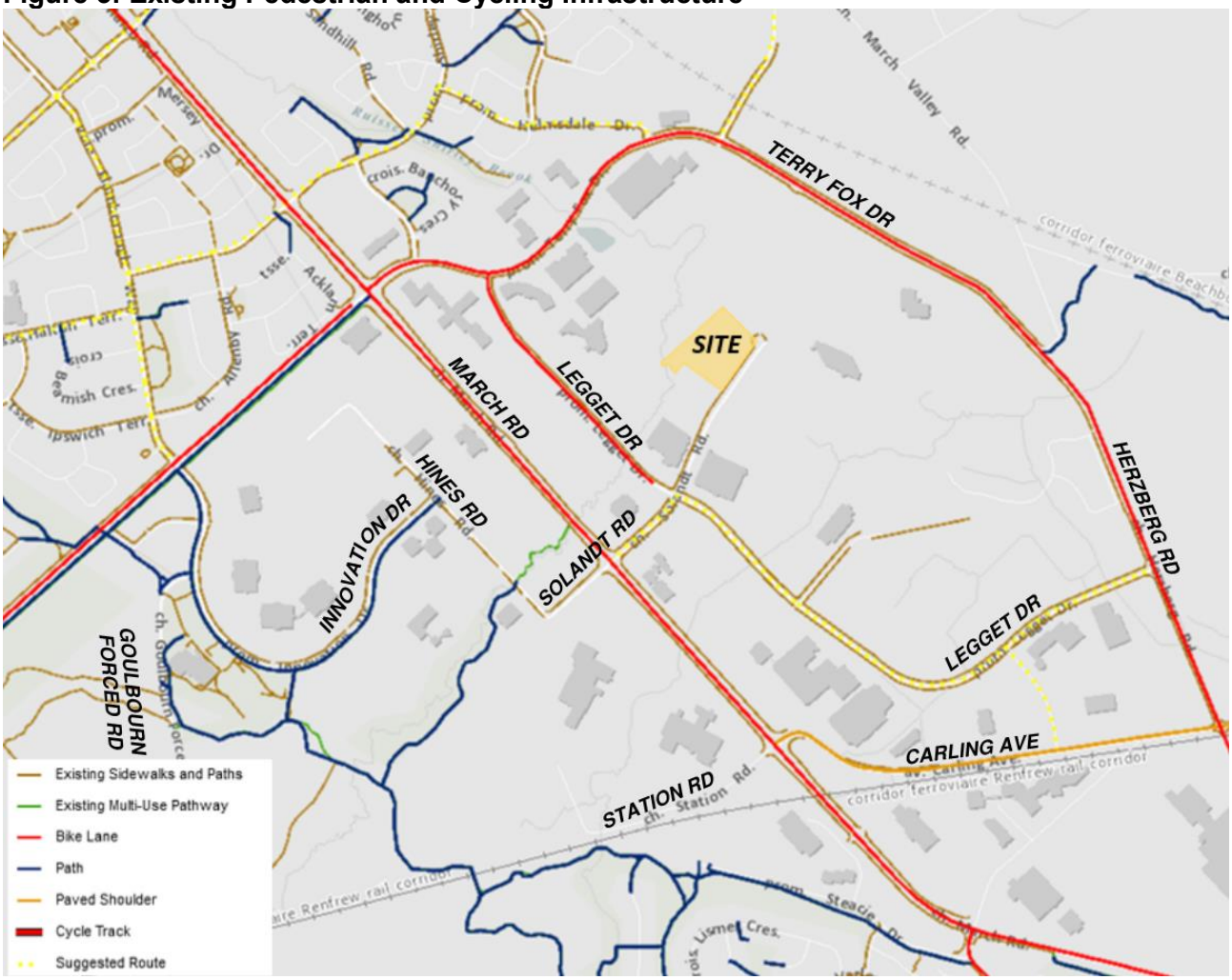
March Road, Carling Avenue, and Terry Fox Drive are classified as Spine Routes in the City's primary cycling network, while Legget Drive and Station Road are classified as Local Routes. Solandt Road is also classified as a Local Route west of Legget Drive, and has no cycling route designation east of Legget Drive.

The existing pedestrian and cycling infrastructure provided in the greater area surrounding the subject site is illustrated in **Figure 3**.

4.1.5 Area Traffic Management

There are no Area Traffic Management (ATM) studies within the study area that have been completed, or are currently in progress.

Figure 3: Existing Pedestrian and Cycling Infrastructure



4.1.6 Transit

The nearest bus stops to the subject site are as follows:

<u>Solandt Loop</u>

- Stop #7548 – for route 66
  (located approximately 35m west of westerly access to 2505 Solandt Road)

<u>Legget Drive/Solandt Road</u>

- Stop #6150 – for routes 63, 66, and 166
  (located on the west side of Legget Drive, approximately 200m north of Solandt Road)
- Stop #6909 – for routes 63, 66, and 166
  (located at the northeast corner)
- Stop #7987 – for routes 63 and 64
  (located on the west side of Legget Drive, approximately 150m south of Solandt Road)
- Stop #7991 – for routes 63 and 64
  (located on the east side of Legget Drive, approximately 150m south of Solandt Road)

Legget Drive/Ad. 515

- Stop #4974 – for routes 63, 66, and 166
  (located on the east side of Legget Drive, approximately 200m north of Solandt Road)

March Road/Solandt Road

- Stop #1172 – for routes 64 and 166
  (located at the northwest corner)
- Stop #1894 – for routes 63, 64, 266, 660, and 674
  (located on the west side of March Road, approximately 90m south of Solandt Road)
- Stop #1898 – for route 63, 266, 660, and 674
  (located at the northeast corner)

Locations of these bus stops are shown in **Figure 4**.

Figure 4: OC Transpo Bus Stop Locations

OC Transpo Route 63 travels between Innovation Station and either Sacré-Coeur/Laurier in Gatineau (from 6:30am to 9:30am and 3:00pm to 6:00pm on weekdays) or Tunney's Pasture Station (outside weekday peak periods and on weekends). On weekdays, the route operates every 15 to 30 minutes from 5:15am to 12:30am. On weekends, the route operates every 30 to 60 minutes from 6:30am to 1:00am.

OC Transpo Route 64 travels between Innovation Station and Tunney's Pasture Station. On weekdays, the route operates every 15 to 30 minutes from 5:30am to 10:30pm. The route does not operate on weekends.

OC Transpo Route 66 travels between the Solandt Loop and either Sacré-Coeur/Laurier in Gatineau or Tunney's Pasture Station. During the weekday AM peak, the route runs toward the Solandt Loop every 15 minutes between 5:30am and 9:00am. During the weekday PM peak, the route runs in the opposite direction every 30 minutes between 3:00pm and 8:00pm. The route does not operate outside of these hours, or on weekends.

OC Transpo Route 166 travels between Innovation Station and Eagleson Station. During the weekday AM peak, a single bus destined to Innovation Station is scheduled to arrive at stop #6150 at 7:50am. During the weekday PM peak, a single bus destined to Eagleson Station is scheduled to arrive at stop #6909 at 5:05pm. The route does not operate outside of these times, or on weekends.

OC Transpo Route 266 travels between Maxwell Bridge/Windance and Tunney's Pasture Station. During the weekday AM peak, the route runs toward Tunney's Pasture Station every 15 minutes between 6:00am and 8:00am. During the weekday PM peak, the route runs toward Maxwell Bridge/ Windance every 15 minutes between 3:30pm and 5:30pm. The route does not operate outside of these times, or on weekends.

The 600-series of OC Transpo Routes provide service to schools throughout the City of Ottawa. The following routes provide service to one or more stops within the study area.

OC Transpo Route 660 travels between Innovation Station and Bell High School. In the morning, the route arrives at stop #1894 at 8:19am. In the afternoon, the route arrives at stop #1898 at 3:56pm.

OC Transpo Route 674 travels between Innovation Station and All Saints High School. In the morning, the route arrives at stop #1894 at 7:37am and 7:47am. In the afternoon, the route arrives at stop #1898 at 2:50pm and 2:54pm.

OC Transpo maps for the routes outlined above and a copy of the OC Transpo System Map is included in **Appendix C**.

4.1.7 Existing Traffic Volumes

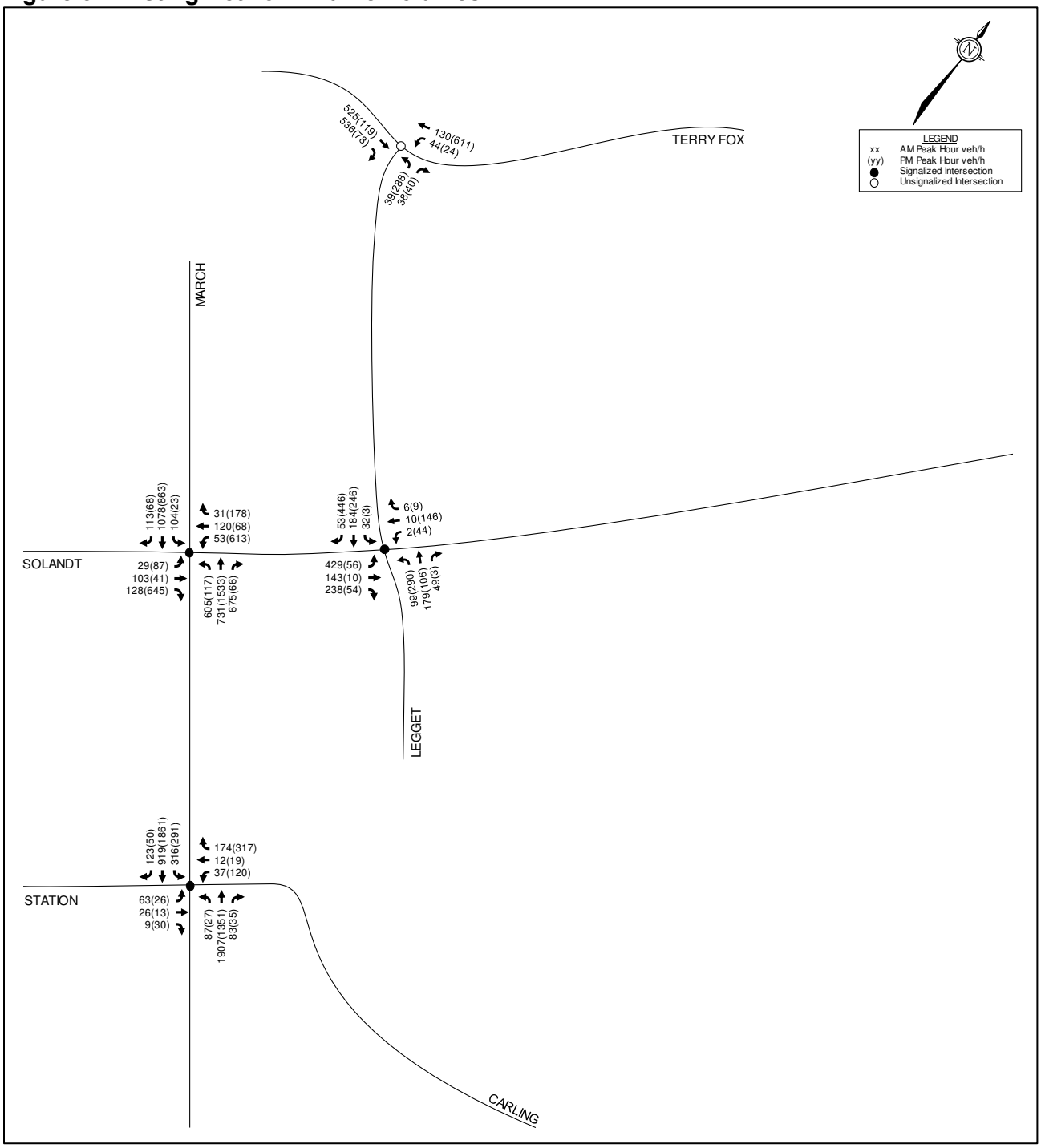
Weekday traffic counts completed by the City of Ottawa have been used to determine the existing pedestrian, cyclist, and vehicular traffic volumes at the study area intersections. The traffic counts were completed on the following dates:

- March Road/Solandt Road — August 10, 2016
- Legget Drive/Solandt Road — April 11, 2017
- March Road/Carling Avenue/Station Road — August 10, 2016
- Legget Drive/Terry Fox Drive — February 20, 2019

The average annual daily traffic (AADT) of Solandt Road east of Legget Drive is approximately 2,280 vehicles per day.

Traffic count data is included in **Appendix D**. Traffic volumes within the study area are shown in **Figure 5**.

Figure 5: Existing Network Traffic Volumes



4.1.8 Collision Records

Historical collision data from the last five years was obtained from the City's Public Works and Service Department at the study area intersection. Copies of the collision summary reports are included in **Appendix E**.

The collision data has been evaluated to determine if there are any identifiable collision patterns. The number of collisions at each intersection in the past five years is summarized in **Table 1**.

Table 1: Reported Collisions

Intersection	Number of Reported Collisions
March Road/Solandt Road	51
Legget Drive/Solandt Road	1
March Road/Carling Avenue/Station Road	52
Legget Drive/Terry Fox Drive	7

March Road/Solandt Road
A total of 51 collisions were reported at this intersection over the last five years, of which there were 23 rear-end impacts, 17 turning movement impacts, four sideswipe impacts, five angle impacts, and two single vehicle/other impacts. Six of the collisions caused injuries, but none caused fatalities. Sixteen of the collisions occurred in poor driving conditions.
Of the 23 rear-end impacts, nine occurred at the northbound approach (three left turn, four through, and two right turn incidents), four occurred at the southbound approach (two through and two right turn incidents), five occurred at the eastbound approach (three through and two right turn incidents), and five occurred at the westbound approach (one through and four right turn incidents). Four of the 23 impacts occurred in poor driving conditions.

The northbound approach exceeds the six-collision threshold to be considered a collision pattern. With three left turn impacts, four through impacts, and two right turn impacts, no individual movement was involved in a majority of these collisions. High traffic volumes on March Road, as well as a posted speed limit of 80 km/h, may have been factors in these collisions. There are no apparent geometric factors that would make rear-end impacts more likely.

Of the 17 turning movement impacts, nine involved left turns at the northbound approach, five involved left turns at the southbound approach, one involved a left turn at the westbound approach, one involved a U-turn at the southbound approach, and one involved a U-turn at the eastbound approach. Eight of the 17 impacts occurred in poor driving conditions.

The northbound approach exceeds the six-collision threshold to be considered a collision pattern. Five of the nine collisions in poor conditions, suggesting that environmental conditions may have been a factor in these collisions. Other likely factors include the posted speed limit of 80 km/h and the left turn and opposing through volumes are significant (particularly in the AM peak hour), as drivers may misjudge gaps in incoming traffic or take more risks when attempting a left turn. Left turns at the northbound approach are accommodated by a protected plus permitted phase. While there are not a disproportionate number of turning movement impacts in the morning (three of the nine between 7:00am and 10:00am), it should be noted that dual left turn lanes are typically considered at 300 vph, and this threshold is doubled during the AM peak hour.

Legget Drive/Solandt Road
One collision was reported at this intersection over the last five years, an angle impact in poor driving conditions. This collision did not cause injury.

March Road/Carling Avenue/Station Road
A total of 52 collisions were reported at this intersection over the last five years, of which there were 33 rear-end impacts, four turning movement impacts, three sideswipe impacts, five angle impacts, and seven single vehicle/other impacts. Two of the collisions caused injuries, while a third collision resulted in two fatalities. Twenty-five of the collisions occurred in poor driving conditions.

Of the 33 rear-end impacts, 12 occurred at the northbound approach (all through incidents), 11 occurred at the southbound approach (all through incidents), one occurred at the eastbound approach (a right turn incident), and nine occurred at the westbound approach (two through incidents and seven right turn incidents).

The northbound and southbound approaches exceed the six-collision threshold to be considered a traffic pattern. High traffic volumes and a posted speed limit of 80 km/h on March Road may have been factors in these collisions. The westbound approach also exceeds the six-collision threshold for right turn incidents. While traffic volumes on Carling Avenue are significantly lower than on March Road, the channelized westbound right turn lane includes a receiving lane that becomes a downstream northbound right turn lane at March Road/Solandt Road, and the westbound approach has a curvilinear alignment. These features may have been a factor in these collisions.

Of the seven single vehicle/other impacts, five involved a single vehicle only. These five incidents each involve a loss of control in poor driving conditions (one incident at the northbound approach, one incident at the southbound approach, and three incidents at the westbound approach). Of the two remaining 'other' impacts, one involved a northbound vehicle reversing into a stopped vehicle.

The other impact resulted in two fatalities on July 27, 2014. In fair driving conditions, a northbound vehicle clipped the curb of the northbound right turn channel from March Road, before hitting a parked westbound vehicle on Carling Avenue. The driver of the northbound vehicle was found to be at fault. Based on street-level and aerial photography, no changes appear to have been made to the intersection since this collision.

Legget Drive/Terry Fox Drive
A total of seven collisions were reported at this intersection over the last five years, of which there were three rear-end impacts and four angle impacts. One of the collisions caused injuries, but none caused fatalities. Two of the collisions occurred in poor driving conditions.

4.2 Planned Conditions

The City of Ottawa's 2013 Transportation Master Plan (TMP) does not identify any upcoming roadway projects within the study area in its 2031 Affordable Road Network.

The Rapid Transit and Transit Priority (RTTP) Network identifies transit improvements in its 2031 Affordable Network and 2031 Network Concepts. In the Network Concept, at-grade bus rapid transit (BRT) will be provided on March Road between Highway 417 and the urban boundary. In the Affordable Network, at-grade BRT will be provided on March Road between Highway 417 and Solandt Road, and transit priority measures such as transit priority signals and queue jump lanes will

be provided on March Road between Solandt Road and the urban boundary (which will allow for future conversion to BRT).

The City's 2013 Cycling Plan identifies multiple Phase 2 (2020-2025) cycling infrastructure projects within the vicinity of the Kanata Research Park. These projects involve the implementation of bike lanes on Flamborough Way, Innovation Drive, Hines Road, Solandt Road, and Legget Drive, in order to improve connectivity between the residential and employment areas in northern Kanata. Within the study area, bike lanes are identified on the entirety of Legget Drive, and on Solandt Road west of Legget Drive.

A review of the City's Development Application search tool does not identify any other developments within the study area that required a TIA, and are being constructed, are approved, or are in the approval process.

4.3 Study Area and Time Periods

The study area for this report will include the roadways March Road, Carling Avenue, Terry Fox Drive, Solandt Road, and Legget Drive, and the signalized intersections at March Road/Solandt Road, Legget Drive/Solandt Road, and March Road/Carling Avenue/Station Road, and the unsignalized intersection at Legget Drive/Terry Fox Drive.

The selected time periods for the analysis are the weekday AM and PM peak hours, as they represent the 'worst case' combination of site generated traffic and adjacent street traffic. The proposed development is expected to be completed in one phase, potentially opening in 2021. Therefore, this TIA will perform analysis for the weekday AM and PM peak periods in the buildout year 2021, and the horizon year 2026.

4.4 Exemptions Review

This module reviews possible exemptions from the final Transportation Impact Assessment, as outlined in the TIA guidelines. The applicable exemptions for this site are shown in **Table 2**.

Table 2: TIA Exemptions

Module	Element	Exemption Criteria	Exemption Status
Design Review Component			
4.1 Development Design	*4.1.2* Circulation and Access	• Only required for site plans	Not Exempt
	4.1.3 New Street Networks	• Only required for plans of subdivision	Exempt
4.2 Parking	*4.2.1* Parking Supply	• Only required for site plans	Not Exempt
	4.2.2 Spillover Parking	• Only required for site plans where parking supply is 15% below unconstrained demand	Exempt

Module	Element	Exemption Criteria	Exemption Status
Network Impact Component			
4.5 Transportation Demand Management	*All elements*	• Not required for non-residential site plans expected to have fewer than 60 employees and/or students on location at any given time	Not Exempt
4.6 Neighbourhood Traffic Management	*4.6.1* Adjacent Neighbourhoods	• Only required when the development relies on local or collector streets for access and total volumes exceed ATM capacity thresholds	Exempt
4.8 Network Concept	*All elements*	• Only required when proposed development generates more than 200 person-trips during the peak hour in excess of the equivalent volume permitted by the established zoning	Exempt

The proposed development is solely accessed via Solandt Road, a dead-end collector roadway. Measured from the proposed westerly access to the subject site, traffic volumes are not anticipated to exceed 300 vehicles during the AM or PM peak hours or 2,500 vehicles per day by the 2026 horizon year, which is the threshold identified in the 2017 TIA Guidelines for Neighbourhood Traffic Management on collector roadways. The projected site-generated traffic will not change the role or function of the roadway, thereby exempting the Neighbourhood Traffic Management module.

Based on the foregoing, the following modules will be included in the TIA report:

- Module 4.1: Development Design
- Module 4.2: Parking
- Module 4.3: Boundary Streets
- Module 4.4: Access Design
- Module 4.5: Transportation Demand Management
- Module 4.7: Transit
- Module 4.9: Intersection Design

5.0 FORECASTING

5.1 Development-Generated Travel Demand

5.1.1 Trip Generation

The proposed development consists of 198,615 ft^2 of office space. Trips generated by the proposed office building have been estimated using rates in the *ITE Trip Generation Manual, 10th Edition*, corresponding to the General Office Building land use (land use 710) and General Urban/Suburban location. The estimated number of trips generated by the proposed offices is shown in **Table 3**.

Table 3: Person Trip Generation

Land Use	ITE Code	GFA	AM Peak (PPH)(1)			PM Peak (PPH)		
			IN	OUT	TOT	IN	OUT	TOT
General Office Building	710	198,615 ft^2	236	38	274	45	237	282

1. PPH: Persons Per Hour – ITE Trip to Person Trip Factor of 1.28 has been applied, consistent with the 2017 TIA Guidelines

From the previous table, the proposed development is projected to generate 274 person trips during the AM peak hour and 282 person trips during the PM peak hour.

The modal shares for the proposed development are anticipated to be consistent with the modal shares outlined in the *2011 TRANS O-D Survey Report*, specific to the Kanata/Stittsville region. The modal share values applied to the proposed office are based on all trips to/within the Kanata district in the AM peak hour and all trips from/within the Kanata district in the PM peak hour. A full breakdown of the projected person trips by modal share are shown in **Table 4**.

Table 4: Person Trips by Modal Share

Travel Mode	Modal Share	AM Peak			PM Peak		
		IN	OUT	TOT	IN	OUT	TOT
Person Trips		*236*	*38*	*274*	*45*	*237*	*282*
Auto Driver	60%	142	22	164	27	142	169
Auto Passenger	15%	35	6	41	7	35	42
Transit	5%	12	2	14	2	12	14
Non-Auto	20%	47	8	55	9	48	57

From the previous table, the proposed development is projected to generate 164 vehicle trips during the AM peak hour and 169 vehicle trips during the PM peak hour.

5.1.2 Trip Distribution

The assumed distribution of trips generated by the proposed development has been derived from existing traffic patterns within the study area. The trip distribution can be described as follows:

- 30% to/from the north via March Road;
- 40% to/from the south via March Road;
- 5% to/from the south via Legget Drive;
- 5% to/from the east via Carling Avenue;
- 15% to/from the west via Terry Fox Drive;
- 5% to/from the west via Solandt Road.

5.1.3 Trip Assignment

Trips generated by the proposed development have been assigned to the proposed accesses based on the amount of parking provided by the different parking areas on-site. For example, the westernmost access is the nearest driveway to approximately 10% of the total parking supply. Therefore, 10% of traffic generated by the proposed development are assigned to that access. Applying this to each access of the development results in the following trip assignment assumptions:

- 10% of all trips to the most westerly access;
- 15% of all trips to the second-most westerly access;
- 30% of egress trips to the second-most easterly access;
- 75% of ingress trips and 45% of egress trips to the most easterly access.

5.2 Background Traffic

A rate of background growth for the arterial and major collector roadways within the study area has been established, through a review of City traffic count data at March Road/Solandt Road from July 2010, June 2011, March 2013, and August 2016. The data indicates a 0.5% per annum growth rate on March Road, the largest arterial roadway within the study area. A review of the City's Strategic Long-Range Model (comparing snapshots of 2011 and 2031 AM peak hour volumes, and included in **Appendix F**) was also conducted. A review of the long-range snapshots estimate growth between 0% and 1% per annum in the traffic volumes on March Road, Carling Avenue, and Terry Fox Drive, the arterial or major collector roadways within the study area. Therefore, a 0.5% annual background growth rate has been applied to these roadways.

Section 2.3 of the 2013 TMP projects a 22% increase in employment within the 'Kanata/Stittsville' area, equating to an annual growth rate of approximately 1%. To maintain a conservative analysis, a 1% annual background growth rate has been applied to Legget Drive and Solandt Road to account for potential growth within the office park.

In order to estimate background traffic on Solandt Road at the site accesses, traffic generated by each of the three existing office buildings on Solandt Road east of Legget Drive (415 Legget Drive, 425 Legget Drive, and 2500 Solandt Road) have been estimated based on the existing traffic count at Legget Drive/Solandt Road, and the total number of parking spaces provided for each building. To maintain a conservative analysis, 40% of the existing traffic observed heading to/from the east at Legget Drive/Solandt Road is assumed to be traffic generated by the offices at 2500 Solandt Road. This property has a main parking lot access between the two westernmost accesses to the proposed development and an access closer to the subject site's main entrance at the terminus of Solandt Road. Approximately 80% of the estimated traffic generated by the offices at 2500 Solandt Road is assumed to enter the site via the main parking lot access. The remainder is assumed to enter the site via the easterly access at the terminus of Solandt Road.

OC Transpo buses which service Stop #7548 in front of the subject site are anticipated to perform a U-turn at the terminus of Solandt Road. A nominal amount of traffic has been assigned to perform this movement.

5.3 Other Area Development

As stated in Section 4.2, the City's Development Application search tool does not identify any other developments within the study area that required a TIA, and are being constructed, are approved, or are in the approval process. Traffic generated by the proposed Kanata North Urban Expansion Area (KNUEA) has been considered however, due to the size of the development. The KNUEA is located on either side of March Road and north of Old Carp Road/Maxwell Bridge Road, and is approximately 181 hectares in area. The southern limit of the KNUEA is approximately 2.3 kilometres north of Solandt Road.

The KNUEA TMP was prepared by Novatech in June 2016, and estimated that the development of the Kanata North lands has the potential to consist of 960 single-detached homes, 950 street townhomes, 1,040 multi-unit residential units, 300,000 ft^2 GFA of community commercial space, 100,000 ft^2 GFA of neighbourhood commercial space, three elementary schools, one high school, and a 500-space park and ride. Full buildout of the KNUEA is estimated to occur in 2026, and has therefore been added to the 2026 background traffic volumes. Relevant excerpts of the TMP are included in **Appendix G**.

The study area of the KNUEA TMP extends as far south as Terry Fox Drive at March Road and Legget Drive. Trips destined to/from the south have been added to the through traffic volumes on March Road throughout the study area. Similarly, any trips destined to/from the east via Terry Fox Drive have been added to the through traffic volumes on Terry Fox Drive at Legget Drive.

5.4 Demand Rationalization

Based on existing traffic volumes, critical movements at the study area intersections are anticipated to operate above capacity. The City of Ottawa is investing in transit, pedestrian, and cycling infrastructure to reduce automobile dependency, and shift modal shares toward transit and active modes.

The assumed existing transit modal shares within the study area follow the mode shares outlined in the Existing Conditions report of the KNUEA TMP. The TMP included a Transportation Area of Interest (TAI) screenline located immediately south of Terry Fox Drive between Second Line Road and March Valley Road, where person trips for vehicles and non-auto modes were estimated using observed traffic, transit rider, cyclist, and pedestrian volumes. Passenger volumes were estimated using a private vehicle occupancy of 1.2. This analysis was performed because the KNUEA is located at the boundary between the Kanata/Stittsville and Rural West regions as shown in the *2011 TRANS O-D Survey Report*.

The results of this exercise indicated that, at the screenline, the existing transit share is 7% and 5% in the weekday AM and PM peak hours, respectively. Existing mode shares at the TAI screenline were not found to be reflective of the mode shares presented for the Kanata/Stittsville region, since the rapid transit stations within Kanata/Stittsville are centralized along Highway 417 (approximately 4.5 km south of the screenline). Conversely, the existing shares are more aligned with those presented for the Rural West region. As the TAI screenline was located immediately south of Terry Fox Drive, and therefore immediately north of the study area for this TIA, the existing transit shares of 7% and 5% in the AM and PM peak hours have been assumed in this study.

Exhibit 2.13 of the City's 2013 TMP identifies a transit share target of 21% within the Kanata/Stittsville region by 2031. Within the study area, it is anticipated that the 21% transit share target will be achieved through the implementation of the planned RTTP projects on March Road, which are described in Section 4.2. Consistent with the KNUEA TMP, a reduction in the background vehicular volumes has been made in the 2026 horizon year only, to reflect the 21% transit share target and the planned implementation of transit priority measures on March Road.

The transit share target has been applied to the site-generated estimates to illustrate the projected site-generated transit trips if the 21% transit share target is met, and is shown in **Table 5**. For the purposes of maintaining a conservative analysis, the site-generated vehicle trip projections shown in **Table 4** have been carried forward for the intersection capacity analysis.

Table 5: Person Trips by Modal Share with 21% Transit Share Target

Travel Mode	Modal Share	AM Peak			PM Peak		
		IN	OUT	TOT	IN	OUT	TOT
Original Shares – Person Trips		*236*	*38*	*274*	*45*	*237*	*282*
Auto Driver	60%	142	22	164	27	142	169
Auto Passenger	15%	35	6	41	7	35	42
Transit	5%	12	2	14	2	12	14
Non-Auto	20%	47	8	55	9	48	57
21% Target – Person Trips		*236*	*38*	*274*	*45*	*237*	*282*
Auto Driver	44%	104	16	120	20	104	124
Auto Passenger	15%	35	6	41	7	35	42
Transit	21%	50	8	58	9	50	59
Non-Auto	20%	47	8	55	9	48	57
Auto Driver (Difference)		**-38**	**-6**	**-44**	**-7**	**-38**	**-45**
Auto Passenger (Difference)		**0**	**0**	**0**	**0**	**0**	**0**
Transit (Difference)		**38**	**6**	**44**	**7**	**38**	**45**
Non-Auto (Difference)		**0**	**0**	**0**	**0**	**0**	**0**

Based on the projections shown in **Table 5**, the increased transit share target would result in the number of transit trips generated by the proposed development increasing from 14 to 58 transit trips during the AM peak hour and 14 to 59 transit trips during the PM peak hour.

The figures listed below present the following conditions:

- Proposed site-generated traffic volumes are shown in **Figure 6**;
- Projected KNUEA-generated traffic volumes are shown in **Figure 7**;
- Background traffic volumes for the 2021 buildout year are shown in **Figure 8**;
- Background traffic volumes for the 2026 horizon year are shown in **Figure 9**;
- Total traffic volumes for the 2021 buildout year are shown in **Figure 10**;
- Total traffic volumes for the 2026 horizon year are shown in **Figure 11**.

Figure 6: Site-Generated Traffic

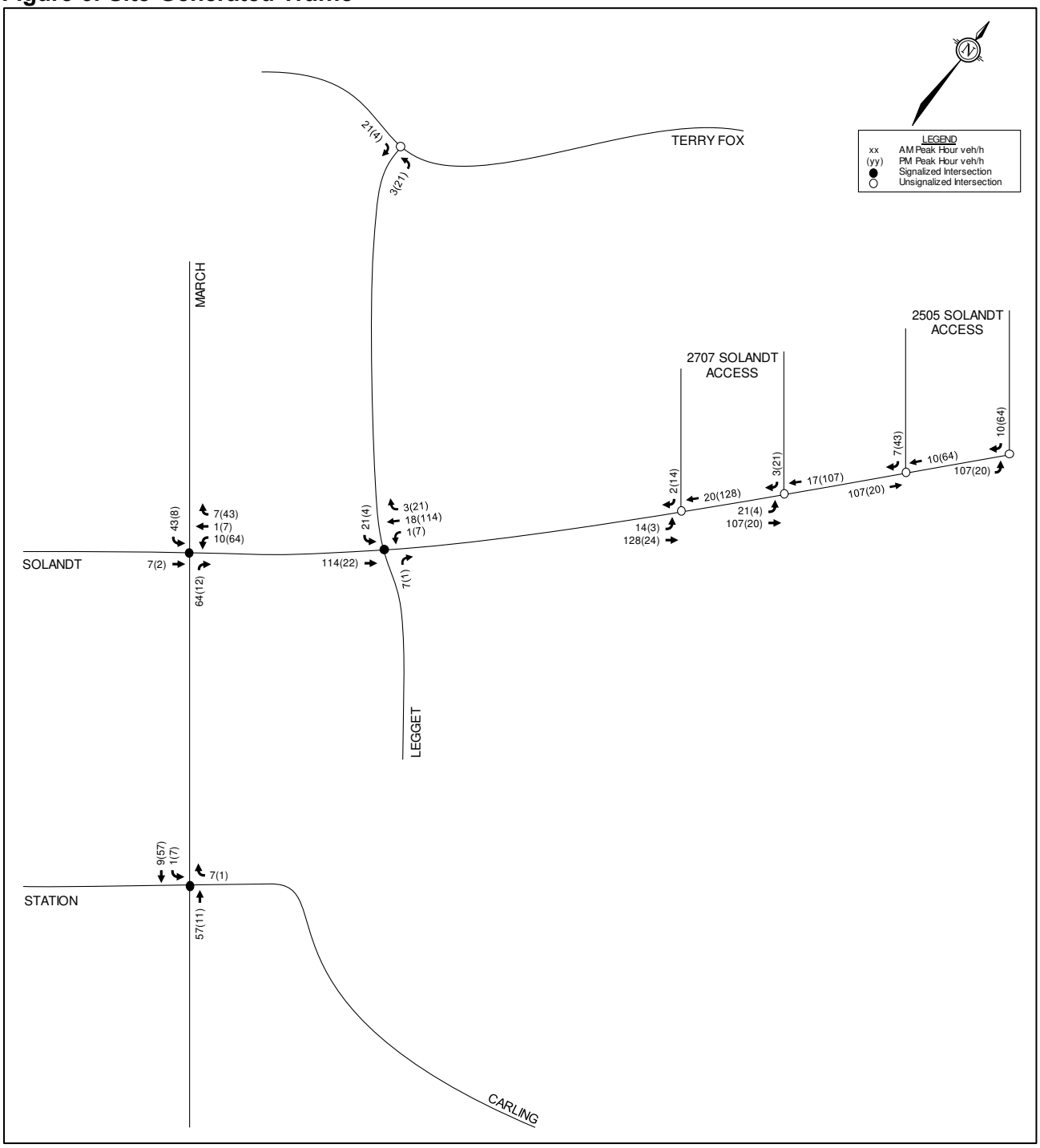


Figure 7: Projected KNUEA Traffic

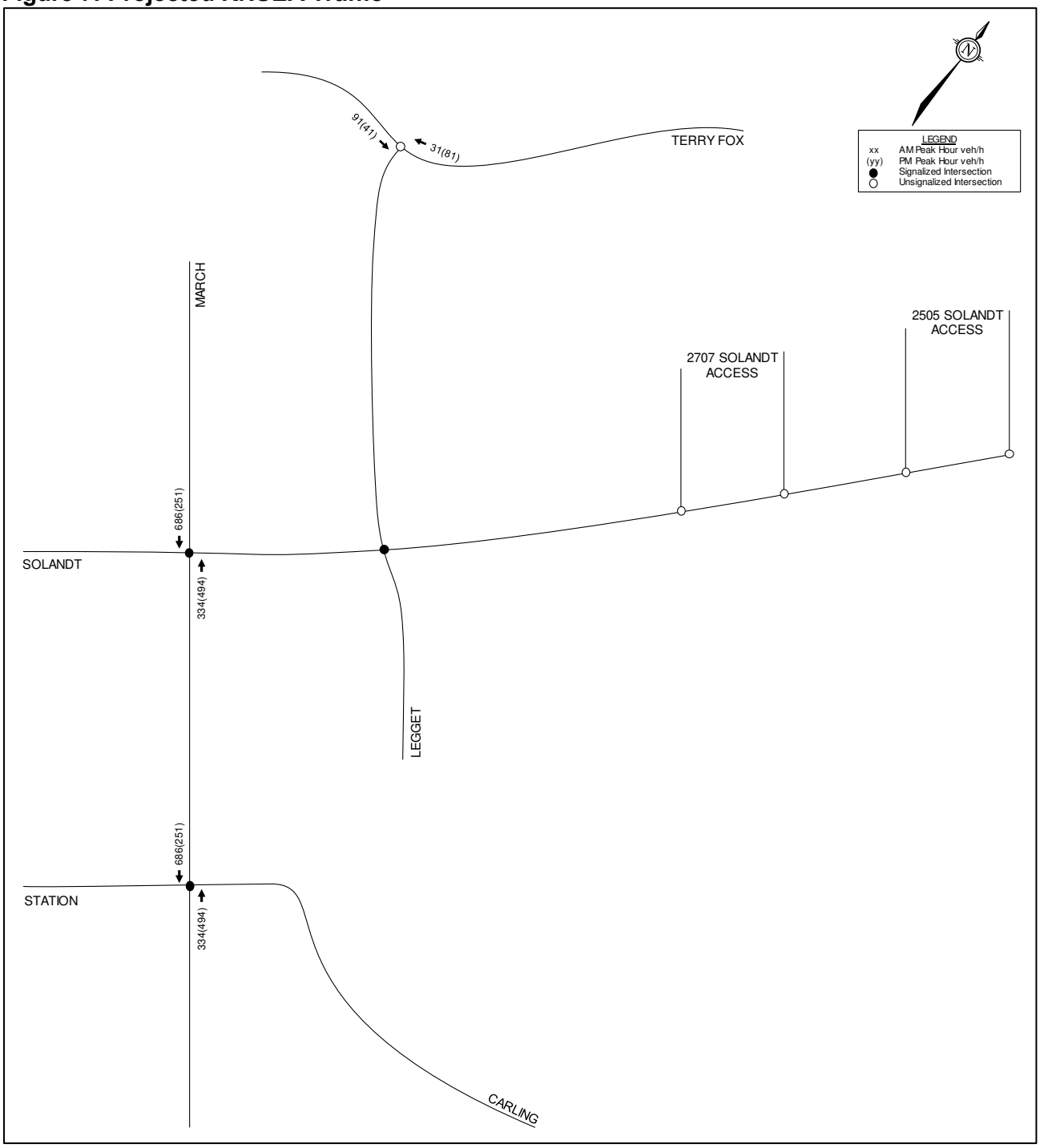


Figure 8: 2021 Background Traffic

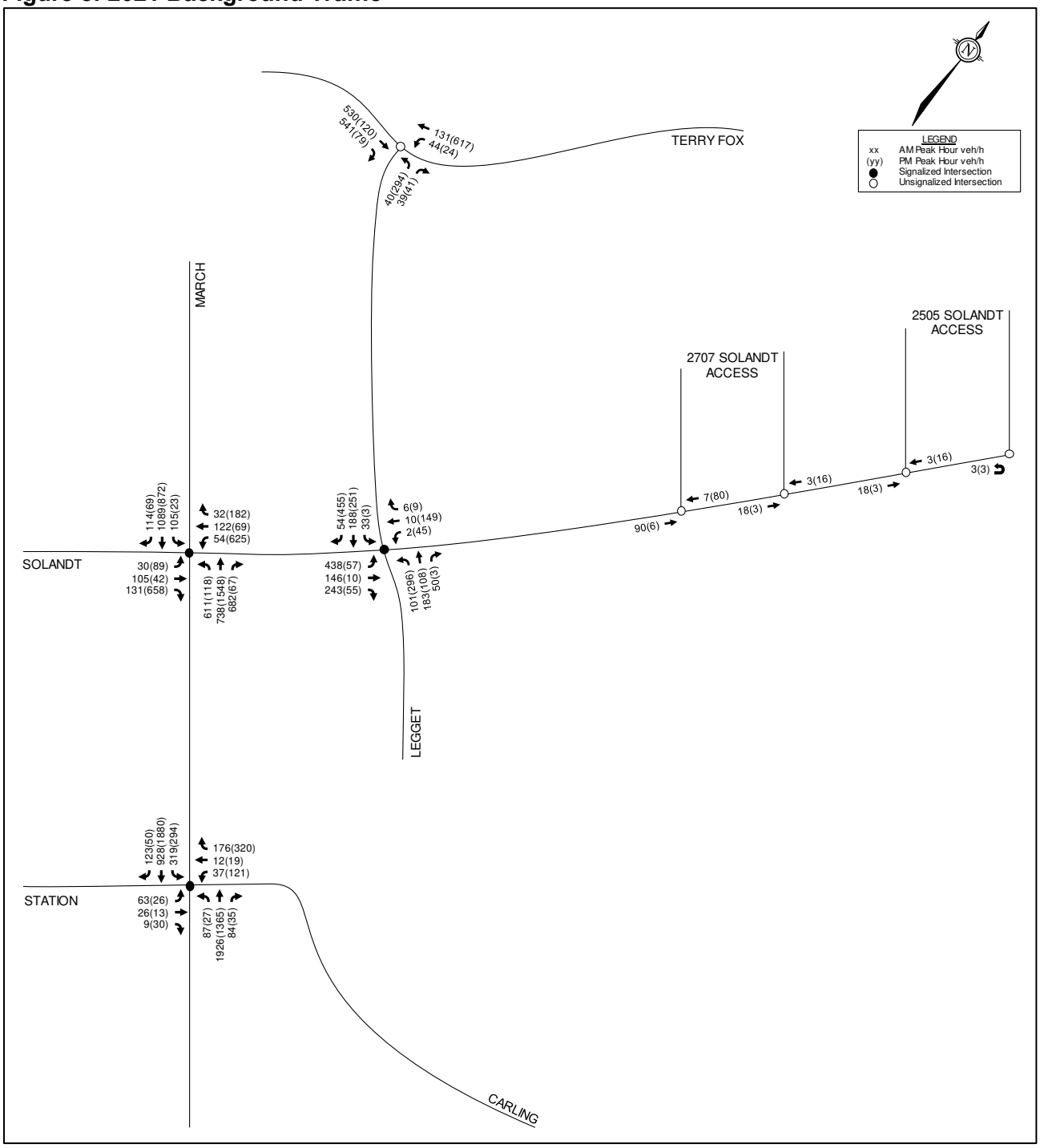


Figure 9: 2026 Background Traffic

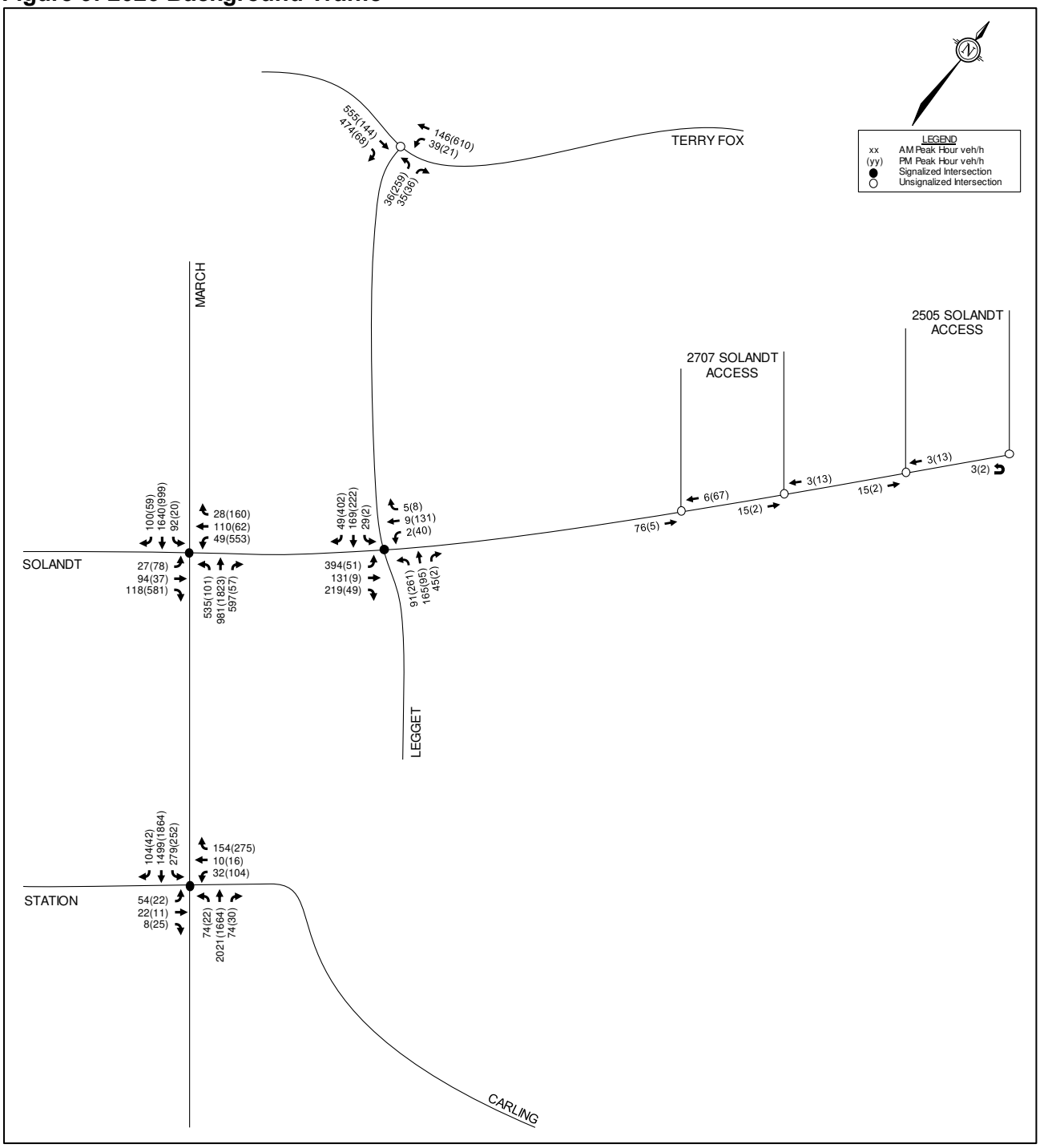


Figure 10: 2021 Total Traffic

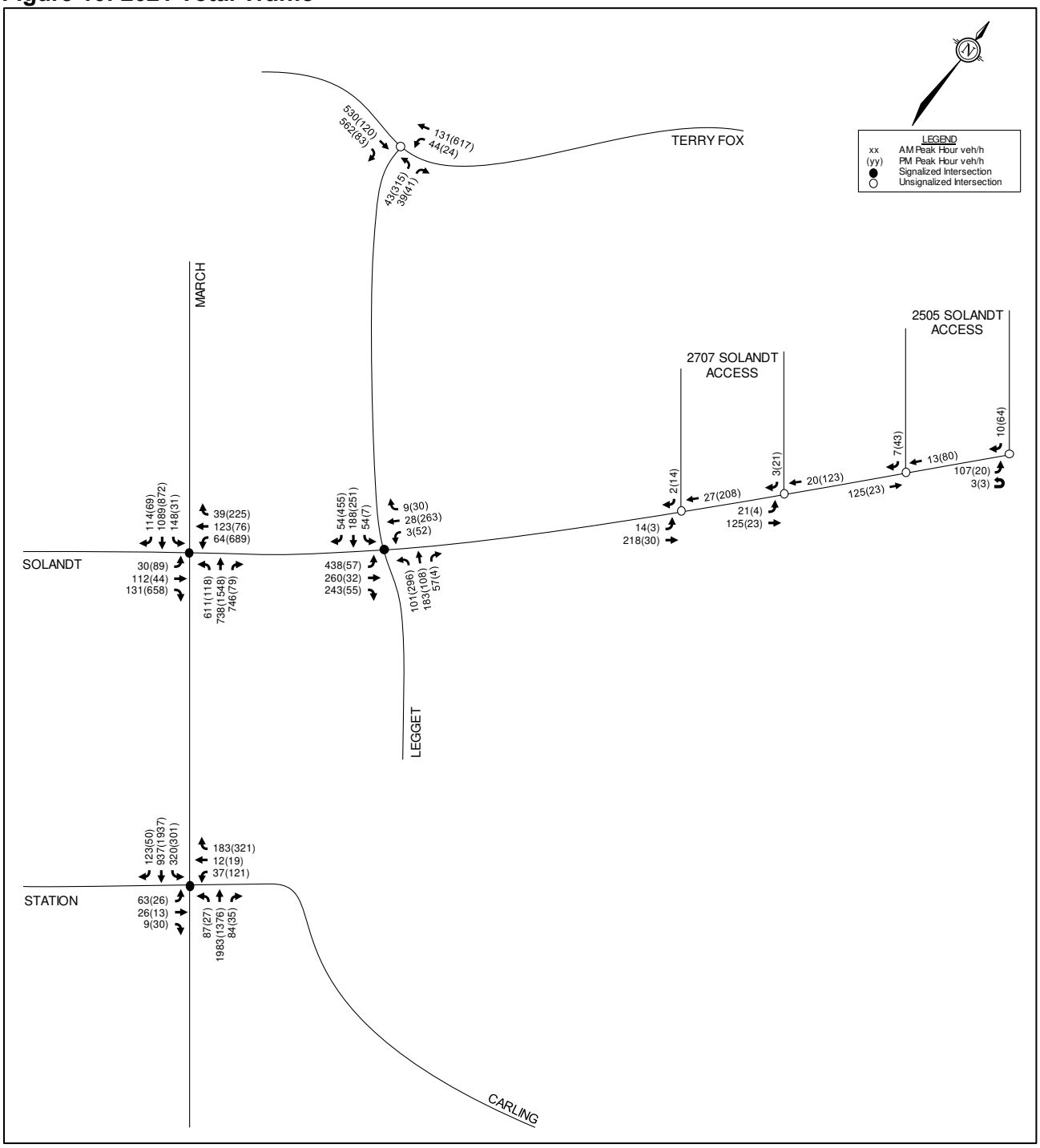
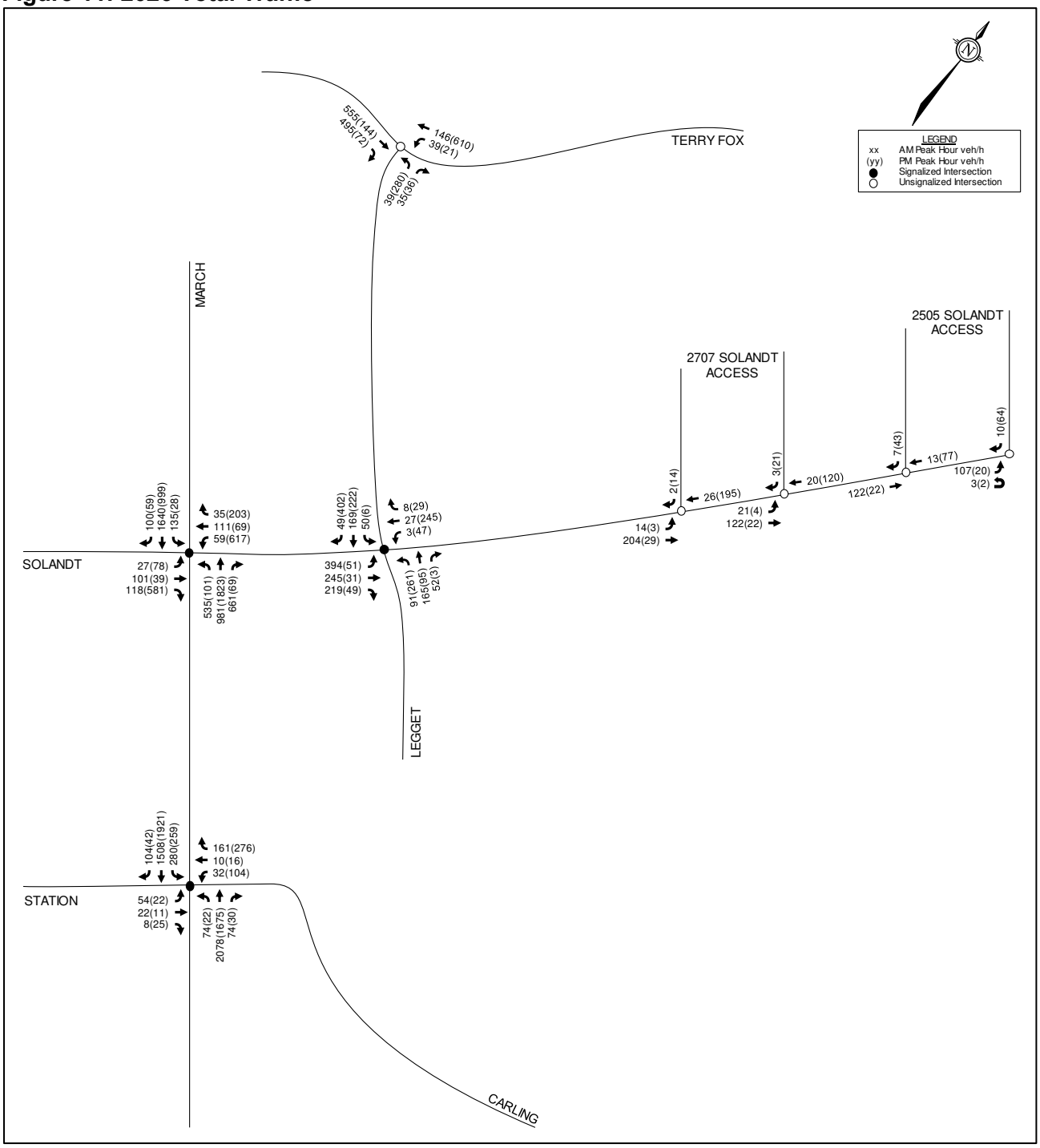


Figure 11: 2026 Total Traffic



6.0 ANALYSIS

6.1 Development Design

6.1.1 Design for Sustainable Modes

Pedestrian facilities will be provided between the building entrances and the parking areas. A pedestrian facility connecting from the existing sidewalk on the north side of Solandt Road will be aligned with the main entrance of the proposed office building, providing the most direct route between the sidewalk and main entrance. Curbs will be depressed at the proposed accesses. A pathway connection will be provided to the existing parking at 2505 Solandt Road.

The bus stops nearest to the subject site are shown in **Figure 4**. Stop #7548 (for route 66) is within 100m walking distance of the main entrance. Stop #6909 (for routes 63, 66, and 166) and stops #7987 and #7991 (for routes 63 and 64) are within approximately 600m walking distance of the main entrance. Stop #1172 (for routes 64 and 66), stop #1894 (for routes 63 and 64), stop #1898 (for route 63), and stop #6150 (for routes 63, 66, and 166) are within approximately 800m walking distance of the main entrance.

Bicycle parking for the proposed development will be in accordance with the minimum requirement of the City's *Zoning By-Law* (ZBL). Bicycle spaces are provided in three areas around the proposed office building. North of the building and patio area, 16 bicycle spaces are proposed. East of the patio area, 40 bicycle spaces are proposed. South of the loading spaces, 24 bicycle spaces are proposed in a secure area. In total, these three areas consist of 80 bicycle spaces. Further review of the parking space requirements is included in Section 6.2.

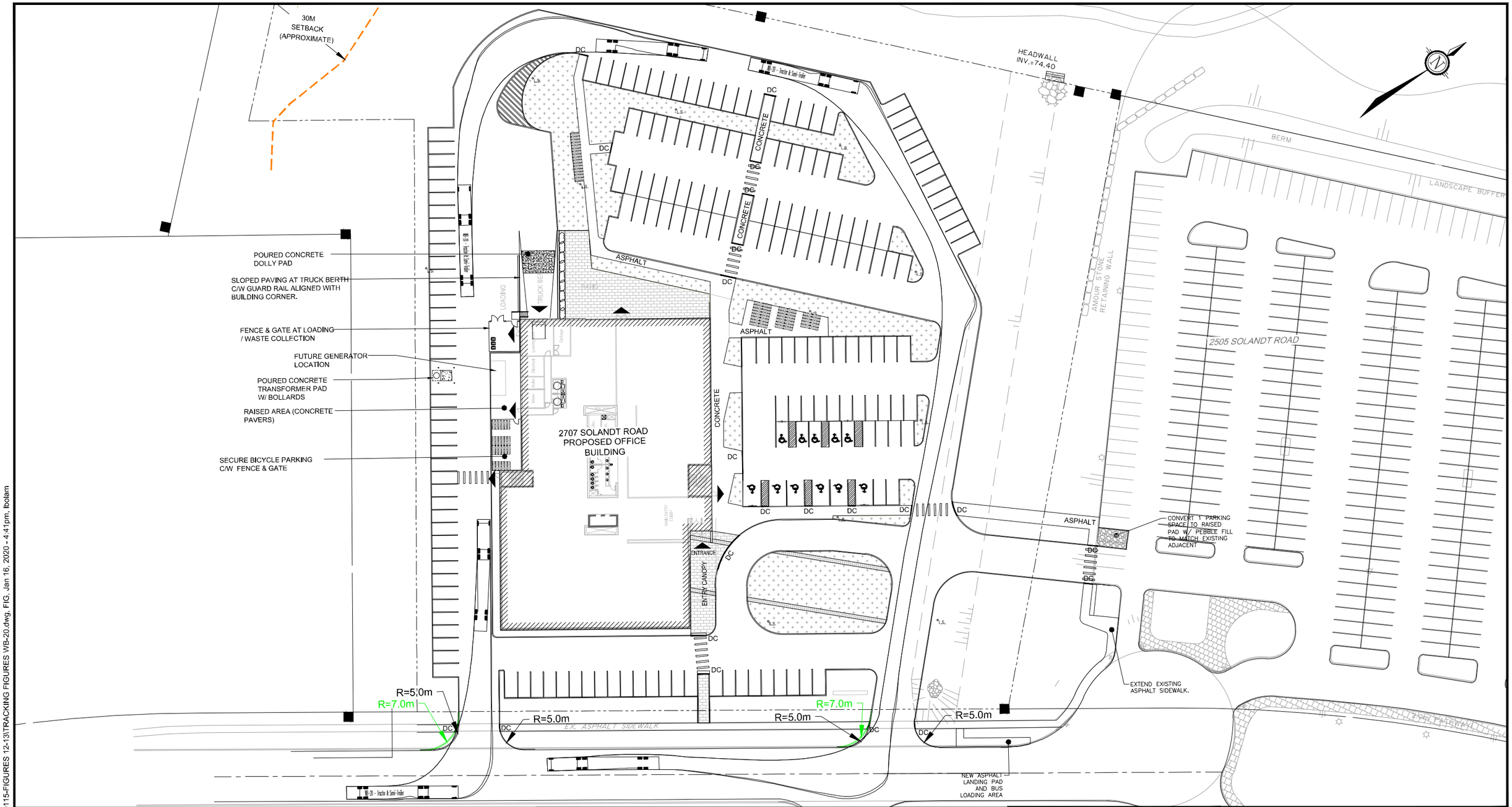
A review of the Transportation Demand Management (TDM) – *Supportive Development Design and Infrastructure Checklist* has been conducted. A copy of the TDM checklist is included in **Appendix H**. All required TDM-supportive design and infrastructure measures in the TDM checklist are met.

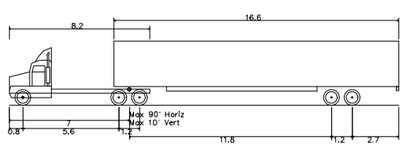
6.1.2 Circulation and Access

The fire route for the proposed development includes the perimeter of 2707 Solandt Road and the drop-off loop at the main entrance. Fire trucks can be accommodated by the proposed accesses. The fire route is shown on the concept plan included in **Appendix A**.

Loading and deliveries will be accommodated directly north of the proposed office building and directly west of the parking area north of the building. Loading vehicles will enter the site via the westerly proposed access to Solandt Road, reverse into a loading dock at the northwest corner of the building, and loop around the perimeter of the site to exit via the easterly proposed access. Turning templates for the largest design vehicle (WB-20) anticipated to enter, exit, and drive through the site are included in **Figures 12** through **Figure 14**.

Garbage collection vehicles will enter the site via the easterly proposed access to Solandt Road, loop around the perimeter of the site and drive forward into the garbage enclosure adjacent to the loading dock. Further review of the number of loading spaces is included in Section 6.2.





WB–20 – Tractor & Semi–Trailer

Overall Length	22.700m
Overall Width	2.600m
Overall Body Height	3.730m
Min Body Ground Clearance	0.435m
Track Width	2.600m
Lock–to–lock time	4.00s
Curb to Curb Turning Radius	10.700m

NTS

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Suite 200, 240 Michael Cowpland Drive
Ottawa, Ontario, Canada K2M 1P6
Telephone (613) 254-9643
Facsimile (613) 254-5867
Website www.novatech-eng.com

2707 SOLANDT DRIVE

WB-20 DESIGN VEHICLE TURNING MOVEMENTS

SCALE 1:750 (0 10 20 30)
DATE JAN 2020
JOB 119110
FIGURE WB-20 A

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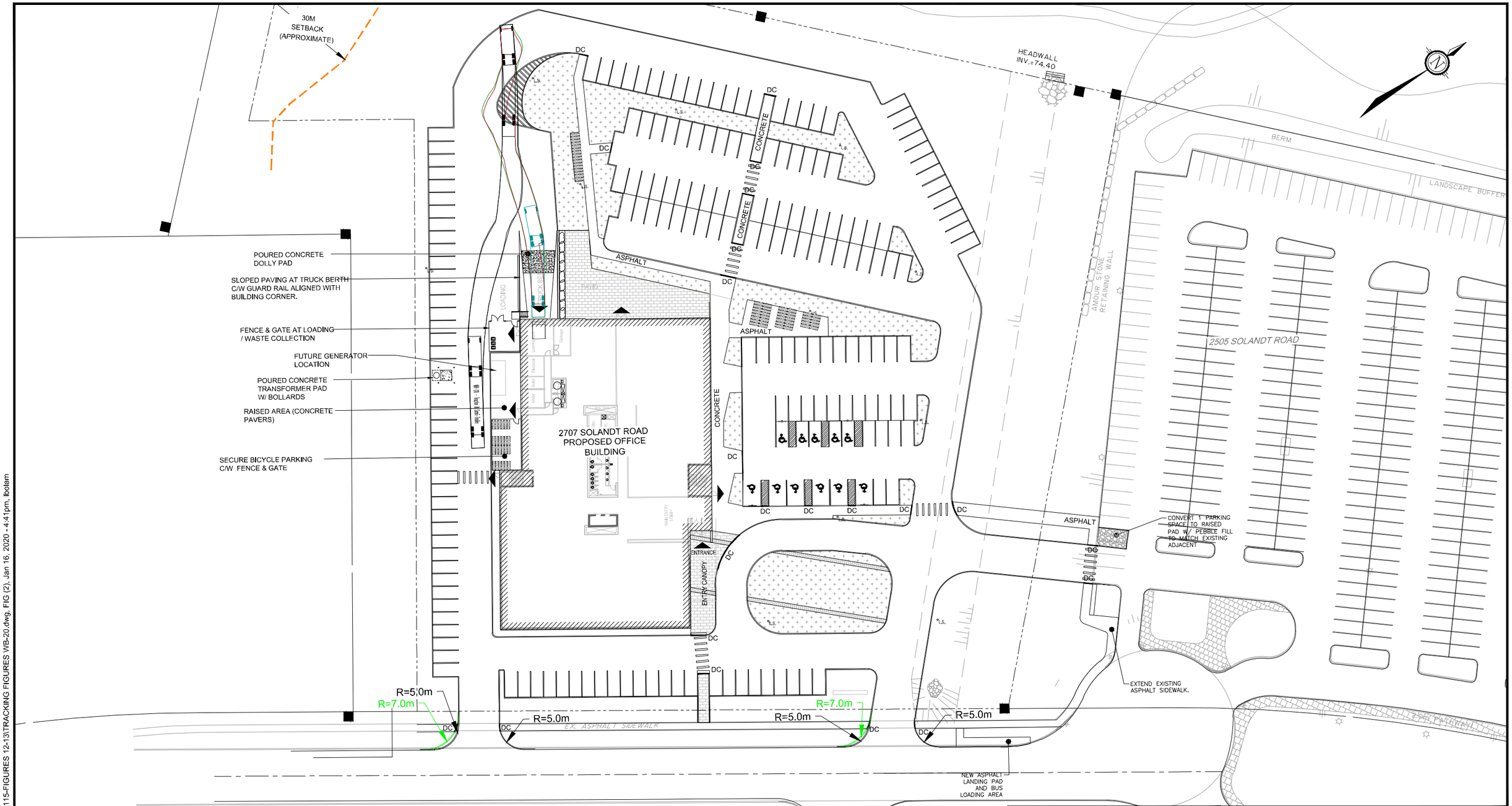

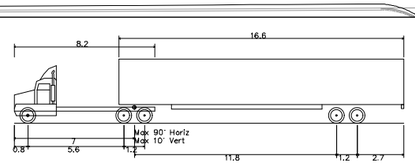

WB–20 – Tractor & Semi–Trailer	
Overall Length	22.700m
Overall Width	2.600m
Overall Body Height	3.730m
Min Body Ground Clearance	0.435m
Track Width	2.600m
Lock–to–lock time	4.00s
Curb to Curb Turning Radius	10.700m

NTS

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2707 SOLANDT DRIVE

WB-20 DESIGN VEHICLE TURNING MOVEMENTS

SCALE 1:750 (0, 10, 20, 30)
DATE JAN 2020
JOB 119110
FIGURE WB-20 B

SHT11X17.DWG - 279mmX432mm

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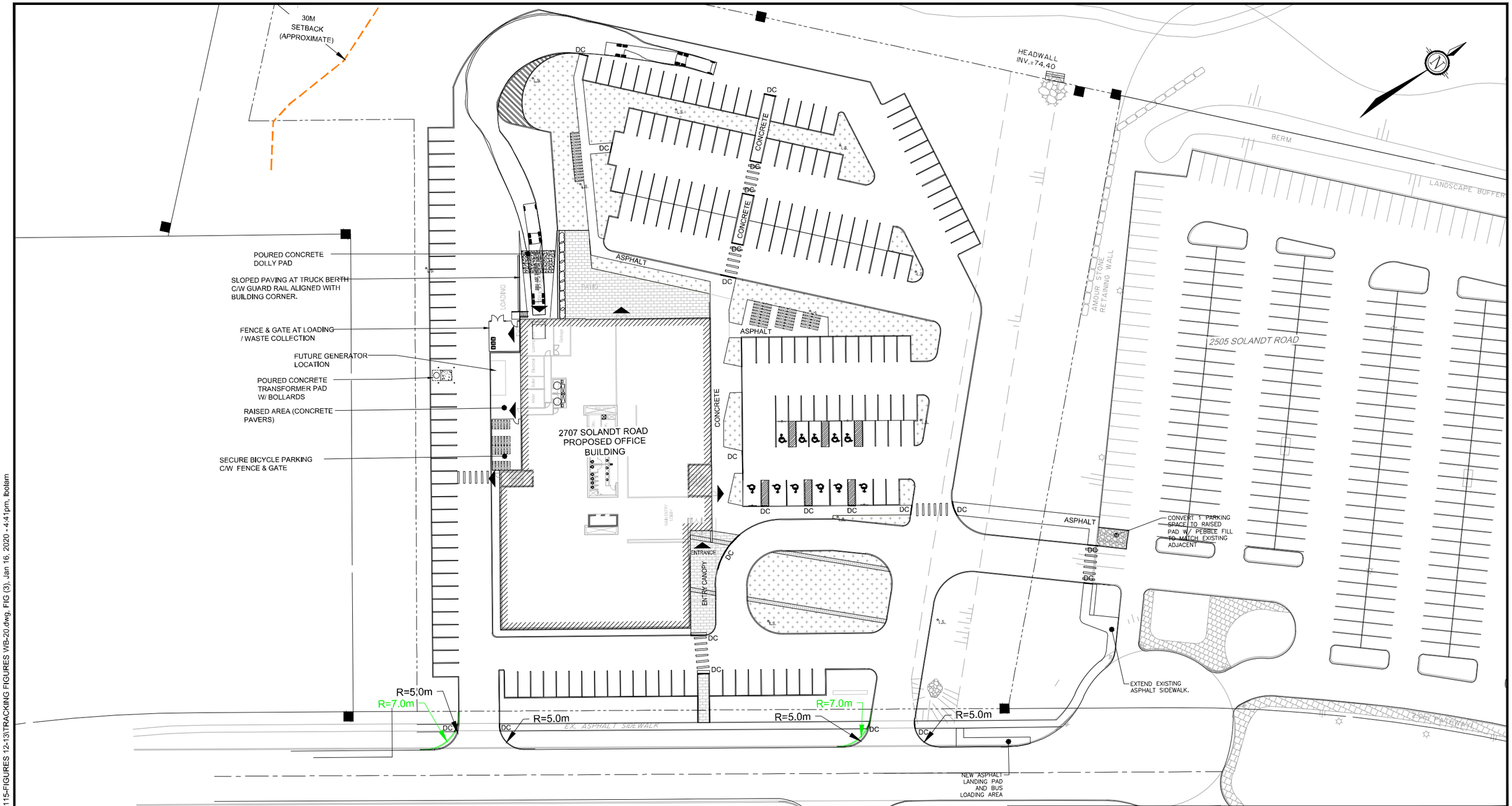

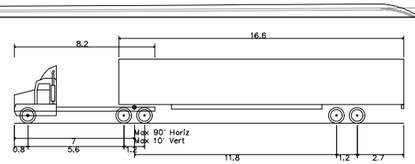

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WB-20 DESIGN VEHICLE TURNING MOVEMENTS

SCALE 1:750 (0 10 20 30)
DATE JAN 2020
JOB 119110
FIGURE WB-20 C

6.2 Parking

The subject site is located in Area C of Schedules 1 and 1A of the City's ZBL. Minimum vehicular and bicycle parking rates for the proposed development are identified in the ZBL, and summarized in **Table 6**.

Table 6: Parking Requirements Per Zoning By-Law

Land Use	Rate	GFA	Required	Provided
Vehicle Parking				
Office	2.4 per 100 m^2 GFA	18,452 m^2	443	587
Bicycle Parking				
Office	1.0 per 250 m^2 GFA	18,452 m^2	74	80

Based on the previous table, the vehicular and bicycle parking provided for the proposed development will meet the minimum requirements of the ZBL.

The City's *Accessibility Design Standards* outline minimum requirements for the number of accessible parking spaces that must be provided. Based on the required number of parking spaces per the ZBL, a total of 11 accessible parking spaces must be provided, consisting of five 'Type A' spaces and six 'Type B' spaces. Type A spaces have a minimum width of 3.4m, and accommodate wider vehicles such as vans that may be equipped with transfer ramps or other mobility aids. Type B spaces have a standard parking space width of 2.4m. All accessible parking spaces will be adjacent to a 1.5m-wide access aisle. The 11 proposed accessible parking spaces meet these requirements.

The City's ZBL identifies minimum loading space requirements, based on land use and gross floor area. For office buildings between 15,000 and 25,000 m^2, two loading spaces are required. Two loading spaces are provided, thereby meeting this requirement.

Section 111(12) of the ZBL identifies that, where the number of bicycle parking spaces required for a single office building exceeds 50 spaces, a minimum of 25% of the required total must be located within a building or structure, a secure area, or bicycle lockers. As the proposed development includes 24 secure bicycle parking spaces, this represents 30% of the required total, and therefore this requirement is met.

6.3 Boundary Streets

This section provides a review of the boundary street Solandt Road (east of Legget Drive), using complete streets principles. The *Multi-Modal Level of Service* (MMLOS) *Guidelines* produced by IBI Group in October 2015 were used to evaluate the levels of service of Solandt Road for each mode of transportation. Schedule B of the City's Official Plan identifies the subject site as being within the Urban Employment Area. The review evaluates Solandt Road for all modes based on existing conditions.

6.3.1 Pedestrian Level of Service (PLOS)

Exhibit 4 of the MMLOS guidelines has been used to evaluate the segment PLOS of Solandt Road. Exhibit 22 of the MMLOS guidelines suggest a target PLOS C for all roadways within the Employment Area. The results of the segment PLOS analysis are summarized in **Table 7**.

Table 7: PLOS Segment Analysis

Sidewalk Width	Boulevard Width	Avg. Daily Curb Lane Volume	Presence of On-Street Parking	Operating Speed(1)	Segment PLOS
Solandt Road (north side)					
1.5m	> 2.0m	≤ 3,000 vpd	N/A	60 km/h	C
Solandt Road (south side)					
No sidewalk		≤ 3,000 vpd	N/A	60 km/h	F

1. Operating speed taken as the speed limit plus 10 km/h.

6.3.2 Bicycle Level of Service (BLOS)

Exhibit 11 of the MMLOS guidelines has been used to evaluate the segment BLOS of Solandt Road. Exhibit 22 of the MMLOS guidelines suggest a target BLOS E for collector roadways with no cycling designation within the Employment Area. The results of the segment BLOS analysis are summarized in **Table 8**.

Table 8: BLOS Segment Analysis

Road Class	Bike Route	Type of Bikeway	Travel Lanes	Centerline Type	Posted Speed	Segment BLOS
Solandt Road (east of Legget Drive)						
Collector	No Class	Mixed Traffic	2	No Marking	50 km/h	D

6.3.3 Transit Level of Service (TLOS)

Exhibit 15 of the MMLOS guidelines has been used to evaluate the segment TLOS of Solandt Road. While Exhibit 22 of the MMLOS guidelines do not suggest a target TLOS for roadways without a rapid transit or transit priority designation, Solandt Road has been evaluated as transit currently operated on this roadway. The results of the segment TLOS analysis are summarized in **Table 9**.

Table 9: TLOS Segment Analysis

Facility Type	Level of Congestion Delay, Friction and Incidents			Segment TLOS
	Congestion	Friction	Incident Potential	
Solandt Road (east of Legget Drive)				
Mixed Traffic – Limited Parking/Driveway Friction	Yes	Low	Medium	D

6.3.4 Truck Level of Service (TkLOS)

Exhibit 20 of the MMLOS guidelines has been used to evaluate the segment TkLOS of Solandt Road. Exhibit 22 of the MMLOS guidelines suggest a target TkLOS D for collector roadways without a truck route designation within the Employment Area. The results of the segment TkLOS analysis are summarized in **Table 10**.

Table 10: TkLOS Segment Analysis

Curb Lane Width	Number of Travel Lanes Per Direction	Segment TkLOS
Solandt Road (east of Legget Drive)		
> 3.7m	1	B

6.3.5 Vehicular Level of Service (Auto LOS)

Exhibit 22 of the MMLOS guidelines suggests a target Auto LOS D for all roadways within the Employment Area. An Auto LOS D corresponds to a maximum volume-to-capacity (v/c) ratio of 0.90. The typical lane capacity along the study area roadways are based on the City's guidelines for the TRANS Long-Range Transportation Model. The estimated lane capacity along the boundary streets is based on road classification and general characteristics (i.e. suburban with limited access, urban with on-street parking, etc.). The results of the segment Auto LOS analysis are summarized in **Table 11**.

Table 11: Auto LOS Segment Analysis

Direction	Directional Capacity	Traffic Volumes		V/C Ratio and LOS			
		AM Peak	PM Peak	AM Peak		PM Peak	
				V/C	LOS	V/C	LOS
Solandt Road (east of Legget Drive)							
Eastbound	600 vph	224	16	0.37	A	0.03	A
Westbound	600 vph	18	199	0.03	A	0.33	A

6.3.6 Segment MMLOS Summary

Results of the segment MMLOS analysis can be summarized as follows:

- The north side of Solandt Road meets the target PLOS C, but the south side does not;
- Solandt Road meets the target BLOS E;
- Solandt Road achieves a TLOS D, equal to the target suggested for Transit Priority routes with isolated measures;
- Solandt Road meets the target TkLOS D;
- Solandt Road meets the target Auto LOS D.

The south side of Solandt Road does not include a sidewalk. Based on Exhibit 4 of the MMLOS guidelines, the target PLOS C can be achieved by providing a sidewalk with a minimum width of 1.5m and a minimum boulevard width of 0.5m, or a sidewalk with a minimum width of 1.8m and no boulevard. As the subject site fronts onto the north side of Solandt Road, this improvement is identified for the City's consideration as funding becomes available.

6.4 Access Design

The westerly two-way access to 2707 Solandt Road is approximately 7.8m in width, and the easterly two-way access is approximately 8.7m in width. Both accesses have been evaluated for compliance with the City's *Private Approach By-Law*.

Per Section 25 (a) of the *Private Approach By-Law*, a maximum of two one-way private approaches and one two-way private approach or a maximum of two two-way private approaches are permitted for properties with 46m to 150m of frontage. The 2707 Solandt Road property has approximately

120m of frontage and two two-way private approaches are proposed. Therefore, the requirements of Section 25 (a) are met by the proposed development.

Section 25 (c) of the *Private Approach By-Law* identifies a maximum width requirement of 9m for two-way accesses, as measured at the street line. Section 107 (1)(a) of the *Zoning By-Law* identifies a minimum width requirement of 6.7m for a two-way driveway to a parking lot. The proposed two-way private approaches meet these requirements.

Section 25 (f) of the *Private Approach By-Law* identifies a minimum separation requirement of 9m between the nearest limits of a two-way private approach and any other private approach to the same property, as measured at the street line and the roadway edge. Measuring at the roadway edge, the nearest limits of the two proposed accesses are approximately 75m apart. As the separation between the other accesses are greater than this, all accesses meet this requirement.

Section 25 (o) of the *Private Approach By-Law* identifies a minimum separation requirement of 3m between the nearest edge of a private approach and any property line, as measured at the street line. The approximate spacing between the accesses and the adjacent property lines meet the requirement, and can be described as follows:

- Westerly proposed access to 2707 Solandt Road and the adjacent property line: 8.5m;
- Easterly proposed access to 2707 Solandt Road and the adjacent property line: 18.5m.

Based on the foregoing, the proposed accesses to the proposed development meet all relevant requirements of the *Private Approach By-Law* and *Zoning By-Law*.

6.5 Transportation Demand Management

A review of the Transportation Demand Management (TDM) – *Measures Checklist* has been conducted. A copy of the TDM checklist is included in **Appendix H**. While the proponent is anticipated to maintain ownership of the development once occupied, many of the measures included in the *TDM Measures Checklist* are more appropriate for the future office tenant(s) to consider, such as encouraging flexible work hours, compressed work weeks, or teleworking.

At this stage, the proponent has agreed to consider the following measures upon opening of the proposed development:

- Displaying local area maps with walking/cycling access routes and key destinations at major entrances;
- Displaying relevant transit schedules and route maps at entrances.

The proposed development also incorporates many ‘basic’ or ‘better’ measures outlined in the *TDM-Supportive Development Design Checklist* in addition to meeting all the required measures, including:

- Locating the building close to the street, with entrances located to minimize walking distances to sidewalks and transit stops/stations, and doors and windows located to ensure visibility of pedestrians from the building, for their security and comfort;
- Providing safe, direct and attractive walking routes from building entrances to nearby transit stops;

- Providing lighting, landscaping and benches along walking and cycling routes between building entrances and streets, sidewalks and trails;
- Providing bicycle parking spaces equivalent to the expected number of commuter plus customer/visitor cyclists;
- Providing a designated area for carpool drivers (plus taxis and ride-hailing services) to drop off or pick up passengers.

6.6 Transit

From the trip generation estimates presented in **Table 4**, the proposed development is anticipated to generate 14 transit trips during both the AM peak hour and PM peak hour. This transit review applies the trip distribution assumptions described in Section 5.1.2.

The transit trips generated by the proposed development are therefore distributed as follows:

AM Peak Hour
- Stop #1894: 3 passengers on OC Transpo Route 63 (0 boarding, 3 alighting);
  2 passengers on OC Transpo Route 64 (0 boarding, 2 alighting);
  1 passenger on OC Transpo Route 266 (0 boarding, 1 alighting);
- Stop #6150: 1 passenger on OC Transpo Route 166 (0 boarding, 1 alighting);
- Stop #7548: 7 passengers on OC Transpo Route 66 (2 boarding, 5 alighting).

PM Peak Hour
- Stop #1172: 2 passengers on OC Transpo Route 64 (2 boarding, 0 alighting);
- Stop #1898: 3 passengers on OC Transpo Route 63 (3 boarding, 0 alighting);
  1 passenger on OC Transpo Route 266 (1 boarding, 0 alighting);
- Stop #6909: 1 passenger on OC Transpo Route 166 (1 boarding, 0 alighting);
- Stop #7548: 7 passengers on OC Transpo Route 66 (5 boarding, 2 alighting).

Based on the projected passenger volumes, no capacity problems are anticipated on the bus routes or at the bus stops listed above.

From the trip generation estimates presented in **Table 5**, the proposed development is anticipated to generate 58 transit trips during the AM peak hour and 59 transit trips during the PM peak hour, based on a future transit share target of 21%. Using the same transit trip distribution assumptions as shown above, the transit trips generated by the proposed development are therefore distributed as follows:

AM Peak Hour
- Stop #1894: 11 passengers on OC Transpo Route 63 (1 boarding, 10 alighting);
  11 passengers on OC Transpo Route 64 (1 boarding, 10 alighting);
  6 passengers on OC Transpo Route 266 (1 boarding, 5 alighting);
- Stop #6150: 5 passengers on OC Transpo Route 166 (0 boarding, 5 alighting);
- Stop #7548: 25 passengers on OC Transpo Route 66 (5 boarding, 20 alighting).

PM Peak Hour

- Stop #1172: 11 passengers on OC Transpo Route 64 (10 boarding, 1 alighting);
- Stop #1898: 11 passengers on OC Transpo Route 63 (10 boarding, 1 alighting);
  6 passengers on OC Transpo Route 266 (5 boarding, 1 alighting);
- Stop #6909: 5 passengers on OC Transpo Route 166 (5 boarding, 0 alighting);
- Stop #7548: 26 passengers on OC Transpo Route 66 (20 boarding, 6 alighting).

These volumes are identified to assist OC Transpo in determining future transit capacity requirements.

6.7 Intersection Design

6.7.1 Intersection MMLOS Analysis

This section provides a review of the study area intersections using complete streets principles. The MMLOS guidelines produced by IBI Group in October 2015 were used to evaluate the multi-modal levels of service for each signalized intersection within the study area. The MMLOS targets associated with the 'General Urban Area' designation have been used to evaluate all study intersections, based on existing conditions.

The full intersection MMLOS analysis is included in **Appendix I**. A summary of the results is shown in **Table 12**.

Table 12: Intersection MMLOS Summary

Intersection	PLOS		BLOS		TLOS		TkLOS		Auto LOS	
	Actual	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Target
March Road/ Solandt Road	**F**	C	**F**	C	**F**	B	A	B	**F**	D
Legget Drive/ Solandt Road	**F**	C	**F**	C	F	-	C	D	**F**	D
March Road/ Carling Avenue/Station Road	**F**	C	**F**	C	**F**	B	**C**	B	**F**	D
Legget Drive/ Terry Fox Drive	-	-	-	-	-	-	-	-	**F**	D

Results of the intersection MMLOS analysis can be summarized as follows:

- No intersections meet the target PLOS C;
- No intersections meet the target BLOS C;
- No intersections with targets meet the target TLOS B;
- March Road/Solandt Road meets the target TkLOS B and Legget Drive/Solandt Road meets the target TkLOS D, while March Road/Carling Avenue/Station Road does not meet the target TkLOS B;
- No intersections meet the target Auto LOS D.

The following includes further discussion for each intersection.

March Road/Solandt Road

March Road/Solandt Road meets the target TkLOS B, and does not meet the target PLOS C, BLOS C, TLOS B, or Auto LOS D.

All approaches have a divided cross-section with a width equivalent to ten lanes crossed or more. There is limited opportunity in improving the PLOS at each approach without reducing the number of travel lanes or restricting turning movements. The level of comfort for pedestrians can be increased by implementing zebra-striped crosswalks. The north and south approaches meet the City's vehicle/pedestrian conflict threshold for zebra-striped crosswalks (greater than 400,000 vehicle/pedestrian conflicts over an eight-hour period). There is also limited opportunity in improving the delay score for pedestrians without incurring major delays for vehicles.

The east approach does not meet the target BLOS C, based on left turn characteristics. The east approach has dual left turn lanes, which equates to a BLOS F per Exhibit 8 of the MMLOS Guidelines. The north, south, and west approaches do not meet the target BLOS based on both left turn and right turn characteristics. For these approaches, cyclists are required to cross at least one lane of traffic, on roads with an operating speed of 50 km/h or greater. Given that all right turn movements are channelized at this intersection, the implementation of two-stage left turn bike boxes at all approaches would not require a right turn on red (RTOR) restriction. This would require the stop bars at all approaches to be shifted away from the intersection. This improvement is identified for the City's consideration.

Regarding right turn characteristics for the north and west approaches, the right turn lanes are greater than 50m. The pocket bike lane at the south approach shifts partway through the right turn lane. Exhibit 8 of the MMLOS Guidelines suggests that providing pocket bike lanes can achieve a BLOS B, as long as the right turn is less than 50m. Based on existing and projected traffic volumes, reducing the length of these right turn lanes is not recommended. Providing bike lanes on Solandt Road (as identified in the 2013 Ottawa Cycling Plan) may improve the level of comfort for cyclists. No other recommendations are identified.

The north and south approaches do not meet the target TLOS B. The east and west approaches do not have a target TLOS, however delays are significant. The City's RTTP Network Concept includes at-grade BRT on March Road throughout the study area, while the Affordable Network includes at-grade BRT between Solandt Road and the Queensway, and transit priority signals and queue jump lanes north of Solandt Road, which will allow for future conversion to BRT. Delays for transit vehicles are anticipated to improve as a result of these projects.

A functional design of median BRT lanes on March Road was included as part of the *West Transitway Connection – Highway 417/Eagleson Road to North of Maxwell Bridge Road* Environmental Project Report (EPR), prepared by Delcan in October 2013. The relevant pages of the functional design are included in **Appendix J**.

The northbound left turn and southbound through movements do not meet the target Auto LOS D during the AM peak hour, with v/c ratios of 1.09 and 1.20, respectively. An Auto LOS D corresponds to a v/c ratio of 0.90. Synchro identifies that the maximum (95th-percentile) queue length for the northbound left turn movement (approximately 170m) slightly exceeds the 165m of storage provided, and the 95th-percentile queue length for the southbound through movement (approximately 220m) blocks the southbound left turn and right turn lanes (155m and 75m of storage, respectively). As the critical movements oppose one another and compete for the same green time, optimizing the signal

timing is not anticipated to mitigate the failing conditions. The existing conditions indicate a need for additional through capacity along the March Road corridor to relieve congestion at this intersection, as well as dual northbound left turn lanes. The observed number of northbound left turning vehicles is approximately 600 during the AM peak hour, which is double the commonly accepted 300 vph threshold that typically warrants the implementation of dual left turn lanes at a signalized intersection. Based on the functional design of the future median BRT lanes on March Road, provisions have been made for additional transit lanes. A reduction of approximately 110 northbound left turning vehicles and 270 southbound through vehicles during the AM peak hour would be required to achieve the target Auto LOS D, based on the current intersection geometry.

The northbound through, eastbound right turn, and westbound left turn movements do not meet the target Auto LOS D during the PM peak hour, with v/c ratios of 1.15, 1.84, and 0.94, respectively. Synchro identifies that the 95th-percentile queue length for the northbound through movement (approximately 290m) block the northbound left turn lane. The 95th-percentile queue length of the eastbound right turn (approximately 300m) exceeds the 60m of storage provided, thereby blocking the eastbound left turn and through lanes, and extending through the intersection with Hines Road (approximately 190m upstream). Synchro also identifies that the 95th-percentile queue length of the westbound left turn (approximately 120m) exceeds the storage provided but is contained within the taper. Based on the current intersection geometry, a reduction of approximately 330 northbound through vehicles, 360 eastbound right turning vehicles, and 70 westbound left turning vehicles during the PM peak hour would be required to achieve the target Auto LOS D.

Legget Drive/Solandt Road

Legget Drive/Solandt Road meets the target TkLOS D, and does not meet the target PLOS C, BLOS C, or Auto LOS D.

