

Lansdowne 2.0

North Stadium Stands

Transportation Impact Assessment

20/12/2024



PLACE
TD

JOEY LANGDONNE

The way the world moves. By design.



LANSDOWNE 2.0 NORTH STADIUM STANDS (PHASE 2)

Transportation Impact Assessment Report
Step 4 – Strategy Report

20/12/2024



DOCUMENT CONTROL ISSUE SHEET


Project & Document Details

Project Name	Lansdowne 2.0 North Stadium Stands TIA (Phase 2)
Project Number	C000241
Document Title	Lansdowne 2.0 Phase 2 North Stadium Stands Transportation Impact Assessment

Document History

Issue	Status	Reason for Issue	Issued to
0.1	Initial Submission	Site Plan Control Application Submission	City of Ottawa

Issue Control

Issue	Date	Author	Contributors	Authorization	
				Name	Signature
0.1	20/12/2024	AA, AD, HM	CA, AD, KL, NB, FM, JH	Hassan M.	



Certification Form for Transportation Impact Assessment (TIA) Study

TIA Reports

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 and 2023 amendments.

Please note that the Certification is only required for the submission of a TIA. The Screening can be undertaken by a non-certified individual for the purpose of identifying if a TIA is needed or not.

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

CERTIFICATION

- 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; (Update effective July 2023)
- 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;
- 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
- I am either a licensed or registered¹ professional in good standing, whose field of expertise
 - is either transportation engineering
 - or transportation planning.

¹ 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.

Dated at Houston this 20 day of December, 2024.
(City)

Name : Hassan Al Madhoun, P.Eng

Professional title: Director, P.Eng



Signature of individual certifier that they meet the above four criteria

Office Contact Information (Please Print)

Address: 141 Avenue du Président-Kennedy, Casier #18 local SB-7250

City / Postal Code: Montreal, Quebec H2X 1Y4

Telephone / Extension: 979-330-3157

Email Address: hassan.madhoun@momentum-transport.com

Stamp



EXECUTIVE SUMMARY

The City of Ottawa is proceeding with a Site Plan Control application for new North Stadium Stands at Lansdowne Park. This Transportation Impact Assessment (TIA) has been prepared by Momentum Transport Consultancy in support of the Lansdowne 2.0 North Stadium Stands (Phase 2) “the development”, located at 1015 Bank Street, Ottawa, K1S 3W7. The development is located within the Glebe neighbourhood of Ottawa, Ontario and is bounded by Bank Street to the west, Holmwood Avenue to the north, and Queen Elizabeth Driveway along the Rideau Canal to the east and south.

This Site Plan Application for the new North Stadium Stands represents the second phase of development for the Lansdowne 2.0 project, which seeks to demolish the existing functionally obsolete north stadium stands and arena complex at Lansdowne Park and build a new world-class sports and entertainment centre. The Lansdowne 2.0 redevelopment plan features a new multi-purpose event centre, new north stadium stands, as well as additional residential housing, destination retail, and office space. The full buildout timeframe is slated to occur between 2032 and 2036.

This TIA document covers screening and scoping, which involve regulatory triggers, existing and planned conditions, horizon years, and exemptions. The forecasting section details updated travel demand for the development to reflect the revised Lansdowne 2.0 development concept made in September 2023. The TIA report outlines the design and accommodation for sustainable modes, circulation and access, parking, intersections, transportation demand management, and transit.

The overall Lansdowne 2.0 proposed plan includes the following phases of development:

Phase 1 (Anticipated completion of 2028) consists of building a new 5,500 seat (up to 6,500 spectators) multipurpose event centre that will be home to the OHL’s Ottawa 67’s, the CEBL’s Ottawa BlackJacks, the PWHL Ottawa, and other indoor events such as shows and concerts.

As this phase of Lansdowne 2.0 replaces the programming provided at the existing 9,800 seat TD Place Arena, it is not expected to generate additional transportation demands to Lansdowne.

Phase 2 (Anticipated completion between 2030 and 2031) consists of replacing the existing functionally obsolete north stadium stands and arena complex at TD Place Stadium with a new 11,200 seat (12,100 spectator) north stand structure. This new facility replaces the existing north stadium stands, which currently have a capacity of 14,028 spectators, and would result in a reduction of approximately 2,000 spectator capacity at TD Place Stadium. This venue will continue to be the home of the CFL’s Ottawa RedBlacks and the CPL’s Ottawa Atlético.

As this phase of Lansdowne 2.0 replaces existing programming currently provided at TD Place Stadium, it is not expected to generate additional transportation demands to Lansdowne.

Phase 3 (Anticipated completion between 2032 and 2036) represents the full build-out of Lansdowne 2.0 and consists of replacing the existing 41,000 ft² of commercial retail and box office annex to the Stadium on Exhibition Way with 49,635 ft² of new podium-level commercial retail space. This represents a net increase of 8,635 ft² of commercial retail space from what is currently provided today. In addition, this phase includes the construction of two new residential towers with a total of 770 new dwelling units. Additional underground parking space will be constructed by extending the existing facility to accommodate an additional 386 parking spaces to service the new residential units and additional retail space, resulting in a total of 1,766 underground parking spaces at Lansdowne.

The full build-out of Lansdowne 2.0 development is anticipated to generate between **130 and 180 net new auto trips** (two-way) during the Weekday AM, Weekday PM, and Weekend Saturday and Sunday peak periods.

Under Phase 2, which is the focus of this TIA submission, no additional trip generation demands are forecasted as the proposed new North Stadium Stands replaces the existing north stands at TD Place. It is anticipated that internal circulation and access within Lansdowne will be altered in an interim operating condition in 2028 during the construction of Phase 2 – this condition is included in the TIA report.

Under the scenarios of Existing Conditions, the 2028 Baseline Conditions, the 2028 Construction Impact, the 2030 Baseline Conditions, the 2030 Construction Impact, the 2033 Future Background, and the 2033 Total Future (Full Buildout of Lansdowne 2.0), all study area intersections are shown to operate acceptably with similar levels of services currently observed today.

In conclusion, the analysis found that Phase 2 of Lansdowne 2.0 will result in minimal impact on the area's overall traffic operations and can be accommodated within the proposed Lansdowne 2.0 concept. From a transportation standpoint, the proposed North Stadium Stands can be accommodated by the future transportation network with the continued adoption of the existing comprehensive Transportation Demand Management strategy.

TABLE OF CONTENTS

1. Screening	1
1.1 Summary of Development	1
1.2 Trip Generation Trigger	2
1.3 Location Triggers	2
1.4 Safety Triggers	3
1.5 Summary	3
2. Scoping	4
2.1 Existing and Planned Conditions	4
Proposed Development	4
Existing Conditions	12
Planned Conditions	40
2.2 Study Area and Time Periods	44
Study Area	44
Time Periods	44
Horizon Years	44
2.3 Exemptions Review	45
3. Forecasting	48
3.1 Development Generated Travel Demand	48
Existing Trip Generation	48
Future Trip Generation and Mode Shares	48
Trip Distribution	55
Trip Assignment	55
3.2 Background Network Travel Demand	61
Transportation Network Plans	61
Background Growth	61
Other Developments	61
3.3 Demand Rationalization	61
2028 Total Future Traffic Volumes	62
2033 Total Future Traffic Volumes	75
4. Strategy Report	106
4.1 Development Design	106
Design for Sustainable Modes	106
Circulation and Access	107
New Street Networks	108
4.2 Parking	112
Parking Supply	112
Spillover Parking	112
4.3 Boundary Street Design	113

Design Concept	113
4.4 Access Intersection Design	122
Access Location	122
Intersection Control	122
4.5 Transportation Demand Management	126
TDM Program	126
4.6 Neighbourhood Traffic Management	126
4.7 Transit	127
Route Capacity	127
4.8 Intersection Design	129
Intersection Control	129
Intersection Design	129
5. Summary and Conclusions	220

Tables

Table 1-1: Summary of Development.....	1
Table 1-2: Trip Generation Trigger.....	2
Table 1-3: Trip Generation Triggers.....	2
Table 1-4: Safety Triggers.....	3
Table 1-5: Summary.....	3
Table 2-1: Collision Summary.....	39
Table 2-2 Collisions involving pedestrians and cyclists on boundary segments and intersections.....	41
Table 2-3: City of Ottawa Transportation Master Plan Projects.....	42
Table 2-4: Background Developments.....	42
Table 2-5: Exemptions Review.....	45
Table 3-1: Lansdowne 2.0 Land Uses and Trip Generation Rates.....	50
Table 3-2: Internal Capture Trips.....	51
Table 3-3: Lansdowne 2.0 Person Trips Generated by Land Use.....	52
Table 3-4: Assumed Mode Share by Land Use.....	53
Table 3-5: Lansdowne 2.0 Future Trip Generation by Travel Mode.....	54
Table 3-6: Site Trip Directional Distribution.....	55
Table 3-7: Refined Directional Trip Distribution Assumptions.....	55
Table 3-8: Trip Assignment for Newly Generated Trips.....	56
Table 4-1: Existing Conditions MMLOS Targets and Results (Segments).....	116
Table 4-2: 2033 Future Conditions MMLOS Targets and Results (Segments).....	116
Table 4-3: Existing Conditions MMLOS Targets and Results (Signalized Intersections).....	117
Table 4-4: 2030 Future Conditions MMLOS Targets and Results (Signalized Intersections).....	118
Table 4-5: Existing Conditions Intersection LOS (Weekday AM/PM Peak).....	130
Table 4-6: Existing Conditions Intersection LOS (Saturday Peak).....	134
Table 4-7: Existing Conditions Intersection LOS (Sunday Peak).....	136
Table 4-8: Existing Conditions Intersection LOS (Minor Event).....	139
Table 4-9: Existing Conditions Intersection LOS (Major Event).....	143
Table 4-10: 2028 Future Background Intersection LOS (Weekday AM/PM Peak).....	147
Table 4-11: 2028 Construction Impact Intersection LOS (Weekday AM/PM Peak).....	151
Table 4-12: 2028 Future Background Intersection LOS (Saturday Peak).....	156
Table 4-13: 2028 Future Background Intersection LOS (Sunday Peak).....	158

Table 4-14: 2028 Future Background Intersection LOS (Minor Event).....	162
Table 4-15: 2028 Future Background Intersection LOS (Major Event).....	166
Table 4-16: 2030 Future Conditions Intersection LOS (Weekday AM/PM Peak)	170
Table 4-17: 2030 Future Construction Impacts Intersection LOS (Weekday AM/PM Peak)	174
Table 4-18: 2030 Future Intersection LOS (Saturday Peak).....	178
Table 4-19: 2030 Future Intersection LOS (Sunday Peak).....	180
Table 4-20: 2030 Future Intersection LOS (Minor Event)	182
Table 4-21: 2030 Future Intersection LOS (Major Event)	186
Table 4-22: 2033 Future Background Intersection LOS (Weekday AM/PM Peak).....	190
Table 4-23: 2033 Total Future Intersection LOS (Weekday AM/PM Peak)	194
Table 4-24: 2033 Future Background Intersection LOS (Saturday Peak)	198
Table 4-25: 2033 Total Future Intersection LOS (Saturday Peak).....	200
Table 4-26: 2033 Future Background Intersection LOS (Sunday Peak).....	202
Table 4-27: 2033 Total Future Intersection LOS (Sunday Peak).....	204
Table 4-28: 2033 Future Background Intersection LOS (Minor Event).....	206
Table 4-29: 2033 Total Future Intersection LOS (Minor Event)	210
Table 4-30: 2033 Future Background Intersection LOS (Major Event).....	214
Table 4-31: 2033 Total Future Intersection LOS (Major Event).....	217

Figures

Figure 2-1: Site Location	5
Figure 2-2: Lansdowne 2.0 NSS Site Plan.....	7
Figure 2-3: Lansdowne 2.0 Redevelopment Concept.....	9
Figure 2-4: Existing Site Zoning	11
Figure 2-5: Existing Lane Configuration and Traffic Control	14
Figure 2-6: Existing and Planned Pedestrian and Cycling Network.....	16
Figure 2-7: Study Area Transit Route and Stops	17
Figure 2-8: Carleton U Park & Shuttle Route (Ottawa 67's and PWHL Ottawa).....	18
Figure 2-9: Enhanced Transit and Shuttle Service to TD Place.....	18
Figure 2-10: Existing Internal Site Circulation	20
Figure 2-11: Existing Internal Site Circulation (Minor Events).....	21
Figure 2-12: Existing Internal Site Circulation (Major Events).....	22
Figure 2-13: Existing Weekday AM and PM Traffic Volumes	24
Figure 2-14: Existing Weekday AM and PM Peak Internal Traffic Volumes	25
Figure 2-15: Existing Weekday/Weekend Pedestrian Volumes.....	26
Figure 2-16: Existing Weekday/Weekend Bicycle Volumes.....	27
Figure 2-17: Existing Saturday PM Traffic Volumes	28
Figure 2-18: Existing Saturday PM Internal Traffic Volumes	29
Figure 2-19: Existing Sunday PM Traffic Volumes.....	30
Figure 2-20: Existing Sunday PM Internal Traffic Volumes.....	31
Figure 2-21: Existing Minor Event Traffic Volumes	32
Figure 2-22: Existing Minor Event Internal Traffic Volumes	33
Figure 2-23: Existing Minor Event Pedestrian Volumes.....	34
Figure 2-24: Existing Minor Event Bicycle Volumes.....	35
Figure 2-25: Existing Major Event Traffic Volumes	36
Figure 2-26: Existing Major Event Pedestrian Volumes.....	37
Figure 2-27: Existing Major Event Bicycle Volumes.....	38
Figure 2-28: Background Developments Key Plan	43

Figure 3-1: Lansdowne 2.0 Site Traffic Assignment Assumptions	57
Figure 3-2: Lansdowne 2.0 Site Volumes (Weekday AM/PM Peak).....	58
Figure 3-3: Lansdowne 2.0 Site Volumes (Saturday Peak)	59
Figure 3-4: Lansdowne 2.0 Site Volumes (Sunday Peak)	60
Figure 3-5: 2028 Future Background Traffic (Weekday AM / PM).....	64
Figure 3-6: 2028 Future Background Internal Traffic (Weekday AM / PM).....	65
Figure 3-7: 2028 Future Background Traffic (Saturday Peak)	66
Figure 3-8: 2028 Future Background Internal Traffic (Saturday Peak).....	67
Figure 3-9: 2028 Future Background Traffic (Sunday Peak)	68
Figure 3-10: 2028 Future Background Internal Traffic (Sunday Peak)	69
Figure 3-11: 2028 Future Background Traffic (Minor Event).....	70
Figure 3-12: 2028 Future Background Internal Traffic (Minor Event).....	71
Figure 3-13: 2028 Future Background Traffic (Major Event).....	72
Figure 3-14: 2028 Construction Traffic (Weekday AM/PM with Bank Street Garage Ramp Closure)..	73
Figure 3-15: 2028 Construction Internal (Weekday AM/PM with Bank Street Garage Ramp Closure)	74
Figure 3-16: 2028 Weekday AM/PM Traffic Volumes On-Site (with Exhibition Way Garage Access Closed and Construction Traffic	Error! Bookmark not defined.
Figure 3-17: 2030 Future Background Traffic (Weekday AM / PM).....	76
Figure 3-18: 2030 Future Background Internal Traffic (Weekday AM / PM).....	77
Figure 3-19: 2030 Future Background + Construction Traffic (Weekday AM / PM)	78
Figure 3-20: 2030 Future Background + Construction Internal Traffic (Weekday AM / PM)	79
Figure 3-21: 2030 Future Background Traffic (Saturday Peak)	80
Figure 3-22: 2030 Future Background Internal Traffic (Saturday Peak).....	81
Figure 3-23: 2030 Future Background Traffic (Sunday Peak)	82
Figure 3-24: 2030 Future Background Internal Traffic (Sunday Peak)	83
Figure 3-25: 2030 Future Background Traffic (Minor Event).....	84
Figure 3-26: 2030 Future Background Internal Traffic (Minor Event).....	85
Figure 3-27: 2030 Future Background Traffic (Major Event).....	86
Figure 3-28: 2033 Future Background Traffic (Weekday AM / PM).....	88
Figure 3-29: 2033 Future Background Internal Traffic (Weekday AM / PM).....	89
Figure 3-30: 2033 Future Background Traffic (Saturday Peak)	90
Figure 3-31: 2033 Future Background Internal Traffic (Saturday Peak).....	91
Figure 3-32: 2033 Future Background Traffic (Sunday Peak)	92
Figure 3-33: 2033 Future Background Internal Traffic (Sunday Peak)	93
Figure 3-34: 2033 Future Background Traffic (Minor Event).....	94
Figure 3-35: 2033 Future Background Internal Traffic (Minor Event).....	95
Figure 3-36: 2033 Future Background Traffic (Major Event).....	96
Figure 3-37: 2033 Total Future Traffic (Weekday AM / PM)	97
Figure 3-38: 2033 Total Future Internal Traffic (Weekday AM / PM)	98
Figure 3-39: 2033 Total Future Traffic (Saturday Peak)	99
Figure 3-40: 2033 Total Future Internal Traffic (Saturday Peak)	100
Figure 3-41: 2033 Total Future Traffic (Sunday Peak).....	101
Figure 3-42: 2033 Total Future Internal Traffic (Sunday Peak).....	102
Figure 3-43: 2033 Total Future Traffic (Minor Event).....	103
Figure 3-44: 2033 Total Future Internal Traffic (Minor Event).....	104
Figure 3-45: 2033 Total Future Traffic (Major Event).....	105
Figure 4-1: Lansdowne 2.0 Internal Site Circulation Plan (Regular Operations)	109
Figure 4-2: Lansdowne 2.0 Internal Site Circulation Plan (Minor Events)	110
Figure 4-3: Lansdowne 2.0 Internal Site Circulation Plan (Major Events)	111
Figure 4-4: Study Area MMLOS Segments.....	114
Figure 4-5: Lansdowne 2.0 Temporary Construction Haul Route Access	123

Figure 4-6: Lansdowne 2.0 Construction Haul Routes 125

Appendices

Appendix A - Turning Movement Count Data

Appendix B - Intersection Collision Data

Appendix C - MMLOS Analysis Data

Appendix D - Construction Haul Route Assessment

Appendix E - TDM CheckList

Appendix F - Synchro Summary Sheets

1. SCREENING

1.1 Summary of Development

Table 1-1: Summary of Development

Municipal Address	1015 Bank Street, Ottawa, K1S 3W7
Description of Location	TD Place at Lansdowne, situated at the southeast quadrant of the intersection of Bank Street and Holmwood Avenue.
Land Use Classification	Mixed-Use Sports & Entertainment District (High-rise residential, retail, office, outdoor stadium, indoor arena and event centre)
Development Size (m ²) [sq-ft] {units}	<p>Phase 1:</p> <p>Indoor Multi-Purpose Event Centre: 5,500 seats (6,500 spectators)</p> <p>Phase 2: <i>Focus of Study</i></p> <p>New North Stadium Stands: 11,200 seats (12,100 spectators)</p> <p>Phase 3:</p> <p>Office: 2,323 m² [25,000 sq-ft] (net increase of 1,324 m² or 14,240 sq-ft)</p> <p>Retail: 4,611 m² [49,635 sq-ft] (net increase of 802 m² or 8,635 sq-ft)</p> <p>Residential: 770 new dwelling units</p>
Number of Accesses and Locations	<p>Four existing site access locations:</p> <ol style="list-style-type: none"> 1. Bank Street / Exhibition Way 2. Bank Street / Marché Way 3. Queen Elizabeth Driveway / Princess Patricia Way 4. Holmwood Parking Garage Ramp (Private, Residents Only Access)
Phase of Development	<p>Phase 1 - Event Center (2028) <i>Existing Land Use</i></p> <p>Phase 2 - North Stadium Stands (2029/2030) <i>Existing Land Use</i> <i>Focus of Study</i></p> <p>Phase 3 – Residential Towers + Retail Podium (2032)</p>
Buildout Year	2032 to 2036

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

1.2 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.

Table 1-2: Trip Generation Trigger

Land Use Type	Minimum Development Size	Triggered
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.**

1.3 Location Triggers

Table 1-3: Trip Generation 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.

1.4 Safety Triggers

Table 1-4: 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 limits 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.

1.5 Summary

Table 1-5: 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).

2. SCOPING

2.1 Existing and Planned Conditions

PROPOSED DEVELOPMENT

The City of Ottawa is proceeding with a Site Plan Control application for new North Stadium Stands (NSS) at Lansdowne Park.

Lansdowne Park is located within the Glebe neighbourhood of Ottawa, Ontario and is bounded by Bank Street to the west, Holmwood Avenue to the north, and Queen Elizabeth Driveway along the Rideau Canal to the east and south.

The new NSS replace the existing north stands of the stadium at TD Place with an 11,200 seat spectator area (total spectator capacity of 12,100 including standing-only).

This Site Plan Application for the new NSS represents the second phase of development for the Lansdowne 2.0 project, which seeks to demolish the existing functionally obsolete north stadium stands and arena complex at Lansdowne Park and build a new world-class sports and entertainment destination.

The Lansdowne 2.0 redevelopment plan features a new multi-purpose event centre (Phase 1), the new north stadium stands (Phase 2), as well as additional residential housing, destination retail, and office space Phase 3).

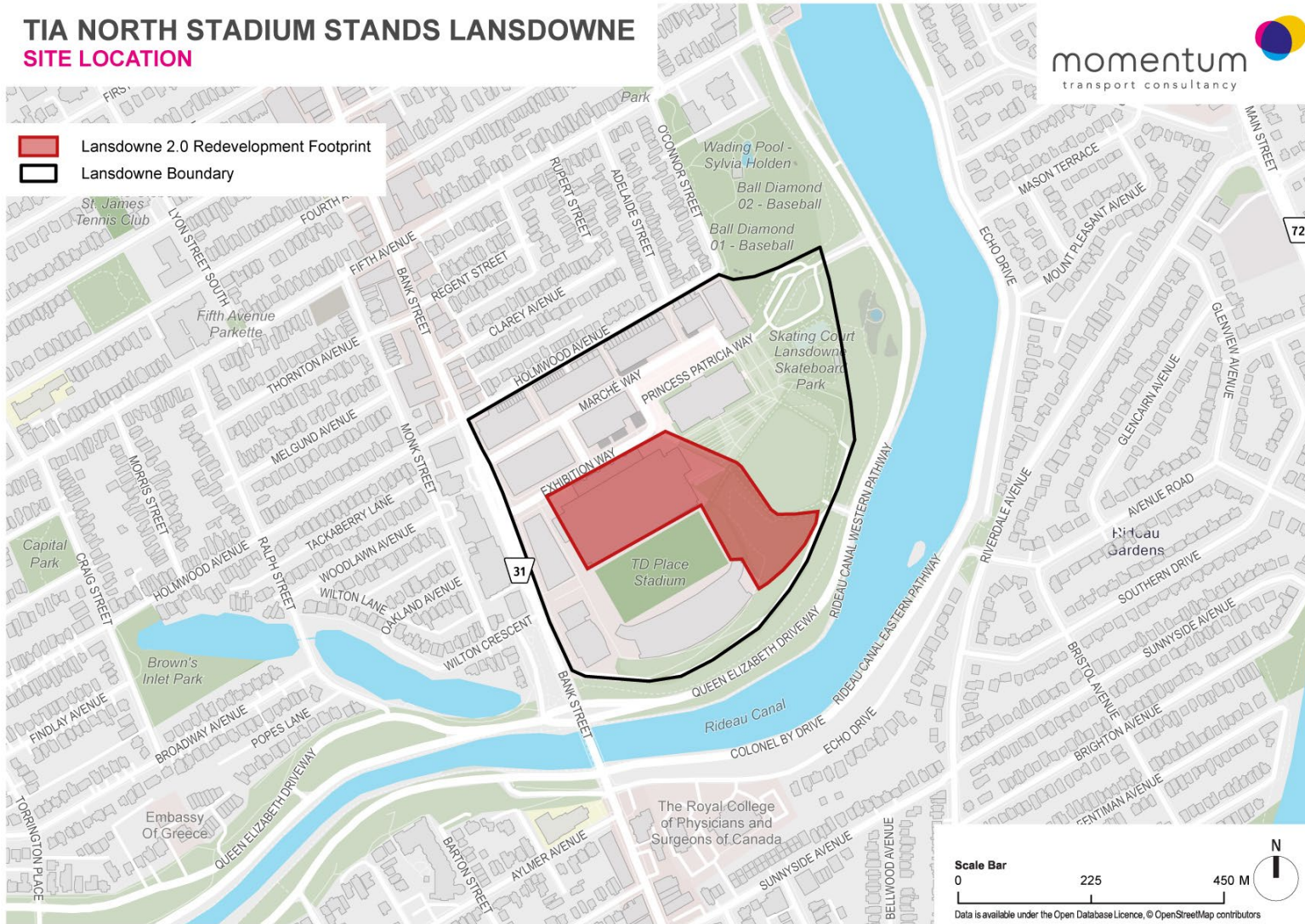
Lansdowne Park currently consists of:

- TD Place Stadium: a 24,000-seat outdoor stadium that is home to the Canadian Football League's (CFL) Ottawa RedBlacks and Canadian Premier League's (CPL) Ottawa Atlético;
- TD Place Arena: a 9,800-seat indoor multipurpose venue and arena (formerly known as the Ottawa Civic Centre) home to the Ontario Hockey League's (OHL) Ottawa 67's, the Canadian Elite Basketball League's (CEBL) Ottawa BlackJacks, and the Professional Women's Hockey League's (PWHL) Ottawa team;
- 280 residential units within two condominium towers and townhomes;
- Approximately 360,000 ft² of destination-based commercial retail and office space; and
- An 18-acre urban park that includes the historic Aberdeen Pavilion exhibition hall and Horticulture Building.
- 1,380 space underground parking garage for public and residential use.

• **Figure 2-1** illustrates the site location and Lansdowne 2.0 redevelopment footprint.

Figure 2-1: Site Location

TIA NORTH STADIUM STANDS LANSDOWNE SITE LOCATION



This Transportation Impact Assessment (TIA) is submitted in support of the Site Plan Application for Phase 2 of the Lansdowne 2.0 redevelopment plan. The proposed improvements include the construction of new NSS with 11,200 seats (capacity for 12,100 attendees) and associated public realm improvements.

Figure 2-2 illustrates the proposed Site Plan for the new NSS at Lansdowne.

Spectator access to the new NSS will be provided primarily at the three main gate entrances:

- Gate 1, currently located on Bank Street on the west side of the NSS;
- Gate 3, a newly configured gate entrance on Exhibition Way that consolidates the current Gate 2 and Gate 3 entrances on the north side of the NSS, and
- Gate 4, a newly configured gate near the Aberdeen Pavilion on the east side of the NSS.

Gate 2 will be relocated to Frank Claire Lane and will serve as a limited access gate for use during events.

All NSS entrance locations connect to existing multi-use pathways within Lansdowne with connections to existing external pathways located on Queen Elizabeth Driveway, as well as sidewalks on Bank Street and Holmwood Drive.

Similar to the current vehicle access and circulation arrangements at Lansdowne, vehicular access is restricted to Bank Street at Exhibition Way and Marche Way, as well as Queen Elizabeth Driveway at Princess Patricia Way.

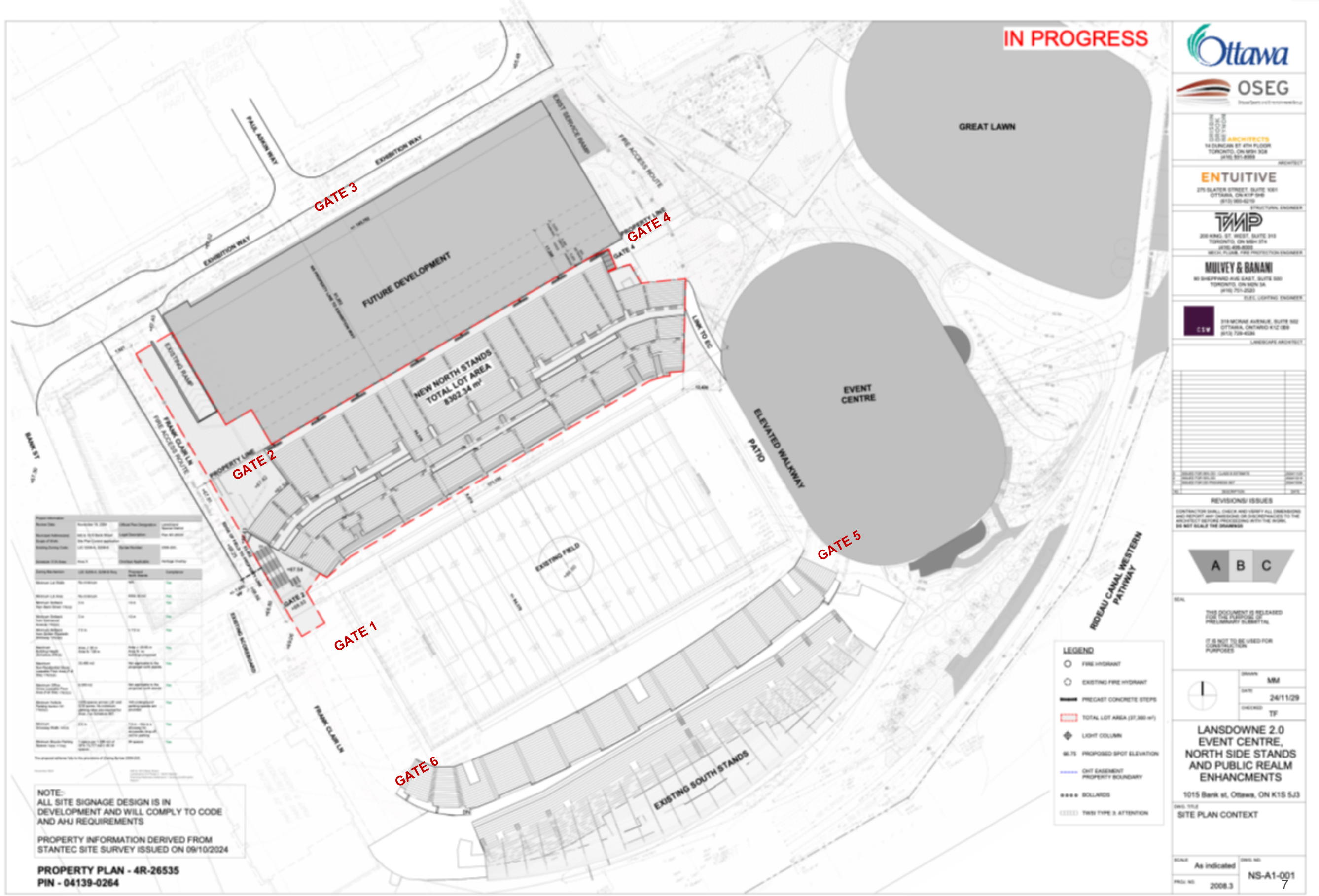
Limited special use access is also provided at Queen Elizabeth Driveway and the Great Lawn to facilitate emergency vehicle access and limited special use by shuttle buses when permitted.

Truck deliveries will continue be facilitated at the existing service ramp located on Exhibition Way, which will undergo improvements as part of Lansdowne 2.0 construction to provide a single consolidated underground loading dock space for deliveries and back-of-house functions for both the new Event Centre and NSS.

The new NSS site plan features public realm improvements on the western portion of the site along Frank Claire Lane. These improvements include widening Frank Claire Lane to provide widened and enhanced landscaping for improved pedestrian circulation. Also, the proposed landscaping plan features a shared-use plaza and vehicle turnaround to provide a restricted-use '5-minute' drop-off area for the administrative offices located in the NSS. The Frank Claire Lane improvements also provide an additional 5.1m widened landscaped approach for improved bi-directional vehicle access and circulation on Frank Claire Lane to better accommodate deliveries to the existing condominium tower at 1035 Bank Street.

Landscaping improvements on the eastern side of the NSS are captured as part of the new Event Centre (Phase 1) site plan. These improvements include a new 15.4m wide entrance at Exhibition Way to provide access to the new event centre and Great Lawn, including a limited use vehicle route to allow for AODA pick-up and drop-off by ParaTranspo for patrons with mobility needs.

Figure 2-2: Lansdowne 2.0 NSS Site Plan



The Lansdowne 2.0 redevelopment plan is anticipated to occur over three phases:

Phase 1:

Phase 1 consists of building a new 5,500 seat (up to 6,500 spectators) multipurpose event centre that will be home to the OHL's Ottawa 67's, the CEBL's Ottawa BlackJacks, the PWHL Ottawa, and other indoor events such as shows and concerts.

Other improvements include landscaping and public realm improvements at the Great Lawn located south of the Aberdeen Pavilion to accommodate the new event centre and allow for additional programming opportunities at Lansdowne Park.

As this phase of Lansdowne 2.0 replaces the programming provided at the existing 9,800 seat TD Place Arena, it is not expected to generate additional transportation demands to Lansdowne.

Phase 1 is anticipated to be completed in 2028.

Phase 2:

Phase 2 (the focus of this TIA Report) consists of replacing the existing functionally obsolete north stadium stands and arena complex at TD Place Stadium with a new 11,200 seat (12,100 spectator) north stand structure. This new facility replaces the existing north stadium stands, which currently has a capacity of 14,028 spectators, and would result in a reduction of approximately 2,000 spectator capacity at TD Place Stadium. This venue will continue to be the home of the CFL's Ottawa RedBlacks and the CPL's Ottawa Atlético.

This phase of Lansdowne 2.0 replaces existing programming currently provided at TD Place Stadium. As a result, it is not expected to generate additional transportation demands to Lansdowne.

Phase 2 is anticipated to be completed between 2030 and 2031.

Phase 3:

Phase 3 consists of replacing the existing 41,000 ft² of commercial retail and box office annex to the Stadium on Exhibition Way with 49,635 ft² of new podium-level commercial retail space. This represents a net increase of 8,635 ft² of commercial retail space from what is currently provided today.

In addition, this phase includes the construction of two new residential towers with a total of 770 new dwelling units. Additional underground parking space will be constructed by extending the existing facility to accommodate an additional 386 parking spaces to service the new residential units and additional retail space, resulting in a total of 1,766 underground parking spaces at Lansdowne. Underground parking will continue be accessed at existing access ramps located on Exhibition Way, and Princess Patricia Way near Queen Elizabeth Driveway.

Phase is anticipated to be completed between 2032 and 2036.

Figure 2-3 illustrates a rendering of the Lansdowne 2.0 redevelopment concept.

Figure 2-3: Lansdowne 2.0 Redevelopment Concept



The site currently carries three different zoning designations. The western portion of the proposed site is zoned L2C S258-A S258-B and as outlined in the City of Ottawa's Zoning By-Law, the purpose of the L2 – Major Leisure Facility Zone is to:

- Accommodate major, urban City-wide sports, recreational and cultural facilities addressed under the Major Urban Facilities policies of the Official Plan.
- Permit a broad range and intensity of leisure, recreational, cultural and related uses; and
- Allow a moderate density and scale of development.

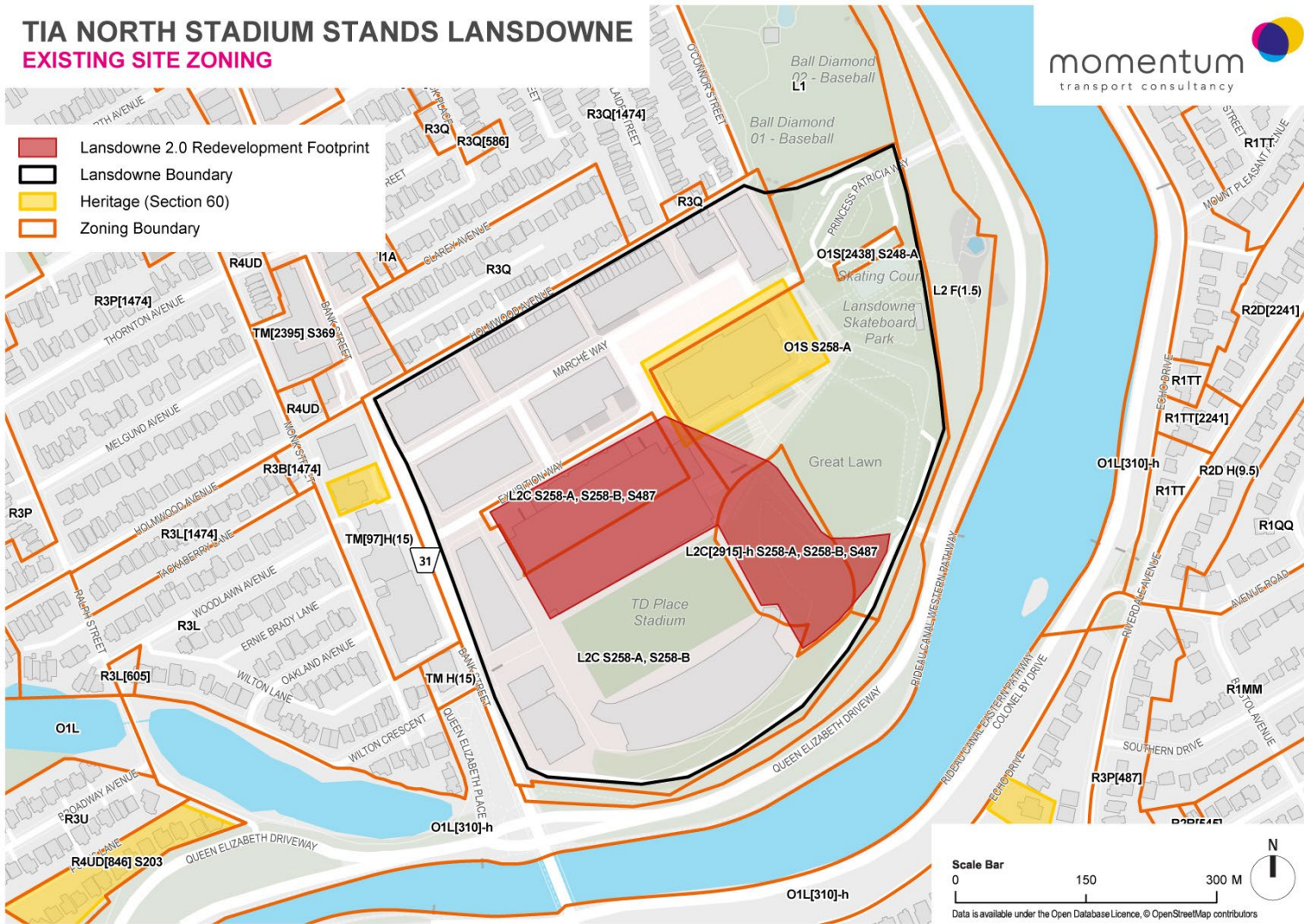
The eastern portion of the proposed site is zoned O1S S258-A and as outlined in the City of Ottawa's Zoning By-Law, the purpose of the O1- Parks and Open Space Zone is to:

- Permit parks, open space and related and compatible uses to locate in areas designated as General Urban Area, General Rural Area, Major Open Space, Mixed Use Centre, Village, Greenbelt Rural and Central Area as well as in Major Recreational Pathway areas and along River Corridors as identified in the Official Plan, and
- Ensure that the range of permitted uses and applicable regulations is in keeping with the low scale, low intensity open space nature of these lands.

Following the Lansdowne 2.0 Zoning By-Law Amendment (ZBA) application and subsequent changes made in November 2023, the parcel east of the Stadium was zoned as L2C[2915]-h S258-A, S258-B, S487 to permit a broad range and intensity of leisure, recreational, cultural and related uses including sports arenas.

Figure 2-4 illustrates the existing site zoning at Lansdowne.

Figure 2-4: Existing Site Zoning



EXISTING CONDITIONS

2.1.1 Roads and Traffic Control

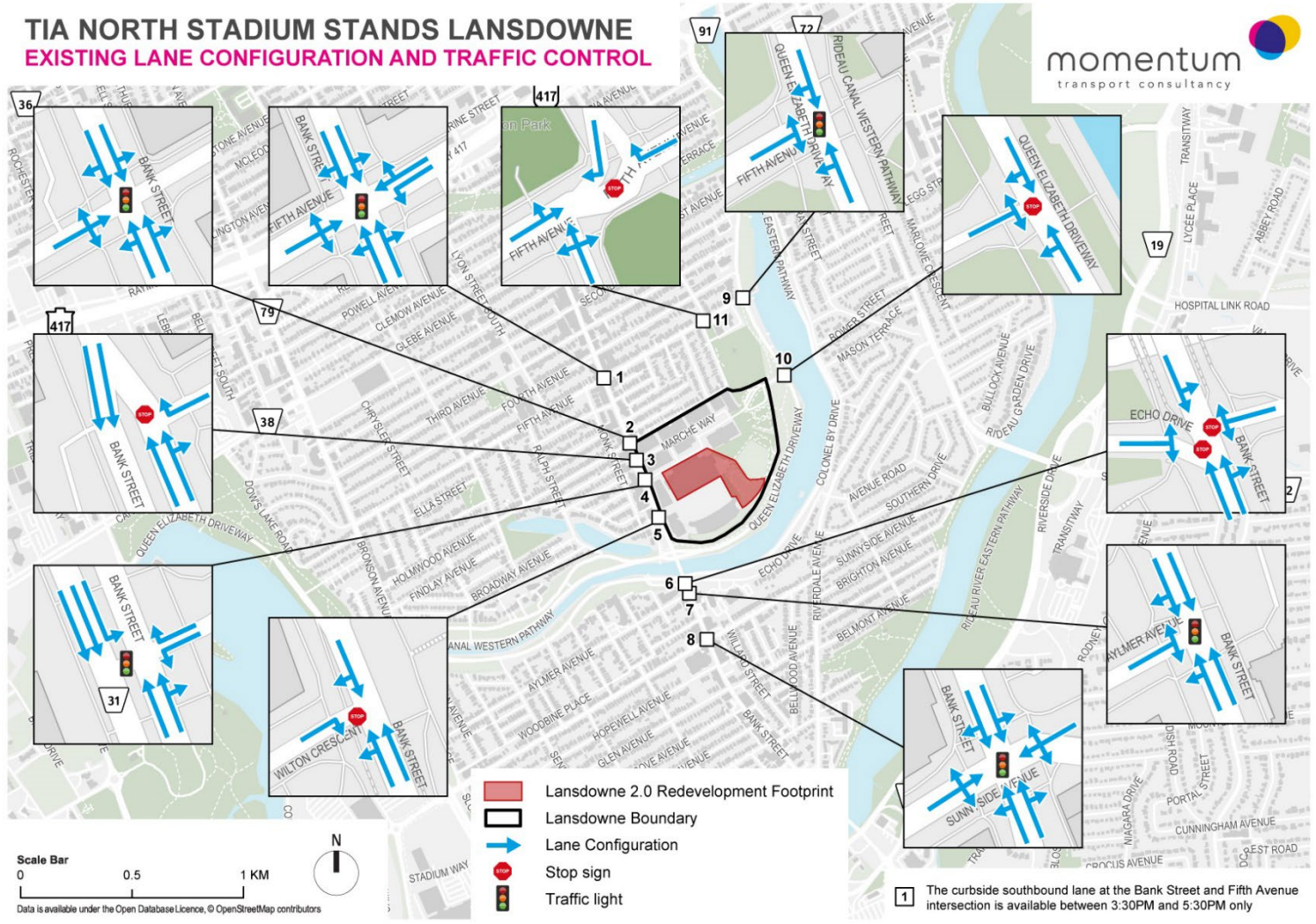
The roadways and intersections under consideration in the study area are described below:

- **Bank Street:** Bank Street is a four-lane arterial roadway with a posted speed limit of 40 km/h. The street is under the jurisdiction of the City of Ottawa. Sidewalks are provided on both sides of Bank Street. The roadway is designated as a truck route. Bank Street currently provides two access connections to Lansdowne with a signalized, full access movement at Exhibition Way, and an unsignalized right-in/right-out only access at Marché Way. On-Street parking is permitted north of Holmwood Avenue. On-street parking on Bank Street across the frontage of the subject site is prohibited at all times. As part of the Bank Street Canal Bridge Rehabilitation Project, 1.5m cycle tracks have been implemented on both sides of the Bank Street Bridge between Exhibition Way and Aylmer Avenue in conjunction with a 3-lane cross-section (2 northbound lanes, 1 southbound lane). Other than the newly installed cycling lanes on the Bank Street Bridge, there is a northbound bike lane on Bank Street across the frontage of the site.
- **Queen Elizabeth Driveway:** Queen Elizabeth Driveway is a two-lane scenic parkway that runs along the Rideau Canal and has a posted speed limit of 40 km/h. The parkway is a federal roadway under the jurisdiction of the National Capital Commission (NCC). In the vicinity of Lansdowne, the parkway features multi-use pathways on both sides which are designated as NCC Pathways as per the City of Ottawa Crosstown Bikeways Network Map 2023. The parkway currently provides two access connections to Lansdowne with an unsignalized, full-movements intersection at Princess Patricia Way, as well as a restricted special-use access located on the south side at the Great Lawn. On-street parking on Queen Elizabeth Driveway is prohibited at all times.
- **Fifth Avenue:** Fifth Avenue is a two-lane collector roadway with a posted speed limit of 40 km/h east of Bank Street, and a posted speed limit of 30km/h west of the Bank Street. There are existing sidewalks along both sides of the roadway. The south side of Fifth Avenue features an on-street cycling lane. The portion of Fifth Avenue from the Rideau Canal to O'Connor Street is designated as Crosstown Bikeway (Section 5) as per the City of Ottawa Crosstown Bikeways Network Map 2023. On-street parking on Fifth Avenue in the vicinity of the subject site is permitted on the northside of the roadway.
- **Holmwood Avenue:** Holmwood Avenue is a two-lane local road with a default speed limit of 30 km/h. East of the intersection with Bank Street, Holmwood Avenue is a one-way street providing access in the eastbound direction. The road features a cycling lane on the northside. West of the Bank Street intersection, Holmwood Avenue is a two-way street. On-street parking on Holmwood Avenue in the vicinity of the subject site is permitted on the southside of the roadway. Holmwood Avenue also includes access to the underground parking garage at Lansdowne what is restricted for residential uses only, and occasionally provides limited exit from the site during major events at Lansdowne.
- **Exhibition Way:** Exhibition Way is a two-way private roadway that functions as the primary access point to Lansdowne. The intersection with Bank Street is signalized with an auxiliary left turn lane in the southbound direction. There are existing sidewalks along both sides of the roadway. There are auxiliary left and right turn lanes in the west bound direction. Designated on-street parking spaces are provided with varying time limits.

- **Marché Way:** Marché Way is a two-way private roadway that functions as the secondary access point to Lansdowne. The intersection with Bank Street is unsignalized and functions as a right-in/right-out only access connection. There are existing sidewalks along both sides of the roadway. Designated on-street parking spaces are provided with varying time limits.
- **Wilton Crescent:** Wilton Crescent is a two-lane local roadway with a posted speed limit of 30 km/h. Left turn movements from Wilton Crescent to Bank Street are prohibited at all times. The intersection with Bank Street is stop controlled along Wilton Crescent. There are existing sidewalks along both sides of the roadway. Wilton Crescent was recently reconstructed with wider sidewalks, and bike lanes between Monk Street and Bank Street. On-street parking is permitted on the northside of the roadway at specific times.
- **Echo Drive:** Echo Drive is a one-lane local roadway with a default speed limit of 40 km/h. Through and left turns off Echo Drive are prohibited. Echo Drive is a one-way road stop controlled along Echo Drive. The roadway has a sidewalk on the north side.
- **Aylmer Avenue:** Aylmer Avenue is a two-lane local roadway with a posted speed limit of 30 km/h. Sidewalks are provided along both sides of Aylmer Avenue. There is an eastbound bike lane on Alymer Avenue (on the south side of the street). On-street parking is permitted on the north side of the roadway.
- **Sunnyside Avenue:** Sunnyside Avenue is a two-lane collector roadway with a posted speed limit of 30 km/h. On-street parking is permitted on the southside of the roadway west of the intersection with Bank Street.
- **O'Connor Street:** O'Connor Street is a two-lane local roadway with a posted speed limit of 30 km/h. South of Fifth Avenue, O'Connor Street is a one-way local road with a dedicated contraflow bike lane on the west side and on-street parking permitted on the east side. North of Fifth Avenue, O'Connor Street is a two-way local road with on-street parking permitted on the east side, and is designated as Crosstown Bikeway (Section 5) as per the City of Ottawa Crosstown Bikeways Network Map 2023.

Figure 2-5 illustrates the existing lane configuration and traffic control.

Figure 2-5: Existing Lane Configuration and Traffic Control



2.1.2 Walking and Cycling

The study area is adequately connected to pedestrian facilities with sidewalks along all study area roadways.

There are currently dedicated bike lanes on Fifth Avenue (east of Bank Street), Aylmer Avenue, and Holmwood Avenue (east of the Bank Street) which forms a connection to the O'Connor Street bike lanes and cycle tracks.

Queen Elizabeth Driveway, which is under the jurisdiction of the NCC, features off-street multi-use pathways.

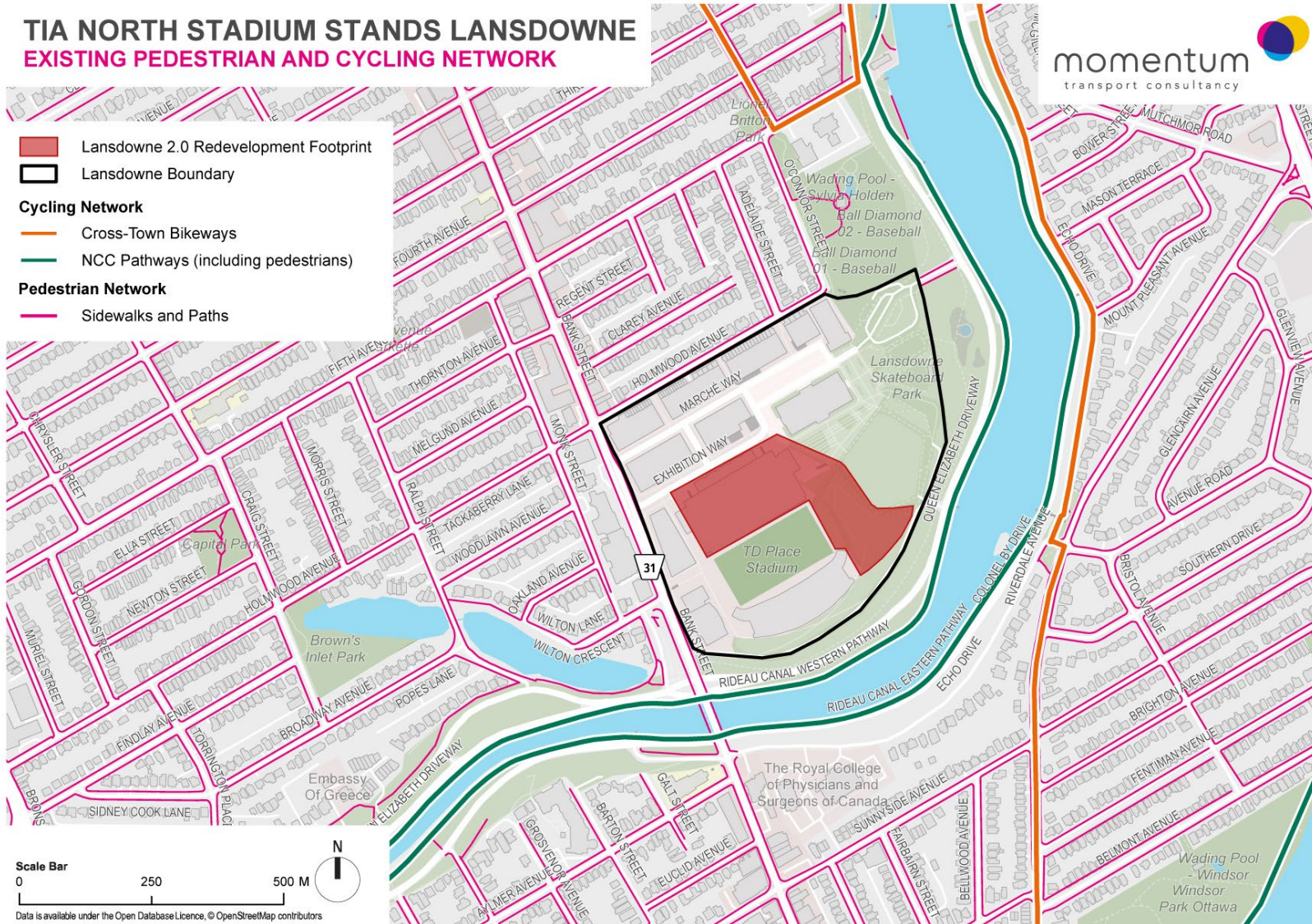
The Flora Footbridge connection, which was opened in June 2019, provides a cycling and walking connection on both sides of the Rideau Canal at Fifth Avenue / Clegg Street. 1.5m cycle tracks have been implemented on both sides of the Bank Street Bridge between Exhibition Way and Aylmer Avenue.

The Ultimate Cycling Network from the 2013 Ottawa Cycling Plan has now been superseded by the 2023 Transportation Master Plan and the updated Crosstown Bikeway Network.

Fifth Street between O'Connor and the Rideau Canal is designated as Crosstown Bikeway, and the Queen Elizabeth Driveway multi-use path (Rideau Canal Western Pathway) is designated NCC Pathway.

Figure 2-6 illustrates existing and planned pedestrian and cycling facilities within the vicinity of Lansdowne.

Figure 2-6: Existing and Planned Pedestrian and Cycling Network



2.1.3 Transit

OC Transpo transit service is currently provided at Lansdowne through OC Transpo bus routes 6 and 7.

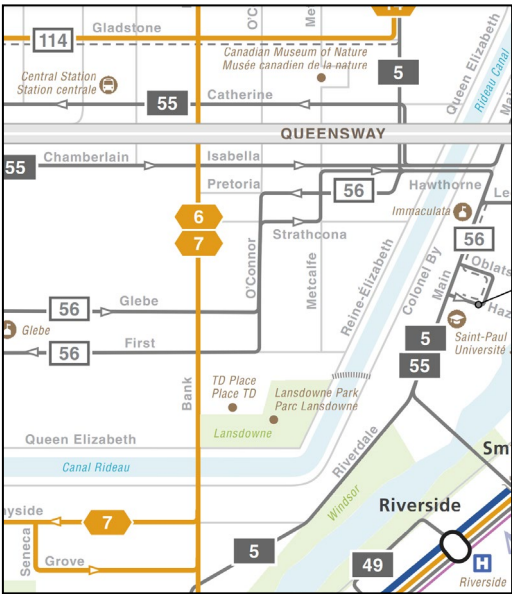
Route 6 is a Frequent Route that runs 7 days per week in all time periods between Greenboro and Rockcliffe. It runs with 15-minute headways or less during the weekday peak periods and 15-minute or less headways during the weekend peak periods.

Route 7 is a Frequent Route that runs 7 days per week in all time periods between Carleton University and St. Laurent. It runs with 15-minute headways or less during both peak periods during weekdays and 15-minutes or less headways during the weekend peak.

Bus stops are provided at the intersection of Bank Street and Exhibition Way.

Figure 2-7 illustrates transit routes in the vicinity of Lansdowne.

Figure 2-7: Study Area Transit Route and Stops



Enhanced transit services are provided to support special events at Lansdowne and TD Place. This includes the provision of free transit to ticketholders for all events held at Lansdowne through an innovative program that is the first of its kind for large venues. The cost of transit service is free of charge for event goers and is borne by the Ottawa Sports and Entertainment Group (OSEG) for any service enhancements provided for events with 5,000 or more attendees. Transit service for special events includes providing supplemental trips on OC Transpo routes 6 and 7 for minor events with attendance levels of 10,000 or less.

For Ottawa 67's and PHLW Ottawa games, park & shuttle service is provided to ticket holders from Carleton University. Ticket holders can park at Carleton University starting 90 minutes before the start of Ottawa 67's and PHLW Ottawa games with services provided until 60 minutes post-games. The cost of parking and shuttle service is free to ticket holders and is borne by OSEG. Shuttle bus service is provided from Carleton University's P18 Parkade with service provided to Lansdowne provided through Sunnyside Avenue and Bank Street.

Figure 2-8 illustrates the Carleton U shuttle route for Ottawa 67's and PHLW Ottawa games.

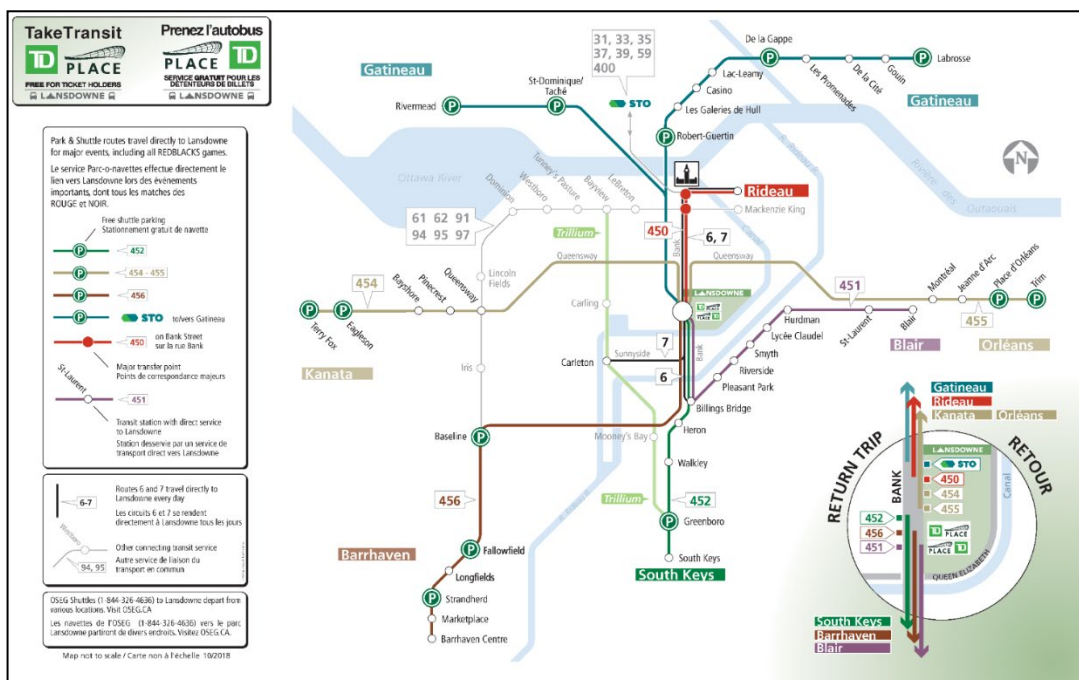
Figure 2-8: Carleton U Park & Shuttle Route (Ottawa 67's and PWHL Ottawa)



For major events, which include events with 10,000 or more attendees, dedicated Park & Shuttle services is provided with event day services provided from OC Transpo Park & Ride locations, as well as privately run shuttles operated by OSEG. Major event transit service typically starts two hours prior to the start of a ticketed event for ingress service, and two hours after the end of a ticketed event for egress service.

Figure 2-9 illustrates special event transit and shuttle services to TD Place.

Figure 2-9: Enhanced Transit and Shuttle Service to TD Place



2.1.4 Traffic Management Measures

Traffic management measures are deployed at Lansdowne to manage traffic flow for day-to-day operations as well as during special events. Under regular day-to-day operations, vehicle access to the site is permitted on both Bank Street and Queen Elizabeth Driveway. Internal vehicle circulation is permitted through the site on Exhibition Way, Marche Way, and Princess Patricia Way, with the exception of a portion of Princess Patricia Way near the Aberdeen Pavilion that is a pedestrian-only zone. Other internal circulation pathways including Frank Clare Lane and the Great Lawn which are restricted use-only for emergency vehicles, deliveries, and accessible transit service (i.e. ParaTranspo) when required.

For minor events, such as events held at TD Place Arena, vehicle access is permitted on both Bank Street and Queen Elizabeth Driveway. Depending on programming activities at TD Place and Lansdowne Park, traffic management measures to reduce vehicular through traffic on Exhibition Way are deployed to re-route internal traffic circulation to Marche Way, where pedestrian activity is lower.

For major events, traffic management measures include the deployment of traffic control devices and police point duty along Bank Street and Queen Elizabeth Driveway to help manage traffic flow and accommodate safe pedestrian crossings. Vehicle access to the site is restricted during major events at the stadium, such as football games, to minimize pedestrian and vehicle conflicts. Vehicle access from Bank Street is restricted at both Exhibition Way and Marche Way. Vehicle access is only permitted at the Queen Elizabeth Driveway access for underground parking garage and pick-ups / drop-offs at the shuttle loop. Vehicle circulation through the site is restricted. While access to Lansdowne is restricted during major events, existing retail patrons and residents continue to access the underground parking facility at Lansdowne from Queen Elizabeth Driveway, which is designated as a 'Federally Owned Road' per Schedule C4 of the Official Plan. In addition, residents are able to access underground parking through a residents-only underground garage ramp on Holmwood Avenue. In addition, on-street parking on Bank Street is temporarily prohibited during large events in order to support special event enhanced transit and shuttle service operations to TD Place.

Lansdowne is designated as a pedestrian-priority zone and features many pedestrian-only pathways and connections. This includes pathway connections from Queen Elizabeth Driveway, a stairway gate entrance on Bank Street by 'TD Place Gate 1', and several laneways connecting to Holmwood Avenue at the northern side of the district.

Existing site access and internal circulation areas during normal operations, minor events, and major events are illustrated in **Figure 2-10** through **Figure 2-12**.

Figure 2-10: Existing Internal Site Circulation

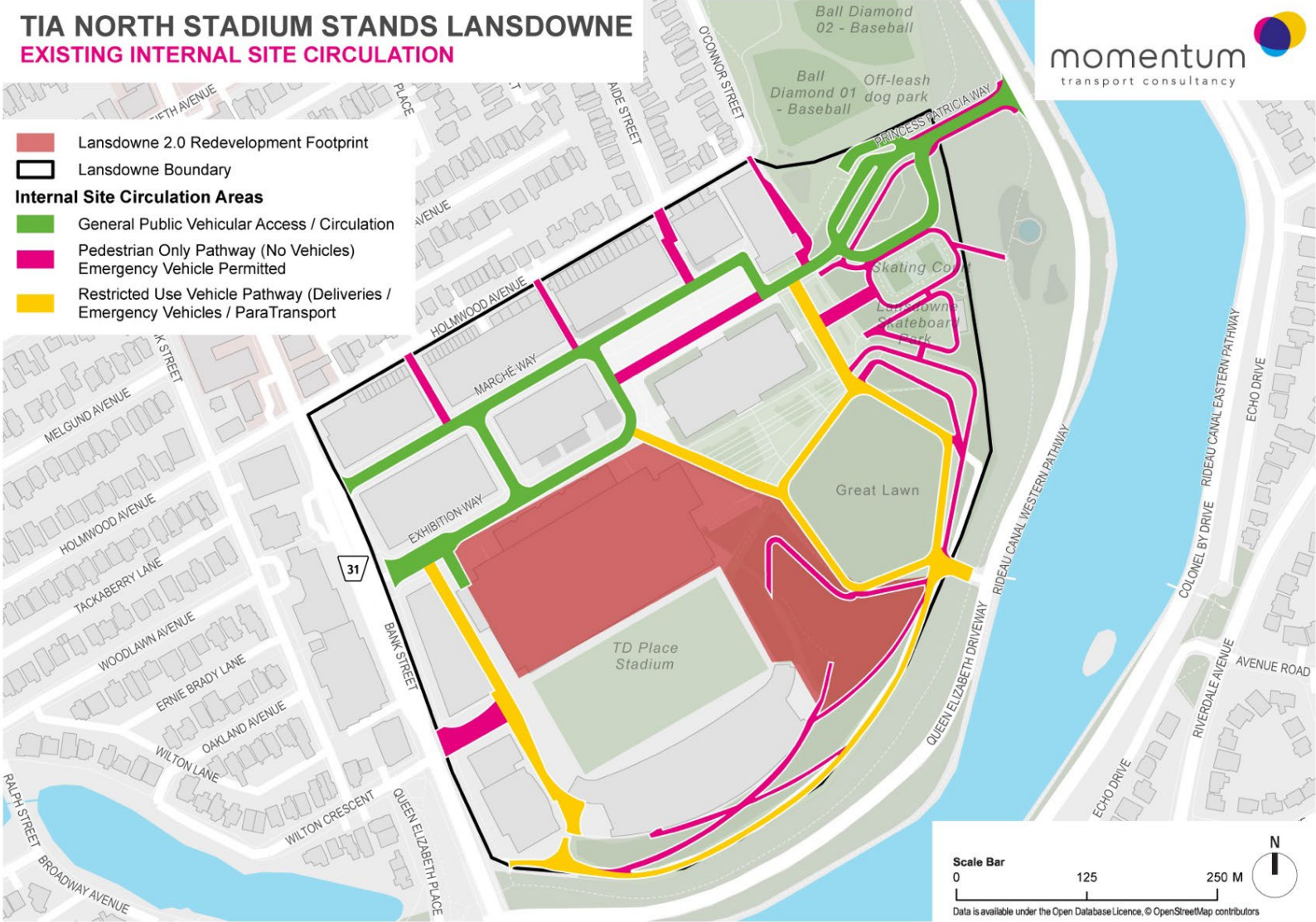


Figure 2-11: Existing Internal Site Circulation (Minor Events)

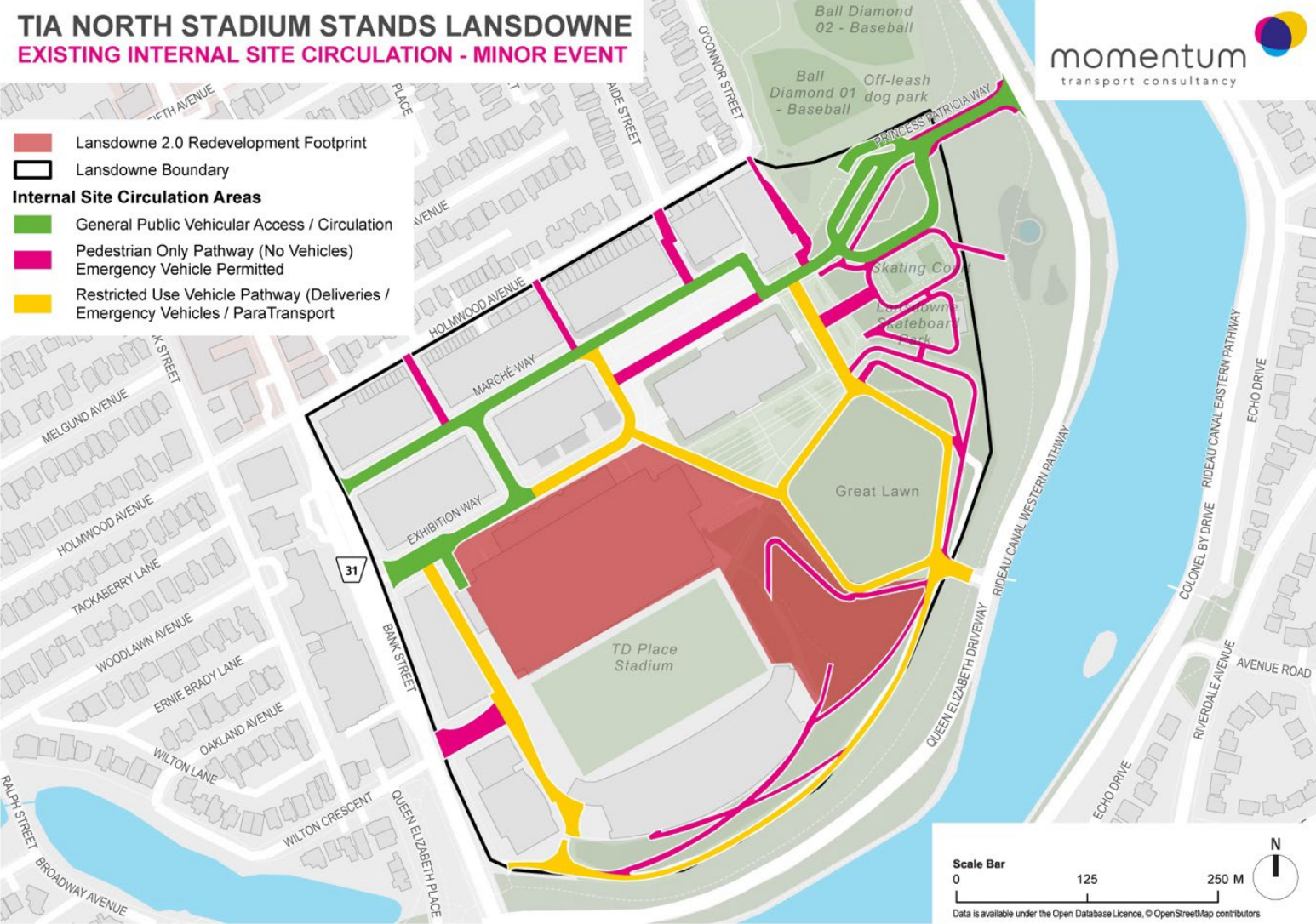
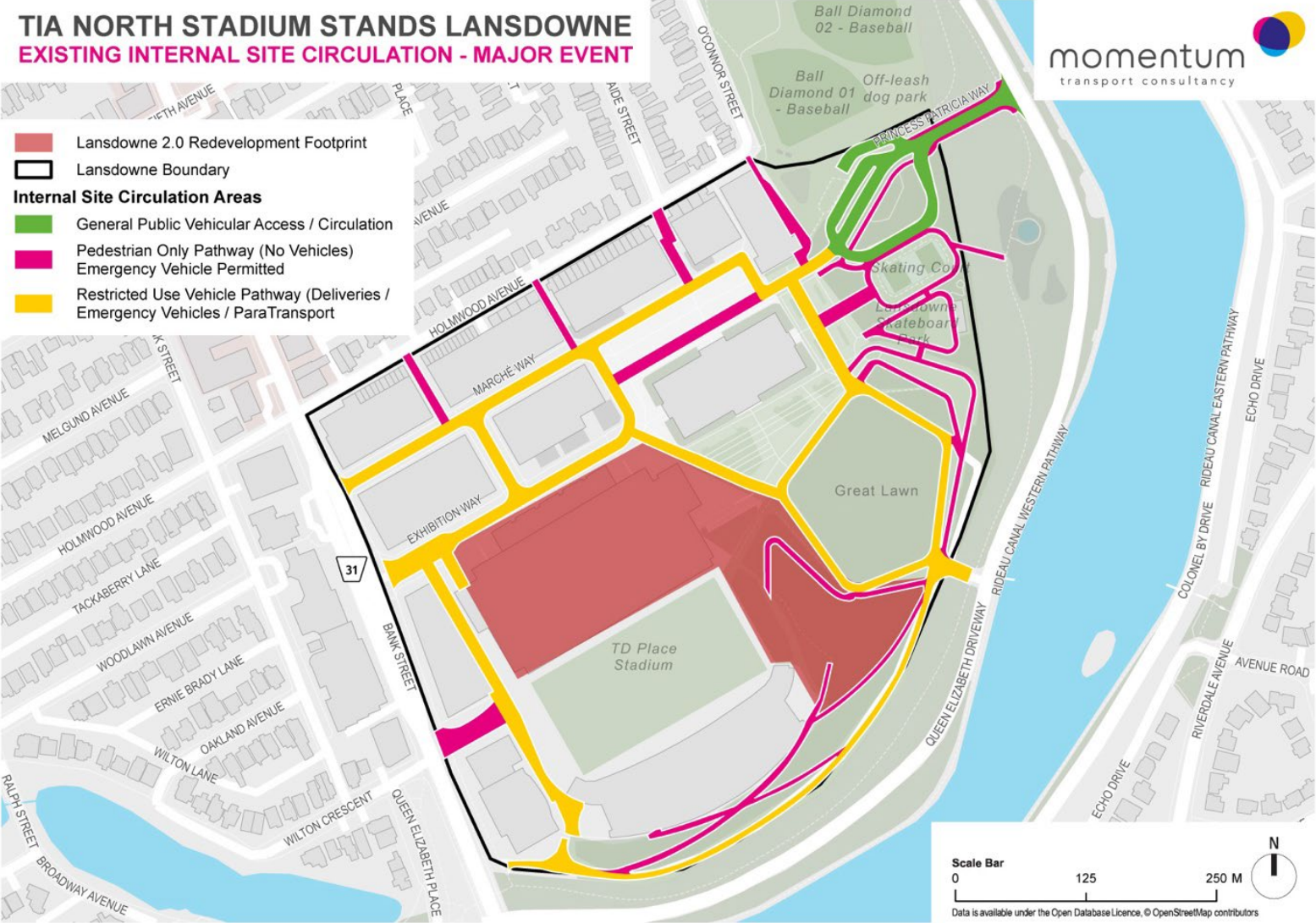


Figure 2-12: Existing Internal Site Circulation (Major Events)



2.2 Traffic Volumes

Recently collected intersection traffic data were obtained from the City of Ottawa. This included traffic data captured for regular weekdays (AM and PM peak periods), a weekday minor event at TD Place Arena, a weekday major event at TD Place Stadium, as well as the Saturday and Sunday weekend mid-day peaks with concurrent programming and events at TD Place and Lansdowne Park. Traffic data was obtained for the following periods:

Typical Weekday Period (AM/PM Peak):

- Tuesday, May 3rd, 2022 / Wednesday, May 11th, 2022 (Weekday AM and PM).

Weekend Saturday Peak Period (Mid-Day Peak):

- Saturday, May 7th, 2022 (Saturday Mid-Day), representative of multi-event activity at Lansdowne including an Atlético Ottawa soccer match at TD Place Stadium (6:00 pm kick-off) with an attendance of 3,555 spectators.

Weekend Sunday Peak Period:

- Sunday, June 9th, 2024 (Sunday Mid-Day), representative of multi-event activity at Lansdowne inclusive of the weekly Ottawa Farmer's Market, retail activity, and three back-to-back events at TD Place Arena for the Volleyball Nations League (VNL) featuring tournament games throughout the day (11:00 am, 2:30 pm, and 6:00 pm matches). Traffic captures on this day also reflects altered traffic patterns resulting from the planned closure of Queen Elizabeth Driveway between Somerset Street and Fifth Avenue as part of the National Capital Commission Weekend Bikedays programming on the driveway.

Minor Arena Event:

- Monday, May 9th, 2022 (Special Event Concert at the Arena at TD Place. Start time of 7:30 pm, End time of 10:30 pm.

Major Stadium Event:

- Friday, October 14th, 2022 (REDBLACKS Football Game at TD Place. Start time of 7:30pm, End time of approximately 10:30pm.

Intersection turning movement count summary data for the various time periods collected are illustrated in **Figure 2-13** through **Figure 2-27**.

Turning movement count data is documented in **Appendix A**.

Figure 2-13: Existing Weekday AM and PM Traffic Volumes

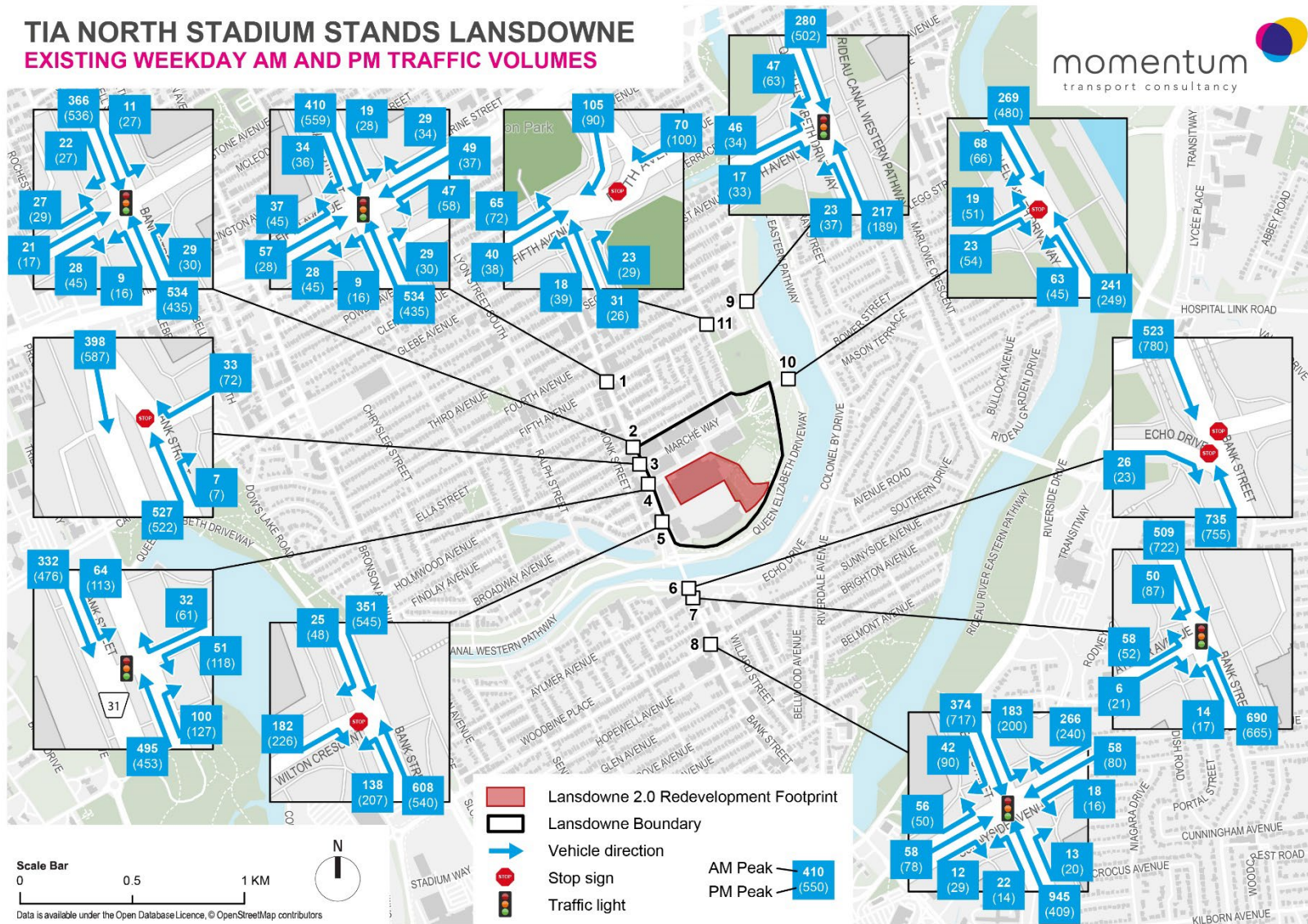


Figure 2-14: Existing Weekday AM and PM Peak Internal Traffic Volumes

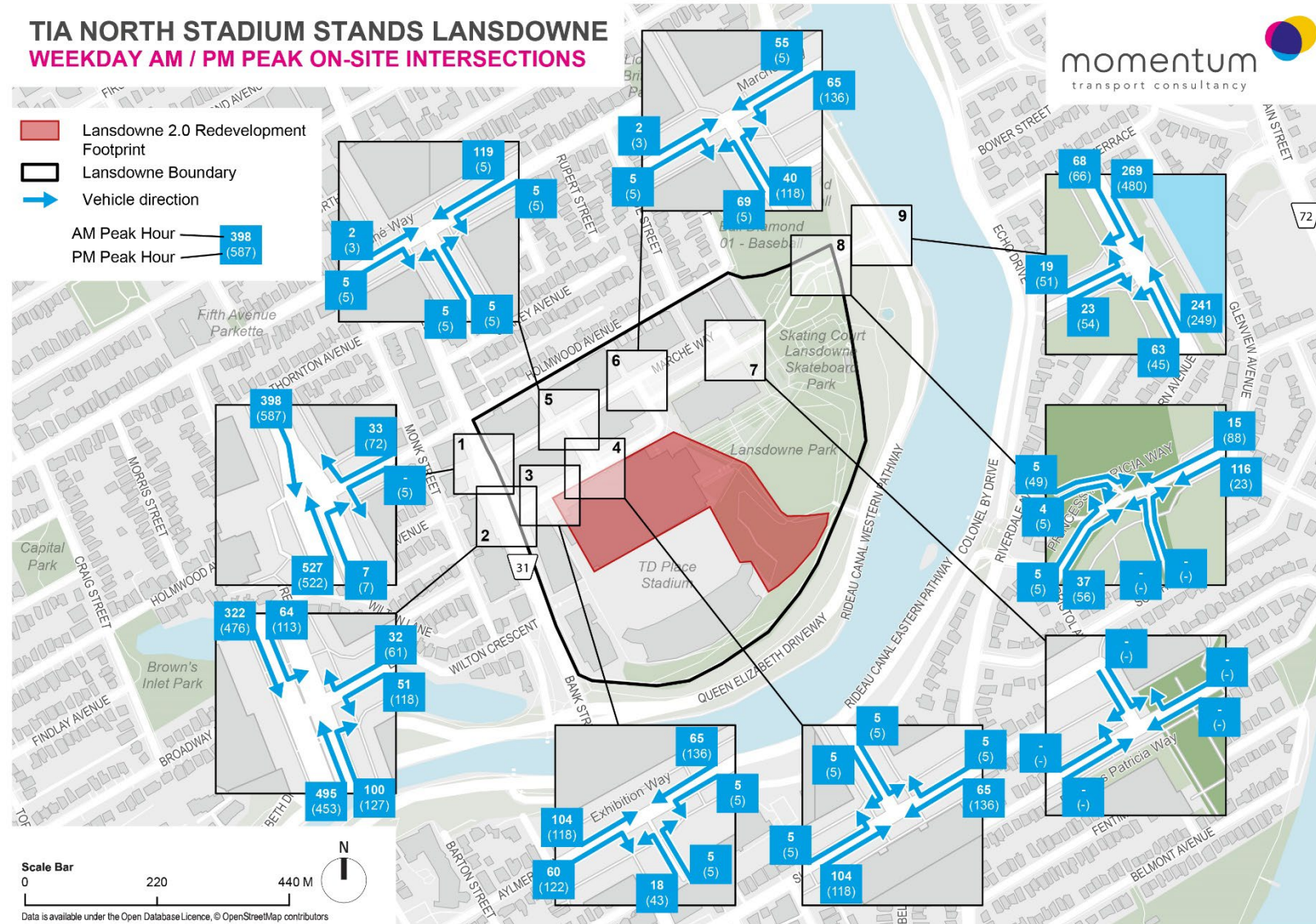


Figure 2-15: Existing Weekday/Weekend Pedestrian Volumes

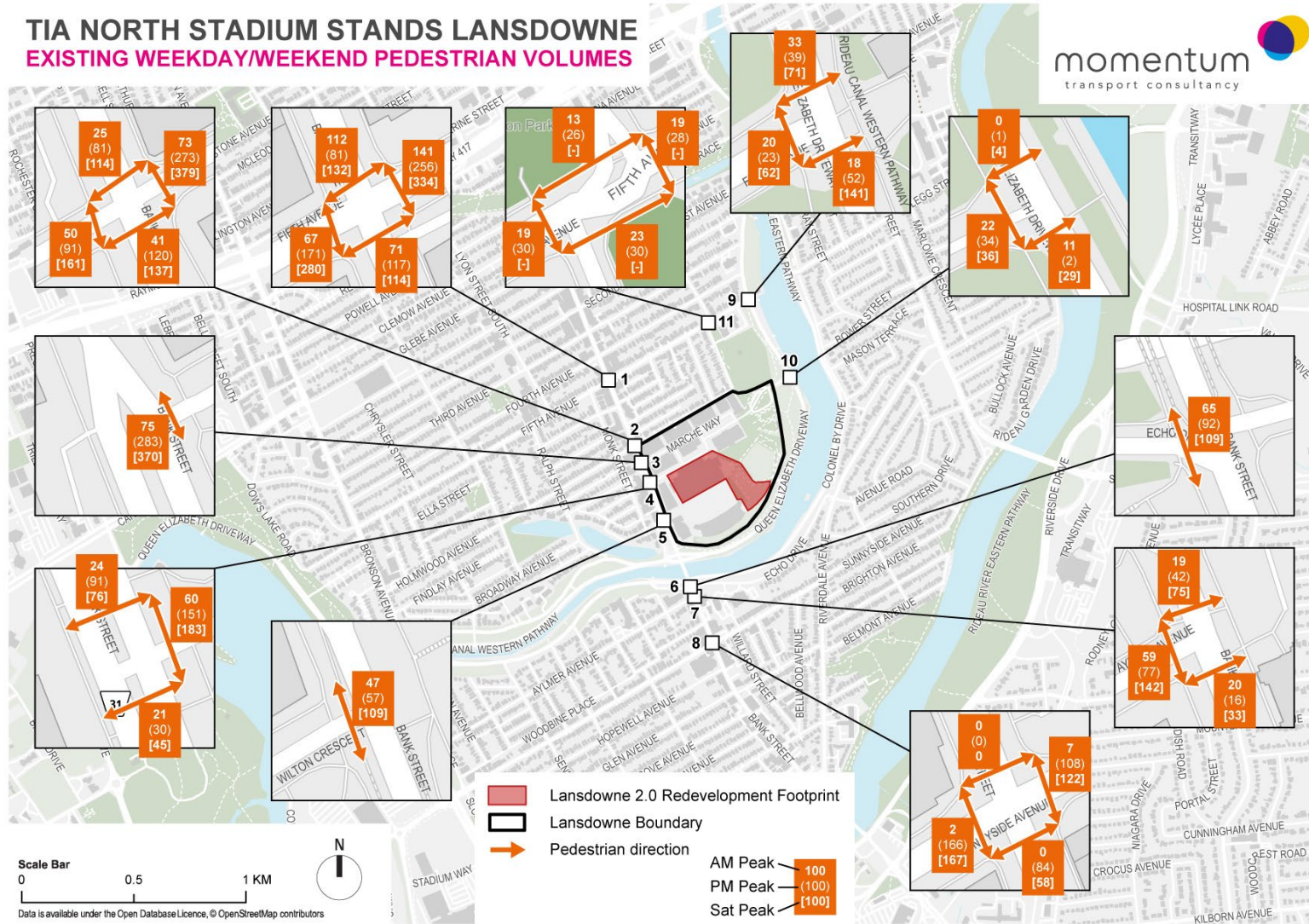


Figure 2-16: Existing Weekday/Weekend Bicycle Volumes

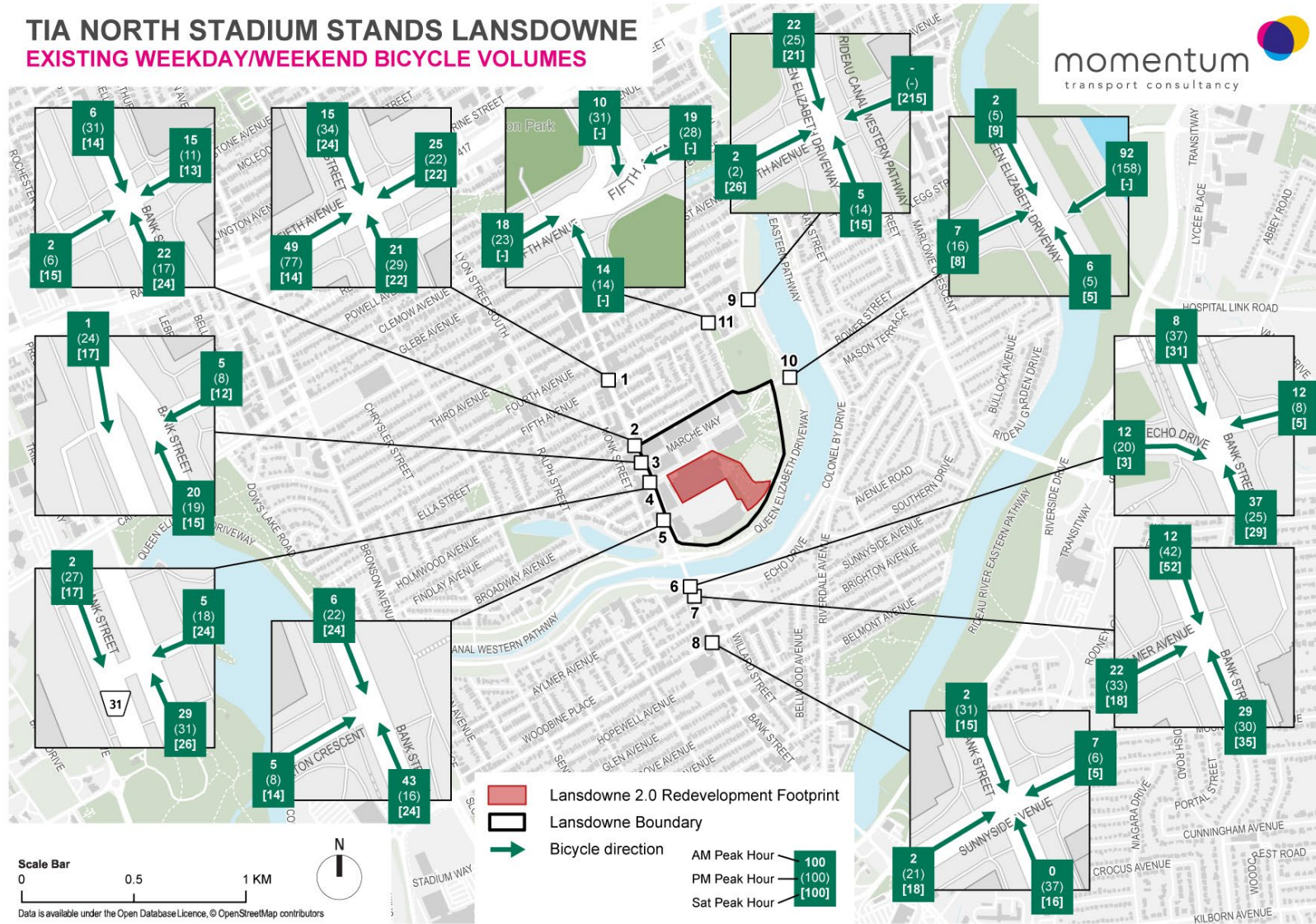


Figure 2-17: Existing Saturday PM Traffic Volumes

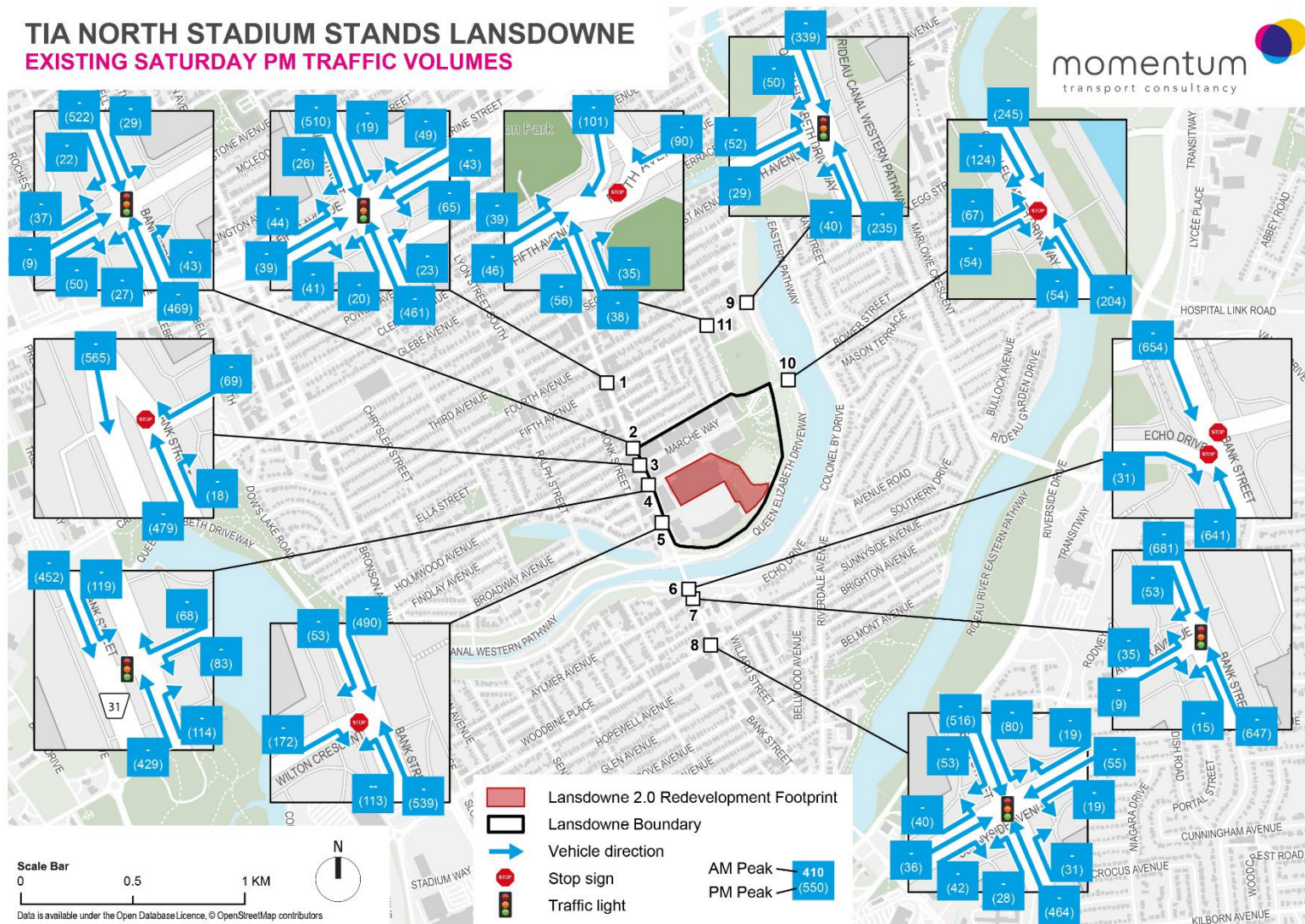


Figure 2-18: Existing Saturday PM Internal Traffic Volumes

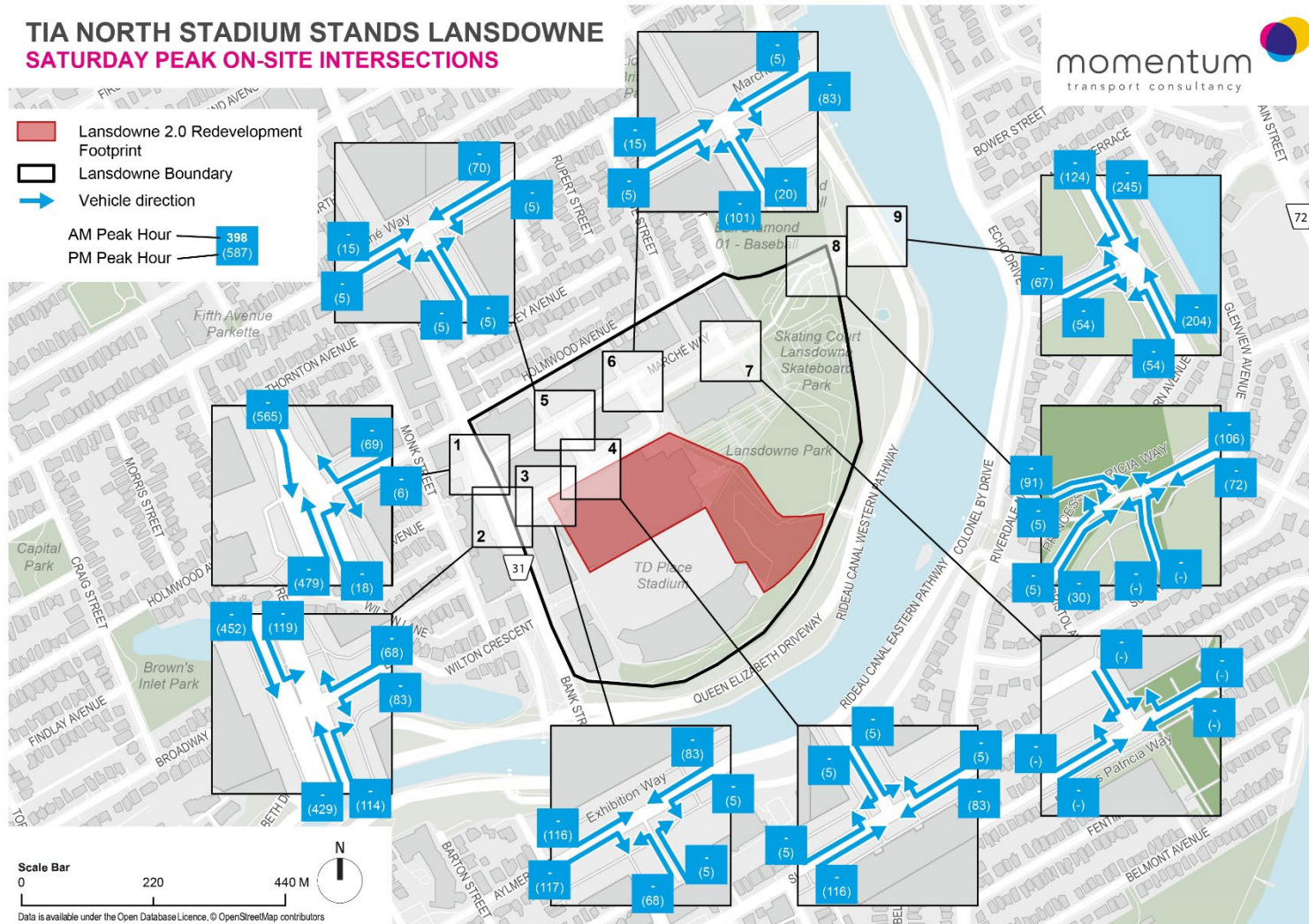


Figure 2-19: Existing Sunday PM Traffic Volumes

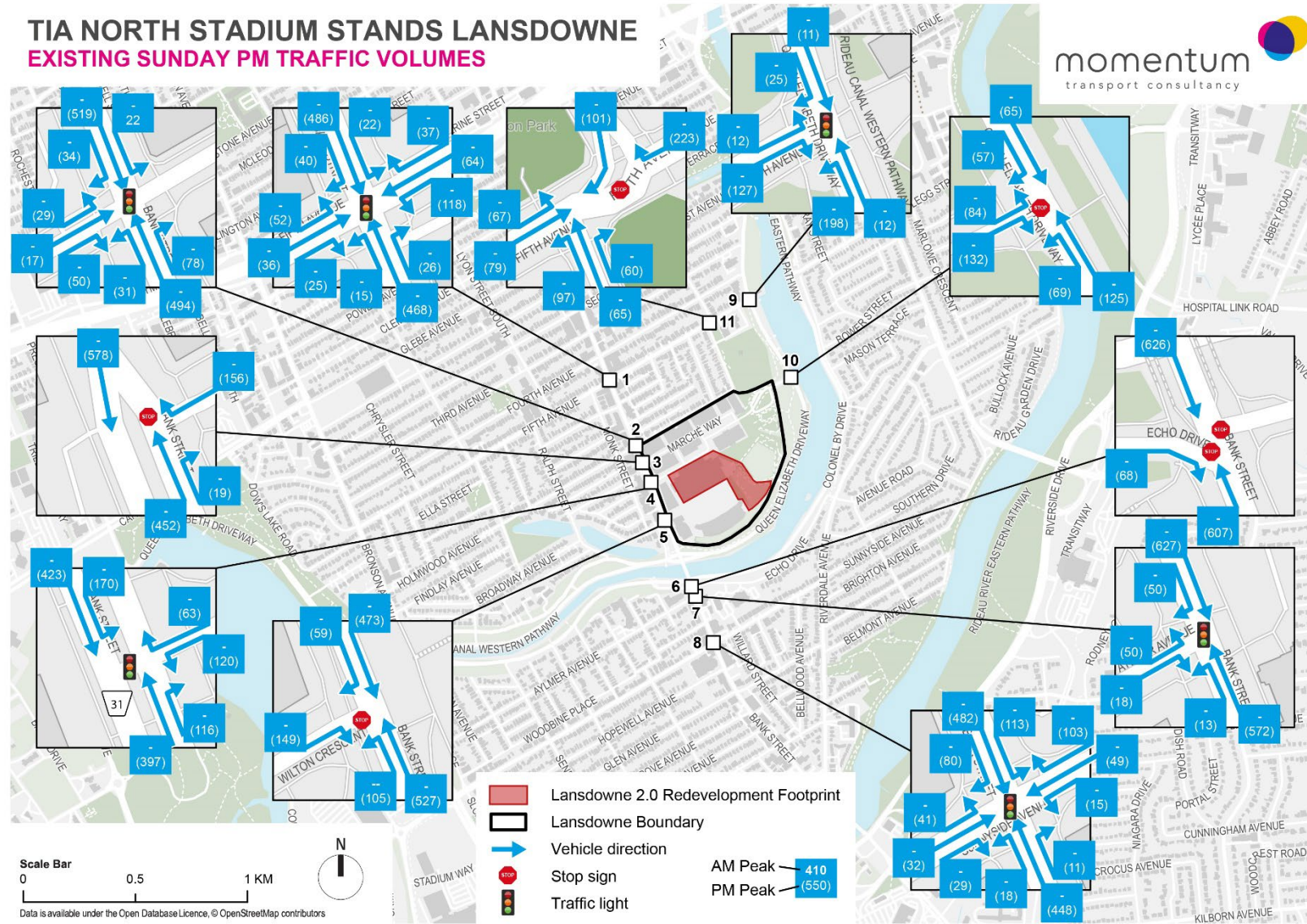


Figure 2-20: Existing Sunday PM Internal Traffic Volumes

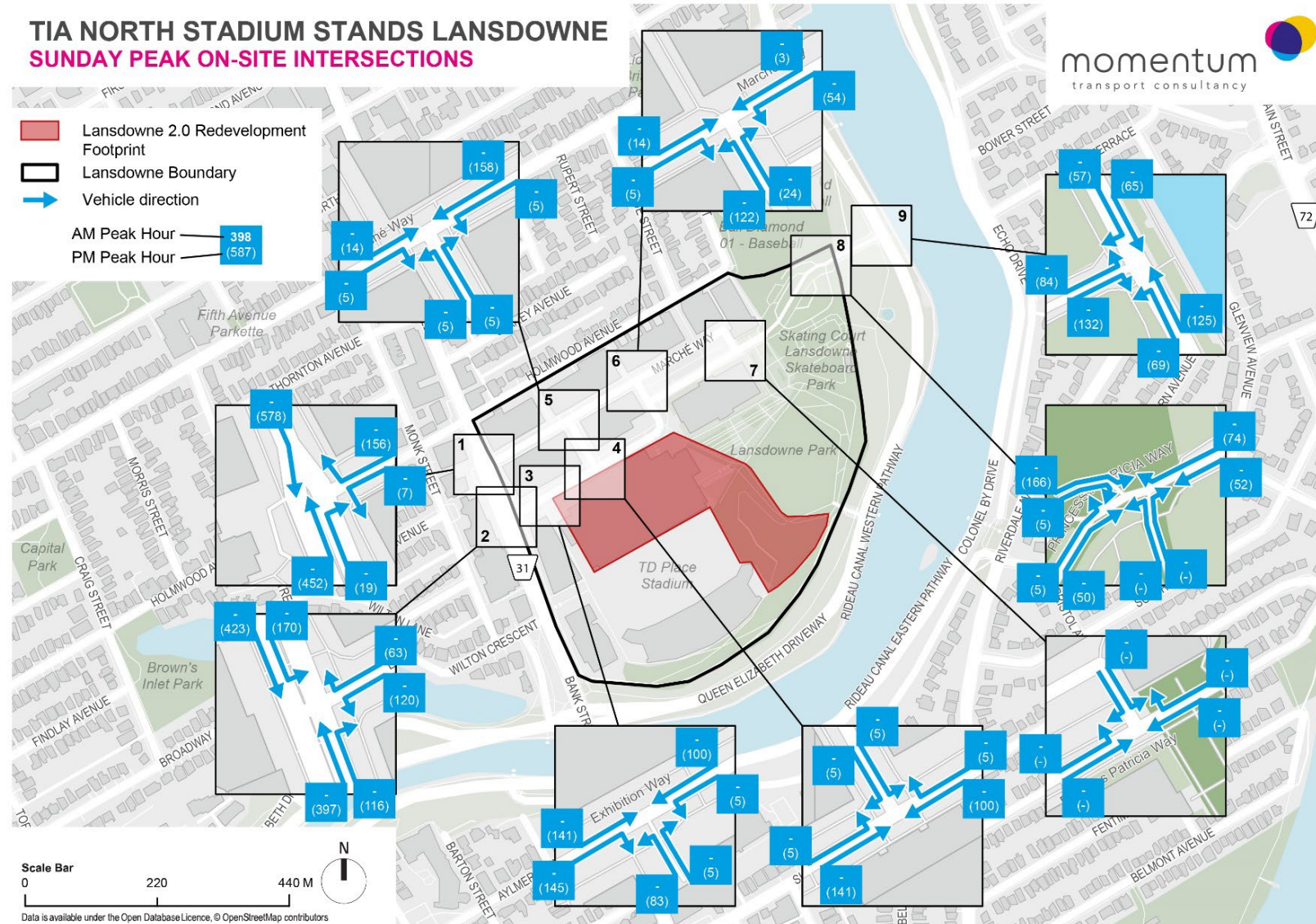


Figure 2-21: Existing Minor Event Traffic Volumes

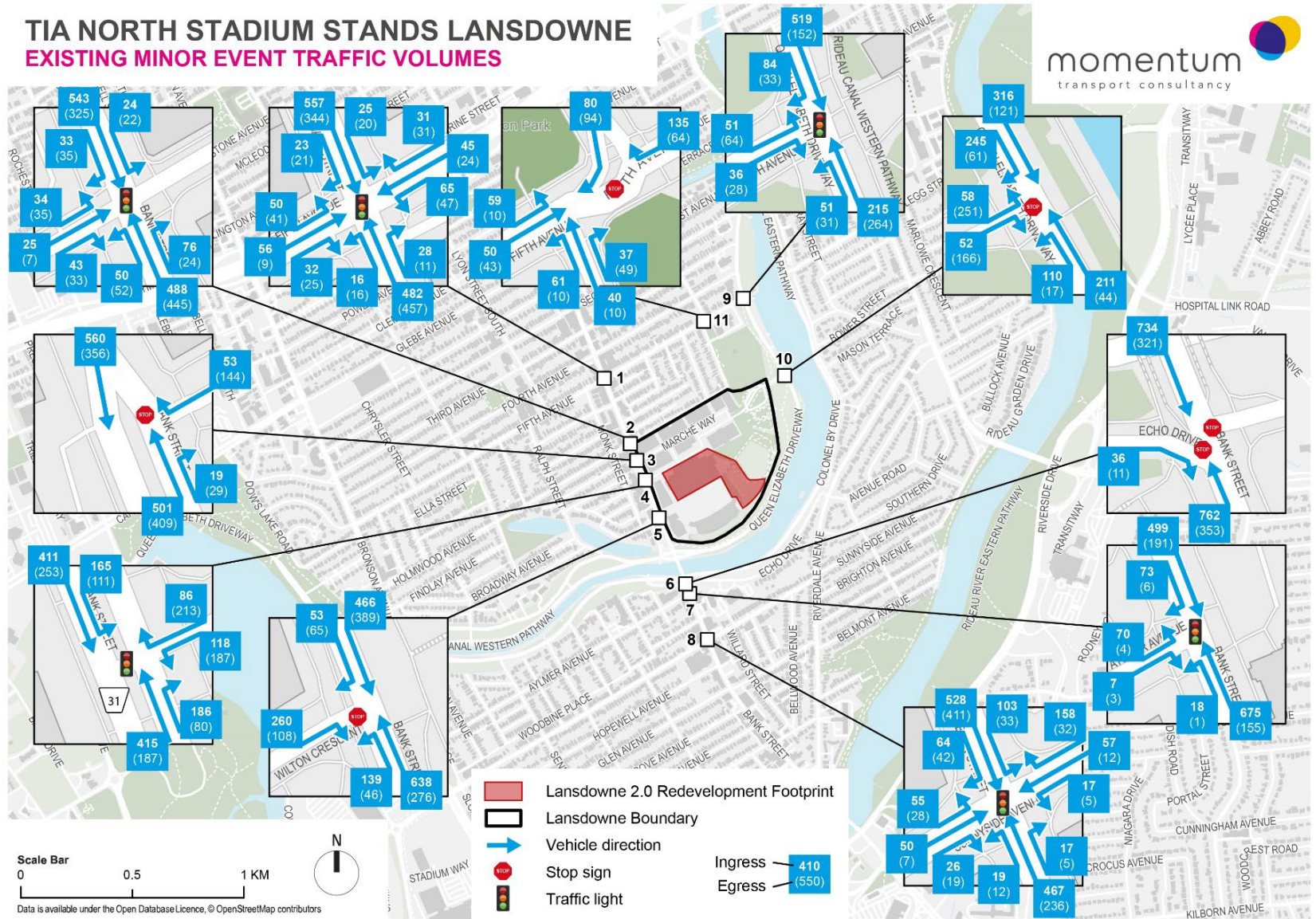


Figure 2-22: Existing Minor Event Internal Traffic Volumes

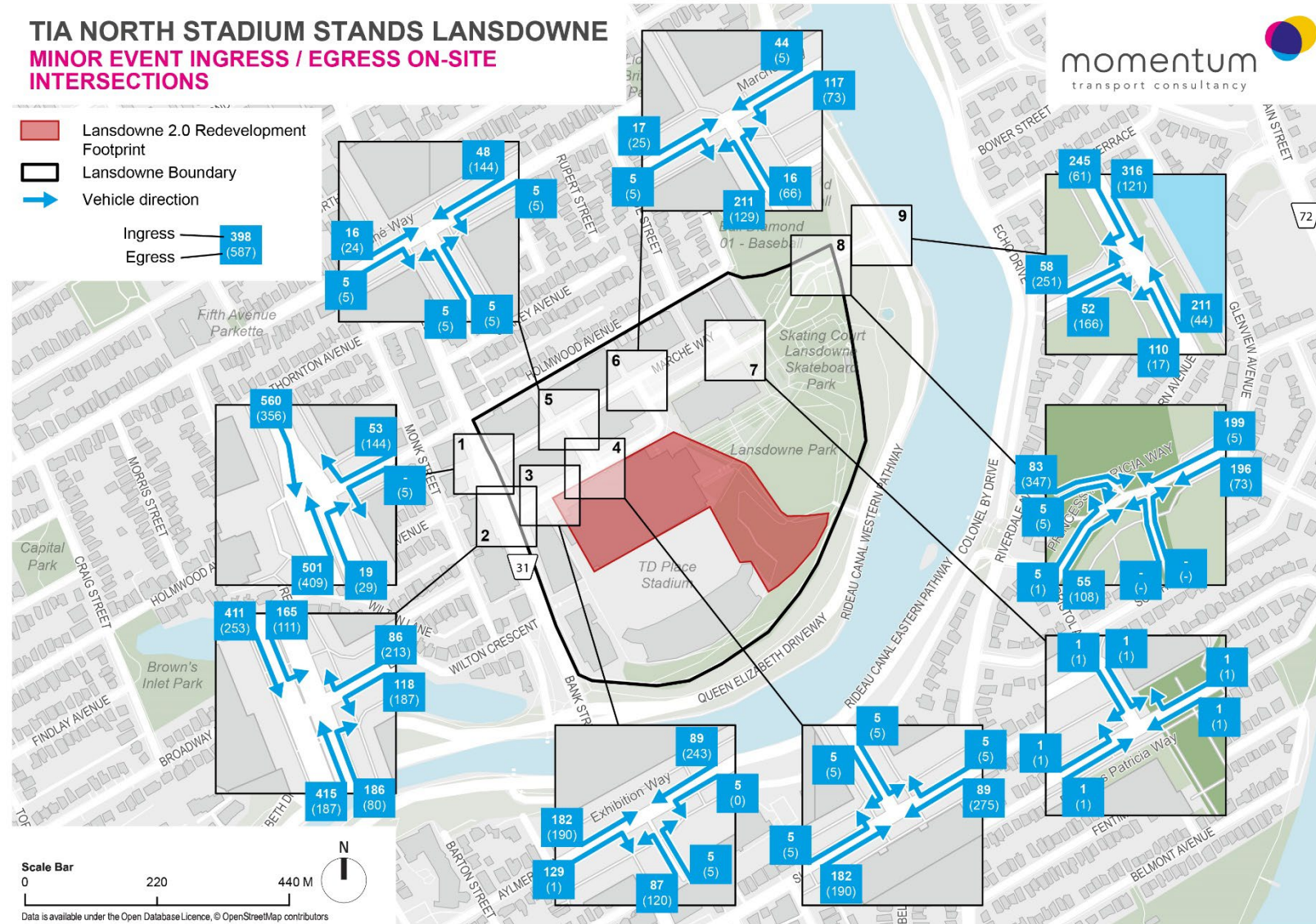


Figure 2-23: Existing Minor Event Pedestrian Volumes

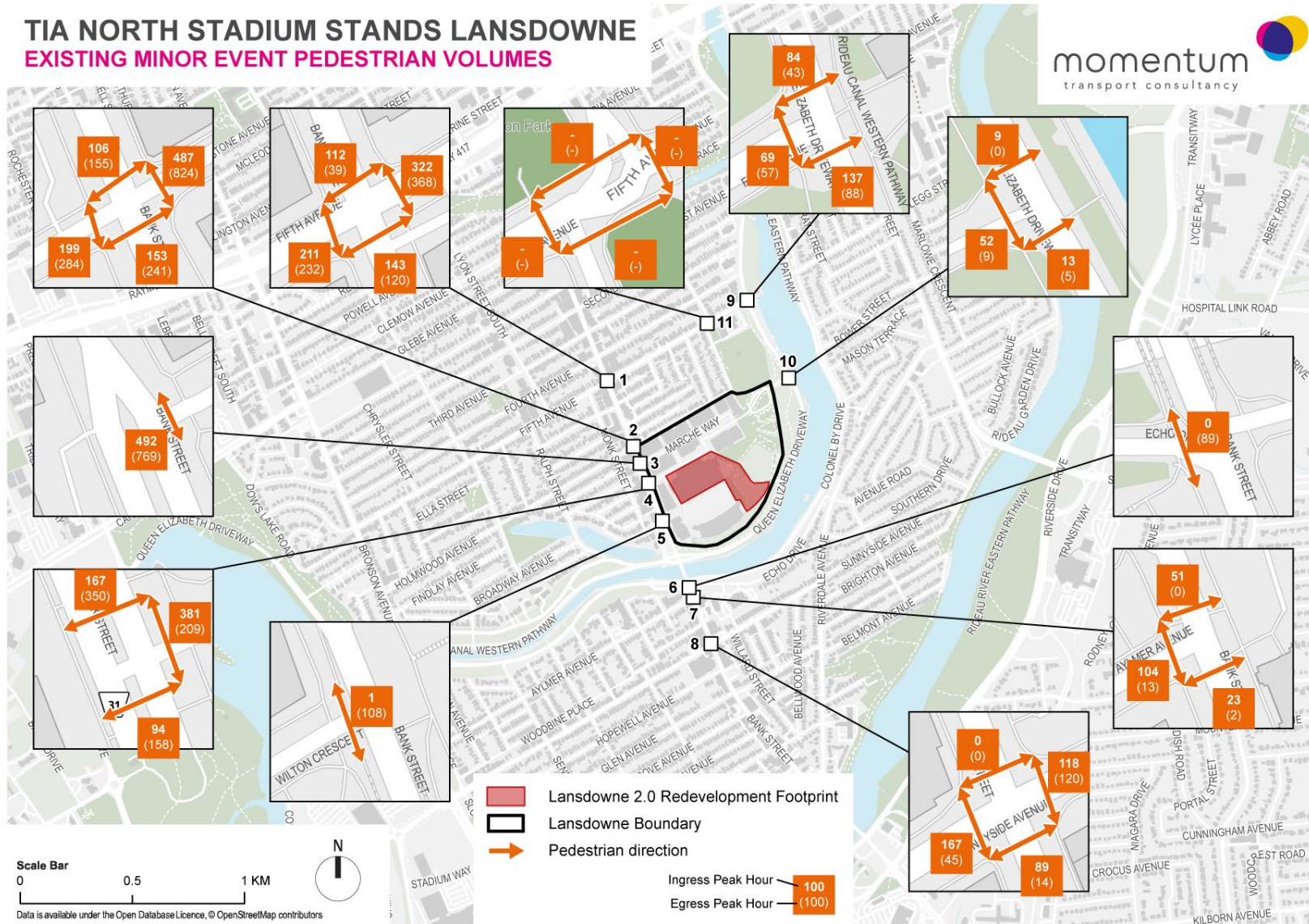


Figure 2-24: Existing Minor Event Bicycle Volumes

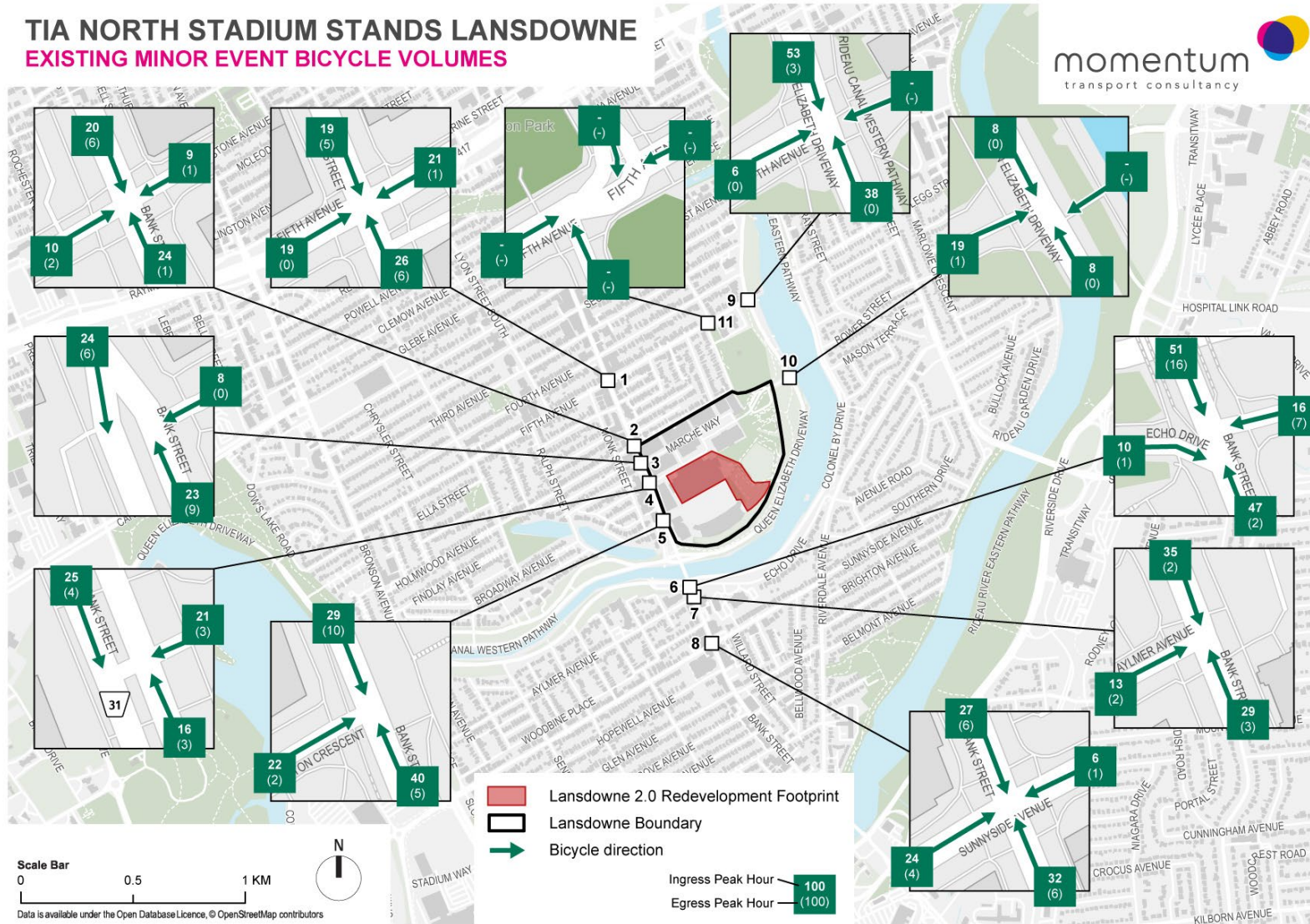


Figure 2-25: Existing Major Event Traffic Volumes

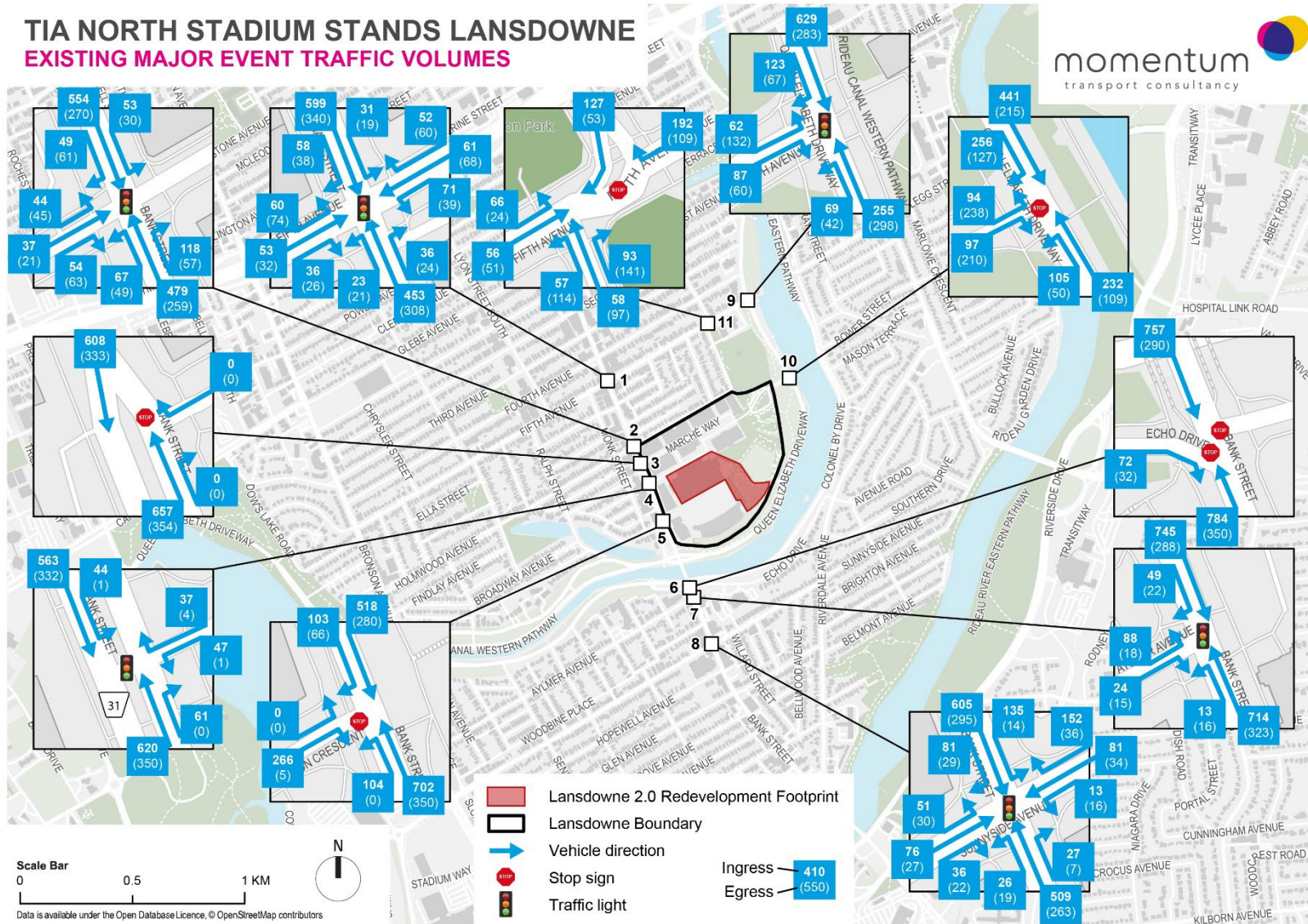


Figure 2-26: Existing Major Event Pedestrian Volumes

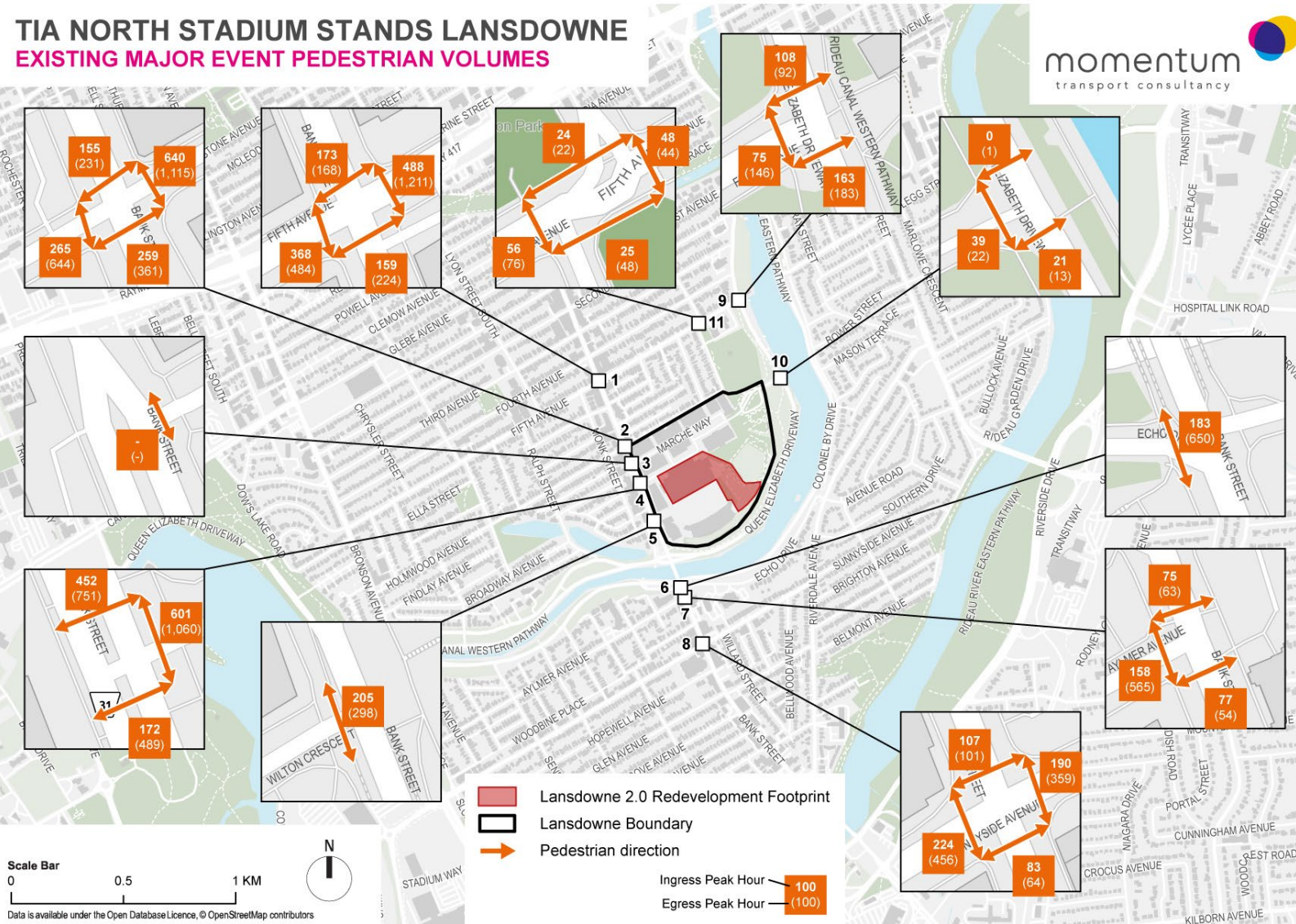
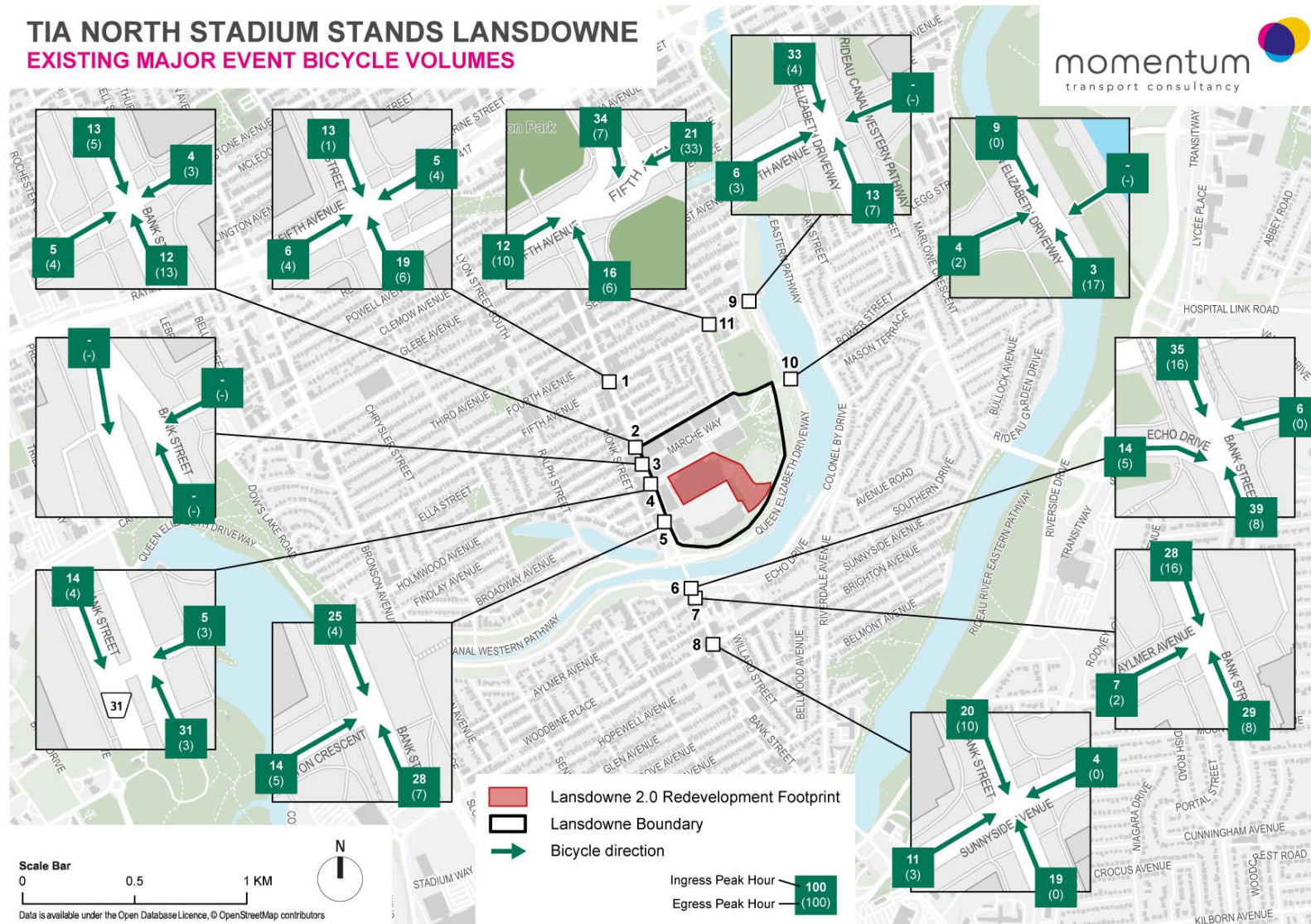


Figure 2-27: Existing Major Event Bicycle Volumes



2.2.1 Collision History

Collision data was provided by the City of Ottawa for the period January 2017 to December 2021 in the vicinity of Lansdowne and TD Place. The data was reviewed to determine if any intersections exhibited identifiable collision patterns.

Table 2-1 summarizes the collision class and impact types for study area intersections.

Table 2-1: Collision Summary

LOCATION	CLASS	IMPACT TYPE				
		Sideswipe	Angle / Turning	Rear End	Single Vehicle	Other
Bank Street at Exhibition Way	Property Damage	1		4	1	
	Non-Fatal Injury					
Bank St at Marche Way	Property Damage			1		
	Non-Fatal Injury				1	
Bank St at Fifth Ave	Property Damage	3	2	3	1	
	Non-Fatal Injury		3	1	2	
Bank St at Holmwood Ave	Property Damage	3	6	2		
	Non-Fatal Injury		1			
Bank St at Wilton Cres	Property Damage	2	3	3	1	
	Non-Fatal Injury	1	3	1		
Bank St at Echo Dr	Property Damage	1	2			1
	Non-Fatal Injury					
Bank St at Aylmer Ave	Property Damage	4	2	4		
	Non-Fatal Injury			1	1	
Bank St at Sunnyside Ave	Property Damage	7	5	1		
	Non-Fatal Injury		3	1	3	
Queen Elizabeth Dr at Fifth Ave	Property Damage			3		
	Non-Fatal Injury					
Queen Elizabeth Dr at Princess Patricia Way	Property Damage	1	2	1		
	Non-Fatal Injury		2			1
Fifth Avenue at O'Connor Street	Property Damage					2
	Non-Fatal Injury					
TOTAL	Property Damage	22	22	22	3	3
	Non-Fatal Injury	1	12	4	7	1

Based on the collision data summarized above, the majority of collisions are classified as Property Damage only (74%), suggesting that the majority of collisions occurred at low speeds.

Collision summary data can be found in **Appendix B**.

Based on a review of the collision data, the following collision hotspots in the table aforementioned have been investigated further:

- *Turning / Angle Collisions* on Bank St at Holmwood Ave: 6 out of 7 collisions at this location were due to driver negligence – either the driver failing yield right of way or making an improper turn.
- *Sideswipe Collisions* at Bank Street and Sunnyside Avenue: 9 out of 11 collisions at this location were due to driver negligence / dangerous driving such as following too close, improper lane change, or making an improper turn.
- *Angle / Turning Collisions* at Bank Street and Sunnyside Avenue: 6 out of 8 collisions at this intersection are due to driver negligence / dangerous driving such as making improper turn, failure to yield right of way, or disobeying the traffic control.

The frequency and type of collisions exhibited at the intersection of Bank Street and Sunnyside Avenue warrants a review of signal timing arrangements at the intersections, particularly for northbound and southbound left-turning movements which operate under permissive phasing within a shared inner thru-left lane.

Table 2-2 shows collisions involving pedestrians and cyclists on boundary segments and intersections.

Based on the analysis of pedestrians and cyclist collision data, all historical collisions recorded between 2016 and 2018 involved an automobile and bicyclists. All collisions results in Non-Fatal Injuries. It is worth noting that the collisions were recorded prior to the implementation of bicycle infrastructure improvements along the Bank Street Bridge.

Table 2-2 Collisions involving pedestrians and cyclists on boundary segments and intersections

Accident Year	Accident Date	Accident Time	Location	Traffic Control	Vehicle 1 Type	Vehicle 2 Type	Environment Condition 1	Light	Classification Of Accident	Initial Impact Type	X-Coordinate	Y-Coordinate	Vehicle 1 Initial Direction	Vehicle 1 Manoeuver	Apparent Driver 1 Action	Vehicle 2 Initial Direction	Vehicle 2 Manoeuver	Apparent Driver 2 Action	No Of Pedestrians
2016	9/3/2016	21:58	BANK ST @ EXHIBITION WAY (0009013)	01 - Traffic signal	01 - Automobile, station wagon	36 - Bicycle	01 - Clear	07 - Dark	02 - Non-fatal injury	05 - Turning movement	368529.1428	5029086.037	02 - South	04 - Turning left	06 - Improper turn	01 - North	01 - Going ahead	01 - Driving properly	0
2018	8/22/2018	9:23	BANK ST @ HOLMWOOD AVE (0007225)	01 - Traffic signal	01 - Automobile, station wagon	36 - Bicycle	01 - Clear	01 - Daylight	02 - Non-fatal injury	05 - Turning movement	368481.7082	5029197.558	01 - North	04 - Turning left	06 - Improper turn	02 - South	01 - Going ahead	01 - Driving properly	0
2015	9/25/2015	12:22	BANK ST @ WILTON CRES (0007712)	02 - Stop sign	01 - Automobile, station wagon	36 - Bicycle	01 - Clear	01 - Daylight	02 - Non-fatal injury	05 - Turning movement	368577.7102	5028966.186	01 - North	04 - Turning left	08 - Failed to yield right-of-way	02 - South	01 - Going ahead	01 - Driving properly	0
2016	6/15/2016	14:08	BANK ST @ WILTON CRES (0007712)	02 - Stop sign	01 - Automobile, station wagon	36 - Bicycle	01 - Clear	01 - Daylight	02 - Non-fatal injury	05 - Turning movement	368578.3866	5028966.772	01 - North	04 - Turning left	08 - Failed to yield right-of-way	02 - South	01 - Going ahead	01 - Driving properly	0
2016	10/11/2016	10:30	BANK ST @ WILTON CRES (0007712)	02 - Stop sign	01 - Automobile, station wagon	36 - Bicycle	01 - Clear	01 - Daylight	02 - Non-fatal injury	02 - Angle	368577.9297	5028966.766	03 - East	05 - Turning right	08 - Failed to yield right-of-way	01 - North	01 - Going ahead	99 - Other	0
2017	7/28/2017	17:07	BANK ST @ WILTON CRES (0007712)	02 - Stop sign	01 - Automobile, station wagon	36 - Bicycle	01 - Clear	01 - Daylight	02 - Non-fatal injury	05 - Turning movement	368577.0692	5028965.905	01 - North	04 - Turning left	08 - Failed to yield right-of-way	02 - South	01 - Going ahead	01 - Driving properly	0
2017	9/24/2017	13:23	BANK ST @ WILTON CRES (0007712)	02 - Stop sign	01 - Automobile, station wagon	36 - Bicycle	01 - Clear	01 - Daylight	02 - Non-fatal injury	04 - Sideswipe	368577.8342	5028966.533	01 - North	10 - Stopped	99 - Other	01 - North	01 - Going ahead	01 - Driving properly	0
2018	6/19/2018	13:49	BANK ST @ WILTON CRES (0007712)	02 - Stop sign	01 - Automobile, station wagon	36 - Bicycle	01 - Clear	01 - Daylight	02 - Non-fatal injury	05 - Turning movement	368577.7564	5028966.568	01 - North	04 - Turning left	06 - Improper turn	02 - South	01 - Going ahead	01 - Driving properly	0
2016	11/13/2016	11:35	BANK ST @ EXHIBITION WAY (0009013)	01 - Traffic signal	01 - Automobile, station wagon		01 - Clear	01 - Daylight	02 - Non-fatal injury	07 - SMV other	368530.1905	5029087.499	04 - West	04 - Turning left	08 - Failed to yield right-of-way				2
2018	11/25/2018	6:25	BANK ST @ MARCHE WAY (0014936)	02 - Stop sign	01 - Automobile, station wagon		04 - Freezing Rain	03 - Dawn	02 - Non-fatal injury	07 - SMV other	368506.2197	5029140.087	04 - West	05 - Turning right	08 - Failed to yield right-of-way				1

PLANNED CONDITIONS

2.2.2 Road Network Modifications

Table 2-3 identifies the City of Ottawa’s Transportation Master Plan (TMP) projects located in the vicinity of the subject site, as well as projects that are anticipated to influence modal share characteristics in the future.

Table 2-3: City of Ottawa Transportation Master Plan Projects

Project	Description
Bank Street	Transit signal priority between Wellington Street and Highway 417. May also include parking lane conversion in the immediate vicinity of selected intersections
	Transit signal priority between Highway 417 and Billings Bridge Station, including limited installation of queue jump lanes (in one direction only) at selected intersections
	<u>The 2023 Transportation Master Plan Cycling Project List includes a feasibility study of cycling facilities on Bank Street between the Rideau Canal and Riverside Drive (westbound)</u>
	<u>The 2023 TMP Pedestrian Project List identifies a feasibility study of pedestrian facilities along Echo Drive from Colonel By Drive to Bank Street, along with a pedestrian crossing at Colonel By Drive</u>

The City of Ottawa is currently undertaking the *Bank Street Active Transportation and Transit Priority Feasibility Study* between Highway 417 to the Rideau Canal. The project, which is currently underway, seeks to identify options to improve transit service efficiency and reliability along the corridor, with improvements to the travel environment for walking and cycling. Recommendations to City of Ottawa Transportation Committee are expected to be provided in Spring 2025. Additionally, the intersection of Bank Street and Holmwood Avenue is slated for a future infrastructure upgrade.

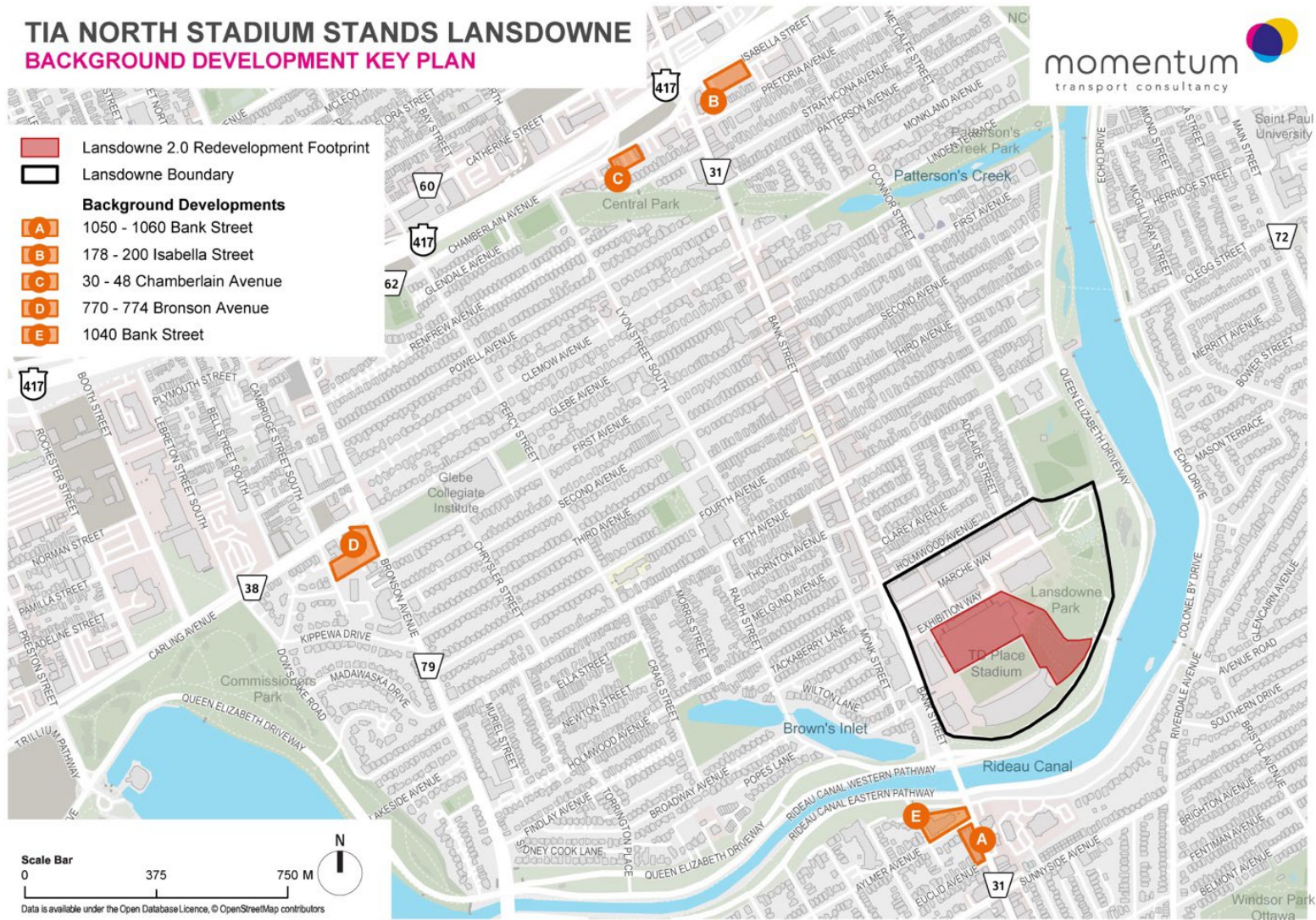
2.2.3 Future Background Developments

Several new developments are proposed in the vicinity of Lansdowne. The location of background developments are described in **Table 2-4** and illustrated in **Figure 2-28**.

Table 2-4: Background Developments

Plan Reference	Development	Location	Description
A	1050 – 1060 Bank Street	West side of Bank Street between Aylmer and Euclid Avenue in the south portion of Ottawa	6 storey residential apartment (44) units and 825m ² retail space (Buildout – 2024)
B	178 – 200 Isabella Street	South of Highway 417 between Bank Street and O’Connor Street	16 storey mixed-use building with 251 dwellings units and approximately 355 m ² of ground floor commercial space (Buildout – 2025)
C	30-48 Chamberlain Avenue	South of Chamberlain Avenue, west of Bank Street	150 apartment units and approximately 400 m ² of ground floor retail space (Buildout – 2024)
D	770 – 774 Bronson Avenue	Southwest corner of Bronson Avenue and Carling Avenue intersection	257 apartment dwelling unit and 71 student housing dwelling units (Buildout-2025)
E	1040 Bank Street	Northwest corner of Bank Street and Aylmer Avenue intersection	Redevelopment of the Southminster United Church including a six-storey condominium building adjacent to the church

Figure 2-28: Background Developments Key Plan



2.3 Study Area and Time Periods

STUDY AREA

2.3.1 The following study area intersections are proposed for analysis:

1. Bank Street at Fifth Avenue
2. Bank Street at Holmwood Avenue
3. Bank Street at Exhibition Way
4. Bank Street at Wilton Crescent
5. Bank Street at Echo Drive
6. Bank Street at Aylmer Avenue
7. Bank Street at Sunnyside Avenue
8. Queen Elizabeth Driveway at Princess Patricia Way
9. Queen Elizabeth Driveway at Fifth Avenue
10. Bank Street at Marché Way
11. Fifth Avenue at O'Connor Street

TIME PERIODS

2.3.2 The proposed scope of the transportation assessment includes the following analysis time periods:

- Weekday AM Peak Hour
- Weekday PM Peak Hour
- Saturday Peak Hour
- Sunday Peak Hour (*inclusive of a planned closure of the QED north of Fifth Avenue*)
- Minor Event at the new Event Centre
- Major Event at the Stadium
- Phase 2 Construction Impacts (for 2028 and 2030 Horizon Years only)
 - Weekday AM - Internal circulation + construction traffic impact
 - Weekday PM - Internal circulation + construction traffic impact

In the analysis that follows, it should be noted that intersection count timings may not always be representative of peak conditions given Ottawa's seasonal variations. For example, volumes for all modes may be higher in the summer (July-August) and during a major event on a Saturday. Active modes like walking and cycling are likely to be less commonly used during winter months.

HORIZON YEARS

2.3.3 The proposed scope of the transportation assessment includes the following horizon years:

- **2024 Existing Conditions:** Reflective of current baseline operating conditions.
- **2028 Phase 2 Construction Period:** Reflective of the completion and commissioning of the new Event Centre, and the start of construction of the new NSS. This will examine 2028 baseline conditions (taking existing demands and growing them to 2028). The assessment of this horizon year will focus on verifying the transportation requirements to support construction of the NSS under the scenarios including weekdays, weekends, minor events at the new Event Centre, and reduced capacity stadium events (i.e. south stadium stands).

- **2030 Phase 3 Construction Period:** Reflective of the completion and commissioning of the new NSS, and ongoing construction of the new podium-level retail and residential towers (Phase 3). This will examine 2030 baseline conditions (taking existing demands and growing them to 2030). The assessment of this horizon year will focus on verifying the transportation requirements to support construction of Phase 3 for various scenarios including weekdays, weekends, minor events at the new Event Centre, and full capacity stadium events at the newly completed NSS.
- **2033 Full Build-Out:** Reflective of completion of podium-level retail and residential towers (Phase 3). This will include Future Background analysis for all scenarios and Total Future (inclusive of site trips) for all scenarios. This analysis was undertaken by Momentum for the Phase 1 TIA Report for the new Event Centre, and has been carried over into this Phase 2 TIA Report.

2.4 Exemptions Review

Table 2-5 summarizes the Exemptions Review table from the City of Ottawa's *2017 Transportation Impact Assessment Guidelines*.

Table 2-5: Exemptions Review

Module	Element	Exemption Considerations	Exempted?
Design Review Component			
4.1 Development Design	4.1.1 Design for Sustainable Modes	All	No
	4.1.2 Circulation and Access	All site plan and zoning by-law applications	No
	4.1.3 New Street Networks	All plans of subdivision	Yes
4.2 Parking	4.2.1 Parking Supply Include language that asks for justification of change to Zoning By-law parking requirements	All site plan and zoning by-law applications	No
4.3 Boundary Street Design		All	No
Network Impact Component			
4.5 Transportation Demand Management	All Elements	Not required for site plans expected to have fewer than 60 employees and/or students on location at any given time	No
	4.5.1 Context for TDM	All	No

Module	Element	Exemption Considerations	Exempted?
4.5 Transportation Demand Management (Con't)	4.5.2 Need and Opportunity	All	No
	4.5.3 TDM Program	All	No
4.6 Neighbourhood Traffic Calming	4.6.1 Adjacent Neighbourhoods	<p>If the development meets all of the following criteria along the route(s) site generated traffic is expected to utilize between an arterial road and the site's access:</p> <ol style="list-style-type: none"> 1. Access to Collector or Local; 2. "Significant sensitive land use presence" exists, where there is at least two of the following adjacent to the subject street segment: <ul style="list-style-type: none"> • School (within 250m walking distance); • Park; • Retirement / Older Adult Facility (i.e. long-term care and retirement homes); • Licenced Child Care Centre; • Community Centre; or • 50%, or greater, of adjacent property along the route(s) is occupied by residential lands and a minimum of 10 occupied residential units are present on the route. 3. Application is for Zoning By-Law Amendment or Draft Plan of Subdivision; 4. At least 75 site-generated auto trips; 5. Site Trip Infiltration is expected. Site traffic will increase peak hour vehicle volumes along the route by 50% or more 	No

Module	Element	Exemption Considerations	Exempted?
4.7 Transit	4.7.1 Transit Route Capacity	> 75 site transit trips	No
	4.7.2 Transit Priority Requirements	> 75 site auto trips	No
4.8 Network Concept		Only required when proposed development generates more than 200 person-trips during the peak hour in excess of the equivalent volume permitted by established zoning	Yes
4.9 Intersection Design	4.9.1 Intersection Controls (including site accesses)	> 75 site auto trips	No
	4.9.2 Intersection Design	> 75 site auto trips	No

3. FORECASTING

3.1 Development Generated Travel Demand

EXISTING TRIP GENERATION

Lansdowne is currently an active site featuring a variety of land uses including the Stadium at TD Place, the Arena at TD Place, 280 residential townhome and condo units, an 18-acre urban park, and approximately 360,000 ft² of commercial retail and office space.

The current vehicular trip generation characteristics of the site are captured through Turning Movement Count (TMC) data. Existing peak hour traffic volumes under Weekday AM, Weekday PM, and Weekend Saturday and Sunday peak hour conditions are summarized in Section 2.2.

FUTURE TRIP GENERATION AND MODE SHARES

Phase 1 of Lansdowne 2.0, which represents the construction of the new 5,500 seat multi-purpose Event Centre, is not expected to generate any additional transportation demands or new travel patterns as the activities and programming associated with this new facility are currently in place at the Arena at TD Place.

Phase 2 of Lansdowne 2.0, which includes the demolition of the old north stadium stands and the construction of a new one is not expected to generate any new transportation demands or changes in travel patterns. Construction of the new Event Centre will allow for the concurrent use of the Stadium and Event Centre. While concurrent events will not be held, the ability to use the Event Centre during Major Events (i.e. extended seating / viewing areas for a future Grey Cup) could occur.

Phase 3 of Lansdowne 2.0, which includes the construction of new podium level retail and additional high-rise residential units within two new towers are expected to generate additional transportation demands at Lansdowne.

As a result, development generated travel demands are forecasted for the ultimate build-out of Lansdowne 2.0 which is assumed to be achieved by 2033.

The Institute of Transportation (ITE) Trip Generation Manual (11th Edition) was used to forecast the trip generation potential of additional land uses for Lansdowne 2.0. The TRANS trip generation rates are not given for weekend periods (only for weekday AM and PM peak hour rates) and the scope of the analysis includes a Saturday and Sunday peak periods; thus the TRANS trip generation rates were not used in this study. The approach used is consistent with the overall Lansdowne 2.0 study completed in 2023.

LUC 222 (Multifamily Housing) was used to estimate the trip generation potential for the two new residential towers (770 units). Person Trips were estimated for the Weekday AM, Weekday PM, Saturday Peak, and Sunday Peak hours using the Dense Multi-Use Urban setting and for the Peak Hour of Generator.

LUC 820 (Shopping Center) was used to estimate the trip generation potential for the new podium level commercial retail (net increase of +8,600 sq-ft). Auto Trips were estimated for the Weekday AM, Weekday PM, Saturday Peak, and Sunday Peak hours using the General Urban/Suburban setting and for the Peak Hour of Generator. Auto Trips were subsequently converted to Person Trips using an auto occupancy factor of 1.28 as per the TRANS Trip Generation Manual.

LUC 710 (General Office) was used to estimate the trip generation potential for the net increase in office space (net increase of +14,200 sq-ft). Person Trips were estimated using the Dense Multi-Use Urban and the Peak Hour of Adjacent Road for the Weekday AM and Weekday PM peak hours, and the Peak Hour of Generator for the Saturday Peak and Sunday Peak hours.

Table 3-1 outlines the assumed land uses and the trip generation rates (ITE) for each land use.

Table 3-1: Lansdowne 2.0 Land Uses and Trip Generation Rates

Phase 1 – New Event Centre (2028)															
N/A	Indoor Arena / Multi-Purpose Event Centre	Person Trips	5,500 Seats	Existing Land Use at Lansdowne. No Additional New Trips Forecasted											
Phase 2 – New North Stadium Stands (2031)															
N/A	Football Stadium	Person Trips	25,000 Seats	Existing Land Use at Lansdowne. No Additional New Trips Forecasted											
Phase 3 – Full Buildout / Podium Retail + New Residential Units (2033)															
LUC	Land Use	Trip Type	Units / GFA (ksf)	Weekday AM Peak Hour			Weekday PM Peak Hour			Saturday Weekend Peak Hour			Sunday Weekend Peak Hour		
				In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
222	Multi-unit Residential (High-Rise)	Person Trips	770 units	16%	84%	0.76 / unit	64%	36%	0.58 / unit	56%	44%	0.74 / unit	51%	49%	0.85 / Unit
820	Shopping Center	Vehicle Trips	8.6 ksf	55%	45%	2.87 / ksf	50%	50%	4.09 / ksf	52%	48%	4.40 / ksf	49%	51%	2.35 / ksf
710	General Office	Person Trips	14.2 ksf	87%	13%	1.22 / ksf	21%	79%	1.28 / ksf	48%	52%	0.27 / ksf	36%	64%	0.17 / ksf

3.1.1 Trip Internalization

Trip internalization refers to trips that are shared between two or more uses within the same site. This behaviour is typical for mixed-use developments that feature a variety of land uses that complement each other. When trip internalization occurs, a portion of the generated trips for each individual land use are drawn from other land uses within the same district, as opposed to new trips that are generated externally.

For new land uses proposed for Lansdowne 2.0, trip internalization factors were applied to account for new site trips that are expected to be generated from within the site, or external trips that visit more than one land use within the subject development. Since these trips are contained within the district, accounting for each trip separately on the roadway network would result in double-counting trips. As a result, land uses with internal capture trips between one another ultimately had their net new trips adjusted consistent with acceptable industry standards.

For Lansdowne 2.0, a portion of the additional commercial retail land-uses are assumed to feature trip internalization with other land-uses and activities within the site include existing and future residential, office, and the existing retail land-uses.

Table 3-2 outlines the trip internalization rates assumed for the additional retail land uses assumed as part of the Lansdowne 2.0 development.

Trip internalization rates were developed based on the methodologies outlined in TRANS Trip Generation Manual and NCHRP Report 684 (Enhancing Internal Trip Capture Estimation for Mixed-Use Developments).

Table 3-2: Internal Capture Trips

LUC	Land Use	Trip Conversion	Weekday AM Peak			Weekday PM Peak			Weekend Peak Hour		
			In	Out	Total	In	Out	Total	In	Out	Total
820	Shopping Plaza	Internal Capture	15%			30%			15%		

Lansdowne 2.0 Additional Person Trips

New transportation demands associated with Lansdowne 2.0 additional development is outlined in **Table 3-3**.

Forecasted person trips for the proposed multi-unit residential towers, additional commercial retail, and general office spaces were derived using the ITE Trip Generation Manual and the TRANS trip generation manual vehicle-to-person conversion factor.

The trip internalization factors outlined above were applied to the shopping plaza land use to capture internal trips.

While the new Event Centre and NSS represent a decrease in venue capacity, this is not anticipated to result in a significant reduction of trips during Minor and Major Events. The new Event Centre has been designed to better accommodate Minor Events held at Lansdowne to date, which typically have attendance levels that are less than 5,000 spectators. Similarly, the reduction in seating capacity at the Stadium is not expected to result in any tangible changes in transport demand as actual attendance levels for matches held to date are at or below the proposed new spectator capacity. No changes in the provision of enhanced transit or shuttle services are expected.

Table 3-3: Lansdowne 2.0 Person Trips Generated by Land Use

LUC	Land Use	Trip Conversion	Weekday AM Peak			Weekday PM Peak			Saturday Peak Hour			Sunday Peak Hour		
			In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
222	Multi-Unit Residential (High-Rise)	Person Trips	94	492	585	286	161	447	319	251	570	334	321	655
820	Shopping Plaza	Auto Trips (Peak Hour)	14	11	25	18	18	35	20	18	38	10	10	20
		Auto Trip to Person Trip Factor	1.28 persons per vehicle											
		Initial Person Trips	17	14	32	32	23	45	25	23	49	13	13	26
		Internalization Factor	15%			30%			15%			15%		
		Internalization Trip Reduction	-3	-2	-5	-7	-7	-14	-4	-4	-7	-2	-2	-4
		Person Trips	14	12	27	16	16	31	21	19	42	11	11	22
710	General Office	Person Trips	15	2	17	4	14	18	2	2	4	1	2	2
Lansdowne 2.0 New Person Trips (Peak Hour)			123	506	629	305	191	496	342	272	615	345	334	679

It is estimated that the Lansdowne 2.0 development is projected to result in a net increase of 629 person trips in the AM Peak Hour, 496 person trips in the PM Peak Hour, 615 trips during the Saturday Weekend Peak Hour, and 679 trips during the Sunday Weekend Peak Hour.

To reflect local travel characteristics, forecasted person trips were assigned and distributed to various travel modes (i.e., auto, passenger, transit, cycling and walking). Modal share percentages were adopted from the TRANS Trip Generation Manual.

The TRANS Trip Generation Manual provides trip generation and modal share rates for 26 geographic regions within Ottawa-Gatineau. For Lansdowne, the modal shares for the *Ottawa Inner Area (050)* were adopted for the High-Rise Multifamily Housing and Commercial land-uses.

The Lansdowne 2.0 assumed modal shares are summarized below in **Table 3-4**.

Table 3-4: Assumed Mode Share by Land Use

Mode	222 - Multiuse Family			820 - Commercial Retail			710 - Office
	AM	PM	Average	AM	PM	Average	
Auto	26%	25%	26%	39%	22%	31%	45%
Passenger	7%	9%	8%	2%	4%	3%	7%
Transit	28%	21%	25%	16%	12%	14%	29%
Cycling	5%	6%	6%	3%	4%	4%	8%
Walking	34%	39%	37%	40%	58%	49%	11%

Residential Trips – Mode Shares

Section 4.2 (Table 8) of the *TRANS Trip Generation Manual (October 2020)* was utilized to determine the residential mode share for high rise multi-family housing for the Ottawa Inner Area district. The mode shares for the district, which is based on blended AM and PM peak period rates, include a 26% auto mode share, a 25% transit mode share, and a combined 43% modal share for walking and cycling.

Commercial Trips – Mode Shares

Section 6.3 (Table 13) of the *TRANS Trip Generation Summary Manual (October 2020)* was utilized to determine the commercial retail mode share for the Ottawa Inner Area district. The mode shares for the district, which is based on blended AM and PM peak period rates, include a 31% auto mode share, a 14% transit mode share, and a combined 53% modal share for walking and cycling.

Table 3-5 outlines the adjusted future trip generation estimate for Lansdowne 2.0 by travel mode.

Table 3-5: Lansdowne 2.0 Future Trip Generation by Travel Mode

LUC	Land Use	Modal Share %		Weekday AM Peak Hour			Weekday PM Peak Hour			Weekend Saturday Peak Hour			Weekend Sunday Peak Hour		
				In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
222	Multi – Unit (High-Rise)	Auto Driver	26%	24	125	149	73	41	114	81	64	145	85	82	167
		Passenger	8%	7	39	47	23	13	36	26	20	46	27	26	52
		Transit	25%	23	120	143	70	39	109	78	61	140	82	79	160
		Cycling	6%	5	27	32	16	9	25	18	14	31	18	18	36
		Walking	37%	34	179	214	104	59	163	116	92	208	122	117	239
820	Shopping Center	Auto Driver	31%	4	4	8	5	5	10	6	6	12	3	3	7
		Passenger	3%	0	0	1	0	0	1	1	1	1	0	0	1
		Transit	14%	2	2	4	2	2	4	3	3	6	2	2	3
		Cycling	4%	1	0	1	1	1	1	1	1	1	0	0	1
		Walking	49%	7	6	13	8	8	15	10	9	20	5	6	11
710	Office	Auto Driver	45%	7	1	8	2	6	8	1	1	2	0	1	1
		Passenger	7%	1	0	1	0	1	1	0	0	0	0	0	0
		Transit	29%	4	1	5	1	4	5	1	1	1	0	0	1
		Cycling	8%	1	0	1	0	1	1	0	0	0	0	0	0
		Walking	11%	2	0	2	0	2	2	0	0	0	0	0	0
Lansdowne 2.0 Additional Person Trips	Auto Driver		35	130	165	79	52	132	89	71	159	89	86	175	
	Passenger		9	40	49	24	14	38	26	21	47	27	26	53	
	Transit		29	123	152	73	46	119	82	65	146	84	81	164	
	Cycling		7	28	35	17	11	27	18	15	33	19	18	37	
	Walking		43	186	229	112	68	180	127	101	228	127	123	250	
	Total Person Trips (Peak Hour)		123	506	629	305	191	496	342	272	614	345	334	679	

The total additional number of trips generated by the Lansdowne 2.0 development are outlined above by mode. Out of the total trips forecasted, the additional auto trips forecasted as part of the Lansdowne 2.0 development are estimated to be 165, 132, and 159, and 175 vehicle trips in the Weekday AM, Weekday PM, Saturday, and Sunday peak hours

TRIP DISTRIBUTION

Cardinal trip distribution to and from Lansdowne was developed based on the 2011 TRANS Origin-Destination Survey for the Ottawa Inner Area region.

Based on the origin-destination data, trip distributions were estimated based on directions to the north, east, south and west. The data indicates that up to 32% of trips surveyed within the Ottawa Inner Area started and ended within the same district, and upwards of 10% of trips have an origin/destination to the Ottawa Centre region north of the district towards downtown Ottawa. The remaining trips were found to be distributed to other regions throughout Ottawa-Gatineau.

Table 3-6 outlines the trip distribution assumptions to and from Lansdowne based on the 2011 TRANS Origin-Destination Survey.

Table 3-6: Site Trip Directional Distribution

Direction	Trip Distribution
North	35%
East	21%
South	32%
West	13%
Total	100%

As Lansdowne is bound by two north-south corridors, namely Bank Street to the west, and Queen Elizabeth Driveway to the east, site trip distribution assumptions were refined in the north-south direction, representing localized trip distribution on Bank Street and Queen Elizabeth Driveway.

Table 3-7 outlines the assumed directional trip distributions based on access to nearby regional corridors including the Queensway (Highway 417) to the north, Bronson Avenue to the west, and Riverside Drive and Heron Road to the south.

Table 3-7: Refined Directional Trip Distribution Assumptions

Direction	Study Area Trip Distribution
North	50%
South	50%

TRIP ASSIGNMENT

Additional Lansdowne 2.0 site generated trips were assigned to the study area road network based on the assumed trip distribution assumptions. In addition, a review of existing traffic data was performed to estimate the traffic volume split between Bank Street, Holmwood Avenue, and Queen Elizabeth Driveway.

Currently, 65% of Lansdowne-specific public traffic utilizes Bank Street for access to/from Lansdowne, with the remaining 35% utilizing Queen Elizabeth Driveway.

Based on parking gate data provided by OSEG for the private residential Holmwood garage ramp, it is estimated that there are approximately 90 residential vehicles utilizing the Holmwood residential garage access per day.

It is assumed that the new residential tenants will also have access to the Holmwood garage ramp. As a result, a proportion of new residential based trips were assumed to utilize the private, restricted-use Holmwood garage ramp for access.

The following site access assumptions were adopted:

- **55%** of new site trips are assumed to access Lansdowne via Bank Street.
- **30%** of new site trips are assumed to access Lansdowne via Queen Elizabeth Driveway.
- **15%** of new site trips, specifically a proportion of additional residential trips, are assumed to access the underground private garage access via Holmwood Avenue.

In the Sunday scenario analysed in this study, Queen Elizabeth Driveway is closed north of Fifth Avenue as part of NCC programming along the Rideau Canal. Therefore, the inbound site trips accessing Queen Elizabeth Driveway from the North in other scenarios will instead enter via Bank Street. The site trips exiting northbound on Queen Elizabeth Drive will be directed north along O' Connor Street.

Table 3-8 summarizes new Lansdowne 2.0 site generated vehicle trips and their respective assignment to Bank Street, Queen Elizabeth Driveway, and the private underground parking garage access ramp on Holmwood.

Table 3-8: Trip Assignment for Newly Generated Trips

Access	Weekday AM Peak Hour		Weekday PM Peak Hour		Saturday Peak Hour		Sunday Peak Hour	
	In	Out	In	Out	In	Out	In	Out
Bank Street	19	72	44	29	49	39	62	47
Queen Elizabeth Driveway	11	39	24	16	27	21	13	26
Holmwood Access*	5	20	12	8	13	11	13	13
Total New Vehicle Trips	35	130	79	52	89	71	89	86
	165		132		159		175	

* Holmwood Access: Lansdowne residents' access to private, restricted-use garage access.

Figure 3-1 illustrates the site trip assignment assumptions for Lansdowne 2.0 additional vehicle trips.

Lansdowne 2.0 additional site generated vehicle trips for weekday AM/PM peak, Saturday peak, and Sunday peak are illustrated in **Figure 3-2** through **Figure 3-4**.

Figure 3-1: Lansdowne 2.0 Site Traffic Assignment Assumptions

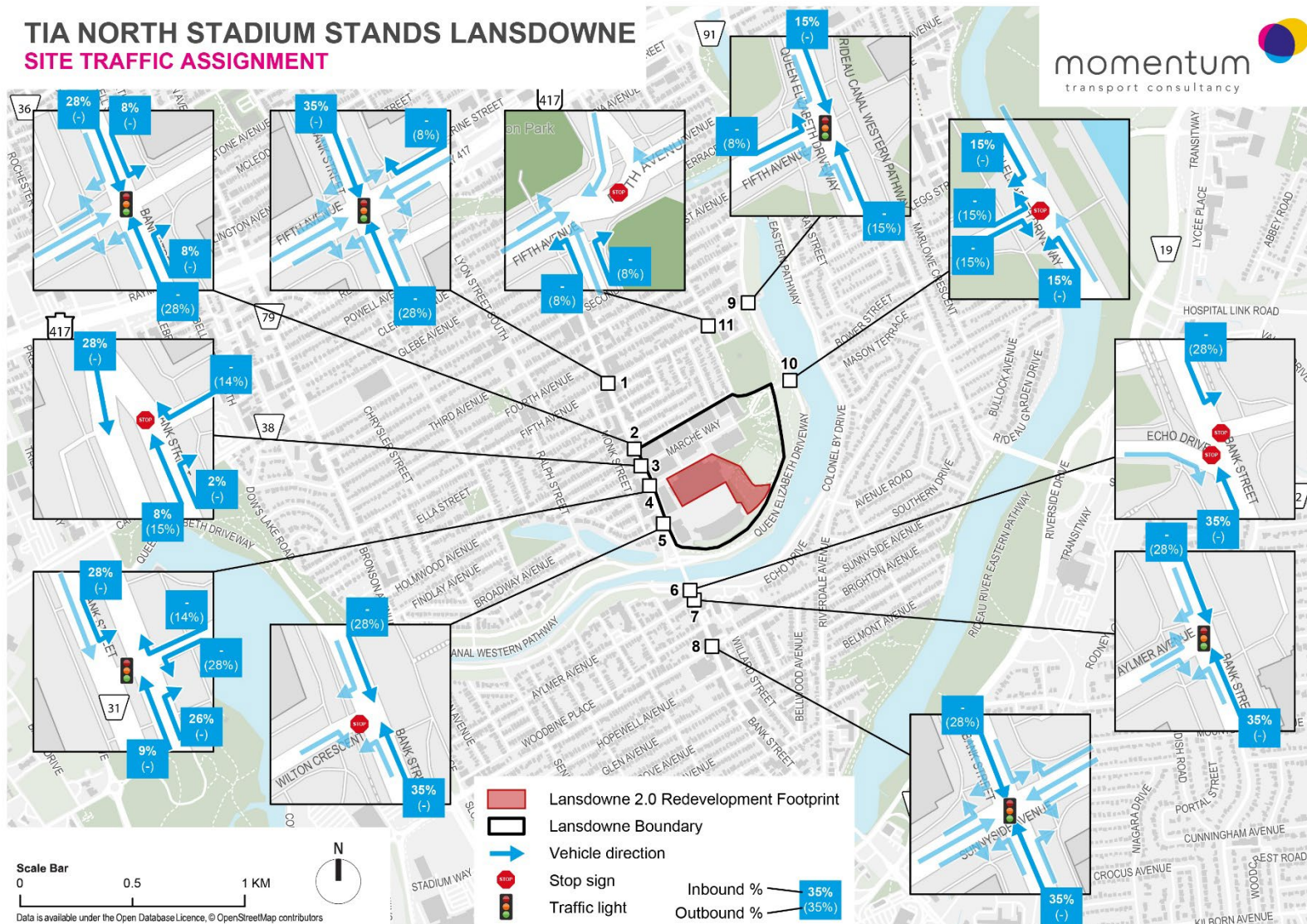


Figure 3-2: Lansdowne 2.0 Site Volumes (Weekday AM/PM Peak)

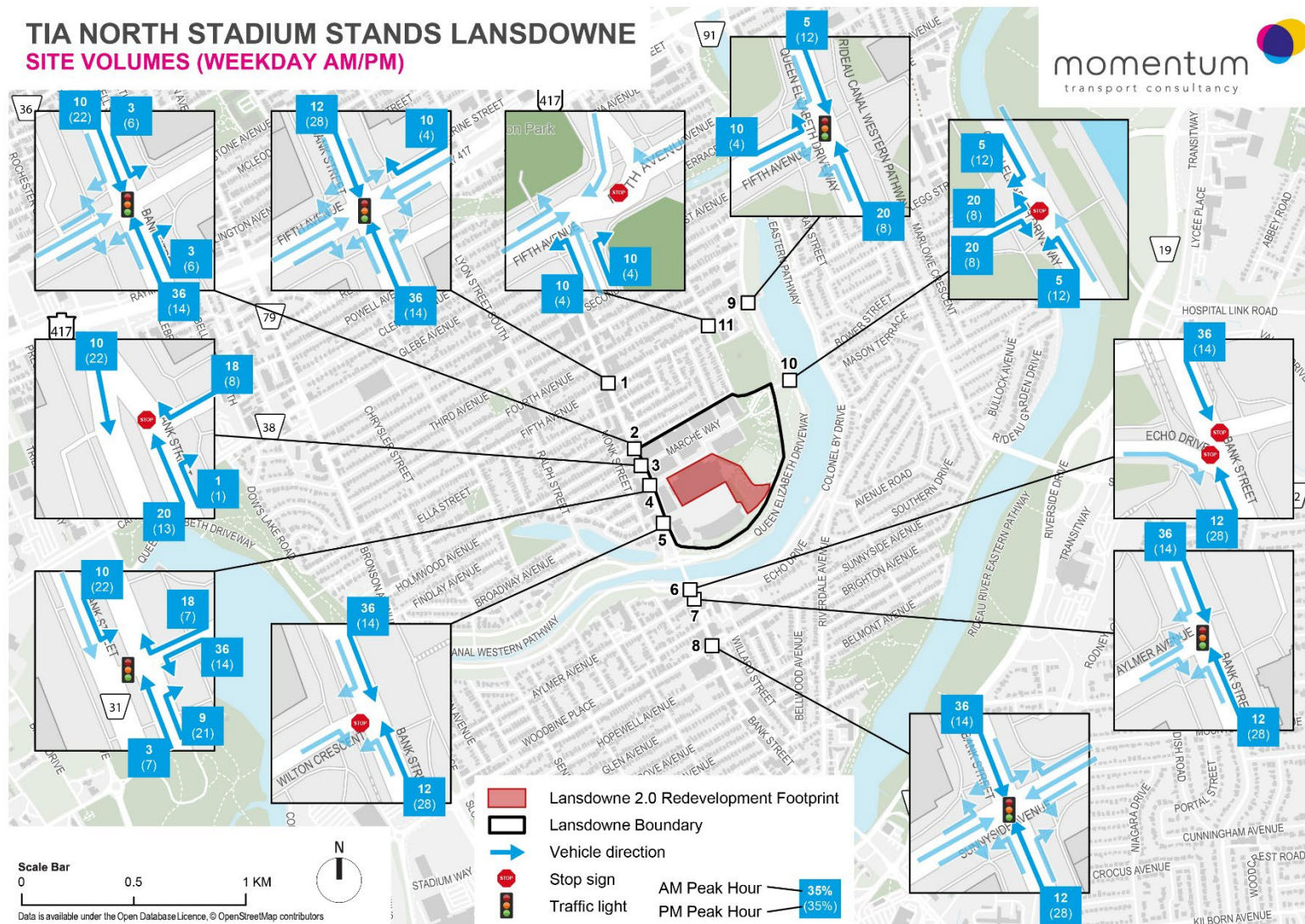


Figure 3-3: Lansdowne 2.0 Site Volumes (Saturday Peak)

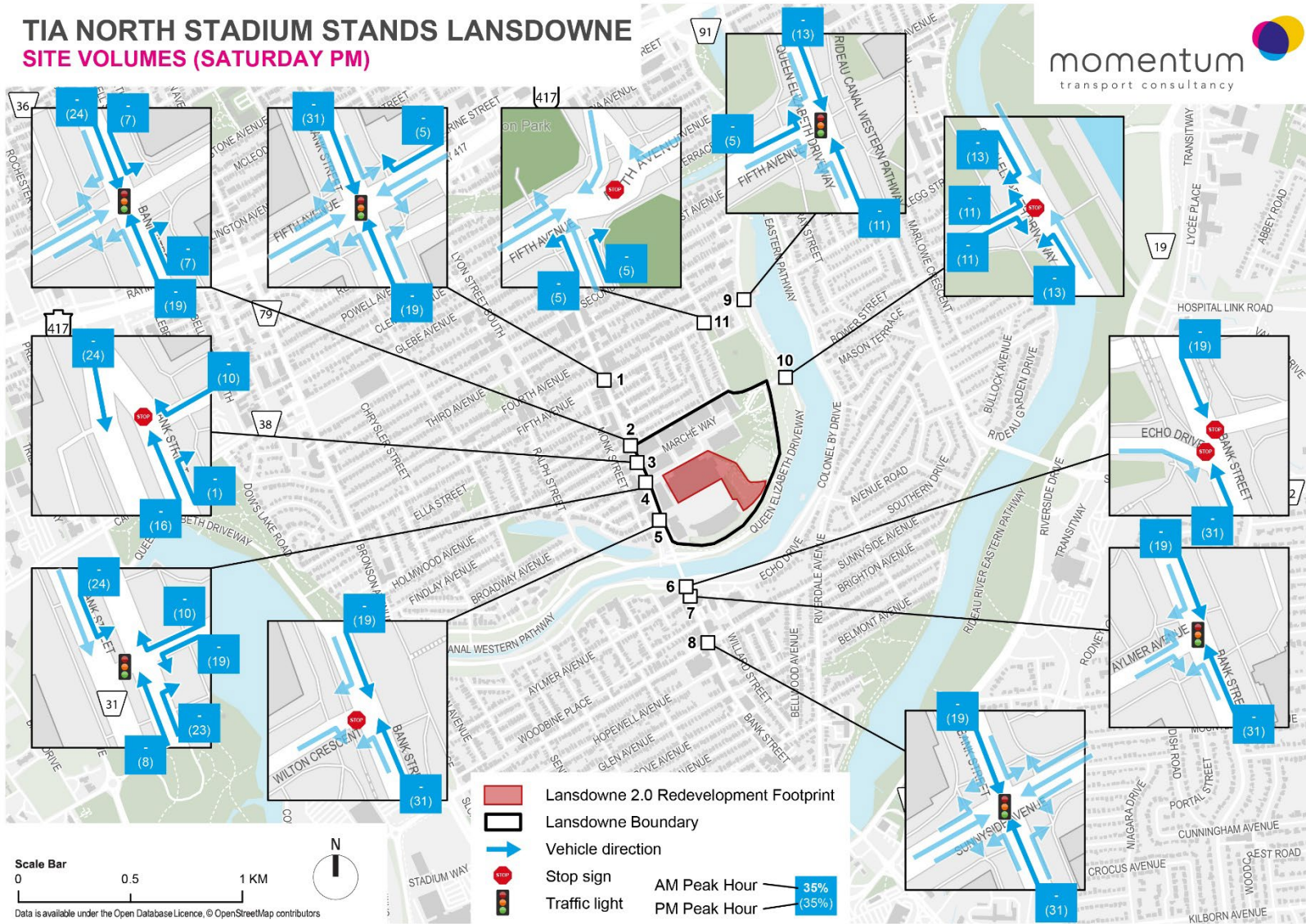
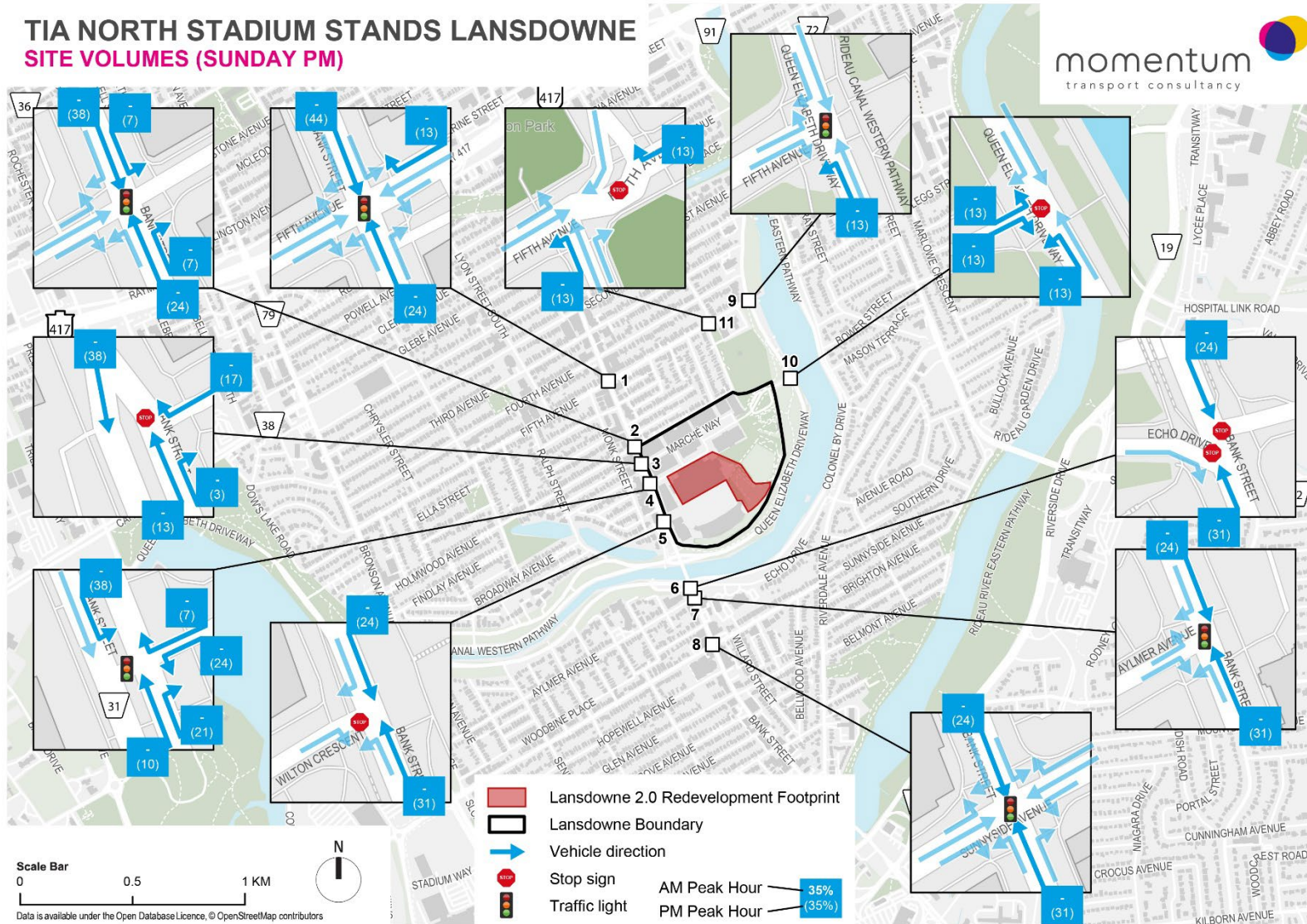


Figure 3-4: Lansdowne 2.0 Site Volumes (Sunday Peak)



3.2 Background Network Travel Demand

TRANSPORTATION NETWORK PLANS

The only road infrastructure project that is identified in the City of Ottawa Transportation Master Plan within the vicinity of Lansdowne is the proposed Transit Priority Corridor improvements on Bank Street.

In May 2022, City of Ottawa Transportation Committee directed staff to undertake an Active Transportation and Transit Operations Feasibility Study project of Bank Street between the Rideau Canal to Highway 417. The study is currently underway with recommendations to City Council expected to be provided in Spring 2025.

BACKGROUND GROWTH

Based on data readily available for the City of Ottawa, the average annual growth rate for traffic volumes in the vicinity of Lansdowne ranges between -2% to +0.2%, indicating a general reduction or limited growth in vehicular traffic volume on Bank Street and the surrounding roadway network. As a result, a nominal 0.5% annual background growth rate was applied to forecast future background growth in traffic volumes.

OTHER DEVELOPMENTS

As outlined in Section 2.2.3, a number of nearby developments near Lansdowne are currently under construction or scheduled to be constructed within the horizons of the study. The traffic volumes from these developments were obtained from their respective traffic studies, where available, and added to the transportation network as part of background traffic growth.

3.3 Demand Rationalization

The current peak hour traffic volumes along Bank Street are in the range of 500 – 800 vehicles per hour per direction. Similar volumes are exhibited on Queen Elizabeth Driveway with peak hour volumes in the range of 300 – 600 vehicles per hour per direction.

The traffic volumes forecasted under the 2033 future build-out year are projected to be in the range of 600 – 900 vehicles per hour per direction for Bank Street, and 350 – 700 vehicles per hour per direction for Queen Elizabeth Driveway.

As the projected volumes fall within a similar range to existing conditions and are likely to be supported by the transportation network, no demand rationalization was undertaken.

2028 TOTAL FUTURE TRAFFIC VOLUMES

The 2028 Total Future horizon year represents the completion of Phase 1 of the Lansdowne 2.0 redevelopment program with the opening of the new multi-purpose Event Centre.

As the new multi-purpose Event Centre will not generate new additional transportation demands to Lansdowne, no new site generated trips have been added. A nominal 0.5% annual growth rate was applied to existing traffic demands to account for background development growth.

It is anticipated that the new Event Centre will operate in an interim condition during construction of subsequent phases of Lansdowne 2.0: namely construction of the new NSS (Phase 2) and the new podium retail and two residential towers (Phase 3).

During Phase 2 and Phase 3 construction of Lansdowne 2.0, site access is expected to be generally unaffected with access provided at both Bank Street and Queen Elizabeth Driveway. Site circulation within Lansdowne will need to be verified during for Phase 3 based on constructability requirements and the construction footprint within Lansdowne. These details are expected to be addressed as part of the permitting and approvals for Phase 3.

While construction phasing details for Phase 2 and Phase 3 are still under development, it is anticipated that during construction of Phase 2 and Phase 3, the underground parking garage ramp at Bank Street will be temporarily closed for public use to accommodate construction of the expanded underground parking garage for Lansdowne.

Shutdown of the Bank Street Garage ramp during Phase 2 is anticipated to be limited to 72-hour closures during weekdays when site traffic volumes at Lansdowne are typically the lowest. Due to the intermittent nature of temporary closures, it is assumed that current site access traffic patterns will not be altered significantly and most will opt to continue to use Bank Street to access Lansdowne.

The 2028 horizon year was assumed to include the temporary closure of the Bank Street underground garage ramp during Weekday AM and PM conditions. It is anticipated that access to Lansdowne from both Bank Street and Queen Elizabeth Driveway will be unaffected with the temporary closure of the Bank Street garage ramp, and public access to the underground parking garage from Bank Street will occur by directing traffic internally to the Princess Patricia Way underground garage ramp near Queen Elizabeth Driveway.

It is assumed that most of the traffic (assumption of **70%**) currently accessing the underground parking facilities at the Exhibition Way underground garage ramp will continue to access Lansdowne on Bank Street and will travel through the site towards the Princess Patricia Way garage access. The assumption that 70% of traffic currently accessing the underground parking facilities at Bank Street would be diverted through the site assumes a "worst-case" scenario to evaluate the impacts on site circulation and the ability of All-Way Stop Controlled intersections in accommodating site traffic within the site.

The remaining portion of traffic (assumption of **30%**) currently accessing the underground parking facility at the Exhibition Way ramp near Bank Street are assumed to alter their travel patterns by shifting to Queen Elizabeth Driveway as the route to travel to Lansdowne. This includes **15%** diverting from Bank Street to Queen Elizabeth Driveway via Fifth Avenue, and **15%** choosing to travel on Queen Elizabeth Driveway further upstream as part of the journey to Lansdowne. Based on a preliminary review, it is anticipated that the surrounding roadway network, notably the key intersections of Bank Street/Fifth Ave and QED/Fifth Ave, will be able to support a substantial portion of diverted trips.

The 2028 future traffic volumes also include the additional construction traffic volumes that is forecasted as part of the construction of the NSS. Construction traffic volumes and routing are described in *Section 4.4 Access Intersection Design – Construction Access*.

Figure 3-5 through **Figure 3-15** summarizes projected 2028 traffic volumes inclusive of background development growth and assumed internal circulation adjustments during the temporary closure of the Exhibition Way underground parking garage access during Phase 2 and Phase 3 construction.

Figure 3-5: 2028 Future Background Traffic (Weekday AM / PM)

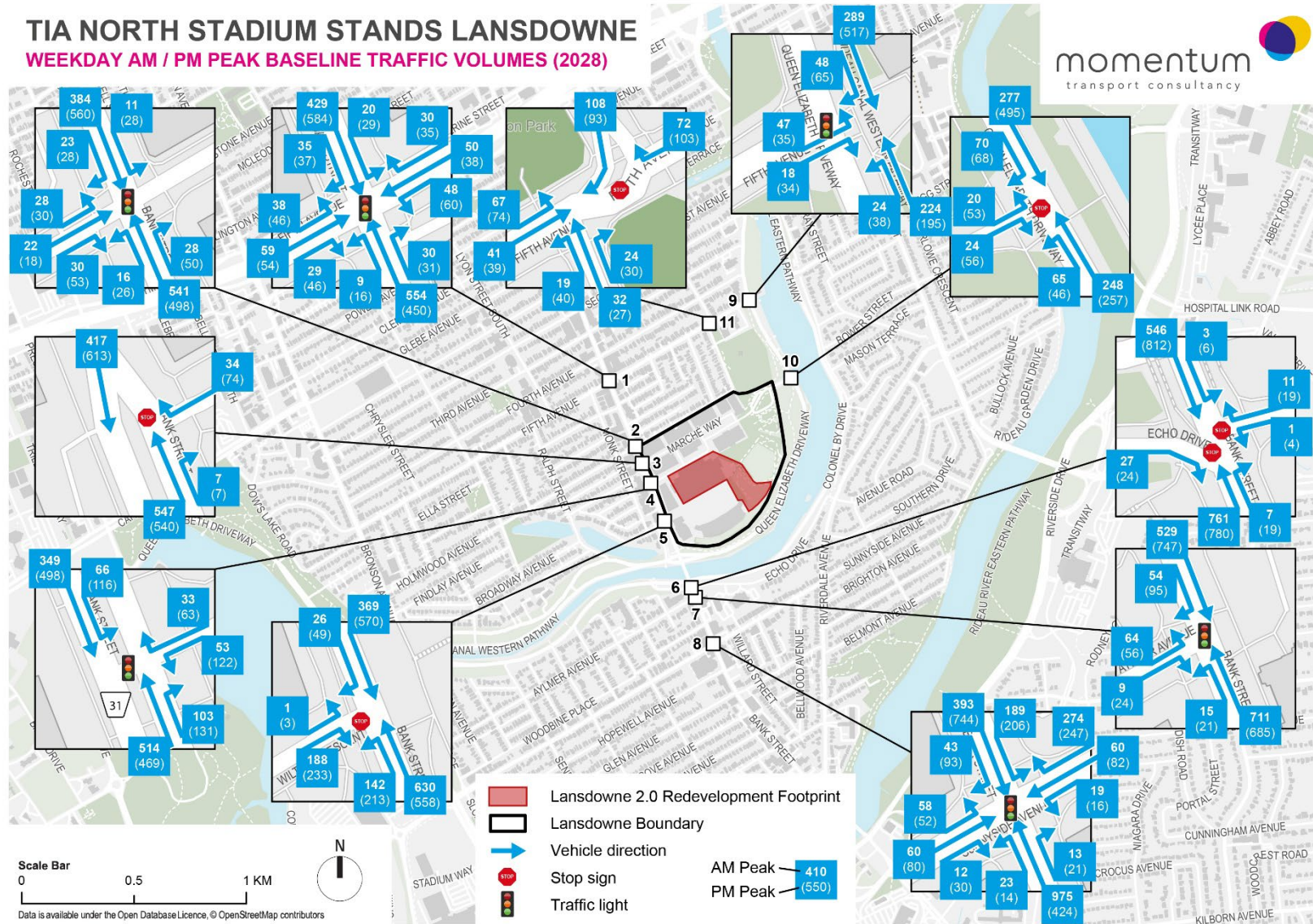


Figure 3-7: 2028 Future Background Traffic (Saturday Peak)

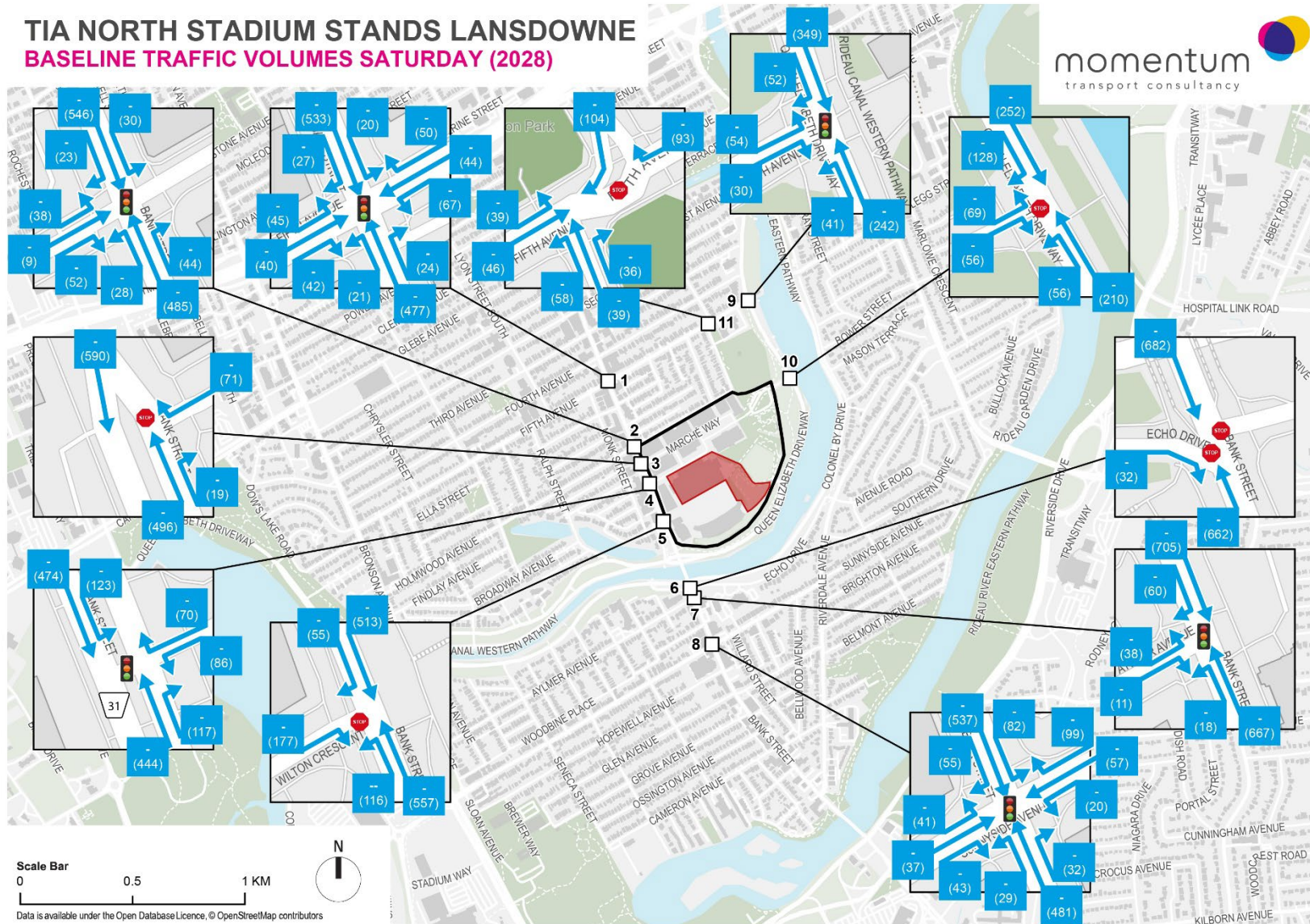


Figure 3-9: 2028 Future Background Traffic (Sunday Peak)

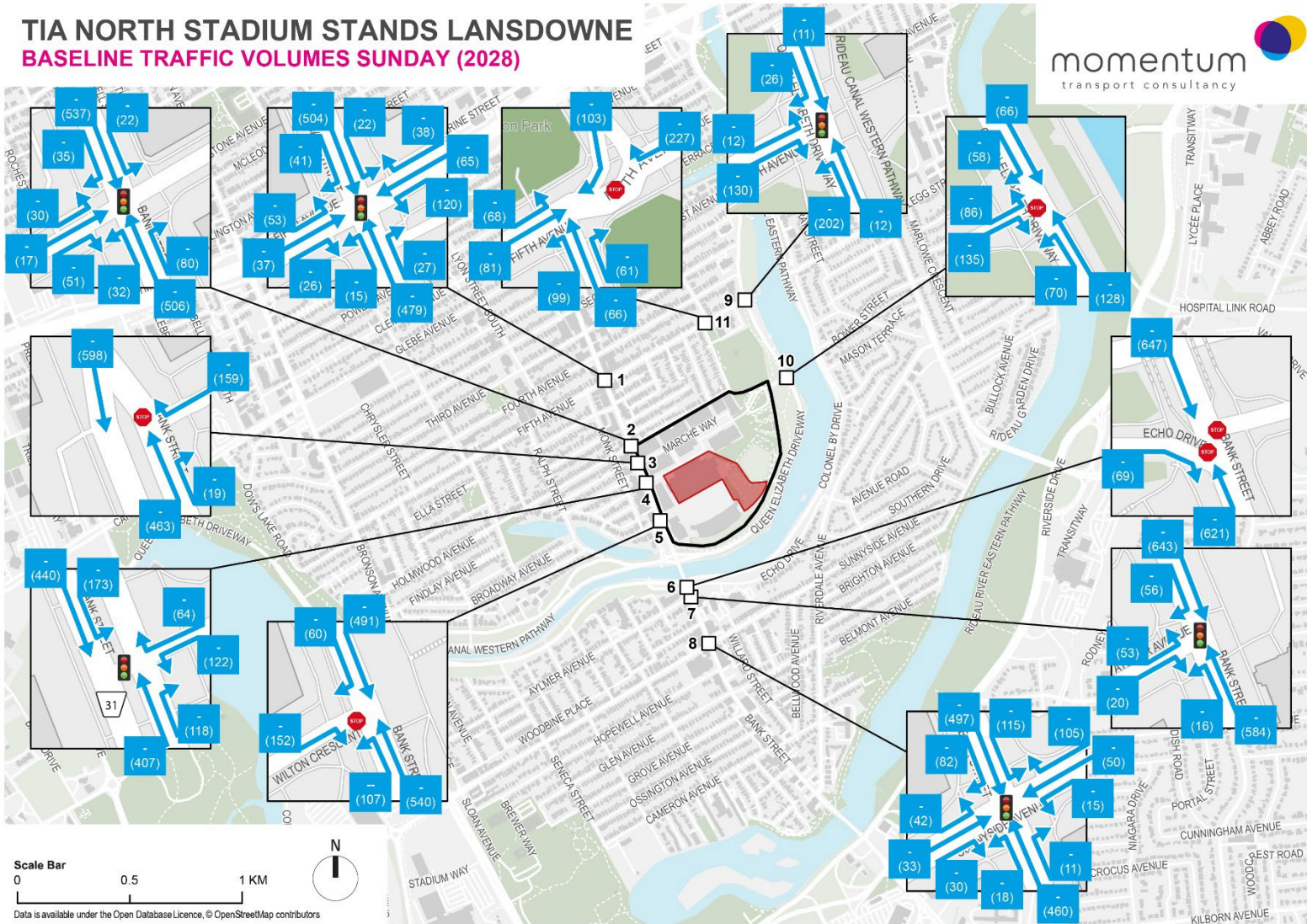


Figure 3-10: 2028 Future Background Internal Traffic (Sunday Peak)

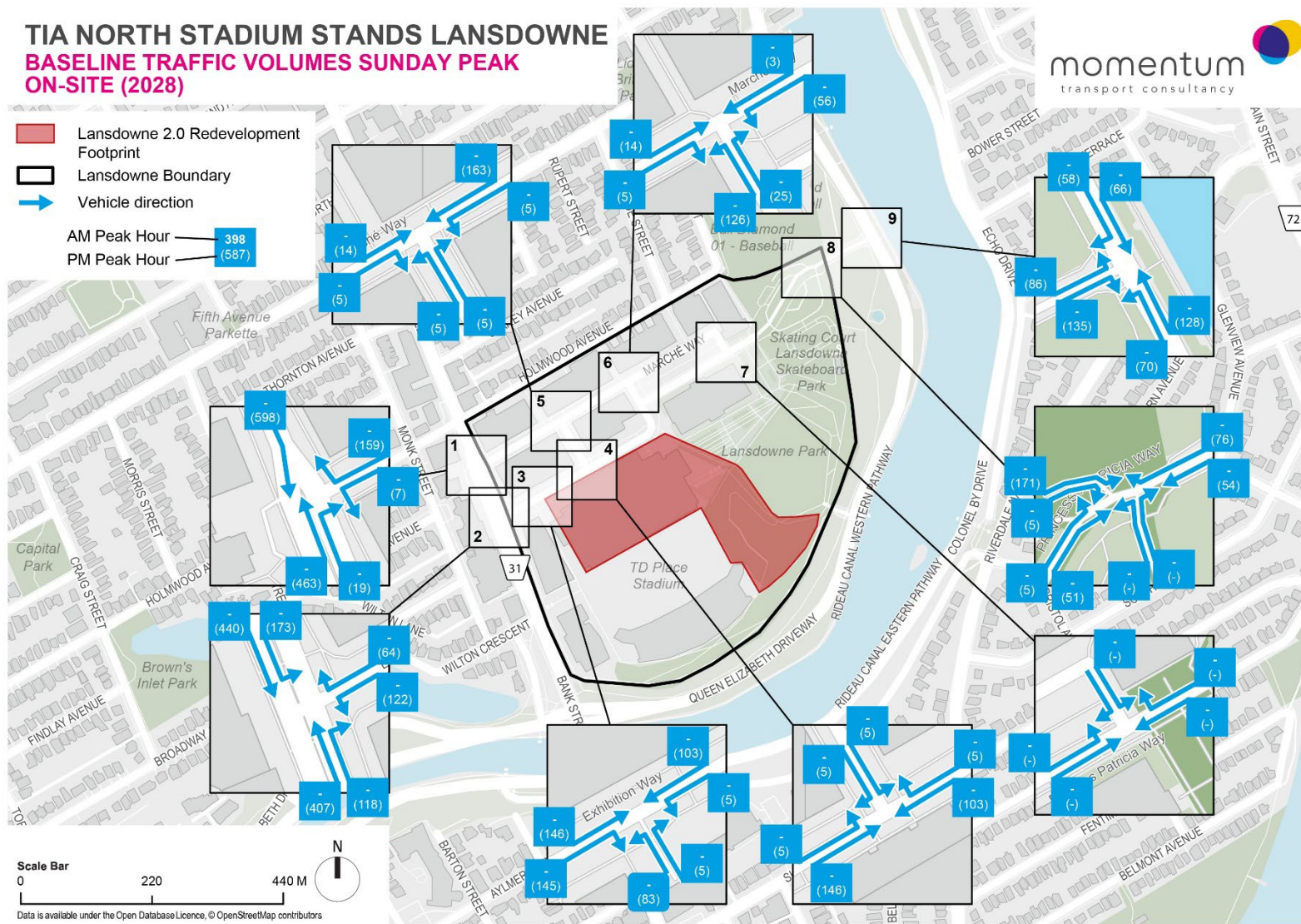


Figure 3-11: 2028 Future Background Traffic (Minor Event)

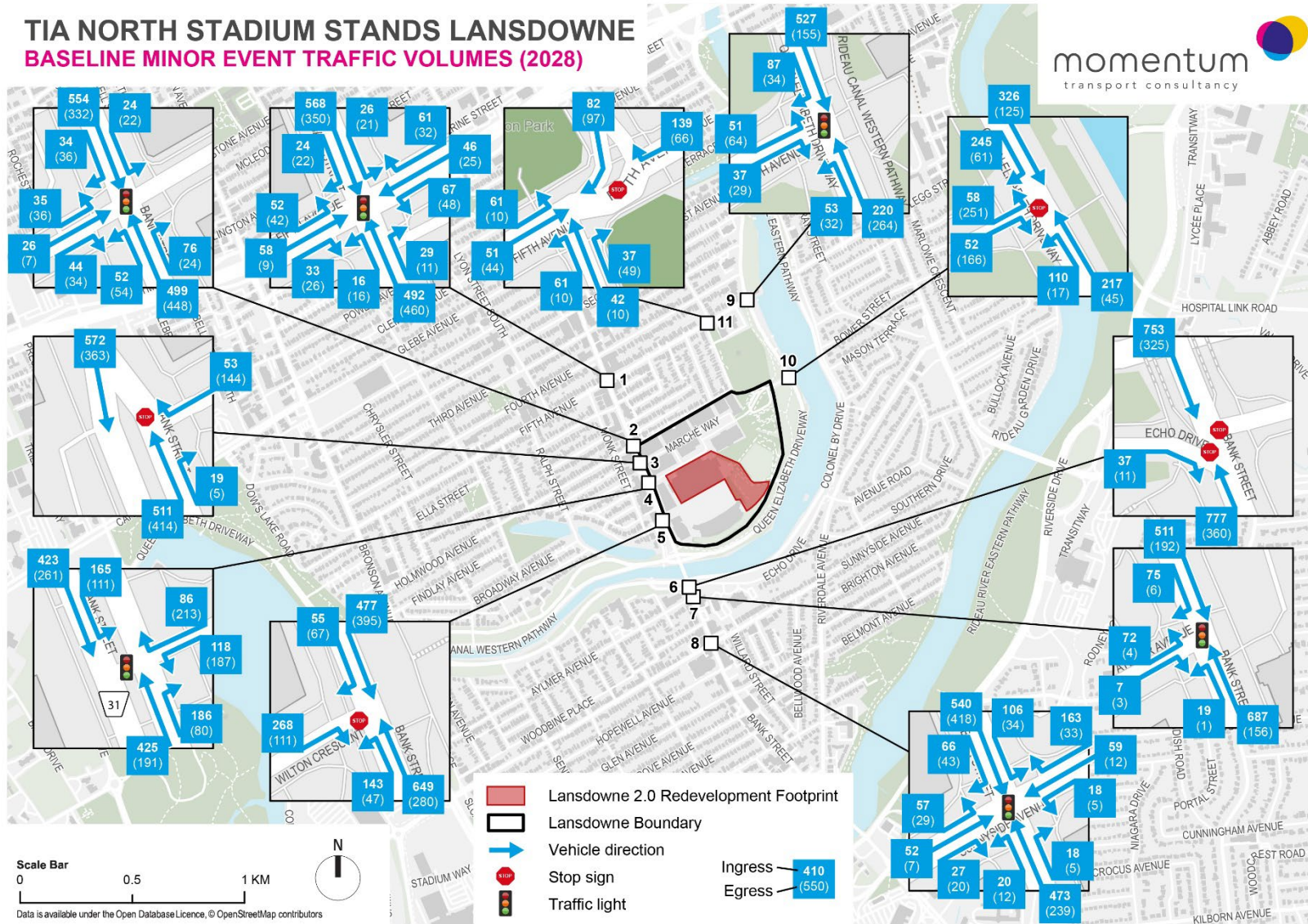


Figure 3-12: 2028 Future Background Internal Traffic (Minor Event)

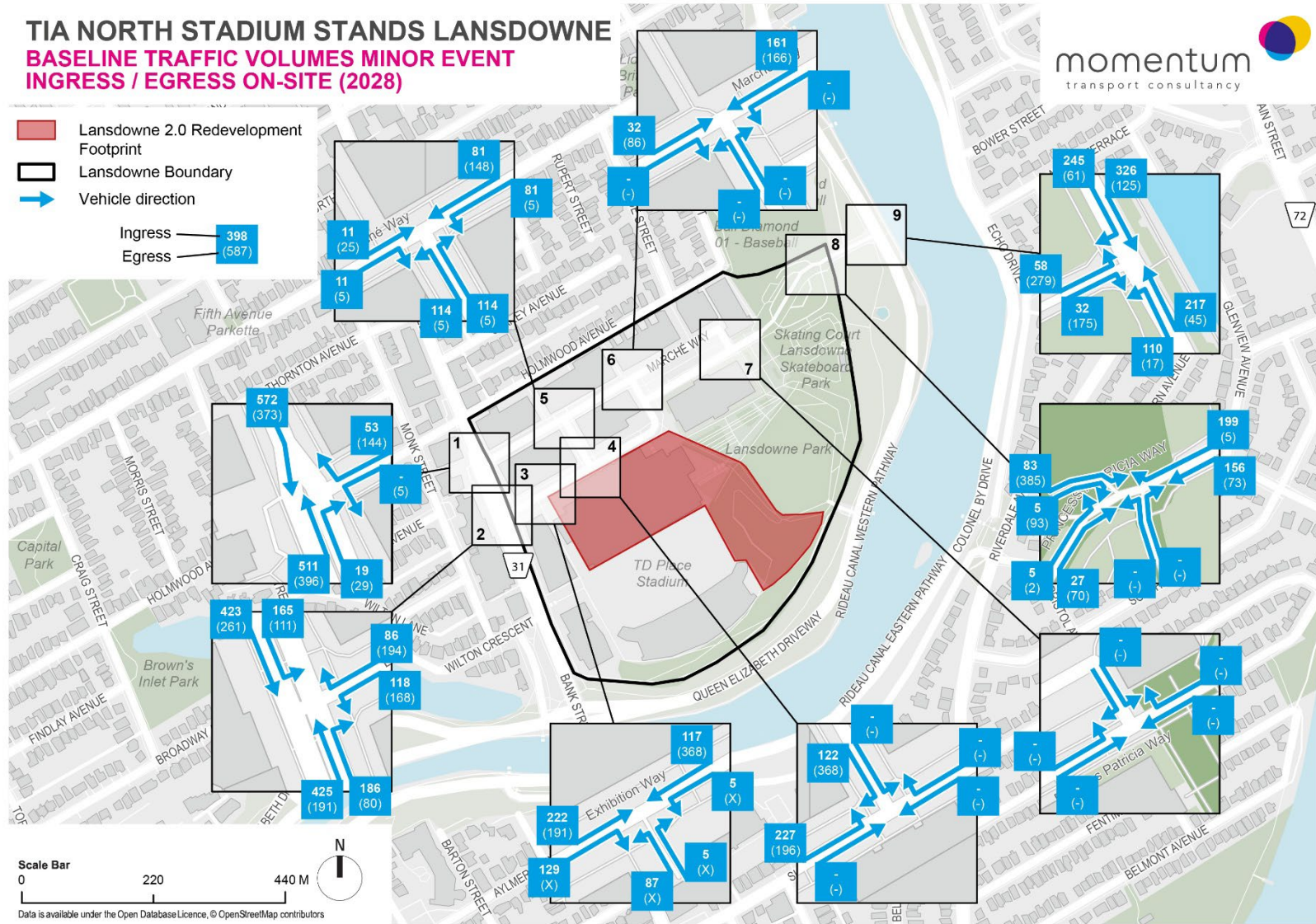


Figure 3-13: 2028 Future Background Traffic (Major Event)

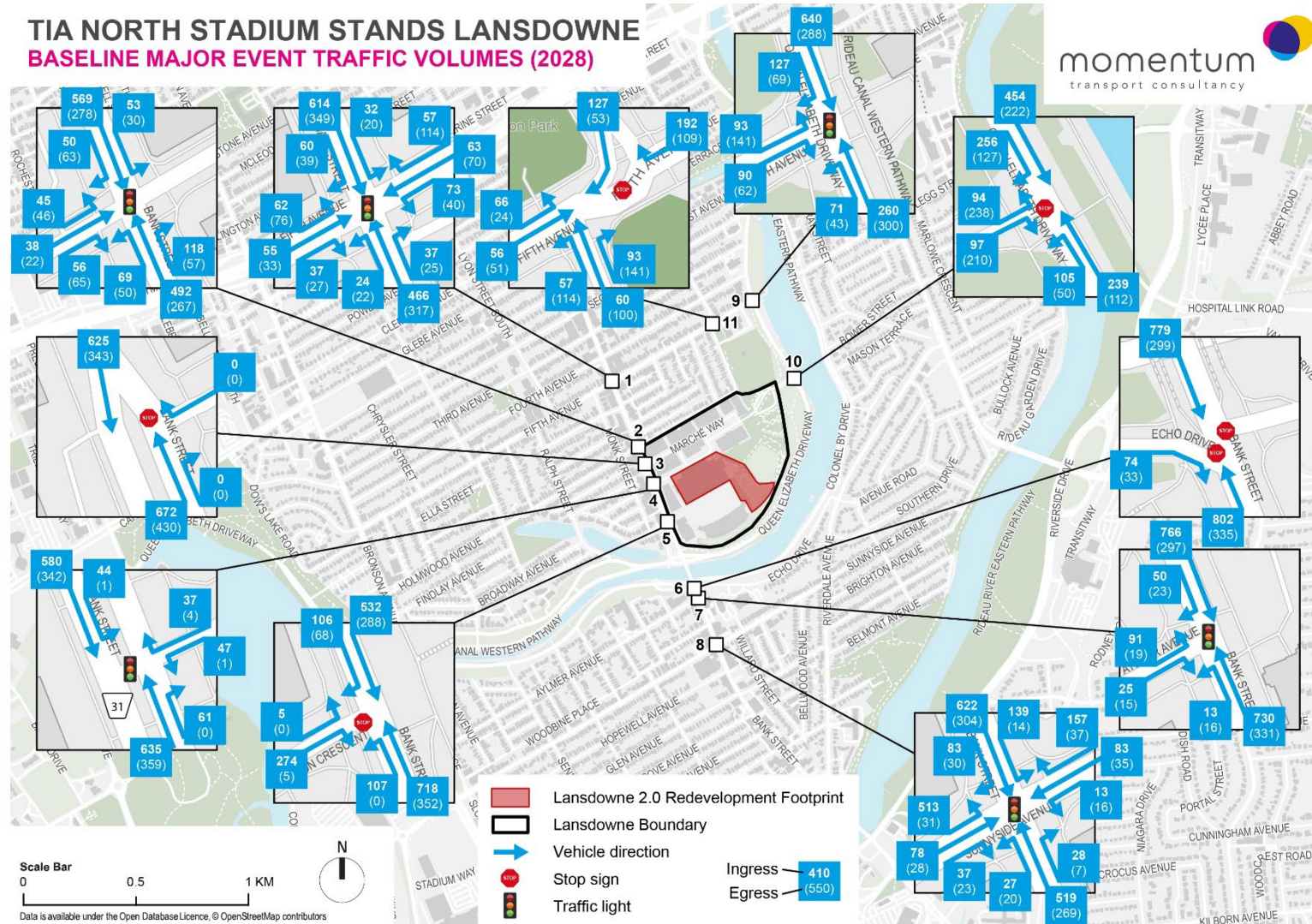


Figure 3-14: 2028 Construction Traffic (Weekday AM/PM with Bank Street Garage Ramp Closure)

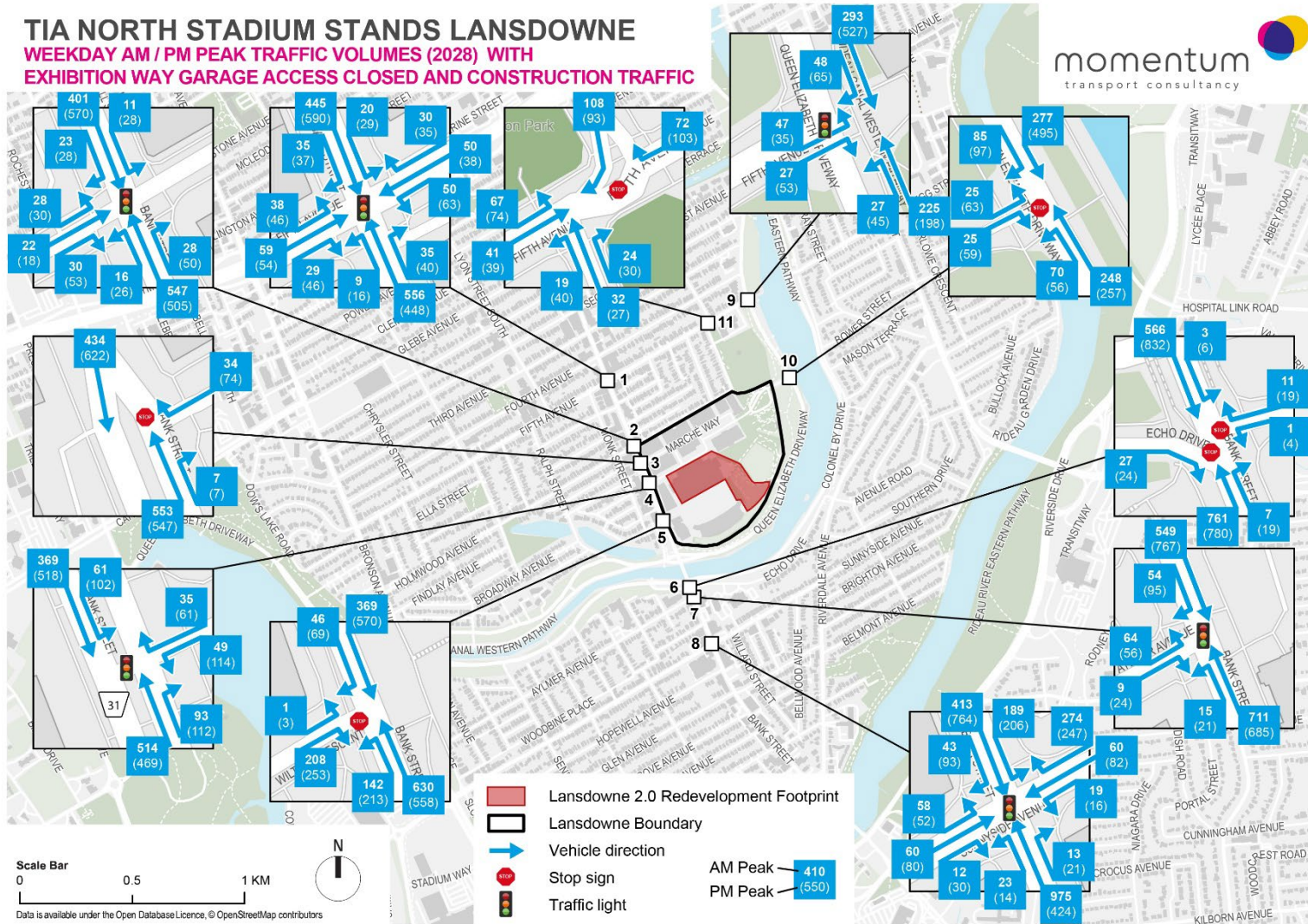
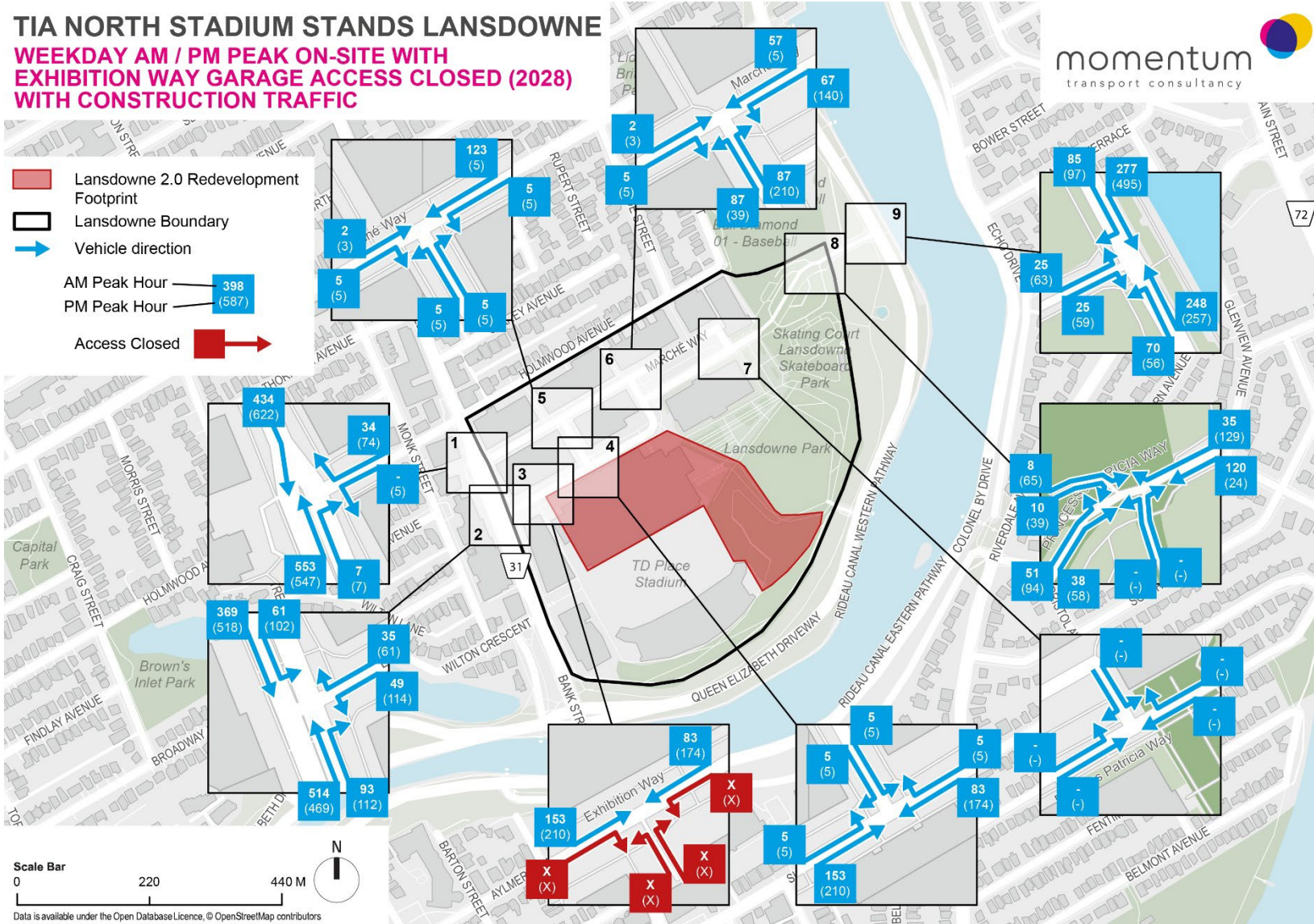


Figure 3-15: 2028 Construction Internal (Weekday AM/PM with Bank Street Garage Ramp Closure)



2030 BASELINE CONDITIONS TRAFFIC VOLUMES

The 2030 Baseline Conditions horizon year represents the completion and commissioning of the new NSS, and ongoing construction of the new podium level retail and residential towers (Phase 3). The assessment of this horizon year will focus on verifying the transportation requirements to support construction of Phase 3 for various scenarios including weekdays, weekends, minor events at the new Event Centre, and full capacity stadium events at the newly completed NSS.

2030 Total Future traffic volumes were developed by applying a 0.5% background growth rate to account for background development volumes from nearby developments, as well as additional construction traffic as outlined in **Table 3-8** and **Figure 3-1** through **Figure 3-4** and described in Section 4.4 Access Intersection Design – Construction Access.

Construction traffic is accounted for only within the weekday AM and PM scenarios as this is when construction activity is expected to occur.

Figure 3-17 through **Figure 3-27** summarize projected 2030 traffic volumes inclusive of Future Background growth and construction traffic where relevant.