All approaches have a undivided cross-section with a width equivalent to six lanes crossed. There is limited opportunity in improving the PLOS at each approach without reducing the number of travel lanes or reducing the curb radii. No approaches meet the City's vehicle/pedestrian conflict threshold for zebra-striped crosswalks (greater than 400,000 vehicle/pedestrian conflicts over an eight-hour period). There is also limited opportunity in improving the delay score for pedestrians without incurring major delays for vehicles.

All approaches do not meet the target BLOS C based on left turn characteristics. The 2013 Ottawa Cycling Plan identifies future implementation of bike lanes on Legget Drive and Solandt Road west of Legget Drive. Exhibit 8 of the MMLOS Guidelines identifies that crossing one lane to make a left turn from a bike lane equates to a BLOS E if the operating speed is 60 km/h, and the target BLOS C if the operating speed is 50 km/h. As part of the planned cycling project, it can be determined if providing bike lanes and narrowing the existing travel lanes may be sufficient in lowering the operating speeds of Legget Drive and Solandt Road if required.

The southbound through movement does not meet the target Auto LOS D during the PM peak hour, with a v/c ratio of 1.06. Synchro identifies that the 95th-percentile queue length for the southbound through/right turn movement (approximately 235m) blocks the southbound left turn lane (30m of storage). The existing conditions indicate an auxiliary southbound right turn lane may be required. Per the Transportation Association of Canada's (TAC) *Geometric Design Guide for Canadian Roads*, the storage length of a right turn lane can be described with the equation (S = NL/30, where N is the number of right turning vehicles and L is the average vehicle length). Assuming an average vehicle length of 7m, approximately 105m of right turn lane storage would be required. Based on the current

intersection geometry, a reduction of approximately 110 southbound through or right turning vehicles during the PM peak hour would be required to achieve the target Auto LOS D.

March Road/Carling Avenue/Station Road

March Road/Carling Avenue/Station Road does not meet the target PLOS C, BLOS C, TLOS B, TkLOS B, or Auto LOS D.

All approaches have a divided cross-section with a width equivalent to nine lanes crossed or more. There is limited opportunity in improving the PLOS at each approach without reducing the number of travel lanes or restricting turning movements. The south approach meets the City's vehicle/ pedestrian conflict threshold for zebra-striped crosswalks (greater than 400,000 vehicle/pedestrian conflicts over an eight-hour period). There is also limited opportunity in improving the delay score for pedestrians without incurring major delays for vehicles.

The north approach does not meet the target BLOS C based on left turn characteristics, and the south approach does not meet the target BLOS based on both left turn and right turn characteristics. The west approach (Station Road) has no target BLOS, and therefore no recommendations are identified. The north and south approaches equate to a BLOS F based on left turn characteristics. The implementation of two-stage left turn bike boxes for north-south cyclists would not require a right turn on red (RTOR) restriction. This is identified for the City's consideration. The south approach equates to a BLOS D based on right turn characteristics, and can improve to a BLOS B by shortening the right turn lane to 50m or less. Based on existing and projected right turn volumes at this approach, reducing the length of this right turn lane is not recommended.

The north and south approaches do not meet the target TLOS B. The east approach does not have a target TLOS, however delays are significant in the PM peak hour. The City's RTTP Network Concept includes at-grade BRT on March Road throughout the study area, while the Affordable Network includes at-grade BRT south of Solandt Road, and transit priority signals and queue jump lanes which will allow for future conversion to BRT. Delays for transit vehicles are anticipated to improve as a result of these projects.

The north approach does not meet the target TkLOS B. This approach involves right turning trucks onto Station Road from March Road, and the receiving lane width of 6m appears to be sufficient for the existing uses. Therefore, no recommendations have been made.

The northbound through movement does not meet the target Auto LOS D during the AM peak hour, with a v/c ratio of 1.13. Synchro identifies that the 95th-percentile queue length for the northbound through movement (approximately 380m) blocks the northbound left turn and right turn lanes (100m and 80m of storage, respectively), the at-grade rail crossing, and extends through the upstream signalized intersection to commercial properties at March Road/365 March Road/4048 Carling Avenue (approximately 280m upstream). Due to the opposing southbound left turn volumes, there is limited opportunity in optimizing the signal timing and allowing more green time to the northbound through movement. The existing conditions indicate a need for additional through capacity along the March Road corridor to relieve congestion at this intersection. Per the functional design of the future median BRT lanes on March Road, provisions have been made for additional transit lanes. A reduction of approximately 380 northbound through vehicles during the AM peak hour would be required to achieve the target Auto LOS D, based on the current intersection geometry.

The southbound through movement does not meet the target Auto LOS D during the PM peak hour, with a v/c ratio of 0.98. Synchro identifies that the 95th-percentile queue length for the northbound through movement (200m) blocks the northbound left turn and right turn lanes. The 95th-percentile queue length for the southbound through movement (approximately 265m) blocks the southbound left turn and right turn lanes (185m and 20m of storage, respectively). Based on the current intersection geometry, a reduction of approximately 180 southbound through vehicles during the PM peak hour would be required to achieve the target Auto LOS D.

Legget Drive/Terry Fox Drive

The northbound left turn/right turn movement does not meet the target Auto LOS D during the PM peak hour. At an unsignalized intersection, an Auto LOS D corresponds to a vehicle delay of 35 seconds. Synchro identifies northbound delays of approximately 135 seconds. It should be noted that delays are sensitive as the approach is over-capacity, and even minor changes to the northbound volumes can cause disproportionate increases or decreases to delays. The 95th-percentile queue length is 105m. Assuming a vehicle length of 7m, this queue is equivalent to 15 vehicles. A reduction of approximately 130 northbound left turning vehicles during the PM peak hour would be required to achieve the target delay of 35 seconds.

The TAC *Geometric Design Guide* includes left turn storage lane graphs, which identify the appropriate left turn storage length for an approach based on the proportion of left turn volumes, opposing volumes, and speed. Based on the relevant graph, a 15m auxiliary westbound left turn lane is warranted at the intersection. The right turn lane storage length equation (S = NL/30) identifies that, assuming a vehicle length of 7m, 125m of storage is required. Based on the existing ROW of Terry Fox Drive, a westbound left turn lane and an eastbound right turn lane can be accommodated. *Book 5* of the OTM indicates that for arterial or major roadways, all-way stop control may be considered when all of the following conditions are met:

- The total vehicle volume on all intersection approaches exceeds 500 vehicles per hour for each of any eight hours of the day;
- The combined vehicular and pedestrian volume on the minor street exceeds 200 units per hour for each of the same eight hours, with an average delay to traffic on the minor street of greater than 30 seconds;
- The volume split does not exceed 70%/30%, where volume on the major street is defined as vehicles only and volume of the minor street includes vehicles and pedestrians.

As only the first condition is met at the Legget Drive/Terry Fox Drive intersection, all-way stop control is not warranted, based on OTM criteria. *Book 12* of the OTM includes warrant criteria for signalizing an intersection, which has been reviewed to determine the extent to which warrants are currently met at this intersection. If any warrant meets the 100% justification threshold, a traffic signal may be considered. Based on existing traffic volumes shown in **Figure 5**, the results show that the "Delay to Cross Traffic" warrant is currently 84% justified. This warrant is the closest to meeting the 100% threshold.

As no warrant criteria for a traffic signal or all-way stop control have been met, it is recommended that the City consider a traffic signal from a safety perspective based on delay. The relevant TAC left turn storage lane graphs, OTM all-way stop warrants, and traffic signal warrant calculations are included in **Appendix K**.

6.7.2 2021 Background Intersection Operations

Intersection capacity analysis has been completed for the 2021 background traffic conditions. The intersection parameters used in the analysis are consistent with the 2017 TIA Guidelines (Saturation Flow Rate: 1800 vphpl, Peak Hour Factor: 1.0). The results of the Synchro analysis for the AM and PM peak hours are summarized in **Table 13**. Approaches where queueing issues have been identified are listed with the associated 50th- and 95th-percentile queue lengths in **Table 14**. Signal timing plans are included in **Appendix L**. Detailed reports are included in **Appendix M**.

Table 13: 2021 Background – Intersection Operations

Intersection	AM Peak			PM Peak		
	Max v/c or Delay	LOS	Mvmt	Max v/c or Delay	LOS	Mvmt
March Road/ Solandt Road	**1.09**	**F**	**SBT**	**1.66**	**F**	**EBR**
Legget Drive/ Solandt Road	0.62	B	EBL	**0.95**	**E**	**SBT/R**
March Road/ Carling Avenue/Station Road	**0.99**	**E**	**NBT**	0.87	D	SBT
Legget Drive/ Terry Fox Drive(1)	23 sec	C	NBL/R	**70 sec**	**F**	**NBL/R**

1. Unsignalized intersection

Table 14: 2021 Background – Queues Over Capacity

Intersection	Mvmt	AM Peak				PM Peak			
		v/c	LOS	50th % Queue (m)	95th % Queue (m)	v/c	LOS	50th % Queue (m)	95th % Queue (m)
March Road/ Solandt Road	NBL	**0.97**	**E**	**~138**	**m#172**	0.69	B	12	m15
	NBT	0.33	A	23	m13	**1.04**	**F**	**~208**	**#250**
	SBL	0.53	A	21	39	0.43	A	4	#16
	SBT	**1.09**	**F**	**~152**	**#190**	0.75	C	95	117
	EBR	0.45	A	0	16	**1.66**	**F**	**~203**	**#269**
	WBL	0.33	A	6	13	**0.91**	**E**	**74**	**#103**
Legget Drive/ Solandt Road	SBT/R	0.54	A	21	56	**0.95**	**E**	**92**	**#205**
March Road/ Carling Avenue/ Station Road	NBT	**0.99**	**E**	**219**	**#333**	0.76	C	131	168
	SBL	0.75	C	39	m31	0.68	B	32	m#43
	SBT	0.45	A	7	m111	0.87	D	199	m#236
Legget Drive/ Terry Fox Drive	NBL/R	23 s	C	-	8	**70 s**	**F**	**-**	**71**

m: volume for the 95th percentile queue is metered by an upstream signal #: volume for the 95th percentile cycle exceeds capacity
~: approach is above capacity

As shown in the previous tables, Synchro identifies that traffic operations marginally improve for most movements despite anticipated background growth, due to differences in the Peak Hour Factor parameter (PHF of 0.9 in existing conditions vs PHF of 1.0 in future conditions). The following movements are therefore anticipated to operate unacceptably in the 2021 background traffic conditions, based on existing geometry:

- March Road/Solandt Road
  - Northbound left turn and southbound through movements (during AM peak hour);
  - Northbound through, eastbound right turn and westbound left turn movements (during PM peak hour).
- Legget Drive/Solandt Road
  - Southbound through/right turn movement (during PM peak hour).
- March Road/Carling Avenue/Station Road
  - Northbound through movement (during AM peak hour).
- Legget Drive/Terry Fox Drive
  - Northbound left turn/right turn movement (during PM peak hour).

Per the discussions in Section 6.7.1, a set of mitigated 2021 background traffic conditions have been analyzed, which include dual northbound left turn lanes at March Road/Solandt Road (including an additional receiving lane on Solandt Road), a southbound right turn lane at Legget Drive/Solandt Road, and separate northbound left turn and right turn lanes, as well as eastbound right turn and westbound left turn lanes, at Legget Drive/Terry Fox Drive. In addition, unsignalized versus signalized operations of Legget Drive/Terry Fox Drive are included. Detailed Synchro reports for these conditions are included in **Appendix M**.

Compared to the existing geometry, the following failing movements are mitigated as follows:

- March Road/Solandt Road
  - Northbound left turn (AM peak hour): v/c improves from 0.97 to 0.84
- Legget Drive/Solandt Road
  - Southbound right turn (PM peak hour): v/c improves from 0.95 to 0.55
- Legget Drive/Terry Fox Drive
  - Northbound left turn/right turn (PM peak hour):
    - Unsignalized intersection: delay improves from 70 sec to 48 sec

6.7.3 2021 Total Intersection Operations

Intersection capacity analysis has been completed for the 2021 total traffic conditions. The intersection parameters used in the analysis are consistent with the 2017 TIA Guidelines (Saturation Flow Rate: 1800 vphpl, Peak Hour Factor: 1.0). The results of the Synchro analysis for the AM and PM peak hours are summarized in **Table 15**. Approaches where queueing issues have been identified are listed with the associated 50th- and 95th-percentile queue lengths in **Table 16**. Signal timing plans are included in **Appendix L**. Detailed reports are included in **Appendix M**.

Table 15: 2021 Total – Intersection Operations

Intersection	AM Peak			PM Peak		
	Max v/c or Delay	LOS	Mvmt	Max v/c or Delay	LOS	Mvmt
March Road/ Solandt Road	**1.09**	**F**	**SBT**	**1.69**	**F**	**EBR**
Legget Drive/ Solandt Road	0.61	B	EBL	**1.04**	**F**	**SBT/R**
March Road/ Carling Avenue/Station Road	**1.02**	**F**	**NBT**	0.89	D	SBT
Legget Drive/ Terry Fox Drive(1)	23 sec	C	NBL/R	**87 sec**	**F**	**NBL/R**

Intersection	AM Peak			PM Peak		
	Max v/c or Delay	LOS	Mvmt	Max v/c or Delay	LOS	Mvmt
Solandt Road/ Access #1(2)	8 sec	A	SBR	9 sec	A	SBR
Solandt Road/ Access #2(2)	8 sec	A	SBR	9 sec	A	SBR
Solandt Road/ Access #3(2)	8 sec	A	SBR	9 sec	A	SBR
Solandt Road/ Access #4(2)	8 sec	A	SBR	9 sec	A	SBR

1. Unsignalized intersection
2. Accesses are unsignalized and numbered from west to east

Table 16: 2021 Total – Queues Over Capacity

Intersection	Mvmt	AM Peak				PM Peak			
		v/c	LOS	50th % Queue (m)	95th % Queue (m)	v/c	LOS	50th % Queue (m)	95th % Queue (m)
March Road/ Solandt Road	NBL	**0.98**	**E**	**~139**	**m#164**	0.69	B	12	m14
	NBT	0.33	A	23	m12	**1.04**	**F**	**~208**	**#250**
	SBL	0.75	C	32	#63	0.57	A	6	#22
	SBT	**1.09**	**F**	**~152**	**#190**	0.75	C	95	117
	EBR	0.44	A	0	16	**1.69**	**F**	**~203**	**#269**
	WBL	0.38	A	8	15	**0.98**	**E**	**84**	**#120**
Legget Drive/ Solandt Road	SBT/R	0.56	A	25	56	**1.04**	**F**	**~131**	**#240**
March Road/ Carling Avenue/ Station Road	NBT	**1.02**	**F**	**~238**	**#348**	0.77	C	134	170
	SBL	0.75	C	39	m31	0.68	B	33	m#42
	SBT	0.45	A	7	m113	0.89	D	207	m#241
Legget Drive/ Terry Fox Drive	NBL/R	23 s	C	-	8	**87 s**	**F**	**-**	**83**

m: volume for the 95th percentile queue is metered by an upstream signal #: volume for the 95th percentile cycle exceeds capacity
~: approach is above capacity

As shown in the previous tables, marginal changes to the v/c ratios and queue lengths are anticipated at all study area intersections as a result of site-generated traffic, compared to the 2021 background traffic conditions. No operational concerns are anticipated on Solandt Road at any of the accesses to the proposed development.

A set of mitigated 2021 total traffic conditions have been analyzed, which include dual northbound left turn lanes at March Road/Solandt Road (including an additional receiving lane on Solandt Road), a southbound right turn lane at Legget Drive/Solandt Road, and separate northbound left turn and right turn lanes, as well as eastbound right turn and westbound left turn lanes, at Legget Drive/Terry Fox Drive. In addition, unsignalized versus signalized operations of Legget Drive/Terry Fox Drive are included. Detailed Synchro reports for these conditions are included in **Appendix M**.

Compared to the existing geometry, the following failing movements are mitigated as follows:

- March Road/Solandt Road
    - Northbound left turn (AM peak hour): v/c improves from 0.98 to 0.84
- Legget Drive/Solandt Road
    - Southbound right turn (PM peak hour): v/c improves from 1.04 to 0.63
- Legget Drive/Terry Fox Drive
    - Northbound left turn/right turn (PM peak hour):
        - Unsignalized intersection: delay improves from 87 sec to 60 sec

6.7.4 2026 Background Intersection Operations

Intersection capacity analysis has been completed for the 2026 background traffic conditions. The intersection parameters used in the analysis are consistent with the 2017 TIA Guidelines (Saturation Flow Rate: 1800 vphpl, Peak Hour Factor: 1.0).

As first described in Section 5.4, a reduction in the background vehicular volumes has been made in the 2026 horizon year, to reflect a higher transit modal share as a result of rapid transit and transit priority measures that will be implemented on March Road. Within the study area and the City's Affordable RTTP Network, median BRT is anticipated on March Road at both Solandt Road and Carling Avenue/Station Road. As an increased transit share is assumed by 2026, the median BRT is also assumed to be operational by 2026. Therefore, the intersection geometry and signal timings have been adjusted to reflect median BRT, with the lane configurations based on the functional design included in **Appendix J**. Other parameters such as posted speed limit and minimum pedestrian crossing times have been adjusted, consistent with the transportation assessments conducted by Delcan as part of the *West Transitway Connection* EPR. It should be noted that the transportation assessments evaluated the transitway alternatives based on person travel time rather than LOS.

A summary of the adjustments to the March Road/Solandt Road intersection are as follows:

- Adjustments to all right turn lane curb radii and turn lane lengths as required;
- Removal of the existing northbound right turn lane, southbound right turn lane, and one of the dual westbound left turn lanes;
- Addition of one auxiliary westbound right turn lane;
- Reduction of speed limit on March Road from 80 km/h to 60 km/h;
- Minimum pedestrian crossing times for eastbound/westbound pedestrians consistent with a two-stage crossing;
- Northbound/southbound left turn phases adjusted to become fully protected;
- Eastbound left turn phase adjusted to become permitted (no fully protected phase);
- Westbound left turn phase adjusted to become permitted in the AM peak hour and protected plus permitted in the PM peak hour (no fully protected phase);
- Amber plus all-red timings adjusted to reflect increased clearance requirements and changes in the speed limit on March Road;
- Cycle length increased to 150 seconds, with splits and offsets optimized.

A summary of the adjustments to the March Road/Carling Avenue/Station Road intersection are as follows:

- Adjustments to all right turn lane curb radii and turn lane lengths as required;
- Removal of the existing northbound right turn lane;
- Addition of an exclusive eastbound left turn lane, one shared eastbound through/right turn lane, and an auxiliary westbound left turn lane;
- Reduction of speed limit of March Road from 80 km/h to 60 km/h;
- Minimum pedestrian crossing times for eastbound/westbound pedestrians consistent with a two-stage crossing;
- Amber plus all-red timings adjusted to reflect increased clearance requirements and changes in the speed limit on March Road;
- Cycle length increased to 150 seconds, with splits and offsets optimized.

The results of the Synchro analysis for the AM and PM peak hours are summarized in **Table 17**. Approaches where queueing issues have been identified are listed with the associated 50th- and 95th-percentile queue lengths in **Table 18**.

Table 17: 2026 Background – Intersection Operations

Intersection	AM Peak			PM Peak		
	Max v/c or Delay	LOS	Mvmt	Max v/c or Delay	LOS	Mvmt
March Road/ Solandt Road	**1.25**	**F**	**SBT**	**1.38**	**F**	**EBR**
Legget Drive/ Solandt Road	0.58	A	EBL	0.81	D	SBT/R
March Road/ Carling Avenue/Station Road	**1.01**	**F**	**NBT**	0.87	D	NBT
Legget Drive/ Terry Fox Drive(1)	22 sec	C	NBL/R	**51 sec**	**F**	**NBL/R**

1. Unsignalized intersection

Table 18: 2026 Background – Queues Over Capacity

Intersection	Mvmt	AM Peak				PM Peak			
		v/c	LOS	50th % Queue (m)	95th % Queue (m)	v/c	LOS	50th % Queue (m)	95th % Queue (m)
March Road/ Solandt Road	NBL	**0.97**	**E**	**128**	**m#184**	0.72	C	25	m31
	NBT	0.74	C	74	m159	**1.09**	**F**	**~322**	**#362**
	SBL	0.66	B	25	#44	0.36	A	6	14
	SBT	**1.25**	**F**	**~313**	**#351**	0.72	C	124	148
	EBR	0.44	A	0	15	**1.38**	**F**	**~172**	**#240**
	WBL	0.38	A	13	23	**1.37**	**F**	**~199**	**#265**
Legget Drive/ Solandt Road	SBT/R	0.50	A	16	50	0.81	D	68	#164
March Road/ Carling Avenue/ Station Road	NBT	**1.03**	**F**	**282**	**#383**	0.89	D	207	242
	SBL	0.60	A	33	m#38	0.72	C	34	m#44
	SBT	0.66	B	216	m188	0.82	D	154	m137
Legget Drive/ Terry Fox Drive	NBL/R	22 s	C	-	7	**54 s**	**F**	**-**	**55**

m: volume for the 95th percentile queue is metered by an upstream signal #: volume for the 95th percentile cycle exceeds capacity
~: approach is above capacity

As shown in the previous tables, failing traffic operations and/or over-capacity queues are anticipated at all study area intersections. For many movements, the Synchro analysis identifies that the effects of KNUEA-generated traffic, general background growth, the reduction in volumes to reflect increased transit ridership, and the approved intersection geometry shown in the *West Transitway Connection* functional design approximately offset one another.

A set of mitigated 2026 background traffic conditions have been analyzed, which include the same additional lanes that were discussed in the 2021 mitigated conditions. In addition, a discussion of maintaining the dual westbound left turn lanes at March Road/Solandt Road is included. Detailed Synchro reports for both conditions are included in **Appendix M**. Further discussion for each intersection separately is included below.

March Road/Solandt Road

During the AM peak hour, the northbound left turn and southbound through movements are anticipated to operate at an Auto LOS E and F, respectively. The reduced northbound left turn volume is approximately offset by the northbound left turn phase becoming fully protected. Thus, when compared to the 2021 background traffic conditions, the v/c ratio and queue lengths for this movement are comparable. The 95th-percentile queue length for the southbound through movement is anticipated to increase significantly compared to the 2021 background conditions, from approximately 190m in 2021 to 350m in 2026. To meet the target Auto LOS D, a reduction of 40 northbound left turning vehicles and 490 southbound through vehicles would be required, based on the intersection geometry accommodating median BRT lanes on March Road. If dual northbound left turn lanes were to be implemented, the v/c ratio of that movement in the AM peak hour would improve from 0.97 to 0.83.

During the PM peak hour, the northbound through, eastbound right turn, and westbound left turn movements are anticipated to operate at an Auto LOS F. The 95th-percentile queue length for the northbound through movement is anticipated to increase significantly compared to the 2021 background conditions, from approximately 250m in 2021 to 360m in 2026. The 95th-percentile queue length for the eastbound right turn movement is anticipated to decrease compared to the 2021 background conditions, from approximately 270m in 2021 to 240m in 2026. To meet the target Auto LOS D, a reduction of 320 northbound through vehicles, 190 westbound left turning vehicles, and 240 eastbound right turning vehicles, would be required.

Removal of one westbound left turn lane is anticipated to severely impact operations for this movement, which was operating at an Auto LOS E in the 2021 background traffic conditions. The 95th-percentile queue length is anticipated to increase from approximately 105m in 2021 to 265m in 2026. This length is greater than the distance between the March Road/Solandt Road and the Legget Drive/Solandt Road intersections (approximately 230m, measured from westbound stop bar to upstream westbound stop bar), and would likely affect operations at Legget Drive/Solandt Road. It should also be noted that the length of this queue will also block westbound vehicles attempting to travel through on Solandt Road or turn right onto March Road.

In 2008, dual westbound left turn lanes were added without realignment of the westbound through receiving lane west of March Road. It appears that the functional design of the future median BRT lanes on March Road elected to correct the existing misalignment by removing a westbound left turn lane and reallocating the existing westbound through lane as a dedicated right turn lane (i.e. reverting to the lane configuration that existed prior to 2008). Given that the westbound left turn volumes are far greater than the westbound right turn volumes and the commonly accepted threshold of 300 vph

for dual left turn lanes, carrying the existing dual left turn lanes and shared through/right turn lane, and correcting the alignment of the receiving through lane has been included in the mitigated conditions. In the case where dual northbound left turn lanes on March Road are provided, the additional receiving lane that would be required on Solandt Road would also serve as a correction for the westbound through alignment. The v/c ratio and maximum queue length of the westbound left turn movement changes marginally in the AM peak hour.

In the PM peak hour, the v/c ratio and maximum queue length improves from 1.39 to 1.15 and 265m to 125m, respectively, by providing dual westbound left turn lanes. In the case where dual westbound left turn lanes are maintained, the maximum queue length exceeds the storage length, but does not extend through the upstream intersection at Legget Drive. As dual left turn lanes require a fully protected phase, the overall performance of the intersection downgrades in the PM peak hour. The v/c ratio of the northbound through movement, which represents the most negatively impacted movement, changes from 1.09 to 1.23 if dual westbound left turn lanes are maintained. In this scenario, meeting the target Auto LOS D would require a reduction of 500 northbound through vehicles, 130 westbound left turning vehicles, and 250 eastbound right turning vehicles. Therefore, consistent with the functional design of the future median BRT lanes on March Road, a single westbound left turn lane, through lane, and right turn lane continue to be recommended.

Legget Drive/Solandt Road

As a result of the reduction in vehicular volumes, Synchro identifies that the intersection will operate at an Auto LOS D during the PM peak hour (improving from the Auto LOS E identified in the 2021 background analysis). Synchro identifies that the 95th-percentile queue length for the southbound through/right turn movement decreases compared to the 2021 background conditions, from approximately 205m in 2021 to 165m in 2026. If a southbound right turn lane were to be implemented, the v/c ratio of that movement in the PM peak hour would improve from 0.81 to 0.51.

March Road/Carling Avenue/Station Road

During the AM peak hour, the northbound through movement is anticipated to operate at an Auto LOS F, compared to the Auto LOS E identified in the 2021 background conditions. Synchro identifies that the 95th-percentile queue length for this movement increases from approximately 335m in 2021 to 385m in 2026. To meet the target Auto LOS D, a reduction of 270 northbound through vehicles would be required, based on the intersection geometry accommodating median BRT lanes on March Road.

Legget Drive/Terry Fox Drive

During the PM peak hour, the northbound left turn/right turn movement is anticipated to operate at an Auto LOS F. Compared to the 2021 background traffic conditions, Synchro identifies that the approach delay decreases from approximately 70 seconds to 55 seconds, as a result of reduced vehicular volumes. To meet the target Auto LOS D (delay of 35 seconds), a reduction of 55 northbound left turning vehicles would be required. If the intersection were signalized, and an eastbound right turn lane, a westbound left turn lane, and separate northbound left turn and right turn lanes were implemented, the PM peak hour delay for northbound vehicles would decrease to approximately 22 seconds. If only the turn lanes were implemented and the intersection remained unsignalized, the PM peak hour delay for northbound vehicles would be 40 seconds. While this delay represents an improvement from an Auto LOS F to an Auto LOS E, it does not achieve the target Auto LOS D, and a reduction of 20 northbound left turning vehicles would still be required.

6.7.5 2026 Total Intersection Operations

Intersection capacity analysis has been completed for the 2026 total traffic conditions. The intersection parameters used in the analysis are consistent with the 2017 TIA Guidelines (Saturation Flow Rate: 1800 vphpl, Peak Hour Factor: 1.0), and the parameters assumed for the 2026 background analysis.

The results of the Synchro analysis for the AM and PM peak hours are summarized in **Table 19**. Approaches where queueing issues have been identified are listed with the associated 50th- and 95th-percentile queue lengths in **Table 20**.

Table 19: 2026 Total – Intersection Operations

Intersection	AM Peak			PM Peak		
	Max v/c or Delay	LOS	Mvmt	Max v/c or Delay	LOS	Mvmt
March Road/ Solandt Road	**1.25**	**F**	**SBT**	**1.53**	**F**	**WBL**
Legget Drive/ Solandt Road	0.57	A	EBL	0.89	D	SBT/R
March Road/ Carling Avenue/Station Road	**1.04**	**F**	**NBT**	0.90	D	NBT
Legget Drive/ Terry Fox Drive(1)	22 sec	C	NBL/R	**62 sec**	**F**	**NBL/R**
Solandt Road/ Access #1(2)	8 sec	A	SBR	9 sec	A	SBR
Solandt Road/ Access #2(2)	8 sec	A	SBR	9 sec	A	SBR
Solandt Road/ Access #3(2)	8 sec	A	SBR	9 sec	A	SBR
Solandt Road/ Access #4(2)	8 sec	A	SBR	9 sec	A	SBR

1. Unsignalized intersection
2. Accesses are unsignalized and numbered from west to east

Table 20: 2026 Total – Queues Over Capacity

Intersection	Mvmt	AM Peak				PM Peak			
		v/c	LOS	50th % Queue (m)	95th % Queue (m)	v/c	LOS	50th % Queue (m)	95th % Queue (m)
March Road/ Solandt Road	NBL	**0.97**	**E**	**129**	**m#177**	0.72	C	25	m31
	NBT	0.81	D	149	m171	**1.09**	**F**	**~326**	**#366**
	SBL	0.70	B	36	#75	0.51	A	8	#21
	SBT	**1.25**	**F**	**~313**	**#351**	0.72	C	124	148
	EBR	0.44	A	0	15	**1.38**	**F**	**~172**	**#240**
	WBL	0.47	A	16	27	**1.53**	**F**	**~236**	**#303**
Legget Drive/ Solandt Road	SBT/R	0.51	A	19	50	0.89	D	89	#198
March Road/ Carling Avenue/ Station Road	NBT	**1.06**	**F**	**~328**	**#399**	0.90	D	210	245
	SBL	0.60	A	33	m#38	0.73	C	35	m#44
	SBT	0.66	B	216	m189	0.85	D	154	m131

Intersection	Mvmt	AM Peak				PM Peak			
		v/c	LOS	50th % Queue (m)	95th % Queue (m)	v/c	LOS	50th % Queue (m)	95th % Queue (m)
Legget Drive/ Terry Fox Drive	NBL/R	22 s	C	-	7	**66 s**	**F**	**-**	**65**

m: volume for the 95th percentile queue is metered by an upstream signal #: volume for the 95th percentile cycle exceeds capacity
~: approach is above capacity

As shown in the previous tables and compared to the 2026 background conditions, site-generated traffic is anticipated to cause marginal increases in the v/c ratios and queue lengths for most movements throughout the study area.

Assuming the geometry shown in the *West Transitway Connection* functional design for intersections at March Road and existing geometry for intersections at Legget Drive, the 95th-percentile queue lengths for the westbound left turn movement at March Road/Solandt Road and the southbound through/right turn movement at Legget Drive/Solandt Road are anticipated to increase by approximately 40m and 35m, respectively, in the PM peak hour. These movements represent the most impacted movements as a result of site-generated traffic. While the proposed development is not anticipated to add any traffic to the southbound right turn movement at Legget Drive/Solandt Road, the site-generated traffic will increase the effective green time of the eastbound and westbound approaches.

A set of mitigated 2026 total traffic conditions have been analyzed, which include the same additional lanes that were discussed in the 2021 mitigated conditions. Detailed Synchro reports for both conditions are included in **Appendix M**.

In the mitigated conditions, the following movements change as follows:

- March Road/Solandt Road
  - Northbound left turn (AM peak hour): v/c improves from 0.97 to 0.80
- Legget Drive/Solandt Road
  - Southbound right turn (PM peak hour): v/c improves from 0.89 to 0.53
- Legget Drive/Terry Fox Drive
  - Northbound left turn/right turn (PM peak hour):
    - Unsignalized intersection: delay improves from 66 sec to 49 sec

In these mitigated conditions, the 95th-percentile queue length of the westbound left turn movement at March Road/Solandt Road marginally shortens; however, this queue length still extends through the upstream intersection of Legget Drive/Solandt Road.

Expressed as a percentage, site-generated traffic accounts for approximately 2 to 3% of total peak hour intersection volumes at March Road/Solandt Road, March Road/Carling Avenue/Station Road, and Legget Drive/Terry Fox Drive, and approximately 10% of total peak hour intersection volumes at Legget Drive/Solandt Road. No roadway modifications are recommended to accommodate the development-related traffic, as none are required.

7.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the foregoing, the conclusions and recommendations of this TIA can be summarized as follows:

Forecasting

- The proposed development is estimated to generate 274 person trips in the AM peak hour and 282 person trips in the PM peak hour, including 164 vehicle trips in the AM peak hour and 169 vehicle trips in the PM peak hour.

Development Design and Parking

- Pedestrian facilities will be provided between the building entrances and the parking areas. A pedestrian facility connecting from the existing sidewalk on the north side of Solandt Road will be aligned with the main entrance of the proposed office building, providing the most direct route between the sidewalk and main entrance.

- The nearest transit stop (Stop #7548) is approximately 100m from the main entrance to the proposed office building.

- All required TDM-supportive design and infrastructure measures in the TDM checklist are met by the proposed development.

- The fire route for the proposed development includes the perimeter of 2707 Solandt Road and the drop-off loop at the main entrance. Fire trucks can be accommodated by the proposed accesses.

- Garbage collection, loading, and deliveries will be accommodated directly north of the proposed office building and directly west of the parking area north of the building. Two loading spaces will be provided, meeting the minimum requirements of the ZBL.

- Approximately 587 vehicle parking spaces and 80 bicycle parking spaces are proposed for the subject site, meeting the requirements of the ZBL.

Boundary Streets

- Results of the segment MMLOS analysis can be summarized as follows:
    - The north side of Solandt Road meets the target PLOS C, but the south side does not;
    - Solandt Road meets the target BLOS E;
    - Solandt Road achieves a TLOS D, equal to the target suggested for Transit Priority routes with isolated measures;
    - Solandt Road meets the target TkLOS D;
    - Solandt Road meets the target Auto LOS D.

- The south side of Solandt Road does not include a sidewalk. Based on Exhibit 4 of the MMLOS guidelines, the target PLOS C can be achieved by providing a sidewalk with a minimum width of 1.5m and minimum boulevard of 0.5m, or a sidewalk with a minimum width of 1.8m and no boulevard. As the subject site fronts onto the north side of Solandt Road, this improvement is identified for the City's consideration as funding becomes available.

Access Design

- The proposed accesses to 2707 Solandt Road meet all relevant requirements outlined in the City's *Private Approach By-Law* and *Zoning By-Law*.

Transportation Demand Management

- While the proponent is anticipated to maintain ownership of the development once occupied, many of the measures included in the *TDM Measures Checklist* are more appropriate for the future office tenant(s) to consider. At this stage, the proponent has agreed to consider the following measures upon opening of the proposed development:
    - Display local area maps with walking/cycling access routes and key destinations at major entrances;
    - Display relevant transit schedules and route maps at entrances.

- The proposed development also incorporates many 'basic' or 'better' measures outlined in the *TDM-Supportive Development Design Checklist* in addition to meeting all the required measures, including:
    - Locating the building close to the street, with entrances located to minimize walking distances to sidewalks and transit stops/stations, and doors and windows located to ensure visibility of pedestrians from the building, for their security and comfort;
    - Providing safe, direct and attractive routes from building entrances to nearby stops;
    - Providing lighting, landscaping and benches along walking and cycling routes between building entrances and streets, sidewalks and trails;
    - Providing bicycle parking spaces equivalent to the expected number of commuter plus customer/visitor cyclists;
    - Providing a designated area for carpool drivers (plus taxis and ride-hailing services) to drop off or pick up passengers.

Transit

- The proposed development is estimated to generate 14 transit trips in both the AM and PM peak hour, based on existing transit shares. Based on these volumes, no capacity problems are anticipated on the bus routes or at the bus stops within the study area.

- The proposed development is estimated to generate 58 and 59 transit trips in the AM and PM peak hours, based on a future 21% transit share target. This is identified to assist OC Transpo in determining future transit capacity requirements.

Intersection Design

- Results of the intersection MMLOS analysis can be summarized as follows:
    - No intersections meet the target PLOS C;
    - No intersections meet the target BLOS C;
    - No intersections with targets meet the target TLOS B;
    - March Road/Solandt Road meets the target TkLOS B and Legget Drive/Solandt Road meets the target TkLOS D, while March Road/Carling Avenue/Station Road does not meet the target TkLOS B;
    - No intersections meet the target Auto LOS D.

- Pedestrian Level of Service
    - All approaches at March Road/Solandt Road, Legget Drive/Solandt Road, and March Road/Carling Avenue/Station Road have a cross-section with a width equivalent to

six lanes crossed or more. There is limited opportunity in improving the PLOS at each approach without reducing the number of travel lanes, restricting turning movements, or reducing curb radii. There is also limited opportunity in improving the delay score for pedestrians without incurring major delays for vehicles.

- Bicycle Level of Service
  - At March Road/Solandt Road, the east approach does not meet the target BLOS based on left turn characteristics and the north, south, and west approaches do not meet the target BLOS based on both left and right turn characteristics. There may be opportunity for two-stage left-turn bike boxes at all approaches, and is identified for the City's consideration. Providing bike lanes on Solandt Road (as identified in the 2013 Ottawa Cycling Plan) may also improve the level of comfort for cyclists.

  - At Legget Drive/Solandt Road, all approaches do not meet the target BLOS based on left turn characteristics. Providing bike lanes and narrowing the existing travel lanes may be sufficient in lowering the operating speeds of Legget Drive and Solandt Road, and improve the level of comfort for cyclists.

  - At March Road/Carling Avenue/Station Road, the north approach does not meet the target BLOS based on left turn characteristics, and the south approach does not meet the target BLOS based on both left and right turn characteristics. There may be opportunity for two-stage left-turn bike boxes for north-south cyclists, and is identified for the City's consideration.

- Transit Level of Service
  - Approaches on March Road at Solandt Road and Carling Avenue/Station Road do not meet the target TLOS B. The City's RTTP Network Concept includes at-grade BRT on March Road throughout the study area, while the Affordable Network includes at-grade BRT south of Solandt Road, and transit priority signals and queue jump lanes, which will allow for future conversion to BRT. Delays for transit vehicles are anticipated to improve as a result of these projects.

- Truck Level of Service
  - The north approach of March Road/Carling Avenue/Station Road does not meet the target TkLOS B. As this approach involves right turning trucks onto Station Road from March Road, it is anticipated that the number of trucks turning onto Station Road is limited. Therefore, no recommendations have been made.

- In existing traffic conditions, capacity issues have been identified for the following movements. To achieve the target Auto LOS D, an approximate reduction in peak hour traffic volumes for the following movements are required:
  - March Road/Solandt Road
    - Northbound left turn (AM peak hour): 110 vehicles;
    - Northbound through (PM peak hour): 330 vehicles;
    - Southbound through (AM peak hour): 270 vehicles;
    - Eastbound right turn (PM peak hour): 360 vehicles;
    - Westbound left turn (PM peak hour): 70 vehicles.
  - Legget Drive/Solandt Road
    - Southbound through/right turn (PM peak hour): 110 vehicles.

  - March Road/Carling Avenue/Station Road
    - Northbound through (AM peak hour): 380 vehicles;
    - Southbound through (PM peak hour): 180 vehicles.
  - Legget Drive/Terry Fox Drive
    - Northbound left turn/right turn (PM peak hour): 130 vehicles.

- The existing conditions indicate a need for additional through capacity along the March Road corridor to relieve congestion, as well as dual northbound left turn lanes. It is anticipated that optimizing the signal timing will not mitigate the failing conditions.

- The functional design of the future median BRT lanes on March Road include additional transit lanes on March Road, and includes the removal of one of the westbound left turn lanes on Solandt Road. As the westbound left turn on Solandt Road is already identified as operating over-capacity, removal of one left turn lane is anticipated to cause significant operational and queueing issues, and will likely affect operations upstream at Legget Drive/ Solandt Road.

- The existing conditions indicate an auxiliary southbound right turn lane at Legget Drive/ Solandt Road may improve the over-capacity southbound through/right turn lane. Based on the TAC *Geometric Design Guide for Canadian Roads*, approximately 105m of right turn lane storage would be required.

- At Legget Drive/Terry Fox Drive, TAC identifies that a 15m westbound left turn lane and 125m eastbound right turn lane are warranted. While the Legget Drive/Terry Fox Drive intersection does not meet the warrants for all-way stop control or signalization, it is recommended that the City monitor the intersection, as signalization may still be appropriate from a safety perspective based on delay.

- In the 2021 background and total traffic conditions, Synchro identifies marginal improvements for most movements in the study area despite anticipated background growth and site-generated traffic, due to differences in the Peak Hour Factor parameter.

- Compared to the existing geometry, providing dual northbound left turn lanes at March Road/ Solandt Road and a southbound right turn lane at Legget Drive/Solandt Road is anticipated to mitigate those failing movements in the AM and PM peak hours, respectively. Signalizing Legget Drive/Terry Fox Drive and providing westbound left turn and eastbound right turn lanes is anticipated to mitigate the failing northbound left turn/right turn movement in the PM peak hour.

- It has been assumed that median BRT lanes on the March Road corridor will be operational by the 2026 horizon year. Synchro identifies that the effects of KNUEA-generated traffic, general background growth, the reduction in traffic volumes to reflect increased transit ridership, and the approved intersection geometry with median BRT lanes approximately offset one another.

- In the 2026 background traffic conditions, capacity issues have been identified for the following movements. To achieve the target Auto LOS D, an approximate reduction in peak hour traffic volumes for the following movements are required, based on the approved intersection geometry:

  - March Road/Solandt Road
    - Northbound left turn (AM peak hour): 40 vehicles;
    - Northbound through (PM peak hour): 320 vehicles;
    - Southbound through (AM peak hour): 490 vehicles;
    - Eastbound right turn (PM peak hour): 240 vehicles;
    - Westbound left turn (PM peak hour): 190 vehicles.
  - March Road/Carling Avenue/Station Road
    - Northbound through (AM peak hour): 270 vehicles.
  - Legget Drive/Terry Fox Drive
    - Northbound left turn/right turn (PM peak hour): 55 vehicles.

- As with the existing conditions, the 2026 traffic conditions indicate a need for additional through capacity along the March Road corridor to relieve congestion, as well as dual northbound left turn lanes at Solandt Road. Capacity issues are anticipated for the eastbound right turn movement and the westbound left turn movement at March Road/Solandt Road. Removal of one of the westbound left turn lanes is anticipated to significantly impact that movement, and will likely impact operations at the upstream intersection of Legget Drive/ Solandt Road.

- Providing dual westbound left turn lanes at March Road/Solandt Road improves the westbound left turn movement, but downgrades the intersection as a whole due to the introduction of a protected left turn phase. In this condition, a reduction of 500 northbound through vehicles, 250 eastbound right turning vehicles, and 130 westbound left turning vehicles would be required. Consistent with the functional design for median BRT lanes on March Road, a single westbound left turn lane, through lane, and right turn lane continue to be recommended.

- In the 2026 total traffic conditions, marginal increases to the v/c ratios and queue lengths within the study area are anticipated as a result of site-generated traffic. Expressed as a percentage, site-generated traffic accounts for approximately 2 to 3% of total peak hour volumes at March Road/Solandt Road, March Road/Carling Avenue/Station Road, and Legget Drive/Terry Fox Drive, and approximately 10% of total peak hour intersection volumes at Legget Drive/Solandt Road.

- No roadway modifications are recommended to accommodate development-related traffic, as none are required.

- No operational concerns are anticipated on Solandt Road at any of the accesses to the proposed development.

NOVATECH

Prepared by:

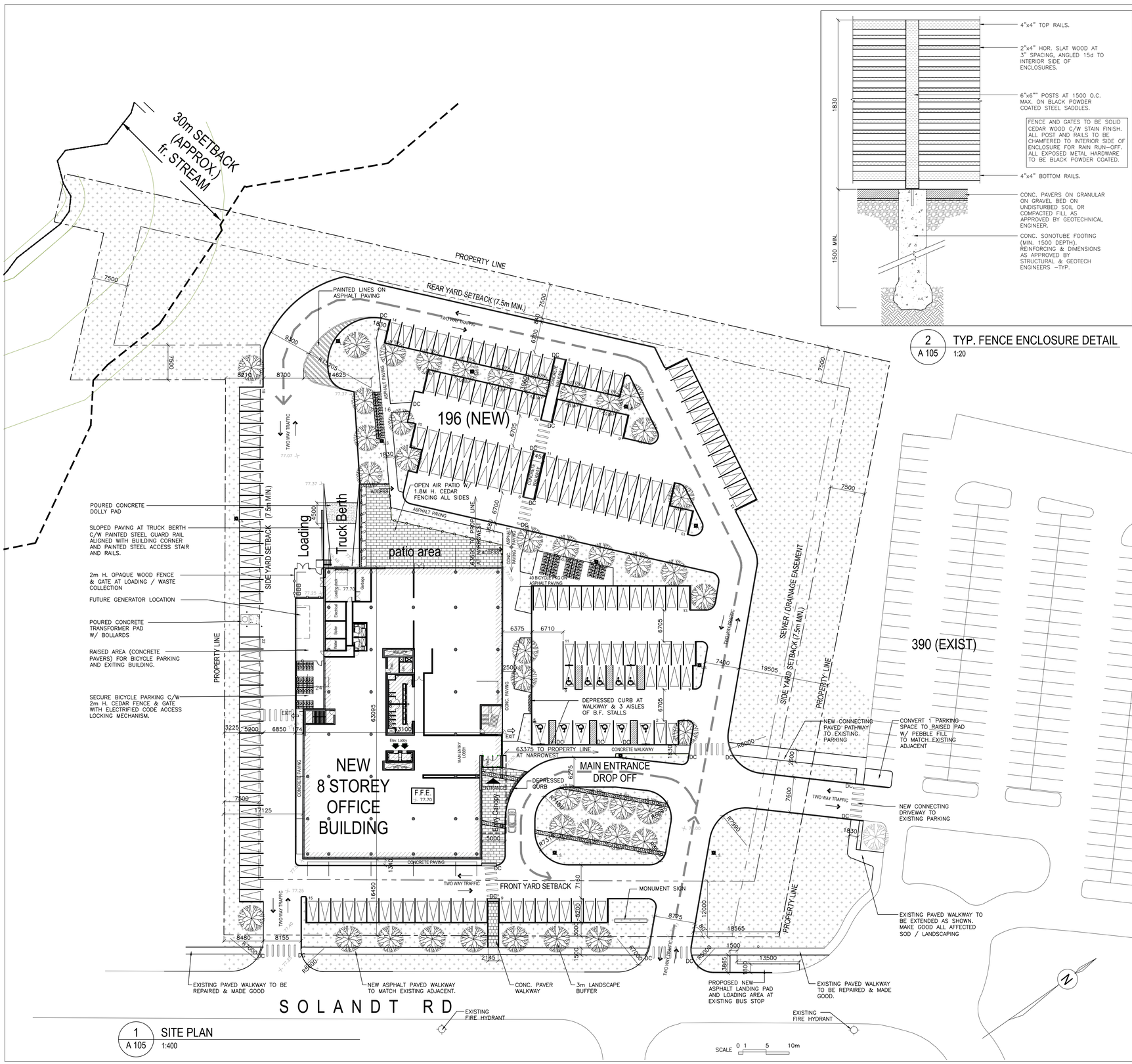
Joshua Audia, B.Sc.
E.I.T.,
Transportation/Traffic

Reviewed by:

Jennifer Luong, P.Eng.
Senior Project Manager,
Transportation/Traffic

APPENDIX A

Concept Plan



1 / A 105 SITE PLAN 1:400

2 / A 105 TYP. FENCE ENCLOSURE DETAIL 1:20

KEY PLAN

PROPERTY DESCRIPTION

EIGHT STOREY OFFICE BUILDING	
CITY OF OTTAWA PIN NUMBER	04517 - 0838
MUNICIPAL ADDRESS	2707 SOLANDT RD, KANATA, ON

SITE INFORMATION

Site information is derived from official survey by Fairhill, Moffat & Woodland ltd, dated Oct. 24, 2000, for registered plan 4M-642 & M-280..

LOT AREA:	19,986 m²
LOT FRONTAGE:	120.07 m
LOT DEPTH:	126.66 m /

BUILDING INFORMATION

BUILDING AREA:	2,306.45m² (2,495m2 w/ vertical cores)
BUILDING FLOOR AREA (GFA):	18,451.6m²
PROPOSED USE:	OFFICE BUILDING, MID-RISE

ZONING TABLE	IP6	
CITY OF OTTAWA ZONING BY-LAW No. 2008-250	REQUIRED	PROPOSED
MINIMUM LOT AREA	4,000m²	19,986 m²
MINIMUM LOT WIDTH	45m	120.07 m
FRONT YARD SETBACK	12m	12 m
MINIMUM INTERIOR SIDE YARD SETBACK	7.5m	7.5m
MINIMUM REAR YARD SETBACK	7.5m	7.5m
MAXIMUM BUILDING HEIGHT	22m	--m
MAXIMUM FLOOR SPACE INDEX	N/A	
PARKING AREA	N/A	11,099 m²
LANDSCAPED AREA (8,380 m2 OF LOT AREA)	15% of parking area (Section 110) --% of Lot	1,943 m2 of parking area 17.5 % of parking area 41.9 % of Lot area
VEHICLE PARKING REQUIREMENTS (AREA C, SCHEDULE 1A)	2.4 per 100m2 of GFA 443 spaces required	391 existing + 196 new SPACES
VISITOR PARKING REQUIREMENTS	N/A	TBD with Owner requirements
BARRIER-FREE PARKING REQTS City of Ottawa Part C - Section 111 O.Reg 191/11	Part C -Section 111: 5 per 400-499 O.Reg 191/11: 2 + 2% per 201-1000	11 SPACES per O.Reg 191/11: (6 type 'A' + 5 type 'B')
BICYCLE PARKING SPACES Part C-Section 111, Table 111A	1 per 250m2 GFA 74 Spaces required (25% to be indoors/secure)	80 SPACES total including 24 secured
LOADING SPACE REQUIREMENTS Part C - Section 113, Table 113A	2 per 15,000-24,999m2 GFA 50% to be oversized	2 SPACES (1 regular + 1 oversized)
DRIVE ACCESS CURBS RADII	Per WB-20 Truck Turning Template for a 53' transport trailer as shown on plan.	

LEGEND:

- GRASS / SOFT-SCAPE (SEE LANDSCAPE PLANS)
- UNIT PAVERS (CONCRETE, STONE, ETC)
- ASPHALT PAVING
- HEAVY DUTY ASPHALT PAVING
- CONCRETE
- FIRE ROUTE
- EXISTING FENCE
- PROPERTY / LOT LINE
- SETBACK LINE
- LINE OF ARCHITECTURAL CEDAR SCREEN, SEE DETAIL 2/A105
- LINE OF TURTLE FENCE
- DESIGNATED BUILDING ENTRANCE / EXIT
- DEPRESSED CURB
- PAINTED CROSSWALK LINES
- STANDARD PARKING SPACE (2600 x 5200)
- TYPE 'A' BARRIER-FREE PARKING SPACE c/w AISLE, PAINTED MARKINGS & SIGN WHERE SHOWN (1500 / 3660 / 5200)
- TYPE 'B' STANDARD PARKING SPACE c/w AISLE, PAINTED MARKINGS & SIGN WHERE SHOWN (1500 / 2600 / 5200)
- SIGNAGE FOR BARRIER-FREE PARKING
- BICYCLE PARKING (HORIZONTAL) N.T.S. (1500 / 1800 / 600)
- FIRE HYDRANT. REFER TO CIVIL
- CATCH BASIN
- MANHOLE
- FLOOR DRAIN
- UTILITY POLE
- OVERHEAD UTILITY WIRES
- L.S. LIGHT STANDARD
- NEW TREE (REFER TO LANDSCAPE DRAWINGS)
- NEW SHRUB (REFER TO LANDSCAPE DRAWINGS)
- NEW BENCH (REFER TO LANDSCAPE DRAWINGS)
- 00.00 EXISTING GROUND ELEVATION (TO DETERMINE EXISTING AVERAGE GRADE)
- 00.00 NEW GROUND ELEVATION REFER TO CIVIL
- NEW RIPARIAN ZONE PLANTING (REFER TO LANDSCAPE DRAWINGS)

NOTES:
- REFER TO CIVIL DRAWINGS FOR GRADING, STORM WATER MANAGEMENT, UTILITIES & SITE SERVICES, ROADWAY DESIGN, RETAINING WALLS, ETC.
- REFER TO LANDSCAPE DRAWINGS FOR TREES, PLANTINGS, LANDSCAPE SURFACE TREATMENTS AND COVERINGS, ETC.
- DOUBLE TRAFFIC LANES (AND AISLES) TO BE A MINIMUM OF 6.7 METERS WIDE.

No.	Date	Emis pour / Object
1	2019-10-04	SITE PLAN CONTROL
2	2020-01-08	CLIENT REVIEW
3	2020-01-10	CLIENT REVIEW
4	2020-01-14	CLIENT TREVIEW
5	2020-01-15	SP – CITY COMMENTS
6	2020-01-17	SP – CITY COMMENTS

Ingénieur / Engineer (Mécanique & Électricité / Mechanical & Electrical)
Goodkey Weedmark Consulting Engineers

Ingénieur / Engineer (Structure / Structure)

Architecte/ Architect (paysagiste / Landscape)
NOVATECH ENGINEERING CONSULTANTS LTD

Ingénieur / Engineer (Civil / Civil)

Client / Client
KRP Properties

Architecte / Architect — Collectif d'architectes / Architects Collective
fig. 1
3550, Saint-Antoine O.
Montréal QC H4C 1A9
T. 514 861-5122
fig. 2
190 Somerset St W #206
Ottawa ON K2P 0J4
T. 613 695-6122
figurr
Formerly Rubin & Rotman Architects
www.figurr.ca

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Sceau / Seal

Note:
L'entrepreneur doit vérifier toutes les dimensions et informations sur le site et aviser immédiatement l'architecte de toutes erreurs ou omissions.

Contractor shall verify all information and dimensions on site and immediately report any errors or omissions to the architect.

Projet / Project

EIGHT STOREY OFFICE BUILDING

2707 SOLANDT ROAD, KANATA, ON

Titre / Title

SITE PLAN

Dessiné par / Drawn by	No. projet / Project number
GB	1930
Vérifié par / Verified by	No. dessin / Drawing number
RC	
Échelle / Scale	Révision / Revision
1:400	#
Date de création du dessin / Drawing creation date	A105
2019/08/13	

Zoning File: D02-02-19-0125

City SP file: D07-12-19-0172 (Appl. #18039)

APPENDIX B

TIA Screening Form

City of Ottawa 2017 TIA Guidelines Screening Form

1. Description of Proposed Development

Municipal Address	**2707 Solandt Road**
Description of Location	**Located on the north side of Solandt Road, approximately 280m east of Legget Drive**
Land Use Classification	**Office**
Development Size (units)	**-**
Development Size (m^2)	**8 storeys** **(approx. 198,615 ft^2 or 18,452 m^2)**
Number of Accesses and Locations	**Four accesses to Solandt Road** **(two existing accesses and two proposed accesses)**
Phase of Development	**1**
Buildout Year	**2021**

If available, please attach a sketch of the development or site plan to this form.

2. Trip Generation Trigger

Considering the Development's Land Use type and Size (as filled out in the previous section), please refer to the Trip Generation Trigger checks below.

Land Use Type	Minimum Development Size
Single-family homes	40 units
Townhomes or apartments	90 units
Office	**3,500 m^2**
Industrial	5,000 m^2
Fast-food restaurant or coffee shop	100 m^2
Destination retail	1,000 m^2
Gas station or convenience market	75 m^2

** If the development has a land use type other than what is presented in the table above, estimates of person-trip generation may be made based on average trip generation characteristics represented in the current edition of the Institute of Transportation Engineers (ITE) Trip Generation Manual.*

If the proposed development size is greater than the sizes identified above, the Trip Generation Trigger is satisfied.

3. Location Triggers

	Yes	No
Does the development propose a new driveway to a boundary street that is designated as part of the City's Transit Priority, Rapid Transit or Spine Bicycle Networks?		✓
Is the development in a Design Priority Area (DPA) or Transit-oriented Development (TOD) zone?*		✓

**DPA and TOD are identified in the City of Ottawa Official Plan (DPA in Section 2.5.1 and Schedules A and B; TOD in Annex 6). See Chapter 4 for a list of City of Ottawa Planning and Engineering documents that support the completion of TIA).*

If any of the above questions were answered with 'Yes,' the Location Trigger is satisfied.

4. Safety Triggers

	Yes	No
Are posted speed limits on a boundary street are 80 km/hr or greater?		✓
Are there any horizontal/vertical curvatures on a boundary street limiting sight lines at a proposed driveway?		✓
Is the proposed driveway within the area of influence of an adjacent traffic signal or roundabout (i.e. within 300 m of intersection in rural conditions, or within 150 m of intersection in urban/suburban conditions)?		✓
Is the proposed driveway within auxiliary lanes of an intersection?		✓
Does the proposed driveway make use of an existing median break that serves an existing site?		✓
Is there is a documented history of traffic operations or safety concerns on the boundary streets within 500 m of the development?		✓
Does the development include a drive-thru facility?		✓

If any of the above questions were answered with 'Yes,' the Safety Trigger is satisfied.

5. Summary

	Yes	No
Does the development satisfy the Trip Generation Trigger?	✓	
Does the development satisfy the Location Trigger?		✓
Does the development satisfy the Safety Trigger?		✓

If none of the triggers are satisfied, the TIA Study is complete. If one or more of the triggers is satisfied, the TIA Study must continue into the next stage (Screening and Scoping).

APPENDIX C

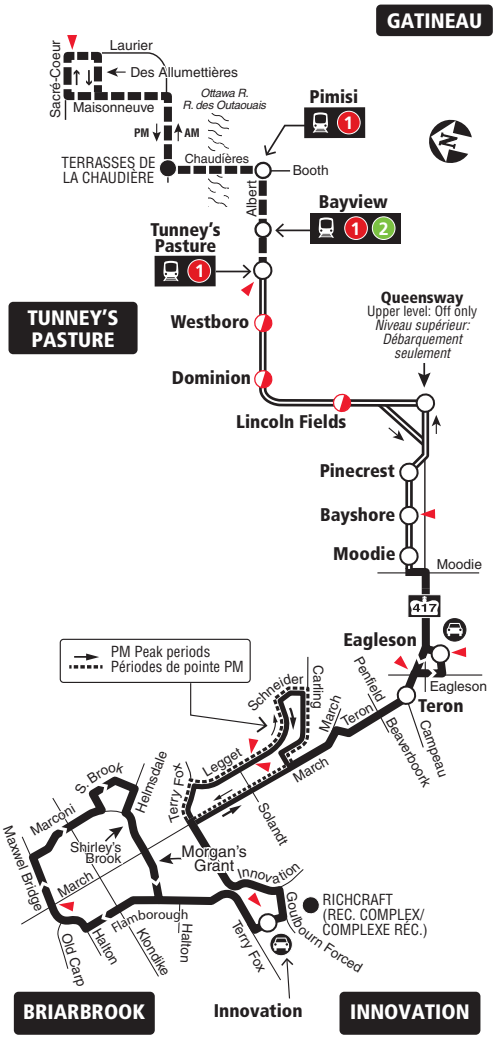
OC Transpo Route Maps

63 Rapide

INNOVATION BRIARBROOK
TUNNEY'S PASTURE GATINEAU

7 days a week / 7 jours par semaine

All day service
Service toute la journée



Transitway & Station
Peak Periods Only / Périodes de pointe seulement
Eastbound: AM Off only - Westbound: Full Service
Vers l'est AM: Débarquement seulement
Vers l'ouest: Service complet
Park & Ride / Parc-o-bus
Timepoint / Heures de passage

2019.07

Starting July 14, 2019
À partir du 14 juillet 2019

Lost and Found / Objets perdus..... **613-563-4011**
Security / Sécurité..... **613-741-2478**

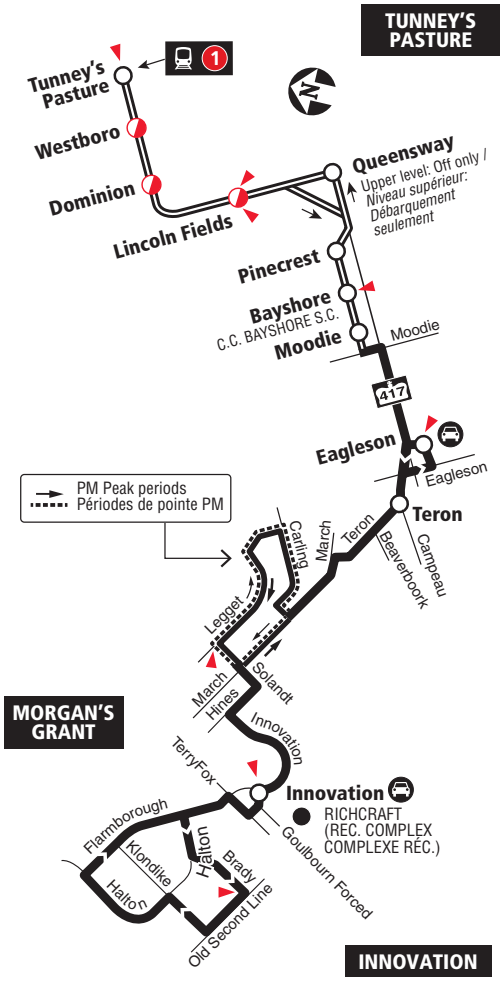
OC Transpo
INFO 613-741-4390
octranspo.com

64 Local

MORGAN'S GRANT
INNOVATION
TUNNEY'S PASTURE

Monday to Friday / Lundi au vendredi

All day service
Service toute la journée



Transitway & Station

Eastbound: AM Off only - Westbound: Full Service
Vers l'est AM: Débarquement seulement
Vers l'ouest: Service complet

Park & Ride / Parc-o-bus

Timepoint / Heures de passage

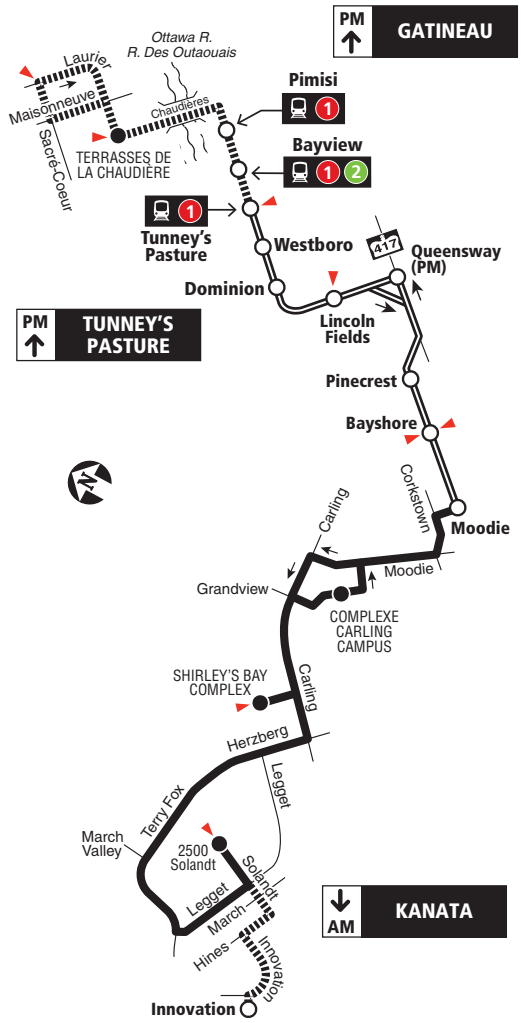
2019.07

66 Local

KANATA
TUNNEY'S PASTURE
GATINEAU

Monday to Friday / Lundi au vendredi

Peak periods only
Périodes de pointe seulement



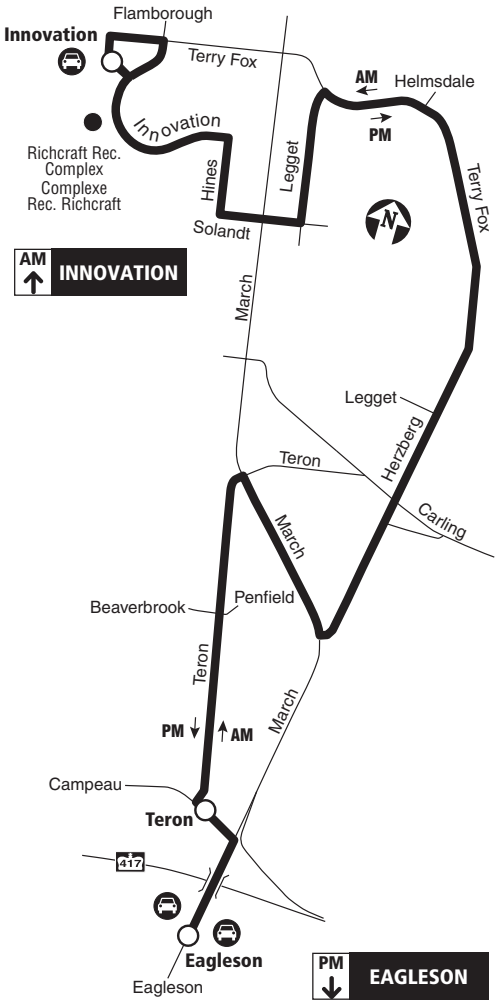
2019.07

166 INNOVATION / EAGLESON

Local

Monday to Friday/ Lundi au vendredi

Limited service / Service limité



Station

Park & Ride / Parc-o-bus

2019.06

Schedule / Horaire.....613-560-1000
Text / Texto 560560

plus your four digit bus stop number / *plus* votre numéro d'arrêt à quatre chiffres

Customer Service
Service à la clientèle **613-741-4390**

Lost and Found / Objets perdus..... **613-563-4011**

Security / Sécurité **613-741-2478**

Effective December 25, 2016
En vigueur 25 décembre 2016

OC Transpo

INFO 613-741-4390
octranspo.com

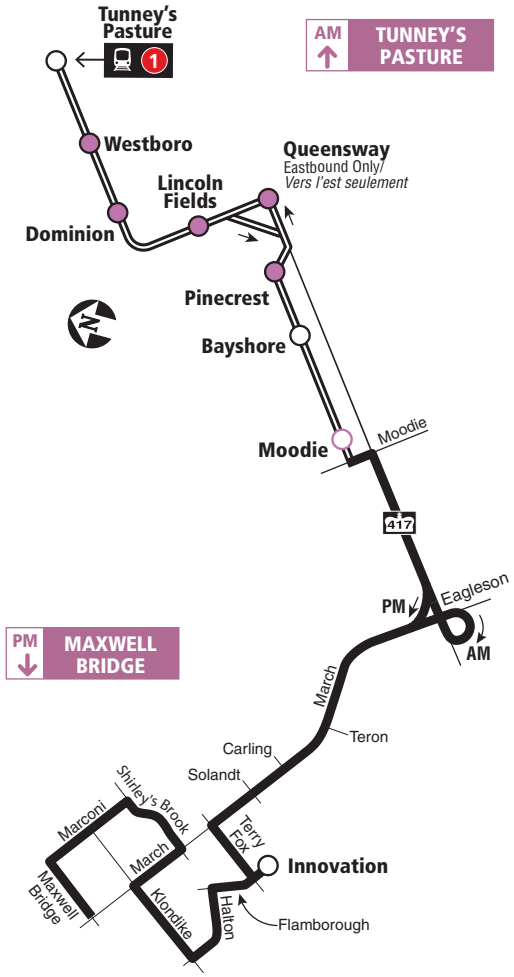
266 Connexion

MAXWELL BRIDGE
TUNNEY'S PASTURE

Monday to Friday / Lundi au vendredi

Peak periods only

Périodes de pointe seulement



Transitway & Station

Limited stops: Off only in AM / No stop in PM
Arrêts limités : Débarquement en AM seul. / Aucun arrêt en PM

AM: Off only - PM: Full Service
AM: Débarquement seul. - PM: Service complet

Park & Ride / Parc-o-bus

2019.09

1

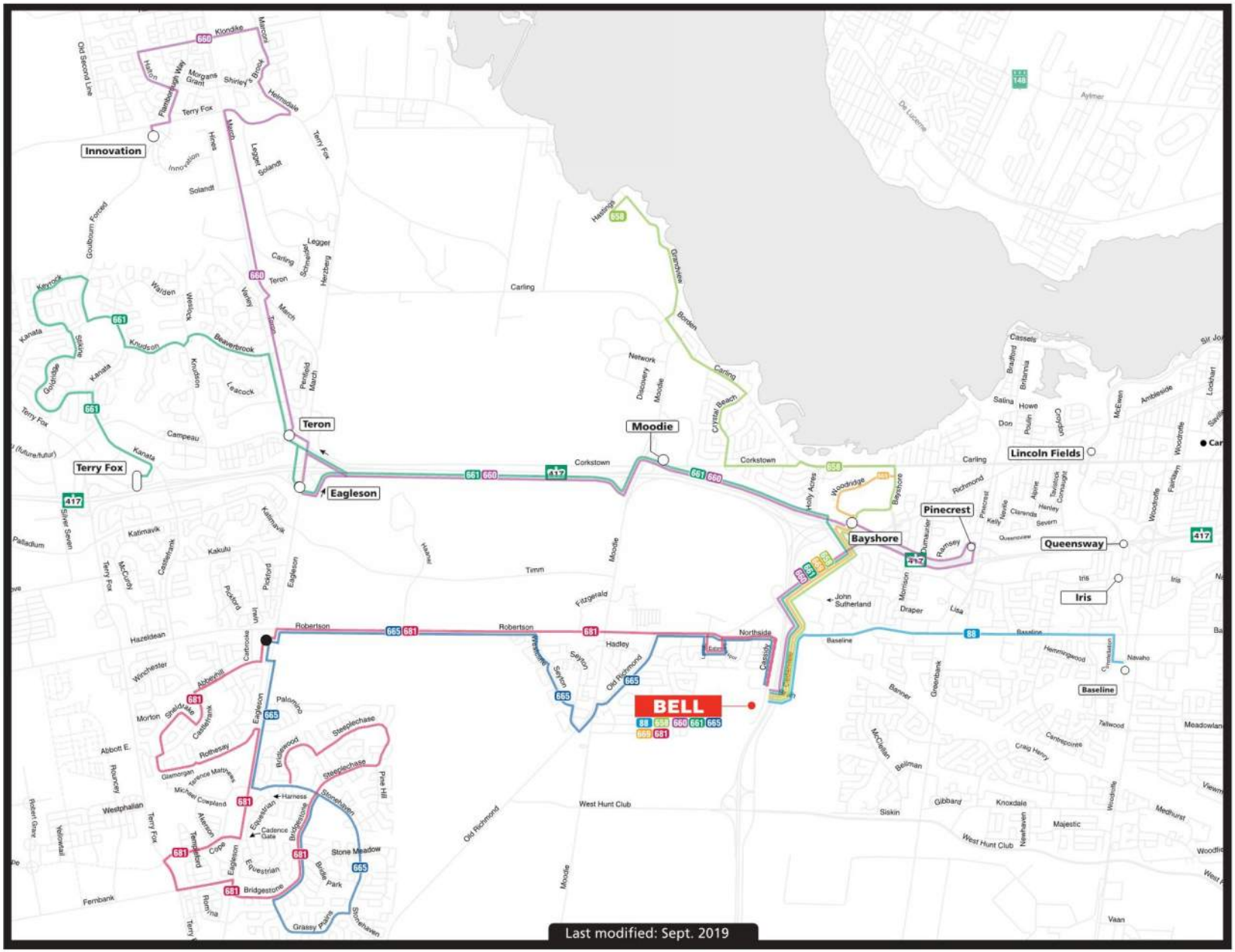
Future route after O-Train Line 1 is open
Trajet du circuit après l'ouverture de la Ligne 1 de l'O-Train

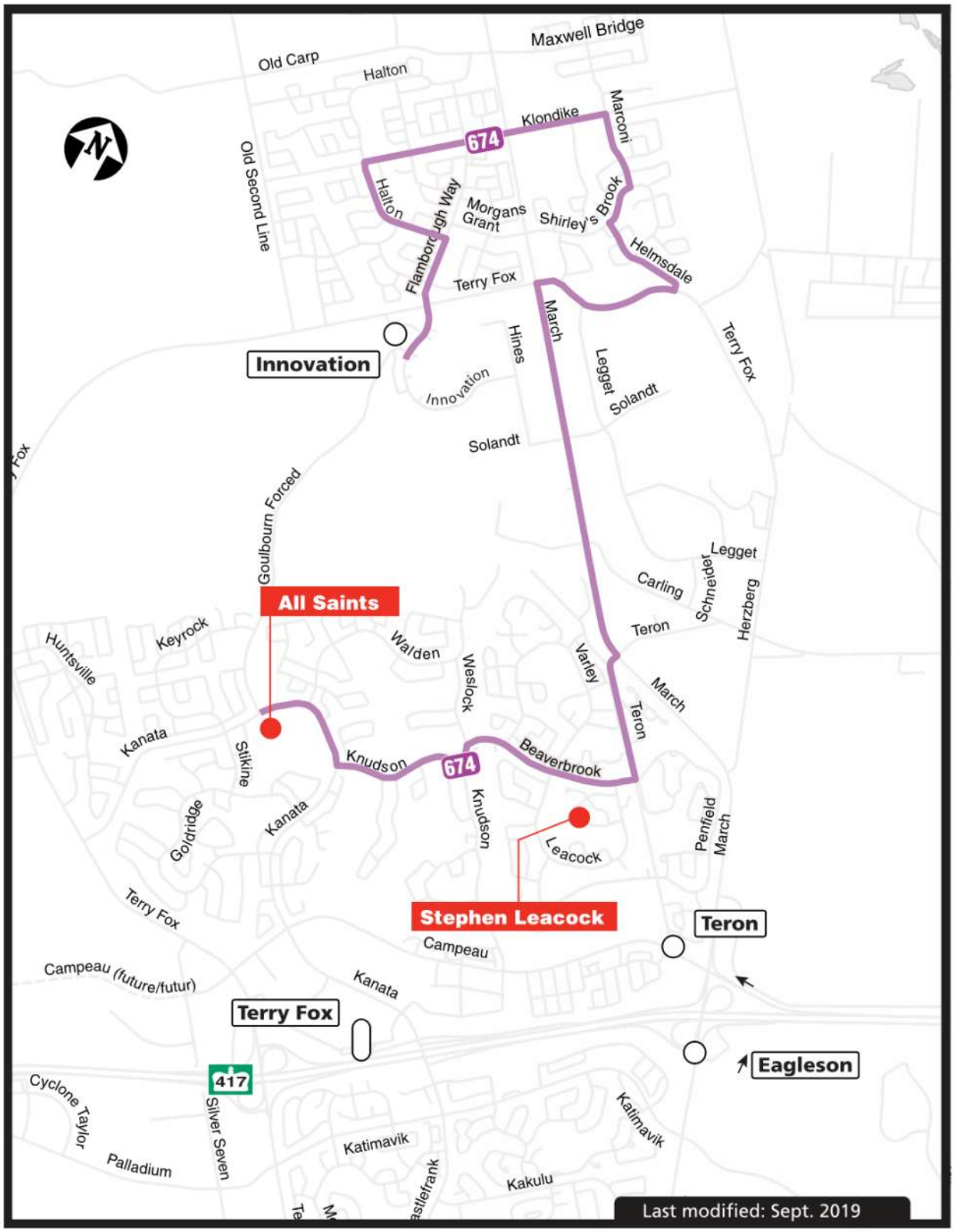
Lost and Found / Objets perdus..... **613-563-4011**

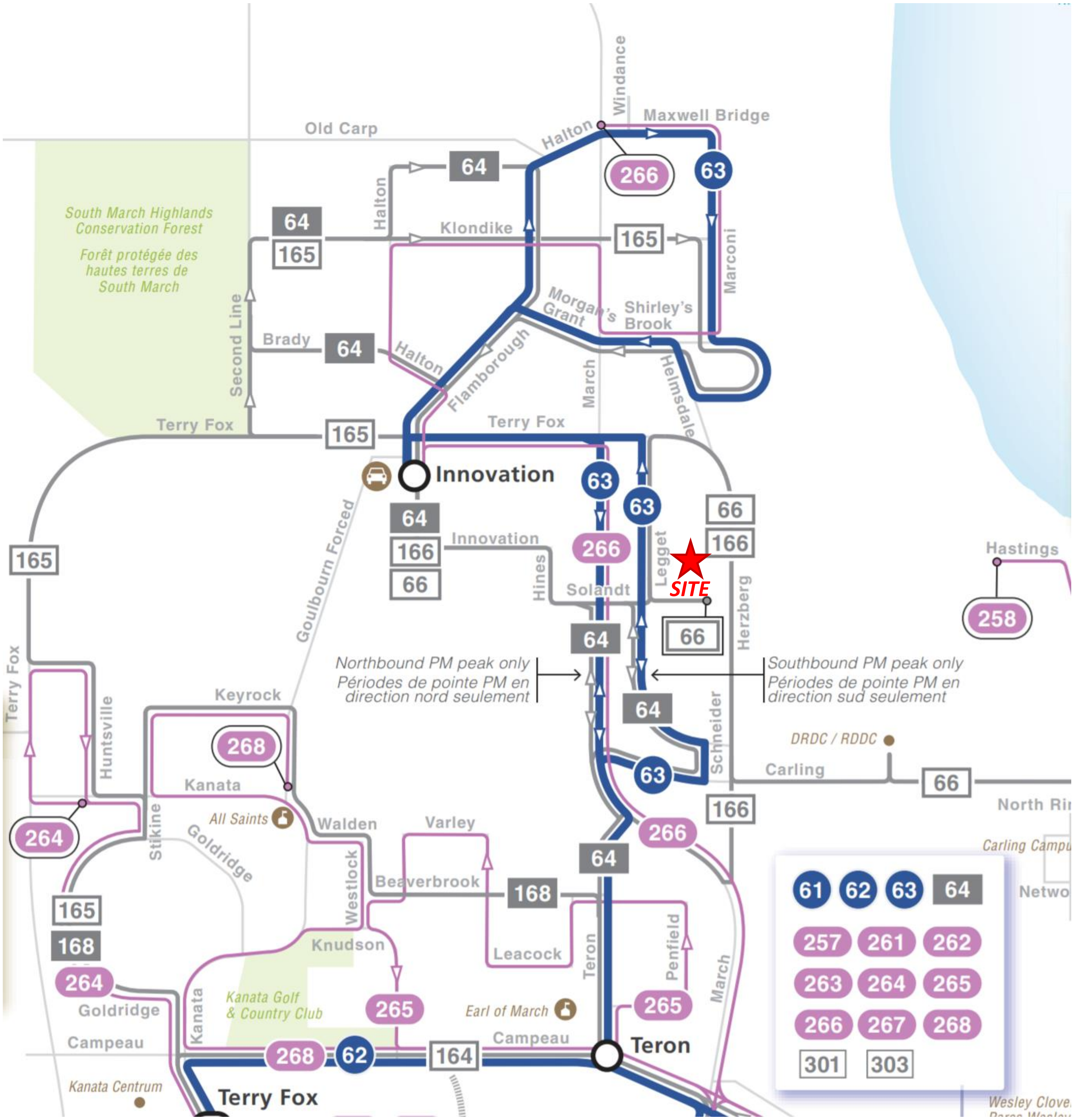
Security / Sécurité..... **613-741-2478**

OC Transpo

INFO 613-741-4390
octranspo.com


Innovation
Teron
Eagleson
Moodie
Terry Fox
Bayshore
Pinecrest
Queensway
Lincoln Fields
Iris
Baseline
BELL
Last modified: Sept. 2019


Maxwell Bridge
Old Carp
Halton
Klondike
Marconi
674
Old Second Line
Halton
Flamborough Way
Morgans Grant
Shirley's Brook
Helmsdale
Terry Fox
Innovation
Hines
March
Legget
Solandt
Terry Fox
Innovation
Solandt
Goulbourn Forced
Legget
Carling
Schneider
Herzberg
All Saints
Keyrock
Huntsville
Walden
Weslock
Varley
Teron
March
Kanata
Stikine
Knudson
674
Beaverbrook
Teron
Goldridge
Kanata
Knudson
Leacock
Penfield
March
Terry Fox
Stephen Leacock
Campeau
Teron
Campeau (future/futur)
Kanata
Terry Fox
417
Eagleson
Cyclone Taylor
Palladium
Silver Seven
Katimavik
Kakulu
Katimavik
Last modified: Sept. 2019



Old Carp
Windance
Halton
Maxwell Bridge
266
63
64
South March Highlands Conservation Forest
Forêt protégée des hautes terres de South March
64
165
Halton
Klondike
165
Marconi
Second Line
Brady
64
Halton
Morgan's Grant
Shirley's Brook
Flamborough
March
Helmsdale
Terry Fox
165
Terry Fox
Innovation
63
63
64
166
66
Innovation
266
Legget
66
166
SITE
Hines
Solandt
66
Herzberg
Hastings
258
165
Goulbourn Forced
64
Northbound PM peak only
Périodes de pointe PM en direction nord seulement
Southbound PM peak only
Périodes de pointe PM en direction sud seulement
64
Terry Fox
Keyrock
Huntsville
268
Schneider
DRDC / RDDC
Kanata
63
Carling
66
264
Stikine
All Saints
Walden
Varley
266
166
North Ri
Goldridge
64
Carling Campu
Westlock
Beaverbrook
168
Netwo
165
Knudson
Penfield
168
Leacock
Teron
March
264
Kanata Golf & Country Club
265
265
Goldridge
Kanata
Earl of March
Campeau
Campeau
268
62
164
Teron
Kanata Centrum
Terry Fox
61
62
63
64
257
261
262
263
264
265
266
267
268
301
303
Wesley Clove

APPENDIX D

Traffic Count Data

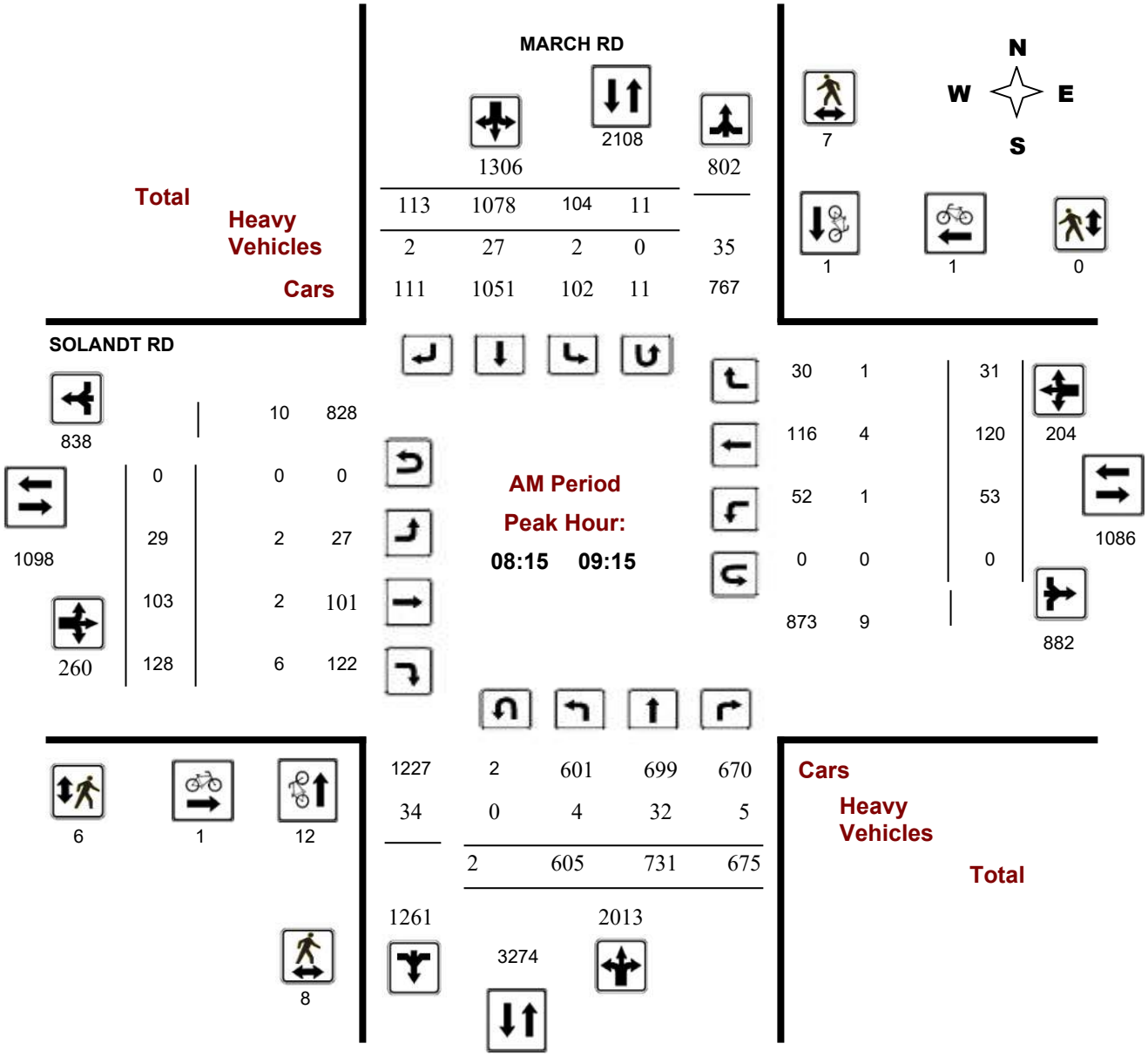
Transportation Services - Traffic Services

Turning Movement Count - Full Study Peak Hour Diagram

MARCH RD @ SOLANDT RD

Survey Date: Wednesday, August 10, 2016 **WO No:** 36153

Start Time: 07:00 **Device:** Miovision



Comments

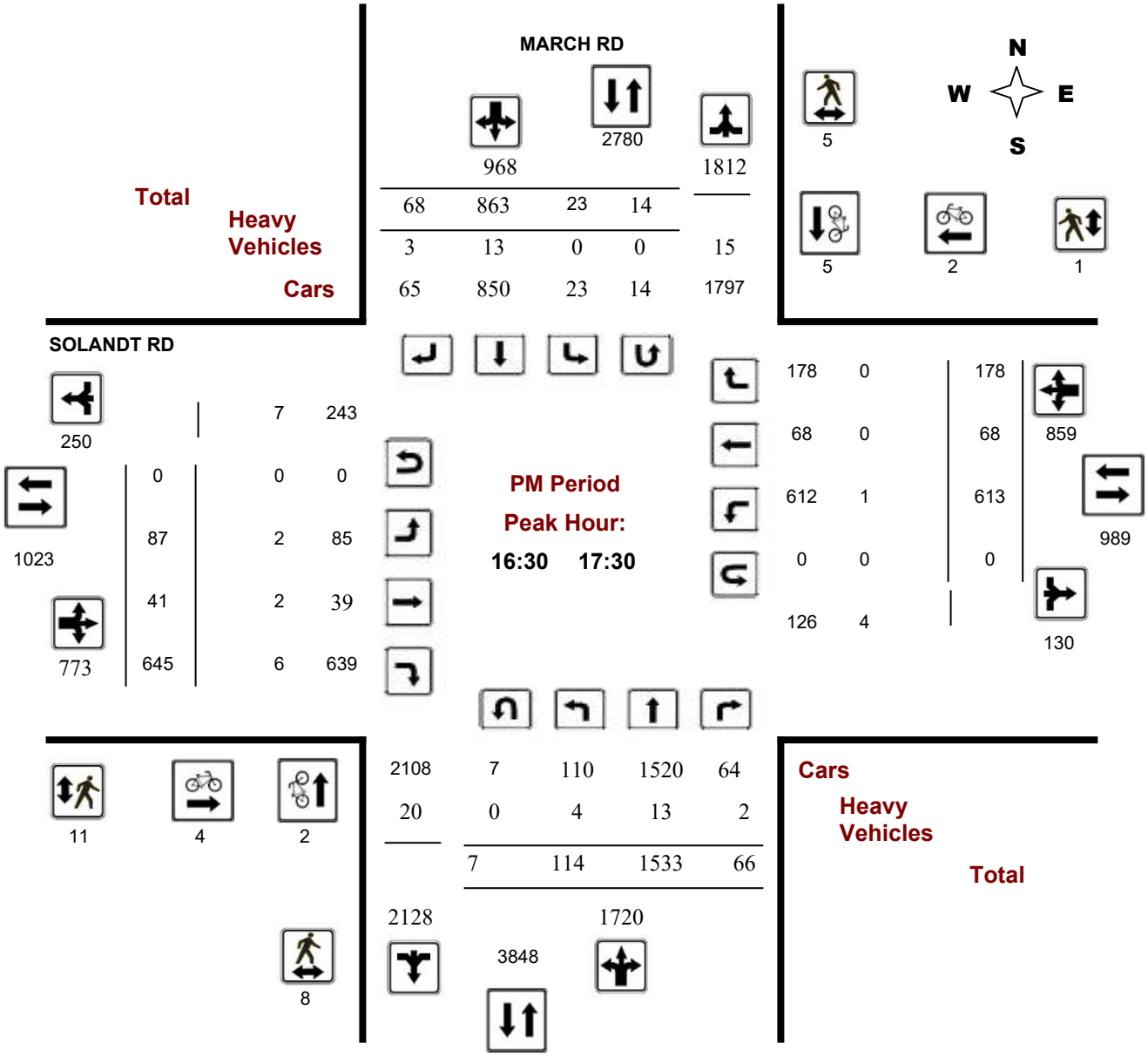
Transportation Services - Traffic Services

Turning Movement Count - Full Study Peak Hour Diagram

MARCH RD @ SOLANDT RD

Survey Date: Wednesday, August 10, 2016 **WO No:** 36153

Start Time: 07:00 **Device:** Miovision



Comments

Transportation Services - Traffic Services

Work Order 36153

Turning Movement Count - Full Study Summary Report

MARCH RD @ SOLANDT RD

Survey Date: Wednesday, August 10, 2016

Total Observed U-Turns

Northbound: 34 Southbound: 81

Eastbound: 0 Westbound: 0

AADT Factor .90

Full Study

	MARCH RD									SOLANDT RD									
	Northbound				Southbound					Eastbound				Westbound					
Period	LT	ST	RT	**NB TOT**	LT	ST	RT	**SB TOT**	**STR TOT**	LT	ST	RT	**EB TOT**	LT	ST	RT	**WB TOT**	**STR TOT**	**Grand Total**
07:00 08:00	301	467	367	**1135**	65	1214	103	**1382**	**2517**	8	29	65	**102**	56	17	10	**83**	**185**	**2702**
08:00 09:00	560	685	645	**1890**	99	1147	125	**1371**	**3261**	27	93	132	**252**	45	91	29	**165**	**417**	**3678**
09:00 10:00	472	736	518	**1726**	67	891	83	**1041**	**2767**	22	52	111	**185**	67	71	23	**161**	**346**	**3113**
11:30 12:30	178	824	118	**1120**	35	728	102	**865**	**1985**	109	46	257	**412**	199	51	87	**337**	**749**	**2734**
12:30 13:30	231	776	182	**1189**	75	771	149	**995**	**2184**	70	40	162	**272**	122	36	49	**207**	**479**	**2663**
15:00 16:00	104	1098	118	**1320**	13	698	48	**759**	**2079**	57	26	280	**363**	273	18	53	**344**	**707**	**2786**
16:00 17:00	145	1439	71	**1655**	21	779	79	**879**	**2534**	88	46	573	**707**	541	65	134	**740**	**1447**	**3981**
17:00 18:00	98	1512	46	**1656**	21	916	50	**987**	**2643**	72	23	487	**582**	520	59	154	**733**	**1315**	**3958**
Sub Total	2089	7537	2065	**11691**	396	7144	739	**8279**	**19970**	453	355	2067	**2875**	1823	408	539	**2770**	**5645**	**25615**
U Turns				**34**				**81**	**115**				**0**				**0**	**0**	**115**
Total	2089	7537	2065	**11725**	396	7144	739	**8360**	**20085**	453	355	2067	**2875**	1823	408	539	**2770**	**5645**	**25730**
EQ 12Hr	2904	10476	2870	**16298**	550	9930	1027	**11620**	**27918**	630	493	2873	**3996**	2534	567	749	**3850**	**7846**	**35764**
Note: These values are calculated by multiplying the totals by the appropriate expansion factor.													**1.39**						
AVG 12Hr	2613	9429	2583	**14668**	495	8937	924	**10458**	**25126**	567	444	2586	**3597**	2281	510	674	**3465**	**7062**	**32188**
Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor.													**.90**						
AVG 24Hr	3423	12352	3384	**19215**	649	11708	1211	**13700**	**32915**	742	582	3387	**4712**	2988	669	883	**4540**	**9252**	**42167**
Note: These volumes are calculated by multiplying the Average Daily 12 hr. totals by 12 to 24 expansion factor.													**1.31**						

Comments:

Note: U-Turns provided for approach totals. Refer to 'U-Turn' Report for specific breakdown.