Figure 3-16: 2030 Future Background Traffic (Weekday AM / PM)

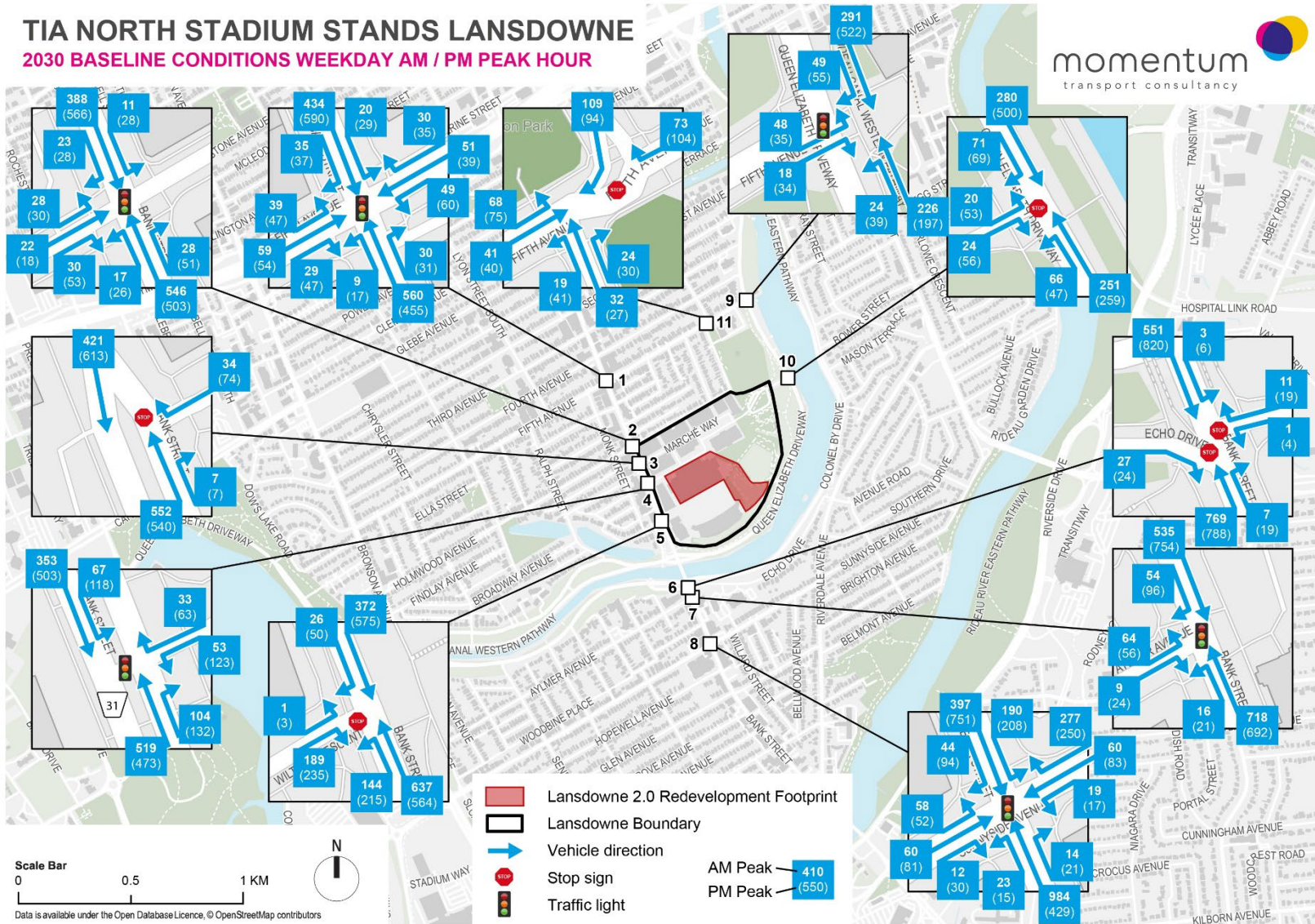


Figure 3-17: 2030 Future Background Internal Traffic (Weekday AM / PM)

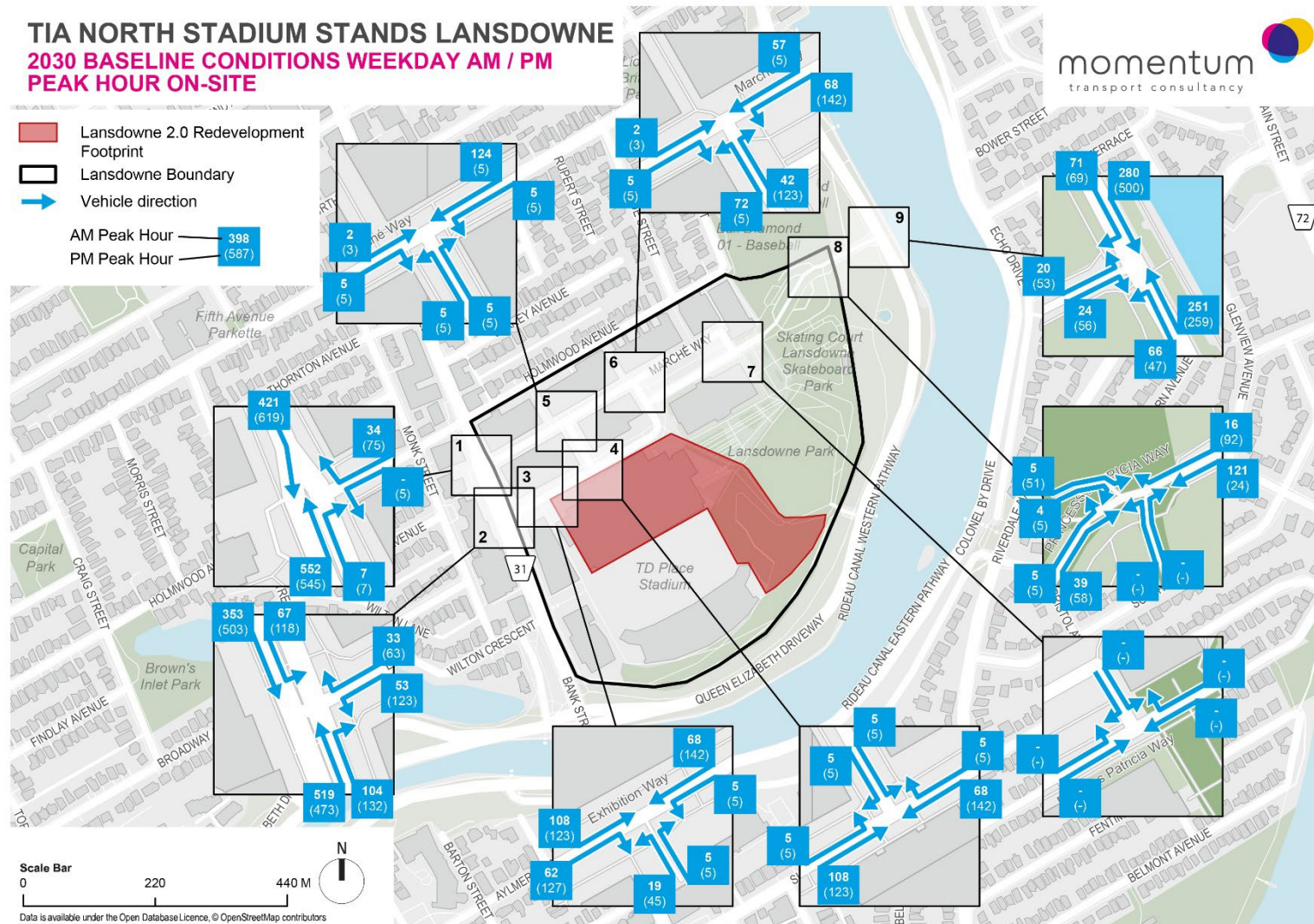


Figure 3-18: 2030 Future Background + Construction Traffic (Weekday AM / PM)

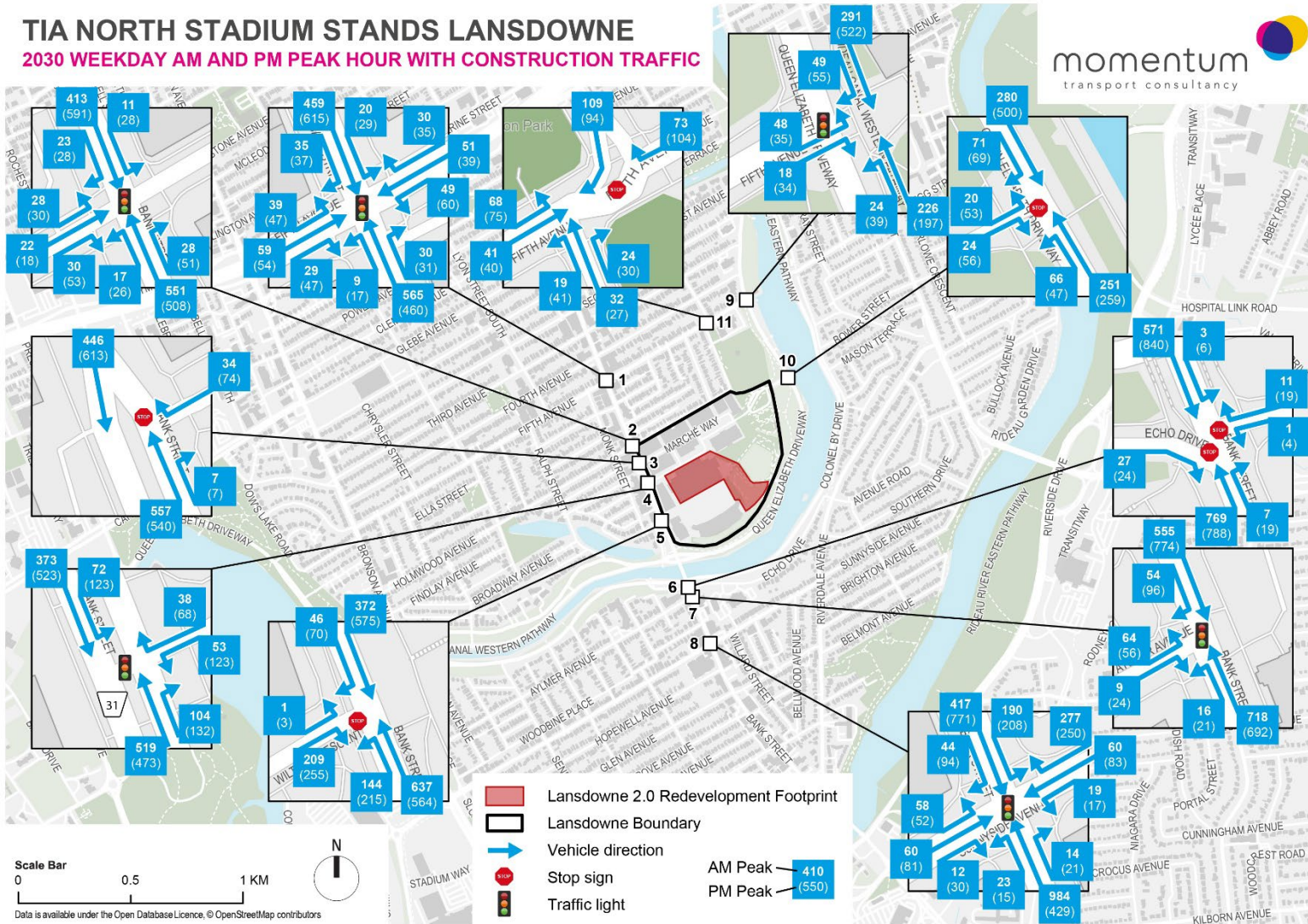


Figure 3-19: 2030 Future Background + Construction Internal Traffic (Weekday AM / PM)

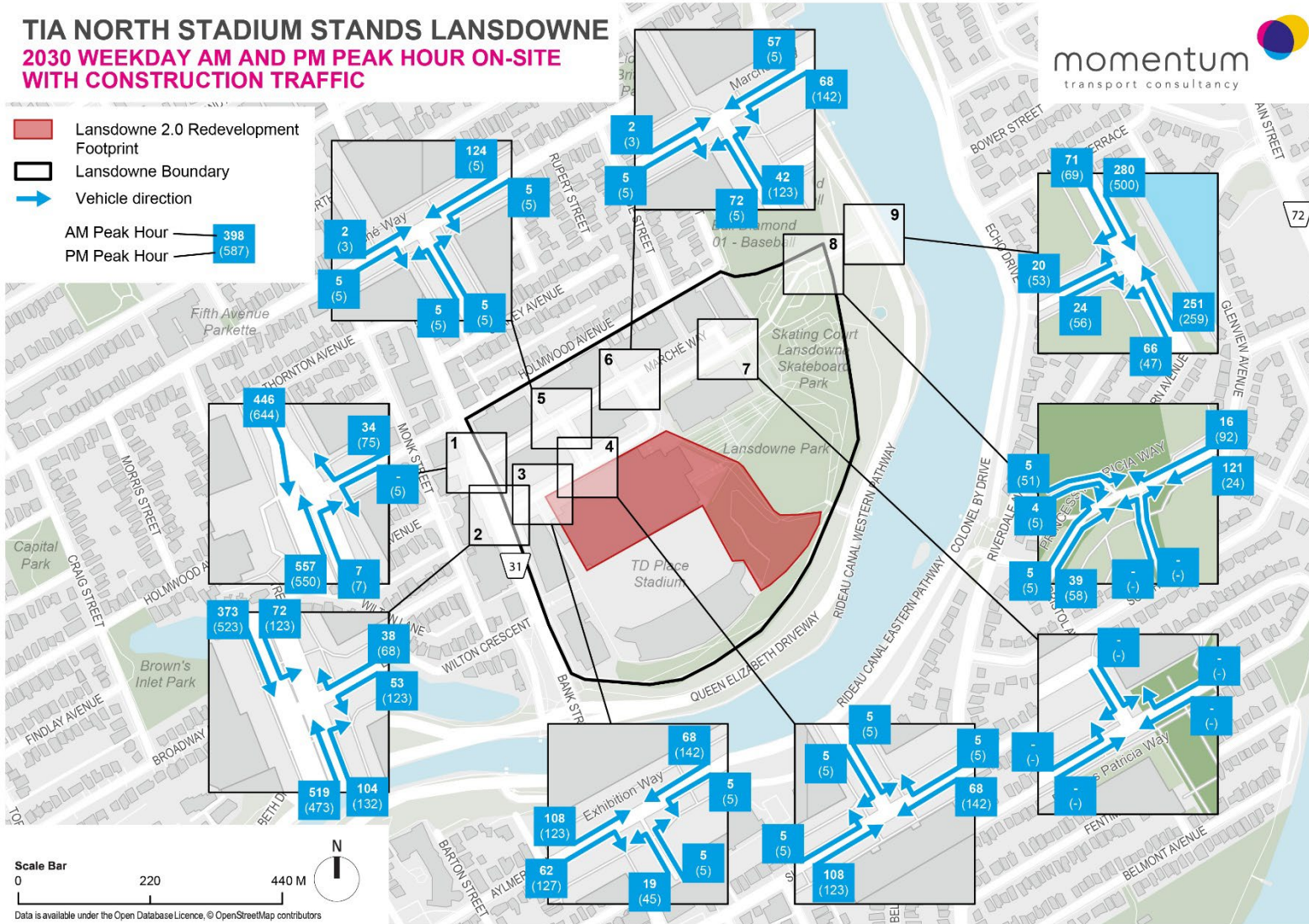


Figure 3-20: 2030 Future Background Traffic (Saturday Peak)

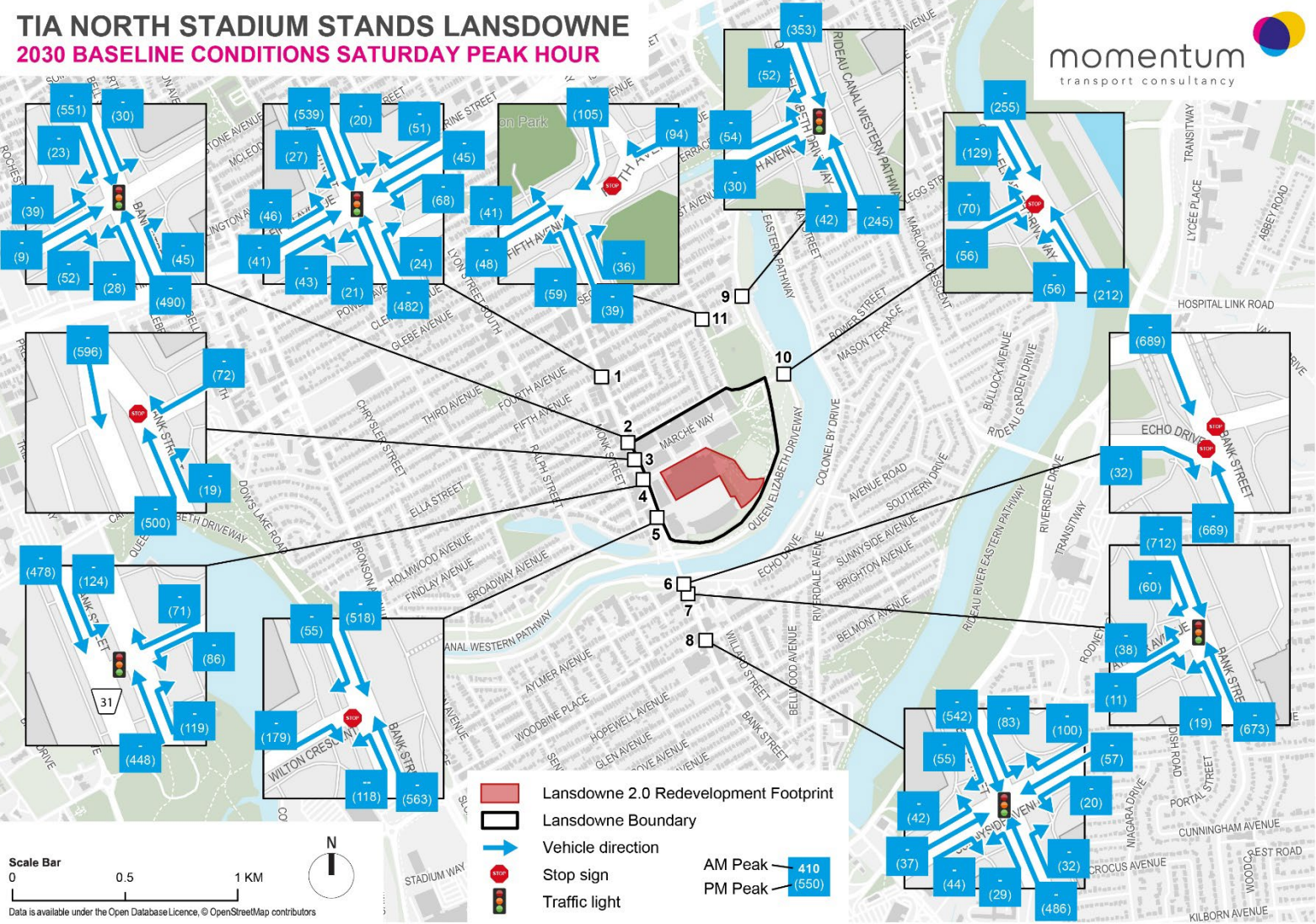


Figure 3-21: 2030 Future Background Internal Traffic (Saturday Peak)

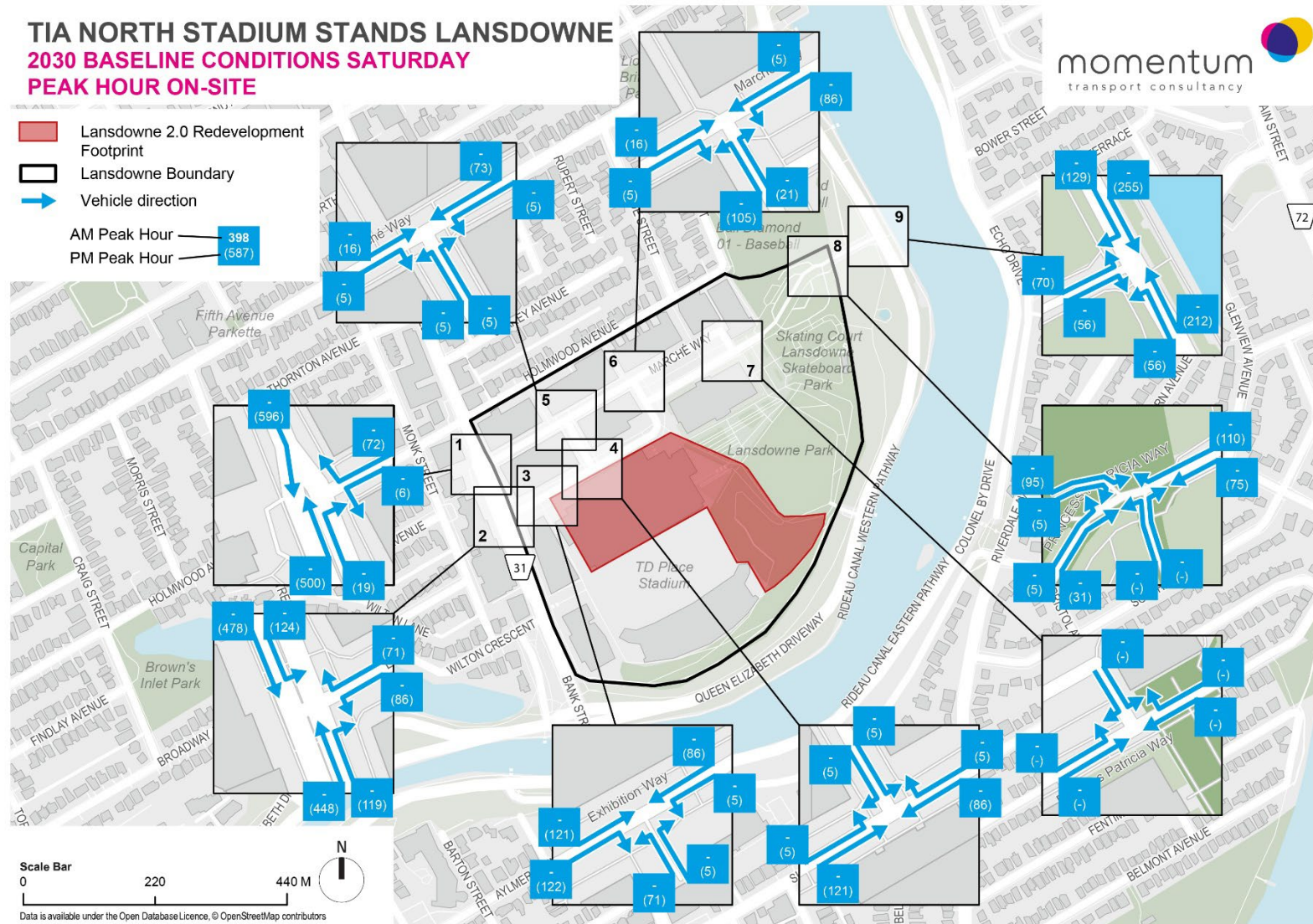


Figure 3-22: 2030 Future Background Traffic (Sunday Peak)

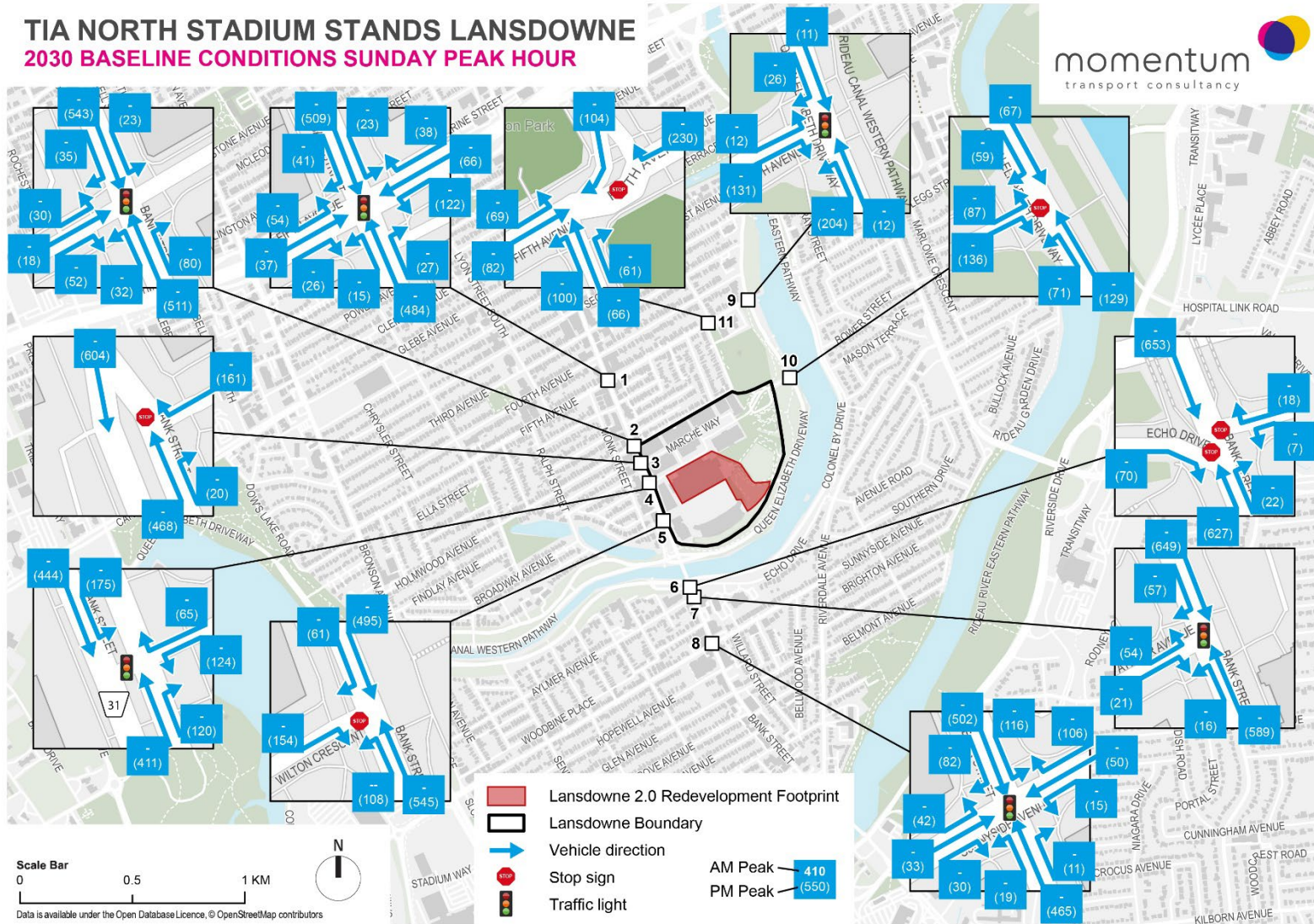


Figure 3-23: 2030 Future Background Internal Traffic (Sunday Peak)

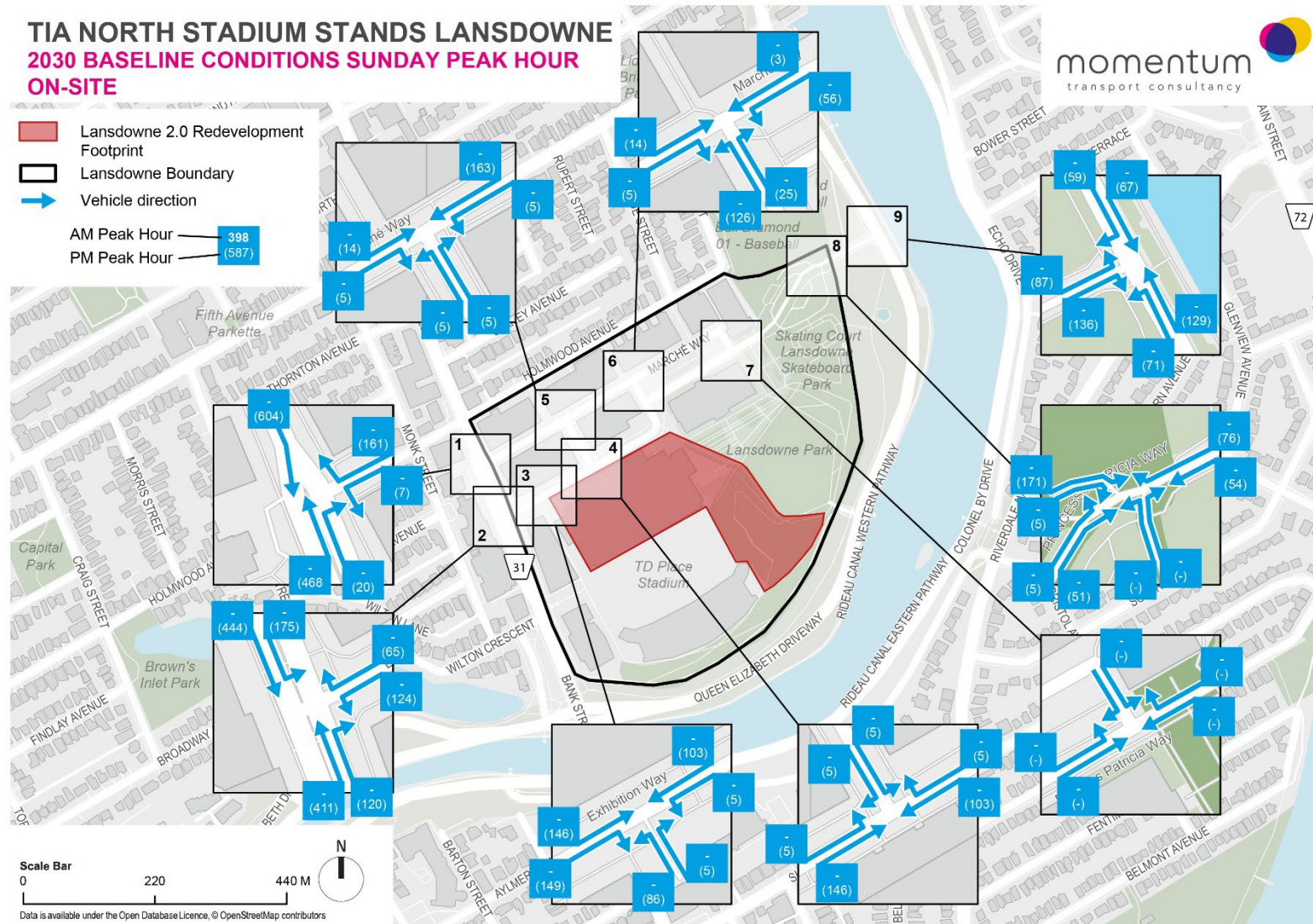


Figure 3-24: 2030 Future Background Traffic (Minor Event)

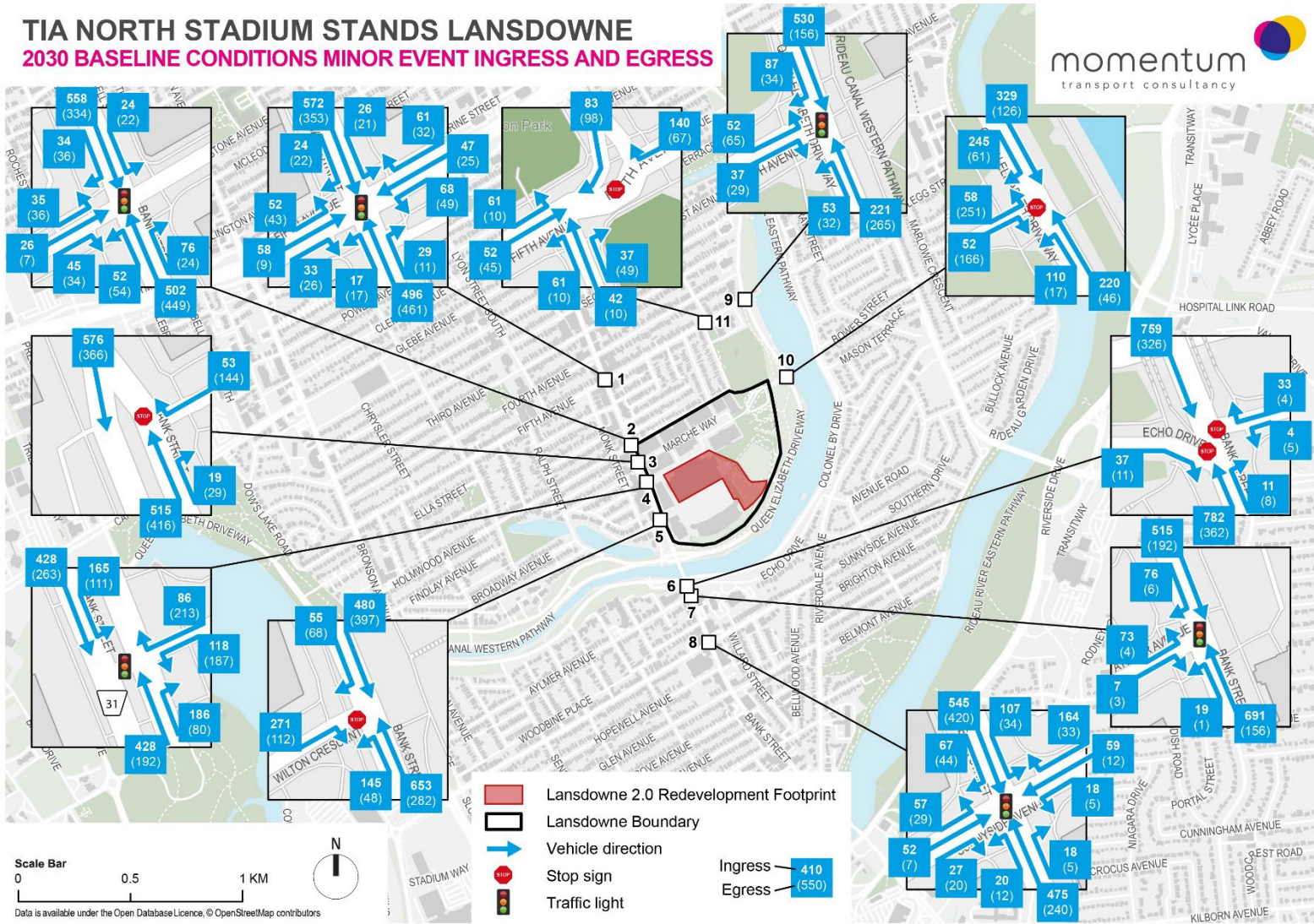


Figure 3-25: 2030 Future Background Internal Traffic (Minor Event)

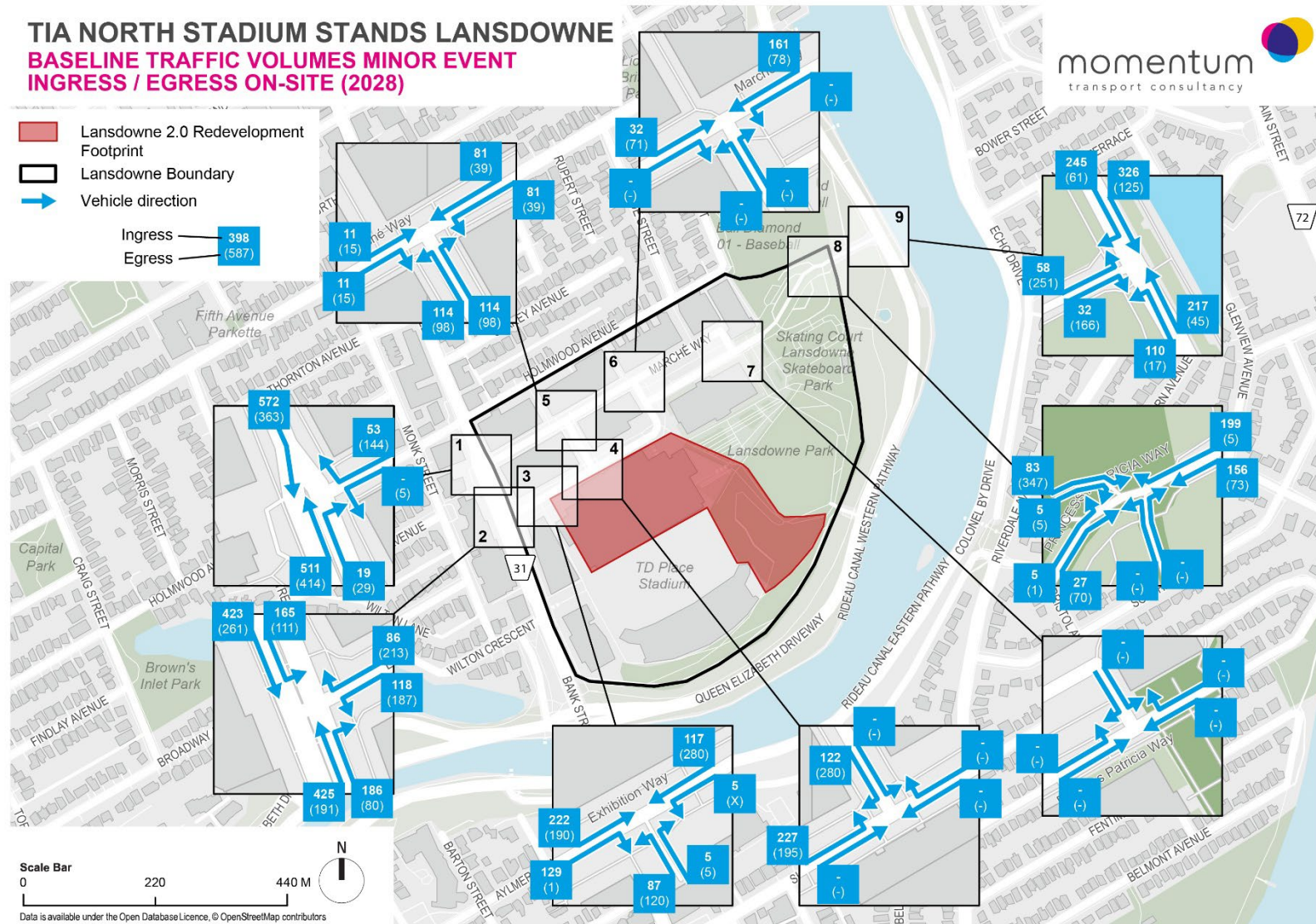
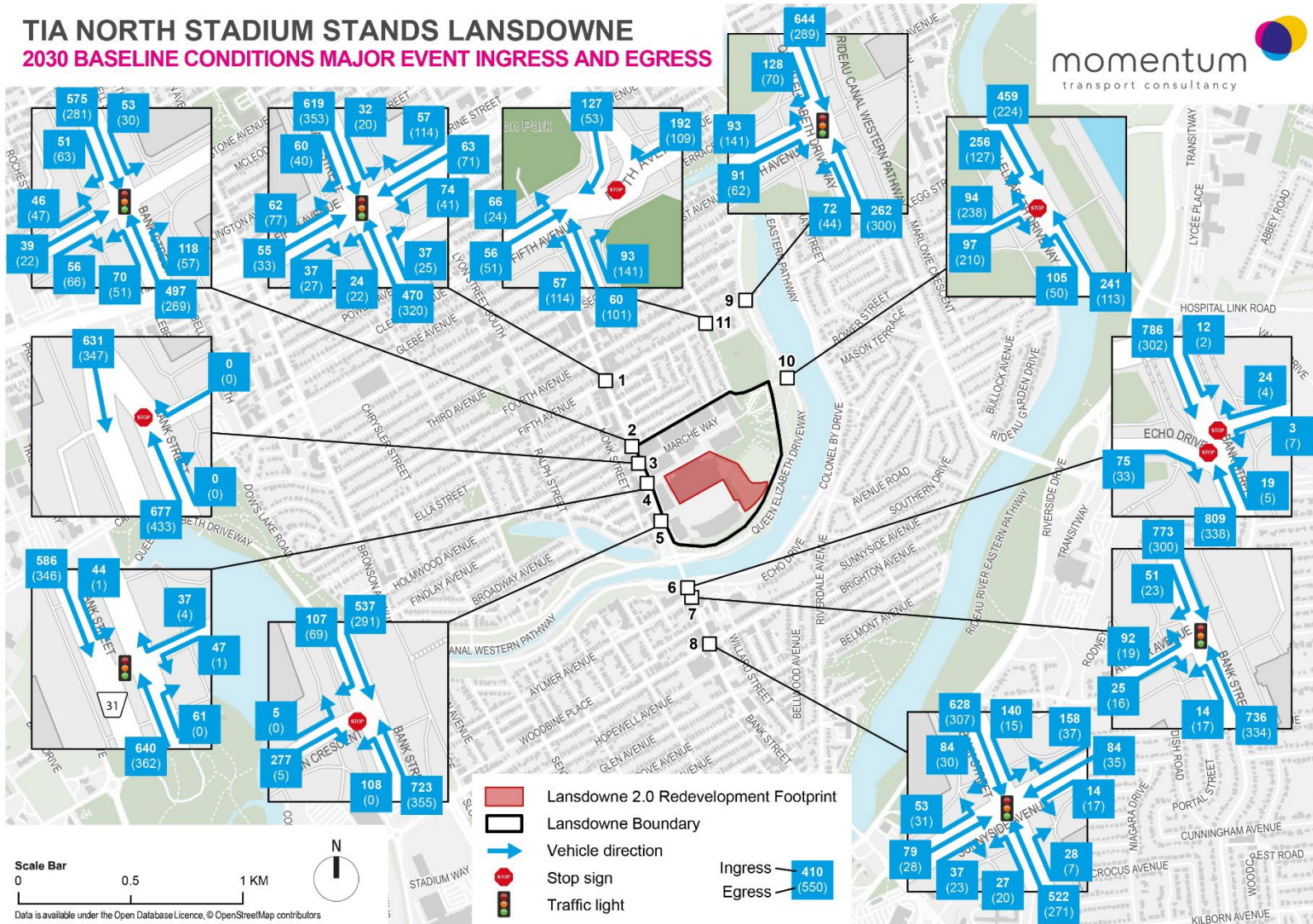


Figure 3-26: 2030 Future Background Traffic (Major Event)



2033 FUTURE BACKGROUND AND TOTAL FUTURE TRAFFIC VOLUMES

The 2033 horizon year represents the full build-out of the Lansdowne 2.0 redevelopment project inclusive of the new Event Centre (Phase 1), North Stadium Stands (Phase 2), and additional retail podium and two residential towers (Phase 3).

2033 Future Background traffic volumes were developed by applying a 0.5% background growth rate, accounting for background development volumes from nearby developments.

Similar to 2028 Future scenarios, 2033 Total Future traffic volumes were developed by applying a 0.5% background growth rate, explicit background development volumes from nearby developments, as well as new additional site generated trips as outlined in Table 3.8 and **Figure 3.1** through **Figure 3.4**.

Figure 3-28 through **Figure 3-45** summarize projected 2033 Future Background and Total Future traffic volumes.

Figure 3-27: 2033 Future Background Traffic (Weekday AM / PM)

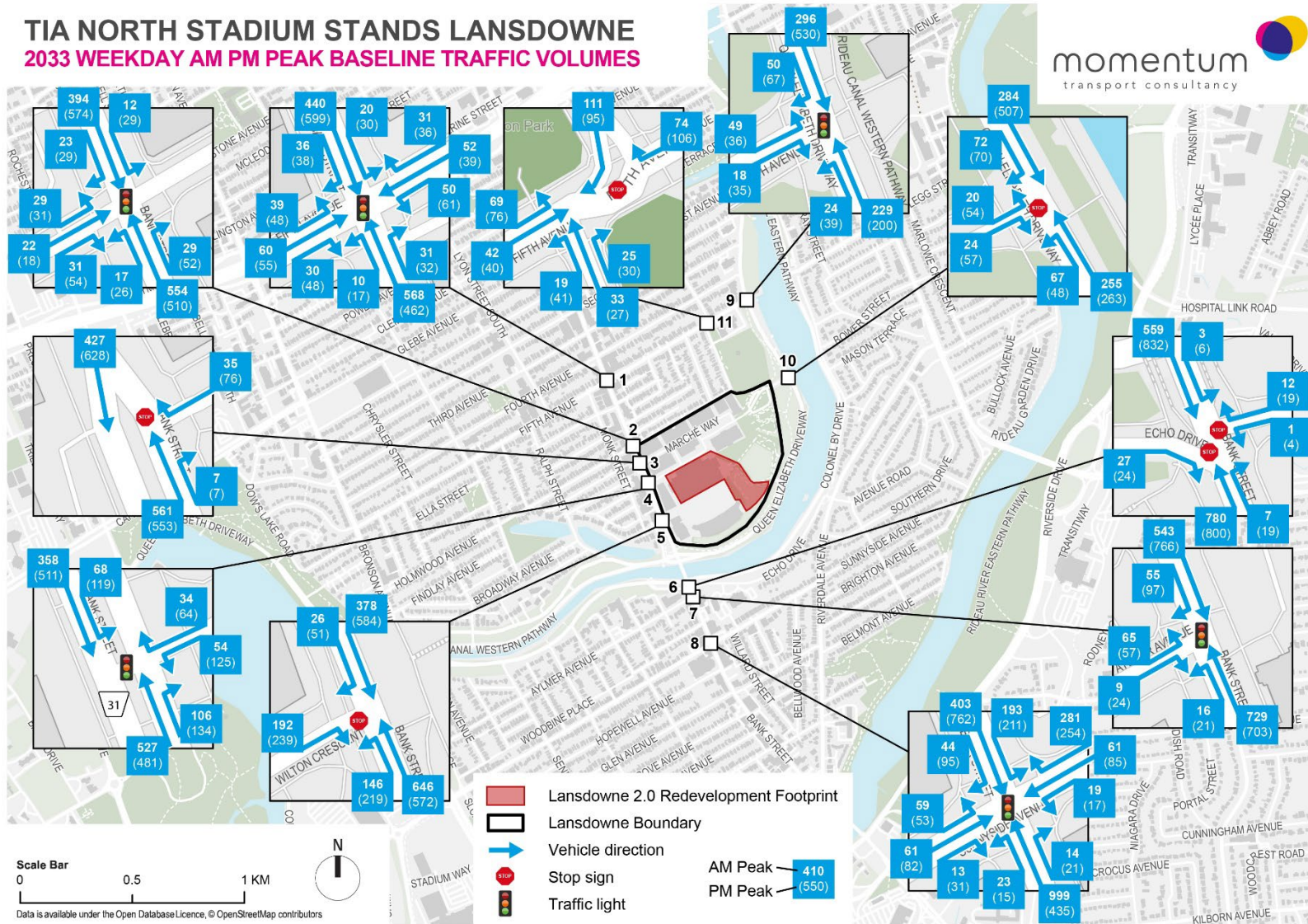


Figure 3-28: 2033 Future Background Internal Traffic (Weekday AM / PM)

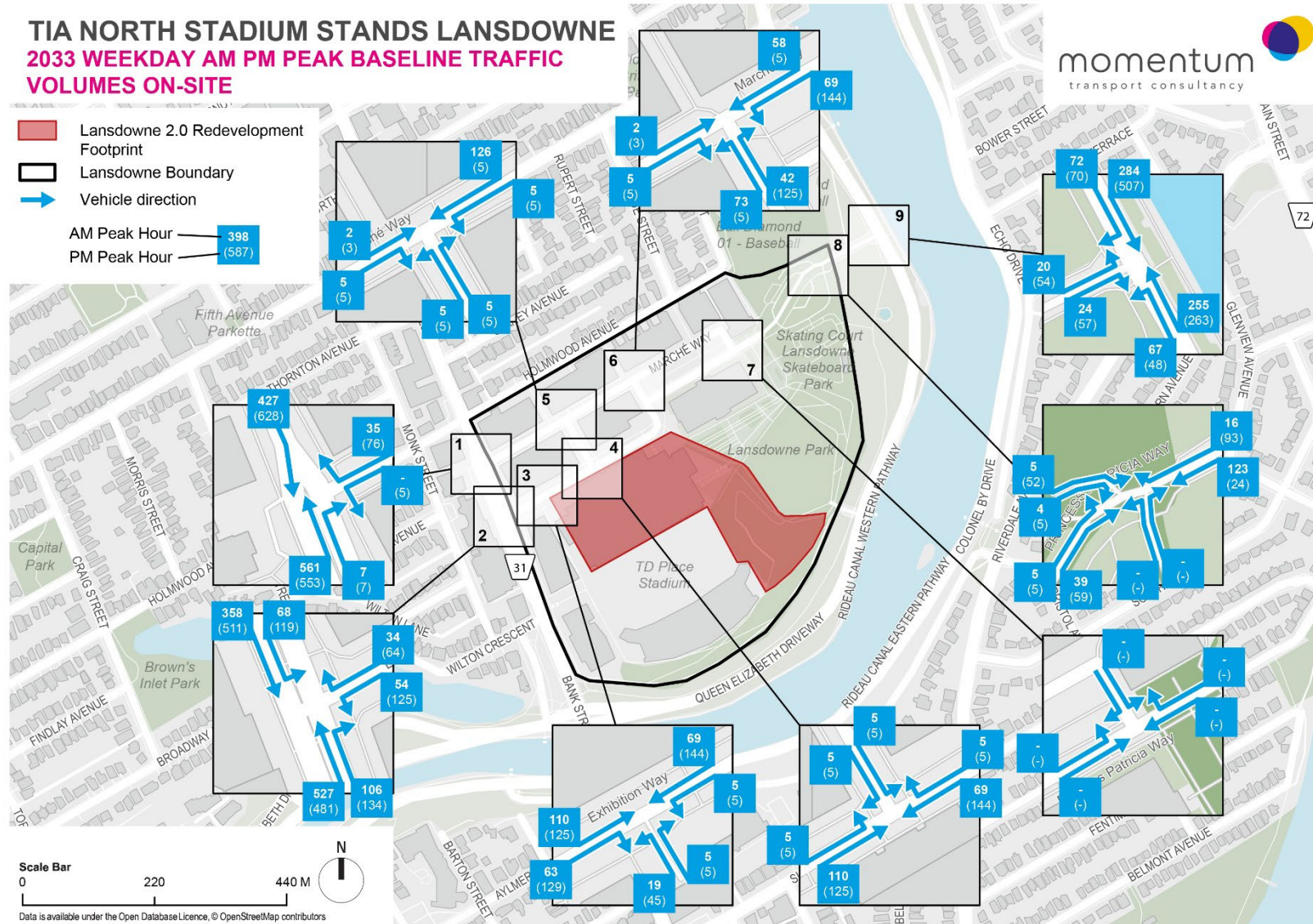


Figure 3-29: 2033 Future Background Traffic (Saturday Peak)

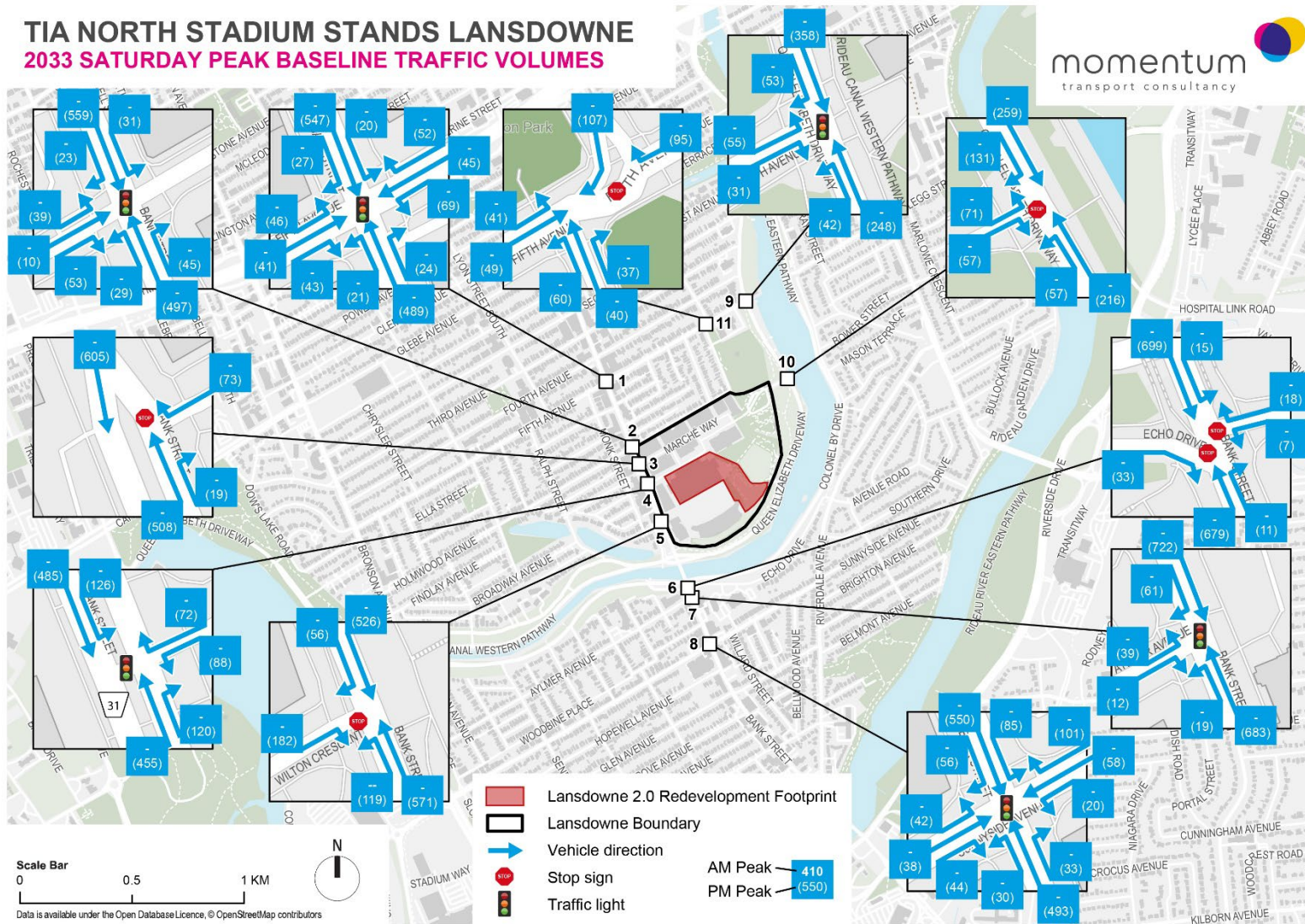


Figure 3-30: 2033 Future Background Internal Traffic (Saturday Peak)

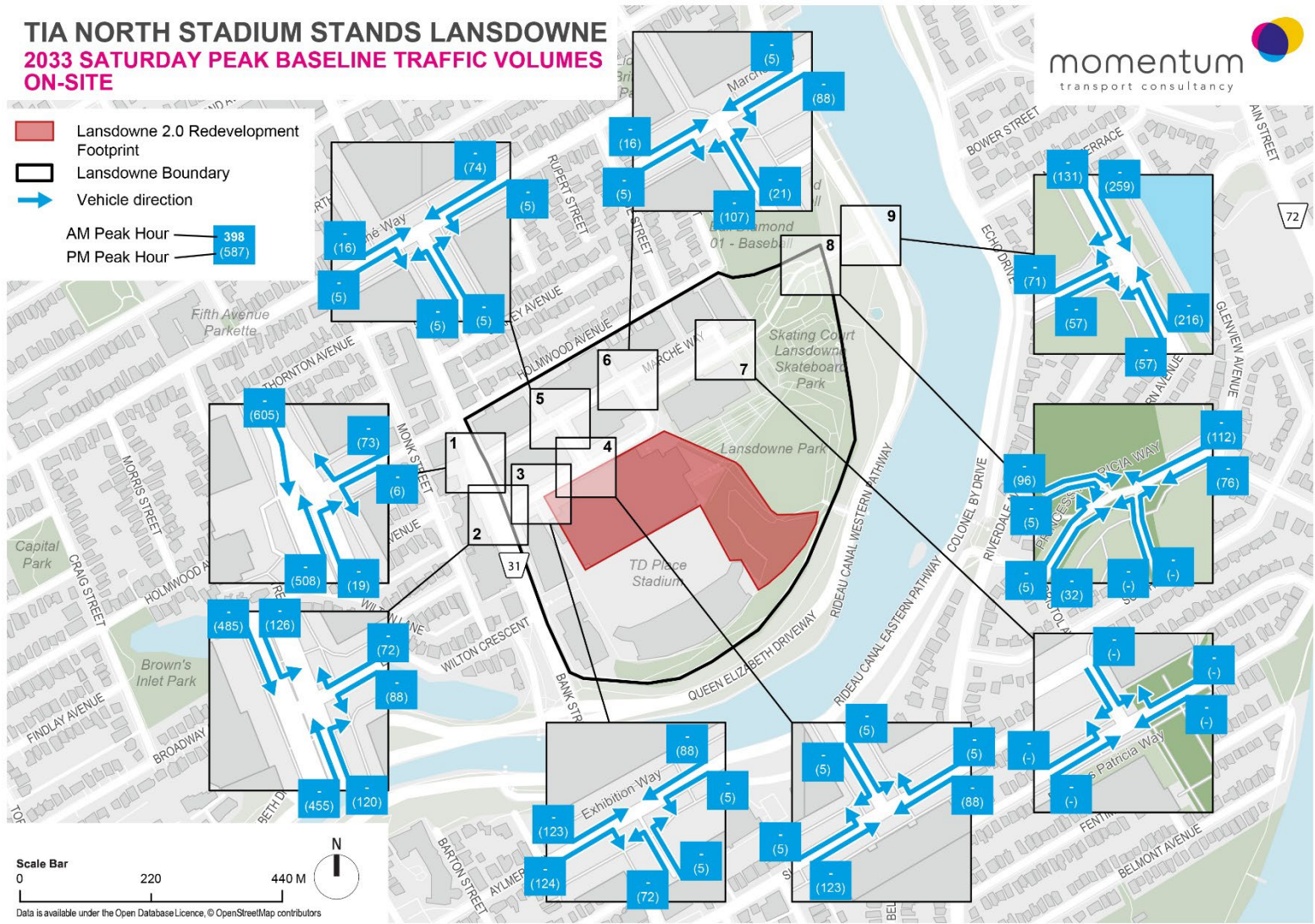


Figure 3-31: 2033 Future Background Traffic (Sunday Peak)

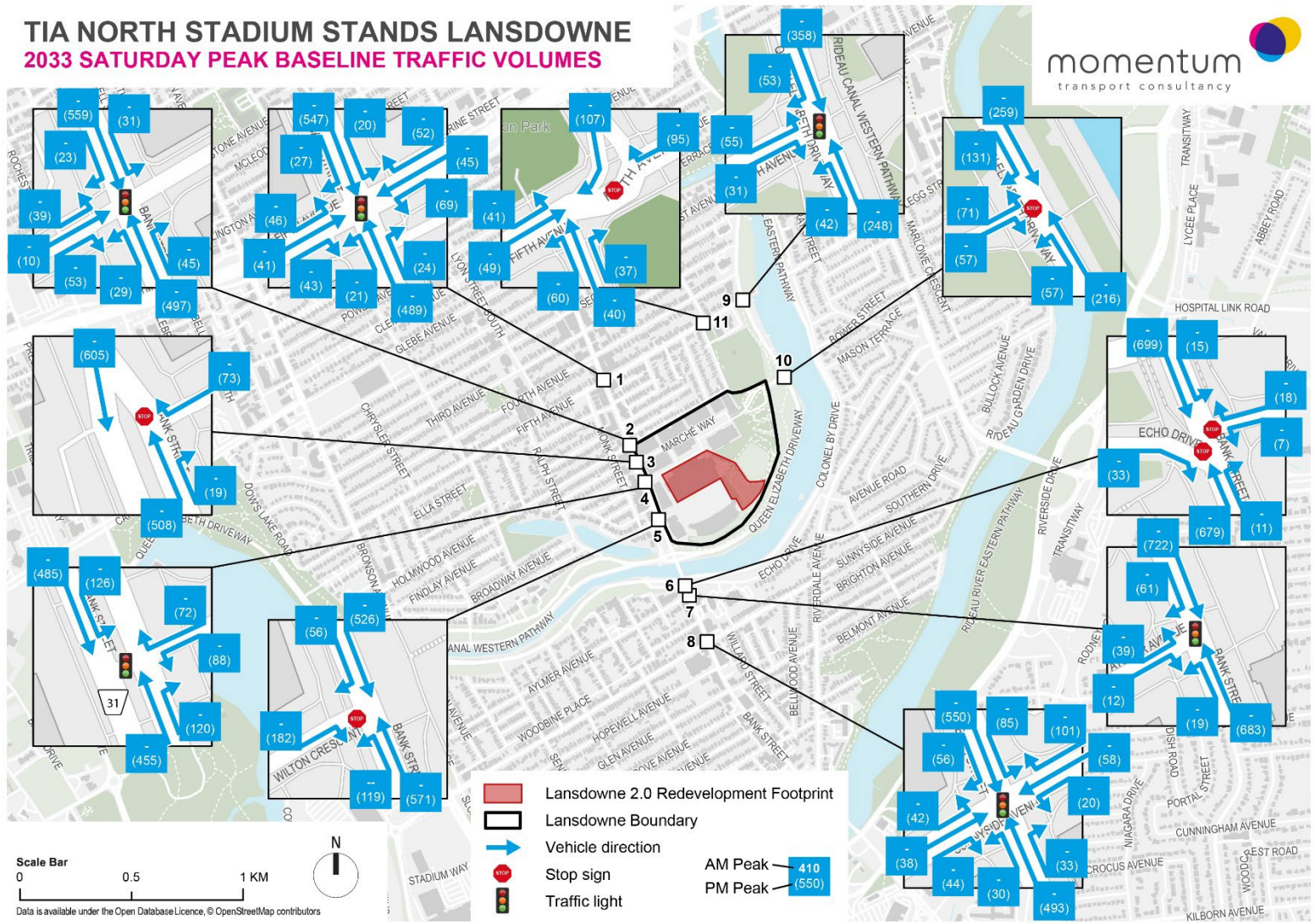


Figure 3-32: 2033 Future Background Internal Traffic (Sunday Peak)

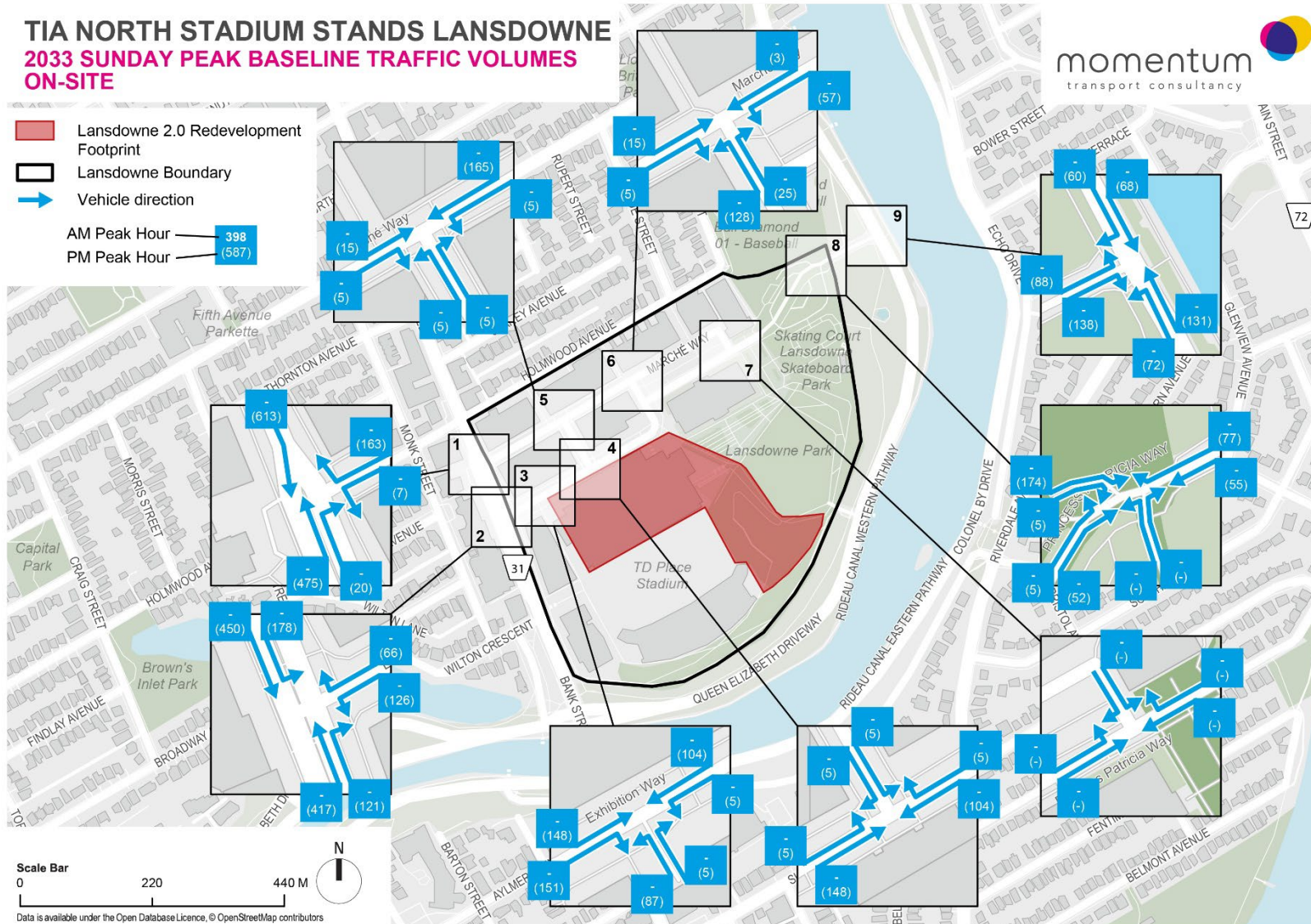


Figure 3-33: 2033 Future Background Traffic (Minor Event)

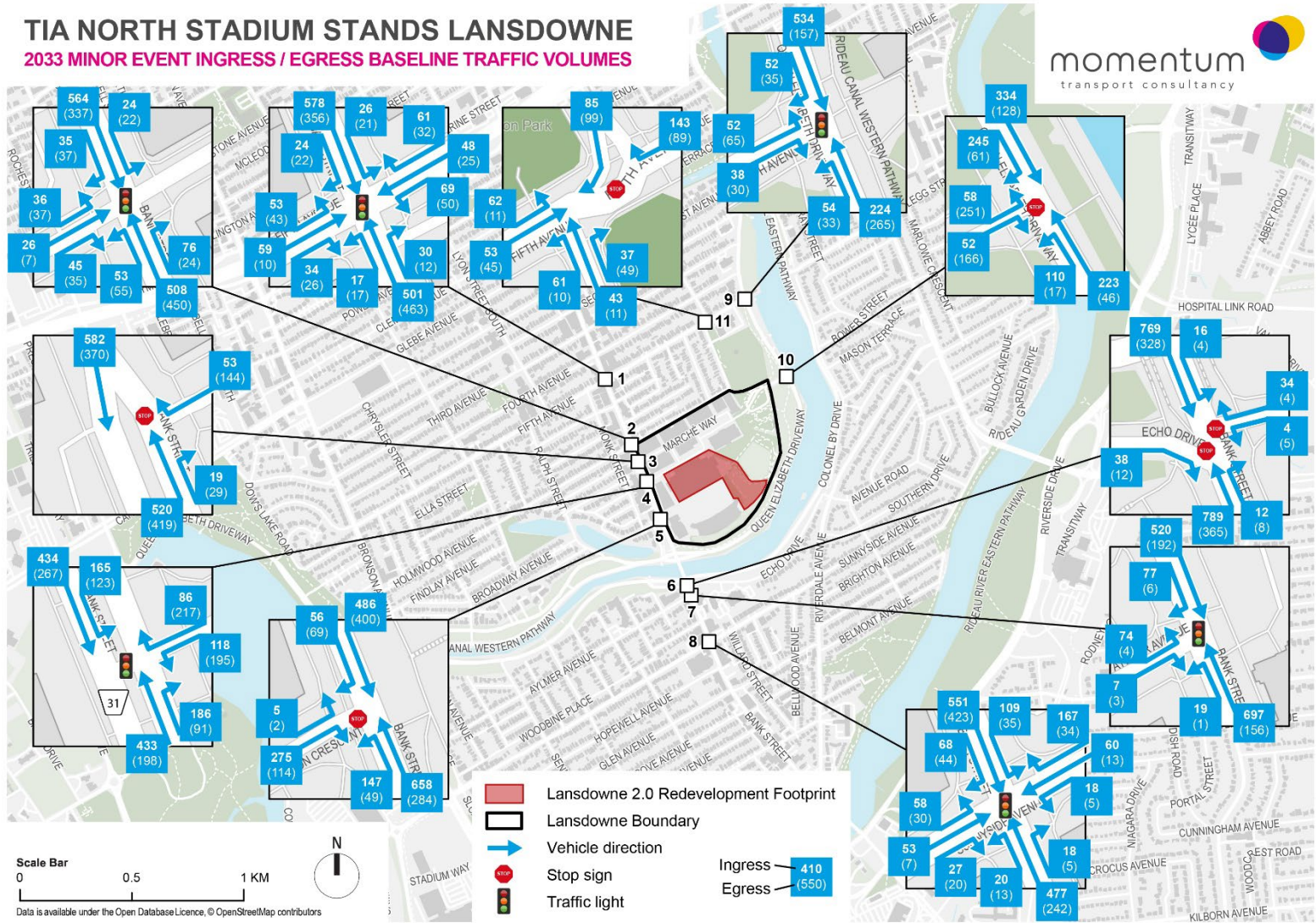


Figure 3-34: 2033 Future Background Internal Traffic (Minor Event)

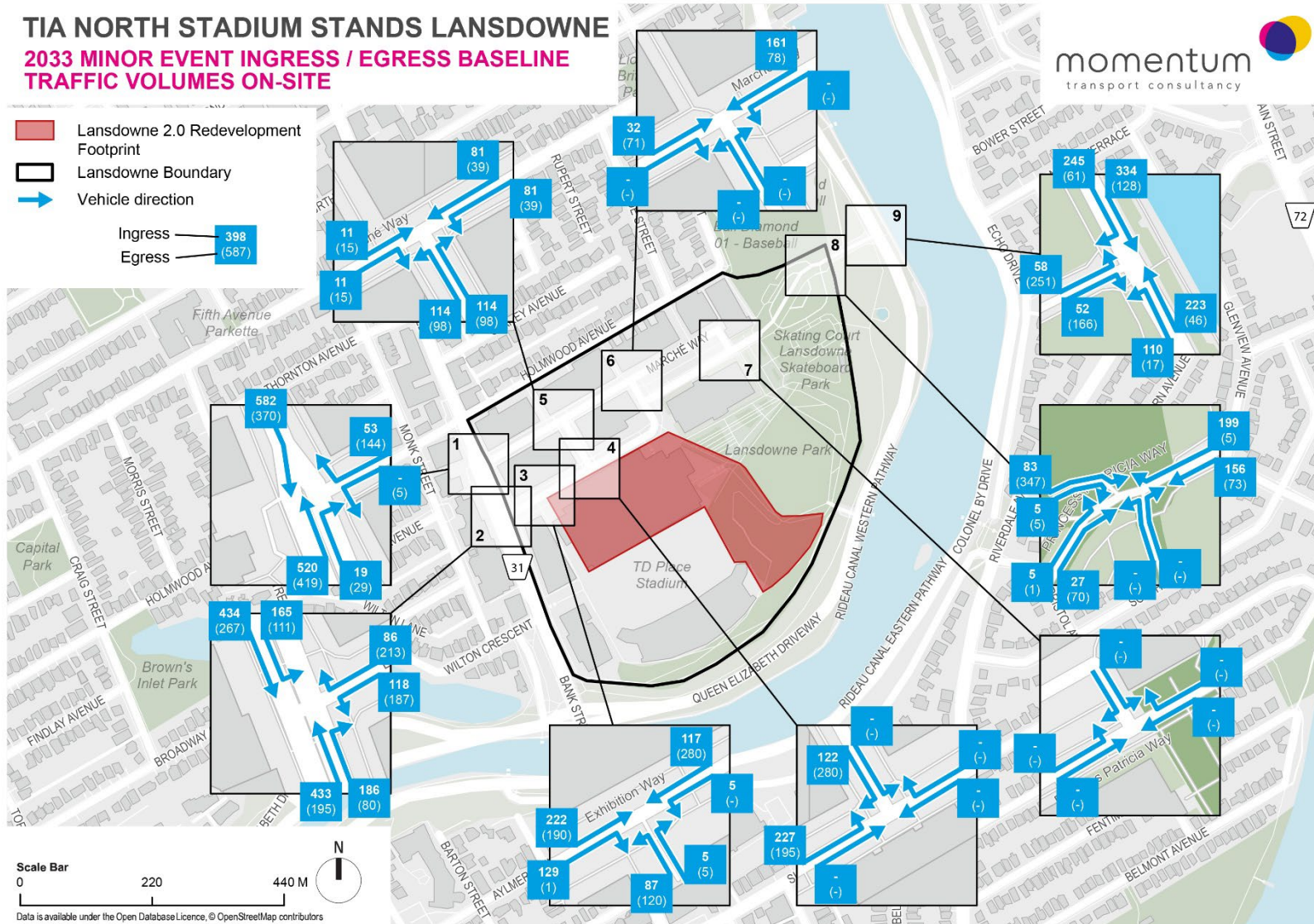


Figure 3-35: 2033 Future Background Traffic (Major Event)

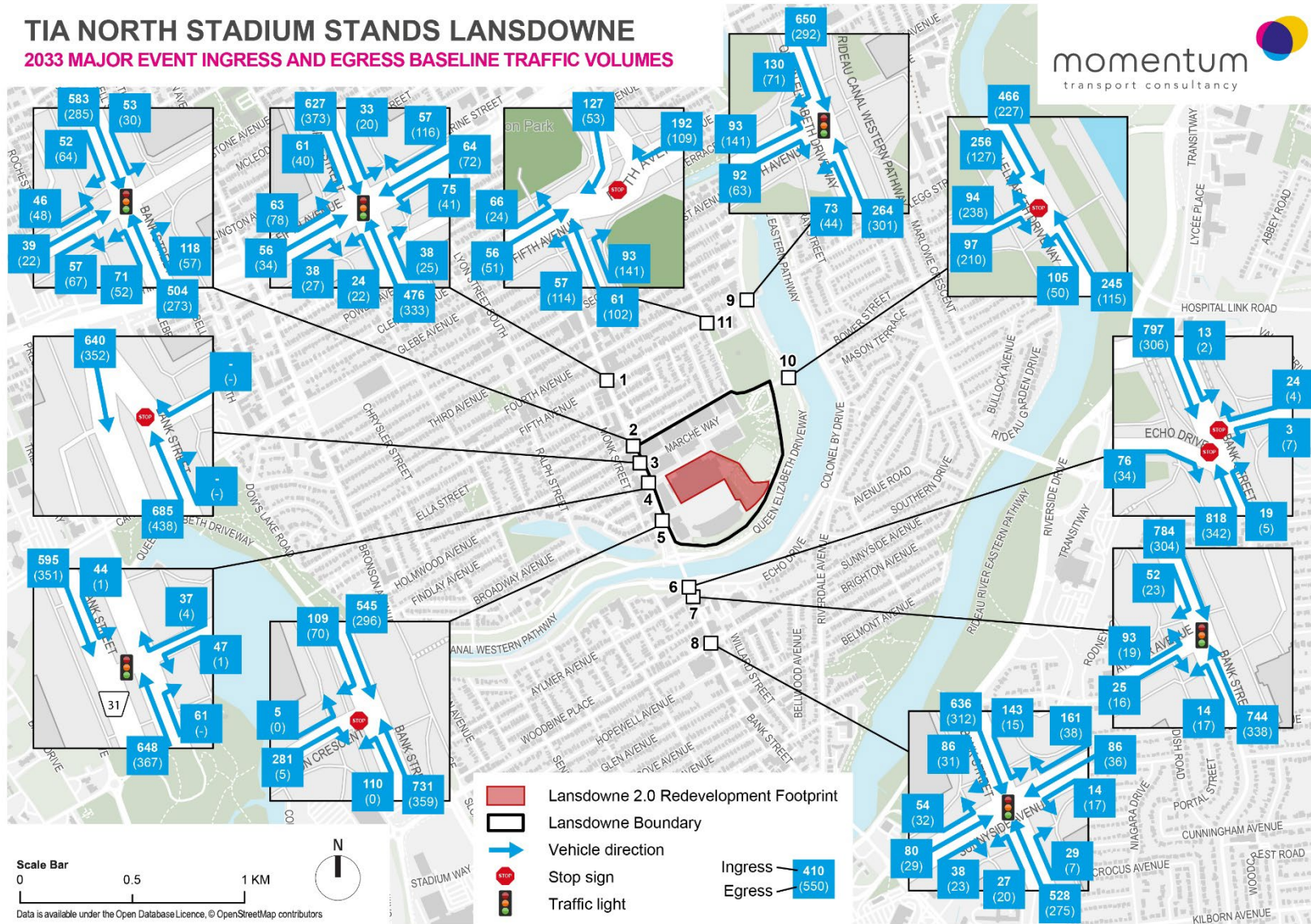


Figure 3-36: 2033 Total Future Traffic (Weekday AM / PM)

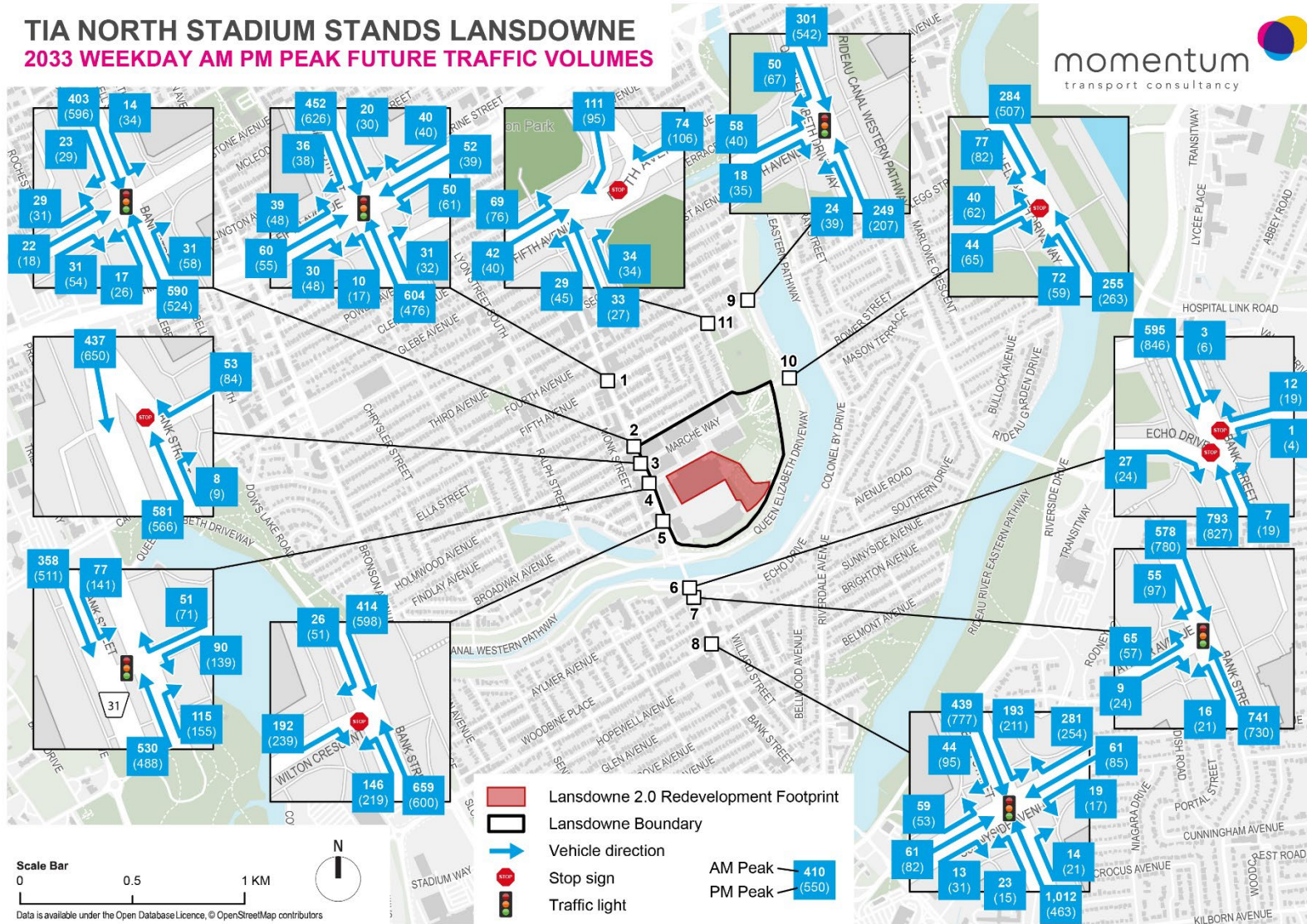


Figure 3-37: 2033 Total Future Internal Traffic (Weekday AM / PM)

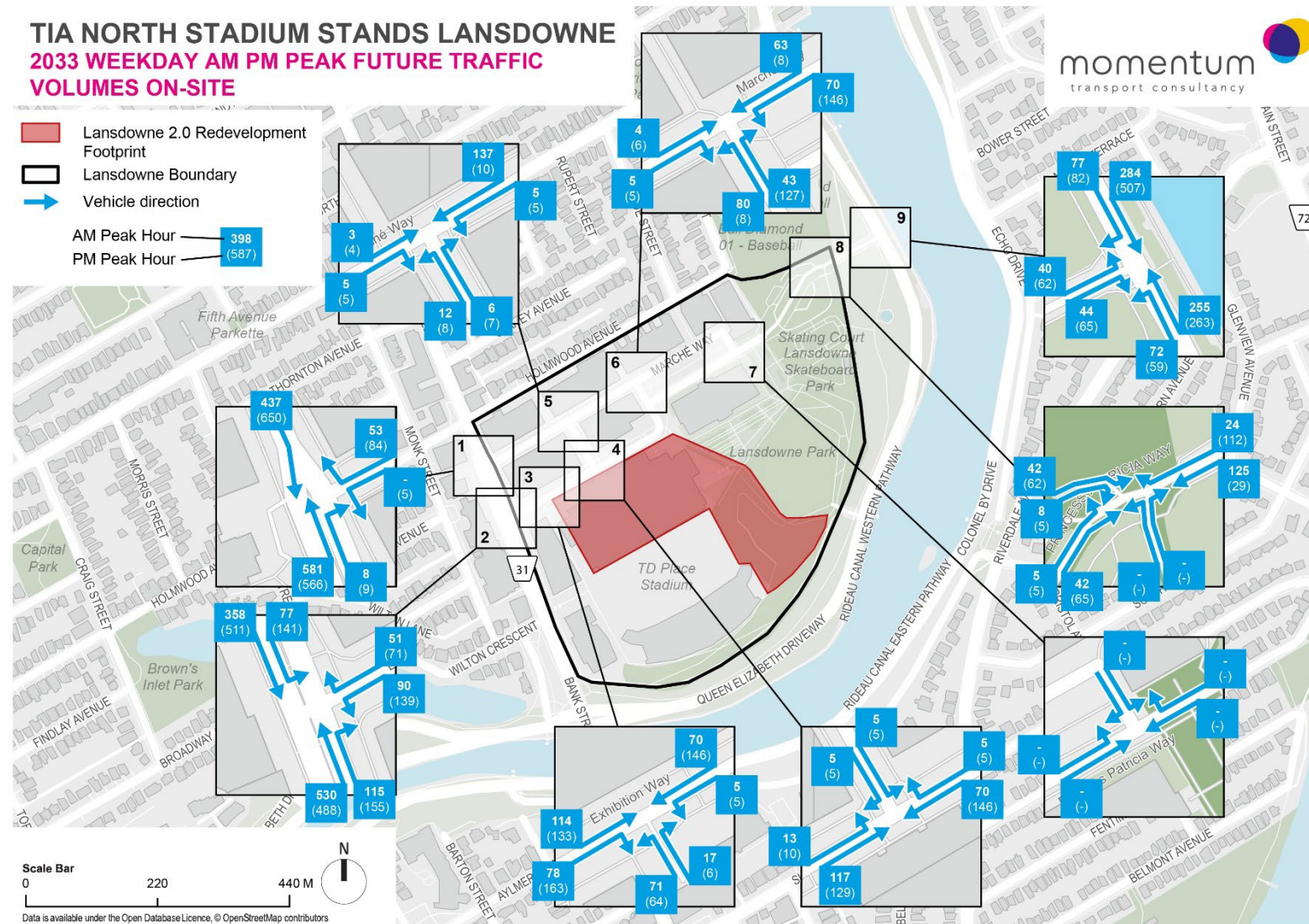


Figure 3-38: 2033 Total Future Traffic (Saturday Peak)

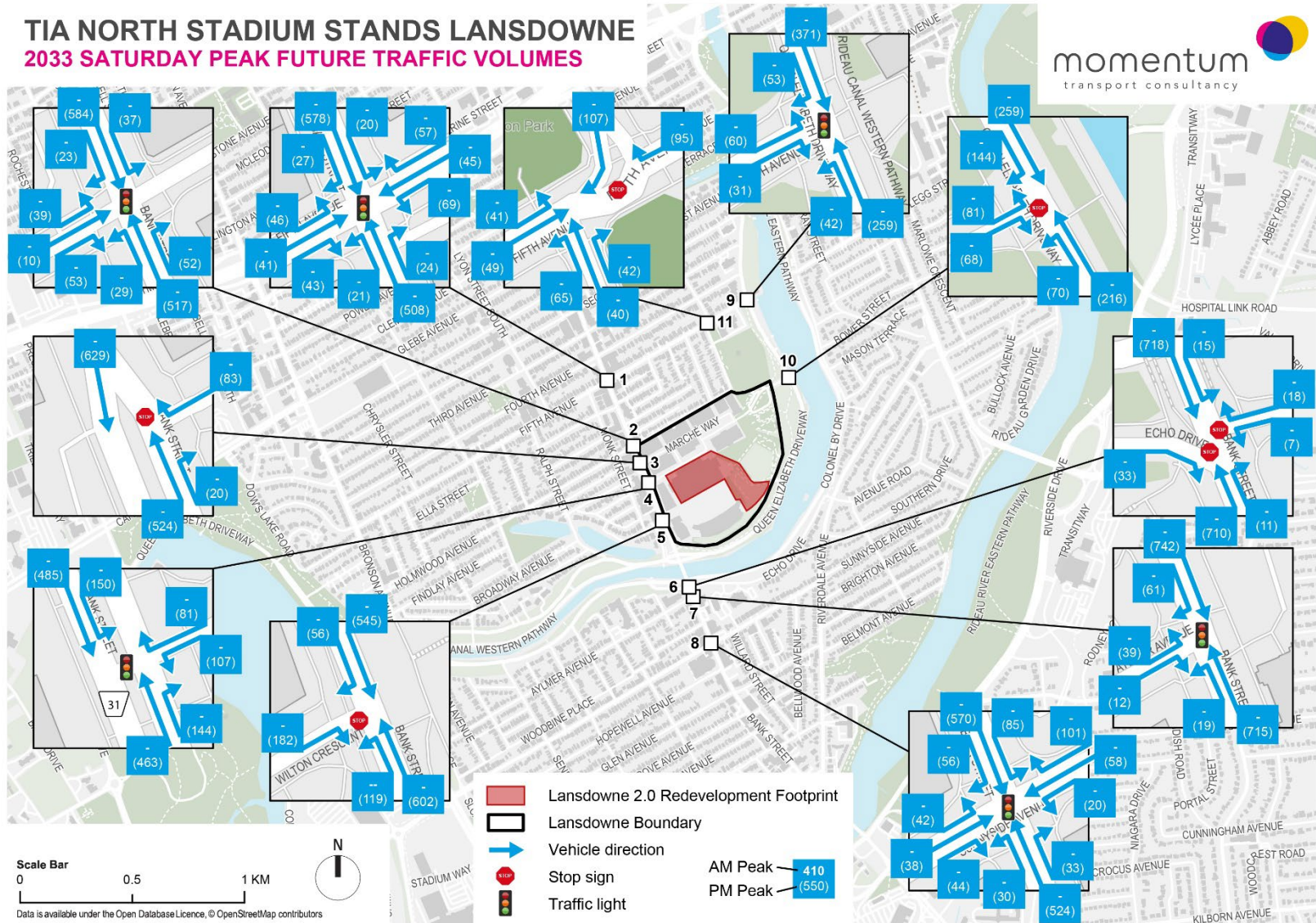


Figure 3-39: 2033 Total Future Internal Traffic (Saturday Peak)

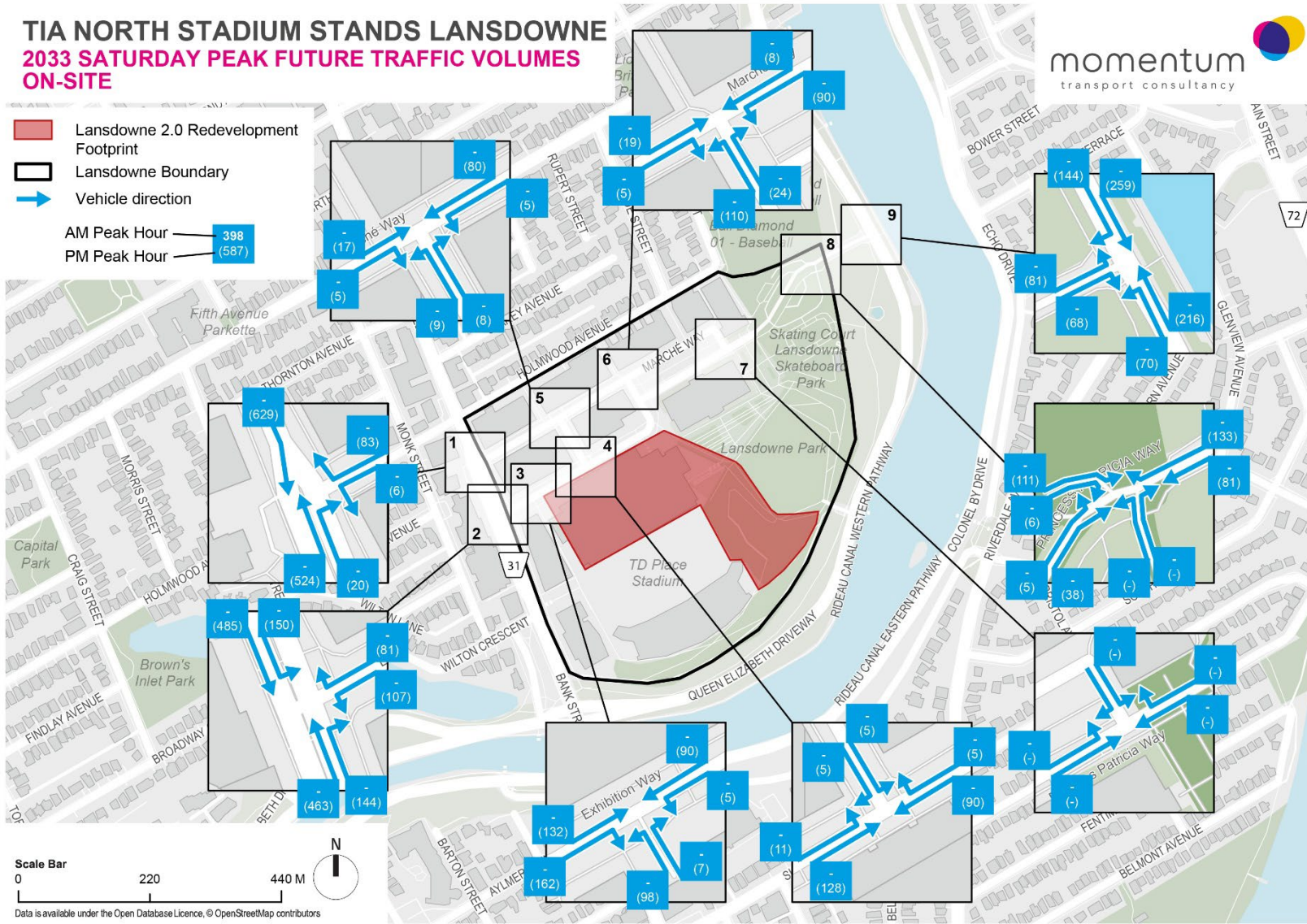


Figure 3-40: 2033 Total Future Traffic (Sunday Peak)

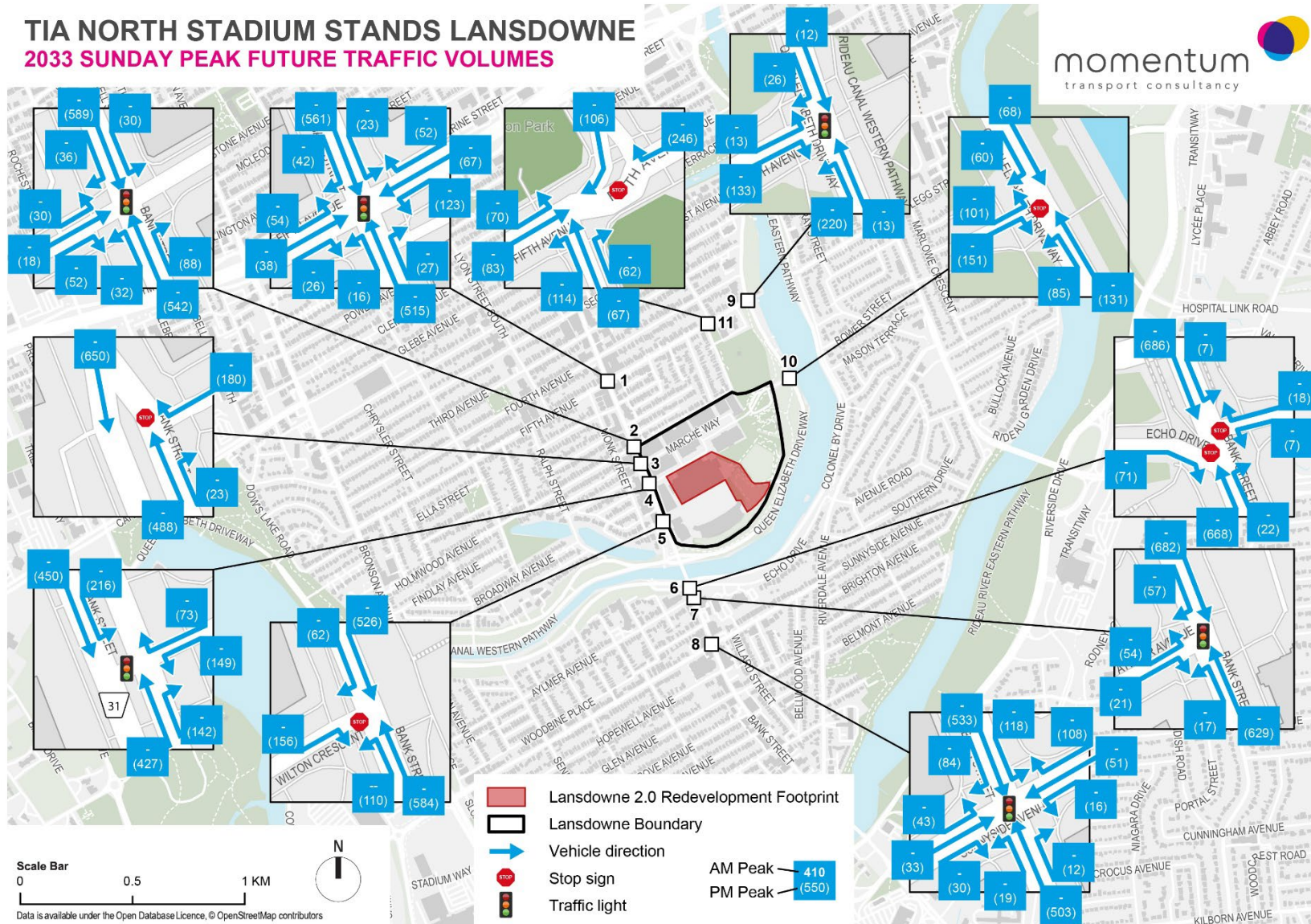


Figure 3-41: 2033 Total Future Internal Traffic (Sunday Peak)

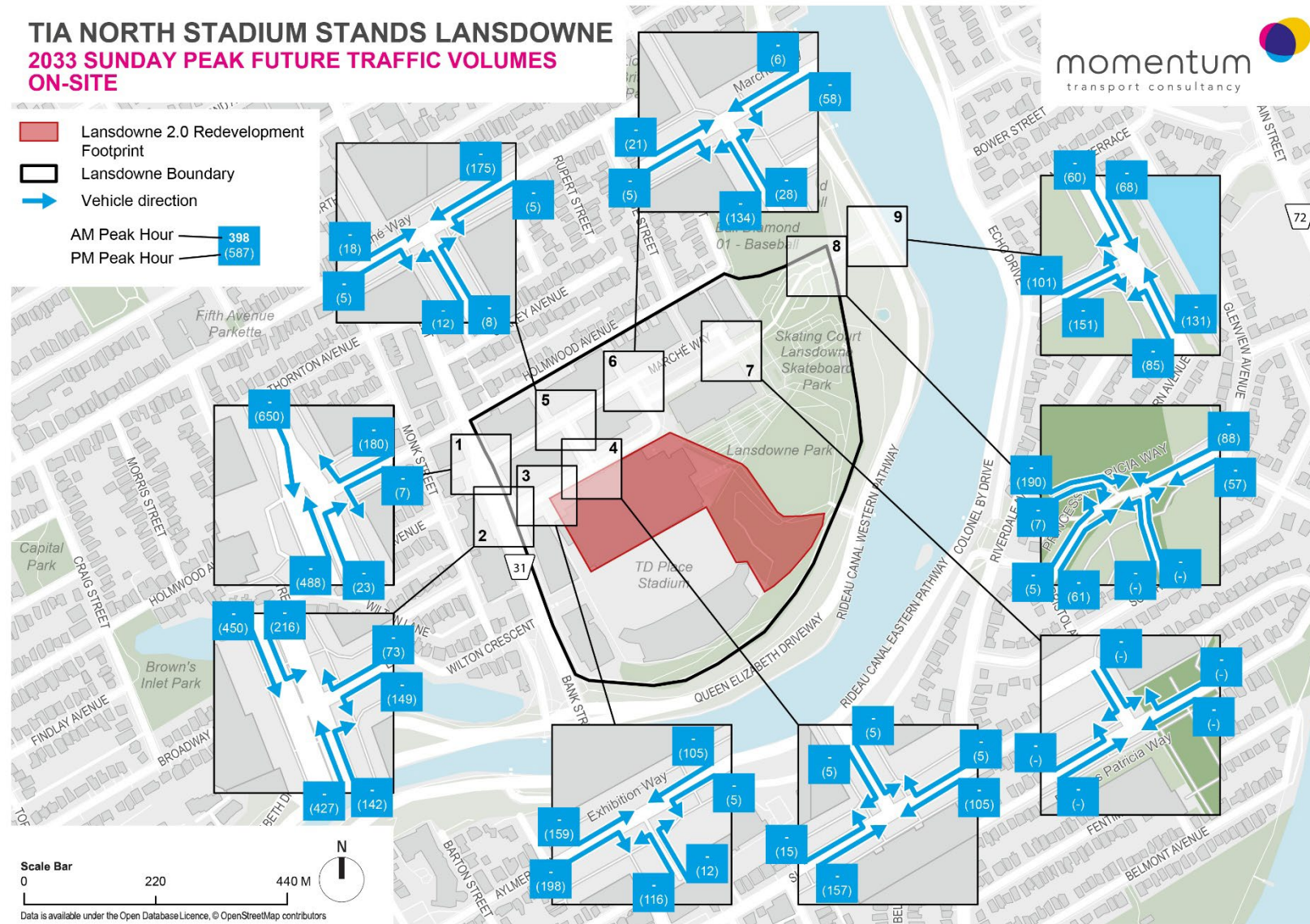


Figure 3-42: 2033 Total Future Traffic (Minor Event)

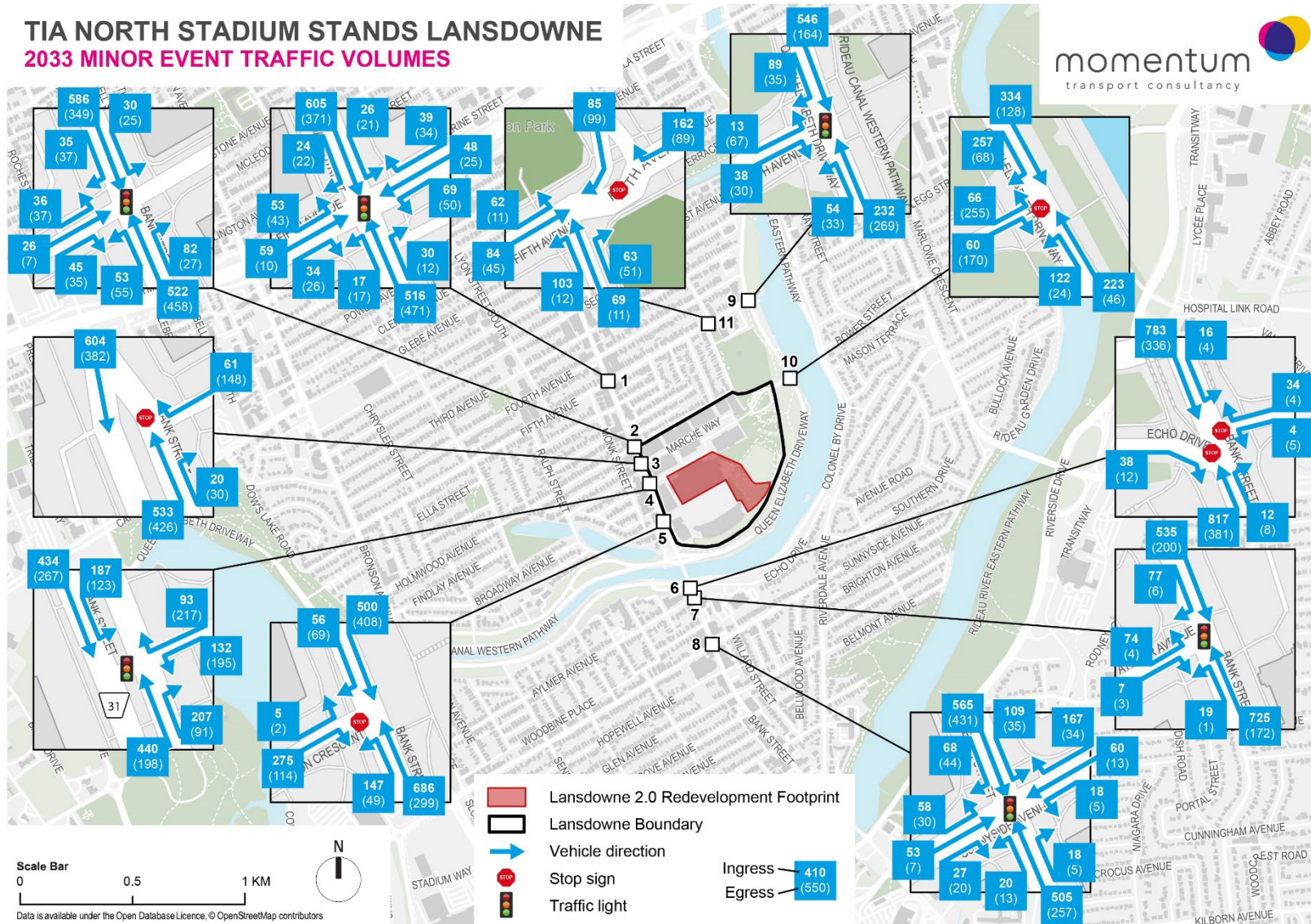


Figure 3-43: 2033 Total Future Internal Traffic (Minor Event)

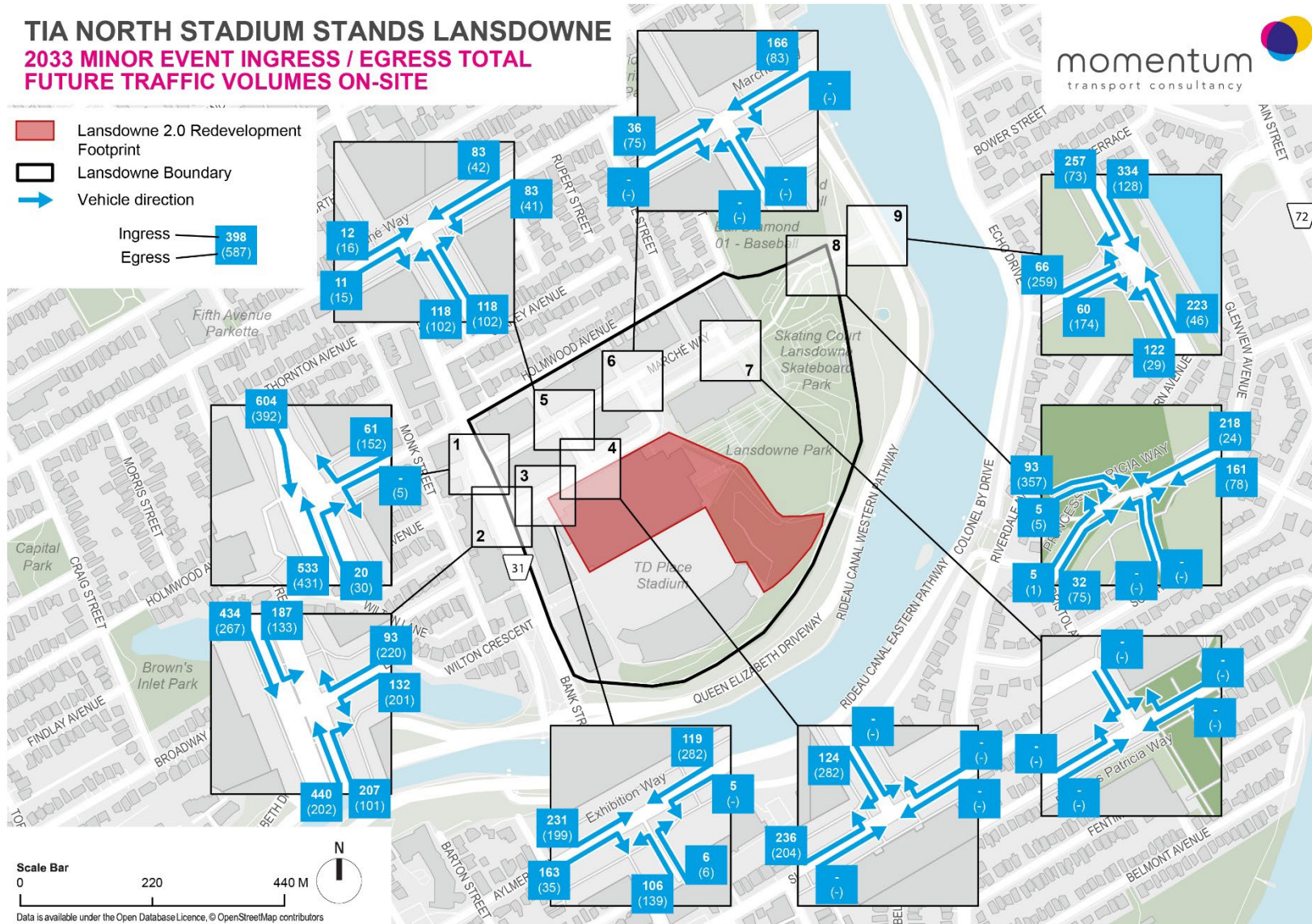
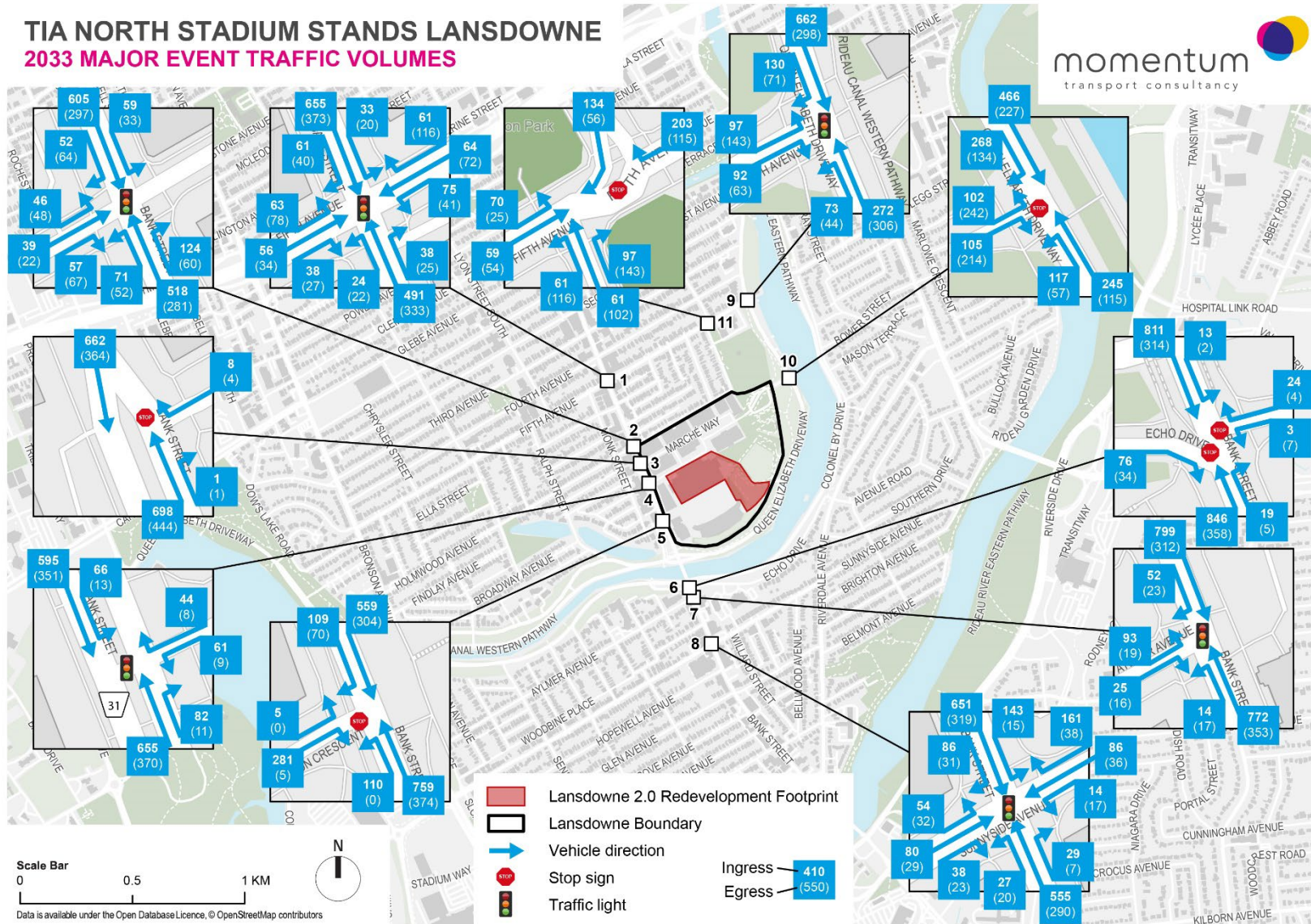


Figure 3-44: 2033 Total Future Traffic (Major Event)



4. STRATEGY REPORT

4.1 Development Design

DESIGN FOR SUSTAINABLE MODES

Bicycle facilities: Lansdowne is designed to accommodate cycling connectivity throughout the site. Many of the internal pathways, particularly Exhibition Way, Marche Way, and Princess Patricia Way, are designed as Pedestrian Priority Zones. Cycling access points to Lansdowne are provided at Bank Street at Exhibition Way and Marche Way, as well as three cycling connections to internal pathways on Holmwood Avenue. On the east and south side of Lansdowne, connections to the multi-use pathways on Queen Elizabeth Driveway are provided at numerous locations. Improved cycling crossing facilities are currently being considered for the Queen Elizabeth Driveway and Princess Patricia Way site access intersection to Lansdowne. Surface bicycle parking is provided throughout the public realm at Lansdowne. While 21 spaces will be removed during construction, 106 surface level bicycle parking spaces will be added (94 as part of Phase 1, and 12 as part of Phase 2). This yields a net increase of 85 spaces with the new Event Centre and NSS for a total of approximately 370 surface level spaces on-site. In addition, for major events held on site at the stadium with attendance levels of 15,000 or more, free valet bike parking storage is provided near TD Place Gate 4 in the North West corner of the Aberdeen Plaza. A partnership with CAA is currently being explored for Bike Valet.

Pedestrian facilities: Lansdowne is designed to accommodate pedestrian movements throughout the site. Many of the internal pathways, particularly Exhibition Way, Marche Way, and Princess Patricia Way, are designed as Pedestrian Priority Zones. In recent years, the section of Princess Patricia Way between Exhibition Way and Marche Way (along the north side of the Aberdeen Pavilion) has been fully closed to vehicular traffic to better accommodate pedestrian flow. Pedestrian access points are currently to Lansdowne with pedestrian connections to Bank Street at Exhibition Way and Marche Way, as well as three pedestrian connections to sidewalks on Holmwood Avenue. On the east and south side of Lansdowne, pedestrian connections to the multi-use pathways on Queen Elizabeth Driveway are provided at numerous locations. Improved sidewalk and crossing facilities are currently contemplated at the Queen Elizabeth Driveway and Princess Patricia Way site access intersection.

Parking areas: Lansdowne currently features an underground parking garage with a total of 1,380 spaces for public and residential use. As part of Lansdowne 2.0 Phase 3, the underground parking garage is proposed to be expanded to include an additional 386 underground parking spaces dedicated to support the residential units and additional retail space, for a total of 1,766 parking spaces. Similar to today, access to the underground parking garage will be provided through two garage ramp entrances: one on Exhibition Way east of Bank Street, the other on Princess Patricia Way west of Queen Elizabeth Driveway.

Transit facilities: Transit stops for OC Transpo routes 6 and 7 currently provide access with stops on Bank Street and Exhibition Way. These bus stops also accommodate enhanced transit service for Major Events. There are sidewalks along both sides of Bank Street as well as adequate pedestrian crosswalks to access the transit stops. The new NSS will be located within the 400-meter transit catchment area.

CIRCULATION AND ACCESS

Site access and circulation at Lansdowne are expected to continue to be provided at the existing site access intersections on Bank Street and Queen Elizabeth Driveway for general public access, as well as Holmwood Avenue at the restricted, residents-only underground garage access.

Site circulation is expected to be managed with similar traffic management measures deployed at Lansdowne today. This includes providing general public traffic access and circulation at designated roadways including Exhibition Way, Marche Way, and Princess Patricia Way.

Paved pathways located at the south of the site in and around the Great Lawn are expected to operate as restricted / limited-use pathways for emergency vehicle access, deliveries, and designated shuttle services including ParaTranspo (accessible transit) and accessible shuttles.

Traffic management measures during major events (i.e. stadium events with attendance levels of 15,000 or more) will continue to restrict vehicular access through Lansdowne with temporary vehicle restrictions placed at Bank Street access intersections. Vehicular access will continue to be restricted to the Queen Elizabeth Driveway intersection to provide access to the underground parking garage ramp at Princess Patricia Way, as well as for the shuttle loop for pick-up and drop-off activity. Vehicular circulation through the site will continue to be restricted during major events.

ParaTranspo shuttles will primarily access the site via QED/Princess Patricia Way for major events, with drop-offs and vehicle staging occurring at the future accessible AODA drop-off located at Gate 4. All future gates for the NSS will also be fully accessible.

A summary of gate accessibility for the NSS is outlined below:

- **Gate 1** – Fully accessible Stadium entrance on Bank Street. Ability to process security screening and ticket scanning.
- **Gate 2** – Internal stadium circulation to the North Stadium Stands. Security screening and ticket scanning to occur at other Stadium entrance locations.
- **Gate 3** – Fully accessible Stadium entrance on Exhibition Way. Ability to process security screening and ticket scanning.
- **Gate 4** – Fully accessible Stadium entrance at the Great Lawn. Location of ParaTranspo drop-off and pick-up location. Ability to process security screening and ticket scanning.
- **Gate 5** – Internal stadium circulation to the South Stadium Stands. Security screening and ticket scanning to occur at other Stadium entrance locations.
- **Gate 6** – Internal stadium circulation to the South Stadium Stands. Security screening and ticket scanning to occur at other Stadium entrance locations.

For minor events, particularly at the new event centre, traffic management measures will be required to restrict vehicular access to the new event centre main entrance area. This will require the deployment of traffic control devices at the intersection of Exhibition Way and the internal service road in order to divert inbound traffic from Bank Street to Marche Way. Traffic measures include deployment of barricades (bike racks) and staff to re-direct traffic to Marche Way. This has been deployed in the past by OSEG during events.

The internal route leading from Exhibition Way to the new Event Centre main entrance is recommended to be designed as flexible pedestrian space and only allow vehicular access for specific activities (cargo loading, emergency access, and accessible pickup/dropoff). In line with best practices, it is recommended for TWSI crossings to be implemented near entrances.

Permitted vehicles, including accessible ParaTranspo buses, will be permitted to travel on Exhibition Way to the designated accessible passenger pick-up and drop-off area.

Proposed site access and internal circulation schemes for regular operations, minor events, and major events after the completion of the Lansdowne 2.0 redevelopment program are illustrated in **Figure 4-1** through **Figure 4-3**.

NEW STREET NETWORKS

Not applicable; exempted during screening and scoping.

Figure 4-1: Lansdowne 2.0 Internal Site Circulation Plan (Regular Operations)

TIA NORTH STADIUM STANDS LANSDOWNE
LANSDOWNE 2.0 INTERNAL SITE CIRCULATION



Figure 4-2: Lansdowne 2.0 Internal Site Circulation Plan (Minor Events)

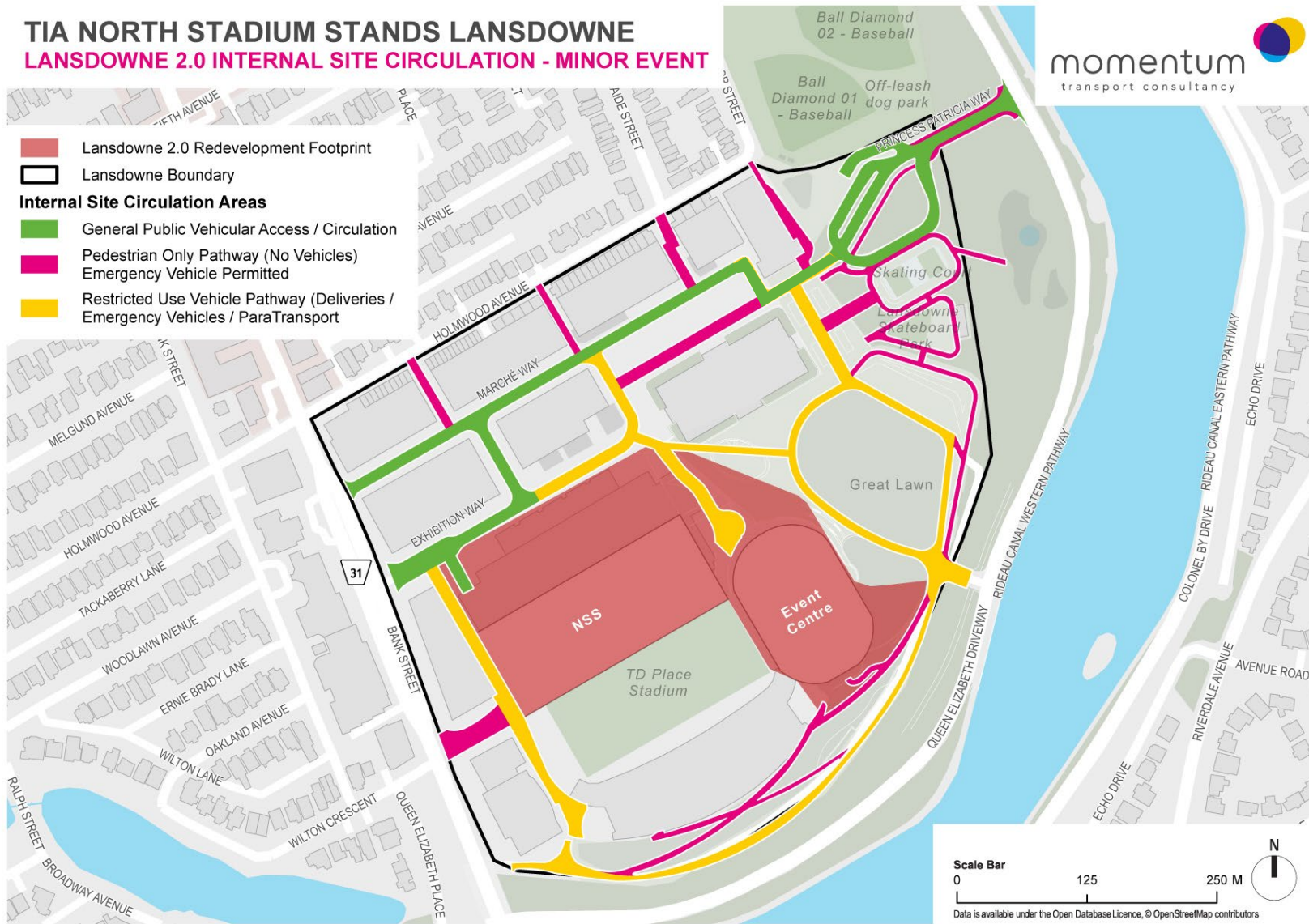
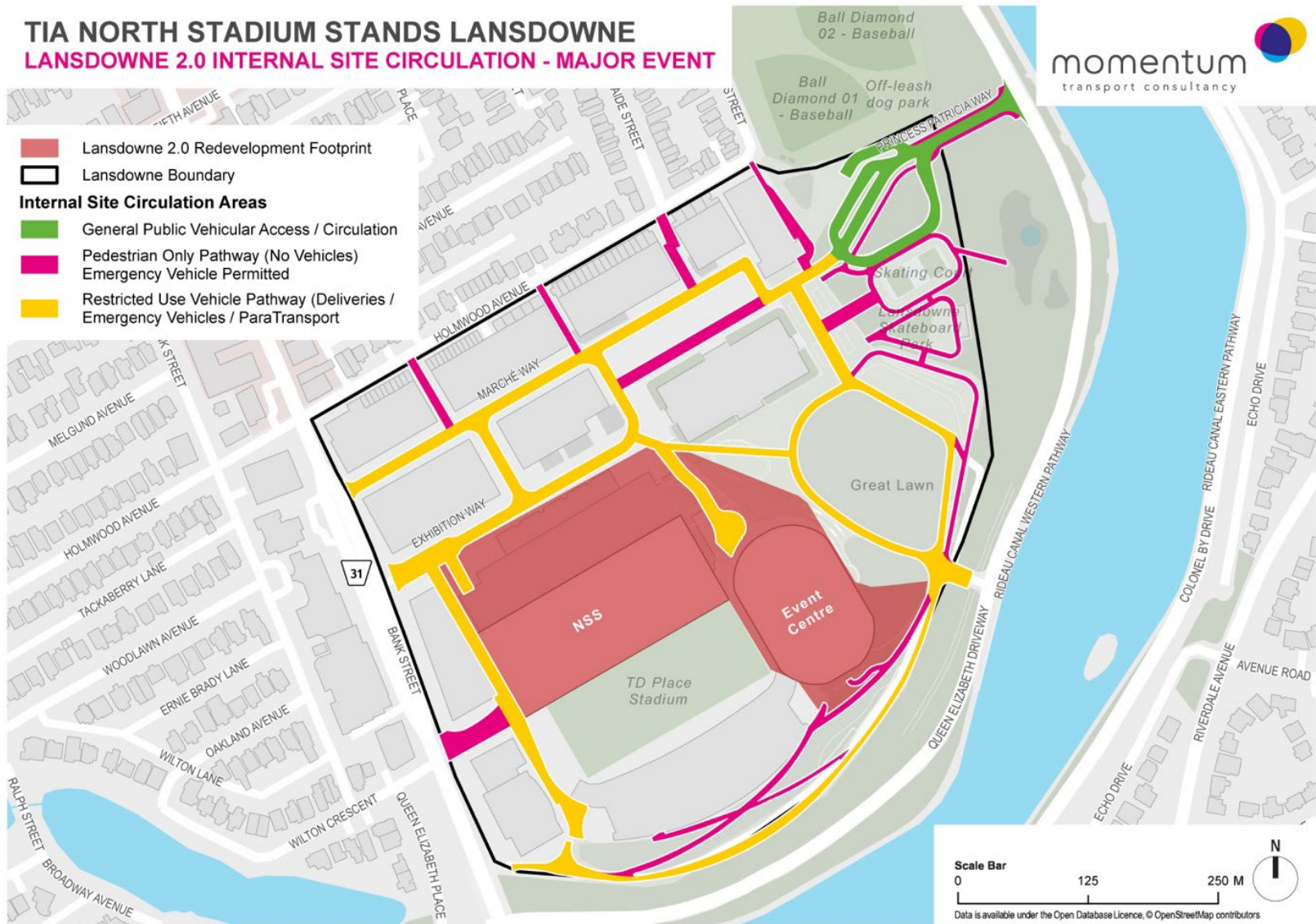


Figure 4-3: Lansdowne 2.0 Internal Site Circulation Plan (Major Events)



4.2 Parking

PARKING SUPPLY

Auto Parking - Lansdowne currently features an underground parking garage with a total of 1,380 spaces for public and residential use. No additional parking spaces are proposed as part of the proposed site plan application for the new event centre (Phase 1) or the new North Stadium Stands (Phase 2), as Lansdowne 2.0 will utilize the same parking structure that was implemented in 2014 and does not introduce any new land uses (i.e., the Stadium at TD Place is currently there). Thus the proposed parking meets the requirements of the Zoning By-Law.

As part of the overall Lansdowne 2.0 project, the underground parking garage is proposed to be expanded to include an additional 386 underground parking spaces dedicated to support the additional retail space and residential units, for a total of 1,766 parking spaces. These additional spaces are contemplated as part of Phase 3 of the Lansdowne 2.0 redevelopment.

Bicycle Parking - Lansdowne benefits from existing surface bicycle parking that supports current day to day activity as well as special events at Lansdowne. Currently there are 285 surface parking spaces for bicycles.

A total of 21 existing bicycle parking spaces at Gate 2 (16 spaces) and Gate 3 (5 spaces) will be removed during construction of the new Event Centre and NSS, however additional spaces will be added back upon the completion of public realm improvements for Phases 1 and 2.

Specifically, a total of 106 bicycle parking spaces will be added as part of the Event Centre Phase 1 public realm improvements (94 bicycle parking spaces), and NSS public realm improvements (12 bicycle parking spaces). This will result in a net increase of 85 surface level bicycle parking spaces at Lansdowne, for a total of 370 surface level bicycle parking spaces.

A small portion of bike parking spaces will be located around the Great Lawn to provide an even distribution of bike parking around the site.

In addition, for major events held on site at the stadium with attendance levels of 15,000 or more, free valet bike parking storage is provided near TD Place Gate 4 south of the Aberdeen Pavilion.

As part of the overall Lansdowne 2.0 project, additional bicycle parking spaces are required for subsequent phases of development at Lansdowne, namely Phase 3 for the new retail podium and two residential towers. Based on the City of Ottawa Zoning By-Laws, the minimum bicycle parking requirement for the subject property is 0.5 spaces per dwelling unit. To offset the reduced parking requirements and to encourage alternative modes of transportation, the residential bicycle parking rate is proposed to be increased to 1 space per dwelling unit, for a total of 770 bicycle parking spaces. All other bicycle parking requirements for non-residential uses are not proposed to be changed and will comply with the applicable requirements of Section 111 of the Zoning By-law.

The total number and allocation of bicycle parking spaces for Phase 3 of redevelopment will be finalized in subsequent phases of design development for Lansdowne 2.0.

SPILLOVER PARKING

Not applicable.

4.3 Boundary Street Design

DESIGN CONCEPT

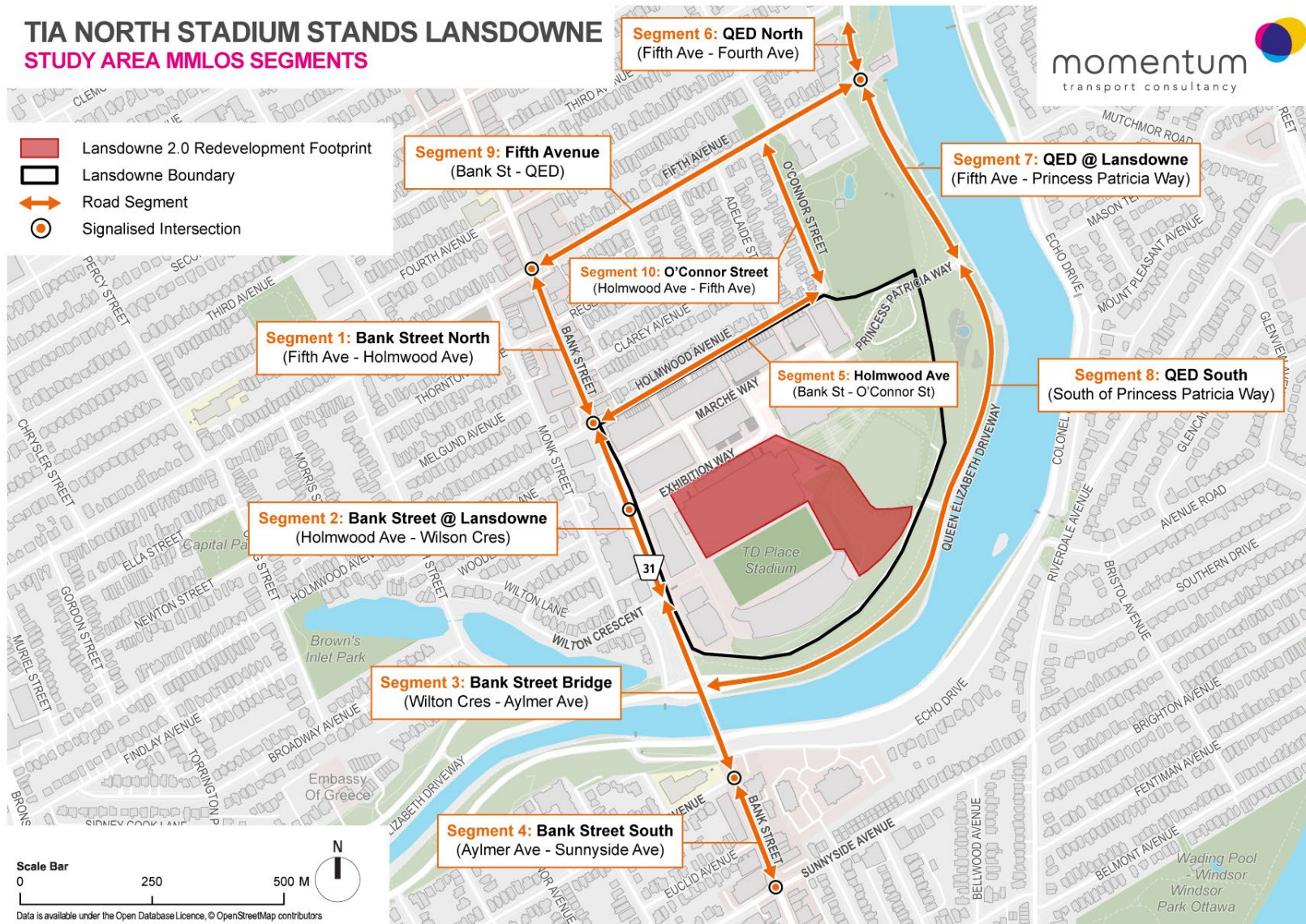
Lansdowne is located in a unique geographic location within the City of Ottawa as it interfaces with Bank Street, a traditional Mainstreet, to the west; Holmwood Avenue, a local residential street, to the north; and the Queen Elizabeth Driveway, a scenic parkway with regional multi-use pathways, to the south and east.

Figure 4-4 illustrates the locations of roadway segments for the study area based on analyzed intersections.

A Multimodal Level of Service (MMLOS) analysis was conducted for key roadway segments and intersections directly interfacing with Lansdowne. Interfaces are defined as street segments that form frontages or boundaries to the Site and include:

- **Segment 2** – Bank Street at Lansdowne (Holmwood Avenue to Wilton Crescent)
- **Segment 5** – Holmwood Avenue (Bank Street to O'Connor Street)
- **Segment 8** – QED South (South of Princess Patricia Way)

Figure 4-4: Study Area MMLOS Segments



4.3.1 Multi-Modal Level of Service (MMLOS)

As per the City of Ottawa Official Plan (Schedule A), Lansdowne falls within the Inner Urban Transect Policy Area, with Bank Street identified as a Mainstreet Corridor. For the purposes of the MMLOS analysis, the following designations were adopted from the Multi-Modal Level of Service (MMLOS) Guidelines:

Bank Street is classified as an Arterial road with a Traditional Main Street designation.

The following MMLOS targets were assumed for Bank Street:

Pedestrian Level of Service (PLOS) target of **PLOS B**.

Bicycle Level of Service (BLOS) target of **BLOS C** based on a Local Route designation .

Transit Level of Service (TLOS) target of **TLOS D**.

Truck Level of Service (TkLOS) target of **TkLOS D**.

Auto Level of Service (LOS) of **LOS D**.

Holmwood Avenue is classified as a Local road with a General Urban Area designation.

The following MMLOS targets were assumed for Holmwood Avenue:

Pedestrian Level of Service (PLOS) target of **PLOS C**.

Bicycle Level of Service (BLOS) target of **BLOS B** based on a Local Route designation .

No Transit Level of Service (TLOS) target is defined.

No Truck Level of Service (TkLOS) target is defined.

Auto Level of Service (LOS) of **LOS D**.

Queen Elizabeth Driveway is classified as an Arterial with a General Urban Area designation.

The following MMLOS targets were assumed for Queen Elizabeth Driveway:

Pedestrian Level of Service (PLOS) target of **PLOS C**.

Bicycle Level of Service (BLOS) target of **BLOS B** based on a Local Route designation

No Transit Level of Service (TLOS) target is defined

No Truck Level of Service (TkLOS) was adopted as QED is not a truck route.

Auto Level of Service (LOS) of **LOS D**.

Table 4-1 summarizes the MMLOS targets and performance for roadway segments.

Future MMLOS performance is for horizon year 2033, when full build-out for Lansdowne 2.0 is expected to be realized.

For the purpose of this analysis, Existing and Future levels of service are expected to remain the same as there are no planned changes to the infrastructure within the segments and signalized intersections adjoining the site.

Appendix C contains the detailed MMLOS analysis.

Table 4-1: Existing Conditions MMLOS Targets and Results (Segments)

Segment		PLOS		BLOS		TLOS		TkLOS	
		Target	Actual	Target	Actual	Target	Actual	Target	Actual
2	Bank Street @ Lansdowne (Holmwood Ave - Wilton Cres)	B	C	C	E	D	F	D	D
5	Holmwood Ave (Bank St - O'Connor St)	C	B	B	C	N/A	N/A	N/A	N/A
8	QED South (South of Princess Patricia Way)	C	B	B	A	N/A	N/A	N/A	N/A

Table 4-2: 2033 Future Conditions MMLOS Targets and Results (Segments)

Segment		PLOS		BLOS		TLOS		TkLOS	
		Target	Actual	Target	Actual	Target	Actual	Target	Actual
2	Bank Street @ Lansdowne (Holmwood Ave - Wilton Cres)	B	C	C	E	D	F	D	D
5	Holmwood Ave (Bank St - O'Connor St)	C	B	B	C	N/A	N/A	N/A	N/A
8	QED South (South of Princess Patricia Way)	C	B	B	A	N/A	N/A	N/A	N/A

Table 4-3: Existing Conditions MMLOS Targets and Results (Signalized Intersections)

Intersection name	PLOS		BLOS		TLOS		TkLOS		ALOS	
	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Target	Actual
Bank St. / Holmwood Ave.	B	D	C	D	D	E	E	F	D	A
Bank St. / Exhibition Way	B	D	C	E	D	D	D	B	D	A
QED / Fifth Ave.	C	C	B	B	N/A	N/A	N/A	N/A	D	A

4.4 Access Intersection Design

ACCESS LOCATION

Access to Lansdowne will continue to be facilitated at three key locations: a primary all-movements access at the intersection of Bank Street and Exhibition Way, a secondary all-movements access at Queen Elizabeth Driveway and Princess Patricia Way, and a minor right-in/right-out only access on Bank Street and Marche Way.

INTERSECTION CONTROL

The primary Bank Street / Exhibition Way intersection access is signalized and accommodates all movements. The secondary Queen Elizabeth Driveway / Princess Patricia Way intersection access is stop-controlled on the minor approach. The minor Bank Street / Marche Way intersection is a right-in/right-out only intersection with a stop-control on the minor approach.

TEMPORARY CONSTRUCTION ACCESS

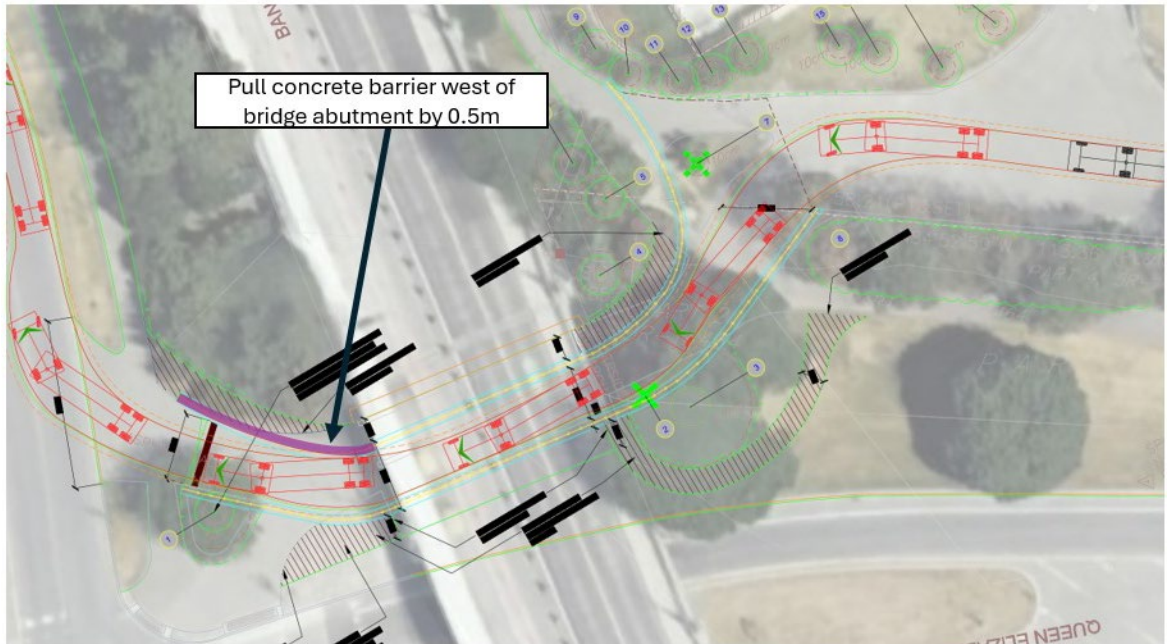
As part of the construction of the new NSS, it is estimated that between 80 to 100 truck trips per day can be expected during the peak construction activity of Lansdowne 2.0.

Out of the total daily truck trips, which consist of construction material deliveries, and hauling of construction spoils, upwards of 25 heavy vehicle trips would occur within the peak hour.

To minimize the number of trucks utilizing the Bank Street and Exhibition Way entrance, a temporary haul route is proposed near the Wilton Crescent and Queen Elizabeth Place intersection to provide construction access along the south side of Lansdowne. This access route, which was previously used to support the original redevelopment construction of Lansdowne Park for 2014, is subject to a the NCC's *Federal Land Use, Design and Transaction Approval* (FLUDTA) process the construction access is within the Queen Elizabeth Way right-of-way.

The temporary construction haul route access point is illustrated in **Figure 4-5**.

Figure 4-5: Lansdowne 2.0 Temporary Construction Haul Route Access



The proposed temporary construction haul route would reduce the number of trucks utilizing the Bank Street and Exhibition Way entrance, minimizing construction traffic conflicts with the general public on site.

Use of the temporary construction access will be limited to certain vehicles due to height and vehicle turning restrictions. Larger construction vehicles, such as 53' truck trailers deliveries and heavy construction equipment, would continue to access the construction site through the Bank Street and Exhibition Way intersection.

The following assumptions related to peak hour traffic volumes were assumed as part of this study and incorporated as part of the 2028 construction traffic scenarios:

- **20 trips** per hour (80% of total trips per hour) would be dump trucks, flatbed trucks, and smaller trucks that can utilize the temporary construction haul route.
- **5 trips** per hour (20% of total trips per hour) would be larger deliveries that would access the site at the Bank Street and Exhibition Way intersection.

illustrates the assumed construction traffic routes to and from the Highway 417 (The Queensway).

Inbound construction traffic to Lansdowne is assumed to travel towards Lansdowne on Highway 417, and would exit at Bank Street to travel southbound towards Lansdowne.

The majority of construction traffic would access the construction site through the temporary haul route by turning onto Wilton Crescent towards the temporary haul route access point. Larger construction vehicles would turn left onto Exhibition Way and travel through the site to

access the construction footprint.

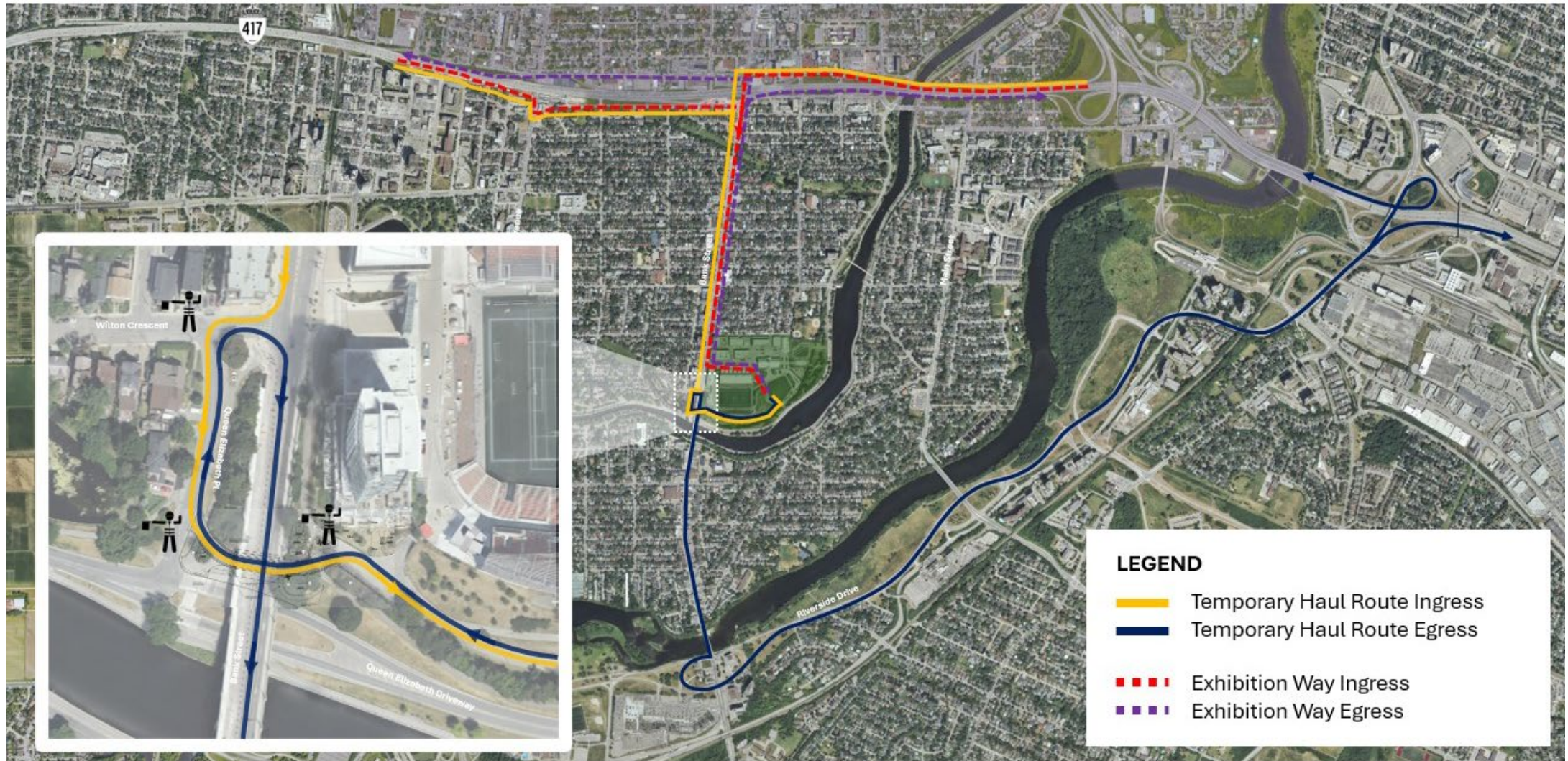
Construction traffic exiting the site is assumed to travel towards Highway 417 through two different patterns. Construction traffic exiting through the temporary haul route onto Wilton Crescent are assumed to turn right onto Bank Street to head southbound due to the existing eastbound left-turn restriction at the intersection of Bank Street and Wilton Crescent, and to mitigate for the need of traffic flaggers for all movements. Access to Highway 417 would be accommodated via Riverside Drive.

Construction traffic exiting the site at the Bank Street and Exhibition Way intersection will be directed northbound on Bank Street towards Highway 417.

Assumed construction haul and access routes for Lansdowne 2.0 redevelopment are illustrated in **Figure 4-6**.

Appendix D includes detailed vehicle swept path analysis of the temporary haul route.

Figure 4-6: Lansdowne 2.0 Construction Haul Routes



4.5 Transportation Demand Management

The initial Lansdowne Redevelopment project featured a comprehensive Transportation Demand Management (TDM) strategy to address day-to-day and special event transportation requirements. The Transportation Demand Management Plan (October 2011) for Lansdowne outlined strategies for encouraging residents, employees, and visitors to Lansdowne to utilize transit and active transportation modes to reduce reliance on single occupant vehicles (SOV) and automobile use. The plan included recommendations for both day-to-day operations (residents, employees and retail patrons) and special events with attendance levels of 10,000 patrons (arena events), 25,000 patrons (stadium events), and 40,000-plus patrons (unique, expanded stadium events).

Construction of the new Event Centre will allow for the concurrent use of the Stadium and Event Centre. While concurrent events will not be held, the ability to use the Event Centre during Major Events (i.e. extended seating / viewing areas for a future Grey Cup) could occur. The TDM Strategy for Lansdowne has been revised to plan for this event size (~29,000 attendees) with additional Park & Shuttle enhancements. This new category would site between a Major Event (25,000 attendees) and a once-in-a-lifetime Mega Event (40,000 attendees) that would include the Grey Cup, for example.

A hallmark of the TDM plan for Lansdowne is the provision of free transit service to all ticketholders attending ticketed events at Lansdowne. This innovative TDM strategy, which is the first of its kind in North America for a large mixed-use entertainment district, provides free transit to all ticketed events starting 2 hours prior to the start of events and 2 hours after the end of events held at Lansdowne. The cost of any enhanced transit service provided for events with attendance levels of 5,000 or more are borne by OSEG.

The comprehensive TDM program implemented in 2014 as part of the original revitalization of Lansdowne Park will continue to play a critical role in supporting the transportation program for Lansdowne 2.0. This includes the provision of free transit for all ticketed events at Lansdowne.

TDM PROGRAM

The City of Ottawa's TDM-supportive design and infrastructure elements checklist was consulted to identify and incorporate TDM supportive measures into the design stage. An updated Transportation Demand Management Strategy for Lansdowne 2.0 was developed as part of the Lansdowne 2.0 Transportation Impact Assessment Study (Stantec – July 2023).

The TDM Checklist in support of the North Side Stands (Phase 2) is included in **Appendix E**.

4.6 Neighbourhood Traffic Calming

The redevelopment of Lansdowne in 2014 prioritized the movement of people through the site through landscape design treatments. Many of the internal pathways, particularly Exhibition Way, Marche Way, and Princess Patricia Way, are designed as Pedestrian Priority Zones.

In recent years, the section of Princess Patricia Way between Exhibition Way and Marche Way (along the north side of the Aberdeen Pavilion) has been fully closed to vehicular traffic to better accommodate pedestrian flow and minimize cut-through vehicular traffic.

Vehicle circulation is currently limited to certain routes within the site and traffic management measures are deployed to limit and restrict the amount of vehicular traffic traveling through the site, particularly when events are held at Lansdowne.

4.7 Transit

ROUTE CAPACITY

Service on Bank Street currently operates with headways of 12 minutes or less on both Routes 6 and 7.

As part of the TDM program for special events at Lansdowne, ticketed events with attendance levels of 5,000 or less are accommodated with regularly scheduled bus service on Bank Street with no service enhancements.

For ticketed events with attendance levels between 5,000 and 10,000 attendees, service enhancements on bus Route 6 and 7 are provided to support additional transit ridership demands for events. Enhanced service can range from 2 additional bus trips to 8 extra trips depending on attendance levels. The cost of additional trips added to support events is borne by OSEG.

It is anticipated that the current transit service enhancements provided for minor events (attendance levels of 10,000 or less) for Phase 1 (multi-purpose event centre) will be supported adequately through the current TDM program and transit service enhancements.

For the full-build out of Lansdowne 2.0 (i.e. Phase 3), transit modal shares of 25%, 14%, and 29% were assumed for the proposed multi-family residential, shopping center, and general office land-uses, respectively.

This is expected to result in a peak hour net increase in transit trips of 152 trips during the Weekday AM peak hour, 119 transit trips in the Weekday PM Peak hour, 146 transit trips in the Weekend Saturday peak hour, and 164 transit trips in the Weekend Sunday peak hour

Currently, OC Transpo Route 6 and Route 7 provide service along Bank Street with connections to key destinations in Ottawa. Service is provided on weekdays and weekends with an average headway of 12 minutes for each route in both directions. This translates to a total of 20 two-way transit trips per hour on Bank Street at Lansdowne (5 trips per bus route, per direction).

The OC Transpo fleet is comprised of various bus types including 40' standard buses, higher capacity 60' articulated buses, and double-decker buses.

Depending on the fleet vehicle used, the passenger capacity across the fleet varies between 57 to 110 passengers per bus.

On average, the following capacities are provided:

Standard 40' buses: the total carrying capacity per bus ranges between 57 to 85 passengers (standing and seated). An assumed carrying capacity of 70 passengers is assumed for Standard 40' buses.

Articulated 60' buses: the total carrying capacity per bus is 110 passengers (standing and seated).

Double Decker buses: the total carrying capacity per bus ranges between 96 to 105 passengers (standing and seated). An assumed carrying capacity of 100 passengers per bus is assumed for Double Decker buses.

Based on the current 20 two-way transit trips along Bank Street, current transit passenger carrying capacity ranges between 1,400 passengers per hour to 2,200 passengers per hour, depending on the fleet mix used.

For planning purposes, an average two-way transit carrying capacity of 1,870 passengers per hour is assumed.

OC Transpo currently utilizes all bus types on Routes 6 and 7 along Bank Street. OC Transpo plans vehicle fleet mix for each trip booking to match observed and projected ridership. Based on information provided by OC Transpo, the following passenger demands are to be assumed for current ridership by bus type:

Standard 40' Buses:

- 40 passengers per vehicle, averaged over an hour during off-peaks.
- 45 passengers per vehicle, averaged over an hour during peak periods.

Articulated 60' Buses:

- 60 passengers per vehicle, averaged over an hour during off-peaks.
- 70 passengers per vehicle, averaged over an hour during peak periods.

Double Decker Buses:

- 85 passengers per vehicle, averaged over an hour during off-peaks.
- 90 passengers per vehicle, averaged over an hour during peak periods.

Based on the transit ridership, current two-way transit demands along Bank Street range between 900 passengers per hour to 1,800 passengers per hour depending on the fleet mix used.

For planning purposes, an average two-way transit demand of 1,400 passengers per hour is assumed for current service along Bank Street on Routes 6 and 7.

It is anticipated that the current two-way transit demands generated by Lansdowne 2.0, which ranges between 119 to 164 passengers per hour, can be accommodated within the current scheduled services on Bank Street. The new NSS will slightly reduce stadium capacity and therefore will not negatively impact public transport capacity.

TRANSIT PRIORITY

Opportunities to improve transit service along Bank Street for Routes 6 and 7 will be evaluated through the City of Ottawa's Active and Transit Operations study for Bank Street. Potential improvements, which may include transit signal priority measures and enhanced bus shelters, can improve transit service reliability and passenger comfort.

The provision for transit service requirements for the full-build out of Lansdowne 2.0 should be confirmed as part of subsequent studies in support of Phase 3 of development. The impact of the Phase 3 development-generated transit demands will be assessed and the possibility of additional transit priority measures to offset transit delays will be considered.

4.8 Intersection Design

INTERSECTION CONTROL

The existing intersection control for Lansdowne (including site accesses) will be maintained as part of the Lansdowne 2.0 redevelopment.

INTERSECTION DESIGN

An assessment of the study area intersections was undertaken to determine the operational characteristics under the various horizons identified in the Screening and Scoping report.

Intersection operational analysis was performed with Synchro 12 software package and the MMLOS analysis was completed for all modes and compared against the City of Ottawa's MMLOS targets.

The LOS scores for signalized intersections are based on V/C ratios as required by the City of Ottawa's 2015 MMLOS Guidelines.

An update is forthcoming to the City's MMLOS Guidelines, in which reference is made to the Ontario Traffic Council (OTC) MMLOS Guidelines methodology. Based on the OTC's MMLOS Guidelines (Table 6.3), LOS for vehicular traffic at unsignalized intersections is delay based in accordance with the Highway Capacity Manual Version 7.

4.8.1 Existing Conditions

Intersection Capacity Analysis

Intersection operational analysis under Existing Conditions is summarized in this section.

Detailed Synchro level of service analysis results can be found in **Appendix F**.

Table 4-5: Existing Conditions Intersection LOS (Weekday AM/PM Peak)

Intersection	Intersection Control	Approach / Movement		LOS		V/C		Total		Queue	
				AM	PM	AM	PM	Delay (s)		95th (m)	
								AM	PM	AM	PM
Bank St & Fifth Ave	Signalized	EB	L / Th / R	A	B	0.36	0.65	21.9	35.1	27.2	31.7
		WB	L	A	A	0.18	0.39	22.9	33.1	14	17.3
			Th / R	A	A	0.21	0.29	15.9	17.7	16	14.4
		NB	L / Th / R	A	A	0.38	0.27	3.8	9.7	8.2	43.6
		SB	L / Th / R	A	A	0.32	0.36	8.5	6.1	25.6	34
Overall Intersection		A	B	0.38	0.65	8.6	12.1	--	--		
Bank St & Holmwood Ave	Signalized	EB	L / Th / R	A	A	0.47	0.53	37.6	38.3	22.6	26.7
		NB	L / Th / R	A	A	0.29	0.3	2.6	1.9	10.8	9
		SB	L / Th / R	A	A	0.21	0.31	3.1	4.7	13.2	21.1
		Overall Intersection		A	A	0.47	0.53	5.4	6.1	--	--
Bank St & Exhibition Way	Signalized	WB	L	A	A	0.27	0.5	32.5	35.1	17.2	30.8
			Right	A	A	0.2	0.28	13.3	10.5	7.5	9.4
		NB	L / Th / R	A	A	0.37	0.31	10.1	5.2	40	27.6
		SB	L	A	A	0.14	0.28	8.5	4.8	11.6	6.5
			Th	A	A	0.16	0.23	6.7	3.1	22.7	9.6
		Overall Intersection		A	A	0.37	0.5	10.1	7.3	--	--
Bank St & Wilton Cr	Minor Stop	EB	R	A	F	0.49	0.82	22	53.2	15.6	40.8
		NB	L		B	0.2	0.36	10.7	13.6	5.7	13.7
			Th	A	A	--	--	1.8	3.3	5.7	13.7
		Overall Intersection		A	B	0.49	0.82	4.8	10.2	--	--
Bank St & Echo Dr	Minor Stop	EB	R	B	C	0.06	0.07	12.5	16.1	1.2	1.2
		Overall Intersection		A	A	0.06	0.07	0.3	0.2	--	--

Intersection	Intersection Control	Approach / Movement		LOS		V/C		Total		Queue	
				AM	PM	AM	PM	Delay (s)		95th (m)	
								AM	PM	AM	PM
Bank St & Aylmer Ave	Signalized	EB	L / R	A	A	0.26	0.34	29.5	31.1	19.9	22.8
		NB	L / Th	A	A	0.42	0.38	3.8	4.9	16.8	19.6
		SB	Th / R	A	A	0.33	0.45	7.2	7.6	28.1	43.7
		Overall Intersection		A	A	0.42	0.45	6.5	7.5	--	--
Bank St & Sunnyside Ave	Signalized	EB	L / Th / R	B	B	0.68	0.65	43	42.2	35.5	#53.6
		WB	L / Th / R	D	E	0.87	0.93	32.4	53.1	#68	#98.3
		NB	L / Th / R	D	D	0.86	0.43	30.6	20.2	#122	43.9
		SB	L / Th / R	B	E	0.67	0.91	19.5	22.5	#48.4	#55.3
		Overall Intersection		D	E	0.87	0.93	28.4	28.9	--	--
QED & Princess Patricia Way	Minor Stop	NB	L / Th	A	A	0.06	0.05	8.2	8.9	1.2	1.2
		EB	L / R	B	C	0.1	0.32	13.1	19.5	1.8	8.4
		Overall Intersection		A	B	0.1	0.32	1.6	2.6	--	--
Queen Elizabeth Dr & Fifth Ave	Signalized	EB	L / R	A	A	0.21	0.37	17.6	36.6	12.9	22
		NB	L / Th	A	A	0.32	0.24	7.7	5	21.9	21.5
		SB	Th / R	A	A	0.42	0.53	8.6	7.7	30.5	66
		Overall Intersection		A	A	0.42	0.53	9.2	9.2	--	--
Bank St & Marche Way	Minor Stop	WB	L / R	C	B	0.57	0.15	21.1	12.9	21	3
		Overall Intersection		A	A	0.57	0.15	4.6	0.8	--	--
Fifth Ave & O'Connor St	All-Way Stop	EB	L / Th	A	A	0.14	0.15	7.9	8	--	--
		WB	R	A	A	0.07	0.1	6.4	6.5	--	--
		NB	L / Th / R	A	A	0.09	0.12	7.5	7.7	--	--
		SB	R	A	A	0.1	0.09	6.6	6.5	--	--

Intersection	Intersection Control	Approach / Movement		LOS		V/C		Total		Queue	
				AM	PM	AM	PM	Delay (s)		95th (m)	
								AM	PM	AM	PM
		Overall Intersection		A	A	0.14	0.15	7.1	7.2	--	--
Garage Access at Exhibition Way	Two-Way Stop	WB	L	A	A	0	0.01	0	0.1	0	0.1
		NB	L / R	B	C	0.05	0.14	12.9	15.6	0.2	3.6
		Overall Intersection		A	A	0.11	0.16	1.3	1.9	--	--
Exhibition Way and Service Roadway	All-Way Stop	EB	L / Th	A	A	0.13	0.16	7.7	7.9	--	--
		WB	Th / R	A	A	0.08	0.18	7.4	7.9	--	--
		SB	L / R	A	A	0.01	0.01	7.2	7.4	--	--
		Overall Intersection		A	A	0.14	0.18	7.6	7.9	--	--
Marché Way and Service Roadway	All-Way Stop	EB	L / Th	A	A	0	0.01	6.7	6.6	--	--
		WB	L / Th	A	A	0.15	0.01	7.7	7.1	--	--
		NB	L / R	A	A	0.01	0.01	7.1	6.8	--	--
		Overall Intersection		A	A	0.15	0.01	7.6	6.9	--	--
Marché Way and Exhibition Way	All-Way Stop	EB	Th / R	A	A	0	0.01	6.9	7	--	--
		WB	L / Th	A	A	0.15	0.19	8.1	8.5	--	--
		NB	L / R	A	A	0.14	0.14	7.8	7.4	--	--
		Overall Intersection		A	A	0.16	0.19	8	7.9	--	--
Garage Access at Princess Patricia Way	Two-Way Stop	EB	L	A	A	0	0	0	0	0.1	0.1
			Th	A	A	0	0	1	0.7	0.1	0.1
		SB	L / R	A	A	0.01	0.07	9.3	9.5	0.3	1.7
		Overall Intersection		A	A	0.09	0.07	0.7	2.5	--	--

L - Left, Th - Through, R - Right

All study area intersections are currently operating with overall acceptable levels of service under current Weekday AM and PM peak hour conditions.

The intersection of Bank Street and Sunnyside Avenue is currently operating with specific movements at or close to theoretical capacity in the southbound approach (AM Peak) and westbound approach (PM Peak).

The eastbound approach at intersection of Bank Street and Wilton Crescent is currently operating with a LOS F during the PM peak hour. The delays are associated with limited gaps in traffic in the southbound direction associated with the recently installed 3-lane cross-section of Bank Street.

No mitigation measures are recommended to improve intersection operations.

Table 4-6: Existing Conditions Intersection LOS (Saturday Peak)

Intersection	Intersection Control	Approach / Movement		LOS	V/C	Total Delay (s)	Queue 95th (m)
Bank St & Fifth Ave	Signalized	EB	L / Th / R	B	0.63	34.2	28.1
		WB	L	A	0.46	36.6	19.4
			Th / R	A	0.39	18.5	17
		NB	L / Th / R	A	0.27	3.7	14.5
		SB	L / Th / R	A	0.29	5.1	28.2
Overall Intersection				B	0.63	9.7	--
Bank St & Holmwood Ave	Signalized	EB	L / Th / R	A	0.54	38.5	26.7
		NB	L / Th / R	A	0.29	2.2	9.2
		SB	L / Th / R	A	0.3	3.6	16.1
		Overall Intersection				A	0.54	5.7	--
Bank St & Exhibition Way	Signalized	WB	L	A	0.39	33.9	23.9
			Right	A	0.33	11.8	10.4
		NB	L / Th / R	A	0.28	4.5	22.7
		SB	L	A	0.28	6.9	16.5
			Th	A	0.21	4.5	22.2
Overall Intersection				A	0.39	7	--
Bank St & Wilton Cr	Minor Stop	EB	R	B	0.19	11.6	4.2
		NB	L	A	--	1.8	4.2
			Th	D	0.58	29.9	20.4
Overall Intersection				B	0.58	5.1	--
Bank St & Echo Dr	Minor Stop	EB	R	B	0.08	14.3	1.8
		Overall Intersection				A	0.08	0.3	--
Bank St & Aylmer Ave	Signalized	EB	L / R	A	0.2	30.2	15.8
		NB	L / Th	A	0.37	5.5	22.4
		SB	Th / R	A	0.4	7.2	38.4
		Overall Intersection				A	0.4	7.1	--
Bank St & Sunnyside Ave	Signalized	EB	L / Th / R	C	0.75	59.8	37.5
		WB	L / Th / R	C	0.71	35.9	38.6
		NB	L / Th / R	A	0.31	6.6	32.6
		SB	L / Th / R	A	0.44	4.1	11.2
		Overall Intersection				C	0.75	13.2	--

Intersection	Intersection Control	Approach / Movement		LOS	V/C	Total Delay (s)	Queue 95th (m)
QED & Princess Patricia Way	Minor Stop	NB	L / Th	A	0.05	8.3	1.2
		EB	L / R	C	0.28	15.2	6.6
		Overall Intersection		A	0.28	3	--
Queen Elizabeth Dr & Fifth Ave	Signalized	EB	L / R	A	0.42	37.3	25.2
		NB	L / Th	A	0.29	5.4	27.5
		SB	Th / R	A	0.37	6.1	40.5
		Overall Intersection		A	0.42	9.2	--
Bank St & Marche Way	Minor Stop	WB	L / R	B	0.14	12.4	3
		Overall Intersection		A	0.14	0.8	--
Fifth Ave & O'Connor St	All-Way Stop	EB	L / Th	A	0.11	7.9	--
		WB	R	A	0.09	6.5	--
		NB	L / Th / R	A	0.16	7.9	--
		SB	R	A	0.1	6.6	--
		Overall Intersection		A	0.16	7.2	--
Garage Access at Exhibition Way	Two-Way Stop	WB	Th / L	A	0	8.4	0
		NB	L / R	C	0.18	15.3	0.7
		Overall Intersection		A	0.19	2.9	--
Exhibition Way and Service Roadway	All-Way Stop	EB	L / Th	A	0.15	7.8	--
		WB	Th / R	A	0.11	7.5	--
		SB	L / R	A	0.01	7.3	--
		Overall Intersection		A	0.15	7.7	--
Marché Way and Service Roadway	All-Way Stop	EB	L / Th	A	0.02	7	--
		WB	L / Th	A	0.09	7.4	--
		NB	L / R	A	0.01	7	--
		Overall Intersection		A	0.09	7.3	--
Marché Way and Exhibition Way	All-Way Stop	EB	Th / R	A	0.02	7.3	--
		WB	L / Th	A	0.12	8.1	--
		NB	L / R	A	0.15	8.1	--
		Overall Intersection		A	0.16	8	--
Garage Access at Princess Patricia Way	Two-Way Stop	EB	L	A	0	7.6	0.1
			Th	A	--	0	0.1
		SB	L / R	B	0.13	10.1	3.5
		Overall Intersection		A	0.13	3.3	--

L - Left, Th - Through, R - Right

As illustrated above, all study area intersections are currently operating with overall acceptable levels of service under Weekend Saturday peak hour conditions.

Table 4-7: Existing Conditions Intersection LOS (Sunday Peak)

Intersection	Intersection Control	Approach / Movement		LOS	V/C	Total Delay (s)	Queue 95th (m)
Bank St & Fifth Ave	Signalized	EB	L / Th / R	A	0.53	30.2	26.4
		WB	L	B	0.65	41.7	30.7
			Th / R	A	0.36	20.1	20
		NB	L / Th / R	A	0.3	7.9	51.3
		SB	L / Th / R	A	0.33	6.5	30.8
		Overall Intersection		B	0.65	12.9	--
Bank St & Holmwood Ave	Signalized	EB	L / Th / R	A	0.53	38.2	26.7
		NB	L / Th / R	A	0.34	7.2	49.5
			L / Th / R	A	0.3	8.2	44.3
				Overall Intersection		A	0.53	10	--
Bank St & Exhibition Way	Signalized	WB	L	A	0.53	35.8	31.2
			Right	A	0.29	10.2	9.4
		NB	L / Th / R	A	0.36	11.3	37.9
		SB	L	A	0.41	12.4	26
			Th	A	0.21	5.1	23.4
		Overall Intersection		A	0.53	11.6	--
Bank St & Wilton Cr	Minor Stop	EB	R	B	0.18	11.4	5.1
		NB	L	A	--	1.7	5.1
			Th	E	0.62	25.5	28.8
		Overall Intersection		A	0.62	4.6	--
Bank St & Echo Dr	Minor Stop	EB	R	C	0.21	17.8	0.8
				Overall Intersection		A	0.41	1.1	--
Bank St & Aylmer Ave	Signalized	EB	L / R	A	0.4	35.7	21.9
		NB	L / Th	A	0.27	2.4	14.3
		SB	Th / R	A	0.31	3.4	26.2
				Overall Intersection		A	0.4	4.6	--
Bank St & Sunnyside Ave	Signalized	EB	L / Th / R	C	0.78	67.8	34.5
		WB	L / Th / R	B	0.7	32.8	35.5

Intersection	Intersection Control	Approach / Movement		LOS	V/C	Total Delay (s)	Queue 95th (m)
		NB	L / Th / R	A	0.37	16.5	47.5
		SB	L / Th / R	A	0.49	4.7	11.3
		Overall Intersection		C	0.78	16.5	--
QED & Princess Patricia Way	Minor Stop	NB	L / Th	A	0.05	7.6	0.2
		EB	L / R	B	0.31	11.9	1.4
		Overall Intersection		A	0.23	5.3	--
Queen Elizabeth Dr & Fifth Ave	Signalized	EB	L / R	B	0.61	40.6	37.4
		NB	L / Th	A	0.29	7.3	27.9
		SB	Th / R	A	0.04	5.6	5.7
		Overall Intersection		B	0.61	19.1	--
Bank St & Marche Way	Minor Stop	WB	L / R	B	0.3	14	1.3
		Overall Intersection		A	0.27	1.9	--
Fifth Ave & O'Connor St	All-Way Stop	EB	L / Th	A	0.23	9.9	0.9
		WB	R	A	0.3	9.4	1.3
		NB	L / Th / R	B	0.34	10.6	1.5
		SB	R	A	0.14	8.5	0.5
		Overall Intersection		A	0.34	9.8	--
Garage Access at Exhibition Way	Two-Way Stop	WB	Th / L	A	0	8.5	0
		NB	L / R	C	0.24	17.1	1
		Overall Intersection		A	0.25	3.2	--
Exhibition Way and Service Roadway	All-Way Stop	EB	L / Th	A	0.18	8	0.7
		WB	Th / R	A	0.13	7.7	0.5
		SB	L / R	A	0.01	7.4	0
		Overall Intersection		A	0.18	7.9	--
Marché Way and Service Roadway	All-Way Stop	EB	L / Th	A	0.02	7.1	0.1
		WB	L / Th	A	0.2	8	0.7
		NB	L / R	A	0.01	7.2	0
		Overall Intersection		A	0.2	7.9	--
Marché Way and Exhibition Way	All-Way Stop	EB	Th / R	A	0.02	7.3	0.1
		WB	L / Th	A	0.07	7.9	0.3
		NB	L / R	A	0.18	8.2	0.7
		Overall Intersection		A	0.19	8	--
Garage Access at Princess	Two-Way Stop	EB	L	A	0	7.5	0
			Th	A	--	0	--
		SB	L / R	B	0.23	10.7	0.9

Intersection	Intersection Control	Approach / Movement	LOS	V/C	Total Delay (s)	Queue 95th (m)
Patricia Way		Overall Intersection	A	0.23	5.3	--

L - Left, **Th** - Through, **R** - Right

As illustrated above, all study area intersections are currently operating with overall acceptable levels of service on Weekend Sunday peak periods with concurrent events at Lansdowne.

The eastbound approach at intersection of Bank Street and Wilton Crescent is currently operating with a LOS E. The delays at this intersection are not directly attributed to event traffic held at Lansdowne and are associated with limited gaps in traffic in the southbound direction associated with the recently installed 3-lane cross-section of Bank Street.

No mitigation measure is recommended to improve intersection operations.

Table 4-8: Existing Conditions Intersection LOS (Minor Event)

Intersection	Intersection Control	Approach / Movement		LOS		V/C		Total		Queue	
				Ingress	Egress	Ingress	Egress	Delay (s)		95th (m)	
								Ingress	Egress	Ingress	Egress
Bank St & Fifth Ave	Signalized	EB	L / Th / R	B	C	0.65	0.51	36.9	31.9	32.3	18.8
		WB	L	A	C	0.42	0.34	33.3	34.4	18.8	15.5
			Th / R	A	B	0.3	0.3	19	19.5	15.6	12.6
		NB	L / Th / R	A	A	0.3	0.24	10	6	49.8	34.2
		SB	L / Th / R	A	A	0.35	0.2	6.3	3.6	33.6	15.6
		Overall Intersection		B	A	0.65	0.51	12.6	9	--	--
Bank St & Holmwood Ave	Signalized	EB	L / Th / R	A	D	0.54	0.47	38.1	37.7	27.8	22.3
		NB	L / Th / R	A	A	0.37	0.29	2.9	3.7	13.9	22.1
		SB	L / Th / R	A	A	0.32	0.2	4.8	4.4	20.2	24.4
				Overall Intersection		A	A	0.54	0.47	6.5	6.6
Bank St & Exhibition Way	Signalized	WB	L	A	D	0.5	0.64	35.1	36.4	30.8	43.5
			Right	A	D	0.37	0.57	10.5	9.6	11.2	16.2
		NB	L / Th / R	A	A	0.33	0.17	4.9	4.9	26.6	12.4
		SB	L	A	A	0.41	0.25	7.4	5.8	10.5	8.8
			Th	A	A	0.2	0.14	3.1	4.4	8.8	7.6
				Overall Intersection		A	B	0.5	0.64	7.6	11.6
Bank St & Wilton Cr	Minor Stop	EB	R	F	C	0.85	0.32	52.8	18.8	45.6	7.8
		NB	L	B	B	0.19	0.07	12.1	10.3	5.3	1.8
			Th	A	A	--	--	2.2	0.6	5.3	1.8
				Overall Intersection		B	A	0.85	0.32	10.5	2.9
Bank St & Echo Dr	Minor Stop	EB	R	C	B	0.11	0.02	15.8	10.4	2.4	0.6
				Overall Intersection		A	A	0.11	0.02	0.4	0.2

Intersection	Intersection Control	Approach / Movement		LOS		V/C		Total		Queue	
				Ingress	Egress	Ingress	Egress	Delay (s)		95th (m)	
								Ingress	Egress	Ingress	Egress
Bank St & Aylmer Ave	Signalized	EB	L / R	A	A	0.35	0.03	36.4	27.2	26.1	4.4
		NB	L / Th	A	A	0.39	0.08	5.4	5.3	23.6	8.1
		SB	Th / R	A	A	0.32	0.1	6.4	5.2	28	9.6
		Overall Intersection		A	A	0.39	0.1	7.6	5.7	--	--
Bank St & Sunnyside Ave	Signalized	EB	L / Th / R	C	A	0.73	0.48	52.2	44.4	#42.6	19.1
		WB	L / Th / R	C	A	0.76	0.33	32.6	20.8	49.7	11.9
		NB	L / Th / R	A	A	0.3	0.12	8.1	3.2	32.2	11
		SB	L / Th / R	A	A	0.53	0.24	7.5	3.5	23.4	21.2
		Overall Intersection		C	A	0.76	0.48	15.2	7	--	--
QED & Princess Patricia Way	Minor Stop	NB	L / Th	A	A	0.13	0.01	9.3	7.6	2.4	0
		EB	L / R	C	C	0.36	0.59	21.6	16.1	9.6	24
		Overall Intersection		C	A	0.36	0.59	3.4	10.4	--	--
Queen Elizabeth Dr & Fifth Ave	Signalized	EB	L / R	A	A	0.38	0.39	28.6	28.7	22.4	23.4
		NB	L / Th	A	A	0.34	0.32	6.8	6.5	27.9	29.4
		SB	Th / R	B	A	0.63	0.2	10.7	5.6	78.2	18
		Overall Intersection		B	A	0.63	0.39	11.2	9.8	--	--
Bank St & Marche Way	Minor Stop	WB	L / R	B	B	0.11	0.27	12.3	13.4	2.4	6.6
		Overall Intersection		A	A	0.11	0.27	0.6	2.1	--	--
Fifth Ave & O'Connor St	All-Way Stop	EB	L / Th	A	A	0.15	0.07	8.1	7.4	--	--
		WB	R	A	A	0.13	0.06	6.7	6.4	--	--
		NB	L / Th / R	A	A	0.18	0.08	8	7	--	--
		SB	R	A	A	0.08	0.09	6.5	6.5	--	--
		Overall Intersection		A	A	0.18	0.09	7.4	6.8	--	--

Intersection	Intersection Control	Approach / Movement		LOS		V/C		Total		Queue	
				Ingress	Egress	Ingress	Egress	Delay (s)		95th (m)	
								Ingress	Egress	Ingress	Egress
Garage Access at Exhibition Way	Two-Way Stop	WB	L	A	A	0	--	8.8	0	0	0
			Th	A	A	--	0	0	0	--	0
		NB	L / R	C	C	0.29	0.43	19.8	24.7	1.2	2.1
		Overall Intersection		A	A	0.3	0.44	3.3	5.2	--	--
Exhibition Way and Service Roadway	All-Way Stop	EB	L / Th	A	A	0.28	0.25	8.7	8.7	1.2	1
		WB	Th / R	A	A	0.15	0.35	7.9	9.4	0.5	1.6
		SB	L / R	A	A	0.01	0.01	7.6	7.9	0	0
		Overall Intersection		A	A	0.29	0.36	8.4	9.1	--	--
Marché Way and Service Roadway	All-Way Stop	EB	L / Th	A	A	0.02	0.03	7	7.2	0.1	0.1
		WB	L / Th	A	A	0.06	0.18	7.3	7.9	0.2	0.7
		NB	L / R	A	A	0.01	0.01	7	7.2	0	0
		Overall Intersection		A	A	0.07	0.18	7.2	7.8	--	--
Marché Way and Exhibition Way	All-Way Stop	EB	Th / R	A	A	0.03	0.03	7.8	7.6	0.1	0.1
		WB	L / Th	A	A	0.23	0.11	9.2	8.2	0.9	0.4
		NB	L / R	A	A	0.31	0.25	9.7	8.5	1.4	1
		Overall Intersection		A	A	0.32	0.25	9.4	8.3	--	--
Garage Access at Princess Patricia Way	Two-Way Stop	EB	L	A	A	0	0	8.1	7.4	0	0
			Th	A	A	--	0	0	0	--	0
		SB	L / R	B	B	0.14	0.47	11.3	13.2	0.5	19.6
		Overall Intersection		A	A	0.14	0.47	2.2	9.3	--	--

L - Left, Th - Through, R - Right

As illustrated above, all study area intersections are currently operating with overall acceptable levels of service during Minor Events held at the Arena at TD Place.

The eastbound approach at intersection of Bank Street and Wilton Crescent is currently operating with a LOS F.

This occurs during the event Ingress period which overlaps with the regular PM peak period. The delays at this intersection are not directly attributed to event traffic held at Lansdowne and are associated with limited gaps in traffic in the southbound direction associated with the recently installed 3-lane cross-section of Bank Street.

No mitigation measures are recommended to improve intersection operations.

Table 4-9: Existing Conditions Intersection LOS (Major Event)

Intersection	Intersection Control	Approach / Movement		LOS		V/C		Total		Queue	
				Ingress	Egress	Ingress	Egress	Delay (s)		95th (m)	
								Ingress	Egress	Ingress	Egress
Bank St & Fifth Ave	Signalized	EB	L / Th / R	B	B	0.67	0.65	35.8	36	34.5	31.8
		WB	L	A	A	0.42	0.21	30.3	24.7	19.8	12.1
			Th / R	A	A	0.4	0.45	17.4	19.3	20.3	23.1
		NB	L / Th / R	A	A	0.32	0.2	6.5	5.6	28.7	18.9
		SB	L / Th / R	A	A	0.42	0.23	7.4	5.6	41.4	21.1
Overall Intersection				B	B	0.67	0.65	11.6	11.8	--	--
Bank St & Holmwood Ave	Signalized	EB	L / Th / R	B	B	0.61	0.61	38.5	38.7	34.1	32.8
		NB	L / Th / R	A	A	0.48	0.25	13.5	5	40.9	17.4
		SB	L / Th / R	A	A	0.42	0.23	6.7	4.8	37.4	16.6
		Overall Intersection				B	B	0.61	0.61	8.2	10
Bank St & Exhibition Way	Signalized	WB	L	<i>Movements Temporarily Restricted During Major Events</i>							
			Right								
		NB	L / Th / R	A	A	0.33	0.12	4.6	0.1	27.1	0
		SB	L	<i>Movements Temporarily Restricted During Major Events</i>							
			Th	A	A	0.26	0.12	3.6	0.1	17.1	0
Overall Intersection				A	A	0.33	0.12	5.3	0.1	--	--
Bank St & Wilton Cr	Minor Stop	EB	R	F	B	0.97	0.01	81.9	13.2	60	0
		NB	L	B	A	0.19	--	12.1	0	5.3	0
			Th	A	--	--	--	2.2	--	5.3	0
		Overall Intersection				C	A	0.97	0.01	14.2	0.1
Bank St & Echo Dr	Minor Stop	EB	R	C	B	0.22	0.05	17.7	10.3	4.8	1.2
		Overall Intersection				A	A	0.22	0.05	0.8	0.5

Intersection	Intersection Control	Approach / Movement		LOS		V/C		Total		Queue	
				Ingress	Egress	Ingress	Egress	Delay (s)		95th (m)	
								Ingress	Egress	Ingress	Egress
Bank St & Aylmer Ave	Signalized	EB	L / R	A	A	0.5	0.17	38.1	23.5	33.9	11.4
		NB	L / Th	A	A	0.41	0.19	7.8	5.9	43.3	16.6
		SB	Th / R	A	A	0.43	0.17	7.9	5.5	47	14.4
		Overall Intersection		A	A	0.5	0.19	9.9	6.6	--	--
Bank St & Sunnyside Ave	Signalized	EB	L / Th / R	D	A	0.84	0.53	64.5	42.8	62.2	24.9
		WB	L / Th / R	D	A	0.82	0.48	43.7	28.2	69.7	21.2
		NB	L / Th / R	A	A	0.36	0.15	7.8	4.1	31.4	13.6
		SB	L / Th / R	B	A	0.68	0.18	12.8	4.1	64.8	15.4
		Overall Intersection		D	A	0.84	0.53	20.2	10.6	--	--
QED & Princess Patricia Way	Minor Stop	NB	L / Th	A	A	0.14	0.05	9.9	8.2	3	0.6
		EB	L / R	F	E	0.77	0.87	50.5	39.7	34.2	58.8
		Overall Intersection		D	C	0.77	0.87	8.7	19.2	--	--
Queen Elizabeth Dr & Fifth Ave	Signalized	EB	L / R	A	B	0.58	0.68	33.3	36.7	35.6	45.8
		NB	L / Th	A	A	0.56	0.4	11.9	8.6	49.3	39.1
		SB	Th / R	D	A	0.81	0.39	18.9	8.4	156.5	39.1
		Overall Intersection		D	B	0.81	0.68	18.8	14.6	--	--
Bank St & Marche Way	Minor Stop	WB	L / R	<i>Movements Temporarily Restricted During Major Events</i>							
		Overall Intersection									
Fifth Ave & O'Connor St	All-Way Stop	EB	L / Th	A	A	0.17	0.11	8.5	8.5	--	--
		WB	R	A	A	0.19	0.11	6.9	6.6	--	--
		NB	L / Th / R	A	B	0.26	0.43	8.4	10	--	--
		SB	R	A	A	0.13	0.05	6.7	6.4	--	--
		Overall Intersection		A	B	0.26	0.43	7.7	8.8	--	--

As illustrated above, all study area intersections are currently operating with overall acceptable levels of service during Major Events held at the Stadium at TD Place.

It should be noted that the Queen Elizabeth Driveway / Princess Patricia Way operations are being controlled by police officers, not stop control, during major events. Synchro analysis may not be representative of real operations.

The eastbound approach at intersection of Bank Street and Wilton Crescent is currently operating with a LOS F. This occurs during the event Ingress period which overlaps with the regular PM peak period. The delays at this intersection are not directly attributed to event traffic held at Lansdowne and are associated with limited gaps in traffic in the southbound direction associated with the recently installed 3-lane cross-section of Bank Street.

No mitigation measures are recommended to improve intersection operations.

In addition, the eastbound approach at the Queen Elizabeth Drive and Princess Patricia Way intersection is shown to operate with an LOS rating of F and E for the Ingress and Egress periods, respectively. Although the analysis indicates that the movements are operating with delays, the performance of these intersections are adequately managed through the deployment of Ottawa Police Point duty as part of the traffic management measures for Major Events at Lansdowne.

No mitigation measures are recommended to improve intersection operations.

4.8.2 2028 Future Conditions

Intersection Capacity Analysis

Intersection operational analysis under the Future Background 2028 conditions is summarized in this section.

This includes an assessment of anticipated traffic operations with Construction Traffic related traffic related to the construction of Lansdowne 2.0. Construction traffic is only reflected in Weekday AM and PM peak hour conditions.

Detailed Synchro level of service analysis results can be found in **Appendix F**.

Table 4-10: 2028 Future Background Intersection LOS (Weekday AM/PM Peak)

Intersection	Intersection Control	Approach / Movement		LOS		V/C		Total		Queue	
				AM	PM	AM	PM	Delay (s)		95th (m)	
								AM	PM	AM	PM
Bank St & Fifth Ave	Signalized	EB	L / Th / R	A	B	0.37	0.67	22.2	35.8	28.4	32.4
		WB	L	A	A	0.18	0.41	23	33.2	14.1	17.7
			Th / R	A	A	0.21	0.29	15.9	17.4	16.4	14.6
		NB	L / Th / R	A	A	0.4	0.29	2.9	11	5.3	49.1
		SB	L / Th / R	A	A	0.34	0.39	8.7	6.7	27	37.5
Overall Intersection		A	B	0.4	0.67	8.3	12.8	--	--		
Bank St & Holmwood Ave	Signalized	EB	L / Th / R	A	A	0.48	0.55	37.8	38.8	23.3	27.6
		NB	L / Th / R	A	A	0.3	0.32	2.1	2	4.6	9.4
		SB	L / Th / R	A	A	0.22	0.34	3.2	3.3	14.1	13
		Overall Intersection		A	A	0.48	0.55	5.2	5.5	--	--
Bank St & Exhibition Way	Signalized	WB	L	A	A	0.28	0.53	32.6	35.7	17.5	31.7
			Right	A	A	0.2	0.29	13.2	10.3	7.4	9.4
		NB	L / Th / R	A	A	0.39	0.33	10.3	5.7	42.2	30.7
		SB	L	A	A	0.15	0.31	8.6	5.4	12	7
			Th	A	A	0.16	0.24	6.7	3.2	23.8	10.6
Overall Intersection		A	A	0.39	0.53	10.2	7.6	--	--		
Bank St & Wilton Cr	Minor Stop	EB	R	C	E	0.52	0.89	23.5	66.9	17.4	48
		NB	L	B	B	0.21	0.38	10.9	14.4	4.8	7.2
			Th	A	A	--	--	1.9	3.8	--	--
		Overall Intersection		A	C	0.52	0.89	5.3	12.9	--	--
Bank St & Echo Dr	Minor Stop	EB	R	B	C	0.06	0.1	12.9	20	1.8	3.2
		Overall Intersection		A	A	0.06	0.1	0.3	0.3	--	--
	Signalized	EB	L / R	A	A	0.3	0.37	29.6	31.5	21.8	24.2

Intersection	Intersection Control	Approach / Movement		LOS		V/C		Total		Queue	
				AM	PM	AM	PM	Delay (s)		95th (m)	
								AM	PM	AM	PM
Bank St & Aylmer Ave		NB	L / Th	A	A	0.44	0.41	3.5	4.3	m15.2	m14.2
		SB	Th / R	A	A	0.35	0.48	7.4	8	29.5	47.8
		Overall Intersection		A	A	0.44	0.48	6.5	7.6	--	--
Bank St & Sunnyside Ave	Signalized	EB	L / Th / R	B	B	0.65	0.69	39.1	45.2	36.3	#57.1
		WB	L / Th / R	D	E	0.87	0.95	33.5	57.6	#73.1	#101.8
		NB	L / Th / R	B	A	0.65	0.3	14.4	9.3	85.4	29.1
		SB	L / Th / R	F	E	1.07dl	0.92	16.7	24	63.1	#139.4
		Overall Intersection		D	E	0.87	0.95	19.8	28.1	--	--
QED & Princess Patricia Way	Minor Stop	NB	L / Th	A	A	0.06	0.05	8.2	8.9	1.2	9
		EB	L / R	B	C	0.1	0.35	13.4	20.6	1.8	1.2
		Overall Intersection		A	A	0.1	0.35	1.6	2.9	--	--
Queen Elizabeth Dr & Fifth Ave	Signalized	EB	L / R	A	A	0.23	0.37	18.7	36.7	17.3	22.5
		NB	L / Th	A	A	0.24	0.23	5.8	4.6	47.7	22.4
		SB	Th / R	A	A	0.31	0.51	6.2	7	66.1	69.2
		Overall Intersection		A	A	0.31	0.51	7.3	20.8	--	--
Bank St & Marche Way	Minor Stop	WB	L / R	B	B	0.08	0.16	12.8	13.6	1.2	3.6
		Overall Intersection		A	A	0.08	0.16	0.4	0.9	--	--
Fifth Ave & O'Connor St	All-Way Stop	EB	L / Th	A	A	0.15	0.16	8.4	8.6	0.5	0.6
		WB	R	A	A	0.09	0.13	7.3	7.5	0.3	0.4
		NB	L / Th / R	A	A	0.1	0.13	7.9	8.2	0.3	0.5
		SB	R	A	A	0.13	0.12	7.5	7.5	0.4	0.4
		Overall Intersection		A	A	0.15	0.16	7.8	8	--	--
Garage Access at	Two-Way Stop	WB	L	A	A	0.01	0.01	8.2	8.4	0	0.01
			Th	A	A	--	--	--	--	--	--

Intersection	Intersection Control	Approach / Movement		LOS		V/C		Total		Queue	
				AM	PM	AM	PM	Delay (s)		95th (m)	
								AM	PM	AM	PM
Exhibition Way		NB	L / R	B	C	0.05	0.14	13	15.5	1.2	1.4
		Overall Intersection		A	A	0.11	0.16	1.3	1.9	--	--
Exhibition Way and Service Roadway	All-Way Stop	EB	L / Th	A	A	0.14	0.16	7.7	7.9	3	3.6
		WB	Th / R	A	A	0.08	0.18	7.4	8	1.8	4.2
		SB	L / R	A	A	0.01	0.01	7.2	7.4	0	0
		Overall Intersection		A	A	0.05	0.16	1.3	1.8	--	--
Marché Way and Service Roadway	All-Way Stop	EB	L / Th	A	A	0.01	0.01	6.7	6.6	--	--
		WB	L / Th	A	A	0.16	0.01	7.7	7.1	3.6	--
		NB	L / R	A	A	0.01	0.01	7.1	6.8	--	--
		Overall Intersection		A	A	0.16	0.01	7.6	6.9	--	--
Marché Way and Exhibition Way	All-Way Stop	EB	Th / R	A	A	0.01	0.01	7	7.1	--	--
		WB	L / Th	A	A	0.17	0.2	8.2	8.5	3.6	3
		NB	L / R	A	A	0.14	0.15	7.9	7.4	3	4.2
		Overall Intersection		A	A	0.17	0.2	8	8.7	--	--
Garage Access at Princess Patricia Way	Two-Way Stop	EB	L	A	A	0	0	7.5	7.5	0	0
			Th	A	A	--	--	0	--	--	--
		SB	L / R	A	B	0.01	0.07	9.3	19.6	0	1.2
		Overall Intersection		A	A	0.01	0.07	2.2	2.4	--	--

L - Left, Th - Through, R - Right

As illustrated in the tables above, most study area intersections are projected to continue to operate with overall acceptable levels of service under the 2028 Future Background Conditions during the Weekday AM and PM peak hours.

The intersection of Bank Street and Sunnyside Avenue is projected to operate at or close to theoretical capacity in the PM peak. In addition, the eastbound approach at intersection of Bank Street and Wilton Crescent is projected to continue to operate with a LOS E due to vehicle delays during the PM peak hour.

The delays are associated with limited gaps in traffic in the southbound direction associated with the recently installed 3-lane cross-section of Bank Street.

No mitigation measures are proposed.

Table 4-11: 2028 Construction Impact Intersection LOS (Weekday AM/PM Peak)

Intersection	Intersection Control	Approach / Movement		LOS		V/C		Total Delay (s)		Queue 95th (m)	
				AM	PM	AM	PM	AM	PM	AM	PM
Bank St & Fifth Ave	Signalized	EB	Left / Through / Right	A	B	0.37	0.67	22.2	35.8	28.4	32.4
		WB	Left	A	A	0.20	0.43	23.1	33.9	14.8	18.5
			Through / Right	A	A	0.21	0.29	15.9	17.4	16.4	14.6
		NB	Left / Through / Right	A	A	0.41	0.30	2.9	10.9	5.4	50.1
		SB	Left / Through / Right	A	A	0.37	0.40	8.9	6.8	28.4	38.6
		Overall Intersection		A	B	0.41	0.67	8.5	12.9	--	--
Bank St & Holmwood Ave	Signalized	EB	Left / Through / Right	A	A	0.48	0.55	37.8	38.8	23.3	27.6
		NB	Left / Through / Right	A	A	0.31	0.33	2.3	2.0	4.8	9.4
		SB	Left / Through / Right	A	A	0.24	0.35	3.2	3.4	15.0	15.5
		Overall Intersection		A	A	0.48	0.55	5.2	5.5	--	--
Bank St & Exhibition Way	Signalized	WB	Left	A	A	0.26	0.51	32.4	35.4	16.5	30.2
			Right	A	A	0.23	0.30	14.0	11.0	7.8	9.4
		NB	Left / Through / Right	A	A	0.38	0.32	10.1	5.5	40.8	29.0
		SB	Left	A	A	0.15	0.27	8.4	5.0	11.4	6.1

Intersection	Intersection Control	Approach / Movement		LOS		V/C		Total Delay (s)		Queue 95th (m)	
				AM	PM	AM	PM	AM	PM	AM	PM
			Through	A	A	0.18	0.26	6.7	3.2	25.1	10.7
		Overall Intersection		A	A	0.38	0.51	10.0	7.3	--	--
Bank St & Wilton Cr	Minor Stop	EB	Right	C	F	0.62	1.022	28.8	100.8	23.4	64.2
		NB	Left	B	B	0.21	0.391	11.1	14.7	4.8	11.4
			Through	A	A	--	--	2	3.9		
		Overall Intersection		A	B	0.62	1.02	6.3	18.7	--	--
Bank St & Echo Dr	Minor Stop	EB	Right	B	C	0.063	0.103	13.1	20.5	1.2	1.8
		Overall Intersection		A	A	0.06	0.10	0.3	0.3	--	--
Bank St & Aylmer Ave	Signalized	EB	Left / Right	A	A	0.30	0.37	29.6	31.5	21.8	24.2
		NB	Left / Through	A	A	0.44	0.41	3.5	4.3	m15.3	m14.2
		SB	Through / Right	A	A	0.37	0.48	7.6	8.0	31.2	49.3
		Overall Intersection		A	A	0.44	0.48	6.6	7.6	--	--
Bank St & Sunnyside Ave	Signalized	EB	Left / Through / Right	B	B	0.76	0.69	51.7	45.2	#44.3	#57.1
		WB	Left / Through / Right	E	E	0.91	0.95	40.1	57.6	#75.5	#101.8
		NB	Left / Through / Right	A	A	0.65	0.30	12.5	9.3	72.7	29.1
		SB	Left / Through / Right	E	E	1.04dl	0.95	19.1	28.6	#67.7	#145.8

Intersection	Intersection Control	Approach / Movement		LOS		V/C		Total Delay (s)		Queue 95th (m)	
				AM	PM	AM	PM	AM	PM	AM	PM
		Overall Intersection		E	E	0.91	0.95	35.5	30.5	--	--
QED & Princess Patricia Way	Minor Stop	NB	Left	A	A	0.067	0.066	8.3	9.1	0.2	1.2
			Through	A		--		0		--	
		EB	Left / Right	B	C	0.123	0.415	14.1	23.7	0.4	12
		Overall Intersection		A	A	0.12	0.42	1.8	3.3	--	--
Queen Elizabeth Dr & Fifth Ave	Signalized	EB	Left / Right	A	A	0.27	0.45	19.7	37.9	14.5	26.6
		NB	Left / Through	A	A	0.27	0.26	6.8	5.2	23.4	25.7
		SB	Through / Right	A	A	0.35	0.52	7.3	7.7	32.5	77.5
		Overall Intersection		A	A	0.35	0.52	8.5	9.9	--	--
Bank St & Marche Way	Minor Stop	WB	Right	B	B	0.08	0.165	12.9	13.6	1.2	4.8
		Overall Intersection		A	A	0.08	0.16	0.4	0.9	--	--
Fifth Ave & O'Connor St	All-Way Stop	EB	Left / Through	A	A	0.152	0.163	8.4	8.6	3	1.8
		WB	Right	A	A	0.087	0.125	7.3	7.5	1.8	2.4
		NB	Left / Through / Right	A	A	0.101	0.134	7.9	8.2	1.8	3
		SB	Right	A	A	0.129	0.115	7.5	7.5	2.4	2.4
		Overall Intersection		A	A	0.15	0.13	7.8	8	--	--

Intersection	Intersection Control	Approach / Movement		LOS		V/C		Total Delay (s)		Queue 95th (m)	
				AM	PM	AM	PM	AM	PM	AM	PM
Exhibition Way and Service Roadway	All-Way Stop	EB	Left / Through	A	A	0.198	0.275	8.1	8.7	4.2	6.6
		WB	Through / Right	A	A	0.111	0.23	7.6	8.4	2.4	5.4
		SB	Left / Right	A	A	0.013	0.014	7.4	7.7	0	0
		Overall Intersection		A	A	0.20	0.28	7.9	8.5	--	--
Marché Way and Service Roadway	All-Way Stop	EB	Left / Through	A	A	0.008	0.009	6.7	6.6	0	0
		WB	Left / Through	A	A	0.156	0.009	7.7	7.1	3.6	0
		NB	Left / Right	A	A	0.012	0.012	7.1	6.8	0	0
		Overall Intersection		A	A	0.16	0.01	7.6	6.9	--	--
Marché Way and Exhibition Way	All-Way Stop	EB	Through / Right	A	A	0.009	0.011	7.1	7.4	0	0
		WB	Left / Through	A	A	0.171	0.211	8.4	9	3.6	4.8
		NB	Left / Right	A	A	0.218	0.298	8.2	8.5	4.8	7.8
		Overall Intersection		A	A	0.22	0.30	8.3	8.7	--	--
Garage Access at Princess Patricia Way	Two-Way Stop	EB	Left	A	A	0.04	0.074	7.7	7.8	0.6	1.2
			Through	A	A	--	--	0	--	--	--
		SB	Left / Right	A	B	0.026	0.17	9.8	11.4	0.6	3.6
		Overall Intersection		A	A	0.04	0.17	2.2	4.7	--	--

As illustrated in the tables above, most study area intersections are projected to continue to operate with overall acceptable levels of service under the 2028 future conditions with Lansdowne 2.0 construction traffic during the Weekday AM and PM peak hours.

As in the baseline scenario, the intersection of Bank Street and Sunnyside Avenue is projected to operate at or close to theoretical capacity, similar to 2028 Future Background conditions.

In addition, eastbound approach at intersection of Bank Street and Wilton Crescent is projected to operate with a LOS F due to vehicle delays during the PM peak hour. The LOS decreases from the LOS E in the baseline scenario due to the additional construction traffic.

The delays in the baseline scenario are associated with limited gaps in traffic in the southbound direction associated with the recently installed 3-lane cross-section of Bank Street.

This suggests that construction hauling activities should stop prior to the PM Peak hour. With the temporary closure of the Exhibition Way garage ramp and assumed re-routed traffic, all internal study area intersections as Lansdowne are projected to operate acceptably with no delays or queues.

Table 4-12: 2028 Future Background Intersection LOS (Saturday Peak)

Intersection	Intersection Control	Approach / Movement		LOS	V/C	Total Delay (s)	Queue 95 th (m)
Bank St & Fifth Ave	Signalized	EB	Left / Through / Right	B	0.64	34.7	28.5
			Left	A	0.47	36.5	19.7
		WB	Through / Right	A	0.40	18.3	17.3
			Left / Through / Right	A	0.30	9.4	49.2
		SB	Left / Through / Right	A	0.33	5.7	30.4
		Overall Intersection		B	0.64	12.1	--
Bank St & Holmwood Ave	Signalized	EB	Left / Through / Right	A	0.55	38.8	27.2
			Left / Through / Right	A	0.31	2.2	9.5
		SB	Left / Through / Right	A	0.33	3.7	17.8
			Overall Intersection		A	0.55	5.8
Bank St & Exhibition Way	Signalized	WB	Left	A	0.42	34.5	24.7
			Right	A	0.34	11.6	10.4
		NB	Left / Through / Right	A	0.30	4.8	25.0
			SB	Left	A	0.31	4.9	6.5
		Through		A	0.23	2.8	9.6
		Overall Intersection		A	0.42	6.4	--
Bank St & Wilton Cr	Minor Stop	NB	Left	B	0.20	11.9	4.2
			Through	A	--	2	--
		EB	Right	D	0.62	33.5	23.4
		Overall Intersection		A	0.62	6.0	--
Bank St & Echo Dr	Minor Stop	EB	Right	B	0.09	14.9	1.8
		Overall Intersection		A	0.08	0.4	--
Bank St & Aylmer Ave	Signalized	EB	Left / Right	A	0.23	30.2	16.7
		NB	Left / Through	A	0.39	5.8	28.1
		SB	Through / Right	A	0.42	7.4	41.0

Intersection	Intersection Control	Approach / Movement		LOS	V/C	Total Delay (s)	Queue 95 th (m)
		Overall Intersection		A	0.42	7.4	--
Bank St & Sunnyside Ave	Signalized	EB	Left / Through / Right	C	0.75	58.6	38.0
		WB	Left / Through / Right	C	0.71	36.2	39.6
		NB	Left / Through / Right	A	0.32	6.9	35.2
		SB	Left / Through / Right	A	0.46	4.0	9.7
		Overall Intersection		C	0.75	13.2	--
QED & Princess Patricia Way	Minor Stop	NB	Left	A	0.06	8.3	1.2
			Through	A	--	0	--
		EB	Left / Right	C	0.29	15.7	7.2
		Overall Intersection		A	0.29	3.1	--
QED & Fifth Ave	Signalized	EB	Left / Right	A	0.43	37.4	25.5
		NB	Left / Through	A	0.27	5.1	28.9
		SB	Through / Right	A	0.35	5.6	42.4
		Overall Intersection		A	0.43	8.9	--
Bank St & Marche Way	Minor Stop	WB	Right	B	0.15	13.2	3.0
		SB	Left	A	0.00	9.4	0
		Overall Intersection		A	0.15	0.9	--
Fifth Ave & O'Connor St	All-Way Stop	EB	Left / Through	A	0.13	8.4	2.4
		WB	Right	A	0.12	7.6	2.4
		NB	Left / Through / Right	A	0.18	8.4	4.2
		SB	Right	A	0.13	7.5	2.4
		Overall Intersection		A	0.18	8	--

Intersection	Intersection Control	Approach / Movement	LOS	V/C	Total Delay (s)	Queue 95 th (m)
--------------	----------------------	---------------------	-----	-----	-----------------	----------------------------

Exhibition Way and Service Roadway	All-Way Stop	EB	Left / Through	A	0.16	7.8	3.6
		WB	Through / Right	A	0.11	7.6	2.4
		SB	Left / Right	A	0.01	7.3	0
		Overall Intersection		A	0.16	7.7	--
Marché Way and Service Roadway	All-Way Stop	EB	Left / Through	A	0.02	7.4	0.6
		WB	Left / Through	A	0.01	7	1.8
		NB	Left / Right	A	0.1	7	0
		Overall Intersection		A	0.1	7.3	--
Marché Way and Exhibition Way	All-Way Stop	EB	Through / Right	A	0.03	7.3	0.6
		WB	Left / Through	A	0.13	8.1	2.4
		NB	Left / Right	A	0.17	8.1	3.6
		Overall Intersection		A	0.17	9	--
Garage Access at Exhibition Way	Two-Way Stop	NB	Left	B	0.19	15.5	4.2
		WB	Left	A	0.05	8.4	0
			Through	A	--	0	--
Overall Intersection		A	0.19	2.9	--		
Garage Access at Princess Patricia Way	Two-Way Stop	EB	Left	A	0.0	7.6	0
			Through	A	--	0	--
		SB	Left / Right	B	0.14	10.2	3.0
		Overall Intersection		A	0.14	3.3	--

As illustrated in the tables above, all study area intersections are projected to continue to operate with overall acceptable levels of service under the 2028 Future Background Saturday peak hour conditions.

Table 4-13: 2028 Future Background Intersection LOS (Sunday Peak)

Intersection	Intersection Control	Approach / Movement	LOS	V/C	Total Delay (s)	Queue 95 th (m)	
Bank St & Fifth Ave	Signalized	EB	Left / Through / Right	A	0.38	22.6	26.8
		WB	Left	A	0.45	28.5	31.3

Intersection	Intersection Control	Approach / Movement		LOS	V/C	Total Delay (s)	Queue 95 th (m)
			Through / Right	A	0.27	16.6	20.2
		NB	Left / Through / Right	A	0.36	10.3	48.5
		SB	Left / Through / Right	A	0.39	9.2	32.5
		Overall Intersection		A	0.45	12.9	--
Bank St & Holmwood Ave	Signalized	EB	Left / Through / Right	A	0.55	38.5	26.9
		NB	Left / Through / Right	A	0.36	2.3	11.8
		SB	Left / Through / Right	A	0.32	9.6	47.2
		Overall Intersection		A	0.55	8.3	--
Bank St & Exhibition Way	Signalized	WB	Left	A	0.58	37.9	31.5
			Right	A	0.30	10.5	9.3
		NB	Left / Through / Right	A	0.39	12.1	40.9
		SB	Left	A	0.45	9.9	15.8
			Through	A	0.22	4.2	12.0
		Overall Intersection		A	0.58	11.5	--
Bank St & Wilton Cr	Minor Stop	NB	Left/Through	B	0.18	11.7	4.2
		EB	Right	C	0.52	27.5	16.8
		Overall Intersection		A	0.52	4.8	--
Bank St & Echo Dr	Minor Stop	EB	Right	B	0.23	18.6	4.8
		Overall Intersection		A	0.23	1	--
Bank St & Aylmer Ave	Signalized	EB	Left / Right	A	0.43	36.0	23.1
		NB	Left / Through	A	0.29	2.6	15.0
		SB	Through / Right	A	0.32	3.6	28.4
		Overall Intersection		A	0.43	4.9	--
Bank St & Sunnyside Ave	Signalized	EB	Left / Through / Right	C	0.77	65.0	34.8
		WB	Left / Through / Right	C	0.71	34.0	36.5
		NB	Left / Through / Right	A	0.39	17.0	48.7

Intersection		Intersection Control	Approach / Movement		LOS	V/C	Total Delay (s)	Queue 95 th (m)
			SB	Left / Through / Right	A	0.51	5.2	11.8
			Overall Intersection		C	0.77	16.8	--
QED & Princess Patricia Way		Minor Stop	NB	Left / Through	A	0.05	7.6	0.2
			EB	Left / Right	B	0.32	12.0	1.4
			Overall Intersection		A	0.32	5.9	--
QED & Fifth Ave		Signalized	EB	Left / Right	A	0.53	28.1	30.6
			NB	Left / Through	A	0.34	8.6	27.3
			SB	Through / Right	A	0.05	6.2	5.6
			Overall Intersection		A	0.53	15.4	--
Bank St & Marche Way		Minor Stop	WB	Left / Right	B	0.33	15.1	9.0
			Overall Intersection		A	0.33	2	--
Fifth Ave & O'Connor St		All-Way Stop	EB	Left / Through	A	0.24	10	9.0
			WB	Right	A	0.32	9.6	5.4
			NB	Left / Through / Right	B	0.35	10.7	7.8
			SB	Right	A	0.15	8.6	3.0
			Overall Intersection		A	0.35	9.9	--
Exhibition Way and Service Roadway	All-Way Stop	EB		Left / Through	A	0.19	8.0	4.2
		WB		Through / Right	A	0.14	7.7	3.0
		SB		Left / Right	A	0.01	7.4	0
		Overall Intersection		A	0.19	7.9	--	
Marché Way and Service Roadway	All-Way Stop	EB		Left / Through	A	0.02	7.1	0.6
		WB		Left / Through	A	0.21	78	4.8
		NB		Left / Right	A	0.01	7.2	0
		Overall Intersection		A	0.21	7.9	--	
Marché Way and Exhibition Way	All-Way Stop	EB		Through / Right	A	0.02	7.3	4.2
		WB		Left / Through	A	0.08	7.9	0.6
		NB		Left / Right	A	0.2	8.2	1.8
		Overall Intersection		A	0.2	8.0	--	
Garage Access at	Two-Way Stop	NB		Left	B	0.25	17.3	6.0
		WB		Left	A	0.01	8.6	0

Intersection		Intersection Control	Approach / Movement	LOS	V/C	Total Delay (s)	Queue 95 th (m)
Exhibition Way			Through	A	--	0	--
		Overall Intersection		A	0.25	3.2	--
Garage Access at Princess Patricia Way	Two-Way Stop	EB	Left	A	0.0	7.5	0
			Through	A	--	0	--
		SB	Left / Right	B	0.24	10.8	5.4
		Overall Intersection		A	0.24	5.3	--

As illustrated in the tables above, all study area intersections are projected to continue to operate with overall acceptable levels of service under the 2028 Future Background Sunday peak hour conditions.

Table 4-14: 2028 Future Background Intersection LOS (Minor Event)

Intersection	Intersection Control	Approach / Movement		LOS		V/C		Total		Queue	
				Ingress	Egress	Ingress	Egress	Delay (s)		95th (m)	
								Ingress	Egress	Ingress	Egress
Bank St & Fifth Ave	Signalized	EB	L / Th / R	B	A	0.67	0.52	37.6	32.1	33.3	19.2
		WB	L	A	A	0.42	0.34	32.9	34.6	19.1	15.6
			Th / R	A	A	0.4	0.32	16	19.5	17.6	13
		NB	L / Th / R	A	A	0.32	0.25	11	6.5	53.7	36.7
		SB	L / Th / R	A	A	0.37	0.21	6.8	3.7	36	16.4
		Overall Intersection		B	A	0.67	0.52	13.2	9.3	--	--
Bank St & Holmwood Ave	Signalized	EB	L / Th / R	A	A	0.56	0.48	38.5	38.1	28.3	22.9
		NB	L / Th / R	A	A	0.39	0.3	3	3.9	14.3	22.7
		SB	L / Th / R	A	A	0.33	0.21	3.4	4.6	8.8	25.5
				Overall Intersection		A	A	0.56	0.48	6	6.8
Bank St & Exhibition Way	Signalized	WB	L	A	B	0.52	0.66	35.6	37.1	30.7	43.4
			Right	A	A	0.37	0.57	10.4	9.4	11	16
		NB	L / Th / R	A	A	0.35	0.18	5.2	5.2	29	13
		SB	L	A	A	0.44	0.26	8.9	6.2	14.3	9.1
			Th	A	A	0.21	0.15	3.2	4.5	9.2	8.2
		Overall Intersection		A	B	0.52	0.66	7.9	11.7	--	--
Bank St & Wilton Cr	Minor Stop	EB	R	E	B	0.894	0.331	62.1	19.4	51.6	8.4
		NB	L	B	B	0.237	0.073	12	10.4	5.4	1.2
			Th	A	A	--	-	2.5	0.6	--	-
		Overall Intersection		B	A	0.894	0.331	12.7	3.2	--	--

Intersection	Intersection Control	Approach / Movement		LOS		V/C		Total		Queue	
				Ingress	Egress	Ingress	Egress	Delay (s)		95th (m)	
								Ingress	Egress	Ingress	Egress
Bank St & Echo Dr	Minor Stop	EB	R	B	B	0.114	0.018	16.3	10.4	2.4	0.6
		Overall Intersection		A	A	0.114	0.018	0.4	0.2	--	--
Bank St & Aylmer Ave	Signalized	EB	L / R	A	A	0.36	0.03	36.7	27.2	26.6	4.4
		NB	L / Th	A	A	0.4	0.09	5	5.3	m21.1	8.1
		SB	Th / R	A	A	0.34	0.11	6.5	5.3	29.5	9.7
		Overall Intersection		A	A	0.4	0.11	7.5	5.7	--	--
Bank St & Sunnyside Ave	Signalized	EB	L / Th / R	C	A	0.71	0.5	49.5	45.9	#44.5	19.6
		WB	L / Th / R	C	A	0.76	0.32	33.3	19.9	#53.8	11.9
		NB	L / Th / R	A	A	0.32	0.13	8.5	3.6	32.7	11.3
		SB	L / Th / R	A	A	0.56	0.26	7.7	4.1	57.4	22
		Overall Intersection		C	A	0.76	0.5	15.4	7.6	--	--
QED & Princess Patricia Way	Minor Stop	NB	L / Th	A	A	0.128	0.014	9.3	7.7	2.4	0
		EB	L / R	C	B	0.372	0.597	22.3	16.3	10.2	24
		Overall Intersection		A	B	0.372	0.597	3.5	10.4	--	--
Queen Elizabeth Dr & Fifth Ave	Signalized	EB	L / R	A	A	0.4	0.41	30	29.9	22.6	23.5
		NB	L / Th	A	A	0.31	0.28	6.1	5.8	28.8	29.6
		SB	Th / R	A	A	0.57	0.18	9	5.1	81.3	18.3
		Overall Intersection		A	A	0.57	0.41	10.1	9.4	--	--
Bank St & Marche Way	Minor Stop	WB	L / R	B	B	0.116	0.292	13	14.2	2.4	7.2
		Overall Intersection		A	A	0.116	0.292	0.6	2.2	--	--
		EB	L / Th	A	A	0.165	0.073	8.7	7.7	3.6	1.2

Intersection	Intersection Control	Approach / Movement		LOS		V/C		Total		Queue	
				Ingress	Egress	Ingress	Egress	Delay (s)		95th (m)	
								Ingress	Egress	Ingress	Egress
Fifth Ave & O'Connor St	All-Way Stop	WB	R	A	A	0.174	0.076	7.9	7.1	3.6	1.2
		NB	L / Th / R	A	A	0.199	0.084	8.7	7.3	4.2	1.8
		SB	R	A	A	0.105	0.11	7.7	7.1	2.4	2.4
		Overall Intersection		A	A	0.199	0.11	8.3	7.3	--	--
Garage Access at Exhibition Way	Two-Way Stop	WB	L	A	A	0	--	8.8	0	0	0
			Th	A	A	--	0	0	0	--	0
		NB	L / R	C	C	0.29	0.43	19.8	24.7	1.2	2.1
		Overall Intersection		A	A	0.3	0.44	3.3	5.2	--	--
Exhibition Way and Service Roadway	All-Way Stop	EB	L / Th	A	A	0.31	0.29	9.4	9.7	7.8	7.2
		WB	Th / R	A	A	0.00	0.00	7.5	7.9	0	0
		SB	L / R	A	A	0.15	0.34	7.6	8.9	3	9
		Overall Intersection		A	A	0.31	0.34	8.8	9.2	--	--
Marché Way and Service Roadway	All-Way Stop	EB	L / Th	A	A	0.03	0.04	7.6	7.4	0.6	0.6
		WB	L / Th	A	A	0.23	0.11	9	8.1	5.4	2.4
		NB	L / R	A	A	0.30	0.24	9	8.3	7.2	5.4
		Overall Intersection		A	A	0.30	0.24	8.9	8.2	--	--
Marché Way and Exhibition Way	All-Way Stop	EB	Th / R	A	A	0.04	0.09	7.3	7.4	0.6	1.8
		WB	L / Th	A	A	0.20	0.10	7.9	7.4	4.2	1.8
		NB	L / R	A	A	0.00	0.00	7.4	7.3	0	0
		Overall Intersection		A	A	0.20	0.10	7.8	7.4	--	--
Garage Access at Princess	Two-Way Stop	EB	L	A	A	0.01	0.00	8.1	7.4	0	0
			Th	A	A	--	--	0	0	-	--
		SB	L / R	B	B	0.15	0.47	11.3	13.2	3	15.6

Intersection	Intersection Control	Approach / Movement	LOS		V/C		Total		Queue	
			Ingress	Egress	Ingress	Egress	Delay (s)		95th (m)	
							Ingress	Egress	Ingress	Egress
Patricia Way		Overall Intersection	A	A	0.15	0.47	2.2	9.3		

L - Left, **Th** - Through, **R** - Right

As illustrated above, all study area intersections are projected to operate acceptably under 2028 operating conditions with overall acceptable levels of service during Minor Events held at the Arena at TD Place.

The eastbound approach at intersection of Bank Street and Wilton Crescent is expected to operate with a LOS E. This occurs during the event Ingress period which overlaps with the regular PM peak period. The delays at this intersection are not directly attributed to event traffic held at Lansdowne and are associated with limited gaps in traffic in the southbound direction associated with the recently installed 3-lane cross-section of Bank Street. No mitigation measures are recommended to improve intersection operations.

All internal study area intersections as Lansdowne are projected to operate acceptably with no delays or queues.

Table 4-15 2028 Future Background Intersection LOS (Major Event)

Intersection	Intersection Control	Approach / Movement		LOS		V/C		Total		Queue	
				Ingress	Egress	Ingress	Egress	Delay (s)		95th (m)	
								Ingress	Egress	Ingress	Egress
Bank St & Fifth Ave	Signalized	EB	L / Th / R	B	C	0.69	0.76	36.8	46.3	35.7	34.8
		WB	L	A	A	0.43	0.21	30.6	24.4	20.5	12.3
			Th / R	A	A	0.42	0.58	17.6	18.8	21.2	28.6
		NB	L / Th / R	A	A	0.34	0.23	6.8	6.3	30.1	19.6
		SB	L / Th / R	A	A	0.45	0.26	7.8	6.3	43.1	21.8
		Overall Intersection		B	C	0.69	0.76	12.1	13.8	--	--
Bank St & Holmwood Ave	Signalized	EB	L / Th / R	B	B	0.63	0.62	38.8	39.2	34.8	33.6
		NB	L / Th / R	A	A	0.51	0.26	4.1	4.3	44.7	18.6
		SB	L / Th / R	A	A	0.45	0.24	5.3	3.4	56.1	22.5
		Overall Intersection		B	B	0.63	0.62	7.8	9.2	--	--
Bank St & Exhibition Way	Signalized	WB	L	<i>Movements Temporarily Restricted During Major Events</i>							
			Right								
		NB	L / Th / R	A	A	0.35	0.14	4.8	1.4	29	13.2
		SB	L	<i>Movements Temporarily Restricted During Major Events</i>							
			Th	A	A	0.27	0.13	2.7	0.8	11.5	5.7
Overall Intersection		A	A	0.35	0.14	5	1.2	--	--		
Bank St & Wilton Cr	Minor Stop	EB	R	F	A	1.03	0.01	99.4	13.4	67.8	0
		NB	L	A	A	0.20	0.00	12.4	0	4.2	0
			Th	--	--	--	--	2.4	--	--	--
		Overall Intersection		F	A	1.03	0.01	17.7	0.1	--	--

Intersection	Intersection Control	Approach / Movement		LOS		V/C		Total		Queue	
				Ingress	Egress	Ingress	Egress	Delay (s)		95th (m)	
								Ingress	Egress	Ingress	Egress
Bank St & Echo Dr	Minor Stop	EB	R	B	B	0.24	0.05	18.6	10.4	5.4	1.2
		Overall Intersection		A	A	0.24	0.05	0.8	0.5	--	--
Bank St & Aylmer Ave	Signalized	EB	L / R	A	A	0.52	0.17	38.6	23.9	34.7	11.7
		NB	L / Th	A	A	0.42	0.20	6.3	4.2	m36.9	9.6
		SB	Th / R	A	A	0.45	0.18	8.2	5.5	49.4	15
		Overall Intersection		A	A	0.52	0.20	9.4	5.8	--	--
Bank St & Sunnyside Ave	Signalized	EB	L / Th / R	D	A	0.85	0.55	65.2	43.3	#64.8	26.1
		WB	L / Th / R	D	A	0.83	0.47	43.6	27.8	#72.2	21.4
		NB	L / Th / R	A	A	0.37	0.15	8.1	4.2	32.2	14.2
		SB	L / Th / R	C	A	0.71	0.18	13.9	4.2	69.1	16.2
		Overall Intersection		D	A	0.85	0.55	20.8	14.5	--	--
QED & Princess Patricia Way	Minor Stop	NB	L / Th	B	A	0.14	0.05	10	8.2	3	0.6
		EB	L / R	D	D	0.79	0.88	54.4	41.4	36	60.6
		Overall Intersection		A	B	0.79	0.88	9.2	19.8	--	--
Queen Elizabeth Dr & Fifth Ave	Signalized	EB	L / R	B	C	0.67	0.71	36.9	38.6	43.2	#52.7
		NB	L / Th	B	A	0.61	0.40	13.9	8.7	54.6	39.7
		SB	Th / R	D	A	0.83	0.40	20.6	8.5	#161.1	40.3
		Overall Intersection		D	C	0.83	0.71	68.4	15.4	--	--
Bank St & Marche Way	Minor Stop	WB	L / R	<i>Movements Temporarily Restricted During Major Events</i>							
		Overall Intersection									
Fifth Ave & O'Connor St	All-Way Stop	EB	L / Th	A	A	0.20	0.12	9.5	8.9	4.2	2.4
		WB	R	A	A	0.26	0.15	9	8.3	6	3
		NB	L / Th / R	A	B	0.31	0.05	9.8	11.2	7.8	15.6

Intersection	Intersection Control	Approach / Movement		LOS		V/C		Total		Queue	
				Ingress	Egress	Ingress	Egress	Delay (s)		95th (m)	
								Ingress	Egress	Ingress	Egress
		SB	R	A	A	0.18	0.07	8.5	7.6	3.6	1.2
		Overall Intersection		A	B	0.31	0.47	9.3	10.1	--	--

L - Left, **Th** - Through, R - Right

* It should be noted that the Queen Elizabeth Driveway / Princess Patricia Way operations are being controlled by police officers, not stop control, during major events. Synchro analysis may not be representative of real operations.

As illustrated above, most study area intersections are currently operating with overall acceptable levels of service during Major Events held at the Stadium at TD Place. The intersection of Bank Street and Wilton Crescent is projected to operate with a LOS F.

This occurs during the event ingress period which overlaps with the regular PM peak period. The delays at this intersection are not directly attributed to event traffic held at Lansdowne and are associated with limited gaps in traffic in the southbound direction associated with the recently installed 3-lane cross-section of Bank Street. No mitigation measures are recommended to improve intersection operations.

No mitigation measures are recommended to improve intersection operations.

4.8.3 2030 Future Conditions

Intersection Capacity Analysis

Intersection operational analysis under the 2030 Future conditions is summarized in this section.

This includes an assessment of anticipated traffic operations with Construction Traffic related traffic related to the construction of Lansdowne 2.0. Construction traffic is only reflected in Weekday AM and PM peak hour conditions.

Detailed Synchro level of service analysis results can be found in **Appendix F**.

Table 4-16: 2030 Future Conditions Intersection LOS (Weekday AM/PM Peak)

Intersection	Intersection Control	Approach / Movement		LOS		V/C		Total		Queue	
				AM	PM	AM	PM	Delay (s)		95th (m)	
								AM	PM	AM	PM
Bank St & Fifth Ave	Signalized	EB	L / Th / R	B	B	0.62	0.67	36.5	35.8	30.2	32.7
		WB	L	A	A	0.33	0.41	31.6	33.1	15.3	17.7
			Th / R	A	A	0.34	0.30	21.1	17.7	17.3	14.7
		NB	L / Th / R	A	A	0.34	0.30	1.4	11.1	4.3	49.9
		SB	L / Th / R	A	A	0.29	0.39	5.4	6.7	24.6	38
Overall Intersection		B	B	0.62	0.67	8.5	12.9	--	--		
Bank St & Holmwood Ave	Signalized	EB	L / Th / R	A	A	0.48	0.55	37.8	38.8	23.3	27.6
		NB	L / Th / R	A	A	0.31	0.33	2.1	2	4.6	9.4
		SB	L / Th / R	A	A	0.22	0.34	3.2	4.9	14.2	23
		Overall Intersection		A	A	0.48	0.55	5.1	6.2	--	--
Bank St & Exhibition Way	Signalized	WB	L	A	A	0.28	0.53	32.6	35.8	17.5	31.8
			Right	A	A	0.20	0.29	13.2	10.2	17.5	9.4
		NB	L / Th / R	A	A	0.39	0.34	10.3	5.7	42.7	31.1
		SB	L	A	A	0.16	0.31	9.1	5.5	12.2	7.1
			Th	A	A	0.17	0.25	6.8	3.2	24.1	10.6
Overall Intersection		A	A	0.39	0.53	10.3	7.6	--	--		
Bank St & Wilton Cr	Minor Stop	EB	R	B	B	0.21	0.39	11	14.6	4.8	10.8
		NB	L	A	A	--	--	2	3.9	--	--
			Th	C	E	0.53	0.90	23.8	70.1	18	49.8
		Overall Intersection		A	B	0.53	0.90	5.4	13.4	--	--
Bank St & Echo Dr	Minor Stop	EB	R	B	C	0.06	0.10	12.9	20.2	1.2	1.8
		Overall Intersection		A	A	0.06	0.10	0.3	0.3	--	--
	Signalized	EB	L / R	A	A	0.30	0.37	29.6	31.5	21.8	24.2

Intersection	Intersection Control	Approach / Movement		LOS		V/C		Total		Queue	
				AM	PM	AM	PM	Delay (s)		95th (m)	
								AM	PM	AM	PM
Bank St & Aylmer Ave		NB	L / Th	A	A	0.44	0.41	4.1	5.1	M17.2	M22.0
		SB	Th / R	A	A	0.35	0.48	7.4	8.1	29.7	48.6
		Overall Intersection		A	A	0.44	0.48	6.8	7.9	--	--
Bank St & Sunnyside Ave	Signalized	EB	L / Th / R	B	B	0.64	0.70	38	45.9	36.1	#57.9
		WB	L / Th / R	D	E	0.87	0.97	33.6	60.9	#74.4	#104.4
		NB	L / Th / R	B	A	0.66	0.31	14.7	9.3	86.9	29.6
		SB	L / Th / R	F	E	1.12dl	0.93	17.7	25.3	#78.3	#141.7
		Overall Intersection		D	E	0.87	0.97	20.1	29.4	--	--
QED & Princess Patricia Way	Minor Stop	NB	L / Th	A	A	0.06	0.05	8.3	9	1.2	1.2
		EB	L / R	B	C	0.10	0.35	13.5	20.9	1.8	9
		Overall Intersection		A	A	0.10	0.35	1.6	2.7	--	--
Queen Elizabeth Dr & Fifth Ave	Signalized	EB	L / R	A	A	0.31	0.37	30.4	36.7	19.1	22.5
		NB	L / Th	A	A	0.22	0.24	4.2	4.7	22.9	22.8
		SB	Th / R	A	A	0.28	0.51	4.6	7.1	31.8	70.8
		Overall Intersection		A	A	0.31	0.51	7	8.7	--	--
Bank St & Marche Way	Minor Stop	WB	L / R	B	B	0.08	0.17	12.8	13.6	1.2	3.6
		Overall Intersection		A	A	0.08	0.17	0.4	0.9	--	--
Fifth Ave & O'Connor St	All-Way Stop	EB	L / Th	A	A	0.15	0.17	8.4	8.6	3	3.6
		WB	R	A	A	0.09	0.13	7.3	7.5	1.8	2.4
		NB	L / Th / R	A	A	0.10	0.14	7.9	8.2	1.8	3
		SB	R	A	A	0.13	0.12	7.5	7.5	2.4	2.4
		Overall Intersection		A	A	0.15	0.17	7.8	8	--	--

Intersection	Intersection Control	Approach / Movement		LOS		V/C		Total		Queue	
				AM	PM	AM	PM	Delay (s)		95th (m)	
								AM	PM	AM	PM
Garage Access at Exhibition Way	Two-Way Stop	WB	L	A	A	0.01	0.01	8.2	8.4	0	0
			Th	A	A	--	--	--	--	--	--
		NB	L / R	B	B	0.06	0.14	13.1	15.7	1.2	3
		Overall Intersection		A	A	0.06	0.14	1.3	1.9	--	--
Exhibition Way and Service Roadway	All-Way Stop	EB	L / Th	A	A	0.14	0.16	7.7	7.9	3	3.6
			Th / R	A	A	0.09	0.18	7.4	8	1.8	4.2
		SB	L / R	A	A	0.01	0.01	7.2	7.4	0	0
		Overall Intersection		A	A	0.14	0.18	7.6	7.9	--	--
Marché Way and Service Roadway	All-Way Stop	EB	L / Th	A	A	0.01	0.09	6.7	6.6	0	0
			Th / R	A	A	0.16	0.01	7.7	7.1	3.6	0
		NB	L / R	A	A	0.01	0.01	7.1	6.8	0	0
		Overall Intersection		A	A	0.16	0.01	7.6	6.9	--	--
Marché Way and Exhibition Way	All-Way Stop	EB	Th / R	A	A	0.01	0.01	7	7.1	0	0
			L / Th	A	A	0.17	0.20	8.2	8.5	3.6	4.2
		NB	L / R	A	A	0.15	0.15	7.9	7.4	3	3
		Overall Intersection		A	A	0.17	0.20	8	8	--	--
Garage Access at Princess Patricia Way	Two-Way Stop	EB	L	A	A	0.00	0.00	7.5	7.5	0	0
			Th	A	A	--	--	0	0	--	--
		SB	L / R	A	A	0.01	0.07	9.4	9.6	0	0.2
		Overall Intersection		A	A	0.01	0.07	0.6	2.4	--	--

L - Left, Th - Through, R - Right

As illustrated above, most study area intersections are projected to continue to operate with overall acceptable levels of service under the 2030 Future Conditions Weekday AM and PM peak hour conditions.

The intersection of Bank Street and Sunnyside Avenue is projected to operate or close to theoretical capacity.

In addition, the eastbound approach at intersection of Bank Street and Wilton Crescent is projected to continue to operate with a LOS E due to vehicle delays during the PM peak hour. The delays are associated with limited gaps in traffic in the southbound direction associated with the recently installed 3-lane cross-section of Bank Street.

No mitigation measures are recommended to improve intersection operations.

Table 4-17: 2030 Future Construction Impacts Intersection LOS (Weekday AM/PM Peak)

Intersection	Intersection Control	Approach / Movement		LOS		V/C		Total		Queue	
				AM	PM	AM	PM	Delay (s)		95th (m)	
								AM	PM	AM	PM
Bank St & Fifth Ave	Signalized	EB	L / Th / R	B	B	0.62	0.67	36.5	35.8	30.2	32.7
		WB	L	A	A	0.33	0.41	31.6	33.1	15.3	17.7
			Th / R	A	A	0.34	0.30	21.1	17.7	17.3	14.7
		NB	L / Th / R	A	A	0.34	0.30	1.5	11.1	4.4	50.8
		SB	L / Th / R	A	A	0.31	0.42	5.6	7	26.6	40.7
Overall Intersection		B	B	0.62	0.67	8.5	12.9	--	--	--	--
Bank St & Holmwood Ave	Signalized	EB	L / Th / R	A	A	0.48	0.55	37.8	38.8	23.3	27.6
		NB	L / Th / R	A	A	0.31	0.33	2.2	2	5	9.8
		SB	L / Th / R	A	A	0.24	0.36	3.3	5	15.5	24.3
		Overall Intersection		A	A	0.48	0.55	5.1	6.3	--	--
Bank St & Exhibition Way	Signalized	WB	L	A	A	0.28	0.53	32.6	35.8	17.5	31.8
			Right	A	A	0.25	0.32	13.9	10.7	8	9.8
		NB	L / Th / R	A	A	0.39	0.34	10.3	5.7	42.7	31.1
		SB	L	A	A	0.18	0.34	9.6	5.9	13.2	7.5
			Th	A	A	0.18	0.27	7	3.3	25.5	11.1
Overall Intersection		A	A	0.39	0.53	10.3	7.7	--	--	--	--
Bank St & Wilton Cr	Minor Stop	EB	R	B	B	0.21	0.40	11.1	14.6	4.8	11.4
		NB	L	A	A	--	--	2	2.6	--	--
			Th	C	F	0.62	1.04	29.2	105.6	24	66
Overall Intersection		A	B	0.62	1.04	6.4	19	--	--	--	--
Bank St & Echo Dr	Minor Stop	EB	R	B	C	0.06	0.11	13.2	20.8	1.2	1.8
		Overall Intersection		A	A	0.06	0.11	0.3	0.3	--	--
	Signalized	EB	L / R	A	A	0.30	0.37	29.6	31.5	21.8	24.2

Intersection	Intersection Control	Approach / Movement		LOS		V/C		Total		Queue	
				AM	PM	AM	PM	Delay (s)		95th (m)	
								AM	PM	AM	PM
Bank St & Aylmer Ave		NB	L / Th	A	A	0.44	0.42	4.1	5.1	M17.2	M22.2
		SB	Th / R	A	A	0.37	0.51	7.6	8.4	31.5	51.2
		Overall Intersection		A	A	0.44	0.51	6.9	8.1	--	--
Bank St & Sunnyside Ave	Signalized	EB	L / Th / R	B	B	0.64	0.70	38	45.9	36.1	#57.9
		WB	L / Th / R	D	E	0.87	0.97	33.6	60.9	#74.4	#104.4
		NB	L / Th / R	B	A	0.66	0.31	14.7	9.3	86.9	29.6
		SB	L / Th / R	F	E	1.11dl	0.96	20.4	30.6	#84.6	#148.4
		Overall Intersection		D	E	0.87	0.97	20.9	32.2	--	--
QED & Princess Patricia Way	Minor Stop	NB	L / Th	A	A	0.06	0.05	8.3	9	1.2	1.2
		EB	L / R	B	C	0.10	0.35	13.5	20.9	1.8	9
		Overall Intersection		A	A	0.10	0.35	1.6	2.8	--	--
Queen Elizabeth Dr & Fifth Ave	Signalized	EB	L / R	A	A	0.31	0.37	30.4	36.7	19.1	22.5
		NB	L / Th	A	A	0.22	0.24	4.2	4.7	22.9	22.8
		SB	Th / R	A	A	0.28	0.51	4.6	7.1	31.8	70.8
		Overall Intersection		A	A	0.31	0.51	7	8.7	--	--
Bank St & Marche Way	Minor Stop	WB	L / R	B	B	0.08	0.17	12.9	13.7	1.2	3.6
		Overall Intersection		A	A	0.08	0.17	0.4	0.9	--	--
Fifth Ave & O'Connor St	All-Way Stop	EB	L / Th	A	A	0.15	0.17	8.4	8.6	3	3.6
		WB	R	A	A	0.09	0.13	7.3	7.5	1.8	2.4
		NB	L / Th / R	A	A	0.10	0.14	7.9	8.2	1.8	3
		SB	R	A	A	0.13	0.12	7.5	7.5	2.4	2.4
		Overall Intersection		A	A	0.15	0.17	7.8	8	--	--

Intersection	Intersection Control	Approach / Movement		LOS		V/C		Total		Queue	
				AM	PM	AM	PM	Delay (s)		95th (m)	
								AM	PM	AM	PM
Garage Access at Exhibition Way	Two-Way Stop	WB	L	A	A	0.01	0.01	8.2	8.4	0	0
			Th	A	A	--	--	--	--	--	--
		NB	L / R	B	B	0.06	0.14	13.1	15.8	1.2	3
		Overall Intersection		A	A	0.06	0.14	1.3	1.9	--	--
Exhibition Way and Service Roadway	All-Way Stop	EB	L / Th	A	A	0.14	0.16	7.7	7.9	3	3.6
			Th / R	A	A	0.09	0.18	7.4	8	1.8	4.2
		SB	L / R	A	A	0.01	0.01	7.2	7.4	0	0
		Overall Intersection		A	A	0.14	0.18	7.6	7.9	--	--
Marché Way and Service Roadway	All-Way Stop	EB	L / Th	A	A	0.01	0.09	6.7	6.6	0	0
			Th / R	A	A	0.16	0.01	7.7	7.1	3.6	0
		NB	L / R	A	A	0.01	0.01	7.1	6.8	0	0
		Overall Intersection		A	A	0.16	0.01	7.6	6.9	--	--
Marché Way and Exhibition Way	All-Way Stop	EB	Th / R	A	A	0.01	0.01	7	7.1	0	0
			L / Th	A	A	0.17	0.20	8.2	8.5	3.6	4.2
		NB	L / R	A	A	0.15	0.15	7.9	7.4	3	3
		Overall Intersection		A	A	0.17	0.20	8	8	--	--
Garage Access at Princess Patricia Way	Two-Way Stop	EB	L	A	A	0.00	0.00	7.5	7.5	0	0
			Th	A	A	--	--	0	0	--	--
		SB	L / R	A	A	0.01	0.07	9.4	9.6	0	1.2
		Overall Intersection		A	A	0.01	0.07	0.6	2.4	--	--

L - Left, Th - Through, R - Right

As illustrated in the tables above, most study area intersections are projected to continue to operate with overall acceptable levels of service under the 2030 Conditions with Lansdowne 2.0 construction traffic during Weekday AM and PM peak hours.

As in the baseline scenario, the intersection of Bank Street and Sunnyside Avenue is projected to operate at or close to theoretical capacity.

In addition, eastbound approach at intersection of Bank Street and Wilton Crescent is projected to operate with a LOS F due to vehicle delays during the PM peak hour. The LOS decreases from the LOS E in the baseline scenario due to the additional construction traffic. The delays in the baseline scenario are associated with limited gaps in traffic in the southbound direction associated with the recently installed 3-lane cross-section of Bank Street.

With the temporary closure of the Exhibition Way garage ramp and assumed re-routed traffic, all internal study area intersections as Lansdowne are projected to operate acceptably with no delays or queues.

Table 4-18: 2030 Future Intersection LOS (Saturday Peak)

Intersection	Intersection Control	Approach / Movement		LOS	V/C	Total Delay (s)	Queue 95th (m)
Bank St & Fifth Ave	Signalized	EB	L / Th / R	B	0.65	35	29.3
		WB	L	A	0.48	36.7	20
			Th / R	A	0.40	18.1	17.4
		NB	L / Th / R	A	0.31	9.6	50.3
		SB	L / Th / R	A	0.34	5.9	31.3
Overall Intersection				B	0.65	12.3	--
Bank St & Holmwood Ave	Signalized	EB	L / Th / R	A	0.55	38.8	27.3
		NB	L / Th / R	A	0.32	2.3	9.6
		SB	L / Th / R	A	0.33	5.8	45.2
		Overall Intersection				A	0.55	6.8	--
Bank St & Exhibition Way	Signalized	WB	L	A	0.42	34.5	24.7
			Right	A	0.34	11.6	10.4
		NB	L / Th / R	A	0.31	4.8	25.3
		SB	L	A	0.31	5	6.5
			Th	A	0.23	3.12.8	9.6
Overall Intersection				A	0.42	6.4	--
Bank St & Wilton Cr	Minor Stop	EB	R	B	0.20	12.3	4.8
		NB	L	A	--	2.1	
			Th	C	0.64	34.5	24.6
Overall Intersection				A	0.64	6.2	--
Bank St & Echo Dr	Minor Stop	EB	R	B	0.09	15.6	1.8
		Overall Intersection				A	0.09	0.4	--
Bank St & Aylmer Ave	Signalized	EB	L / R	A	0.23	30.2	16.7
		NB	L / Th	A	0.40	5.9	29.2
		SB	Th / R	A	0.43	7.5	41.5
		Overall Intersection				A	0.44	7.59	--
Bank St & Sunnyside Ave	Signalized	EB	L / Th / R	B	0.61	44.7	#43.5
		WB	L / Th / R	B	0.63	31.3	43.2
		NB	L / Th / R	A	0.55	22.2	56.7
		SB	L / Th / R	A	0.53	4.6	9.7
		Overall Intersection				B	0.63	17.2	--
QED & Princess Patricia Way	Minor Stop	NB	L / Th	A	0.05	8.3	1.2
		EB	L / R	B	0.30	15.8	7.2
		Overall Intersection				A	0.30	3.2	--
Queen Elizabeth Dr & Fifth Ave	Signalized	EB	L / R	A	0.43	37.4	25.5
		NB	L / Th	A	0.30	5.6	29.4
		SB	Th / R	A	0.39	6.2	42.9

Intersection	Intersection Control	Approach / Movement		LOS	V/C	Total Delay (s)	Queue 95th (m)
		Overall Intersection		A	0.43	9.4	--
Bank St & Marche Way	Minor Stop	WB	L / R	B	0.16	13.3	3
		Overall Intersection		A	0.16	0.9	--
Fifth Ave & O'Connor St	All-Way Stop	EB	L / Th	A	0.13	8.4	2.4
		WB	R	A	0.12	7.6	2.4
		NB	L / Th / R	A	0.18	8.5	4.2
		SB	R	A	0.13	7.6	2.4
		Overall Intersection		A	0.18	8.1	--
Garage Access at Exhibition Way	Two-Way Stop	WB	Th / L	A	0.01	8.4	0
		NB	L / R	B	0.20	15.6	4.2
		Overall Intersection		A	0.19	2.9	--
Exhibition Way and Service Roadway	All-Way Stop	EB	L / Th	A	0.16	7.8	3.6
		WB	Th / R	A	0.11	7.6	2.4
		SB	L / R	A	0.01	7.3	0
		Overall Intersection		A	0.16	7.7	
Marché Way and Service Roadway	All-Way Stop	EB	L / Th	A	0.03	7	0.6
		WB	L / Th	A	0.10	7.4	1.8
		NB	L / R	A	0.01	7	0
		Overall Intersection		A	0.10	7.3	--
Marché Way and Exhibition Way	All-Way Stop	EB	Th / R	A	0.03	7.3	0.6
		WB	L / Th	A	0.13	8.1	2.4
		NB	L / R	A	0.17	8.1	3.6
		Overall Intersection		A	0.16	8	--
Garage Access at Princess Patricia Way	Two-Way Stop	EB	L	A	0.00	7.6	0
			Th	A	--	0	--
		SB	L / R	B	0.14	10.2	3
		Overall Intersection		A	0.14	3.3	--

L - Left, Th - Through, R - Right

As illustrated above, all study area intersections are projected to continue to operate with acceptable levels of service under 2030 Future Saturday peak hour conditions.