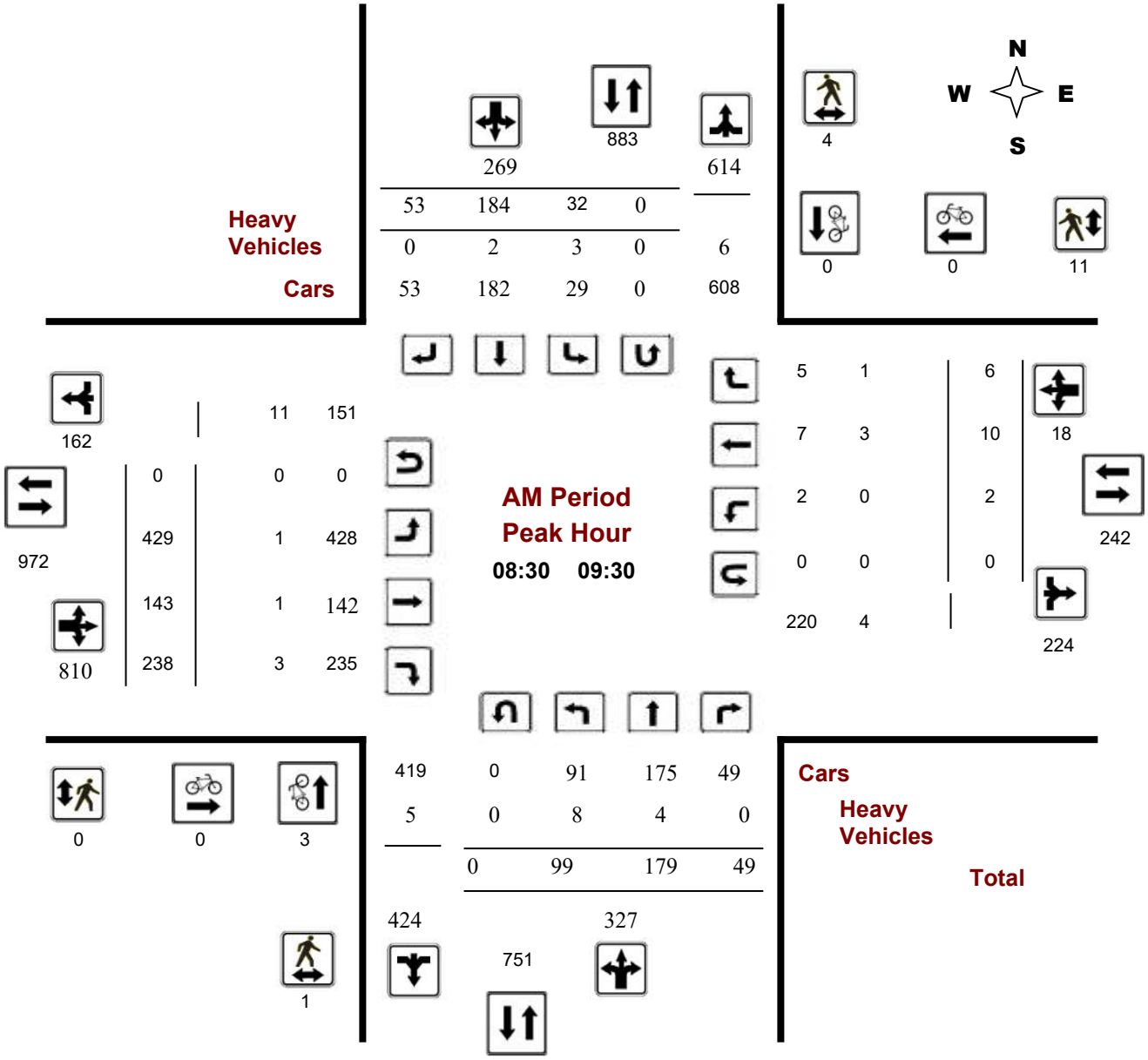
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

LEGGET DR @ SOLANDT RD

Survey Date: Tuesday, April 11, 2017
Start Time: 07:00

WO No: 36905
Device: Miovision



Comments

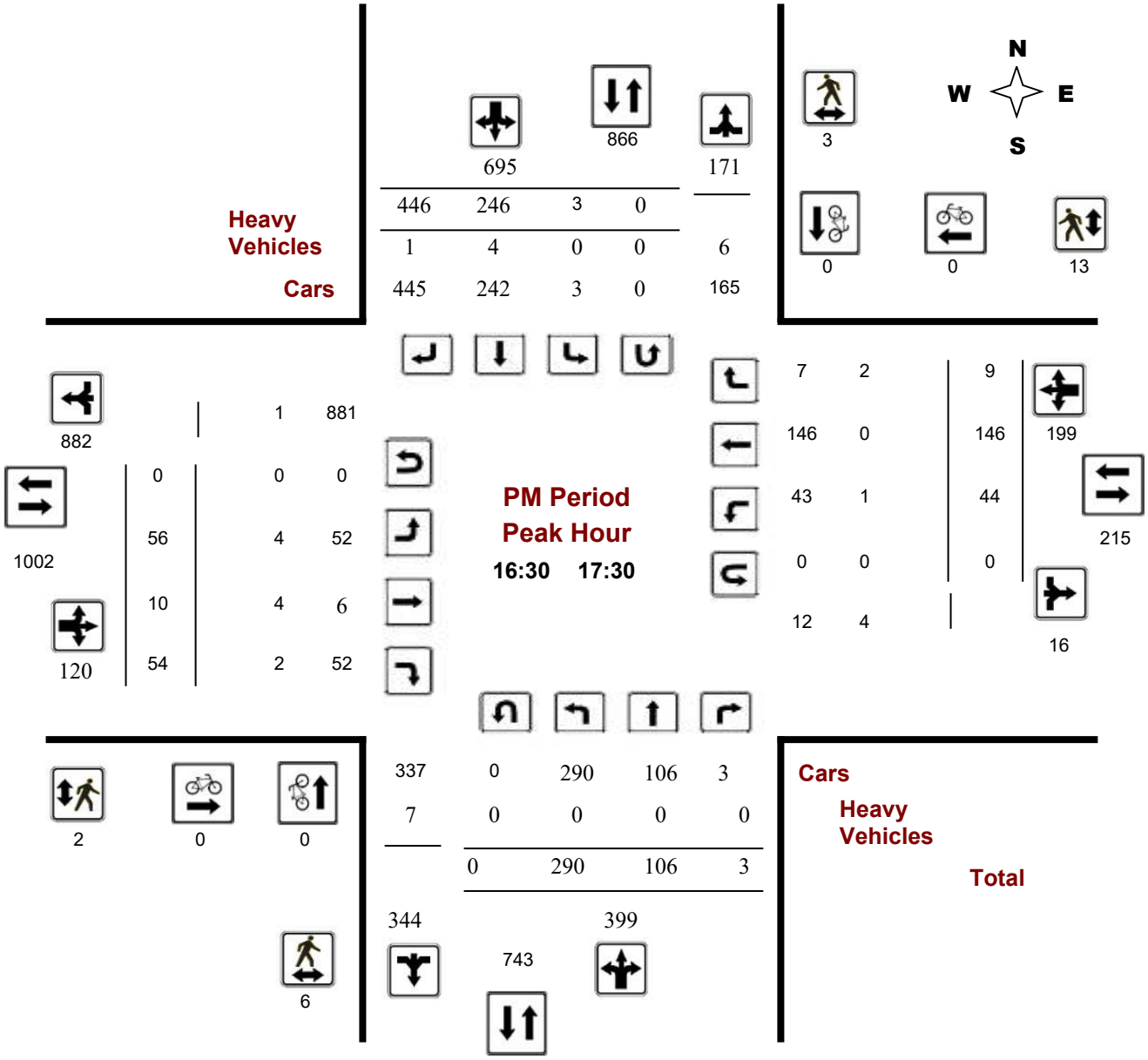
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

LEGGET DR @ SOLANDT RD

Survey Date: Tuesday, April 11, 2017 **WO No:** 36905

Start Time: 07:00 **Device:** Miovision



Comments

Transportation Services - Traffic Services

Work Order 36905

Turning Movement Count - Full Study Summary Report

LEGGET DR @ SOLANDT RD

Survey Date: Tuesday, April 11, 2017

Total Observed U-Turns

Northbound: 2 Southbound: 0

Eastbound: 0 Westbound: 0

AADT Factor .90

Full Study

	Northbound				Southbound					Eastbound				Westbound					
Period	LT	ST	RT	**NB TOT**	LT	ST	RT	**SB TOT**	**STR TOT**	LT	ST	RT	**EB TOT**	LT	ST	RT	**WB TOT**	**STR TOT**	**Grand Total**
07:00 08:00	25	100	12	**137**	11	98	36	**145**	**282**	309	86	137	**532**	3	6	3	**12**	**544**	**826**
08:00 09:00	84	161	36	**281**	37	207	59	**303**	**584**	427	147	213	**787**	5	8	3	**16**	**803**	**1387**
09:00 10:00	69	147	37	**253**	29	132	49	**210**	**463**	372	113	173	**658**	1	17	6	**24**	**682**	**1145**
11:30 12:30	129	116	13	**258**	14	89	131	**234**	**492**	91	37	47	**175**	13	68	25	**106**	**281**	**773**
12:30 13:30	68	68	12	**148**	23	117	94	**234**	**382**	131	67	110	**308**	7	35	8	**50**	**358**	**740**
15:00 16:00	96	67	4	**167**	5	110	201	**316**	**483**	90	12	52	**154**	23	54	12	**89**	**243**	**726**
16:00 17:00	212	96	3	**311**	5	238	419	**662**	**973**	74	12	43	**129**	35	124	17	**176**	**305**	**1278**
17:00 18:00	270	106	1	**377**	1	216	375	**592**	**969**	40	11	56	**107**	37	146	5	**188**	**295**	**1264**
Sub Total	953	861	118	**1932**	125	1207	1364	**2696**	**4628**	1534	485	831	**2850**	124	458	79	**661**	**3511**	**8139**
U Turns				**2**				**0**	**2**				**0**				**0**	**0**	**2**
Total	953	861	118	**1934**	125	1207	1364	**2696**	**4630**	1534	485	831	**2850**	124	458	79	**661**	**3511**	**8141**
EQ 12Hr	1325	1197	164	**2688**	174	1678	1896	**3747**	**6435**	2132	674	1155	**3961**	172	637	110	**919**	**4880**	**11315**
Note: These values are calculated by multiplying the totals by the appropriate expansion factor.													**1.39**						
AVG 12Hr	1192	1077	148	**2419**	156	1510	1706	**3373**	**5792**	1919	607	1040	**3565**	155	573	99	**827**	**4392**	**10184**
Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor.													**.90**						
AVG 24Hr	1562	1411	193	**3169**	205	1978	2235	**4418**	**7587**	2514	795	1362	**4671**	203	751	129	**1083**	**5754**	**13341**
Note: These volumes are calculated by multiplying the Average Daily 12 hr. totals by 12 to 24 expansion factor.													**1.31**						

Comments:

Note: U-Turns provided for approach totals. Refer to 'U-Turn' Report for specific breakdown.

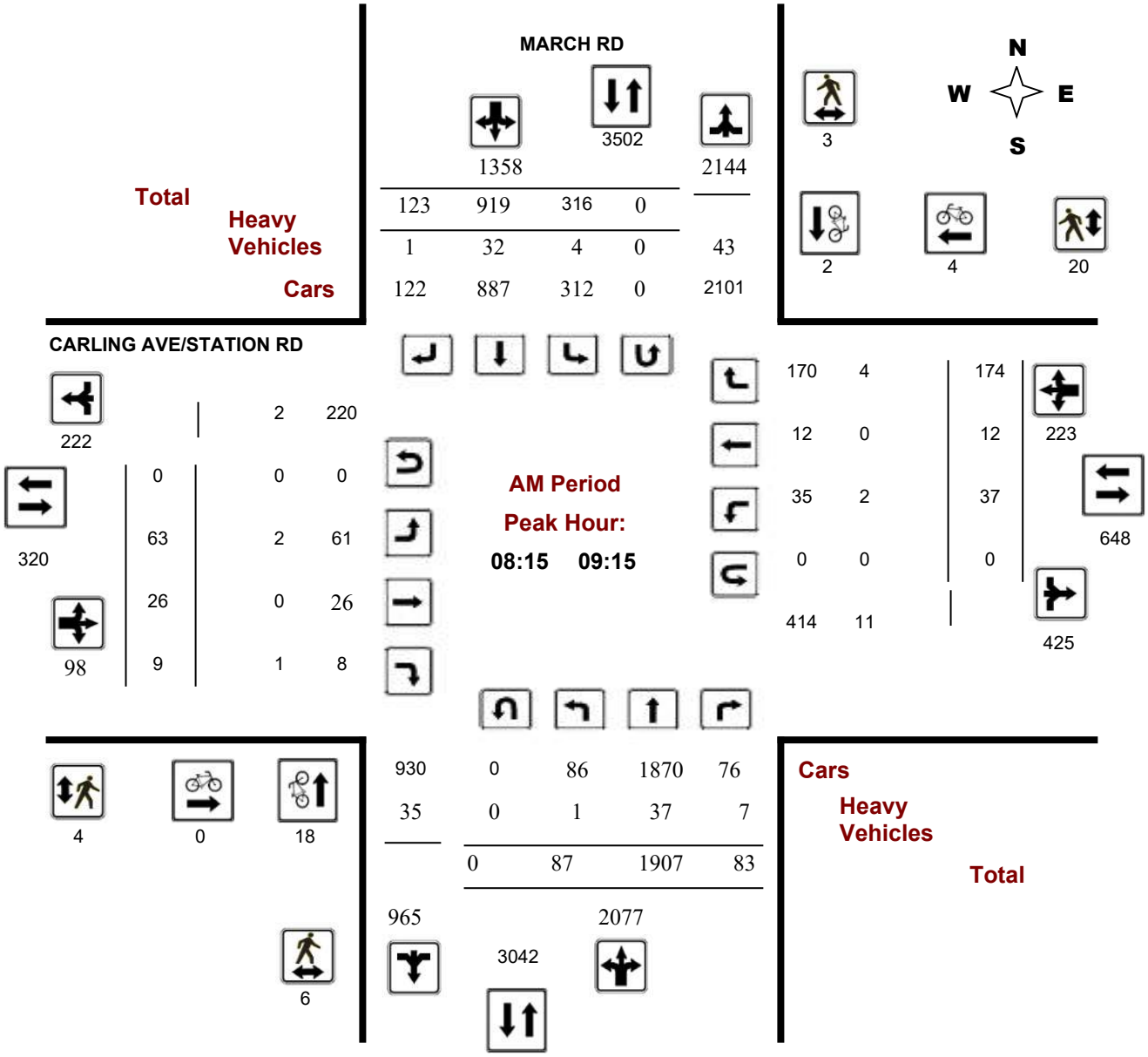
Transportation Services - Traffic Services

Turning Movement Count - Full Study Peak Hour Diagram

CARLING AVE/STATION RD @ MARCH RD

Survey Date: Wednesday, August 10, 2016 **WO No:** 36154

Start Time: 07:00 **Device:** Miovision



Comments

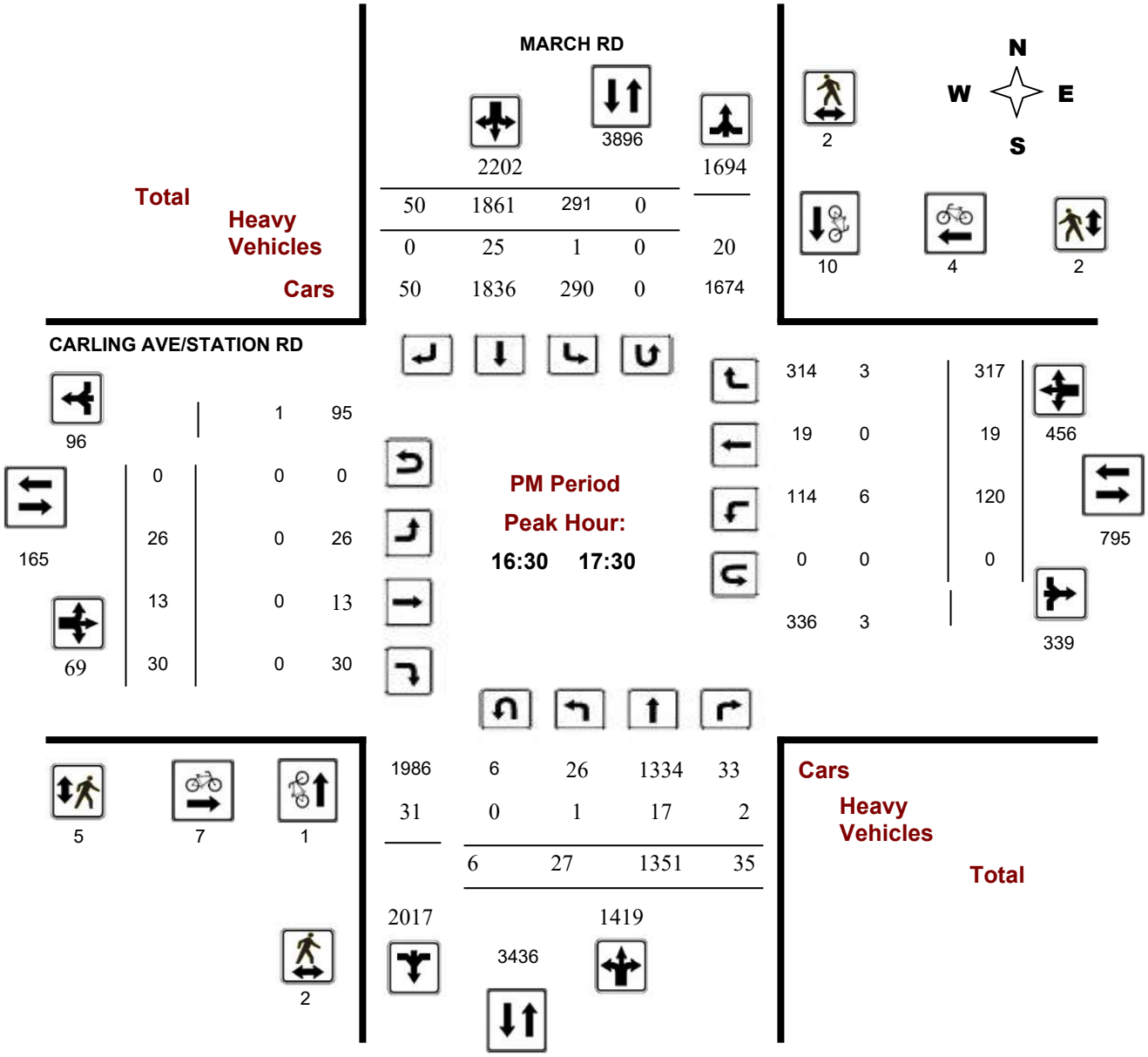
Transportation Services - Traffic Services

Turning Movement Count - Full Study Peak Hour Diagram

CARLING AVE/STATION RD @ MARCH RD

Survey Date: Wednesday, August 10, 2016 **WO No:** 36154

Start Time: 07:00 **Device:** Miovision



Comments

Transportation Services - Traffic Services

Work Order 36154

Turning Movement Count - Full Study Summary Report

CARLING AVE/STATION RD @ MARCH RD

Survey Date: Wednesday, August 10, 2016

Total Observed U-Turns

Northbound: 17 Southbound: 4

Eastbound: 0 Westbound: 0

AADT Factor .90

Full Study

	MARCH RD									CARLING AVE/STATION RD									
	Northbound				Southbound					Eastbound				Westbound					
Period	LT	ST	RT	**NB TOT**	LT	ST	RT	**SB TOT**	**STR TOT**	LT	ST	RT	**EB TOT**	LT	ST	RT	**WB TOT**	**STR TOT**	**Grand Total**
07:00 08:00	104	1009	73	**1186**	294	971	121	**1386**	**2572**	48	24	5	**77**	21	14	90	**125**	**202**	**2774**
08:00 09:00	92	1847	87	**2026**	302	937	120	**1359**	**3385**	59	29	8	**96**	32	12	151	**195**	**291**	**3676**
09:00 10:00	68	1574	48	**1690**	185	847	116	**1148**	**2838**	72	12	14	**98**	33	21	155	**209**	**307**	**3145**
11:30 12:30	50	851	52	**953**	172	988	103	**1263**	**2216**	67	27	21	**115**	63	38	187	**288**	**403**	**2619**
12:30 13:30	53	966	53	**1072**	154	901	73	**1128**	**2200**	73	19	13	**105**	58	7	183	**248**	**353**	**2553**
15:00 16:00	38	1036	29	**1103**	146	1096	47	**1289**	**2392**	56	19	61	**136**	55	9	214	**278**	**414**	**2806**
16:00 17:00	36	1309	36	**1381**	211	1618	42	**1871**	**3252**	25	18	36	**79**	113	13	315	**441**	**520**	**3772**
17:00 18:00	16	1322	39	**1377**	292	1767	52	**2111**	**3488**	20	11	24	**55**	108	14	294	**416**	**471**	**3959**
Sub Total	457	9914	417	**10788**	1756	9125	674	**11555**	**22343**	420	159	182	**761**	483	128	1589	**2200**	**2961**	**25304**
U Turns				**17**				**4**	**21**				**0**				**0**	**0**	**21**
Total	457	9914	417	**10805**	1756	9125	674	**11559**	**22364**	420	159	182	**761**	483	128	1589	**2200**	**2961**	**25325**
EQ 12Hr	635	13780	580	**15019**	2441	12684	937	**16067**	**31086**	584	221	253	**1058**	671	178	2209	**3058**	**4116**	**35202**
Note: These values are calculated by multiplying the totals by the appropriate expansion factor.													**1.39**						
AVG 12Hr	572	12402	522	**13517**	2197	11415	843	**14460**	**27977**	525	199	228	**952**	604	160	1988	**2752**	**3704**	**31681**
Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor.													**.90**						
AVG 24Hr	749	16247	683	**17707**	2878	14954	1105	**18943**	**36650**	688	261	298	**1247**	792	210	2604	**3605**	**4852**	**41502**
Note: These volumes are calculated by multiplying the Average Daily 12 hr. totals by 12 to 24 expansion factor.													**1.31**						

Comments:

Note: U-Turns provided for approach totals. Refer to 'U-Turn' Report for specific breakdown.

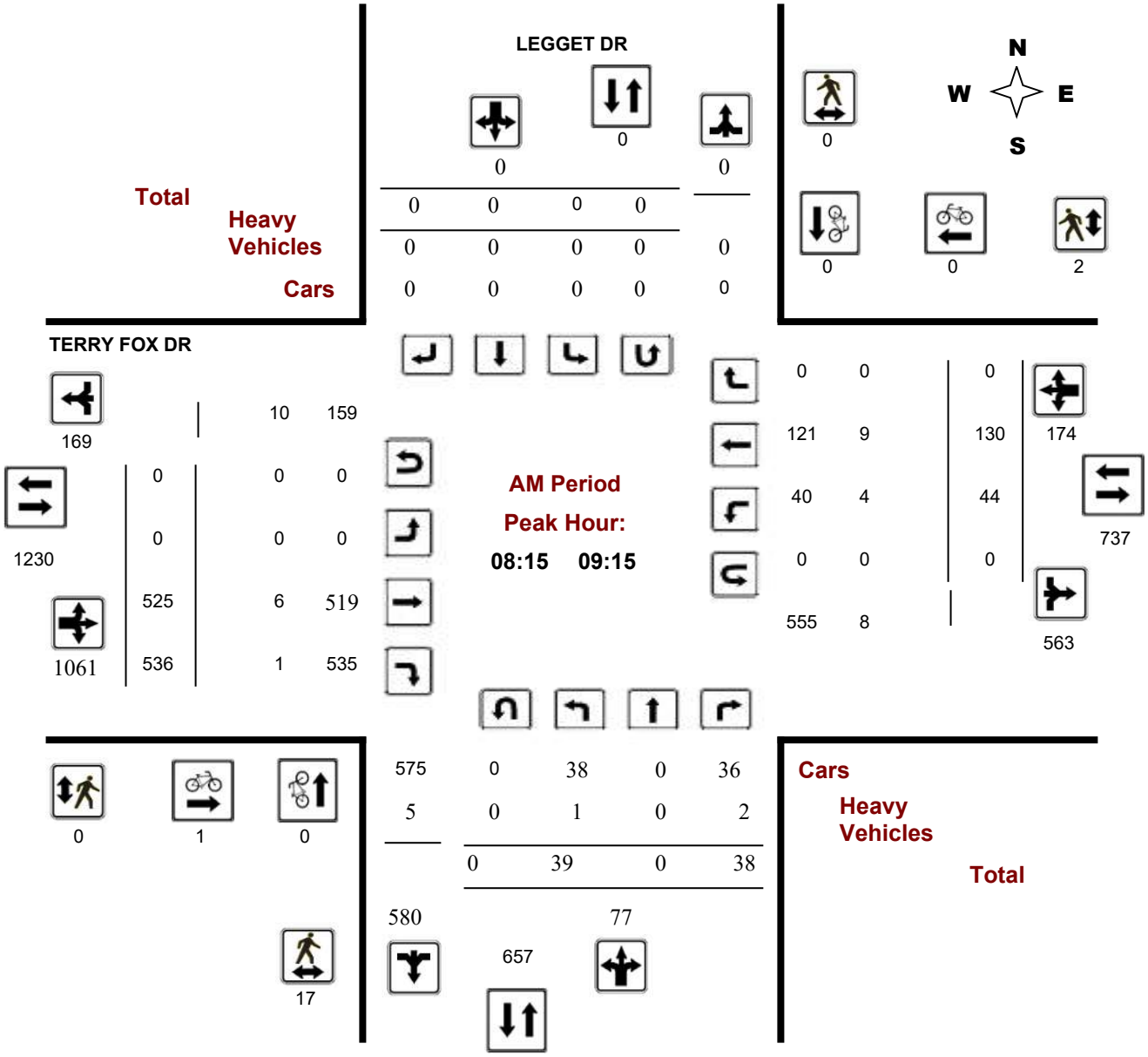
Transportation Services - Traffic Services

Turning Movement Count - Full Study Peak Hour Diagram

LEGGET DR @ TERRY FOX DR

Survey Date: Wednesday, February 20, 2019 **WO No:** 38360

Start Time: 07:00 **Device:** Miovision



Comments

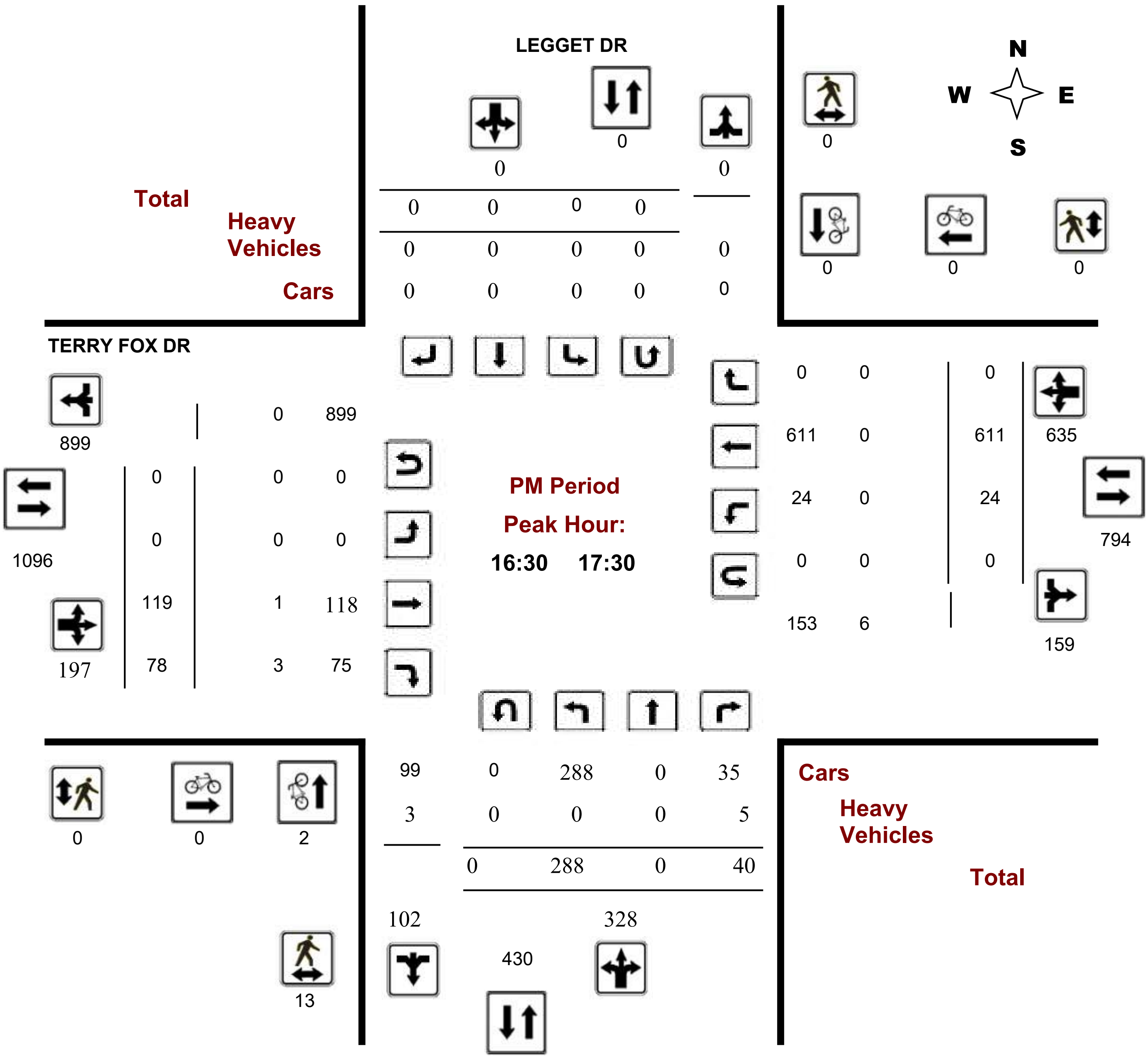
Transportation Services - Traffic Services

Turning Movement Count - Full Study Peak Hour Diagram

LEGGET DR @ TERRY FOX DR

Survey Date: Wednesday, February 20, 2019 **WO No:** 38360

Start Time: 07:00 **Device:** Miovision



Comments

Transportation Services - Traffic Services

Work Order
38360

Turning Movement Count - Full Study Summary Report

LEGGET DR @ TERRY FOX DR

Survey Date: Wednesday, February 20, 2019

Total Observed U-Turns

Northbound: 0 Southbound: 0
Eastbound: 0 Westbound: 1

AADT Factor
1.00

Full Study

	LEGGET DR									TERRY FOX DR									
	Northbound				Southbound					Eastbound				Westbound					
Period	LT	ST	RT	**NB TOT**	LT	ST	RT	**SB TOT**	**STR TOT**	LT	ST	RT	**EB TOT**	LT	ST	RT	**WB TOT**	**STR TOT**	**Grand Total**
07:00 08:00	27	0	21	**48**	0	0	0	**0**	**48**	0	324	365	**689**	38	82	0	**120**	**809**	**857**
08:00 09:00	41	0	39	**80**	0	0	0	**0**	**80**	0	476	553	**1029**	37	122	0	**159**	**1188**	**1268**
09:00 10:00	61	0	28	**89**	0	0	0	**0**	**89**	0	390	370	**760**	37	105	0	**142**	**902**	**991**
11:30 12:30	208	0	29	**237**	0	0	0	**0**	**237**	0	125	144	**269**	22	288	0	**310**	**579**	**816**
12:30 13:30	115	0	21	**136**	0	0	0	**0**	**136**	0	228	206	**434**	21	147	0	**168**	**602**	**738**
15:00 16:00	188	0	27	**215**	0	0	0	**0**	**215**	0	84	89	**173**	21	239	0	**260**	**433**	**648**
16:00 17:00	301	0	45	**346**	0	0	0	**0**	**346**	0	107	81	**188**	18	540	0	**558**	**746**	**1092**
17:00 18:00	256	0	37	**293**	0	0	0	**0**	**293**	0	105	69	**174**	26	553	0	**579**	**753**	**1046**
Sub Total	1197	0	247	**1444**	0	0	0	**0**	**1444**	0	1839	1877	**3716**	220	2076	0	**2296**	**6012**	**7456**
U Turns				**0**				**0**	**0**				**0**				**1**	**1**	**1**
Total	1197	0	247	**1444**	0	0	0	**0**	**1444**	0	1839	1877	**3716**	220	2076	0	**2297**	**6013**	**7457**
EQ 12Hr	1664	0	343	**2007**	0	0	0	**0**	**2007**	0	2556	2609	**5165**	306	2886	0	**3193**	**8358**	**10365**
Note: These values are calculated by multiplying the totals by the appropriate expansion factor.													**1.39**						
AVG 12Hr	1664	0	343	**2007**	0	0	0	**0**	**2007**	0	2556	2609	**5165**	306	2886	0	**3193**	**8358**	**10365**
Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor.													**1.00**						
AVG 24Hr	2180	0	450	**2629**	0	0	0	**0**	**2629**	0	3349	3418	**6766**	401	3780	0	**4183**	**10949**	**13578**
Note: These volumes are calculated by multiplying the Average Daily 12 hr. totals by 12 to 24 expansion factor.													**1.31**						

Comments:

Note: U-Turns provided for approach totals. Refer to 'U-Turn' Report for specific breakdown.

Public Works and Services Department

Count ID 2755

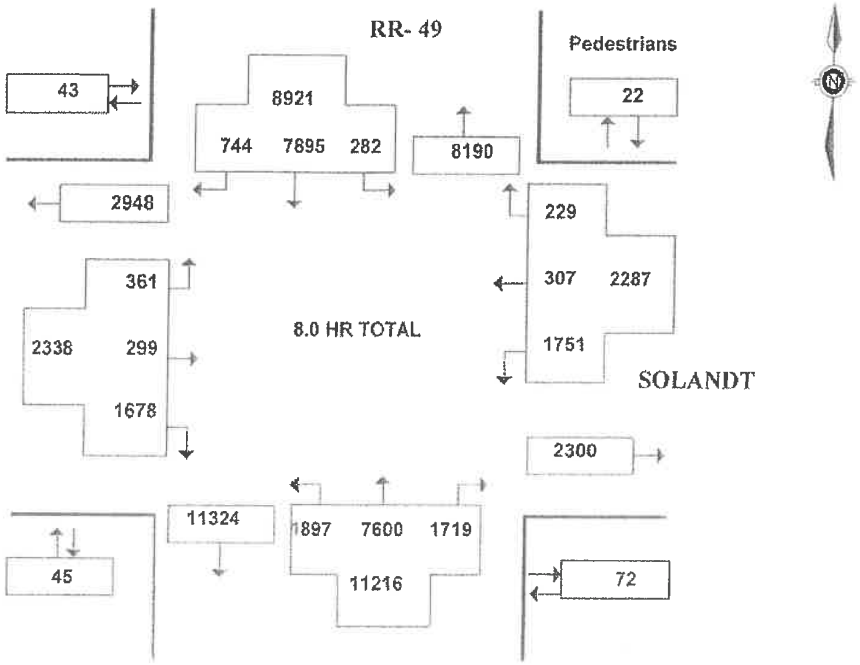
MARCH RD and SOLANDT RD

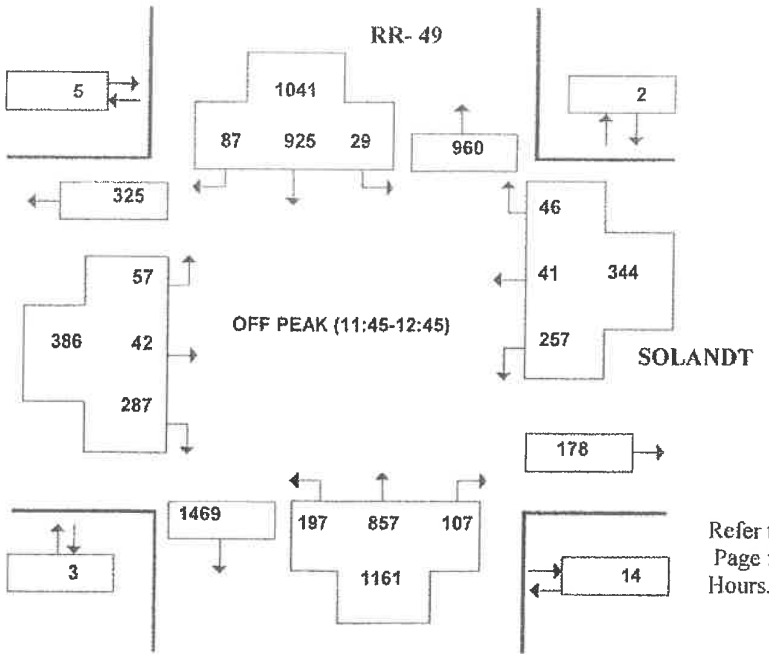
(ULRS Listing RR- 49 & SOLANDT)

Survey Date: Friday 23 July 2010
Conditions: wet
Start Time: 0700

Total Observed U-Turns
Northbound: 18 Southbound: 49
Eastbound: 0 Westbound: 0

AADT Factor
Friday in July is
0.9





Refer to Summary Page for Survey Hours.

Approved by : GZ

Printed on : 23/11/2012

Ottawa — *Public Works and Services Department*

Count ID 2755

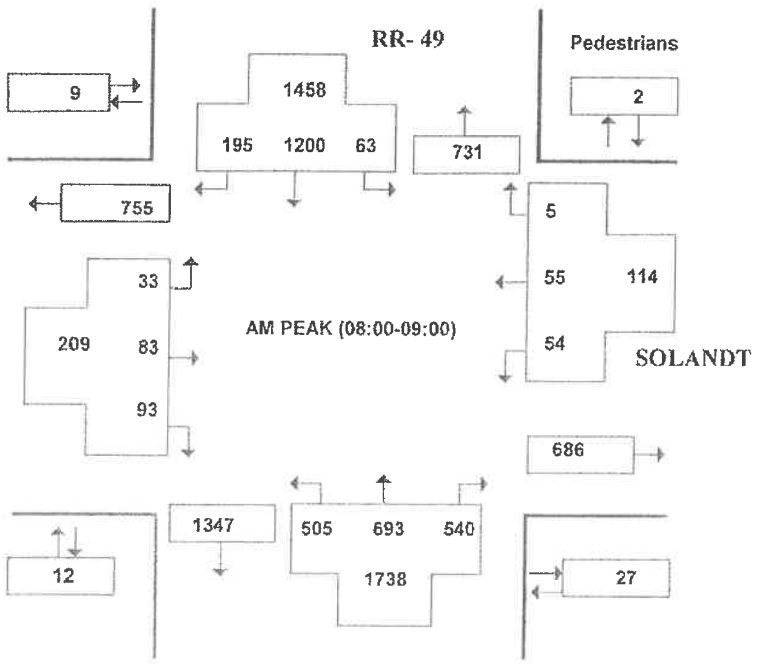
MARCH RD and SOLANDT RD

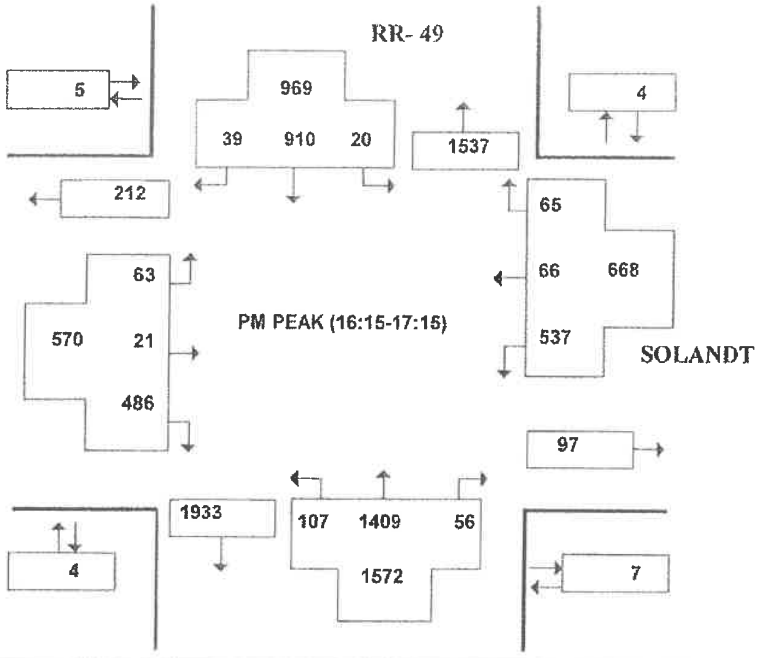
(ULRS Listing RR- 49 & SOLANDT)

Survey Date: Friday 23 July 2010
Conditions: wet
Start Time: 0700

Total Observed U-Turns
Northbound: 18 Southbound: 49
Eastbound: 0 Westbound: 0

AADT Factor
Friday in July is
0.9





Approved by : GZ

Printed on : 23/11/2012

Ottawa — *Public Works and Services Department*

Count ID 2914

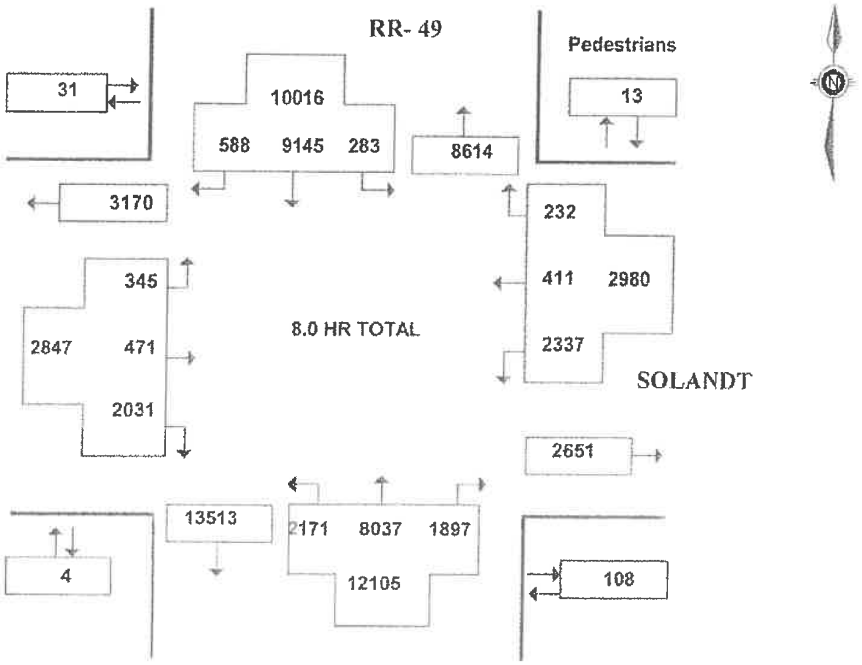
MARCH RD and SOLANDT RD

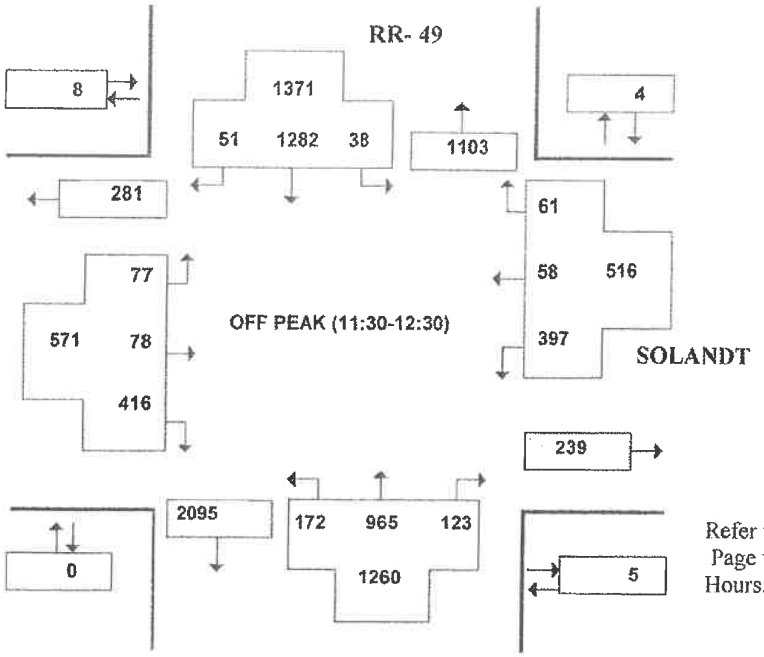
(ULRS Listing RR- 49 & SOLANDT)

Survey Date: Thursday 30 June 2011
Conditions: dry
Start Time: 0700

Total Observed U-Turns
Northbound: 18 Southbound: 19
Eastbound: 0 Westbound: 1

AADT Factor
Thursday in June is 0.9





Refer to Summary Page for Survey Hours.

Approved by : DT

Printed on : 23/11/2012

Public Works and Services Department

Count ID 2914

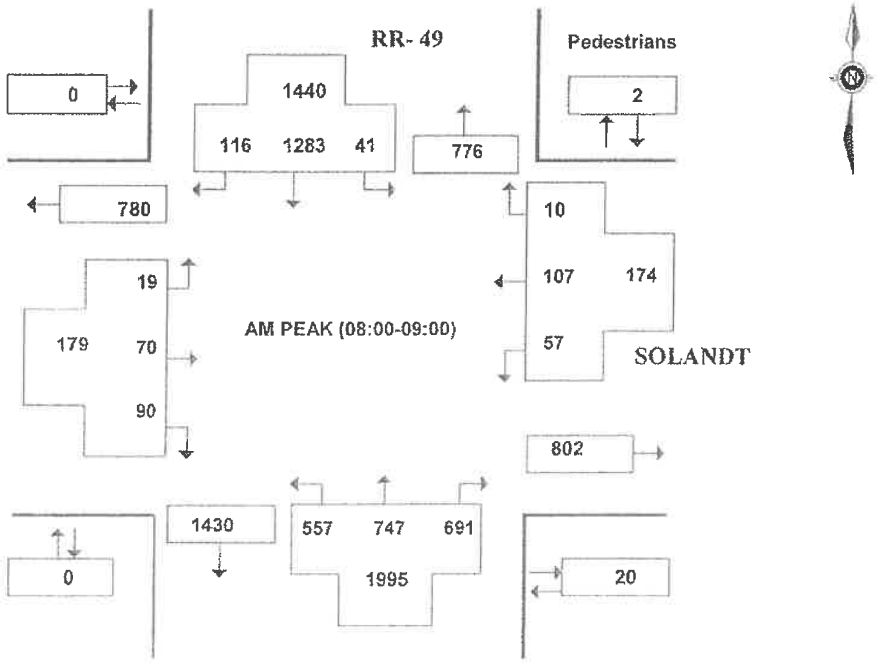
MARCH RD and SOLANDT RD

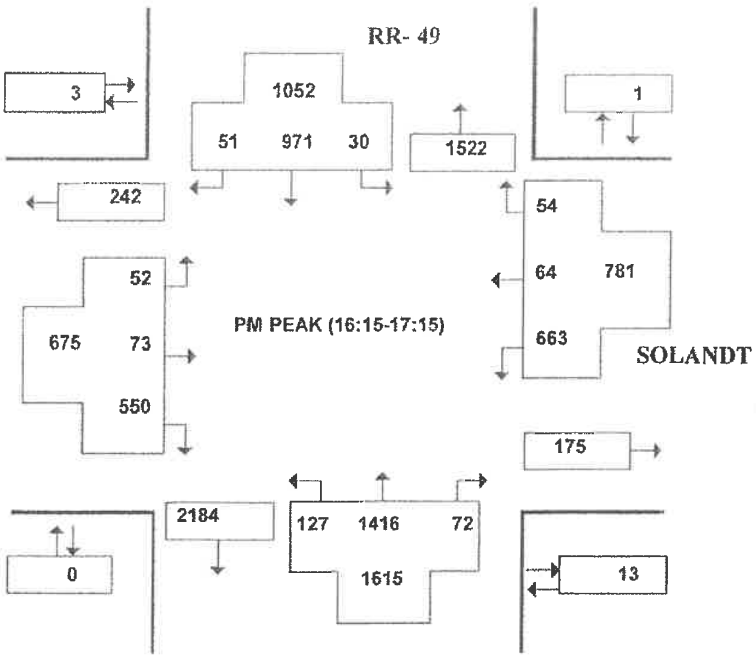
(ULRS Listing RR- 49 & SOLANDT)

Survey Date: Thursday 30 June 2011
Conditions: dry
Start Time: 0700

Total Observed U-Turns
Northbound: 18 Southbound: 19
Eastbound: 0 Westbound: 1

AADT Factor
Thursday in June is 0.9





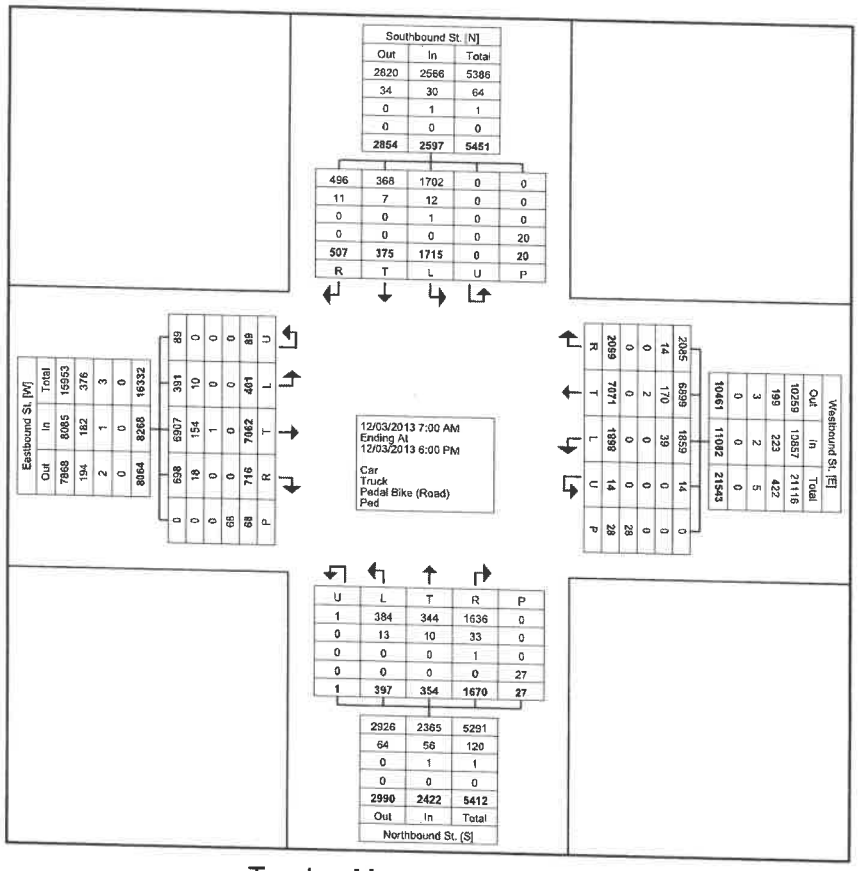
Approved by : DT

Printed on : 23/11/2012

City of Ottawa
110 Laurier Ave West

Ottawa, Ontario, Canada K1P 1J1
613-580-2424 Ibrahim.Conteh@ottawa.ca

Count Name: 5081460-March and Solandt- Dec 3
Site Code: 00871103
Start Date: 12/03/2013

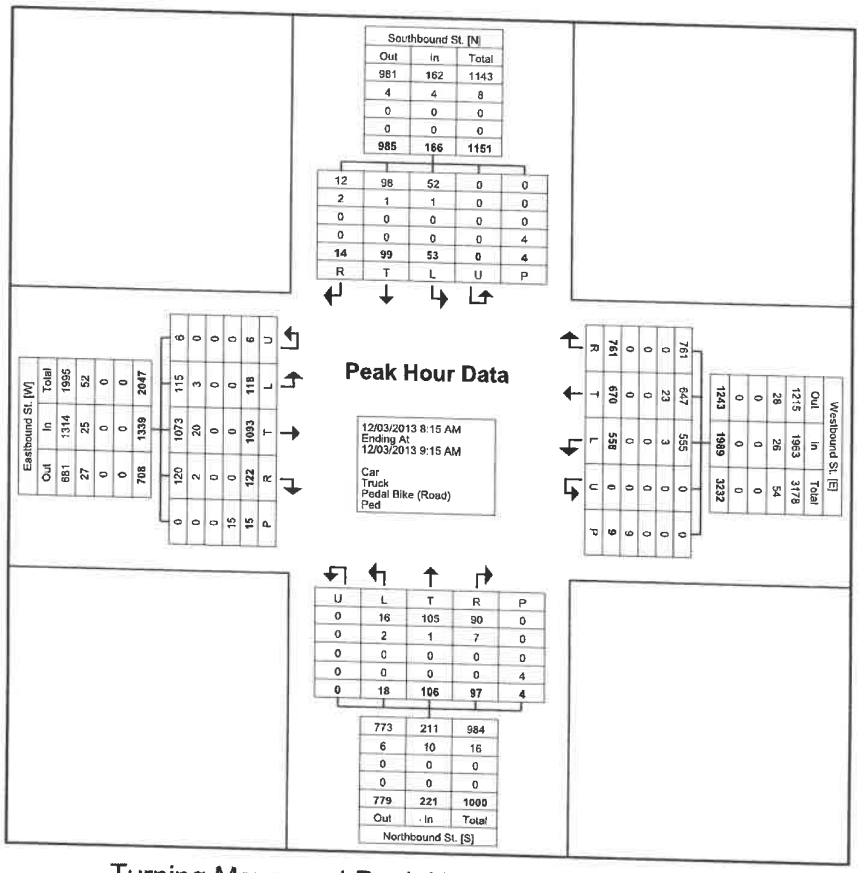


Turning Movement Data Plot

City of Ottawa
110 Laurier Ave West

Ottawa, Ontario, Canada K1P 1J1
613-580-2424 Ibrahim.Conteh@ottawa.ca

Count Name: 5081460-March and Solandt- Dec 3
Site Code: 00871103
Start Date: 12/03/2013

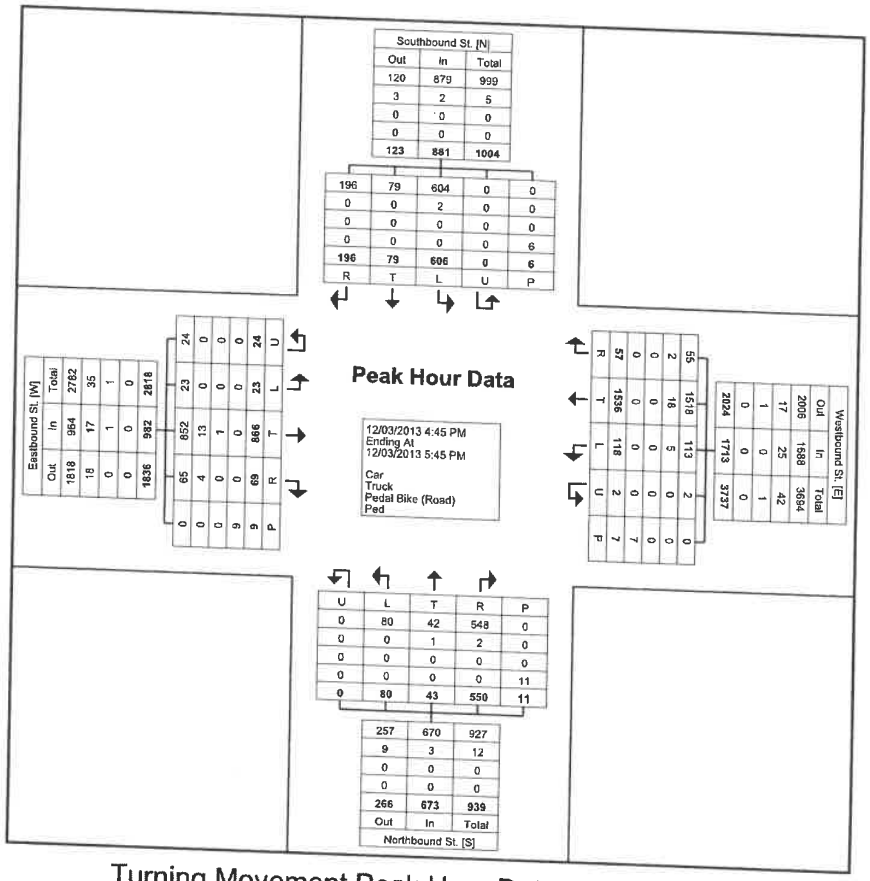


Turning Movement Peak Hour Data Plot (8:15 AM)

City of Ottawa
110 Laurier Ave West

Ottawa, Ontario, Canada K1P 1J1
613-580-2424 Ibrahim.Conteh@ottawa.ca

Count Name: 5081460-March and Solandt- Dec 3
Site Code: 00871103
Start Date: 12/03/2013



Turning Movement Peak Hour Data Plot (4:45 PM)

APPENDIX E

Collision Records

City Operations - Transportation Services

Collision Details Report - Public Version

From: January 1, 2013 **To:** December 31, 2017

Location: LEGGET DR @ SOLANDT RD

Traffic Control: Traffic signal **Total Collisions:** 1

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2017-Nov-02, Thu,17:32	Rain	Angle	P.D. only	Wet	North	Going ahead	Automobile, station wagon	Other motor vehicle	
					West	Going ahead	Automobile, station wagon	Other motor vehicle	

Location: MARCH RD @ SOLANDT RD

Traffic Control: Traffic signal **Total Collisions:** 51

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2013-Jan-10, Thu,09:37	Clear	Rear end	P.D. only	Wet	North	Turning left	Automobile, station wagon	Other motor vehicle	
					North	Turning left	Automobile, station wagon	Other motor vehicle	
					North	Turning left	Automobile, station wagon	Other motor vehicle	
2013-Mar-06, Wed,12:32	Clear	Turning movement	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle	
					North	Turning left	Passenger van	Other motor vehicle	
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2013-Mar-31, Sun,20:10	Rain	Angle	P.D. only	Wet	West	Unknown	Automobile, station wagon	Other motor vehicle	
					South	Turning left	Automobile, station wagon	Other motor vehicle	

2013-Apr-26, Fri,11:35	Clear	Rear end	P.D. only	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle
					East	Stopped	Pick-up truck	Other motor vehicle
2013-Jun-18, Tue,11:17	Clear	Rear end	P.D. only	Dry	North	Going ahead	Truck - closed	Other motor vehicle
					North	Stopped	Automobile, station wagon	Other motor vehicle
2013-Sep-30, Mon,17:53	Clear	Rear end	P.D. only	Dry	East	Going ahead	Truck - open	Other motor vehicle
					East	Stopped	Automobile, station wagon	Other motor vehicle
2014-Jan-05, Sun,09:47	Snow	SMV other	P.D. only	Loose snow	North	Turning right	Automobile, station wagon	Ran off road
2014-Feb-11, Tue,16:20	Clear	Rear end	P.D. only	Dry	North	Turning right	Automobile, station wagon	Other motor vehicle
					North	Turning right	Automobile, station wagon	Other motor vehicle
2014-Mar-17, Mon,16:25	Clear	Turning movement	Non-fatal injury	Dry	North	Turning left	Automobile, station wagon	Other motor vehicle
					South	Going ahead	Automobile, station wagon	Other motor vehicle
2014-May-12, Mon,17:30	Clear	Sideswipe	Non-fatal injury	Dry	North	Changing lanes	Automobile, station wagon	Other motor vehicle
					North	Going ahead	Motorcycle	Other motor vehicle
2014-Jul-08, Tue,17:29	Clear	Rear end	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle

					North	Stopped	Truck - dump	Other motor vehicle
2014-Jul-10, Thu,17:04	Clear	Rear end	Non-fatal injury	Dry	West	Turning right	Automobile, station wagon	Other motor vehicle
					West	Turning right	Automobile, station wagon	Other motor vehicle
2014-Jul-10, Thu,17:50	Clear	Rear end	P.D. only	Dry	West	Turning right	Pick-up truck	Other motor vehicle
					West	Turning right	Automobile, station wagon	Other motor vehicle
2014-Jul-18, Fri,17:37	Clear	Rear end	P.D. only	Dry	East	Turning right	Automobile, station wagon	Other motor vehicle
					East	Turning right	Automobile, station wagon	Other motor vehicle
2014-Sep-03, Wed,09:58	Clear	Rear end	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle
					North	Stopped	Automobile, station wagon	Other motor vehicle
2014-Sep-30, Tue,09:13	Clear	Angle	P.D. only	Dry	West	Turning right	Automobile, station wagon	Other motor vehicle
					North	Going ahead	Automobile, station wagon	Other motor vehicle
2014-Oct-02, Thu,12:19	Clear	Angle	P.D. only	Dry	North	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					West	Turning left	Automobile, station wagon	Other motor vehicle
2014-Dec-08, Mon,07:42	Clear	Turning movement	P.D. only	Dry	North	Turning left	Automobile, station wagon	Other motor vehicle

					South	Going ahead	Pick-up truck	Other motor vehicle
					East	Turning right	Passenger van	Other motor vehicle
2015-Jan-12, Mon,07:20	Snow	Turning movement	P.D. only	Loose snow	South	Turning left	Automobile, station wagon	Skidding/sliding
					North	Going ahead	Automobile, station wagon	Other motor vehicle
2015-Jan-21, Wed,17:08	Clear	Rear end	P.D. only	Packed snow	West	Turning right	Automobile, station wagon	Other motor vehicle
					West	Turning right	Pick-up truck	Other motor vehicle
2015-Feb-04, Wed,14:30	Snow	Rear end	P.D. only	Loose snow	North	Turning left	Automobile, station wagon	Other motor vehicle
					North	Turning left	Pick-up truck	Other motor vehicle
2015-Mar-18, Wed,13:23	Clear	Turning movement	P.D. only	Dry	South	Turning left	Automobile, station wagon	Other motor vehicle
					North	Going ahead	Automobile, station wagon	Other motor vehicle
2015-Jun-18, Thu,08:04	Clear	Rear end	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle
					South	Stopped	Pick-up truck	Other motor vehicle
2015-Jul-15, Wed,20:15	Clear	Sideswipe	P.D. only	Dry	North	Changing lanes	Passenger van	Other motor vehicle
					North	Going ahead	Passenger van	Other motor vehicle

2015-Jul-17, Fri,17:30	Rain	Turning movement	P.D. only	Wet	South	Turning left	Automobile, station wagon	Other motor vehicle
					North	Going ahead	Pick-up truck	Other motor vehicle
2015-Aug-27, Thu,13:56	Clear	Turning movement	P.D. only	Dry	South	Turning left	Pick-up truck	Other motor vehicle
					North	Going ahead	Automobile, station wagon	Other motor vehicle
2015-Oct-19, Mon,08:52	Clear	Angle	P.D. only	Dry	East	Turning left	Pick-up truck	Other motor vehicle
					South	Going ahead	Automobile, station wagon	Other motor vehicle
2015-Dec-09, Wed,10:31	Clear	Sideswipe	P.D. only	Dry	South	Changing lanes	Automobile, station wagon	Other motor vehicle
					South	Going ahead	Pick-up truck	Other motor vehicle
2015-Dec-29, Tue,20:29	Snow	Sideswipe	P.D. only	Loose snow	South	Going ahead	Automobile, station wagon	Other motor vehicle
					South	Stopped	Snow plow	Other motor vehicle
2016-Feb-16, Tue,11:02	Snow	Turning movement	P.D. only	Loose snow	West	Turning left	Passenger van	Other motor vehicle
					East	Going ahead	Pick-up truck	Other motor vehicle
2016-Feb-23, Tue,15:50	Clear	Rear end	P.D. only	Dry	North	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					North	Stopped	Pick-up truck	Other motor vehicle

2016-Mar-02, Wed,19:35	Clear	Turning movement	P.D. only	Wet	North	Turning left	Automobile, station wagon	Other motor vehicle
					South	Going ahead	Passenger van	Other motor vehicle
2016-Mar-14, Mon,10:46	Rain	Turning movement	P.D. only	Wet	North	Turning left	Automobile, station wagon	Other motor vehicle
					South	Going ahead	Automobile, station wagon	Other motor vehicle
2016-May-03, Tue,16:55	Clear	Rear end	P.D. only	Dry	East	Turning right	Pick-up truck	Other motor vehicle
					East	Turning right	Automobile, station wagon	Other motor vehicle
2016-Aug-17, Wed,10:51	Clear	Rear end	Non-fatal injury	Dry	North	Turning left	Automobile, station wagon	Other motor vehicle
					North	Turning left	Automobile, station wagon	Other motor vehicle
2016-Sep-16, Fri,11:14	Clear	Rear end	P.D. only	Dry	South	Turning right	Automobile, station wagon	Other motor vehicle
					South	Going ahead	Automobile, station wagon	Other motor vehicle
					South	Going ahead	Passenger van	Debris falling off vehicle
2016-Oct-20, Thu,16:28	Rain	Rear end	P.D. only	Wet	South	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					South	Stopped	Passenger van	Other motor vehicle
2016-Oct-31, Mon,08:05	Clear	Rear end	P.D. only	Dry	South	Turning right	Automobile, station wagon	Other motor vehicle
					South	Turning right	Automobile, station wagon	Other motor vehicle

2016-Nov-20, Sun,20:27	Drifting Snow	SMV other	P.D. only	Ice	North	Turning left	Automobile, station wagon	Pole (utility, power)
2016-Nov-28, Mon,12:27	Clear	Turning movement	P.D. only	Dry	East	Making "U" turn	Automobile, station wagon	Other motor vehicle
					West	Going ahead	Automobile, station wagon	Other motor vehicle
2017-Feb-16, Thu,19:15	Clear	Turning movement	P.D. only	Dry	North	Turning left	Automobile, station wagon	Other motor vehicle
					South	Going ahead	Pick-up truck	Other motor vehicle
2017-Mar-22, Wed,09:35	Clear	Turning movement	Non-fatal injury	Dry	South	Going ahead	Pick-up truck	Other motor vehicle
					North	Turning left	Automobile, station wagon	Other motor vehicle
2017-Apr-18, Tue,15:58	Clear	Rear end	Non-fatal injury	Dry	West	Turning right	Motorcycle	Other motor vehicle
					West	Turning right	Automobile, station wagon	Other motor vehicle
2017-May-09, Tue,09:30	Clear	Rear end	P.D. only	Dry	North	Turning right	Automobile, station wagon	Other motor vehicle
					North	Turning right	Pick-up truck	Other motor vehicle
2017-Jun-02, Fri,07:58	Clear	Turning movement	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle
					South	Turning left	Automobile, station wagon	Other motor vehicle
2017-Jun-13, Tue,17:30	Clear	Turning movement	P.D. only	Dry	South	Making "U" turn	Automobile, station wagon	Other motor vehicle

					North	Going ahead	Pick-up truck	Other motor vehicle
2017-Sep-12, Tue,07:13	Clear	Rear end	P.D. only	Dry	East	Going ahead	Passenger van	Other motor vehicle
					East	Stopped	Automobile, station wagon	Other motor vehicle
2017-Oct-24, Tue,07:37	Rain	Turning movement	P.D. only	Wet	North	Turning left	Automobile, station wagon	Other motor vehicle
					South	Going ahead	Automobile, station wagon	Other motor vehicle
2017-Oct-31, Tue,15:47	Clear	Turning movement	P.D. only	Dry	North	Turning left	Automobile, station wagon	Other motor vehicle
					South	Going ahead	Automobile, station wagon	Other motor vehicle
2017-Dec-20, Wed,15:51	Clear	Rear end	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle
					West	Turning left	Automobile, station wagon	Other motor vehicle
2017-Dec-21, Thu,10:30	Clear	Angle	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle
					West	Turning left	Automobile, station wagon	Other motor vehicle

City Operations - Transportation Services

Collision Details Report - Public Version

From: January 1, 2014 **To:** December 31, 2018

Location: CARLING AVE/STATION RD @ MARCH RD

Traffic Control: Traffic signal

Total Collisions: 52

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2014-Jan-24, Fri,11:38	Clear	Angle	P.D. only	Dry	West	Turning left	Automobile, station wagon	Other motor vehicle	
					North	Going ahead	Pick-up truck	Other motor vehicle	
2014-Feb-14, Fri,09:00	Snow	SMV other	P.D. only	Packed snow	South	Going ahead	Pick-up truck	Other	
2014-Jul-27, Sun,13:10	Clear	Other	Fatal injury	Dry	North	Turning right	Automobile, station wagon	Curb	
					West	Stopped	Automobile, station wagon	Other motor vehicle	
2014-Jul-30, Wed,19:31	Rain	Angle	P.D. only	Wet	North	Going ahead	Pick-up truck	Other motor vehicle	
					West	Turning left	Automobile, station wagon	Other motor vehicle	
2014-Aug-09, Sat,00:45	Clear	Rear end	P.D. only	Dry	East	Turning right	Automobile, station wagon	Other motor vehicle	
					East	Turning right	Pick-up truck	Other motor vehicle	
2014-Sep-03, Wed,18:09	Clear	Other	P.D. only	Dry	North	Reversing	Automobile, station wagon	Other motor vehicle	
					South	Stopped	Pick-up truck	Other motor vehicle	

2014-Dec-07, Sun,12:40	Clear	Rear end	P.D. only	Dry	North	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					North	Stopped	Pick-up truck	Other motor vehicle
2015-Jan-03, Sat,13:07	Snow	Turning movement	P.D. only	Packed snow	North	Going ahead	Passenger van	Other motor vehicle
					South	Turning left	Pick-up truck	Other motor vehicle
2015-Jan-13, Tue,08:49	Clear	Rear end	P.D. only	Wet	North	Going ahead	Pick-up truck	Other motor vehicle
					North	Going ahead	Automobile, station wagon	Other motor vehicle
2015-Jan-23, Fri,18:32	Clear	Rear end	P.D. only	Slush	South	Going ahead	Automobile, station wagon	Other motor vehicle
					South	Stopped	Pick-up truck	Other motor vehicle
2015-Feb-03, Tue,09:12	Snow	SMV other	P.D. only	Slush	West	Turning right	Automobile, station wagon	Skidding/sliding
2015-Feb-27, Fri,21:22	Clear	Rear end	P.D. only	Dry	West	Turning right	Pick-up truck	Other motor vehicle
					West	Turning right	Automobile, station wagon	Other motor vehicle
2015-Mar-10, Tue,07:53	Clear	Rear end	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle
					North	Stopped	Automobile, station wagon	Other motor vehicle
2015-Jun-19, Fri,10:19	Clear	Rear end	P.D. only	Dry	South	Going ahead	Passenger van	Other motor vehicle

					South	Stopped	Automobile, station wagon	Other motor vehicle
2015-Jul-08, Wed,12:52	Clear	Rear end	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle
					South	Stopped	Automobile, station wagon	Other motor vehicle
2015-Jul-16, Thu,12:51	Clear	Rear end	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle
					South	Going ahead	Pick-up truck	Other motor vehicle
					South	Slowing or stopping	Automobile, station wagon	Other motor vehicle
2015-Oct-19, Mon,21:25	Rain	Rear end	Non-fatal injury	Wet	North	Going ahead	Automobile, station wagon	Other motor vehicle
					North	Stopped	Pick-up truck	Other motor vehicle
2015-Dec-21, Mon,12:20	Rain	Sideswipe	P.D. only	Wet	South	Changing lanes	Automobile, station wagon	Other motor vehicle
					South	Turning left	Pick-up truck	Other motor vehicle
					South	Stopped	Automobile, station wagon	Other motor vehicle
2015-Dec-23, Wed,18:45	Clear	Rear end	P.D. only	Dry	West	Turning right	Pick-up truck	Other motor vehicle
					West	Turning right	Automobile, station wagon	Other motor vehicle
2016-Jan-18, Mon,17:28	Clear	Rear end	P.D. only	Wet	West	Slowing or stopping	Passenger van	Other motor vehicle
					West	Stopped	Automobile, station wagon	Other motor vehicle

2016-Jan-25, Mon,18:00	Clear	Rear end	P.D. only	Wet	South	Going ahead	Pick-up truck	Other motor vehicle
					South	Stopped	Automobile, station wagon	Other motor vehicle
					South	Unknown	Unknown	Other motor vehicle
2016-Feb-08, Mon,09:10	Clear	Rear end	P.D. only	Dry	North	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					North	Stopped	Automobile, station wagon	Other motor vehicle
2016-Mar-23, Wed,10:16	Snow	Rear end	P.D. only	Wet	North	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					North	Stopped	Automobile, station wagon	Other motor vehicle
2016-Apr-28, Thu,15:57	Clear	Rear end	P.D. only	Dry	North	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					North	Going ahead	Automobile, station wagon	Other motor vehicle
2016-Jun-01, Wed,13:23	Clear	Turning movement	P.D. only	Dry	South	Turning right	Automobile, station wagon	Other motor vehicle
					North	Turning left	Automobile, station wagon	Other motor vehicle
2016-Aug-11, Thu,17:22	Clear	Rear end	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle
					South	Stopped	Automobile, station wagon	Other motor vehicle
2016-Oct-07, Fri,10:27	Clear	Rear end	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle
					North	Stopped	Automobile, station wagon	Other motor vehicle

2016-Oct-14, Fri,07:35	Clear	Rear end	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle
					North	Stopped	Automobile, station wagon	Other motor vehicle
2016-Oct-22, Sat,15:21	Strong wind	SMV other	P.D. only	Wet	West	Stopped	Automobile, station wagon	Other
2016-Nov-17, Thu,08:55	Clear	Rear end	P.D. only	Dry	South	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					South	Stopped	Automobile, station wagon	Other motor vehicle
2016-Nov-24, Thu,09:10	Snow	Turning movement	P.D. only	Loose snow	South	Going ahead	Automobile, station wagon	Other motor vehicle
					North	Turning left	Automobile, station wagon	Other motor vehicle
2017-Jan-03, Tue,07:02	Freezing Rain	Angle	P.D. only	Slush	West	Turning right	Automobile, station wagon	Curb
					South	Turning left	Pick-up truck	Other motor vehicle
					South	Turning left	Automobile, station wagon	Other motor vehicle
					South	Turning left	Automobile, station wagon	Other motor vehicle
2017-Jan-25, Wed,17:25	Snow	Rear end	P.D. only	Wet	North	Going ahead	Automobile, station wagon	Other motor vehicle
					North	Going ahead	Automobile, station wagon	Other motor vehicle
2017-Mar-17, Fri,09:14	Clear	Rear end	P.D. only	Dry	West	Turning right	Pick-up truck	Other motor vehicle
					West	Turning right	Automobile, station wagon	Other motor vehicle

2017-Apr-21, Fri,12:22	Clear	Rear end	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle
					South	Slowing or stopping	Automobile, station wagon	Other motor vehicle
2017-May-16, Tue,07:55	Clear	Rear end	P.D. only	Dry	South	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					South	Slowing or stopping	Automobile, station wagon	Other motor vehicle
2017-Jul-06, Thu,18:42	Clear	Angle	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle
					West	Turning left	Municipal transit bus	Other motor vehicle
2017-Sep-03, Sun,11:25	Rain	SMV other	P.D. only	Wet	North	Going ahead	Automobile, station wagon	Skidding/sliding
2017-Sep-12, Tue,09:02	Clear	Rear end	Non-fatal injury	Dry	North	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					North	Stopped	Pick-up truck	Other motor vehicle
2017-Nov-07, Tue,13:06	Clear	Rear end	P.D. only	Dry	West	Turning right	Automobile, station wagon	Other motor vehicle
					West	Turning right	Pick-up truck	Other motor vehicle
2017-Nov-27, Mon,18:10	Clear	Sideswipe	P.D. only	Ice	West	Changing lanes	Pick-up truck	Other motor vehicle
					West	Turning right	Automobile, station wagon	Other motor vehicle
2017-Dec-28, Thu,07:34	Clear	Angle	P.D. only	Ice	North	Slowing or stopping	Automobile, station wagon	Other motor vehicle

					West	Going ahead	Automobile, station wagon	Other motor vehicle
2018-Feb-07, Wed,12:25	Snow	Turning movement	P.D. only	Loose snow	North	Slowing or stopping	Automobile, station wagon	Skidding/sliding
					South	Turning left	Automobile, station wagon	Other motor vehicle
2018-Mar-02, Fri,09:37	Clear	Sideswipe	P.D. only	Dry	North	Changing lanes	Automobile, station wagon	Other motor vehicle
					North	Going ahead	Automobile, station wagon	Other motor vehicle
2018-Mar-08, Thu,16:44	Snow	Rear end	P.D. only	Slush	West	Going ahead	Automobile, station wagon	Other motor vehicle
					West	Turning right	Automobile, station wagon	Other motor vehicle
2018-Mar-28, Wed,18:49	Clear	Rear end	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle
					South	Stopped	Automobile, station wagon	Other motor vehicle
					South	Stopped	Automobile, station wagon	Other motor vehicle
2018-Apr-02, Mon,11:57	Clear	Rear end	P.D. only	Dry	South	Going ahead	Passenger van	Other motor vehicle
					South	Stopped	Automobile, station wagon	Other motor vehicle
2018-May-02, Wed,14:34	Clear	Rear end	P.D. only	Dry	West	Turning right	Automobile, station wagon	Other motor vehicle
					West	Turning right	Automobile, station wagon	Other motor vehicle

2018-Jun-20, Wed,09:59	Clear	Rear end	P.D. only	Dry	West	Turning right	Automobile, station wagon	Other motor vehicle	
					West	Turning right	Automobile, station wagon	Other motor vehicle	
2018-Oct-15, Mon,11:33	Rain	Rear end	P.D. only	Wet	West	Turning right	Automobile, station wagon	Other motor vehicle	
					West	Turning right	Automobile, station wagon	Other motor vehicle	
2018-Nov-04, Sun,10:50	Clear	Rear end	P.D. only	Dry	North	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
					North	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2018-Dec-09, Sun,04:00	Clear	SMV other	P.D. only	Packed snow	West	Going ahead	Automobile, station wagon	Curb	

Location: LEGGET DR @ TERRY FOX DR

Traffic Control: Stop sign **Total Collisions:** 7

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2014-Feb-25, Tue,09:00	Clear	Angle	P.D. only	Dry	North	Going ahead	Passenger van	Other motor vehicle	
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2014-Aug-26, Tue,17:45	Clear	Angle	P.D. only	Dry	North	Going ahead	Pick-up truck	Other motor vehicle	
					East	Going ahead	Pick-up truck	Other motor vehicle	
2015-Jan-09, Fri,08:33	Snow	Rear end	P.D. only	Ice	East	Going ahead	Automobile, station wagon	Other motor vehicle	
					East	Stopped	Pick-up truck	Other motor vehicle	

2016-Apr-05, Tue,16:14	Clear	Angle	Non-fatal injury	Dry	North	Turning left	Pick-up truck	Other motor vehicle
					East	Going ahead	Pick-up truck	Other motor vehicle
2016-Jun-13, Mon,12:31	Clear	Rear end	P.D. only	Dry	North	Going ahead	Passenger van	Other motor vehicle
					North	Stopped	Automobile, station wagon	Other motor vehicle
2017-Oct-25, Wed,00:02	Rain	Rear end	P.D. only	Wet	East	Going ahead	Automobile, station wagon	Other motor vehicle
					East	Slowing or stopping	Automobile, station wagon	Other motor vehicle
2018-May-24, Thu,17:14	Clear	Angle	P.D. only	Dry	North	Turning left	Automobile, station wagon	Other motor vehicle
					East	Going ahead	Automobile, station wagon	Other motor vehicle

APPENDIX F

Strategic Long-Range Model

TRANS Regional Model

Version 1.13 - Assigned March 6, 2019

AM Peak Hour Total Traffic Volume

Shirley's Brook - Kanata

2011 - Base Scenario

User Initials: SG
Plot Prepared: March 6, 2019
EMME Scenario: 11132

TRANS

Legend

AM Peak Hour Total Traffic Volume

1000 2000 3000 4000 5000

N

Distance (m)

200 400 600 800 1000

Connaught Range and Primary Training Centre

DRDC Ottawa Research Centre

South March Highlands Conservation Forest

March Road

Old Carp Road

TRANS Regional Model

Version 1.14 - Assigned March 5, 2019

AM Peak Hour Total Traffic Volume

Shirley's Brook - Kanata

2031 - Base Scenario
TMP Affordable Road & Transit Network

User Initials: SG
Plot Prepared: March 6, 2018
EMME Scenario: 14311

TRANS

Legend

AM Peak Hour Total Traffic Volume

1000 2000 3000 4000 5000

N

Distance (m)

200 400 600 800 1000

Connaught Range and Primary Training Centre

DRDC Ottawa Research Centre

South March Highlands Conservation Forest

The TRANS model is continuously refined & maintained, and all information is provided in good faith. However, model outputs are provided "as is", and no warranty or guarantee is provided as to the accuracy, reliability or reasonableness of the results. In using this data, you agree to accept any and all risks arising from any incorrect, incomplete, or misleading information.

Recipients are required to use caution and professional judgement in using and interpreting model outputs. In particular, caution should be used when focusing on a geographically limited area (such as a single road or intersection), as the model is primarily designed to simulate regional-scale phenomena and has been calibrated at a regional level.

As general good practice, it is recommended that the user confirm the network coding within the area of interest, and compare base year forecasts against traffic count data to assess the extent to which the model may be over- or under-estimating the travel demand.