Table 4-19 2030 Future Intersection LOS (Sunday Peak)

Intersection	Intersection Control	Approach / Movement		LOS	V/C	Total Delay (s)	Queue 95th (m)
Bank St & Fifth Ave	Signalized	EB	L / Th / R	A	0.55	30.7	27.3
		WB	L	B	0.67	43.2	32.1
			Th / R	A	0.37	20.2	20.5
		NB	L / Th / R	A	0.32	7.2	49
		SB	L / Th / R	A	0.35	6.9	33
		Overall Intersection		B	0.67	13	--
Bank St & Holmwood Ave	Signalized	EB	L / Th / R	A	0.55	38.6	27.3
		NB	L / Th / R	A	0.37	2.4	12
		SB	L / Th / R	A	0.33	8.8	47.8
				Overall Intersection		A	0.55	8	--
Bank St & Exhibition Way	Signalized	WB	L	A	0.56	36.5	32
			Right	A	0.29	9.9	9.4
		NB	L / Th / R	A	0.40	12.1	41.4
		SB	L	B	0.45	10.9	16.6
			Th	A	0.22	4.7	12.1
				Overall Intersection		A	0.56	11.6	--
Bank St & Wilton Cr	Minor Stop	EB	R	B	0.18	11.7	4.2
		NB	L	A	--	1.8	--
			Th	C	0.53	28.1	17.4
				Overall Intersection		A	0.53	4.9	--
Bank St & Echo Dr	Minor Stop	EB	R	B	0.23	18.8	5.4
				Overall Intersection		A	0.23	1	--
Bank St & Aylmer Ave	Signalized	EB	L / R	A	0.43	35.9	23.2
		NB	L / Th	A	0.29	2.6	16
		SB	Th / R	A	0.33	3.6	29.1
				Overall Intersection		A	0.43	4.9	--
Bank St & Sunnyside Ave	Signalized	EB	L / Th / R	A	0.52	40.5	35.2
		WB	L / Th / R	A	0.60	26.8	39
		NB	L / Th / R	A	0.47	20.9	49.6
		SB	L / Th / R	B	0.63	10.4	25.2
				Overall Intersection		B	0.63	18	--
QED & Princess Patricia Way	Minor Stop	NB	L / Th	A	0.05	7.6	1.2
		EB	L / R	B	0.33	12.1	8.4
				Overall Intersection		A	0.33	5.9	--
	Signalized	EB	L / R	A	0.53	28.3	31

Intersection	Intersection Control	Approach / Movement		LOS	V/C	Total Delay (s)	Queue 95th (m)
Queen Elizabeth Dr & Fifth Ave		NB	L / Th	A	0.34	8.7	27.7
		SB	Th / R	A	0.05	6.2	5.6
		Overall Intersection		A	0.53	15.5	--
Bank St & Marche Way	Minor Stop	WB	L / R	C	0.34	15.3	9
		Overall Intersection		A	0.34	2	--
Fifth Ave & O'Connor St	All-Way Stop	EB	L / Th	B	0.25	10.1	6
		WB	R	A	0.32	9.6	8.4
		NB	L / Th / R	B	0.35	10.8	9.6
		SB	R	A	0.15	8.6	3
		Overall Intersection		A	0.35	9.9	--
Garage Access at Exhibition Way	Two-Way Stop	WB	Th / L	A	0.01	8.6	0
		NB	L / R	B	0.26	17.5	6
		Overall Intersection		A	0.19	2.9	--
Exhibition Way and Service Roadway	All-Way Stop	EB	L / Th	A	0.19	8	4.2
		WB	Th / R	A	0.14	7.7	3
		SB	L / R	A	0.01	7.4	0
		Overall Intersection		A	0.14	7.79	--
Marché Way and Service Roadway	All-Way Stop	EB	L / Th	A	0.02	7.1	0.6
		WB	L / Th	A	0.21	8	4.8
		NB	L / R	A	0.01	7.2	0
		Overall Intersection		A	0.21	7.9	--
Marché Way and Exhibition Way	All-Way Stop	EB	Th / R	A	0.03	7.3	0.6
		WB	L / Th	A	0.08	7.9	1.8
		NB	L / R	A	0.20	8.2	4.2
		Overall Intersection		A	0.19	8	--
Garage Access at Princess Patricia Way	Two-Way Stop	EB	L	A	0.00	7.5	0
			Th	A	--	0	--
		SB	L / R	B	0.24	10.8	5.4
		Overall Intersection		A	0.24	5.3	--

L - Left, Th - Through, R - Right

As illustrated above, all study area intersections are projected to continue to operate with acceptable levels of service under 2030 Future Sunday peak hour conditions.

Table 4-20: 2030 Future Intersection LOS (Minor Event)

Intersection	Intersection Control	Approach / Movement		LOS		V/C		Total		Queue	
				Ingress	Egress	Ingress	Egress	Delay (s)		95th (m)	
								Ingress	Egress	Ingress	Egress
Bank St & Fifth Ave	Signalized	EB	L / Th / R	B	A	0.66	0.52	37.3	32.1	33.3	19.3
		WB	L	A	A	0.43	0.35	33.3	34.6	19.5	15.9
			Th / R	A	A	0.40	0.31	16.1	19.3	17.9	12.9
		NB	L / Th / R	A	A	0.32	0.24	10.6	6.2	52.9	35.5
		SB	L / Th / R	A	A	0.36	0.20	6.6	3.7	35.6	16.4
Overall Intersection		B	A	0.66	0.52	12.9	9.2	--	--		
Bank St & Holmwood Ave	Signalized	EB	L / Th / R	A	A	0.55	0.48	38.2	37.8	28.7	22.9
		NB	L / Th / R	A	A	0.38	0.29	2.9	3.8	14	22.3
		SB	L / Th / R	A	A	0.33	0.21	4.8	4.5	9	25.3
		Overall Intersection		A	A	0.55	0.48	6.6	6.7	--	--
Bank St & Exhibition Way	Signalized	WB	L	A	B	0.50	0.64	35.1	36.4	30.8	43.5
			Right	A	A	0.37	0.57	10.5	9.6	11.2	16.2
		NB	L / Th / R	A	A	0.33	0.17	5	4.9	27.7	12.6
		SB	L	A	A	0.42	0.25	7.7	5.8	11.2	8.7
			Th	A	A	0.21	0.15	3.1	4.3	9	7.8
Overall Intersection		A	B	0.50	0.64	7.6	11.5	--	--		
Bank St & Wilton Cr	Minor Stop	EB	R	E	B	0.90	0.33	62.8	19.3	52.2	8.4
		NB	L	B	B	0.24	0.07	12	10.4	5.4	1.2
			Th	A	A	--	--	2.5	0.6	--	--
Overall Intersection		B	A	0.90	0.33	12.8	3.2	--	--		
Bank St & Echo Dr	Minor Stop	EB	R	B	B	0.11	0.02	16.3	10.4	2.4	0.6
		Overall Intersection		A	A	0.11	0.02	0.4	0.2	--	--

Intersection	Intersection Control	Approach / Movement		LOS		V/C		Total		Queue	
				Ingress	Egress	Ingress	Egress	Delay (s)		95th (m)	
								Ingress	Egress	Ingress	Egress
Bank St & Aylmer Ave	Signalized	EB	L / R	A	A	0.36	0.03	36.6	27.2	26.8	4.4
		NB	L / Th	A	A	0.40	0.09	5.5	5.3	25.1	8.1
		SB	Th / R	A	A	0.33	0.10	6.5	5.2	29.4	9.7
		Overall Intersection		A	A	0.40	0.10	7.7	5.7	--	--
Bank St & Sunnyside Ave	Signalized	EB	L / Th / R	B	A	0.69	0.50	47.7	45.9	#43.7	19.6
		WB	L / Th / R	C	A	0.75	0.32	32.6	19.9	#53.9	11.9
		NB	L / Th / R	A	A	0.32	0.13	8.7	3.6	32.9	11.3
		SB	L / Th / R	A	A	0.57	0.26	8.2	4.1	23.7	22.2
		Overall Intersection		C	A	0.75	0.50	15.3	7.6	--	--
QED & Princess Patricia Way	Minor Stop	NB	L / Th	A	A	0.13	0.01	9.3	7.7	2.4	0
		EB	L / R	C	B	0.38	0.60	22.6	16.3	10.2	24
		Overall Intersection		A	B	0.38	0.60	3.5	10.4	--	--
Queen Elizabeth Dr & Fifth Ave	Signalized	EB	L / R	A	A	0.38	0.40	28.7	28.8	22.7	23.6
		NB	L / Th	A	A	0.35	0.32	7	6.6	29.2	29.9
		SB	Th / R	B	A	0.65	0.20	11.1	5.6	82.4	18.4
		Overall Intersection		B	A	0.65	0.40	11.5	9.9	--	--
Bank St & Marche Way	Minor Stop	WB	L / R	B	B	0.11	0.27	12.4	13.4	2.4	6.6
		Overall Intersection		A	A	0.11	0.27	0.6	2.1	--	--
Fifth Ave & O'Connor St	All-Way Stop	EB	L / Th	A	A	0.17	0.08	8.7	7.8	3.6	1.2
		WB	R	A	A	0.18	0.08	7.9	7.1	3.6	1.2
		NB	L / Th / R	A	A	0.20	0.08	8.8	7.3	4.2	1.8
		SB	R	A	A	0.11	0.11	7.7	7.2	2.4	2.4

Intersection	Intersection Control	Approach / Movement		LOS		V/C		Total		Queue	
				Ingress	Egress	Ingress	Egress	Delay (s)		95th (m)	
								Ingress	Egress	Ingress	Egress
		Overall Intersection		A	A	0.20	0.11	8.3	7.3	--	--
Garage Access at Exhibition Way	Two-Way Stop	WB	L	A	A	0.01	--	8.8	0	0	0
			Th	A	A	--	--	0	--	--	--
		NB	L / R	B	C	0.30	0.44	19.8	24.7	7.2	12.6
		Overall Intersection		A	A	0.30	0.44	3.3	5.2	--	--
Exhibition Way and Service Roadway	All-Way Stop	EB	L / Th	A	A	0.31	0.29	9.4	9.7	7.8	7.2
		WB	Th / R	A	A	0.00	0.00	7.5	7.9	0	0
		SB	L / R	A	A	0.15	0.34	7.6	8.9	3	9
		Overall Intersection		A	A	0.31	0.34	8.8	9.2	--	--
Marché Way and Service Roadway	All-Way Stop	EB	L / Th	A	A	0.03	0.04	7.6	7.4	0.6	0.6
		WB	L / Th	A	A	0.23	0.11	9	8.1	5.4	2.4
		NB	L / R	A	A	0.30	0.24	9	8.3	7.2	5.4
		Overall Intersection		A	A	0.30	0.24	8.9	8.2	--	--
Marché Way and Exhibition Way	All-Way Stop	EB	Th / R	A	A	0.04	0.09	7.3	7.4	0.6	1.8
		WB	L / Th	A	A	0.20	0.10	7.9	7.4	4.2	1.8
		NB	L / R	A	A	0.00	0.00	7.4	7.3	0	0
		Overall Intersection		A	A	0.20	0.10	7.8	7.4	--	--
Garage Access at Princess Patricia Way	Two-Way Stop	EB	L	A	A	0.01	0.00	8.1	7.4	0	0
			Th	A	A	--	--	0.146	0	--	--
		SB	L / R	B	B	0.15	0.47	11.3	13.2	3	15.6
		Overall Intersection		A	A	0.15	0.47	2.2	9.3	--	--

L - Left, Th - Through, R - Right

As illustrated above, all study area intersections are projected to continue to operate with overall acceptable levels of service in the Future 2030 conditions horizon year for Minor Events held at TD Place.

The eastbound approach at intersection of Bank Street and Wilton Crescent is projected to continue to operate with a LOS E due to vehicle delays incurred on the minor approach. This occurs during the Ingress period which overlaps with the regular PM peak period. The delays at this intersection are not directly attributed to event traffic held at Lansdowne and are associated with limited gaps in traffic in the southbound direction as a result of the recently installed 3-lane cross-section of Bank Street.

No mitigation measures are recommended to improve intersection operations.

Table 4-21: 2030 Future Intersection LOS (Major Event)

Intersection	Intersection Control	Approach / Movement		LOS		V/C		Total		Queue	
				Ingress	Egress	Ingress	Egress	Delay (s)		95th (m)	
								Ingress	Egress	Ingress	Egress
Bank St & Fifth Ave	Signalized	EB	L / Th / R	B	C	0.68	0.75	36.2	45.7	35.5	35.2
		WB	L	A	A	0.43	0.21	30.6	24.4	20.6	12.7
			Th / R	A	A	0.41	0.58	17.5	18.8	21.1	29.1
		NB	L / Th / R	A	A	0.33	0.23	6.7	6.2	30.1	19.7
		SB	L / Th / R	A	A	0.44	0.26	7.6	6.3	43.5	22.1
		Overall Intersection		B	C	0.68	0.75	11.9	13.7	--	--
Bank St & Holmwood Ave	Signalized	EB	L / Th / R	B	B	0.62	0.62	38.5	38.9	35	33.8
		NB	L / Th / R	A	A	0.50	0.26	3.9	4.2	44.1	18.5
		SB	L / Th / R	A	A	0.44	0.23	7	5	39.8	17.6
		Overall Intersection		B	B	0.62	0.62	8.6	9.8	--	--
Bank St & Exhibition Way	Signalized	WB	L	<i>Movements Temporarily Restricted During Major Events</i>							
			Right								
		NB	L / Th / R	A	A	0.34	0.13	4.7	1.4	28.1	13.1
		SB	L	<i>Movements Temporarily Restricted During Major Events</i>							
Th	A		A	0.27	0.13	3.6	1	17.7	9.8		

Intersection	Intersection Control	Approach / Movement		LOS		V/C		Total		Queue	
				Ingress	Egress	Ingress	Egress	Delay (s)		95th (m)	
								Ingress	Egress	Ingress	Egress
		Overall Intersection		A	A	0.34	0.13	5.3	1.3	--	--
Bank St & Wilton Cr	Minor Stop	EB	R	F	B	1.04	0.01	101.7	13.3	69	0
		NB	L	B	A	0.20	--	12.3	0	4.2	0
			Th	A	--	--	--	--	2.4	--	--
		Overall Intersection		F	A	1.04	0.01	18.1	0.1	--	--
Bank St & Echo Dr	Minor Stop	EB	R	B	B	0.24	0.05	18.6	10.4	5.4	1.2
		Overall Intersection		A	A	0.24	0.05	0.8	0.5	--	--
Bank St & Aylmer Ave	Signalized	EB	L / R	A	A	0.52	0.17	38.7	23.5	35.2	11.9
		NB	L / Th	A	A	0.42	0.20	8	5.9	45.3	17.3
		SB	Th / R	A	A	0.45	0.18	8.1	5.5	49.6	15.1
		Overall Intersection		A	A	0.52	0.20	10.2	6.6	--	--
Bank St & Sunnyside Ave	Signalized	EB	L / Th / R	D	A	0.85	0.55	66.6	43.3	#65.6	26.1
		WB	L / Th / R	D	A	0.85	0.48	46.4	28.3	#74.9	21.7
		NB	L / Th / R	A	A	0.37	0.15	8.1	4.3	32.4	14.3
		SB	L / Th / R	C	A	0.72	0.19	14.1	4.2	70.5	16.4
		Overall Intersection		D	A	0.85	0.55	21.5	10.7	--	--
QED & Princess Patricia Way	Minor Stop	NB	L / Th	B	A	0.14	0.05	10	8.2	3	0.6
		EB	L / R	E	D	0.80	0.88	56	42	36.6	61.2
		Overall Intersection		A	B	0.80	0.88	9.4	20	--	--
Queen Elizabeth Dr & Fifth Ave	Signalized	EB	L / R	B	C	0.67	0.71	36.2	38.5	43.5	#52.7
		NB	L / Th	B	A	0.64	0.41	15	8.8	57.6	39.9
		SB	Th / R	D	A	0.85	0.40	21.6	8.6	#162.8	40.4

Intersection	Intersection Control	Approach / Movement		LOS		V/C		Total		Queue	
				Ingress	Egress	Ingress	Egress	Delay (s)		95th (m)	
								Ingress	Egress	Ingress	Egress
		Overall Intersection		D	C	0.85	0.71	22	15.4	--	--
Bank St & Marche Way	Minor Stop	WB	L / R	<i>Movements Temporarily Restricted During Major Events</i>							
		Overall Intersection									
Fifth Ave & O'Connor St	All-Way Stop	EB	L / Th	B	A	0.20	0.12	9.5	8.9	4.2	2.4
		WB	R	A	A	0.26	0.15	9	8.3	6	3
		NB	L / Th / R	A	B	0.31	0.47	9.8	11.2	7.8	15.6
		SB	R	A	A	0.18	0.07	8.5	7.6	3.6	1.2
		Overall Intersection		A	B	0.31	0.47	9.3	10.1	--	--

L - Left, **Th** - Through, **R** - Right

* It should be noted that the Queen Elizabeth Driveway / Princess Patricia Way operations are being controlled by police officers, not stop control, during major events. Synchro analysis may not be representative of real operations.

As illustrated above, all study area intersections are projected to continue to operate with overall acceptable levels of service during the 2030 Future conditions horizon year for Major Events held at TD Place.

The eastbound approach at intersection of Bank Street and Wilton Crescent is projected to continue to operate with a LOS F due to vehicle delays incurred on the minor approach. This occurs during the event Ingress period which overlaps with the regular PM peak period. The delays at this intersection are not directly attributed to event traffic held at Lansdowne and are associated with limited gaps in traffic in the southbound direction due to the recently installed 3-lane cross-section of Bank Street.

In addition, the eastbound approach at the Queen Elizabeth Drive and Princess Patricia Way intersection is shown to operate with an LOS rating of E for the Ingress periods. Although the analysis indicates that the movements are operating with delays, the performance of these intersections are expected to continue to be adequately managed through the deployment of Ottawa Police Point duty as part of the traffic management measures for Major Events at Lansdowne. No mitigation measures are recommended to improve intersection operations.

4.8.4 2033 Future Conditions

Intersection Capacity Analysis

Intersection operational analysis under the 2033 Future Background and Total Future (full build-out) conditions are summarized in this section.

Detailed Synchro level of service analysis results can be found in **Appendix F**.

Table 4-22: 2033 Future Background Intersection LOS (Weekday AM/PM Peak)

Intersection	Intersection Control	Approach / Movement		LOS		V/C		Total		Queue	
				AM	PM	AM	PM	Delay (s)		95th (m)	
								AM	PM	AM	PM
Bank St & Fifth Ave	Signalized	EB	L / Th / R	B	B	0.63	0.67	36.5	35.9	30.5	33.2
		WB	L	A	A	0.35	0.41	32	-	15.6	17.9
			Th / R	A	A	0.35	0.30	21.1	24.3	17.6	14.6
		NB	L / Th / R	A	A	0.34	0.31	1.5	11.4	4.4	51.5
		SB	L / Th / R	A	A	0.29	0.40	5.5	6.9	25.2	39.5
Overall Intersection		B	B	0.63	0.67	8.5	13	-	-		
Bank St & Holmwood Ave	Signalized	EB	L / Th / R	A	A	0.48	0.56	37.7	38.8	23.5	27.8
		NB	L / Th / R	A	A	0.31	0.33	2.2	2	4.7	9.5
		SB	L / Th / R	A	A	0.22	0.35	3.2	5	14.5	21.4
		Overall Intersection		A	A	0.48	0.56	5.2	6.3	-	-
Bank St & Exhibition Way	Signalized	WB	L	A	A	0.28	0.54	32.7	35.8	17.7	32.2
			Right	A	A	0.21	0.29	13.1	10.2	7.6	9.4
		NB	L / Th / R	A	A	0.40	0.34	10.4	5.8	43.6	32
		SB	L	A	A	0.16	0.32	9.2	5.6	12.4	7.3
			Th	A	A	0.17	0.25	6.7	3.2	24.2	10.9
		Overall Intersection		A	A	0.40	0.54	10.3	7.7	-	-
Bank St & Wilton Cr	Minor Stop	EB	R	C	F	0.54	0.93	24.4	14.8	18.6	52.8
		NB	L	B	A	0.21	0.40	11	4.1	4.8	11.4
			Th	A	A	-	-	2	76.7	-	-
		Overall Intersection		C	F	0.54	0.93	5.5	14.5	-	-
Bank St & Echo Dr	Minor Stop	EB	R	B	C	0.06	0.10	13	20.5	1.2	1.8
		Overall Intersection		B	C	0.06	0.10	13	20.5	-	-

Intersection	Intersection Control	Approach / Movement		LOS		V/C		Total		Queue	
				AM	PM	AM	PM	Delay (s)		95th (m)	
								AM	PM	AM	PM
Bank St & Aylmer Ave	Signalized	EB	L / R	A	A	0.30	38.00	29.7	31.6	22.1	24.5
		NB	L / Th	A	A	0.45	0.42	4.1	5.1	17.2	m22.8
		SB	Th / R	A	A	0.35	0.49	7.4	8.1	30.4	49.8
		Overall Intersection		A	A	0.45	0.49	6.8	8	-	-
Bank St & Sunnyside Ave	Signalized	EB	L / Th / R	B	C	0.65	0.72	38.3	47.9	37.4	#60.1
		WB	L / Th / R	D	E	0.88	0.98	33.7	64.6	#76.1	#107.2
		NB	L / Th / R	B	A	0.68	0.31	15.2	9.4	89	30
		SB	L / Th / R	F	E	1.17dl	0.94	18.8	27.7	#80.8	#145.6
		Overall Intersection		D	E	0.88	0.98	20.7	31.5	-	-
QED & Princess Patricia Way	Minor Stop	NB	L / Th	A	A	0.06	0.06	8.3	9	1.2	1.2
		EB	L / R	B	C	0.11	0.36	13.6	21.5	1.8	9.6
		Overall Intersection		A	A	0.11	0.36	1.6	2.8	-	-
Queen Elizabeth Dr & Fifth Ave	Signalized	EB	L / R	A	A	0.32	0.38	30.5	36.8	19.3	22.8
		NB	L / Th	A	A	0.24	0.24	5	4.7	23.1	23.3
		SB	Th / R	A	A	0.32	0.52	5.4	7.2	32.6	73.1
		Overall Intersection		A	A	0.32	0.52	7.8	8.9	-	-
Bank St & Marche Way	Minor Stop	WB	L / R	B	B	0.08	0.17	12.9	13.7	1.8	3.6
		Overall Intersection		B	A	0.08	0.17	12.9	0.9	-	-
Fifth Ave & O'Connor St	All-Way Stop	EB	L / Th	A	A	0.16	0.17	8.5	8.6	1.8	3.6
		WB	R	A	A	0.09	0.13	7.3	7.6	3.6	2.4
		NB	L / Th / R	A	A	0.11	0.15	7.9	8.3	1.8	3
		SB	R	A	A	0.13	0.12	7.5	7.6	3	2.4

Intersection	Intersection Control	Approach / Movement		LOS		V/C		Total		Queue	
				AM	PM	AM	PM	Delay (s)		95th (m)	
								AM	PM	AM	PM
		Overall Intersection		A	A	0.16	0.17	7.8	8	-	-
Garage Access at Exhibition Way	Two-Way Stop	WB	Th/L	A	A	0.01	0.01	8.2	8.4	0	0
		NB	L / R	B	C	0.06	0.14	13.1	15.8	1.2	3
		Overall Intersection		A	A	0.06	0.14	1.3	1.8	-	-
Exhibition Way and Service Roadway	All-Way Stop	EB	L / Th	A	A	0.14	0.17	7.7	7.9	3	3.6
		WB	Th / R	A	A	0.09	0.19	7.4	8	1.8	4.2
		SB	L / R	A	A	0.01	0.01	7.2	7.5	0	0
		Overall Intersection		A	A	0.14	0.19	7.6	7.9	-	-
Marché Way and Service Roadway	All-Way Stop	EB	L / Th	A	A	0.01	0.01	6.7	6.6	0	0
		WB	L / Th	A	A	0.16	0.01	7.7	7.1	0	0
		NB	L / R	A	A	0.01	0.01	7.1	6.8	3.6	0
		Overall Intersection		A	A	0.16	0.01	7.6	6.9	-	-
Marché Way and Exhibition Way	All-Way Stop	EB	Th / R	A	A	0.01	0.01	7	7.1	0	0
		WB	L / Th	A	A	0.17	0.20	8.2	8.6	3.6	4.8
		NB	L / R	A	A	0.15	0.15	7.9	7.5	3	3
		Overall Intersection		A	A	0.17	0.20	8	8.1	-	-
Garage Access at Princess Patricia Way	Two-Way Stop	EB	L	A	A	0.00	0.00	7.5	7.5	0	0
			Th	A	A	-	-	0	0	-	-
		SB	L / R	A	A	0.01	0.01	9.4	9.6	0	1.2
		Overall Intersection		A	A	0.01	0.01	2.4	2.5	--	-

L - Left, Th - Through, R - Right

As illustrated above, most study area intersections are projected to continue to operate with overall acceptable levels of service under the 2033 baseline conditions weekday AM and PM peak hour conditions.

The intersection of Bank Street and Sunnyside Avenue is projected to continue to operate at or close to theoretical capacity.

In addition, the eastbound approach at intersection of Bank Street and Wilton Crescent is projected to continue to operate with a LOS F due to vehicle delays during the PM peak hour. The delays are associated with limited gaps in traffic in the southbound direction associated with the recently installed 3-lane cross-section of Bank Street.

No mitigation measures are recommended to improve intersection operations

Table 4-23: 2033 Total Future Intersection LOS (Weekday AM/PM Peak)

Intersection	Intersection Control	Approach / Movement		LOS		V/C		Total		Queue	
				AM	PM	AM	PM	Delay (s)		95th (m)	
								AM	PM	AM	PM
Bank St & Fifth Ave	Signalized	EB	L / Th / R	B	A	0.63	0.45	36.4	22.8	30.4	32.7
			L	A	A	0.35	0.25	31.8	24.3	15.6	17.5
		WB	Th / R	A	A	0.38	0.21	20.1	13.7	18.1	14.7
			L / Th / R	A	A	0.36	0.37	1.6	15.1	5.1	53.9
		SB	L / Th / R	A	A	0.30	0.48	5.6	10.3	26	42.4
Overall Intersection		B	A	0.63	0.48	8.4	14	--	--		
Bank St & Holmwood Ave	Signalized	EB	L / Th / R	A	A	0.48	0.56	37.7	38.8	23.5	27.8
			NB	L / Th / R	A	A	0.33	0.35	1.9	2.1	6.6	10.4
		SB	L / Th / R	A	A	0.23	0.37	3.2	3.4	15.1	16.1
			Overall Intersection		A	A	0.48	0.56	4.9	5.5	--
Bank St & Exhibition Way	Signalized	WB	L	A	A	0.43	0.57	34.6	36.1	25.4	34.7
			Right	A	A	0.27	0.31	11.5	9.7	8.9	9.7
		NB	L / Th / R	A	A	0.42	0.40	11.3	6.8	48.8	34.8
			SB	L	A	A	0.19	0.43	10.5	8	14.2	9.5
		Th		A	A	0.17	0.28	7.5	3.9	24.5	11.4
Overall Intersection		A	A	0.43	0.57	11.9	8.8	--	--		
Bank St & Wilton Cr	Minor Stop	EB	R	D	F	0.58	0.95	26.7	82.1	32.7	101
			NB	L	B	C	0.22	0.41	11.3	15.1	6.7	16.9
		Th		A	A	--	--	2.2	4.3	6.7	16.9
		Overall Intersection		D	F	0.58	0.95	5.7	15.1	--	--
Bank St & Echo Dr	Minor Stop	EB	R	B	C	0.07	0.11	13.5	20.9	2.4	3.5
			Overall Intersection		A	A	0.07	0.11	0.3	0.3	--
	Signalized	EB	L / R	A	A	0.30	0.38	29.7	31.6	22.1	24.5

Intersection	Intersection Control	Approach / Movement		LOS		V/C		Total		Queue	
				AM	PM	AM	PM	Delay (s)		95th (m)	
								AM	PM	AM	PM
Bank St & Aylmer Ave		NB	L / Th	A	A	0.46	0.44	4.1	4.7	M17.3	m17.4
		SB	Th / R	A	A	0.37	0.50	7.6	8.2	32.6	51
		Overall Intersection		A	A	0.46	0.50	6.9	7.8	--	--
Bank St & Sunnyside Ave	Signalized	EB	L / Th / R	B	F	0.65	1.23	38.3	184.2	37.4	#79.2
		WB	L / Th / R	D	F	0.88	1.14	33.7	116.2	#76.1	#116.6
		NB	L / Th / R	B	A	0.69	0.48	15.4	21	91	50.2
		SB	L / Th / R	F	E	1.20dl	0.95	21.4	27	#87.9	#117.3
		Overall Intersection		D	F	0.88	1.23	21.6	53	--	--
QED & Princess Patricia Way	Minor Stop	NB	L / Th	A	A	0.07	0.07	8.3	9.1	1.7	1.8
		EB	L / R	C	C	0.21	0.43	15	24.3	5.7	16.2
		Overall Intersection		A	A	0.21	0.43	2.4	3.5	--	--
Queen Elizabeth Dr & Fifth Ave	Signalized	EB	L / R	A	A	0.35	0.28	30.8	30.7	21.1	23.1
		NB	L / Th	A	A	0.26	0.43	5.2	14.7	26.1	42.4
		SB	Th / R	A	C	0.32	0.79	5.7	24.5	34.5	#129.4
		Overall Intersection		A	C	0.32	0.79	2.4	22.4	--	--
Bank St & Marche Way	Minor Stop	WB	L / R	B	B	0.12	0.19	13.5	14.1	2.1	5.4
		Overall Intersection		A	A	0.12	0.19	0.7	1	--	--
Fifth Ave & O'Connor St	All-Way Stop	EB	L / Th	A	A	0.16	0.17	8.5	8.6	--	--
		WB	R	A	A	0.09	0.13	7.4	7.6	--	--
		NB	L / Th / R	A	A	0.13	0.15	8	8.3	--	--
		SB	R	A	A	0.13	0.12	7.5	7.6	--	--
		Overall Intersection		A	A	0.16	0.17	7.9	8	--	--
		WB	Th/L	A	A	0.01	0.01	8.2	8.6	0	0

Intersection	Intersection Control	Approach / Movement		LOS		V/C		Total		Queue	
				AM	PM	AM	PM	Delay (s)		95th (m)	
								AM	PM	AM	PM
Garage Access at Exhibition Way	Two-Way Stop	NB	L / R	B	C	0.21	0.21	14.9	17.2	4.8	4.8
		Overall Intersection		A	A	0.21	0.21	3.8	2.4	--	--
Exhibition Way and Service Roadway	All-Way Stop	EB	L / Th	A	A	0.16	0.18	7.8	8	3.6	3.6
		WB	Th / R	A	A	0.09	0.19	7.5	8	1.8	4.2
		SB	L / R	A	A	0.01	0.01	7.3	7.5	0	0
		Overall Intersection		A	A	0.16	0.19	7.7	8	--	--
Marché Way and Service Roadway	All-Way Stop	EB	L / Th	A	A	0.01	0.01	6.8	6.7	0	0
		WB	L / Th	A	A	0.18	0.02	7.8	7.1	3.6	0.6
		NB	L / R	A	A	0.02	0.02	7.3	6.9	0.6	0.6
		Overall Intersection		A	A	0.18	0.02	7.7	6.9	--	--
Marché Way and Exhibition Way	All-Way Stop	EB	Th / R	A	A	0.01	0.01	7.1	7.2	0	0
		WB	L / Th	A	A	0.18	0.21	8.3	8.6	3.6	4.8
		NB	L / R	A	A	0.16	0.16	8	7.5	3.6	3.6
		Overall Intersection		A	A	0.18	0.21	8.1	8.1	--	--
Garage Access at Princess Patricia Way	Two-Way Stop	EB	L	A	A	0.00	0.00	7.6	7.5	0	0
			Th	A	A	--	--	0	0	--	--
		SB	L / R	A	A	0.07	0.09	9.9	9.8	1.2	1.8
		Overall Intersection		A	A	0.07	0.09	2.2	2.5	--	--

L - Left, Th - Through, R - Right

As illustrated above, all study area intersections are projected to continue to operate with overall acceptable levels of service under the 2033 Total Future conditions with Lansdowne 2.0 additional site trips added to the transportation network.

The eastbound approach at intersection of Bank Street and Wilton Crescent is projected to continue to operate with a LOS E due to vehicle delays during the Saturday peak hour. The delays are associated with limited gaps in traffic in the southbound direction associated with the recently installed 3-lane cross-section of Bank Street.

No mitigation measures are recommended to improve intersection operations.

Table 4-24: 2033 Future Background Intersection LOS (Saturday Peak)

Intersection	Intersection Control	Approach / Movement		LOS	V/C	Total Delay (s)	Queue 95th (m)
Bank St & Fifth Ave	Signalized	EB	L / Th / R	B	0.65	35	29.3
		WB	L	A	0.48	--	20.2
			Th / R	A	0.40	25.9	17.3
		NB	L / Th / R	A	0.31	9.8	51.5
		SB	L / Th / R	A	0.34	5.9	31.8
		Overall Intersection				B	0.65	12.4	--
Bank St & Holmwood Ave	Signalized	EB	L / Th / R	A	0.56	38.9	27.7
		NB	L / Th / R	A	0.32	2.3	9.7
		SB	L / Th / R	A	0.34	5.9	46.1
		Overall Intersection				A	0.56	6.9	--
Bank St & Exhibition Way	Signalized	WB	L	A	0.43	24.3	25.1
			Right	A	0.34	--	10.5
		NB	L / Th / R	A	0.31	4.9	26.1
		SB	L	A	0.32	--	6.6
			Th	A	0.23	3.3	9.6
		Overall Intersection				A	0.43	6.5	--
Bank St & Wilton Cr	Minor Stop	EB	R	E	0.65	36.1	25.8
		NB	L	B	0.21	12.1	4.8
			Th	A	--	2.1	--
		Overall Intersection				A	0.65	6.4	--
Bank St & Echo Dr	Minor Stop	EB	R	C	0.09	15.2	1.8
		Overall Intersection				C	0.09	0.4	--
Bank St & Aylmer Ave	Signalized	EB	L / R	A	0.24	30	17.3
		NB	L / Th	A	0.40	6.1	30.8
		SB	Th / R	A	0.43	7.5	42.3
		Overall Intersection				A	0.43	7.6	--
Bank St & Sunnyside Ave	Signalized	EB	L / Th / R	B	0.61	44.9	#43.8
		WB	L / Th / R	B	0.64	32	#44.2
		NB	L / Th / R	A	0.56	22.4	#57.8
		SB	L / Th / R	A	0.54	4.7	10
		Overall Intersection				B	0.64	17.4	--
QED & Princess Patricia Way	Minor Stop	NB	L / Th	A	0.06	8.4	1.2
		EB	L / R	C	0.31	16.1	7.8
		Overall Intersection				A	0.31	3.2	--
Queen Elizabeth	Signalized	EB	L / R	A	0.43	37.5	26.1
		NB	L / Th	A	0.30	5.7	29.9

Intersection	Intersection Control	Approach / Movement		LOS	V/C	Total Delay (s)	Queue 95th (m)
Dr & Fifth Ave		SB	Th / R	A	0.39	6.3	44.1
		Overall Intersection		A	0.43	9.5	--
Bank St & Marche Way	Minor Stop	WB	L / R	B	0.16	13.4	3.6
		Overall Intersection		A	0.16	0.9	--
Fifth Ave & O'Connor St	All-Way Stop	EB	L / Th	A	0.13	8.5	2.4
		WB	R	A	0.12	7.6	2.4
		NB	L / Th / R	A	0.19	8.5	4.2
		SB	R	A	0.13	7.6	3
		Overall Intersection		A	0.19	8.1	--
Garage Access at Exhibition Way	Two-Way Stop	WB	Th / L	A	0.01	8.4	0
		NB	L / R	C	0.20	15.8	4.8
		Overall Intersection		A	0.20	3	--
Exhibition Way and Service Roadway	All-Way Stop	EB	L / Th	A	0.16	7.8	3.6
		WB	Th / R	A	0.12	7.6	4.2
		SB	L / R	A	0.01	7.3	0
		Overall Intersection		A	0.12	7.7	--
Marché Way and Service Roadway	All-Way Stop	EB	L / Th	A	0.03	7	0.6
		WB	L / Th	A	0.10	7.4	3.6
		NB	L / R	A	0.01	7	0
		Overall Intersection		A	0.10	7.3	--
Marché Way and Exhibition Way	All-Way Stop	EB	Th / R	A	0.03	7.4	0.6
		WB	L / Th	A	0.13	8.1	2.4
		NB	L / R	A	0.17	8.2	3.6
		Overall Intersection		A	0.17	8.1	--
Garage Access at Princess Patricia Way	Two-Way Stop	EB	L	A	0.00	7.7	0
			Th	A	--	0	--
		SB	L / R	B	0.14	10.3	3
		Overall Intersection		A	0.14	3.3	--

L - Left, Th - Through, R - Right

As illustrated above, all study area intersections are projected to continue to operate with overall acceptable levels of service under the 2033 Future Background Saturday peak hour conditions.

The eastbound approach at intersection of Bank Street and Wilton Crescent is projected to continue to operate with a LOS E due to vehicle delays during the Saturday peak hour. The delays are associated with limited gaps in traffic in the southbound direction associated with the recently installed 3-lane cross-section of Bank Street. No mitigation measures are recommended to improve intersection operations.

Table 4-25: 2033 Total Future Intersection LOS (Saturday Peak)

Intersection	Intersection Control	Approach / Movement		LOS	V/C	Total Delay (s)	Queue 95th (m)
Bank St & Fifth Ave	Signalized	EB	L / Th / R	A	0.40	20.9	28
		WB	L	A	0.27	--	19.2
			Th / R	A	0.27	17.6	17
		NB	L / Th / R	A	0.38	14.1	56
		SB	L / Th / R	A	0.43	9.6	36.6
		Overall Intersection				A	0.43	13.2	--
Bank St & Holmwood Ave	Signalized	EB	L / Th / R	A	0.56	38.9	27.7
		NB	L / Th / R	A	0.34	2.3	10.9
		SB	L / Th / R	A	0.36	3.9	28.3
		Overall Intersection				A	0.56	5.8	--
Bank St & Exhibition Way	Signalized	WB	L	A	0.49	24.7	28.8
			Right	A	0.36		10.8
		NB	L / Th / R	A	0.34	5.3	29.2
		SB	L	A	0.40		9.7
			Th	A	0.24	3.9	9.8
		Overall Intersection				A	0.49	7.3	--
Bank St & Wilton Cr	Minor Stop	EB	R	E	0.67	38.4	27
		NB	L	B	0.21	12.3	4.8
			Th	A	--	2.3	--
		Overall Intersection				A	0.67	6.6	--
Bank St & Echo Dr	Minor Stop	EB	R	C	0.10	15.5	1.8
		Overall Intersection				A	0.10	0.4	--
Bank St & Aylmer Ave	Signalized	EB	L / R	A	0.24	30	17.3
		NB	L / Th	A	0.42	3.3	35.7
		SB	Th / R	A	0.44	7.6	43.7
		Overall Intersection				A	0.44	7.9	--
Bank St & Sunnyside Ave	Signalized	EB	L / Th / R	B	0.61	44.9	#43.8
		WB	L / Th / R	B	0.64	32	#44.2
		NB	L / Th / R	A	0.59	23.1	61.7
		SB	L / Th / R	A	0.56	4.9	10.2
		Overall Intersection				B	0.64	17.7	--
QED & Princess Patricia Way	Minor Stop	NB	L / Th	A	0.07	8.4	1.2
		EB	L / R	C	0.37	17.8	10.2
		Overall Intersection				A	0.37	3.9	--
Queen Elizabeth	Signalized	EB	L / R	A	0.34	31.7	27
		NB	L / Th	A	0.43	14.4	49.4

Intersection	Intersection Control	Approach / Movement		LOS	V/C	Total Delay (s)	Queue 95th (m)
Dr & Fifth Ave		SB	Th / R	A	0.55	16.3	72.1
		Overall Intersection		A	0.55	17.3	--
Bank St & Marche Way	Minor Stop	WB	L / R	B	0.18	13.8	4.2
		Overall Intersection		A	0.18	1	--
Fifth Ave & O'Connor St	All-Way Stop	EB	L / Th	A	0.37	9.3	10.2
		WB	R	A	0.14	8.3	3
		NB	L / Th / R	A	0.16	9	3.6
		SB	R	A	0.00	8.1	0
		Overall Intersection		A	0.37	9	--
Garage Access at Exhibition Way	Two-Way Stop	WB	Th / L	A	0.01	8.4	0
		NB	L / R	C	0.20	15.8	4.8
		Overall Intersection		A	0.20	3	--
Exhibition Way and Service Roadway	All-Way Stop	EB	L / Th	A	0.17	7.9	3.6
		WB	Th / R	A	0.12	7.6	2.4
		SB	L / R	A	0.01	7.3	0
		Overall Intersection		A	0.17	7.8	--
Marché Way and Service Roadway	All-Way Stop	EB	L / Th	A	0.03	7	0.6
		WB	L / Th	A	0.11	7.5	2.4
		NB	L / R	A	0.02	7.1	0.6
		Overall Intersection		A	0.11	7.4	--
Marché Way and Exhibition Way	All-Way Stop	EB	Th / R	A	0.03	7.4	0.6
		WB	L / Th	A	0.14	8.2	3
		NB	L / R	A	0.18	8.2	3.6
		Overall Intersection		A	0.18	8.1	--
Garage Access at Princess Patricia Way	Two-Way Stop	EB	L	A	0.00	7.7	0
			Th	A	--	0	--
		SB	L / R	B	0.14	10.3	3
		Overall Intersection		A	0.14	3.3	--

L - Left, **Th** - Through, **R** - Right

As illustrated above, all study area intersections are projected to continue to operate with acceptable levels of service similar to background levels under 2033 Total Future Saturday peak hour conditions.

Table 4-26: 2033 Future Background Intersection LOS (Sunday Peak)

Intersection	Intersection Control	Approach / Movement		LOS	V/C	Total Delay (s)	Queue 95th (m)
Bank St & Fifth Ave	Signalized	EB	L / Th / R	A	0.55	30.6	27.4
		WB	L	B	0.67	43.3	32.3
			Th / R	A	0.38	20.4	20.9
		NB	L / Th / R	A	0.32	7.3	50
		SB	L / Th / R	A	0.36	6.9	33.6
		Overall Intersection		B	0.67	13	--
Bank St & Holmwood Ave	Signalized	EB	L / Th / R	A	0.55	38.6	27.3
		NB	L / Th / R	A	0.37	2.4	12.1
		SB	L / Th / R	A	0.33	8.9	48.9
		Overall Intersection		A	0.55	8.1	--
Bank St & Exhibition Way	Signalized	WB	L	A	0.56	36.6	32.4
			Right	A	0.29	9.8	9.3
		NB	L / Th / R	A	0.40	12.2	42.2
		SB	L	A	0.47	11.4	17.2
			Th	A	0.22	4.7	12.3
		Overall Intersection		A	0.47	11.8	--
Bank St & Wilton Cr	Minor Stop	EB	R	D	0.54	29	18.6
		NB	L	B	0.19	11.8	4.2
			Th	A	--	1.9	--
		Overall Intersection		A	0.54	5.1	--
Bank St & Echo Dr	Minor Stop	EB	R	C	0.24	19.1	5.4
		Overall Intersection		A	0.24	1	--
Bank St & Aylmer Ave	Signalized	EB	L / R	A	0.43	35.9	23.2
		NB	L / Th	A	0.29	2.7	16.9
		SB	Th / R	A	0.33	3.7	29.5
		Overall Intersection		A	0.43	4.9	--
Bank St & Sunnyside Ave	Signalized	EB	L / Th / R	A	0.53	41.1	35.5
		WB	L / Th / R	B	0.61	27.5	39.9
		NB	L / Th / R	A	0.48	21	50.5
		SB	L / Th / R	B	0.65	10.7	27.1
		Overall Intersection		B	0.65	18.3	--
QED & Princess Patricia Way	Minor Stop	NB	L / Th	A	0.06	7.6	1.2
		EB	L / R	B	0.34	12.2	9
		Overall Intersection		A	0.34	5.9	--
Queen Elizabeth	Signalized	EB	L / R	A	0.54	28.4	31.4
		NB	L / Th	A	0.35	8.8	28.3

Intersection	Intersection Control	Approach / Movement		LOS	V/C	Total Delay (s)	Queue 95th (m)
Dr & Fifth Ave		SB	Th / R	A	0.05	6.2	5.7
		Overall Intersection		A	0.54	15.6	--
Bank St & Marche Way	Minor Stop	WB	L / R	C	0.35	15.4	9
		Overall Intersection		A	0.35	2.1	--
Fifth Ave & O'Connor St	All-Way Stop	EB	L / Th	B	0.25	10.2	6
		WB	R	A	0.33	9.7	8.4
		NB	L / Th / R	B	0.36	10.9	9.6
		SB	R	A	0.16	8.7	3.6
		Overall Intersection		A	0.36	10	--
Garage Access at Exhibition Way	Two-Way Stop	WB	Th / L	A	0.01	8.6	0
		NB	L / R	C	0.27	17.7	6.6
		Overall Intersection		A	0.27	3.3	--
Exhibition Way and Service Roadway	All-Way Stop	EB	L / Th	A	0.19	8	4.2
		WB	Th / R	A	0.14	7.7	3
		SB	L / R	A	0.01	7.4	0
		Overall Intersection		A	0.19	7.9	--
Marché Way and Service Roadway	All-Way Stop	EB	L / Th	A	0.02	7.1	0.6
		WB	L / Th	A	0.21	8	4.8
		NB	L / R	A	0.01	7.2	0
		Overall Intersection		A	0.21	7.9	--
Marché Way and Exhibition Way	All-Way Stop	EB	Th / R	A	0.03	7.4	0.6
		WB	L / Th	A	0.08	7.9	1.8
		NB	L / R	A	0.20	8.2	4.2
		Overall Intersection		A	0.20	8.1	--
Garage Access at Princess Patricia Way	Two-Way Stop	EB	L	A	0.00	7.5	0
			Th	A	--	0	--
		SB	L / R	B	0.24	10.8	6
		Overall Intersection		A	0.24	5.4	--

L - Left, **Th** - Through, **R** - Right

As illustrated above, all study area intersections are projected to continue to operate with acceptable levels of service under 2033 Future Background Sunday peak hour conditions.

Table 4-27: 2033 Total Future Intersection LOS (Sunday Peak)

Intersection	Intersection Control	Approach / Movement		LOS	V/C	Total Delay (s)	Queue 95th (m)
Bank St & Fifth Ave	Signalized	EB	L / Th / R	A	0.39	22.9	27.3
		WB	L	A	0.47	29	32.2
			Th / R	A	0.31	15.9	22
		NB	L / Th / R	A	0.38	10	47.5
		SB	L / Th / R	A	0.44	9.7	36.9
		Overall Intersection			A	0.47	12.8
Bank St & Holmwood Ave	Signalized	EB	L / Th / R	A	0.55	38.6	27.3
		NB	L / Th / R	A	0.39	2.4	13.4
		SB	L / Th / R	A	0.36	10.3	54.7
		Overall Intersection			A	0.55	8.6
Bank St & Exhibition Way	Signalized	WB	L	B	0.63	38.2	36.6
			Right	A	0.31	9.4	9.4
		NB	L / Th / R	A	0.48	14.3	47.2
		SB	L	B	0.64	19	#20.8
			Th	A	0.25	4.6	12.4
		Overall Intersection			B	0.64	14.2
Bank St & Wilton Cr	Minor Stop	EB	R	D	0.56	30.7	19.2
		NB	L	B	0.19	12	4.2
			Th	A	--	2	--
		Overall Intersection			A	0.56	5.2
Bank St & Echo Dr	Minor Stop	EB	R	C	0.25	19.8	5.4
		Overall Intersection			A	0.25	1
Bank St & Aylmer Ave	Signalized	EB	L / R	A	0.43	35.9	23.2
		NB	L / Th	A	0.31	3	20.4
		SB	Th / R	A	0.34	3.7	30.8
		Overall Intersection			A	0.43	5.1
Bank St & Sunnyside Ave	Signalized	EB	L / Th / R	C	0.77	64.9	34.8
		WB	L / Th / R	C	0.72	34.8	37.5
		NB	L / Th / R	A	0.43	17.7	54
		SB	L / Th / R	A	0.55	5.8	12.4
		Overall Intersection			C	0.77	17.2
QED & Princess Patricia Way	Minor Stop	NB	L / Th	A	0.07	7.6	1.2
		EB	L / R	B	0.39	13.1	10.8
		Overall Intersection			A	0.39	6.6
Queen Elizabeth	Signalized	EB	L / R	A	0.54	28.4	31.4
		NB	L / Th	A	0.37	9	30.1

Intersection	Intersection Control	Approach / Movement		LOS	V/C	Total Delay (s)	Queue 95th (m)
Dr & Fifth Ave		SB	Th / R	A	0.05	6.2	5.7
		Overall Intersection		A	0.54	15.6	--
Bank St & Marche Way	Minor Stop	WB	L / R	C	0.39	16.3	10.8
		Overall Intersection		A	0.39	2.3	--
Fifth Ave & O'Connor St	All-Way Stop	EB	L / Th	B	0.26	10.3	6
		WB	R	A	0.35	10.2	9
		NB	L / Th / R	B	0.39	11.4	10.8
		SB	R	A	0.16	8.8	3.6
		Overall Intersection		B	0.37	10.4	--
Garage Access at Exhibition Way	Two-Way Stop	WB	Th / L	A	0.01	8.8	0
		NB	L / R	C	0.39	20.7	10.8
		Overall Intersection		A	0.38	4.5	--
Exhibition Way and Service Roadway	All-Way Stop	EB	L / Th	A	0.22	8.2	4.8
		WB	Th / R	A	0.14	7.8	3
		SB	L / R	A	0.01	7.5	0
		Overall Intersection		A	0.22	8	--
Marché Way and Service Roadway	All-Way Stop	EB	L / Th	A	0.03	7.2	0.6
		WB	L / Th	A	0.22	8.2	4.8
		NB	L / R	A	0.03	7.4	0.6
		Overall Intersection		A	0.22	8	--
Marché Way and Exhibition Way	All-Way Stop	EB	Th / R	A	0.04	7.5	0.6
		WB	L / Th	A	0.09	8	1.8
		NB	L / R	A	0.21	8.3	4.8
		Overall Intersection		A	0.21	8.1	--
Garage Access at Princess Patricia Way	Two-Way Stop	EB	L	A	0.00	7.5	0
			Th	A	--	0	--
		SB	L / R	B	0.27	11.2	6.6
		Overall Intersection		A	0.27	5.5	--

L - Left, **Th** - Through, **R** - Right

As illustrated above, all study area intersections are projected to continue to operate with acceptable levels of service under 2033 Total Future Sunday peak hour conditions.

Table 4-28: 2033 Future Background Intersection LOS (Minor Event)

Intersection	Intersection Control	Approach / Movement		LOS		V/C		Total		Queue	
				Ingress	Egress	Ingress	Egress	Delay (s)		95th (m)	
								Ingress	Egress	Ingress	Egress
Bank St & Fifth Ave	Signalized	EB	L / Th / R	B	A	0.67	0.52	37.5	32.1	33.9	19.6
		WB	L	A	A	0.44	0.36	33.2	--	19.6	16.3
			Th / R	A	A	0.39	0.31	16.1	26.6	17.8	12.9
		NB	L / Th / R	A	A	0.32	0.24	10.8	6.3	54.1	36.3
		SB	L / Th / R	A	A	0.37	0.21	6.8	3.7	36.3	16.6
		Overall Intersection		B	A	0.67	0.52	13.1	9.3	--	--
Bank St & Holmwood Ave	Signalized	EB	L / Th / R	A	A	0.55	0.48	38.2	37.9	28.8	23.3
		NB	L / Th / R	A	A	0.38	0.29	3	3.8	14.1	22.5
		SB	L / Th / R	A	A	0.33	0.21	4.8	4.6	9.3	25.7
				Overall Intersection		A	A	0.55	0.48	6.6	6.8
Bank St & Exhibition Way	Signalized	WB	L	A	B	0.50	0.64	35.1	22.1	30.8	43.5
			Right	A	A	0.37	0.57	10.5	--	11.2	16.2
		NB	L / Th / R	A	A	0.34	0.17	5	5	28	12.8
		SB	L	A	A	0.42	0.25	7.8	--	11.5	8.8
			Th	A	A	0.21	0.15	3.1	4.7	9.1	7.9
				Overall Intersection		A	B	0.50	0.64	7.6	11.4
Bank St & Wilton Cr	Minor Stop	EB	R	F	C	0.92	0.34	67.5	19.5	55.2	9
		NB	L	B	B	0.24	0.08	12.1	10.4	5.4	1.2
			Th	A	A	--	--	2.5	0.6	--	--
				Overall Intersection		B	A	0.92	0.34	13.7	3.2
Bank St & Echo Dr	Minor Stop	EB	R	C	B	0.12	0.02	16.5	10.4	2.4	0.6
				Overall Intersection		A	A	0.12	0.02	0.4	0.2
	Signalized	EB	L / R	A	A	0.36	0.03	36.7	27.2	27.1	4.4

Intersection	Intersection Control	Approach / Movement		LOS		V/C		Total		Queue	
				Ingress	Egress	Ingress	Egress	Delay (s)		95th (m)	
								Ingress	Egress	Ingress	Egress
Bank St & Aylmer Ave		NB	L / Th	A	A	0.40	0.09	5.5	5.3	25.6	8.1
		SB	Th / R	A	A	0.34	0.10	6.5	5.2	29.9	9.7
		Overall Intersection		A	A	0.40	0.10	7.8	5.7	--	--
Bank St & Sunnyside Ave	Signalized	EB	L / Th / R	B	A	0.69	0.50	47.4	45.9	#45.4	19.7
		WB	L / Th / R	C	A	0.76	0.33	32.9	19.9	#59.8	12.3
		NB	L / Th / R	A	A	0.32	0.13	8.8	3.7	33.2	11.5
		SB	L / Th / R	A	A	0.58	0.27	8.4	4.1	24	22.6
		Overall Intersection		C	A	0.76	0.50	15.5	7.7	--	--
QED & Princess Patricia Way	Minor Stop	NB	L / Th	A	A	0.13	0.01	9.3	7.7	2.4	0
		EB	L / R	C	C	0.38	0.60	22.9	16.4	10.2	24.6
		Overall Intersection		A	B	0.38	0.60	3.5	10.4	--	--
Queen Elizabeth Dr & Fifth Ave	Signalized	EB	L / R	A	A	0.39	0.40	28.8	28.9	23	23.8
		NB	L / Th	A	A	0.36	0.32	7.1	6.6	29.7	30.2
		SB	Th / R	B	A	0.65	0.20	11.2	5.7	83.6	18.7
		Overall Intersection		B	A	0.65	0.40	11.7	9.9	--	--
Bank St & Marche Way	Minor Stop	WB	L / R	B	B	0.11	0.27	12.5	13.5	2.4	6.6
		Overall Intersection		A	A	0.11	0.27	0.6	2.1	--	--
Fifth Ave & O'Connor St	All-Way Stop	EB	L / Th	A	A	0.17	0.08	8.8	7.8	3.6	1.2
		WB	R	A	A	0.18	0.08	8	7.1	3.6	1.8
		NB	L / Th / R	A	A	0.20	0.09	8.8	7.3	4.2	1.8
		SB	R	A	A	0.11	0.11	7.7	7.2	2.4	2.4
		Overall Intersection		A	A	0.20	0.11	8.4	7.3	--	--
Garage Access at	Two-Way Stop	WB	L	A	A	0.01	--	8.8	24.7	0	12.2
			Th	A	--	--	--	--	0	--	--

Intersection	Intersection Control	Approach / Movement		LOS		V/C		Total		Queue	
				Ingress	Egress	Ingress	Egress	Delay (s)		95th (m)	
								Ingress	Egress	Ingress	Egress
Exhibition Way		NB	L / R	C	C	0.30	0.44	19.8	0	7.2	0
		Overall Intersection		A	A	0.30	0.44	3.3	5.2	--	--
Exhibition Way and Service Roadway	All-Way Stop	EB	L / Th	A	A	0.31	0.29	9.4	9.7	7.8	7.2
		WB	Th / R	A	A	0.00	0.00	7.5	7.9	0	0
		SB	L / R	A	A	0.15	0.34	7.6	8.9	3	9
		Overall Intersection		A	A	0.31	0.34	8.8	9.2	--	--
Marché Way and Service Roadway	All-Way Stop	EB	L / Th	A	A	0.03	0.04	7.6	7.4	0.6	0.6
		WB	L / Th	A	A	0.23	0.11	9	8.1	5.4	2.4
		NB	L / R	A	A	0.30	0.24	9	8.3	7.2	5.4
		Overall Intersection		A	A	0.30	0.24	8.9	8.2	--	--
Marché Way and Exhibition Way	All-Way Stop	EB	Th / R	A	A	0.04	0.09	7.3	7.4	0.6	1.8
		WB	L / Th	A	A	0.20	0.10	7.9	7.4	4.2	1.8
		NB	L / R	A	A	0.00	0.00	7.4	7.3	0	0
		Overall Intersection		A	A	0.20	0.10	7.8	7.4	--	--
Garage Access at Princess Patricia Way	Two-Way Stop	EB	L	A	A	0.01	0.00	8.1	7.4	0	0
			Th	A	A	--	--	0	0	--	--
		SB	L / R	B	B	0.15	0.47	11.3	13.2	3	15.6
		Overall Intersection		A	A	0.15	0.47	2.2	9.3	--	--

L - Left, Th - Through, R - Right

As illustrated above, all study area intersections are projected to continue to operate with overall acceptable levels of service in the 2033 Future Background horizon year for Minor Events held at TD Place.

The eastbound approach at intersection of Bank Street and Wilton Crescent is projected to continue to operate with a LOS F due to vehicle delays incurred on the minor approach. This occurs during the Ingress period which overlaps with the regular PM peak period. The delays are a result of the recently installed 3-lane cross-section of Bank Street.

No mitigation measures are recommended to improve intersection operations.

Table 4-29: 2033 Total Future Intersection LOS (Minor Event)

Intersection	Intersection Control	Approach / Movement		LOS		V/C		Total		Queue	
				Ingress	Egress	Ingress	Egress	Delay (s)		95th (m)	
								Ingress	Egress	Ingress	Egress
Bank St & Fifth Ave	Signalized	EB	L / Th / R	B	A	0.67	0.52	37.5	32.2	33.9	19.6
		WB	L	A	A	0.44	0.36	33.2	35	19.6	16.3
			Th / R	A	A	0.40	0.32	15.9	19.2	18.1	13.1
		NB	L / Th / R	A	A	0.33	0.25	11.1	6.4	56.1	37.3
		SB	L / Th / R	A	A	0.38	0.21	6.9	3.7	38.3	17.2
		Overall Intersection		B	A	0.67	0.52	13.1	9.2	--	--
Bank St & Holmwood Ave	Signalized	EB	L / Th / R	A	A	0.55	0.48	38.2	37.9	28.8	23.3
		NB	L / Th / R	A	A	0.40	0.30	3	3.8	15.2	23.1
		SB	L / Th / R	A	A	0.35	0.22	4.9	4.6	9.3	26.8
				Overall Intersection		A	A	0.55	0.48	6.5	6.8
Bank St & Exhibition Way	Signalized	WB	L	A	B	0.54	0.66	35.5	36.6	33.6	45
			Right	A	A	0.38	0.58	10.1	9.4	11.3	16.1
		NB	L / Th / R	A	A	0.39	0.18	5.8	5	30.4	13.3
		SB	L	A	A	0.54	0.28	12.3	6.3	19	10
			Th	A	A	0.23	0.15	3.6	4.4	9.4	8.1
		Overall Intersection		A	B	0.54	0.66	8.9	11.5	--	--
Bank St & Wilton Cr	Minor Stop	EB	R	F	C	0.94	0.34	72.4	19.8	103.7	14.2
		NB	L	B	B	0.25	0.08	12.2	10.4	7.8	1.9
			Th	A	A	--	--	2.7	0.7	7.8	1.9
				Overall Intersection		D	A	0.94	0.34	14.3	3.2
Bank St & Echo Dr	Minor Stop	EB	R	C	B	0.12	0.02	16.8	10.5	5.7	0.7
				Overall Intersection		A	--	0.12	0.02	0.4	0.2
	Signalized	EB	L / R	A	A	0.36	0.03	36.7	27.2	27.1	4.4

Intersection	Intersection Control	Approach / Movement		LOS		V/C		Total		Queue	
				Ingress	Egress	Ingress	Egress	Delay (s)		95th (m)	
								Ingress	Egress	Ingress	Egress
Bank St & Aylmer Ave		NB	L / Th	A	A	0.42	0.09	5.5	5.4	26.2	8.8
		SB	Th / R	A	A	0.34	0.11	6.6	5.3	31	10
		Overall Intersection		A	A	0.42	0.11	7.8	5.7	--	--
Bank St & Sunnyside Ave	Signalized	EB	L / Th / R	C	A	0.71	0.50	48.8	45.9	#47.4	19.7
		WB	L / Th / R	C	A	0.76	0.33	33.3	19.9	#59.8	12.3
		NB	L / Th / R	A	A	0.34	0.14	8.9	3.7	35.2	12.1
		SB	L / Th / R	A	A	0.59	0.27	8.6	4.2	24.3	23
		Overall Intersection		C	A	0.76	0.50	15.6	7.6	--	--
QED & Princess Patricia Way	Minor Stop	NB	L / Th	A	A	0.14	0.02	9.5	7.7	4	0.5
		EB	L / R	D	C	0.46	0.63	26.3	17.4	17.5	33.7
		Overall Intersection		--	--	--	--	4.2	10.9	--	--
Queen Elizabeth Dr & Fifth Ave	Signalized	EB	L / R	A	A	0.40	0.41	29	29	23.7	24.3
		NB	L / Th	A	A	0.37	0.33	7.2	6.7	31.3	30.8
		SB	Th / R	B	A	0.67	0.21	11.7	5.7	88	19.4
		Overall Intersection		B	A	0.67	0.41	12	10	--	--
Bank St & Marche Way	Minor Stop	WB	L / R	B	B	0.13	0.29	12.7	13.6	3.3	1.2
		Overall Intersection		A	A	0.13	0.29	0.7	2.1	--	--
Fifth Ave & O'Connor St	All-Way Stop	EB	L / Th	A	A	0.17	0.08	8.8	7.8	--	--
		WB	R	A	A	0.18	0.06	8	7.1	--	--
		NB	L / Th / R	A	A	0.21	0.01	8.9	7.3	--	--
		SB	R	A	A	0.11	0.11	7.7	7.2	--	--
		Overall Intersection		A	A	--	--	8.4	7.3	--	--
		WB	L	A	A	0.01	--	8.9	0	0	0

Intersection	Intersection Control	Approach / Movement		LOS		V/C		Total		Queue	
				Ingress	Egress	Ingress	Egress	Delay (s)		95th (m)	
								Ingress	Egress	Ingress	Egress
Garage Access at Exhibition Way	Two-Way Stop		Th	A	--	--	--	0	--	--	--
		NB	L / R	C	D	0.38	0.53	22.3	29.1	10.2	17.4
		Overall Intersection		A	A	0.38	0.53	4	6.4	--	--
Exhibition Way and Service Roadway	All-Way Stop	EB	L / Th	A	A	0.32	0.30	9.5	9.9	8.4	7.8
		WB	Th / R	A	A	0.00	0.00	7.5	7.9	0	0
		SB	L / R	A	A	0.15	0.34	7.7	8.9	3	9
		Overall Intersection		A	A	0.32	0.34	8.9	9.3	--	--
Marché Way and Service Roadway	All-Way Stop	EB	L / Th	A	A	0.03	0.04	7.6	7.4	7.8	0.6
		WB	L / Th	A	A	0.24	0.12	9.1	8.2	0.6	2.4
		NB	L / R	A	A	0.31	0.25	9.1	8.4	5.4	6
		Overall Intersection		A	A	0.31	0.25	9	8.3	--	--
Marché Way and Exhibition Way	All-Way Stop	EB	Th / R	A	A	0.05	0.09	7.3	7.4	0.6	1.8
		WB	L / Th	A	A	0.20	0.10	8	7.5	4.8	1.8
		NB	L / R	A	A	0.00	0.00	7.4	7.3	0	0
		Overall Intersection		A	A	0.20	0.10	7.9	7.5	--	--
Garage Access at Princess Patricia Way	Two-Way Stop	EB	L	A	A	0.01	0.00	8.2	7.4	0	0
			Th	A	A	-	--	0	0	--	--
		SB	L / R	B	B	0.17	0.50	11.6	13.9	3.6	16.8
		Overall Intersection		A	A	0.17	0.50	2.3	9.3	--	--

L - Left, Th - Through, R - Right

As illustrated above, all study area intersections are projected to continue to operate with overall acceptable levels of service in the 2033 Total Future horizon year for Minor Events held at TD Place. Not noticeable change in intersection levels of service is anticipated with the addition of Lansdowne 2.0 trips.

The eastbound approach at intersection of Bank Street and Wilton Crescent is projected to continue to operate with a LOS F due to vehicle delays incurred on the minor approach. This occurs during the Ingress period which overlaps with the regular PM peak period. The delays at this intersection are not directly attributed to event traffic held at Lansdowne and are associated with limited gaps in traffic in the southbound direction as a result of the recently installed 3-lane cross-section of Bank Street.

No mitigation measures are recommended to improve intersection operations.

Table 4-30 2033 Future Background Intersection LOS (Major Event)

Intersection	Intersection Control	Approach / Movement		LOS		V/C		Total		Queue	
				Ingress	Egress	Ingress	Egress	Delay (s)		95th (m)	
								Ingress	Egress	Ingress	Egress
Bank St & Fifth Ave	Signalized	EB	L / Th / R	B	C	0.69	0.76	36.4	46.1	36.2	35.6
		WB	L	A	A	0.43	0.21	30.7	--	20.8	12.7
			Th / R	A	A	0.41	0.57	17.5	19.9	21.3	29.4
		NB	L / Th / R	A	A	0.34	0.23	6.8	6.3	30.6	20.1
		SB	L / Th / R	A	A	0.45	0.26	7.8	6.4	44.4	22.3
Overall Intersection		B	C	0.69	0.76	12	13.8	--	--		
Bank St & Holmwood Ave	Signalized	EB	L / Th / R	B	B	0.62	0.62	38.5	38.9	35.3	34.2
		NB	L / Th / R	A	A	0.51	0.26	4	4.3	45	19
		SB	L / Th / R	A	A	0.44	0.24	7.2	5	40.7	18
		Overall Intersection		B	B	0.62	0.62	8.6	9.8	--	--
Bank St & Exhibition Way	Signalized	WB	L	<i>Movements Temporarily Restricted During Major Events</i>							
			Right								
		NB	L / Th / R	A	A	0.34	0.14	4.7	1.4	28.5	13.3
		SB	L	<i>Movements Temporarily Restricted During Major Events</i>							
			Th	A	A	0.28	0.13	3.6	1	18	10
Overall Intersection		A	A	0.34	0.14	5.3	1.3	--	--		
Bank St & Wilton Cr	Minor Stop	EB	R	F	B	1.07	0.01	111	13.4	72.6	0
		NB	L	B	A	0.20	--	12.5	0	4.8	0
			Th	A	--	--	--	2.5	--	--	--
		Overall Intersection		B	A	1.07	0.01	19.6	0.1	--	--
Bank St & Echo Dr	Minor Stop	EB	R	C	B	0.25	0.05	19	10.4	6	1.2
		Overall Intersection		C	B	0.25	0.05	0.9	0.5	--	--
	Signalized	EB	L / R	A	A	0.52	0.17	38.8	23.5	35.4	11.9

Intersection	Intersection Control	Approach / Movement		LOS		V/C		Total		Queue	
				Ingress	Egress	Ingress	Egress	Delay (s)		95th (m)	
								Ingress	Egress	Ingress	Egress
Bank St & Aylmer Ave		NB	L / Th	A	A	0.43	0.20	8.1	6	45.8	17.5
		SB	Th / R	A	A	0.45	0.18	8.2	5.5	50.5	15.3
		Overall Intersection		A	A	0.52	0.20	10.2	6.6	--	--
Bank St & Sunnyside Ave	Signalized	EB	L / Th / R	D	A	0.88	0.56	72	43.6	#67.4	26.7
		WB	L / Th / R	D	A	0.86	0.48	49	28.4	#78.0	22.2
		NB	L / Th / R	A	A	0.38	0.16	8.1	4.3	33	14.7
		SB	L / Th / R	C	A	0.74	0.19	14.7	4.3	73.5	16.9
		Overall Intersection		D	A	0.88	0.56	22.7	10.9	--	--
QED & Princess Patricia Way	Minor Stop	NB	L / Th	B	A	0.14	0.05	10	8.2	3	0.6
		EB	L / R	F	E	0.81	0.89	58.8	43	37.8	61.8
		Overall Intersection		A	C	0.81	0.89	9.7	20.4	--	--
Queen Elizabeth Dr & Fifth Ave	Signalized	EB	L / R	B	C	0.67	0.71	36.3	38.8	43.6	#52.7
		NB	L / Th	B	A	0.65	0.41	15.8	8.8	60	39.9
		SB	Th / R	D	A	0.86	0.40	22.3	8.6	#165.3	41.2
		Overall Intersection		D	C	0.86	0.71	22.6	15.4	--	--
Bank St & Marche Way	Minor Stop	WB	L / R	<i>Movements Temporarily Restricted During Major Events</i>							
		Overall Intersection									
Fifth Ave & O'Connor St	All-Way Stop	EB	L / Th	A	A	0.20	0.12	9.5	8.9	4.2	2.4
		WB	R	A	A	0.26	0.15	9	8.3	6	3
		NB	L / Th / R	A	B	0.31	0.48	9.8	11.2	7.8	15.6
		SB	R	A	A	0.18	0.07	8.5	7.6	3.6	1.2
		Overall Intersection		A	B	0.31	0.48	9.3	10.1	--	--

L - Left, Th - Through, R - Right

It should be noted that the Queen Elizabeth Driveway / Princess Patricia Way operations are being controlled by police officers, not stop control, during major events. Synchro analysis may not be representative of real operations.

As illustrated above, all study area intersections are projected to continue to operate with overall acceptable levels of service during the 2033 Future Background horizon year for Major Events held at TD Place.

The eastbound approach at intersection of Bank Street and Wilton Crescent is projected to continue to operate with a LOS F due to vehicle delays incurred on the minor approach. This occurs during the event Ingress period which overlaps with the regular PM peak period. The delays at this intersection are not directly attributed to event traffic held at Lansdowne and are associated with limited gaps in traffic in the southbound direction due to the recently installed 3-lane cross-section of Bank Street.

In addition, the eastbound approach at the Queen Elizabeth Drive and Princess Patricia Way intersection is shown to operate with an LOS rating of F and E for the Ingress and Egress periods, respectively. Although the analysis indicates that the movements are operating with delays, the performance of these intersections are expected to continue to be adequately managed through the deployment of Ottawa Police Point duty as part of the traffic management measures for Major Events at Lansdowne.

No mitigation measures are recommended to improve intersection operations.

Table 4-31: 2033 Total Future Intersection LOS (Major Event)

Intersection	Intersection Control	Approach / Movement		LOS		V/C		Total		Queue	
				Ingress	Egress	Ingress	Egress	Delay (s)		95th (m)	
								Ingress	Egress	Ingress	Egress
Bank St & Fifth Ave	Signalized	EB	L / Th / R	B	C	0.69	0.76	36.5	46.5	36.3	35.7
		WB	L	A	A	0.43	0.21	30.7	24.3	20.8	12.7
			Th / R	A	A	0.42	0.58	17.5	18.9	21.8	29.6
		NB	L / Th / R	A	A	0.35	0.24	6.9	6.4	31.6	20.5
		SB	L / Th / R	A	A	0.47	0.27	8	6.5	46.8	23.3
Overall Intersection		B	C	0.69	0.76	12	13.8	--	--		
Bank St & Holmwood Ave	Signalized	EB	L / Th / R	B	B	0.62	0.62	38.5	38.9	35.3	34.2
		NB	L / Th / R	A	A	0.52	0.27	4.2	3.6	47.6	20.1
		SB	L / Th / R	A	A	0.47	0.25	7.5	5.2	43.7	19.1
		Overall Intersection		B	B	0.62	0.62	8.8	9.5	--	--
Bank St & Exhibition Way	Signalized	WB	L	<i>Movements Temporarily Restricted During Major Events</i>							
			Right								
		NB	L / Th / R	A	A	0.36	0.15	4.9	2.4	31.8	13.7
		SB	L	<i>Movements Temporarily Restricted During Major Events</i>							
			Th	A	A	0.28	0.14	3.8	1.8	18.7	10.1
Overall Intersection		A	A	0.36	0.15	5.8	2.6	--	--		
Bank St & Wilton Cr	Minor Stop	EB	R	F	B	1.09	0.01	119	13.5	131.7	0.4
		NB	L	B	A	0.21	0	12.6	0	6.4	0
			Th	A	--	--	--	2.6	0	6.4	0
		Overall Intersection		E	A	1.09	0.01	20.5	0.1	--	--
Bank St & Echo Dr	Minor Stop	EB	R	C	B	0.25	0.06	19.4	10.5	13.2	1.8
		Overall Intersection		A	A	0.25	0.06	0.9	0.5	--	--
	Signalized	EB	L / R	A	A	0.52	0.17	38.8	23.5	35.4	11.9

Intersection	Intersection Control	Approach / Movement		LOS		V/C		Total		Queue	
				Ingress	Egress	Ingress	Egress	Delay (s)		95th (m)	
								Ingress	Egress	Ingress	Egress
Bank St & Aylmer Ave		NB	L / Th	A	A	0.44	0.21	8.2	6	48.3	18.2
		SB	Th / R	A	A	0.46	0.18	8.2	5.6	51.7	15.7
		Overall Intersection		A	A	0.52	0.21	10.3	6.6	--	--
Bank St & Sunnyside Ave	Signalized	EB	L / Th / R	D	A	0.88	0.56	72	43.6	#67.4	26.7
		WB	L / Th / R	D	A	0.86	0.48	49	28.4	#78.0	22.2
		NB	L / Th / R	A	A	0.39	0.16	8.3	4.4	34.7	15.4
		SB	L / Th / R	C	A	0.76	0.19	15.4	4.3	#67.4	17.3
		Overall Intersection		D	A	0.88	0.56	22.8	10.8	--	--
QED & Princess Patricia Way	Minor Stop	NB	L / Th	B	A	0.16	0.05	10.2	8.3	4.9	1.3
		EB	L / R	F	E	0.93	0.93	82.4	50	75.2	86.8
		Overall Intersection		C	C	0.93	0.93	14	23.5	--	--
Queen Elizabeth Dr & Fifth Ave	Signalized	EB	L / R	B	C	0.68	0.72	36.9	39	#45.2	#53.5
		NB	L / Th	B	A	0.69	0.41	17.9	8.9	#70.0	40.7
		SB	Th / R	D	A	0.87	0.41	23.7	8.7	#169.4	42
		Overall Intersection		D	C	0.87	0.72	24.1	15.5	--	--
Bank St & Marche Way	Minor Stop	WB	L / R	<i>Movements Temporarily Restricted During Major Events</i>							
		Overall Intersection									
Fifth Ave & O'Connor St	All-Way Stop	EB	L / Th	B	A	0.21	0.13	10.1	9	--	--
		WB	R	A	A	0.28	0.16	9.7	8.4	--	--
		NB	L / Th / R	A	B	0.26	0.49	9.2	11.4	--	--
		SB	R	A	A	0.19	0.08	8.6	7.7	--	--
		Overall Intersection		A	B	0.28	0.49	9.5	8.8	--	--

L - Left, Th - Through, R - Right

It should be noted that the Queen Elizabeth Driveway / Princess Patricia Way operations are being controlled by police officers, not stop control, during major events. Synchro analysis may not be representative of real operations.

As illustrated above, all study area intersections are projected to continue to operate with overall acceptable levels of service, similar to 2033 Background Conditions, for the 2033 Total Future horizon year for Major Events held at TD Place.

The eastbound approach at intersection of Bank Street and Wilton Crescent is projected to continue to operate with a LOS F due to vehicle delays incurred on the minor approach. This occurs during the event Ingress period which overlaps with the regular PM peak period. The delays at this intersection are not directly attributed to event traffic held at Lansdowne and are associated with limited gaps in traffic in the southbound direction due to the recently installed 3-lane cross-section of Bank Street.

In addition, the eastbound approach at the Queen Elizabeth Drive and Princess Patricia Way intersection is shown to operate with an LOS rating of F and E for the Ingress and Egress periods, respectively. Although the analysis indicates that the movements are operating with delays, the performance of these intersections are expected to continue to be adequately managed through the deployment of Ottawa Police Point duty as part of the traffic management measures for Major Events at Lansdowne.

No mitigation measures are recommended to improve intersection operations.

5. SUMMARY AND CONCLUSIONS

This Transportation Impact Assessment (TIA) was prepared in support of a Site Plan Application (SPA) for the proposed new North Side Stands at Lansdowne Park located in the Glebe community of Ottawa, Ontario.

The proposed North Stadium Stands (NSS) represents Phase 2 of the Lansdowne 2.0 plan which seeks to replace existing city-owned infrastructure while adding additional density to the site. The overall Lansdowne 2.0 proposed plan includes the following phases of development:

Phase 1 (*Anticipated completion of 2028*) consists of building a new 5,500 seat (up to 6,500 spectators) multipurpose event centre that will be home to the OHL's Ottawa 67's, the CEBL's Ottawa BlackJacks, the PWHL Ottawa, and other indoor events such as shows and concerts. As this phase of Lansdowne 2.0 replaces the programming provided at the existing 9,800 seat TD Place Arena, it is not expected to generate additional transportation demands to Lansdowne.

Phase 2 (*Anticipated completion between 2030 and 2031*) consists of replacing the existing functionally obsolete north stadium stands and arena complex at TD Place Stadium with a new 11,200 seat (12,100 spectator) north stand structure. This new facility replaces the existing north stadium stands, which currently has a capacity of 14,028 spectators, and would result in a reduction of approximately 2,000 spectator capacity at TD Place Stadium. This venue will continue to be the home of the CFL's Ottawa RedBlacks and the CPL's Ottawa Atlético. As this phase of Lansdowne 2.0 replaces existing programming currently provided at TD Place Stadium, it is not expected to generate additional transportation demands to Lansdowne.

Phase 3 (*Anticipated completion between 2032 and 2036*) represents the full build-out of Lansdowne 2.0 and consists of replacing the existing 41,000 ft² of commercial retail and box office annex to the Stadium on Exhibition Way with 49,635 ft² of new podium-level commercial retail space. This represents a net increase of 8,635 ft² of commercial retail space from what is currently provided today. In addition, this phase includes the construction of two new residential towers with a total of 770 new dwelling units. Additional underground parking space will be constructed by extending the existing facility to accommodate an additional 386 parking spaces to service the new residential units and additional retail space, resulting in a total of 1,766 underground parking spaces at Lansdowne.

Under Phase 1, no additional trip generation demands are forecasted as the proposed multi-purpose event centre replaces the existing programming at the Arena at TD Place.

It is anticipated that additional construction traffic will be added to the network on weekdays during the interim operating conditions in 2028 and 2030, during the construction of subsequent phases of Lansdowne 2.0. Furthermore, internal circulation and access within Lansdowne will be altered during the weekdays of the 2028 scenario to account for the closure of the Exhibition Way garage access.

The full build-out of Lansdowne 2.0 development is anticipated to generate between 132 and 175 net new auto trips (two-way) during the Weekday AM, Weekday PM, and Weekend Saturday and Sunday peak periods.

An analysis of study area intersections was completed under existing conditions, the baseline and construction impact conditions for the interim years of 2028 (construction of the new event centre), and 2030 (completion and commissioning of the new NSS, and ongoing construction of the new podium level retail and residential towers), and the baseline and future conditions for 2033 (full build-out of Lansdowne 2.0).

All study area intersections were shown to operate acceptably with similar levels of services currently observed today.

In conclusion, the analysis found that the anticipated Phase 2 of Lansdowne 2.0 will result in minimal impact to the overall traffic operations in the area. From a transportation standpoint, the proposed new North Side Stands can be accommodated by the future transportation network with the continued adoption of the existing comprehensive Transportation Demand Management strategy.

APPENDIX A - TURNING MOVEMENT COUNT DATA



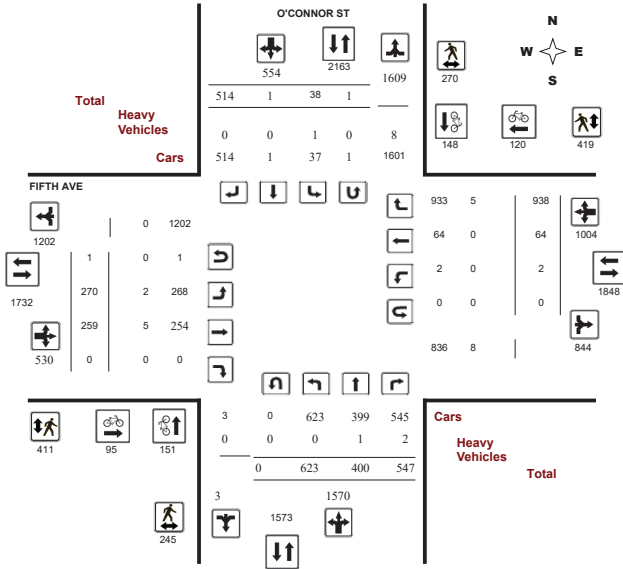
Transportation Services - Traffic Services

Turning Movement Count - Study Results
FIFTH AVE @ O'CONNOR ST

Survey Date: Friday, August 05, 2022
Start Time: 16:00

WO No: 40983
Device: Miovision

Full Study Diagram



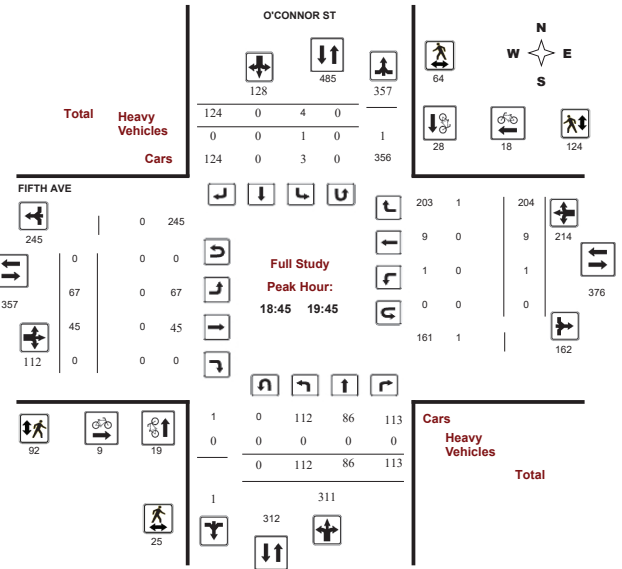
Transportation Services - Traffic Services

Turning Movement Count - Study Results
FIFTH AVE @ O'CONNOR ST

Survey Date: Friday, August 05, 2022
Start Time: 16:00

WO No: 40983
Device: Miovision

Full Study Peak Hour Diagram



Transportation Services - Traffic Services

Turning Movement Count - Study Results
FIFTH AVE @ O'CONNOR ST

Survey Date: Friday, August 05, 2022
Start Time: 16:00

WO No: 40983
Device: Miovision

Full Study 15 Minute Increments

Table with columns for Time Period, Northbound, Southbound, Eastbound, Westbound, and Grand Total. Rows represent 15-minute intervals from 16:00 to 23:45.

Note: U-Turns are included in Totals.



Transportation Services - Traffic Services

Turning Movement Count - Study Results
FIFTH AVE @ O'CONNOR ST

Survey Date: Friday, August 05, 2022
Start Time: 16:00

WO No: 40983
Device: Miovision

Full Study Cyclist Volume

Table showing cyclist volume counts for Northbound, Southbound, Eastbound, and Westbound directions across various time periods from 16:00 to 23:45.



Transportation Services - Traffic Services

Turning Movement Count - Study Results
FIFTH AVE @ O'CONNOR ST

Survey Date: Friday, August 05, 2022
Start Time: 16:00

WO No: 40983
Device: Miovision

Full Study Pedestrian Volume

Table with columns: Time Period, NB Approach, SB Approach, Total, EB Approach, WB Approach, Grand Total. Rows show pedestrian volume data for various time intervals.



Transportation Services - Traffic Services

Turning Movement Count - Study Results
FIFTH AVE @ O'CONNOR ST

Survey Date: Friday, August 05, 2022
Start Time: 16:00

WO No: 40983
Device: Miovision

Full Study Heavy Vehicles

Table with columns: Time Period, Northbound, Southbound, Eastbound, Westbound, Grand Total. Rows show heavy vehicle volume data for various time intervals.



Transportation Services - Traffic Services

Turning Movement Count - Study Results
FIFTH AVE @ O'CONNOR ST

Survey Date: Friday, August 05, 2022
Start Time: 16:00

WO No: 40983
Device: Miovision

Full Study 15 Minute U-Turn Total

Table with columns: Time Period, Northbound U-Turn Total, Southbound U-Turn Total, Eastbound U-Turn Total, Westbound U-Turn Total, Total. Rows show 15-minute U-turn volume data.

5566814 - COVID - BANK ST @ MARCHE WAY - MAY... - TMC

Tue May 3, 2022
Full Length (6:30 AM-9:30 AM, 11:30 AM-2 PM, 3:30 PM-6 PM)
All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 947989, Location: 45.399403, -75.68617

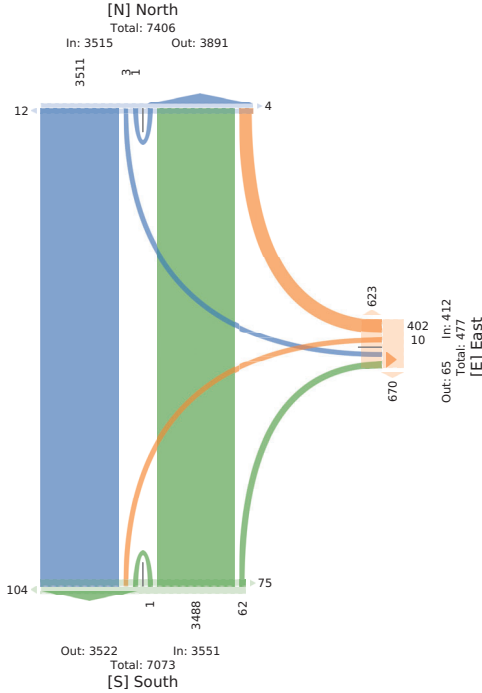


Provided by: City of Ottawa
100 Constellation Dr,
Nepean, ON, K2G 5J9, CA

Table with columns: Leg Direction, Time, North Southbound, East Westbound, South Northbound, Int. Rows show detailed traffic count and percentage data.

^Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

5566814 - COVID - BANK ST @ MARCHE WAY - MAY... - TMC
 Tue May 3, 2022
 Full Length (6:30 AM-9:30 AM, 11:30 AM-2 PM, 3:30 PM-6 PM)
 All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
 All Movements
 ID: 947989, Location: 45.399403, -75.68617



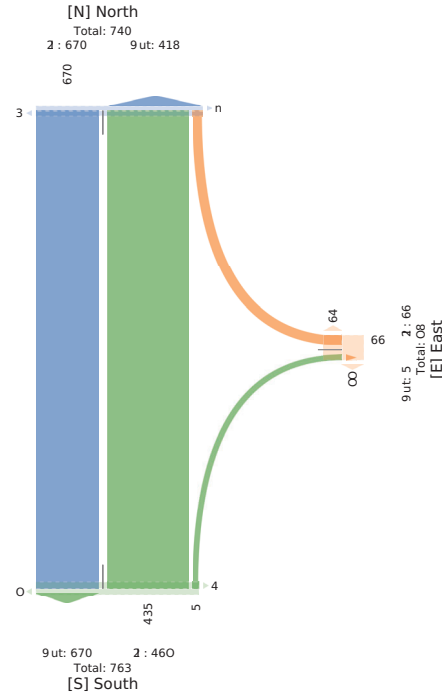
5566814 - COVID - BANK ST @ MARCHE WAY - MAY... - TMC
 Tue May 3, 2022
 Full Length (6:30 AM-9:30 AM, 11:30 AM-2 PM, 3:30 PM-6 PM)
 All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
 All Movements
 ID: 947989, Location: 45.399403, -75.68617



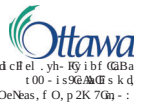
9eP kReQs	0d0 EduQ_dusi				Ja-C Se-Cdusi				EduQ 0d0_dusi				kC			
	T	9	W	FNN	leU	B	9	W	FNN	leU	B	T		W	FNN	leU
20220403g30FM	3	0	0	3	5	50	0	0	50	51	2	540	0	54	2	218
g14FM	52	0	0	52	0	0	0	0	24	2	540	0	54	1	212	
00FM	11	0	0	11	0	D	0	0	D	25	0	52	0	52	2	230
054FM	gD	0	0	gD	2	D	0	0	D	56	2	505	0	503	5	56D
T0d:	3g	0	0	3g	3	33	0	0	33	11	D	41D	0	431	1	164
* FNNdr	500*	0*	0*	h	h	500*	0*	0*	h	h	57*	g3*	0*	h	h	h
* T0d:	152*	0*	0*	152*	h	37*	0*	0*	37*	h	07*	418*	0*	443*	h	h
1c %	0200	h	h	0200	h	0200	h	h	0200	h	0204	023D	h	0231	h	0225
9P)Gasi Mddryre:	3D	0	0	3D	h	2D	0	0	2D	h	4	11	0	1gl	h	888
* 9P)Gasi Mddryre:	(12*	0*	0*	(12*	h	g5*	0*	0*	g5*	h	131*	(0*	0*	(08*	h	(20*
c eaHy	20	0	0	20	h	4	0	0	4	h	0	30	0	30	h	44
* c eaHy	40*	0*	0*	40*	h	542*	0*	0*	542*	h	0*	47*	0*	47*	h	417
v kryre-ds Bdai	5	0	0	5	h	5	0	0	5	h	2	5g	0	20	h	22
* v kryre-ds Bdai	03*	0*	0*	03*	h	30*	0*	0*	30*	h	2g*	31*	0*	37*	h	29*
1eie-Gds:	h	h	h	h	h	h	h	h	h	h	h	h	h	h	h	h
* 1eie-Gds:	h	h	h	h	500*	h	h	h	h	11*	h	h	h	h	500*	h
v kryre-ds Ad-Ral:	h	h	h	h	0	h	h	h	h	1	h	h	h	h	h	0
* v kryre-ds Ad-Ral:	h	h	h	h	0*	h	h	h	h	45*	h	h	h	h	h	0*

1eie-Gds-asi v kryre-ds Ad-Ral:79t9eCBrB)P)C(T)u, w, WHTus

5566814 - COVID - BANK ST @ MARCHE WAY - MAY... - TMC
 Tue May 3, 2022
 AM Peak (8:30 AM - 9:30 AM)
 All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
 All Movements
 ID: 947989, Location: 45.399403, -75.68617



5566814 - COVID - BANK ST @ MARCHE WAY - MAY... - TMC
 Tue May 3, 2022
 Full Length (6:30 AM-9:30 AM, 11:30 AM-2 PM, 3:30 PM-6 PM)
 All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
 All Movements
 ID: 947989, Location: 45.399403, -75.68617



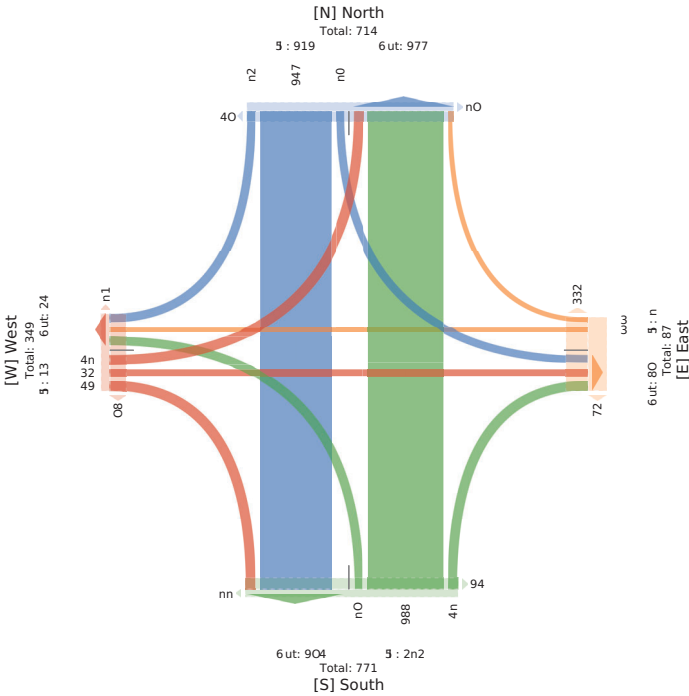
1eP kReQs	0d0 EduQ_dusi				Ja-C Se-Cdusi				EduQ 0d0_dusi				kC			
	T	1	W	NN	leU	v	1	W	NN	leU	v	T		W	NN	leU
20220703t280LM	t0D	0	0	t0D	0	t3	t	0	t1	73	7	10m	0	t11	5	237
207LM	t25	0	0	t25	0	1D	0	0	1D	1m	3	11m	0	t22	0	257
180LM	t1m	0	0	t1m	0	15	0	0	15	3	3	12D	0	t30	1	257
1h7LM	t11	0	0	t11	0	13	0	0	13	1m	1	10m	0	t10	m	230
T1GA	155	0	0	155	0	7m	1	0	50	142	12	151	0	115	1m	1002
* NN1ao)	100*	0*	0*	(	(	m8*	18*	0*	(	(	29*	m3*	0*	(((
* T1GA	158*	0*	0*	158*	(	78*	08*	0*	58*	(	18*	158*	0*	118*	((
Lr %	0882	(	(	0882	(	0854	0870	(	0842	(	0870	0882	(	0882	(	0843
1P)Gasi Mi Gdya09	121	0	0	121	(	72	t	0	73	(	11	13t	0	112	(	m11
* 1P)Gasi Mi Gdya09	m8*	0*	0*	m8*	(	448*	t00*	0*	448*	(	m8*	m8*	0*	m8*	(	m8*
r eacy	3t	0	0	3t	(	D	0	0	D	(	0	20	0	20	(	74
* r eacy	58*	0*	0*	58*	(	t18*	0*	0*	t18*	(	0*	18*	0*	18*	(	78*
Hbyo09is vial	t1	0	0	t1	(	0	0	0	0	(	t	13	0	t1	(	27
* Hbyo09is vial	28*	0*	0*	28*	(	0*	0*	0*	0*	(	48*	28*	0*	28*	(	28*
1eie-Gds:	((((((((((((((((
* 1eie-Gds:	((((((((((((((((
Hbyo09is-d9Baa	((((((((((((((((
* Hbyo09is-d9Baa	((((((((((((((((

1eie-Gds-asi Hbyo09is vial 9Baa:81h1eCvhw)P)C(T)u, w, WHTus

5566814 - COVID - BANK ST @ HOLMWOOD AVE - M... - TMC
 Tue May 3, 2022
 M/P Pay kea (8.2-30 km 9: -30 km)
 l Cs GilleL B ghtLanP Mtdrory @L, c eaHy, kePeLoanL, v Ayrr@Ldn BdaP, v Ayrr@Ldn
 s oLLRr(C)
 l CMdlHewentL
 n - D47D2, i drat@n- 45.3DD6D1, 975.161513



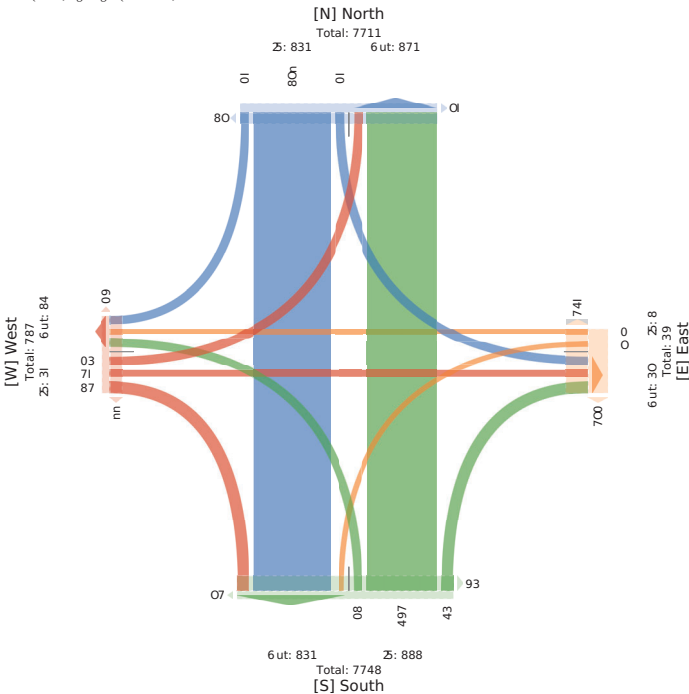
5566814 - COVID - BANK ST @ HOLMWOOD AVE - M... - TMC
 Tue May 3, 2022
 FM Feal lng h FM (hg h FM6 : Ae-a@Feal 1 Pu-
) 9C Sslls l drs ar MPD-B@Bss, 1 eaAy, Fevesed@H, Rdy@Bss Phw@v, Rdy@Bss PH
 C-Pssk a@ B
) 9MPAemeHs
 lDg447442, l P@rP@h@hB4454. , (7h8 5. h. 3



5566814 - COVID - BANK ST @ HOLMWOOD AVE - M... - TMC
 Tue May 3, 2022
 AM AeaP (8 - AM 9-8 - AM) 9l CsaLLAeaP i gus
 h llL lamen ldr c h avB Mghs@Ren, i eaCy, Ae@b@k@v, w@v@Ren gv m@B w@v@Ren gv
 t sgml a@P
 h llMg@Devi@
 47 85(, 552, dg@h@v@8(- 65515b, 9 - 6@1b- b3



5566814 - COVID - BANK ST @ WILTON CRES - MA... - TMC
 Tue May 3, 2022
 Full Length (6:30 AM-9:30 AM, 11:30 AM-2 PM, 3:30 PM-6 PM)
 All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on
 Crosswalk)
 All Movements
 ID: 947024, Location: 48359. . . 2. - 83578408



Time	Northbound					Southbound					Westbound					Eastbound										
	h	t	i	w	nn	h	t	i	w	nn	h	t	i	w	nn	h	t	i	w	nn	h	t	i	w	nn	
2022-08-03 06:00AM	5	14	7	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ng@FM	7	133	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ng@FM	7	142	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ph@	27	13	27	0	0	0	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* NN@h	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* Tr@h	28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F1 %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
i dr ca all MP@-@B@	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* i dr ca all MP@-@B@	55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1 ea@y	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* 1 ea@y	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rdy@Bss Phw@v	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* Rdy@Bss Phw@v	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fevesed@H	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* Fevesed@H	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rdy@Bss PHC-Pssk a@	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
* Rdy@Bss PHC-Pssk a@	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

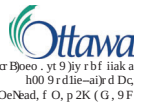
Fevesed@H a@ Rdy@Bss PHC-Pssk a@ B@ g@ efc, w@v@v@r, T@T@U, W@W@T@U@H

5566814 - COVID - BANK ST @ WILTON CRES - MA... - TMC
 Tue May 3, 2022
 Full Length (6:30 AM-9:30 AM, 11:30 AM-2 PM, 3:30 PM-6 PM)
 All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
 All Movements
 ID: 947024, Location: 4859... 2, -, 8578408

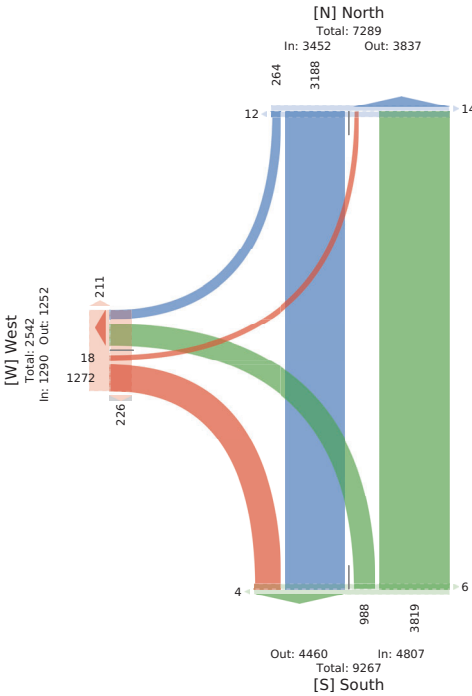


Provided by: City of Ottawa
 100 Constellation Dr,
 Nepean, ON, K2G 8J9, CA

5566814 - COVID - BANK ST @ WILTON CRES - MA... - TMC
 Tue May 3, 2022
 FM 1 eal.rgh(FM 6: th(F MA
 F - 9 -a1le rP)Csi1 ado Mr r chHe1, v eaBy, l eoe1clad1, R)HHe1 rd wrao, R)HHe1 rd
 9 r 1lk a-LA
 F - Mr Bmedil
 ID: 4g024, Pr H1)rdt 4(7: 8882, 8B(75g(40(



1 r B)oo - vt 9 j)jy r bf h1k a
 r00 9 r d1e -al)rd Dc
 OeNad, f O, p 2K (G, 9 F



Pec. DyeHrd	Ords Jruis. rudo					Jruis Ords. rudo					E ell Sall. rudo				
	w	T	W	FNN	l eol.	T	P	W	FNN	l eol.	w	P	W	FNN	l eol.
20220403 gth FM	8	5	0	82	0	b23	2	0	h2	0	4h	0	0	4h	h3
g30F M	h0	h	0	g	2	h(	34	0	hg	0	h	0	0	h	hg
g4F M	(	h0	0	h	0	hg	38	0	222	0	4	0	0	4	h
g05F M	3	h0	0	h04	2	h4	3g	0	hg3	0	35	h	0	38	h
Tria	2	3	h	0	385	4	50g	h3g	0	845	0	hg2	h	0	hg3
* FNNa18	55*	37*	0*	0*	6	6	gh3*	hg1*	0*	6	4	::1*	01*	0*	6
* Tria	h7*	257*	0*	2g2*	6	6	455*	h075*	0*	87*	6	h37*	07*	0*	h47*
lv%	072	078.5	6	0785	6	6	0788	0782	6	0782	6	0724	02(0	6	072
P)Csi1 ado Mr r chHe1	24	330	0	3(4	6	6	3h	h2:	0	550	6	h88	h	0	h8g
* P)Csi1 ado Mr r chHe1	:50*	:47*	0*	:47*	6	6	g89*	:37*	0*	gg7*	6	:87*	h00*	0*	:87*
* v eaBy	h	h8	0	hg	6	6	4h	2	0	43	6	h	0	0	h
* v eaBy	47*	43*	0*	47*	6	6	58*	h7*	0*	7*	6	07*	0*	0*	07*
R)HHe1 rd wrao	0	4	0	4	6	6	35	8	0	43	6	4	0	0	4
* R)HHe1 rd wrao	0*	h*	0*	h*	6	6	(7*	(h*	0*	7*	6	27*	0*	0*	27*
* l eoe1clad1	6	6	6	6	2	6	6	6	6	6	6	6	6	6	6
* l eoe1clad1	6	6	6	6	07*	6	6	6	6	6	6	6	6	6	6
R)HHe1 rd 9 r 1lk a-L	6	6	6	6	2	6	6	6	6	6	6	6	6	6	6
* R)HHe1 rd 9 r 1lk a-L	6	6	6	6	07*	6	6	6	6	6	6	6	6	6	6

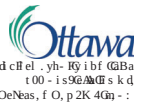
l eoe1clad1 ado R)HHe1 rd 9 r 1lk a-L7P)Peh, wt w)Csi, Tr Tscu, W WGTud

5566814 - COVID - BANK ST @ WILTON CRES - MA... - TMC
 Tue May 3, 2022
 AM Peak (8: -9 AM) 1: -9 AM
 Ass Lsai ei (g)nd aor Mcd:Hvysel, Bealy, Per eidhioi, whyysel co mcar, whyysel co
 LHiii askC
 Ass McReDeod
 47: 158025, gcvadro: 59.316662, j69.189509

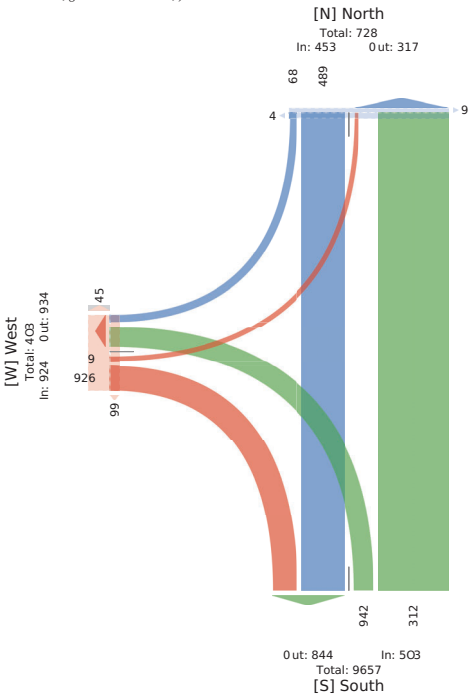


PH)rrer by: L)h ci Odh1 a
 -00 Lcoi)ssadto 7 H
 Nepean, ON, K2G 9J1, LA

5566814 - COVID - BANK ST @ WILTON CRES - MA... - TMC
 Tue May 3, 2022
 MB l ay Lean g 2180 LM (t 180 LM6
 : Av A9e9 gl IP)Qasl Mi G dyoA9, r eacy, Lel e9D1as9, H)yoA9i s vial, H)yoA9i s
 - d 99BaA6
 : AMi ceRes9
 vk hmi D21, l i oaE sh1 478n882, (845D4104



Ld e)l el -yh- R) i bf G)Ba
 t00 - is 9)A)E s k d
 OeNad, f O, p 2K 4Gm - :



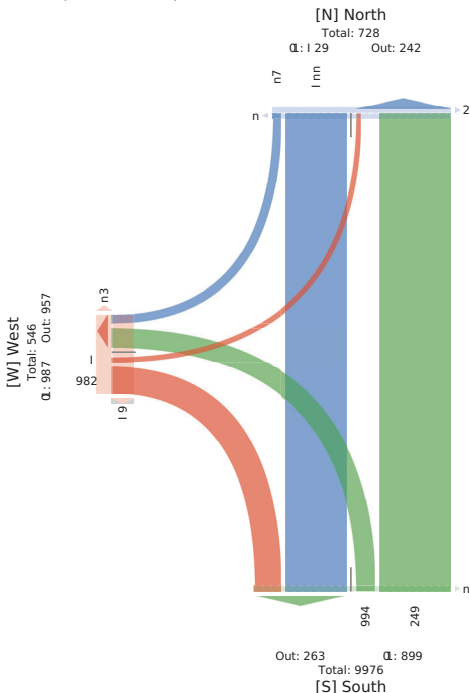
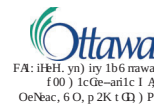
lep k h)oe s	Oid Jruis. iusi					Jruis Oid. iusi					E e9C S)9C iusi				
	v	T	W	NN	LeL	T	l	W	NN	LeL	v	l	W	NN	LeL
20220403 t2180LM	D	n2	0	t00	0	t22	34	0	t48	2	34	2	0	38	18
t2180LM	D	t12	0	t20	4	t23	28	0	t40	0	15	0	0	15	36.5
t180LM	4	t14	0	t20	1	t35	23	0	t4m	0	40	1	0	4	14
th4LM	D	t03	0	t11	1	t20	24	0	t14	0	3i	1	0	34	20
T)GA	2m	122	0	14	8	40	t10	0	5t	2	154	1	0	t5m	5i
* ; NN)ao	57*	875*	0*	0*	(	(	127*	t10*	0*	(	(	875*	27*	0*	(
* T)GA	27*	312*	0*	355*	(	(	107*	D9*	0*	1n5*	(	134*	07*	0*	137*
Lr %	0705	0708	(	0780	(	(	0701	0715	(	0764	(	0711	0700	(	0718
1P)Qasl Mi G dyoA9	2D	3D4	0	t13	(	(	151	t10	0	481	(	156	1	0	t54
* 1P)Qasl Mi G dyoA9	n65*	m2*	0*	m5*	(	(	n25*	t00*	0*	n87*	(	n65*	t00*	0*	n85*
r eacy	t	24	0	25	(	(	21	0	0	21	(	t	0	0	t
* r eacy	37*	47*	0*	47*	(	(	17*	0*	0*	37*	(	05*	0*	0*	05*
H)yoA9i s vial	0	t2	0	t2	(	(	13	0	0	t3	(	3	0	0	3
* H)yoA9i s vial	0*	21*	0*	28*	(	(	25*	0*	0*	21*	(	t7*	0*	0*	t7*
Lel e9D1as9	(	(	(	(	5	(	(	(	(	2	(	(	(	(	58
Lel e9D1as9	(	(	(	(	4	D97*	(	(	(	100*	(	(	(	(	m87*
H)yoA9i s - d 99BaA6	(	(	(	(	1	(	(	(	(	0	(	(	(	(	1
* H)yoA9i s - d 99BaA6	(	(	(	(	175*	(	(	(	(	0*	(	(	(	(	7*

l eoe1clad1 ado R)HHe1 rd 9 r 1lk a-L7P)Peh, wt w)Csi, Tr Tscu, W WGTud

5566814 - COVID - BANK ST @ WILTON CRES - MA... - TMC
 Tue May 3, 2022
 M/Pay keaf (8.2-30 km 9: -30 kM)
 l Cš GllLeB ħhtLanP Mtdđryr@L, c eaĥy, kePeLoan, v Ayrr@Ldn BdaP, v Ayrr@Ldn
 s allLRa(C)
 l (CMdHwentL
 nĥ - D47024, i dr at@n- 45.3D662, 955.175405



5566814 - COVID - BANK ST @ WILTON CRES - MA... - TMC
 Tue May 3, 2022
 FM Feal 3igt FM hgngt FM (h6: eA- Feal 9 luA
 P -) -a(Cš idorCaCHM1rAyv-C9 ea: y, FeĤGAcC BivvyeC1c R1aĤ BivvyeC1c
) A(CGva-l (C)
 P - M1: ek ecrC
 nĥ nĤg402g, s lvanl cngt 3D882, Ĥt 754 g0t



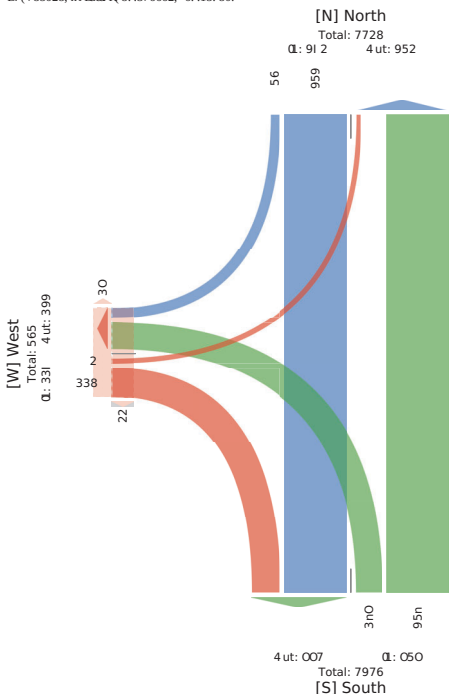
Lk e	O1A0					J1um					E eĤ					Inr
	R	T	W	PNN	FeĤL	T	s	W	PNN	FeĤL	R	s	W	PNN	FeĤL	
20220503 3gg FM	f5	fg2	0	ft4	0	fg0	35	0	f85	0	l3	0	0	l3	f3	348
g0FM	14	f3f	0	fgD	0	ffD	18	0	f85	0	g8	2	0	gD	15	38g
g4FM	ff	f33	0	fgg	0	fg0	82	0	222	0	80	f	0	8f	11	g28
g0FM	3	f3D	0	fg2	0	fgf	g2	0	f43	0	15	0	0	15	15	34f
T1m	g4	fg	0	tD	0	fg0	208	0	8g0	0	225	3	0	22D	50	ft5D
* PNNLavo	4T*	ĤT*	0*	h	h	825*	288*	0*	h	h	D88*	f3*	0*	h	h	h
* T1m	3T*	3g8*	0*	382*	h	3g3*	f32*	0*	g85*	h	fg3*	02*	0*	fg5*	h	h
P9*	0563	0TqD	h	0T88	h	0T13	0832	h	078D	h	08f3	0788	h	07f2	h	0T8g
s idorCaCHM1rAyv-C	g5	t0D	0	ttt	h	t0D	203	0	8f2	h	22f	3	0	22g	h	fgD
* s idorCaCHM1rAyv-C	D7*	D8g*	0*	D85*	h	Dg5*	DĤ7*	0*	D78*	h	D82*	f00*	0*	D82*	h	D78*
9 ea: y	f	ft	0	f5	h	f8	2	0	fD	h	0	0	0	0	h	3*
* 9 ea: y	2T*	2T*	0*	2B*	h	3T*	f70*	0*	2T*	h	0*	0*	0*	0*	h	2T*
BivvyeC1c R1aĤ	f	2f	0	22	h	fg	2	0	f5	h	t	0	0	t	h	g3
* BivvyeC1c R1aĤ	2T*	3T*	0*	3B*	h	25*	f70*	0*	2T*	h	22*	0*	0*	22*	h	2B*
* FeĤGAcC	h	h	h	h	0	h	h	h	h	0	h	h	h	h	0	h
BivvyeC1c) A(CGva-l	h	h	h	h	0	h	h	h	h	0	h	h	h	h	0	h
* BivvyeC1c) A(CGva-l	h	h	h	h	h	h	h	h	h	h	h	h	h	h	h	h

FeĤGAcC CaCHBivvyeC1c) A(CGva-l 7s ns eĤr, RnRidor, TnToA, WnWhTnA

5566814 - COVID - BANK ST @ WILTON CRES - MA... - TMC
 Tue May 3, 2022
 AM AeaP k(8: AM - 8(8: AM9 -) l eGAs AeaP L i uC
 g s h s att e Ĥndr a aĤV Mi G ĤBet, L ea l y, AevetGĤH, RĤBet i Hwi av, RĤBet i H
 ĤGttmasP9
 g s Mi l eĤ eĤt
 Ĥ (785028, ni Bnd Ĥ 8: .376662, -6: .15: 80:



5566814 - COVID - BANK ST @ ECHO DR - MAY 03... - TMC
 Tue May 3, 2022
 Full Length (6:30 AM-9:30 AM, 11:30 AM-2 PM, 3:30 PM-6 PM)
 All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
 All Movements
 ID: 947081, Location: 485987.9, - 85674334



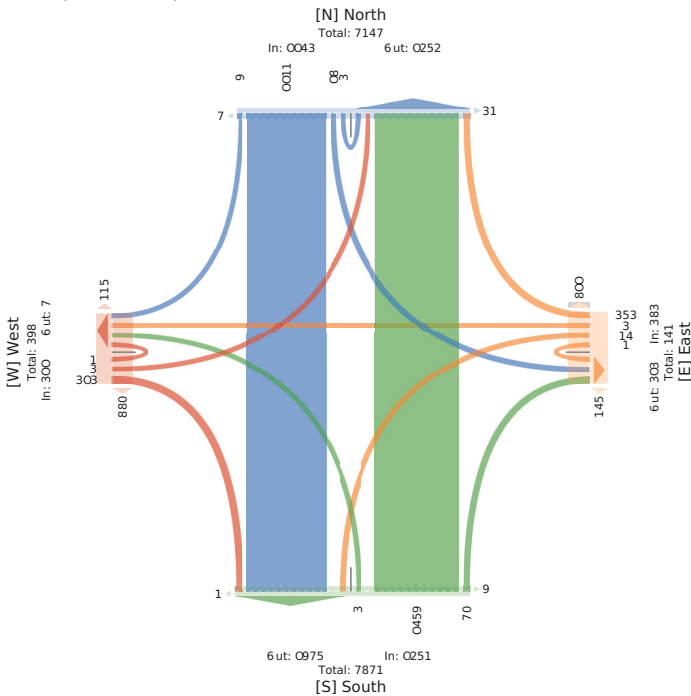
Leg Direction	North Southbound					East Westbound					South Northbound					West Eastbound					Inr			
	R	T	L	U	App	R	T	L	U	App	R	T	L	U	App	R	T	L	U	App				
2022-08-03 6:00AM	0	118	0	0	118	0	1	0	0	1	0	140	0	0	140	0	1	0	0	1	17	28		
9:00AM	0	340	1	0	341	2	7	0	1	9	16	7	403	0	0	411	2	14	0	0	14	2	56	
7:00AM	0	484	2	0	486	4	9	0	0	9	43	6	694	0	0	700	0	17	0	0	17	0	1223	
9:00AM	0	242	4	0	246	0	4	0	1	8	14	4	30	0	0	311	1	4	0	0	4	24	866	
11:00AM	0	267	4	0	271	2	8	0	0	8	20	3	277	0	0	291	0	7	0	0	7	30	8.6	
12:00PM	0	880	7	0	887	1	9	1	9	1	20	13	862	1	0	876	0	16	0	1	1	69	11.1	
1:00PM	0	8	2	10	0	22	0	28	0	1	33	97	26	84	0	0	83	3	14	0	0	14	63	1202
3:00PM	1	3	1	2	0	3.4	1	9	0	1	10	71	326	0	0	333	0	11	0	0	11	0	1.27	
4:00PM	2	.70	6	0	.77	1	17	0	4	0	22	127	17	.88	0	0	6.3	0	23	0	0	23	112	1606
8:00PM	2	690	6	1	699	10	13	0	4	0	1.130	11	673	0	0	694	1	32	0	0	2	34	1444	
Total	8	4422	43	1	44.1	21	101	1	2	2	131	614	96	4.08	1	0	4702	141	0	1	2	144	886	9847
% Approach	0%	97%	13%	0%	-	-	.3%	0%	20%	13%	-	23%	97%	0%	0%	-	9.3%	0%	0%	15%	-	-	-	
% Total	0%	46%	0%	0%	46%	1%	0%	0%	0%	1%	13%	49%	0%	0%	49%	1%	13%	0%	0%	13%	0%	13%	-	
Lights and Motorcycles	1	4137	40	1	4178	-	0	0	26	2	97	67	43.9	0	0	444	-	138	0	1	2	137	7763	
% Lights and Motorcycles	20%	93%	93%	100%	93%	69%	0%	96%	100%	45%	0%	93%	0%	0%	93%	98%	0%	100%	100%	98%	92%	92%	-	
Heavy	0	162	0	0	162	-	1	0	0	1	-	1	170	1	0	172	-	1	0	0	1	-	346	
% Heavy	0%	3%	0%	0%	3%	13%	0%	0%	0%	0%	13%	35%	100%	0%	35%	-	0%	0%	0%	0%	0%	0%	-	
Bicycles on Road	4	122	3	0	129	-	30	1	1	0	32	-	2	146	0	0	1.3	-	8	0	0	8	-	339
% Bicycles on Road	70%	2%	.5%	0%	25%	-	25%	100%	35%	0%	24%	-	27%	3%	0%	0%	-	33%	0%	0%	33%	-	33%	
Pedestrians	-	-	-	-	-	19	-	-	-	-	604	-	-	-	-	6	-	-	-	-	-	471		
% Pedestrians	-	-	-	-	-	90%	-	-	-	-	97%	-	-	-	-	78%	-	-	-	-	-	76%		
Bicycles on Crosswalk	-	-	-	-	-	2	-	-	-	-	10	-	-	-	-	1	-	-	-	-	-	8		
% Bicycles on Crosswalk	-	-	-	-	-	98%	-	-	-	-	13%	-	-	-	-	145%	-	-	-	-	-	138%		

* Pedestrians and Bicycles on Crosswalk: L: Left, R: Right, T: Thru, U: U-Turn

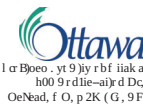
5566814 - COVID - BANK ST @ ECHO DR - MAY 03... - TMC
 Tue May 3, 2022
 Full Length (6:30 AM-9:30 AM, 11:30 AM-2 PM, 3:30 PM-6 PM)
 All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
 All Movements
 ID: 947081, Location: 485987.9, - 8574334



Provided by: City of Ottawa
 100 Constellation Dr,
 Nepean, ON, K2G 8J9, CA



5566814 - COVID - BANK ST @ ECHO DR - MAY 03... - TMC
 Tue May 3, 2022
 FM 1 ea l r g h F M 6 : th (F MA
 F - 9 a l l e l r P C S i a d o M r i r d H e l v e a B y , l e o l e i c j a d l R H e l r d w r a o , R H e l r d
 9 r l l k a - L A
 F - M r B e m e d i
 I D t : 4 g 0 (h , P r H i) d r t 4 (7 8 : (g 8 : 6 6 (7 5 g 4 3 3 4



1 r c B p o o v t 9 j y r b f B i a k a
 h 0 0 9 r d i e - a l j r d D e
 O e N a s , f O , p 2 K (G , 9 F

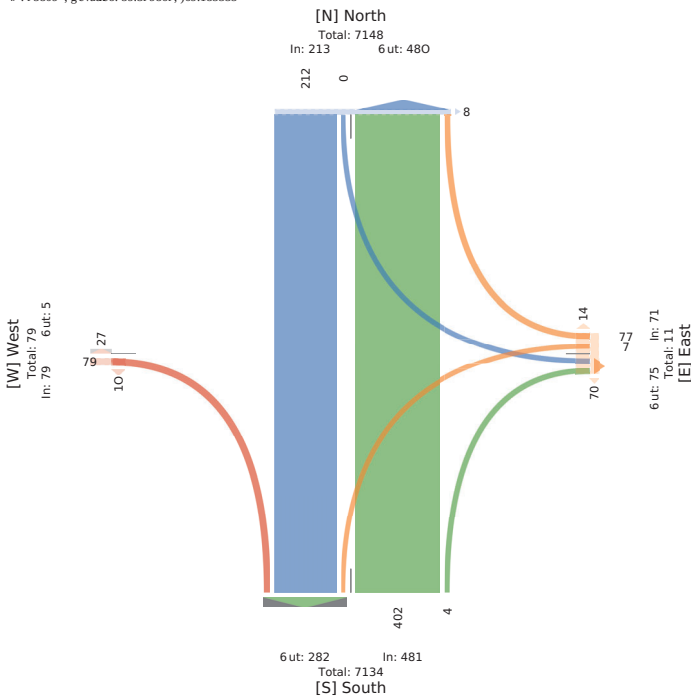
Pec	Ords					Jali					Erus					S eli								
	W	T	P	W	FNN	W	T	P	W	FNN	W	T	P	W	FNN	W	T	P	W	FNN				
20220(03)gh(FM)	0	h04	0	0	h04	h	4	0	0	0	4	h2	2	h4	0	0	h5	0	4	0	0	4	2	25g
g30F M	0	h20	h	0	h2h	3	4	0	0	0	4	h0	3	h4	0	0	h8	0	4	0	0	4	2	30g
g44F M	0	h1	0	0	h1	0	0	0	0	0	0	h0	h	2h	0	0	h5	0	8	0	0	8	h	30g
g00F M	0	h42	2	0	h44	0	3	0	h	0	4	h	h	h2	0	0	h3	0	2	0	0	2	h	33g
Tra	0	(2	3	0	(2g	4	h	0	h	0	h2	40	0	h	0	0	h42	0	h	0	0	h	h	h0h
* FNRaH	0	2	0	0	0	6	4	h	0	0	0	6	6	0	0	0	0	6	h	0	0	0	6	6
* Tra	0	40	0	0	40	6	0	0	0	0	0	6	0	0	0	0	6	h	0	0	0	h	h	h
1 v %	6	0	2	4	0	2	6	0	2	0	6	0	2	0	6	0	2	0	6	0	2	0	6	0
P311 ad o M r i r d H e l	0	00	3	0	03	6	2	0	h	0	3	6	h	55h	0	0	552	6	h	0	0	h	6	h
* P311 ad o M r i r d H e l	0	(2	h	0	0	(2	6	h	0	0	0	2	0	h	0	0	2	6	h	0	0	0	h	0
v e a B y	0	h	0	0	h	6	0	0	0	0	0	6	0	43	0	0	43	6	0	0	0	0	6	5h
* R H e l r d w r a o	0	8	0	0	8	6	0	0	0	0	0	6	0	0	0	0	6	0	0	0	0	0	6	4
* R H e l r d w r a o	0	h	0	0	h	6	h	0	0	0	0	6	h	0	0	0	6	h	0	0	0	0	6	4
* l e o l e i c j a d l	6	6	6	6	6	3	6	6	6	6	3	6	6	6	6	6	6	6	6	6	6	6	6	6
R H e l r d 9 r l l k a - L A	6	6	6	6	6	h	6	6	6	6	6	h	6	6	6	6	6	6	6	6	6	6	6	h
* R H e l r d 9 r l l k a - L A	6	6	6	6	6	h	6	6	6	6	6	h	6	6	6	6	6	6	6	6	6	6	6	h

l e o l e i c j a d l a d o R H e l r d 9 r l l k a - L A P e h , w t w (S i , T i T s c u , W W G I u d

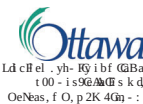
5566814 - COVID - BANK ST @ ECHO DR - MAY 03... - TMC
 Tue May 3, 2022
 AM Peak (8-9 AM) 1 : - 9 AM C
 A s L s a i e (g t n d a o r M c d H y v e i , B e a l y , P e r e i d h o i , w h y v e i c o m c a r , w h y v e i c o
 L H i i l a s k
 A s M c R e D e o d
 4 7 : 1 5 8 0 9 - , g c v a d r o : 5 9 . 3 1 9 8 6 1 ,) 6 9 . 1 8 5 3 3 5



PH r r e r b y : L h i c i O d h i a
 - 0 0 L c o i s s a d o 7 H
 N e p e a n , O N , K 2 G 9 J 1 , L A



5566814 - COVID - BANK ST @ ECHO DR - MAY 03... - TMC
 Tue May 3, 2022
 M B l e a n g L 2 8 0 L M (t 1 8 0 L M 6
 : A v A 9 2 9 g l P P a s l M i G d y o a 9 , r e a c y , L e l e 9 d i s 9 , H i y o a 9 i s v i a l , H i y o a 9 i s
 - d 9 9 B a h 6
 : A M i c e R e s 0
 w k h m l I D 4 t , l i o a 6 s h l 4 3 m l D B m (8 4 5 1 3 3 1



L d e l e l y h - R y r b f B i a k a
 t 0 0 - i s 9 0 A 6 6 s k d
 O e N a s , f O , p 2 K 4 6 m - :

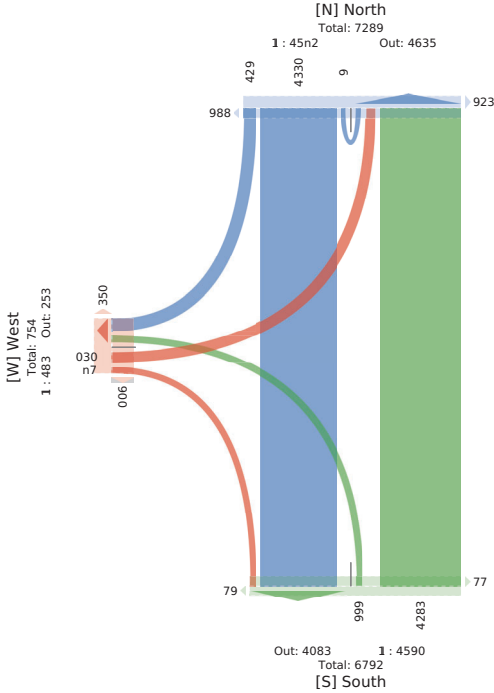
I e P	O i d j					J a o C					E u d j					S e 9 C													
	W	T	P	W	FNN	W	T	P	W	FNN	W	T	P	W	FNN	W	T	P	W	FNN									
202204(03)280LM	0	124	2	0	128	0	3	0	0	0	3	14	1	114	0	0	11m	0	1	0	0	1	20	21g					
1284LM	0	141	1	0	144	0	2	1	1	0	1	24	2	145	0	0	140	0	3	0	0	3	14	32g					
180LM	0	150	4	0	153	0	4	0	1	0	m	25	D	118	0	0	144	0	2	0	0	2	11	30g					
1h4LM	0	130	2	0	110	0	m	0	1	0	10	20	D	130	0	0	130	3	3	0	0	3	22	2m					
Tra	0	40	10	0	4m	1	m	1	5	0	25	m	22	40	0	0	500	3	12	0	0	12	8	123g					
* N d a o	0	n0	0	0	0	(	0	0	0	0	0	(	3	h	0	0	0	(	1	0	0	0	0	((
* Tra	0	16	0	0	16	(	1	0	0	0	0	2	(	1	0	0	0	(	1	0	0	0	0	((
L r %	0	0	0	0	0	(	0	0	0	0	0	(	0	0	0	0	(	0	0	0	0	0	((
1 P P a s l M i G d y o a 9	0	41	1	0	44	(	1	8	0	5	0	23	(	1	8	43m	0	0	445	(	1	2	0	0	12	(	11	14	
* 1 P P a s l M i G d y o a 9	0	n0	0	0	0	(	h	0	0	0	0	h	(	h	0	0	0	0	(	h	0	0	0	h	(	h	0	0	h
r e a c y	0	28	0	0	28	(	0	0	0	0	0	(	0	23	0	0	23	(	0	0	0	0	0	(	0	4	0	0	4
* r e a c y	0	15	0	0	15	(	0	0	0	0	0	(	0	10	0	0	10	(	0	0	0	0	0	(	0	1	0	0	1
H i y o a 9 i s v i a l	0	11	0	0	11	(	2	1	0	0	3	(	4	15	0	0	2	(	0	0	0	0	0	(	0	1	0	0	1
* H i y o a 9 i s v i a l	0	2	1	0	2	(	0	0	0	0	0	(	2	2	0	0	0	(	0	0	0	0	0	(	0	0	0	0	0
L e l e 9 d i s 9	(((((((((((((((((((((((((((((
* L e l e 9 d i s 9	(((((((((((((((((((((((((((((
H i y o a 9 i s - d 9 9 B a h	(((((((((((((((((((((((((((((
* H i y o a 9 i s - d 9 9 B a h	(((((((((((((((((((((((((((((

L e l e 9 d i s 9 a s l H i y o a 9 i s - d 9 9 B a h 7 1 h e C v h v P C h T T d i , W h W T u d

5566814 - COVID - BANK ST @ AYLMER AVE - MAY... - TMC
 Tue May 3, 2022
 Full Length (6:30 AM-9:30 AM, 11:30 AM-2 PM, 3:30 PM-6 PM)
 All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
 All Movements
 ID: 947085, Location: 48.3986, -58.674156



5566814 - COVID - BANK ST @ AYLMER AVE - MAY... - TMC
 Tue May 3, 2022
 F M L e o l c i a d l r o j C h i e l a d o M r i r c h e l e v e a b y l e o l c i a d l R j H e l r d w r a o R j H e l r d
 F - 9 a l l e l r o j C h i e l a d o M r i r c h e l e v e a b y l e o l c i a d l R j H e l r d w r a o R j H e l r d
 F - M r B e m e d i
 I d t 47: 0 (g , P r H i) d t 7 (8 4 (5 , 6) (5 : 7 h g 5



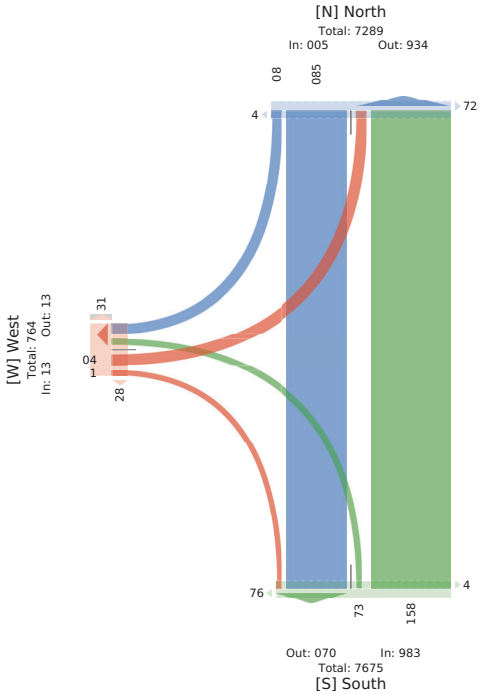
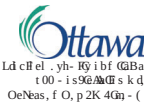
Pec DyeHrd	Ords Jruis. rudo				l e o l	Jruis Ords. rudo				l e o l	E e l i S a l l . r u d o				l e o l	
	w	T	W	FNN		T	P	W	FNN		w	P	W	FNN		
20220403 g h F M	4	h0	0	h07	h3	h74	2	0	h4	5	7	h g	0	2h	37	2:5
g30F M	h0	h33	0	h73	h3	h40	(	0	h4	h	2	h g	0	h4	h g	3:6
g71F M	h7	h2	0	h55	h3	h40	g	0	h4g	h h	0	h3	0	h3	h	3:5
h00F M	h g	h4	0	h35	h3	h5h	0	0	h5h	h	0	h3	0	h4	h0	3:8
T i a s	(	04	0	(4	2h	540	h7	0	g07	20	5	(	0	57	g5	h3:6
* F N r a h	38*	4h8*	0*	6	6	4:8*	28*	0*	6	6	4:8*	408*	0*	6	6	6
* T i a s	38*	3:8*	0*	72h*	6	(20*	h8*	0*	(3h*	6	0:8*	78*	0*	7h*	6	6
l v %	0:6:2	0:8:3	6	0:8:7g	6	0:8:43	0:8:00	6	0:8:4	6	0:8:6g	0:8:3	6	0:8:5	6	0:8:5
P j i l l a d o M r i r c h e l e	7h	743	0	(37	6	52	h3	0	53:	6	5	7:	0	(7	6	h:25
* P j i l l a d o M r i r c h e l e	:20*	45h*	0*	4:8*	6	408*	42h*	0*	405*	6	h00*	:28*	0*	:78*	6	4:29*
v e a l y	2	h3	0	h	6	35	h	0	3g	6	0	(	0	(	6	h
* v e a l y	7h*	28*	0*	28*	6	(8*	gB*	0*	(8*	6	0*	:8*	0*	g8*	6	7h*
R j H e l r d w r a o	g	3	0	h0	6	24	0	0	24	6	0	(	0	(	6	77
* R j H e l r d w r a o	h7h*	08*	0*	h8*	6	7h*	0*	0*	7h*	6	0*	:8*	0*	g8*	6	38*
l e o l c i a d l	6	6	6	6	h4	6	6	6	6	20	6	6	6	6	6	4:
* l e o l c i a d l	6	6	6	6	40g*	6	6	6	6	h00*	6	6	6	6	6	g:8*
R j H e l r d g r i l k a d	6	6	6	6	2	6	6	6	6	0	6	6	6	6	6	h g
* R j H e l r d g r i l k a d	6	6	6	6	4g*	6	6	6	6	0*	6	6	6	6	6	229*

l e o l c i a d l a d o R j H e l r d g r i l k a - L B P t P e h , w t w j C i , T r T s c u , W W G T u d

5566814 - COVID - BANK ST @ AYLMER AVE - MAY... - TMC
 Tue May 3, 2022
 AM Peak (8: -9 AM) 1: -9 AM C
 Ass L s a i e (g t n d a o r M c d H y v e i , B e a l y , P e r e i d h o i , w h y v e e c o m c a r , w h y v e e c o L H i i l a s k C
 Ass M c R e D e o d
 47: 5.1098, gcvadro: .96591, 89g1. -81



5566814 - COVID - BANK ST @ AYLMER AVE - MAY... - TMC
 Tue May 3, 2022
 M B l a y L e a n g t l B O (M 6 t 2 B O L M :
 (A v A 9 e 9 g l P) O a s l M i G d y o a 9 , r e a c y , L e l e 9 G a s 9 , H i b y o a 9 i s v i a l , H i b y o a 9 i s
 - d 9 9 B a h :
 (A M i c e R e s 0
 v k h m l D 47 , l i o a e s h l 4 8 m 5 , 6 7 4 5 D t 7 5



l e p k h o e s	O i d j J i u g . i u s i				l e l	J i u g O i d j . i u s i				l e l	E e c S a l C i u s i				l e l	w c
	v	T	W	(NN		T	I	W	(NN		v	I	W	(NN		
20220403 t r i B O M	14	t14	0	130	m	t11	3	0	t11	3	0	7	0	7	2t	2h
t r i B g M	20	117	0	157	1	117	4	0	142	3	1	4	0	5	11	3:4
t r i B O L M	14	112	0	147	3	11m	2	0	14	5	2	m	0	11	1m	3: m
t r i h d l M	11	132	0	115	t2	133	3	0	135	1	2	10	0	12	27	2h
T i G A	51	435	0	500	2D	470	13	0	428	15	4	3:	0	35	Dh	12: m
* (N N i a e)	108*	Dh8*	0*	6	6	g78*	28*	0*	6	6	13h*	D3*	0*	6	6	6
* T i G A	48*	118*	0*	1:6h*	6	15h*	18*	0*	178*	6	0:8*	28*	0*	3h*	6	6
l r %	0:8:0	0:8:03	6	0:8:1	6	0:8:44	0:8:40	6	0:8:1D	6	0:8:24	0:8:00	6	0:8:1D	6	0:8:23
1 P j O a s l M i G d y o a 9	13	40m	0	442	6	435	13	0	41m	6	4	24	0	30	6	1:13
* 1 P j O a s l M i G d y o a 9	57h*	m8h*	0*	m8h*	6	m18*	100*	0*	m18*	6	100*	Dh8*	0*	Dh8*	6	m:2h*
r e a c y	4	22	0	27	6	22	0	0	22	6	0	3	0	3	6	4:2
* r e a c y	7h*	18*	0*	18*	6	3h*	0*	0*	3h*	6	0*	m8*	0*	Dh*	6	1:8*
H i b y o a 9 i s v i a l	t5	4	0	2t	6	12	0	0	12	6	0	3	0	3	6	3:5
* H i b y o a 9 i s v i a l	24h*	08*	0*	3h*	6	2h*	0*	0*	2h*	6	0*	m8*	0*	Dh*	6	3:8*
L e l e 9 G a s 9	6	6	6	6	27	6	6	6	6	15	6	6	6	6	6	7:
* L e l e 9 G a s 9	6	6	6	6	m8*	6	6	6	6	100*	6	6	6	6	6	D:8*
H i b y o a 9 i s - d 9 9 B a h	6	6	6	6	1	6	6	6	6	0	6	6	6	6	6	1:3
* H i b y o a 9 i s - d 9 9 B a h	6	6	6	6	3h*	6	6	6	6	0*	6	6	6	6	6	4:8*

l e l e 9 G a s 9 a s l H i b y o a 9 i s - d 9 9 B a h 1 h l e C v h v P j C T h T d i , W W G T u d

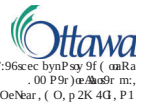
5566814 - COVID - BANK ST @ AYLMER AVE - MAY... - TMC

Tue May 3, 2022
 M: 7:30 AM - 9:30 AM
 9:30 AM - 12:00 PM
 12:00 PM - 3:00 PM
 3:00 PM - 6:00 PM
 6:00 PM - 9:00 PM
 9:00 PM - 12:00 AM

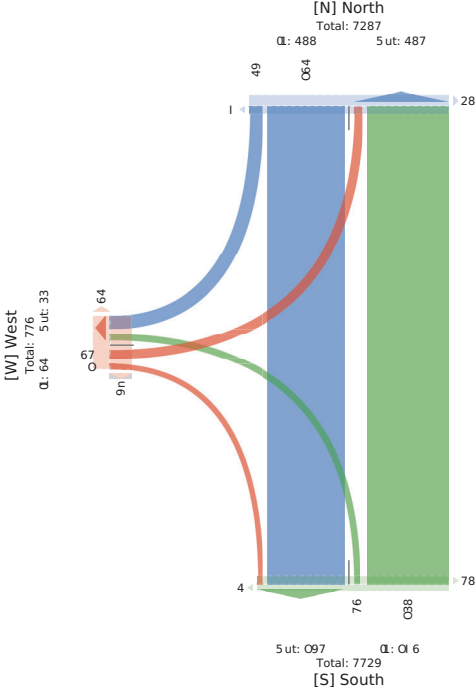


5566814 - COVID - BANK ST @ AYLMER AVE - MAY... - TMC

Tue May 3, 2022
 FM Feal 13:00 FM gt r0 FMhg(GeaWFeal - 9u:
 1 AP A)je ICs d0 arc M90: H(H), - ea6y, Fecel0sar), v s(H) 9r B9ac, v s(H) 9r
 P:9)RaA
 1 AM9Gewer0
 km1 t D47, C9H0arnt 481 45, g/45D . 75



F:96cc bymP9y 91 (mR
 00 P9: y0A0r m,
 OeNar, (O, p2K 4G, P1



Time	[N] North				[W] West				[S] South				
	B	T	W	1 NN	B	T	W	1 NN	B	T	W	1 NN	
2022-04-03 3:00 PM	32	15	0	22D	1	7	1	0	74	3	2	1	0
3:45 PM	1	0	0	10	1	1	0	0	1	0	0	0	0
4:00 PM	4	5	0	7	1	7	5	0	77	3	7	7	0
4:15 PM	22	10	0	2	2	10	0	15	0	0	2	0	3
Total	17	722	0	101	1	554	7	0	512	23	2	42	0
% Approach	0.8%	13.2%	0%	4.8%	0.1%	17.8%	0.2%	0%	1.8%	1.2%	0.1%	0.7%	0%
% Heavy	48%	158%	0%	4.8%	8%	128%	8%	0%	1.8%	8%	38%	0%	1.8%
% Bicycles on Road	41	515	0	744	8	532	7	0	561	8	1	17	0
% Pedestrians	0.8%	1.8%	0%	2.8%	0.1%	1.48%	0%	0%	1.48%	0.1%	1.08%	0%	1.08%
% Bicycles on Crosswalk	27	1	0	35	8	23	0	0	23	8	2	1	0
% Bicycles on Crosswalk	3.0%	0.2%	0%	1.8%	0.8%	3.8%	0%	0%	3.8%	1.8%	7.0%	0%	1.8%

4 Fecel0sar) arc v s(H) 9r P:9)RaA8Cn Cefq BnBs d0 TnTdu, WnWgtur

5566814 - COVID - BANK ST @ AYLMER AVE - MAY... - TMC

Tue May 3, 2022
 AM AeaP k(30 AM 8: (30 AM- 89) elacAeap s Lul
 i Cg Ghheh k nioth acHMLLvyv(s ea) y, Aehhrlach, Bayv0eh Lc RLaH Bayv0eh Lc
 g LHhwaP-
 i (LML) emech
 ID(4: 705, t LvantLc(: 50451, 8 507: b. 1

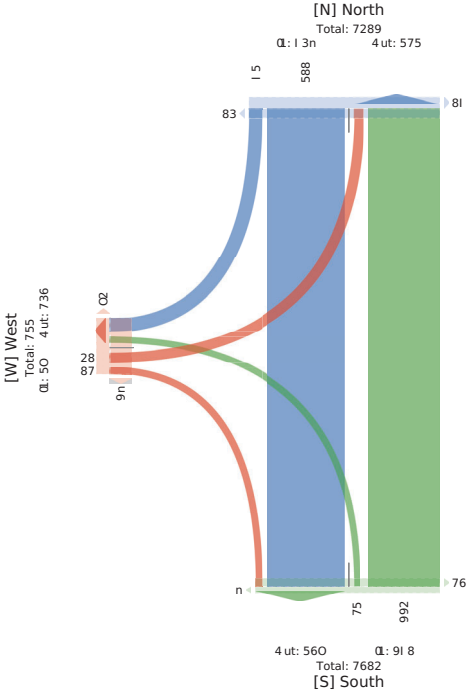


5566814 - COVID - QUEEN ELIZABETH DRWY @ FIF... - TMC

Tue May 3, 2022
 Full Length (6:30 AM-9:30 AM, 11:30 AM-2 PM, 3:30 PM-6 PM)
 All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
 All Movements
 ID: 947066, Location: 48303921, -. 83719. 4

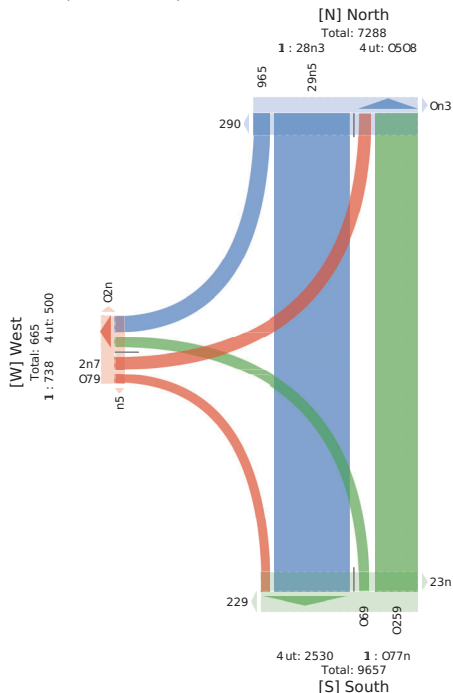


Provided by: City of Ottawa
 100 Constellation Dr,
 Nepean, ON, K2G 8J9, CA



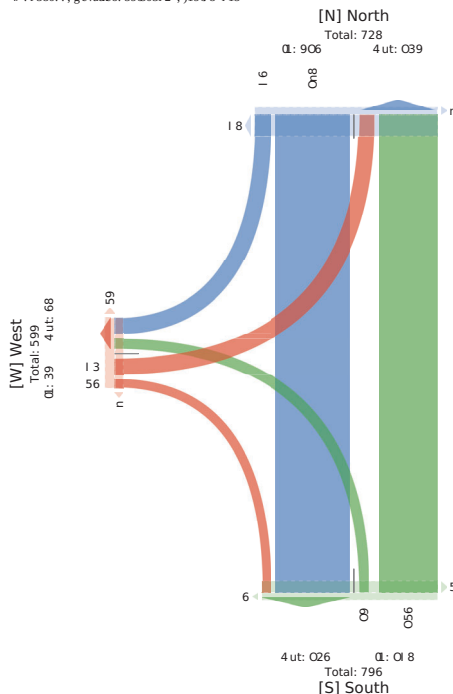
Leg Direction	North Ebound				South Nbound				West Wbound							
	R	T	U	App	Ped	T	L	U	App	Ped	R	L	U	App	Ped	Int
2022-08-03 6:00 AM	8	42	0	4	13	32	1	0	33	11	3	4	0	0	0	7
7:00 AM	23	1	4	19	22	141	0	0	147	2	8	1	0	22	13	36
8:00 AM	44	2	1	318	4	212	21	0	233	2	18	46	0	61	20	600
9:00 AM	24	107	0	132	18	73	13	0	96	11	11	20	0	31	7	289
10:00 AM	30	131	0	161	19	61	8	0	66	23	9	17	0	2	16	284
12:00 PM	86	286	0	312	83	132	2	0	189	2	16	38	0	81	26	822
1:00 PM	83	240	0	293	46	13	26	0	163	88	12	23	0	38	24	491
3:00 PM	26	233	0	289	48	9	23	0	120	3	17	18	0	33	16	412
4:00 PM	68	808	0	8	8	16	36	0	203	66	32	39	0	1	22	744
8:00 PM	69	408	0	4	4	71	191	34	0	228	100	22	4	0	69	39
Total	398	2368	0	2,60	397	1283	193	0	1446	429	143	264	0	40	191	4613
% Approach	145%	785%	0%	-	-	765%	133%	0%	-	-	383%	643%	0%	-	-	-
% Total	75%	815%	0%	895%	-	2.5%	42%	0%	315%	-	33%	85%	0%	75%	-	-
Lights and Motorcycles	36	2329	0	2696	-	1222	193	0	1418	-	137	284	0	392	-	4803
% Lights and Motorcycles	923%	978%	0%	9.5%	-	9.3%	100%	0%	9.5%	-	963%	962%	0%	962%	-	9.3%
Heavy	9	18	0	24	-	10	0	0	10	-	2	4	0	6	-	40
% Heavy	2.9%	0.8%	0%	0.9%	-	0.9%	0%	0%	0.5%	-	1.8%	1.8%	0%	1.5%	-	0.9%
Bicycles on Road	19	21	0	40	-	21	0	0	21	-	3	6	0	9	-	0
% Bicycles on Road	4.5%	0.9%	0%	1.5%	-	1.5%	0%	0%	1.5%	-	2.3%	2.9%	0%	2.5%	-	1.9%
% Pedestrians	-	-	-	-	290	-	-	-	-	369	-	-	-	-	174	-
Bicycles on Crosswalk	-	-	-	-	107	-	-	-	-	60	-	-	-	-	-	-
% Bicycles on Crosswalk	-	-	-	-	2.9%	-	-	-	-	14.3%	-	-	-	-	-	3.5%

5 Pedestrians and Bicycles on Crosswalk: L: Left, R: Right, T: Thru, U: U-Turn



Time	Ords				Jruis				E ell						
	w	T	W	FNN	l eol	T	P	W	FNN	l eol	w	P	W	FNN	l eol
20220(03 ghr(FM	hg	74	0	g2	ht	(h	7	0	(5	7	2	5	0	:	g
g30F M	h0	gh	0	1h	g	7g	3	0	5h	(	4	h2	0	h7	4
g4F M	g	g3	0	1h	h7	15	(	0	72	5	g	h	0	23	4
:00F M	hh	(2	0	73	h0	dh	:	0	(0	(	3	h2	0	h	(
T)ia	45	2g0	0	325	4g	2h5	23	0	240	23	h5	47	0	73	2h
* FNR aH	h48*	g(9*	0*	6	g	:08*	:8*	0*	6	g	258*	538*	0*	6	g
* T)ia	5*	448*	0*	(h8*	g	348*	38*	0*	3g8*	g	28*	58*	0*	h08*	g
1 v %	08hg	08dg	6	08g	g	08g	08f3:	6	08g4	g	083h	08f(0	6	0854	g
P)Cil ado Mr ir cHHe1	40	25g	0	3hg	g	2h(	23	0	23g	g	h5	4(	0	72	g
* P)Cil ado Mr ir cHHe1	g(h*	: :8*	0*	:52*	g	: :8*	h00*	0*	: :8*	g	h00*	:58*	0*	:g8*	g
* v ealy	2	0	0	2	g	2	0	0	2	g	0	0	0	0	g
* v ealy	48*	0*	0*	08*	g	08*	0*	0*	08*	g	0*	0*	0*	0*	g
R)HHe1 rd wrao	(	2	0	5	g	0	0	0	0	g	0	h	0	h	g
* R)HHe1 rd wrao	h08*	08*	0*	28*	g	0*	0*	0*	0*	g	0*	28*	0*	h8*	g
* l eoe1clad1	6	6	6	6	33	6	6	6	6	hg	6	6	6	6	20
* l eoe1clad1	6	6	6	6	78g*	6	6	6	6	5g8*	6	6	6	6	(8*
R)HHe1 rd 9 r 1lk a-L	6	6	6	6	h	6	6	6	6	(	6	6	6	6	h
* R)HHe1 rd 9 r 1lk a-L	6	6	6	6	38g*	6	6	6	6	28g*	6	6	6	6	48*

l eoe1clad1 ado R)HHe1 rd 9 r 1lk a-LBPt Pelt, wt w)CsI, Tr Tscu, W WGIud



Time	Os)jP				Jsu)P				E e-)						
	H	T	W	6NN	LeL	T	9	W	6NN	LeL	H	9	W	6NN	LeL
20220703(2600LM	tm	40	0	5m	tt	27	5	0	32	2t	7	t2	0	t5	3
12h 7LM	t3	47	0	5D	tt	2m	7	0	3l	2t	4	7	0	tt	1t
12h0LM	tt	47	0	5m	tt	37	4	0	11	17	t	D	0	m	7
12h 7LM	t0	44	0	54	tt	13	m	0	72	17	1	10	0	tt	5
T)ia	74	274	0	3t2	72	132	25	0	17m	52	14	37	0	7t	24
* 6NNsu)P	t58*	128*	0*	h	h	180*	158*	0*	h	h	38*	428*	0*	h	h
* T)ia	t08*	108*	0*	7m8*	h	278*	78*	0*	308*	h	38*	48*	0*	m8*	h
Lo %	0835	08h	h	08D	h	08D	0870	h	0857	h	0845	08D	h	0827	h
9HP) aC Ms)jdyde-	74	272	0	30D	h	t2D	25	0	t77	h	t4	32	0	1D	h
* 9HP) aC Ms)jdyde-	t00*	m8*	0*	m8*	h	m8*	t00*	0*	m8*	h	t00*	m8*	0*	m8*	h
o eary	0	3	0	3	h	3	0	0	3	h	0	t	0	t	h
* o eary	0*	t8*	0*	t8*	h	28*	0*	0*	t8*	h	0*	28*	0*	28*	h
c R)hde- sCHsal	0	t	0	t	h	t	0	0	t	h	0	2	0	2	h
* c R)hde- sCHsal	0*	08*	0*	08*	h	08*	0*	0*	08*	h	0*	78*	0*	38*	h
* l eoe1clad1	h	h	h	h	12	h	h	h	h	45	h	h	h	h	24
* l eoe1clad1	h	h	h	h	58g*	h	h	h	h	m8*	h	h	h	h	100*
c R)hde- sCAis--v a(n	h	h	h	h	tt	h	h	h	h	7	h	h	h	h	0
* c R)hde- sCAis--v a(n	h	h	h	h	20D*	h	h	h	h	48*	h	h	h	h	0*

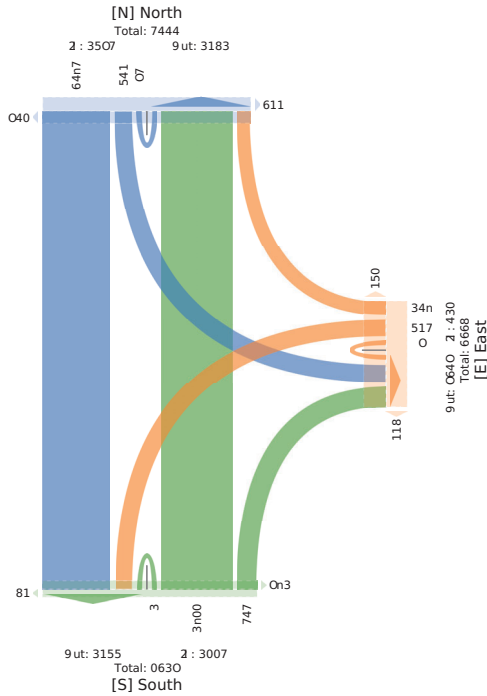
l eoe1clad1 ado R)HHe1 rd 9 r 1lk a-LBPt Pelt, wt w)CsI, Tr Tscu, W WGIud

5566814 - COVID - BANK ST @ EXHIBITION WAY -... - TMC

Tue May 3, 2022
 Full Length (6
 : ll Ala--e- (Lght- anl MPP)G)De-, s ea y, dele-i)9n-, o9)CLe- Pn r Pa l, o9)CLe- Pn
 A)P--c allB
 : ll MPi ev ent-
 Bkwnll 2m LPat9PnwDn6k7l8D) 5 m67n7k3

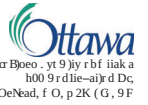


d)Pi 9el- ykBy Pf ttoe a
 (00 APn-tellatPh R),
 Nepean, f N, K2G rnk, A:



5566814 - COVID - BANK ST @ EXHIBITION WAY -... - TMC

Tue May 3, 2022
 FM 1 ea l.rgh(FM 6: th(F MA
 F - 9 -a ll e r P)Cs i l ado Mr r r c H e l, v ea B y, l eo e i c j a d l R) H e l r d w r a o, R) H e l r d
 9 r l l k a - L A
 F - Mr B e m e d i
 I D t : (0 4 2 (, P r H i) r d t 7 (8 : g 4 5 7 , 6 4 (6 5 g (g : 3



l r B j o o o - v t 9 j y r b f h i a k a
 t 0 0 - i s 9 6 A m e s k d
 O e N e a d , f O , p 2 K (G , 9 F

Pec DyeHyd	Ords Eruis . rudo				Jall S e i l . rudo				Eruis Ords . rudo				Tot			
	T	P	W	FNN	l eol	w	P	W	FNN	l eol	w	T		W	FNN	l eol
20220103 ghr (F M	52	20	0	g2		h0	h0	0	20	2h	3h	h	0	k22	4	227
g30F M	45	h7	0	10	(	h7	hg	0	32	h5	25	h2g	0	h7		245
g7F M	h04	22	0	h2	7	5	h3	0	h	h4	22	h3	0	h4	2	323
:00F M	g4	6	0	1	(	5	2	h0	h2	h3	2h	h23	0	h7	7	2h
T l i a	332	57	0	3.5	27	32	(h	0	g3	57	h00	7	(	(	22	h07
* F N R a h	g3g*	h5g*	0*	6	6	3g6*	5h6*	0*	6	6	h5g*	g3g*	0*	6	6	6
* T l i a	30g*	5g*	0*	35g*	6	3g*	7g*	0*	4g*	6	4	5g*	75h*	0*	(	g
1 v %	084h	0824	6	0857	6	0g4h	08:7	6	087h	6	0g30	0g0h	6	0g77	6	0g2h
P Y C i l a d o M r r c H e l	3h5	50	0	345	6	3h	74	0	4g	6	g4	77h	0	(2g	6	g2
* P Y C i l a d o M r r c H e l	: (8*	: 3g*	0*	: 7g*	6	: 5g*	: 2g*	0*	: 7g*	6	g4g*	g:8*	0*	gg8*	6	h6*
v e a l y	h7	7	0	hg	6	h	3	0	7	6	5	33	0	3:	6	5h
* v e a l y	7g*	5g*	0*	7g*	6	3h*	(8*	0*	7g*	6	5g*	5g*	0*	5g*	6	(8*
R) H e l r d w r a o	2	0	0	2	6	0	h	0	h	6	4	2h	0	2g	6	3h
* R) H e l r d w r a o	0g*	0*	0*	0g*	6	0*	2h*	0*	h2*	6	4g*	7g*	0*	7g*	6	2g*
l e o e i c j a d l	6	6	6	6	27	6	6	6	6	50	6	6	6	6	6	2h
* l e o e i c j a d l	6	6	6	6	0	6	6	6	6	3g*	6	6	6	6	(8*	6
R) H e l r d 9 r l l k a - L	6	6	6	6	0	6	6	6	6	7	6	6	6	6	h	6
* R) H e l r d 9 r l l k a - L	6	6	6	6	0*	6	6	6	6	5g*	6	6	6	6	7g*	6

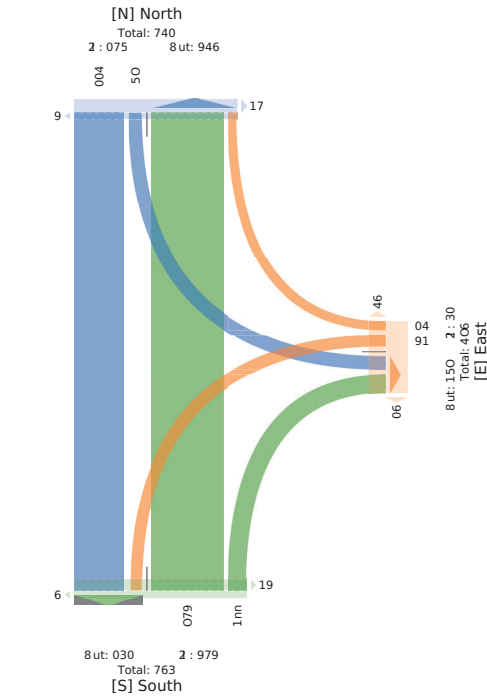
l e o e i c j a d l a d o R) H e l r d 9 r l l k a - L B P t P e h , w t w (C i , T t T s u , W M G U t u d

5566814 - COVID - BANK ST @ EXHIBITION WAY -... - TMC

Tue May 3, 2022
 AM Peak (8-9 AM) 1 : -9 AM C
 Ass Lsaiie (glt nd aor Mcd:Hvysei, Bealy, Per eid)hoi, whyysei co mcar, whyysei co
 LHiii askC
 Ass McReDeod
 47 : 190529, gcvadro: .96l 851. ,)59g 898l 3

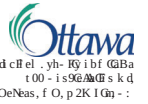


PH r r e r : L h y c i O d h i a
 - 0 0 L c o i d s a d o 7 H
 Nepean, ON, K2G 9Jl , LA



5566814 - COVID - BANK ST @ EXHIBITION WAY -... - TMC

Tue May 3, 2022
 MB l ay Lean g 2h0 LM (t h0 LM6
 : A v A 9 9 e g l P) G a s l M i G d y o A 9 , r e a c y, L e l e 9 G a s 9, H i 9 y o A 9 i s v i a l, H i 9 y o A 9 i s
 - d 9 9 B a A 6
 : A M B i c e R e s 9
 w k h m l 0 2 1 , l i a o e s h 4 l 7 3 n 8 D 4 , (l 7 5 8 l 8 n 8



L d e l l e r - y h - R y i b f G a B a
 t 0 0 - i s 9 6 A m e s k d
 O e N e a d , f O , p 2 K l G n - :

l e P k h o e s	O i d E l u G . i u s l				J a o C S e C i u s l				E i u d O i d . i u s l				w C			
	T	l	W	: NN	l e l	v	l	W	: NN	l e l	v	T		W	: NN	l e l
20220103 t260LM	8l	tm	0	t04	n	t2	t1	0	2D	2h	23	t02	0	t21	l3	215
t261LM	t0m	l8	t	l28	t1	2h	l0	0	3h	3h	23	mD	0	t20	l4	21h
t100LM	l05	l1	0	l21	h3	lD	l3	0	30	34	2h	l10	0	l3h	l3	202
t111LM	h8	23	0	l15	l1	l5	23	0	3m	35	l8	mD	0	l11	h	210
T l G A	3h8	D	t	45m	h1	55	5h	0	t2D	l35	8h	405	0	4m	42	l000
* : N h a o	83g*	l50*	02*	(	(	l2D*	497*	0*	(	(	l13D*	827*	0*	(((
* T l G A	352*	5h7	07*	432*	(	51*	l5*	0*	l17*	(	l8*	31g*	0*	4l2*	((
l z %	07m5	07h1	07l0	07h0	(	0735	07m0	(	07h0	(	07h0	07h4	(	07m8	(	0768
l B y G a s l M i G d y o A 9	3l8	D	t	42m	(	50	lD	0	t1D	(	lD	3l8	0	4l1	(	l00h
* l B y G a s l M i G d y o A 9	m l *	m 2 g *	l 0 0 *	m l *	(	m 0 h r	m 2 g *	0 *	m 2 l *	(	m 0 5 *	m 2 l *	0 *	m 2 D *	(	m 2 l *
r e a c y	25	l	0	3h	(	t	t	0	2	(	4	tm	0	23	(	l5
* r e a c y	55*	53*	0*	55*	(	l7*	l5*	0*	l5*	(	43*	43*	0*	43*	(	l2*
H i 9 y o A 9 i s v i a l	m	0	0	m	(	l	3	0	8	(	4	m	0	l3	(	30
* H i 9 y o A 9 i s v i a l	23*	0*	0*	t h r	(	l 0 5 *	4 h r	0 *	5 5 *	(	4 1 *	2 2 *	0 *	2 5 *	(	2 8 *
l e l e o e i c j a d l	(	(	(	(	l3	(	(	(	l34	(	(	(	(	(	4h	l
* l e l e o e i c j a d l	(	(	(	(	m 3 *	(	(	(	m 3 *	(	(	(	(	(	m 3 5 *	l
H i 9 y o A 9 i s - d 9 9 B a A 6	(	(	(	(	2	(	(	(	2	(	(	(	(	(	l	l
* H i 9 y o A 9 i s - d 9 9 B a A 6	(	(	(	(	37*	(	(	(	l7*	(	(	(	(	(	27*	l

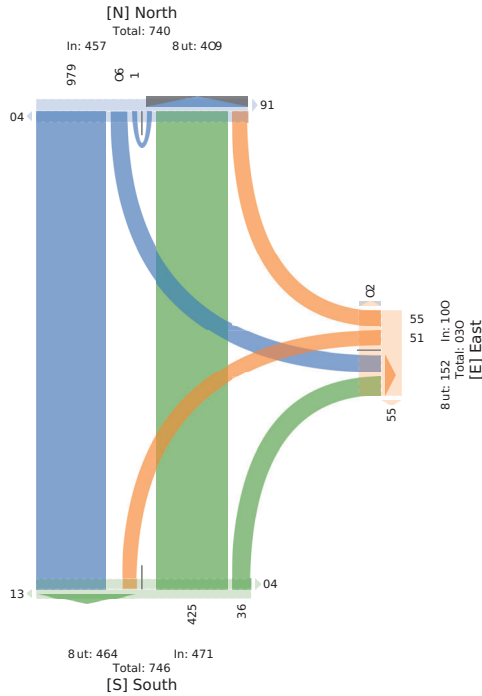
l e l e 9 G a s 9 a s l H i 9 y o A 9 i s - d 9 9 B a A 6 l h l e C v h v P C T H T d i , W h W U t u d

5566814 - COVID - BANK ST @ EXHIBITION WAY ... - TMC

Tue May 3, 2022
 M/PPay kea(8.2-30 km 9: -30 kM)
 l Cs Gillel(8)ghtLanP Mtdrory@L, c eaHy, kePelroAnL, v Ayr@Ldn BdaP, v Ayr@Ldn
 s allLRa(C)
 l CMdHwEntL
 n - D40724, i drat@n- 54.3D6715, 974.1646D3

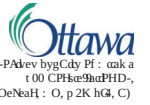


kaHReP-s Ays dI OnaRa
 00 s dnleGat@n 1 q
 Nepean, ON, K2G-4J1 s 1



5566814 - COVID - BANK ST @ EXHIBITION WAY ... - TMC

Tue May 3, 2022
 FM Feal Ing h FM (hg h FM6(: Ae-a9Feal 1 Pu-)
 9)CAsse li drs avh MPP-B/Bs, 1 eaAyr, FevesedhF, Rdy/Bs PHwPav, Rdy/Bs PH C-Psk ad 6
 9)MPPAmeHts
 IDg4h072h, i PbaPPh@457. n, (7h8 5h543



F-PAAv byGdy P: : mka a
 t 00 CPfka@hHD-,
 OeNeh : O, p 2K hG, C)

I eo DdehdfH	OP-a EPaa bbaHk					Jasc S eshbPaHk					EPaar OP-a bbaHk					HE
	T	W	U	9 pp	10	T	W	U	9 pp	10	T	W	U	9 pp	10	
2022(0h03 ng hFM	11	3	1	4	1	1	3	1	4	1	2	4	1	5	2	330
ngb0FM	12	3	0	1	2	1	3	0	1	2	2	4	1	5	2	326
ngb1FM	12	3	0	1	2	1	3	0	1	2	2	4	1	5	2	334
hg0FM	12	3	0	1	2	1	3	0	1	2	2	4	1	5	2	385
TbaP	17	11	3	2	4	4	1	1	1	1	127	103	1	1	1	1381
*) NNPaH	508*	148*	08*	08*	08*	1	1	1	1	1	219*	758*	08*	08*	08*	1
* TbaP	3h8*	5h*	08*	08*	08*	1	1	1	1	1	48*	338*	08*	08*	08*	1
F1%	08r0	0800	0800	0854	0854	1	1	1	1	1	0874	08. h	0810	0867	0867	1
l drs avh MPP-B/Bs	m0	11	2	2	4	1	1	1	1	1	11	11	11	11	11	1
* l drs avh MPP-B/Bs	42h*	44h*	100*	100*	100*	1	1	1	1	1	408*	438*	100*	100*	100*	1
1 eaAyr	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
* 1 eaAyr	3h2*	0*	0*	2h*	2h*	1	1	1	1	1	085*	3h*	0*	2h*	2h*	1
Rdy/Bs PHwPav	2	1	0	0	2	1	1	1	1	1	1	1	1	1	1	1
* Rdy/Bs PHwPav	n8*	08*	0*	3h*	3h*	1	1	1	1	1	58*	3h*	0*	n8*	n8*	1
FevesedhF	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
* FevesedhF	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Rdy/Bs PHC-Psk ad	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
* Rdy/Bs PHC-Psk ad	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

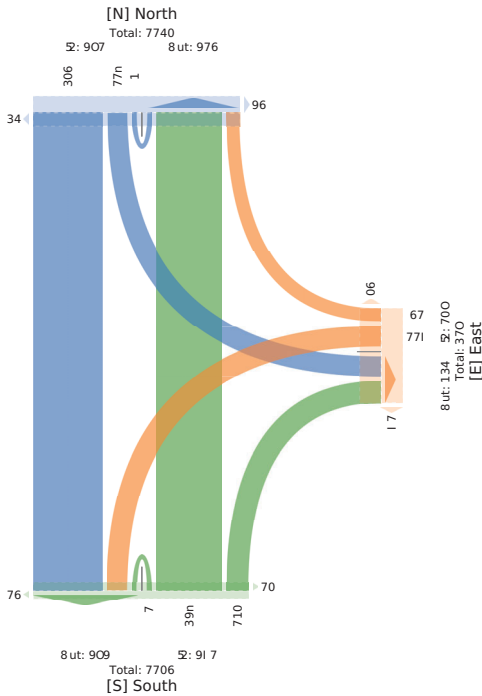
l FevesedhF avh Rdy/Bs PHC-Psk ad Bi gi efc, wgwdr, TgTr-u, WgW(Tu-H

5566814 - COVID - BANK ST @ EXHIBITION WAY ... - TMC

Tue May 3, 2022
 AM AeaP (8 - AM 9: 8 - AM) 91 CesaL AeaP i gus
 h llr lamen ldr c h avB MghsRyRen, i eaCy, AelBnklaivn, wdyRen gv mgarB wdyRen gv
 t sgml aIP)
 l lLMGcDeviH
 4785-0.2-, dgRahgv8(-681. b, 9 - 61-153



AegChB/B/Bs dI gOI lHh a
 00 t gvdHlghy 7 s,
 Nepean, 1 N, K2G-1J5, t h



5566814 - COVID - BANK ST @ FIFTH AVE - MAY ... - TMC

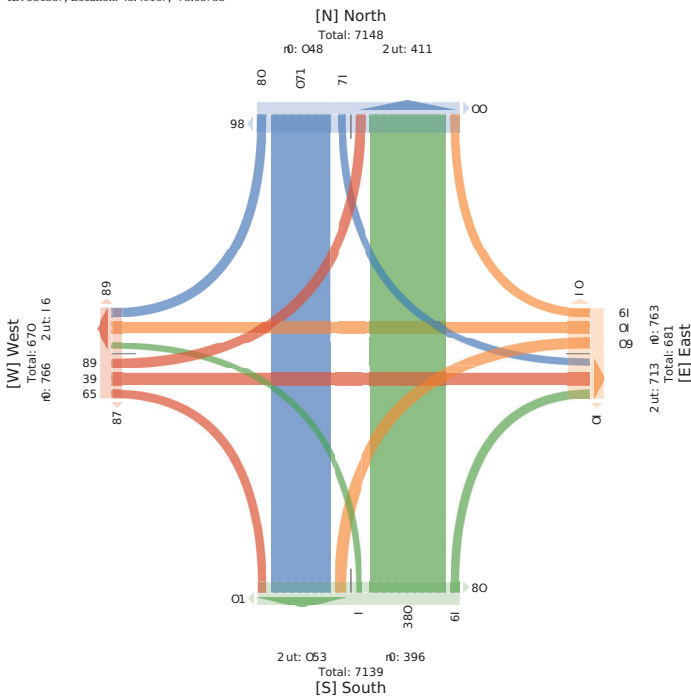
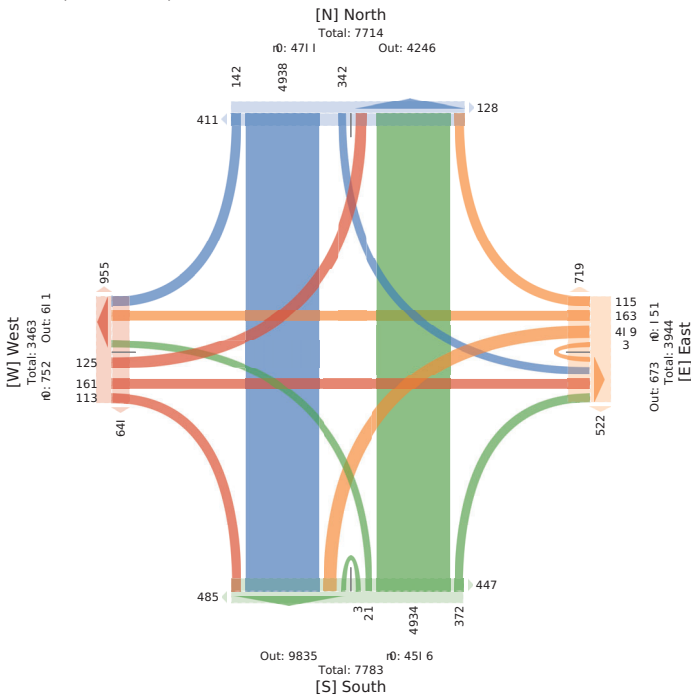
Tue May 3, 2022
 FI lnuagI (6 A0 9 MPA0 9 M, 33A0 9 M2) M, - A0) M)) MC
 9 lLs laivt fnd (h age Molyrcydia, Heavy,) ueuIrdgi, Bdyclai and Roae, Bdyclai and s roaiwalc
 9 lLMovomugh
 IDA43-78, nocalhgA4.503: 8, 84: 7847



rovduke byAs dy of Ottawa
 300 s ogihlilabD, Nupaag, ON, K2G 4J1, 9

I eo DdehdfH	North Sol bol ge					East T uilbol ge					South North bol ge					East T uilbol ge											
	R	W	U	9 pp	10	R	W	U	9 pp	10	R	W	U	9 pp	10	R	W	U	9 pp	10							
2022(04133 : 405 M	4	3	7	0	32P	1	8	5	32	0	2	37	2	335	3	0	338	0	3	8	0	33	322				
8460 M	3	2	4	0	27h	2	3	2	2	3	47	0	37	39	4	0	52	29	35	38	0	0	3	867			
7400 M	25	17	20	0	532	302	42	52	0	328	33	2	440	3	0	479	1	39	5	5	0	0	2	3225			
8400 M	38	203	5	0	222	-P	5	7	2	0	-4	-P	0	228	-	0	2-P	-0	37	25	23	0	-	2	44F		
33400 M	37	2	0	33	0	24P	5	3	34	0	0	3	30P	32	2	0	0	253	58	23	0	25	0	45	70		
32400 M	-2	558	23	0	400	97	-2	42	0	320	2	4	27	5	4	38	0	430	97	27	2	0	0	0	379		
3460 M	-	50	37	0	593	4	-7	25	13	0	32	395	20	525	3	0	547	70	-2	39	-4	0	7	34			
460 M	32	282	7	0	392	84	34	22	29	0	11	338	0	392	4	0	20	-	30	28	3	0	4	73			
5400 M	5	432	34	0	48	89	25	53	44	0	320	25	24	5	5	3	0	402	97	-3	5	54	0	330	392		
4460 M	-	44P	27	0	12	77	-5	-8	47	0	32P	24F	0	5	4	3	0	573	137	54	42	54	0	352	384		
Wbal	2-P	530	3-P	0	877	32	22	243	75	3	72	352	38P	53	P2	3	-	74	5	223	242	28	0	8-P	3005		
% 9 gpmat	1	0	0	0	0	1	2	2	29	3	55	4	5	9	2	2	0	1	1	27	8	2	7	4	0		
% Wbal	2	1	8	4	3	4	0	2	4	2	3	0	1	2	4	0	1	1	2	5	1	7	0	1			
% nd (h age Molyrcydia)	22	-	32	3	0	572	38	384	-	4	3	8	5	342	-	30	77	3	-	58	20P	38P	22	0	0	0	
% nd (h age Molyrcydia)	15	-	0	0	0	0	1	74	5	1	0	0	0	75	1	0	0	0	0	15	1	0	0	0	0		
Heavy	0	383	0	0	37	1	33	0	32	0	2	1	374	0	0	0	0	1	4	0	0	0	0	0			
% Heavy	-7	40%	2	2%	0%	5	7%	1	5	1%	-2	0%	-8	1%	5	4	5%	1	1	3	5%	3	2%	0%	3	5%	1
Bdyclai and Roae	5	3	3	0	32	1	22	8	8	0	0	1	23	322	3	0	355	1	P	4	0	4	0	15	1		
% Bdyclai and Roae	3	8%	-	5%	2	2%	1	8	2	8%	3	7%	0	33	3%	-	0	1	1	5	3%	3	8%	0	7	1%	1
Bdyclai and s roaiwalc	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
% Bdyclai and s roaiwalc	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	

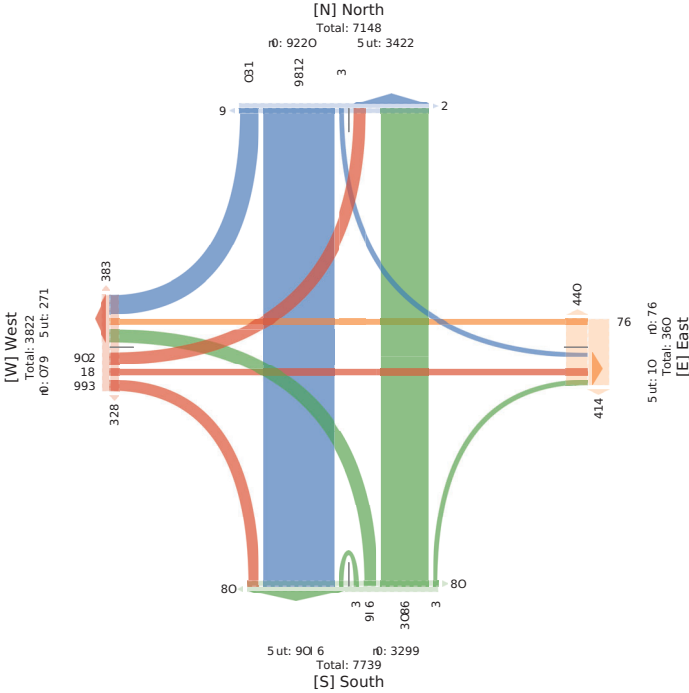
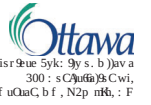
) ueuIrdgi age Bdyclai and s roaiwalc, n AnuH RARD (h WAWrU, UAU/Wrg



5566814 - COVID - QUEEN ELIZABETH DRWY @ PRI... - TMC
 Wed May 11, 2022
 Full Length (6:30 AM-9:30 AM, 3:30 PM-6 PM, 11:30 AM-1:15 PM, 1:15 PM-2 PMC)
 All s lai ei (Lghti and Mr tr ch)Hei, v eaBy, Pedetioanni, RdHHei r n r w ad, RdHHei r n
 s r iik aln C
 All Mr Bf ent
 B: 9) 1811, Lr Htra n: 8) 780148, -4) 76. 034.



5566814 - COVID - QUEEN ELIZABETH DRWY @ PRI... - TMC
 T ue May 33, 2022
 F M l ual. rg F M t h F M(
 F 6: GaAuAn- 9P)AaGc Ms j s idyduA o u ar y, l ueu/9hCA c 9hdyu/As CHsae, c 9hdyu/As C
 : is Av a f L
 F 6 Ms r u Bu QCA
 Rckhml 33, - s da)B Ck l mD0341, t4nDg084g



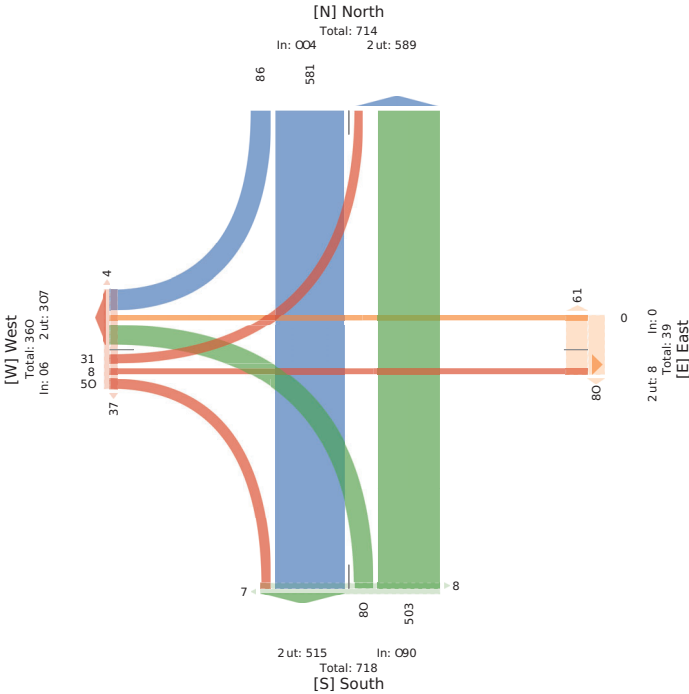
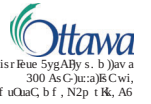
wBuD9C	f s i P					G a /					s E P					F u a /					
	H	S	W	FOD	u e L	H	S	W	FOD	u e L	H	S	W	FOD	u e L	H	S	W	FOD	u e L	
20220r033 g00F M	30	70	0	0	40	0	3	0	0	3	11	0	m	32	0	7g	8	3	1	0	g
g00F M	3g	m	0	0	4g	0	3	0	0	3	18	0	m	37	0	42	1	1	8	1	0
g00F M	28	78	0	0	g7	0	2	0	0	2	1m	0	dh	29	0	1h	2	38	3	7	0
g00F M	34	h3	0	0	3hg	0	0	0	0	0	20	0	m	3m	0	7m	2	8	3	m	0
Sj3e	7g	27h	0	0	884	0	1	0	0	1	3m	0	213	78	0	801	33	28	7	3h	0
* FODsAP	30D*	4hg*	0*	0*	1	0*	300*	0*	0*	1	0*	4hb*	20h*	0*	1	14h*	32D*	8D*	0*	1	
* Sj3e	hg*	8hg*	0*	0*	1gD*	0*	0D*	0*	0*	0*	0*	81h*	hD*	0*	18h*	1	8h*	21h*	0*	7h*	
1 o %	048h	0481	1	1	044m	1	1	1	1	1	1	0478	04gg	1	047g	1	0428	1	04h2	1	04h8
- 9P)AaGc Ms j s idyduA	74	277	0	0	888	1	0	0	0	0	1	0	28m	78	0	2hg	1	22	0	3h	0
- 9P)AaGc Ms j s idyduA	hgD*	hgD*	0*	0*	hgD*	0*	0*	0*	0*	0*	0*	h4h*	300*	0*	hgD*	1	hnd3*	0*	300*	0*	gnd*
o u ar y	3	3	0	0	2	1	0	0	0	0	1	0	0	0	0	1	0	0	0	0	
* o u ar y	3h*	0h*	0*	0*	0D*	1	0*	0*	0*	0*	1	0*	0*	0*	0*	1	0*	0*	0*	0*	
c 9hdyu/As CHsae	0	2	0	0	2	1	0	1	0	0	1	1	0	0	7	1	3	7	0	0	
* c 9hdyu/As CHsae	0*	0h*	0*	0*	0D*	0*	300*	0*	0*	300*	1	0*	21h*	0*	2D*	1	1h*	300*	0*	31D*	
1 ueu/9hCA	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
* 1 ueu/9hCA	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
c 9hdyu/As C: is Av a f L	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
* c 9hdyu/As C: is Av a f L	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	

1 ueu/9hCAaGc c 9hdyu/As C: is Av a f L D k u.), HgHHP), SgSPe, WkWS6C

5566814 - COVID - QUEEN ELIZABETH DRWY @ PRI... - TMC
 Wed May 11, 2022
 AM Peak (8 AM : 5 AM-
 9B) 9h l ei (Csl g abd Mt g nyoel, r eacy, Pedelgahl, Hsoyoel th v t ad, Hsoyoel th
) r t l l Ba3k-
 9B Mt ce Rehj
 ml 5D311, Cr oage hl 3D90143, :4DX 80648



5566814 - COVID - QUEEN ELIZABETH DRWY @ PRI... - TMC
 T ue May 33, 2022
 MReay l ual. r32glt l M h3gt l M(
 6 : Aa-u- t9P) aGc Ms j s idydu- o u ar y, l ueu-)lG C, c 9hdyu- s CHsae, c 9hdyu- s C
 Ais--v a f L
 6 : Ms r u Bu Qc
 Rwgkt 3n83, 9s da)B Cgm l nD3Dm hD l4708D7



wBuD9C	f s i P					G a /					s E P					F u a /							
	H	S	W	FOD	u e L	H	S	W	FOD	u e L	H	S	W	FOD	u e L	H	S	W	FOD	u e L			
20220r033 g00F M	20	D	0	0	k7	0	3	0	0	3	10	0	BD	8	0	m	38	3	1	0	3k		
32glt l M	3	h4	0	0	333	0	3	0	0	3	44	0	13	1	0	14	h	D	8	4	0		
32glt l M	3D	77	0	0	30h	3	0	2	0	0	18	8	0	14	0	4	8	D	0	34			
3g00 M	3	4	0	0	70	0	3	0	0	3	13	0	4	0	m	3	D	32	7	0			
Sj3e	4D	82D	0	0	8hm	3	0	1	0	1	233	0	3DD	3D	0	3hm	7	88	3k	24	0		
* 6ODsAP	30D*	nD*	0*	0*	h	1	0*	300*	0*	0*	h	1	0*	24h*	7D*	0*	h	42h*	24h*	88h*	0*	h	
* Sj3e	30D*	nD*	0*	0*	17D*	1	0*	0D*	0*	0D*	1	0*	24h*	2h*	0*	27h*	h	m	21*	8h*	0*	33h*	
1 o %	0787	07D	h	h	0k0m	h	h	h	h	h	h	0F33	0D07	h	07mm	h	048t	h	07D	h	0Dk2	h	0B0k
9P) aGc Ms j s idydu-	4t	837	0	0	878	1	0	0	0	0	h	0	3D0	3D	0	37D	h	83	0	2m	0		
* 9P) aGc Ms j s idydu-	hD*	hD*	0*	0*	hD*	0*	0*	0*	0*	0*	h	0*	h4D*	300*	0*	h4h*	h	h8h*	0*	h28*	0*	hDh*	
o u ar y	2	2	0	0	m	0	0	0	0	0	0	2	0	0	2	h	2	0	0	0			
* o u ar y	8D*	0h*	0*	0*	3D*	0*	0*	0*	0*	0*	h	0*	3D*	0*	3D*	h	4h*	0*	0*	21h*			
c 9hdyu- s CHsae	0	D	0	0	D	0	1	0	0	0	1	0	0	0	1	0	3k	2	0	23			
* c 9hdyu- s CHsae	0*	2D*	0*	0*	3D*	1	0*	300*	0*	300*	1	0*	2D*	0*	21h*	h	0*	300*	1D*	0*	24h*		
1 ueu-)lG C	h	h	h	h	3	h	h	h	h	7m	h	h	h	h	7	h	h	h	h	h			
* 1 ueu-)lG C	h	h	h	h	h300*	h	h	h	h	h8k7*	h	h	h	h	h300*	h	h	h	h	h72k*			
c 9hdyu- s CAis--v a f L	h	h	h	h	0	h	h	h	h	32D	h	h	h	h	0	h	h	h	h	h			
* c 9hdyu- s CAis--v a f L	h	h	h	h	0*	h	h	h	h	h402*	h	h	h	h	0*	h	h	h	h	h3Dk*			

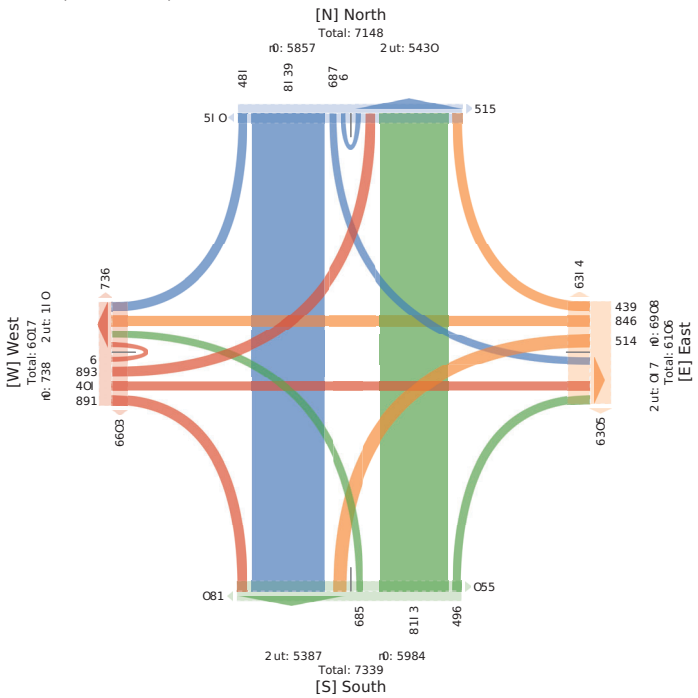
1 ueu-)lG C aGc c 9hdyu- s CAis--v a f L l9g9u.), HgHHP), SgSPe, WkWS6C

5566814 - COVID - BANK ST @ FIFTH AVE - MAY ... - TMC

Sat May 7, 2022
 Full Length (10:30 AM-6:30 PM)
 All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
 All Movements
 ID: 949152, Location: 45.40167, -75.68758



Provided by: City of Ottawa
 100 Constellation Dr,
 Nepean, ON, K2G 5J9, CA



5566814 - COVID - BANK ST @ FIFTH AVE - MAY ... - TMC

Tue/May y3, 2, .
 M/F/Fu 1 lan g h (6 : gW92 1 M PA -92 1 M:
 1) J Cjussl g ftoes ur F Mcc:Hav)Js3B LuRq3l LFIselHr s3w0Av)Js cr k cuf3w0Av)Js cr
 CHssm)j
 1) Mc:REI Ires
 IS - 474.0B, 3i cvast:tr - 7852A y3B85 by8b



1 HR/FLP Fa - Cln COnNum
 A22 Ccrsd)uafR 6 13
 (IPlar3N(3h , K 8G3C1

S/L	c/cb					f/aw					T/cbo					L/cn							
	k	s	i	w	1pp	k	s	i	w	1pp	k	s	i	w	1pp	k	s	i	w	1pp			
2, ., RBRy AA921 M	y	A	y	.	2	A	2	7	9	.	A	2	7	9	.	A	2	7	9	.			
AV781 M	b	A	2	8	2	A	2	7	9	.	A	2	7	9	.	A	2	7	9	.			
A-221 M	A	y	.	2	A	A	y	A	2	9	A	2	7	9	.	A	2	7	9	.			
A-801 M	B	A	.	2	A	b	A	2	9	.	A	2	7	9	.	A	2	7	9	.			
* Scaj	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
* 1 p/ptuo	75*	40*	92*	2*	P	75*	40*	92*	2*	P	75*	40*	92*	2*	P	75*	40*	92*	2*	P			
* Scaj	AG*	96*	A2*	2*	7A2*	95*	95*	75*	2*	AV5*	95*	97*	AB*	2*	9y5*	99*	9*	99*	2*	49*			
1 B%	2b49	2904	2562	P	2267	25	4	2322	2388	P	238	25	AA	29	8	23b	25	bb	2562	23b	P	237A	
i ftoes ur F Mcc:Hav)Js	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
* 1 ftoes ur F	4.5*	493*	473*	2*	495*	495*	y	3*	A22*	2*	b	5*	485*	4	3*	482*	2*	493*	4y5*	45*	4y5*	2*	bb5*
* B1ab	2	A	2	2	A	2	A	2	2	A	2	A	2	2	A	2	A	2	2	A			
* w0Av)Js cr k cuf	A	A	.	A	2	.	4	AA	2	2	.	A	A	.	A	2	.	2	A	.	A	2	.
* w0Av)Js cr k cuf	93*	98*	83*	2*	95*	95*	95*	2*	2*	A	5*	75*	95*	82*	2*	93*	2*	923*	9*	2*	A23*	85*	
1 ftoes ur F	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P			
* 1 ftoes ur F	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P			
* w0Av)Js cr CHssm)j	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P			
* w0Av)Js cr CHssm)j	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P			

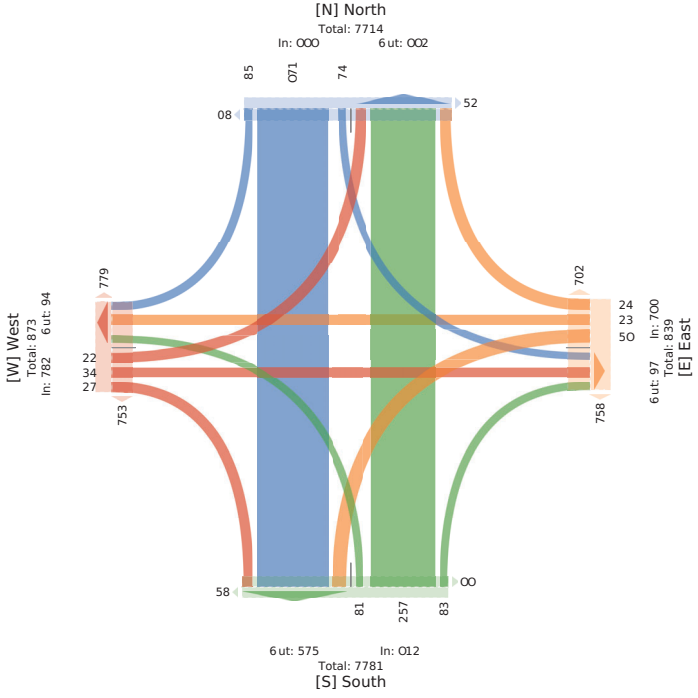
1 ftoes ur F w0Av)Js cr CHssm)j - 1 ftoes ur F - k ftoes ur F - SoH3W - WSEH

5566814 - COVID - BANK ST @ FIFTH AVE - MAY ... - TMC

Sat May 7, 2022
 Midday Peak (WKND) (11:30 AM - 12:30 PM)
 All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
 All Movements
 ID: 949152, Location: 45.40167, -75.68758

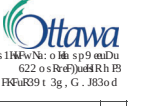


Provided by: City of Ottawa
 100 Constellation Dr,
 Nepean, ON, K2G 5J9, CA



5566814 - COVID - BANK ST @ FIFTH AVE - MAY ... - TMC

Tue/May y3, 2, .
 0M OfuI In g t h (16:A2 0M - , :A2 0M(- 9 1FR)) OfuI Csi P
 d) o rrrF Ic HFr ubwMs Bak)F3C FuLa30 FvF rFHR 3mIkak)F s RI s w0mIkak)F s R
 o BrrDuj) (
 d) J Ms 154 FPr
 fh : 8586, . 3e skasR R 5, h26f y3-y. fQy, O



0 B 1HR/WN: o h) sp 9 onDu
 622 s Rcf)uafR h B
 t FkUr3R 3g , G . J830 d

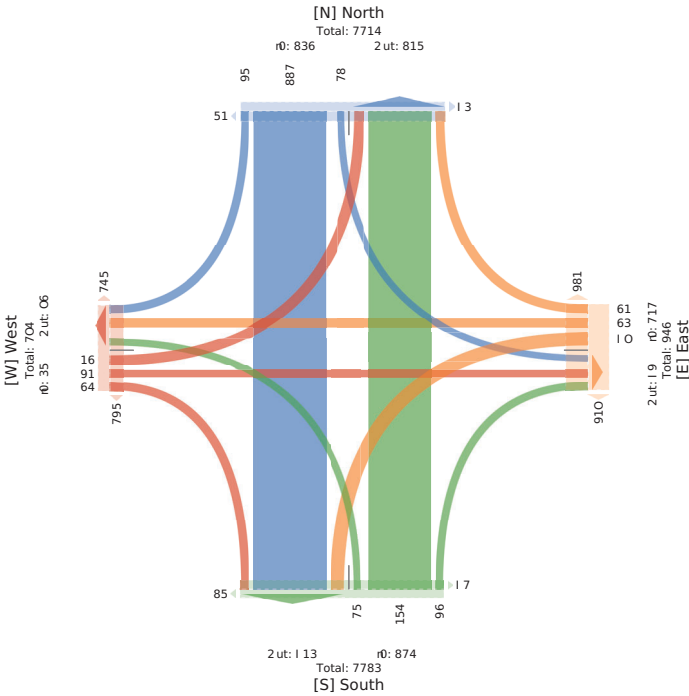
S/L	s/B					Eare					Tsi4B					h/Fre				
	I	S	C	W	d/KC	I	S	C	W	d/KC	I	S	C	W	d/KC	I	S	C	W	d/KC
2, ., -2y 6:A20M	y	6	2	5	2	y	6	6	2	A	5	6	6	2	6	y	5	2	6	2
6.5.0M	O	6	A	5	2	y	6	6	2	A	5	6	6	2	6	A	O	5	6	2
..220M	f	6	5	2	6	6	6	6	2	A	6	6	6	2	6	A	f	6	6	2
..6.0M	f	6	5	2	6	6	6	6	2	5	6	6	6	2	6	A	f	6	6	2
* Scaj	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
* d HBR)uafR	5*	8	1*	6	2*	.	.	.	.	.	5*	8	1*	6	2*	.	.	.	.	.
* Scaj	12*	50*	6*	2*	55*	.	.	.	.	.	6*	1*	6*	2*	62*	.	.	.	.	.
0C%2K5 21868 2b, 2 - 21852	2b,	2b,	2b,	2b,	2	2b,	2b,	2b,	2b,	2	2b,	2b,	2b,	2b,	2	2b,	2b,	2b,	2b,	2
c HFr ubwMs Bak)F	y	.	.	.	15	.	.	.	.	15	.	.	.	.	15	.	.	.	.	15
* c HFr ubwMs Bak)F	622*	83*	622*	2*	8	16*	86*	158*	622*	2*	816*	85*	622*	2*	85*	622*	816*	85*	2*	850*
Cfuta	2	6	2	2	6	.	.	.	.	2	2	6	2	2	6	.	.	.	.	2
* Cfuta	2*	6*	2*	2*	6*	.	.	.	.	2*	2*	6*	2*	2*	6*	.	.	.	.	2*
mIkak)F s RI s w	2	6	2	2	6	.	.	.	.	6	.	.	.	.	6	.	.	.	.	6
* mIkak)F s RI s w	2*	6*	2*	2*	6*	.	.	.	.	6*	.	.	.	.	6*	.	.	.	.	6*
0P)F)uafR	.	.	.	.	622*	.	.	.	.	622*	.	.	.	.	622*	.	.	.	.	622*
0P)F)uafR	.	.	.	.	622*	.	.	.	.	622*	.	.	.	.	622*	.	.	.	.	622*
mIkak)F s R o BrrDuj	.	.	.	.	2	.	.	.	.	2	.	.	.	.	2	.	.	.	.	2
* mIkak)F s R o BrrDuj	.	.	.	.	2*	.	.	.	.	2*	.	.	.	.	2*	.	.	.	.	2*

0P)F)uafR ubwMs Bak)F s R o BrrDuj be: c fpej : 1 HNBBS: SBR 3W WSI R

5566814 - COVID - BANK ST @ FIFTH AVE - MAY ... - TMC
 Sat May 7, 2022
 PM Peak (WKND) (1:30 PM - 2:30 PM) - Overall Peak Hour
 All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
 All Movements
 ID: 949152, Location: 45.40167, -75.68758



Provided by: City of Ottawa
 100 Constellation Dr,
 Nepean, ON, K2G 5J9, CA



5566814 - COVID - QUEEN ELIZABETH DRWY @ PRI... - TMC
 Tue/May y3, 2, ,
 0Fl Lngt d(62:A2 - M91:A2 PM)
 - II Clusss (Lit hes ugd Moeacrls3Hnuv3Pndnsrings3Bicacrls and Roud3Bicacrls and Crosswalk)
 - II Movmnges
 ID: 4746113, Location: 78526y739y8Q, 2Ay.



Provided by: City of Ottawa
 622 Casselman St,
 Nepean, ON, K2G 5J9, CA

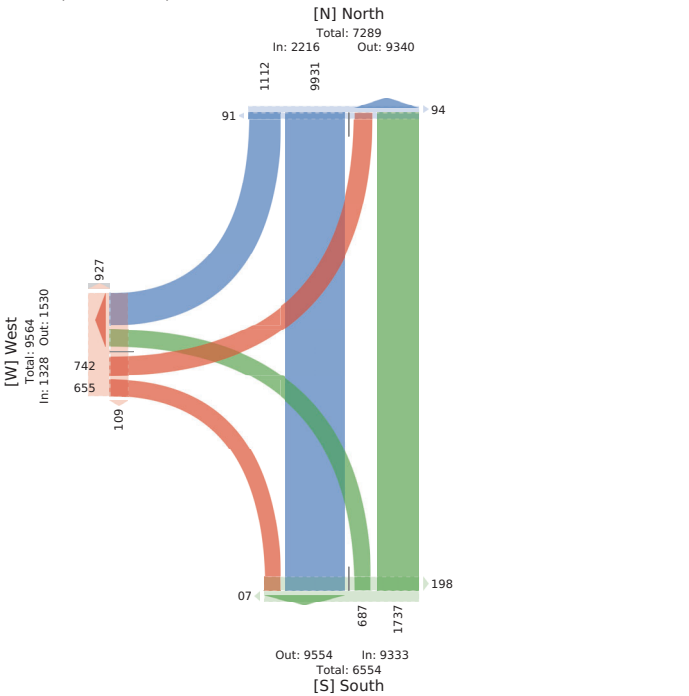
Lst Dirncdog	North ToRhbofgd					ToRhb NorthhoFgd					E nse SusbhoFgd					lge
	R	W	U	- pp	Pnd*	W	L	U	- pp	Pnd*	R	L	U	- pp	Pnd*	
Winn	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
6:22PM	47	..	4	2	A A	68A	81	2	24	4	82	A2	2	2	7y	
6:22PM	6,1	..	17	2	A2	691	17	2	72	6,	77	88	2	44	48	
6:22PM	4,	..	16	2	A8A	..	54	A4	2	8,	..	71	14	2	668	
7:22PM	668	A2	2	7,8	..	648	11	2	16	7,	81	12	2	661	88	
A22PM	676	A A	2	717	..	..	6,	17	2	..y1	86	..	62,	2	6,
7:22PM	674	A22	2	774	..	646	84	2	82	A,	8	4,	2	6 A	y1	
8:22PM	..7A	..1y	2	862	1	6,4	41	2	..8	..7	7,	..	1	2	6A7	
1:22PM	664	677	2	..1A	6	4,	A	2	6A2	..1	..4	84	2	..	64	
Wval	666A	..26	2	A67	7,	6828	748	2	222	..67	711	8yA	2	62A	76y	
% - pproach	A93%	115%	2%	9	9	y85%	75%	2%	9	9	775%	883%	2%	9	9	
% Wval	6y3%	A7%	2%	8,5%	9	..A%	y5%	2%	A63%	9	y9%	42%	2%	615%	9	
Lit hes ugd Monocacrls	6244	67y	2	A,71	9	6771	747	2	6472	9	788	817	2	6264	9	
% Lit hes ugd Monocacrls	4,3%	4y8%	2%	4y5%	9	413%	445%	2%	4y5%	9	4y3%	4,5%	2%	4,9%	9	
% Hnuv	23%	28%	2%	29%	9	23%	25%	2%	28%	9	63%	29%	2%	62%	9	
Bicacrls and Roud	y	86	2	R	9	86	2	2	86	4	A	y	2	62	9	
% Bicacrls and Roud	23%	5%	2%	65%	9	A7%	2%	2%	9%	9	23%	65%	2%	62%	9	
Pndnsrings	9	9	9	9	7y	9	9	9	9	28	9	9	9	9	A y	
% Pndnsrings	9	9	9	9	4y5%	9	9	9	9	485%	9	9	9	9	y,5%	
Bicacrls and Crosswalk	9	9	9	9	6	9	9	9	9	4	9	9	9	9	42	
% Bicacrls and Crosswalk	9	9	9	9	3%	9	9	9	9	75%	9	9	9	9	63%	

*Pndnsrings ugd Bicacrls and CrosswalkSL: Lnf8R: Rit he3W WlrF3U: U9Wrg

5566814 - COVID - QUEEN ELIZABETH DRWY @ PRI... - TMC
 Sat May 7, 2022
 Full Length (10:30 AM-6:30 PM)
 All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
 All Movements
 ID: 949166, Location: 45.40174, -75.680378



Provided by: City of Ottawa
 100 Constellation Dr,
 Nepean, ON, K2G 5J9, CA



5566814 - COVID - QUEEN ELIZABETH DRWY @ PRI... - TMC
 Tue/May y3, 2, ,
 MCFuua l un g h (6 : gA -92 l M 1A92 l M:
 P) CjssLS g lloes ur F Mcacrls3B LuR3l LFLsdflr 3w0vls cr kcufl3w0vls cr
 CHssmjl):
 P) McRll Lrs
 lB - 474A883l cvudlrr - 75,72Ay73ly5,8b29yb

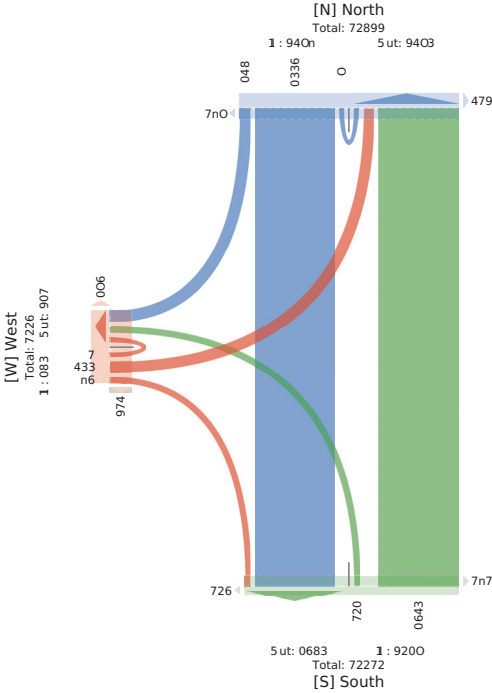


Provided by: City of Ottawa
 622 Casselman St,
 Nepean, ON, K2G 5J9, CA

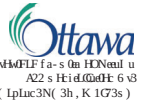
Lst Dirncdog	(ch0 TcJmf cJrF					TcJmf cJrF					E nse East cJrF					lge
	k	S	W	Ppp	lLFU	S	i	W	Ppp	lLFU	k	i	W	Ppp	lLFU	
Winn	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
A-75M	94	55	2	47	..	78	..	2	88	7	A	A2	2	..	A2	
A22M	..5	5A	2	y8	..	7y	AA	2	5b	A8	A7	..	2	98	A8	
Ay6M	92	54	2	b4	2	54	b	2	8y	9	AA	AA	2	92	A2	
Scu0	A	75	2	984	7	..27	57	2	5b	9A	57	8y	2	A A	7A	
* Ppplhss	99,8%	88,7%	2*	1	1	y4,A*	2,4*	2*	1	1	77,8*	55,7*	2*	1	1	
* Scu0	A8,8*	9,3*	2*	74,9*	1	y,9*	y,4*	2*	97,5*	1	y,4*	4,2*	2*	A6,*	1	
l B%	2ybb	2y84	1	2b7A	1	2b5,	2,8y5	1	2,45A	1	2y47	2y8,	1	2b79	1	
l lloes ur F Mcacrls	A,	..9y	2	954	1	..22	57	2	57	1	59	87	2	Ay	1	
* l lloes ur F Mcacrls	4b,7*	48,y*	2*	4y,9*	1	4b,2*	A2,2*	2*	4b,7*	1	4b,A*	45,5*	2*	48,y*	1	
B lalb	A	2	2	A	1	A	2	2	A	1	A	2	2	A	1	
* B lalb	2,b*	2*	2*	2,9*	1	2,5*	2*	2*	2,7*	1	A4*	2*	2*	2,b*	1	
w0avls cr kcufl	A	b	2	4	1	9	2	2	9	1	2	9	2	9	1	
* w0avls cr kcufl	2,b*	9,9*	2*	..7*	1	A5*	2*	2*	A,*	1	2*	7,5*	2*	..5*	1	
l LFsdflr	1	1	1	1	7	1	1	1	1	4	1	1	1	1	98	
* l LFsdflr	1	1	1	1	A2,2*	1	1	1	1	49,5*	1	1	1	1	by,b*	
w0avls cr CHssmjl)	1	1	1	1	2	1	1	1	1	..	1	1	1	1	5	
* w0avls cr CHssmjl)	1	1	1	1	2*	1	1	1	1	8,5*	1	1	1	1	A,*	

l LFsdflr ur F w0avls cr CHssmjl), i - i L08k - k lloesS - SoH3W - WSlJH

5566814 - COVID - BANK ST @ AYLNER AVE - MAY... - TMC
 Sat May 7, 2022
 Full Length (10:30 AM-6:30 PM)
 All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
 All Movements
 ID: 941355, Location: 54.3946, -74.685176



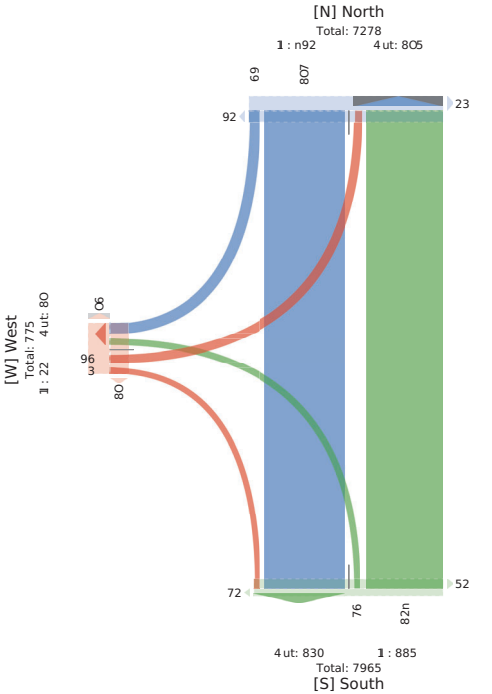
5566814 - COVID - BANK ST @ AYLNER AVE - MAY... - TMC
 Tue/May 3, 2, 2,
 M/F/Wa/Lun g: h (6: gA -911 M PA911 M:
) (Cs GiiLi gl0r e ucF MHHbHLI 3R Luwa3l LFU e0ici 3k BBLI H: mHfE3k BbBLI H: s vH11 u0:
) (CMHdLdLca
 4b - 71A993d HhHhH- 91371. 3By15 b9Ay.



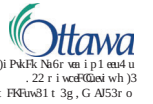
dir	lanes	phases	phases	lanes
dir	lanes	phases	phases	lanes
SDLL	m S W) pp	1 1LU	S d W) pp	1 1LU
. 2, , 121By A -911 M	A A, 2 A0	, B	A B , 2 A 1	A A
A22 M	A A, 2 A,	, ,	A , 9 2 A2	A , 9 2 ,
A41 M	A A, 9 2 A,	, B	A A 8 2 A19	b A b 2 7 81
A62 M	A A, 7 2 A,	, A	A, 2 A,	7 8 A 2 A7 9,
S1ac	10 , bA 2 y69	b0 , 9y A1 2 , ,	b0 , 7 81 2 90	A6b A62
*) pp14b	y5* 7, 9* 2* P	P	7y5* , 9* 2* P	1 , 23* y78* 2* P
* S1ac	85* 9, 9* 2* 1A2*	P	995* A2* 9* 2* P	1 , 25* , 9* 2* 85*
1R%	251b 25y. P 25b2	P	25y. 25, 1 P 25, 7	1 25, y 29Ab P 29yb
d0r e ucF MHHbHLI	9, . 8, 2 , yb	P	. 28 A1 2 , . Ab	f b , 7 2 8y
* d0r e ucF MHHbHLI	b, b* 7, 9* 2* 7, 9*	P	785* A2* 2* 785*	f bb9* b, 9* 2* b99*
R1ac	2 A 2 A	P	A0 2 2 A0	H 2 2 2 2
* R1ac	2* Ab* 2* A6*	P	. 5* 2* 2* , 9*	H 2* 2* 2* 2*
k BbBLI H: mHf	y 8y 2 99	P	82 2 2 82	H A , 2 y f bA
* k BbBLI H: mHf	A5* 19* 2* , 9*	P	95* 2* 2* 99*	f A0A* A, 9* 2* A19*
* 11LUe0ci	P P P P 729*	P	P P P P b, b*	P P P P 7, 8*
k BbBLI H: s vH11 u0	P P P P b,	P	P P P P 1	P P P P A,
* k BbBLI H: s vH11 u0	P P P P 75*	P	P P P P A5*	P P P P 9, 5*

4) LFU e0ici ucF k BbBLI H: s vH11 u0 s d - d LQb m - m b r e S - Sr v d 3W - WS J w

5566814 - COVID - BANK ST @ AYLNER AVE - MAY... - TMC
 Sat May 7, 2022
 Midday Peak (WKND) (12:30PM - 1:30PM)
 l (Cs GiiLeL (gihntLaod Mr tr y H0L, v eaBy, Pedeltciaol, RiH y H0L r o wrad, RiH y H0L r o s r lIma0)
 l (CMr B0l eotL
 9D: 4A1533, gr Htiro: 3A54A6, -7A683176



5566814 - COVID - BANK ST @ AYLNER AVE - MAY... - TMC
 Tue/May 3, 2, 2,
 0M 0Ful In g t h (L, G A0M - 9G A0M(- 1 P)P u C D Ful s i d)
 o Cr G0cF: l HMR: unK Mi d) n r n f c 3s Fu Pa 30 F c F y u v c 3 l v n r n f c i w D i u k 3 l v n r n f c i w
 r j i c04 u0:
 o (CMr PF7 Fw:
 0h 65A 9: : 3H nmei w6: A95A'3-yAf Q . yf



HBB	lanes	phases	phases	lanes
dir	lanes	phases	phases	lanes
SvF	D S W o NK 0RLU	1 1LU	S H W o NK 0RLU	1 1LU
. 2, , -2A2y, 6 A0M	. y . fy 2 . 0 , G	, G	. y: 2 2 . y: y	9 , . 2 . A 19
9620M	. 0 . y0 2 . 5f	5 , . A5 : 2 . f9	y , . 2 2 , , 9A	99,
96 A0M	. . A 2 . f9	. 2 . f2 A 2 . fA	. . : , 9 2 , , y 12	9AA
9820M	. . f, 2 . 0	. f, 2 . 0	. . : , 9 2 , , y 12	9A2
S1ac	f0 fA0 2 y, f	y9 f, yA . . 2 fG	. f, . . X 2 f, y . . .	. 1 y5
* o H0L u0	5b* 52h* 2* ,	-	5Ch* , H* 2* ,	-
* S1ac	H* : : b* 2* : 5b* ,	-	: A1* 2b* 2* : f b* ,	-
0s %	26, . 26, f - 26, :	-	262y 26A2 - 26, :	-
HMR: unK Mi d J n r n f c	f, . 199 2 f5:	-	f, . . 2 2 f9, .	-
* HMR: unK Mi d J n r n f c	0h y* 5f h* 2* 5A6*	-	5, b* 526* 2* 5, b* ,	-
s FuPa	. . A 2 . f	-	. 9 . 2 . :	-
* s FuPa	. b* , 9* 2* , b* ,	-	. b* 5b* 2* , 9* ,	-
l v n r n f c i w D i u k	f . 2 2 . f	-	. 2 2 2 . 2	-
* l v n r n f c i w D i u k	0 h y* 5 f h* 2* , b* ,	-	A6* 2* 2* A0*	-
* 0H0L u0	- - - - -	-	- - - - -	-
* 0H0L u0	- - - - -	-	- - - - -	-
l v n r n f c i w j) c04 u0	- - - - -	-	- - - - -	-
* l v n r n f c i w j) c04 u0	- - - - -	-	- - - - -	-

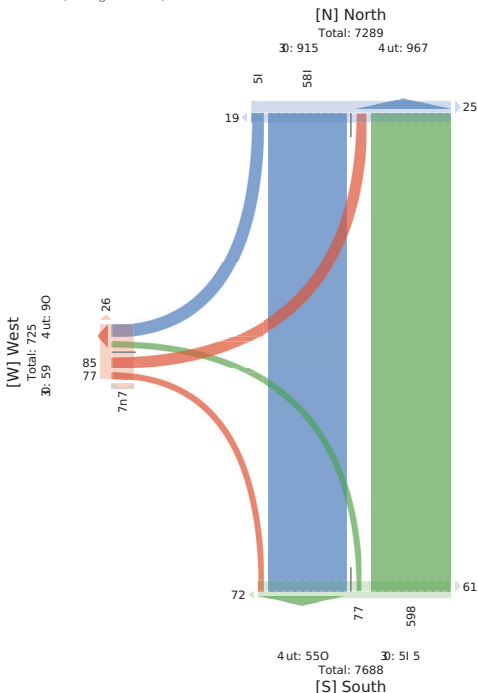
4) F c F y u v c 3 l v n r n f c i w r j) c04 u0 b H 0 L u 0 s d - d L Q b m - m b r e S - S r v d 3 W - W S J w

5566814 - COVID - BANK ST @ AYLMEYER AV - MAY... - TMC

Sat May 7, 2022
PM Peak (WKND) (2:13 PM - 3:30 PM) - v r r e l a t e
City of Ottawa
All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 94135, Location: 3.0436, -73.68: 576



Plur g e c b y l s b y u l v t a m a
500 s u l l e t H i g u d D L
Nepean, v N, K2G 3J4, S C



5566814 - COVID - BANK ST @ ECHO DR - MAY 07... - TMC

Tue/May 3, 2,
OFI Lngh (6:2-A - M9: A2 PM)
- II C l a s s e s (L i t h u g d M o t o r c a c i n s 3 H n u v a 3 P n d r s r i n g s 3 B i c a c i n s a n d R o a d 3 B i c a c i n s a n d C r o s s w a l k)
- II M o v e m e n t s
ID: 4769853, Location: 87.1475y4397.158AV8



Providin b d: C i t y o f O t t a w a
622 C o n s e n t u o u g D r 3
N r p n u g 3 O N 3 K, G 7 J 4 C 3

Table with columns: Ln, Direction, North, East, South, West. Rows include vehicle types like M, A, B, C and various movement codes.

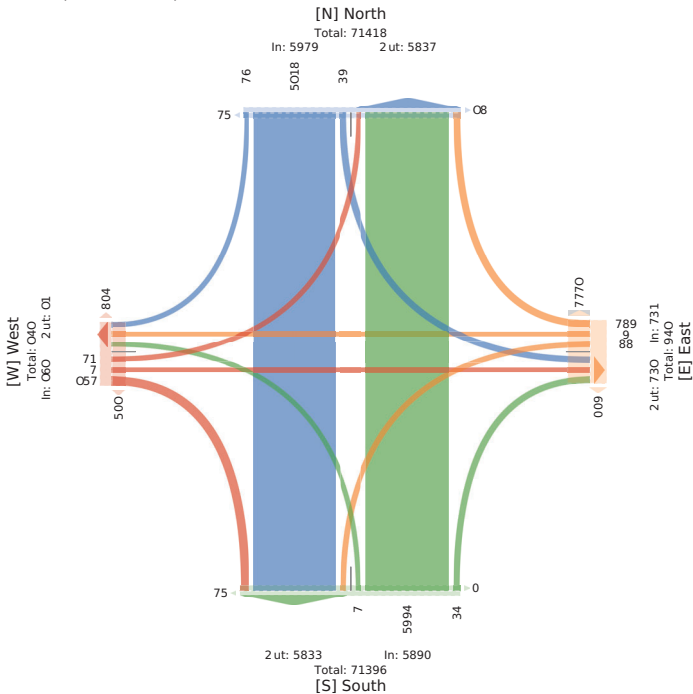
P n d r s r i n g s u g d B i c a c i n s a n d C r o s s w a l k. L: L n f b R. R i t h B W W h F 3 U. U 9 W F r g

5566814 - COVID - BANK ST @ ECHO DR - MAY 07... - TMC

Sat May 7, 2022
Full Length (10:30 AM-6:30 PM)
All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 94135, Location: 548894.79, -7486.5335



Provided by: City of Ottawa
100 Constellation Dr,
Nepean, ON, K2G 4J9, CA



5566814 - COVID - BANK ST @ ECHO DR - MAY 07... - TMC

Tue/May 3, 2,
MOFua I un g h (6 : g A A 9 2 1 M P A - 9 2 1 M :
I) C h a s s i s g (l i o s u r F M c e H a v) L s B L u R a 3 L F L s d f r s 3 w 0 v a) L s c r k c u c F 3 w 0 v a) L s c r
C h e s s m u j :
I) M c R I L L r e s
ID - 4769853i c v u d r - 87.9475y4397.158898



I H R P L F F a C i t y o f O t t a w a
A 2 2 C e r s d) j u d r 6 F B
(L p L u r 3 N (3 h, K 7 G 3 C 1

Table with columns: Ln, Direction, North, East, South, West. Rows include vehicle types like M, A, B, C and various movement codes.

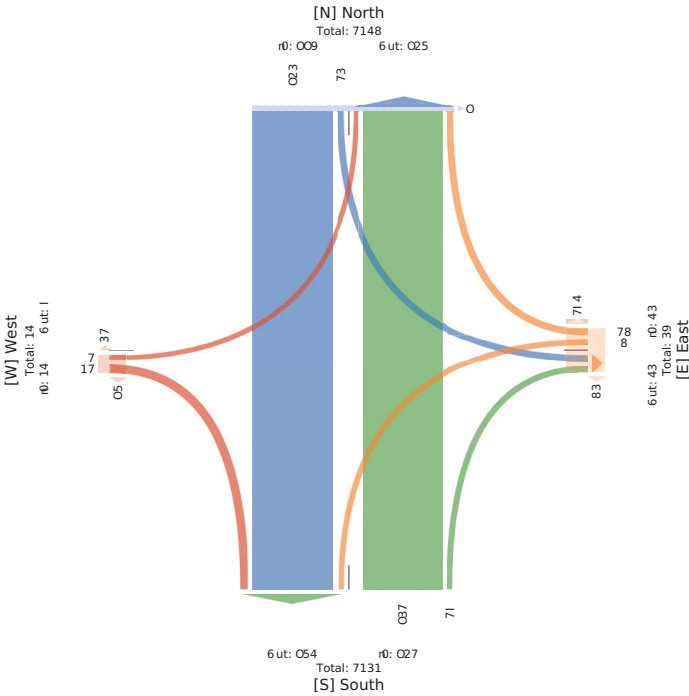
I L F L s d f r s u r F w 0 v a) L s c r C h e s s m u j . i - i L O B k - k l o e S - S o E 3 W - W S E H

5566814 - COVID - BANK ST @ ECHO DR - MAY 07... - TMC

Sat May 7, 2022
 Midday Peak (WKND) (11:30 AM - 12:30 PM)
 All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
 All Movements
 ID: 94135, Location: 546894.79, -748.5335

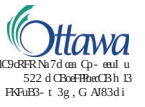


Provided by: City of Ottawa
 100 Constellation Dr,
 Nepean, ON, K2G 4J9, CA



5566814 - COVID - BANK ST @ ECHO DR - MAY 07... - TMC

Tue May 3, 2022
 0M Ofal In g t h (16 0M : A0M(: - 9FluFOFl) Cs 1
 i PdRofo Ir d'vo uERMGChvFo3) Fu9a30FRfoelubk3 oavFo CBmCur3k oavFo CB
 d iCod uB (:
 i PPM(C)DFBo
 h 78/65. 6b3r CxetCB76Ae. 8/yB83:yACb6. . 6



Provided by: City of Ottawa
 622 Cogswellatog Dr3
 Nnpnug3ON3K, G 7143C-

Dir	Clav	Euse	IClav	n Fe
h d'v	TClavN3 ER	n FoN3 ER	ClavN3 ER	EuseN3 ER
SDF	m S r W I KK OFRL	m S r W I KK OFRL	m S r W I KK OFRL	m S r W I KK OFRL
6:20M	5 Sb . . 2 SGO	. O 2 5 2 y G	6 5y2 2 2 5y6	b 2 2 2 b . 3 yA
67:0M	5 5Q 6 2 5OA	. 2 5 2 6 82	. 5y8 2 2 2 5b	. 6 2 2 2 6 68
67:20M	6 5y6 6 2 5b	5 . 5 . 2 . 2 5A 6A	. 5yb 2 2 2 5b5	5 8 2 . 2 55 . . 88
67:40M	2 5y . 6 2 5yO	. 6 2 5 2 A G	. 5y9 2 2 2 588	2 5 . 2 2 2 5 . 5b . 8
* i NOCna	2b* 8yL* . 2* 2*	: 52EP* 2* 588* 2*	: 5EP* 8b6* 2* 2*	: 86L* 2* 2* 2* . 2*
* SCLap	26* 6AEP* 2B* 2* 6CB*	: 5b* 2* 28* 2* . 5*	: 2B* 6y8* 2* 2* 6bb*	: . L* 2* 26* 2* . L*
0 %	: 2B. O 285y : 2865	: 2IA. A : 2IA22 : 2IA68	: 2y/A2 2828 : 285A	: 2ly. . . : 2y. . . 2800
r d'v uERMGChvFo	2 O y 55 2 Cbb	: . 5 2 O 2 y	. 5 . 0y6 2 2 2 CO	: . O 2 2 2 . O 5.y
* i d'v uERMGChvFo	2* 8. IA* ybK* 2* 85B*	: 66Q2* 2* 522* 2* byE*	: 522* 8. E* 2* 2* 8. E*	: ybb* 2* 2* 2* y6L* . 85B*
() F6a	2 55 2 2 55	: 2 2 2 2 2 2	: 2 5 . 2 2 5 .	: 2 2 2 2 2 2
() F6a	2* 5EP* 2* 2* 5EP*	: 2* 2* 2* 2* 2*	: 2* 5b* 2* 2* 5b*	: 2* 2* 2* 2* 2*
k oavFo CBmCur	O 65 . 2 A2	: 6 2 2 2 2 6	: 2 . y 2 2 . y	: y 2 . . 2 8
* k oavFo CBmCur	522* O2* . 58* 2* yE*	: 5O2* 2* 2* 2* 5. 8*	: 2* A5* 2* 2* A2*	: 5L* 2* 522* 2* 2* 2* 8*
0789elub	: 6	: ON	: 8	: 5. 2
* 0789elub	: 522*	: 8yLb*	: 522*	: 860A*
k oavFo CBmCur uB	: 2	: 6	: 2	: 9
* k oavFo CBmCur uB	: 2*	: L*	: 2*	: AEM*

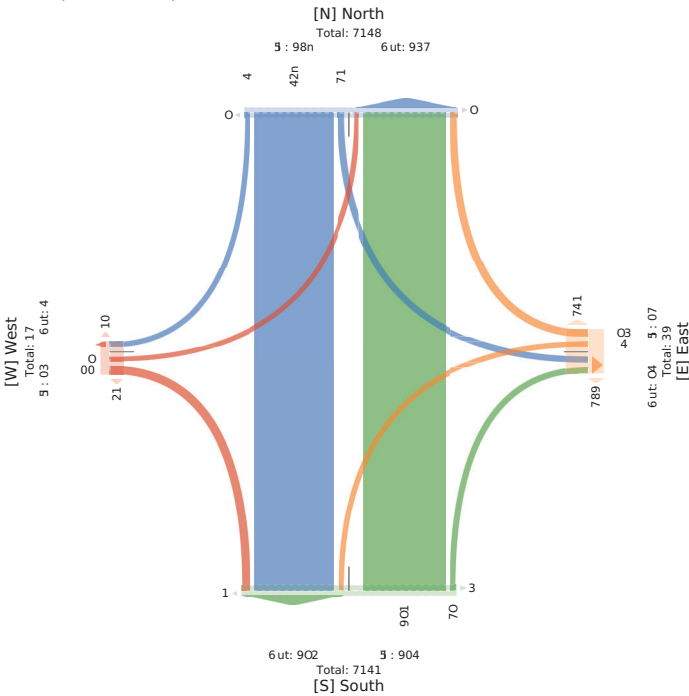
0789elub uERMGChvFo CBmCur d iCod uB (r 77 Fpbn7mHv875Vb3W7WSs IB

5566814 - COVID - BANK ST @ ECHO DR - MAY 07... - TMC

Sat May 7, 2022
 PM Peak (WKND) (1 PM : 3 PM) : - Qvair Peak l Hv
 u r AnaGC(s L i gCahn MHFdydreC l eaOy, PeneGdahC c ldydreCH BFhn, c ldydreCH AvHCRark)
 u r MHDevehC
 nDI 93451, s HAttHh 13693. 79, :738. 1551



Provided by: City of Ottawa
 400 AHGenatH Dc
 Nepean, - N, K2G 3J9, Au



5566814 - COVID - BANK ST @ WILTON CRES - MA... - TMC

Tue May 3, 2022
 0Fl Lngt dh (62:A2 - M91:A2 PM)
 - II Cluuss (Lit hes ugd Moeracahns3Hnuv3Pndnsriugs3Bicahns og Road3Bicahns og Crosswalk)
 - II Movnmnges
 ID: 476A713Locuoig: 875Myyy, 39/73. 7827



Provided by: City of Ottawa
 622 Cogswellatog Dr3
 Nnpnug3ON3K, G 7143C-

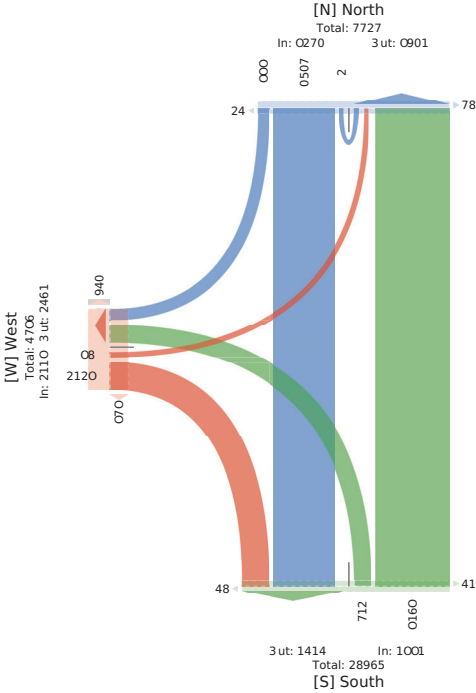
Dir	Clav	Euse	IClav	n Fe
h d'v	TClavN3 ER	n FoN3 ER	ClavN3 ER	EuseN3 ER
Winn	R W U - pp Prd*	W L U - pp Prd*	R L U - pp Prd*	R L U - pp Prd*
66:22-M	7, 871 2 72, 1	777 628 2 174 8	6y8 . 2 6y1 4A	688A
6:22PM	87 873 2 72, 6A	78A 823 2 172 66	6, 27 . 2 6A 676	6A17
6:22PM	78 841 2 772 A	718 62. 2 1y, A	. 2 1 2 . 1 6. 1	688
A22PM	77 766 2 711 .	7. A 66A 2 141 y	. 68 A 2 . 6y 617	68y4
8:22PM	11 764 2 7. 7 6,	1. 8 661 2 y82 y	6. A y 2 642 67y	6767
7:22PM	74 867 2 8y8 4,	1. y 621 2 yAA 62	6. 8 7 2 6. 4 6. 2	6A11
1:22PM	AA . 68 6 . 8. 68	. 4A 8A 2 AA	. 2 A 2 . A 87	11y
% - pproach	623% . 43% 2% 9	9 . 83% 67% 2% 9	9 4y3% . 9% 2% 9	9 66%
% Wnal	82% A8B% 2% Ay3%	9 863% y3% 2% 8. 3%	9 6A3% 23% 2% 6A3%	9 9
Lit hes ugd Monrachs	862 A8. 1 6 A 4y	9 8. A . 2 2 727,	9 68A A8 2 68y,	9 626. 6
% Lit hes ugd Monrachs	4. 5% 4A6% 622% 4A5	9 4. 3% 413% 2% 4. 5%	9 473% . 75% 2% 483%	9 44% 9
% Hnuv	6 47 2 41	9 62. 7 2 63y	9 . 2 2 . 2	9 . 27
% Hnuv	25 % . 87% 2% . 9%	9 . 5% 23% 2% . 5%	9 23% 2% 2% 25%	9 69 %
Bicahns og Road	AA 67y 2 642 4	9 12 . 1 2 . 1	9 y8 1 2 2 2	9 771
% Bicahns og Road	y3% 85 % 2% 85%	9 73% A8% 2% 75%	9 894% 675% 2% 75%	9 75%
Pndnsriugs	9 9 9 9 9 42	9 9 9 9 9 82	9 9 9 9 9 6272	9
% Pndnsriugs	9 9 9 9 9 45%	9 9 9 9 9 . 54%	9 9 9 9 9 4894%	9
Bicahns og Crosswalk	9 9 9 9 9 .	9 9 9 9 9 7	9 9 9 9 9 7y	9
% Bicahns og Crosswalk	9 9 9 9 9 . 5%	9 9 9 9 9 663%	9 9 9 9 9 73%	9

* Pndnsriugs ugd Bicahns og Crosswalk5L: Lnfe3R: Rit he3W WhrF3U: U9Wng

5566814 - COVID - BANK ST @ WILTON CRES - MA... - TMC
 Sat May 7, 2022
 Full Length (10:30 AM-6:30 PM)
 All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
 All Movements
 ID: 941346, Location: 54.397772, -74.684504



5566814 - COVID - BANK ST @ WILTON CRES - MA... - TMC
 Tue/May y3, 2, .
 M/F/Tue 1 Lun g h (6 : gAA92 1 M PA -92 1 M:
 1) Cussls g ðloes ur F Mce: Havjls3B LuRa3l LFLsdður s3w0avjls cr kcuF3w0avjls cr
 CHssm:n
 1) McRll Lrs
 IB - 47A9783i cvudtr - 57.94yyy, 3y7.8b7527



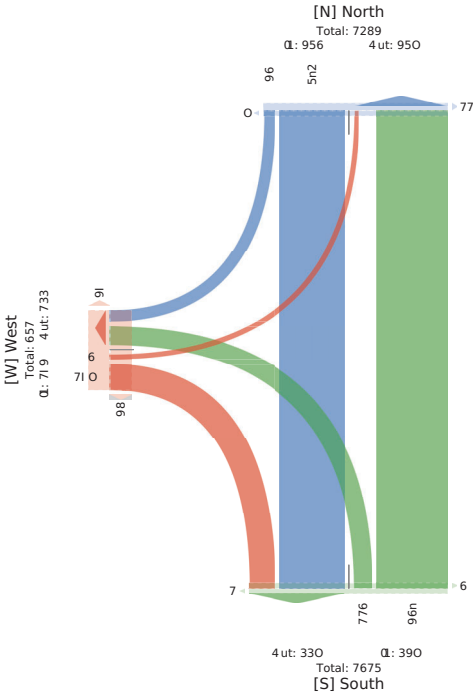
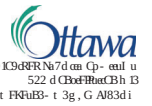
Lid 6Hvdtr	Cld Tcl of cJrF					Tclm (cld of cJrF					Lse Eust cJrF				
	k	S	W	1 pp	1 LFL	S	i	W	1 pp	1 LFL	k	i	W	1 pp	1 LFL
AA	ABA	2	AB	5	AB	95	2	AB7	2	72	A	2	7A	2	97b
AA571 M	Av	A24	2	A 8	2	AB	2	AB8	2	52	2	2	52	99	99
A 22 M	Av	A 9	2	Av	2	ABA	92	ABA	94	94	2	5A	9y	97d	97d
A 37 M	AA	A 3	2	AB	2	AA	2	AB2	2	59	2	2	59	5	9A
Scaj	79	542	2	759	AB	794	AB	2	87	5	Av	9	2	Av7	Av7
* 1 ppHaw	4b*	42,*	2*	P	P	b,y*	Av9*	2*	P	P	4b9*	Av3*	2*	P	P
* Scaj	9,4*	97,8*	2*	94,8*	P	94,9*	b,*	2*	Sy,8*	P	A,8*	2,*	2*	A,b*	P
1 B%	2,yA4	2,4A	P	2,4,4	P	2,422	2,69A	P	2,42b	P	2,b,2	2,9y7	P	2,bA4	P
1 ðloes ur F Mce:Havjls	58	57y	2	729	P	54b	AAA	2	824	P	AB5	9	2	Avy	P
* 1 ðloes ur F Mce:Havjls	b8,b*	49,9*	2*	4,8*	P	4,5*	4b,*	2*	49,5*	P	47,9*	A2,2*	2*	47,5*	P
BLab	2	Av	2	Av	P	Av	2	A4	P	2	2	2	2	2	P
* BLab	2*	9,7*	2*	9,4*	P	9,*	Ab*	2*	4*	P	2*	2*	2*	2*	P
w0avjls cr kcuF	y	AB	2	9	P	5	2	2	5	P	b	2	2	b	P
* w0avjls cr kcuF	Ab,*	9,9*	2*	5,*	P	5,7*	2*	2*	9,y*	P	5,y*	2*	2*	5,8*	P
1 LFLob	P	P	P	P	A	P	P	P	P	5	P	P	P	P	A4
* 1 LFLob	P	P	P	P	4,9*	P	P	P	P	A2,2*	P	P	P	P	45,b*
w0avjls cr CHssm:n	P	P	P	P	A	P	P	P	P	2	P	P	P	P	B
* w0avjls cr CHssm:n	P	P	P	P	y,y*	P	P	P	P	2*	P	P	P	P	7,*

4) LFLsdður s ur F w0avjls cr CHssm:n. i - i LQ8k - k ðloes - SoH3W - WSJH

5566814 - COVID - BANK ST @ WILTON CRES - MA... - TMC
 Sat May 7, 2022
 Midday Peak (WKND) (11:30 AM - 12:30 PM)
 All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
 All Movements
 ID: 941345, Location: . 4697772, -74684. 04

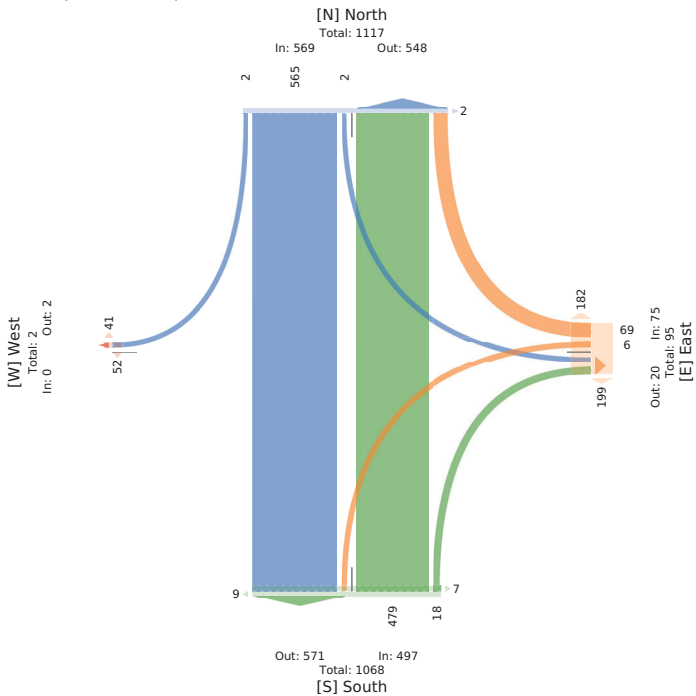


5566814 - COVID - BANK ST @ WILTON CRES - MA... - TMC
 Tue/May y3, 2, .
 0M 0Ful In g t h (16 0M : A0M (: - 9FluP0Ful) G 1
 i Ppd ðloes ur F Mce: Havjls3B LuRa3l LFLsdður s3w0avjls cr kcuF3w0avjls cr
 CHssm:n
 1) McRll Lrs
 IB - 47A9783i cvudtr - 57.94yyy, 3y7.8b7527

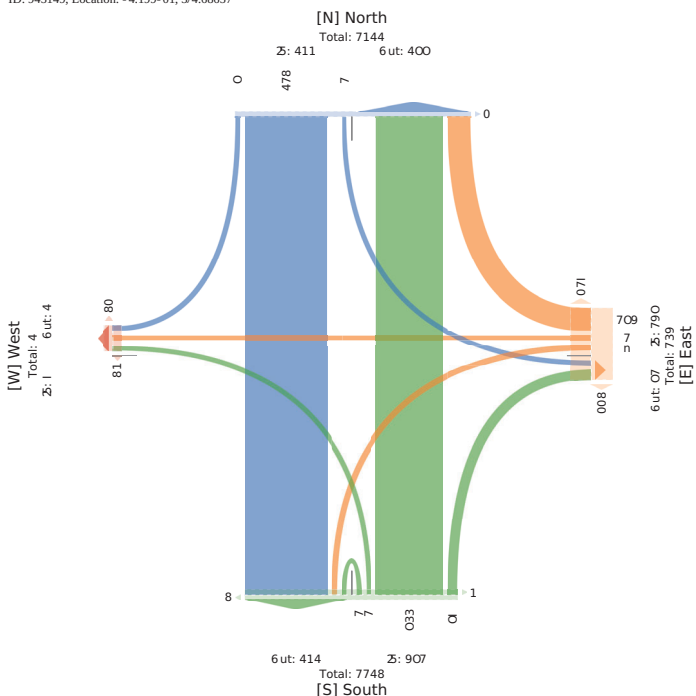


rFH h cJrF	Cav TClavN3:BR					TClav TClavN3:BR					m Foe EustN3:BR				
	m	S	W	1 RK	0HRL	S	r	W	1 RK	0HRL	m	r	W	1 RK	0HRL
SDF	2	56y	2	5by	2	5,y	5	2	5B0	5	66	2	2	66	5y
65:AM	5	5	2	5AA	5	5Ab	5	2	5B	2	66	2	2	65	AD
67:20M	52	5,5	2	5,5	8	5Ab	5	2	5Q	2	76	6	2	AD	5y
65:AM	5	558	2	5	5	5Q	2	2b	2	6y	2	2	6y	6	0A
Scaj	bb	AS8	2	AOA	5	b,6	55b	2	y62	3	50	y	2	582	5,y
* 1 RKClav	55*	00y*	2*	5	5	0K*	5Ay*	2*	5	5	88,*	5y*	2*	5	5
* Scaj	66*	66*	2*	60*	5	65*	y6*	2*	600*	5	5,5*	2A*	2*	5,6*	5
0) %	2bA	2R86	2	200*	5	2Kb,	2B,y	2	2R86	5	2825	286,0	2	2R8A	28Q
r ðloes ur MCG:ChavFo	b2	6CA	2	6A	5	AvA	556	2	b08	5	5y	y	2	5y8	565
* r ðloes ur MCG:ChavFo	82B*	8,8y*	2*	8,8*	5	8,8*	8CE*	2*	8,8*	5	862*	522*	2*	866*	8,8*
) Rfda	2	5	2	5	5	55	5	2	5	5	5	2	2	5	5
*) Rfda	2*	5*	2*	5*	5	5K*	2B*	2*	5b*	5	2A*	2*	2*	2A*	5y*
k0avFo CBmCulR	b	2	2	2	2	2	2	2	2	2	52	2	2	52	5y
* k0avFo CBmCulR	8E*	6L*	2*	60*	5	b5*	2B*	2*	AL*	5	AL*	2*	2*	AL*	AS*
0HFLob	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
* 0HFLob	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
k0avFo CBd Kcol uR	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
* k0avFo CBd Kcol uR	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5

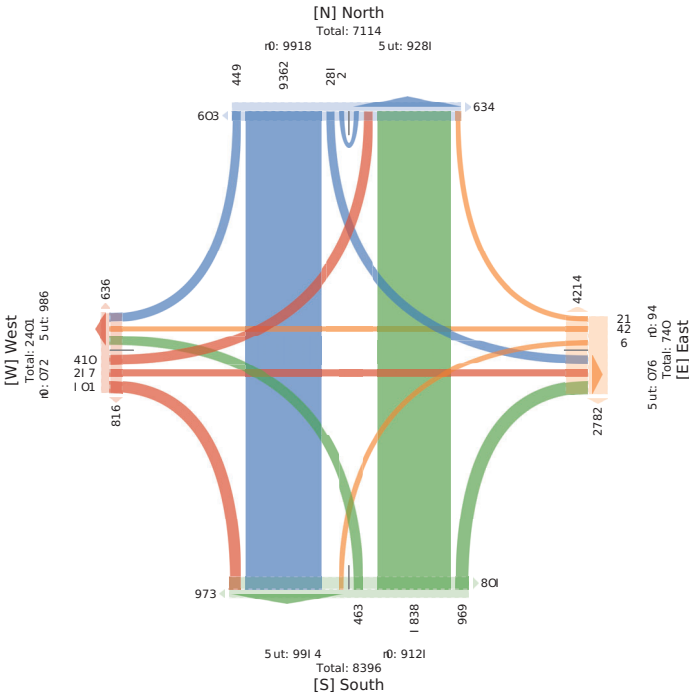
4) FFLsdður s ur F w0avjls cr CHssm:n. i - i LQ8k - k ðloes - SoH3W - WSJH



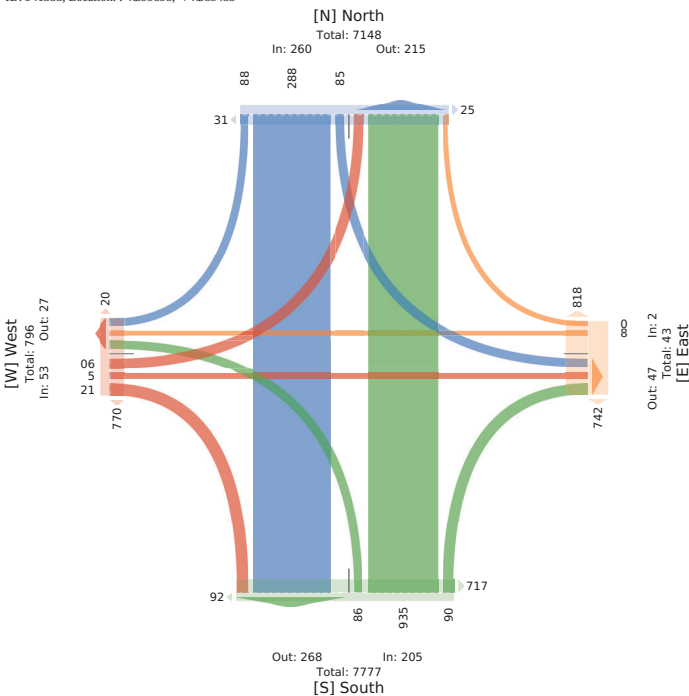
Dir	Flow	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Sat	569	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Out	548	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
West	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
East	75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1117	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



Dir	Flow	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Sat	7144	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Out	400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
West	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
East	739	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	7748	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

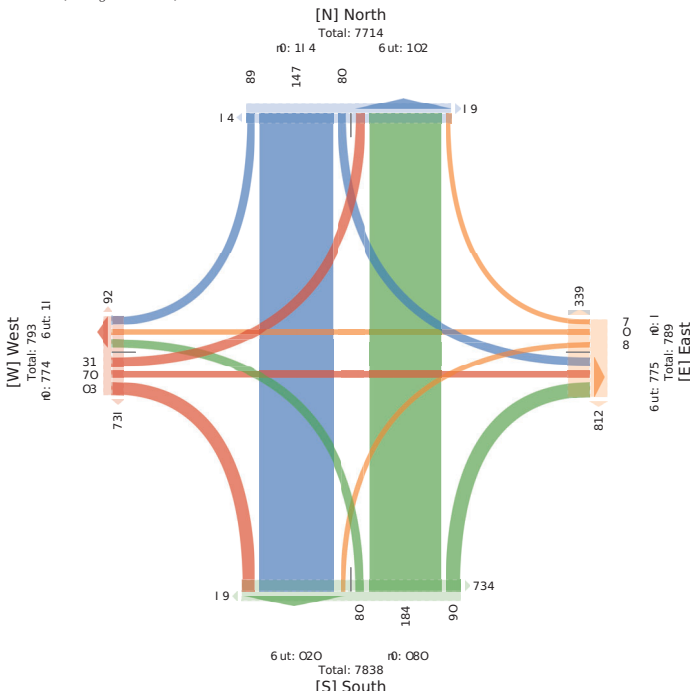


Phase	Color	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th	15th	16th	17th	18th	19th	20th
1	Red	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2	Yellow	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3	Green	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...