TRANS Regional Model

Version 1.13 - Assigned March 6, 2019

AM Peak Hour Total Traffic Volume

Shirley's Brook - Kanata

2011 - Base Scenario

User Initials: SG
Plot Prepared: March 6, 2019
EMME Scenario: 11132

TRANS

Legend

AM Peak Hour Total Traffic Volume

1000 2000 3000 4000 5000

N

Distance (m)

500 1000 1500 2000

Connaught Range and Primary Training Centre

South March Highlands Conservation Forest

Ottawa / Carp Airport

TRANS Regional Model

Version 1.14 - Assigned March 5, 2019

AM Peak Hour Total Traffic Volume

Shirley's Brook - Kanata

2031 - Base Scenario

TMP Affordable Road & Transit Network

User Initials: SG
Plot Prepared: March 6, 2018
EMME Scenario: 14311

TRANS

Legend

AM Peak Hour Total Traffic Volume

1000 2000 3000 4000 5000

Distance (m)

500 1000 1500 2000

N

Connaught Range and Primary Training Centre

DRDC Ottawa Research Centre

Carling Campus

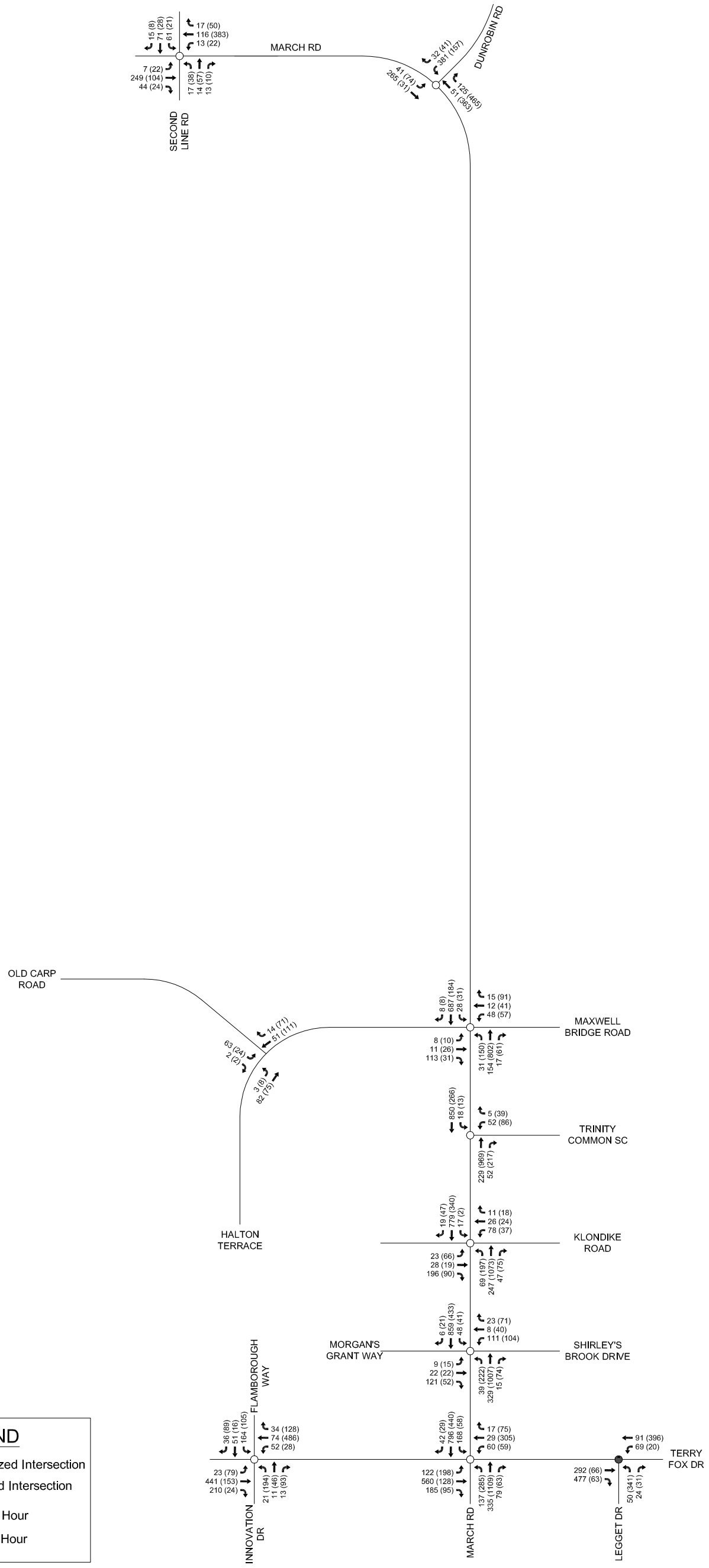
South March Highlands Conservation Forest

Ottawa / Carp Airport

APPENDIX G

Relevant Excerpts of KNUEA TMP

Figure 35 – Demonstration Plan



LEGEND

- Unsignalized Intersection
- Signalized Intersection

xx VPH AM Peak Hour

(xx) VPH PM Peak Hour

KANATA NORTH

COMMUNITY DESIGN PLAN

FIGURE NO. 11

2026 BACKGROUND TRAFFIC VOLUMES

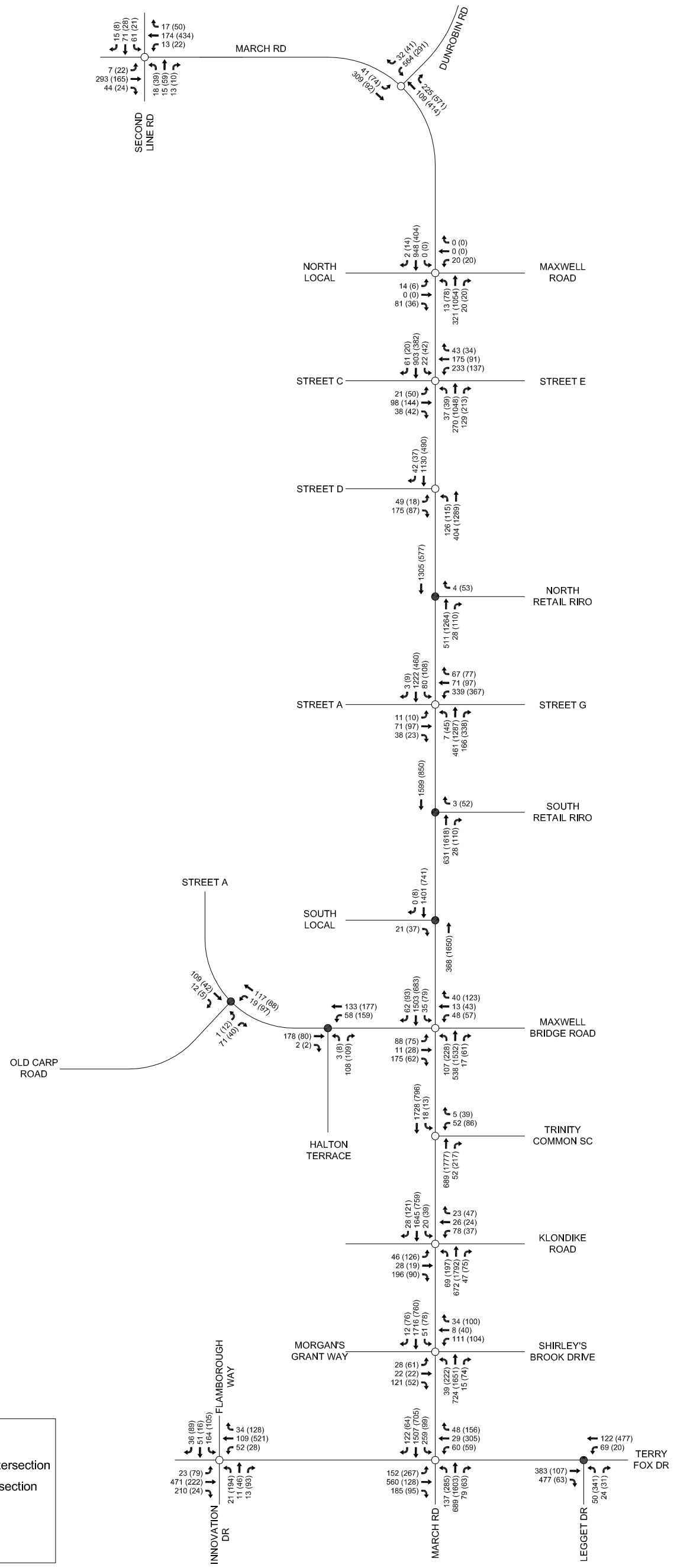
DATE JUN 2016

JOB 112117

SCALE N.T.S.

NOVATECH

Engineers, Planners & Landscape Architects



LEGEND

- Unsignalized Intersection
- Signalized Intersection

xx VPH AM Peak Hour

(xx) VPH PM Peak Hour

KANATA NORTH

COMMUNITY DESIGN PLAN

FIGURE NO. 36

2026 TOTAL TRAFFIC VOLUMES

DATE JUN 2016

JOB 112117

SCALE N.T.S.

NOVATECH

Engineers, Planners & Landscape Architects

M:\2012\112117\CAD\Design\Figures\Traffic\TMP\FINAL\Traffic Figures.dwg, 2026 TOTAL, Mar 28, 2016 - 3:07pm, bbyvelds

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APPENDIX H

Transportation Demand Management Checklists

TRANSPORTATION DEMAND MANAGEMENT

TDM-Supportive Development Design and Infrastructure Checklist

TDM-Supportive Development Design and Infrastructure Checklist:
Non-Residential Developments (office, institutional, retail or industrial)

Legend

REQUIRED	The Official Plan or Zoning By-law provides related guidance that must be followed
BASIC	The measure is generally feasible and effective, and in most cases would benefit the development and its users
BETTER	The measure could maximize support for users of sustainable modes, and optimize development performance

		TDM-supportive design & infrastructure measures: *Non-residential developments*	Check if completed & add descriptions, explanations or plan/drawing references
	1.	**WALKING & CYCLING: ROUTES**	
	1.1	**Building location & access points**	
BASIC	1.1.1	Locate building close to the street, and do not locate parking areas between the street and building entrances	☑
BASIC	1.1.2	Locate building entrances in order to minimize walking distances to sidewalks and transit stops/stations	☑
BASIC	1.1.3	Locate building doors and windows to ensure visibility of pedestrians from the building, for their security and comfort	☑
	1.2	**Facilities for walking & cycling**	
REQUIRED	1.2.1	Provide convenient, direct access to stations or major stops along rapid transit routes within 600 metres; minimize walking distances from buildings to rapid transit; provide pedestrian-friendly, weather-protected (where possible) environment between rapid transit accesses and building entrances; ensure quality linkages from sidewalks through building entrances to integrated stops/stations *(see Official Plan policy 4.3.3)*	☑ - direct connection to stop #7548 (less than 100m walking distance)
REQUIRED	1.2.2	Provide safe, direct and attractive pedestrian access from public sidewalks to building entrances through such measures as: reducing distances between public sidewalks and major building entrances; providing walkways from public streets to major building entrances; within a site, providing walkways along the front of adjoining buildings, between adjacent buildings, and connecting areas where people may congregate, such as courtyards and transit stops; and providing weather protection through canopies, colonnades, and other design elements wherever possible *(see Official Plan policy 4.3.12)*	☑

		TDM-supportive design & infrastructure measures: *Non-residential developments*	Check if completed & add descriptions, explanations or plan/drawing references
REQUIRED	1.2.3	Provide sidewalks of smooth, well-drained walking surfaces of contrasting materials or treatments to differentiate pedestrian areas from vehicle areas, and provide marked pedestrian crosswalks at intersection sidewalks *(see Official Plan policy 4.3.10)*	☑
REQUIRED	1.2.4	Make sidewalks and open space areas easily accessible through features such as gradual grade transition, depressed curbs at street corners and convenient access to extra-wide parking spaces and ramps *(see Official Plan policy 4.3.10)*	☑
REQUIRED	1.2.5	Include adequately spaced inter-block/street cycling and pedestrian connections to facilitate travel by active transportation. Provide links to the existing or planned network of public sidewalks, multi-use pathways and on-road cycle routes. Where public sidewalks and multi-use pathways intersect with roads, consider providing traffic control devices to give priority to cyclists and pedestrians *(see Official Plan policy 4.3.11)*	☑
BASIC	1.2.6	Provide safe, direct and attractive walking routes from building entrances to nearby transit stops	☑
BASIC	1.2.7	Ensure that walking routes to transit stops are secure, visible, lighted, shaded and wind-protected wherever possible	☐
BASIC	1.2.8	Design roads used for access or circulation by cyclists using a target operating speed of no more than 30 km/h, or provide a separated cycling facility	☑
	1.3	**Amenities for walking & cycling**	
BASIC	1.3.1	Provide lighting, landscaping and benches along walking and cycling routes between building entrances and streets, sidewalks and trails	☑
BASIC	1.3.2	Provide wayfinding signage for site access (where required, e.g. when multiple buildings or entrances exist) and egress (where warranted, such as when directions to reach transit stops/stations, trails or other common destinations are not obvious)	☐

		TDM-supportive design & infrastructure measures: *Non-residential developments*	Check if completed & add descriptions, explanations or plan/drawing references
	2.	**WALKING & CYCLING: END-OF-TRIP FACILITIES**	
	2.1	**Bicycle parking**	
REQUIRED	2.1.1	Provide bicycle parking in highly visible and lighted areas, sheltered from the weather wherever possible *(see Official Plan policy 4.3.6)*	☑
REQUIRED	2.1.2	Provide the number of bicycle parking spaces specified for various land uses in different parts of Ottawa; provide convenient access to main entrances or well-used areas *(see Zoning By-law Section 111)*	☑
REQUIRED	2.1.3	Ensure that bicycle parking spaces and access aisles meet minimum dimensions; that no more than 50% of spaces are vertical spaces; and that parking racks are securely anchored *(see Zoning By-law Section 111)*	☑
BASIC	2.1.4	Provide bicycle parking spaces equivalent to the expected number of commuter cyclists (assuming the cycling mode share target is met), plus the expected peak number of customer/visitor cyclists	☑
BETTER	2.1.5	Provide bicycle parking spaces equivalent to the expected number of commuter and customer/visitor cyclists, plus an additional buffer (e.g. 25 percent extra) to encourage other cyclists and ensure adequate capacity in peak cycling season	☐
	2.2	**Secure bicycle parking**	
REQUIRED	2.2.1	Where more than 50 bicycle parking spaces are provided for a single office building, locate at least 25% of spaces within a building/structure, a secure area (e.g. supervised parking lot or enclosure) or bicycle lockers *(see Zoning By-law Section 111)*	☑
BETTER	2.2.2	Provide secure bicycle parking spaces equivalent to the expected number of commuter cyclists (assuming the cycling mode share target is met)	☐
	2.3	**Shower & change facilities**	
BASIC	2.3.1	Provide shower and change facilities for the use of active commuters	☐
BETTER	2.3.2	In addition to shower and change facilities, provide dedicated lockers, grooming stations, drying racks and laundry facilities for the use of active commuters	☐
	2.4	**Bicycle repair station**	
BETTER	2.4.1	Provide a permanent bike repair station, with commonly used tools and an air pump, adjacent to the main bicycle parking area (or secure bicycle parking area, if provided)	☐

		TDM-supportive design & infrastructure measures: *Non-residential developments*	Check if completed & add descriptions, explanations or plan/drawing references
	3.	**TRANSIT**	
	3.1	**Customer amenities**	
BASIC	3.1.1	Provide shelters, lighting and benches at any on-site transit stops	☐
BASIC	3.1.2	Where the site abuts an off-site transit stop and insufficient space exists for a transit shelter in the public right-of-way, protect land for a shelter and/or install a shelter	☐
BETTER	3.1.3	Provide a secure and comfortable interior waiting area by integrating any on-site transit stops into the building	☐
	4.	**RIDESHARING**	
	4.1	**Pick-up & drop-off facilities**	
BASIC	4.1.1	Provide a designated area for carpool drivers (plus taxis and ride-hailing services) to drop off or pick up passengers without using fire lanes or other no-stopping zones	☑
	4.2	**Carpool parking**	
BASIC	4.2.1	Provide signed parking spaces for carpools in a priority location close to a major building entrance, sufficient in number to accommodate the mode share target for carpools	☐
BETTER	4.2.2	At large developments, provide spaces for carpools in a separate, access-controlled parking area to simplify enforcement	☐
	5.	**CARSHARING & BIKESHARING**	
	5.1	**Carshare parking spaces**	
BETTER	5.1.1	Provide carshare parking spaces in permitted non-residential zones, occupying either required or provided parking spaces *(see Zoning By-law Section 94)*	☐
	5.2	**Bikeshare station location**	
BETTER	5.2.1	Provide a designated bikeshare station area near a major building entrance, preferably lighted and sheltered with a direct walkway connection	☐

		TDM-supportive design & infrastructure measures: *Non-residential developments*	Check if completed & add descriptions, explanations or plan/drawing references
	6.	**PARKING**	
	6.1	**Number of parking spaces**	
REQUIRED	6.1.1	Do not provide more parking than permitted by zoning, nor less than required by zoning, unless a variance is being applied for	☑
BASIC	6.1.2	Provide parking for long-term and short-term users that is consistent with mode share targets, considering the potential for visitors to use off-site public parking	☐
BASIC	6.1.3	Where a site features more than one use, provide shared parking and reduce the cumulative number of parking spaces accordingly *(see Zoning By-law Section 104)*	☐
BETTER	6.1.4	Reduce the minimum number of parking spaces required by zoning by one space for each 13 square metres of gross floor area provided as shower rooms, change rooms, locker rooms and other facilities for cyclists in conjunction with bicycle parking *(see Zoning By-law Section 111)*	☐
	6.2	**Separate long-term & short-term parking areas**	
BETTER	6.2.1	Separate short-term and long-term parking areas using signage or physical barriers, to permit access controls and simplify enforcement (i.e. to discourage employees from parking in visitor spaces, and vice versa)	☐
	7.	**OTHER**	
	7.1	**On-site amenities to minimize off-site trips**	
BETTER	7.1.1	Provide on-site amenities to minimize mid-day or mid-commute errands	☐

TRANSPORTATION DEMAND MANAGEMENT

TDM Measures Checklist

TDM Measures Checklist:
Non-Residential Developments (office, institutional, retail or industrial)

Legend

BASIC — The measure is generally feasible and effective, and in most cases would benefit the development and its users

BETTER — The measure could maximize support for users of sustainable modes, and optimize development performance

★ — The measure is one of the most dependably effective tools to encourage the use of sustainable modes

		TDM measures: *Non-residential developments*	Check if proposed & add descriptions
		1. TDM PROGRAM MANAGEMENT	
		1.1 Program coordinator	
BASIC	★	1.1.1 Designate an internal coordinator, or contract with an external coordinator	☐
		1.2 Travel surveys	
BETTER		1.2.1 Conduct periodic surveys to identify travel-related behaviours, attitudes, challenges and solutions, and to track progress	☐
		2. WALKING AND CYCLING	
		2.1 Information on walking/cycling routes & destinations	
BASIC		2.1.1 Display local area maps with walking/cycling access routes and key destinations at major entrances	☑
		2.2 Bicycle skills training *Commuter travel*	
BETTER	★	2.2.1 Offer on-site cycling courses for commuters, or subsidize off-site courses	☐
		2.3 Valet bike parking *Visitor travel*	
BETTER		2.3.1 Offer secure valet bike parking during public events when demand exceeds fixed supply (e.g. for festivals, concerts, games)	☐

			TDM measures: *Non-residential developments*	Check if proposed & add descriptions
		3.	**TRANSIT**	
		3.1	**Transit information**	
BASIC		3.1.1	Display relevant transit schedules and route maps at entrances	☑
BASIC		3.1.2	Provide online links to OC Transpo and STO information	☐
BETTER		3.1.3	Provide real-time arrival information display at entrances	☐
		3.2	**Transit fare incentives**	
			Commuter travel	
BETTER		3.2.1	Offer preloaded PRESTO cards to encourage commuters to use transit	☐
BETTER	★	3.2.2	Subsidize or reimburse monthly transit pass purchases by employees	☐
			Visitor travel	
BETTER		3.2.3	Arrange inclusion of same-day transit fare in price of tickets (e.g. for festivals, concerts, games)	☐
		3.3	**Enhanced public transit service**	
			Commuter travel	
BETTER		3.3.1	Contract with OC Transpo to provide enhanced transit services (e.g. for shift changes, weekends)	☐
			Visitor travel	
BETTER		3.3.2	Contract with OC Transpo to provide enhanced transit services (e.g. for festivals, concerts, games)	☐
		3.4	**Private transit service**	
			Commuter travel	
BETTER		3.4.1	Provide shuttle service when OC Transpo cannot offer sufficient quality or capacity to serve demand (e.g. for shift changes, weekends)	☐
			Visitor travel	
BETTER		3.4.2	Provide shuttle service when OC Transpo cannot offer sufficient quality or capacity to serve demand (e.g. for festivals, concerts, games)	☐

			TDM measures: *Non-residential developments*	Check if proposed & add descriptions
		4.	**RIDESHARING**	
		4.1	**Ridematching service**	
			Commuter travel	
BASIC	★	4.1.1	Provide a dedicated ridematching portal at OttawaRideMatch.com	☐
		4.2	**Carpool parking price incentives**	
			Commuter travel	
BETTER		4.2.1	Provide discounts on parking costs for registered carpools	☐
		4.3	**Vanpool service**	
			Commuter travel	
BETTER		4.3.1	Provide a vanpooling service for long-distance commuters	☐
		5.	**CARSHARING & BIKESHARING**	
		5.1	**Bikeshare stations & memberships**	
BETTER		5.1.1	Contract with provider to install on-site bikeshare station for use by commuters and visitors	☐
			Commuter travel	
BETTER		5.1.2	Provide employees with bikeshare memberships for local business travel	☐
		5.2	**Carshare vehicles & memberships**	
			Commuter travel	
BETTER		5.2.1	Contract with provider to install on-site carshare vehicles and promote their use by tenants	☐
BETTER		5.2.2	Provide employees with carshare memberships for local business travel	☐
		6.	**PARKING**	
		6.1	**Priced parking**	
			Commuter travel	
BASIC	★	6.1.1	Charge for long-term parking (daily, weekly, monthly)	☐
BASIC		6.1.2	Unbundle parking cost from lease rates at multi-tenant sites	☐
			Visitor travel	
BETTER		6.1.3	Charge for short-term parking (hourly)	☐

			TDM measures: *Non-residential developments*	Check if proposed & add descriptions
		7.	**TDM MARKETING & COMMUNICATIONS**	
		7.1	**Multimodal travel information**	
			Commuter travel	
BASIC	★	7.1.1	Provide a multimodal travel option information package to new/relocating employees and students	☐
			Visitor travel	
BETTER	★	7.1.2	Include multimodal travel option information in invitations or advertising that attract visitors or customers (e.g. for festivals, concerts, games)	☐
		7.2	**Personalized trip planning**	
			Commuter travel	
BETTER	★	7.2.1	Offer personalized trip planning to new/relocating employees	☐
		7.3	**Promotions**	
			Commuter travel	
BETTER		7.3.1	Deliver promotions and incentives to maintain awareness, build understanding, and encourage trial of sustainable modes	☐
		8.	**OTHER INCENTIVES & AMENITIES**	
		8.1	**Emergency ride home**	
			Commuter travel	
BETTER	★	8.1.1	Provide emergency ride home service to non-driving commuters	☐
		8.2	**Alternative work arrangements**	
			Commuter travel	
BASIC	★	8.2.1	Encourage flexible work hours	☐
BETTER		8.2.2	Encourage compressed workweeks	☐
BETTER	★	8.2.3	Encourage telework	☐
		8.3	**Local business travel options**	
			Commuter travel	
BASIC	★	8.3.1	Provide local business travel options that minimize the need for employees to bring a personal car to work	☐
		8.4	**Commuter incentives**	
			Commuter travel	
BETTER		8.4.1	Offer employees a taxable, mode-neutral commuting allowance	☐
		8.5	**On-site amenities**	
			Commuter travel	
BETTER		8.5.1	Provide on-site amenities/services to minimize mid-day or mid-commute errands	☐

APPENDIX I

Intersection MMLOS Analysis

Intersection MMLOS Analysis

Exhibit 5 of the Addendum to the MMLOS guidelines has been used to evaluate the existing PLOS at all signalized intersections within the study area. Exhibit 22 of the MMLOS guidelines suggests a target PLOS C for all roadways within the Employment Area. The results of the intersection PLOS analysis are summarized in **Table 1** through **Table 3**.

Exhibit 12 of the MMLOS guidelines has been used to evaluate the existing BLOS at all signalized intersections within the study area. Exhibit 22 of the MMLOS guidelines suggests a target BLOS C for Spine Routes on arterial roadways in the Employment Area (March Road, Carling Avenue), a target BLOS C for all Local Routes in the Employment Area (Legget Drive, Solandt Road west of Legget Drive), and a target BLOS E for collector roadways with no cycling route designation (Solandt Road east of Legget Drive). The results of the intersection BLOS analysis are summarized in **Table 4**.

Exhibit 16 of the MMLOS guidelines has been used to evaluate the existing TLOS at relevant intersections within the study area. Exhibit 22 of the MMLOS guidelines suggests a target TLOS B for Rapid Transit Corridors in the Employment Area (March Road). No other roadways have any rapid transit or transit priority designations. However, since Carling Avenue, Solandt Road, and Legget Drive also carry transit, these roadways have been evaluated for TLOS. The results of the intersection TLOS analysis are summarized in **Table 5**.

Exhibit 21 of the MMLOS guidelines has been used to evaluate the existing TkLOS at relevant intersections within the study area. Exhibit 22 of the MMLOS guidelines suggest a target TkLOS B for arterial truck routes (March Road, Carling Avenue), and a target TkLOS D for collector roadways with no truck route designation (Solandt Road, Legget Drive). The results of the intersection TkLOS analysis are summarized in **Table 6**.

Exhibit 22 of the MMLOS guidelines suggests a target Auto LOS D for all roadways in the Employment Area. Detailed Synchro reports are included in **Appendix M**. The results of the intersection existing conditions Auto LOS analysis are summarized in **Table 6**. Approaches where queueing issues have been identified are listed with the associated 50^{th}- and 95^{th}-percentile queue lengths, and presented in **Table 7**.

A summary of the existing signalized intersection MMLOS analysis is provided in **Table 8**.

Table 1: PLOS Intersection Analysis – March Road/Solandt Road

CRITERIA	North Approach		South Approach		East Approach		West Approach	
PETSI SCORE								
CROSSING DISTANCE CONDITIONS								
Median > 2.4m in Width	No	-10	No	-10	No	-10	No	-10
Lanes Crossed (3.5m Lane Width)	10 +		10 +		10 +		10 +	
SIGNAL PHASING AND TIMING								
Left Turn Conflict	Protected	0	Protected	0	Permissive	-8	Perm + Prot	-8
Right Turn Conflict	Permissive or Yield	-5	Permissive or Yield	-5	Permissive or Yield	-5	Permissive or Yield	-5
Right Turn on Red	N/A	0	N/A	0	N/A	0	N/A	0
Leading Pedestrian Interval	No	-2	No	-2	No	-2	No	-2
CORNER RADIUS								
Parallel Radius	> 15m to 25m	-8	> 15m to 25m	-8	> 15m to 25m	-8	> 15m to 25m	-8
Parallel Right Turn Channel	Conventional without Receiving	0	Conventional without Receiving	0	Conventional without Receiving	0	Conventional without Receiving	0
Perpendicular Radius	> 15m to 25m	-8	> 15m to 25m	-8	> 15m to 25m	-8	> 15m to 25m	-8
Perpendicular Right Turn Channel	Conventional without Receiving	0	Conventional without Receiving	0	Conventional without Receiving	0	Conventional without Receiving	0
CROSSING TREATMENT								
Treatment	Standard	-7	Standard	-7	Standard	-7	Standard	-7
PETSI SCORE		**-40**		**-40**		**-48**		**-48**
LOS		**F**		**F**		**F**		**F**
DELAY SCORE								
Cycle Length		130		130		130		130
Pedestrian Walk Time		7.5		7.5		45.7		27.7
DELAY SCORE		**57.7**		**57.7**		**27.3**		**40.3**
LOS		**E**		**E**		**C**		**E**
OVERALL		**F**		**F**		**F**		**F**

Table 2: PLOS Intersection Analysis – Legget Drive/Solandt Road

CRITERIA	North Approach		South Approach		East Approach		West Approach	
PETSI SCORE								
CROSSING DISTANCE CONDITIONS								
Median > 2.4m in Width	No	55	No	55	No	55	No	55
Lanes Crossed (3.5m Lane Width)	6		6		6		6	
SIGNAL PHASING AND TIMING								
Left Turn Conflict	Permissive	-8	Permissive	-8	Permissive	-8	Perm + Prot	-8
Right Turn Conflict	Permissive or Yield	-5	Permissive or Yield	-5	Permissive or Yield	-5	Permissive or Yield	-5
Right Turn on Red	RTOR Allowed	-3	RTOR Allowed	-3	RTOR Allowed	-3	RTOR Allowed	-3
Leading Pedestrian Interval	No	-2	No	-2	No	-2	No	-2
CORNER RADIUS								
Parallel Radius	> 15m to 25m	-8	> 15m to 25m	-8	> 15m to 25m	-8	> 15m to 25m	-8
Parallel Right Turn Channel	No Right Turn Channel	-4	No Right Turn Channel	-4	No Right Turn Channel	-4	No Right Turn Channel	-4
Perpendicular Radius	N/A	0	N/A	0	N/A	0	N/A	0
Perpendicular Right Turn Channel	N/A	0	N/A	0	N/A	0	N/A	0
CROSSING TREATMENT								
Treatment	Standard	-7	Standard	-7	Standard	-7	Standard	-7
PETSI SCORE		**18**		**18**		**18**		**18**
LOS		**F**		**F**		**F**		**F**
DELAY SCORE								
Cycle Length		118.6		118.6		112.4		118.6
Pedestrian Walk Time		23.0		23.0		28.0		28.0
DELAY SCORE		**38.5**		**38.5**		**31.7**		**34.6**
LOS		**D**		**D**		**D**		**D**
OVERALL		**F**		**F**		**F**		**F**

Table 3: PLOS Intersection Analysis – March Road/Carling Avenue/Station Road

CRITERIA	North Approach		South Approach		East Approach		West Approach	
PETSI SCORE								
CROSSING DISTANCE CONDITIONS								
Median > 2.4m in Width	No	-10	No	-10	No	-10	No	6
Lanes Crossed (3.5m Lane Width)	10 +		10 +		10 +		9	
SIGNAL PHASING AND TIMING								
Left Turn Conflict	Permissive	-8	Permissive	-8	Protected	0	Protected	0
Right Turn Conflict	Permissive or Yield	-5	Permissive or Yield	-5	Permissive or Yield	-5	Permissive or Yield	-5
Right Turn on Red	RTOR Allowed	-3	N/A	0	N/A	0	N/A	0
Leading Pedestrian Interval	No	-2	No	-2	No	-2	No	-2
CORNER RADIUS								
Parallel Radius	> 25m	-9	> 15m to 25m	-8	> 25m	-9	> 15m to 25m	-8
Parallel Right Turn Channel	Conventional with Receiving	-3	Conventional without Receiving	0	Conventional without Receiving	0	No Right Turn Channel	-4
Perpendicular Radius	N/A	0	> 25m	-9	> 25m	-9	> 15m to 25m	-8
Perpendicular Right Turn Channel	N/A	0	Conventional without Receiving	0	Conventional with Receiving	-3	Conventional without Receiving	0
CROSSING TREATMENT								
Treatment	Standard	-7	Standard	-7	Standard	-7	Standard	-7
PETSI SCORE		**-47**		**-49**		**-45**		**-28**
LOS		**F**		**F**		**F**		**F**
DELAY SCORE								
Cycle Length		130		130		130		130
Pedestrian Walk Time		7.5		7.5		44.4		44.4
DELAY SCORE		**57.7**		**57.7**		**28.2**		**28.2**
LOS		**E**		**E**		**C**		**C**
OVERALL		**F**		**F**		**F**		**F**

Table 4: BLOS Intersection Analysis

Approach	Bikeway Type	Criteria	Travel Lanes and/or Speed	BLOS
March Road/Solandt Road				
North Approach	Pocket Bike Lane	Right Turn Lane Characteristics	Right turn lane > 50m and introduced to the right	D
		Left Turn Accommodation	2 lanes crossed, ≥ 50 km/h	F
South Approach	Pocket Bike Lane	Right Turn Lane Characteristics	Bike lane shifts to the left of the right turn lane	D
		Left Turn Accommodation	2 lanes crossed, ≥ 50 km/h	F
East Approach	Mixed Traffic	Right Turn Lane Characteristics	Shared through/right turn lane	A
		Left Turn Accommodation	Dual left turn lanes	F
West Approach	Mixed Traffic	Right Turn Lane Characteristics	Right turn lane > 50m	F
		Left Turn Accommodation	1 lane crossed, ≥ 60 km/h	F
Legget Drive/Solandt Road				
North Approach	Mixed Traffic	Right Turn Lane Characteristics	Shared through/right turn lane	A
		Left Turn Accommodation	1 lane crossed, ≥ 60 km/h	F
South Approach	Mixed Traffic	Right Turn Lane Characteristics	Shared through/right turn lane	A
		Left Turn Accommodation	1 lane crossed, ≥ 60 km/h	F
East Approach	Mixed Traffic	Right Turn Lane Characteristics	Shared through/right turn lane	A
		Left Turn Accommodation	1 lane crossed, ≥ 60 km/h	F
West Approach	Mixed Traffic	Right Turn Lane Characteristics	Shared through/right turn lane	A
		Left Turn Accommodation	1 lane crossed, ≥ 60 km/h	F
March Road/Carling Avenue/Station Road				
North Approach	Pocket Bike Lane	Right Turn Lane Characteristics	Right turn lane < 50m and introduced to the right	B
		Left Turn Accommodation	Dual left turn lanes	F
South Approach	Pocket Bike Lane	Right Turn Lane Characteristics	Right turn lane > 50m and introduced to the right	D
		Left Turn Accommodation	2 lanes crossed, ≥ 50 km/h	F
East Approach	Pocket Bike Lane	Right Turn Lane Characteristics	Right turn lane < 50m and introduced to the right	B
		Left Turn Accommodation	No lanes crossed, ≥ 60 km/h	C
West Approach	Mixed Traffic	Right Turn Lane Characteristics	Right turn lane < 50m	D
		Left Turn Accommodation	No lanes crossed, ≥ 60 km/h	D

Table 5: TLOS Intersection Analysis

Approach	Delay[1]		TLOS
	AM Peak	PM Peak	
March Road/Solandt Road			
North Approach	120 sec	45 sec	F
South Approach	25 sec	90 sec	F
East Approach	60 sec	65 sec	F
West Approach	35 sec	355 sec	F
Legget Drive/Solandt Road			
North Approach	30 sec	75 sec	F
South Approach	35 sec	30 sec	E
East Approach	5 sec	45 sec	E
West Approach	15 sec	30 sec	D
March Road/Carling Avenue/Station Road			
North Approach	25 sec	30 sec	D
South Approach	90 sec	35 sec	F
East Approach	20 sec	50 sec	F

1. Delay based on outputs from Synchro analysis

Table 6: TkLOS Intersection Analysis

Approach	Effective Corner Radius	Number of Receiving Lanes on Departure from Intersection	TkLOS
March Road/Solandt Road			
North Approach	> 15m	2	A
South Approach	> 15m	2	A
East Approach	> 15m	3	A
West Approach	> 15m	3	A
Legget Drive/Solandt Road			
North Approach	> 15m	1	C
South Approach	> 15m	1	C
East Approach	> 15m	1	C
West Approach	> 15m	1	C
March Road/Carling Avenue/Station Road			
North Approach	> 15m	1	C
South Approach	> 15m	2	A
East Approach	> 15m	3	A
West Approach	> 15m	3	A

Table 7: Auto LOS Intersection Analysis – Existing

Intersection	AM Peak			PM Peak		
	Max v/c or Delay	LOS	Mvmt	Max v/c or Delay	LOS	Mvmt
March Road/ Solandt Road	**1.20**	**F**	**SBT**	**1.84**	**F**	**EBR**
Legget Drive/ Solandt Road	0.66	B	EBL	**1.06**	**F**	**SBT/R**
March Road/ Carling Avenue/Station Road	**1.13**	**F**	**NBT**	**0.98**	**E**	**SBT**
Legget Drive/ Terry Fox Drive(1)	27 sec	D	NBL/R	**134 sec**	**F**	**NBL/R**

1. Unsignalized intersection

Table 8: Existing Queues Over Capacity

Intersection	Mvmt	AM Peak				PM Peak			
		v/c	LOS	50th % Queue (m)	95th % Queue (m)	v/c	LOS	50th % Queue (m)	95th % Queue (m)
March Road/ Solandt Road	NBL	**1.09**	**F**	**~170**	**m#167**	0.89	D	11	m#17
	NBT	0.36	A	23	m12	**1.15**	**F**	**~249**	**#291**
	SBL	0.63	B	24	#47	0.48	A	5	#18
	SBT	**1.20**	**F**	**~180**	**#218**	0.82	D	108	133
	EBR	0.46	A	0	16	**1.84**	**F**	**~232**	**#300**
	WBL	0.35	A	7	14	**0.97**	**E**	**83**	**#117**
Legget Drive/ Solandt Road	SBT/R	0.59	A	28	60	**1.06**	**F**	**~130**	**#235**
March Road/ Carling Avenue/ Station Road	NBT	**1.13**	**F**	**~303**	**#382**	0.88	D	165	198
	SBL	0.75	C	40	m32	0.72	C	36	m#44
	SBT	0.50	A	8	m114	**0.98**	**E**	**~281**	**m#266**
Legget Drive/ Terry Fox Drive	NBL/R	27 s	D	-	10	**134 s**	**F**	**-**	**105**

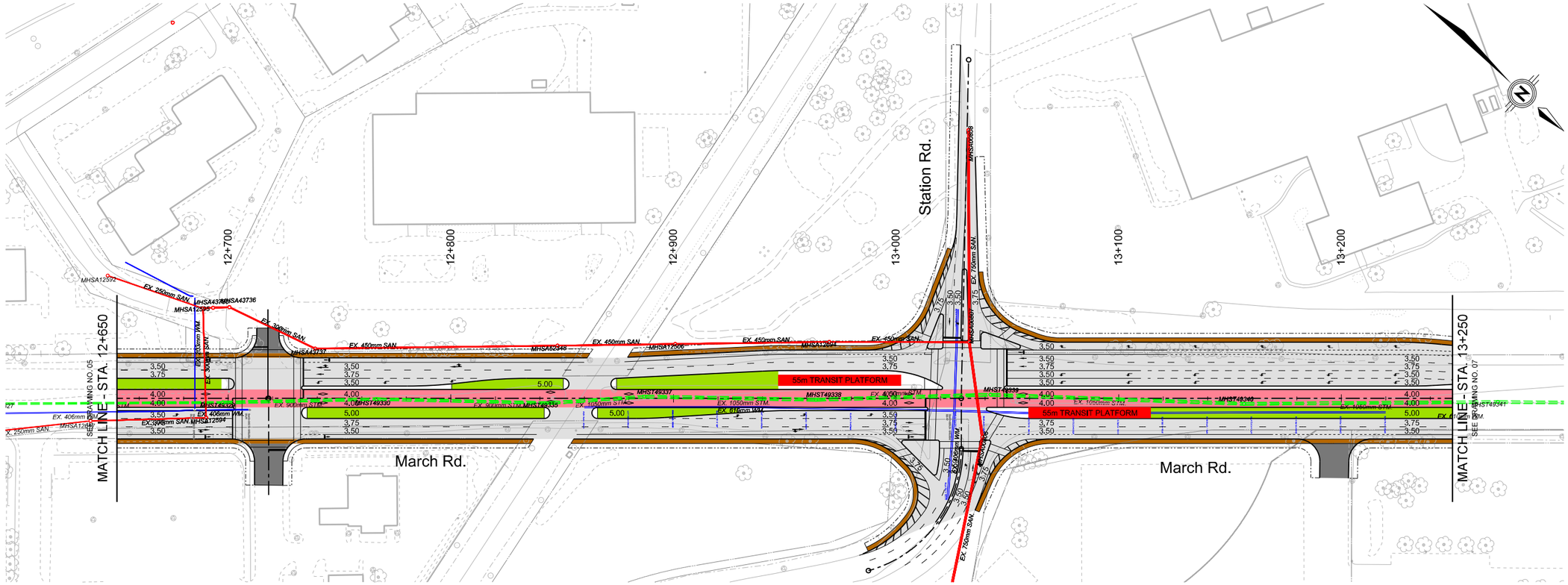
m: volume for the 95th percentile queue is metered by an upstream signal
#: volume for the 95th percentile cycle exceeds capacity
~: approach is above capacity

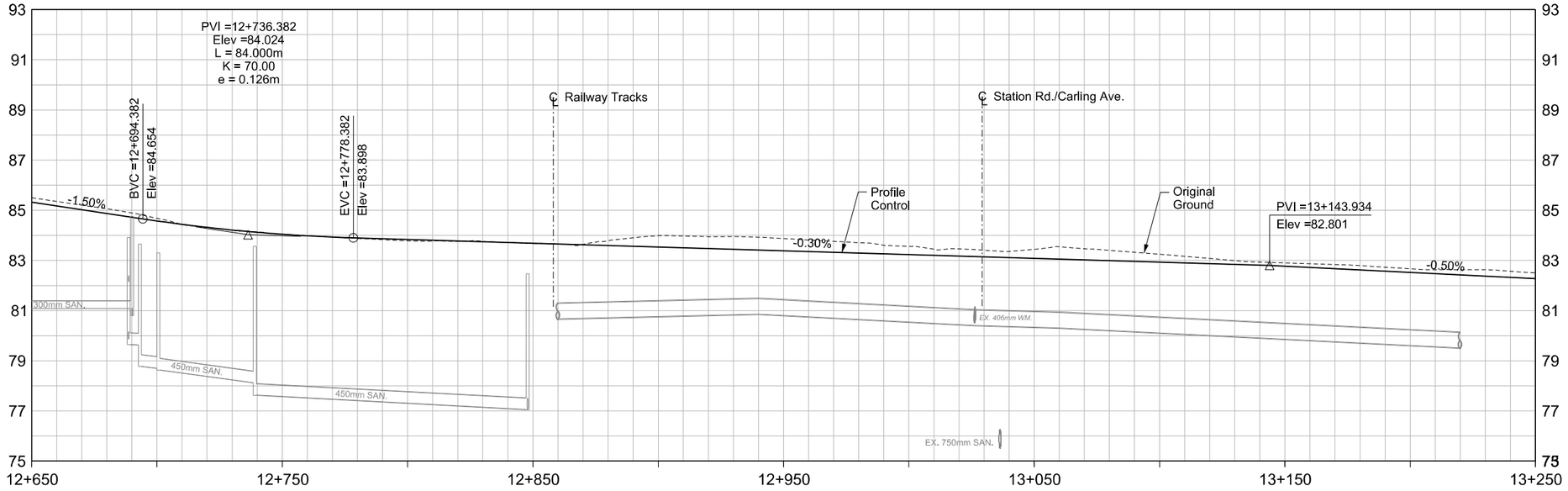
Table 9: Signalized Intersection MMLOS Summary

	Intersection	March Road/Solandt Road				Legget Drive/Solandt Road				March Road/Carling Avenue/Station Road			
		NORTH	SOUTH	EAST	WEST	NORTH	SOUTH	EAST	WEST	NORTH	SOUTH	EAST	WEST
Pedestrian	Island Refuge	No	No	No	No	No	No	No	No	No	No	No	No
	Lanes	10+	10+	10+	10+	6	6	6	6	10+	10+	10+	9
	Conflicting Left Turns	Protected	Protected	Permissive	Perm + Prot	Permissive	Permissive	Permissive	Perm + Prot	Permissive	Permissive	Protected	Protected
	Conflicting Right Turns	Permissive/Yield	Permissive/Yield	Permissive/Yield	Permissive/Yield	Permissive/Yield	Permissive/Yield	Permissive/Yield	Permissive/Yield	Permissive/Yield	Permissive/Yield	Permissive/Yield	Permissive/Yield
	Right Turn on Red	-	-	-	-	RTOR Allowed	RTOR Allowed	RTOR Allowed	RTOR Allowed	RTOR Allowed	-	-	-
	Pedestrian Leading Interval	No	No	No	No	No	No	No	No	No	No	No	No
	Parallel Radius	15m to 25m	15m to 25m	15m to 25m	15m to 25m	15m to 25m	15m to 25m	15m to 25m	15m to 25m	> 25m	15m to 25m	> 25m	15m to 25m
	Parallel Channel	Conv w/o Receiving	Conv w/o Receiving	Conv w/o Receiving	Conv w/o Receiving	No Channel	No Channel	No Channel	No Channel	Conv w Receiving	Conv w/o Receiving	Conv w/o Receiving	No Channel
	Perpendicular Radius	15m to 25m	15m to 25m	15m to 25m	15m to 25m	-	-	-	-	-	> 25m	15m to 25m	> 25m
	Perpendicular Channel	Conv w/o Receiving	Conv w/o Receiving	Conv w/o Receiving	Conv w/o Receiving	-	-	-	-	-	Conv w/o Receiving	Conv w Receiving	Conv w/o Receiving
	Crosswalk Type	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
	PETSI Score	-40	-40	-48	-48	18	18	18	18	-47	-49	-45	-28
	Delay Score	57.7	57.7	27.3	40.3	38.5	38.5	31.7	34.6	57.7	57.7	28.2	28.2
	Level of Service	F	F	F	F	F	F	F	F	F	F	F	F
		F				F				F			
	Target	C				C				C			
Cyclist	Type of Bikeway	Pocket Lane	Pocket Lane	Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic	Pocket Lane	Pocket Lane	Pocket Lane	Mixed Traffic
	Turning Speed	Slow	Slow	Slow	Slow	Slow	Slow	Slow	Slow	Slow	Slow	Slow	Slow
	Right Turn Storage	> 50m	> 50m	-	> 50m	-	-	-	-	< 50m	> 50m	< 50m	< 50m
	Dual Right Turn Lanes	No	No	No	No	No	No	No	No	No	No	No	No
	Shared Through-Right Lane	No	No	Yes	No	Yes	Yes	Yes	Yes	No	No	No	No
	Bike Box	No	No	No	No	No	No	No	No	No	No	No	No
	Lanes Crossed (Left Turns)	2	2	1	1	1	1	1	1	2	2	0	0
	Dual Left Turn Lanes	No	No	Yes	No	No	No	No	No	Yes	No	No	No
	Approach Speed	90 km/h	90 km/h	60 km/h	60 km/h	60 km/h	60 km/h	60 km/h	60 km/h	90 km/h	90 km/h	70 km/h	60 km/h
	Level of Service	F	F	F	F	F	F	F	F	F	F	C	D
		F				F				F			
	Target	C				C				C			
Transit	Average Signal Delay	120 sec	90 sec	65 sec	355 sec	75 sec	35 sec	45 sec	30 sec	30 sec	90 sec	50 sec	-
	Level of Service	F	F	F	F	F	E	E	D	D	F	F	-
		F				F				F			
	Target	B				-				B			
Truck	Turning Radius	> 15m	> 15m	> 15m	> 15m	> 15m	> 15m	> 15m	> 15m	> 15m	> 15m	> 15m	> 15m
	Receiving Lanes	2	2	3	3	1	1	1	1	1	2	3	3
	Level of Service	A	A	A	A	C	C	C	C	C	A	A	A
		A				C				C			
	Target	B				D				B			
Auto	Level of Service	F				F				F			
	Target	D				D				D			

APPENDIX J

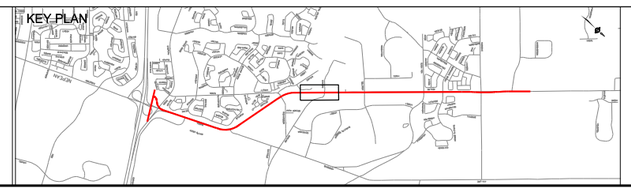
Future March Road Transitway Functional Design





NOTES:
1. DURING DETAILED DESIGN STAGE,SEGREGATED BICYCLE FACILITY WILL BE DESIGNED ALONG THE CORRIDOR AND TROUGH THE INTERCECTION.
2. METHODOLOGY FOR DETERMINING THE RIGHT OF WAY (ROW):
MARCH ROAD - CORKSTOWN ROAD TO OLD CARP ROAD
-PROPERTY FOR THE TRANSITWAY FOR THE MOST PART IS INCLUDED WITHIN THE EXISTING MARCH ROAD ROW.
-PROPERTY ACQUISITION REQUIRED ON BOTH SIDES OF WIDENING.
-ROW SET TO FOOTPRINT OF TRANSITWAY PLUS 4.0m . THE EXACT OWNERSHIP WILL BE DETERMINED DURING DETAILED DESIGN.
SOUTH OF CORKSTOWN ROAD/MARCH ROAD STATION/WEST TRANSITWAY CONNECTION
-ROW SET TO FOOTPRINT OF TRANSITWAY PLUS 4.0m . THE EXACT OWNERSHIP WILL BE DETERMINED DURING DETAILED DESIGN.

KEY PLAN



LEGEND:
- TRANSIT STATION
- TRANSIT LANES
- TRAFFIC LANES
- SIDEWALK
- EDGE OF PAVEMENT
- TRANSIT CENTRELINE
- PROPOSED RIGHT-OF- WAY
- STRUCTURE OUTLINE
- PEDESTRIAN BRIDGE
- BRIDGE ACCESS POINT SEE SHEET 13

Delcan

Date: SEPTEMBER 26 2012	Designed By: MDR / RRG	Drawn By: MB / RRG
Project Manager: DAH	Discipline Engineer: DAH	Checked By: RRG

Scale: HORIZONTAL 0m 10 20 40 60 / VERTICAL 1 2 4 6

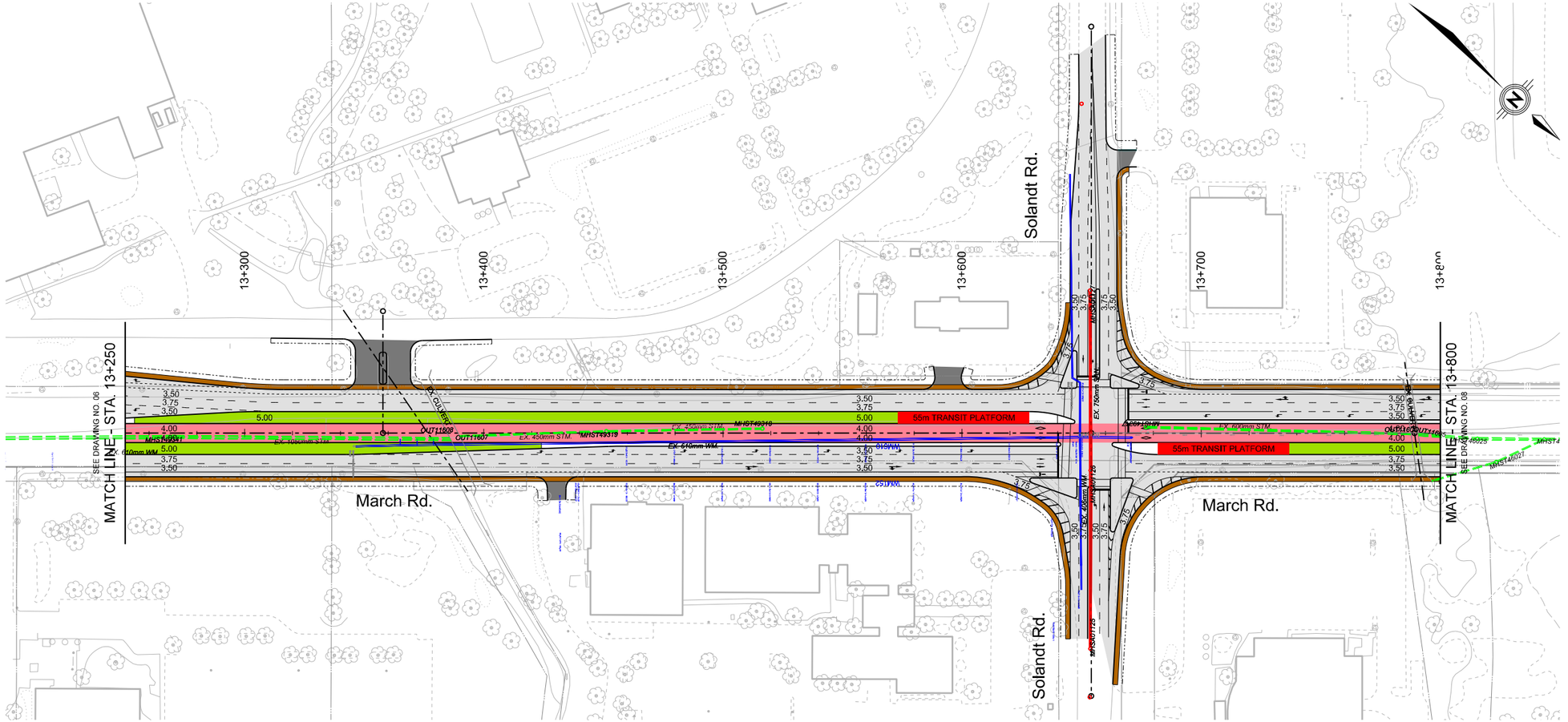
CAD File Name: TO3065TOD-2.0-006.DGN | Plot Date: 24/10/2012

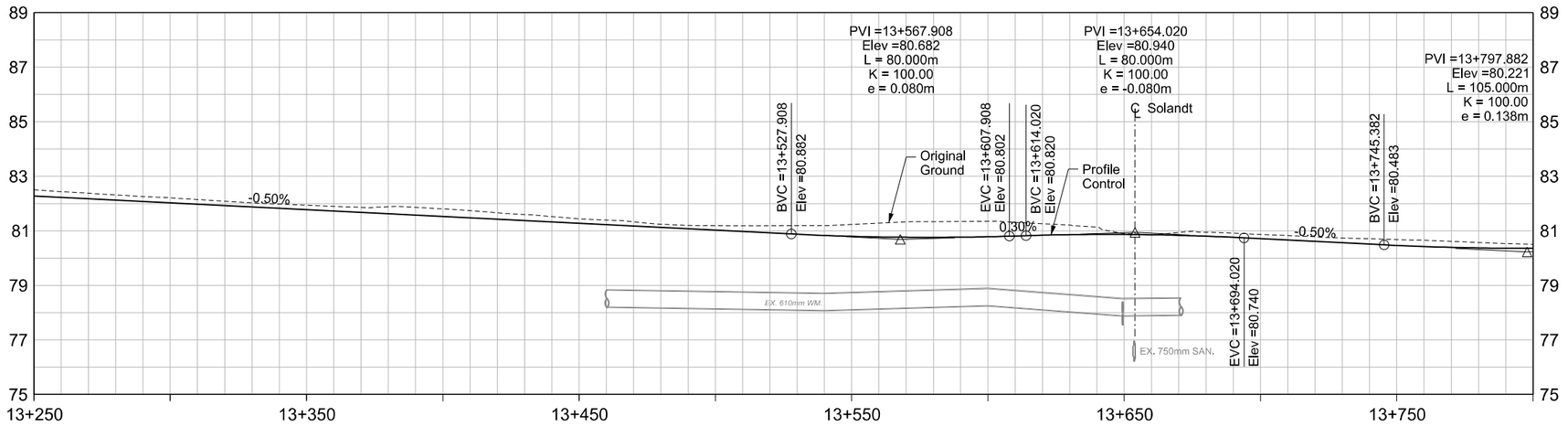
Ottawa

Kanata North Transitway

(Hwy 417/Eagleson-March Road to North of Maxwell Bridge Road)

Drawings No.: | Revision 01 | Sheet No. 06



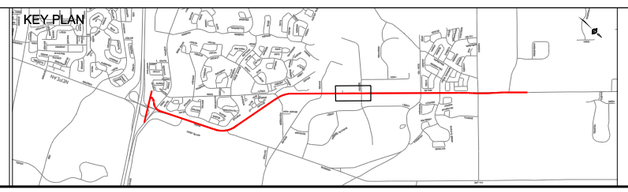


NOTES:
1. DURING DETAILED DESIGN STAGE,SEGREGATED BICYCLE FACILITY WILL BE DESIGNED ALONG THE CORRIDOR AND TROUGH THE INTERCECTION.
2. METHODOLOGY FOR DETERMINING THE RIGHT OF WAY (ROW):

MARCH ROAD - CORKSTOWN ROAD TO OLD CARP ROAD
- PROPERTY FOR THE TRANSITWAY FOR THE MOST PART IS INCLUDED WITHIN THE EXISTING MARCH ROAD ROW.
- PROPERTY ACQUISITION REQUIRED ON BOTH SIDES OF WIDENING.
- ROW SET TO FOOTPRINT OF TRANSITWAY PLUS 4.0m . THE EXACT OWNERSHIP WILL BE DETERMINED DURING DETAILED DESIGN.

SOUTH OF CORKSTOWN ROAD/MARCH ROAD STATION/WEST TRANSITWAY CONNECTION
- ROW SET TO FOOTPRINT OF TRANSITWAY PLUS 4.0m . THE EXACT OWNERSHIP WILL BE DETERMINED DURING DETAILED DESIGN.

KEY PLAN



LEGEND:
- TRANSIT STATION
- TRANSIT LANES
- TRAFFIC LANES
- SIDEWALK
- EDGE OF PAVEMENT
- TRANSIT CENTRELINE
- PROPOSED RIGHT-OF- WAY
- STRUCTURE OUTLINE
- PEDESTRIAN BRIDGE
- BRIDGE ACCESS POINT SEE SHEET 13

Delcan

Date: SEPTEMBER 28 2012	Designed By: MDR / RRG	Drawn By: MB / RRG
Project Manager: DAH	Dicipline Engineer: DAH	Checked By: RRG
Scale: HORIZONTAL 0m 10 20 40 60 / VERTICAL 1 2 4 6		
CAD File Name: TO3065TOD-2.0-007.DGN		Plot Date: 24/10/2012

Ottawa

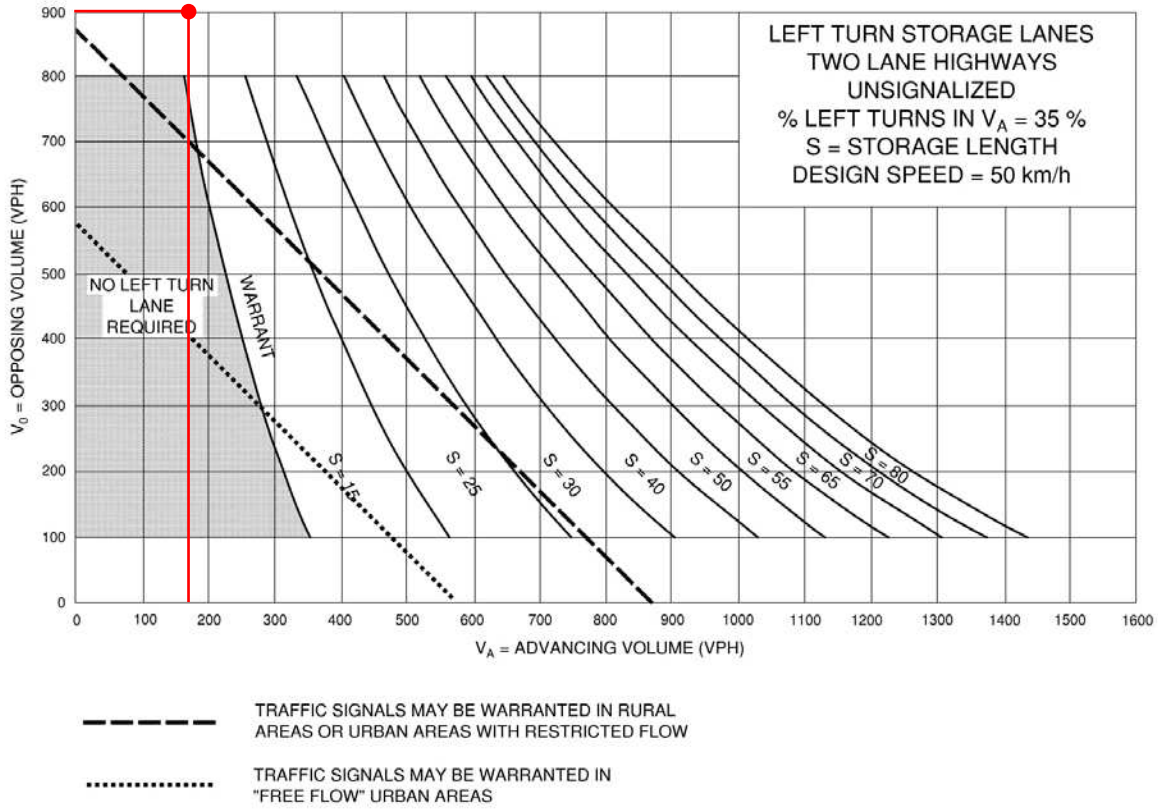
Kanata North Transitway
(Hwy 417/Eagleson-March Road to North of Maxwell Bridge Road)

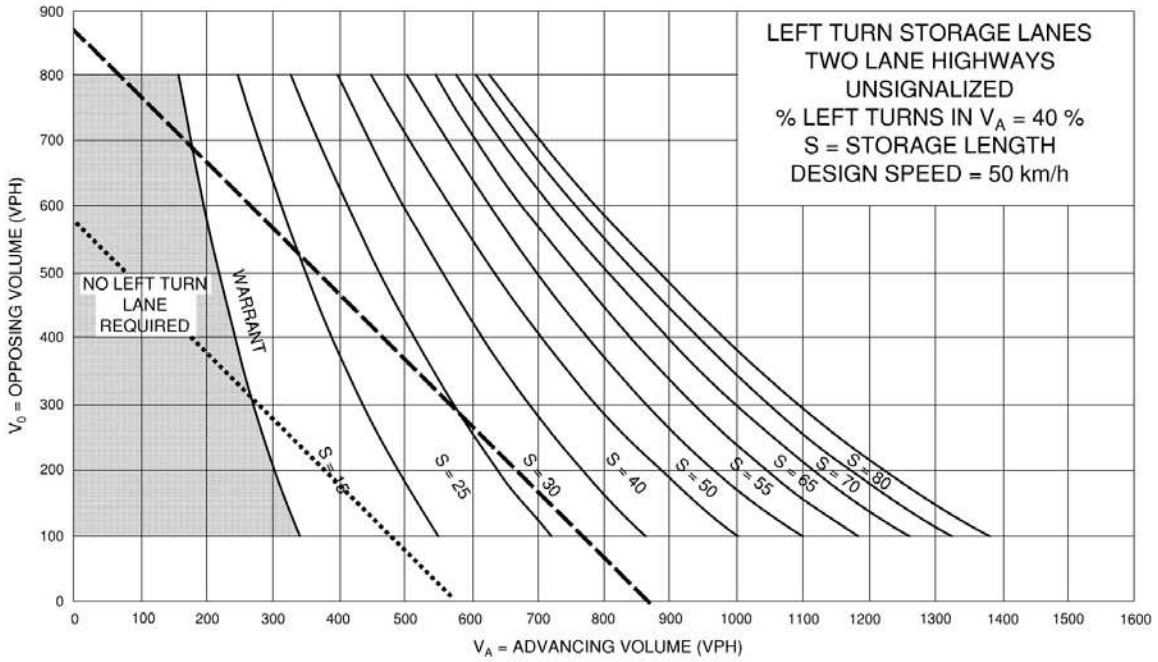
Drawings No.: | Revision 01 | Sheet No. 07

APPENDIX K

Left Turn Lane, All-Way Stop Control, and Traffic Signal Warrants

Exhibit 9A-5


LEFT TURN STORAGE LANES
TWO LANE HIGHWAYS
UNSIGNALIZED
% LEFT TURNS IN V_A = 35 %
S = STORAGE LENGTH
DESIGN SPEED = 50 km/h
NO LEFT TURN LANE REQUIRED
WARRANT
S = 15
S = 25
S = 30
S = 40
S = 50
S = 55
S = 65
S = 70
S = 80
V_O = OPPOSING VOLUME (VPH)
V_A = ADVANCING VOLUME (VPH)
TRAFFIC SIGNALS MAY BE WARRANTED IN RURAL AREAS OR URBAN AREAS WITH RESTRICTED FLOW
TRAFFIC SIGNALS MAY BE WARRANTED IN "FREE FLOW" URBAN AREAS


LEFT TURN STORAGE LANES
TWO LANE HIGHWAYS
UNSIGNALIZED
% LEFT TURNS IN V_A = 40 %
S = STORAGE LENGTH
DESIGN SPEED = 50 km/h
NO LEFT TURN LANE REQUIRED
WARRANT
S = 15
S = 25
S = 30
S = 40
S = 50
S = 55
S = 65
S = 70
S = 80
V_O = OPPOSING VOLUME (VPH)
V_A = ADVANCING VOLUME (VPH)

- At the intersection of a County or Regional road with a King's Highway in a rural area.

The use of STOP signs should be considered:

- At the intersection of a County or Regional road with a King's Highway in a built-up area;
- At the intersection of a city street or township road with a King's Highway;
- At the intersection of a minor street or road with a through street or highway;
- At unsignalized intersections in a signalized area, except where they would interfere with traffic signal progression;
- At intersections where the application of the normal right hand rule or yield control would be unduly hazardous; and
- At intersections which have experienced a record of collisions of the type which are susceptible to correction by STOP control (see stop collision warrant below).

Stop Collision Warrant

STOP sign control may be warranted where three or more right angle or turning collisions per year have occurred over a period of three years and methods of reducing the collision experience, such as sight line improvements, street lighting, parking prohibitions, enforcement, geometric revisions, or YIELD sign controls, have been tried or considered, and found to be inadequate.

All-way Stop Controls

In some circumstances, it may be appropriate to install STOP signs on all approaches to an intersection. This results in an all-way stop condition. All-way STOP sign controls disrupt the flow of traffic and introduce delays to all drivers within the intersection and should only be considered at the intersection of two relatively equal roadways having similar traffic volume demand and operating characteristics (see minimum volume warrants below). The approaches should be directly opposing (i.e., not offset), should preferably approach at right angles (i.e., no skewed approaches) and have an equal number of lanes.

All-way stop controls should be considered only under the following situations:

- As an interim measure, where traffic control signals are warranted but cannot be implemented immediately. For information on traffic signal control, refer to Book 12 (Traffic Signals);
- At locations having a high collision frequency where less restrictive measures have been tried and found inadequate (see all-way stop collision warrant below); or
- As a means of providing a transition period to accustom drivers to a change in intersection right-of-way control from one direction to another. Installation under this warrant must be in conformance with the Amendment of Intersection Control, discussed under Special Considerations at the end of Section 2.

All-way Stop Minimum Volume Warrant (Arterial and Major Roads)

All-way stop control may be considered on major roads where the following conditions are met:

- The total vehicle volume on all intersection approaches exceeds 500 vehicles per hour for each of any eight hours of the day;

- The combined vehicular and pedestrian volume on the minor street exceeds 200 units per hour (all vehicles plus pedestrians wishing to enter the intersection) for each of the same eight hours, with an average delay to traffic on the minor street (either vehicles or pedestrians wishing to enter the intersection) of greater than 30 seconds; and

- The volume split does not exceed 70/30. Volume on the major street is defined as vehicles only. Volume on the minor street includes all vehicles plus any pedestrians wishing to cross the major roadway.

All-way Stop Minimum Volume Warrant (Minor Roads)

All-way stop control may be considered on minor roads where the following conditions are met:

- Total vehicle volume on all intersection approaches exceeds 350 for the highest hour recorded; and

- Volume split does not exceed 75/25 for three-way control or 65/35 for four-way control. Volume is defined as vehicles only.

All-way Stop Collision Warrant

For the purposes of this warrant, a high accident frequency is an average of four collisions per year over a three-year period. Only those accidents susceptible to relief through multi-way stop control must be considered (i.e., right angle and turning type collisions).

Included in this warrant are those locations where visibility problems exist which limit the safe approach speed to less than 15 km/h, thereby creating an unreasonable accident potential. Special advance warning or overhead flashing lights may be necessary to augment the control if vertical or horizontal alignment is a factor.

Inappropriate Use of All-way Stop Control

All-way stop controls should *not* be used under the following conditions:

- Where the protection of pedestrians, school children in particular, is a prime concern. This concern can usually be addressed by other means;

- As a speed control device;

- On roads where progressive signal timing exists;

- On roads within urban areas having a posted speed limit in excess of 60 km/h;

- At intersections that are not roundabouts having less than three, or more than four, approaches;

- At intersections that are offset, poorly defined or geometrically substandard;

- On truck or bus routes, except in an industrial area or where two such routes cross;

- On multi-lane approaches where a parked or stopped vehicle on the right will obscure the STOP sign;

- Where traffic would be required to stop on grades;

- As a means of deterring the movement of through traffic in a residential area;

- Where visibility of the sign is hampered by curves or grades, and insufficient safe stopping distance exists; or
- Where any other traffic device controlling right-of-way is permanently in place within 250 m, with the exception of a YIELD sign.

Location Criteria

A STOP sign must be installed in accordance with the Regulations in order to be effective and enforceable.

The STOP sign must be installed on the right side of the roadway, facing traffic, no closer than 1.5 m and no further than 15 m from the edge of the intersecting roadway, unless it is clearly not practicable to locate the STOP sign closer to the intersection.

Within a city, town, village, police village or built-up area, the left edge of the STOP sign must be no more than 2 m from the edge of the roadway. In other (rural) areas, the left edge must be no more than 4 m and no less than 2 m from the edge of the roadway.

On divided highways and one-way roadways with visibility problems, a supplementary STOP sign should be installed on the left side of the roadway.

Where one roadway intersects another roadway at an acute angle, the STOP sign on the intersecting roadway should be turned or shielded so that motorists travelling on the higher priority roadway cannot read it.

Typical locations of STOP signs are illustrated in Figure 2.

Legal Status

Highway Traffic Act, Sections 136 and 137 (R.S.O. 1990) (STOP Sign).

Highway Traffic Act, Regulation 615, Sections 6 to 8, and Regulations 623 and 624 (R.R.O. 1990) (STOP Sign).

On roadways under the jurisdiction of a municipality, a municipal by-law is required before the STOP sign becomes enforceable.

Highway Traffic Act, Regulation 615, Section 10 (R.R.O. 1990) (ALL-WAY Tab Sign).

Minimum Sheeting Requirement

The signs must be Type III or IV as of January 1, 2002.

Type I is minimum requirement prior to the dates indicated.

Special Considerations

Amendment of Intersection Right-of-way Control

Where right-of-way is being reassigned from one roadway to another crossing roadway, through the elimination of an existing STOP sign control and the installation of STOP sign control on the previously uncontrolled roadway, an introductory period is required to safely carry out the transition.

The recommended procedure for completing such a reversal is described below. For information on the warning signs noted in the procedure, reference should be made to Book 6 (Warning Signs).

NOVATECH
Engineers, Planners & Landscape Architects

TRAFFIC SIGNAL JUSTIFICATION

LOCATION: Legget Dr at Terry Fox Dr

DATE: February 20, 2019

JUSTIFICATION 1 – Minimum Vehicular Volume

	MINIMUM REQUIREMENTS (80% SHOWN IN BRACKETS)				PERCENTAGE WARRANT								
APPROACH LANES	(1)		2 or MORE		HOUR ENDING								
FLOW CONDITION	FREE FLOW	RESTR FLOW	FREE FLOW	RESTR FLOW	8:00	9:00	10:00	12:30	13:30	16:00	17:00	18:00	TOTAL ACROSS
A. ALL APPROACHES	480	720	600	900	857	1,268	991	816	738	648	1,092	1,046	
	(385)	(575)	(480)	(720)									
100% FULFILLED					100%	100%	100%	100%	100%		100%	100%	700%
80% FULFILLED										80%			80%
ACTUAL % IF BELOW 80% VALUE													0%
												TOTAL DOWN:	780%
												AVERAGE (TOTAL/8):	98%

T Intersection Add 50%

	180	**255**	**180**	**255**									
	143	**203**	**143**	**203**									
B. MINOR STREET BOTH APPROACHES	120	170	120	170	48	80	89	237	136	215	346	293	
	(95)	(135)	(95)	(135)									
100% FULFILLED											100%	100%	200%
80% FULFILLED								80%		80%			160%
ACTUAL % IF BELOW 80% VALUE					19%	31%	35%		53%				138%
												TOTAL DOWN:	498%
												AVERAGE (TOTAL/8):	62%

JUSTIFICATION 2 – Delay To Cross Traffic

	MINIMUM REQUIREMENTS (80% SHOWN IN BRACKETS)				PERCENTAGE WARRANT								
APPROACH LANES	(1)		2 or MORE		HOUR ENDING								
FLOW CONDITION	FREE FLOW	RESTR FLOW	FREE FLOW	RESTR FLOW	8:00	9:00	10:00	12:30	13:30	16:00	17:00	18:00	TOTAL ACROSS
A. MAJOR STREET BOTH APPROACHES	480	720	600	900	809	1,188	902	579	602	433	746	753	
	(385)	(575)	(480)	(720)									
100% FULFILLED					100%	100%	100%				100%	100%	500%
80% FULFILLED								80%	80%				160%
ACTUAL % IF BELOW 80% VALUE										60%			60%
												TOTAL DOWN:	720%
												AVERAGE (TOTAL/8):	90%

B. TRAFFIC CROSSING MAJOR STREET	50	75	50	75	27	41	61	208	115	188	301	256	
	(40)	(60)	(40)	(60)									
100% FULFILLED								100%	100%	100%	100%	100%	500%
80% FULFILLED							80%						80%
ACTUAL % IF BELOW 80% VALUE					36%	55%							91%
												TOTAL DOWN:	671%
												AVERAGE (TOTAL/8):	84%

NOVATECH
Engineers, Planners & Landscape Architects

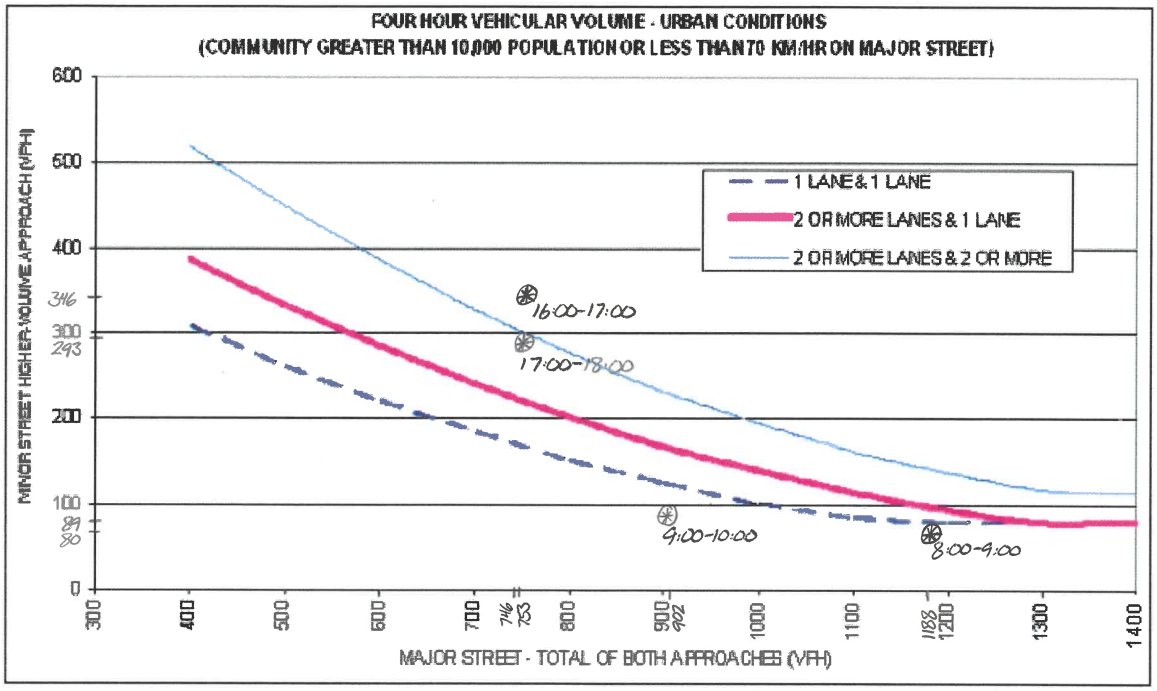
TRAFFIC SIGNAL JUSTIFICATION

LOCATION: Legget Dr at Terry Fox Dr

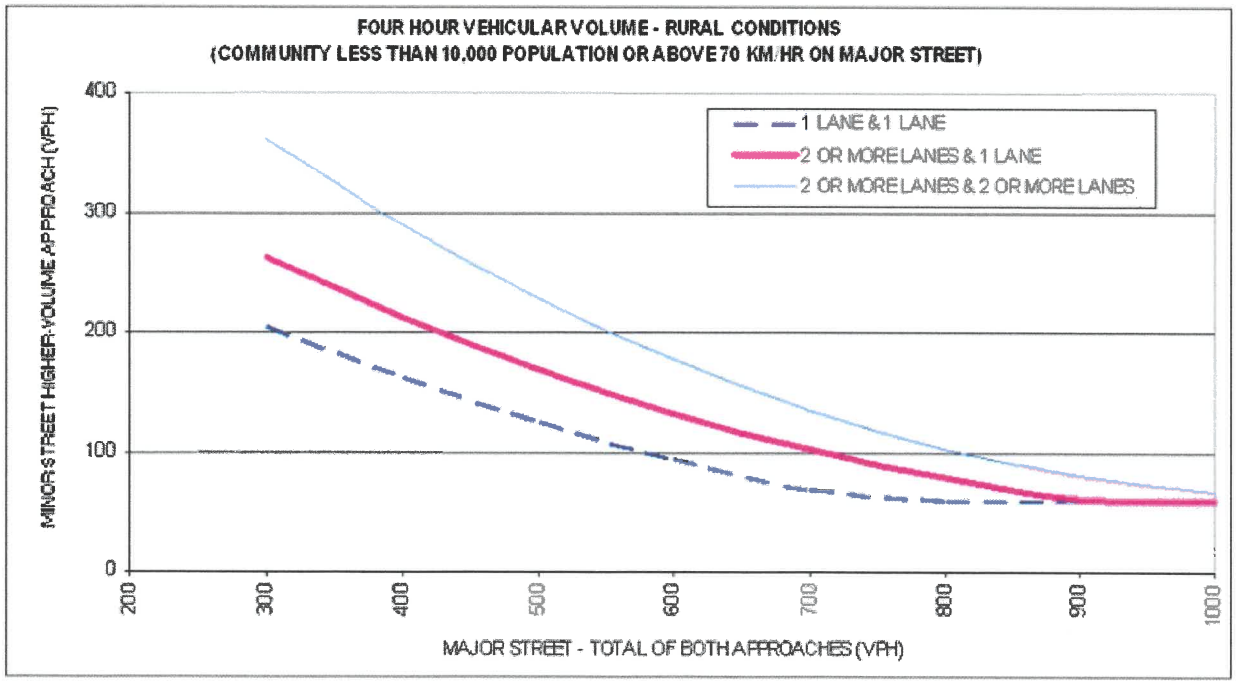
DATE: February 20, 2019

JUSTIFICATION 4 – Minimum Four-Hour Vehicle Volume

A. Restricted Flow



B. Free Flow



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Engineers, Planners & Landscape Architects

TRAFFIC SIGNAL JUSTIFICATION SUMMARY TABLE

LOCATION: LEGGET DR at TERRY FOX DR

DATE: FEBRUARY 20, 2019

JUSTIFICATION	DESCRIPTION	MINIMUM REQUIREMENT		COMPLIANCE	
		FREE FLOW	RESTRICTED FLOW	SECTIONAL %	ENTIRE % (2)
		OPERATING SPEED ≥ 70KM/H	OPERATING SPEED < 70 KM/H		
1. MINIMUM VEHICULAR WARRANT	A. Vehicle volume, all approaches for each of the heaviest 8 hours of an average day, and	480 600 (2 or more lane approach	720 900 (2 or more lane approach	98%	62%
	B. Vehicle volume, along minor street, for each of the same 8 hours.	120 180 (tee intersection)	170 255 (tee intersection)	62%	
2. DELAY TO CROSS TRAFFIC	A. Vehicle volume, along major street for each for the heaviest 8 hours of an average day, and	480 600 (2 or more lane approach)	720 900 (2 or more lane approach	90%	84%
	B (1). Combined vehicle and pedestrian volume crossing the major street for each of the same 8 hours	50	75	84%	
3. VOLUME/DELAY COMBINATION	The above Justifications (1 and 2) both satisfied to the extent of 80% or more	Yes ☐		No ☑	
4. MINIMUM FOUR HOUR VEHICLE VOLUME	Plotted point representing hourly volume for minor approach vs. major approach for four highest hours of an average day fall above the applicable curve	Yes ☐		No ☑	
5. COLLISION EXPERIENCE	A. Total reported accidents of types susceptible to correction by a traffic signal, per 12 month period averaged over a 36 month period, and	5			
	B. Adequate trial of less restrictive remedies, where satisfactory observance and enforcement have failed to reduce the number of accidents	Yes ☐		No ☐	
6. PEDESTRIAN VOLUME AND DELAY	A. Plotted point representing 8 hour pedestrian volume vs. 8 hour vehicular volume fall in justified zone, and	Yes ☐		No ☐	
	B. Plotted point representing 8 hour volume of pedestrian experiencing delays of 10 s or more vs. 8 hour pedestrian volume fall in justified zone	Yes ☐		No ☐	

NOTES

1) For definition of crossing volume refer to the Ontario Traffic Manual Book 12, Section 4.5 (Nov. 2007).
2) The lowest sectional percentage governs the entire Justification.

APPENDIX L

Signal Timing Plans

Traffic Signal Timing

City of Ottawa, Transportation Services Department

Traffic Signal Operations Unit

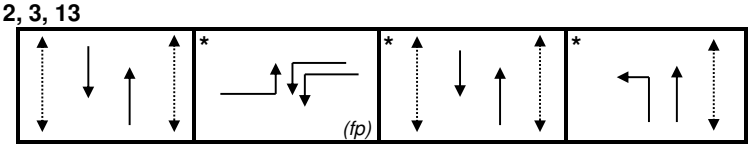
Intersection:	**Main:** March	**Side:**	Solandt
Controller:	**MS-3200**	**TSD:**	**5359**
Author:	Jean Nabolle	**Date:**	08-Jul-2019

Existing Timing Plans†

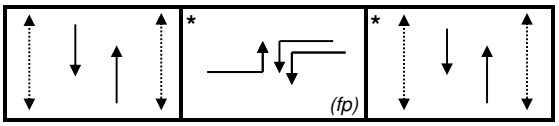
	Plan					Ped Minimum Time		
	AM Peak 1	**Off Peak** 2	**PM Peak** 3	**Night** 4	**PM Heavy** 13	***Walk***	***DW***	***A+R***
Cycle	130	110	120	85	130			
Offset	15	16	21	X	30			
NB Thru	85	60	59	38	64	7	12	4.6 + 1.7
SB Thru	46	47	47	38	52	7	12	4.6 + 1.7
EB Left (fp)	13	18	29	16	34	-	-	3.3 + 2.6
WB Left (fp)	13	18	29	16	34	-	-	3.3 + 2.6
EB Thru	32	32	32	31	32	7	18	3.3 + 3.2
WB Thru	32	32	32	31	32	7	18	3.3 + 3.2
NB Left	39	13	12	-	12	-	-	4.6 + 1.7

Phasing Sequence‡

Plan: 1, 2, 3, 13



Plan: 4



Notes: 1) For plan 1, if the pedestrian phase is not actuated then the EW thru movements will be forced off after 10 seconds green. In addition, all extra time for plan 1 will be added to the NS thru movements

Weekday

Time	Plan
0:10	4
6:30	1
9:30	2
15:00	3
16:30	13
18:00	3
18:30	2
23:00	4

Weekend

Time	Plan
0:10	4
8:00	2
22:30	4

Notes

†: Time for each direction includes amber and all red intervals

‡: Start of first phase should be used as reference point for offset

Asterisk (*) Indicates actuated phase

(fp): Fully Protected Left Turn

◄·····► Pedestrian signal

Cost is $57.63 ($51 + HST)

Traffic Signal Timing

City of Ottawa, Transportation Services Department

Traffic Signal Operations Unit

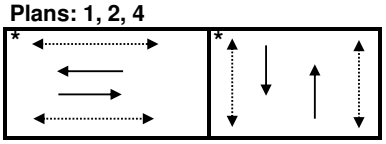
Intersection:	***Main:*** Legget	***Side:*** Solandt	
Controller:	**MS-3200**	**TSD:**	6537
Author:	Jean Nabolle	**Date:**	08-Jul-2019

Existing Timing Plans†

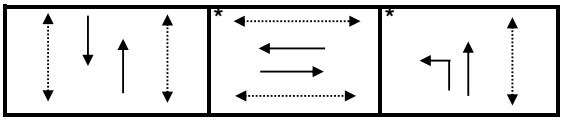
	Plan				**Ped Minimum Time**		
	AM Peak 1	**Off Peak** 2	**PM Peak** 3	**Night** 4	***Walk***	***DW***	***A+R***
Cycle	FREE	FREE	FREE	FREE			
Offset	X	X	X	X			
NB Thru	max 46.2	max 46.2	max 71.2	max 25.2	7	12	3.3+2.9
SB Thru	max 46.2	max 46.2	max 46.2	max 25.2	7	12	3.3+2.9
EB Thru	max 66.2	max 46.2	max 41.2	max 25.2	7	12	3.3+2.9
WB Thru	max 66.2	max 46.2	max 41.2	max 25.2	7	12	3.3+2.9
NB Left	-	-	max 31.2	-	-	-	3.3+2.9

Phasing Sequence‡

Plans: 1, 2, 4



Plans: 3



NOTE:

1) Plans 1, 2, & 4 have a min recall on the EB and WB movements of 15 seconds green.

2) Plan 3 has a ped recall on the NB and SB movement

Schedule

Weekday

Time	Plan
0:10	4
6:00	1
9:50	2
15:00	3
19:00	4

Weekend

Time	Plan
0:10	4

Notes

†: Time for each direction includes amber and all red intervals

‡: Start of first phase should be used as reference point for offset

Asterisk (*) Indicates actuated phase

(fp): Fully Protected Left Turn

◄·····► Pedestrian signal

Cost is $57.63 ($51 + HST)

Traffic Signal Timing

City of Ottawa, Transportation Services Department

Traffic Signal Operations Unit

Intersection:	**Main:** March	**Side:**	Carling / Station
Controller:	**MS3200**	**TSD:**	**5830**
Author:	Matthew Anderson	**Date:**	25-Jul-2019

Existing Timing Plans†

	Plan					**Ped Minimum Time**		
	AM	**Off Peak**	**PM**	**Night**	**PM Peak**	***Walk***	***DW***	***A+R***
	1	2	3	4	13			
Cycle	130	110	120	85	130			
Offset	68	76	96	X	102			
NB Thru	68	52	62	32	72	7	17	4.6+2.0
SB Thru	68	52	62	32	72	7	17	4.6+2.0
EB Thru	40	40	40	40	40	7	26	3.7+2.8
WB Thru	40	40	40	40	40	7	26	3.7+2.8
NB Left (fp)	22	18	18	13	18	-	-	4.6+2.1
SB Left (fp)	22	18	18	13	18	-	-	4.6+2.1

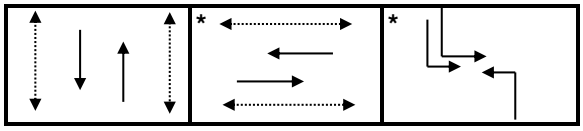
Notes:

1) For plan 2,3, 4 & 13, if the pedestrian phase is not actuated the eastbound and westbound movements will be forced off 17 seconds early.

2) The eastbound and westbound movements have a maximum green time of 30 seconds

Phasing Sequence‡

Plan: All



Schedule

Weekday

Time	Plan
0:10	4
6:30	1
9:30	2
15:00	3
16:30	13
18:00	3
18:30	2
23:00	4

Weekend

Time	Plan
0:10	4
8:00	2
22:30	4

Notes

†: Time for each direction includes amber and all red intervals

‡: Start of first phase should be used as reference point for offset

Asterisk (*) Indicates actuated phase

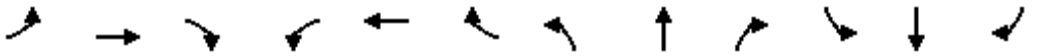
(fp): Fully Protected Left Turn

◄·····► Pedestrian signal

Cost is $57.63 ($51 + HST)

APPENDIX M

Synchro Analysis



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	29	103	128	53	120	31	605	731	675	104	1078	113
Future Volume (vph)	29	103	128	53	120	31	605	731	675	104	1078	113
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	35.0		60.0	85.0		0.0	165.0		0.0	155.0		75.0
Storage Lanes	1		1	2		0	1		1	1		1
Taper Length (m)	50.0			95.0			40.0			25.0		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor	0.99		0.97	0.98	1.00				0.97			0.98
Frt			0.850		0.969				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1610	1745	1441	3216	1666	0	1674	3252	1498	1658	3283	1483
Flt Permitted	0.950			0.950			0.092			0.345		
Satd. Flow (perm)	1597	1745	1404	3159	1666	0	162	3252	1457	602	3283	1447
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			142		9				601			132
Link Speed (k/h)		50			50			80			80	
Link Distance (m)		123.9			245.5			634.3			855.0	
Travel Time (s)		8.9			17.7			28.5			38.5	
Confl. Peds. (#/hr)	7		8	8		7	6					6
Confl. Bikes (#/hr)			1			1			12			1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	5%	2%	5%	2%	3%	3%	1%	4%	1%	2%	3%	2%
Adj. Flow (vph)	32	114	142	59	133	34	672	812	750	116	1198	126
Shared Lane Traffic (%)												
Lane Group Flow (vph)	32	114	142	59	167	0	672	812	750	116	1198	126
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.0			10.5			7.0			7.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2		1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	18.6	93.0	18.6	18.6	93.0		18.6	93.0	18.6	18.6	93.0	18.6
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	18.6	5.5	18.6	18.6	5.5		18.6	5.5	18.6	18.6	5.5	18.6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		87.5			87.5			87.5			87.5	
Detector 2 Size(m)		5.5			5.5			5.5			5.5	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA		pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases			4				2		2	6		6
Detector Phase	7	4	4	3	8		5	2	2	6	6	6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0		5.0	20.0	20.0	20.0	20.0	20.0
Minimum Split (s)	10.9	31.5	31.5	10.9	31.5		11.3	26.3	26.3	26.3	26.3	26.3
Total Split (s)	13.0	32.0	32.0	13.0	32.0		39.0	85.0	85.0	46.0	46.0	46.0
Total Split (%)	10.0%	24.6%	24.6%	10.0%	24.6%		30.0%	65.4%	65.4%	35.4%	35.4%	35.4%
Maximum Green (s)	7.1	25.5	25.5	7.1	25.5		32.7	78.7	78.7	39.7	39.7	39.7
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3		4.6	4.6	4.6	4.6	4.6	4.6
All-Red Time (s)	2.6	3.2	3.2	2.6	3.2		1.7	1.7	1.7	1.7	1.7	1.7
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
Total Lost Time (s)	5.9	6.5	6.5	5.9	6.5		6.3	6.3	6.3	6.3	6.3	6.3
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes			Yes	Yes	Yes
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
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	C-Max	C-Max	C-Max
Walk Time (s)		7.0	7.0		7.0			7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		18.0	18.0		18.0			12.0	12.0	12.0	12.0	12.0
Pedestrian Calls (#/hr)		8	8		7			6	6	0	0	0
Act Effct Green (s)	6.7	17.1	17.1	6.8	19.7		89.7	89.7	89.7	39.7	39.7	39.7
Actuated g/C Ratio	0.05	0.13	0.13	0.05	0.15		0.69	0.69	0.69	0.31	0.31	0.31
v/c Ratio	0.39	0.50	0.46	0.35	0.64		1.09	0.36	0.63	0.63	1.20	0.24
Control Delay	73.3	58.5	12.2	65.3	60.1		68.2	2.3	5.3	56.5	137.6	6.0
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	73.3	58.5	12.2	65.3	60.1		68.2	2.3	5.3	56.5	137.6	6.0
LOS	E	E	B	E	E		E	A	A	E	F	A
Approach Delay		37.3			61.5			23.1			119.6	
Approach LOS		D			E			C			F	
Queue Length 50th (m)	7.4	25.2	0.0	7.0	36.2		~170.4	23.0	22.6	23.6	~179.7	0.0
Queue Length 95th (m)	17.4	39.8	16.1	13.7	54.8		m#167.1	m12.3	m8.8	#47.1	#218.4	11.9
Internal Link Dist (m)		99.9			221.5			610.3			831.0	
Turn Bay Length (m)	35.0		60.0	85.0			165.0			155.0		75.0
Base Capacity (vph)	87	342	389	175	334		619	2243	1191	183	1002	533
Starvation Cap Reductn	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
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.37	0.33	0.37	0.34	0.50		1.09	0.36	0.63	0.63	1.20	0.24

Intersection Summary

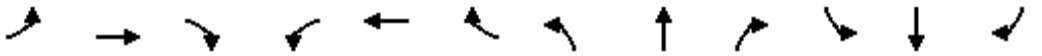
Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 15 (12%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.20
Intersection Signal Delay: 59.3 Intersection LOS: E
Intersection Capacity Utilization 103.1% ICU Level of Service G
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: March & Solandt

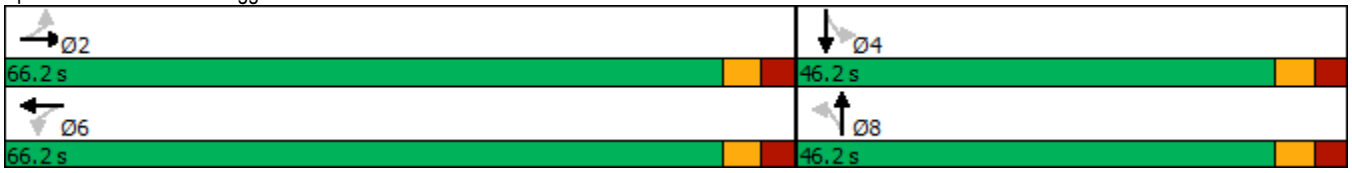


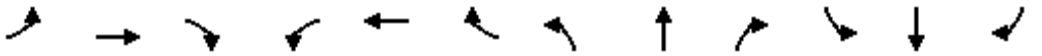
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	429	143	238	2	10	6	99	179	49	32	184	53
Future Volume (vph)	429	143	238	2	10	6	99	179	49	32	184	53
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	110.0		0.0	40.0		0.0	50.0		0.0	30.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	70.0			30.0			60.0			30.0		
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
Ped Bike Factor	0.99	0.99		1.00	0.99			0.99		0.98		
Frt		0.906			0.942			0.968			0.966	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1674	1564	0	1674	1506	0	1566	1673	0	1610	1689	0
Flt Permitted	0.746			0.472			0.503			0.521		
Satd. Flow (perm)	1300	1564	0	831	1506	0	829	1673	0	866	1689	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		114			7			13			14	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		245.5			306.0			489.3			751.0	
Travel Time (s)		17.7			22.0			35.2			54.1	
Confl. Peds. (#/hr)	4		1	1		4			11	11		
Confl. Bikes (#/hr)									3			
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	1%	1%	2%	1%	10%	10%	8%	2%	1%	5%	2%	1%
Adj. Flow (vph)	477	159	264	2	11	7	110	199	54	36	204	59
Shared Lane Traffic (%)												
Lane Group Flow (vph)	477	423	0	2	18	0	110	253	0	36	263	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.0			3.5			3.5			3.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	18.6	93.0		18.6	93.0		18.6	93.0		18.6	93.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	18.6	5.5		18.6	5.5		18.6	5.5		18.6	5.5	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		87.5			87.5			87.5			87.5	
Detector 2 Size(m)		5.5			5.5			5.5			5.5	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		4	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	15.0	15.0		15.0	15.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	25.2	25.2		25.2	25.2		25.2	25.2		25.2	25.2	
Total Split (s)	66.2	66.2		66.2	66.2		46.2	46.2		46.2	46.2	
Total Split (%)	58.9%	58.9%		58.9%	58.9%		41.1%	41.1%		41.1%	41.1%	
Maximum Green (s)	60.0	60.0		60.0	60.0		40.0	40.0		40.0	40.0	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.9	2.9		2.9	2.9		2.9	2.9		2.9	2.9	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.2	6.2		6.2	6.2		6.2	6.2		6.2	6.2	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Min	Min		Min	Min		None	None		None	None	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Pedestrian Calls (#/hr)	1	1		4	4		11	11		0	0	
Act Effct Green (s)	41.5	41.5		41.5	41.5		19.3	19.3		19.3	19.3	
Actuated g/C Ratio	0.56	0.56		0.56	0.56		0.26	0.26		0.26	0.26	
v/c Ratio	0.66	0.46		0.00	0.02		0.51	0.57		0.16	0.59	
Control Delay	17.2	8.9		8.5	6.8		37.0	31.0		27.4	31.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	17.2	8.9		8.5	6.8		37.0	31.0		27.4	31.3	
LOS	B	A		A	A		D	C		C	C	
Approach Delay		13.3			6.9			32.8			30.8	
Approach LOS		B			A			C			C	
Queue Length 50th (m)	37.3	19.2		0.1	0.6		12.1	26.8		3.6	28.0	
Queue Length 95th (m)	88.3	49.9		1.1	3.6		31.8	58.1		12.2	60.4	
Internal Link Dist (m)		221.5			282.0			465.3			727.0	
Turn Bay Length (m)	110.0			40.0			50.0			30.0		
Base Capacity (vph)	1044	1278		667	1211		494	1003		516	1013	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.46	0.33		0.00	0.01		0.22	0.25		0.07	0.26	

Intersection Summary			
Area Type:	Other		
Cycle Length: 112.4			
Actuated Cycle Length: 74.6			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.66			
Intersection Signal Delay: 21.0		Intersection LOS: C	
Intersection Capacity Utilization 69.7%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 2: Legget & Solandt





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	63	26	9	37	12	174	87	1907	83	316	919	123
Future Volume (vph)	63	26	9	37	12	174	87	1907	83	316	919	123
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	0.0		20.0	0.0		60.0	100.0		80.0	185.0		20.0
Storage Lanes	0		1	0		1	1		1	2		1
Taper Length (m)	20.0			20.0			40.0			60.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Ped Bike Factor		1.00	0.98		1.00	0.98	1.00		0.95	1.00		0.97
Frt			0.850			0.850			0.850			0.850
Flt Protected		0.966			0.963		0.950			0.950		
Satd. Flow (prot)	0	1679	1375	0	1648	1469	1658	3316	1388	3216	3316	1498
Flt Permitted		0.756			0.712		0.950			0.950		
Satd. Flow (perm)	0	1311	1349	0	1212	1441	1653	3316	1316	3207	3316	1450
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			86			193			86			86
Link Speed (k/h)		50			60			80			80	
Link Distance (m)		247.8			333.9			554.1			634.3	
Travel Time (s)		17.8			20.0			24.9			28.5	
Confl. Peds. (#/hr)	3		6	6		3	4		20	20		4
Confl. Bikes (#/hr)						4			18			2
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	3%	1%	10%	5%	1%	3%	2%	2%	9%	2%	2%	1%
Adj. Flow (vph)	70	29	10	41	13	193	97	2119	92	351	1021	137
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	99	10	0	54	193	97	2119	92	351	1021	137
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		1.8			0.0			10.5			10.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	18.6	93.0	18.6	18.6	93.0	18.6	18.6	93.0	18.6	18.6	93.0	18.6
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	18.6	5.5	18.6	18.6	5.5	18.6	18.6	5.5	18.6	18.6	5.5	18.6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (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
Detector 1 Queue (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
Detector 1 Delay (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
Detector 2 Position(m)		87.5			87.5			87.5			87.5	
Detector 2 Size(m)		5.5			5.5			5.5			5.5	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	5.0	20.0	20.0	5.0	20.0	20.0
Minimum Split (s)	39.5	39.5	39.5	39.5	39.5	39.5	17.6	30.6	30.6	17.6	30.6	30.6
Total Split (s)	40.0	40.0	40.0	40.0	40.0	40.0	22.0	68.0	68.0	22.0	68.0	68.0
Total Split (%)	30.8%	30.8%	30.8%	30.8%	30.8%	30.8%	16.9%	52.3%	52.3%	16.9%	52.3%	52.3%
Maximum Green (s)	33.5	33.5	33.5	33.5	33.5	33.5	15.3	61.4	61.4	15.3	61.4	61.4
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	4.6	4.6	4.6	4.6	4.6	4.6
All-Red Time (s)	2.8	2.8	2.8	2.8	2.8	2.8	2.1	2.0	2.0	2.1	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.5	6.5		6.5	6.5	6.7	6.6	6.6	6.7	6.6	6.6
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
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	None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)	26.0	26.0	26.0	26.0	26.0	26.0		17.0	17.0		17.0	17.0
Pedestrian Calls (#/hr)	6	6	6	3	3	3		4	4		20	20
Act Effct Green (s)		17.7	17.7		17.7	17.7	12.5	73.7	73.7	18.9	80.1	80.1
Actuated g/C Ratio		0.14	0.14		0.14	0.14	0.10	0.57	0.57	0.15	0.62	0.62
v/c Ratio		0.56	0.04		0.33	0.53	0.61	1.13	0.12	0.75	0.50	0.15
Control Delay		62.4	0.3		53.0	11.3	72.3	93.2	4.4	78.2	9.8	3.0
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		62.4	0.3		53.0	11.3	72.3	93.2	4.4	78.2	9.8	3.0
LOS		E	A		D	B	E	F	A	E	A	A
Approach Delay		56.7			20.4			88.8			25.1	
Approach LOS		E			C			F			C	
Queue Length 50th (m)		22.7	0.0		12.0	0.0	22.3	~302.5	0.6	40.4	8.1	0.0
Queue Length 95th (m)		33.9	0.0		20.5	16.8	38.3	#382.3	9.3	m32.2	m114.1	m12.7
Internal Link Dist (m)		223.8			309.9			530.1			610.3	
Turn Bay Length (m)			20.0			60.0	100.0		80.0	185.0		20.0
Base Capacity (vph)		337	411		312	514	196	1878	782	467	2042	926
Starvation Cap Reductn		0	0		0	0	0	0	0	0	0	0
Spillback Cap Reductn		0	0		0	0	0	0	0	0	0	0
Storage Cap Reductn		0	0		0	0	0	0	0	0	0	0
Reduced v/c Ratio		0.29	0.02		0.17	0.38	0.49	1.13	0.12	0.75	0.50	0.15

Intersection Summary

Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 68 (52%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.13
Intersection Signal Delay: 60.9 Intersection LOS: E
Intersection Capacity Utilization 97.0% ICU Level of Service F
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: March & Station/Carling

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	525	536	44	130	39	38
Future Volume (vph)	525	536	44	130	39	38
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.932				0.933	
Flt Protected				0.987	0.975	
Satd. Flow (prot)	1643	0	0	1634	1565	0
Flt Permitted				0.987	0.975	
Satd. Flow (perm)	1643	0	0	1634	1565	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	336.6			459.4	751.0	
Travel Time (s)	24.2			33.1	54.1	
Confl. Peds. (#/hr)		17	17			2
Confl. Bikes (#/hr)		1				
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	1%	1%	9%	7%	3%	4%
Adj. Flow (vph)	583	596	49	144	43	42
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1179	0	0	193	85	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.0			3.0	3.5	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	5.0			5.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 76.7%		ICU Level of Service D	
Analysis Period (min) 15			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	87	41	645	613	68	178	117	1533	66	23	863	68
Future Volume (vph)	87	41	645	613	68	178	117	1533	66	23	863	68
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	35.0		60.0	85.0		0.0	165.0		0.0	155.0		75.0
Storage Lanes	1		1	2		0	1		1	1		1
Taper Length (m)	50.0			95.0			40.0			25.0		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor	0.99		0.97	0.98	0.98				0.97			0.96
Frt			0.850		0.892				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1658	1695	1498	3248	1547	0	1626	3349	1469	1674	3316	1455
Flt Permitted	0.950			0.950			0.110			0.088		
Satd. Flow (perm)	1649	1695	1455	3185	1547	0	188	3349	1432	155	3316	1401
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			130		90				79			132
Link Speed (k/h)		50			50			80			80	
Link Distance (m)		127.9			245.5			634.3			855.0	
Travel Time (s)		9.2			17.7			28.5			38.5	
Confl. Peds. (#/hr)	5		8	8		5	11		1	1		11
Confl. Bikes (#/hr)			4			2			2			5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	5%	1%	1%	1%	1%	4%	1%	3%	1%	2%	4%
Adj. Flow (vph)	97	46	717	681	76	198	130	1703	73	26	959	76
Shared Lane Traffic (%)												
Lane Group Flow (vph)	97	46	717	681	274	0	130	1703	73	26	959	76
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.0			10.5			7.0			7.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2		1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	18.6	93.0	18.6	18.6	93.0		18.6	93.0	18.6	18.6	93.0	18.6
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	18.6	5.5	18.6	18.6	5.5		18.6	5.5	18.6	18.6	5.5	18.6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		87.5			87.5			87.5			87.5	
Detector 2 Size(m)		5.5			5.5			5.5			5.5	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA		pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases			4				2		2	6		6
Detector Phase	7	4	4	3	8		5	2	2	6	6	6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0		5.0	20.0	20.0	20.0	20.0	20.0
Minimum Split (s)	10.9	31.5	31.5	10.9	31.5		11.3	26.3	26.3	26.3	26.3	26.3
Total Split (s)	34.0	32.0	32.0	34.0	32.0		12.0	64.0	64.0	52.0	52.0	52.0
Total Split (%)	26.2%	24.6%	24.6%	26.2%	24.6%		9.2%	49.2%	49.2%	40.0%	40.0%	40.0%
Maximum Green (s)	28.1	25.5	25.5	28.1	25.5		5.7	57.7	57.7	45.7	45.7	45.7
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3		4.6	4.6	4.6	4.6	4.6	4.6
All-Red Time (s)	2.6	3.2	3.2	2.6	3.2		1.7	1.7	1.7	1.7	1.7	1.7
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
Total Lost Time (s)	5.9	6.5	6.5	5.9	6.5		6.3	6.3	6.3	6.3	6.3	6.3
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes			Yes	Yes	Yes
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
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	C-Max	C-Max	C-Max
Walk Time (s)		7.0	7.0		7.0			7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		18.0	18.0		18.0			12.0	12.0	12.0	12.0	12.0
Pedestrian Calls (#/hr)		8	8		5			1	1	11	11	11
Act Effct Green (s)	12.9	25.5	25.5	28.1	40.7		57.7	57.7	57.7	45.7	45.7	45.7
Actuated g/C Ratio	0.10	0.20	0.20	0.22	0.31		0.44	0.44	0.44	0.35	0.35	0.35
v/c Ratio	0.59	0.14	1.84	0.97	0.50		0.89	1.15	0.11	0.48	0.82	0.13
Control Delay	69.8	44.6	414.4	77.9	28.5		52.4	95.8	1.3	66.1	45.6	0.7
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	69.8	44.6	414.4	77.9	28.5		52.4	95.8	1.3	66.1	45.6	0.7
LOS	E	D	F	E	C		D	F	A	E	D	A
Approach Delay		355.8			63.7			89.2			42.9	
Approach LOS		F			E			F			D	
Queue Length 50th (m)	22.3	9.1	~232.0	82.8	35.0		11.1	~248.5	1.3	4.8	108.1	0.0
Queue Length 95th (m)	37.5	19.3	#300.2	#117.4	63.3		m#17.3	#290.5	m1.6	#17.5	132.5	0.6
Internal Link Dist (m)		103.9			221.5			610.3			831.0	
Turn Bay Length (m)	35.0		60.0	85.0			165.0			155.0		75.0
Base Capacity (vph)	358	332	389	702	545		146	1486	679	54	1165	578
Starvation Cap Reductn	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
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.27	0.14	1.84	0.97	0.50		0.89	1.15	0.11	0.48	0.82	0.13

Intersection Summary

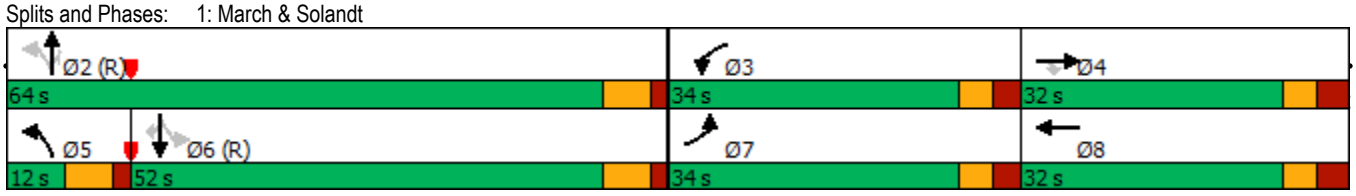
Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 30 (23%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.84
Intersection Signal Delay: 121.8 Intersection LOS: F
Intersection Capacity Utilization 111.9% ICU Level of Service H
Analysis Period (min) 15

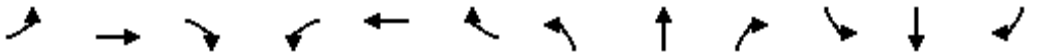
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: March & Solandt





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	56	10	54	44	146	9	290	106	3	3	246	446
Future Volume (vph)	56	10	54	44	146	9	290	106	3	3	246	446
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	110.0		0.0	40.0		0.0	50.0		0.0	30.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	70.0			30.0			60.0			30.0		
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
Ped Bike Factor	0.99	0.97		0.98	1.00			1.00		0.97	0.98	
Frt		0.873			0.991			0.996			0.903	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1610	1433	0	1658	1735	0	1674	1753	0	1674	1559	0
Flt Permitted	0.564			0.711			0.086			0.679		
Satd. Flow (perm)	950	1433	0	1220	1735	0	152	1753	0	1156	1559	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		60			3			2			83	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		245.5			306.0			489.3			751.0	
Travel Time (s)		17.7			22.0			35.2			54.1	
Confl. Peds. (#/hr)	3		6	6		3	2		13	13		2
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	5%	10%	4%	2%	1%	10%	1%	1%	1%	1%	2%	1%
Adj. Flow (vph)	62	11	60	49	162	10	322	118	3	3	273	496
Shared Lane Traffic (%)												
Lane Group Flow (vph)	62	71	0	49	172	0	322	121	0	3	769	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.0			3.5			3.5			3.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	18.6	93.0		18.6	93.0		18.6	93.0		18.6	93.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	18.6	5.5		18.6	5.5		18.6	5.5		18.6	5.5	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		87.5			87.5			87.5			87.5	
Detector 2 Size(m)		5.5			5.5			5.5			5.5	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		2			6		3	8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		3	8		4	4	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	25.2	25.2		25.2	25.2		16.2	25.2		25.2	25.2	
Total Split (s)	41.2	41.2		41.2	41.2		31.2	77.4		46.2	46.2	
Total Split (%)	34.7%	34.7%		34.7%	34.7%		26.3%	65.3%		39.0%	39.0%	
Maximum Green (s)	35.0	35.0		35.0	35.0		25.0	71.2		40.0	40.0	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.9	2.9		2.9	2.9		2.9	2.9		2.9	2.9	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.2	6.2		6.2	6.2		6.2	6.2		6.2	6.2	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Ped		Ped	Ped	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0		7.0	7.0	
Flash Dont Walk (s)	12.0	12.0		12.0	12.0			12.0		12.0	12.0	
Pedestrian Calls (#/hr)	6	6		3	3			13		2	2	
Act Effct Green (s)	15.1	15.1		15.1	15.1		64.9	64.9		40.4	40.4	
Actuated g/C Ratio	0.16	0.16		0.16	0.16		0.70	0.70		0.44	0.44	
v/c Ratio	0.40	0.25		0.25	0.60		0.80	0.10		0.01	1.06	
Control Delay	43.9	14.4		38.0	45.3		36.9	5.2		19.3	75.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	43.9	14.4		38.0	45.3		36.9	5.2		19.3	75.4	
LOS	D	B		D	D		D	A		B	E	
Approach Delay		28.1			43.7			28.3			75.1	
Approach LOS		C			D			C			E	
Queue Length 50th (m)	9.2	1.5		7.1	26.0		35.0	5.2		0.3	~130.7	
Queue Length 95th (m)	21.3	12.3		17.1	47.0		70.3	12.9		2.2	#235.4	
Internal Link Dist (m)		221.5			282.0			465.3			727.0	
Turn Bay Length (m)	110.0			40.0			50.0			30.0		
Base Capacity (vph)	363	585		466	665		522	1364		505	728	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.17	0.12		0.11	0.26		0.62	0.09		0.01	1.06	

Intersection Summary

Area Type: Other
Cycle Length: 118.6
Actuated Cycle Length: 92.5
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.06
Intersection Signal Delay: 53.5 Intersection LOS: D
Intersection Capacity Utilization 98.4% ICU Level of Service F
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

Splits and Phases: 2: Legget & Solandt

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	13	30	120	19	317	27	1351	35	291	1861	50
Future Volume (vph)	26	13	30	120	19	317	27	1351	35	291	1861	50
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	0.0		20.0	0.0		60.0	100.0		80.0	185.0		20.0
Storage Lanes	0		1	0		1	1		1	2		1
Taper Length (m)	20.0			20.0			40.0			60.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Ped Bike Factor		1.00	0.98		1.00	0.98	1.00		0.98	1.00		0.96
Frt			0.850			0.850			0.850			0.850
Flt Protected		0.967			0.959		0.950			0.950		
Satd. Flow (prot)	0	1682	1375	0	1634	1469	1658	3316	1388	3216	3316	1498
Flt Permitted		0.750			0.725		0.950			0.950		
Satd. Flow (perm)	0	1303	1347	0	1233	1443	1657	3316	1366	3214	3316	1437
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			86			176			86			86
Link Speed (k/h)		50			60			80			80	
Link Distance (m)		247.8			333.9			554.1			634.3	
Travel Time (s)		17.8			20.0			24.9			28.5	
Confl. Peds. (#/hr)	2		2	2		2	5		2	2		5
Confl. Bikes (#/hr)			7			4			1			10
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	3%	1%	10%	5%	1%	3%	2%	2%	9%	2%	2%	1%
Adj. Flow (vph)	29	14	33	133	21	352	30	1501	39	323	2068	56
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	43	33	0	154	352	30	1501	39	323	2068	56
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		1.8			0.0			10.5			10.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	18.6	93.0	18.6	18.6	93.0	18.6	18.6	93.0	18.6	18.6	93.0	18.6
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	18.6	5.5	18.6	18.6	5.5	18.6	18.6	5.5	18.6	18.6	5.5	18.6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (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
Detector 1 Queue (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
Detector 1 Delay (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
Detector 2 Position(m)		87.5			87.5			87.5			87.5	
Detector 2 Size(m)		5.5			5.5			5.5			5.5	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	5.0	20.0	20.0	5.0	20.0	20.0
Minimum Split (s)	39.5	39.5	39.5	39.5	39.5	39.5	17.6	30.6	30.6	17.6	30.6	30.6
Total Split (s)	40.0	40.0	40.0	40.0	40.0	40.0	18.0	72.0	72.0	18.0	72.0	72.0
Total Split (%)	30.8%	30.8%	30.8%	30.8%	30.8%	30.8%	13.8%	55.4%	55.4%	13.8%	55.4%	55.4%
Maximum Green (s)	33.5	33.5	33.5	33.5	33.5	33.5	11.3	65.4	65.4	11.3	65.4	65.4
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	4.6	4.6	4.6	4.6	4.6	4.6
All-Red Time (s)	2.8	2.8	2.8	2.8	2.8	2.8	2.1	2.0	2.0	2.1	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.5	6.5		6.5	6.5	6.7	6.6	6.6	6.7	6.6	6.6
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
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	None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)	26.0	26.0	26.0	26.0	26.0	26.0		17.0	17.0		17.0	17.0
Pedestrian Calls (#/hr)	2	2	2	2	2	2		2	2		5	5
Act Effct Green (s)		24.9	24.9		24.9	24.9	7.9	67.1	67.1	18.2	82.5	82.5
Actuated g/C Ratio		0.19	0.19		0.19	0.19	0.06	0.52	0.52	0.14	0.63	0.63
v/c Ratio		0.17	0.10		0.65	0.84	0.30	0.88	0.05	0.72	0.98	0.06
Control Delay		42.1	0.6		60.2	42.1	65.4	35.4	0.1	52.4	25.0	1.7
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		42.1	0.6		60.2	42.1	65.4	35.4	0.1	52.4	25.0	1.7
LOS		D	A		E	D	E	D	A	D	C	A
Approach Delay		24.1			47.6			35.1			28.1	
Approach LOS		C			D			D			C	
Queue Length 50th (m)		8.5	0.0		33.6	41.7	6.9	164.5	0.0	36.3	~281.1	0.0
Queue Length 95th (m)		17.0	0.0		51.1	71.4	15.9	197.5	0.0	m#44.0	m#265.8	m0.0
Internal Link Dist (m)		223.8			309.9			530.1			610.3	
Turn Bay Length (m)			20.0			60.0	100.0		80.0	185.0		20.0
Base Capacity (vph)		335	410		317	502	144	1710	746	450	2104	943
Starvation Cap Reductn		0	0		0	0	0	0	0	0	0	0
Spillback Cap Reductn		0	0		0	0	0	0	0	0	0	0
Storage Cap Reductn		0	0		0	0	0	0	0	0	0	0
Reduced v/c Ratio		0.13	0.08		0.49	0.70	0.21	0.88	0.05	0.72	0.98	0.06

Intersection Summary

Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 102 (78%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.98
Intersection Signal Delay: 32.6 Intersection LOS: C
Intersection Capacity Utilization 90.5% ICU Level of Service E
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

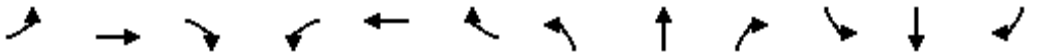
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: March & Station/Carling

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	119	78	24	611	288	40
Future Volume (vph)	119	78	24	611	288	40
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.946				0.984	
Flt Protected				0.998	0.958	
Satd. Flow (prot)	1648	0	0	1759	1644	0
Flt Permitted				0.998	0.958	
Satd. Flow (perm)	1648	0	0	1759	1644	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	336.6			459.4	751.0	
Travel Time (s)	24.2			33.1	54.1	
Confl. Peds. (#/hr)		13	13			
Confl. Bikes (#/hr)						2
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	1%	4%	1%	1%	1%	10%
Adj. Flow (vph)	132	87	27	679	320	44
Shared Lane Traffic (%)						
Lane Group Flow (vph)	219	0	0	706	364	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.0			3.0	3.5	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	5.0			5.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 77.3%		ICU Level of Service D	
Analysis Period (min) 15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	105	131	54	122	32	611	738	682	105	1089	114
Future Volume (vph)	30	105	131	54	122	32	611	738	682	105	1089	114
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	35.0		60.0	85.0		0.0	165.0		0.0	155.0		75.0
Storage Lanes	1		1	2		0	1		1	1		1
Taper Length (m)	50.0			95.0			40.0			25.0		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor	0.99		0.97	0.98	1.00				0.97			0.98
Frt			0.850		0.969				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1610	1745	1441	3216	1666	0	1674	3252	1498	1658	3283	1483
Flt Permitted	0.950			0.950			0.092			0.371		
Satd. Flow (perm)	1596	1745	1404	3158	1666	0	162	3252	1457	647	3283	1447
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			131		9				623			132
Link Speed (k/h)		50			50			80			80	
Link Distance (m)		126.7			245.5			634.3			855.0	
Travel Time (s)		9.1			17.7			28.5			38.5	
Confl. Peds. (#/hr)	7		8	8		7	6					6
Confl. Bikes (#/hr)			1			1			12			1
Peak Hour 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
Heavy Vehicles (%)	5%	2%	5%	2%	3%	3%	1%	4%	1%	2%	3%	2%
Adj. Flow (vph)	30	105	131	54	122	32	611	738	682	105	1089	114
Shared Lane Traffic (%)												
Lane Group Flow (vph)	30	105	131	54	154	0	611	738	682	105	1089	114
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.0			10.5			7.0			7.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2		1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	18.6	93.0	18.6	18.6	93.0		18.6	93.0	18.6	18.6	93.0	18.6
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	18.6	5.5	18.6	18.6	5.5		18.6	5.5	18.6	18.6	5.5	18.6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		87.5			87.5			87.5			87.5	
Detector 2 Size(m)		5.5			5.5			5.5			5.5	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA		pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases			4				2		2	6		6
Detector Phase	7	4	4	3	8		5	2	2	6	6	6

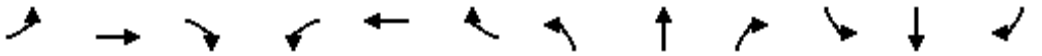
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0		5.0	20.0	20.0	20.0	20.0	20.0
Minimum Split (s)	10.9	31.5	31.5	10.9	31.5		11.3	26.3	26.3	26.3	26.3	26.3
Total Split (s)	13.0	32.0	32.0	13.0	32.0		39.0	85.0	85.0	46.0	46.0	46.0
Total Split (%)	10.0%	24.6%	24.6%	10.0%	24.6%		30.0%	65.4%	65.4%	35.4%	35.4%	35.4%
Maximum Green (s)	7.1	25.5	25.5	7.1	25.5		32.7	78.7	78.7	39.7	39.7	39.7
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3		4.6	4.6	4.6	4.6	4.6	4.6
All-Red Time (s)	2.6	3.2	3.2	2.6	3.2		1.7	1.7	1.7	1.7	1.7	1.7
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
Total Lost Time (s)	5.9	6.5	6.5	5.9	6.5		6.3	6.3	6.3	6.3	6.3	6.3
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes			Yes	Yes	Yes
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
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	C-Max	C-Max	C-Max
Walk Time (s)		7.0	7.0		7.0			7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		18.0	18.0		18.0			12.0	12.0	12.0	12.0	12.0
Pedestrian Calls (#/hr)		8	8		7			6	6	0	0	0
Act Effct Green (s)	6.7	16.4	16.4	6.7	19.0		90.4	90.4	90.4	39.7	39.7	39.7
Actuated g/C Ratio	0.05	0.13	0.13	0.05	0.15		0.70	0.70	0.70	0.31	0.31	0.31
v/c Ratio	0.37	0.48	0.45	0.33	0.62		0.97	0.33	0.57	0.53	1.09	0.21
Control Delay	72.1	58.5	12.6	64.6	59.1		41.7	2.7	4.2	49.1	97.6	4.6
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	72.1	58.5	12.6	64.6	59.1		41.7	2.7	4.2	49.1	97.6	4.6
LOS	E	E	B	E	E		D	A	A	D	F	A
Approach Delay		37.4			60.6			14.9			85.6	
Approach LOS		D			E			B			F	
Queue Length 50th (m)	7.0	23.3	0.0	6.4	33.2		~137.5	23.3	15.0	20.5	~151.6	0.0
Queue Length 95th (m)	16.4	37.5	15.5	12.8	50.5		m#171.7	m12.6	m8.8	39.3	#190.0	9.0
Internal Link Dist (m)		102.7			221.5			610.3			831.0	
Turn Bay Length (m)	35.0		60.0	85.0			165.0			155.0		75.0
Base Capacity (vph)	87	342	380	175	334		629	2261	1203	197	1002	533
Starvation Cap Reductn	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
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.34	0.31	0.34	0.31	0.46		0.97	0.33	0.57	0.53	1.09	0.21

Intersection Summary

Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 15 (12%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.09
Intersection Signal Delay: 43.2 Intersection LOS: D
Intersection Capacity Utilization 104.0% ICU Level of Service G
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: March & Solandt



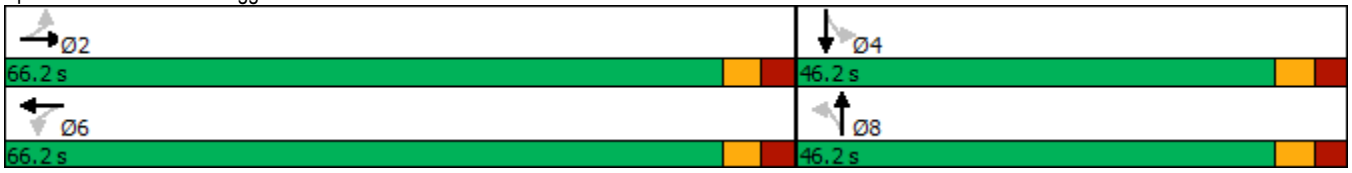
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	438	146	243	2	10	6	101	183	50	33	188	54
Future Volume (vph)	438	146	243	2	10	6	101	183	50	33	188	54
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	110.0		0.0	40.0		0.0	50.0		0.0	30.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	70.0			30.0			60.0			30.0		
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
Ped Bike Factor	0.99	0.99		1.00	0.99			0.99		0.98		
Frt		0.906			0.944			0.968			0.967	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1674	1564	0	1674	1509	0	1566	1673	0	1610	1691	0
Flt Permitted	0.747			0.502			0.560			0.576		
Satd. Flow (perm)	1301	1564	0	884	1509	0	923	1673	0	956	1691	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		114			6			14			14	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		245.5			306.0			489.3			751.0	
Travel Time (s)		17.7			22.0			35.2			54.1	
Confl. Peds. (#/hr)	4		1	1		4			11	11		
Confl. Bikes (#/hr)									3			
Peak Hour 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
Heavy Vehicles (%)	1%	1%	2%	1%	10%	10%	8%	2%	1%	5%	2%	1%
Adj. Flow (vph)	438	146	243	2	10	6	101	183	50	33	188	54
Shared Lane Traffic (%)												
Lane Group Flow (vph)	438	389	0	2	16	0	101	233	0	33	242	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.0			3.5			3.5			3.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	18.6	93.0		18.6	93.0		18.6	93.0		18.6	93.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	18.6	5.5		18.6	5.5		18.6	5.5		18.6	5.5	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		87.5			87.5			87.5			87.5	
Detector 2 Size(m)		5.5			5.5			5.5			5.5	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		4	4	

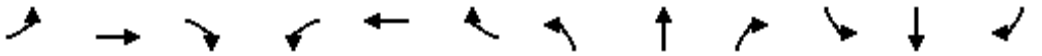
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	15.0	15.0		15.0	15.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	25.2	25.2		25.2	25.2		25.2	25.2		25.2	25.2	
Total Split (s)	66.2	66.2		66.2	66.2		46.2	46.2		46.2	46.2	
Total Split (%)	58.9%	58.9%		58.9%	58.9%		41.1%	41.1%		41.1%	41.1%	
Maximum Green (s)	60.0	60.0		60.0	60.0		40.0	40.0		40.0	40.0	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.9	2.9		2.9	2.9		2.9	2.9		2.9	2.9	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.2	6.2		6.2	6.2		6.2	6.2		6.2	6.2	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Min	Min		Min	Min		None	None		None	None	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Pedestrian Calls (#/hr)	1	1		4	4		11	11		0	0	
Act Effct Green (s)	36.5	36.5		36.5	36.5		17.4	17.4		17.4	17.4	
Actuated g/C Ratio	0.54	0.54		0.54	0.54		0.26	0.26		0.26	0.26	
v/c Ratio	0.62	0.43		0.00	0.02		0.43	0.53		0.13	0.54	
Control Delay	15.4	8.0		7.5	6.2		31.4	28.1		25.5	28.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	15.4	8.0		7.5	6.2		31.4	28.1		25.5	28.4	
LOS	B	A		A	A		C	C		C	C	
Approach Delay		11.9			6.4			29.1			28.1	
Approach LOS		B			A			C			C	
Queue Length 50th (m)	28.9	14.6		0.1	0.5		9.2	20.4		2.8	21.3	
Queue Length 95th (m)	70.0	39.4		1.0	3.0		28.9	53.6		11.4	55.7	
Internal Link Dist (m)		221.5			282.0			465.3			727.0	
Turn Bay Length (m)	110.0			40.0			50.0			30.0		
Base Capacity (vph)	1109	1350		753	1287		605	1102		627	1114	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.39	0.29		0.00	0.01		0.17	0.21		0.05	0.22	

Intersection Summary

Area Type: Other
Cycle Length: 112.4
Actuated Cycle Length: 67.7
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.62
Intersection Signal Delay: 18.9 Intersection LOS: B
Intersection Capacity Utilization 70.4% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 2: Legget & Solandt





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	63	26	9	37	12	176	87	1926	84	319	928	123
Future Volume (vph)	63	26	9	37	12	176	87	1926	84	319	928	123
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	0.0		20.0	0.0		60.0	100.0		80.0	185.0		20.0
Storage Lanes	0		1	0		1	1		1	2		1
Taper Length (m)	20.0			20.0			40.0			60.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Ped Bike Factor		1.00	0.98		1.00	0.98	1.00		0.95	1.00		0.97
Frt			0.850			0.850			0.850			0.850
Flt Protected		0.966			0.964		0.950			0.950		
Satd. Flow (prot)	0	1679	1375	0	1650	1469	1658	3316	1388	3216	3316	1498
Flt Permitted		0.759			0.721		0.950			0.950		
Satd. Flow (perm)	0	1316	1349	0	1228	1441	1653	3316	1316	3204	3316	1450
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			86			176			86			86
Link Speed (k/h)		50			60			80			80	
Link Distance (m)		247.8			333.9			554.1			634.3	
Travel Time (s)		17.8			20.0			24.9			28.5	
Confl. Peds. (#/hr)	3		6	6		3	4		20	20		4
Confl. Bikes (#/hr)						4			18			2
Peak Hour 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
Heavy Vehicles (%)	3%	1%	10%	5%	1%	3%	2%	2%	9%	2%	2%	1%
Adj. Flow (vph)	63	26	9	37	12	176	87	1926	84	319	928	123
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	89	9	0	49	176	87	1926	84	319	928	123
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		1.8			0.0			10.5			10.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	18.6	93.0	18.6	18.6	93.0	18.6	18.6	93.0	18.6	18.6	93.0	18.6
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	18.6	5.5	18.6	18.6	5.5	18.6	18.6	5.5	18.6	18.6	5.5	18.6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (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
Detector 1 Queue (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
Detector 1 Delay (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
Detector 2 Position(m)		87.5			87.5			87.5			87.5	
Detector 2 Size(m)		5.5			5.5			5.5			5.5	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	5.0	20.0	20.0	5.0	20.0	20.0
Minimum Split (s)	39.5	39.5	39.5	39.5	39.5	39.5	17.6	30.6	30.6	17.6	30.6	30.6
Total Split (s)	40.0	40.0	40.0	40.0	40.0	40.0	22.0	68.0	68.0	22.0	68.0	68.0
Total Split (%)	30.8%	30.8%	30.8%	30.8%	30.8%	30.8%	16.9%	52.3%	52.3%	16.9%	52.3%	52.3%
Maximum Green (s)	33.5	33.5	33.5	33.5	33.5	33.5	15.3	61.4	61.4	15.3	61.4	61.4
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	4.6	4.6	4.6	4.6	4.6	4.6
All-Red Time (s)	2.8	2.8	2.8	2.8	2.8	2.8	2.1	2.0	2.0	2.1	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.5	6.5		6.5	6.5	6.7	6.6	6.6	6.7	6.6	6.6
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
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	None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)	26.0	26.0	26.0	26.0	26.0	26.0		17.0	17.0		17.0	17.0
Pedestrian Calls (#/hr)	6	6	6	3	3	3		4	4		20	20
Act Effct Green (s)		17.0	17.0		17.0	17.0	11.9	76.0	76.0	17.2	81.3	81.3
Actuated g/C Ratio		0.13	0.13		0.13	0.13	0.09	0.58	0.58	0.13	0.63	0.63
v/c Ratio		0.52	0.04		0.31	0.52	0.58	0.99	0.10	0.75	0.45	0.13
Control Delay		61.1	0.2		52.8	11.6	71.0	46.4	3.7	83.5	8.2	2.8
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		61.1	0.2		52.8	11.6	71.0	46.4	3.7	83.5	8.2	2.8
LOS		E	A		D	B	E	D	A	F	A	A
Approach Delay		55.5			20.6			45.7			25.3	
Approach LOS		E			C			D			C	
Queue Length 50th (m)		20.4	0.0		10.9	0.0	20.0	218.6	0.0	39.4	6.5	0.0
Queue Length 95th (m)		30.9	0.0		19.1	16.2	35.0	#333.3	7.8	m31.2	m111.2	m12.1
Internal Link Dist (m)		223.8			309.9			530.1			610.3	
Turn Bay Length (m)			20.0			60.0	100.0		80.0	185.0		20.0
Base Capacity (vph)		339	411		316	501	196	1939	805	430	2073	939
Starvation Cap Reductn		0	0		0	0	0	0	0	0	0	0
Spillback Cap Reductn		0	0		0	0	0	0	0	0	0	0
Storage Cap Reductn		0	0		0	0	0	0	0	0	0	0
Reduced v/c Ratio		0.26	0.02		0.16	0.35	0.44	0.99	0.10	0.74	0.45	0.13

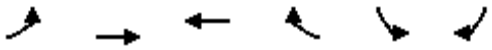
Intersection Summary

Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 68 (52%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.99
Intersection Signal Delay: 37.1 Intersection LOS: D
Intersection Capacity Utilization 97.7% ICU Level of Service F
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: March & Station/Carling

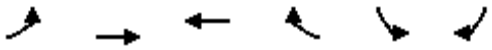
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	530	541	44	131	40	39
Future Volume (vph)	530	541	44	131	40	39
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.932				0.933	
Flt Protected				0.988	0.975	
Satd. Flow (prot)	1643	0	0	1636	1565	0
Flt Permitted				0.988	0.975	
Satd. Flow (perm)	1643	0	0	1636	1565	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	336.6			459.4	751.0	
Travel Time (s)	24.2			33.1	54.1	
Confl. Peds. (#/hr)		17	17			2
Confl. Bikes (#/hr)		1				
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	9%	7%	3%	4%
Adj. Flow (vph)	530	541	44	131	40	39
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1071	0	0	175	79	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.0			3.0	3.5	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	5.0			5.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 77.4%		ICU Level of Service D	
Analysis Period (min) 15			



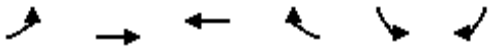
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	90	7	0	0	0
Future Volume (vph)	0	90	7	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	0	1745	1745	0	0	1745
Flt Permitted						
Satd. Flow (perm)	0	1745	1745	0	0	1745
Link Speed (k/h)		50	50		50	
Link Distance (m)		306.0	84.0		67.2	
Travel Time (s)		22.0	6.0		4.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	90	7	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	90	7	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		5.0	5.0		5.0	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 8.3%		ICU Level of Service A	
Analysis Period (min) 15			



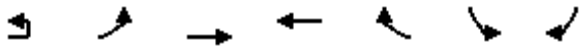
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	18	3	0	0	0
Future Volume (vph)	0	18	3	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	0	1745	1745	0	0	1745
Flt Permitted						
Satd. Flow (perm)	0	1745	1745	0	0	1745
Link Speed (k/h)		50	50		50	
Link Distance (m)		84.0	42.7		67.9	
Travel Time (s)		6.0	3.1		4.9	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	18	3	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	18	3	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		5.0	5.0		5.0	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	

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



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	18	3	0	0	0
Future Volume (vph)	0	18	3	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	4.8	3.5	3.5	3.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	0	1745	2000	0	0	1745
Flt Permitted						
Satd. Flow (perm)	0	1745	2000	0	0	1745
Link Speed (k/h)		50	50		50	
Link Distance (m)		42.7	29.9		67.1	
Travel Time (s)		3.1	2.2		4.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	18	3	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	18	3	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		5.0	5.0		5.0	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	0.91	1.09	1.09	1.09
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	

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



Lane Group	EBU	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations							
Traffic Volume (vph)	3	0	0	0	0	0	0
Future Volume (vph)	3	0	0	0	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	4.8	3.5	3.5	3.5	3.5	3.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt							
Flt Protected		0.950					
Satd. Flow (prot)	0	1900	0	0	0	0	1745
Flt Permitted		0.950					
Satd. Flow (perm)	0	1900	0	0	0	0	1745
Link Speed (k/h)			50	50		50	
Link Distance (m)			29.9	42.6		66.7	
Travel Time (s)			2.2	3.1		4.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	3	0	0	0	0	0	0
Shared Lane Traffic (%)							
Lane Group Flow (vph)	0	3	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No
Lane Alignment	R NA	Left	Left	Left	Right	Left	Right
Median Width(m)			4.8	4.8		0.0	
Link Offset(m)			0.0	0.0		0.0	
Crosswalk Width(m)			5.0	5.0		5.0	
Two way Left Turn Lane							
Headway Factor	1.09	0.91	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	14	24			14	24	14
Sign Control			Free	Free		Stop	

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

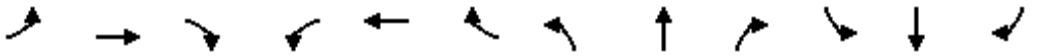
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	105	131	54	122	32	611	738	682	105	1089	114
Future Volume (vph)	30	105	131	54	122	32	611	738	682	105	1089	114
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	35.0		60.0	85.0		0.0	165.0		0.0	155.0		75.0
Storage Lanes	1		1	2		0	2		1	1		1
Taper Length (m)	50.0			95.0			40.0			25.0		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	0.97	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor	0.99		0.97	0.98	1.00		1.00		0.97			0.98
Frt			0.850		0.969				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1610	1745	1441	3216	1666	0	3248	3252	1498	1658	3283	1483
Flt Permitted	0.950			0.950			0.950			0.371		
Satd. Flow (perm)	1596	1745	1404	3158	1666	0	3233	3252	1457	647	3283	1447
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			131		9				623			132
Link Speed (k/h)		50			50			80			80	
Link Distance (m)		126.7			245.5			634.3			855.0	
Travel Time (s)		9.1			17.7			28.5			38.5	
Confl. Peds. (#/hr)	7		8	8		7	6					6
Confl. Bikes (#/hr)			1			1			12			1
Peak Hour 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
Heavy Vehicles (%)	5%	2%	5%	2%	3%	3%	1%	4%	1%	2%	3%	2%
Adj. Flow (vph)	30	105	131	54	122	32	611	738	682	105	1089	114
Shared Lane Traffic (%)												
Lane Group Flow (vph)	30	105	131	54	154	0	611	738	682	105	1089	114
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.0			10.5			7.0			7.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2		1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	18.6	93.0	18.6	18.6	93.0		18.6	93.0	18.6	18.6	93.0	18.6
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	18.6	5.5	18.6	18.6	5.5		18.6	5.5	18.6	18.6	5.5	18.6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		87.5			87.5			87.5			87.5	
Detector 2 Size(m)		5.5			5.5			5.5			5.5	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Perm	NA	Perm
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases			4						2	6		6
Detector Phase	7	4	4	3	8		5	2	2	6	6	6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0		5.0	20.0	20.0	20.0	20.0	20.0
Minimum Split (s)	10.9	31.5	31.5	10.9	31.5		11.3	26.3	26.3	26.3	26.3	26.3
Total Split (s)	13.0	32.0	32.0	13.0	32.0		39.0	85.0	85.0	46.0	46.0	46.0
Total Split (%)	10.0%	24.6%	24.6%	10.0%	24.6%		30.0%	65.4%	65.4%	35.4%	35.4%	35.4%
Maximum Green (s)	7.1	25.5	25.5	7.1	25.5		32.7	78.7	78.7	39.7	39.7	39.7
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3		4.6	4.6	4.6	4.6	4.6	4.6
All-Red Time (s)	2.6	3.2	3.2	2.6	3.2		1.7	1.7	1.7	1.7	1.7	1.7
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
Total Lost Time (s)	5.9	6.5	6.5	5.9	6.5		6.3	6.3	6.3	6.3	6.3	6.3
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes			Yes	Yes	Yes
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
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	C-Max	C-Max	C-Max
Walk Time (s)		7.0	7.0		7.0			7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		18.0	18.0		18.0			12.0	12.0	12.0	12.0	12.0
Pedestrian Calls (#/hr)		8	8		7			6	6	0	0	0
Act Effct Green (s)	6.7	16.4	16.4	6.7	19.0		29.1	90.4	90.4	55.0	55.0	55.0
Actuated g/C Ratio	0.05	0.13	0.13	0.05	0.15		0.22	0.70	0.70	0.42	0.42	0.42
v/c Ratio	0.37	0.48	0.45	0.33	0.62		0.84	0.33	0.57	0.38	0.78	0.17
Control Delay	72.1	58.5	12.6	64.6	59.1		46.8	2.7	4.2	36.5	39.7	4.1
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	72.1	58.5	12.6	64.6	59.1		46.8	2.7	4.2	36.5	39.7	4.1
LOS	E	E	B	E	E		D	A	A	D	D	A
Approach Delay		37.4			60.6			16.4			36.3	
Approach LOS		D			E			B			D	
Queue Length 50th (m)	7.0	23.3	0.0	6.4	33.2		64.0	23.3	15.0	17.6	120.6	0.0
Queue Length 95th (m)	16.4	37.5	15.5	12.8	50.5		m54.5	m12.6	m8.8	39.3	#190.0	9.0
Internal Link Dist (m)		102.7			221.5			610.3			831.0	
Turn Bay Length (m)	35.0		60.0	85.0			165.0			155.0		75.0
Base Capacity (vph)	87	342	380	175	334		819	2261	1203	273	1389	688
Starvation Cap Reductn	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
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.34	0.31	0.34	0.31	0.46		0.75	0.33	0.57	0.38	0.78	0.17

Intersection Summary

Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 15 (12%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
Natural Cycle: 110
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.84
Intersection Signal Delay: 27.1 Intersection LOS: C
Intersection Capacity Utilization 88.4% ICU Level of Service E
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: March & Solandt



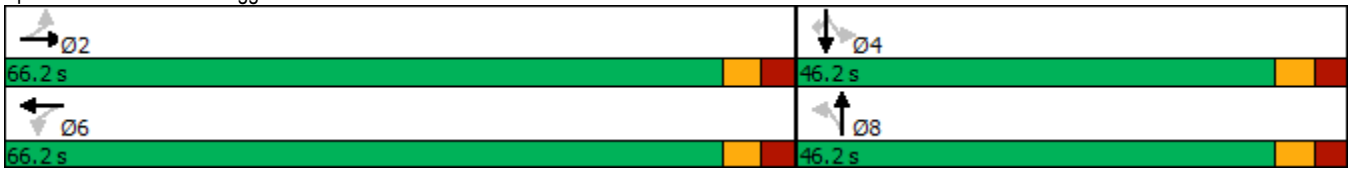
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	438	146	243	2	10	6	101	183	50	33	188	54
Future Volume (vph)	438	146	243	2	10	6	101	183	50	33	188	54
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	110.0		0.0	40.0		0.0	50.0		0.0	30.0		105.0
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (m)	70.0			30.0			60.0			30.0		
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
Ped Bike Factor	0.99	0.99		1.00	0.99			0.99		0.98		
Frt		0.906			0.944			0.968				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1674	1564	0	1674	1509	0	1566	1673	0	1610	1745	1498
Flt Permitted	0.747			0.503			0.639			0.576		
Satd. Flow (perm)	1301	1564	0	885	1509	0	1053	1673	0	956	1745	1498
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		114			6			14				54
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		245.5			306.0			489.3			751.0	
Travel Time (s)		17.7			22.0			35.2			54.1	
Confl. Peds. (#/hr)	4		1	1		4			11	11		
Confl. Bikes (#/hr)									3			
Peak Hour 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
Heavy Vehicles (%)	1%	1%	2%	1%	10%	10%	8%	2%	1%	5%	2%	1%
Adj. Flow (vph)	438	146	243	2	10	6	101	183	50	33	188	54
Shared Lane Traffic (%)												
Lane Group Flow (vph)	438	389	0	2	16	0	101	233	0	33	188	54
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.0			3.5			3.5			3.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (m)	18.6	93.0		18.6	93.0		18.6	93.0		18.6	93.0	18.6
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Size(m)	18.6	5.5		18.6	5.5		18.6	5.5		18.6	5.5	18.6
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(m)		87.5			87.5			87.5			87.5	
Detector 2 Size(m)		5.5			5.5			5.5			5.5	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		4
Detector Phase	2	2		6	6		8	8		4	4	4

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	15.0	15.0		15.0	15.0		10.0	10.0		10.0	10.0	10.0
Minimum Split (s)	25.2	25.2		25.2	25.2		25.2	25.2		25.2	25.2	25.2
Total Split (s)	66.2	66.2		66.2	66.2		46.2	46.2		46.2	46.2	46.2
Total Split (%)	58.9%	58.9%		58.9%	58.9%		41.1%	41.1%		41.1%	41.1%	41.1%
Maximum Green (s)	60.0	60.0		60.0	60.0		40.0	40.0		40.0	40.0	40.0
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	3.3
All-Red Time (s)	2.9	2.9		2.9	2.9		2.9	2.9		2.9	2.9	2.9
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.2	6.2		6.2	6.2		6.2	6.2		6.2	6.2	6.2
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
Recall Mode	Min	Min		Min	Min		None	None		None	None	None
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	12.0
Pedestrian Calls (#/hr)	1	1		4	4		11	11		0	0	0
Act Effct Green (s)	36.4	36.4		36.4	36.4		17.3	17.3		17.3	17.3	17.3
Actuated g/C Ratio	0.54	0.54		0.54	0.54		0.26	0.26		0.26	0.26	0.26
v/c Ratio	0.62	0.43		0.00	0.02		0.37	0.53		0.13	0.42	0.13
Control Delay	15.4	7.9		7.5	6.2		29.3	28.2		25.5	27.5	8.6
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	15.4	7.9		7.5	6.2		29.3	28.2		25.5	27.5	8.6
LOS	B	A		A	A		C	C		C	C	A
Approach Delay		11.9			6.4			28.5			23.5	
Approach LOS		B			A			C			C	
Queue Length 50th (m)	28.6	14.4		0.1	0.5		9.0	20.3		2.8	17.0	0.0
Queue Length 95th (m)	70.0	39.4		1.0	3.0		28.1	53.6		11.4	45.1	7.9
Internal Link Dist (m)		221.5			282.0			465.3			727.0	
Turn Bay Length (m)	110.0			40.0			50.0			30.0		105.0
Base Capacity (vph)	1113	1354		757	1291		693	1105		629	1148	1004
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.39	0.29		0.00	0.01		0.15	0.21		0.05	0.16	0.05

Intersection Summary

Area Type: Other
Cycle Length: 112.4
Actuated Cycle Length: 67.5
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.62
Intersection Signal Delay: 17.8 Intersection LOS: B
Intersection Capacity Utilization 70.4% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 2: Legget & Solandt



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	63	26	9	37	12	176	87	1926	84	319	928	123
Future Volume (vph)	63	26	9	37	12	176	87	1926	84	319	928	123
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	0.0		20.0	0.0		60.0	100.0		80.0	185.0		20.0
Storage Lanes	0		1	0		1	1		1	2		1
Taper Length (m)	20.0			20.0			40.0			60.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Ped Bike Factor		1.00	0.98		1.00	0.98	1.00		0.95	1.00		0.97
Frt			0.850			0.850			0.850			0.850
Flt Protected		0.966			0.964		0.950			0.950		
Satd. Flow (prot)	0	1679	1375	0	1650	1469	1658	3316	1388	3216	3316	1498
Flt Permitted		0.759			0.721		0.950			0.950		
Satd. Flow (perm)	0	1316	1349	0	1228	1441	1653	3316	1316	3204	3316	1450
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			86			176			86			86
Link Speed (k/h)		50			60			80			80	
Link Distance (m)		247.8			333.9			554.1			634.3	
Travel Time (s)		17.8			20.0			24.9			28.5	
Confl. Peds. (#/hr)	3		6	6		3	4		20	20		4
Confl. Bikes (#/hr)						4			18			2
Peak Hour 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
Heavy Vehicles (%)	3%	1%	10%	5%	1%	3%	2%	2%	9%	2%	2%	1%
Adj. Flow (vph)	63	26	9	37	12	176	87	1926	84	319	928	123
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	89	9	0	49	176	87	1926	84	319	928	123
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		1.8			0.0			10.5			10.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	18.6	93.0	18.6	18.6	93.0	18.6	18.6	93.0	18.6	18.6	93.0	18.6
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	18.6	5.5	18.6	18.6	5.5	18.6	18.6	5.5	18.6	18.6	5.5	18.6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (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
Detector 1 Queue (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
Detector 1 Delay (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
Detector 2 Position(m)		87.5			87.5			87.5			87.5	
Detector 2 Size(m)		5.5			5.5			5.5			5.5	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	5.0	20.0	20.0	5.0	20.0	20.0
Minimum Split (s)	39.5	39.5	39.5	39.5	39.5	39.5	17.6	30.6	30.6	17.6	30.6	30.6
Total Split (s)	40.0	40.0	40.0	40.0	40.0	40.0	22.0	68.0	68.0	22.0	68.0	68.0
Total Split (%)	30.8%	30.8%	30.8%	30.8%	30.8%	30.8%	16.9%	52.3%	52.3%	16.9%	52.3%	52.3%
Maximum Green (s)	33.5	33.5	33.5	33.5	33.5	33.5	15.3	61.4	61.4	15.3	61.4	61.4
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	4.6	4.6	4.6	4.6	4.6	4.6
All-Red Time (s)	2.8	2.8	2.8	2.8	2.8	2.8	2.1	2.0	2.0	2.1	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.5	6.5		6.5	6.5	6.7	6.6	6.6	6.7	6.6	6.6
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
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	None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)	26.0	26.0	26.0	26.0	26.0	26.0		17.0	17.0		17.0	17.0
Pedestrian Calls (#/hr)	6	6	6	3	3	3		4	4		20	20
Act Effct Green (s)		17.0	17.0		17.0	17.0	11.9	76.0	76.0	17.2	81.3	81.3
Actuated g/C Ratio		0.13	0.13		0.13	0.13	0.09	0.58	0.58	0.13	0.63	0.63
v/c Ratio		0.52	0.04		0.31	0.52	0.58	0.99	0.10	0.75	0.45	0.13
Control Delay		61.1	0.2		52.8	11.6	71.0	46.4	3.7	70.4	14.5	4.2
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		61.1	0.2		52.8	11.6	71.0	46.4	3.7	70.4	14.5	4.2
LOS		E	A		D	B	E	D	A	E	B	A
Approach Delay		55.5			20.6			45.7			26.6	
Approach LOS		E			C			D			C	
Queue Length 50th (m)		20.4	0.0		10.9	0.0	20.0	218.6	0.0	30.2	85.6	4.2
Queue Length 95th (m)		30.9	0.0		19.1	16.2	35.0	#333.3	7.8	m#51.8	133.8	m17.9
Internal Link Dist (m)		223.8			309.9			530.1			610.3	
Turn Bay Length (m)			20.0			60.0	100.0		80.0	185.0		20.0
Base Capacity (vph)		339	411		316	501	196	1939	805	430	2073	939
Starvation Cap Reductn		0	0		0	0	0	0	0	0	0	0
Spillback Cap Reductn		0	0		0	0	0	0	0	0	0	0
Storage Cap Reductn		0	0		0	0	0	0	0	0	0	0
Reduced v/c Ratio		0.26	0.02		0.16	0.35	0.44	0.99	0.10	0.74	0.45	0.13

Intersection Summary

Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 68 (52%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.99
Intersection Signal Delay: 37.6 Intersection LOS: D
Intersection Capacity Utilization 97.7% ICU Level of Service F
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: March & Station/Carling

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	530	541	44	131	40	39
Future Volume (vph)	530	541	44	131	40	39
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Storage Length (m)		125.0	15.0		0.0	40.0
Storage Lanes		1	1		1	1
Taper Length (m)			20.0		20.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1762	1498	1551	1664	1642	1455
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	1762	1498	1551	1664	1642	1455
Link Speed (k/h)	50			50	50	
Link Distance (m)	336.6			459.4	751.0	
Travel Time (s)	24.2			33.1	54.1	
Confl. Peds. (#/hr)		17	17			2
Confl. Bikes (#/hr)		1				
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	9%	7%	3%	4%
Adj. Flow (vph)	530	541	44	131	40	39
Shared Lane Traffic (%)						
Lane Group Flow (vph)	530	541	44	131	40	39
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.0			3.0	3.5	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	5.0			5.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 47.0%		ICU Level of Service A	
Analysis Period (min) 15			

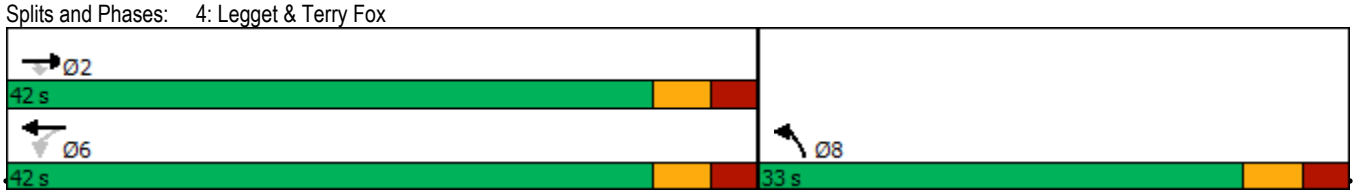
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	530	541	44	131	40	39
Future Volume (vph)	530	541	44	131	40	39
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Storage Length (m)		125.0	15.0		0.0	40.0
Storage Lanes		1	1		1	1
Taper Length (m)			20.0		20.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.95	0.99			
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1762	1498	1551	1664	1642	1455
Flt Permitted			0.452		0.950	
Satd. Flow (perm)	1762	1429	731	1664	1642	1455
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		541				39
Link Speed (k/h)	50			50	50	
Link Distance (m)	336.6			459.4	751.0	
Travel Time (s)	24.2			33.1	54.1	
Confl. Peds. (#/hr)		17	17			2
Confl. Bikes (#/hr)		1				
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	9%	7%	3%	4%
Adj. Flow (vph)	530	541	44	131	40	39
Shared Lane Traffic (%)						
Lane Group Flow (vph)	530	541	44	131	40	39
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.0			3.0	3.5	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	5.0			5.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)		14	24		24	14
Number of Detectors	2	1	1	2	1	1
Detector Template	Thru	Right	Left	Thru	Left	Right
Leading Detector (m)	93.0	18.6	18.6	93.0	18.6	18.6
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	5.5	18.6	18.6	5.5	18.6	18.6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)	87.5			87.5		
Detector 2 Size(m)	5.5			5.5		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA	Perm	Perm	NA	Prot	custom
Protected Phases	2			6	8	
Permitted Phases		2	6			
Detector Phase	2	2	6	6	8	

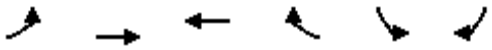
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	31.0	31.0	31.0	31.0	33.0	
Total Split (s)	42.0	42.0	42.0	42.0	33.0	
Total Split (%)	56.0%	56.0%	56.0%	56.0%	44.0%	
Maximum Green (s)	36.0	36.0	36.0	36.0	27.0	
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	
All-Red Time (s)	2.7	2.7	2.7	2.7	2.7	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None	None	
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	18.0	18.0	18.0	18.0	20.0	
Pedestrian Calls (#/hr)	1	1	1	1	1	
Act Effct Green (s)	37.5	37.5	37.5	37.5	14.2	0.0
Actuated g/C Ratio	0.82	0.82	0.82	0.82	0.31	0.00
v/c Ratio	0.37	0.43	0.07	0.10	0.08	1.00
Control Delay	7.3	2.3	7.0	5.9	16.9	167.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.3	2.3	7.0	5.9	16.9	167.7
LOS	A	A	A	A	B	F
Approach Delay	4.8			6.2	91.3	
Approach LOS	A			A	F	
Queue Length 50th (m)	0.0	0.0	0.0	0.0	2.1	0.0
Queue Length 95th (m)	77.0	13.6	8.1	17.6	8.8	#16.6
Internal Link Dist (m)	312.6			435.4	727.0	
Turn Bay Length (m)		125.0	15.0			40.0
Base Capacity (vph)	1445	1269	599	1364	1090	39
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.37	0.43	0.07	0.10	0.04	1.00

Intersection Summary

Area Type: Other
Cycle Length: 75
Actuated Cycle Length: 45.7
Natural Cycle: 65
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.00
Intersection Signal Delay: 10.1 Intersection LOS: B
Intersection Capacity Utilization 57.8% ICU Level of Service B
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

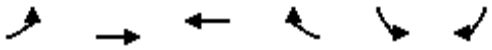
Splits and Phases: 4: Legget & Terry Fox





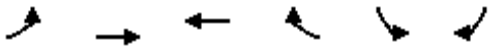
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	90	7	0	0	0
Future Volume (vph)	0	90	7	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	0	1745	1745	0	0	1745
Flt Permitted						
Satd. Flow (perm)	0	1745	1745	0	0	1745
Link Speed (k/h)		50	50		50	
Link Distance (m)		306.0	84.0		67.2	
Travel Time (s)		22.0	6.0		4.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	90	7	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	90	7	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		5.0	5.0		5.0	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 8.3%		ICU Level of Service A	
Analysis Period (min) 15			



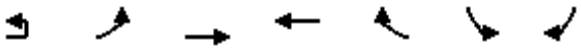
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	18	3	0	0	0
Future Volume (vph)	0	18	3	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	0	1745	1745	0	0	1745
Flt Permitted						
Satd. Flow (perm)	0	1745	1745	0	0	1745
Link Speed (k/h)		50	50		50	
Link Distance (m)		84.0	42.7		67.9	
Travel Time (s)		6.0	3.1		4.9	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	18	3	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	18	3	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		5.0	5.0		5.0	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	

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



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑			↗
Traffic Volume (vph)	0	18	3	0	0	0
Future Volume (vph)	0	18	3	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	4.8	3.5	3.5	3.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	0	1745	2000	0	0	1745
Flt Permitted						
Satd. Flow (perm)	0	1745	2000	0	0	1745
Link Speed (k/h)		50	50		50	
Link Distance (m)		42.7	29.9		67.1	
Travel Time (s)		3.1	2.2		4.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	18	3	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	18	3	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		5.0	5.0		5.0	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	0.91	1.09	1.09	1.09
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	

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



Lane Group	EBU	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations							
Traffic Volume (vph)	3	0	0	0	0	0	0
Future Volume (vph)	3	0	0	0	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	4.8	3.5	3.5	3.5	3.5	3.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt							
Flt Protected		0.950					
Satd. Flow (prot)	0	1900	0	0	0	0	1745
Flt Permitted		0.950					
Satd. Flow (perm)	0	1900	0	0	0	0	1745
Link Speed (k/h)			50	50		50	
Link Distance (m)			29.9	42.6		66.7	
Travel Time (s)			2.2	3.1		4.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	3	0	0	0	0	0	0
Shared Lane Traffic (%)							
Lane Group Flow (vph)	0	3	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No
Lane Alignment	R NA	Left	Left	Left	Right	Left	Right
Median Width(m)			4.8	4.8		0.0	
Link Offset(m)			0.0	0.0		0.0	
Crosswalk Width(m)			5.0	5.0		5.0	
Two way Left Turn Lane							
Headway Factor	1.09	0.91	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	14	24			14	24	14
Sign Control			Free	Free		Stop	

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	89	42	658	625	69	182	118	1548	67	23	872	69
Future Volume (vph)	89	42	658	625	69	182	118	1548	67	23	872	69
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	35.0		60.0	85.0		0.0	165.0		0.0	155.0		75.0
Storage Lanes	1		1	2		0	1		1	1		1
Taper Length (m)	50.0			95.0			40.0			25.0		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor	0.99		0.97	0.98	0.98				0.97			0.96
Frt			0.850		0.891				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1658	1695	1498	3248	1545	0	1626	3349	1469	1674	3316	1455
Flt Permitted	0.950			0.950			0.145			0.088		
Satd. Flow (perm)	1649	1695	1455	3184	1545	0	248	3349	1432	155	3316	1401
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			130		91				79			132
Link Speed (k/h)		50			50			80			80	
Link Distance (m)		123.9			245.5			634.3			855.0	
Travel Time (s)		8.9			17.7			28.5			38.5	
Confl. Peds. (#/hr)	5		8	8		5	11		1	1		11
Confl. Bikes (#/hr)			4			2			2			5
Peak Hour 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
Heavy Vehicles (%)	2%	5%	1%	1%	1%	1%	4%	1%	3%	1%	2%	4%
Adj. Flow (vph)	89	42	658	625	69	182	118	1548	67	23	872	69
Shared Lane Traffic (%)												
Lane Group Flow (vph)	89	42	658	625	251	0	118	1548	67	23	872	69
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.0			10.5			7.0			7.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2		1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	18.6	93.0	18.6	18.6	93.0		18.6	93.0	18.6	18.6	93.0	18.6
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	18.6	5.5	18.6	18.6	5.5		18.6	5.5	18.6	18.6	5.5	18.6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		87.5			87.5			87.5			87.5	
Detector 2 Size(m)		5.5			5.5			5.5			5.5	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA		pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases			4				2		2	6		6
Detector Phase	7	4	4	3	8		5	2	2	6	6	6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0		5.0	20.0	20.0	20.0	20.0	20.0
Minimum Split (s)	10.9	31.5	31.5	10.9	31.5		11.3	26.3	26.3	26.3	26.3	26.3
Total Split (s)	34.0	32.0	32.0	34.0	32.0		12.0	64.0	64.0	52.0	52.0	52.0
Total Split (%)	26.2%	24.6%	24.6%	26.2%	24.6%		9.2%	49.2%	49.2%	40.0%	40.0%	40.0%
Maximum Green (s)	28.1	25.5	25.5	28.1	25.5		5.7	57.7	57.7	45.7	45.7	45.7
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3		4.6	4.6	4.6	4.6	4.6	4.6
All-Red Time (s)	2.6	3.2	3.2	2.6	3.2		1.7	1.7	1.7	1.7	1.7	1.7
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
Total Lost Time (s)	5.9	6.5	6.5	5.9	6.5		6.3	6.3	6.3	6.3	6.3	6.3
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes			Yes	Yes	Yes
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
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	C-Max	C-Max	C-Max
Walk Time (s)		7.0	7.0		7.0			7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		18.0	18.0		18.0			12.0	12.0	12.0	12.0	12.0
Pedestrian Calls (#/hr)		8	8		5			1	1	11	11	11
Act Effct Green (s)	12.3	26.2	26.2	27.4	41.3		57.7	57.7	57.7	45.7	45.7	45.7
Actuated g/C Ratio	0.09	0.20	0.20	0.21	0.32		0.44	0.44	0.44	0.35	0.35	0.35
v/c Ratio	0.57	0.12	1.66	0.91	0.45		0.69	1.04	0.10	0.43	0.75	0.12
Control Delay	69.6	44.3	335.0	69.0	25.9		28.9	58.4	1.5	60.1	41.9	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
Total Delay	69.6	44.3	335.0	69.0	25.9		28.9	58.4	1.5	60.1	41.9	0.4
LOS	E	D	F	E	C		C	E	A	E	D	A
Approach Delay		289.6			56.6			54.2			39.4	
Approach LOS		F			E			D			D	
Queue Length 50th (m)	20.4	8.3	~202.6	74.3	29.5		12.1	~207.7	1.7	4.1	94.8	0.0
Queue Length 95th (m)	35.2	17.8	#269.4	#102.5	55.5		m14.5	#250.1	m1.9	#15.6	117.2	0.0
Internal Link Dist (m)		99.9			221.5			610.3			831.0	
Turn Bay Length (m)	35.0		60.0	85.0			165.0			155.0		75.0
Base Capacity (vph)	358	341	396	702	552		170	1486	679	54	1165	578
Starvation Cap Reductn	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
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.12	1.66	0.89	0.45		0.69	1.04	0.10	0.43	0.75	0.12

Intersection Summary

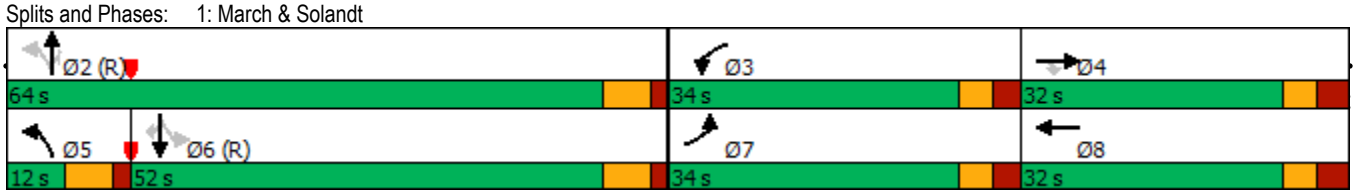
Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 30 (23%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 130
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.66
Intersection Signal Delay: 94.0 Intersection LOS: F
Intersection Capacity Utilization 112.7% ICU Level of Service H
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: March & Solandt



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	57	10	55	45	149	9	296	108	3	3	251	455
Future Volume (vph)	57	10	55	45	149	9	296	108	3	3	251	455
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	110.0		0.0	40.0		0.0	50.0		0.0	30.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	70.0			30.0			60.0			30.0		
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
Ped Bike Factor	0.99	0.97		0.98	1.00			1.00		0.97	0.98	
Frt		0.873			0.991			0.996			0.903	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1610	1433	0	1658	1735	0	1674	1752	0	1674	1559	0
Flt Permitted	0.607			0.715			0.126			0.685		
Satd. Flow (perm)	1022	1433	0	1226	1735	0	222	1752	0	1165	1559	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		55			3			2			83	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		245.5			306.0			489.3			751.0	
Travel Time (s)		17.7			22.0			35.2			54.1	
Confl. Peds. (#/hr)	3		6	6		3	2		13	13		2
Peak Hour 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
Heavy Vehicles (%)	5%	10%	4%	2%	1%	10%	1%	1%	1%	1%	2%	1%
Adj. Flow (vph)	57	10	55	45	149	9	296	108	3	3	251	455
Shared Lane Traffic (%)												
Lane Group Flow (vph)	57	65	0	45	158	0	296	111	0	3	706	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.0			3.5			3.5			3.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	18.6	93.0		18.6	93.0		18.6	93.0		18.6	93.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	18.6	5.5		18.6	5.5		18.6	5.5		18.6	5.5	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		87.5			87.5			87.5			87.5	
Detector 2 Size(m)		5.5			5.5			5.5			5.5	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		2			6		3	8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		3	8		4	4	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	25.2	25.2		25.2	25.2		16.2	25.2		25.2	25.2	
Total Split (s)	41.2	41.2		41.2	41.2		31.2	77.4		46.2	46.2	
Total Split (%)	34.7%	34.7%		34.7%	34.7%		26.3%	65.3%		39.0%	39.0%	
Maximum Green (s)	35.0	35.0		35.0	35.0		25.0	71.2		40.0	40.0	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.9	2.9		2.9	2.9		2.9	2.9		2.9	2.9	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.2	6.2		6.2	6.2		6.2	6.2		6.2	6.2	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Ped		Ped	Ped	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0		7.0	7.0	
Flash Dont Walk (s)	12.0	12.0		12.0	12.0			12.0		12.0	12.0	
Pedestrian Calls (#/hr)	6	6		3	3			13		2	2	
Act Effct Green (s)	14.3	14.3		14.3	14.3		63.2	63.2		40.4	40.4	
Actuated g/C Ratio	0.16	0.16		0.16	0.16		0.70	0.70		0.45	0.45	
v/c Ratio	0.35	0.24		0.23	0.57		0.70	0.09		0.01	0.95	
Control Delay	41.3	14.5		37.3	43.6		23.7	5.0		18.3	46.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	41.3	14.5		37.3	43.6		23.7	5.0		18.3	46.6	
LOS	D	B		D	D		C	A		B	D	
Approach Delay		27.0			42.2			18.6			46.4	
Approach LOS		C			D			B			D	
Queue Length 50th (m)	8.1	1.4		6.3	22.8		21.9	4.5		0.3	91.6	
Queue Length 95th (m)	20.0	11.8		16.3	43.7		53.3	11.6		2.1	#205.3	
Internal Link Dist (m)		221.5			282.0			465.3			727.0	
Turn Bay Length (m)	110.0			40.0			50.0			30.0		
Base Capacity (vph)	402	596		481	683		563	1401		523	746	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.14	0.11		0.09	0.23		0.53	0.08		0.01	0.95	

Intersection Summary

Area Type: Other
Cycle Length: 118.6
Actuated Cycle Length: 90
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.95
Intersection Signal Delay: 36.3 Intersection LOS: D
Intersection Capacity Utilization 99.6% ICU Level of Service F
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 2: Legget & Solandt

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	13	30	121	19	320	27	1365	35	294	1880	50
Future Volume (vph)	26	13	30	121	19	320	27	1365	35	294	1880	50
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	0.0		20.0	0.0		60.0	100.0		80.0	185.0		20.0
Storage Lanes	0		1	0		1	1		1	2		1
Taper Length (m)	20.0			20.0			40.0			60.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Ped Bike Factor		1.00	0.98		1.00	0.98	1.00		0.98	1.00		0.96
Frt			0.850			0.850			0.850			0.850
Flt Protected		0.968			0.959		0.950			0.950		
Satd. Flow (prot)	0	1684	1375	0	1634	1469	1658	3316	1388	3216	3316	1498
Flt Permitted		0.758			0.727		0.950			0.950		
Satd. Flow (perm)	0	1317	1347	0	1236	1443	1656	3316	1366	3214	3316	1437
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			86			184			86			86
Link Speed (k/h)		50			60			80			80	
Link Distance (m)		247.8			333.9			554.1			634.3	
Travel Time (s)		17.8			20.0			24.9			28.5	
Confl. Peds. (#/hr)	2		2	2		2	5		2	2		5
Confl. Bikes (#/hr)			7			4			1			10
Peak Hour 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
Heavy Vehicles (%)	3%	1%	10%	5%	1%	3%	2%	2%	9%	2%	2%	1%
Adj. Flow (vph)	26	13	30	121	19	320	27	1365	35	294	1880	50
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	39	30	0	140	320	27	1365	35	294	1880	50
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		1.8			0.0			10.5			10.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	18.6	93.0	18.6	18.6	93.0	18.6	18.6	93.0	18.6	18.6	93.0	18.6
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	18.6	5.5	18.6	18.6	5.5	18.6	18.6	5.5	18.6	18.6	5.5	18.6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (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
Detector 1 Queue (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
Detector 1 Delay (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
Detector 2 Position(m)		87.5			87.5			87.5			87.5	
Detector 2 Size(m)		5.5			5.5			5.5			5.5	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	5.0	20.0	20.0	5.0	20.0	20.0
Minimum Split (s)	39.5	39.5	39.5	39.5	39.5	39.5	17.6	30.6	30.6	17.6	30.6	30.6
Total Split (s)	40.0	40.0	40.0	40.0	40.0	40.0	18.0	72.0	72.0	18.0	72.0	72.0
Total Split (%)	30.8%	30.8%	30.8%	30.8%	30.8%	30.8%	13.8%	55.4%	55.4%	13.8%	55.4%	55.4%
Maximum Green (s)	33.5	33.5	33.5	33.5	33.5	33.5	11.3	65.4	65.4	11.3	65.4	65.4
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	4.6	4.6	4.6	4.6	4.6	4.6
All-Red Time (s)	2.8	2.8	2.8	2.8	2.8	2.8	2.1	2.0	2.0	2.1	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.5	6.5		6.5	6.5	6.7	6.6	6.6	6.7	6.6	6.6
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
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	None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)	26.0	26.0	26.0	26.0	26.0	26.0		17.0	17.0		17.0	17.0
Pedestrian Calls (#/hr)	2	2	2	2	2	2		2	2		5	5
Act Effct Green (s)		22.4	22.4		22.4	22.4	7.6	70.4	70.4	17.4	85.2	85.2
Actuated g/C Ratio		0.17	0.17		0.17	0.17	0.06	0.54	0.54	0.13	0.66	0.66
v/c Ratio		0.17	0.10		0.66	0.80	0.28	0.76	0.04	0.68	0.87	0.05
Control Delay		43.8	0.7		63.2	35.5	65.0	27.7	0.1	50.7	18.8	1.7
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		43.8	0.7		63.2	35.5	65.0	27.7	0.1	50.7	18.8	1.7
LOS		D	A		E	D	E	C	A	D	B	A
Approach Delay		25.0			43.9			27.8			22.6	
Approach LOS		C			D			C			C	
Queue Length 50th (m)		8.0	0.0		31.4	32.0	6.2	131.1	0.0	31.9	198.8	0.0
Queue Length 95th (m)		15.8	0.0		46.6	58.0	15.0	167.7	0.0	m#43.1	m#236.0	m0.0
Internal Link Dist (m)		223.8			309.9			530.1			610.3	
Turn Bay Length (m)			20.0			60.0	100.0		80.0	185.0		20.0
Base Capacity (vph)		339	410		318	508	144	1794	778	430	2172	971
Starvation Cap Reductn		0	0		0	0	0	0	0	0	0	0
Spillback Cap Reductn		0	0		0	0	0	0	0	0	0	0
Storage Cap Reductn		0	0		0	0	0	0	0	0	0	0
Reduced v/c Ratio		0.12	0.07		0.44	0.63	0.19	0.76	0.04	0.68	0.87	0.05

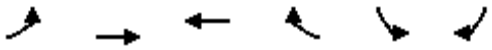
Intersection Summary

Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 102 (78%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 140
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.87
Intersection Signal Delay: 26.8 Intersection LOS: C
Intersection Capacity Utilization 91.1% ICU Level of Service F
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: March & Station/Carling

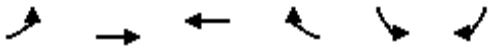
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	120	79	24	617	294	41
Future Volume (vph)	120	79	24	617	294	41
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.946				0.983	
Flt Protected				0.998	0.958	
Satd. Flow (prot)	1648	0	0	1759	1642	0
Flt Permitted				0.998	0.958	
Satd. Flow (perm)	1648	0	0	1759	1642	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	336.6			459.4	751.0	
Travel Time (s)	24.2			33.1	54.1	
Confl. Peds. (#/hr)		13	13			
Confl. Bikes (#/hr)						2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	4%	1%	1%	1%	10%
Adj. Flow (vph)	120	79	24	617	294	41
Shared Lane Traffic (%)						
Lane Group Flow (vph)	199	0	0	641	335	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.0			3.0	3.5	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	5.0			5.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 78.2%		ICU Level of Service D	
Analysis Period (min) 15			



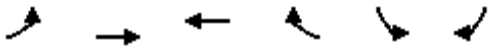
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	6	80	0	0	0
Future Volume (vph)	0	6	80	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	0	1745	1745	0	0	1745
Flt Permitted						
Satd. Flow (perm)	0	1745	1745	0	0	1745
Link Speed (k/h)		50	50		50	
Link Distance (m)		306.0	84.0		67.2	
Travel Time (s)		22.0	6.0		4.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	6	80	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	6	80	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		5.0	5.0		5.0	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 7.8%		ICU Level of Service A	
Analysis Period (min) 15			



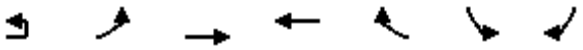
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	3	16	0	0	0
Future Volume (vph)	0	3	16	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	0	1745	1745	0	0	1745
Flt Permitted						
Satd. Flow (perm)	0	1745	1745	0	0	1745
Link Speed (k/h)		50	50		50	
Link Distance (m)		84.0	42.7		67.9	
Travel Time (s)		6.0	3.1		4.9	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	3	16	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	3	16	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		5.0	5.0		5.0	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	

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



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑			↗
Traffic Volume (vph)	0	3	16	0	0	0
Future Volume (vph)	0	3	16	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	4.8	3.5	3.5	3.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	0	1745	2000	0	0	1745
Flt Permitted						
Satd. Flow (perm)	0	1745	2000	0	0	1745
Link Speed (k/h)		50	50		50	
Link Distance (m)		42.7	29.9		67.1	
Travel Time (s)		3.1	2.2		4.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	3	16	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	3	16	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		5.0	5.0		5.0	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	0.91	1.09	1.09	1.09
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	

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



Lane Group	EBU	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations							
Traffic Volume (vph)	3	0	0	0	0	0	0
Future Volume (vph)	3	0	0	0	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	4.8	3.5	3.5	3.5	3.5	3.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt							
Flt Protected		0.950					
Satd. Flow (prot)	0	1900	0	0	0	0	1745
Flt Permitted		0.950					
Satd. Flow (perm)	0	1900	0	0	0	0	1745
Link Speed (k/h)			50	50		50	
Link Distance (m)			29.9	42.6		66.7	
Travel Time (s)			2.2	3.1		4.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	3	0	0	0	0	0	0
Shared Lane Traffic (%)							
Lane Group Flow (vph)	0	3	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No
Lane Alignment	R NA	Left	Left	Left	Right	Left	Right
Median Width(m)			4.8	4.8		0.0	
Link Offset(m)			0.0	0.0		0.0	
Crosswalk Width(m)			5.0	5.0		5.0	
Two way Left Turn Lane							
Headway Factor	1.09	0.91	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	14	24			14	24	14
Sign Control			Free	Free		Stop	

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	89	42	658	625	69	182	118	1548	67	23	872	69
Future Volume (vph)	89	42	658	625	69	182	118	1548	67	23	872	69
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	35.0		60.0	85.0		0.0	165.0		0.0	155.0		75.0
Storage Lanes	1		1	2		0	2		1	1		1
Taper Length (m)	50.0			95.0			40.0			25.0		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	0.97	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor	0.99		0.97	0.98	0.98		0.99		0.97			0.96
Frt			0.850		0.891				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1658	1695	1498	3248	1545	0	3154	3349	1469	1674	3316	1455
Flt Permitted	0.950			0.950			0.950			0.088		
Satd. Flow (perm)	1649	1695	1455	3184	1545	0	3119	3349	1432	155	3316	1401
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			130		91				79			132
Link Speed (k/h)		50			50			80			80	
Link Distance (m)		123.9			245.5			634.3			855.0	
Travel Time (s)		8.9			17.7			28.5			38.5	
Confl. Peds. (#/hr)	5		8	8		5	11		1	1		11
Confl. Bikes (#/hr)			4			2			2			5
Peak Hour 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
Heavy Vehicles (%)	2%	5%	1%	1%	1%	1%	4%	1%	3%	1%	2%	4%
Adj. Flow (vph)	89	42	658	625	69	182	118	1548	67	23	872	69
Shared Lane Traffic (%)												
Lane Group Flow (vph)	89	42	658	625	251	0	118	1548	67	23	872	69
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.0			10.5			7.0			7.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2		1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	18.6	93.0	18.6	18.6	93.0		18.6	93.0	18.6	18.6	93.0	18.6
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	18.6	5.5	18.6	18.6	5.5		18.6	5.5	18.6	18.6	5.5	18.6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		87.5			87.5			87.5			87.5	
Detector 2 Size(m)		5.5			5.5			5.5			5.5	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Perm	NA	Perm
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases			4						2	6		6
Detector Phase	7	4	4	3	8		5	2	2	6	6	6