Phase	Color	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th	15th	16th	17th	18th	19th	20th
1	Red	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2	Yellow	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3	Green	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

5566814 - COVID - BANK ST @ HOLMWOOD AVE - M... - TMC
 Sat May 7, 2022
 PM Peak (WKND) (1:30 - 4:30 PM) Overlapping Peak
 All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
 All Movements
 ID: 941367, Location: 3-614484, 0-68. - 1

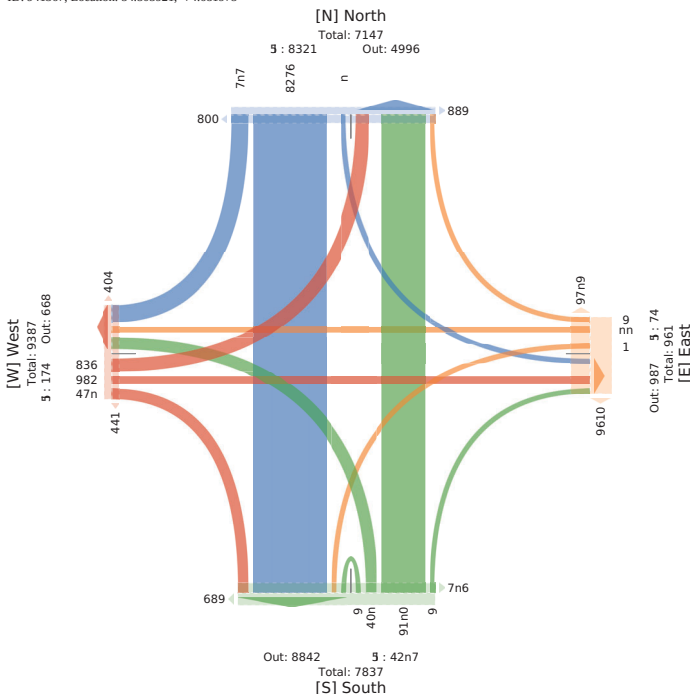


5566814 - COVID - QUEEN ELIZABETH DRWY @ FIF... - TMC
 Tue/May 3, 2, 2,
 0 Flt Lngt th (62:AE - M91:A2 PM)
 - II Classes (Lit hsgd Motorcycles 3Hnuva3Pndrsrings3Bicacns and Road3Bicacns and Crosswalk)
 - II Movements
 ID: 476Al3, Location: 873244, 639/73, 64y8



Lit Dircng	North ToRthofgd					East S rthofgd					North Northofgd					West Endofgd					Age		
	R	W	L	U	pp	R	W	L	U	pp	R	W	L	U	pp	R	W	L	U	pp			
2, 9878y 62:22 M	2	6	1	2	2	6	6	2	2	2	2	6	2	2	2	2	6	2	2	2	17		
6:22PM	1A	A2	2	2	2	6	6	2	2	2	2	6	2	2	2	2	6	2	2	2	164		
6:22PM	78	A1	6	2	2	6	6	2	2	2	2	6	2	2	2	2	6	2	2	2	171		
6:22PM	78	A2	6	2	2	6	6	2	2	2	2	6	2	2	2	2	6	2	2	2	172		
6:22PM	y2	A4	6	2	2	6	6	2	2	2	2	6	2	2	2	2	6	2	2	2	173		
6:22PM	14	8A6	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	174		
6:22PM	y	824	6	2	2	6	6	2	2	2	2	6	2	2	2	2	6	2	2	2	175		
6:22PM	1	816	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	176		
6:22PM	8	7	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	177		
Total	787	A27	8	2	2	6	68	2	2	2	6	684	48	6	287	6	84	2	2	7	754	1871	
% approach	67%	85%	28%	2%	9%	69%	83%	60%	2%	9%	2%	75%	68%	2%	9%	5%	6%	8%	2%	9%	9%	9%	
% West	3%	6%	28%	2%	77%	9%	2%	25%	2%	25%	9%	2%	93%	83%	2%	83%	6%	7%	2%	66%	3%	9%	
Lit hsgd Motorcycles	7A2	44	6	2	2	2	2	2	2	2	2	6	27	4A	6	6444	9	8A	6	8	74	6	16,2
% Lit hsgd Motorcycles	45%	45%	72%	2%	45%	9%	2%	2%	2%	2%	2%	47%	44%	62%	45%	9	47%	25%	41%	2%	47%	48%	4%
% Heavy	6	66	2	2	2	2	2	2	2	2	2	6	2	2	2	2	2	2	2	2	2	2	2
% Bicycles and Road	66	77	A	2	14	9	6	8A	y	2	76	9	6	Al	2	2	2	2	2	2	2	2	2
% Bicycles and Crosswalk	2%	45%	97%	2%	68%	62%	45%	62%	2%	4	8%	62%	8%	2%	2%	45%	2	8%	4	2%	5%	2%	64%
% Pedestrians	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
% Bicycles and Crosswalk	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
% Bicycles and Crosswalk	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
% Bicycles and Crosswalk	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9

5566814 - COVID - QUEEN ELIZABETH DRWY @ FIF... - TMC
 Sat May 7, 2022
 Full Length (10:30 AM-6:30 PM)
 All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
 All Movements
 ID: 941367, Location: 54.503921, -74.681975



5566814 - COVID - QUEEN ELIZABETH DRWY @ FIF... - TMC
 Tue/May 3, 2, 2,
 MF/Fra 1 am g h (6 g :91 l M PA91 l M:
) Cs Gll Li gr thr e u F M H H B B L L 3 R L n a 3 l L F l i d u c i k B h B L H t m H F 3 k B h B L H t s V H I l u d :
) C M H H L L r d
 46 - 71 A 5 y 3 l H H G H - 91.9287, A 3 y l 5 b A 7 y 9



lit	Dir	Class	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow
2, 9878y 62:22 M	2	6	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
6:22PM	1A	A2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
6:22PM	78	A1	6	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
6:22PM	78	A2	6	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
6:22PM	y2	A4	6	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
6:22PM	14	8A6	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
6:22PM	y	824	6	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
6:22PM	1	816	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
6:22PM	8	7	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Total	787	A27	8	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
% approach	67%	85%	28%	2%	9%	69%	83%	60%	2%	9%	2%	75%	68%	2%	9%	5%	6%	8%	2%	9%	9%	9%	9%	9%
% West	3%	6%	28%	2%	77%	9%	2%	25%	2%	25%	9%	2%	93%	83%	2%	83%	6%	7%	2%	66%	3%	9%	9%	9%
Lit hsgd Motorcycles	7A2	44	6	2	2	2	2	2	2	2	2	6	27	4A	6	6444	9	8A	6	8	74	6	16,2	6
% Lit hsgd Motorcycles	45%	45%	72%	2%	45%	9%	2%	2%	2%	2%	2%	47%	44%	62%	45%	9	47%	25%	41%	2%	47%	48%	4%	4%
% Heavy	6	66	2	2	2	2	2	2	2	2	2	6	2	2	2	2	2	2	2	2	2	2	2	2
% Bicycles and Road	66	77	A	2	14	9	6	8A	y	2	76	9	6	Al	2	2	2	2	2	2	2	2	2	2
% Bicycles and Crosswalk	2%	45%	97%	2%	68%	62%	45%	62%	2%	4	8%	62%	8%	2%	2%	45%	2	8%	4	2%	5%	2%	64%	4
% Pedestrians	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
% Bicycles and Crosswalk	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
% Bicycles and Crosswalk	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
% Bicycles and Crosswalk	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9

5566814 - COVID - QUEEN ELIZABETH DRWY @ FIF... - TMC
 Sat May 7, 2022
 Midday Peak (WKND) (12:30PM - 1:30PM)
 1 CS GILLeL (i ghtL ad M r tr ch y H e L, v ea B, P e d e l t a o L, R i H y H e L o w r a d, R i H y H e L o s
 s o L l a M a L)
 1 C M r B e L e o L
 9D: 4A15, 7, g r H i r o: 3A805421, -7A6 81473

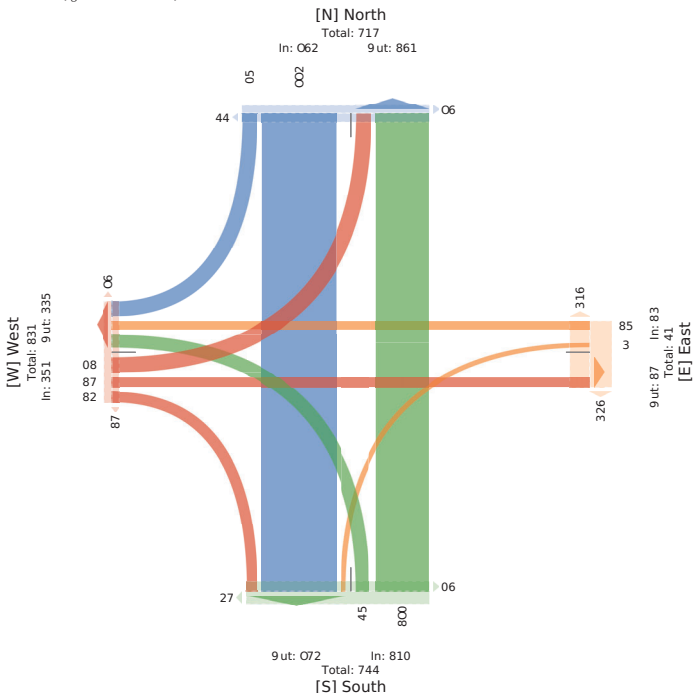


Par B d e d y: s i y i f O t t a w a
 100 s o l l e g a t i o n D e
 Nepean, ON, K2G 4A4, s 1

5566814 - COVID - QUEEN ELIZABETH DRWY @ FIF... - TMC
 Tue May y3, 2, 2,
 0M 0Ful In g t h (16: A2 0M - 9: A2 0M (- 1 P F u C D F u l s i d)
 o C r C o c f F I N E R t e u k M i d j a n R C 3 s F u P a 30 F k F o y u w c 31 v a n F e c i w D i u k 31 v a n F e c i w
 r j i c o 4 u l f
 o C M i P F F w e c
 9h: 56. A b y 3 H i m e i w e b 6 b 2 A 6, . 3- y 6 B 90 5 y b



O j P k R N: v a n F e c i w i p 1 m a u
 . 22 r i w e H G e i w h 3
 t F R k u w l i 3 g, G 6 J 5 3 r o



5566814 - COVID - QUEEN ELIZABETH DRWY @ FIF... - TMC
 Sat May 7, 2022
 PM Peak (WKND) (1:30 PM - 3:30 PM) - v e r a l l P e a k o u l
 C H s H i L L e L (i g h t L a d c M u t u l B y B 4 L, o e a r y, P e c e l t a g d L, R g B y B 4 L u d w a c, R g B y B 4 L u d
 s l u L l a M a L)
 C H M u r e d i t L
 9D: 415307, i u B i g g d: . 16 03425, -710 08547.

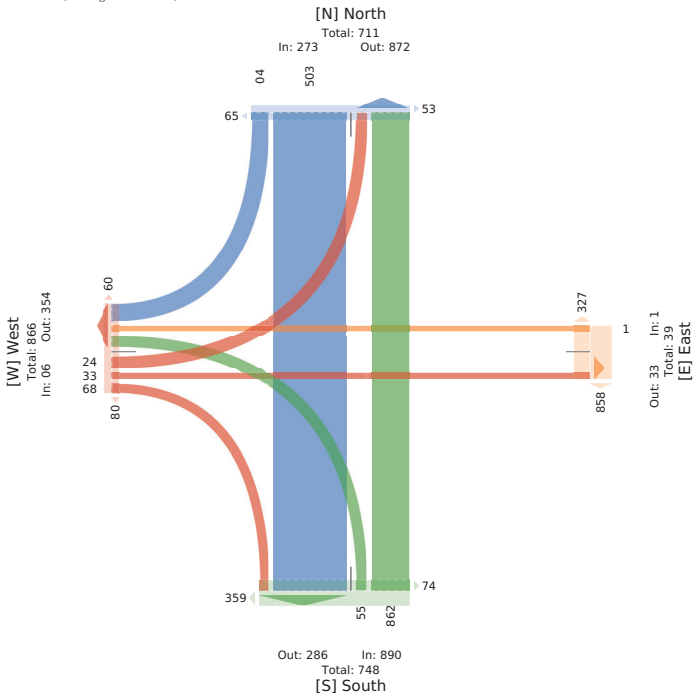


Plur g e c d y: s g y u l v t r a m a
 500 s u l l e H i g d D L
 Nepean, v N, K2G 1J4, s C

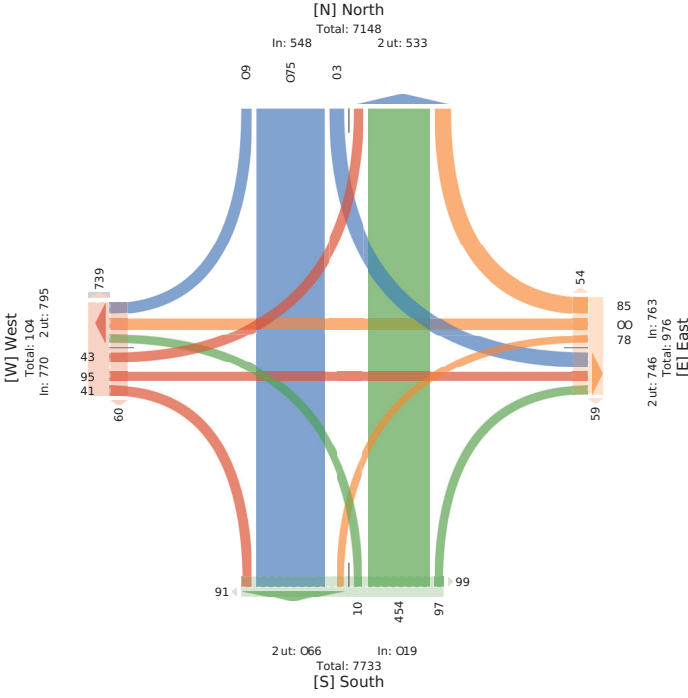
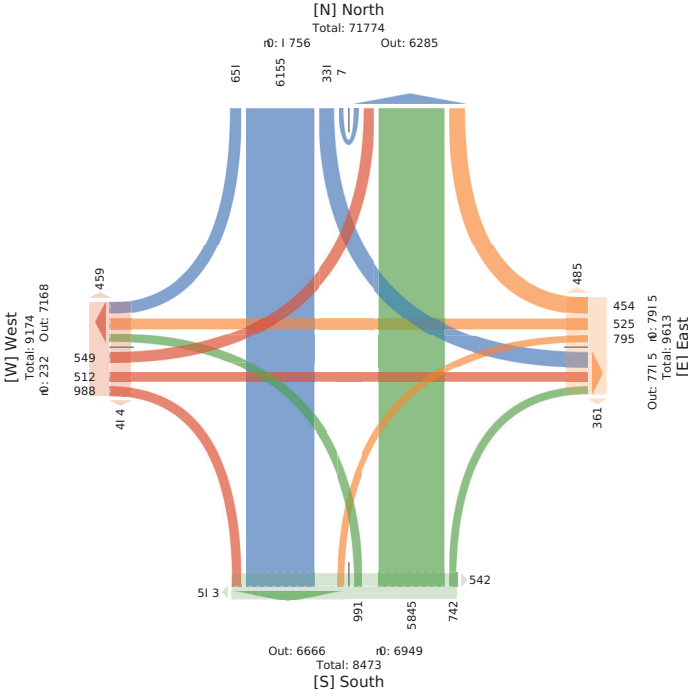
5566814 - COVID - BANK ST @ SUNNYSIDE AVE - ... - TMC
 Tue May y3, 2, 2,
 0Fll Lngt h (6: A2 - M 9: A2 P M)
 - H C l a s s e s (L i t h e u g d M o o r c a c h n s 3 H n u a 3 P n d s r i n g s 3 B i c a c h n s o u d 3 B i c a c h n s o u d
 C r o s s w u k)
 + H M o v m e n t s
 I D: 476A143, L o c a t i o n: 87548, 463973, . 024



Pr o v i d n t b a: C i m o f O t t a w a
 622 C o s n a l l u o g D r 3
 N n p n g 30 N 3 K, G 7 143-9



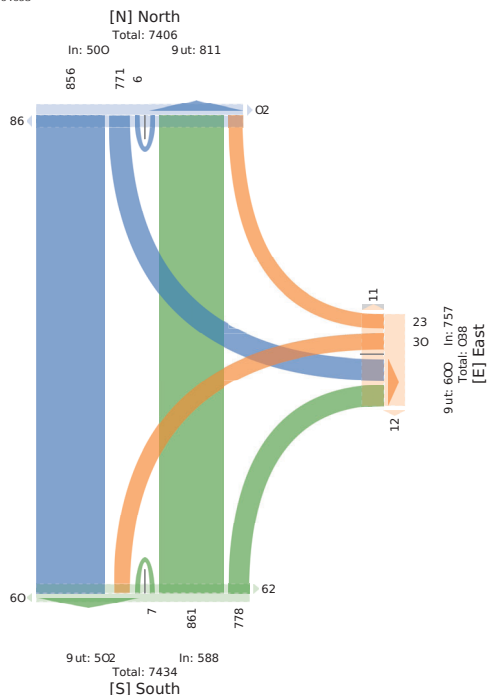
Dir	North				East				South				%																		
	R	W	L	U	R	W	L	U	R	W	L	U																			
2, 2, 987By 62-22 M	7	68	8A	2	...	9	A	61	6A	2	3y	12	66	76	66	2	7A	11	67	4	1	2	y2	y7	3y						
6:22PM	81	844	y6	2	161	9	4A	8	1	2	61A	622	7	8	1	2	74A	94	8	8	AA	2	6A	616	68A						
6:22PM	72	84y	7	2	1A	9	4A	7A	2	2	6y	6,4	A2	87A	7	2	76A	8	82	6	8A	2	66B	6	68A						
6:22PM	y2	846	y1	6	1A	9	62y	yA	6	2	64	6v	...	88y	1	2	847	1v	88	76	Av	2	66C	6	68A						
6:22PM	7A	777	47	2	y2A	9	4	77	2	677	Al	64	8y	A0	2	7A	6,7	76	76	4	AA	2	64A	6v	68,4						
A22PM	84	7y1	4	2	y68	9	4	76	6	2	616	Al	8	8	2	78y	6,3	7y	8	78	2	64A	6v	6716							
8:22PM	88	7,1	44	2	114	9	4y	86	6	2	672	6A	1	2	76	7	2	77y	1	70	71	2	682	6v	6761						
7:22PM	11	87y	y	2	247	9	2	AA	6A	2	6A	12	64	7A	6	2	78y	42	A2	...	78	2	66C	6	686B						
1:22PM	A	6	A0	2	7	9	AA	6y	7	2	72	3A	4	A	61	2	1A	6	67	67	A2	2	12	2	11A						
W e a d	8A0	82AA	117	6	7606	9	yA	AA	6	A	2	6,7A	68A	6y4	A	yA	1	2	2	8,y	yA0	...	A04	Ay	2	414	68	681			
% approach	5%	3%	6A2%	2%	9	9	7,5%	A63%	45%	2%	9	9	85%	42%	73%	2%	9	45%	A69%	A	3%	2%	9	9	9	9					
% W e a d	A5%	A63%	75%	2%	885%	9	15%	A8%	63%	2%	625%	9	65%	A6%	65%	2%	A5%	9	5%	3%	A5%	2%	9%	9	9	9					
L i t h e u g d M o o r c a c h n s	A	1	A21	178	6	8,y	9	y	...	A	6	A	2	6,y	9	6y7	A177	64	2	8284	9	...	A	4y	A11	2	481	9	66214		
% L i t h e u g d M o o r c a c h n s	5%	483%	4	5%	622%	2%	4y9%	9	4	2%	4y5%	622%	2%	4y9%	9	9	4y5%	483%	445%	2%	485%	9	4	5%	416%	4	3%	2%	4y4%	9	475%
% H a n o v	8	1	...	2	621	9	A	8	2	2	y	9	2	4y	6	2	4	9	A	2	2	7	9	A	2	7	9	61			
% B i c a c h n s o u d	45%	65%	25%	2%	3%	9	23%	62%	2%	2%	23%	9	2%	2%	25%	2%	9%	4	25%	62%	2%	2%	25%	9	63%	9	63%				
% B i c a c h n s o u d	y	617	4	2	6	6	6	y	2	2	64	9	8	6	6	2	2	6,7	9	A	4	1	2	6	6	9	60A				
% P n d s r i n g s	9	9	9	9	9	2	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9				
% B i c a c h n s o u d	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9				
% B i c a c h n s o u d	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9				



Fl	Fl	Fl	Fl	Fl	Fl	Fl	Fl	Fl	Fl	Fl	Fl	Fl	Fl	Fl
Fl	Fl	Fl	Fl	Fl	Fl	Fl	Fl	Fl	Fl	Fl	Fl	Fl	Fl	Fl
Fl	Fl	Fl	Fl	Fl	Fl	Fl	Fl	Fl	Fl	Fl	Fl	Fl	Fl	Fl
...
...
...
...
...
...
...
...
...
...
...



Provided by: City of Ottawa
 100 Constellation Dr,
 Nepean, ON, K2G 4J9, CA



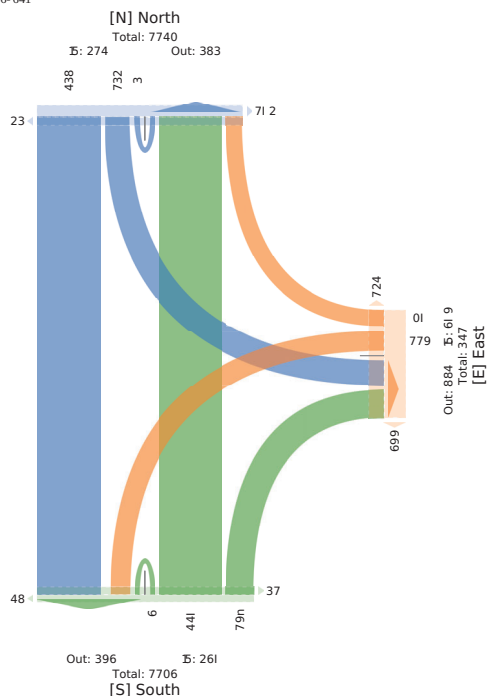
0) j PkRk N8: i v8 1 j 1 m8 u
 22 r i uclRQ8st wh j3
 r HkFusl t 3g, G - J53r o

hB b u f u e w	i j)R Ti d d R n d u k					Euce n F e N d u k					Ti d d R i j)R n d u k					e					
	S	H	W	o K K	O R U	D	H	W	o K K	O R U	D	S	W	o K K	O R U						
2, ., 9-9y 6:A 0M	..	2	6-	..	.AO	OR	..	f	A	2	A	..	2	2	Oy	..	f	6-			
AZ20M	..	5	A6	..	.f2	6,	..	O	66	2	A6	..	22	A	50	..	.6f	..	6y		
A - 0M	..	6	..	..	.A	7h	..	y	60	2	O	..	..	Ay	..	..	.O	..	6y	
A620M	..	2	A2	..	.A	6,	..	5	A	2	+6	..	..	A6	..	25	..	..	6y	
* o H8J ush	A 6	..	O	..	O A	..	..	52	..	2	.2y	AA	..	yf	A2	..	O 2	..	AA	
* s iac	6 h*	2H*	2H*	..	..	..	..	A6*	..	2*	..	..	..	fH*	y 12*	2H*	..	..	..
* s iac	6 h*	2H*	2H*	A 10*	..	..	..	Ch*	fH*	2*	.A6*	..	..	h*	62h*	2h*	A62*	..	..
0s %	2Hf	2yf	2Hf	2Hf	..	..	..	2H2O	2Hf	..	2H66	..	..	2h5	2h5	f	2h22	2h5	..	2h20
H8Rc usk Mi d)nandfcs	A -	..	..	..	..	..	..	fO	..	6	2	.55	..	..	f f	A 6	..	..	..	..
* H8Rc usk Mi d)nandfcs	56h*	5y9h*	..22*	5A4*	..	..	..	5-10*	500P	2*	50h*	..	..	f f H*	568*	..22*	5 h*	..	..	..
s FuPa	..	A	..	..	..	..	..	..	2	2	..	..	..	..	2	2	2	..	..	..
* s FuPa	6h*	2H*	2*	..	..	..	..	..	b*	2*	2*	2h*	..	..	2*	..h*	2*	..10*	..	..
i vnanfrc i w Di uk	..	A	2	..	..	..	..	6	A	2	2	y	..	..	..	2	..	..	..	..
* i vnanfrc i w Di uk	6h*	..h*	2*	..h*	..	..	..	6h*	6h*	2*	6h*	..	..	..h*	6h*	2*	6y*	..	..	..
OIRKusw	..	9	9	9	9	..	..	..	..	..	..	..	..	9	9	9	9	9	9	..
* OIRKusw	9	9	9	9	53h*	9	9	9	9	5h*	9	9	9	9	9	5h*	..
i vnanfrc i w r j) c04 uL	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	..
* i vnanfrc i w r j) c04 uL	9	9	9	9	20*	9	9	9	9	16*	9	9	9	9	9	9	..

h)Rfcyevucsk i vnanfrc i w r j) c04 uL bH: H8RcD: D8RcS: StQd3W: W8dJw



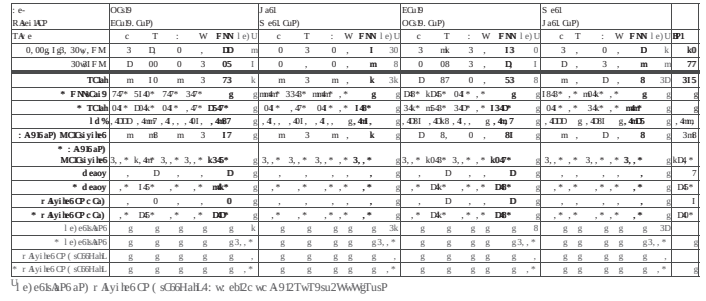
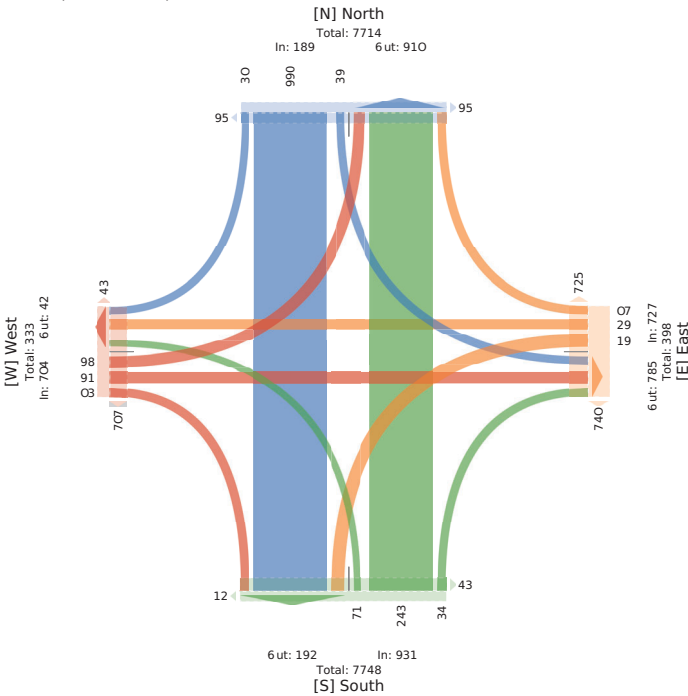
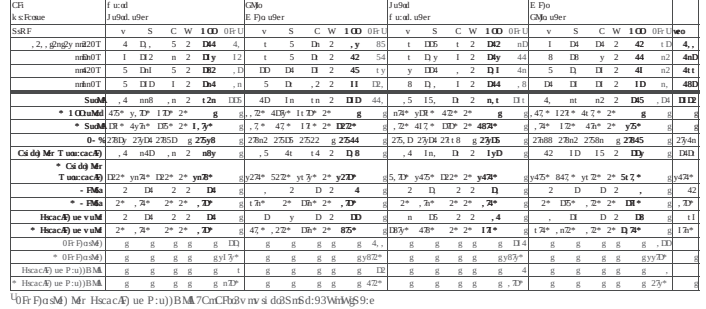
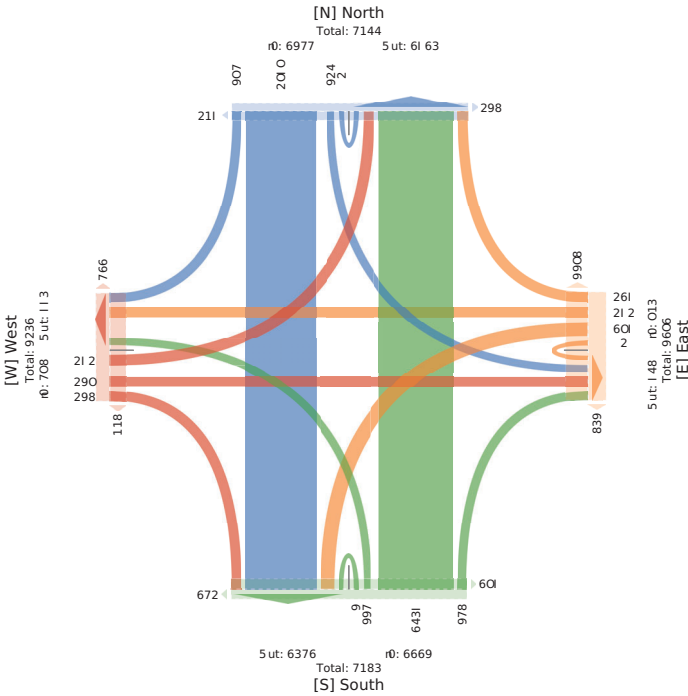
Plur gec by: s gy uL i t rana
 500 s uL t r HgD L,
 Nepean, v N, K2G - J4, S C



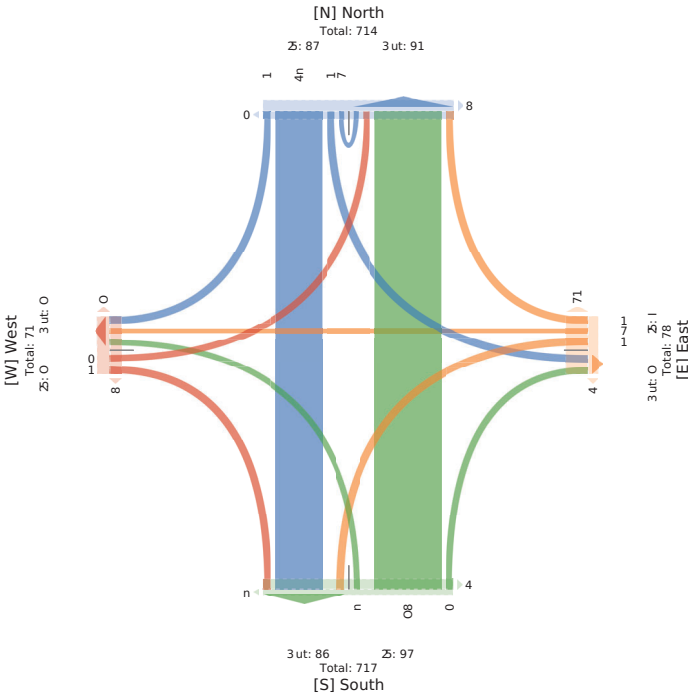
122 CuestllMue 1 d0nNm3f O3p, K D39CP

Lang i use r i s e	Dnuth EuFth, u f e d					U Me S n s t, u f e d					EuFth Dnuth, u f e d					S n s t J M e, u f e d						
	B	W	L	U	PNN	B	W	L	U	PNN	B	W	L	U	PNN	B	W	L	U	PNN		
2, ., 9-9y 6:A 0M	..	2	6-	..	.AO	OR	..	f	A	2	A	..	2	2	Oy	..	f	6-	..	6y		
AZ20M	..	5	A6	..	.f2	6,	..	O	66	2	A6	..	22	A	50	..	.6f	..	6y	..	6y	
A - 0M	..	6	..	..	.A	7h	..	y	60	2	O	..	..	Ay	..	..	.O	..	6y	..	6y
A620M	..	2	A2	..	.A	6,	..	5	A	2	+6	..	..	A6	..	25	..	..	6y	..	6y
* o H8J ush	A 6	..	O	..	O A	..	..	52	..	2	.2y	AA	..	yf	A2	..	O 2	..	AA	..	AA
* s iac	6 h*	2H*	2H*	..	..	..	..	A6*	..	2*	..	..	..	fH*	y 12*	2H*	..	..	..	..	..
* s iac	6 h*	2H*	2H*	A 10*	..	..	..	Ch*	fH*	2*	.A6*	..	..	h*	62h*	2h*	A62*	..	..	..	..
0s %	2Hf	2yf	2Hf	2Hf	..	..	..	2H2O	2Hf	..	2H66	..	..	2h5	2h5	f	2h22	2h5	..	2h20	..
H8Rc usk Mi d)nandfcs	A -	..	..	..	..	..	..	fO	..	6	2	.55	..	..	f f	A 6	..	..	..	..	..
* H8Rc usk Mi d)nandfcs	56h*	5y9h*	..22*	5A4*	..	..	..	5-10*	500P	2*	50h*	..	..	f f H*	568*	..22*	5 h*	..	..	..	..
s FuPa	..	A	..	..	..	..	..	..	2	2	..	..	..	..	2	2	2	..	..	..	..
* s FuPa	6h*	2H*	2*	..	..	..	..	..	b*	2*	2*	2h*	..	..	2*	..h*	2*	..10*	..	..	..
i vnanfrc i w Di uk	..	A	2	..	..	..	..	6	A	2	2	y	..	..	..	2	..	..	..	..	..
* i vnanfrc i w Di uk	6h*	..h*	2*	..h*	..	..	..	6h*	6h*	2*	6h*	..	..	..h*	6h*	2*	6y*	..	..	..	..
OIRKusw	..	9	9	9	9	..	..	..	..	..	..	..	..	9	9	9	9	9	9	9	..
* OIRKusw	9	9	9	9	53h*	9	9	9	9	5h*	9	9	9	9	9	9	5h*	..
i vnanfrc i w r j) c04 uL	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	..
* i vnanfrc i w r j) c04 uL	9	9	9	9	20*	9	9	9	9	16*	9	9	9	9	9	9	9	..

* ndnstaMsvirarir us CassRMBvL: Lnh3B: Bigh3W Wbf3U: U9Mf6



5566814 - COVID - BANK ST @ FIFTH AVE - MAY ... - TMC
 Tue May 3, 20, 00
 AM Peak (May 3, 0, 00 30AM 83 AM)
 A--9-a)e) (l GL) agh Mt it ndy-e)2o ear y2Pehe)ir4g)2c @y-d-e) t g Ht ah2c @y-d-e) t g
 9rt)v-a-k:
 A--Mt r eBegi)
 Rwni D 34721 r dai@gmD3) 3. 628645 1641



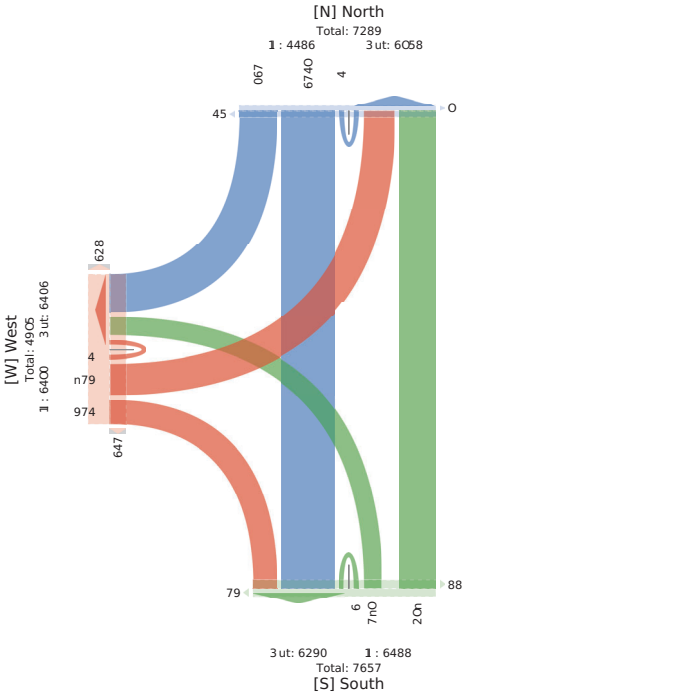
5566814 - COVID - QUEEN ELIZABETH DRWY @ PRI... - TMC
 T ue T M y3, 2, ,
 OFH Length (6:42 - T 9L :A2 P T)
 PII CInghs (Lights Md T utuarIn3c nMh3- ndnstoiM3v irarIn3 ue BuM3v irarIn3 ue
 CusswM6)
 PII T uHh nets
 nh : y6y1D23Lur Mue: 647621D63D47852AD5



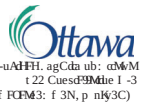
Lag I Intrdue	Outh JuFh. ufed				JuFth Outh. ufed				E. est SMc. ufed							
	B	W	U	PNN	-nd*	W	L	U	PNN	-nd*	B	L	U	PNN	-nd*	
Wk n	88	1y	2	45	A	yD	A	2	1,y	A	4	D	2	4	AD	
4:22-T	115	AA	2	40	y	1,y	124	2	AW	16	6y	44	2	126	81	
8:22-T	A2	1,y	1	6A	.	HA	y5	1	8.	.	y5	5A	.	151	D5	
D22-T	116	18y	2	5A	4	165	8D	2	14	15	51	y4	.	115	4	
5:22-T	8y	18D	1	AD	6	121	.	2	1,1	2	6	8A	2	5D	6y	
y22-T	85	1.A	2	1y1	A	44	.	y	2	56	D	AD	2	121	4	
12:22-T	DA	1,5	2	21	2	6y	1D	2	88	4	142	11	2	AD1	1y	
11:22-T	AI	4y	2	y2	2	1	D	2	5	1	8A	125	2	1D1	2	
2, 9:49:21, 22P T	1.	8	2	15	2	6	1	2	4	.	5	8	2	A6	2	
ViaM	y1A	1A	8	.	61	8	58D	AD	1	1,66	Dy	4A	DA	.	1,8y	AD3
% PNNuMh	62%	4y7%	27%	9	9	8yD%	A27%	27%	9	9	61%	4D%	27%	9	9	
% VnuM	1y2%	4D%	2%	6DR%	9	15%	D9%	2%	87%	9	11%	14%	2%	82%	9	
Lights Md T utuarIn3	y12	1A25	.	2	9	562	AD	1	1,1D	9	4,1	D5	.	1,41	9	
% C uMh	1	.	2	A	9	.	2	2	.	9	2	1	2	1	9	
% C uMh	27%	27%	2%	27%	9	27%	2%	2%	27%	9	2%	27%	2%	27%	9	
v irarIn3 ue BuM	18	2	15	9	9	4	2	2	4	9	11	8	2	1D	9	
% v irarIn3 ue BuM	27%	17%	2%	25%	9	9%	2%	2%	2%	9	7%	25%	2%	176%	9	
- ndnstoiM3	9	9	9	9	8	9	9	9	9	D	9	9	9	9	9	
% - ndnstoiM3	9	9	9	9	12%	9	9	9	9	y17%	9	9	9	9	9	
v irarIn3 ue CusswM6	9	9	9	9	2	9	9	9	9	D	9	9	9	9	88	
% v irarIn3 ue CusswM6	9	9	9	9	2%	9	9	9	9	53%	9	9	9	9	12%	

* - ndnstoiM3 Md v irarIn3 ue CusswM6/L: Lnh3B: Bigh3W Whd3U: U9M3e

5566814 - COVID - QUEEN ELIZABETH DRWY @ PRI... - TMC
 Mon May 9, 2022
 Full Length (4:30 PM-12:30 AM)
 All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
 All Movements
 ID: 949150, Location: 4. 40154, -5. 6780358



5566814 - COVID - QUEEN ELIZABETH DRWY @ PRI... - TMC
 T ue T M y3, 2, ,
 OT OFM IT M 2y, 2, , ng nOT h (g n OT 6h: AF-MB0FM 1 uP-
 9)C3M6S li drs e MHT uau-vavS31 FMA30FHScdM3BdavS ue RuMBBdavS ue
 C-usswM 6
) 9T uAk Fees
 nh gyDrt 4231 uvMthgDnT2r 4DBhn7 82548



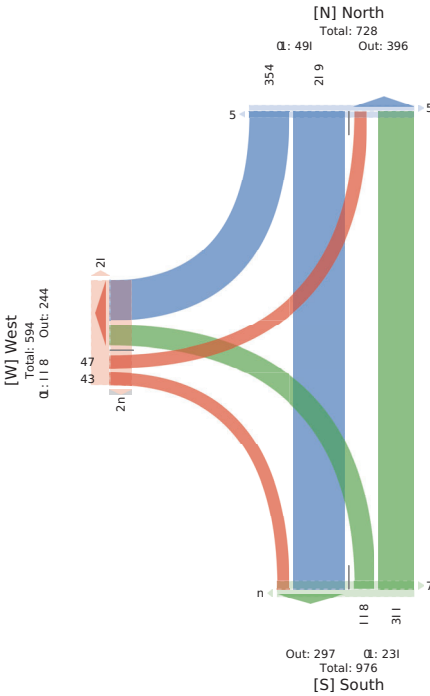
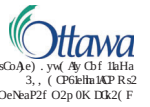
I fo IdFvade	f u-a GaPc. uPEH				GaPc f u-a. uPEH				J fsc EMc. uPEH							
	R	S	W	) OD	OHL	S	i	W	) OD	OHL	R	i	W	) OD	OHL
Sd F	5y	t2y	2	t1D	.	(n	.	n	2	y2	(t	n	t	2	4
ng2OT	D	45	2	t1n	t	D	.	2	(D	h	8	1n	2	5	.	
ng2OT	((	4D	2	t1n	n	ny	5e	2	y2	2	15	15	2	(	4
(g2OT	y8	(2	2	t1n	2	Dh	5	2	44	n	1(	18	2	5D	1
SuM	Dh	5e	2	t1n	8	11	112	2	5,t	n	n	n	2	t12	(8	
*) COuM	D3*	n7*	2*	h	h	(n7*	5D5*	2*	h	h	D5*	n7*	2*	h	h	
* SuM	D3*	5e3*	2*	n7*	h	175*	17*	2*	5,7*	h	n7*	n7*	2*	17*	h	
01%	27,	n	27e5	h	2884	h	2844	28ny	h	28(4	h	28e4	28,	D	h	
I drcs MHT uau-vavS	Dh	52n	2	nn2	h	2t	112	2	5t	h	Dy	n7	2	t2n	h	
* I drcs MHT uau-vavS	t22*	y(h*	2*	y82*	h	yn5*	t22*	2*	y(y*	h	yD*	y7*	2*	yn3*	h	
I PMu	2	t1	2	2	h	t	2	2	t	h	2	2	2	2	h	
* I PMu	2*	2*	2*	2*	h	2h*	2*	2*	25*	h	2*	2*	2*	2*	h	
BdavS ue RuM	2	t1	2	t1	h	y	2	2	y	h	5	.	2	n	h	
* BdavS ue RuM	2*	5h*	2*	2*	h	D5*	2*	2*	2*	h	n8*	5D*	2*	D3*	h	
OHScdM	h	h	h	h	h	h	h	h	h	h	15	h	h	h	h	
OHScdM	h	h	h	h	122*	h	h	h	h	h	R3*	h	h	h	8e5*	
BdavS ue CusswM	h	h	h	h	2	h	h	h	h	h	h	h	h	h	12	
* BdavS ue CusswM	h	h	h	h	2*	h	h	h	h	157*	h	h	h	h	tR*	

OHFScdM3 MHBdavS ue C-usswM 7i gi R3RgRdrcS5Gr -P3WgMS-Pe

5566814 - COVID - QUEEN ELIZABETH DRWY @ PRI... - TMC
 Mon May 9, 2022
 PM Peak (May 09 2022 5-65PM) O65 PMV) r l eia uPeak AoCH
 s uLuinei (glt ddi anBMoonRyRei, AeaLy, PeReidInni, wRyRei on moaB wRyRei on
 LHii11 aukv
 : s uMol eDend
 : 4 - 919630, goRedon- 15.10631,)35.070837



5566814 - COVID - QUEEN ELIZABETH DRWY @ PRI... - TMC
 Tue May 3, 20, 00
 F M l eal r nMay 3, 0, 00 30F M g3 F Mt
 F lh(h6e6 r A96 aP) MCCS i yi h62 eao y21 e) e6kAP6 r Ayi h6 CP c Ca) 2r Ayi h6 CP
 (sCGH aL4
 F hM Cve eP6
 R r wnk31, 2: G a1 CP v nD h 31 n2 g D F 8, 518



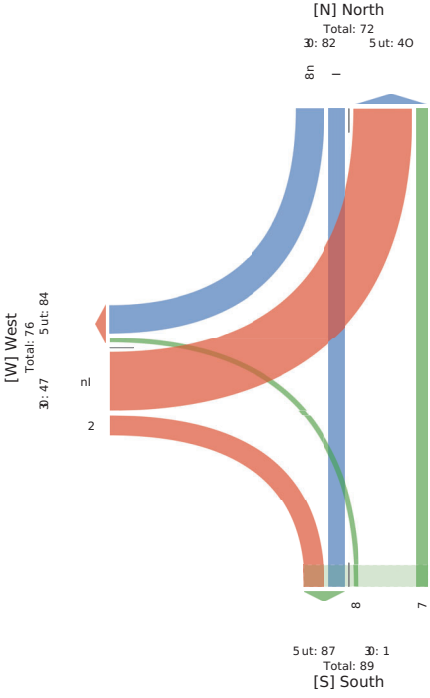
T	OGaB (CuB, CuP)				J CuB (OGaB, CuP)				E e6a Sa6L (CuP)				
	c	T	W	FNN	e	T	W	FNN	e	c	W	FNN	e
0.00g	18	5	33	33	5	3	5	5	3	3	35	35	00
30aLDF	m	5	1	1	3	3	0	0	m	k	5	5	00
TChk	30	7	38	38	m	3	D	0	8	07	5m	5	D
* FNNCuS	774*	554*	*	g	8,4*	0,4*	*	g	8	054*	174*	*	g
* TChk	03a*	3, 4*	534*	g	14*	34*	*	86*	g	3a4*	106*	*	D6*
1d%	,41D	,41,	g	,4k	g	,455	,40D	g	,41,	,480	g	,4nD	g
* A96aP) MCCS i yi h6	30	7	38	38	m	3	D	0	8	07	5m	5	D
* A96aP) MCCS i yi h6	3,*	3,*	*	3,*	g	3,*	3,*	*	3,*	3,*	*	3,*	g
d eao y	.	.	.	.	.	.	.	.	.	.	.	.	.
* d eao y	.	.	.	.	.	.	.	.	.	.	.	.	.
r Ayi h6 CP c Ca)	.	.	.	.	.	.	.	.	.	.	.	.	.
* r Ayi h6 CP c Ca)	.	.	.	.	.	.	.	.	.	.	.	.	.
e) e6kAP6	g	g	g	g	g	g	g	g	0	g	g	g	g
* e) e6kAP6	g	g	g	g	g	g	g	g	3,*	g	g	g	g
r Ayi h6 CP (sCGH aL4)	g	g	g	g	g	g	g	g	g	g	g	g	g
* r Ayi h6 CP (sCGH aL4)	g	g	g	g	g	g	g	g	g	g	g	g	g

1) e) e6kAP6 aP) r Ayi h6 CP (sCGH aL4: w e h2c w c A912T w 19u2W w 6T uS P

5566814 - COVID - QUEEN ELIZABETH DRWY @ PRI... - TMC
 Tue May 3, 20, 00
 AM Peak (May 3, 0, 00 30AM 83 AM:
 A--9 a))e (l 6L) agh Mt it ndy-e)2o ear y2Pehe)in6g)2c @y-d-e) t g h t ah2c @y-d-e) t g
 9 n))v a-k:
 A--Mt r eBegi)
 R w n l D 34, 21 r dai@g nL F 3) 34D 8475 6, 146



5566814 - COVID - BANK ST @ AYLME AVE - MAY... - TMC
 Tue May 3, 20, 00
 OFI Length (6:A2 - T 9L :A2 P T)
 P LI CIGMS (Lights Md T unuarInS c nMh3- ndnstaMs3v irarInS ue BuM3v irarInS ue
 CausSRMw)
 P LI T ufhk nets
 n h : yDI A643Lur Mue: 6D7yID394D856148



Lag	Outh Jufth. ufed				Jufth. Outh. ufed				E nst SMe. ufed				
	B	W	U	PNN	W	L	U	PNN	B	L	U	PNN	
2, 2, 2	1	2	2	2	1	2	2	2	2	1	2	2	2
Wk n	B	W	U	PNN	B	L	U	PNN	B	L	U	PNN	
2, 2, 2	1	2	2	2	1	2	2	2	2	1	2	2	
10:22-T	4A	6yy	2	D	18	84D	15	2	8yA	1D	4	42	2
8:22-T	65	D21	2	Dy	66	64y	12	1	6y2	1A	11	65	2
4:22-T	D	6A2	1	6DB	11	625	5	2	618	1,	A	14	2
5:22-T	15	AAA	2	A	18	A44	8	1	A66	12	A	12	2
y:22-T	D	66,	1	685	D	A12	4	2	A14	1,	y	2	2
12:22-T	4	,8,	2	,8y	2	14A	,	2	14D	.	A	D	2
11:22-T	, 1,	1	2	1,A	2	5A	2	2	5A	2	,	6	2
2, 2, 2	1	,y	2	A2	2	1y	2	2	1y	2	2	1	2
% PNNuMh	43%	y, 2%	27%	9	9	y45%	, 7%	27%	9	9	105%	56%	2%
% WnMh	62%	682%	2%	D22%	9	663%	12%	2%	6D3%	9	22%	A0R	2%
Lights Md T unuarInS	1y6	,524	1	A2,	9	,4,D	82	,	,454	9	6,	,24	2
% Lights Md T unuarInS	487%	yD2%	D22%	yA0%	9	y68%	y85%	122%	y62%	9	122%	y, 2%	2%
% c nMh	2	84	1	85	9	64	1	2	65	9	2	1	2
% v irarInS ue BuM	81	5,	2	16A	9	12y	1	2	112	9	2	1D	2
% v irarInS ue BuM	,A5%	, 2%	2%	62%	9	A5%	12%	2%	A2%	9	2%	82%	2%
- ndnstaMs	9	9	9	9	1y8	9	9	9	9	5y	9	9	9
% - ndnstaMs	9	9	9	9	y12%	9	9	9	9	y15%	9	9	9
v irarInS ue CausSRMw	9	9	9	9	15	9	9	9	9	9	9	9	9
% v irarInS ue CausSRMw	9	9	9	9	56%	9	9	9	9	52%	9	9	9

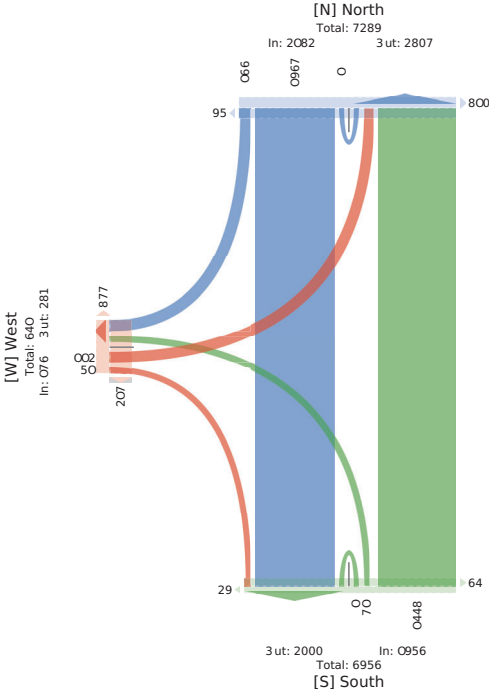
* - ndnstaMs Md v irarInS ue CausSRMw/L: Ln h3B: Bigh3W Whd3U: U9WPe

5566814 - COVID - BANK ST @ AYLMEY AVE - MAY... - TMC

Mon May 9, 2022
 Full Length (4:30 PM-12:30 AM)
 All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
 All Movements
 ID: 95134, Location: 456957, -567841.7

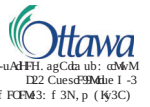


Provided by: City of Ottawa
 100 Constellation Dr,
 Nepean, ON, K2G 5J9, CA



5566814 - COVID - BANK ST @ AYLMEY AVE - MAY... - TMC

Tue May 3, 20, 00
 0T 0FM 1T M 2y, ., ng 20T h (g 2 0T 6h: AF-MB0FM 1 uP-)
 9)C0M6S li dr s MHT uu-vaV531 FMa30H5e0M3Bdav5S ue RuMBBdav5S ue C-usswM 6
) 9T uAK Fees
 n gy(D n43i uvMhgn 7 y(83h(75nD48



0-uAHH, agGda ul: uMwM
 F22 CuesE3Hte 1-3
 f HCM3: f 3N, p (H3C)

Sd F	f u-r				f u-r				f u-r				f u-r			
	R	S	W	OO	R	S	W	OO	R	S	W	OO	R	S	W	OO
2, ., h(ly ng 20T	.4	D	2	Dy	D	2	Dy	D	2	Dy	D	2	Dy	D	2	Dy
ng(OT	.y	D	2	Dy	D	2	Dy	D	2	Dy	D	2	Dy	D	2	Dy
(g20T	D	2	Dy	D	2	Dy	D	2	Dy	D	2	Dy	D	2	Dy	D
(g40T	.y	D	2	Dy	D	2	Dy	D	2	Dy	D	2	Dy	D	2	Dy
SuM	D	2	Dy	D	2	Dy	D	2	Dy	D	2	Dy	D	2	Dy	D
*) 0uM	D	2	Dy	D	2	Dy	D	2	Dy	D	2	Dy	D	2	Dy	D
* SuM	D	2	Dy	D	2	Dy	D	2	Dy	D	2	Dy	D	2	Dy	D
01 %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
1 drcs MHT uu-vaV5S	8,	(	4	2	8D	h	8(	,	D	2	858	h	y	4	2	55
* 1 drcs MHT uu-vaV5S	8D	y	(	2	2	y2	h	y	(	2	2	y	(	2	2	y
1 FMu	2	D	2	D	h	4	2	2	4	h	2	2	2	2	h	2
* 1 FMu	2	2	2	2	D	h	D	2	2	2	D	h	2	2	2	h
Bdav5S ue RuM	1	y	2	2	(	n	h	5	2	2	2	5	h	2	8	2
* Bdav5S ue RuM	1	5	2	2	4	h	n	2	2	2	4	h	2	2	2	h
0H5e0M3	h	h	h	h	h	h	h	h	h	h	h	h	h	h	h	h
* 0H5e0M3	h	h	h	h	h	h	h	h	h	h	h	h	h	h	h	h
Bdav5S ue C-usswM	h	h	h	h	h	h	h	h	h	h	h	h	h	h	h	h
* Bdav5S ue C-usswM	h	h	h	h	h	h	h	h	h	h	h	h	h	h	h	h

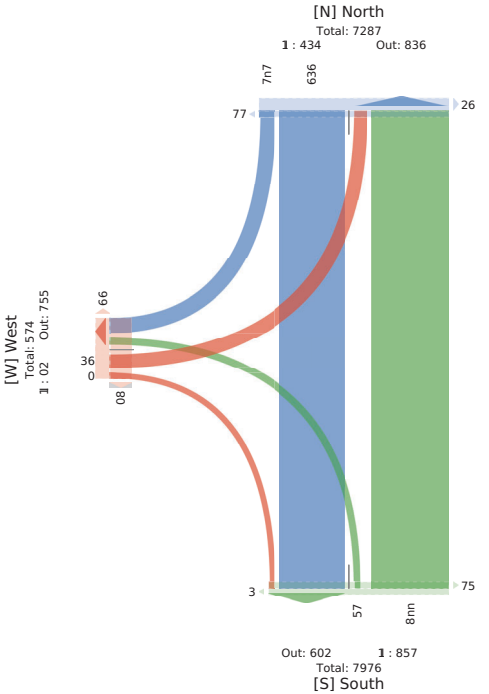
hH5e0M3 MHBdav5S ue C-usswM 7i gi h3RgRbrC5SGr-P3W6W6P-e

5566814 - COVID - BANK ST @ AYLMEY AVE - MAY... - TMC

Mon May 9, 2022
 PM Peak (May 09 2022 5-60PM) O60 PMv) r l ehuPeak AoCh
 s uLuniei (gt ddi anBMoonRyRei, Aea y, Pekeidn, wHyRei on moaB wHyRei on
 LHii auk
 : s uMol eDend
 : 4-901653, goRdn-5069CF,)30785137

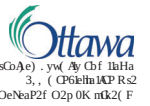


PHo hBoBy- lly of r and a
 100 Lontusdn 4 H
 Nepean, r N, K2G 0P9, Ls



5566814 - COVID - BANK ST @ AYLMEY AVE - MAY... - TMC

Tue May 3, 20, 00
 FM 1 eaL nMay 3, 0, 00 30FM g3 FMt
 Fh(h66e6 tr A96aP) MCC3iyi h62d eaoy2l e)e6kAP2r Ayi h6CP c G) 2r Ayi h6CP
 (sCGHHL
 FhM CDev eP6
 RkwnB D42: G a1CPvDn k n82gm85D348

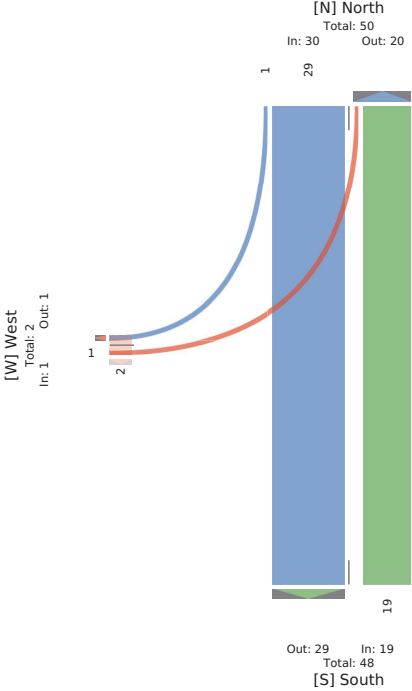


1 sG) e) yw Ay Chf hth
 3, (CP6k hAP R P s2
 OeNa2P O2p OK nK2(F

TAX e	OCAB				J CuB				E e6i				
	c	T	W	FNN	c	T	W	FNN	c	T	W	FNN	
0, 00g mg, 30v, FM	3	38	.	34	.	k	.	k	.	.	.	.	06
30ntr FM	.	31	.	31	.	3	.	3	.	3	.	3	00
TCh	3	0k	.	1	.	3k	.	3k	.	3	.	3	0
* FNMCI9	1	3	.	8	.	3	.	8	.	3	.	8	8
* TCh	0	2	.	8	.	15	.	15	.	0	.	0	8
1 d %	3	2m	.	208	.	23m	.	23m	.	3	.	3	8
: A96aP) MCC3iyi h6	3	08	.	04	.	34	.	34	.	3	.	3	8
* : A96aP) MCC3iyi h6	3	.	.	k	.	5k	.	5k	.	3	.	3	8
d eaoy	.	0	.	0	.	0	.	0	.	.	.	.	8
* d eaoy	.	8k	.	82	.	3	.	3	.	.	.	.	52
r Ayi h6CP c G)	.	3	.	3	.	.	.	.	.	.	.	.	3
* r Ayi h6CP c G)	.	1	.	1	.	.	.	.	.	.	.	.	02
1 e) e6kAP	.	.	.	.	.	.	.	.	.	.	.	.	0
* 1 e) e6kAP	.	.	.	.	.	.	.	.	.	.	.	.	3
r Ayi h6CP (sCGHHL	.	.	.	.	.	.	.	.	.	.	.	.	8
* r Ayi h6CP (sCGHHL	.	.	.	.	.	.	.	.	.	.	.	.	8

h e) e6kAP a) r Ayi h6CP (sCGHHL: w e h2c w c A92T w19s2WwWjTusP

5566814 - COVID - BANK ST @ AYLMEER AVE - MAY... - TMC
Tue May 3, 20, 00
AM Peak (May 3, 0, 00 30AM 83 AM:
A-9-a)e (l 6L) agh Mt it ndy-e)2o ear y2Pehe)irfdg)2c @y-d-e) t g Ht ah2c @y-d-e) t g
9t)vt a-k:
A-Mt r eBegi)
Rwn D347521 t daci@gdn7D41 D328D617356



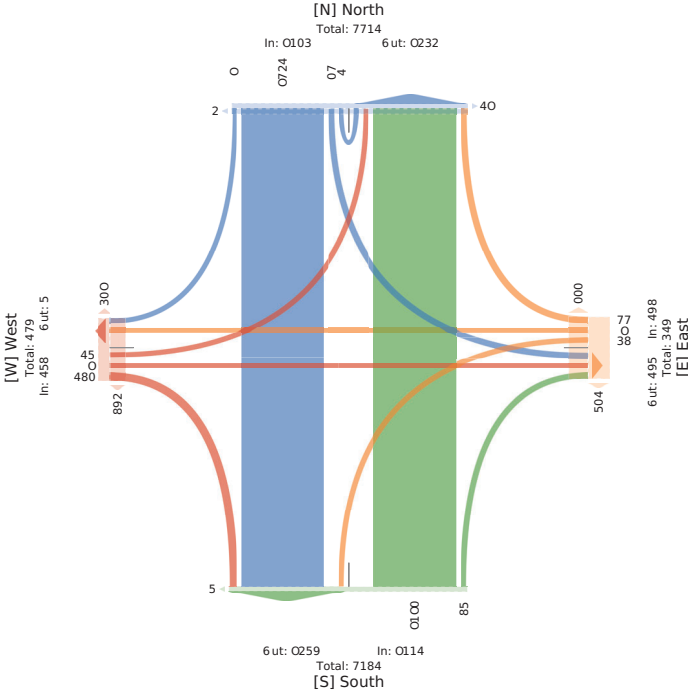
5566814 - COVID - BANK ST @ ECHO DR - MAY 09... - TMC
Tue May 3, 20, 00
AM Peak (May 3, 0, 00 30AM 83 AM:
A-9-a)e (l 6L) agh Mt it ndy-e)2o ear y2Pehe)irfdg)2c @y-d-e) t g Ht ah2c @y-d-e) t g
9t)vt a-k:
A-Mt r eBegi)
Rwn D347521 t daci@gdn7D41 D328D617356



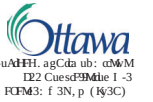
Signal	Phase	Length	Start	End	Priority	Group	Color	Start	End	Priority	Group	Color
D22-T	2	8/6	ID	2	8/6	2	A	A	6	2	8/6	2
5:22-T	1	DW	IA	2	DW	7	7	2	2	12	1	A
8:22-T	2	DN	12	2	DN	1	A	2	1	2	1	D
7:22-T	2	6/6	D	1	6/6	1	A	2	1	2	6	7
y:22-T	1	AD	D	2	AD	A	5	2	D	2	11	5/8
12:22-T	1	6/6A	6	2	6/6	7	2	6	2	L	1	8
11:22-T	2	y6	1	2	yD	2	2	2	2	2	2	A
2	5/8	2	2	2	5/8	2	2	2	2	2	2	1/8
1	1/8	2	2	2	1/8	1	1	1	1	1	1	1
8	8	8	8	8	8	8	8	8	8	8	8	8
6	6	6	6	6	6	6	6	6	6	6	6	6
2	2	2	2	2	2	2	2	2	2	2	2	2
1	1	1	1	1	1	1	1	1	1	1	1	1

5566814 - COVID - BANK ST @ ECHO DR - MAY 09... - TMC

5566814 - COVID - BANK ST @ ECHO DR - MAY 09... - TMC
Mon May 9, 2022
Full Length (4:30 PM-12:30 AM)
All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 951349, Location: 45.395679, -75.864334



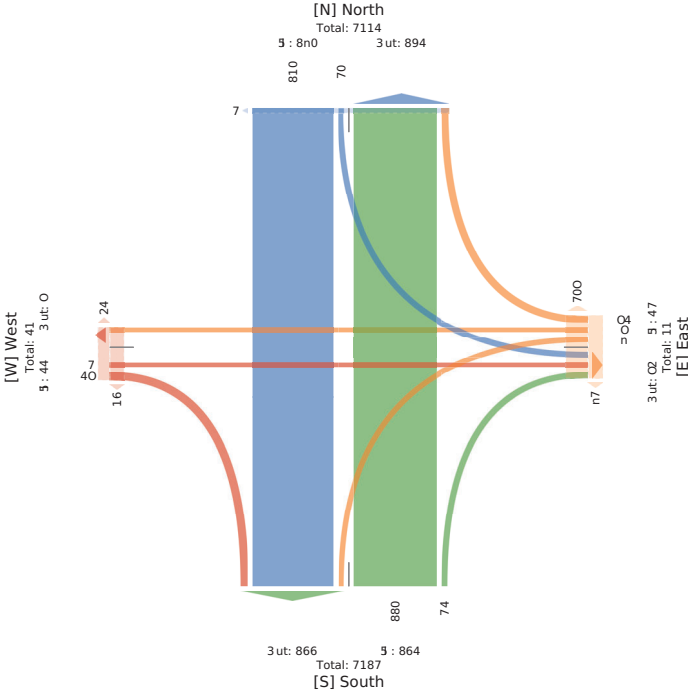
5566814 - COVID - BANK ST @ ECHO DR - MAY 09... - TMC
Tue May 3, 20, 00
AM Peak (May 3, 0, 00 30AM 83 AM:
A-9-a)e (l 6L) agh Mt it ndy-e)2o ear y2Pehe)irfdg)2c @y-d-e) t g Ht ah2c @y-d-e) t g
9t)vt a-k:
A-Mt r eBegi)
Rwn D347521 t daci@gdn7D41 D328D617356



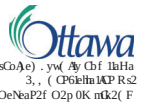
Signal	Phase	Length	Start	End	Priority	Group	Color	Start	End	Priority	Group	Color
D22-T	2	8/6	ID	2	8/6	2	A	A	6	2	8/6	2
5:22-T	1	DW	IA	2	DW	7	7	2	2	12	1	A
8:22-T	2	DN	12	2	DN	1	A	2	1	2	1	D
7:22-T	2	6/6	D	1	6/6	1	A	2	1	2	6	7
y:22-T	1	AD	D	2	AD	A	5	2	D	2	11	5/8
12:22-T	1	6/6A	6	2	6/6	7	2	6	2	L	1	8
11:22-T	2	y6	1	2	yD	2	2	2	2	2	2	A
2	5/8	2	2	2	5/8	2	2	2	2	2	2	1/8
1	1/8	2	2	2	1/8	1	1	1	1	1	1	1
8	8	8	8	8	8	8	8	8	8	8	8	8
6	6	6	6	6	6	6	6	6	6	6	6	6
2	2	2	2	2	2	2	2	2	2	2	2	2
1	1	1	1	1	1	1	1	1	1	1	1	1

5566814 - COVID - BANK ST @ ECHO DR - MAY 09... - TMC

5566814 - COVID - BANK ST @ ECHO DR - MAY 09... - TMC
 Mon May 9, 2022
 PM Peak (May 09 2022 5-60PM) O60 PMV) r l eia uPeak AoCH
 s uLuniei (glt ddi anBMoofRyRei, AeaLy, Pebeidhni, wHyRei on moaB wHyRei on
 LHii1 aukv
 s uMol eDend
 :4-901659, goRedon-50B90 79, J7OB: 5665



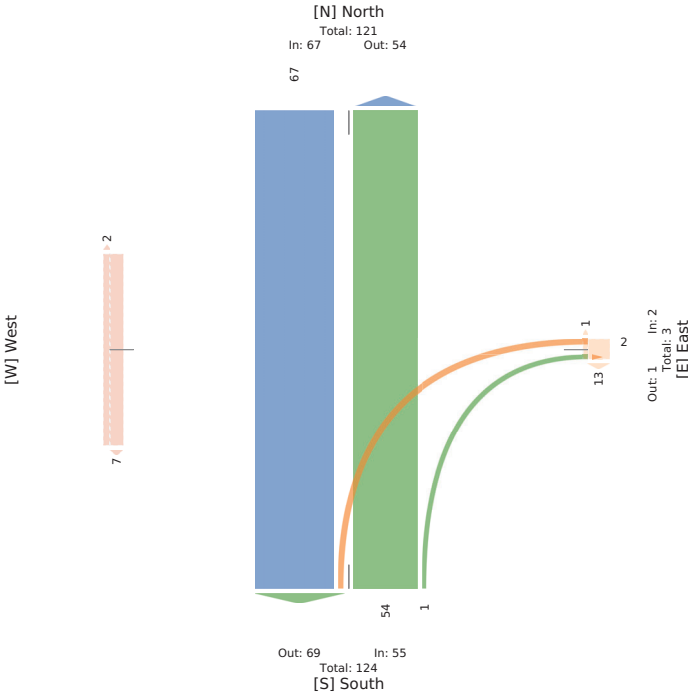
5566814 - COVID - BANK ST @ ECHO DR - MAY 09... - TMC
 Tue May 3, 20, 00
 FM Peak (May 3, 0, 00 30FM g3 FMt
 Fh(h666r A96aP) MCCSi yi62id eaoy2l e)e6kAP2r Ayi h6 CP c Ca) 2r Ayi h6 CP
 (sCGHalL
 FhMCoev eP6
 Rkwmbf Dk2: G a1CPvDnd kn78k2gim67D1D



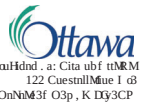
Lag	OCB				Jua				EQu				S e6t						
	EQu (GUP)				S e6L (GUP)				OCB (GUP)				Jua6L (GUP)						
TA e	c	T	W	FNN	e	U	c	T	W	FNN	e	U	c	T	W	FNN	e	U	BP1
0,00% ng3, 30w, FM	.07	.07	.07	.07	.07	.07	.07	.07	.07	.07	.07	.07	.07	.07	.07	.07	.07	.07	.07
30aaf M	.1k	.1k	.1k	.1k	.1k	.1k	.1k	.1k	.1k	.1k	.1k	.1k	.1k	.1k	.1k	.1k	.1k	.1k	.1k
TCah	.58	.58	.58	.58	.58	.58	.58	.58	.58	.58	.58	.58	.58	.58	.58	.58	.58	.58	.58
* FNCAI9	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3
* TCah	.438	.438	.438	.438	.438	.438	.438	.438	.438	.438	.438	.438	.438	.438	.438	.438	.438	.438	.438
* A96aP) MCCSi yi h6	.50	.50	.50	.50	.50	.50	.50	.50	.50	.50	.50	.50	.50	.50	.50	.50	.50	.50	.50
* A96aP) MCCSi yi h6	.k04r	.k04r	.k04r	.k04r	.k04r	.k04r	.k04r	.k04r	.k04r	.k04r	.k04r	.k04r	.k04r	.k04r	.k04r	.k04r	.k04r	.k04r	.k04r
d eaoy	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1
* d eaoy	.Dtr	.Dtr	.Dtr	.Dtr	.Dtr	.Dtr	.Dtr	.Dtr	.Dtr	.Dtr	.Dtr	.Dtr	.Dtr	.Dtr	.Dtr	.Dtr	.Dtr	.Dtr	.Dtr
r Ayi h6 CP c Ca)	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
* r Ayi h6 CP c Ca)	.14	.14	.14	.14	.14	.14	.14	.14	.14	.14	.14	.14	.14	.14	.14	.14	.14	.14	.14
l e) e6kAP6	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8
* l e) e6kAP6	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8
r Ayi h6 CP c CGHalL	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8
* r Ayi h6 CP c CGHalL	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8

l e) e6kAP6 aP) r Ayi h6 CP (sCGHalL: w e b2c w c A9J2T w l9su2WwWgTusP

5566814 - COVID - BANK ST @ ECHO DR - MAY 09... - TMC
 Tue May 3, 20, 00
 AM Peak (May 3, 0, 00 30AM 83 AM:
 A--9-a))e (l 6L) agh Mt it ndy-d)2o ear y2Pehe)irfag2c @y-d-e) t g Ht ah2c @y-d-e) t g
 9 it)v a-k:
 A--Mt r eBegi)
 Rwnf D847121 r daii@gm7D8H D 6l 286DR : 7447



5566814 - COVID - BANK ST @ WILTON CRES - MA... - TMC
 Tue May 3, 20, 00
 OFII Length (6:42 - T 9L :A2 P T)
 PII CIGMSns (Lights Md T utuararlns3c nmh3- ndnstaM3v irarlns ue BuM3v irarlns ue
 CausrRMw)
 PII T ufhk nets
 nh : yDIADH3Lur Mue: 6D7y888, 38D54D32D



Lag	Outh				Jufth				E nst								
l inrtue	Jufth, ufed				Outh, ufed				SM: ufed								
Wk n	B	W	U	PNN	W	L	U	PNN	B	L	U	PNN	nt				
.2, 5E0y 6:22-T	.y	.6	.2	.81	.2	.A28	.y	.2	.Ayy	.1	.D	.A	.2	.1,4	.61	.894	
D22-T	DA	.655	.2	Dy	.1	.548	.1A	.2	.888	.1	.52	.D	.2	.5D	.168	.1DE1	
8:22-T	DE	.A6	.1	Ay8	.16	.862	.116	.2	.826	.5	.14y	.4	.2	.1y8	.159	.1A64	
4:22-T	AE	.A6	.2	.A6	.A	.A6	.5A	.2	.6	.D	.6	.12A	.6	.2	.128	.8	.y26
y22-T	. .	.88	.2	.yy	.D	.A6D	.65	.2	.Ay1	.6	.8y	.6	.2	.4A	.D	.88A	
12:22-T	Dy	.A0	.2	.612	.A6	.A12	.6A	.2	.ADA	.1	.y4	.2	.2	.122	.111	.45A	
11:22-T	.1	.A4	.2	.Dy	.2	.1DE	.1D	.2	.181	.A	.DE	.1	.2	.D8	.16	.648	
.2, 5E0y 21, 22P T	.5	.51	.2	.58	.5	.D6	.A	.1	.D	.2	.5	.A	.2	.y	.8	.1A6	
% VntM	.A4	.58y	.1	.A211	.88	.A	.4y	.528	.1	.A4y8	.6D	.12y1	.A8	.1	.11, y	.86D	.42A6
% P NntMh	.112%	.4y2%	.2%	.9	.9	.466%	.1D6%	.2%	.9	.9	.y57%	.A76%	.27%	.9	.9	.9	.9
% VntM	.67%	.A476%	.2%	.A8D3%	.9	.623%	.85%	.2%	.64D3%	.9	.1A5%	.2D3%	.2%	.162%	.9	.9	.9
Lights Md T utuararlns	.A	.1	.646	.1	.425	.9	.A8y	.Dy8	.1	.A688	.9	.12, D	.8	.1	.12DA	.9	.8D6
% Lights Md T utuararlns	.y82%	.y	.8%	.122%	.yA2%	.9	.yA6%	.y48%	.122%	.y66%	.9	.y62%	.8A2%	.122%	.yA6%	.9	.yA6%
c nMh	.1	.8D	.2	.85	.9	.D	.A	.2	.D6	.9	.1	.2	.A	.9	.14D	.9	.14D
% c nMh	.27%	.7%	.2%	.D3%	.9	.17%	.D3%	.2%	.12%	.9	.22%	.7%	.2%	.276%	.9	.17%	
v irarlns ue BuM	.y	.1,2	.2	.1, y	.9	.1D	.8	.2	.156	.9	.56	.y	.2	.8A	.9	.865	
% v irarlns ue BuM	.7%	.6D%	.2%	.67%	.9	.69%	.12%	.2%	.62%	.9	.D%	.67%	.2%	.5D%	.9	.67%	
- ndnstaM3s	.9	.9	.9	.9	.88	.9	.9	.9	.9	.61	.9	.9	.9	.9	.8,1	.9	
% - ndnstaM3s	.9	.9	.9	.9	.122%	.9	.9	.9	.9	.y17%	.9	.9	.9	.9	.y57%	.9	
v irarlns ue CausrRMw	.9	.9	.9	.9	.2	.9	.9	.9	.9	.6	.9	.9	.9	.9	.6	.9	
% v irarlns ue CausrRMw	.9	.9	.9	.9	.2%	.9	.9	.9	.9	.43%	.9	.9	.9	.9	.A2%	.9	

* - ndnstaM3s Md v irarlns ue CausrRMw/L: LnH3B: Bigh3W Wnd3U: U9Nf6e

5566814 - COVID - BANK ST @ WILTON CRES - MA... - TMC

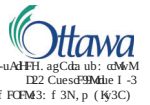
Mon May 9, 2022
 Full Length (4:30 PM-12:30 AM)
 All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
 All Movements
 ID: 95135, Location: 45697772, -75B: 5405



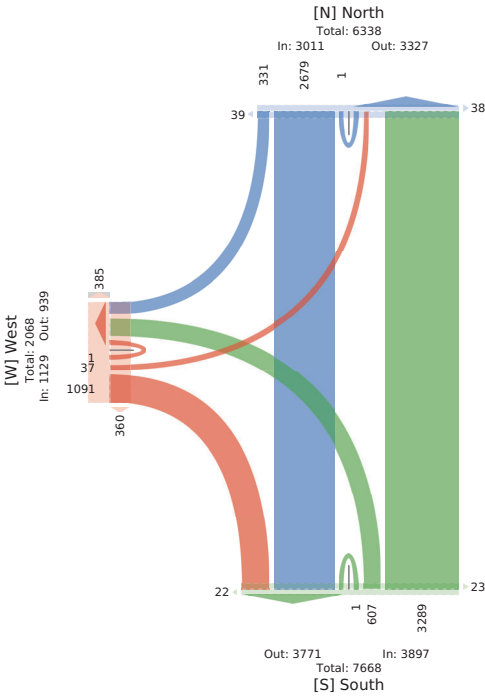
Provided by: City of Ottawa
 100 Constellation Dr,
 Nepean, ON, K2G 5J9, CA

5566814 - COVID - BANK ST @ WILTON CRES - MA... - TMC

Tue May 3, 20, 00
 0T 0FM 12 M 2y, 2, ng 20T h (g 2 0T 6h: AF-MB0FM 1 uP-)
 9)C6M6S li drs MHT uav-vavS31 FMa30HfScdM4S3BdavSfS ue RuMBBdavSfS ue C-usswM 6
 9)T uAk Fecs
 n gy (D (43i uvMthegn 7y888, 3f6(75d n2(



0-uAHFH agCda ul: nMWM
 F22 Cues33Mte 1-3
 f FCM3: f 3N, p (H3C)



Sd F	f u-o				f u-o				f u-o				f u-o				
	R	S	W	OD	R	S	W	OD	R	S	W	OD	R	S	W	OD	
2, , h(hly ng 20T	D	D	2	D	D	n4	2	22	((	D	2	(5	..	..	..	..
ng(OT	D	D	2	D	D	n4	2	22	((	D	2	(5	..	..	..	..
g(OT	D	D	2	D	D	n4	2	22	((	D	2	(5	..	..	..	..
g(OT	D	D	2	D	D	n4	2	22	((	D	2	(5	..	..	..	..
SuM	(4	n4	2	(n	2	5D	D	2	845	..	n4	1	2	(D	..	..
*) Oubh	D	2*	4y2*	2*	h	h	847*	D	2*	h	y42*	D	2*	h	..		
* SuM	1*	2*	2*	1a2*	h	h	1y2*	D	2*	h	1Q*	27*	2*	1Q*	h		
01%	2*	n	278n	h	27y	h	275(	2782	h	2755	h	278D	27*	h	274*	
1 drs MHT uav-vavS	(5	m2	2	ny5	h	(5	D5	2	8*	h	..	..	..	..	..
* 1 drs MHT uav-vavS	y55*	y23*	2*	yD*	h	yD*	y42*	2*	yD*	h	y	R*	D2*	2*	y	2*	
1 FMa	2	D	2	D	h	y	D	2	D	h	2	2	2	2	h		
* 1 FMa	2*	17*	2*	17*	h	D	275*	2*	D	h	2*	2*	2*	2*	h		
BdavSfS ue RuM	..	..	..	..	h	n	..	..	..	h	D	2	2	D	h	
* BdavSfS ue RuM	1*	2*	2*	1*	h	5*	D	2*	5*	h	87*	2*	2*	87*	h		
0HfScdM	h	h	h	h	h	h	h	h	h	h	h	h	h	h	h	h	
0HfScdM	h	h	h	h	h	h	h	h	(22*	h	h	h	h	h	h	h	h
BdavSfS ue C-usswM	h	h	h	h	h	h	h	h	h	h	h	h	h	h	h	h	
* BdavSfS ue C-usswM	h	h	h	h	h	h	h	h	(22*	h	h	h	h	h	h	h	h

0HfScdM4S MHBdavSfS ue C-usswM 7i gi H3RgRdrC5SgSr-P3W6P6-e

5566814 - COVID - BANK ST @ WILTON CRES - MA... - TMC

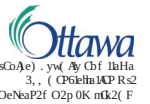
Mon May 9, 2022
 PM Peak (May 09 2022 5-60PM) O60 PMv) r l ehuPeak AoCH
 s uLuniei (gt ddi anBMoonRyRei, AeaLy, Pekeidnini, wlyRei on moaB wlyRei on
 LHii i auk
 : s uMol eDend
 : 4- 9016CB, goRdn- 50697772, 7083C500



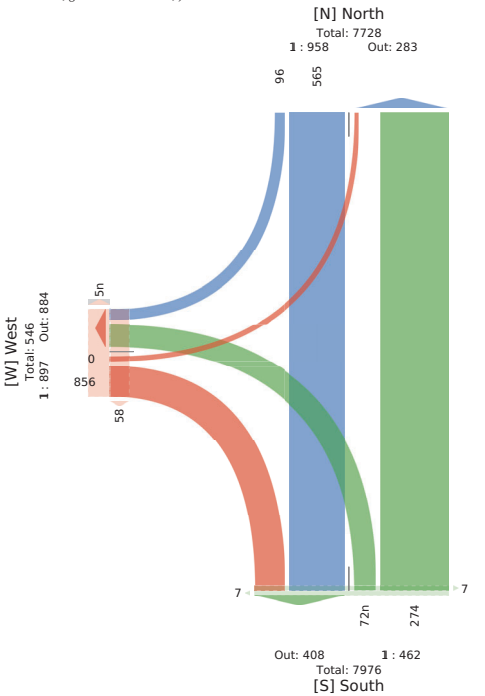
PHo HsBBy- Lly of r and a
 100 Lontesudon 4 H
 Nepean, r N, K2G 0J9, LS

5566814 - COVID - BANK ST @ WILTON CRES - MA... - TMC

Tue May 3, 20, 00
 F M 1 eaLnMay 3, 0, 00 30F M g3 F Mt
 Fh(h66e6 tr A916 aP) MCC3si yi h62 eaoy2l e)e6kAP2r Ayi h6 CP c Ca) 2r Ayi h6 CP
 (sCGHhL
 F hM CDev eP6
 H r wknbl nL2: G a1CPw4ml k88802gim5Dml, m



1 sGdA e) yw Ay Cbf hAha
 3, (CP6kth IAP R2
 OeNa2P O2p OK nK2(F



TAX e	OGB (CuB: CuP)				GUB (CuB: CuP)				E est Safet CuP)				
	c	T	W	FNN	T	W	FNN	c	W	FNN	le)U		
0, 00g ng5, 30w, F M	4	01	..	08	1	m	1	3	1	k	..	..
30anaf M	0	1D	..	4	5	3k	..	..	3k	..	..	..
TCh	5	53	..	58	5	m	1	3	mD	..	..	..
* F NGA9	k7*	k37*	..	g	g	k7*	mP*	3P*	g	55B*	111*	..	
* TCh	4tr	4tr	..	m 2*	g	4.1*	0D*	8*	41*	4tr	0D*	..	
14%	3.8m	..	1D	g	2.5	g	1k	..	..	..	..	..
* A916aP) MCC3si yi h6	5	m5	..	50	g	m8	1	3	mm	g	5	3	
* : A916aP) MCC3si yi h6	3	..	k3D*	..	k07*	g	k47*	3	..	3	..	117*	..
d eaoy	..	..	..	..	..	..	..	..	..	..	..	..
* d eaoy	..	..	..	..	..	..	..	..	..	..	..	..
r Ayi h6 CP c Ca)	..	..	..	..	..	..	..	..	..	..	..	..
* r Ayi h6 CP c Ca)	..	..	..	..	..	..	..	..	..	..	..	..
e) e6kAP6	g	g	g	g	5	g	g	g	g	g	g	g	
* e) e6kAP6	g	g	g	g	3	..	..	..	g	g	g	g
r Ayi h6 CP (sCGHhL	g	g	g	g	..	..	..	..	g	g	g	g
* r Ayi h6 CP (sCGHhL	g	g	g	g	..	..	..	..	g	g	g	g

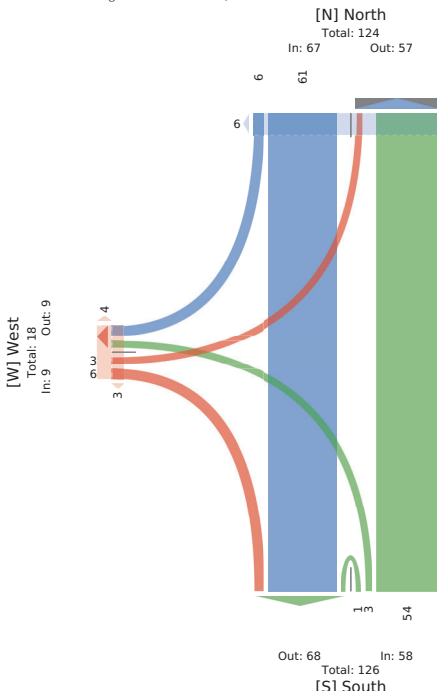
4) e)e6kAP6 aP) r Ayi h6 CP (sCGHhL: we eB2: wc A9127v19su2WwWjTusP

5566814 - COVID - BANK ST @ WILTON CRES - MA... - TMC

Tue May 3, 20, 00
 AM Peak (May 3, 0, 00 30AM 83 AM:
 A-9-a)e) (l 6L) agh Mt it ndy-e)2o ear y2Pehe)in(ig)2c (yde-e) t g Ht ah2c (yde-e) t g
 9rt)v a-k:
 A-Mt r eBegi)
 Rwni D34D72l t dai(gn5D4l 666028D17D5, D



Pr r d'eh bynD Qy Tt Oliav a
 3, , 9t g)ie-aif g wri
 Nepeag2ON2K0G DJI 29 A



5566814 - COVID - BANK ST @ MARCHE WAY - MAY... - TMC

Tue M y3, 2, ,
 0Fl Length (6:A2 - T 9L :A2 P T)
 Pll ClMghs (Lights Md T utuarInS3c nMh3- ndnstoM3svirInS ue BuM3virInS ue
 CusswM)6
 Pll T uHh nets
 nh : yDlA13Lur Mue: 6D7y62A3BDR5418



- auHhdn : a Cita ub f nM
 122 Cuesnll Mue 1 B
 OnNm3f O3p, K D33CP

Lag I Intrdue	Quoth EuRth. uFed				JMc S st. uFed				EuRth Quoth. uFed				mt			
	W	L	U	PNN	B	L	U	PNN	B	W	U	PNN				
.2, , 9Ddy 6:22-T	A26	A	2	A28	.1	DD	1	2	DD	186	4	,A6	2	,66	y	428
D22-T	D42	.	2	D6	A	1,6	2	2	1,6	698	1y	DEI	2	D2	11	1,24
4:22-T	686	1	2	68D	2	152	2	2	152	566	62	DEI	2	D1	18	1194
8:22-T	65.	D	2	658	1	,2y	A	2	,1	441	9y	616	2	6DA	1	11D
5:22-T	648	2	2	648	6	54	A	1	y2	A26	11	A65	2	A6y	1A	584
y:22-T	A15	2	2	A15	6	y4	D	2	121	11A	16	A24	2	A2	6	8Ay
12:22-T	A81	2	2	A81	2	1DD	D	2	142	515	,y	A66	1	616	8	y6D
11:22-T	154	2	2	154	2	8.	.	2	86	44	12	,1A	2	,,A	A	65A
.2, , 9Ddy 21, 22PT	42	2	2	42	6	,4	1	2	,8	,,1	4	DD	1	4,	1	16y
% PNNaMh	y28%	278%	2%	9	y83%	,2%	27%	9	9	D3%	y63%	27%	9	9	9	8DA
% VnaMh	6A0%	27%	2%	6A0%	9	1A2%	27%	2%	1A3%	9	,3%	627%	2%	6,20%	9	9
Lights Md T utuarInS	A2, y	4	2	A2D	9	y5,	2	1	122A	9	182	,844	1	,yA8	9	4y8D
% Lights Md T utuarInS	y63%	DE3%	2%	y63%	9	y83%	122%	122%	y83%	9	y83%	yA5%	DE2%	y62%	9	y63%
% c nMh	8A	2	2	8A	9	6	2	2	6	9	2	DE	2	DE	9	1D
% c nMh	,28%	2%	2%	,28%	9	28%	2%	2%	28%	9	2%	,2%	2%	13%	9	13%
virarInS ue BuM	y2	D	2	yD	9	18	2	2	18	9	6	1,4	1	1A1	9	,6A
% virarInS ue BuM	,25%	6D3%	2%	A2%	9	13%	2%	2%	13%	9	,2%	67%	DE2%	62%	9	A2%
% ndnstoM3	9	9	9	14	9	9	9	9	AQ2	9	9	9	9	9	9	88
% ndnstoM3	9	9	9	9	9	9	9	9	y9D3	9	9	9	9	9	9	122%
virarInS ue CusswM	9	9	9	9	9	9	9	9	1y	9	9	9	9	9	9	2
% virarInS ue CusswM	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	2%

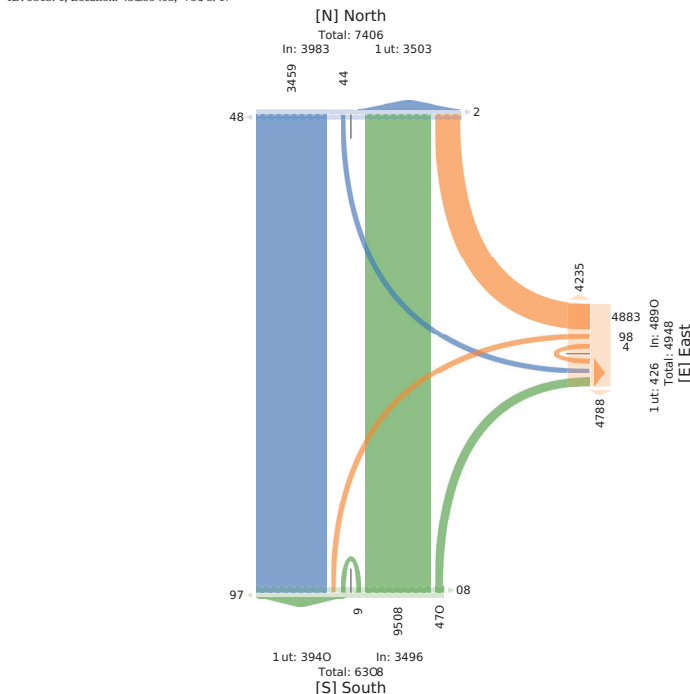
* ndnstoM3 Md virarInS ue CusswM7L: Lnh3B: Bigh3W WhdF3U: U9Mf6e

5566814 - COVID - BANK ST @ MARCHE WAY - MAY... - TMC

Mon May 9, 2022
 Full Length (4:30 PM-12:30 AM)
 All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on
 Crosswalk)
 All Movements
 ID: 9513. 1, Location: 45699403, -756 8. 17



Provided by: City of Ottawa
 100 Constellation Dr,
 Nepean, ON, K2G 5J9, CA



5566814 - COVID - BANK ST @ MARCHE WAY - MAY... - TMC

Tue M y3, 2, ,
 0T 0FM IT M 2y, 2, , ng 20T h (g 2 0T 6h: AF-MB0FM 1 uP-
 9)C3M3S li dr s MHT u-u-vvS31 FMA30FHScM3Bdavs ue RuMBBdavs ue
 C-usswM 6
 9)T uAfk Fees
 nh gyDit n43i uvMtheg7Dl yy72t 3f (Dh5n4(

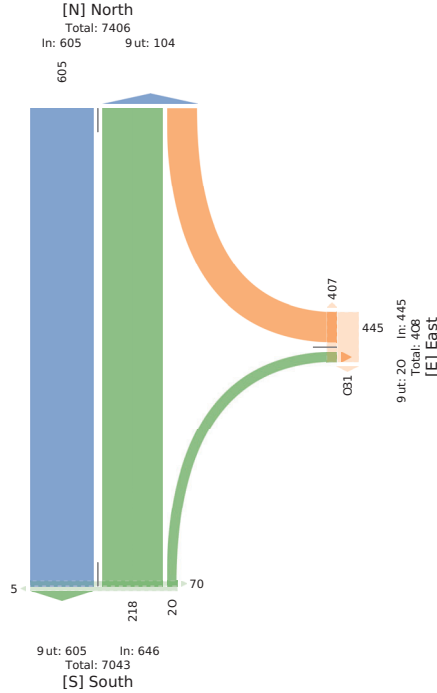


0-uAHH, ag Cda ub: nM
 422 Cuesnll Mue 1-3
 f FCM3: f 3N, p D33(C)

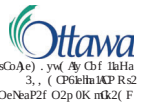
I fo l d fVnde	F u-a FuPr. uPeH				CMc E Fic. uPeH				F u-a F u-a. uPeH				mc			
	S	i	W	) OD	R	i	W	) OD	R	S	W	) OD				
.2, , hDdy ng 20T	472	2	2	472	2	D	2	2	D	4	4,	2	4,	,	t, D	
ng 0T	444	2	2	444	2	D	2	2	D	14	4,	4,	2	477	, 147	
(g 20T	447	2	2	447	2	D	2	2	D	14	4,	4,	2	4D	5, 12,	
(g 0T	45	2	2	45	2	D	2	2	D	4y	42	427	2	447	4, 142	
SuM	D2	2	2	D2	2	,,1	2	2	,,1	555	76	7y	2	D D	4, 4, D	
*) ODuM	422	2*	2*	422	2*	h	h	h	422	2*	2*	h	h	58*	y48* 2*	h
* SuM	728	2*	2*	728	2*	h	h	h	4(6*	2*	2*	4(6*	h	18*	158* 2*	7,8*
01%	28yn	h	h	28yn	h	28D	h	h	28D	h	28y2	h	28y7	h	28(4	
i dr s MHT u-u-vvS	754	2	2	754	2	,,4	2	2	,,4	h	7D	7D	2	7yD	h	44(
* i dr s MHT u-u-vvS	yDh*	2*	2*	yDh*	2*	h	h	h	yy8*	2*	2*	yy8*	h	y(6*	yt8* 2*	y78*
1 FMA	42	2	2	42	2	2	2	2	2	h	2	y	2	y	h	4y
* 1 FMA	,8*	2*	2*	,8*	2*	h	h	h	2*	2*	2*	h	h	48*	2*	48*
Bdavs ue RuM	4,	2	2	4,	2	2	2	2	2	h	4	,2	2	4	h	1D
* Bdavs ue RuM	,8*	2*	2*	,8*	2*	h	h	h	28*	2*	2*	h	h	78*	2*	78*
01FscM3	h	h	h	h	h	h	h	h	h	55a	h	h	h	h	h	41
* 01FscM3	h	h	h	h	h	h	h	h	h	yy8*	h	h	h	h	h	422*
Bdavs ue CusswM	h	h	h	h	h	h	h	h	h	D	h	h	h	h	h	2
* Bdavs ue CusswM	h	h	h	h	h	h	h	h	h	28*	h	h	h	h	h	2*

4)FHScM3 MHBdavs ue C-usswM 8i gi R3RgRdr cSgSr -P3W6MS P-e

5566814 - COVID - BANK ST @ MARCHE WAY - MAY... - TMC
 Mon May 3, 2022
 PM Peak (May 09 2022 5-60PM) O60 PMV) r l eia uPeak AoCh
 s uLuniei (glt ddi anBMoortRyRei, AeaLy, PeReidnini, wRyRei on moaB wRyRei on
 LHii1 aukv
 s uMol eDend
 :4 - 913653, goRdon- .17699.06,)OI58530



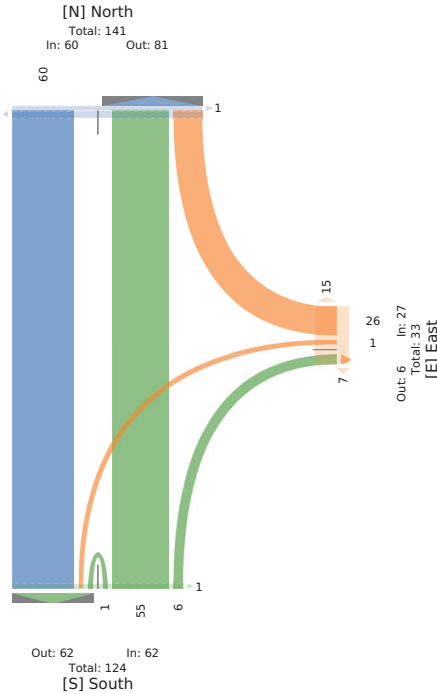
5566814 - COVID - BANK ST @ MARCHE WAY - MAY... - TMC
 Tue May 3, 20, 00
 FM Peak (May 3, 0, 00 30F M g3 FMt
 Fh(h666tr A9B aP) MCCSi yi h62d eaoy2l e) e6kAPG2r Ayi h6CP c Ca) 2r Ayi h6CP
 (sCGHalL
 FihMCoev eP6E
 RkwnBf D2: G a1CPw4mfl k4, 12gimL5D38



Phase	OCaB (EGaB, CuP)	Jact S e6i CuP)	ECaB (OCaB, CuP)	IP1
0.00g ngB, 30w, FM	T : W FNN 1 e) U	c : W FNN 1 e) U	c T W FNN 1 e) U	31
30aof M	08 . . . 08	1 5 3 . . k	0 35 . . 0 . .	nd
TChk	0 . . . 0	4 00 3 . . 08	00 D nm 3 00 3	34k
* FNNCaIS	3, . . . *	g kM+ 1B+ . . *	g kCB+ 55B+ 3AP	g
* TChk	4, 1+ . . . *	4, 1+ 303+ . . . *	42+ 118+ . . . *	43D
14%	. . . 20B	g . . . 20B	g . . . 20B	g . . . 20B
* A9EaP) MCCSi yi h6	nd	nd 00 3 . . .	D 45 . . .	nd
* A9EaP) MCCSi yi h6	k1T+ . . . *	k1T+ 3, . . . *	3, . . . 581+ . . *	583*
d eaoy	1	1	1	I
* d eaoy	nt+ . . . *	nt+ . . . *	nt+ . . . *	45*
r Ayi h6CP c Ca)	3	3	4 3 . . .	m
* r Ayi h6CP c Ca)	3B+ . . . *	3B+ . . . *	3B+ . . . *	5B*
e) e6kAPG	g g g g . . .	g g g g . . .	g g g g . . .	g
e) e6kAPG	g g g g . . .	g g g g . . .	g g g g . . .	g
r Ayi h6CP (sCGHalL)	g g g g . . .	g g g g . . .	g g g g . . .	g
* r Ayi h6CP (sCGHalL)	g g g g . . .	g g g g . . .	g g g g . . .	g

1) e) e6kAPG aP) r Ayi h6CP (sCGHalL): w: eB2c w A92T w f9su2WwWgtusP

5566814 - COVID - BANK ST @ MARCHE WAY - MAY... - TMC
 Tue May 3, 20, 00
 AM Peak (May 3, 0, 00 30AM 83 AM:
 A-- 9-a))e (l 6L) agh Mt it ndyde)2o ear y2Pehe)inf6g)2c @yde) t g Ht ah2c @yde) t g
 9 it)v a-k:
 A-- Mt r eBegi)
 Rwnf D347321 r dai@gn5D4115, 4286D71736



5566814 - COVID - BANK ST @ HOLMWOOD AVE - M... - TMC
 Tue May 3, 20, 00
 OFH Length (6: A2 - T 9L - :PT)
 P11 CIMoss (Lights Md T unarlns3c nM3- ndnstaM3v irarlns ue BuM3v irarlns ue CaussRnM3)
 P11 T uHk nets
 rB y y43Bf D384D3A
 122 CuelntIMue 1 gOnnM3f O3p, K D33CP



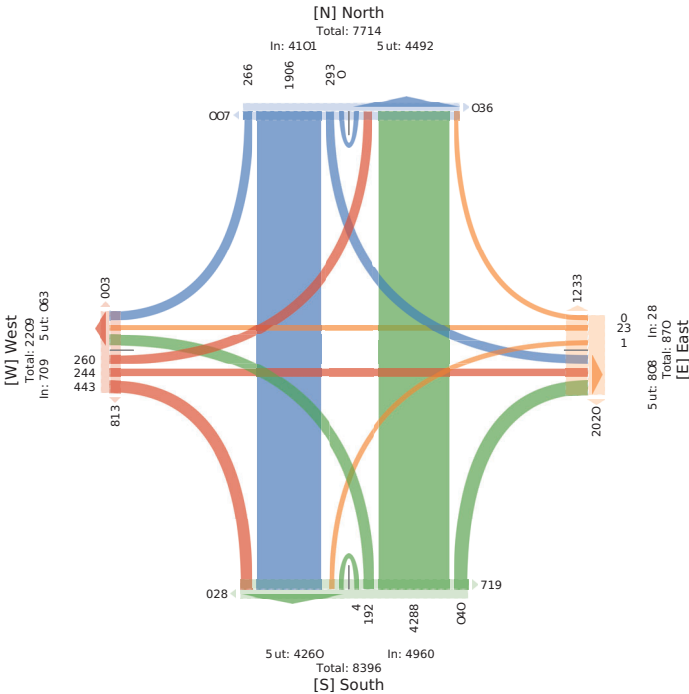
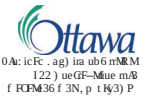
Lang	Quoth	J Mo	EuBth	S no
1 surtine	EuBth, ufud	S no, ufud	Quoth, ufud	J Mo, ufud
Wk n	B W L U PNN nst	B W L U PNN nst	B W L U PNN nst	B W L U PNN nst
. 2, 908y 6:22-T	14 52 5 2 . yA	19 2 2 2 2 2 18A	AD . AB AI 2 A06 82	AI 11 11 2 DA 11
1:22-T	AA 1BA . 6 2 422 138	1 . . . 2 D 611	54 688 DE 2 416 142	6A . D AB 2 12 . 2 1A 1
4:22-T	6 61y AB 2 655 AA	. 6 2 2 4 50R	128 13y 6A 1 441 12	46 A . A2 2 1.4 . 6 1.52
5:22-T	A2 AHA AI 2 6.6 11y	1 2 2 2 2 1 444	111 65D 6D 2 4A 22	85 A AI 2 10E . 61 1.24
8:22-T	. . . Apy . 1 A 66D 42	1 1 2 2 2 . A62	AD AB. 16 2 6.1 11A	AI y 12 2 DE 80 y18
y:22-T	. A . yA . 8 2 A66 65	2 1 2 2 2 1 . A	AA A62 . . 2 AyD 44	AI 12 14 2 DE 54 5y5
12:22-T	AB AAI . 4 2 62 118	2 . . . 2 2 2 . 803	. y 6. A 65 2 6yy 12	AI y AB 2 58 . 3 981
11:22-T	11 15y . 5 1 198 . y	2 2 2 2 2 2 5A	D 13y . 6 2 88 11	y D . . 2 A 81 82
. 2, 908y 21 . 22P-T	. . . ID . 2 Dy . y	2 2 2 2 2 2 . 2	. . 5A D . . B .	A 2 A 2 4 4 165
WkM	15y . 81y 182 6 A 6. 81E2	D 12 . . 2 15 A10	6/A A55 . 81 A AByD 1103	AA2 1AA 1yD 2 40R 1.42 581
% PNNM3	47% 887% 13% 23%	9 9 y87% DE8% 113% 2%	9 9 117% 812% 51% 23%	9 9 DE2% . 27% y2% 2% 9 3 9
% WkM	13% A78% . 38% 23% 612%	9 23% 23% 2% 2% 21%	9 130% 625% A9% 2% 6y3%	9 62% 15% . 13% 2% 82% 9 3
Lights Md T unarlns	150 . 521 158 6 A55	9 2 2 2 2 2 2	612 A64 . 55 A A6M	9 A8B 11A 1y1 2 4 . 564E
% Lights Md T unarlns	y53% y63% y87% 122% y63%	9 2% 2% 2% 2% 2%	9 y63% y13% y87% 122% y13%	9 y40% 81E% y53% y53% y1E%
c nM3	2 5D 2 2 2 5D	9 1 2 2 2 1 9	2 1D 1 2 D 9	. 2 . 2 6 9 1M
% c nM3	2% . 28% 2% 2% 2%	9 2.2% 2% 2% 2% 19%	9 2% 15% 28% 2% 15%	9 23% . 2% 12% 2% 28% 9 15%
% v irarlns ue BuM3	D BA . . 2 y2 9 6 12 2 14 9	. 6 54 A 2 12A	9 12 . 2 2 A 9 61	
% v irarlns ue BuM3	13% . 3% 17% 2% . 30%	9 822% 122% 122% 2% y63%	9 103% . 30% 17% 2% . 2%	9 102% 112% 12% 2% 63% 9 103%
% ndnstaM3	9 9 9 9 9 9 86A	9 9 9 9 9 9 A8B	9 9 9 9 9 9 11AC	9 9 9 9 9 9 1.6
% ndnstaM3	9 9 9 9 9 9 y27%	9 9 9 9 9 9 y37%	9 9 9 9 9 9 y87%	9 9 9 9 9 9 y87%
% v irarlns ue CaussRnM3	9 9 9 9 9 9 1.	9 9 9 9 9 9 4	9 9 9 9 9 9 11	9 9 9 9 9 9 18
% v irarlns ue CaussRnM3	9 9 9 9 9 9 13%	9 9 9 9 9 9 27%	9 9 9 9 9 9 13%	9 9 9 9 9 9 13%