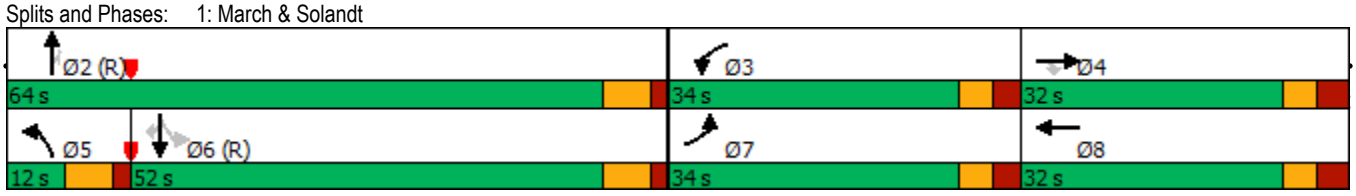
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0		5.0	20.0	20.0	20.0	20.0	20.0
Minimum Split (s)	10.9	31.5	31.5	10.9	31.5		11.3	26.3	26.3	26.3	26.3	26.3
Total Split (s)	34.0	32.0	32.0	34.0	32.0		12.0	64.0	64.0	52.0	52.0	52.0
Total Split (%)	26.2%	24.6%	24.6%	26.2%	24.6%		9.2%	49.2%	49.2%	40.0%	40.0%	40.0%
Maximum Green (s)	28.1	25.5	25.5	28.1	25.5		5.7	57.7	57.7	45.7	45.7	45.7
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3		4.6	4.6	4.6	4.6	4.6	4.6
All-Red Time (s)	2.6	3.2	3.2	2.6	3.2		1.7	1.7	1.7	1.7	1.7	1.7
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
Total Lost Time (s)	5.9	6.5	6.5	5.9	6.5		6.3	6.3	6.3	6.3	6.3	6.3
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes			Yes	Yes	Yes
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
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	C-Max	C-Max	C-Max
Walk Time (s)		7.0	7.0		7.0			7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		18.0	18.0		18.0			12.0	12.0	12.0	12.0	12.0
Pedestrian Calls (#/hr)		8	8		5			1	1	11	11	11
Act Effct Green (s)	12.3	26.2	26.2	27.4	41.3		5.7	57.7	57.7	45.7	45.7	45.7
Actuated g/C Ratio	0.09	0.20	0.20	0.21	0.32		0.04	0.44	0.44	0.35	0.35	0.35
v/c Ratio	0.57	0.12	1.66	0.91	0.45		0.86	1.04	0.10	0.43	0.75	0.12
Control Delay	69.6	44.3	335.0	69.0	25.9		96.9	58.4	1.5	60.1	41.9	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
Total Delay	69.6	44.3	335.0	69.0	25.9		96.9	58.4	1.5	60.1	41.9	0.4
LOS	E	D	F	E	C		F	E	A	E	D	A
Approach Delay		289.6			56.6			58.8			39.4	
Approach LOS		F			E			E			D	
Queue Length 50th (m)	20.4	8.3	~202.6	74.3	29.5		13.6	~207.7	1.7	4.1	94.8	0.0
Queue Length 95th (m)	35.2	17.8	#269.4	#102.5	55.5		m#23.1	#250.1	m1.9	#15.6	117.2	0.0
Internal Link Dist (m)		99.9			221.5			610.3			831.0	
Turn Bay Length (m)	35.0		60.0	85.0			165.0			155.0		75.0
Base Capacity (vph)	358	341	396	702	552		138	1486	679	54	1165	578
Starvation Cap Reductn	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
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.12	1.66	0.89	0.45		0.86	1.04	0.10	0.43	0.75	0.12

Intersection Summary

Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 30 (23%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
Natural Cycle: 130
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.66
Intersection Signal Delay: 95.8 Intersection LOS: F
Intersection Capacity Utilization 103.7% ICU Level of Service G
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: March & Solandt



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	57	10	55	45	149	9	296	108	3	3	251	455
Future Volume (vph)	57	10	55	45	149	9	296	108	3	3	251	455
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	110.0		0.0	40.0		0.0	50.0		0.0	30.0		105.0
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (m)	70.0			30.0			60.0			30.0		
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
Ped Bike Factor	0.99	0.97		0.98	1.00		1.00	1.00		0.97		0.97
Frt		0.873			0.991			0.996				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1610	1433	0	1658	1735	0	1674	1752	0	1674	1745	1498
Flt Permitted	0.657			0.715			0.469			0.685		
Satd. Flow (perm)	1106	1433	0	1226	1735	0	824	1752	0	1165	1745	1459
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		55			3			2				455
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		245.5			306.0			489.3			751.0	
Travel Time (s)		17.7			22.0			35.2			54.1	
Confl. Peds. (#/hr)	3		6	6		3	2		13	13		2
Peak Hour 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
Heavy Vehicles (%)	5%	10%	4%	2%	1%	10%	1%	1%	1%	1%	2%	1%
Adj. Flow (vph)	57	10	55	45	149	9	296	108	3	3	251	455
Shared Lane Traffic (%)												
Lane Group Flow (vph)	57	65	0	45	158	0	296	111	0	3	251	455
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.0			3.5			3.5			3.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (m)	18.6	93.0		18.6	93.0		18.6	93.0		18.6	93.0	18.6
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Size(m)	18.6	5.5		18.6	5.5		18.6	5.5		18.6	5.5	18.6
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(m)		87.5			87.5			87.5			87.5	
Detector 2 Size(m)		5.5			5.5			5.5			5.5	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA	Perm
Protected Phases		2			6		3	8			4	
Permitted Phases	2			6			8			4		4
Detector Phase	2	2		6	6		3	8		4	4	4
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	10.0
Minimum Split (s)	25.2	25.2		25.2	25.2		16.2	25.2		25.2	25.2	25.2
Total Split (s)	41.2	41.2		41.2	41.2		31.2	77.4		46.2	46.2	46.2
Total Split (%)	34.7%	34.7%		34.7%	34.7%		26.3%	65.3%		39.0%	39.0%	39.0%
Maximum Green (s)	35.0	35.0		35.0	35.0		25.0	71.2		40.0	40.0	40.0
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	3.3
All-Red Time (s)	2.9	2.9		2.9	2.9		2.9	2.9		2.9	2.9	2.9
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.2	6.2		6.2	6.2		6.2	6.2		6.2	6.2	6.2
Lead/Lag							Lead			Lag	Lag	Lag
Lead-Lag Optimize?							Yes			Yes	Yes	Yes
Vehicle Extension (s)	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	Ped		Ped	Ped	Ped
Walk Time (s)	7.0	7.0		7.0	7.0			7.0		7.0	7.0	7.0
Flash Dont Walk (s)	12.0	12.0		12.0	12.0			12.0		12.0	12.0	12.0
Pedestrian Calls (#/hr)	6	6		3	3			13		2	2	2
Act Effct Green (s)	13.1	13.1		13.1	13.1		43.7	43.7		25.4	25.4	25.4
Actuated g/C Ratio	0.19	0.19		0.19	0.19		0.63	0.63		0.36	0.36	0.36
v/c Ratio	0.27	0.21		0.20	0.48		0.45	0.10		0.01	0.40	0.55
Control Delay	30.8	12.4		29.1	32.2		8.4	5.6		15.3	19.0	4.7
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	30.8	12.4		29.1	32.2		8.4	5.6		15.3	19.0	4.7
LOS	C	B		C	C		A	A		B	B	A
Approach Delay		21.0			31.5			7.6			9.8	
Approach LOS		C			C			A			A	
Queue Length 50th (m)	5.3	0.9		4.1	15.0		12.5	4.0		0.2	19.7	0.0
Queue Length 95th (m)	18.1	10.9		14.9	39.9		29.3	11.3		1.9	44.9	15.9
Internal Link Dist (m)		221.5			282.0			465.3			727.0	
Turn Bay Length (m)	110.0			40.0			50.0			30.0		105.0
Base Capacity (vph)	576	773		638	905		833	1645		694	1039	1053
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.10	0.08		0.07	0.17		0.36	0.07		0.00	0.24	0.43

Intersection Summary			
Area Type:	Other		
Cycle Length: 118.6			
Actuated Cycle Length: 69.7			
Natural Cycle: 70			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.55			
Intersection Signal Delay: 13.2		Intersection LOS: B	
Intersection Capacity Utilization 72.3%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 2: Legget & Solandt

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	13	30	121	19	320	27	1365	35	294	1880	50
Future Volume (vph)	26	13	30	121	19	320	27	1365	35	294	1880	50
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	0.0		20.0	0.0		60.0	100.0		80.0	185.0		20.0
Storage Lanes	0		1	0		1	1		1	2		1
Taper Length (m)	20.0			20.0			40.0			60.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Ped Bike Factor		1.00	0.98		1.00	0.98	1.00		0.98	1.00		0.96
Frt			0.850			0.850			0.850			0.850
Flt Protected		0.968			0.959		0.950			0.950		
Satd. Flow (prot)	0	1684	1375	0	1634	1469	1658	3316	1388	3216	3316	1498
Flt Permitted		0.758			0.727		0.950			0.950		
Satd. Flow (perm)	0	1317	1347	0	1236	1443	1656	3316	1366	3214	3316	1437
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			86			184			86			86
Link Speed (k/h)		50			60			80			80	
Link Distance (m)		247.8			333.9			554.1			634.3	
Travel Time (s)		17.8			20.0			24.9			28.5	
Confl. Peds. (#/hr)	2		2	2		2	5		2	2		5
Confl. Bikes (#/hr)			7			4			1			10
Peak Hour 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
Heavy Vehicles (%)	3%	1%	10%	5%	1%	3%	2%	2%	9%	2%	2%	1%
Adj. Flow (vph)	26	13	30	121	19	320	27	1365	35	294	1880	50
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	39	30	0	140	320	27	1365	35	294	1880	50
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		1.8			0.0			10.5			10.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	18.6	93.0	18.6	18.6	93.0	18.6	18.6	93.0	18.6	18.6	93.0	18.6
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	18.6	5.5	18.6	18.6	5.5	18.6	18.6	5.5	18.6	18.6	5.5	18.6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (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
Detector 1 Queue (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
Detector 1 Delay (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
Detector 2 Position(m)		87.5			87.5			87.5			87.5	
Detector 2 Size(m)		5.5			5.5			5.5			5.5	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	5.0	20.0	20.0	5.0	20.0	20.0
Minimum Split (s)	39.5	39.5	39.5	39.5	39.5	39.5	17.6	30.6	30.6	17.6	30.6	30.6
Total Split (s)	40.0	40.0	40.0	40.0	40.0	40.0	18.0	72.0	72.0	18.0	72.0	72.0
Total Split (%)	30.8%	30.8%	30.8%	30.8%	30.8%	30.8%	13.8%	55.4%	55.4%	13.8%	55.4%	55.4%
Maximum Green (s)	33.5	33.5	33.5	33.5	33.5	33.5	11.3	65.4	65.4	11.3	65.4	65.4
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	4.6	4.6	4.6	4.6	4.6	4.6
All-Red Time (s)	2.8	2.8	2.8	2.8	2.8	2.8	2.1	2.0	2.0	2.1	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.5	6.5		6.5	6.5	6.7	6.6	6.6	6.7	6.6	6.6
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
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	None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)	26.0	26.0	26.0	26.0	26.0	26.0		17.0	17.0		17.0	17.0
Pedestrian Calls (#/hr)	2	2	2	2	2	2		2	2		5	5
Act Effct Green (s)		22.4	22.4		22.4	22.4	7.6	70.4	70.4	17.4	85.2	85.2
Actuated g/C Ratio		0.17	0.17		0.17	0.17	0.06	0.54	0.54	0.13	0.66	0.66
v/c Ratio		0.17	0.10		0.66	0.80	0.28	0.76	0.04	0.68	0.87	0.05
Control Delay		43.8	0.7		63.2	35.5	65.0	27.7	0.1	50.7	18.8	1.7
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		43.8	0.7		63.2	35.5	65.0	27.7	0.1	50.7	18.8	1.7
LOS		D	A		E	D	E	C	A	D	B	A
Approach Delay		25.0			43.9			27.8			22.6	
Approach LOS		C			D			C			C	
Queue Length 50th (m)		8.0	0.0		31.4	32.0	6.2	131.1	0.0	31.9	198.8	0.0
Queue Length 95th (m)		15.8	0.0		46.6	58.0	15.0	167.7	0.0	m#43.1	m#236.0	m0.0
Internal Link Dist (m)		223.8			309.9			530.1			610.3	
Turn Bay Length (m)			20.0			60.0	100.0		80.0	185.0		20.0
Base Capacity (vph)		339	410		318	508	144	1794	778	430	2172	971
Starvation Cap Reductn		0	0		0	0	0	0	0	0	0	0
Spillback Cap Reductn		0	0		0	0	0	0	0	0	0	0
Storage Cap Reductn		0	0		0	0	0	0	0	0	0	0
Reduced v/c Ratio		0.12	0.07		0.44	0.63	0.19	0.76	0.04	0.68	0.87	0.05

Intersection Summary

Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 102 (78%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 140
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.87
Intersection Signal Delay: 26.8 Intersection LOS: C
Intersection Capacity Utilization 91.1% ICU Level of Service F
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: March & Station/Carling

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	120	79	24	617	294	41
Future Volume (vph)	120	79	24	617	294	41
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Storage Length (m)		125.0	15.0		0.0	40.0
Storage Lanes		1	1		1	1
Taper Length (m)			20.0		20.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1762	1455	1674	1762	1674	1375
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	1762	1455	1674	1762	1674	1375
Link Speed (k/h)	50			50	50	
Link Distance (m)	336.6			459.4	751.0	
Travel Time (s)	24.2			33.1	54.1	
Confl. Peds. (#/hr)		13	13			
Confl. Bikes (#/hr)						2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	4%	1%	1%	1%	10%
Adj. Flow (vph)	120	79	24	617	294	41
Shared Lane Traffic (%)						
Lane Group Flow (vph)	120	79	24	617	294	41
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.0			3.0	3.5	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	5.0			5.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	

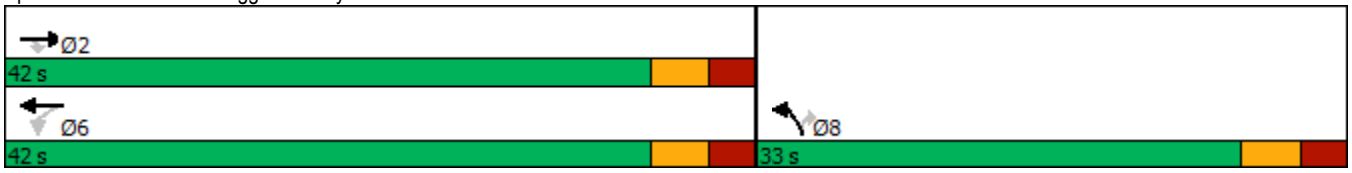
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 58.1%		ICU Level of Service B	
Analysis Period (min) 15			

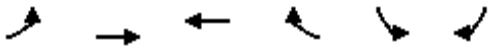
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	120	79	24	617	294	41
Future Volume (vph)	120	79	24	617	294	41
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Storage Length (m)		125.0	15.0		0.0	40.0
Storage Lanes		1	1		1	1
Taper Length (m)			20.0		20.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.96	0.98			0.98
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1762	1455	1674	1762	1674	1375
Flt Permitted			0.680		0.950	
Satd. Flow (perm)	1762	1398	1179	1762	1674	1345
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		79				41
Link Speed (k/h)	50			50	50	
Link Distance (m)	336.6			459.4	751.0	
Travel Time (s)	24.2			33.1	54.1	
Confl. Peds. (#/hr)		13	13			
Confl. Bikes (#/hr)						2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	4%	1%	1%	1%	10%
Adj. Flow (vph)	120	79	24	617	294	41
Shared Lane Traffic (%)						
Lane Group Flow (vph)	120	79	24	617	294	41
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.0			3.0	3.5	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	5.0			5.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)		14	24		24	14
Number of Detectors	2	1	1	2	1	1
Detector Template	Thru	Right	Left	Thru	Left	Right
Leading Detector (m)	93.0	18.6	18.6	93.0	18.6	18.6
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	5.5	18.6	18.6	5.5	18.6	18.6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)	87.5			87.5		
Detector 2 Size(m)	5.5			5.5		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA	Perm	Perm	NA	Prot	Perm
Protected Phases	2			6	8	
Permitted Phases		2	6			8
Detector Phase	2	2	6	6	8	8

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	31.0	31.0	31.0	31.0	33.0	33.0
Total Split (s)	42.0	42.0	42.0	42.0	33.0	33.0
Total Split (%)	56.0%	56.0%	56.0%	56.0%	44.0%	44.0%
Maximum Green (s)	36.0	36.0	36.0	36.0	27.0	27.0
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	2.7	2.7	2.7	2.7	2.7	2.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	18.0	18.0	18.0	18.0	20.0	20.0
Pedestrian Calls (#/hr)	1	1	1	1	1	1
Act Effct Green (s)	27.2	27.2	27.2	27.2	16.5	16.5
Actuated g/C Ratio	0.48	0.48	0.48	0.48	0.29	0.29
v/c Ratio	0.14	0.11	0.04	0.73	0.60	0.10
Control Delay	9.4	3.2	9.2	18.3	24.3	6.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.4	3.2	9.2	18.3	24.3	6.7
LOS	A	A	A	B	C	A
Approach Delay	6.9			18.0	22.1	
Approach LOS	A			B	C	
Queue Length 50th (m)	5.5	0.0	1.1	40.6	24.3	0.0
Queue Length 95th (m)	16.2	5.7	4.9	96.3	48.8	5.3
Internal Link Dist (m)	312.6			435.4	727.0	
Turn Bay Length (m)		125.0	15.0			40.0
Base Capacity (vph)	1199	976	802	1199	854	706
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.08	0.03	0.51	0.34	0.06

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 56.5			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.73			
Intersection Signal Delay: 17.3		Intersection LOS: B	
Intersection Capacity Utilization 61.5%		ICU Level of Service B	
Analysis Period (min) 15			

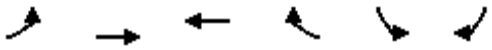
Splits and Phases: 4: Legget & Terry Fox





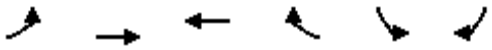
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	6	80	0	0	0
Future Volume (vph)	0	6	80	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	0	1745	1745	0	0	1745
Flt Permitted						
Satd. Flow (perm)	0	1745	1745	0	0	1745
Link Speed (k/h)		50	50		50	
Link Distance (m)		306.0	84.0		67.2	
Travel Time (s)		22.0	6.0		4.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	6	80	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	6	80	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		5.0	5.0		5.0	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 7.8%		ICU Level of Service A	
Analysis Period (min) 15			



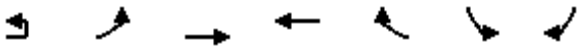
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	3	16	0	0	0
Future Volume (vph)	0	3	16	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	0	1745	1745	0	0	1745
Flt Permitted						
Satd. Flow (perm)	0	1745	1745	0	0	1745
Link Speed (k/h)		50	50		50	
Link Distance (m)		84.0	42.7		67.9	
Travel Time (s)		6.0	3.1		4.9	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	3	16	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	3	16	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		5.0	5.0		5.0	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	

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



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	3	16	0	0	0
Future Volume (vph)	0	3	16	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	4.8	3.5	3.5	3.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	0	1745	2000	0	0	1745
Flt Permitted						
Satd. Flow (perm)	0	1745	2000	0	0	1745
Link Speed (k/h)		50	50		50	
Link Distance (m)		42.7	29.9		67.1	
Travel Time (s)		3.1	2.2		4.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	3	16	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	3	16	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		5.0	5.0		5.0	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	0.91	1.09	1.09	1.09
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	

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



Lane Group	EBU	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations							
Traffic Volume (vph)	3	0	0	0	0	0	0
Future Volume (vph)	3	0	0	0	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	4.8	3.5	3.5	3.5	3.5	3.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt							
Flt Protected		0.950					
Satd. Flow (prot)	0	1900	0	0	0	0	1745
Flt Permitted		0.950					
Satd. Flow (perm)	0	1900	0	0	0	0	1745
Link Speed (k/h)			50	50		50	
Link Distance (m)			29.9	42.6		66.7	
Travel Time (s)			2.2	3.1		4.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	3	0	0	0	0	0	0
Shared Lane Traffic (%)							
Lane Group Flow (vph)	0	3	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No
Lane Alignment	R NA	Left	Left	Left	Right	Left	Right
Median Width(m)			4.8	4.8		0.0	
Link Offset(m)			0.0	0.0		0.0	
Crosswalk Width(m)			5.0	5.0		5.0	
Two way Left Turn Lane							
Headway Factor	1.09	0.91	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	14	24			14	24	14
Sign Control			Free	Free		Stop	

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	112	131	64	123	39	611	738	746	148	1089	114
Future Volume (vph)	30	112	131	64	123	39	611	738	746	148	1089	114
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	35.0		60.0	85.0		0.0	165.0		0.0	155.0		75.0
Storage Lanes	1		1	2		0	1		1	1		1
Taper Length (m)	50.0			95.0			40.0			25.0		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor	0.99		0.97	0.98	0.99				0.97			0.98
Frt			0.850		0.964				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1610	1745	1441	3216	1656	0	1674	3252	1498	1658	3283	1483
Flt Permitted	0.950			0.950			0.092			0.371		
Satd. Flow (perm)	1596	1745	1404	3159	1656	0	162	3252	1457	647	3283	1447
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			131		11				606			132
Link Speed (k/h)		50			50			80			80	
Link Distance (m)		126.7			245.5			634.3			855.0	
Travel Time (s)		9.1			17.7			28.5			38.5	
Confl. Peds. (#/hr)	7		8	8		7	6					6
Confl. Bikes (#/hr)			1			1			12			1
Peak Hour 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
Heavy Vehicles (%)	5%	2%	5%	2%	3%	3%	1%	4%	1%	2%	3%	2%
Adj. Flow (vph)	30	112	131	64	123	39	611	738	746	148	1089	114
Shared Lane Traffic (%)												
Lane Group Flow (vph)	30	112	131	64	162	0	611	738	746	148	1089	114
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.0			10.5			7.0			7.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2		1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	18.6	93.0	18.6	18.6	93.0		18.6	93.0	18.6	18.6	93.0	18.6
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	18.6	5.5	18.6	18.6	5.5		18.6	5.5	18.6	18.6	5.5	18.6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		87.5			87.5			87.5			87.5	
Detector 2 Size(m)		5.5			5.5			5.5			5.5	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA		pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases			4				2		2	6		6
Detector Phase	7	4	4	3	8		5	2	2	6	6	6

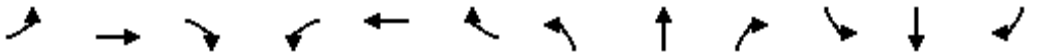
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0		5.0	20.0	20.0	20.0	20.0	20.0
Minimum Split (s)	10.9	31.5	31.5	10.9	31.5		11.3	26.3	26.3	26.3	26.3	26.3
Total Split (s)	13.0	32.0	32.0	13.0	32.0		39.0	85.0	85.0	46.0	46.0	46.0
Total Split (%)	10.0%	24.6%	24.6%	10.0%	24.6%		30.0%	65.4%	65.4%	35.4%	35.4%	35.4%
Maximum Green (s)	7.1	25.5	25.5	7.1	25.5		32.7	78.7	78.7	39.7	39.7	39.7
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3		4.6	4.6	4.6	4.6	4.6	4.6
All-Red Time (s)	2.6	3.2	3.2	2.6	3.2		1.7	1.7	1.7	1.7	1.7	1.7
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
Total Lost Time (s)	5.9	6.5	6.5	5.9	6.5		6.3	6.3	6.3	6.3	6.3	6.3
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes			Yes	Yes	Yes
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
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	C-Max	C-Max	C-Max
Walk Time (s)		7.0	7.0		7.0			7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		18.0	18.0		18.0			12.0	12.0	12.0	12.0	12.0
Pedestrian Calls (#/hr)		8	8		7			6	6	0	0	0
Act Effct Green (s)	6.7	16.8	16.8	6.8	19.4		90.0	90.0	90.0	39.7	39.7	39.7
Actuated g/C Ratio	0.05	0.13	0.13	0.05	0.15		0.69	0.69	0.69	0.31	0.31	0.31
v/c Ratio	0.37	0.50	0.44	0.38	0.63		0.98	0.33	0.62	0.75	1.09	0.21
Control Delay	72.1	58.9	12.4	66.1	59.1		42.5	2.8	6.0	65.4	97.6	4.6
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	72.1	58.9	12.4	66.1	59.1		42.5	2.8	6.0	65.4	97.6	4.6
LOS	E	E	B	E	E		D	A	A	E	F	A
Approach Delay		38.0			61.1			15.5			86.2	
Approach LOS		D			E			B			F	
Queue Length 50th (m)	7.0	24.9	0.0	7.6	34.6		~139.3	23.3	28.6	31.5	~151.6	0.0
Queue Length 95th (m)	16.4	39.6	15.5	14.6	52.8		m#164.0	m12.0	m11.9	#63.3	#190.0	9.0
Internal Link Dist (m)		102.7			221.5			610.3			831.0	
Turn Bay Length (m)	35.0		60.0	85.0			165.0			155.0		75.0
Base Capacity (vph)	87	342	380	175	333		623	2250	1194	197	1002	533
Starvation Cap Reductn	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
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.34	0.33	0.34	0.37	0.49		0.98	0.33	0.62	0.75	1.09	0.21

Intersection Summary

Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 15 (12%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.09
Intersection Signal Delay: 43.9 Intersection LOS: D
Intersection Capacity Utilization 104.4% ICU Level of Service G
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: March & Solandt



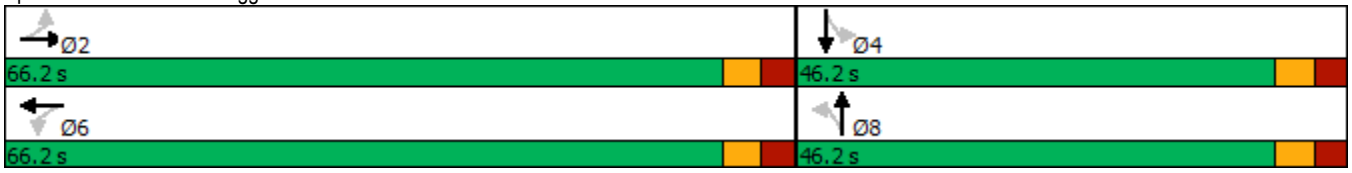
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	438	260	243	3	28	9	101	183	58	54	188	54
Future Volume (vph)	438	260	243	3	28	9	101	183	58	54	188	54
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	110.0		0.0	40.0		0.0	50.0		0.0	30.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	70.0			30.0			60.0			30.0		
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
Ped Bike Factor	0.99	0.99		1.00	0.99			0.99		0.98		
Frt		0.928			0.964			0.964			0.967	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1674	1610	0	1674	1548	0	1566	1664	0	1610	1691	0
Flt Permitted	0.733			0.412			0.538			0.540		
Satd. Flow (perm)	1277	1610	0	725	1548	0	887	1664	0	897	1691	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		64			9			16			14	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		245.5			306.0			489.3			751.0	
Travel Time (s)		17.7			22.0			35.2			54.1	
Confl. Peds. (#/hr)	4		1	1		4			11	11		
Confl. Bikes (#/hr)									3			
Peak Hour 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
Heavy Vehicles (%)	1%	1%	2%	1%	10%	10%	8%	2%	1%	5%	2%	1%
Adj. Flow (vph)	438	260	243	3	28	9	101	183	58	54	188	54
Shared Lane Traffic (%)												
Lane Group Flow (vph)	438	503	0	3	37	0	101	241	0	54	242	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.0			3.5			3.5			3.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	18.6	93.0		18.6	93.0		18.6	93.0		18.6	93.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	18.6	5.5		18.6	5.5		18.6	5.5		18.6	5.5	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		87.5			87.5			87.5			87.5	
Detector 2 Size(m)		5.5			5.5			5.5			5.5	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		4	4	

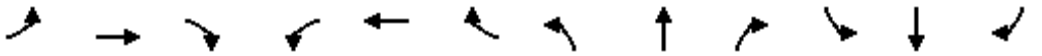
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	15.0	15.0		15.0	15.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	25.2	25.2		25.2	25.2		25.2	25.2		25.2	25.2	
Total Split (s)	66.2	66.2		66.2	66.2		46.2	46.2		46.2	46.2	
Total Split (%)	58.9%	58.9%		58.9%	58.9%		41.1%	41.1%		41.1%	41.1%	
Maximum Green (s)	60.0	60.0		60.0	60.0		40.0	40.0		40.0	40.0	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.9	2.9		2.9	2.9		2.9	2.9		2.9	2.9	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.2	6.2		6.2	6.2		6.2	6.2		6.2	6.2	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Min	Min		Min	Min		None	None		None	None	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Pedestrian Calls (#/hr)	1	1		4	4		11	11		0	0	
Act Effct Green (s)	41.3	41.3		41.3	41.3		18.5	18.5		18.5	18.5	
Actuated g/C Ratio	0.56	0.56		0.56	0.56		0.25	0.25		0.25	0.25	
v/c Ratio	0.61	0.54		0.01	0.04		0.45	0.56		0.24	0.56	
Control Delay	15.3	11.3		8.0	6.5		34.6	30.7		29.1	30.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	15.3	11.3		8.0	6.5		34.6	30.7		29.1	30.7	
LOS	B	B		A	A		C	C		C	C	
Approach Delay		13.1			6.6			31.8			30.4	
Approach LOS		B			A			C			C	
Queue Length 50th (m)	31.9	29.5		0.2	1.4		10.8	24.7		5.4	25.0	
Queue Length 95th (m)	74.3	68.0		1.3	5.7		29.0	55.2		16.7	55.5	
Internal Link Dist (m)		221.5			282.0			465.3			727.0	
Turn Bay Length (m)	110.0			40.0			50.0			30.0		
Base Capacity (vph)	1034	1316		587	1256		535	1010		541	1025	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.42	0.38		0.01	0.03		0.19	0.24		0.10	0.24	

Intersection Summary

Area Type: Other
Cycle Length: 112.4
Actuated Cycle Length: 73.6
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.61
Intersection Signal Delay: 20.1 Intersection LOS: C
Intersection Capacity Utilization 70.8% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 2: Legget & Solandt





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	63	26	9	37	12	183	87	1983	84	320	937	123
Future Volume (vph)	63	26	9	37	12	183	87	1983	84	320	937	123
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	0.0		20.0	0.0		60.0	100.0		80.0	185.0		20.0
Storage Lanes	0		1	0		1	1		1	2		1
Taper Length (m)	20.0			20.0			40.0			60.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Ped Bike Factor		1.00	0.98		1.00	0.98	1.00		0.95	1.00		0.97
Frt			0.850			0.850			0.850			0.850
Flt Protected		0.966			0.964		0.950			0.950		
Satd. Flow (prot)	0	1679	1375	0	1650	1469	1658	3316	1388	3216	3316	1498
Flt Permitted		0.759			0.721		0.950			0.950		
Satd. Flow (perm)	0	1316	1349	0	1228	1441	1653	3316	1316	3205	3316	1450
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			86			183			86			86
Link Speed (k/h)		50			60			80			80	
Link Distance (m)		247.8			333.9			554.1			634.3	
Travel Time (s)		17.8			20.0			24.9			28.5	
Confl. Peds. (#/hr)	3		6	6		3	4		20	20		4
Confl. Bikes (#/hr)						4			18			2
Peak Hour 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
Heavy Vehicles (%)	3%	1%	10%	5%	1%	3%	2%	2%	9%	2%	2%	1%
Adj. Flow (vph)	63	26	9	37	12	183	87	1983	84	320	937	123
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	89	9	0	49	183	87	1983	84	320	937	123
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		1.8			0.0			10.5			10.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	18.6	93.0	18.6	18.6	93.0	18.6	18.6	93.0	18.6	18.6	93.0	18.6
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	18.6	5.5	18.6	18.6	5.5	18.6	18.6	5.5	18.6	18.6	5.5	18.6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (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
Detector 1 Queue (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
Detector 1 Delay (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
Detector 2 Position(m)		87.5			87.5			87.5			87.5	
Detector 2 Size(m)		5.5			5.5			5.5			5.5	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	5.0	20.0	20.0	5.0	20.0	20.0
Minimum Split (s)	39.5	39.5	39.5	39.5	39.5	39.5	17.6	30.6	30.6	17.6	30.6	30.6
Total Split (s)	40.0	40.0	40.0	40.0	40.0	40.0	22.0	68.0	68.0	22.0	68.0	68.0
Total Split (%)	30.8%	30.8%	30.8%	30.8%	30.8%	30.8%	16.9%	52.3%	52.3%	16.9%	52.3%	52.3%
Maximum Green (s)	33.5	33.5	33.5	33.5	33.5	33.5	15.3	61.4	61.4	15.3	61.4	61.4
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	4.6	4.6	4.6	4.6	4.6	4.6
All-Red Time (s)	2.8	2.8	2.8	2.8	2.8	2.8	2.1	2.0	2.0	2.1	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.5	6.5		6.5	6.5	6.7	6.6	6.6	6.7	6.6	6.6
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
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	None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)	26.0	26.0	26.0	26.0	26.0	26.0		17.0	17.0		17.0	17.0
Pedestrian Calls (#/hr)	6	6	6	3	3	3		4	4		20	20
Act Effct Green (s)		17.0	17.0		17.0	17.0	11.9	76.0	76.0	17.2	81.3	81.3
Actuated g/C Ratio		0.13	0.13		0.13	0.13	0.09	0.58	0.58	0.13	0.63	0.63
v/c Ratio		0.52	0.04		0.31	0.53	0.58	1.02	0.10	0.75	0.45	0.13
Control Delay		61.1	0.2		52.8	11.6	71.0	54.2	3.7	83.4	8.3	2.8
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		61.1	0.2		52.8	11.6	71.0	54.2	3.7	83.4	8.3	2.8
LOS		E	A		D	B	E	D	A	F	A	A
Approach Delay		55.5			20.3			53.0			25.2	
Approach LOS		E			C			D			C	
Queue Length 50th (m)		20.4	0.0		10.9	0.0	20.0	~238.1	0.0	39.4	6.5	0.0
Queue Length 95th (m)		30.9	0.0		19.1	16.4	35.0	#347.7	7.8	m31.4	m112.6	m12.0
Internal Link Dist (m)		223.8			309.9			530.1			610.3	
Turn Bay Length (m)			20.0			60.0	100.0		80.0	185.0		20.0
Base Capacity (vph)		339	411		316	507	196	1937	804	432	2073	939
Starvation Cap Reductn		0	0		0	0	0	0	0	0	0	0
Spillback Cap Reductn		0	0		0	0	0	0	0	0	0	0
Storage Cap Reductn		0	0		0	0	0	0	0	0	0	0
Reduced v/c Ratio		0.26	0.02		0.16	0.36	0.44	1.02	0.10	0.74	0.45	0.13

Intersection Summary

Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 68 (52%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.02
Intersection Signal Delay: 41.1 Intersection LOS: D
Intersection Capacity Utilization 99.7% ICU Level of Service F
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

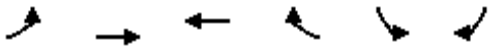
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: March & Station/Carling

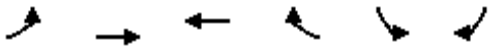
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	530	562	44	131	43	39
Future Volume (vph)	530	562	44	131	43	39
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.931				0.936	
Flt Protected				0.988	0.974	
Satd. Flow (prot)	1641	0	0	1636	1568	0
Flt Permitted				0.988	0.974	
Satd. Flow (perm)	1641	0	0	1636	1568	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	336.6			459.4	751.0	
Travel Time (s)	24.2			33.1	54.1	
Confl. Peds. (#/hr)		17	17			2
Confl. Bikes (#/hr)		1				
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	9%	7%	3%	4%
Adj. Flow (vph)	530	562	44	131	43	39
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1092	0	0	175	82	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.0			3.0	3.5	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	5.0			5.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 78.9%		ICU Level of Service D	
Analysis Period (min) 15			



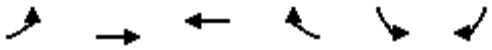
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	14	218	27	0	0	2
Future Volume (vph)	14	218	27	0	0	2
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.865
Flt Protected		0.997				
Satd. Flow (prot)	0	1740	1745	0	0	1510
Flt Permitted		0.997				
Satd. Flow (perm)	0	1740	1745	0	0	1510
Link Speed (k/h)		50	50		50	
Link Distance (m)		306.0	84.0		67.2	
Travel Time (s)		22.0	6.0		4.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	14	218	27	0	0	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	232	27	0	0	2
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		5.0	5.0		5.0	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	22.9%	ICU Level of Service	A
Analysis Period (min)	15		



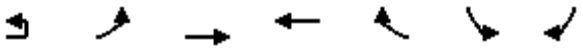
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	21	125	20	0	0	3
Future Volume (vph)	21	125	20	0	0	3
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.865
Flt Protected		0.993				
Satd. Flow (prot)	0	1733	1745	0	0	1510
Flt Permitted		0.993				
Satd. Flow (perm)	0	1733	1745	0	0	1510
Link Speed (k/h)		50	50		50	
Link Distance (m)		84.0	42.7		67.9	
Travel Time (s)		6.0	3.1		4.9	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	21	125	20	0	0	3
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	146	20	0	0	3
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		5.0	5.0		5.0	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	

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



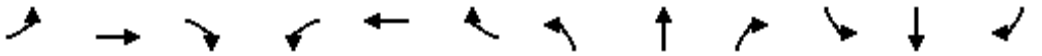
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	125	13	0	0	7
Future Volume (vph)	0	125	13	0	0	7
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	4.8	3.5	3.5	3.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.865
Flt Protected						
Satd. Flow (prot)	0	1745	2000	0	0	1510
Flt Permitted						
Satd. Flow (perm)	0	1745	2000	0	0	1510
Link Speed (k/h)		50	50		50	
Link Distance (m)		42.7	29.9		67.1	
Travel Time (s)		3.1	2.2		4.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	125	13	0	0	7
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	125	13	0	0	7
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		5.0	5.0		5.0	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	0.91	1.09	1.09	1.09
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	

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



Lane Group	EBU	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations							
Traffic Volume (vph)	3	107	0	0	0	0	10
Future Volume (vph)	3	107	0	0	0	0	10
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	4.8	3.5	3.5	3.5	3.5	3.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt							0.865
Flt Protected		0.950					
Satd. Flow (prot)	0	1900	0	0	0	0	1510
Flt Permitted		0.950					
Satd. Flow (perm)	0	1900	0	0	0	0	1510
Link Speed (k/h)			50	50		50	
Link Distance (m)			29.9	42.6		66.7	
Travel Time (s)			2.2	3.1		4.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	3	107	0	0	0	0	10
Shared Lane Traffic (%)							
Lane Group Flow (vph)	0	110	0	0	0	0	10
Enter Blocked Intersection	No	No	No	No	No	No	No
Lane Alignment	R NA	Left	Left	Left	Right	Left	Right
Median Width(m)			4.8	4.8		0.0	
Link Offset(m)			0.0	0.0		0.0	
Crosswalk Width(m)			5.0	5.0		5.0	
Two way Left Turn Lane							
Headway Factor	1.09	0.91	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	14	24			14	24	14
Sign Control			Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 16.4%		ICU Level of Service A	
Analysis Period (min) 15			



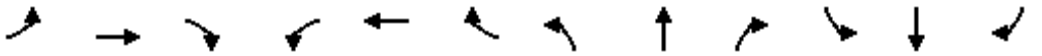
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	112	131	64	123	39	611	738	746	148	1089	114
Future Volume (vph)	30	112	131	64	123	39	611	738	746	148	1089	114
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	35.0		60.0	85.0		0.0	165.0		0.0	155.0		75.0
Storage Lanes	1		1	2		0	2		1	1		1
Taper Length (m)	50.0			95.0			40.0			25.0		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	0.97	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor	0.99		0.97	0.98	0.99		1.00		0.97			0.98
Frt			0.850		0.964				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1610	1745	1441	3216	1656	0	3248	3252	1498	1658	3283	1483
Flt Permitted	0.950			0.950			0.950			0.371		
Satd. Flow (perm)	1596	1745	1404	3159	1656	0	3233	3252	1457	647	3283	1447
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			131		11				606			132
Link Speed (k/h)		50			50			80			80	
Link Distance (m)		126.7			245.5			634.3			855.0	
Travel Time (s)		9.1			17.7			28.5			38.5	
Confl. Peds. (#/hr)	7		8	8		7	6					6
Confl. Bikes (#/hr)			1			1			12			1
Peak Hour 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
Heavy Vehicles (%)	5%	2%	5%	2%	3%	3%	1%	4%	1%	2%	3%	2%
Adj. Flow (vph)	30	112	131	64	123	39	611	738	746	148	1089	114
Shared Lane Traffic (%)												
Lane Group Flow (vph)	30	112	131	64	162	0	611	738	746	148	1089	114
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.0			10.5			7.0			7.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2		1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	18.6	93.0	18.6	18.6	93.0		18.6	93.0	18.6	18.6	93.0	18.6
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	18.6	5.5	18.6	18.6	5.5		18.6	5.5	18.6	18.6	5.5	18.6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		87.5			87.5			87.5			87.5	
Detector 2 Size(m)		5.5			5.5			5.5			5.5	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Perm	NA	Perm
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases			4						2	6		6
Detector Phase	7	4	4	3	8		5	2	2	6	6	6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0		5.0	20.0	20.0	20.0	20.0	20.0
Minimum Split (s)	10.9	31.5	31.5	10.9	31.5		11.3	26.3	26.3	26.3	26.3	26.3
Total Split (s)	13.0	32.0	32.0	13.0	32.0		39.0	85.0	85.0	46.0	46.0	46.0
Total Split (%)	10.0%	24.6%	24.6%	10.0%	24.6%		30.0%	65.4%	65.4%	35.4%	35.4%	35.4%
Maximum Green (s)	7.1	25.5	25.5	7.1	25.5		32.7	78.7	78.7	39.7	39.7	39.7
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3		4.6	4.6	4.6	4.6	4.6	4.6
All-Red Time (s)	2.6	3.2	3.2	2.6	3.2		1.7	1.7	1.7	1.7	1.7	1.7
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
Total Lost Time (s)	5.9	6.5	6.5	5.9	6.5		6.3	6.3	6.3	6.3	6.3	6.3
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes			Yes	Yes	Yes
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
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	C-Max	C-Max	C-Max
Walk Time (s)		7.0	7.0		7.0			7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		18.0	18.0		18.0			12.0	12.0	12.0	12.0	12.0
Pedestrian Calls (#/hr)		8	8		7			6	6	0	0	0
Act Effct Green (s)	6.7	16.8	16.8	6.8	19.4		29.1	90.0	90.0	54.6	54.6	54.6
Actuated g/C Ratio	0.05	0.13	0.13	0.05	0.15		0.22	0.69	0.69	0.42	0.42	0.42
v/c Ratio	0.37	0.50	0.44	0.38	0.63		0.84	0.33	0.62	0.55	0.79	0.17
Control Delay	72.1	58.9	12.4	66.1	59.1		46.5	2.8	6.0	42.7	40.2	4.2
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	72.1	58.9	12.4	66.1	59.1		46.5	2.8	6.0	42.7	40.2	4.2
LOS	E	E	B	E	E		D	A	A	D	D	A
Approach Delay		38.0			61.1			16.7			37.4	
Approach LOS		D			E			B			D	
Queue Length 50th (m)	7.0	24.9	0.0	7.6	34.6		64.5	23.3	28.6	27.2	121.5	0.0
Queue Length 95th (m)	16.4	39.6	15.5	14.6	52.8		m52.4	m12.0	m11.9	#63.3	#190.0	9.0
Internal Link Dist (m)		102.7			221.5			610.3			831.0	
Turn Bay Length (m)	35.0		60.0	85.0			165.0			155.0		75.0
Base Capacity (vph)	87	342	380	175	333		819	2250	1194	271	1378	683
Starvation Cap Reductn	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
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.34	0.33	0.34	0.37	0.49		0.75	0.33	0.62	0.55	0.79	0.17

Intersection Summary

Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 15 (12%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
Natural Cycle: 110
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.84
Intersection Signal Delay: 27.8 Intersection LOS: C
Intersection Capacity Utilization 92.6% ICU Level of Service F
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: March & Solandt



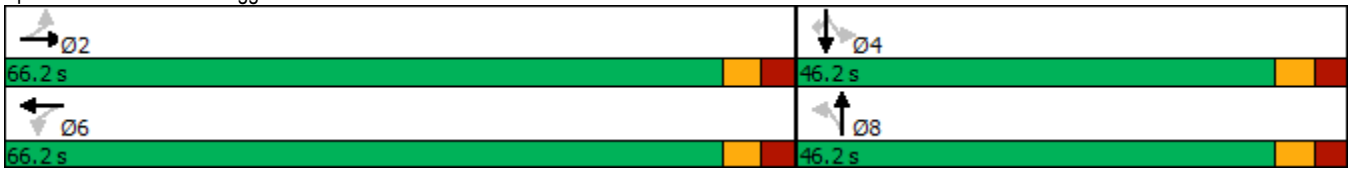
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	438	260	243	3	28	9	101	183	58	54	188	54
Future Volume (vph)	438	260	243	3	28	9	101	183	58	54	188	54
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	110.0		0.0	40.0		0.0	50.0		0.0	30.0		105.0
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (m)	70.0			30.0			60.0			30.0		
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
Ped Bike Factor	0.99	0.99		1.00	0.99			0.99		0.98		
Frt		0.928			0.964			0.964				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1674	1610	0	1674	1548	0	1566	1664	0	1610	1745	1498
Flt Permitted	0.733			0.412			0.637			0.540		
Satd. Flow (perm)	1277	1610	0	725	1548	0	1050	1664	0	897	1745	1498
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		64			9			16				54
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		245.5			306.0			489.3			751.0	
Travel Time (s)		17.7			22.0			35.2			54.1	
Confl. Peds. (#/hr)	4		1	1		4			11	11		
Confl. Bikes (#/hr)									3			
Peak Hour 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
Heavy Vehicles (%)	1%	1%	2%	1%	10%	10%	8%	2%	1%	5%	2%	1%
Adj. Flow (vph)	438	260	243	3	28	9	101	183	58	54	188	54
Shared Lane Traffic (%)												
Lane Group Flow (vph)	438	503	0	3	37	0	101	241	0	54	188	54
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.0			3.5			3.5			3.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (m)	18.6	93.0		18.6	93.0		18.6	93.0		18.6	93.0	18.6
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Size(m)	18.6	5.5		18.6	5.5		18.6	5.5		18.6	5.5	18.6
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(m)		87.5			87.5			87.5			87.5	
Detector 2 Size(m)		5.5			5.5			5.5			5.5	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		4
Detector Phase	2	2		6	6		8	8		4	4	4

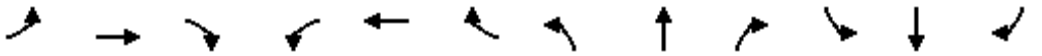
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	15.0	15.0		15.0	15.0		10.0	10.0		10.0	10.0	10.0
Minimum Split (s)	25.2	25.2		25.2	25.2		25.2	25.2		25.2	25.2	25.2
Total Split (s)	66.2	66.2		66.2	66.2		46.2	46.2		46.2	46.2	46.2
Total Split (%)	58.9%	58.9%		58.9%	58.9%		41.1%	41.1%		41.1%	41.1%	41.1%
Maximum Green (s)	60.0	60.0		60.0	60.0		40.0	40.0		40.0	40.0	40.0
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	3.3
All-Red Time (s)	2.9	2.9		2.9	2.9		2.9	2.9		2.9	2.9	2.9
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.2	6.2		6.2	6.2		6.2	6.2		6.2	6.2	6.2
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
Recall Mode	Min	Min		Min	Min		None	None		None	None	None
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	12.0
Pedestrian Calls (#/hr)	1	1		4	4		11	11		0	0	0
Act Effct Green (s)	41.3	41.3		41.3	41.3		18.5	18.5		18.5	18.5	18.5
Actuated g/C Ratio	0.56	0.56		0.56	0.56		0.25	0.25		0.25	0.25	0.25
v/c Ratio	0.61	0.54		0.01	0.04		0.38	0.56		0.24	0.43	0.13
Control Delay	15.3	11.3		8.0	6.5		31.4	30.7		29.1	29.6	8.7
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	15.3	11.3		8.0	6.5		31.4	30.7		29.1	29.6	8.7
LOS	B	B		A	A		C	C		C	C	A
Approach Delay		13.1			6.6			30.9			25.7	
Approach LOS		B			A			C			C	
Queue Length 50th (m)	31.9	29.5		0.2	1.4		10.6	24.7		5.4	20.0	0.0
Queue Length 95th (m)	74.3	68.0		1.3	5.7		27.9	55.2		16.7	44.9	7.9
Internal Link Dist (m)		221.5			282.0			465.3			727.0	
Turn Bay Length (m)	110.0			40.0			50.0			30.0		105.0
Base Capacity (vph)	1034	1316		587	1256		633	1010		541	1052	925
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.42	0.38		0.01	0.03		0.16	0.24		0.10	0.18	0.06

Intersection Summary

Area Type: Other
Cycle Length: 112.4
Actuated Cycle Length: 73.6
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.61
Intersection Signal Delay: 19.0 Intersection LOS: B
Intersection Capacity Utilization 70.8% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 2: Legget & Solandt





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	63	26	9	37	12	183	87	1983	84	320	937	123
Future Volume (vph)	63	26	9	37	12	183	87	1983	84	320	937	123
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	0.0		20.0	0.0		60.0	100.0		80.0	185.0		20.0
Storage Lanes	0		1	0		1	1		1	2		1
Taper Length (m)	20.0			20.0			40.0			60.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Ped Bike Factor		1.00	0.98		1.00	0.98	1.00		0.95	1.00		0.97
Frt			0.850			0.850			0.850			0.850
Flt Protected		0.966			0.964		0.950			0.950		
Satd. Flow (prot)	0	1679	1375	0	1650	1469	1658	3316	1388	3216	3316	1498
Flt Permitted		0.759			0.721		0.950			0.950		
Satd. Flow (perm)	0	1316	1349	0	1228	1441	1653	3316	1316	3205	3316	1450
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			86			183			86			86
Link Speed (k/h)		50			60			80			80	
Link Distance (m)		247.8			333.9			554.1			634.3	
Travel Time (s)		17.8			20.0			24.9			28.5	
Confl. Peds. (#/hr)	3		6	6		3	4		20	20		4
Confl. Bikes (#/hr)						4			18			2
Peak Hour 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
Heavy Vehicles (%)	3%	1%	10%	5%	1%	3%	2%	2%	9%	2%	2%	1%
Adj. Flow (vph)	63	26	9	37	12	183	87	1983	84	320	937	123
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	89	9	0	49	183	87	1983	84	320	937	123
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		1.8			0.0			10.5			10.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	18.6	93.0	18.6	18.6	93.0	18.6	18.6	93.0	18.6	18.6	93.0	18.6
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	18.6	5.5	18.6	18.6	5.5	18.6	18.6	5.5	18.6	18.6	5.5	18.6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (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
Detector 1 Queue (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
Detector 1 Delay (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
Detector 2 Position(m)		87.5			87.5			87.5			87.5	
Detector 2 Size(m)		5.5			5.5			5.5			5.5	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	5.0	20.0	20.0	5.0	20.0	20.0
Minimum Split (s)	39.5	39.5	39.5	39.5	39.5	39.5	17.6	30.6	30.6	17.6	30.6	30.6
Total Split (s)	40.0	40.0	40.0	40.0	40.0	40.0	22.0	68.0	68.0	22.0	68.0	68.0
Total Split (%)	30.8%	30.8%	30.8%	30.8%	30.8%	30.8%	16.9%	52.3%	52.3%	16.9%	52.3%	52.3%
Maximum Green (s)	33.5	33.5	33.5	33.5	33.5	33.5	15.3	61.4	61.4	15.3	61.4	61.4
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	4.6	4.6	4.6	4.6	4.6	4.6
All-Red Time (s)	2.8	2.8	2.8	2.8	2.8	2.8	2.1	2.0	2.0	2.1	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.5	6.5		6.5	6.5	6.7	6.6	6.6	6.7	6.6	6.6
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
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	None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)	26.0	26.0	26.0	26.0	26.0	26.0		17.0	17.0		17.0	17.0
Pedestrian Calls (#/hr)	6	6	6	3	3	3		4	4		20	20
Act Effct Green (s)		17.0	17.0		17.0	17.0	11.9	76.0	76.0	17.2	81.3	81.3
Actuated g/C Ratio		0.13	0.13		0.13	0.13	0.09	0.58	0.58	0.13	0.63	0.63
v/c Ratio		0.52	0.04		0.31	0.53	0.58	1.02	0.10	0.75	0.45	0.13
Control Delay		61.1	0.2		52.8	11.6	71.0	54.2	3.7	70.8	14.3	4.0
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		61.1	0.2		52.8	11.6	71.0	54.2	3.7	70.8	14.3	4.0
LOS		E	A		D	B	E	D	A	E	B	A
Approach Delay		55.5			20.3			53.0			26.4	
Approach LOS		E			C			D			C	
Queue Length 50th (m)		20.4	0.0		10.9	0.0	20.0	~238.1	0.0	30.7	81.8	3.8
Queue Length 95th (m)		30.9	0.0		19.1	16.4	35.0	#347.7	7.8	m#51.7	135.0	m17.5
Internal Link Dist (m)		223.8			309.9			530.1			610.3	
Turn Bay Length (m)			20.0			60.0	100.0		80.0	185.0		20.0
Base Capacity (vph)		339	411		316	507	196	1937	804	432	2073	939
Starvation Cap Reductn		0	0		0	0	0	0	0	0	0	0
Spillback Cap Reductn		0	0		0	0	0	0	0	0	0	0
Storage Cap Reductn		0	0		0	0	0	0	0	0	0	0
Reduced v/c Ratio		0.26	0.02		0.16	0.36	0.44	1.02	0.10	0.74	0.45	0.13

Intersection Summary

Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 68 (52%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.02
Intersection Signal Delay: 41.6 Intersection LOS: D
Intersection Capacity Utilization 99.7% ICU Level of Service F
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: March & Station/Carling

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	530	562	44	131	43	39
Future Volume (vph)	530	562	44	131	43	39
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Storage Length (m)		125.0	15.0		0.0	40.0
Storage Lanes		1	1		1	1
Taper Length (m)			20.0		20.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1762	1498	1551	1664	1642	1455
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	1762	1498	1551	1664	1642	1455
Link Speed (k/h)	50			50	50	
Link Distance (m)	336.6			459.4	751.0	
Travel Time (s)	24.2			33.1	54.1	
Confl. Peds. (#/hr)		17	17			2
Confl. Bikes (#/hr)		1				
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	9%	7%	3%	4%
Adj. Flow (vph)	530	562	44	131	43	39
Shared Lane Traffic (%)						
Lane Group Flow (vph)	530	562	44	131	43	39
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.0			3.0	3.5	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	5.0			5.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	

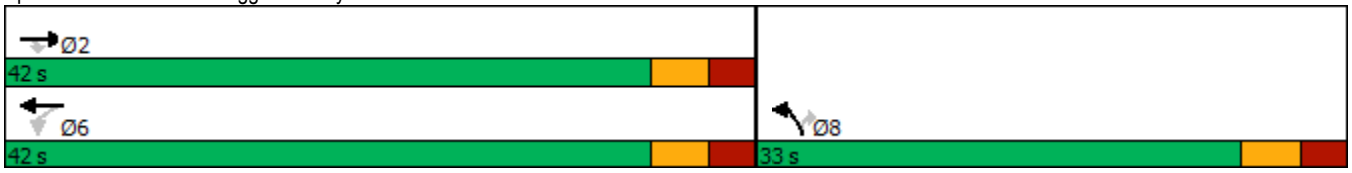
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 48.4%		ICU Level of Service A	
Analysis Period (min) 15			

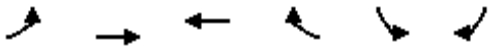
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	530	562	44	131	43	39
Future Volume (vph)	530	562	44	131	43	39
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Storage Length (m)		125.0	15.0		0.0	40.0
Storage Lanes		1	1		1	1
Taper Length (m)			20.0		20.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.95	0.99			0.98
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1762	1498	1551	1664	1642	1455
Flt Permitted			0.440		0.950	
Satd. Flow (perm)	1762	1429	712	1664	1642	1422
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		562				39
Link Speed (k/h)	50			50	50	
Link Distance (m)	336.6			459.4	751.0	
Travel Time (s)	24.2			33.1	54.1	
Confl. Peds. (#/hr)		17	17			2
Confl. Bikes (#/hr)		1				
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	9%	7%	3%	4%
Adj. Flow (vph)	530	562	44	131	43	39
Shared Lane Traffic (%)						
Lane Group Flow (vph)	530	562	44	131	43	39
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.0			3.0	3.5	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	5.0			5.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)		14	24		24	14
Number of Detectors	2	1	1	2	1	1
Detector Template	Thru	Right	Left	Thru	Left	Right
Leading Detector (m)	93.0	18.6	18.6	93.0	18.6	18.6
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	5.5	18.6	18.6	5.5	18.6	18.6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)	87.5			87.5		
Detector 2 Size(m)	5.5			5.5		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA	Perm	Perm	NA	Prot	Perm
Protected Phases	2			6	8	
Permitted Phases		2	6			8
Detector Phase	2	2	6	6	8	8

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	31.0	31.0	31.0	31.0	33.0	33.0
Total Split (s)	42.0	42.0	42.0	42.0	33.0	33.0
Total Split (%)	56.0%	56.0%	56.0%	56.0%	44.0%	44.0%
Maximum Green (s)	36.0	36.0	36.0	36.0	27.0	27.0
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	2.7	2.7	2.7	2.7	2.7	2.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	18.0	18.0	18.0	18.0	20.0	20.0
Pedestrian Calls (#/hr)	1	1	1	1	1	1
Act Effct Green (s)	36.5	36.5	36.5	36.5	14.5	14.5
Actuated g/C Ratio	0.74	0.74	0.74	0.74	0.30	0.30
v/c Ratio	0.40	0.47	0.08	0.11	0.09	0.09
Control Delay	8.7	2.5	7.9	6.9	18.5	7.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.7	2.5	7.9	6.9	18.5	7.2
LOS	A	A	A	A	B	A
Approach Delay	5.5			7.2	13.1	
Approach LOS	A			A	B	
Queue Length 50th (m)	23.7	0.0	1.5	4.4	3.6	0.0
Queue Length 95th (m)	77.0	13.8	8.2	17.6	9.3	5.1
Internal Link Dist (m)	312.6			435.4	727.0	
Turn Bay Length (m)		125.0	15.0			40.0
Base Capacity (vph)	1311	1207	529	1238	1023	900
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.40	0.47	0.08	0.11	0.04	0.04

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 49.1			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.47			
Intersection Signal Delay: 6.2		Intersection LOS: A	
Intersection Capacity Utilization 57.8%		ICU Level of Service B	
Analysis Period (min) 15			

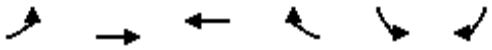
Splits and Phases: 4: Legget & Terry Fox





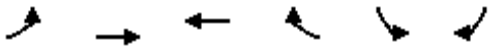
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	14	218	27	0	0	2
Future Volume (vph)	14	218	27	0	0	2
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.865
Flt Protected		0.997				
Satd. Flow (prot)	0	1740	1745	0	0	1510
Flt Permitted		0.997				
Satd. Flow (perm)	0	1740	1745	0	0	1510
Link Speed (k/h)		50	50		50	
Link Distance (m)		306.0	84.0		67.2	
Travel Time (s)		22.0	6.0		4.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	14	218	27	0	0	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	232	27	0	0	2
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		5.0	5.0		5.0	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 22.9%		ICU Level of Service A	
Analysis Period (min) 15			



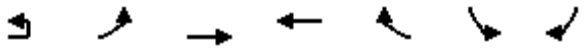
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	21	125	20	0	0	3
Future Volume (vph)	21	125	20	0	0	3
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.865
Flt Protected		0.993				
Satd. Flow (prot)	0	1733	1745	0	0	1510
Flt Permitted		0.993				
Satd. Flow (perm)	0	1733	1745	0	0	1510
Link Speed (k/h)		50	50		50	
Link Distance (m)		84.0	42.7		67.9	
Travel Time (s)		6.0	3.1		4.9	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	21	125	20	0	0	3
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	146	20	0	0	3
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		5.0	5.0		5.0	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	

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



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑			↱
Traffic Volume (vph)	0	125	13	0	0	7
Future Volume (vph)	0	125	13	0	0	7
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	4.8	3.5	3.5	3.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.865
Flt Protected						
Satd. Flow (prot)	0	1745	2000	0	0	1510
Flt Permitted						
Satd. Flow (perm)	0	1745	2000	0	0	1510
Link Speed (k/h)		50	50		50	
Link Distance (m)		42.7	29.9		67.1	
Travel Time (s)		3.1	2.2		4.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	125	13	0	0	7
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	125	13	0	0	7
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		5.0	5.0		5.0	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	0.91	1.09	1.09	1.09
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	

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



Lane Group	EBU	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations							
Traffic Volume (vph)	3	107	0	0	0	0	10
Future Volume (vph)	3	107	0	0	0	0	10
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	4.8	3.5	3.5	3.5	3.5	3.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt							0.865
Flt Protected		0.950					
Satd. Flow (prot)	0	1900	0	0	0	0	1510
Flt Permitted		0.950					
Satd. Flow (perm)	0	1900	0	0	0	0	1510
Link Speed (k/h)			50	50		50	
Link Distance (m)			29.9	42.6		66.7	
Travel Time (s)			2.2	3.1		4.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	3	107	0	0	0	0	10
Shared Lane Traffic (%)							
Lane Group Flow (vph)	0	110	0	0	0	0	10
Enter Blocked Intersection	No	No	No	No	No	No	No
Lane Alignment	R NA	Left	Left	Left	Right	Left	Right
Median Width(m)			4.8	4.8		0.0	
Link Offset(m)			0.0	0.0		0.0	
Crosswalk Width(m)			5.0	5.0		5.0	
Two way Left Turn Lane							
Headway Factor	1.09	0.91	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	14	24			14	24	14
Sign Control			Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 16.4%		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)	89	44	658	689	76	225	118	1548	79	31	872	69
Future Volume (vph)	89	44	658	689	76	225	118	1548	79	31	872	69
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	35.0		60.0	85.0		0.0	165.0		0.0	155.0		75.0
Storage Lanes	1		1	2		0	1		1	1		1
Taper Length (m)	50.0			95.0			40.0			25.0		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor	0.99		0.97	0.98	0.98				0.97			0.96
Frt			0.850		0.888				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1658	1695	1498	3248	1539	0	1626	3349	1469	1674	3316	1455
Flt Permitted	0.950			0.950			0.145			0.088		
Satd. Flow (perm)	1649	1695	1455	3185	1539	0	248	3349	1432	155	3316	1401
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			130		102				79			132
Link Speed (k/h)		50			50			80			80	
Link Distance (m)		123.9			245.5			634.3			855.0	
Travel Time (s)		8.9			17.7			28.5			38.5	
Confl. Peds. (#/hr)	5		8	8		5	11		1	1		11
Confl. Bikes (#/hr)			4			2			2			5
Peak Hour 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
Heavy Vehicles (%)	2%	5%	1%	1%	1%	1%	4%	1%	3%	1%	2%	4%
Adj. Flow (vph)	89	44	658	689	76	225	118	1548	79	31	872	69
Shared Lane Traffic (%)												
Lane Group Flow (vph)	89	44	658	689	301	0	118	1548	79	31	872	69
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.0			10.5			7.0			7.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2		1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	18.6	93.0	18.6	18.6	93.0		18.6	93.0	18.6	18.6	93.0	18.6
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	18.6	5.5	18.6	18.6	5.5		18.6	5.5	18.6	18.6	5.5	18.6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		87.5			87.5			87.5			87.5	
Detector 2 Size(m)		5.5			5.5			5.5			5.5	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA		pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases			4				2		2	6		6
Detector Phase	7	4	4	3	8		5	2	2	6	6	6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0		5.0	20.0	20.0	20.0	20.0	20.0
Minimum Split (s)	10.9	31.5	31.5	10.9	31.5		11.3	26.3	26.3	26.3	26.3	26.3
Total Split (s)	34.0	32.0	32.0	34.0	32.0		12.0	64.0	64.0	52.0	52.0	52.0
Total Split (%)	26.2%	24.6%	24.6%	26.2%	24.6%		9.2%	49.2%	49.2%	40.0%	40.0%	40.0%
Maximum Green (s)	28.1	25.5	25.5	28.1	25.5		5.7	57.7	57.7	45.7	45.7	45.7
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3		4.6	4.6	4.6	4.6	4.6	4.6
All-Red Time (s)	2.6	3.2	3.2	2.6	3.2		1.7	1.7	1.7	1.7	1.7	1.7
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
Total Lost Time (s)	5.9	6.5	6.5	5.9	6.5		6.3	6.3	6.3	6.3	6.3	6.3
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes			Yes	Yes	Yes
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
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	C-Max	C-Max	C-Max
Walk Time (s)		7.0	7.0		7.0			7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		18.0	18.0		18.0			12.0	12.0	12.0	12.0	12.0
Pedestrian Calls (#/hr)		8	8		5			1	1	11	11	11
Act Effct Green (s)	12.3	25.5	25.5	28.1	41.3		57.7	57.7	57.7	45.7	45.7	45.7
Actuated g/C Ratio	0.09	0.20	0.20	0.22	0.32		0.44	0.44	0.44	0.35	0.35	0.35
v/c Ratio	0.57	0.13	1.69	0.98	0.54		0.69	1.04	0.12	0.57	0.75	0.12
Control Delay	69.6	44.5	348.8	80.4	28.5		28.4	57.9	1.8	77.7	41.9	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
Total Delay	69.6	44.5	348.8	80.4	28.5		28.4	57.9	1.8	77.7	41.9	0.4
LOS	E	D	F	F	C		C	E	A	E	D	A
Approach Delay		300.4			64.6			53.3			40.1	
Approach LOS		F			E			D			D	
Queue Length 50th (m)	20.4	8.6	~202.6	84.0	38.3		11.6	~207.6	2.4	5.9	94.8	0.0
Queue Length 95th (m)	35.2	18.4	#269.4	#119.5	68.9		m14.1	#249.6	m2.5	#21.5	117.2	0.0
Internal Link Dist (m)		99.9			221.5			610.3			831.0	
Turn Bay Length (m)	35.0		60.0	85.0			165.0			155.0		75.0
Base Capacity (vph)	358	332	389	702	558		170	1486	679	54	1165	578
Starvation Cap Reductn	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
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.13	1.69	0.98	0.54		0.69	1.04	0.12	0.57	0.75	0.12

Intersection Summary

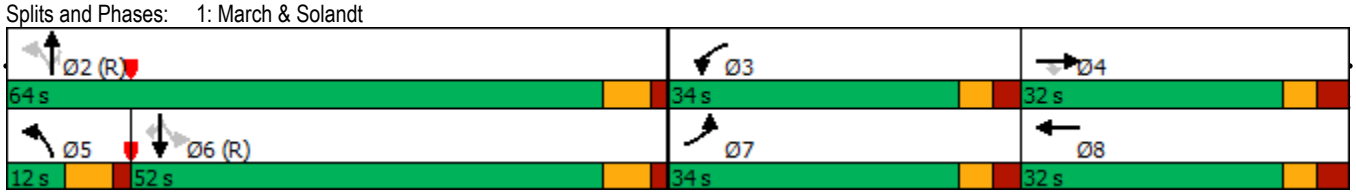
Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 30 (23%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 120
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.69
Intersection Signal Delay: 96.4 Intersection LOS: F
Intersection Capacity Utilization 114.7% ICU Level of Service H
Analysis Period (min) 15

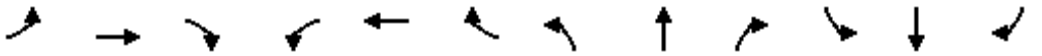
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: March & Solandt





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	57	32	55	52	263	30	296	108	4	7	251	455
Future Volume (vph)	57	32	55	52	263	30	296	108	4	7	251	455
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	110.0		0.0	40.0		0.0	50.0		0.0	30.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	70.0			30.0			60.0			30.0		
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
Ped Bike Factor	1.00	0.98		0.98	1.00			1.00		0.97	0.98	
Frt		0.905			0.985			0.995			0.903	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1610	1480	0	1658	1715	0	1674	1750	0	1674	1559	0
Flt Permitted	0.362			0.701			0.085			0.685		
Satd. Flow (perm)	611	1480	0	1203	1715	0	150	1750	0	1165	1559	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		55			5			3			83	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		245.5			306.0			489.3			751.0	
Travel Time (s)		17.7			22.0			35.2			54.1	
Confl. Peds. (#/hr)	3		6	6		3	2		13	13		2
Peak Hour 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
Heavy Vehicles (%)	5%	10%	4%	2%	1%	10%	1%	1%	1%	1%	2%	1%
Adj. Flow (vph)	57	32	55	52	263	30	296	108	4	7	251	455
Shared Lane Traffic (%)												
Lane Group Flow (vph)	57	87	0	52	293	0	296	112	0	7	706	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.0			3.5			3.5			3.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	18.6	93.0		18.6	93.0		18.6	93.0		18.6	93.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	18.6	5.5		18.6	5.5		18.6	5.5		18.6	5.5	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		87.5			87.5			87.5			87.5	
Detector 2 Size(m)		5.5			5.5			5.5			5.5	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		2			6		3	8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		3	8		4	4	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	25.2	25.2		25.2	25.2		16.2	25.2		25.2	25.2	
Total Split (s)	41.2	41.2		41.2	41.2		31.2	77.4		46.2	46.2	
Total Split (%)	34.7%	34.7%		34.7%	34.7%		26.3%	65.3%		39.0%	39.0%	
Maximum Green (s)	35.0	35.0		35.0	35.0		25.0	71.2		40.0	40.0	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.9	2.9		2.9	2.9		2.9	2.9		2.9	2.9	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.2	6.2		6.2	6.2		6.2	6.2		6.2	6.2	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Ped		Ped	Ped	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0		7.0	7.0	
Flash Dont Walk (s)	12.0	12.0		12.0	12.0			12.0		12.0	12.0	
Pedestrian Calls (#/hr)	6	6		3	3			13		2	2	
Act Effct Green (s)	23.4	23.4		23.4	23.4		64.9	64.9		40.7	40.7	
Actuated g/C Ratio	0.23	0.23		0.23	0.23		0.64	0.64		0.40	0.40	
v/c Ratio	0.40	0.23		0.19	0.73		0.81	0.10		0.01	1.04	
Control Delay	42.6	15.6		33.1	46.7		42.7	8.3		24.4	74.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	42.6	15.6		33.1	46.7		42.7	8.3		24.4	74.8	
LOS	D	B		C	D		D	A		C	E	
Approach Delay		26.3			44.6			33.3			74.3	
Approach LOS		C			D			C			E	
Queue Length 50th (m)	8.7	4.5		7.5	48.0		37.0	6.9		0.8	~130.7	
Queue Length 95th (m)	20.9	16.2		17.4	78.5		73.8	16.6		4.1	#239.8	
Internal Link Dist (m)		221.5			282.0			465.3			727.0	
Turn Bay Length (m)	110.0			40.0			50.0			30.0		
Base Capacity (vph)	215	558		424	608		480	1257		470	678	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.27	0.16		0.12	0.48		0.62	0.09		0.01	1.04	

Intersection Summary			
Area Type:	Other		
Cycle Length: 118.6			
Actuated Cycle Length: 100.9			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.04			
Intersection Signal Delay: 53.3		Intersection LOS: D	
Intersection Capacity Utilization 106.4%		ICU Level of Service G	
Analysis Period (min) 15			

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 2: Legget & Solandt

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	13	30	121	19	321	27	1376	35	301	1937	50
Future Volume (vph)	26	13	30	121	19	321	27	1376	35	301	1937	50
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	0.0		20.0	0.0		60.0	100.0		80.0	185.0		20.0
Storage Lanes	0		1	0		1	1		1	2		1
Taper Length (m)	20.0			20.0			40.0			60.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Ped Bike Factor		1.00	0.98		1.00	0.98	1.00		0.98	1.00		0.96
Frt			0.850			0.850			0.850			0.850
Flt Protected		0.968			0.959		0.950			0.950		
Satd. Flow (prot)	0	1684	1375	0	1634	1469	1658	3316	1388	3216	3316	1498
Flt Permitted		0.758			0.727		0.950			0.950		
Satd. Flow (perm)	0	1317	1347	0	1236	1443	1656	3316	1366	3214	3316	1437
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			86			183			86			86
Link Speed (k/h)		50			60			80			80	
Link Distance (m)		247.8			333.9			554.1			634.3	
Travel Time (s)		17.8			20.0			24.9			28.5	
Confl. Peds. (#/hr)	2		2	2		2	5		2	2		5
Confl. Bikes (#/hr)			7			4			1			10
Peak Hour 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
Heavy Vehicles (%)	3%	1%	10%	5%	1%	3%	2%	2%	9%	2%	2%	1%
Adj. Flow (vph)	26	13	30	121	19	321	27	1376	35	301	1937	50
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	39	30	0	140	321	27	1376	35	301	1937	50
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		1.8			0.0			10.5			10.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	18.6	93.0	18.6	18.6	93.0	18.6	18.6	93.0	18.6	18.6	93.0	18.6
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	18.6	5.5	18.6	18.6	5.5	18.6	18.6	5.5	18.6	18.6	5.5	18.6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (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
Detector 1 Queue (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
Detector 1 Delay (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
Detector 2 Position(m)		87.5			87.5			87.5			87.5	
Detector 2 Size(m)		5.5			5.5			5.5			5.5	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	5.0	20.0	20.0	5.0	20.0	20.0
Minimum Split (s)	39.5	39.5	39.5	39.5	39.5	39.5	17.6	30.6	30.6	17.6	30.6	30.6
Total Split (s)	40.0	40.0	40.0	40.0	40.0	40.0	18.0	72.0	72.0	18.0	72.0	72.0
Total Split (%)	30.8%	30.8%	30.8%	30.8%	30.8%	30.8%	13.8%	55.4%	55.4%	13.8%	55.4%	55.4%
Maximum Green (s)	33.5	33.5	33.5	33.5	33.5	33.5	11.3	65.4	65.4	11.3	65.4	65.4
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	4.6	4.6	4.6	4.6	4.6	4.6
All-Red Time (s)	2.8	2.8	2.8	2.8	2.8	2.8	2.1	2.0	2.0	2.1	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.5	6.5		6.5	6.5	6.7	6.6	6.6	6.7	6.6	6.6
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
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	None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)	26.0	26.0	26.0	26.0	26.0	26.0		17.0	17.0		17.0	17.0
Pedestrian Calls (#/hr)	2	2	2	2	2	2		2	2		5	5
Act Effct Green (s)		22.5	22.5		22.5	22.5	7.6	69.9	69.9	17.9	85.1	85.1
Actuated g/C Ratio		0.17	0.17		0.17	0.17	0.06	0.54	0.54	0.14	0.65	0.65
v/c Ratio		0.17	0.10		0.66	0.80	0.28	0.77	0.05	0.68	0.89	0.05
Control Delay		43.7	0.6		63.0	36.1	65.0	28.4	0.1	51.3	19.1	1.5
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		43.7	0.6		63.0	36.1	65.0	28.4	0.1	51.3	19.1	1.5
LOS		D	A		E	D	E	C	A	D	B	A
Approach Delay		25.0			44.3			28.4			23.0	
Approach LOS		C			D			C			C	
Queue Length 50th (m)		8.0	0.0		31.4	32.6	6.2	134.1	0.0	32.9	206.9	0.0
Queue Length 95th (m)		15.8	0.0		46.6	58.3	15.0	169.7	0.0	m#42.3	m#241.0	m0.0
Internal Link Dist (m)		223.8			309.9			530.1			610.3	
Turn Bay Length (m)			20.0			60.0	100.0		80.0	185.0		20.0
Base Capacity (vph)		339	410		318	507	144	1782	773	441	2171	970
Starvation Cap Reductn		0	0		0	0	0	0	0	0	0	0
Spillback Cap Reductn		0	0		0	0	0	0	0	0	0	0
Storage Cap Reductn		0	0		0	0	0	0	0	0	0	0
Reduced v/c Ratio		0.12	0.07		0.44	0.63	0.19	0.77	0.05	0.68	0.89	0.05

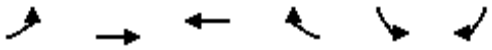
Intersection Summary

Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 102 (78%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.89
Intersection Signal Delay: 27.1 Intersection LOS: C
Intersection Capacity Utilization 92.8% ICU Level of Service F
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: March & Station/Carling

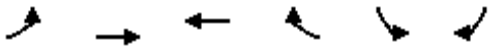
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	120	83	24	617	315	41
Future Volume (vph)	120	83	24	617	315	41
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.945				0.984	
Flt Protected				0.998	0.958	
Satd. Flow (prot)	1645	0	0	1759	1644	0
Flt Permitted				0.998	0.958	
Satd. Flow (perm)	1645	0	0	1759	1644	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	336.6			459.4	751.0	
Travel Time (s)	24.2			33.1	54.1	
Confl. Peds. (#/hr)		13	13			
Confl. Bikes (#/hr)						2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	4%	1%	1%	1%	10%
Adj. Flow (vph)	120	83	24	617	315	41
Shared Lane Traffic (%)						
Lane Group Flow (vph)	203	0	0	641	356	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.0			3.0	3.5	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	5.0			5.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 79.6%		ICU Level of Service D	
Analysis Period (min) 15			



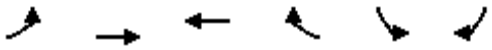
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	3	30	208	0	0	14
Future Volume (vph)	3	30	208	0	0	14
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.865
Flt Protected		0.995				
Satd. Flow (prot)	0	1736	1745	0	0	1510
Flt Permitted		0.995				
Satd. Flow (perm)	0	1736	1745	0	0	1510
Link Speed (k/h)		50	50		50	
Link Distance (m)		306.0	84.0		67.2	
Travel Time (s)		22.0	6.0		4.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	3	30	208	0	0	14
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	33	208	0	0	14
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		5.0	5.0		5.0	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	21.6%	ICU Level of Service	A
Analysis Period (min)	15		



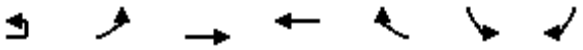
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	4	23	123	0	0	21
Future Volume (vph)	4	23	123	0	0	21
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.865
Flt Protected		0.993				
Satd. Flow (prot)	0	1733	1745	0	0	1510
Flt Permitted		0.993				
Satd. Flow (perm)	0	1733	1745	0	0	1510
Link Speed (k/h)		50	50		50	
Link Distance (m)		84.0	42.7		67.9	
Travel Time (s)		6.0	3.1		4.9	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	4	23	123	0	0	21
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	27	123	0	0	21
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		5.0	5.0		5.0	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 16.8%		ICU Level of Service A	
Analysis Period (min) 15			



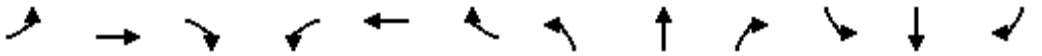
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	23	80	0	0	43
Future Volume (vph)	0	23	80	0	0	43
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	4.8	3.5	3.5	3.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.865
Flt Protected						
Satd. Flow (prot)	0	1745	2000	0	0	1510
Flt Permitted						
Satd. Flow (perm)	0	1745	2000	0	0	1510
Link Speed (k/h)		50	50		50	
Link Distance (m)		42.7	29.9		67.1	
Travel Time (s)		3.1	2.2		4.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	23	80	0	0	43
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	23	80	0	0	43
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		5.0	5.0		5.0	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	0.91	1.09	1.09	1.09
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	14.4%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBU	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations							
Traffic Volume (vph)	3	20	0	0	0	0	64
Future Volume (vph)	3	20	0	0	0	0	64
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	4.8	3.5	3.5	3.5	3.5	3.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt							0.865
Flt Protected		0.950					
Satd. Flow (prot)	0	1900	0	0	0	0	1510
Flt Permitted		0.950					
Satd. Flow (perm)	0	1900	0	0	0	0	1510
Link Speed (k/h)			50	50		50	
Link Distance (m)			29.9	42.6		66.7	
Travel Time (s)			2.2	3.1		4.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	3	20	0	0	0	0	64
Shared Lane Traffic (%)							
Lane Group Flow (vph)	0	23	0	0	0	0	64
Enter Blocked Intersection	No	No	No	No	No	No	No
Lane Alignment	R NA	Left	Left	Left	Right	Left	Right
Median Width(m)			4.8	4.8		0.0	
Link Offset(m)			0.0	0.0		0.0	
Crosswalk Width(m)			5.0	5.0		5.0	
Two way Left Turn Lane							
Headway Factor	1.09	0.91	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	14	24			14	24	14
Sign Control			Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 14.2%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	89	44	658	689	76	225	118	1548	79	31	872	69
Future Volume (vph)	89	44	658	689	76	225	118	1548	79	31	872	69
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	35.0		60.0	85.0		0.0	165.0		0.0	155.0		75.0
Storage Lanes	1		1	2		0	2		1	1		1
Taper Length (m)	50.0			95.0			40.0			25.0		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	0.97	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor	0.99		0.97	0.98	0.98		0.99		0.97			0.96
Frt			0.850		0.888				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1658	1695	1498	3248	1539	0	3154	3349	1469	1674	3316	1455
Flt Permitted	0.950			0.950			0.950			0.088		
Satd. Flow (perm)	1649	1695	1455	3185	1539	0	3119	3349	1432	155	3316	1401
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			130		102				79			132
Link Speed (k/h)		50			50			80			80	
Link Distance (m)		123.9			245.5			634.3			855.0	
Travel Time (s)		8.9			17.7			28.5			38.5	
Confl. Peds. (#/hr)	5		8	8		5	11		1	1		11
Confl. Bikes (#/hr)			4			2			2			5
Peak Hour 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
Heavy Vehicles (%)	2%	5%	1%	1%	1%	1%	4%	1%	3%	1%	2%	4%
Adj. Flow (vph)	89	44	658	689	76	225	118	1548	79	31	872	69
Shared Lane Traffic (%)												
Lane Group Flow (vph)	89	44	658	689	301	0	118	1548	79	31	872	69
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.0			10.5			7.0			7.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2		1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	18.6	93.0	18.6	18.6	93.0		18.6	93.0	18.6	18.6	93.0	18.6
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	18.6	5.5	18.6	18.6	5.5		18.6	5.5	18.6	18.6	5.5	18.6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		87.5			87.5			87.5			87.5	
Detector 2 Size(m)		5.5			5.5			5.5			5.5	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Perm	NA	Perm
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases			4						2	6		6
Detector Phase	7	4	4	3	8		5	2	2	6	6	6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0		5.0	20.0	20.0	20.0	20.0	20.0
Minimum Split (s)	10.9	31.5	31.5	10.9	31.5		11.3	26.3	26.3	26.3	26.3	26.3
Total Split (s)	34.0	32.0	32.0	34.0	32.0		12.0	64.0	64.0	52.0	52.0	52.0
Total Split (%)	26.2%	24.6%	24.6%	26.2%	24.6%		9.2%	49.2%	49.2%	40.0%	40.0%	40.0%
Maximum Green (s)	28.1	25.5	25.5	28.1	25.5		5.7	57.7	57.7	45.7	45.7	45.7
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3		4.6	4.6	4.6	4.6	4.6	4.6
All-Red Time (s)	2.6	3.2	3.2	2.6	3.2		1.7	1.7	1.7	1.7	1.7	1.7
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
Total Lost Time (s)	5.9	6.5	6.5	5.9	6.5		6.3	6.3	6.3	6.3	6.3	6.3
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes			Yes	Yes	Yes
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
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	C-Max	C-Max	C-Max
Walk Time (s)		7.0	7.0		7.0			7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)		18.0	18.0		18.0			12.0	12.0	12.0	12.0	12.0
Pedestrian Calls (#/hr)		8	8		5			1	1	11	11	11
Act Effct Green (s)	12.3	25.5	25.5	28.1	41.3		5.7	57.7	57.7	45.7	45.7	45.7
Actuated g/C Ratio	0.09	0.20	0.20	0.22	0.32		0.04	0.44	0.44	0.35	0.35	0.35
v/c Ratio	0.57	0.13	1.69	0.98	0.54		0.86	1.04	0.12	0.57	0.75	0.12
Control Delay	69.6	44.5	348.8	80.4	28.5		96.8	57.9	1.8	77.7	41.9	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
Total Delay	69.6	44.5	348.8	80.4	28.5		96.8	57.9	1.8	77.7	41.9	0.4
LOS	E	D	F	F	C		F	E	A	E	D	A
Approach Delay		300.4			64.6			58.0			40.1	
Approach LOS		F			E			E			D	
Queue Length 50th (m)	20.4	8.6	~202.6	84.0	38.3		13.5	~207.6	2.4	5.9	94.8	0.0
Queue Length 95th (m)	35.2	18.4	#269.4	#119.5	68.9		m#22.4	#249.6	m2.5	#21.5	117.2	0.0
Internal Link Dist (m)		99.9			221.5			610.3			831.0	
Turn Bay Length (m)	35.0		60.0	85.0			165.0			155.0		75.0
Base Capacity (vph)	358	332	389	702	558		138	1486	679	54	1165	578
Starvation Cap Reductn	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
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.13	1.69	0.98	0.54		0.86	1.04	0.12	0.57	0.75	0.12

Intersection Summary

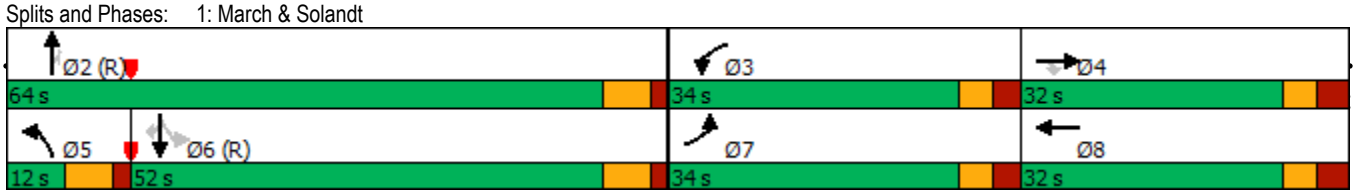
Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 30 (23%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
Natural Cycle: 120
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.69
Intersection Signal Delay: 98.2 Intersection LOS: F
Intersection Capacity Utilization 105.6% ICU Level of Service G
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: March & Solandt

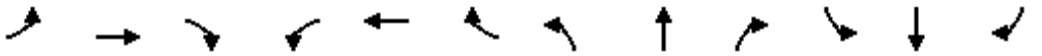


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	57	32	55	52	263	30	296	108	4	7	251	455
Future Volume (vph)	57	32	55	52	263	30	296	108	4	7	251	455
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	110.0		0.0	40.0		0.0	50.0		0.0	30.0		105.0
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (m)	70.0			30.0			60.0			30.0		
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
Ped Bike Factor	1.00	0.98		0.98	1.00		1.00	1.00		0.97		0.97
Frt		0.905			0.985			0.995				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1610	1480	0	1658	1715	0	1674	1750	0	1674	1745	1498
Flt Permitted	0.431			0.701			0.447			0.685		
Satd. Flow (perm)	727	1480	0	1203	1715	0	785	1750	0	1165	1745	1459
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		55			5			3				368
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		245.5			306.0			489.3			751.0	
Travel Time (s)		17.7			22.0			35.2			54.1	
Confl. Peds. (#/hr)	3		6	6		3	2		13	13		2
Peak Hour 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
Heavy Vehicles (%)	5%	10%	4%	2%	1%	10%	1%	1%	1%	1%	2%	1%
Adj. Flow (vph)	57	32	55	52	263	30	296	108	4	7	251	455
Shared Lane Traffic (%)												
Lane Group Flow (vph)	57	87	0	52	293	0	296	112	0	7	251	455
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.0			3.5			3.5			3.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (m)	18.6	93.0		18.6	93.0		18.6	93.0		18.6	93.0	18.6
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Size(m)	18.6	5.5		18.6	5.5		18.6	5.5		18.6	5.5	18.6
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(m)		87.5			87.5			87.5			87.5	
Detector 2 Size(m)		5.5			5.5			5.5			5.5	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA	Perm
Protected Phases		2			6		3	8			4	
Permitted Phases	2			6			8			4		4
Detector Phase	2	2		6	6		3	8		4	4	4
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	10.0
Minimum Split (s)	25.2	25.2		25.2	25.2		16.2	25.2		25.2	25.2	25.2
Total Split (s)	41.2	41.2		41.2	41.2		31.2	77.4		46.2	46.2	46.2
Total Split (%)	34.7%	34.7%		34.7%	34.7%		26.3%	65.3%		39.0%	39.0%	39.0%
Maximum Green (s)	35.0	35.0		35.0	35.0		25.0	71.2		40.0	40.0	40.0
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	3.3
All-Red Time (s)	2.9	2.9		2.9	2.9		2.9	2.9		2.9	2.9	2.9
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.2	6.2		6.2	6.2		6.2	6.2		6.2	6.2	6.2
Lead/Lag							Lead			Lag	Lag	Lag
Lead-Lag Optimize?							Yes			Yes	Yes	Yes
Vehicle Extension (s)	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	Ped		Ped	Ped	Ped
Walk Time (s)	7.0	7.0		7.0	7.0			7.0		7.0	7.0	7.0
Flash Dont Walk (s)	12.0	12.0		12.0	12.0			12.0		12.0	12.0	12.0
Pedestrian Calls (#/hr)	6	6		3	3			13		2	2	2
Act Effct Green (s)	20.8	20.8		20.8	20.8		47.0	47.0		26.6	26.6	26.6
Actuated g/C Ratio	0.26	0.26		0.26	0.26		0.58	0.58		0.33	0.33	0.33
v/c Ratio	0.31	0.21		0.17	0.66		0.49	0.11		0.02	0.44	0.63
Control Delay	31.6	13.8		27.1	35.5		12.5	8.9		22.3	25.8	9.9
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	31.6	13.8		27.1	35.5		12.5	8.9		22.3	25.8	9.9
LOS	C	B		C	D		B	A		C	C	A
Approach Delay		20.8			34.2			11.5			15.6	
Approach LOS		C			C			B			B	
Queue Length 50th (m)	6.0	3.1		5.2	33.3		18.5	6.0		0.6	25.7	8.1
Queue Length 95th (m)	19.4	15.5		16.7	75.4		43.6	16.7		3.9	60.1	41.6
Internal Link Dist (m)		221.5			282.0			465.3			727.0	
Turn Bay Length (m)	110.0			40.0			50.0			30.0		105.0
Base Capacity (vph)	334	710		553	791		747	1516		612	917	941
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.17	0.12		0.09	0.37		0.40	0.07		0.01	0.27	0.48

Intersection Summary			
Area Type:	Other		
Cycle Length: 118.6			
Actuated Cycle Length: 80.9			
Natural Cycle: 70			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.66			
Intersection Signal Delay: 19.0		Intersection LOS: B	
Intersection Capacity Utilization 79.3%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 2: Legget & Solandt



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	13	30	121	19	321	27	1376	35	301	1937	50
Future Volume (vph)	26	13	30	121	19	321	27	1376	35	301	1937	50
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	0.0		20.0	0.0		60.0	100.0		80.0	185.0		20.0
Storage Lanes	0		1	0		1	1		1	2		1
Taper Length (m)	20.0			20.0			40.0			60.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Ped Bike Factor		1.00	0.98		1.00	0.98	1.00		0.98	1.00		0.96
Frt			0.850			0.850			0.850			0.850
Flt Protected		0.968			0.959		0.950			0.950		
Satd. Flow (prot)	0	1684	1375	0	1634	1469	1658	3316	1388	3216	3316	1498
Flt Permitted		0.758			0.727		0.950			0.950		
Satd. Flow (perm)	0	1317	1347	0	1236	1443	1656	3316	1366	3214	3316	1437
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			86			183			86			86
Link Speed (k/h)		50			60			80			80	
Link Distance (m)		247.8			333.9			554.1			634.3	
Travel Time (s)		17.8			20.0			24.9			28.5	
Confl. Peds. (#/hr)	2		2	2		2	5		2	2		5
Confl. Bikes (#/hr)			7			4			1			10
Peak Hour 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
Heavy Vehicles (%)	3%	1%	10%	5%	1%	3%	2%	2%	9%	2%	2%	1%
Adj. Flow (vph)	26	13	30	121	19	321	27	1376	35	301	1937	50
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	39	30	0	140	321	27	1376	35	301	1937	50
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		1.8			0.0			10.5			10.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	18.6	93.0	18.6	18.6	93.0	18.6	18.6	93.0	18.6	18.6	93.0	18.6
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	18.6	5.5	18.6	18.6	5.5	18.6	18.6	5.5	18.6	18.6	5.5	18.6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (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
Detector 1 Queue (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
Detector 1 Delay (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
Detector 2 Position(m)		87.5			87.5			87.5			87.5	
Detector 2 Size(m)		5.5			5.5			5.5			5.5	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	5.0	20.0	20.0	5.0	20.0	20.0
Minimum Split (s)	39.5	39.5	39.5	39.5	39.5	39.5	17.6	30.6	30.6	17.6	30.6	30.6
Total Split (s)	40.0	40.0	40.0	40.0	40.0	40.0	18.0	72.0	72.0	18.0	72.0	72.0
Total Split (%)	30.8%	30.8%	30.8%	30.8%	30.8%	30.8%	13.8%	55.4%	55.4%	13.8%	55.4%	55.4%
Maximum Green (s)	33.5	33.5	33.5	33.5	33.5	33.5	11.3	65.4	65.4	11.3	65.4	65.4
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	4.6	4.6	4.6	4.6	4.6	4.6
All-Red Time (s)	2.8	2.8	2.8	2.8	2.8	2.8	2.1	2.0	2.0	2.1	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.5	6.5		6.5	6.5	6.7	6.6	6.6	6.7	6.6	6.6
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
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	None	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)	26.0	26.0	26.0	26.0	26.0	26.0		17.0	17.0		17.0	17.0
Pedestrian Calls (#/hr)	2	2	2	2	2	2		2	2		5	5
Act Effct Green (s)		22.5	22.5		22.5	22.5	7.6	69.9	69.9	17.9	85.1	85.1
Actuated g/C Ratio		0.17	0.17		0.17	0.17	0.06	0.54	0.54	0.14	0.65	0.65
v/c Ratio		0.17	0.10		0.66	0.80	0.28	0.77	0.05	0.68	0.89	0.05
Control Delay		43.7	0.6		63.0	36.1	65.0	28.4	0.1	51.3	19.1	1.5
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		43.7	0.6		63.0	36.1	65.0	28.4	0.1	51.3	19.1	1.5
LOS		D	A		E	D	E	C	A	D	B	A
Approach Delay		25.0			44.3			28.4			23.0	
Approach LOS		C			D			C			C	
Queue Length 50th (m)		8.0	0.0		31.4	32.6	6.2	134.1	0.0	32.9	206.9	0.0
Queue Length 95th (m)		15.8	0.0		46.6	58.3	15.0	169.7	0.0	m#42.3	m#241.0	m0.0
Internal Link Dist (m)		223.8			309.9			530.1			610.3	
Turn Bay Length (m)			20.0			60.0	100.0		80.0	185.0		20.0
Base Capacity (vph)		339	410		318	507	144	1782	773	441	2171	970
Starvation Cap Reductn		0	0		0	0	0	0	0	0	0	0
Spillback Cap Reductn		0	0		0	0	0	0	0	0	0	0
Storage Cap Reductn		0	0		0	0	0	0	0	0	0	0
Reduced v/c Ratio		0.12	0.07		0.44	0.63	0.19	0.77	0.05	0.68	0.89	0.05

Intersection Summary

Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 102 (78%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.89
Intersection Signal Delay: 27.1 Intersection LOS: C
Intersection Capacity Utilization 92.8% ICU Level of Service F
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: March & Station/Carling

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	120	83	24	617	315	41
Future Volume (vph)	120	83	24	617	315	41
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Storage Length (m)		125.0	15.0		0.0	40.0
Storage Lanes		1	1		1	1
Taper Length (m)			20.0		20.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1762	1455	1674	1762	1674	1375
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	1762	1455	1674	1762	1674	1375
Link Speed (k/h)	50			50	50	
Link Distance (m)	336.6			459.4	751.0	
Travel Time (s)	24.2			33.1	54.1	
Confl. Peds. (#/hr)		13	13			
Confl. Bikes (#/hr)						2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	4%	1%	1%	1%	10%
Adj. Flow (vph)	120	83	24	617	315	41
Shared Lane Traffic (%)						
Lane Group Flow (vph)	120	83	24	617	315	41
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.0			3.0	3.5	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	5.0			5.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	

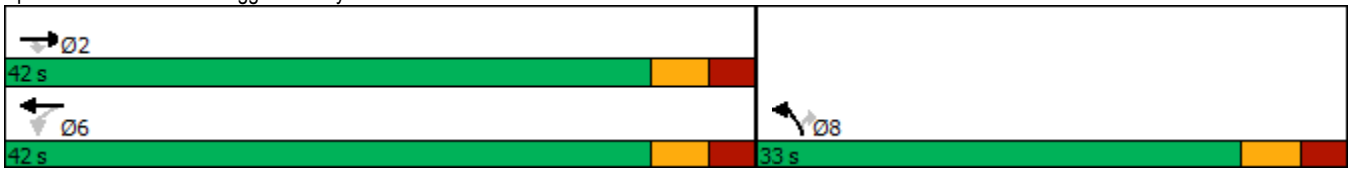
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 59.4%		ICU Level of Service B	
Analysis Period (min) 15			

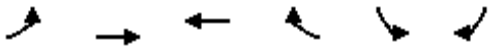
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	120	83	24	617	315	41
Future Volume (vph)	120	83	24	617	315	41
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Storage Length (m)		125.0	15.0		0.0	40.0
Storage Lanes		1	1		1	1
Taper Length (m)			20.0		20.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.96	0.98			0.98
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1762	1455	1674	1762	1674	1375
Flt Permitted			0.680		0.950	
Satd. Flow (perm)	1762	1398	1179	1762	1674	1345
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		83				41
Link Speed (k/h)	50			50	50	
Link Distance (m)	336.6			459.4	751.0	
Travel Time (s)	24.2			33.1	54.1	
Confl. Peds. (#/hr)		13	13			
Confl. Bikes (#/hr)						2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	4%	1%	1%	1%	10%
Adj. Flow (vph)	120	83	24	617	315	41
Shared Lane Traffic (%)						
Lane Group Flow (vph)	120	83	24	617	315	41
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.0			3.0	3.5	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	5.0			5.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)		14	24		24	14
Number of Detectors	2	1	1	2	1	1
Detector Template	Thru	Right	Left	Thru	Left	Right
Leading Detector (m)	93.0	18.6	18.6	93.0	18.6	18.6
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	5.5	18.6	18.6	5.5	18.6	18.6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)	87.5			87.5		
Detector 2 Size(m)	5.5			5.5		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA	Perm	Perm	NA	Prot	Perm
Protected Phases	2			6	8	
Permitted Phases		2	6			8
Detector Phase	2	2	6	6	8	8

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	31.0	31.0	31.0	31.0	33.0	33.0
Total Split (s)	42.0	42.0	42.0	42.0	33.0	33.0
Total Split (%)	56.0%	56.0%	56.0%	56.0%	44.0%	44.0%
Maximum Green (s)	36.0	36.0	36.0	36.0	27.0	27.0
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	2.7	2.7	2.7	2.7	2.7	2.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	18.0	18.0	18.0	18.0	20.0	20.0
Pedestrian Calls (#/hr)	1	1	1	1	1	1
Act Effct Green (s)	27.4	27.4	27.4	27.4	17.0	17.0
Actuated g/C Ratio	0.48	0.48	0.48	0.48	0.30	0.30
v/c Ratio	0.14	0.12	0.04	0.73	0.63	0.10
Control Delay	9.6	3.2	9.3	18.7	25.1	6.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.6	3.2	9.3	18.7	25.1	6.6
LOS	A	A	A	B	C	A
Approach Delay	7.0			18.4	22.9	
Approach LOS	A			B	C	
Queue Length 50th (m)	5.8	0.0	1.1	42.3	26.8	0.0
Queue Length 95th (m)	16.2	5.8	4.9	96.3	52.6	5.3
Internal Link Dist (m)	312.6			435.4	727.0	
Turn Bay Length (m)		125.0	15.0			40.0
Base Capacity (vph)	1183	966	791	1183	843	697
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.09	0.03	0.52	0.37	0.06

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 57.2			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.73			
Intersection Signal Delay: 17.8		Intersection LOS: B	
Intersection Capacity Utilization 62.7%		ICU Level of Service B	
Analysis Period (min) 15			

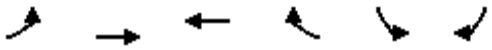
Splits and Phases: 4: Legget & Terry Fox





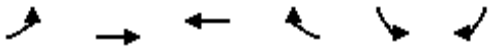
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	3	30	208	0	0	14
Future Volume (vph)	3	30	208	0	0	14
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.865
Flt Protected		0.995				
Satd. Flow (prot)	0	1736	1745	0	0	1510
Flt Permitted		0.995				
Satd. Flow (perm)	0	1736	1745	0	0	1510
Link Speed (k/h)		50	50		50	
Link Distance (m)		306.0	84.0		67.2	
Travel Time (s)		22.0	6.0		4.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	3	30	208	0	0	14
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	33	208	0	0	14
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		5.0	5.0		5.0	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	21.6%	ICU Level of Service	A
Analysis Period (min)	15		



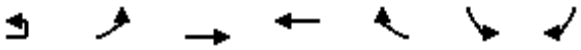
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	4	23	123	0	0	21
Future Volume (vph)	4	23	123	0	0	21
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.865
Flt Protected		0.993				
Satd. Flow (prot)	0	1733	1745	0	0	1510
Flt Permitted		0.993				
Satd. Flow (perm)	0	1733	1745	0	0	1510
Link Speed (k/h)		50	50		50	
Link Distance (m)		84.0	42.7		67.9	
Travel Time (s)		6.0	3.1		4.9	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	4	23	123	0	0	21
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	27	123	0	0	21
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		5.0	5.0		5.0	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 16.8%		ICU Level of Service A	
Analysis Period (min) 15			



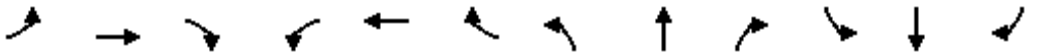
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	23	80	0	0	43
Future Volume (vph)	0	23	80	0	0	43
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	4.8	3.5	3.5	3.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.865
Flt Protected						
Satd. Flow (prot)	0	1745	2000	0	0	1510
Flt Permitted						
Satd. Flow (perm)	0	1745	2000	0	0	1510
Link Speed (k/h)		50	50		50	
Link Distance (m)		42.7	29.9		67.1	
Travel Time (s)		3.1	2.2		4.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	23	80	0	0	43
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	23	80	0	0	43
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		5.0	5.0		5.0	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	0.91	1.09	1.09	1.09
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	14.4%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBU	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations							
Traffic Volume (vph)	3	20	0	0	0	0	64
Future Volume (vph)	3	20	0	0	0	0	64
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	4.8	3.5	3.5	3.5	3.5	3.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt							0.865
Flt Protected		0.950					
Satd. Flow (prot)	0	1900	0	0	0	0	1510
Flt Permitted		0.950					
Satd. Flow (perm)	0	1900	0	0	0	0	1510
Link Speed (k/h)			50	50		50	
Link Distance (m)			29.9	42.6		66.7	
Travel Time (s)			2.2	3.1		4.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	3	20	0	0	0	0	64
Shared Lane Traffic (%)							
Lane Group Flow (vph)	0	23	0	0	0	0	64
Enter Blocked Intersection	No	No	No	No	No	No	No
Lane Alignment	R NA	Left	Left	Left	Right	Left	Right
Median Width(m)			4.8	4.8		0.0	
Link Offset(m)			0.0	0.0		0.0	
Crosswalk Width(m)			5.0	5.0		5.0	
Two way Left Turn Lane							
Headway Factor	1.09	0.91	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	14	24			14	24	14
Sign Control			Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 14.2%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	94	118	49	110	28	535	981	597	92	1640	100
Future Volume (vph)	27	94	118	49	110	28	535	981	597	92	1640	100
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	35.0		60.0	85.0		55.0	165.0		0.0	155.0		75.0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (m)	50.0			95.0			40.0			25.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	0.99		0.98	0.99		0.98	1.00	0.99			1.00	
Frt			0.850			0.850		0.943			0.991	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1610	1745	1441	1658	1728	1469	1674	3081	0	1658	3251	0
Flt Permitted	0.598			0.662			0.950			0.950		
Satd. Flow (perm)	1005	1745	1405	1143	1728	1435	1672	3081	0	1658	3251	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			122			122		146			5	
Link Speed (k/h)		50			50			60			60	
Link Distance (m)		126.3			245.5			634.3			855.0	
Travel Time (s)		9.1			17.7			38.1			51.3	
Confl. Peds. (#/hr)	7		8	8		7	6					6
Confl. Bikes (#/hr)			1			1			12			1
Peak Hour 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
Heavy Vehicles (%)	5%	2%	5%	2%	3%	3%	1%	4%	1%	2%	3%	2%
Adj. Flow (vph)	27	94	118	49	110	28	535	981	597	92	1640	100
Shared Lane Traffic (%)												
Lane Group Flow (vph)	27	94	118	49	110	28	535	1578	0	92	1740	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		5.0			5.0			18.0			18.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	18.6	93.0	18.6	18.6	93.0	18.6	18.6	93.0		18.6	93.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	18.6	5.5	18.6	18.6	5.5	18.6	18.6	5.5		18.6	5.5	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		87.5			87.5			87.5			87.5	
Detector 2 Size(m)		5.5			5.5			5.5			5.5	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phase	4	4	4	8	8	8	5	2		1	6	

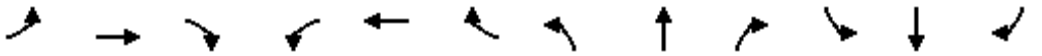
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	5.0	10.0		5.0	10.0	
Minimum Split (s)	36.5	36.5	36.5	36.5	36.5	36.5	12.0	26.8		12.0	26.8	
Total Split (s)	37.0	37.0	37.0	37.0	37.0	37.0	43.0	93.0		20.0	70.0	
Total Split (%)	24.7%	24.7%	24.7%	24.7%	24.7%	24.7%	28.7%	62.0%		13.3%	46.7%	
Maximum Green (s)	30.5	30.5	30.5	30.5	30.5	30.5	36.0	87.2		13.0	64.2	
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3	3.7	3.7		3.7	3.7	
All-Red Time (s)	3.2	3.2	3.2	3.2	3.2	3.2	3.3	2.1		3.3	2.1	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.5	6.5	6.5	6.5	6.5	6.5	7.0	5.8		7.0	5.8	
Lead/Lag							Lead	Lag		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	
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0		7.0			7.0	
Flash Dont Walk (s)	23.0	23.0	23.0	23.0	23.0	23.0		14.0			14.0	
Pedestrian Calls (#/hr)	8	8	8	7	7	7		6			0	
Act Effct Green (s)	16.9	16.9	16.9	16.9	16.9	16.9	49.6	101.1		12.7	64.2	
Actuated g/C Ratio	0.11	0.11	0.11	0.11	0.11	0.11	0.33	0.67		0.08	0.43	
v/c Ratio	0.24	0.48	0.44	0.38	0.56	0.10	0.97	0.74		0.66	1.25	
Control Delay	62.3	68.6	13.2	67.5	72.7	0.8	65.8	6.8		88.2	154.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	62.3	68.6	13.2	67.5	72.7	0.8	65.8	6.8		88.2	154.8	
LOS	E	E	B	E	E	A	E	A		F	F	
Approach Delay		40.5			60.5			21.8			151.5	
Approach LOS		D			E			C			F	
Queue Length 50th (m)	7.0	25.0	0.0	12.9	29.5	0.0	128.3	74.0		24.7	~312.6	
Queue Length 95th (m)	14.6	37.7	14.6	23.0	43.4	0.0	m#184.0	m159.3		#44.0	#351.4	
Internal Link Dist (m)		102.3			221.5			610.3			831.0	
Turn Bay Length (m)	35.0		60.0	85.0		55.0	165.0			155.0		
Base Capacity (vph)	204	354	382	232	351	388	553	2123		153	1394	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.13	0.27	0.31	0.21	0.31	0.07	0.97	0.74		0.60	1.25	

Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 148 (99%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.25
Intersection Signal Delay: 78.8 Intersection LOS: E
Intersection Capacity Utilization 111.4% ICU Level of Service H
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: March & Solandt



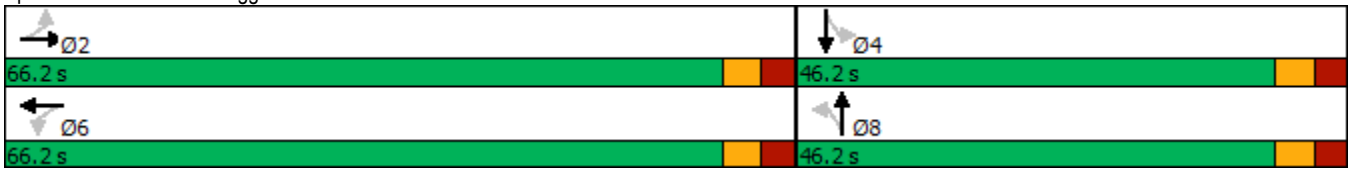
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	394	131	219	2	9	5	91	165	45	29	169	49
Future Volume (vph)	394	131	219	2	9	5	91	165	45	29	169	49
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	0.0		0.0	40.0		0.0	50.0		0.0	30.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	70.0			30.0			60.0			30.0		
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
Ped Bike Factor	0.99	0.99		1.00	0.99			0.99		0.98		
Frt		0.906			0.946			0.968			0.966	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1674	1564	0	1674	1514	0	1566	1673	0	1610	1689	0
Flt Permitted	0.748			0.542			0.622			0.626		
Satd. Flow (perm)	1303	1564	0	954	1514	0	1025	1673	0	1038	1689	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		115			5			14			14	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		245.5			306.0			489.3			751.0	
Travel Time (s)		17.7			22.0			35.2			54.1	
Confl. Peds. (#/hr)	4		1	1		4			11	11		
Confl. Bikes (#/hr)									3			
Peak Hour 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
Heavy Vehicles (%)	1%	1%	2%	1%	10%	10%	8%	2%	1%	5%	2%	1%
Adj. Flow (vph)	394	131	219	2	9	5	91	165	45	29	169	49
Shared Lane Traffic (%)												
Lane Group Flow (vph)	394	350	0	2	14	0	91	210	0	29	218	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.0			3.5			3.5			3.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	18.6	93.0		18.6	93.0		18.6	93.0		18.6	93.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	18.6	5.5		18.6	5.5		18.6	5.5		18.6	5.5	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		87.5			87.5			87.5			87.5	
Detector 2 Size(m)		5.5			5.5			5.5			5.5	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		4	4	

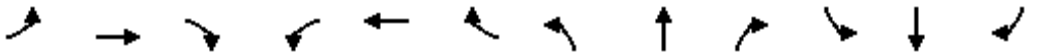
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	15.0	15.0		15.0	15.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	25.2	25.2		25.2	25.2		25.2	25.2		25.2	25.2	
Total Split (s)	66.2	66.2		66.2	66.2		46.2	46.2		46.2	46.2	
Total Split (%)	58.9%	58.9%		58.9%	58.9%		41.1%	41.1%		41.1%	41.1%	
Maximum Green (s)	60.0	60.0		60.0	60.0		40.0	40.0		40.0	40.0	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.9	2.9		2.9	2.9		2.9	2.9		2.9	2.9	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.2	6.2		6.2	6.2		6.2	6.2		6.2	6.2	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Min	Min		Min	Min		None	None		None	None	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Pedestrian Calls (#/hr)	1	1		4	4		11	11		0	0	
Act Effct Green (s)	31.6	31.6		31.6	31.6		15.5	15.5		15.5	15.5	
Actuated g/C Ratio	0.52	0.52		0.52	0.52		0.25	0.25		0.25	0.25	
v/c Ratio	0.58	0.40		0.00	0.02		0.35	0.48		0.11	0.50	
Control Delay	13.9	7.0		7.5	6.0		27.2	25.4		23.7	25.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	13.9	7.0		7.5	6.0		27.2	25.4		23.7	25.7	
LOS	B	A		A	A		C	C		C	C	
Approach Delay		10.6			6.2			26.0			25.5	
Approach LOS		B			A			C			C	
Queue Length 50th (m)	22.1	10.8		0.1	0.4		6.9	15.3		2.1	16.0	
Queue Length 95th (m)	57.1	31.7		0.9	2.7		25.5	48.2		10.3	49.8	
Internal Link Dist (m)		221.5			282.0			465.3			727.0	
Turn Bay Length (m)				40.0			50.0			30.0		
Base Capacity (vph)	1166	1411		853	1355		737	1207		746	1219	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.34	0.25		0.00	0.01		0.12	0.17		0.04	0.18	

Intersection Summary

Area Type: Other
Cycle Length: 112.4
Actuated Cycle Length: 61
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.58
Intersection Signal Delay: 16.9 Intersection LOS: B
Intersection Capacity Utilization 66.9% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 2: Legget & Solandt





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	22	8	32	10	154	74	2021	74	279	1499	104
Future Volume (vph)	54	22	8	32	10	154	74	2021	74	279	1499	104
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	0.0		35.0	100.0		0.0	80.0		0.0	200.0		180.0
Storage Lanes	1		1	1		1	1		0	2		1
Taper Length (m)	20.0			20.0			40.0			60.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.97	0.95	1.00
Ped Bike Factor	1.00	0.99		0.99		0.98	1.00	1.00		1.00		0.97
Frt		0.960				0.850		0.995				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1642	1644	0	1610	1762	1469	1658	3285	0	3216	3316	1498
Flt Permitted	0.751			0.738			0.950			0.950		
Satd. Flow (perm)	1293	1644	0	1242	1762	1440	1655	3285	0	3206	3316	1449
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		8				121		4				104
Link Speed (k/h)		50			60			60			60	
Link Distance (m)		247.8			333.9			554.1			634.3	
Travel Time (s)		17.8			20.0			33.2			38.1	
Confl. Peds. (#/hr)	3		6	6		3	4		20	20		4
Confl. Bikes (#/hr)						4			18			2
Peak Hour 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
Heavy Vehicles (%)	3%	1%	10%	5%	1%	3%	2%	2%	9%	2%	2%	1%
Adj. Flow (vph)	54	22	8	32	10	154	74	2021	74	279	1499	104
Shared Lane Traffic (%)												
Lane Group Flow (vph)	54	30	0	32	10	154	74	2095	0	279	1499	104
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		5.0			5.0			18.0			18.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2	1	1	2		1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (m)	18.6	93.0		18.6	93.0	18.6	18.6	93.0		18.6	93.0	18.6
Trailing Detector (m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Size(m)	18.6	5.5		18.6	5.5	18.6	18.6	5.5		18.6	5.5	18.6
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(m)		87.5			87.5			87.5			87.5	
Detector 2 Size(m)		5.5			5.5			5.5			5.5	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						6
Detector Phase	4	4		8	8	8	5	2		1	6	6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0	10.0	5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	40.7	40.7		40.7	40.7	40.7	12.0	31.1		12.0	31.1	31.1
Total Split (s)	41.0	41.0		41.0	41.0	41.0	17.0	92.0		17.0	92.0	92.0
Total Split (%)	27.3%	27.3%		27.3%	27.3%	27.3%	11.3%	61.3%		11.3%	61.3%	61.3%
Maximum Green (s)	34.3	34.3		34.3	34.3	34.3	10.0	85.9		10.0	85.9	85.9
Yellow Time (s)	3.7	3.7		3.7	3.7	3.7	3.7	3.7		3.7	3.7	3.7
All-Red Time (s)	3.0	3.0		3.0	3.0	3.0	3.3	2.4		3.3	2.4	2.4
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.7	6.7		6.7	6.7	6.7	7.0	6.1		7.0	6.1	6.1
Lead/Lag							Lead	Lag		Lead	Lag	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
Recall Mode	None	None		None	None	None	None	C-Max		None	C-Max	C-Max
Walk Time (s)	7.0	7.0		7.0	7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)	27.0	27.0		27.0	27.0	27.0		18.0			18.0	18.0
Pedestrian Calls (#/hr)	6	6		3	3	3		4			20	20
Act Effct Green (s)	15.9	15.9		15.9	15.9	15.9	11.0	92.5		21.8	103.3	103.3
Actuated g/C Ratio	0.11	0.11		0.11	0.11	0.11	0.07	0.62		0.15	0.69	0.69
v/c Ratio	0.40	0.17		0.24	0.05	0.59	0.61	1.03		0.60	0.66	0.10
Control Delay	68.1	46.3		62.1	55.0	25.0	87.4	57.8		76.2	16.2	2.5
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	68.1	46.3		62.1	55.0	25.0	87.4	57.8		76.2	16.2	2.5
LOS	E	D		E	D	C	F	E		E	B	A
Approach Delay		60.3			32.6			58.8			24.4	
Approach LOS		E			C			E			C	
Queue Length 50th (m)	14.5	5.8		8.5	2.6	8.7	19.8	282.4		33.0	216.2	1.4
Queue Length 95th (m)	23.7	13.1		15.9	7.0	25.8	#41.0	#382.6		m#37.9	m187.7	m5.1
Internal Link Dist (m)		223.8			309.9			530.1			610.3	
Turn Bay Length (m)				100.0			80.0			200.0		180.0
Base Capacity (vph)	295	382		284	402	422	127	2026		468	2283	1030
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	0
Reduced v/c Ratio	0.18	0.08		0.11	0.02	0.36	0.58	1.03		0.60	0.66	0.10

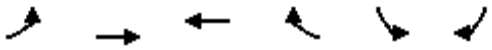
Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 68 (45%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 145
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.03
Intersection Signal Delay: 42.7 Intersection LOS: D
Intersection Capacity Utilization 99.6% ICU Level of Service F
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: March & Station/Carling

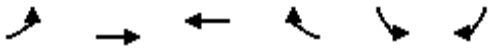
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	555	474	39	146	36	35
Future Volume (vph)	555	474	39	146	36	35
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.938				0.933	
Flt Protected				0.990	0.975	
Satd. Flow (prot)	1653	0	0	1640	1565	0
Flt Permitted				0.990	0.975	
Satd. Flow (perm)	1653	0	0	1640	1565	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	336.6			459.4	751.0	
Travel Time (s)	24.2			33.1	54.1	
Confl. Peds. (#/hr)		17	17			2
Confl. Bikes (#/hr)		1				
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	9%	7%	3%	4%
Adj. Flow (vph)	555	474	39	146	36	35
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1029	0	0	185	71	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.0			3.0	3.5	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	5.0			5.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 73.9%		ICU Level of Service D	
Analysis Period (min) 15			



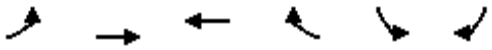
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	76	6	0	0	0
Future Volume (vph)	0	76	6	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	0	1745	1745	0	0	1745
Flt Permitted						
Satd. Flow (perm)	0	1745	1745	0	0	1745
Link Speed (k/h)		50	50		50	
Link Distance (m)		306.0	84.0		67.2	
Travel Time (s)		22.0	6.0		4.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	76	6	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	76	6	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		5.0	5.0		5.0	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 7.6%		ICU Level of Service A	
Analysis Period (min) 15			



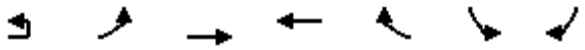
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	15	3	0	0	0
Future Volume (vph)	0	15	3	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	0	1745	1745	0	0	1745
Flt Permitted						
Satd. Flow (perm)	0	1745	1745	0	0	1745
Link Speed (k/h)		50	50		50	
Link Distance (m)		84.0	42.7		67.9	
Travel Time (s)		6.0	3.1		4.9	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	15	3	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	15	3	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		5.0	5.0		5.0	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	

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



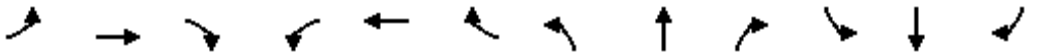
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	15	3	0	0	0
Future Volume (vph)	0	15	3	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	4.8	3.5	3.5	3.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	0	1745	2000	0	0	1745
Flt Permitted						
Satd. Flow (perm)	0	1745	2000	0	0	1745
Link Speed (k/h)		50	50		50	
Link Distance (m)		42.7	29.9		67.1	
Travel Time (s)		3.1	2.2		4.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	15	3	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	15	3	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		5.0	5.0		5.0	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	0.91	1.09	1.09	1.09
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	

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



Lane Group	EBU	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations							
Traffic Volume (vph)	3	0	0	0	0	0	0
Future Volume (vph)	3	0	0	0	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	4.8	3.5	3.5	3.5	3.5	3.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt							
Flt Protected		0.950					
Satd. Flow (prot)	0	1900	0	0	0	0	1745
Flt Permitted		0.950					
Satd. Flow (perm)	0	1900	0	0	0	0	1745
Link Speed (k/h)			50	50		50	
Link Distance (m)			29.9	42.6		66.7	
Travel Time (s)			2.2	3.1		4.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	3	0	0	0	0	0	0
Shared Lane Traffic (%)							
Lane Group Flow (vph)	0	3	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No
Lane Alignment	R NA	Left	Left	Left	Right	Left	Right
Median Width(m)			4.8	4.8		0.0	
Link Offset(m)			0.0	0.0		0.0	
Crosswalk Width(m)			5.0	5.0		5.0	
Two way Left Turn Lane							
Headway Factor	1.09	0.91	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	14	24			14	24	14
Sign Control			Free	Free		Stop	

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



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	94	118	49	110	28	535	981	597	92	1640	100
Future Volume (vph)	27	94	118	49	110	28	535	981	597	92	1640	100
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	35.0		60.0	85.0		0.0	165.0		0.0	155.0		75.0
Storage Lanes	1		1	2		0	2		0	1		0
Taper Length (m)	50.0			95.0			40.0			25.0		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	0.97	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	0.99		0.98	0.98	1.00		1.00	0.99			1.00	
Frt			0.850		0.970			0.943			0.991	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1610	1745	1441	3216	1668	0	3248	3080	0	1658	3251	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1597	1745	1405	3160	1668	0	3242	3080	0	1658	3251	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			169		8			130			5	
Link Speed (k/h)		50			50			60			60	
Link Distance (m)		126.3			245.5			634.3			855.0	
Travel Time (s)		9.1			17.7			38.1			51.3	
Confl. Peds. (#/hr)	7		8	8		7	6					6
Confl. Bikes (#/hr)			1			1			12			1
Peak Hour 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
Heavy Vehicles (%)	5%	2%	5%	2%	3%	3%	1%	4%	1%	2%	3%	2%
Adj. Flow (vph)	27	94	118	49	110	28	535	981	597	92	1640	100
Shared Lane Traffic (%)												
Lane Group Flow (vph)	27	94	118	49	138	0	535	1578	0	92	1740	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		5.0			10.5			18.0			18.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2		1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	18.6	93.0	18.6	18.6	93.0		18.6	93.0		18.6	93.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	18.6	5.5	18.6	18.6	5.5		18.6	5.5		18.6	5.5	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		87.5			87.5			87.5			87.5	
Detector 2 Size(m)		5.5			5.5			5.5			5.5	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									
Detector Phase	7	4	4	3	8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0		5.0	10.0		5.0	10.0	
Minimum Split (s)	11.5	36.5	36.5	11.5	36.5		12.0	26.8		12.0	26.8	
Total Split (s)	12.0	37.0	37.0	12.0	37.0		28.0	85.0		16.0	73.0	
Total Split (%)	8.0%	24.7%	24.7%	8.0%	24.7%		18.7%	56.7%		10.7%	48.7%	
Maximum Green (s)	5.5	30.5	30.5	5.5	30.5		21.0	79.2		9.0	67.2	
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3		3.7	3.7		3.7	3.7	
All-Red Time (s)	3.2	3.2	3.2	3.2	3.2		3.3	2.1		3.3	2.1	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.5	6.5	6.5	6.5	6.5		7.0	5.8		7.0	5.8	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes							
Vehicle Extension (s)	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	C-Max		None	C-Max	
Walk Time (s)		7.0	7.0		7.0			7.0			7.0	
Flash Dont Walk (s)		23.0	23.0		23.0			14.0			14.0	
Pedestrian Calls (#/hr)		8	8		7			6			0	
Act Effct Green (s)	5.5	17.7	17.7	5.5	20.1		33.8	89.9		13.5	69.6	
Actuated g/C Ratio	0.04	0.12	0.12	0.04	0.13		0.23	0.60		0.09	0.46	
v/c Ratio	0.46	0.46	0.38	0.42	0.60		0.73	0.83		0.62	1.15	
Control Delay	94.9	66.8	4.8	81.7	67.4		60.5	18.5		82.5	112.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	94.9	66.8	4.8	81.7	67.4		60.5	18.5		82.5	112.9	
LOS	F	E	A	F	E		E	B		F	F	
Approach Delay		39.4			71.2			29.1			111.4	
Approach LOS		D			E			C			F	
Queue Length 50th (m)	7.4	24.5	0.0	6.9	34.9		64.1	223.8		24.3	~302.7	
Queue Length 95th (m)	#18.5	37.7	3.6	13.6	51.1		m#86.1	m216.7		#56.5	#341.5	
Internal Link Dist (m)		102.3			221.5			610.3			831.0	
Turn Bay Length (m)	35.0		60.0	85.0			165.0			155.0		
Base Capacity (vph)	59	354	420	117	345		730	1897		149	1512	
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	
Reduced v/c Ratio	0.46	0.27	0.28	0.42	0.40		0.73	0.83		0.62	1.15	

Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 148 (99%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.15
Intersection Signal Delay: 66.0 Intersection LOS: E
Intersection Capacity Utilization 105.3% ICU Level of Service G
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: March & Solandt

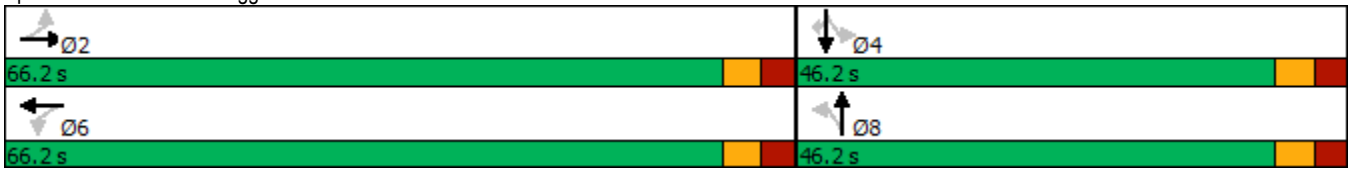
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	394	131	219	2	9	5	91	165	45	29	169	49
Future Volume (vph)	394	131	219	2	9	5	91	165	45	29	169	49
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	0.0		0.0	40.0		0.0	50.0		0.0	30.0		105.0
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (m)	70.0			30.0			60.0			30.0		
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
Ped Bike Factor	0.99	0.99		1.00	0.99			0.99		0.98		
Frt		0.906			0.946			0.968				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1674	1564	0	1674	1514	0	1566	1673	0	1610	1745	1498
Flt Permitted	0.748			0.542			0.650			0.626		
Satd. Flow (perm)	1303	1564	0	954	1514	0	1071	1673	0	1038	1745	1498
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		115			5			14				49
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		245.5			306.0			489.3			751.0	
Travel Time (s)		17.7			22.0			35.2			54.1	
Confl. Peds. (#/hr)	4		1	1		4			11	11		
Confl. Bikes (#/hr)									3			
Peak Hour 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
Heavy Vehicles (%)	1%	1%	2%	1%	10%	10%	8%	2%	1%	5%	2%	1%
Adj. Flow (vph)	394	131	219	2	9	5	91	165	45	29	169	49
Shared Lane Traffic (%)												
Lane Group Flow (vph)	394	350	0	2	14	0	91	210	0	29	169	49
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.0			3.5			3.5			3.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (m)	18.6	93.0		18.6	93.0		18.6	93.0		18.6	93.0	18.6
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Size(m)	18.6	5.5		18.6	5.5		18.6	5.5		18.6	5.5	18.6
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(m)		87.5			87.5			87.5			87.5	
Detector 2 Size(m)		5.5			5.5			5.5			5.5	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		4
Detector Phase	2	2		6	6		8	8		4	4	4

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	15.0	15.0		15.0	15.0		10.0	10.0		10.0	10.0	10.0
Minimum Split (s)	25.2	25.2		25.2	25.2		25.2	25.2		25.2	25.2	25.2
Total Split (s)	66.2	66.2		66.2	66.2		46.2	46.2		46.2	46.2	46.2
Total Split (%)	58.9%	58.9%		58.9%	58.9%		41.1%	41.1%		41.1%	41.1%	41.1%
Maximum Green (s)	60.0	60.0		60.0	60.0		40.0	40.0		40.0	40.0	40.0
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	3.3
All-Red Time (s)	2.9	2.9		2.9	2.9		2.9	2.9		2.9	2.9	2.9
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.2	6.2		6.2	6.2		6.2	6.2		6.2	6.2	6.2
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
Recall Mode	Min	Min		Min	Min		None	None		None	None	None
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	12.0
Pedestrian Calls (#/hr)	1	1		4	4		11	11		0	0	0
Act Effct Green (s)	31.6	31.6		31.6	31.6		15.5	15.5		15.5	15.5	15.5
Actuated g/C Ratio	0.52	0.52		0.52	0.52		0.25	0.25		0.25	0.25	0.25
v/c Ratio	0.58	0.40		0.00	0.02		0.33	0.48		0.11	0.38	0.12
Control Delay	13.9	7.0		7.5	6.0		26.7	25.4		23.7	25.3	8.7
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	13.9	7.0		7.5	6.0		26.7	25.4		23.7	25.3	8.7
LOS	B	A		A	A		C	C		C	C	A
Approach Delay		10.6			6.2			25.8			21.8	
Approach LOS		B			A			C			C	
Queue Length 50th (m)	22.1	10.8		0.1	0.4		6.9	15.3		2.1	12.9	0.0
Queue Length 95th (m)	57.1	31.7		0.9	2.7		25.3	48.2		10.3	40.6	7.7
Internal Link Dist (m)		221.5			282.0			465.3			727.0	
Turn Bay Length (m)				40.0			50.0			30.0		105.0
Base Capacity (vph)	1166	1411		853	1355		771	1209		747	1257	1092
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.34	0.25		0.00	0.01		0.12	0.17		0.04	0.13	0.04

Intersection Summary

Area Type: Other
Cycle Length: 112.4
Actuated Cycle Length: 61
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.58
Intersection Signal Delay: 16.2 Intersection LOS: B
Intersection Capacity Utilization 66.9% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 2: Legget & Solandt



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	22	8	32	10	154	74	2021	74	279	1499	104
Future Volume (vph)	54	22	8	32	10	154	74	2021	74	279	1499	104
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	0.0		35.0	100.0		0.0	80.0		0.0	200.0		180.0
Storage Lanes	1		1	1		1	1		0	2		1
Taper Length (m)	20.0			20.0			40.0			60.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.97	0.95	1.00
Ped Bike Factor	1.00	0.99		0.99		0.98	1.00	1.00		1.00		0.97
Frt		0.960				0.850		0.995				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1642	1644	0	1610	1762	1469	1658	3285	0	3216	3316	1498
Flt Permitted	0.751			0.738			0.950			0.950		
Satd. Flow (perm)	1293	1644	0	1242	1762	1440	1655	3285	0	3206	3316	1449
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		8				121		4				104
Link Speed (k/h)		50			60			60			60	
Link Distance (m)		247.8			333.9			554.1			634.3	
Travel Time (s)		17.8			20.0			33.2			38.1	
Confl. Peds. (#/hr)	3		6	6		3	4		20	20		4
Confl. Bikes (#/hr)						4			18			2
Peak Hour 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
Heavy Vehicles (%)	3%	1%	10%	5%	1%	3%	2%	2%	9%	2%	2%	1%
Adj. Flow (vph)	54	22	8	32	10	154	74	2021	74	279	1499	104
Shared Lane Traffic (%)												
Lane Group Flow (vph)	54	30	0	32	10	154	74	2095	0	279	1499	104
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		5.0			5.0			18.0			18.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2	1	1	2		1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (m)	18.6	93.0		18.6	93.0	18.6	18.6	93.0		18.6	93.0	18.6
Trailing Detector (m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Size(m)	18.6	5.5		18.6	5.5	18.6	18.6	5.5		18.6	5.5	18.6
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(m)		87.5			87.5			87.5			87.5	
Detector 2 Size(m)		5.5			5.5			5.5			5.5	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						6
Detector Phase	4	4		8	8	8	5	2		1	6	6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0	10.0	5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	40.7	40.7		40.7	40.7	40.7	12.0	31.1		12.0	31.1	31.1
Total Split (s)	41.0	41.0		41.0	41.0	41.0	17.0	92.0		17.0	92.0	92.0
Total Split (%)	27.3%	27.3%		27.3%	27.3%	27.3%	11.3%	61.3%		11.3%	61.3%	61.3%
Maximum Green (s)	34.3	34.3		34.3	34.3	34.3	10.0	85.9		10.0	85.9	85.9
Yellow Time (s)	3.7	3.7		3.7	3.7	3.7	3.7	3.7		3.7	3.7	3.7
All-Red Time (s)	3.0	3.0		3.0	3.0	3.0	3.3	2.4		3.3	2.4	2.4
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.7	6.7		6.7	6.7	6.7	7.0	6.1		7.0	6.1	6.1
Lead/Lag							Lead	Lag		Lead	Lag	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
Recall Mode	None	None		None	None	None	None	C-Max		None	C-Max	C-Max
Walk Time (s)	7.0	7.0		7.0	7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)	27.0	27.0		27.0	27.0	27.0		18.0			18.0	18.0
Pedestrian Calls (#/hr)	6	6		3	3	3		4			20	20
Act Effct Green (s)	15.9	15.9		15.9	15.9	15.9	11.0	92.5		21.8	103.3	103.3
Actuated g/C Ratio	0.11	0.11		0.11	0.11	0.11	0.07	0.62		0.15	0.69	0.69
v/c Ratio	0.40	0.17		0.24	0.05	0.59	0.61	1.03		0.60	0.66	0.10
Control Delay	68.1	46.3		62.1	55.0	25.0	87.4	57.8		74.5	16.4	2.4
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	68.1	46.3		62.1	55.0	25.0	87.4	57.8		74.5	16.4	2.4
LOS	E	D		E	D	C	F	E		E	B	A
Approach Delay		60.3			32.6			58.8			24.2	
Approach LOS		E			C			E			C	
Queue Length 50th (m)	14.5	5.8		8.5	2.6	8.7	19.8	282.4		33.4	216.3	1.3
Queue Length 95th (m)	23.7	13.1		15.9	7.0	25.8	#41.0	#382.6		m#42.5	m200.8	m5.4
Internal Link Dist (m)		223.8			309.9			530.1			610.3	
Turn Bay Length (m)				100.0			80.0			200.0		180.0
Base Capacity (vph)	295	382		284	402	422	127	2026		468	2283	1030
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	0
Reduced v/c Ratio	0.18	0.08		0.11	0.02	0.36	0.58	1.03		0.60	0.66	0.10

Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 68 (45%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 145
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.03
Intersection Signal Delay: 42.6 Intersection LOS: D
Intersection Capacity Utilization 99.6% ICU Level of Service F
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: March & Station/Carling

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	555	474	39	146	36	35
Future Volume (vph)	555	474	39	146	36	35
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Storage Length (m)		125.0	15.0		0.0	40.0
Storage Lanes		1	1		1	1
Taper Length (m)			20.0		20.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1762	1498	1551	1664	1642	1455
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	1762	1498	1551	1664	1642	1455
Link Speed (k/h)	50			50	50	
Link Distance (m)	336.6			459.4	751.0	
Travel Time (s)	24.2			33.1	54.1	
Confl. Peds. (#/hr)		17	17			2
Confl. Bikes (#/hr)		1				
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	9%	7%	3%	4%
Adj. Flow (vph)	555	474	39	146	36	35
Shared Lane Traffic (%)						
Lane Group Flow (vph)	555	474	39	146	36	35
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.0			3.0	3.5	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	5.0			5.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	

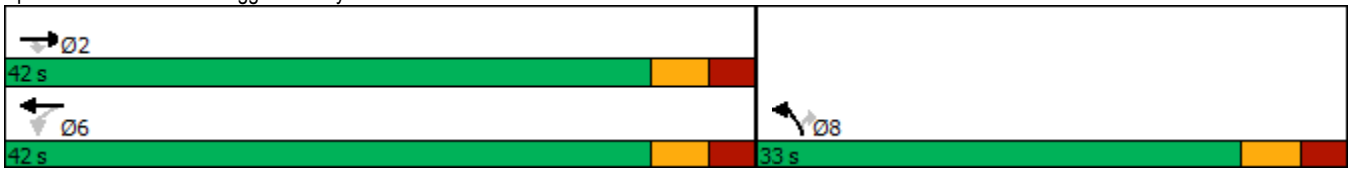
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 44.9%		ICU Level of Service A	
Analysis Period (min) 15			

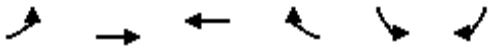
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	555	474	39	146	36	35
Future Volume (vph)	555	474	39	146	36	35
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Storage Length (m)		125.0	15.0		0.0	40.0
Storage Lanes		1	1		1	1
Taper Length (m)			20.0		20.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.95	0.99			0.98
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1762	1498	1551	1664	1642	1455
Flt Permitted			0.422		0.950	
Satd. Flow (perm)	1762	1429	683	1664	1642	1422
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		474				35
Link Speed (k/h)	50			50	50	
Link Distance (m)	336.6			459.4	751.0	
Travel Time (s)	24.2			33.1	54.1	
Confl. Peds. (#/hr)		17	17			2
Confl. Bikes (#/hr)		1				
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	9%	7%	3%	4%
Adj. Flow (vph)	555	474	39	146	36	35
Shared Lane Traffic (%)						
Lane Group Flow (vph)	555	474	39	146	36	35
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.0			3.0	3.5	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	5.0			5.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)		14	24		24	14
Number of Detectors	2	1	1	2	1	1
Detector Template	Thru	Right	Left	Thru	Left	Right
Leading Detector (m)	93.0	18.6	18.6	93.0	18.6	18.6
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	5.5	18.6	18.6	5.5	18.6	18.6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)	87.5			87.5		
Detector 2 Size(m)	5.5			5.5		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA	Perm	Perm	NA	Prot	Perm
Protected Phases	2			6	8	
Permitted Phases		2	6			8
Detector Phase	2	2	6	6	8	8

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	31.0	31.0	31.0	31.0	33.0	33.0
Total Split (s)	42.0	42.0	42.0	42.0	33.0	33.0
Total Split (%)	56.0%	56.0%	56.0%	56.0%	44.0%	44.0%
Maximum Green (s)	36.0	36.0	36.0	36.0	27.0	27.0
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	2.7	2.7	2.7	2.7	2.7	2.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	18.0	18.0	18.0	18.0	20.0	20.0
Pedestrian Calls (#/hr)	1	1	1	1	1	1
Act Effct Green (s)	35.9	35.9	35.9	35.9	14.7	14.7
Actuated g/C Ratio	0.74	0.74	0.74	0.74	0.30	0.30
v/c Ratio	0.42	0.40	0.08	0.12	0.07	0.08
Control Delay	9.0	2.3	7.9	7.0	18.4	7.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.0	2.3	7.9	7.0	18.4	7.4
LOS	A	A	A	A	B	A
Approach Delay	5.9			7.2	13.0	
Approach LOS	A			A	B	
Queue Length 50th (m)	25.3	0.0	1.3	5.0	3.0	0.0
Queue Length 95th (m)	82.2	12.9	7.5	19.4	8.2	4.9
Internal Link Dist (m)	312.6			435.4	727.0	
Turn Bay Length (m)		125.0	15.0			40.0
Base Capacity (vph)	1311	1184	508	1238	1049	921
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.42	0.40	0.08	0.12	0.03	0.04

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 48.3			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.42			
Intersection Signal Delay: 6.5		Intersection LOS: A	
Intersection Capacity Utilization 53.5%		ICU Level of Service A	
Analysis Period (min) 15			

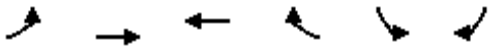
Splits and Phases: 4: Legget & Terry Fox





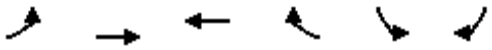
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	76	6	0	0	0
Future Volume (vph)	0	76	6	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	0	1745	1745	0	0	1745
Flt Permitted						
Satd. Flow (perm)	0	1745	1745	0	0	1745
Link Speed (k/h)		50	50		50	
Link Distance (m)		306.0	84.0		67.2	
Travel Time (s)		22.0	6.0		4.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	76	6	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	76	6	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		5.0	5.0		5.0	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 7.6%		ICU Level of Service A	
Analysis Period (min) 15			



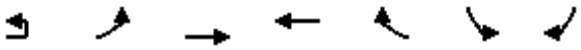
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	15	3	0	0	0
Future Volume (vph)	0	15	3	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	0	1745	1745	0	0	1745
Flt Permitted						
Satd. Flow (perm)	0	1745	1745	0	0	1745
Link Speed (k/h)		50	50		50	
Link Distance (m)		84.0	42.7		67.9	
Travel Time (s)		6.0	3.1		4.9	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	15	3	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	15	3	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		5.0	5.0		5.0	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	

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



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	15	3	0	0	0
Future Volume (vph)	0	15	3	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	4.8	3.5	3.5	3.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	0	1745	2000	0	0	1745
Flt Permitted						
Satd. Flow (perm)	0	1745	2000	0	0	1745
Link Speed (k/h)		50	50		50	
Link Distance (m)		42.7	29.9		67.1	
Travel Time (s)		3.1	2.2		4.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	15	3	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	15	3	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		5.0	5.0		5.0	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	0.91	1.09	1.09	1.09
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	

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



Lane Group	EBU	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations							
Traffic Volume (vph)	3	0	0	0	0	0	0
Future Volume (vph)	3	0	0	0	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	4.8	3.5	3.5	3.5	3.5	3.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt							
Flt Protected		0.950					
Satd. Flow (prot)	0	1900	0	0	0	0	1745
Flt Permitted		0.950					
Satd. Flow (perm)	0	1900	0	0	0	0	1745
Link Speed (k/h)			50	50		50	
Link Distance (m)			29.9	42.6		66.7	
Travel Time (s)			2.2	3.1		4.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	3	0	0	0	0	0	0
Shared Lane Traffic (%)							
Lane Group Flow (vph)	0	3	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No
Lane Alignment	R NA	Left	Left	Left	Right	Left	Right
Median Width(m)			4.8	4.8		0.0	
Link Offset(m)			0.0	0.0		0.0	
Crosswalk Width(m)			5.0	5.0		5.0	
Two way Left Turn Lane							
Headway Factor	1.09	0.91	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	14	24			14	24	14
Sign Control			Free	Free		Stop	

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	78	37	581	553	62	160	101	1823	57	20	999	59
Future Volume (vph)	78	37	581	553	62	160	101	1823	57	20	999	59
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	35.0		60.0	85.0		55.0	165.0		0.0	155.0		75.0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (m)	50.0			95.0			40.0			25.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	0.99		0.98	0.99		0.98	1.00	1.00			1.00	
Frt			0.850			0.850		0.995			0.992	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1610	1745	1441	1658	1728	1469	1674	3237	0	1658	3254	0
Flt Permitted	0.717			0.603			0.950			0.950		
Satd. Flow (perm)	1204	1745	1405	1042	1728	1435	1669	3237	0	1658	3254	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			170			122		3			5	
Link Speed (k/h)		50			50			60			60	
Link Distance (m)		126.3			245.5			634.3			855.0	
Travel Time (s)		9.1			17.7			38.1			51.3	
Confl. Peds. (#/hr)	7		8	8		7	6					6
Confl. Bikes (#/hr)			1			1			12			1
Peak Hour 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
Heavy Vehicles (%)	5%	2%	5%	2%	3%	3%	1%	4%	1%	2%	3%	2%
Adj. Flow (vph)	78	37	581	553	62	160	101	1823	57	20	999	59
Shared Lane Traffic (%)												
Lane Group Flow (vph)	78	37	581	553	62	160	101	1880	0	20	1058	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		5.0			5.0			18.0			18.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	18.6	93.0	18.6	18.6	93.0	18.6	18.6	93.0		18.6	93.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	18.6	5.5	18.6	18.6	5.5	18.6	18.6	5.5		18.6	5.5	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		87.5			87.5			87.5			87.5	
Detector 2 Size(m)		5.5			5.5			5.5			5.5	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phase	4	4	4	3	8	8	5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0		5.0	10.0	
Minimum Split (s)	36.5	36.5	36.5	11.6	36.5	36.5	12.0	26.8		12.0	26.8	
Total Split (s)	37.0	37.0	37.0	20.0	57.0	57.0	21.0	81.0		12.0	72.0	
Total Split (%)	24.7%	24.7%	24.7%	13.3%	38.0%	38.0%	14.0%	54.0%		8.0%	48.0%	
Maximum Green (s)	30.5	30.5	30.5	13.4	50.5	50.5	14.0	75.2		5.0	66.2	
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3	3.7	3.7		3.7	3.7	
All-Red Time (s)	3.2	3.2	3.2	3.3	3.2	3.2	3.3	2.1		3.3	2.1	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.5	6.5	6.5	6.6	6.5	6.5	7.0	5.8		7.0	5.8	
Lead/Lag	Lag	Lag	Lag	Lead			Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes								
Vehicle Extension (s)	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	None	C-Max		None	C-Max	
Walk Time (s)	7.0	7.0	7.0		7.0	7.0		7.0			7.0	
Flash Dont Walk (s)	23.0	23.0	23.0		23.0	23.0		14.0			14.0	
Pedestrian Calls (#/hr)	8	8	8		5	5		1			11	
Act Effct Green (s)	30.5	30.5	30.5	50.4	50.5	50.5	12.6	80.0		5.0	67.6	
Actuated g/C Ratio	0.20	0.20	0.20	0.34	0.34	0.34	0.08	0.53		0.03	0.45	
v/c Ratio	0.32	0.10	1.38	1.37	0.11	0.28	0.72	1.09		0.36	0.72	
Control Delay	55.2	49.7	216.0	216.8	35.0	11.5	88.9	71.1		89.2	37.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	55.2	49.7	216.0	216.8	35.0	11.5	88.9	71.1		89.2	37.1	
LOS	E	D	F	F	C	B	F	E		F	D	
Approach Delay		189.1			159.8			72.0			38.1	
Approach LOS		F			F			E			D	
Queue Length 50th (m)	18.4	8.3	~172.1	~199.0	11.7	7.1	25.4	~322.3		5.5	124.1	
Queue Length 95th (m)	33.3	17.8	#239.5	#264.9	22.0	23.1	m31.1	#361.5		14.0	148.3	
Internal Link Dist (m)		102.3			221.5			610.3			831.0	
Turn Bay Length (m)	35.0		60.0	85.0		55.0	165.0			155.0		
Base Capacity (vph)	244	354	421	405	581	564	156	1728		55	1468	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.32	0.10	1.38	1.37	0.11	0.28	0.65	1.09		0.36	0.72	

Intersection Summary

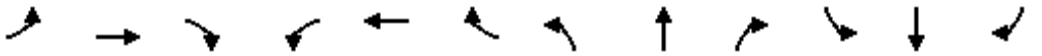
Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 25 (17%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.38
Intersection Signal Delay: 96.9 Intersection LOS: F
Intersection Capacity Utilization 118.0% ICU Level of Service H
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: March & Solandt



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	51	9	49	40	131	8	261	95	2	2	222	402
Future Volume (vph)	51	9	49	40	131	8	261	95	2	2	222	402
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	0.0		0.0	40.0		0.0	50.0		0.0	30.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	70.0			30.0			60.0			30.0		
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
Ped Bike Factor	0.99	0.98		1.00	1.00			1.00		0.97		
Frt		0.873			0.991			0.997			0.903	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1674	1496	0	1674	1601	0	1566	1738	0	1610	1586	0
Flt Permitted	0.665			0.719			0.196			0.694		
Satd. Flow (perm)	1160	1496	0	1263	1601	0	323	1738	0	1141	1586	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		49			3			2			83	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		245.5			306.0			489.3			751.0	
Travel Time (s)		17.7			22.0			35.2			54.1	
Confl. Peds. (#/hr)	4		1	1		4			11	11		
Confl. Bikes (#/hr)									3			
Peak Hour 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
Heavy Vehicles (%)	1%	1%	2%	1%	10%	10%	8%	2%	1%	5%	2%	1%
Adj. Flow (vph)	51	9	49	40	131	8	261	95	2	2	222	402
Shared Lane Traffic (%)												
Lane Group Flow (vph)	51	58	0	40	139	0	261	97	0	2	624	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.0			3.5			3.5			3.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	18.6	93.0		18.6	93.0		18.6	93.0		18.6	93.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	18.6	5.5		18.6	5.5		18.6	5.5		18.6	5.5	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		87.5			87.5			87.5			87.5	
Detector 2 Size(m)		5.5			5.5			5.5			5.5	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		2			6		3	8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		3	8		4	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	25.2	25.2		25.2	25.2		16.2	25.2		25.2	25.2	
Total Split (s)	41.2	41.2		41.2	41.2		31.2	77.4		46.2	46.2	
Total Split (%)	34.7%	34.7%		34.7%	34.7%		26.3%	65.3%		39.0%	39.0%	
Maximum Green (s)	35.0	35.0		35.0	35.0		25.0	71.2		40.0	40.0	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.9	2.9		2.9	2.9		2.9	2.9		2.9	2.9	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.2	6.2		6.2	6.2		6.2	6.2		6.2	6.2	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Ped		Ped	Ped	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0		7.0	7.0	
Flash Dont Walk (s)	12.0	12.0		12.0	12.0			12.0		12.0	12.0	
Pedestrian Calls (#/hr)	6	6		3	3			13		2	2	
Act Effct Green (s)	13.5	13.5		13.5	13.5		62.4	62.4		40.4	40.4	
Actuated g/C Ratio	0.15	0.15		0.15	0.15		0.71	0.71		0.46	0.46	
v/c Ratio	0.29	0.22		0.21	0.57		0.58	0.08		0.00	0.81	
Control Delay	39.0	14.9		36.8	44.3		11.9	4.6		17.5	29.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	39.0	14.9		36.8	44.3		11.9	4.6		17.5	29.9	
LOS	D	B		D	D		B	A		B	C	
Approach Delay		26.2			42.6			9.9			29.9	
Approach LOS		C			D			A			C	
Queue Length 50th (m)	7.0	1.2		5.4	19.5		11.7	3.8		0.2	68.2	
Queue Length 95th (m)	18.0	11.1		14.8	39.5		31.8	9.8		1.6	#164.3	
Internal Link Dist (m)		221.5			282.0			465.3			727.0	
Turn Bay Length (m)				40.0			50.0			30.0		
Base Capacity (vph)	463	627		505	642		583	1414		521	770	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.11	0.09		0.08	0.22		0.45	0.07		0.00	0.81	

Intersection Summary

Area Type: Other
Cycle Length: 118.6
Actuated Cycle Length: 88.4
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.81
Intersection Signal Delay: 25.7 Intersection LOS: C
Intersection Capacity Utilization 91.9% ICU Level of Service F
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 2: Legget & Solandt

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	22	11	25	104	16	275	22	1664	30	252	1864	42
Future Volume (vph)	22	11	25	104	16	275	22	1664	30	252	1864	42
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	0.0		35.0	100.0		0.0	80.0		0.0	200.0		180.0
Storage Lanes	1		1	1		1	1		0	2		1
Taper Length (m)	20.0			20.0			40.0			60.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.97	0.95	1.00
Ped Bike Factor	1.00	0.99		0.99		0.98	1.00	1.00		0.99		0.97
Frt		0.896				0.850		0.997				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1642	1467	0	1610	1762	1469	1658	3299	0	3216	3316	1498
Flt Permitted	0.747			0.734			0.950			0.950		
Satd. Flow (perm)	1286	1467	0	1235	1762	1440	1656	3299	0	3198	3316	1449
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		25				78		2				78
Link Speed (k/h)		50			60			60			60	
Link Distance (m)		247.8			333.9			554.1			634.3	
Travel Time (s)		17.8			20.0			33.2			38.1	
Confl. Peds. (#/hr)	3		6	6		3	4		20	20		4
Confl. Bikes (#/hr)						4			18			2
Peak Hour 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
Heavy Vehicles (%)	3%	1%	10%	5%	1%	3%	2%	2%	9%	2%	2%	1%
Adj. Flow (vph)	22	11	25	104	16	275	22	1664	30	252	1864	42
Shared Lane Traffic (%)												
Lane Group Flow (vph)	22	36	0	104	16	275	22	1694	0	252	1864	42
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		5.0			5.0			18.0			18.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2	1	1	2		1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (m)	18.6	93.0		18.6	93.0	18.6	18.6	93.0		18.6	93.0	18.6
Trailing Detector (m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Size(m)	18.6	5.5		18.6	5.5	18.6	18.6	5.5		18.6	5.5	18.6
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(m)		87.5			87.5			87.5			87.5	
Detector 2 Size(m)		5.5			5.5			5.5			5.5	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						6
Detector Phase	4	4		8	8	8	5	2		1	6	6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0	10.0	5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	40.7	40.7		40.7	40.7	40.7	12.0	31.1		12.0	31.1	31.1
Total Split (s)	41.0	41.0		41.0	41.0	41.0	12.0	92.0		17.0	97.0	97.0
Total Split (%)	27.3%	27.3%		27.3%	27.3%	27.3%	8.0%	61.3%		11.3%	64.7%	64.7%
Maximum Green (s)	34.3	34.3		34.3	34.3	34.3	5.0	85.9		10.0	90.9	90.9
Yellow Time (s)	3.7	3.7		3.7	3.7	3.7	3.7	3.7		3.7	3.7	3.7
All-Red Time (s)	3.0	3.0		3.0	3.0	3.0	3.3	2.4		3.3	2.4	2.4
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.7	6.7		6.7	6.7	6.7	7.0	6.1		7.0	6.1	6.1
Lead/Lag							Lead	Lag		Lead	Lag	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
Recall Mode	None	None		None	None	None	None	C-Max		None	C-Max	C-Max
Walk Time (s)	7.0	7.0		7.0	7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)	27.0	27.0		27.0	27.0	27.0		18.0			18.0	18.0
Pedestrian Calls (#/hr)	6	6		3	3	3		4			20	20
Act Effct Green (s)	27.1	27.1		27.1	27.1	27.1	5.9	86.8		16.2	102.3	102.3
Actuated g/C Ratio	0.18	0.18		0.18	0.18	0.18	0.04	0.58		0.11	0.68	0.68
v/c Ratio	0.09	0.13		0.47	0.05	0.85	0.34	0.89		0.72	0.82	0.04
Control Delay	48.5	22.9		60.2	47.2	64.8	84.7	34.6		61.4	12.4	0.6
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	48.5	22.9		60.2	47.2	64.8	84.7	34.6		61.4	12.4	0.6
LOS	D	C		E	D	E	F	C		E	B	A
Approach Delay		32.6			62.9			35.2			17.9	
Approach LOS		C			E			D			B	
Queue Length 50th (m)	5.0	2.5		25.5	3.6	53.5	5.9	206.9		33.5	154.2	0.0
Queue Length 95th (m)	12.0	11.3		41.2	9.4	81.9	15.1	242.1		m#43.9	m136.8	m0.0
Internal Link Dist (m)		223.8			309.9			530.1			610.3	
Turn Bay Length (m)				100.0			80.0			200.0		180.0
Base Capacity (vph)	294	354		282	402	389	65	1911		348	2262	1012
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	0
Reduced v/c Ratio	0.07	0.10		0.37	0.04	0.71	0.34	0.89		0.72	0.82	0.04

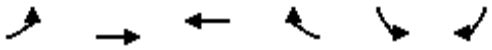
Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 100 (67%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 135
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.89
Intersection Signal Delay: 29.1 Intersection LOS: C
Intersection Capacity Utilization 93.4% ICU Level of Service F
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: March & Station/Carling

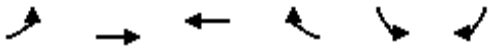
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	144	68	21	610	259	36
Future Volume (vph)	144	68	21	610	259	36
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.957				0.984	
Flt Protected				0.998	0.958	
Satd. Flow (prot)	1687	0	0	1659	1627	0
Flt Permitted				0.998	0.958	
Satd. Flow (perm)	1687	0	0	1659	1627	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	336.6			459.4	751.0	
Travel Time (s)	24.2			33.1	54.1	
Confl. Peds. (#/hr)		17	17			2
Confl. Bikes (#/hr)		1				
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	9%	7%	3%	4%
Adj. Flow (vph)	144	68	21	610	259	36
Shared Lane Traffic (%)						
Lane Group Flow (vph)	212	0	0	631	295	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.0			3.0	3.5	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	5.0			5.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 75.7%		ICU Level of Service D	
Analysis Period (min) 15			



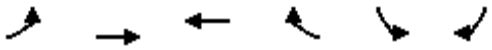
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	5	67	0	0	0
Future Volume (vph)	0	5	67	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	0	1745	1745	0	0	1745
Flt Permitted						
Satd. Flow (perm)	0	1745	1745	0	0	1745
Link Speed (k/h)		50	50		50	
Link Distance (m)		306.0	84.0		67.2	
Travel Time (s)		22.0	6.0		4.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	5	67	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	5	67	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		5.0	5.0		5.0	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 7.1%		ICU Level of Service A	
Analysis Period (min) 15			



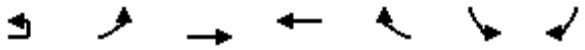
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	2	13	0	0	0
Future Volume (vph)	0	2	13	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	0	1745	1745	0	0	1745
Flt Permitted						
Satd. Flow (perm)	0	1745	1745	0	0	1745
Link Speed (k/h)		50	50		50	
Link Distance (m)		84.0	42.7		67.9	
Travel Time (s)		6.0	3.1		4.9	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	2	13	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	2	13	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		5.0	5.0		5.0	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	

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



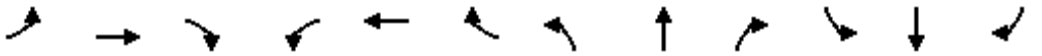
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑			↗
Traffic Volume (vph)	0	2	13	0	0	0
Future Volume (vph)	0	2	13	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	4.8	3.5	3.5	3.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	0	1745	2000	0	0	1745
Flt Permitted						
Satd. Flow (perm)	0	1745	2000	0	0	1745
Link Speed (k/h)		50	50		50	
Link Distance (m)		42.7	29.9		67.1	
Travel Time (s)		3.1	2.2		4.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	2	13	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	2	13	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		5.0	5.0		5.0	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	0.91	1.09	1.09	1.09
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	

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



Lane Group	EBU	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations							
Traffic Volume (vph)	2	0	0	0	0	0	0
Future Volume (vph)	2	0	0	0	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	4.8	3.5	3.5	3.5	3.5	3.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt							
Flt Protected		0.950					
Satd. Flow (prot)	0	1900	0	0	0	0	1745
Flt Permitted		0.950					
Satd. Flow (perm)	0	1900	0	0	0	0	1745
Link Speed (k/h)			50	50		50	
Link Distance (m)			29.9	42.6		66.7	
Travel Time (s)			2.2	3.1		4.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	2	0	0	0	0	0	0
Shared Lane Traffic (%)							
Lane Group Flow (vph)	0	2	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No
Lane Alignment	R NA	Left	Left	Left	Right	Left	Right
Median Width(m)			4.8	4.8		0.0	
Link Offset(m)			0.0	0.0		0.0	
Crosswalk Width(m)			5.0	5.0		5.0	
Two way Left Turn Lane							
Headway Factor	1.09	0.91	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	14	24			14	24	14
Sign Control			Free	Free		Stop	

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



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	78	37	581	553	62	160	101	1823	57	20	999	59
Future Volume (vph)	78	37	581	553	62	160	101	1823	57	20	999	59
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	35.0		60.0	85.0		0.0	165.0		0.0	155.0		75.0
Storage Lanes	1		1	2		0	2		0	1		0
Taper Length (m)	50.0			95.0			40.0			25.0		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	0.97	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	0.99		0.98	0.98	0.98		1.00	1.00			1.00	
Frt			0.850		0.892			0.995			0.992	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1610	1745	1441	3216	1516	0	3248	3237	0	1658	3254	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1598	1745	1405	3155	1516	0	3232	3237	0	1658	3254	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			166		85			3			5	
Link Speed (k/h)		50			50			60			60	
Link Distance (m)		126.3			245.5			634.3			855.0	
Travel Time (s)		9.1			17.7			38.1			51.3	
Confl. Peds. (#/hr)	7		8	8		7	6					6
Confl. Bikes (#/hr)			1			1			12			1
Peak Hour 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
Heavy Vehicles (%)	5%	2%	5%	2%	3%	3%	1%	4%	1%	2%	3%	2%
Adj. Flow (vph)	78	37	581	553	62	160	101	1823	57	20	999	59
Shared Lane Traffic (%)												
Lane Group Flow (vph)	78	37	581	553	222	0	101	1880	0	20	1058	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		5.0			10.5			18.0			18.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2		1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	18.6	93.0	18.6	18.6	93.0		18.6	93.0		18.6	93.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	18.6	5.5	18.6	18.6	5.5		18.6	5.5		18.6	5.5	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		87.5			87.5			87.5			87.5	
Detector 2 Size(m)		5.5			5.5			5.5			5.5	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									
Detector Phase	7	4	4	3	8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0		5.0	10.0		5.0	10.0	
Minimum Split (s)	11.5	36.5	36.5	11.6	36.5		12.0	26.8		12.0	26.8	
Total Split (s)	19.0	37.0	37.0	29.0	47.0		14.0	72.0		12.0	70.0	
Total Split (%)	12.7%	24.7%	24.7%	19.3%	31.3%		9.3%	48.0%		8.0%	46.7%	
Maximum Green (s)	12.5	30.5	30.5	22.5	40.5		7.0	66.2		5.0	64.2	
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3		3.7	3.7		3.7	3.7	
All-Red Time (s)	3.2	3.2	3.2	3.2	3.2		3.3	2.1		3.3	2.1	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.5	6.5	6.5	6.5	6.5		7.0	5.8		7.0	5.8	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag		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	
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	
Walk Time (s)		7.0	7.0		7.0			7.0			7.0	
Flash Dont Walk (s)		23.0	23.0		23.0			14.0			14.0	
Pedestrian Calls (#/hr)		8	8		5			1			11	
Act Effct Green (s)	11.1	30.5	30.5	22.5	41.9		7.0	71.0		5.0	64.2	
Actuated g/C Ratio	0.07	0.20	0.20	0.15	0.28		0.05	0.47		0.03	0.43	
v/c Ratio	0.66	0.10	1.39	1.15	0.46		0.67	1.23		0.36	0.76	
Control Delay	92.4	49.7	221.8	143.0	30.8		92.7	132.4		89.2	40.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	92.4	49.7	221.8	143.0	30.8		92.7	132.4		89.2	40.5	
LOS	F	D	F	F	C		F	F		F	D	
Approach Delay		198.1			110.8			130.4			41.4	
Approach LOS		F			F			F			D	
Queue Length 50th (m)	21.0	8.3	~174.0	~91.2	31.1		13.6	~351.8		5.5	127.3	
Queue Length 95th (m)	37.4	17.8	#241.4	#125.2	55.1		m16.4	#392.1		14.0	152.2	
Internal Link Dist (m)		102.3			221.5			610.3			831.0	
Turn Bay Length (m)	35.0		60.0	85.0			165.0			155.0		
Base Capacity (vph)	134	354	417	482	484		151	1533		55	1395	
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	
Reduced v/c Ratio	0.58	0.10	1.39	1.15	0.46		0.67	1.23		0.36	0.76	

Intersection Summary

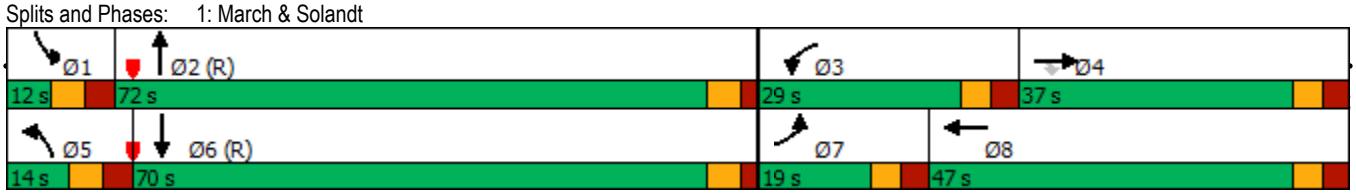
Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 18 (12%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.39
Intersection Signal Delay: 116.3 Intersection LOS: F
Intersection Capacity Utilization 102.3% ICU Level of Service G
Analysis Period (min) 15

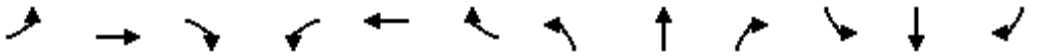
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: March & Solandt





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	51	9	49	40	131	8	261	95	2	2	222	402
Future Volume (vph)	51	9	49	40	131	8	261	95	2	2	222	402
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	0.0		0.0	40.0		0.0	50.0		0.0	30.0		105.0
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (m)	70.0			30.0			60.0			30.0		
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
Ped Bike Factor	0.99	0.98		1.00	1.00			1.00		0.97		
Frt		0.873			0.991			0.997				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1674	1496	0	1674	1601	0	1566	1738	0	1610	1745	1498
Flt Permitted	0.668			0.719			0.488			0.694		
Satd. Flow (perm)	1165	1496	0	1263	1601	0	804	1738	0	1141	1745	1498
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		49			3			2				402
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		245.5			306.0			489.3			751.0	
Travel Time (s)		17.7			22.0			35.2			54.1	
Confl. Peds. (#/hr)	4		1	1		4			11	11		
Confl. Bikes (#/hr)									3			
Peak Hour 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
Heavy Vehicles (%)	1%	1%	2%	1%	10%	10%	8%	2%	1%	5%	2%	1%
Adj. Flow (vph)	51	9	49	40	131	8	261	95	2	2	222	402
Shared Lane Traffic (%)												
Lane Group Flow (vph)	51	58	0	40	139	0	261	97	0	2	222	402
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.0			3.5			3.5			3.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (m)	18.6	93.0		18.6	93.0		18.6	93.0		18.6	93.0	18.6
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Size(m)	18.6	5.5		18.6	5.5		18.6	5.5		18.6	5.5	18.6
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(m)		87.5			87.5			87.5			87.5	
Detector 2 Size(m)		5.5			5.5			5.5			5.5	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA	Perm
Protected Phases		2			6		3	8			4	
Permitted Phases	2			6			8			4		4
Detector Phase	2	2		6	6		3	8		4	4	4

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	10.0
Minimum Split (s)	25.2	25.2		25.2	25.2		16.2	25.2		25.2	25.2	25.2
Total Split (s)	41.2	41.2		41.2	41.2		31.2	77.4		46.2	46.2	46.2
Total Split (%)	34.7%	34.7%		34.7%	34.7%		26.3%	65.3%		39.0%	39.0%	39.0%
Maximum Green (s)	35.0	35.0		35.0	35.0		25.0	71.2		40.0	40.0	40.0
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	3.3
All-Red Time (s)	2.9	2.9		2.9	2.9		2.9	2.9		2.9	2.9	2.9
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.2	6.2		6.2	6.2		6.2	6.2		6.2	6.2	6.2
Lead/Lag							Lead			Lag	Lag	Lag
Lead-Lag Optimize?							Yes			Yes	Yes	Yes
Vehicle Extension (s)	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	Ped		Ped	Ped	Ped
Walk Time (s)	7.0	7.0		7.0	7.0			7.0		7.0	7.0	7.0
Flash Dont Walk (s)	12.0	12.0		12.0	12.0			12.0		12.0	12.0	12.0
Pedestrian Calls (#/hr)	6	6		3	3			13		2	2	2
Act Effct Green (s)	12.4	12.4		12.4	12.4		40.6	40.6		22.9	22.9	22.9
Actuated g/C Ratio	0.19	0.19		0.19	0.19		0.62	0.62		0.35	0.35	0.35
v/c Ratio	0.23	0.18		0.17	0.46		0.41	0.09		0.01	0.37	0.51
Control Delay	27.7	11.7		26.4	30.1		8.1	5.5		15.5	18.5	4.6
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	27.7	11.7		26.4	30.1		8.1	5.5		15.5	18.5	4.6
LOS	C	B		C	C		A	A		B	B	A
Approach Delay		19.2			29.3			7.4			9.5	
Approach LOS		B			C			A			A	
Queue Length 50th (m)	4.3	0.7		3.4	12.1		10.4	3.4		0.2	16.5	0.0
Queue Length 95th (m)	15.2	9.6		12.6	33.4		25.5	9.9		1.4	38.7	15.3
Internal Link Dist (m)		221.5			282.0			465.3			727.0	
Turn Bay Length (m)				40.0			50.0			30.0		105.0
Base Capacity (vph)	636	840		690	876		794	1673		712	1090	1086
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.08	0.07		0.06	0.16		0.33	0.06		0.00	0.20	0.37

Intersection Summary			
Area Type:	Other		
Cycle Length: 118.6			
Actuated Cycle Length: 65.7			
Natural Cycle: 70			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.51			
Intersection Signal Delay: 12.5		Intersection LOS: B	
Intersection Capacity Utilization 66.3%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 2: Legget & Solandt

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	22	11	25	104	16	275	22	1664	30	252	1864	42
Future Volume (vph)	22	11	25	104	16	275	22	1664	30	252	1864	42
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	0.0		35.0	100.0		0.0	80.0		0.0	200.0		180.0
Storage Lanes	1		1	1		1	1		0	2		1
Taper Length (m)	20.0			20.0			40.0			60.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.97	0.95	1.00
Ped Bike Factor	1.00	0.99		0.99		0.98	1.00	1.00		0.99		0.97
Frt		0.896				0.850		0.997				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1642	1467	0	1610	1762	1469	1658	3299	0	3216	3316	1498
Flt Permitted	0.747			0.734			0.950			0.950		
Satd. Flow (perm)	1286	1467	0	1235	1762	1440	1656	3299	0	3198	3316	1449
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		25				78		2				78
Link Speed (k/h)		50			60			60			60	
Link Distance (m)		247.8			333.9			554.1			634.3	
Travel Time (s)		17.8			20.0			33.2			38.1	
Confl. Peds. (#/hr)	3		6	6		3	4		20	20		4
Confl. Bikes (#/hr)						4			18			2
Peak Hour 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
Heavy Vehicles (%)	3%	1%	10%	5%	1%	3%	2%	2%	9%	2%	2%	1%
Adj. Flow (vph)	22	11	25	104	16	275	22	1664	30	252	1864	42
Shared Lane Traffic (%)												
Lane Group Flow (vph)	22	36	0	104	16	275	22	1694	0	252	1864	42
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		5.0			5.0			18.0			18.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2	1	1	2		1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (m)	18.6	93.0		18.6	93.0	18.6	18.6	93.0		18.6	93.0	18.6
Trailing Detector (m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Size(m)	18.6	5.5		18.6	5.5	18.6	18.6	5.5		18.6	5.5	18.6
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(m)		87.5			87.5			87.5			87.5	
Detector 2 Size(m)		5.5			5.5			5.5			5.5	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						6
Detector Phase	4	4		8	8	8	5	2		1	6	6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0	10.0	5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	40.7	40.7		40.7	40.7	40.7	12.0	31.1		12.0	31.1	31.1
Total Split (s)	41.0	41.0		41.0	41.0	41.0	12.0	92.0		17.0	97.0	97.0
Total Split (%)	27.3%	27.3%		27.3%	27.3%	27.3%	8.0%	61.3%		11.3%	64.7%	64.7%
Maximum Green (s)	34.3	34.3		34.3	34.3	34.3	5.0	85.9		10.0	90.9	90.9
Yellow Time (s)	3.7	3.7		3.7	3.7	3.7	3.7	3.7		3.7	3.7	3.7
All-Red Time (s)	3.0	3.0		3.0	3.0	3.0	3.3	2.4		3.3	2.4	2.4
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.7	6.7		6.7	6.7	6.7	7.0	6.1		7.0	6.1	6.1
Lead/Lag							Lead	Lag		Lead	Lag	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
Recall Mode	None	None		None	None	None	None	C-Max		None	C-Max	C-Max
Walk Time (s)	7.0	7.0		7.0	7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)	27.0	27.0		27.0	27.0	27.0		18.0			18.0	18.0
Pedestrian Calls (#/hr)	6	6		3	3	3		4			20	20
Act Effct Green (s)	27.1	27.1		27.1	27.1	27.1	5.9	86.8		16.2	102.3	102.3
Actuated g/C Ratio	0.18	0.18		0.18	0.18	0.18	0.04	0.58		0.11	0.68	0.68
v/c Ratio	0.09	0.13		0.47	0.05	0.85	0.34	0.89		0.72	0.82	0.04
Control Delay	48.5	22.9		60.2	47.2	64.8	84.7	34.6		61.6	17.9	1.0
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	48.5	22.9		60.2	47.2	64.8	84.7	34.6		61.6	17.9	1.0
LOS	D	C		E	D	E	F	C		E	B	A
Approach Delay		32.6			62.9			35.2			22.7	
Approach LOS		C			E			D			C	
Queue Length 50th (m)	5.0	2.5		25.5	3.6	53.5	5.9	206.9		33.6	232.6	0.0
Queue Length 95th (m)	12.0	11.3		41.2	9.4	81.9	15.1	242.1		m#45.4	m214.5	m0.0
Internal Link Dist (m)		223.8			309.9			530.1			610.3	
Turn Bay Length (m)				100.0			80.0			200.0		180.0
Base Capacity (vph)	294	354		282	402	389	65	1911		348	2262	1012
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	0
Reduced v/c Ratio	0.07	0.10		0.37	0.04	0.71	0.34	0.89		0.72	0.82	0.04

Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 100 (67%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 135
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.89
Intersection Signal Delay: 31.5 Intersection LOS: C
Intersection Capacity Utilization 93.4% ICU Level of Service F
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: March & Station/Carling

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	144	68	21	610	259	36
Future Volume (vph)	144	68	21	610	259	36
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Storage Length (m)		125.0	15.0		0.0	40.0
Storage Lanes		1	1		1	1
Taper Length (m)			20.0		20.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1762	1498	1551	1664	1642	1455
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	1762	1498	1551	1664	1642	1455
Link Speed (k/h)	50			50	50	
Link Distance (m)	336.6			459.4	751.0	
Travel Time (s)	24.2			33.1	54.1	
Confl. Peds. (#/hr)		17	17			2
Confl. Bikes (#/hr)		1				
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	9%	7%	3%	4%
Adj. Flow (vph)	144	68	21	610	259	36
Shared Lane Traffic (%)						
Lane Group Flow (vph)	144	68	21	610	259	36
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.0			3.0	3.5	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	5.0			5.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 55.7%		ICU Level of Service B	
Analysis Period (min) 15			

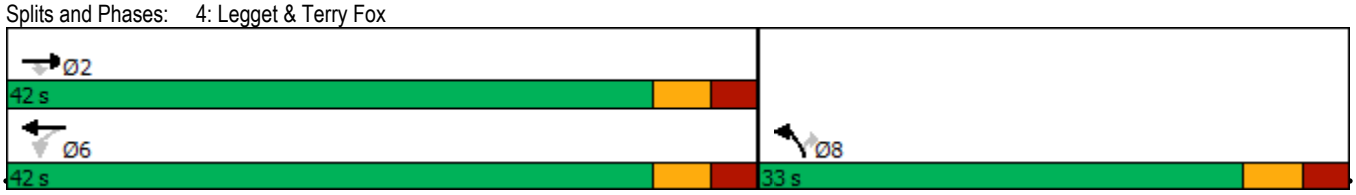
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	144	68	21	610	259	36
Future Volume (vph)	144	68	21	610	259	36
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Storage Length (m)		125.0	15.0		0.0	40.0
Storage Lanes		1	1		1	1
Taper Length (m)			20.0		20.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.95	0.98			0.98
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1762	1498	1551	1664	1642	1455
Flt Permitted			0.665		0.950	
Satd. Flow (perm)	1762	1429	1063	1664	1642	1422
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		68				36
Link Speed (k/h)	50			50	50	
Link Distance (m)	336.6			459.4	751.0	
Travel Time (s)	24.2			33.1	54.1	
Confl. Peds. (#/hr)		17	17			2
Confl. Bikes (#/hr)		1				
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	9%	7%	3%	4%
Adj. Flow (vph)	144	68	21	610	259	36
Shared Lane Traffic (%)						
Lane Group Flow (vph)	144	68	21	610	259	36
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.0			3.0	3.5	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	5.0			5.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)		14	24		24	14
Number of Detectors	2	1	1	2	1	1
Detector Template	Thru	Right	Left	Thru	Left	Right
Leading Detector (m)	93.0	18.6	18.6	93.0	18.6	18.6
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	5.5	18.6	18.6	5.5	18.6	18.6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)	87.5			87.5		
Detector 2 Size(m)	5.5			5.5		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA	Perm	Perm	NA	Prot	Perm
Protected Phases	2			6	8	
Permitted Phases		2	6			8
Detector Phase	2	2	6	6	8	8

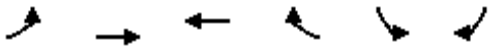
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	31.0	31.0	31.0	31.0	33.0	33.0
Total Split (s)	42.0	42.0	42.0	42.0	33.0	33.0
Total Split (%)	56.0%	56.0%	56.0%	56.0%	44.0%	44.0%
Maximum Green (s)	36.0	36.0	36.0	36.0	27.0	27.0
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	2.7	2.7	2.7	2.7	2.7	2.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	18.0	18.0	18.0	18.0	20.0	20.0
Pedestrian Calls (#/hr)	1	1	1	1	1	1
Act Effct Green (s)	27.5	27.5	27.5	27.5	15.8	15.8
Actuated g/C Ratio	0.49	0.49	0.49	0.49	0.28	0.28
v/c Ratio	0.17	0.09	0.04	0.75	0.56	0.08
Control Delay	9.2	3.2	9.0	19.2	23.8	6.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.2	3.2	9.0	19.2	23.8	6.9
LOS	A	A	A	B	C	A
Approach Delay	7.3			18.9	21.7	
Approach LOS	A			B	C	
Queue Length 50th (m)	6.4	0.0	0.9	39.2	21.5	0.0
Queue Length 95th (m)	19.0	5.3	4.5	#100.3	42.9	4.9
Internal Link Dist (m)	312.6			435.4	727.0	
Turn Bay Length (m)		125.0	15.0			40.0
Base Capacity (vph)	1202	996	725	1135	840	745
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.12	0.07	0.03	0.54	0.31	0.05

Intersection Summary

Area Type: Other
Cycle Length: 75
Actuated Cycle Length: 56.1
Natural Cycle: 65
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.75
Intersection Signal Delay: 17.4 Intersection LOS: B
Intersection Capacity Utilization 59.5% ICU Level of Service B
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

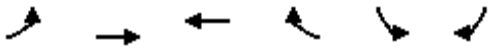
Splits and Phases: 4: Legget & Terry Fox





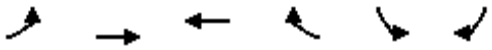
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	5	67	0	0	0
Future Volume (vph)	0	5	67	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	0	1745	1745	0	0	1745
Flt Permitted						
Satd. Flow (perm)	0	1745	1745	0	0	1745
Link Speed (k/h)		50	50		50	
Link Distance (m)		306.0	84.0		67.2	
Travel Time (s)		22.0	6.0		4.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	5	67	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	5	67	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		5.0	5.0		5.0	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 7.1%		ICU Level of Service A	
Analysis Period (min) 15			



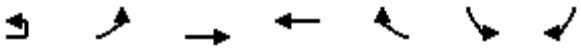
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	2	13	0	0	0
Future Volume (vph)	0	2	13	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	0	1745	1745	0	0	1745
Flt Permitted						
Satd. Flow (perm)	0	1745	1745	0	0	1745
Link Speed (k/h)		50	50		50	
Link Distance (m)		84.0	42.7		67.9	
Travel Time (s)		6.0	3.1		4.9	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	2	13	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	2	13	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		5.0	5.0		5.0	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	

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



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	2	13	0	0	0
Future Volume (vph)	0	2	13	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	4.8	3.5	3.5	3.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	0	1745	2000	0	0	1745
Flt Permitted						
Satd. Flow (perm)	0	1745	2000	0	0	1745
Link Speed (k/h)		50	50		50	
Link Distance (m)		42.7	29.9		67.1	
Travel Time (s)		3.1	2.2		4.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	2	13	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	2	13	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		5.0	5.0		5.0	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	0.91	1.09	1.09	1.09
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	

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



Lane Group	EBU	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations							
Traffic Volume (vph)	2	0	0	0	0	0	0
Future Volume (vph)	2	0	0	0	0	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	4.8	3.5	3.5	3.5	3.5	3.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt							
Flt Protected		0.950					
Satd. Flow (prot)	0	1900	0	0	0	0	1745
Flt Permitted		0.950					
Satd. Flow (perm)	0	1900	0	0	0	0	1745
Link Speed (k/h)			50	50		50	
Link Distance (m)			29.9	42.6		66.7	
Travel Time (s)			2.2	3.1		4.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	2	0	0	0	0	0	0
Shared Lane Traffic (%)							
Lane Group Flow (vph)	0	2	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No
Lane Alignment	R NA	Left	Left	Left	Right	Left	Right
Median Width(m)			4.8	4.8		0.0	
Link Offset(m)			0.0	0.0		0.0	
Crosswalk Width(m)			5.0	5.0		5.0	
Two way Left Turn Lane							
Headway Factor	1.09	0.91	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	14	24			14	24	14
Sign Control			Free	Free		Stop	

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	101	118	59	111	35	535	981	661	135	1640	100
Future Volume (vph)	27	101	118	59	111	35	535	981	661	135	1640	100
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	35.0		60.0	85.0		55.0	165.0		0.0	155.0		75.0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (m)	50.0			95.0			40.0			25.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	0.99		0.98	0.99		0.98	1.00	0.99			1.00	
Frt			0.850			0.850		0.940			0.991	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1610	1745	1441	1658	1728	1469	1674	3072	0	1658	3251	0
Flt Permitted	0.597			0.636			0.950			0.950		
Satd. Flow (perm)	1003	1745	1405	1098	1728	1435	1672	3072	0	1658	3251	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			122			122		187			5	
Link Speed (k/h)		50			50			60			60	
Link Distance (m)		126.3			245.5			634.3			855.0	
Travel Time (s)		9.1			17.7			38.1			51.3	
Confl. Peds. (#/hr)	7		8	8		7	6					6
Confl. Bikes (#/hr)			1			1			12			1
Peak Hour 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
Heavy Vehicles (%)	5%	2%	5%	2%	3%	3%	1%	4%	1%	2%	3%	2%
Adj. Flow (vph)	27	101	118	59	111	35	535	981	661	135	1640	100
Shared Lane Traffic (%)												
Lane Group Flow (vph)	27	101	118	59	111	35	535	1642	0	135	1740	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		5.0			5.0			18.0			18.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	18.6	93.0	18.6	18.6	93.0	18.6	18.6	93.0		18.6	93.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	18.6	5.5	18.6	18.6	5.5	18.6	18.6	5.5		18.6	5.5	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		87.5			87.5			87.5			87.5	
Detector 2 Size(m)		5.5			5.5			5.5			5.5	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phase	4	4	4	8	8	8	5	2		1	6	

1: March & Solandt
AM Peak Hour

2707 Solandt Road
2026 Total Traffic

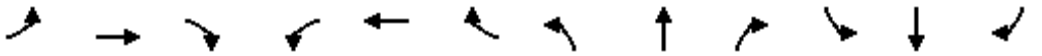
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	5.0	10.0		5.0	10.0	
Minimum Split (s)	36.5	36.5	36.5	36.5	36.5	36.5	12.0	26.8		12.0	26.8	
Total Split (s)	37.0	37.0	37.0	37.0	37.0	37.0	43.0	93.0		20.0	70.0	
Total Split (%)	24.7%	24.7%	24.7%	24.7%	24.7%	24.7%	28.7%	62.0%		13.3%	46.7%	
Maximum Green (s)	30.5	30.5	30.5	30.5	30.5	30.5	36.0	87.2		13.0	64.2	
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3	3.7	3.7		3.7	3.7	
All-Red Time (s)	3.2	3.2	3.2	3.2	3.2	3.2	3.3	2.1		3.3	2.1	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.5	6.5	6.5	6.5	6.5	6.5	7.0	5.8		7.0	5.8	
Lead/Lag							Lead	Lag		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	
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0		7.0			7.0	
Flash Dont Walk (s)	23.0	23.0	23.0	23.0	23.0	23.0		14.0			14.0	
Pedestrian Calls (#/hr)	8	8	8	7	7	7		6			0	
Act Effct Green (s)	17.2	17.2	17.2	17.2	17.2	17.2	49.3	96.0		17.6	64.2	
Actuated g/C Ratio	0.11	0.11	0.11	0.11	0.11	0.11	0.33	0.64		0.12	0.43	
v/c Ratio	0.24	0.51	0.44	0.47	0.56	0.13	0.97	0.81		0.70	1.25	
Control Delay	61.9	69.5	13.0	72.1	72.2	1.0	65.1	10.3		81.6	154.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	61.9	69.5	13.0	72.1	72.2	1.0	65.1	10.3		81.6	154.8	
LOS	E	E	B	E	E	A	E	B		F	F	
Approach Delay		41.6			60.0			23.8			149.6	
Approach LOS		D			E			C			F	
Queue Length 50th (m)	7.0	26.9	0.0	15.7	29.8	0.0	128.8	149.0		35.5	~312.6	
Queue Length 95th (m)	14.7	40.1	14.6	26.8	43.4	0.0	m#176.6	m170.6		#74.6	#351.4	
Internal Link Dist (m)		102.3			221.5			610.3			831.0	
Turn Bay Length (m)	35.0		60.0	85.0		55.0	165.0			155.0		
Base Capacity (vph)	203	354	382	223	351	388	550	2032		194	1394	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.13	0.29	0.31	0.26	0.32	0.09	0.97	0.81		0.70	1.25	

Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 148 (99%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.25
Intersection Signal Delay: 78.8 Intersection LOS: E
Intersection Capacity Utilization 111.8% ICU Level of Service H
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: March & Solandt

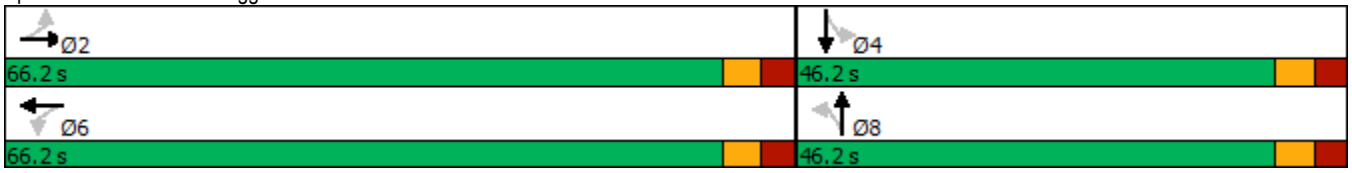


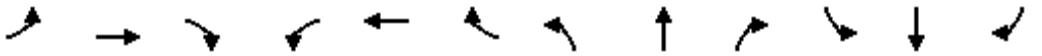
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	394	245	219	3	27	8	91	165	52	50	169	49
Future Volume (vph)	394	245	219	3	27	8	91	165	52	50	169	49
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	0.0		0.0	40.0		0.0	50.0		0.0	30.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	70.0			30.0			60.0			30.0		
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
Ped Bike Factor	0.99	0.99		1.00	0.99			0.99		0.98		
Frt		0.929			0.966			0.964			0.966	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1674	1612	0	1674	1552	0	1566	1664	0	1610	1689	0
Flt Permitted	0.734			0.444			0.607			0.608		
Satd. Flow (perm)	1279	1612	0	782	1552	0	1000	1664	0	1008	1689	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		61			8			16			14	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		245.5			306.0			489.3			751.0	
Travel Time (s)		17.7			22.0			35.2			54.1	
Confl. Peds. (#/hr)	4		1	1		4			11	11		
Confl. Bikes (#/hr)									3			
Peak Hour 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
Heavy Vehicles (%)	1%	1%	2%	1%	10%	10%	8%	2%	1%	5%	2%	1%
Adj. Flow (vph)	394	245	219	3	27	8	91	165	52	50	169	49
Shared Lane Traffic (%)												
Lane Group Flow (vph)	394	464	0	3	35	0	91	217	0	50	218	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.0			3.5			3.5			3.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	18.6	93.0		18.6	93.0		18.6	93.0		18.6	93.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	18.6	5.5		18.6	5.5		18.6	5.5		18.6	5.5	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		87.5			87.5			87.5			87.5	
Detector 2 Size(m)		5.5			5.5			5.5			5.5	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		4	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	15.0	15.0		15.0	15.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	25.2	25.2		25.2	25.2		25.2	25.2		25.2	25.2	
Total Split (s)	66.2	66.2		66.2	66.2		46.2	46.2		46.2	46.2	
Total Split (%)	58.9%	58.9%		58.9%	58.9%		41.1%	41.1%		41.1%	41.1%	
Maximum Green (s)	60.0	60.0		60.0	60.0		40.0	40.0		40.0	40.0	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.9	2.9		2.9	2.9		2.9	2.9		2.9	2.9	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.2	6.2		6.2	6.2		6.2	6.2		6.2	6.2	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Min	Min		Min	Min		None	None		None	None	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Pedestrian Calls (#/hr)	1	1		4	4		11	11		0	0	
Act Effct Green (s)	35.5	35.5		35.5	35.5		16.3	16.3		16.3	16.3	
Actuated g/C Ratio	0.54	0.54		0.54	0.54		0.25	0.25		0.25	0.25	
v/c Ratio	0.57	0.52		0.01	0.04		0.37	0.51		0.20	0.51	
Control Delay	13.6	10.2		7.3	6.1		29.6	27.6		26.4	27.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	13.6	10.2		7.3	6.1		29.6	27.6		26.4	27.7	
LOS	B	B		A	A		C	C		C	C	
Approach Delay		11.8			6.2			28.2			27.5	
Approach LOS		B			A			C			C	
Queue Length 50th (m)	23.5	22.4		0.1	1.1		8.0	18.2		4.2	18.5	
Queue Length 95th (m)	58.7	55.8		1.2	5.2		25.9	49.8		15.6	50.2	
Internal Link Dist (m)		221.5			282.0			465.3			727.0	
Turn Bay Length (m)				40.0			50.0			30.0		
Base Capacity (vph)	1108	1405		677	1345		675	1129		680	1145	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.36	0.33		0.00	0.03		0.13	0.19		0.07	0.19	

Intersection Summary			
Area Type:	Other		
Cycle Length: 112.4			
Actuated Cycle Length: 65.6			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.57			
Intersection Signal Delay: 17.9		Intersection LOS: B	
Intersection Capacity Utilization 67.3%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 2: Legget & Solandt





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	22	8	32	10	161	74	2078	74	280	1508	104
Future Volume (vph)	54	22	8	32	10	161	74	2078	74	280	1508	104
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	0.0		35.0	100.0		0.0	80.0		0.0	200.0		180.0
Storage Lanes	1		1	1		1	1		0	2		1
Taper Length (m)	20.0			20.0			40.0			60.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.97	0.95	1.00
Ped Bike Factor	1.00	0.99		0.99		0.98	1.00	1.00		1.00		0.97
Frt		0.960				0.850		0.995				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1642	1644	0	1610	1762	1469	1658	3285	0	3216	3316	1498
Flt Permitted	0.751			0.738			0.950			0.950		
Satd. Flow (perm)	1293	1644	0	1242	1762	1440	1655	3285	0	3207	3316	1449
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		8				120		4				104
Link Speed (k/h)		50			60			60			60	
Link Distance (m)		247.8			333.9			554.1			634.3	
Travel Time (s)		17.8			20.0			33.2			38.1	
Confl. Peds. (#/hr)	3		6	6		3	4		20	20		4
Confl. Bikes (#/hr)						4			18			2
Peak Hour 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
Heavy Vehicles (%)	3%	1%	10%	5%	1%	3%	2%	2%	9%	2%	2%	1%
Adj. Flow (vph)	54	22	8	32	10	161	74	2078	74	280	1508	104
Shared Lane Traffic (%)												
Lane Group Flow (vph)	54	30	0	32	10	161	74	2152	0	280	1508	104
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		5.0			5.0			18.0			18.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2	1	1	2		1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (m)	18.6	93.0		18.6	93.0	18.6	18.6	93.0		18.6	93.0	18.6
Trailing Detector (m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Size(m)	18.6	5.5		18.6	5.5	18.6	18.6	5.5		18.6	5.5	18.6
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(m)		87.5			87.5			87.5			87.5	
Detector 2 Size(m)		5.5			5.5			5.5			5.5	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						6
Detector Phase	4	4		8	8	8	5	2		1	6	6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0	10.0	5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	40.7	40.7		40.7	40.7	40.7	12.0	31.1		12.0	31.1	31.1
Total Split (s)	41.0	41.0		41.0	41.0	41.0	17.0	92.0		17.0	92.0	92.0
Total Split (%)	27.3%	27.3%		27.3%	27.3%	27.3%	11.3%	61.3%		11.3%	61.3%	61.3%
Maximum Green (s)	34.3	34.3		34.3	34.3	34.3	10.0	85.9		10.0	85.9	85.9
Yellow Time (s)	3.7	3.7		3.7	3.7	3.7	3.7	3.7		3.7	3.7	3.7
All-Red Time (s)	3.0	3.0		3.0	3.0	3.0	3.3	2.4		3.3	2.4	2.4
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.7	6.7		6.7	6.7	6.7	7.0	6.1		7.0	6.1	6.1
Lead/Lag							Lead	Lag		Lead	Lag	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
Recall Mode	None	None		None	None	None	None	C-Max		None	C-Max	C-Max
Walk Time (s)	7.0	7.0		7.0	7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)	27.0	27.0		27.0	27.0	27.0		18.0			18.0	18.0
Pedestrian Calls (#/hr)	6	6		3	3	3		4			20	20
Act Effct Green (s)	15.9	15.9		15.9	15.9	15.9	11.0	92.4		22.0	103.3	103.3
Actuated g/C Ratio	0.11	0.11		0.11	0.11	0.11	0.07	0.62		0.15	0.69	0.69
v/c Ratio	0.40	0.17		0.24	0.05	0.62	0.61	1.06		0.60	0.66	0.10
Control Delay	68.1	46.3		62.1	55.0	28.1	87.4	67.9		76.1	16.2	2.5
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	68.1	46.3		62.1	55.0	28.1	87.4	67.9		76.1	16.2	2.5
LOS	E	D		E	D	C	F	E		E	B	A
Approach Delay		60.3			34.8			68.6			24.3	
Approach LOS		E			C			E			C	
Queue Length 50th (m)	14.5	5.8		8.5	2.6	10.9	19.8	~328.4		33.1	216.4	1.4
Queue Length 95th (m)	23.7	13.1		15.9	7.0	28.3	#41.0	#399.3		m#38.3	m188.5	m5.1
Internal Link Dist (m)		223.8			309.9			530.1			610.3	
Turn Bay Length (m)				100.0			80.0			200.0		180.0
Base Capacity (vph)	295	382		284	402	421	127	2024		470	2283	1030
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	0
Reduced v/c Ratio	0.18	0.08		0.11	0.02	0.38	0.58	1.06		0.60	0.66	0.10

Intersection Summary

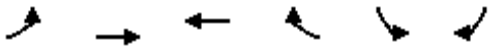
Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 68 (45%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 145
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.06
Intersection Signal Delay: 47.8 Intersection LOS: D
Intersection Capacity Utilization 101.3% ICU Level of Service G
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: March & Station/Carling

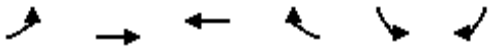
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	555	495	39	146	39	35
Future Volume (vph)	555	495	39	146	39	35
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.936				0.936	
Flt Protected				0.990	0.974	
Satd. Flow (prot)	1650	0	0	1640	1568	0
Flt Permitted				0.990	0.974	
Satd. Flow (perm)	1650	0	0	1640	1568	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	336.6			459.4	751.0	
Travel Time (s)	24.2			33.1	54.1	
Confl. Peds. (#/hr)		17	17			2
Confl. Bikes (#/hr)		1				
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	9%	7%	3%	4%
Adj. Flow (vph)	555	495	39	146	39	35
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1050	0	0	185	74	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.0			3.0	3.5	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	5.0			5.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 75.4%		ICU Level of Service D	
Analysis Period (min) 15			



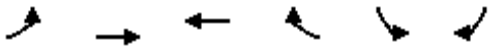
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	14	204	26	0	0	2
Future Volume (vph)	14	204	26	0	0	2
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.865
Flt Protected		0.997				
Satd. Flow (prot)	0	1740	1745	0	0	1510
Flt Permitted		0.997				
Satd. Flow (perm)	0	1740	1745	0	0	1510
Link Speed (k/h)		50	50		50	
Link Distance (m)		306.0	84.0		67.2	
Travel Time (s)		22.0	6.0		4.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	14	204	26	0	0	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	218	26	0	0	2
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		5.0	5.0		5.0	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 22.2%		ICU Level of Service A	
Analysis Period (min) 15			



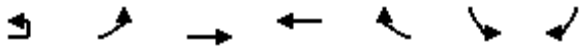
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	21	122	20	0	0	3
Future Volume (vph)	21	122	20	0	0	3
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.865
Flt Protected		0.993				
Satd. Flow (prot)	0	1733	1745	0	0	1510
Flt Permitted		0.993				
Satd. Flow (perm)	0	1733	1745	0	0	1510
Link Speed (k/h)		50	50		50	
Link Distance (m)		84.0	42.7		67.9	
Travel Time (s)		6.0	3.1		4.9	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	21	122	20	0	0	3
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	143	20	0	0	3
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		5.0	5.0		5.0	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 18.0%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	122	13	0	0	7
Future Volume (vph)	0	122	13	0	0	7
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	4.8	3.5	3.5	3.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.865
Flt Protected						
Satd. Flow (prot)	0	1745	2000	0	0	1510
Flt Permitted						
Satd. Flow (perm)	0	1745	2000	0	0	1510
Link Speed (k/h)		50	50		50	
Link Distance (m)		42.7	29.9		67.1	
Travel Time (s)		3.1	2.2		4.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	122	13	0	0	7
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	122	13	0	0	7
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		5.0	5.0		5.0	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	0.91	1.09	1.09	1.09
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	

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



Lane Group	EBU	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations							
Traffic Volume (vph)	3	107	0	0	0	0	10
Future Volume (vph)	3	107	0	0	0	0	10
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	4.8	3.5	3.5	3.5	3.5	3.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt							0.865
Flt Protected		0.950					
Satd. Flow (prot)	0	1900	0	0	0	0	1510
Flt Permitted		0.950					
Satd. Flow (perm)	0	1900	0	0	0	0	1510
Link Speed (k/h)			50	50		50	
Link Distance (m)			29.9	42.6		66.7	
Travel Time (s)			2.2	3.1		4.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	3	107	0	0	0	0	10
Shared Lane Traffic (%)							
Lane Group Flow (vph)	0	110	0	0	0	0	10
Enter Blocked Intersection	No	No	No	No	No	No	No
Lane Alignment	R NA	Left	Left	Left	Right	Left	Right
Median Width(m)			4.8	4.8		0.0	
Link Offset(m)			0.0	0.0		0.0	
Crosswalk Width(m)			5.0	5.0		5.0	
Two way Left Turn Lane							
Headway Factor	1.09	0.91	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	14	24			14	24	14
Sign Control			Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 16.4%		ICU Level of Service A	
Analysis Period (min) 15			

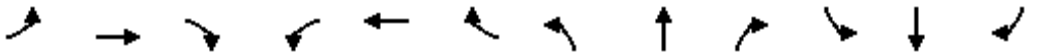
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	101	118	59	111	35	535	981	661	135	1640	100
Future Volume (vph)	27	101	118	59	111	35	535	981	661	135	1640	100
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	35.0		60.0	85.0		55.0	165.0		0.0	155.0		75.0
Storage Lanes	1		1	1		1	2		0	1		0
Taper Length (m)	50.0			95.0			40.0			25.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	0.99		0.98	0.99		0.98	1.00	0.99			1.00	
Frt			0.850			0.850		0.940			0.991	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1610	1745	1441	1658	1728	1469	3248	3072	0	1658	3251	0
Flt Permitted	0.597			0.636			0.950			0.950		
Satd. Flow (perm)	1003	1745	1405	1098	1728	1435	3242	3072	0	1658	3251	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			122			122		178			6	
Link Speed (k/h)		50			50			60			60	
Link Distance (m)		126.3			245.5			634.3			855.0	
Travel Time (s)		9.1			17.7			38.1			51.3	
Confl. Peds. (#/hr)	7		8	8		7	6					6
Confl. Bikes (#/hr)			1			1			12			1
Peak Hour 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
Heavy Vehicles (%)	5%	2%	5%	2%	3%	3%	1%	4%	1%	2%	3%	2%
Adj. Flow (vph)	27	101	118	59	111	35	535	981	661	135	1640	100
Shared Lane Traffic (%)												
Lane Group Flow (vph)	27	101	118	59	111	35	535	1642	0	135	1740	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		5.0			10.5			18.0			18.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	18.6	93.0	18.6	18.6	93.0	18.6	18.6	93.0		18.6	93.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	18.6	5.5	18.6	18.6	5.5	18.6	18.6	5.5		18.6	5.5	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		87.5			87.5			87.5			87.5	
Detector 2 Size(m)		5.5			5.5			5.5			5.5	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phase	4	4	4	8	8	8	5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	5.0	10.0		5.0	10.0	
Minimum Split (s)	36.5	36.5	36.5	36.5	36.5	36.5	12.0	26.8		12.0	26.8	
Total Split (s)	37.0	37.0	37.0	37.0	37.0	37.0	31.0	90.0		23.0	82.0	
Total Split (%)	24.7%	24.7%	24.7%	24.7%	24.7%	24.7%	20.7%	60.0%		15.3%	54.7%	
Maximum Green (s)	30.5	30.5	30.5	30.5	30.5	30.5	24.0	84.2		16.0	76.2	
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3	3.7	3.7		3.7	3.7	
All-Red Time (s)	3.2	3.2	3.2	3.2	3.2	3.2	3.3	2.1		3.3	2.1	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.5	6.5	6.5	6.5	6.5	6.5	7.0	5.8		7.0	5.8	
Lead/Lag							Lead	Lag		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	
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0		7.0			7.0	
Flash Dont Walk (s)	23.0	23.0	23.0	23.0	23.0	23.0		14.0			14.0	
Pedestrian Calls (#/hr)	8	8	8	7	7	7		6			0	
Act Effct Green (s)	17.2	17.2	17.2	17.2	17.2	17.2	31.3	97.0		16.5	82.3	
Actuated g/C Ratio	0.11	0.11	0.11	0.11	0.11	0.11	0.21	0.65		0.11	0.55	
v/c Ratio	0.24	0.51	0.44	0.47	0.56	0.13	0.79	0.80		0.74	0.97	
Control Delay	61.9	69.5	13.0	72.1	72.2	1.0	39.0	30.0		87.6	49.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	61.9	69.5	13.0	72.1	72.2	1.0	39.0	30.0		87.6	49.0	
LOS	E	E	B	E	E	A	D	C		F	D	
Approach Delay		41.6			60.0			32.2			51.8	
Approach LOS		D			E			C			D	
Queue Length 50th (m)	7.0	26.9	0.0	15.7	29.8	0.0	65.6	153.8		36.0	234.2	
Queue Length 95th (m)	14.7	40.1	14.6	26.8	43.4	0.0	m76.8	m163.3		#65.2	#311.5	
Internal Link Dist (m)		102.3			221.5			610.3			831.0	
Turn Bay Length (m)	35.0		60.0	85.0		55.0	165.0			155.0		
Base Capacity (vph)	203	354	382	223	351	388	677	2049		193	1785	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.13	0.29	0.31	0.26	0.32	0.09	0.79	0.80		0.70	0.97	

Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 55 (37%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.97
Intersection Signal Delay: 42.1 Intersection LOS: D
Intersection Capacity Utilization 96.7% ICU Level of Service F
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: March & Solandt

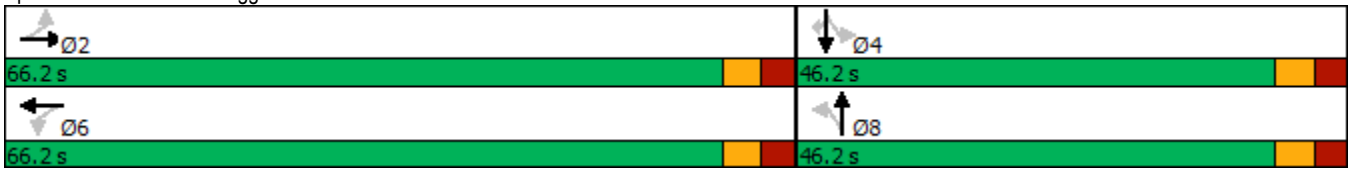


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	394	245	219	3	27	8	91	165	52	50	169	49
Future Volume (vph)	394	245	219	3	27	8	91	165	52	50	169	49
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	0.0		0.0	40.0		0.0	50.0		0.0	30.0		105.0
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (m)	70.0			30.0			60.0			30.0		
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
Ped Bike Factor	0.99	0.99		1.00	0.99			0.99		0.98		
Frt		0.929			0.966			0.964				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1674	1612	0	1674	1552	0	1566	1664	0	1610	1745	1498
Flt Permitted	0.734			0.444			0.650			0.608		
Satd. Flow (perm)	1279	1612	0	782	1552	0	1071	1664	0	1008	1745	1498
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		61			8			16				49
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		245.5			306.0			489.3			751.0	
Travel Time (s)		17.7			22.0			35.2			54.1	
Confl. Peds. (#/hr)	4		1	1		4			11	11		
Confl. Bikes (#/hr)									3			
Peak Hour 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
Heavy Vehicles (%)	1%	1%	2%	1%	10%	10%	8%	2%	1%	5%	2%	1%
Adj. Flow (vph)	394	245	219	3	27	8	91	165	52	50	169	49
Shared Lane Traffic (%)												
Lane Group Flow (vph)	394	464	0	3	35	0	91	217	0	50	169	49
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.0			3.5			3.5			3.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (m)	18.6	93.0		18.6	93.0		18.6	93.0		18.6	93.0	18.6
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Size(m)	18.6	5.5		18.6	5.5		18.6	5.5		18.6	5.5	18.6
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(m)		87.5			87.5			87.5			87.5	
Detector 2 Size(m)		5.5			5.5			5.5			5.5	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		4
Detector Phase	2	2		6	6		8	8		4	4	4

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	15.0	15.0		15.0	15.0		10.0	10.0		10.0	10.0	10.0
Minimum Split (s)	25.2	25.2		25.2	25.2		25.2	25.2		25.2	25.2	25.2
Total Split (s)	66.2	66.2		66.2	66.2		46.2	46.2		46.2	46.2	46.2
Total Split (%)	58.9%	58.9%		58.9%	58.9%		41.1%	41.1%		41.1%	41.1%	41.1%
Maximum Green (s)	60.0	60.0		60.0	60.0		40.0	40.0		40.0	40.0	40.0
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	3.3
All-Red Time (s)	2.9	2.9		2.9	2.9		2.9	2.9		2.9	2.9	2.9
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.2	6.2		6.2	6.2		6.2	6.2		6.2	6.2	6.2
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
Recall Mode	Min	Min		Min	Min		None	None		None	None	None
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	12.0
Pedestrian Calls (#/hr)	1	1		4	4		11	11		0	0	0
Act Effct Green (s)	35.5	35.5		35.5	35.5		16.3	16.3		16.3	16.3	16.3
Actuated g/C Ratio	0.54	0.54		0.54	0.54		0.25	0.25		0.25	0.25	0.25
v/c Ratio	0.57	0.52		0.01	0.04		0.34	0.51		0.20	0.39	0.12
Control Delay	13.6	10.2		7.3	6.1		28.7	27.6		26.4	27.2	9.0
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	13.6	10.2		7.3	6.1		28.7	27.6		26.4	27.2	9.0
LOS	B	B		A	A		C	C		C	C	A
Approach Delay		11.8			6.2			28.0			23.7	
Approach LOS		B			A			C			C	
Queue Length 50th (m)	23.5	22.4		0.1	1.1		7.9	18.2		4.2	14.9	0.0
Queue Length 95th (m)	58.7	55.8		1.2	5.2		25.6	49.8		15.6	40.9	7.7
Internal Link Dist (m)		221.5			282.0			465.3			727.0	
Turn Bay Length (m)				40.0			50.0			30.0		105.0
Base Capacity (vph)	1108	1405		677	1345		723	1129		680	1179	1027
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.36	0.33		0.00	0.03		0.13	0.19		0.07	0.14	0.05

Intersection Summary			
Area Type:	Other		
Cycle Length: 112.4			
Actuated Cycle Length: 65.6			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.57			
Intersection Signal Delay: 17.2		Intersection LOS: B	
Intersection Capacity Utilization 67.3%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 2: Legget & Solandt



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	22	8	32	10	161	74	2078	74	280	1508	104
Future Volume (vph)	54	22	8	32	10	161	74	2078	74	280	1508	104
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	0.0		35.0	100.0		0.0	80.0		0.0	200.0		180.0
Storage Lanes	1		1	1		1	1		0	2		1
Taper Length (m)	20.0			20.0			40.0			60.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.97	0.95	1.00
Ped Bike Factor	1.00	0.99		0.99		0.98	1.00	1.00		1.00		0.97
Frt		0.960				0.850		0.995				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1642	1644	0	1610	1762	1469	1658	3285	0	3216	3316	1498
Flt Permitted	0.751			0.738			0.950			0.950		
Satd. Flow (perm)	1293	1644	0	1242	1762	1440	1655	3285	0	3207	3316	1449
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		8				120		4				104
Link Speed (k/h)		50			60			60			60	
Link Distance (m)		247.8			333.9			554.1			634.3	
Travel Time (s)		17.8			20.0			33.2			38.1	
Confl. Peds. (#/hr)	3		6	6		3	4		20	20		4
Confl. Bikes (#/hr)						4			18			2
Peak Hour 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
Heavy Vehicles (%)	3%	1%	10%	5%	1%	3%	2%	2%	9%	2%	2%	1%
Adj. Flow (vph)	54	22	8	32	10	161	74	2078	74	280	1508	104
Shared Lane Traffic (%)												
Lane Group Flow (vph)	54	30	0	32	10	161	74	2152	0	280	1508	104
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		5.0			5.0			18.0			18.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2	1	1	2		1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (m)	18.6	93.0		18.6	93.0	18.6	18.6	93.0		18.6	93.0	18.6
Trailing Detector (m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Size(m)	18.6	5.5		18.6	5.5	18.6	18.6	5.5		18.6	5.5	18.6
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(m)		87.5			87.5			87.5			87.5	
Detector 2 Size(m)		5.5			5.5			5.5			5.5	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						6
Detector Phase	4	4		8	8	8	5	2		1	6	6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0	10.0	5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	40.7	40.7		40.7	40.7	40.7	12.0	31.1		12.0	31.1	31.1
Total Split (s)	41.0	41.0		41.0	41.0	41.0	17.0	92.0		17.0	92.0	92.0
Total Split (%)	27.3%	27.3%		27.3%	27.3%	27.3%	11.3%	61.3%		11.3%	61.3%	61.3%
Maximum Green (s)	34.3	34.3		34.3	34.3	34.3	10.0	85.9		10.0	85.9	85.9
Yellow Time (s)	3.7	3.7		3.7	3.7	3.7	3.7	3.7		3.7	3.7	3.7
All-Red Time (s)	3.0	3.0		3.0	3.0	3.0	3.3	2.4		3.3	2.4	2.4
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.7	6.7		6.7	6.7	6.7	7.0	6.1		7.0	6.1	6.1
Lead/Lag							Lead	Lag		Lead	Lag	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
Recall Mode	None	None		None	None	None	None	C-Max		None	C-Max	C-Max
Walk Time (s)	7.0	7.0		7.0	7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)	27.0	27.0		27.0	27.0	27.0		18.0			18.0	18.0
Pedestrian Calls (#/hr)	6	6		3	3	3		4			20	20
Act Effct Green (s)	15.9	15.9		15.9	15.9	15.9	11.0	92.4		22.0	103.3	103.3
Actuated g/C Ratio	0.11	0.11		0.11	0.11	0.11	0.07	0.62		0.15	0.69	0.69
v/c Ratio	0.40	0.17		0.24	0.05	0.62	0.61	1.06		0.60	0.66	0.10
Control Delay	68.1	46.3		62.1	55.0	28.1	87.4	67.9		62.6	9.8	2.3
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	68.1	46.3		62.1	55.0	28.1	87.4	67.9		62.6	9.8	2.3
LOS	E	D		E	D	C	F	E		E	A	A
Approach Delay		60.3			34.8			68.6			17.2	
Approach LOS		E			C			E			B	
Queue Length 50th (m)	14.5	5.8		8.5	2.6	10.9	19.8	~328.4		41.5	47.7	0.6
Queue Length 95th (m)	23.7	13.1		15.9	7.0	28.3	#41.0	#399.3		m#56.7	m64.7	m2.0
Internal Link Dist (m)		223.8			309.9			530.1			610.3	
Turn Bay Length (m)				100.0			80.0			200.0		180.0
Base Capacity (vph)	295	382		284	402	421	127	2024		470	2283	1030
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	0
Reduced v/c Ratio	0.18	0.08		0.11	0.02	0.38	0.58	1.06		0.60	0.66	0.10

Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 68 (45%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 145
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.06
Intersection Signal Delay: 44.8 Intersection LOS: D
Intersection Capacity Utilization 101.3% ICU Level of Service G
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: March & Station/Carling

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	555	495	39	146	39	35
Future Volume (vph)	555	495	39	146	39	35
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Storage Length (m)		125.0	15.0		0.0	40.0
Storage Lanes		1	1		1	1
Taper Length (m)			20.0		20.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1762	1498	1551	1664	1642	1455
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	1762	1498	1551	1664	1642	1455
Link Speed (k/h)	50			50	50	
Link Distance (m)	336.6			459.4	751.0	
Travel Time (s)	24.2			33.1	54.1	
Confl. Peds. (#/hr)		17	17			2
Confl. Bikes (#/hr)		1				
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	9%	7%	3%	4%
Adj. Flow (vph)	555	495	39	146	39	35
Shared Lane Traffic (%)						
Lane Group Flow (vph)	555	495	39	146	39	35
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.0			3.0	3.5	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	5.0			5.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	

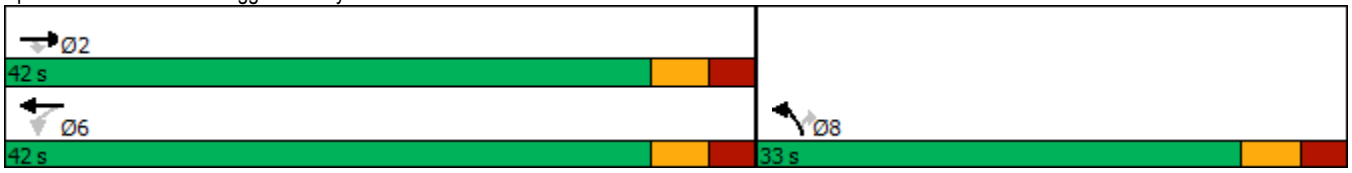
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 44.9%		ICU Level of Service A	
Analysis Period (min) 15			

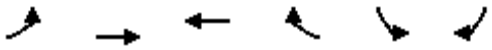
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	555	495	39	146	39	35
Future Volume (vph)	555	495	39	146	39	35
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Storage Length (m)		125.0	15.0		0.0	40.0
Storage Lanes		1	1		1	1
Taper Length (m)			20.0		20.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.95	0.99			0.98
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1762	1498	1551	1664	1642	1455
Flt Permitted			0.422		0.950	
Satd. Flow (perm)	1762	1429	683	1664	1642	1422
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		495				35
Link Speed (k/h)	50			50	50	
Link Distance (m)	336.6			459.4	751.0	
Travel Time (s)	24.2			33.1	54.1	
Confl. Peds. (#/hr)		17	17			2
Confl. Bikes (#/hr)		1				
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	9%	7%	3%	4%
Adj. Flow (vph)	555	495	39	146	39	35
Shared Lane Traffic (%)						
Lane Group Flow (vph)	555	495	39	146	39	35
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.0			3.0	3.5	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	5.0			5.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)		14	24		24	14
Number of Detectors	2	1	1	2	1	1
Detector Template	Thru	Right	Left	Thru	Left	Right
Leading Detector (m)	93.0	18.6	18.6	93.0	18.6	18.6
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	5.5	18.6	18.6	5.5	18.6	18.6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)	87.5			87.5		
Detector 2 Size(m)	5.5			5.5		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA	Perm	Perm	NA	Prot	Perm
Protected Phases	2			6	8	
Permitted Phases		2	6			8
Detector Phase	2	2	6	6	8	8

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	31.0	31.0	31.0	31.0	33.0	33.0
Total Split (s)	42.0	42.0	42.0	42.0	33.0	33.0
Total Split (%)	56.0%	56.0%	56.0%	56.0%	44.0%	44.0%
Maximum Green (s)	36.0	36.0	36.0	36.0	27.0	27.0
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	2.7	2.7	2.7	2.7	2.7	2.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	18.0	18.0	18.0	18.0	20.0	20.0
Pedestrian Calls (#/hr)	1	1	1	1	1	1
Act Effct Green (s)	36.1	36.1	36.1	36.1	14.6	14.6
Actuated g/C Ratio	0.74	0.74	0.74	0.74	0.30	0.30
v/c Ratio	0.42	0.42	0.08	0.12	0.08	0.08
Control Delay	9.0	2.3	7.9	7.0	18.4	7.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.0	2.3	7.9	7.0	18.4	7.4
LOS	A	A	A	A	B	A
Approach Delay	5.8			7.2	13.2	
Approach LOS	A			A	B	
Queue Length 50th (m)	25.3	0.0	1.3	5.0	3.3	0.0
Queue Length 95th (m)	82.2	13.1	7.5	19.4	8.6	4.9
Internal Link Dist (m)	312.6			435.4	727.0	
Turn Bay Length (m)		125.0	15.0			40.0
Base Capacity (vph)	1311	1190	508	1238	1039	912
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.42	0.42	0.08	0.12	0.04	0.04

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 48.5			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.42			
Intersection Signal Delay: 6.4		Intersection LOS: A	
Intersection Capacity Utilization 53.5%		ICU Level of Service A	
Analysis Period (min) 15			

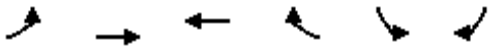
Splits and Phases: 4: Legget & Terry Fox





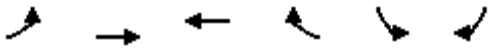
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	14	204	26	0	0	2
Future Volume (vph)	14	204	26	0	0	2
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.865
Flt Protected		0.997				
Satd. Flow (prot)	0	1740	1745	0	0	1510
Flt Permitted		0.997				
Satd. Flow (perm)	0	1740	1745	0	0	1510
Link Speed (k/h)		50	50		50	
Link Distance (m)		306.0	84.0		67.2	
Travel Time (s)		22.0	6.0		4.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	14	204	26	0	0	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	218	26	0	0	2
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		5.0	5.0		5.0	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 22.2%		ICU Level of Service A	
Analysis Period (min) 15			



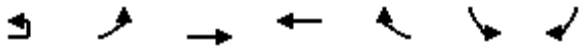
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	21	122	20	0	0	3
Future Volume (vph)	21	122	20	0	0	3
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.865
Flt Protected		0.993				
Satd. Flow (prot)	0	1733	1745	0	0	1510
Flt Permitted		0.993				
Satd. Flow (perm)	0	1733	1745	0	0	1510
Link Speed (k/h)		50	50		50	
Link Distance (m)		84.0	42.7		67.9	
Travel Time (s)		6.0	3.1		4.9	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	21	122	20	0	0	3
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	143	20	0	0	3
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		5.0	5.0		5.0	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 18.0%		ICU Level of Service A	
Analysis Period (min) 15			



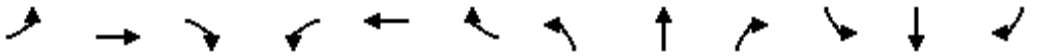
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑			↱
Traffic Volume (vph)	0	122	13	0	0	7
Future Volume (vph)	0	122	13	0	0	7
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	4.8	3.5	3.5	3.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.865
Flt Protected						
Satd. Flow (prot)	0	1745	2000	0	0	1510
Flt Permitted						
Satd. Flow (perm)	0	1745	2000	0	0	1510
Link Speed (k/h)		50	50		50	
Link Distance (m)		42.7	29.9		67.1	
Travel Time (s)		3.1	2.2		4.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	122	13	0	0	7
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	122	13	0	0	7
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		5.0	5.0		5.0	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	0.91	1.09	1.09	1.09
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	

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



Lane Group	EBU	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations							
Traffic Volume (vph)	3	107	0	0	0	0	10
Future Volume (vph)	3	107	0	0	0	0	10
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	4.8	3.5	3.5	3.5	3.5	3.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt							0.865
Flt Protected		0.950					
Satd. Flow (prot)	0	1900	0	0	0	0	1510
Flt Permitted		0.950					
Satd. Flow (perm)	0	1900	0	0	0	0	1510
Link Speed (k/h)			50	50		50	
Link Distance (m)			29.9	42.6		66.7	
Travel Time (s)			2.2	3.1		4.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	3	107	0	0	0	0	10
Shared Lane Traffic (%)							
Lane Group Flow (vph)	0	110	0	0	0	0	10
Enter Blocked Intersection	No	No	No	No	No	No	No
Lane Alignment	R NA	Left	Left	Left	Right	Left	Right
Median Width(m)			4.8	4.8		0.0	
Link Offset(m)			0.0	0.0		0.0	
Crosswalk Width(m)			5.0	5.0		5.0	
Two way Left Turn Lane							
Headway Factor	1.09	0.91	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	14	24			14	24	14
Sign Control			Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 16.4%		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)	78	39	581	617	69	203	101	1823	69	28	999	59
Future Volume (vph)	78	39	581	617	69	203	101	1823	69	28	999	59
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	35.0		60.0	85.0		55.0	165.0		0.0	155.0		75.0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (m)	50.0			95.0			40.0			25.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	0.99		0.98	0.99		0.98	1.00	1.00			1.00	
Frt			0.850			0.850		0.995			0.992	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1610	1745	1441	1658	1728	1469	1674	3237	0	1658	3254	0
Flt Permitted	0.712			0.601			0.950			0.950		
Satd. Flow (perm)	1195	1745	1405	1038	1728	1435	1669	3237	0	1658	3254	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			170			122		4			5	
Link Speed (k/h)		50			50			60			60	
Link Distance (m)		126.3			245.5			634.3			855.0	
Travel Time (s)		9.1			17.7			38.1			51.3	
Confl. Peds. (#/hr)	7		8	8		7	6					6
Confl. Bikes (#/hr)			1			1			12			1
Peak Hour 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
Heavy Vehicles (%)	5%	2%	5%	2%	3%	3%	1%	4%	1%	2%	3%	2%
Adj. Flow (vph)	78	39	581	617	69	203	101	1823	69	28	999	59
Shared Lane Traffic (%)												
Lane Group Flow (vph)	78	39	581	617	69	203	101	1892	0	28	1058	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		5.0			5.0			18.0			18.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	18.6	93.0	18.6	18.6	93.0	18.6	18.6	93.0		18.6	93.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	18.6	5.5	18.6	18.6	5.5	18.6	18.6	5.5		18.6	5.5	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		87.5			87.5			87.5			87.5	
Detector 2 Size(m)		5.5			5.5			5.5			5.5	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phase	4	4	4	3	8	8	5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0		5.0	10.0	
Minimum Split (s)	36.5	36.5	36.5	11.6	36.5	36.5	12.0	26.8		12.0	26.8	
Total Split (s)	37.0	37.0	37.0	20.0	57.0	57.0	21.0	81.0		12.0	72.0	
Total Split (%)	24.7%	24.7%	24.7%	13.3%	38.0%	38.0%	14.0%	54.0%		8.0%	48.0%	
Maximum Green (s)	30.5	30.5	30.5	13.4	50.5	50.5	14.0	75.2		5.0	66.2	
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3	3.7	3.7		3.7	3.7	
All-Red Time (s)	3.2	3.2	3.2	3.3	3.2	3.2	3.3	2.1		3.3	2.1	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.5	6.5	6.5	6.6	6.5	6.5	7.0	5.8		7.0	5.8	
Lead/Lag	Lag	Lag	Lag	Lead			Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes								
Vehicle Extension (s)	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	None	C-Max		None	C-Max	
Walk Time (s)	7.0	7.0	7.0		7.0	7.0		7.0			7.0	
Flash Dont Walk (s)	23.0	23.0	23.0		23.0	23.0		14.0			14.0	
Pedestrian Calls (#/hr)	8	8	8		5	5		1			11	
Act Effct Green (s)	30.5	30.5	30.5	50.4	50.5	50.5	12.6	80.0		5.0	67.6	
Actuated g/C Ratio	0.20	0.20	0.20	0.34	0.34	0.34	0.08	0.53		0.03	0.45	
v/c Ratio	0.32	0.11	1.38	1.53	0.12	0.36	0.72	1.09		0.51	0.72	
Control Delay	55.3	49.8	216.0	283.3	35.2	16.6	88.8	73.5		101.2	37.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	55.3	49.8	216.0	283.3	35.2	16.6	88.8	73.5		101.2	37.1	
LOS	E	D	F	F	D	B	F	E		F	D	
Approach Delay		188.8			203.2			74.3			38.8	
Approach LOS		F			F			E			D	
Queue Length 50th (m)	18.4	8.8	~172.1	~235.7	13.1	15.6	25.4	~326.0		7.7	124.1	
Queue Length 95th (m)	33.3	18.5	#239.5	#302.7	23.9	35.5	m31.0	#365.9		#20.7	148.3	
Internal Link Dist (m)		102.3			221.5			610.3			831.0	
Turn Bay Length (m)	35.0		60.0	85.0		55.0	165.0			155.0		
Base Capacity (vph)	242	354	421	404	581	564	156	1728		55	1468	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.32	0.11	1.38	1.53	0.12	0.36	0.65	1.09		0.51	0.72	

Intersection Summary

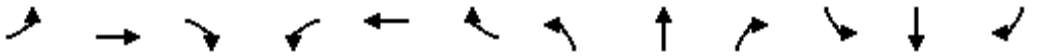
Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 25 (17%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.53
Intersection Signal Delay: 107.7 Intersection LOS: F
Intersection Capacity Utilization 121.7% ICU Level of Service H
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: March & Solandt



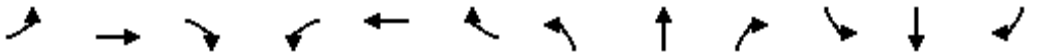
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	51	31	49	47	245	29	261	95	3	6	222	402
Future Volume (vph)	51	31	49	47	245	29	261	95	3	6	222	402
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	0.0		0.0	40.0		0.0	50.0		0.0	30.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	70.0			30.0			60.0			30.0		
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
Ped Bike Factor	0.99	0.99		1.00	1.00			1.00		0.97		
Frt		0.908			0.984			0.995			0.903	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1674	1568	0	1674	1587	0	1566	1734	0	1610	1586	0
Flt Permitted	0.395			0.705			0.147			0.694		
Satd. Flow (perm)	692	1568	0	1239	1587	0	242	1734	0	1141	1586	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		49			5			2			83	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		245.5			306.0			489.3			751.0	
Travel Time (s)		17.7			22.0			35.2			54.1	
Confl. Peds. (#/hr)	4		1	1		4			11	11		
Confl. Bikes (#/hr)									3			
Peak Hour 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
Heavy Vehicles (%)	1%	1%	2%	1%	10%	10%	8%	2%	1%	5%	2%	1%
Adj. Flow (vph)	51	31	49	47	245	29	261	95	3	6	222	402
Shared Lane Traffic (%)												
Lane Group Flow (vph)	51	80	0	47	274	0	261	98	0	6	624	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.0			3.5			3.5			3.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	18.6	93.0		18.6	93.0		18.6	93.0		18.6	93.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	18.6	5.5		18.6	5.5		18.6	5.5		18.6	5.5	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		87.5			87.5			87.5			87.5	
Detector 2 Size(m)		5.5			5.5			5.5			5.5	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		2			6		3	8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		3	8		4	4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	25.2	25.2		25.2	25.2		16.2	25.2		25.2	25.2	
Total Split (s)	41.2	41.2		41.2	41.2		31.2	77.4		46.2	46.2	
Total Split (%)	34.7%	34.7%		34.7%	34.7%		26.3%	65.3%		39.0%	39.0%	
Maximum Green (s)	35.0	35.0		35.0	35.0		25.0	71.2		40.0	40.0	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.9	2.9		2.9	2.9		2.9	2.9		2.9	2.9	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.2	6.2		6.2	6.2		6.2	6.2		6.2	6.2	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Ped		Ped	Ped	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0		7.0	7.0	
Flash Dont Walk (s)	12.0	12.0		12.0	12.0			12.0		12.0	12.0	
Pedestrian Calls (#/hr)	6	6		3	3			13		2	2	
Act Effct Green (s)	22.7	22.7		22.7	22.7		64.0	64.0		40.7	40.7	
Actuated g/C Ratio	0.23	0.23		0.23	0.23		0.64	0.64		0.41	0.41	
v/c Ratio	0.32	0.20		0.17	0.75		0.69	0.09		0.01	0.89	
Control Delay	38.3	16.0		32.4	48.4		24.2	8.2		23.8	43.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	38.3	16.0		32.4	48.4		24.2	8.2		23.8	43.2	
LOS	D	B		C	D		C	A		C	D	
Approach Delay		24.7			46.1			19.8			43.1	
Approach LOS		C			D			B			D	
Queue Length 50th (m)	7.5	4.3		6.6	44.0		19.8	5.8		0.6	89.2	
Queue Length 95th (m)	18.5	15.4		16.1	74.9		53.0	14.9		3.6	#198.2	
Internal Link Dist (m)		221.5			282.0			465.3			727.0	
Turn Bay Length (m)				40.0			50.0			30.0		
Base Capacity (vph)	248	593		444	572		495	1266		467	699	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.21	0.13		0.11	0.48		0.53	0.08		0.01	0.89	

Intersection Summary

Area Type: Other
Cycle Length: 118.6
Actuated Cycle Length: 99.3
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.89
Intersection Signal Delay: 36.3 Intersection LOS: D
Intersection Capacity Utilization 98.2% ICU Level of Service F
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 2: Legget & Solandt



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	22	11	25	104	16	276	22	1675	30	259	1921	42
Future Volume (vph)	22	11	25	104	16	276	22	1675	30	259	1921	42
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	0.0		35.0	100.0		0.0	80.0		0.0	200.0		180.0
Storage Lanes	1		1	1		1	1		0	2		1
Taper Length (m)	20.0			20.0			40.0			60.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.97	0.95	1.00
Ped Bike Factor	1.00	0.99		0.99		0.98	1.00	1.00		0.99		0.97
Frt		0.896				0.850		0.997				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1642	1467	0	1610	1762	1469	1658	3299	0	3216	3316	1498
Flt Permitted	0.747			0.734			0.950			0.950		
Satd. Flow (perm)	1286	1467	0	1235	1762	1440	1656	3299	0	3198	3316	1449
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		25				77		2				78
Link Speed (k/h)		50			60			60			60	
Link Distance (m)		247.8			333.9			554.1			634.3	
Travel Time (s)		17.8			20.0			33.2			38.1	
Confl. Peds. (#/hr)	3		6	6		3	4		20	20		4
Confl. Bikes (#/hr)						4			18			2
Peak Hour 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
Heavy Vehicles (%)	3%	1%	10%	5%	1%	3%	2%	2%	9%	2%	2%	1%
Adj. Flow (vph)	22	11	25	104	16	276	22	1675	30	259	1921	42
Shared Lane Traffic (%)												
Lane Group Flow (vph)	22	36	0	104	16	276	22	1705	0	259	1921	42
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		5.0			5.0			18.0			18.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2	1	1	2		1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (m)	18.6	93.0		18.6	93.0	18.6	18.6	93.0		18.6	93.0	18.6
Trailing Detector (m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Size(m)	18.6	5.5		18.6	5.5	18.6	18.6	5.5		18.6	5.5	18.6
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(m)		87.5			87.5			87.5			87.5	
Detector 2 Size(m)		5.5			5.5			5.5			5.5	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						6
Detector Phase	4	4		8	8	8	5	2		1	6	6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0	10.0	5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	40.7	40.7		40.7	40.7	40.7	12.0	31.1		12.0	31.1	31.1
Total Split (s)	41.0	41.0		41.0	41.0	41.0	12.0	92.0		17.0	97.0	97.0
Total Split (%)	27.3%	27.3%		27.3%	27.3%	27.3%	8.0%	61.3%		11.3%	64.7%	64.7%
Maximum Green (s)	34.3	34.3		34.3	34.3	34.3	5.0	85.9		10.0	90.9	90.9
Yellow Time (s)	3.7	3.7		3.7	3.7	3.7	3.7	3.7		3.7	3.7	3.7
All-Red Time (s)	3.0	3.0		3.0	3.0	3.0	3.3	2.4		3.3	2.4	2.4
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.7	6.7		6.7	6.7	6.7	7.0	6.1		7.0	6.1	6.1
Lead/Lag							Lead	Lag		Lead	Lag	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
Recall Mode	None	None		None	None	None	None	C-Max		None	C-Max	C-Max
Walk Time (s)	7.0	7.0		7.0	7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)	27.0	27.0		27.0	27.0	27.0		18.0			18.0	18.0
Pedestrian Calls (#/hr)	6	6		3	3	3		4			20	20
Act Effct Green (s)	27.3	27.3		27.3	27.3	27.3	5.9	86.5		16.5	102.2	102.2
Actuated g/C Ratio	0.18	0.18		0.18	0.18	0.18	0.04	0.58		0.11	0.68	0.68
v/c Ratio	0.09	0.13		0.46	0.05	0.85	0.34	0.90		0.73	0.85	0.04
Control Delay	48.4	22.8		60.0	47.1	65.3	84.8	35.6		61.7	12.6	0.5
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	48.4	22.8		60.0	47.1	65.3	84.8	35.6		61.7	12.6	0.5
LOS	D	C		E	D	E	F	D		E	B	A
Approach Delay		32.5			63.2			36.2			18.1	
Approach LOS		C			E			D			B	
Queue Length 50th (m)	5.0	2.5		25.4	3.6	54.1	5.9	209.5		34.8	154.4	0.0
Queue Length 95th (m)	12.0	11.3		41.2	9.4	82.6	15.1	245.2		m#43.7	m131.2	m0.0
Internal Link Dist (m)		223.8			309.9			530.1			610.3	
Turn Bay Length (m)				100.0			80.0			200.0		180.0
Base Capacity (vph)	294	354		282	402	388	65	1902		353	2259	1012
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	0
Reduced v/c Ratio	0.07	0.10		0.37	0.04	0.71	0.34	0.90		0.73	0.85	0.04

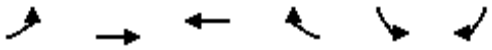
Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 100 (67%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 135
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.90
Intersection Signal Delay: 29.4 Intersection LOS: C
Intersection Capacity Utilization 93.8% ICU Level of Service F
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: March & Station/Carling

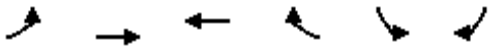
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	144	72	21	610	280	36
Future Volume (vph)	144	72	21	610	280	36
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.955				0.985	
Flt Protected				0.998	0.958	
Satd. Flow (prot)	1683	0	0	1659	1629	0
Flt Permitted				0.998	0.958	
Satd. Flow (perm)	1683	0	0	1659	1629	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	336.6			459.4	751.0	
Travel Time (s)	24.2			33.1	54.1	
Confl. Peds. (#/hr)		17	17			2
Confl. Bikes (#/hr)		1				
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	9%	7%	3%	4%
Adj. Flow (vph)	144	72	21	610	280	36
Shared Lane Traffic (%)						
Lane Group Flow (vph)	216	0	0	631	316	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.0			3.0	3.5	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	5.0			5.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 77.1%		ICU Level of Service D	
Analysis Period (min) 15			



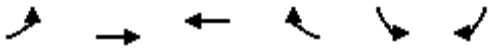
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	3	29	195	0	0	14
Future Volume (vph)	3	29	195	0	0	14
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.865
Flt Protected		0.995				
Satd. Flow (prot)	0	1736	1745	0	0	1510
Flt Permitted		0.995				
Satd. Flow (perm)	0	1736	1745	0	0	1510
Link Speed (k/h)		50	50		50	
Link Distance (m)		306.0	84.0		67.2	
Travel Time (s)		22.0	6.0		4.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	3	29	195	0	0	14
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	32	195	0	0	14
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		5.0	5.0		5.0	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 20.8%		ICU Level of Service A	
Analysis Period (min) 15			



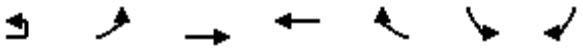
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	4	22	120	0	0	21
Future Volume (vph)	4	22	120	0	0	21
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.865
Flt Protected		0.992				
Satd. Flow (prot)	0	1731	1745	0	0	1510
Flt Permitted		0.992				
Satd. Flow (perm)	0	1731	1745	0	0	1510
Link Speed (k/h)		50	50		50	
Link Distance (m)		84.0	42.7		67.9	
Travel Time (s)		6.0	3.1		4.9	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	4	22	120	0	0	21
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	26	120	0	0	21
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		5.0	5.0		5.0	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 16.7%		ICU Level of Service A	
Analysis Period (min) 15			



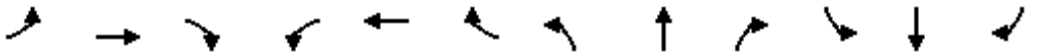
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑			↱
Traffic Volume (vph)	0	22	77	0	0	43
Future Volume (vph)	0	22	77	0	0	43
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	4.8	3.5	3.5	3.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.865
Flt Protected						
Satd. Flow (prot)	0	1745	2000	0	0	1510
Flt Permitted						
Satd. Flow (perm)	0	1745	2000	0	0	1510
Link Speed (k/h)		50	50		50	
Link Distance (m)		42.7	29.9		67.1	
Travel Time (s)		3.1	2.2		4.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	22	77	0	0	43
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	22	77	0	0	43
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		5.0	5.0		5.0	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	0.91	1.09	1.09	1.09
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 14.3%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBU	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations							
Traffic Volume (vph)	2	20	0	0	0	0	64
Future Volume (vph)	2	20	0	0	0	0	64
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	4.8	3.5	3.5	3.5	3.5	3.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt							0.865
Flt Protected		0.950					
Satd. Flow (prot)	0	1900	0	0	0	0	1510
Flt Permitted		0.950					
Satd. Flow (perm)	0	1900	0	0	0	0	1510
Link Speed (k/h)			50	50		50	
Link Distance (m)			29.9	42.6		66.7	
Travel Time (s)			2.2	3.1		4.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	2	20	0	0	0	0	64
Shared Lane Traffic (%)							
Lane Group Flow (vph)	0	22	0	0	0	0	64
Enter Blocked Intersection	No	No	No	No	No	No	No
Lane Alignment	R NA	Left	Left	Left	Right	Left	Right
Median Width(m)			4.8	4.8		0.0	
Link Offset(m)			0.0	0.0		0.0	
Crosswalk Width(m)			5.0	5.0		5.0	
Two way Left Turn Lane							
Headway Factor	1.09	0.91	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	14	24			14	24	14
Sign Control			Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 14.2%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	78	39	581	617	69	203	101	1823	69	28	999	59
Future Volume (vph)	78	39	581	617	69	203	101	1823	69	28	999	59
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	35.0		60.0	85.0		55.0	165.0		0.0	155.0		75.0
Storage Lanes	1		1	1		1	2		0	1		0
Taper Length (m)	50.0			95.0			40.0			25.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	0.99		0.98	0.99		0.98	1.00	1.00			1.00	
Frt			0.850			0.850		0.995			0.992	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1610	1745	1441	1658	1728	1469	3248	3237	0	1658	3254	0
Flt Permitted	0.712			0.603			0.950			0.950		
Satd. Flow (perm)	1195	1745	1405	1042	1728	1435	3232	3237	0	1658	3254	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			119			77		3			5	
Link Speed (k/h)		50			50			60			60	
Link Distance (m)		126.3			245.5			634.3			855.0	
Travel Time (s)		9.1			17.7			38.1			51.3	
Confl. Peds. (#/hr)	7		8	8		7	6					6
Confl. Bikes (#/hr)			1			1			12			1
Peak Hour 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
Heavy Vehicles (%)	5%	2%	5%	2%	3%	3%	1%	4%	1%	2%	3%	2%
Adj. Flow (vph)	78	39	581	617	69	203	101	1823	69	28	999	59
Shared Lane Traffic (%)												
Lane Group Flow (vph)	78	39	581	617	69	203	101	1892	0	28	1058	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		5.0			10.5			18.0			18.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	18.6	93.0	18.6	18.6	93.0	18.6	18.6	93.0		18.6	93.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	18.6	5.5	18.6	18.6	5.5	18.6	18.6	5.5		18.6	5.5	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		87.5			87.5			87.5			87.5	
Detector 2 Size(m)		5.5			5.5			5.5			5.5	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phase	4	4	4	3	8	8	5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0		5.0	10.0	
Minimum Split (s)	36.5	36.5	36.5	11.6	36.5	36.5	12.0	26.8		12.0	26.8	
Total Split (s)	37.0	37.0	37.0	23.0	60.0	60.0	13.0	78.0		12.0	77.0	
Total Split (%)	24.7%	24.7%	24.7%	15.3%	40.0%	40.0%	8.7%	52.0%		8.0%	51.3%	
Maximum Green (s)	30.5	30.5	30.5	16.5	53.5	53.5	6.0	72.2		5.0	71.2	
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3	3.7	3.7		3.7	3.7	
All-Red Time (s)	3.2	3.2	3.2	3.2	3.2	3.2	3.3	2.1		3.3	2.1	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.5	6.5	6.5	6.5	6.5	6.5	7.0	5.8		7.0	5.8	
Lead/Lag	Lag	Lag	Lag	Lead			Lead	Lag		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	
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	
Walk Time (s)	7.0	7.0	7.0		7.0	7.0		7.0			7.0	
Flash Dont Walk (s)	23.0	23.0	23.0		23.0	23.0		14.0			14.0	
Pedestrian Calls (#/hr)	8	8	8		5	5		1			11	
Act Effct Green (s)	30.5	30.5	30.5	53.5	53.5	53.5	6.0	77.0		5.0	71.2	
Actuated g/C Ratio	0.20	0.20	0.20	0.36	0.36	0.36	0.04	0.51		0.03	0.47	
v/c Ratio	0.32	0.11	1.53	1.41	0.11	0.36	0.78	1.14		0.51	0.68	
Control Delay	55.3	49.8	282.1	231.0	33.1	23.6	102.6	92.2		101.2	33.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	55.3	49.8	282.1	231.0	33.1	23.6	102.6	92.2		101.2	33.3	
LOS	E	D	F	F	C	C	F	F		F	C	
Approach Delay		243.8			168.3			92.7			35.1	
Approach LOS		F			F			F			D	
Queue Length 50th (m)	18.4	8.8	~195.8	~225.7	12.7	24.8	13.8	~336.0		7.7	116.1	
Queue Length 95th (m)	33.3	18.5	#263.2	#292.7	23.1	44.8	m16.6	#375.6		#20.7	138.8	
Internal Link Dist (m)		102.3			221.5			610.3			831.0	
Turn Bay Length (m)	35.0		60.0	85.0		55.0	165.0			155.0		
Base Capacity (vph)	242	354	380	439	616	561	129	1663		55	1547	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.32	0.11	1.53	1.41	0.11	0.36	0.78	1.14		0.51	0.68	

Intersection Summary

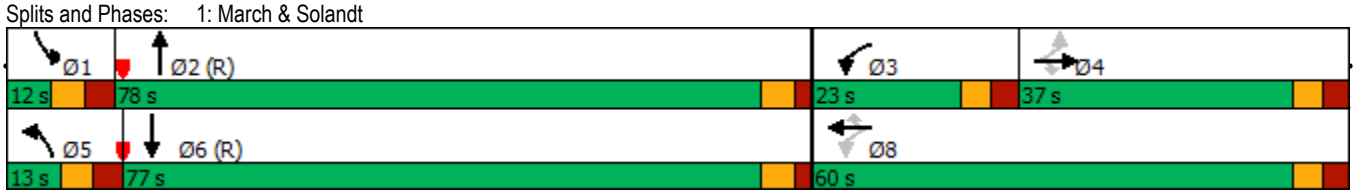
Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 17 (11%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.53
Intersection Signal Delay: 116.3 Intersection LOS: F
Intersection Capacity Utilization 121.7% ICU Level of Service H
Analysis Period (min) 15

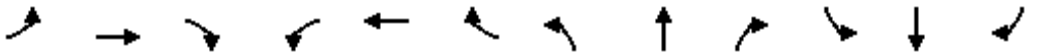
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: March & Solandt





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	51	31	49	47	245	29	261	95	3	6	222	402
Future Volume (vph)	51	31	49	47	245	29	261	95	3	6	222	402
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	0.0		0.0	40.0		0.0	50.0		0.0	30.0		105.0
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (m)	70.0			30.0			60.0			30.0		
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
Ped Bike Factor	0.99	0.99		1.00	1.00			1.00		0.97		
Frt		0.908			0.984			0.995				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1674	1568	0	1674	1587	0	1566	1734	0	1610	1745	1498
Flt Permitted	0.469			0.705			0.477			0.694		
Satd. Flow (perm)	821	1568	0	1239	1587	0	786	1734	0	1141	1745	1498
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		49			5			2				402
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		245.5			306.0			489.3			751.0	
Travel Time (s)		17.7			22.0			35.2			54.1	
Confl. Peds. (#/hr)	4		1	1		4			11	11		
Confl. Bikes (#/hr)									3			
Peak Hour 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
Heavy Vehicles (%)	1%	1%	2%	1%	10%	10%	8%	2%	1%	5%	2%	1%
Adj. Flow (vph)	51	31	49	47	245	29	261	95	3	6	222	402
Shared Lane Traffic (%)												
Lane Group Flow (vph)	51	80	0	47	274	0	261	98	0	6	222	402
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.0			3.5			3.5			3.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (m)	18.6	93.0		18.6	93.0		18.6	93.0		18.6	93.0	18.6
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Size(m)	18.6	5.5		18.6	5.5		18.6	5.5		18.6	5.5	18.6
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(m)		87.5			87.5			87.5			87.5	
Detector 2 Size(m)		5.5			5.5			5.5			5.5	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA	Perm
Protected Phases		2			6		3	8			4	
Permitted Phases	2			6			8			4		4
Detector Phase	2	2		6	6		3	8		4	4	4

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	10.0
Minimum Split (s)	25.2	25.2		25.2	25.2		16.2	25.2		25.2	25.2	25.2
Total Split (s)	41.2	41.2		41.2	41.2		31.2	77.4		46.2	46.2	46.2
Total Split (%)	34.7%	34.7%		34.7%	34.7%		26.3%	65.3%		39.0%	39.0%	39.0%
Maximum Green (s)	35.0	35.0		35.0	35.0		25.0	71.2		40.0	40.0	40.0
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	3.3
All-Red Time (s)	2.9	2.9		2.9	2.9		2.9	2.9		2.9	2.9	2.9
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.2	6.2		6.2	6.2		6.2	6.2		6.2	6.2	6.2
Lead/Lag							Lead			Lag	Lag	Lag
Lead-Lag Optimize?							Yes			Yes	Yes	Yes
Vehicle Extension (s)	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	Ped		Ped	Ped	Ped
Walk Time (s)	7.0	7.0		7.0	7.0			7.0		7.0	7.0	7.0
Flash Dont Walk (s)	12.0	12.0		12.0	12.0			12.0		12.0	12.0	12.0
Pedestrian Calls (#/hr)	6	6		3	3			13		2	2	2
Act Effct Green (s)	19.6	19.6		19.6	19.6		44.7	44.7		24.9	24.9	24.9
Actuated g/C Ratio	0.25	0.25		0.25	0.25		0.58	0.58		0.32	0.32	0.32
v/c Ratio	0.25	0.18		0.15	0.68		0.45	0.10		0.02	0.40	0.53
Control Delay	28.4	13.5		25.6	35.7		12.0	8.8		22.0	24.7	5.5
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	28.4	13.5		25.6	35.7		12.0	8.8		22.0	24.7	5.5
LOS	C	B		C	D		B	A		C	C	A
Approach Delay		19.3			34.2			11.1			12.4	
Approach LOS		B			C			B			B	
Queue Length 50th (m)	4.8	2.8		4.3	28.5		15.1	4.9		0.5	21.0	0.0
Queue Length 95th (m)	17.1	14.8		15.3	70.9		38.9	15.1		3.5	52.7	18.6
Internal Link Dist (m)		221.5			282.0			465.3			727.0	
Turn Bay Length (m)				40.0			50.0			30.0		105.0
Base Capacity (vph)	393	776		593	763		720	1550		624	955	1002
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.13	0.10		0.08	0.36		0.36	0.06		0.01	0.23	0.40

Intersection Summary

Area Type: Other
Cycle Length: 118.6
Actuated Cycle Length: 77.5
Natural Cycle: 70
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.68
Intersection Signal Delay: 17.6 Intersection LOS: B
Intersection Capacity Utilization 72.6% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 2: Legget & Solandt

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	22	11	25	104	16	276	22	1675	30	259	1921	42
Future Volume (vph)	22	11	25	104	16	276	22	1675	30	259	1921	42
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	0.0		35.0	100.0		0.0	80.0		0.0	200.0		180.0
Storage Lanes	1		1	1		1	1		0	2		1
Taper Length (m)	20.0			20.0			40.0			60.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.97	0.95	1.00
Ped Bike Factor	1.00	0.99		0.99		0.98	1.00	1.00		0.99		0.97
Frt		0.896				0.850		0.997				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1642	1467	0	1610	1762	1469	1658	3299	0	3216	3316	1498
Flt Permitted	0.747			0.734			0.950			0.950		
Satd. Flow (perm)	1286	1467	0	1235	1762	1440	1656	3299	0	3198	3316	1449
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		25				77		2				78
Link Speed (k/h)		50			60			60			60	
Link Distance (m)		247.8			333.9			554.1			634.3	
Travel Time (s)		17.8			20.0			33.2			38.1	
Confl. Peds. (#/hr)	3		6	6		3	4		20	20		4
Confl. Bikes (#/hr)						4			18			2
Peak Hour 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
Heavy Vehicles (%)	3%	1%	10%	5%	1%	3%	2%	2%	9%	2%	2%	1%
Adj. Flow (vph)	22	11	25	104	16	276	22	1675	30	259	1921	42
Shared Lane Traffic (%)												
Lane Group Flow (vph)	22	36	0	104	16	276	22	1705	0	259	1921	42
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		5.0			5.0			18.0			18.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2		1	2	1	1	2		1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (m)	18.6	93.0		18.6	93.0	18.6	18.6	93.0		18.6	93.0	18.6
Trailing Detector (m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Size(m)	18.6	5.5		18.6	5.5	18.6	18.6	5.5		18.6	5.5	18.6
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(m)		87.5			87.5			87.5			87.5	
Detector 2 Size(m)		5.5			5.5			5.5			5.5	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						6
Detector Phase	4	4		8	8	8	5	2		1	6	6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0	10.0	5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	40.7	40.7		40.7	40.7	40.7	12.0	31.1		12.0	31.1	31.1
Total Split (s)	41.0	41.0		41.0	41.0	41.0	12.0	92.0		17.0	97.0	97.0
Total Split (%)	27.3%	27.3%		27.3%	27.3%	27.3%	8.0%	61.3%		11.3%	64.7%	64.7%
Maximum Green (s)	34.3	34.3		34.3	34.3	34.3	5.0	85.9		10.0	90.9	90.9
Yellow Time (s)	3.7	3.7		3.7	3.7	3.7	3.7	3.7		3.7	3.7	3.7
All-Red Time (s)	3.0	3.0		3.0	3.0	3.0	3.3	2.4		3.3	2.4	2.4
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.7	6.7		6.7	6.7	6.7	7.0	6.1		7.0	6.1	6.1
Lead/Lag							Lead	Lag		Lead	Lag	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
Recall Mode	None	None		None	None	None	None	C-Max		None	C-Max	C-Max
Walk Time (s)	7.0	7.0		7.0	7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)	27.0	27.0		27.0	27.0	27.0		18.0			18.0	18.0
Pedestrian Calls (#/hr)	6	6		3	3	3		4			20	20
Act Effct Green (s)	27.3	27.3		27.3	27.3	27.3	5.9	86.5		16.5	102.2	102.2
Actuated g/C Ratio	0.18	0.18		0.18	0.18	0.18	0.04	0.58		0.11	0.68	0.68
v/c Ratio	0.09	0.13		0.46	0.05	0.85	0.34	0.90		0.73	0.85	0.04
Control Delay	48.4	22.8		60.0	47.1	65.3	84.8	35.6		57.9	14.5	0.8
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	48.4	22.8		60.0	47.1	65.3	84.8	35.6		57.9	14.5	0.8
LOS	D	C		E	D	E	F	D		E	B	A
Approach Delay		32.5			63.2			36.2			19.3	
Approach LOS		C			E			D			B	
Queue Length 50th (m)	5.0	2.5		25.4	3.6	54.1	5.9	209.5		35.0	149.7	0.0
Queue Length 95th (m)	12.0	11.3		41.2	9.4	82.6	15.1	245.2		m#43.5	m128.3	m0.0
Internal Link Dist (m)		223.8			309.9			530.1			610.3	
Turn Bay Length (m)				100.0			80.0			200.0		180.0
Base Capacity (vph)	294	354		282	402	388	65	1902		353	2259	1012
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	0
Reduced v/c Ratio	0.07	0.10		0.37	0.04	0.71	0.34	0.90		0.73	0.85	0.04

Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 100 (67%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 135
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.90
Intersection Signal Delay: 30.0 Intersection LOS: C
Intersection Capacity Utilization 93.8% ICU Level of Service F
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: March & Station/Carling

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	144	72	21	610	280	36
Future Volume (vph)	144	72	21	610	280	36
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Storage Length (m)		125.0	15.0		0.0	30.0
Storage Lanes		1	1		1	1
Taper Length (m)			20.0		20.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1762	1498	1551	1664	1642	1455
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	1762	1498	1551	1664	1642	1455
Link Speed (k/h)	50			50	50	
Link Distance (m)	336.6			459.4	751.0	
Travel Time (s)	24.2			33.1	54.1	
Confl. Peds. (#/hr)		17	17			2
Confl. Bikes (#/hr)		1				
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	9%	7%	3%	4%
Adj. Flow (vph)	144	72	21	610	280	36
Shared Lane Traffic (%)						
Lane Group Flow (vph)	144	72	21	610	280	36
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.0			3.0	3.5	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	5.0			5.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 56.9%		ICU Level of Service B	
Analysis Period (min) 15			

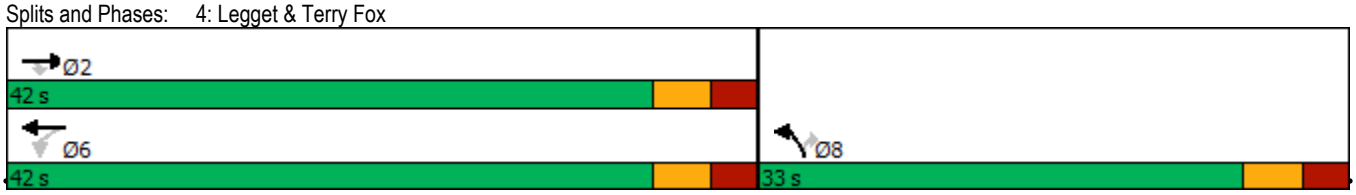
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	144	72	21	610	280	36
Future Volume (vph)	144	72	21	610	280	36
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Storage Length (m)		125.0	15.0		0.0	40.0
Storage Lanes		1	1		1	1
Taper Length (m)			20.0		20.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.95	0.98			0.98
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1762	1498	1551	1664	1642	1455
Flt Permitted			0.665		0.950	
Satd. Flow (perm)	1762	1429	1063	1664	1642	1422
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		72				36
Link Speed (k/h)	50			50	50	
Link Distance (m)	336.6			459.4	751.0	
Travel Time (s)	24.2			33.1	54.1	
Confl. Peds. (#/hr)		17	17			2
Confl. Bikes (#/hr)		1				
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	9%	7%	3%	4%
Adj. Flow (vph)	144	72	21	610	280	36
Shared Lane Traffic (%)						
Lane Group Flow (vph)	144	72	21	610	280	36
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.0			3.0	3.5	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	5.0			5.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)		14	24		24	14
Number of Detectors	2	1	1	2	1	1
Detector Template	Thru	Right	Left	Thru	Left	Right
Leading Detector (m)	93.0	18.6	18.6	93.0	18.6	18.6
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	5.5	18.6	18.6	5.5	18.6	18.6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)	87.5			87.5		
Detector 2 Size(m)	5.5			5.5		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA	Perm	Perm	NA	Prot	Perm
Protected Phases	2			6	8	
Permitted Phases		2	6			8
Detector Phase	2	2	6	6	8	8

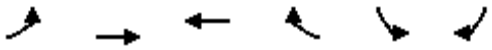
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	31.0	31.0	31.0	31.0	33.0	33.0
Total Split (s)	42.0	42.0	42.0	42.0	33.0	33.0
Total Split (%)	56.0%	56.0%	56.0%	56.0%	44.0%	44.0%
Maximum Green (s)	36.0	36.0	36.0	36.0	27.0	27.0
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	2.7	2.7	2.7	2.7	2.7	2.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	18.0	18.0	18.0	18.0	20.0	20.0
Pedestrian Calls (#/hr)	1	1	1	1	1	1
Act Effct Green (s)	27.7	27.7	27.7	27.7	16.3	16.3
Actuated g/C Ratio	0.49	0.49	0.49	0.49	0.29	0.29
v/c Ratio	0.17	0.10	0.04	0.75	0.59	0.08
Control Delay	9.5	3.2	9.1	19.7	24.5	6.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.5	3.2	9.1	19.7	24.5	6.9
LOS	A	A	A	B	C	A
Approach Delay	7.4			19.3	22.5	
Approach LOS	A			B	C	
Queue Length 50th (m)	6.7	0.0	0.9	40.9	24.0	0.0
Queue Length 95th (m)	19.0	5.5	4.5	#100.3	46.7	4.9
Internal Link Dist (m)	312.6			435.4	727.0	
Turn Bay Length (m)		125.0	15.0			40.0
Base Capacity (vph)	1188	987	717	1122	830	737
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.12	0.07	0.03	0.54	0.34	0.05

Intersection Summary

Area Type: Other
Cycle Length: 75
Actuated Cycle Length: 56.8
Natural Cycle: 65
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.75
Intersection Signal Delay: 18.0 Intersection LOS: B
Intersection Capacity Utilization 60.7% ICU Level of Service B
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

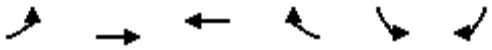
Splits and Phases: 4: Legget & Terry Fox





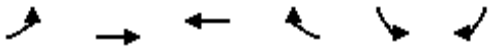
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	3	29	195	0	0	14
Future Volume (vph)	3	29	195	0	0	14
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.865
Flt Protected		0.995				
Satd. Flow (prot)	0	1736	1745	0	0	1510
Flt Permitted		0.995				
Satd. Flow (perm)	0	1736	1745	0	0	1510
Link Speed (k/h)		50	50		50	
Link Distance (m)		306.0	84.0		67.2	
Travel Time (s)		22.0	6.0		4.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	3	29	195	0	0	14
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	32	195	0	0	14
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		5.0	5.0		5.0	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 20.8%		ICU Level of Service A	
Analysis Period (min) 15			



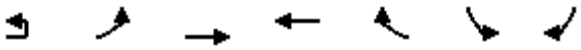
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	4	22	120	0	0	21
Future Volume (vph)	4	22	120	0	0	21
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.865
Flt Protected		0.992				
Satd. Flow (prot)	0	1731	1745	0	0	1510
Flt Permitted		0.992				
Satd. Flow (perm)	0	1731	1745	0	0	1510
Link Speed (k/h)		50	50		50	
Link Distance (m)		84.0	42.7		67.9	
Travel Time (s)		6.0	3.1		4.9	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	4	22	120	0	0	21
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	26	120	0	0	21
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		5.0	5.0		5.0	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 16.7%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑			↱
Traffic Volume (vph)	0	22	77	0	0	43
Future Volume (vph)	0	22	77	0	0	43
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	3.5	4.8	3.5	3.5	3.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.865
Flt Protected						
Satd. Flow (prot)	0	1745	2000	0	0	1510
Flt Permitted						
Satd. Flow (perm)	0	1745	2000	0	0	1510
Link Speed (k/h)		50	50		50	
Link Distance (m)		42.7	29.9		67.1	
Travel Time (s)		3.1	2.2		4.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	22	77	0	0	43
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	22	77	0	0	43
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		5.0	5.0		5.0	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	0.91	1.09	1.09	1.09
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	14.3%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBU	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations							
Traffic Volume (vph)	2	20	0	0	0	0	64
Future Volume (vph)	2	20	0	0	0	0	64
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800
Lane Width (m)	3.5	4.8	3.5	3.5	3.5	3.5	3.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt							0.865
Flt Protected		0.950					
Satd. Flow (prot)	0	1900	0	0	0	0	1510
Flt Permitted		0.950					
Satd. Flow (perm)	0	1900	0	0	0	0	1510
Link Speed (k/h)			50	50		50	
Link Distance (m)			29.9	42.6		66.7	
Travel Time (s)			2.2	3.1		4.8	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	2	20	0	0	0	0	64
Shared Lane Traffic (%)							
Lane Group Flow (vph)	0	22	0	0	0	0	64
Enter Blocked Intersection	No	No	No	No	No	No	No
Lane Alignment	R NA	Left	Left	Left	Right	Left	Right
Median Width(m)			4.8	4.8		0.0	
Link Offset(m)			0.0	0.0		0.0	
Crosswalk Width(m)			5.0	5.0		5.0	
Two way Left Turn Lane							
Headway Factor	1.09	0.91	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	14	24			14	24	14
Sign Control			Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 14.2%		ICU Level of Service A	
Analysis Period (min) 15			