* ndnstaM3 v irarlns ue CaussRnM3: Lht3B: Bight3W VhtF3U: U9WFe

5566814 - COVID - BANK ST @ HOLMWOD AVE - M... - TMC
 Mon May 9, 2022
 Full Length (4:30 PM-12:30 AM)
 All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
 All Movements
 ID: 9513.4, Location: 45689979., -856 7.5 3



5566814 - COVID - BANK ST @ HOLMWOD AVE - M... - TMC
 Tue May 3, 2022
 Full Length (4:30 PM-12:30 AM)
 All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
 All Movements
 ID: 9513.4, Location: 45689979., -856 7.5 3



2 of 6

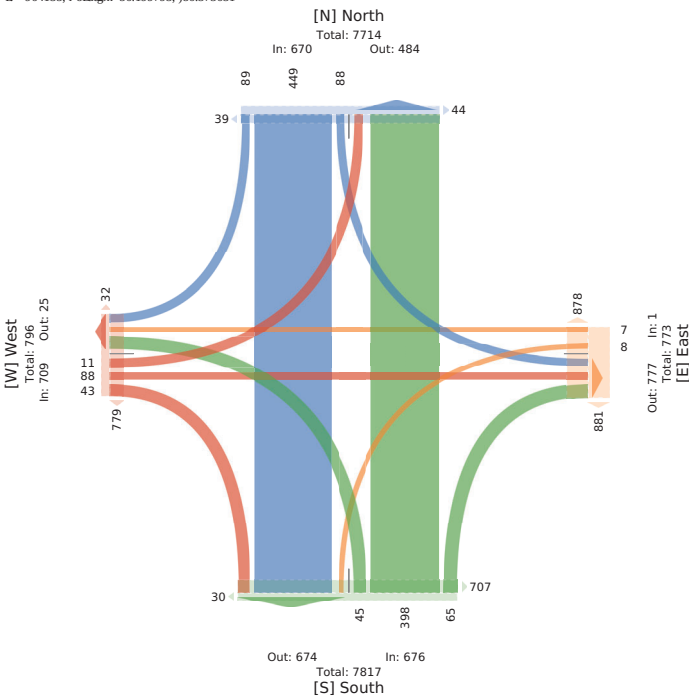
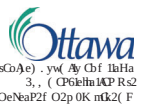
Flow	Auto	Light	Heavy	Motorcycle	Truck	Trailer	Other	Subtotal	Auto	Light	Heavy	Motorcycle	Truck	Trailer	Other	Subtotal
Northbound
Southbound
Westbound
Eastbound

3 of 6

5566814 - COVID - BANK ST @ HOLMWOD AVE - M... - TMC
 Mon May 9, 2022
 PM Peak (May 09 2022 5-56PM) 6-56 PMO) v r e l a H Peak u o a l
 C H S H L L e L (i g h t d a n c M o d B y B H L u e a r y , P e c e l d i n g , R g B H L o n w o a c , R g B H L o n w o a c)
 S o L l m a i k O
 C H M o r e l e n d .
 D - 964135, i o B d p n - 56.199793, j 86.373631



5566814 - COVID - BANK ST @ HOLMWOD AVE - M... - TMC
 Tue May 3, 20, 20
 PM Peak (May 3, 0, 00 30F M g 3 F Mt
 F h (h 6 6 6 r t A 9 6 a p) M C C 3 i y l e 6 2 e a o y 2 l e) e 6 k A P 2 r A y i l e 6 C P C a) 2 r A y i l e 6 C P
 (s C G H a L L)
 F h M C o e v e P 6
 B r w k n B D 2 : G a I A U P w a n l k k 8 k D 5 m D B D H D

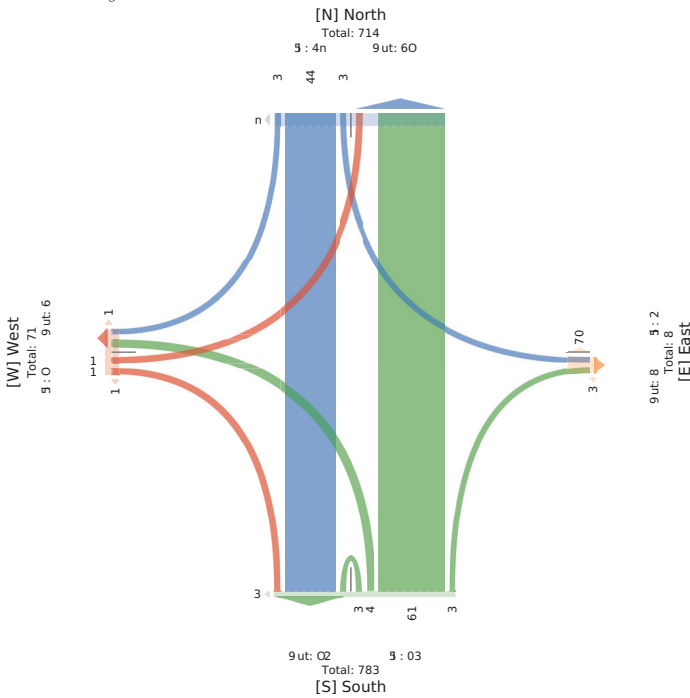


4 of 6

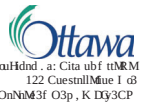
Flow	Auto	Light	Heavy	Motorcycle	Truck	Trailer	Other	Subtotal	Auto	Light	Heavy	Motorcycle	Truck	Trailer	Other	Subtotal
Northbound
Southbound
Westbound
Eastbound

5 of 6

5566814 - COVID - BANK ST @ HOLMWOOD AVE - M... - TMC
 Tue May 3, 20, 00
 AM Peak (May 3, 0, 00 30AM 83 AM:
 A-9-a)e (l 6L) agh Mt it ndy-e)2o ear y2Pehe)in(ig)2c @y-d-e) t g Ht ah2c @y-d-e) t g
 9t)v a-k:
 A--Mt r eBegi)
 Rwnl D847521 r dai@g.n5D411617281D7671D74



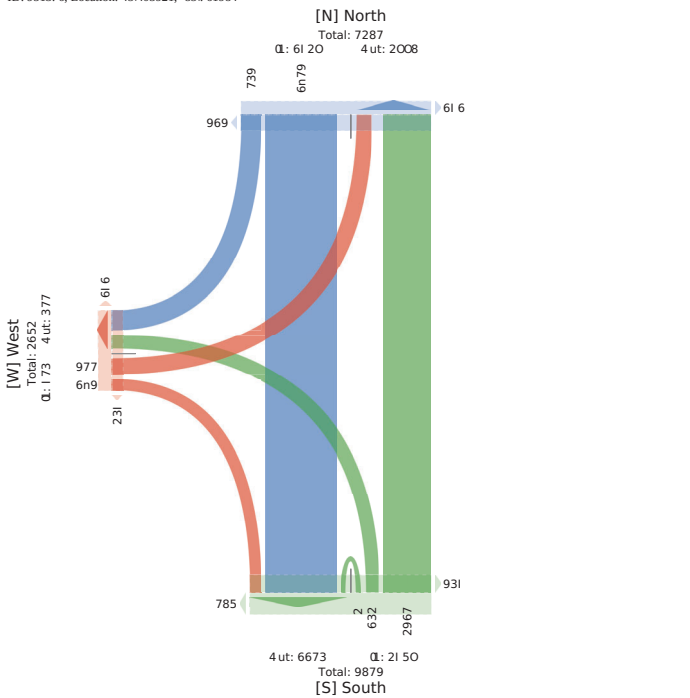
5566814 - COVID - QUEEN ELIZABETH DRWY @ FIF... - TMC
 Tue May 3, 20, 00
 AM Peak (May 3, 0, 00 30AM 83 AM:
 A-9-a)e (l 6L) agh Mt it ndy-e)2o ear y2Pehe)in(ig)2c @y-d-e) t g Ht ah2c @y-d-e) t g
 9t)v a-k:
 A--Mt r eBegi)
 Rwnl D847521 r dai@g.n5D411617281D7671D74



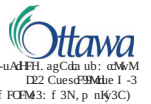
Lag I Intrise	Outh JuFh. uFed				JuFh Outh. uFed				E nst SMc. uFed								
	B	W	U	PNN	W	L	U	PNN	B	L	U	PNN					
2, , 92Dy 6:22-T	A2	A2	2	47	DA	y2	, 4	2	114	55	1D	, 2	2	AD	, 4	61y	
D22-T	YA	D4	2	Dy	11D	, 14	41	2	55	152	, 5	64	2	5A	5D	36y	
4:22-T	1, 4	6, 5	2	DA	117	1y	D	2	DA	25	A2	D4	2	y6	y4	7y7	
5:22-T	117	15	2	AD	11y	1y4	DA	2	5y	15A	64	56	2	1, 2	7y	526	
7:22-T	A6	, 1y	2	DA	4y	164	14	2	14	52	1y	A2	2	6y	D3	646	
y:22-T	, 7	145	2	1yD	A2	121	, 1	2	1, 1	D6	, 6	, 7	2	D	, 1	ADy	
12:22-T	AD	152	2	2D	D6	, A2	, y	2	, Dy	yD	, 4	D4	2	7	4D	D4	
11:22-T	7	71	2	7y	y	11y	12	1	1A2	1A	7	A	2	62	A	, Dy	
2, , 92Dy 2, 1:22P-T	1	17	2	1y	2	, 5	A	2	A2	2	2	, 2	, 2	, 2	, 2	D4	
WnM	65A	, 26A	2	, D4	D3D	1A	6	, 51	1	1Dy4	746	, 2A	A66	2	D65	6, 5	64Dy
% PNNuMh	178%	718%	2%	9	9	782%	158%	28%	9	9	A68%	4, 8%	2%	9	9	9	9
% WnM	128%	6, 8%	2%	D62%	9	, 78%	D3%	2%	A69%	9	68%	58%	2%	118%	9	9	9
Lights Md T uncarIns	612	, 21y	2	, 6, y	9	1A2D	, 45	1	1DA	9	1y7	Ay	2	D6	9	6Dy	9
% e nMh	6	D	2	y	9	1	, 2	A	9	1	6	2	D	9	9	15	9
% Lights Md T uncarIns	748%	y78%	2%	y4D%	9	y78%	y78%	122%	y78%	9	y5D%	y78%	2%	y78%	9	y58%	9
% e nMh	28%	28%	2%	28%	9	28%	28%	2%	28%	9	28%	18%	2%	28%	9	28%	9
% virarIns ue BuM	Dy	1y	2	57	9	17	, 2	, 2	9	6	1	2	D	9	D2A	9	9
% virarIns ue BuM	1, 4%	28%	2%	A3%	9	18%	28%	2%	18%	9	, 8%	28%	2%	28%	9	, 8%	9
% ndstoMs	9	9	9	642	9	9	9	9	564	9	9	9	9	9	9	622	9
% ndstoMs	9	9	9	728%	9	9	9	9	748%	9	9	9	9	9	9	y46%	9
% virarIns ue CussRMb	9	9	9	11D	9	9	9	9	117	9	9	9	9	9	9	, 5	9
% virarIns ue CussRMb	9	9	9	9	28%	9	9	9	1A6%	9	9	9	9	9	9	48%	9

* ndstoMs Md virarIns ue CussRMbL: LnH3B: Bgh3W Whd3U: U9MFe

5566814 - COVID - QUEEN ELIZABETH DRWY @ FIF... - TMC
 Mon May 9, 2022
 Full Length (4:30 PM-12:30 AM)
 All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on
 Crosswalk)
 All Movements
 ID: 9513. 6, Location: 457403921, -857 61984

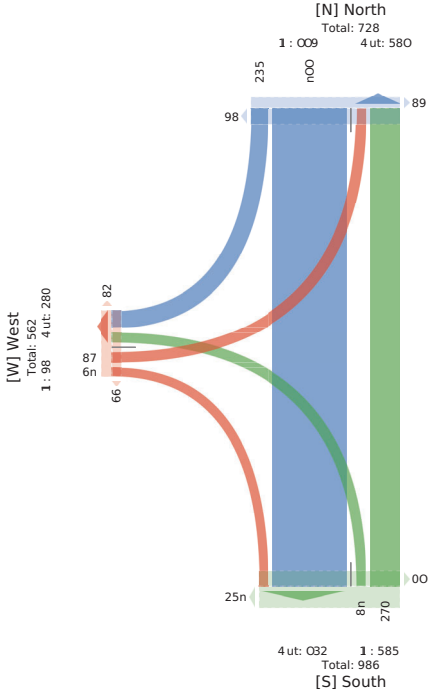


5566814 - COVID - QUEEN ELIZABETH DRWY @ FIF... - TMC
 Tue May 3, 20, 00
 AM Peak (May 3, 0, 00 30AM 83 AM:
 A-9-a)e (l 6L) agh Mt it ndy-e)2o ear y2Pehe)in(ig)2c @y-d-e) t g Ht ah2c @y-d-e) t g
 9t)v a-k:
 A--Mt r eBegi)
 Rwnl D847521 r dai@g.n5D411617281D7671D74



Lag I Intrise	f u-a GuPr. uPeH				GuPr f u-a. uPeH				J Fsc EMc. uPeH										
	R	S	W	CO	S	L	W	CO	R	L	W	CO							
2, , 92Dy 6:22-T	D4	D4	2	Dy	, 7	7D	D	2	m	74	y	D	2	, ,	D	, D7			
ngwT	D5	D2	2	D5	7n	m	D	2	(y	m	D	D	2	, 2	, ,	, D1			
(g2OT	D5	Dn	2	D1	, 3	n7	y	2	(	72	D	D	2	, 4	, 2	, m		
(gDOT	15	D4	2	, 2	1	35	D	2	m5	12	n	y	2	D7	, 2	, 3D			
SuM	D2	n	(	2	(4	D4	D5	7n	2	, 7,	, 21	1n	7y	2	47	57	3y7	
* 1 DuM	D4	, 475*	2*	h	h	4D7*	D4	, 2*	h	h	7D5*	n48*	2*	h	h	h			
* SuM	D2	n	(	2*	(58*	h	D4	, 78*	2*	, 78*	h	18*	78*	2*	48*	h	h	
01%	24	4n	28	(n	h	28m	h	2842	2827	h	28(7	n	28yn	28	D	h	28o2	h	2874
1 dres MHT un-uavS	57	m5	2	(tD	h	Dy2	7n	2	, t	n	1n	74	2	4t	h	h	y7y		
* 1 dres MHT un-uavS	5, 8n*	y48*	2*	y78*	h	y(8*	D2*	2*	y5D*	h	D2*	y48*	2*	y48*	h	h	yn8*		
1 FMu	2	t	2	t	h	2	2	2	2	h	2	D	2	D	h	h	7		
* 1 FMu	2*	28*	2*	28*	h	2*	2*	2*	2*	h	2*	8*	2*	D8*	h	h	28*		
Bdavs ue RuM	, 4	(	2	17	h	18	2	2	5	h	2	2	2	2	h	h	7D	
* Bdavs ue RuM	, 58n*	D7*	2*	nD7*	h	18*	2*	2*	8*	h	2*	2*	2*	2*	h	h	78*		
% FHScMh	h	h	h	h	5, 8*	h	h	h	h	h	D62	h	h	h	h	h	5, 8		
% FHScMh	h	h	h	h	h	h	h	h	h	h	478*	h	h	h	h	h	y58*		
Bdavs ue CussRMb	h	h	h	h	h	1	h	h	h	h	1	h	h	h	h	h	h		
* Bdavs ue CussRMb	h	h	h	h	h	h	h	h	h	h	D8*	h	h	h	h	h	, 8*		

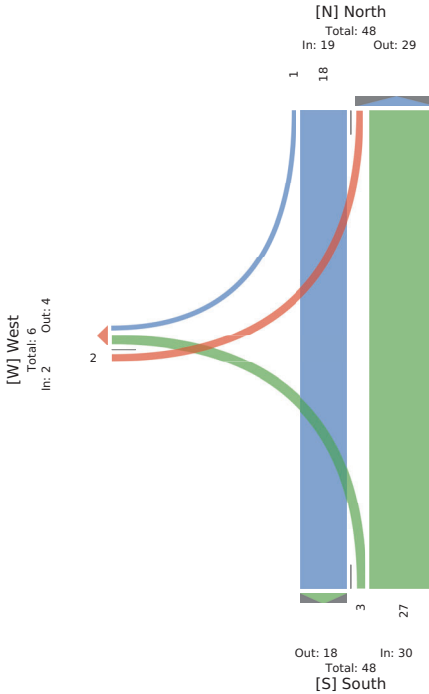
4FHScMh MHBdavs ue CussRMb gi R3RgRdrCSgSr-P3WgMSPe



[W] West
 Total: 562
 1: 98 4 ut: 280

E- e6l RAct 1CP	OC3B J Cu B. Cu P)				J Cu B OC3B. Cu P)				E e6l Sa6l Cu P)				BP1				
	c	T	W	FNN	e) U	T	W	FNN	e) U	c	W	FNN		e) U			
0, 00g, 30w, FM	33			33		35	0		33				0		0		03
30mFM	3	5		4		3	3		3				0		0		03
TCh9	3	34		3k		05	1		1				0		0		nb
* FNCA9	nb*	k75*		*		k, 9*	3, 9*		*				3, **		*		g
* TCh9	08*	1nb*		158*		nbk*	nbk*		nbk*				1k*		1k*		g
1 d %	80m	87, k		g		810	g		8K5		8, 5m		g		8, km		g
* A916aP) MCCSi yi h6	3	34		3k		05	1		1				0		0		nb
* A916aP) MCCSi yi h6	3, **	3, **		3, **		3, **	3, **		3, **				3, **		3, **		g
d eaoy																	g
d eaoy	*	*		*		*	*		*		*	*	*		*		g
r Ayi h6 CP c Ca)																	g
* r Ayi h6 CP c Ca)	*	*		*		*	*		*		*	*	*		*		g
e) e6kAPG	g	g		g		g	g		g		g	g	g		g		g
e) e6kAPG	g	g		g		g	g		g		g	g	g		g		g
r Ayi h6 CP c CG6HalLr	g	g		g		g	g		g		g	g	g		g		g
* r Ayi h6 CP c CG6HalLr	g	g		g		g	g		g		g	g	g		g		g

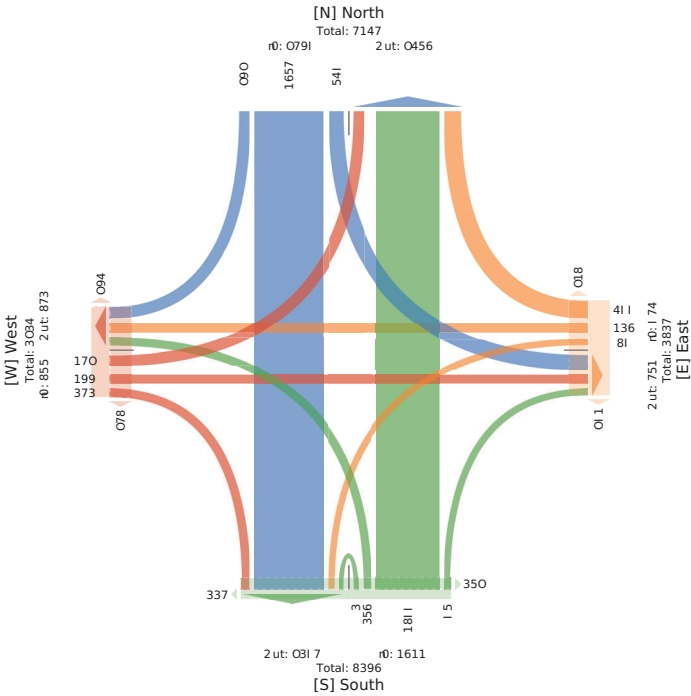
1) e) e6kAPG aP) r Ayi h6 CP (sCG6HalLr: w: eB2c w: A912Wt9su2WwWgtUsP



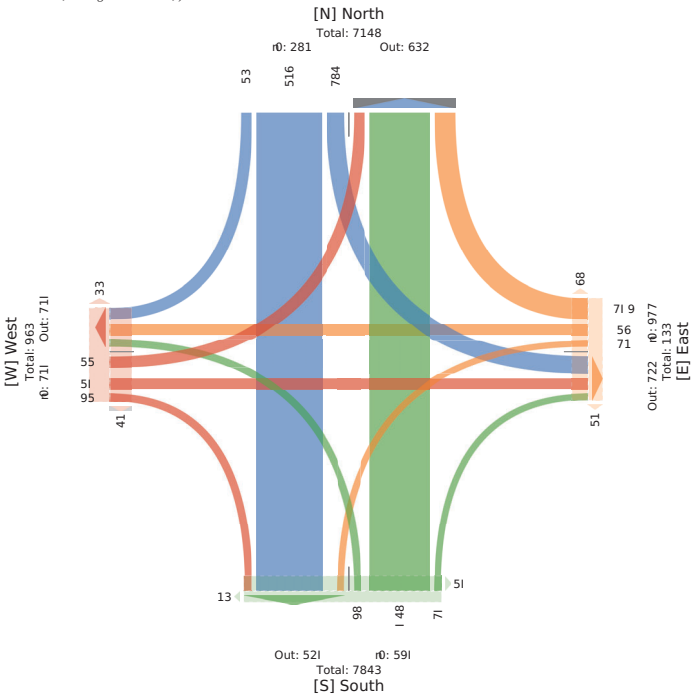
[W] West
 Total: 6
 In: 2 Out: 4

Log I nter time	Dwh BuFh. ufed				J M6 S nst. ufed				BuFh Ouath. ufed				S nst J M6. ufed													
	B	W	L	U	PNN	-nt	B	W	L	U	PNN	-nt	B	W	L	U	PNN	-nt								
2, 908E 622-T	A	41	81	2	AD	9	45	6	A	2	12D	AB	5	16	12	2	4	AL	12	A	D	2	15	4A	4y2	
1222-T	86	11	5	12A	2	8yD	9	115	14	14	2	A	1, 8	14	684	1y	2	12A	AL	8	12	12D	2	141	153	1181
822-T	DA	8y	54	2	DA	9	1AA	1E	y	2	1y	1, 4	15	1E	y	2	1E	62	A	A	D	2	118	101	155	
422-T	AB	61D	42	2	11	9	45	AD	16	2	1, 4	1AB	1	AS1	1D	2	615	AL	y	y	AG	2	5D	15	1111	
522-T	5	AB4	66	2	6y	9	66	16	12	2	85	51	11	AA	8	2	AA6	y	AL	AB	D	2	y	84	y4A	
y22-T	A	58	AG	2	AB	9	61	2	D	2	88	AB	y	AA	14	1	AA2	11	1A	15	Al	2	85	111	5, 2	
1222-T	AA	AA6	5	2	6y	9	AD	1D	D	2	1D	1A	8	1y	16	2	4y	2	A	12	Al	2	86	11	548	
1122-T	1	1A	1	2	A22	9	15	A	D	2	8	61	A	116	8	2	164	2	D	5	11	2	6	11	6y4	
2, 908E 1, 22P-T	5	1A	8	2	41	9	A	1	2	2	6	4	2	64	A	2	1E	2		1	A	2	8		1A1	
W6M	AA	y64	615	2	AC25	9	185	1y	85	2	54D	425	56	855	16y	1	y	102	141	22	4A	2	866	851	516y	
% FN6M6	51	%	4y2%	1, 26%	2%	9	841	%	12%	45%	2%	9	5	3%	y	2%	1E%	2%	9	3, 88%	AL3%	6, 26%	2%	9	8	9
% W6M	68%	AB%	18%	2%	6D3%	9	41	%	26%	25%	2%	122%	9	12%	AA2%	15%	2%	AB3%	9	7%	13%	AA5%	2%	43%	9	9
Lights Mid T unararins	84	44	616	2	ABY	A	18D	18	88	2	584	8	4y	112	168	1	468	9	182	1yA	BD	2	815	8	44, 6	
% Lights Mid T unararins	553%	y63%	yy3%	2%	y62%	9	yy23%	y58%	y43%	2%	yy73%	9	y62%	yA5%	y52%	122%	y62%	9	yAR%	y13%	y43%	2%	y82%	9	y65%	
% c m6	D	1E	1	2	48	9	2	2	2	2	9	2	1E	2	2	2	62	9		1	2	D	9	16A		
% v irarins ue B6M	111	1, D	A	2	1A	9	1	A	2	2	8	9	2%	7	176%	2%	7%	9	17%	12%	23%	2%	22%	9	15%	
% v irarins ue B6M	AD%	67%	22%	2%	AD%	9	23%	12%	3%	2%	22%	9	82%	63%	23%	2%	62%	9	18%	13%	26%	2%	AD%	9	AD%	
% ndnraM6	9	9	9	9	9	2	9	9	9	9	9	8y6	9	9	9	9	9	9	9	9	9	9	9	9	9	8AA
% v irarins ue CaussR M6	9	9	9	9	9	2	9	9	9	9	9	10	9	9	9	9	9	9	9	9	9	9	9	9	9	62%
% v irarins ue CaussR M6	9	9	9	9	9	5	9	9	9	9	9	2%	9	9	9	9	9	9	9	9	9	9	9	9	9	42%

- ndnraM6 Md v irarins ue CaussR M6/ L: Lnh3B: Bight3W WhF3U: U9W6e

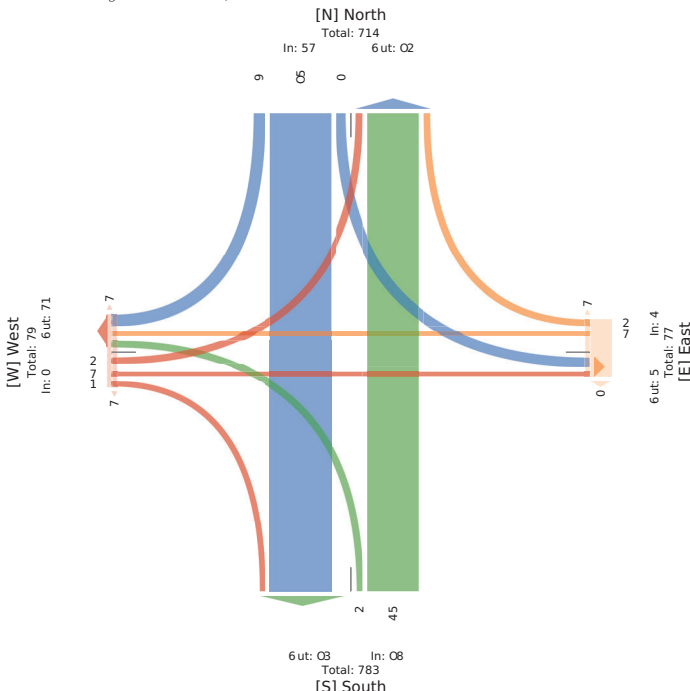


Flow	Volume	Control	Flow	Volume	Control	Flow	Volume	Control
Northbound	1657	Signal	Southbound	181	Signal	Westbound	170	Signal
Eastbound	411	Signal	Westbound	199	Signal	Northbound	1657	Signal
Southbound	181	Signal	Eastbound	136	Signal	Southbound	181	Signal
Westbound	170	Signal	Westbound	373	Signal	Westbound	170	Signal



Flow	Volume	Control	Flow	Volume	Control	Flow	Volume	Control
Northbound	53	Signal	Southbound	71	Signal	Westbound	55	Signal
Eastbound	68	Signal	Westbound	95	Signal	Northbound	53	Signal
Southbound	71	Signal	Eastbound	51	Signal	Southbound	71	Signal
Westbound	55	Signal	Westbound	71	Signal	Westbound	55	Signal

5566814 - COVID - BANK ST @ SUNNYSIDE AVE - ... - TMC
 Tue May 3, 20, 00
 AM Peak (May 3, 0, 00 30AM 83 AM:
 A-9-a) (l 6L) agh Mt it ndy-e) 2o ear y2Pehe)ir(ig)2c (y-d-e) t g Ht ah2c (y-d-e) t g
 9 it)v a-k:
 A-Mt r eBegi)
 Rwni D347321 r dai@gm5D41 501 3287D6145, 1



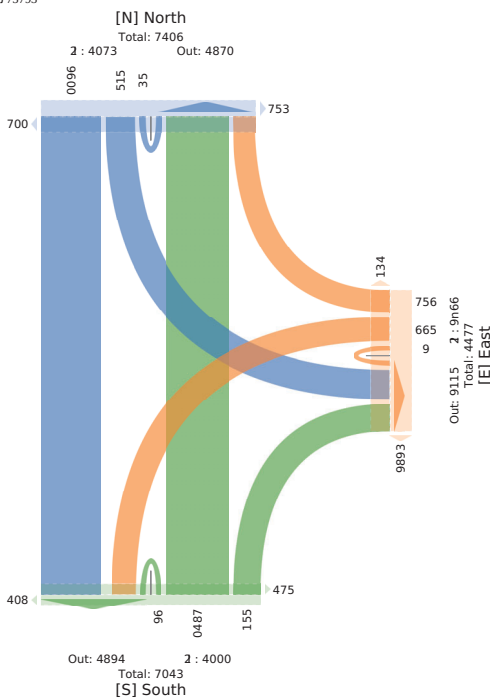
5566814 - COVID - BANK ST @ EXHIBITION WAY - ... - TMC
 Tue May 3, 20, 00
 AM Peak (May 3, 0, 00 30AM 83 AM:
 A-9-a) (l 6L) agh Mt it ndy-e) 2o ear y2Pehe)ir(ig)2c (y-d-e) t g Ht ah2c (y-d-e) t g
 9 it)v a-k:
 A-Mt r eBegi)
 Rwni D347321 r dai@gm5D41 501 3287D6145, 1



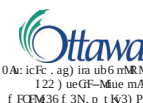
Lag I Intrdue	Outh Eufh. ufed					JMt S st. uFed					Eufh Outh. ufed					mt
	W	L	U	PNN	-nd*	B	L	U	PNN	-nd*	B	W	U	PNN	-nd*	
2, ., 9D3y 6:22-T	.25	84	.	.yD	5,	Ag	41	2	122	113	y2	.18	1	42A	y8	526
D22-T	611	14D	y	BD	151	84	118	2	26	Av	184	61D	.	42A	y8	1A,
4:22-T	AD	11D	1,	8,	55	81	81	2	14	66	186	6,6	4	416	168	1, D
5:22-T	A,8	11D	12	8y4	4,	58	84	2	146	AD	1,1	AA	A	685	1A	1165
8:22-T	.y4	1A5	A	6A	44	42	5D	2	1AD	142	8A	8,	2	AD	68	yAI
y22-T	.,D	y8	5	AO	4,	41	52	2	1A1	56	84	68	1	AO	8	5y4
12:22-T	.41	125	11	Ag	6,	15A	168	2	A 1	.,A	y6	.26	6	AO	14	122,
11:22-T	1AA	4D	.	.22	A	12A	11D	2	.18	AA	62	116	2	1D6	.	D,
2, ., 9D3y 6:22-T	61	18	A	4,	A	14	.D	1	6,	11	1D	AO	2	DA	.	116
% PNN	45%	A2%	17%	9	9	65%	11	23%	9	9	53%	51%	21%	9	9	5y46
% VNM	58%	1,7%	27%	612%	9	83%	y8%	2%	181%	9	117%	.y2%	27%	622%	9	9
Lights Md T unarins	.251	y5D	Dy	A2D	9	4y2	5A1	1	16,5	9	88,	.y6	15	AyA	9	54, D
% c rMh	52	A	2	5A	9	A	6	2	5	9	4	12	2	D	9	114
% c rMh	A2%	28%	2%	2%	9	23%	23%	2%	23%	9	25%	.1%	2%	15%	9	17%
% v irarins ue BuM	54	11	2	85	9	6	Ag	2	6A	9	11	4,	2	5A	9	.2A
% v irarins ue BuM	A2%	17%	2%	2%	9	24%	10%	2%	3%	9	17%	.5%	2%	76%	9	13%
% v irarins ue CussR M	9	9	9	9	1y8	9	9	9	9	18A	9	9	9	9	9	454
% v irarins ue CussR M	9	9	9	9	1y	9	9	9	9	9	9	9	9	9	9	1A
% v irarins ue CussR M	9	9	9	9	10%	9	9	9	9	9	9	9	9	9	9	13%

* - ndstoms Md v irarins ue CussR M / Lnh3B: Bigh3W WdF3U: U9MFe

5566814 - COVID - BANK ST @ EXHIBITION WAY - ... - TMC
 Mon May 9, 2022
 Full Length (4:30 PM-12:30 AM)
 All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
 All Movements
 ID: 95141, Location: 456978.4, -856 75793



5566814 - COVID - BANK ST @ EXHIBITION WAY - ... - TMC
 Tue May 3, 20, 00
 AM Peak (May 3, 0, 00 30AM 83 AM:
 A-9-a) (l 6L) agh Mt it ndy-e) 2o ear y2Pehe)ir(ig)2c (y-d-e) t g Ht ah2c (y-d-e) t g
 9 it)v a-k:
 A-Mt r eBegi)
 Rwni D347321 r dai@gm5D41 501 3287D6145, 1



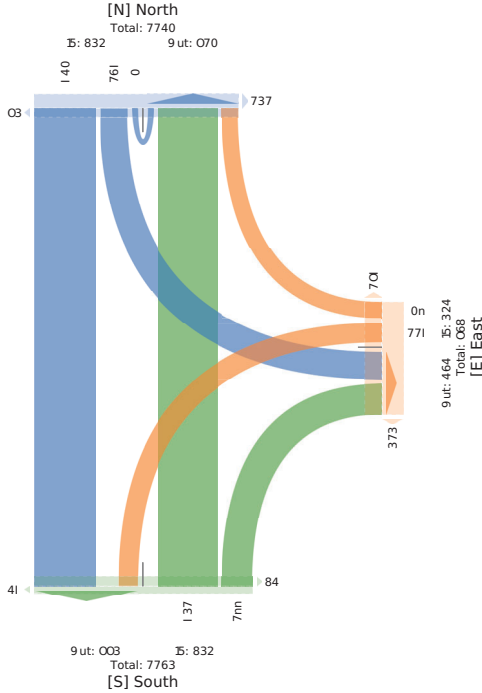
s f m A H ue	f uko Julno. ulec					C M E F G. ulec					Julno f uko. ulec					
	S	s	W	P O D	OR L	B	s	W	P O D	OR L	B	S	W	P O D	OR L	
2, ., 9D3y 6:22-T	117	ny	1	11P	n2	.7	.y	2	t,	8y	t7	12D	2	11y	.	756
t g 20T	1,1	.8	2	1ny	7%	.h	71	2	t t	85	ny	12n	2	11y	.	755
t g 10T	8	nl	.	1,8	60	.8	72	2	t 8	11y	h,	12n	2	1AD	13	771
t g 20T	11y	t D	1	182	11	ln	.n	2	78	5,	11	125	2	1D	71	782
% P O D	52%	.84*	14*	h	h	n74*	t D*	2*	h	h	7,4*	D34*	2*	h	h	h
% S uM	724*	1,4*	24*	n72*	h	D*	54*	2*	1nd*	h	174*	.y4*	2*	n74*	h	h
% s idot C M c T un A H H C	24y5	245,	2402	240P	h	24yt	2471	h	24Dh	h	24yl	2411	h	2478	h	24n2
% 9 F Ma	7y2	157	8	t 51	h	8y	125	2	1yD	h	1yD	7m	2	ty2	h	175
% v i H H C ue Bu M	8y4*	yy4*	122*	y, 4*	h	122*	y74*	2*	yDyP	h	y84*	y74D*	2*	yt4*	h	yy4*
% v i H H C ue Bu M	1y	2	2	1y	h	2	1	2	1	h	2	12	2	12	h	72
% v i H H C ue Bu M	n4*	2*	2*	74*	h	2*	24*	2*	24*	h	2*	.4*	2*	14D*	h	.4*
% v i H H C ue Bu M	.y	1	2	72	h	2	D	2	D	h	7	15	2	.2	h	1D
% v i H H C ue Bu M	DyP	24*	2*	n6*	h	2*	t4*	2*	74*	h	14*	n4*	2*	74*	h	74*
% v i H H C ue Bu M	h	h	h	h	1D	h	h	h	h	71	h	h	h	h	h	yy
% v i H H C ue Bu M	h	h	h	h	8	h	h	h	h	yD*	h	h	h	h	h	yy4*
% v i H H C ue Bu M	h	h	h	h	n4*	h	h	h	h	1n	h	h	h	h	h	t
% v i H H C ue Bu M	h	h	h	h	n4*	h	h	h	h	74*	h	h	h	h	h	t4*

h i F e R G A M C M c v i H H C ue) A C R M 4 s g s F r 3 B g B i d a r 3 S g S o A 3 W g M S 1 A

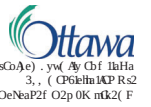
Mon May 9, 2022
 PM Peak (May 09 2022 5-56PM) 6-56 PM
 CHS Hill (light L anc Mod by BIL, u ear y, Peceld gn, Rg y BIL Lon woac, Rg y BIL s lo Lma lK O
 CHM or el end.
 D - 964541, i o f d p n - 563 97815,)863 7679.



Plor g ec by - s g l o f v d h m a
 400 s on l e h d g n : L
 Nepean, v N, K2G 6J9, s C



Tue May 3, 20, 00
 FM Peak (May 3, 0, 00 30FM g3 FMt
 Fh (h e f e t r A 9 6 a P) M C C S i y i e l e 2 d e a o y 2 l e) e 6 k A P 6 2 r A y i h e 6 C P c C a) 2 r A y i h e 6 C P
 (s C G H a L A
 F i h m C o e v P E
 R w k m B I 3 D 2 : G a l C P v d m f k 8 5 D I 2 5 m D n B k 7



l s C o A e) - y w A y C i f h i h a
 3, (C P G k h a P R s 2
 O e N e a P 2 f O 2 p O K n f k 2 (F

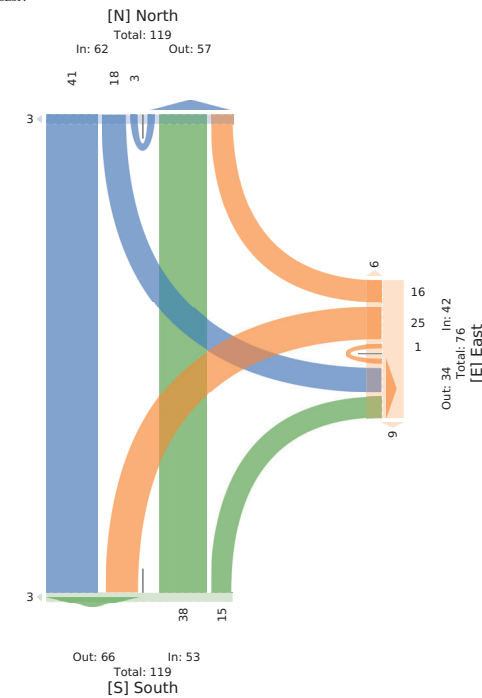
Direction	OCB (EuB, CuP)	OCB (EuB, CuP)	OCB (EuB, CuP)	OCB (EuB, CuP)	OCB (EuB, CuP)	OCB (EuB, CuP)	OCB (EuB, CuP)	OCB (EuB, CuP)	OCB (EuB, CuP)	OCB (EuB, CuP)	OCB (EuB, CuP)
North	71	3	8	30	3	03	3	8	30	3	03
South	77	7	77	7	7	7	7	7	7	7	7
East	068	0	068	0	068	0	068	0	068	0	068

l e) e 6 k A P 6 a P) r A y i h e 6 C P (s C G H a L A : w e h 2 c w c A 9 I 2 T w I 9 u 2 W w W g I u s P

Tue May 3, 20, 00
 AM Peak (May 3, 0, 00 30AM 83 AM:
 A - 9 - a) e (l G L) a g h M t i t n d y - e) 2 o e a r y 2 P e h e) i n f a g) 2 c t y d - e) t g H t a h 2 c t y d - e) t g
 9 i t) v a - k :
 A - Mt r e B e g)
 R w n I D 8 4 3 7 2 I t d a i t @ g m # E B I 6 1 7 4 2 8 I D 7 6 D 6 I .



P r r (t e h b y n B) G y I I O l i a v a
 3, , 9 t g) i e - a l f g w r 2
 Nepean, v N, K2G 6J9, s C



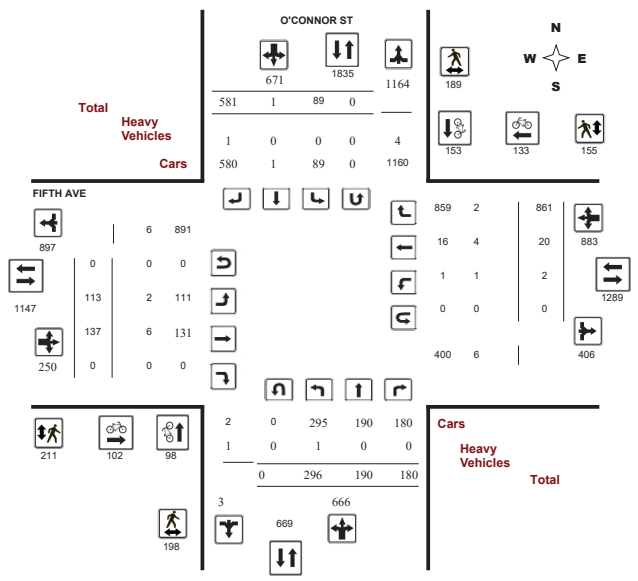
Transportation Services - Traffic Services

Turning Movement Count - Study Results
 FIFTH AVE @ O'CONNOR ST

Survey Date: Tuesday, July 26, 2022
 Start Time: 16:00

WO No: 40492
 Device: Miovision

Full Study Diagram





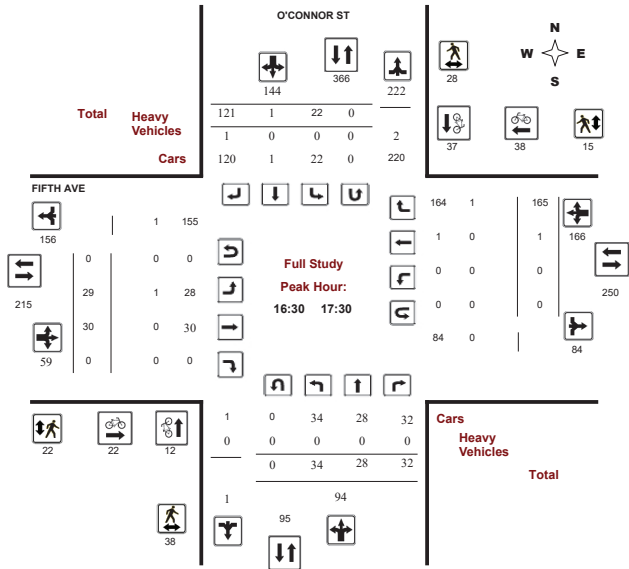
Transportation Services - Traffic Services

Turning Movement Count - Study Results
FIFTH AVE @ O'CONNOR ST

Survey Date: Tuesday, July 26, 2022
Start Time: 16:00

WO No: 40492
Device: Miovision

Full Study Peak Hour Diagram



Transportation Services - Traffic Services

Turning Movement Count - Study Results
FIFTH AVE @ O'CONNOR ST

Survey Date: Tuesday, July 26, 2022
Start Time: 16:00

WO No: 40492
Device: Miovision

Full Study 15 Minute Increments

Table with columns for Time Period, Northbound, Southbound, Eastbound, Westbound, and Grand Total. Rows show 15-minute intervals from 16:00 to 23:45.

Note: U-Turns are included in Totals.



Transportation Services - Traffic Services

Turning Movement Count - Study Results
FIFTH AVE @ O'CONNOR ST

Survey Date: Tuesday, July 26, 2022
Start Time: 16:00

WO No: 40492
Device: Miovision

Full Study Cyclist Volume

Table showing cyclist volume counts for Northbound, Southbound, Eastbound, and Westbound directions at the intersection of O'Connor St and Fifth Ave.



Transportation Services - Traffic Services

Turning Movement Count - Study Results
FIFTH AVE @ O'CONNOR ST

Survey Date: Tuesday, July 26, 2022
Start Time: 16:00

WO No: 40492
Device: Miovision

Full Study Pedestrian Volume

Table showing pedestrian volume counts for NB, SB, EB, and WB approaches at the intersection of O'Connor St and Fifth Ave.



Turning Movement Count - Study Results
FIFTH AVE @ O'CONNOR ST

Survey Date: Tuesday, July 26, 2022
Start Time: 16:00

WO No: 40492
Device: Miovision

Full Study Heavy Vehicles

Table with columns for Time Period, Northbound, Southbound, Eastbound, Westbound, and Grand Total. Rows list 15-minute intervals from 16:00 to 23:45.



Turning Movement Count - Study Results
FIFTH AVE @ O'CONNOR ST

Survey Date: Tuesday, July 26, 2022
Start Time: 16:00

WO No: 40492
Device: Miovision

Full Study 15 Minute U-Turn Total

Table with columns for Time Period, Northbound U-Turn Total, Southbound U-Turn Total, Eastbound U-Turn Total, Westbound U-Turn Total, and Total. Rows list 15-minute intervals from 16:00 to 23:45.

5589707 - BANK ST @ AYLME AVE - OCT 14 2022 - TMC
Tue May 3, 20F00
TL Ln g h b j G AF - 9 133AF - 9 P
) IL Csi i gi 6 n d h (y i s t d 9 o y u r a l g i 2 c g s H 2 - g d g i y u s t i 2 v n a r a l g i o t B o s d 2 v n a r a l g i o t
C u s i i R s l w P
) IL 9 o h j k g y
n A3FF0B42n o a s y o t A, 78 47521 78D 3, 52 b a g C o d g A, F53, 3F:



10 H d g i F r A c y o C M y e R s
3 F F C o t i g l l y s y o t 1 u 2
N g p s t 2 M N 2 K 7 0 4 2 (C)

Detailed turning movement count table with columns for approach, movement, and percentage. Includes summary rows for % v n a r a l g o t C u s i i R s l w and % g d g i y u s t i 2 v n a r a l g o t C u s i i R s l w n A n g g e B A B d h i y 2 W A W i 2 U A U I W t.

Summary table with columns for % v n a r a l g o t C u s i i R s l w and % g d g i y u s t i 2 v n a r a l g o t C u s i i R s l w n A n g g e B A B d h i y 2 W A W i 2 U A U I W t.

Sat M7, 20FuFF
SI Length: 1.3 u A - 6, 3 u A - P
) ILCLiiti le th(2 sgd - o bary yni oc nsF0Andni 2s g0v tyr ylai og Bos0v tyr ylai og
Caoi i RslwP
u u Cogi Tills Tog 1 d0
Npsrg0MNOKFG 41. 0C.)



Tue M3, 20F00
1 L 1 ngv h(636 1 L A: M ngv91 ngv 1 P) u
C9S g0i ni h0 nry j gHL P)Puva9ni 21 ng-v21 nhl yugci 2Bava9ni Pc RPg2Bava9ni Pc
s pIwng3
C9L P-rik nc y
n(3 FF0D42d PageP(, 6756D52:467 D 88, 2bg0 s PHL, F. 383F8

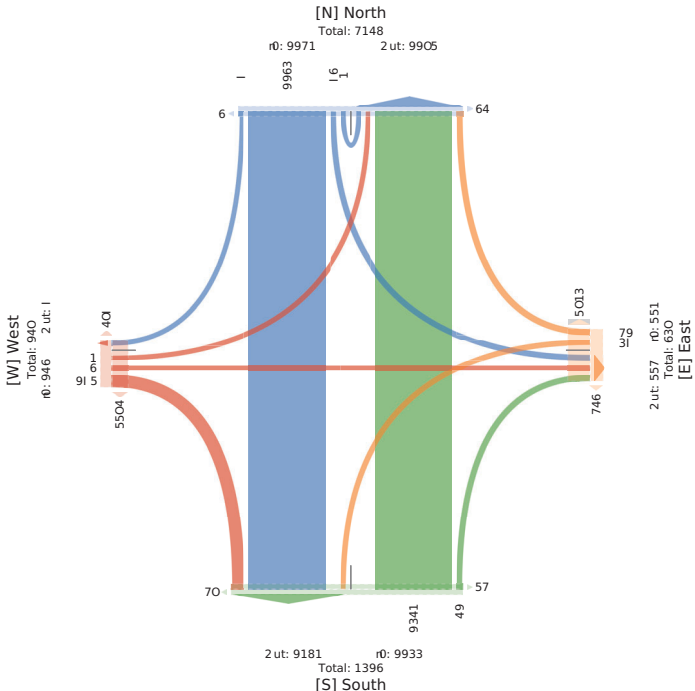


Table with 16 columns: Row, W, U, Cpp, Left, Right, W, U, Cpp, Left, Right, W, U, Cpp, Left, Right, Row, W, U, Cpp, Left, Right. Contains traffic flow data for various approaches and directions.

Sat M7, 20FuFF
1 L 1 eng h2(1 1 L : 1 G, 1 1 L 3 : M n-1 eng 6 P) a
C - s -ni ei htdr 2 nchL P2pyy-ei 06 en a/w0 ehi 2nci 0Byyy-ei Pc RPhfB2yyy-ei Pc
s pIwng3
C - L P nck ec7
n(, uuiFT) 90d Pyn7P(21-6. 1D0: 0:914E25520bt r e s PHL 2u8, 5, u5



Tue M3, 20F00
1 L ngv h(G AF - 9 133AF - 9 P
) ILCLiiti g dth(s y st d 9 ouyar algj 2c gH2- gdl yugci 21 v nral g0t Bos2v nral g0t
Caoi i RslwP
u u Cogi Tills Tog 1 d0
Npsrg0MNOKFG 11. 0s C

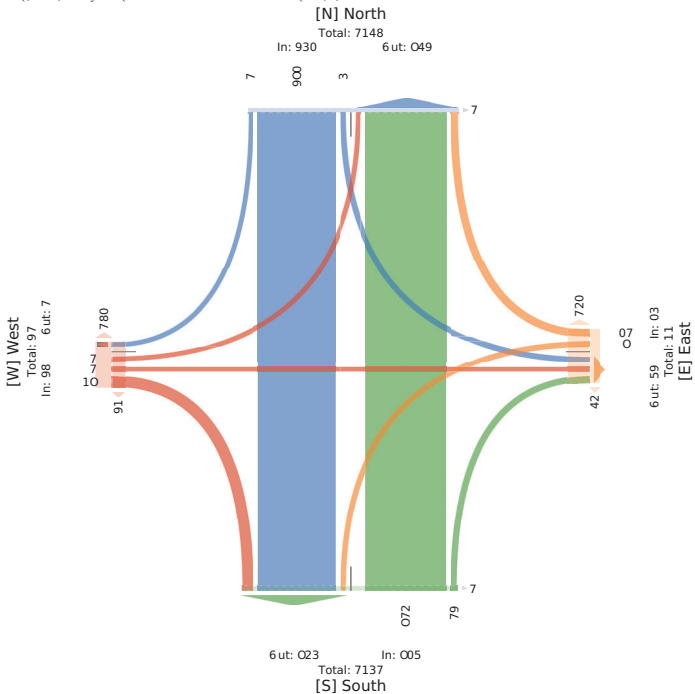


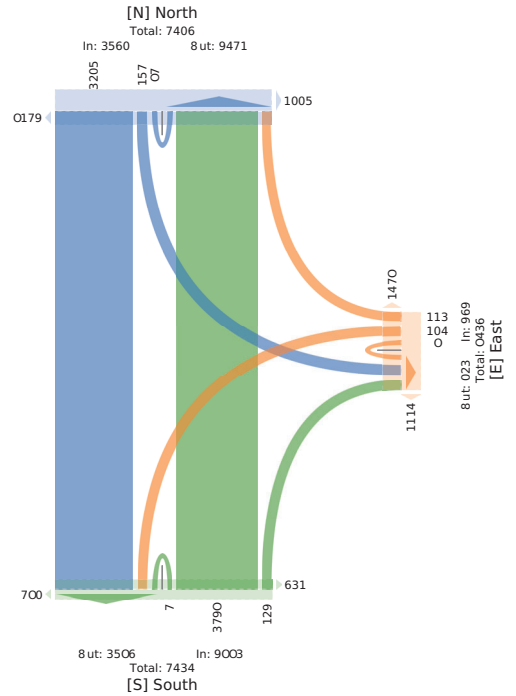
Table with 16 columns: Row, W, U, Cpp, Left, Right, W, U, Cpp, Left, Right, W, U, Cpp, Left, Right, Row, W, U, Cpp, Left, Right. Contains traffic flow data for various approaches and directions.

Wk g	Noag bol y f o l t d				Esty S g y f o l t d				bol y Noag f o l t d						
	W	n	U	) pp - g l *	B	n	U	) pp - g l *	B	W	U	) pp - g l *
% v ar a l g i o t C u n i i R s l v	1	1	1	1	F 2 %	1	1	1	1	F 2 %	1	1	1	1	3 2 %

* g d g j y u s t i s t d v ar a l g i o t C u n i i R s l v o n A n g @ 2 B A B h i (2 V A W) d 2 U A U I W t

5589707 - BANK ST @ EXHIBITION WAY - OCT 14 ... - TMC

Sat My7, 20FuFF
 1 L l n g r h (3 6 1 L : 6 3 6 1 L A M - n g s B l n g t 1 P u)
) L L C s i i h 7 l e t h (2 s g d : o b a y y l a i 0 c n s F 0 A n d n i 7 e s g i 0 v t y r y l a i o g B o s d 0 v t y r y l a i o g
 C a o i i R s l v P
) L - o f h k n g 7
 n h 3 , u u f T) : o e y s 7 o g 3 2 9 4 5 D 8 2 0 6 9 4 B D E : 0 b r t h C o d n 3 2 u 8 , . . u



5589707 - BANK ST @ EXHIBITION WAY - OCT 14 ... - TMC

Tue My3, 20Fu0
 1 L l n g r h (3 6 1 L : 6 3 6 1 L A M - n g s B l n g t 1 P u)
 C 9 s 9 i n i h d e r y j g c H L P p u a v a h i 2 1 n g - v 2 l n h i y u g c i 2 B a v a h i P c R p g F B a v a h i P c
 s u P i w g 9 A
 C 9 L P - n k n c y
 n h (3 F F 0 B 4 2 d P a g y P c (, 6 7 8 D E , 2 : 5 6 7 D 6 D 8 4 2 b e n s P H (, F . 3 5 3 F 4

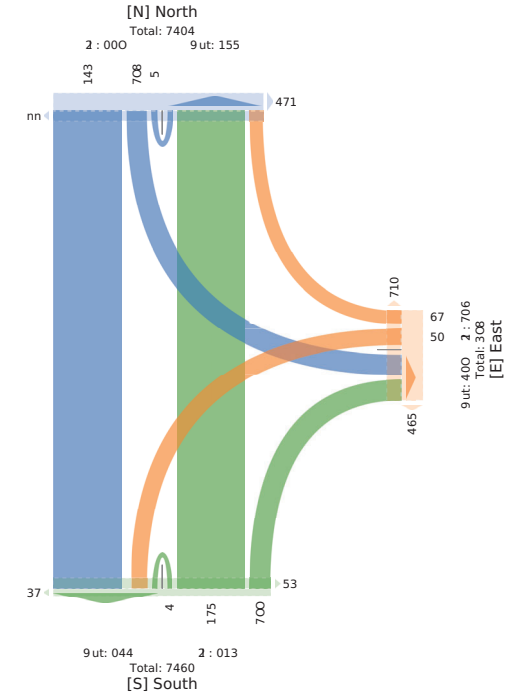


Wk n	N P a r b P y f P c H				E g y S u y P c H				b P y N P a r f P c H							
	W	d	U	Cpp	R	d	U	Cpp	R	W	U	Cpp	l n f P y			
0 F 0 0 3 F 3 , (3 6 1 L	335	4	3	3.3	63	3D	03	F	48	DE	45	340	F	3.8	05	4.8
, (4 6 1 L	33	4	3	3.3	63	3	0D	F	48	DE	45	340	F	3.8	05	4.3
, (6 1 L	340	44	6	35F	DE	38	0	F	4	3, F	4	33D	F	360	46	4.6
6 0 1 1 L	368	33	0	350	31%	3D	04	F	3	335	0	363	3	35	4	4.0
% V P g i	60	34F	8	4	41%	53	8	F	3.5	46	344	638	0	6	346	3.0
% C p p u P a r	58%	38%	32%	1	0%	65%	P%	1	0%	58%	F 2%	1	1	1	1	1
% V P g i	46%	DE%	F 2%	5%	1%	3%	3%	P%	33%	1%	8%	46%	F 2%	1%	1%	1
1 1 T	F 2 F	F 5 F	F 2 F	F 6 F	F 6 F	F 8 4 3	F 1 D	F	F 8, 0	1	F 1 D	F 1 Q	F 6 F	F 8 3 5	1	F 8, 0
d e a r y j g c H L P p u a v a h i	8, 36%	308	8	44	86%	5	8	F	3.3	1	30D	8	0	0	1	3, 3D
% d e a r y j g c H L P p u a v a h i	8, 36%	88%	3F%	86%	8, 7%	85%	P%	8.7%	1	8, 7%	86%	3F%	86%	1	1	86%
1 n g - v	35	F	F	35	1	F	3	F	3	1	4	33	F	3	1	40
% 1 n g - v	47%	P%	P%	0%	1	P%	33%	P%	F 2 %	1	0%	0%	P%	0%	1	0%
B a v a h i P c R p g H	30	3	F	34	1	3	F	6	1	0	3	F	3	1	4	4
% B a v a h i P c R p g H	0%	F 1%	P%	0%	1	6%	3%	P%	4%	1	3%	0%	P%	0%	1	0%
1 n h i y u g c i	1	1	1	1	41%	1	1	1	1	1	1	1	1	1	1	30%
% 1 n h i y u g c i	1	1	1	1	88%	1	1	1	1	1	1	1	1	1	1	80%
B a v a h i P c s u P i w g 9	1	1	1	1	4	1	1	1	1	1	1	1	1	1	1	3%
% B a v a h i P c s u P i w g 9	1	1	1	1	33%	1	1	1	1	1	1	1	1	1	1	5%

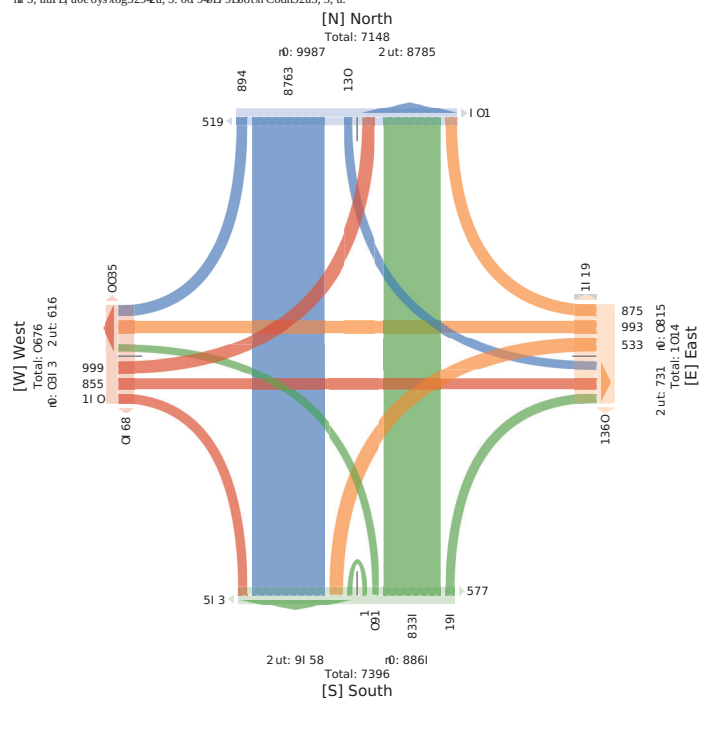
* 1 n h i y u g c i g c H B a v a h i P c s u P i w g 9 7 d (d n Q 2 R R e a r j 2 W W u j 2 U (U : W j u c

5589707 - BANK ST @ EXHIBITION WAY - OCT 14 ... - TMC

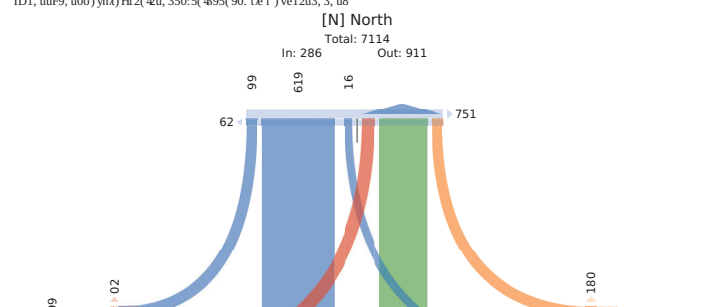
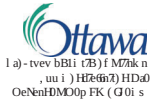
Sat My7, 20FuFF
 1 L l n g r h (1 1 L : 1 (, 1 1 L 3 : M e a n - l e n g 6 P) a
 C - s - n i i e i h d t o r 2 n c H L P P a y y - e i 0 6 e n A w 0 l e h i 7 a n c i 0 B t y v y - e i P c R P h f D B t y v y - e i P c
 s a P i w n g 3
 C - L P A e k e c 7
 n h (, u u f T) 9 0 d P y n 7 P c (2 1 4 5 D 8 2 0 : 1 4 8 D I E 9 0 b r e s P H (2 u 8 , . . u 9



5589707 - BANK ST @ FIFTH AVE - OCT 14 2022 - TMC
Tue May 3, 20F00
1 L Ingt H 6 AF -9 B3AF -9 P
) ILCLSiini le th t 2 sgd - o'bayr ylni Oc nsF 0'Andni ztsghi 0v tyr ylni of Bosd0v tyr ylni og
Caoi l Rs l wP
J L E9 o'hk ngT
n# A3F0DF2Onayr A 42 F385254R1E41D2_egg CodgA, FR383F:



5589707 - BANK ST @ FIFTH AVE - OCT 14 2022 - TMC
Tue May 3, 20F00
1 L Ingt H 6 (1 L : 1G : 1L : : Mhngll ngt P)Ca
s Hl igkhd to c yd g l L) u nBnd P ng9B21 nvdngH2RnBa(hd) Hw g2RnBa(hd) H
l uq ddk g l -
s Hl j 9nmvdH
ID63FF04320) age) H6, (? F3A82-R 7M6(425gn 1) vnt6, FAB3AF.



5589707 - BANK ST @ HOLMWOOD AVE - OCT 14 20... - TMC
Tue May 3, 20F0F
I L lng h 6 A F - 9 B3AF - 9 P
J L L C b i i n i l e t h (3 s g d - o b a y r y l n i 0 c n s F 0 A n d n i 2 e s g i 0 v y r y l n i o t B o s d 2 v a r a l g i o t C u n i I R s b w
K B o s d 2 v a r a l g i o t C u n i I R s b w
n h A B H U 0 2 n o s s a n t A 4 7 8 8 1 B S 2 1 . 4 5 D E 5 4 : 2 b o g C o d g A F 5 3 F 3 F



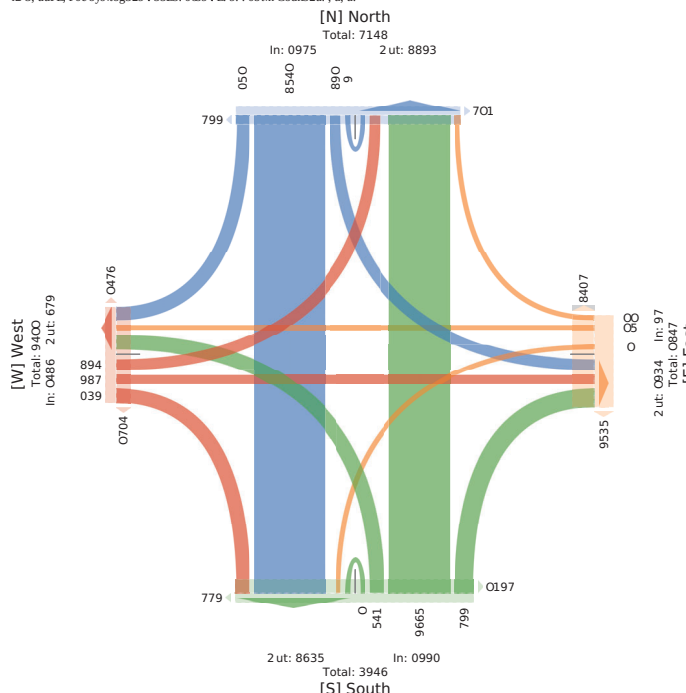
u o i d l g i t r A C o r o M Y e R s
3 F F C o t i g y l l n e t 1 u N g p p g 2 M N 2 K O G 4 1 B 2 C

Wk	Nbr of requests					Nbr of errors					Nbr of warnings					Nbr of errors					Nbr of warnings								
	B	W	n	U	pp	B	W	n	U	pp	B	W	n	U	pp	B	W	n	U	pp	B	W	n	U	pp	B	W	n	U	pp
0000-3E3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
% general	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%
% ciph	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%
% v a r l a g i o t B o s d	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%
% v a r l a g i o t C u n i I R s b w	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%
% v a r l a g i o t C u n i I R s b w	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%

5589707 - BANK ST @ HOLMWOOD AVE - OCT 14 20... - TMC
Sat M7, 20F0F
I L lng h 7 l 3 u A - 6, 3 u A - P
J L L C b i i n i l e t h (2 s g d - o b a y r y l n i 0 c n s F 0 A n d n i 2 e s g i 0 v y r y l n i o t B o s d 0 v y r y l n i o t C u n i I R s b w
K B o s d 0 v y r y l n i o t C u n i I R s b w
n h A B H U 0 2 n o s s a n t A 4 7 8 8 1 B S 2 1 . 4 5 D E 5 4 : 2 b o g C o d g A F 5 3 F 3 F



u o i d l g i t r A C o r o M Y e R s
3 F F C o t i g y l l n e t 1 u N g p p g 2 M N 2 K O G 4 1 B 2 C



5589707 - BANK ST @ HOLMWOOD AVE - OCT 14 20... - TMC
Tue May 3, 20F0F
I L lng h (6 1 L : 6 G 3 1 L A : M - n g 9 1 n g r 1 P u
C 9 s g j i n i l e t h r y g c H L P y R a v a d n i 2 1 n g - v 2 1 n h i y u g c i 2 B a v a d n i P c R h g i 2 B a v a d n i P c
s u P i l w g t A
C 9 s g j i n i l e t h r y g c H L P y R a v a d n i 2 1 n g - v 2 1 n h i y u g c i 2 B a v a d n i P c R h g i 2 B a v a d n i P c
n h (3 F F H U 0 2 n o s s a n t A 4 7 8 8 1 B S 2 1 . 4 5 D E 5 4 : 2 b o g C o d g A F 5 3 F 3 F



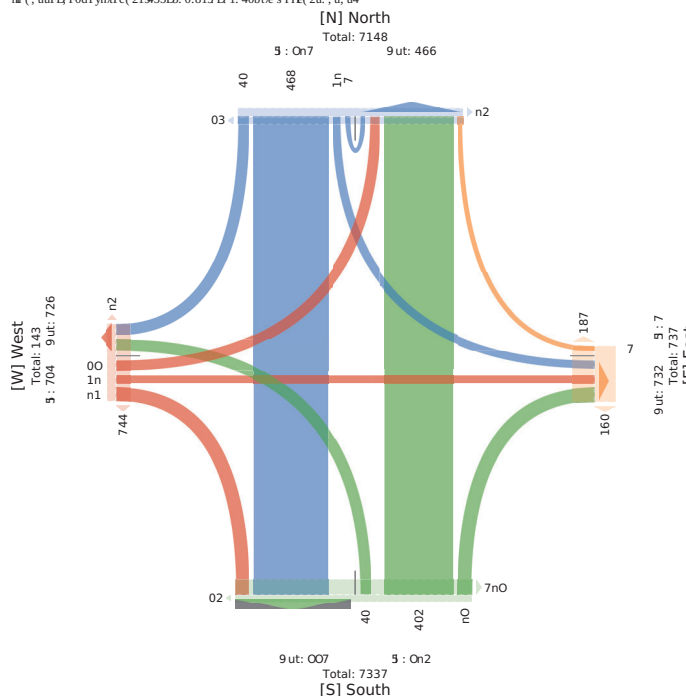
u o i d l g i t r A C o r o M Y e R s
3 F F C o t i g y l l n e t 1 u N g p p g 2 M N 2 K O G 4 1 B 2 C

Wk	Nbr of requests					Nbr of errors					Nbr of warnings					Nbr of errors					Nbr of warnings									
	B	W	n	U	pp	B	W	n	U	pp	B	W	n	U	pp	B	W	n	U	pp	B	W	n	U	pp	B	W	n	U	pp
0000-3E3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
% general	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%
% ciph	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%
% v a r l a g i o t B o s d	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%
% v a r l a g i o t C u n i I R s b w	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%
% v a r l a g i o t C u n i I R s b w	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%

5589707 - BANK ST @ HOLMWOOD AVE - OCT 14 20... - TMC
Sat M7, 20F0F
I L lng h 2, 1 1 L : 3 M - e n g 6 P u
C - s - n i i e t h r 2 n C H L P y R a v a d n i 0 6 e n A v o l e h i 2 n c i 0 B y v y e i P c P h i F D B y v y e i P c
s u P i l w g t A
C - s - n i i e t h r 2 n C H L P y R a v a d n i 0 6 e n A v o l e h i 2 n c i 0 B y v y e i P c P h i F D B y v y e i P c
n h (3 F F H U 0 2 n o s s a n t A 4 7 8 8 1 B S 2 1 . 4 5 D E 5 4 : 2 b o g C o d g A F 5 3 F 3 F

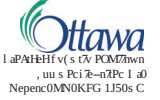
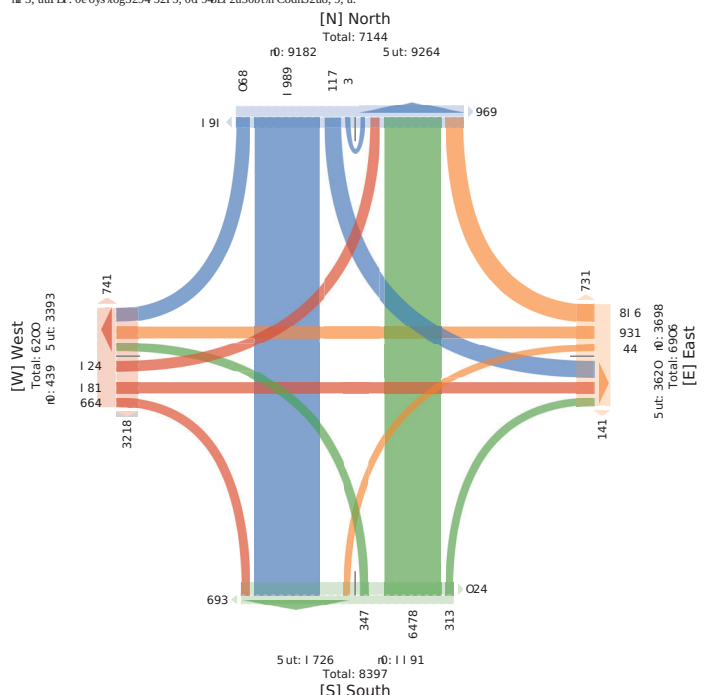


u o i d l g i t r A C o r o M Y e R s
3 F F C o t i g y l l n e t 1 u N g p p g 2 M N 2 K O G 4 1 B 2 C

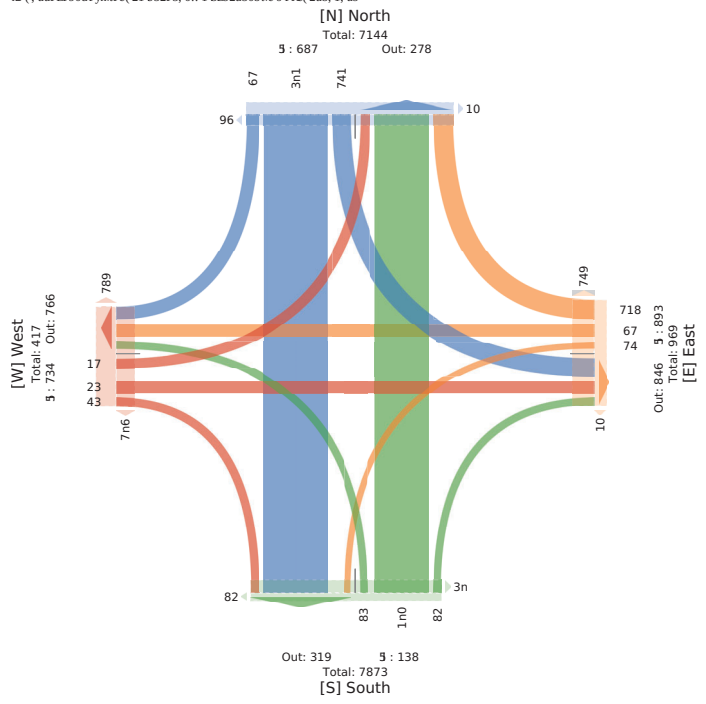




Wk_n	Day	In				Out				Total	Avg
		R	W	U	P	R	W	U	P		
0F00	03	3	4	3	0	3	4	3	0	3	0
6F1L	00	3	5	4	4	0	0	0	0	3	0
6G1L	00	3	4	4	4	0	0	0	0	3	0
6G1L	00	3	4	4	4	0	0	0	0	3	0
Wg1	10	3	4	4	4	0	0	0	0	3	0
%Cp100%											
%Wg1	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
deorj gH L PPhavadi											
% deorj gH L PPhavadi											
1 ngr											
% 1 ngr											
Bavadi Pe Rlgth											
% Bavadi Pe Rlgth											
% 1 ngr wgt											
% 1 ngr wgt											
Bavadi Pe s P1wgt											
% Bavadi Pe s P1wgt											



Wk_n	Day	In				Out				Total	Avg
		R	W	U	P	R	W	U	P		
0F00	03	3	4	3	0	3	4	3	0	3	0
6F1L	00	3	5	4	4	0	0	0	0	3	0
6G1L	00	3	4	4	4	0	0	0	0	3	0
6G1L	00	3	4	4	4	0	0	0	0	3	0
Wg1	10	3	4	4	4	0	0	0	0	3	0
%Cp100%											
%Wg1	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
deorj gH L PPhavadi											
% deorj gH L PPhavadi											
1 ngr											
% 1 ngr											
Bavadi Pe Rlgth											
% Bavadi Pe Rlgth											
% 1 ngr wgt											
% 1 ngr wgt											
Bavadi Pe s P1wgt											
% Bavadi Pe s P1wgt											



1 ngr 9gi ini hdeorj gH L PPhavadi Pe s P1wgt 7d (dnQR(Rnrg2W w 2U(U:W:u

5589707 - BANK ST @ WILTON CRES - OCT 14 2022 - TMC

Tue May 3, 20FD0

11 Lng h (6 AF - 9 P

) ILCLSI gi dh (y st d 9 oyuarlgi 2c gsH2-gdgjysti 2v aralgi of Bosd2v aralgi of

Cuiri RslwP

) IL9 oHhkg y

nh 3, uuFTI 90e oys7og3294 5... F06 94FD2u90b7h Codn32u8, F, u:



ngh l agyust Wk g	Nouq bol y fol t d				bol y Nouq fol t d				E gy Sij fol t d			
	B	W	U	J pp -gpr*	W	n	U	J pp -gpr*	B	n	U	J pp -gpr*
% v aralgi of Cuiri Rslw												
1 1 1 1 1 F2% 1 1 1 1 1 F2% 1 1 1 1 1 32% 1 1												

* -gdgjysti st d v aralgi of Cuiri Rslw/n Anq@2BABdh(y2)WAV (d 2UAIUW t

ngh l agyust Wk g	Nouq bol y fol t d				bol y Nouq fol t d				E gy Sij fol t d			
	B	W	U	J pp -gpr*	W	n	U	J pp -gpr*	B	n	U	J pp -gpr*
% v aralgi of Cuiri Rslw												
1 1 1 1 1 F2% 1 1 1 1 1 F2% 1 1 1 1 1 32% 1 1												

5589707 - BANK ST @ WILTON CRES - OCT 14 2022 - TMC

Sat May 7, 20FuF

11 Lng h (6 AF - 9 P

) ILCLSI i le th (2 sgd - o2bar yni 0c nsH2-Andni 2ts gi 0v tyr ylni of Bosd0v tyr ylni of

Cuiri RslwP

) IL9 oHhkg y

nh 3, uuFTI 90e oys7og3294 5... F06 94FD2u90b7h Codn32u8, F, u:



5589707 - BANK ST @ WILTON CRES - OCT 14 2022 - TMC

Tue May 3, 20FD0

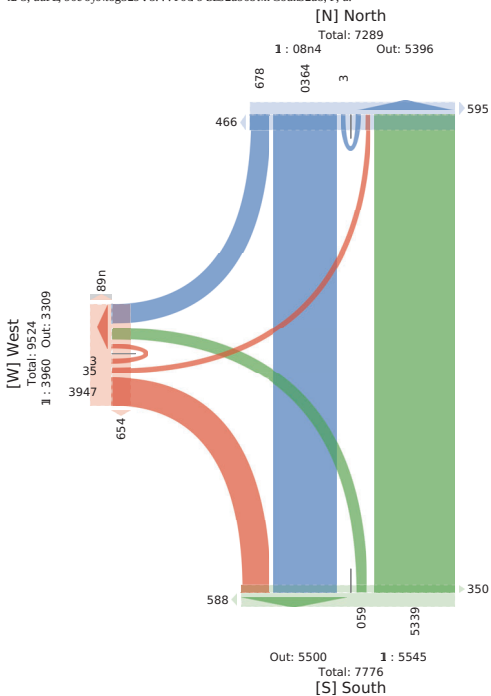
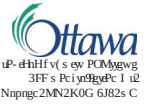
11 Lng h (6 AF - 9 P

) ILCLSI i le th (2 sgd - o2bar yni 0c nsH2-Andni 2ts gi 0v tyr ylni of Bosd0v tyr ylni of

Cuiri RslwP

) IL9 oHhkg y

nh 3, uuFTI 90e oys7og3294 5... F06 94FD2u90b7h Codn32u8, F, u:

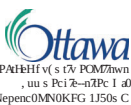


ngh l agyust Wk n	NPar bP y f P cH				bP y NPar f P cH				E nry Sij y P cH			
	R	W	U	C pp i nP*	W	d	U	C pp i nP*	R	d	U	C pp i nP*
% v aralgi of Cuiri Rslw												
1 1 1 1 1 F2% 1 1 1 1 1 F2% 1 1 1 1 1 32% 1 1												

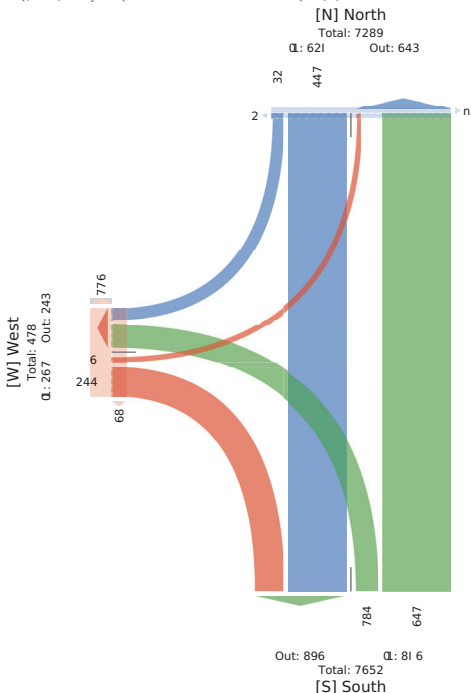
* -gdgjysti st d v aralgi of Cuiri Rslw/n Anq@2BABdh(y2)WAV (d 2UAIUW t

5589707 - BANK ST @ WILTON CRES - OCT 14 2022 - TMC

Sat M7, 20FuFF
 1 L 1 eng hZ, 1 L L : 1(, 1 L L 3: M'ean-1 eng 6 P)a
 C--s-ni ei htor 2 nchL P'Pyvy-ei 06 en/w/0l ehki 7nci0Btyy-ei Pc P'PhfDBtyy-ei Pc
 s aPi wng3
 C--L P'ek ec7
 n (, uuFT) 10d Pyn7P(21945... FD: 19DI2u10br'e s P'F(2u8, F, u4



1 p'AhH'V (s Dv PDM'wv
 u u s Pci 7--n7P: 1 aD
 Nepenc0M'NKG 1J50s C



5589707 - QUEEN ELIZABETH DRWY @ FIFTH AVE ... - TMC

Tue M7, 20FD0
 TI Lng h' G AF - 9 133AF - 9 P
) ILCSiigi 6ndh(y st d 9 opuarlgi 2c gsH2-gdgi yst i2v narlgi ot Bos2v narlgi ot
 Cuii RslwP
) IL- oHk ng7
 n A3FFD1 32noasyot A 47 F: 8032I547 D85, 2beng CodgA F: 333F:



-w h'g' l' r' C'op' o'CM'w' s
 3F' C'og' l' l' g' l' g' y' 1 aD
 Nnpng0M'NKG 9J50C)

Wk g	Noag bol y fol t d				bol y Noag fol t d				E g'y Sai y ol t d						
	B	W	U	) pp -g8*	W	n	U	) pp -g8*	B	n	U	) pp -g8*			
0F0013FB ; AF-9	0D	34F	F	35D	05	44	30	F	5	01	5	8	F	3	8
col ut WoyL	5	054	F	50	3	334	05	F	3	0	4	34	38	F	04
AF-9	34	3.0	F	355	3	4	3F	F	3	3	5	38	F	0	13
AF-9	0	3FD	F	3.0	38	0	35	F	58	1	30	35	F	08	310
AF-9	0D	3.D	F	38	0	33	F	54	4	5	34	F	00	0F	08
AF-9	34D	F	0F3	0	4	3D	F	5	10	3F	35	F	05	0	10
col ut WoyL	33F	48	F	5E	18	0.4	4	F	083	3.5	1	D	F	3F	50
4F-9	0	3.F	F	3D	1	35	F	D	1	03	3F	F	3	0	085
4F-9	08	354	F	0E	38	45	3	F	5F	F	05	3	F	F	30
4F-9	0D	3	F	3	13	5	03	F	85	15	08	00	F	43	310
4F-9	15	F	F	55	05	15	3	F	4	15	04	00	F	5	05
col ut WoyL	335	433	F	0D	303	0	5	F	3E	301	30	15	F	3.8	18
AF-9	1	F	F	8	0	4F	00	F	50	0	0	00	F	4	1
AF-9	1F	0	F	50	18	8	5	F	4	85	0	38	F	0	1
AF-9	00	4	F	5	13	40	33	F	1	18	3	3D	F	1	1
AF-9	05	F	F	5	1	D	0D	F	1	1	04	3F	F	14	1
col ut WoyL	330	38	F	14	3.8	3D	D	F	045	11	15	8	F	34	343
5AF-9	4	F	3F	3F	4F	0	F	5	0	0	0	F	5	0	00
5AF-9	3	5F	F	3F3	30	33	F	45	1	0	35	F	1	34	0F3
5AF-9	05	16	F	33	1	D	F	43	F	15	04	F	0	1	005
5AF-9	08	5	F	30	34	0D	38	F	5	04	34	00	F	5	8
col ut WoyL	3	0D	F	35	1	3.5	F	0.3	35	30	16	F	30	4	D5
DF-9	0	3	F	16	3	34	3	F	15	34	30	3	F	04	4
DF-9	3	45	F	5	3	08	5	F	1	33	34	35	F	0	3F
DF-9	3F	1	F	4	30	0	33	F	15	34	D	D	F	3	3F
DF-9	D	4	F	3	33	08	F	14	0F	3F	4	F	34	1	333
col ut WoyL	F	03	F	05	4F	33D	15	F	344	19	4	1	F	DD	10
8AF-9	3	F	F	5	4	0	33	F	1	00	38	3	F	1	3
8AF-9	35	D	F	D	3D	15	3	F	43	05	33	3F	F	03	3
8AF-9	0	D	F	80	D	8	F	40	03	3	34	F	0D	8	350
8AF-9	0F	3F3	F	303	D	5	00	F	84	34	3	03	F	1	38
col ut WoyL	55	085	F	15	18	3D	4F	F	0	D	4	F	F	33	45
3FAF-9	3D	1	F	D	03	48	30	F	53	D	33	0D	F	8	43
3FAF-9	24	15	F	D	1	0	F	8F	3	35	3	F	4D	F	0
3FAF-9	3	43	F	4	0F	D	F	D	00	38	0	F	3	3	03F
3FAF-9	33	D	F	8	30	8	4	F	5	5	3	0	F	8	0
col ut WoyL	4D	00F	F	05D	3FF	08	04	F	138	31D	1	3	F	385	308
33AF-9	3F	F	F	4F	1	5F	3	F	D	1	33	F	34	1	3.8
33AF-9	3F	1	F	4	D	08	F	1	4	F	4	F	4	1	80
col ut WoyL	0F	D	F	3E	33	88	3D	F	335	8	3	F	0F	5	0.3
WoyL	5	0.5	F	1D	15	3.4	30	F	0F.5	3003	43F	4	F	3F5	1F5
% p'p'asaf	032%	510%	F%	1	1	587%	0F7%	F%	1	1	57%	407%	F%	1	1
% WoyL	330%	33%	F%	407%	1	04%	7%	F%	37%	1	52%	1%	F%	3.7%	1
n'ndh'y st d 9 opuarlgi	53F	0	F	13	1	345F	15	F	3855	1	4F3	444	F	3F4	1
% n'ndh'y st d 9 opuarlgi	8.5%	852%	F%	850%	1	8.3%	810%	F%	8.2%	1	800%	80%	F%	80%	1
% c'g'it	2	40	F	44	1	44	F	4D	1	F	5	F	5	1	30F
% c'g'it	F2%	37%	F%	37%	1	1.7%	F2%	F%	0D%	1	F1%	F2%	F%	F2%	1
v narlgi ot Bosd	03	38	F	F	1	3F	0	F	30	1	4	4	F	3F	1
% v narlgi ot Bosd	07%	F5%	F%	37%	1	F7%	F2%	F%	F2%	1	33%	F2%	F%	F2%	1
-gdgi yst i	1	1	1	1	4D	1	1	1	1	3300	1	1	1	1	4D4
% -gdgi yst i	1	1	1	1	837%	1	1	1	1	837%	1	1	1	1	8.7%
v narlgi ot Cuii Rslw	1	1	1	1	4	1	1	1	1	88	1	1	1	1	00

Wk g	Noag bol y fol t d				bol y Noag fol t d				E g'y Sai y ol t d						
	B	W	U	) pp -g8*	W	n	U	) pp -g8*	B	n	U	) pp -g8*
% v narlgi ot Cuii Rslw	1	1	1	1	DE%	1	1	1	1	DE%	1	1	1	1	2%

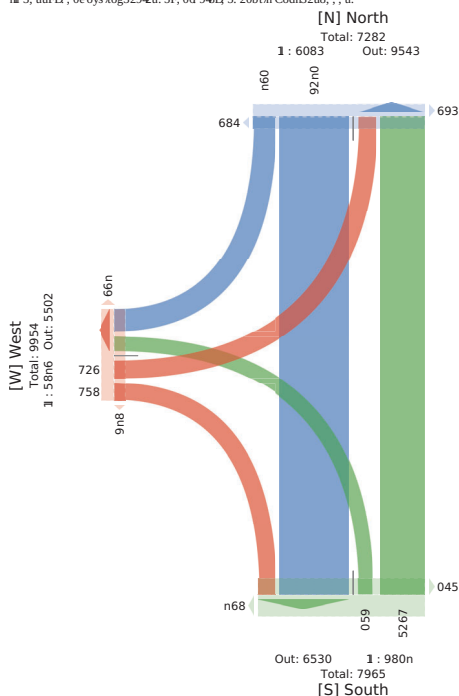
* -gdgi yst i st d v narlgi ot Cuii Rslw n Ang@2BABdh(2'VAVW d 2U AUJW ut

5589707 - QUEEN ELIZABETH DRWY @ FIFTH AVE ... - TMC

Sat M7, 20FuFF
 SI L'eng h' k 3 u A - 6, 3 u A - P
) ILCSiigi 7 l' th (7 sgd - o'bayr ylni 0c nsH'0Andni 7sgi 0v tyrlni ot Bosd 0v tyrlni ot
 Cuii RslwP
) IL- oHk ng7
 n 3, uuFD, 0e oys 7og 3294u: 5F, 06 94D 5. 20br'h Codn 32u8, , , u:



Ao H'ndi F' 3CG' o'CM'w' s
 u Cogi T'ls 7og 1 aD
 Nnpng0M'NKG 9J50C)



5589707 - QUEEN ELIZABETH DRWY @ FIFTH AVE ... - TMC

Tue May 3, 20F00

1 L 1 ng h (6 1 L : 6 6 1 L A M ng 9 l ngt 1 P u)

C9s gji ni l d e o r y g c H L P p u a v a h i 2 1 n g - v 2 l n h i y u g i c 2 B a v a h i P c R p g F 2 B a v a h i P c

s u P i w g 9 A

C9L P - n k n c y

n h (3 F F 0 D 4 3 2 d P a g e P c (, 6 7 F 4 8 0 3 2 : 5 6 7 D 8 5 , 2 b e n s P H i (, F . 3 3 3 F 4



1 u P - e h H i v (s o y P O M g e r s

3 F F s P e r i v g e P c 1 u 2

N n p g r 2 M N 2 K O G 6 J 8 2 s C

5589707 - QUEEN ELIZABETH DRWY @ FIFTH AVE ... - TMC

Sat May 7, 20F00

1 L 1 e n g h 2 1 1 L : 1 (2 1 1 L 3 : M e a n - 1 e n g 6 P a

C - s e n i e i h t o r 2 n c H L P P a y - e i 0 6 e n a w l e h i 2 n c i 0 B t y v - e i P c R p h F B t y v - e i P c

s a P i w n g 3

C - L P A e k e c 7

n h (, u i u F D , 0 d P y n 7 P c (2 1 - 4 u 9 5 F , 0 : 1 4 D) 5 . 2 0 b r e s P H i (2 u 8 , , u 9



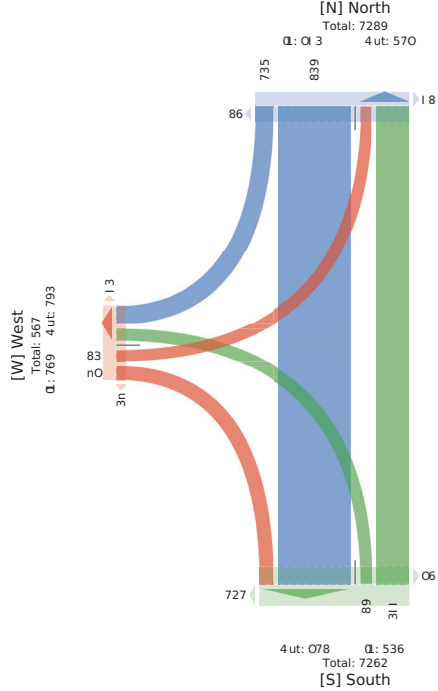
1 u P A h i v (s o y P O M g e r s

u u s P e i 2 - n P c 1 a 0

N e p e n c 0 M N O K F G 1 J 5 0 s C

Wk n	Nbr b y y P c H				b P y Nbr P P c H				E n y S g y P y c H				
	R	W	U	Cpp	W	U	Cpp	l n P	R	d	U	Cpp	l n P
0F00:3F3	4	3	6	0	6	3	5	0	3	3	5	0	0
60F1L	04	3	F	30	3	3	F	30	03	3	F	05	0
636L	08	35	F	05	38	65	34	F	05	34	F	F	30
648L	0D	34	F	3	43	5	03	F	85	00	00	F	63
% Wgt	304	108	F	500	308	066	8	F	40	356	12	0	F
% Cpp	3.7%	1.8%	F%	1	3.0%	0.3%	F%	1	6.2%	3.7%	F%	1	1
% Wgt	37%	63%	F%	37%	0.7%	67%	F%	0.7%	5.8%	6.5%	F%	307%	1
11T	F54	FDR	F83D	FDA	FDD3	FDD0	F53	F56	F506	F750	F750	F750	1
d e r y g c H L P p u a v a h i	3F8	34	F	500	0,5	D	F	436	D	0	F	3, D	3318
% d e r y g c H L P p u a v a h i	8.5%	8.3%	8.3%	8.3%	8.3%	8.0%	F%	8.0%	8.0%	3.1%	F%	8.8%	8.5%
1 n g - v	F	8	F	8	5	3	F	D	F	F	F	F	35
% 1 n g - v	4%	3%	F%	30%	0.5%	3%	F%	0.5%	1%	F%	F%	F%	3%
B a v a h i P c R p g i	3	5	F	03	3	F	F	3	3	F	F	3	04
% B a v a h i P c R p g i	33%	35%	F%	03%	F%	F%	F%	F%	33%	F%	F%	F%	33%
1 n h i y u g i	1	1	1	1	1	1	1	1	1	1	1	1	50
% 1 n h i y u g i	1	1	1	1	1	1	1	1	1	1	1	1	843%
B a v a h i P c s u P i w g 9	1	1	1	1	1	1	1	1	1	1	1	1	0
% B a v a h i P c s u P i w g 9	1	1	1	1	1	1	1	1	1	1	1	1	2%

1 n h i y u g i g c H B a v a h i P c s u P i w g 9 7 d (d n g R R R e o r 2 y W W u q 2 U : W u c



5589707 - QUEEN ELIZABETH DRWY @ PRINCESS PA... - TMC

Tue May 3, 20F00

1 L 1 n g h b y 6 A F - 9 1 3 3 A F - 9 P

) 1 L C b i g i 6 n d (y i s t d 9 o y a r a l g i 2 c g s H 2 - g d g j y s t i 2 v n a r a l g i o t B o s d 2 v n a r a l g i o t

C u i i R s l w P

) 1 L 9 a h j k g y

n h 3 F F 0 D 4 2 n o a s y o t A 7 8 F 3 4 , 2 4 7 5 D F : 4 D E . e g C o d g A , F 5 F 3 F :



1 u P - e h H i v (s o y P O M g e r s

3 F F s P e r i v g e P c 1 u 2

N n p g r 2 M N 2 K O G 7 J 8 2 C

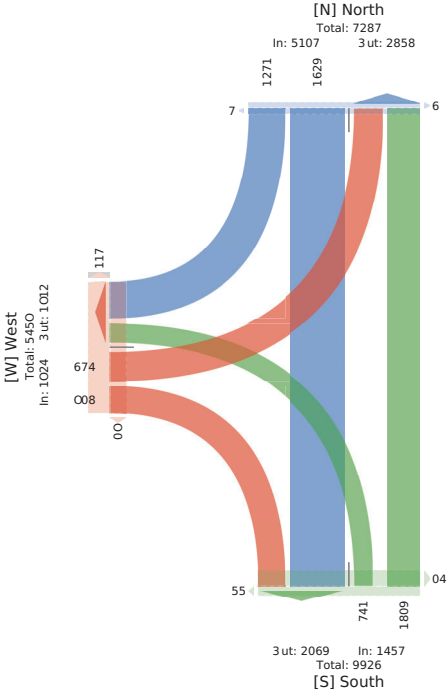
Wk g	Nbr o l y f o l d				o l y Nbr f o l d				E g y S s i y f o l d			
	B	W	U	pp	W	n	U	pp	B	n	U	pp
% v a r a l g i o t C u i i R s l w	1	1	1	1	1	1	1	1	1	1	1	1
% - g d g j y s t i s t d v n a r a l g i o t C u i i R s l w h A n g g 2 B A B d h i y 2 W A W u 2 U A U I W u	1	1	1	1	1	1	1	1	1	1	1	1

Wk g	Nbr o l y f o l d				o l y Nbr f o l d				E g y S s i y f o l d			
	B	W	U	pp	W	n	U	pp	B	n	U	pp
0F00:3F3	4	3	6	0	6	3	5	0	3	3	5	0
60F1L	04	3	F	30	3	3	F	30	03	3	F	05
636L	08	35	F	05	38	65	34	F	05	34	F	F
648L	0D	34	F	3	43	5	03	F	85	00	00	F
% Wgt	304	108	F	500	308	066	8	F	40	356	12	0
% Cpp	3.7%	1.8%	F%	1	3.0%	0.3%	F%	1	6.2%	3.7%	F%	1
% Wgt	37%	63%	F%	37%	0.7%	67%	F%	0.7%	5.8%	6.5%	F%	307%
11T	F54	FDR	F83D	FDA	FDD3	FDD0	F53	F56	F506	F750	F750	F750
d e r y g c H L P p u a v a h i	3F8	34	F	500	0,5	D	F	436	D	0	F	3, D
% d e r y g c H L P p u a v a h i	8.5%	8.3%	8.3%	8.3%	8.3%	8.0%	F%	8.0%	8.0%	3.1%	F%	8.8%
1 n g - v	F	8	F	8	5	3	F	D	F	F	F	F
% 1 n g - v	4%	3%	F%	30%	0.5%	3%	F%	0.5%	1%	F%	F%	F%
B a v a h i P c R p g i	3	5	F	03	3	F	F	3	3	F	F	3
% B a v a h i P c R p g i	33%	35%	F%	03%	F%	F%	F%	F%	33%	F%	F%	F%
1 n h i y u g i	1	1	1	1	1	1	1	1	1	1	1	1
% 1 n h i y u g i	1	1	1	1	1	1	1	1	1	1	1	1
B a v a h i P c s u P i w g 9	1	1	1	1	1	1	1	1	1	1	1	1
% B a v a h i P c s u P i w g 9	1	1	1	1	1	1	1	1	1	1	1	1

5589707 - QUEEN ELIZABETH DRWY @ PRINCESS PA... - TMC
 Sat My7, 20FuFF
 S1 LEngth(1 3 u A- 6, 3 u A- P
) ILCSiini leth(2 sgd - o'bayr ylni 0c nsH0Andni 7zsg10v tyr ylni og Bosd0v tyr ylni og
 Caoi iRslwP
) LL- oHhk ng7
 nk 3, uuiFF90e oys 7og 3242u, 920B45 D: 9D08t7h Codn32u. ub, u:



5589707 - QUEEN ELIZABETH DRWY @ PRINCESS PA... - TMC
 Tue My3, 20Fu0
 L L 1 ngr h (6 1 L : 6, 6 1 L A- M- ng9l ngr 1 P) u
 C9s 9gi ini lndeyr g eHL PpPuvah9i 21 ng- v2l nHhi yugci 2Bavah9i Pc Rpgh2Bavah9i Pc
 s uPi w9A
 C9L P- nk ncy
 nk (3FF0D42d PgyPc (, 67 F34, 2:46BDF54DE. yn s PH(, F8Fb3F5



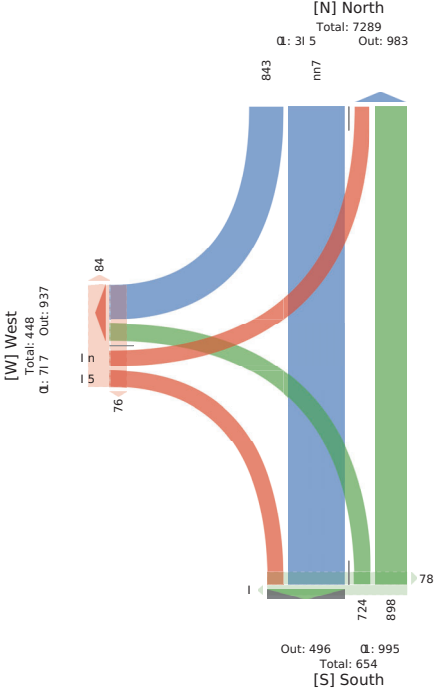
Wk n	NPar P y r f P) c H					P y r f P) c H					E ay S g y f P) c H				
	R	W	U	Cpp	l n P	W	d	U	Cpp	l n P	R	d	U	Cpp	l n P
0F00:3E:3, (6 L	b	30F	F	38b	F	86	05	F	DD	D	35	38	F	0b	35
60F1 L	86	338	F	30B	F	8F	0F	F	DF	5	0F	3D	F	5D	35
6091 L	D	338	F	0F5	F	60	53	F	1B		0D	53	F	0b	b
6091 L	6D	DB	F	3,	F	66	53	F	DB	9	58	0b	F	86	35
Wpgl	068	, 3	F	8b-4	F	050	316	F	554	03	b4	b,	F	3b3	, 5
% Capdgr	587%	857%	P%			803%	537%	P%			6F2%	, 87%	P%		
% Wpgl	0F7%	587%	P%	687%		308%	18%	P%	042%		47%	42%	P%	367%	
11 T	F84,	F73b		F18F		F16	F14		F38F		F84,	F86D		F856	
dnyr g:HL PpPuvah9i	0,4	, 50	F	84b		008	3F3	F	504		b0	D,	F	3DB	
% dnyr g:HL PpPuvah9i	b86%	b0P%	P%	b47%		b47%	b87%	P%	b47%		b, 2%	b, 2%	P%	b, 2%	
1 ng- v	4	0	F	b		5	,	F	4		6	6	F	3F	
% 1 ng- v	02%	F6%	P%	35%		35%	53%	P%	02%		67%	67%	P%	67%	
Bavah9i Pc Rpgh	0	4	F	b		5	F	F	5		F	F	F	F	
% Bavah9i Pc Rpgh	F0%	32%	P%	35%		35%	P%	P%	F7%		P%	P%	P%	P%	
1 nHhngi															
% 1 nHhngi											34%				b7%
Bavah9i Pc s uPi w9A															
% Bavah9i Pc s uPi w9A															b5%

1 nHhngi g eHL Bavah9i Pc s uPi w9A 7d(d n9R(Rnyr) W(W) 2U(U: W) t

5589707 - QUEEN ELIZABETH DRWY @ PRINCESS PA... - TMC
 Sat My7, 20FuFF
 L L 1 eng h(2 1 L : 1(2 1 L 3: M'ean- 1 eng 6 P) a
 C- s- ni ei htdor 2 nchL PpPyvy- ei 06 en/ w0l ehki 7znci 0Btyvy- ei Pc RPhf DBtyvy- ei Pc
 s aPi wng3
 C- L P'ack ec7
 nk (, uuiFF90d Pyn7Pc(2142u, 920:9146D: 9D08t7s PH(2uSub, u.



5589707 - QUEEN ELIZABETH DRWY @ PRINCESS PA... - TMC
 Tue My3, 20Fu0
 L L 1 ngr h (6 1 L : 6, 6 1 L A- M- ng9l ngr 1 P) u
 C9s 9gi ini lndeyr g eHL PpPuvah9i 21 ng- v2l nHhi yugci 2Bavah9i Pc Rpgh2Bavah9i Pc
 s uPi w9A
 C9L P- nk ncy
 nk (3FF0D42d PgyPc (, 67 F34, 2:46BDF54DE. yn s PH(, F8Fb3F5



APPENDIX B - INTERSECTION COLLISION DATA



Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2015 To: December 31, 2021

Location: AYLMER AVE @ BANK ST

Traffic Control: Traffic signal

Total Collisions: 18

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
2015-Jul-28, Tue,20:27	Clear	Rear end	Non-fatal injury	Dry	North	Slowing or stopping	Bicycle	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Cyclist	
2015-Aug-24, Mon,13:28	Rain	Rear end	P.D. only	Wet	South	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2016-Mar-17, Thu,18:15	Clear	Rear end	P.D. only	Dry	North	Slowing or stopping	Delivery van	Other motor vehicle	0
					North	Stopped	Automobile, station wagon	Other motor vehicle	
					North	Stopped	Pick-up truck	Other motor vehicle	
2016-Jun-12, Sun,11:35	Rain	SMV other	Non-fatal injury	Wet	East	Turning left	Automobile, station wagon	Pedestrian	1
2016-Jul-06, Wed,13:32	Clear	Sideswipe	P.D. only	Dry	South	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2016-Jul-18, Mon,17:37	Clear	Rear end	P.D. only	Dry	North	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					North	Stopped	Pick-up truck	Other motor vehicle	
2017-Jan-31, Tue,17:10	Clear	Rear end	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2017-Jul-01, Sat,22:34	Clear	Rear end	Non-fatal injury	Wet	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2017-Jul-08, Sat,18:29	Clear	SMV other	Non-fatal injury	Dry	North	Turning left	School bus	Pedestrian	1
2017-Aug-01, Tue,17:39	Clear	Rear end	P.D. only	Dry	South	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2017-Aug-30, Wed,08:10	Clear	Rear end	P.D. only	Dry	East	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2018-Dec-28, Fri,13:46	Rain	Angle	P.D. only	Wet	West	Turning left	Unknown	Other motor vehicle	0
					North	Going ahead	Delivery van	Other motor vehicle	



Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2015 To: December 31, 2021

Location: AYLMER AVE @ BANK ST

Traffic Control: Traffic signal

Total Collisions: 18

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
2019-Jan-05, Sat,01:45	Clear	Sideswipe	P.D. only	Wet	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Mar-14, Thu,21:55	Clear	Turning movement	P.D. only	Wet	South	Turning right	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Sep-20, Fri,08:45	Clear	Sideswipe	P.D. only	Dry	South	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Dec-21, Sat,16:00	Clear	Sideswipe	P.D. only	Dry	North	Changing lanes	Passenger van	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2020-Oct-10, Sat,11:39	Clear	Rear end	P.D. only	Dry	North	Slowing or stopping	Pick-up truck	Other motor vehicle	0
					North	Stopped	Pick-up truck	Other motor vehicle	
2021-Mar-11, Thu,20:00	Rain	Sideswipe	P.D. only	Wet	South	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					South	Stopped	Pick-up truck	Other motor vehicle	

Location: BANK ST @ ECHO DR

Traffic Control: Stop sign

Total Collisions: 9

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
2015-Jan-26, Mon,12:17	Clear	Rear end	P.D. only	Ice	West	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					West	Stopped	Automobile, station wagon	Other motor vehicle	
2015-May-06, Wed,11:23	Clear	Sideswipe	P.D. only	Dry	North	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2015-Jul-09, Thu,20:45	Clear	Angle	P.D. only	Dry	East	Turning right	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2016-Aug-16, Tue,17:39	Rain	Angle	P.D. only	Wet	East	Turning right	Pick-up truck	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	



Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2015 To: December 31, 2021

Location: BANK ST @ ECHO DR

Traffic Control: Stop sign

Total Collisions: 9

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
2017-Jan-24, Tue,09:05	Freezing Rain	Approaching	P.D. only	Ice	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
					West	Unknown	Passenger van	Other motor vehicle	
					East	Unknown	Automobile, station wagon	Other motor vehicle	
					East	Unknown	Pick-up truck	Other motor vehicle	
2017-Feb-22, Wed,14:35	Clear	Angle	P.D. only	Dry	East	Turning left	Pick-up truck	Other motor vehicle	0
					South	Going ahead	Pick-up truck	Other motor vehicle	
2019-Feb-05, Tue,08:39	Rain	Sideswipe	P.D. only	Wet	South	Unknown	Unknown	Other motor vehicle	0
					South	Stopped	Municipal transit bus	Other motor vehicle	
2019-Jun-26, Wed,23:50	Clear	Turning movement	P.D. only	Dry	South	Making "U" turn	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2021-Aug-20, Fri,14:15	Clear	Other	P.D. only	Dry	North	Reversing	Pick-up truck	Other motor vehicle	0
					South	Stopped	Pick-up truck	Other motor vehicle	

Location: BANK ST @ EXHIBITION WAY

Traffic Control: Traffic signal

Total Collisions: 14

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
2015-Jan-08, Thu,12:14	Snow	Rear end	P.D. only	Packed snow	South	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					South	Stopped	Truck - closed	Other motor vehicle	
2015-Mar-14, Sat,23:43	Snow	Rear end	P.D. only	Loose snow	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2015-Jul-17, Fri,23:22	Clear	Turning movement	P.D. only	Wet	North	Going ahead	Passenger van	Other motor vehicle	0
					North	Making "U" turn	Automobile, station wagon	Other motor vehicle	



Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2015 To: December 31, 2021

Location: BANK ST @ EXHIBITION WAY

Traffic Control: Traffic signal

Total Collisions: 14

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
2015-Oct-13, Tue, 12:03	Fog, mist, smoke, dust	Turning movement	Non-fatal injury	Wet	South	Turning left	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Pick-up truck	Other motor vehicle	
2015-Nov-06, Fri, 11:04	Rain	Rear end	P.D. only	Wet	South	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					South	Stopped	Pick-up truck	Other motor vehicle	
2016-Sep-03, Sat, 21:58	Clear	Turning movement	Non-fatal injury	Dry	South	Turning left	Automobile, station wagon	Cyclist	0
					North	Going ahead	Bicycle	Other motor vehicle	
2016-Nov-13, Sun, 11:35	Clear	SMV other	Non-fatal injury	Dry	West	Turning left	Automobile, station wagon	Pedestrian	2
2016-Nov-24, Thu, 06:52	Snow	Rear end	P.D. only	Loose snow	North	Turning right	Passenger van	Other motor vehicle	0
					North	Turning right	Automobile, station wagon	Other motor vehicle	
2017-Aug-12, Sat, 11:20	Clear	Rear end	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					North	Stopped	Automobile, station wagon	Other motor vehicle	
2018-Mar-11, Sun, 17:20	Clear	Rear end	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					North	Stopped	Pick-up truck	Other motor vehicle	
2018-Nov-13, Tue, 03:36	Snow	SMV other	P.D. only	Wet	North	Going ahead	Automobile, station wagon	Curb	0
2018-Nov-20, Tue, 21:00	Snow	Rear end	P.D. only	Wet	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2018-Dec-06, Thu, 21:45	Clear	Rear end	P.D. only	Wet	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Dec-08, Sun, 13:30	Clear	Sideswipe	P.D. only	Dry	North	Unknown	Automobile, station wagon	Other motor vehicle	0
					North	Unknown	Automobile, station wagon	Other motor vehicle	

Location: BANK ST @ FIFTH AVE

Traffic Control: Traffic signal

Total Collisions: 23

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
---------------	-------------	-------------	----------------	----------------	----------	-------------------	--------------	-------------	---------



Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2015 To: December 31, 2021

Location: BANK ST @ FIFTH AVE

Traffic Control: Traffic signal

Total Collisions: 23

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
2015-Feb-06, Fri,17:49	Clear	Sideswipe	P.D. only	Slush	North	Going ahead	Delivery van	Other motor vehicle	0
					North	Stopped	Municipal transit bus	Other motor vehicle	
2015-Mar-15, Sun,16:59	Clear	Angle	P.D. only	Dry	South	Going ahead	Passenger van	Other motor vehicle	0
					East	Going ahead	Passenger van	Other motor vehicle	
2015-May-26, Tue,18:00	Clear	Angle	P.D. only	Dry	North	Going ahead	Pick-up truck	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2015-Sep-03, Thu,10:18	Clear	Rear end	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Pick-up truck	Other motor vehicle	
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2016-Mar-04, Fri,18:42	Clear	Sideswipe	P.D. only	Dry	North	Unknown	Automobile, station wagon	Other motor vehicle	0
					North	Unknown	Automobile, station wagon	Other motor vehicle	
2016-Oct-06, Thu,18:44	Clear	Sideswipe	P.D. only	Dry	South	Changing lanes	Pick-up truck	Other motor vehicle	0
					South	Going ahead	Passenger van	Other motor vehicle	
2016-Oct-19, Wed,16:29	Clear	Turning movement	P.D. only	Dry	West	Turning right	Unknown	Other motor vehicle	0
					West	Stopped	Automobile, station wagon	Other motor vehicle	
2016-Nov-25, Fri,19:26	Clear	Turning movement	P.D. only	Wet	North	Turning left	School bus	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2017-May-15, Mon,08:48	Clear	Turning movement	P.D. only	Dry	North	Turning left	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2017-Jun-26, Mon,22:42	Rain	Rear end	P.D. only	Wet	North	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					North	Stopped	Pick-up truck	Other motor vehicle	
2017-Dec-16, Sat,16:52	Clear	SMV unattended vehicle	P.D. only	Wet	East	Turning left	Fire vehicle	Unattended vehicle	0



Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2015 To: December 31, 2021

Location: BANK ST @ FIFTH AVE

Traffic Control: Traffic signal

Total Collisions: 23

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
2018-Apr-26, Thu,07:12	Rain	Sideswipe	P.D. only	Wet	South	Changing lanes	Truck - closed	Other motor vehicle	0
					South	Stopped	Truck - tractor	Other motor vehicle	
2019-Mar-07, Thu,13:38	Clear	SMV other	Non-fatal injury	Dry	West	Turning left	Automobile, station wagon	Pedestrian	1
2019-Aug-16, Fri,23:17	Clear	Sideswipe	P.D. only	Dry	North	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Oct-03, Thu,06:13	Clear	Turning movement	Non-fatal injury	Dry	North	Going ahead	Bicycle	Other motor vehicle	0
					South	Turning left	Automobile, station wagon	Cyclist	
2019-Oct-06, Sun,00:00	Rain	Angle	P.D. only	Wet	West	Turning right	Fire vehicle	Other motor vehicle	0
					North	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Nov-21, Thu,18:18	Rain	Turning movement	Non-fatal injury	Wet	North	Turning left	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2020-Jan-04, Sat,17:15	Clear	Rear end	P.D. only	Wet	North	Stopped	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2020-Feb-15, Sat,14:00	Clear	Rear end	P.D. only	Packed snow	West	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					West	Stopped	Automobile, station wagon	Other motor vehicle	
2020-Aug-28, Fri,11:58	Clear	Sideswipe	P.D. only	Dry	North	Pulling away from shoulder or curb	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2020-Nov-05, Thu,11:11	Clear	SMV other	Non-fatal injury	Dry	West	Turning left	Pick-up truck	Pedestrian	1
2021-Mar-17, Wed,13:56	Clear	Turning movement	Non-fatal injury	Dry	West	Turning left	Automobile, station wagon	Cyclist	0
					East	Going ahead	Bicycle	Other motor vehicle	
2021-Mar-17, Wed,14:58	Clear	Rear end	Non-fatal injury	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Pick-up truck	Other motor vehicle	



Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2015 **To:** December 31, 2021

Location: BANK ST @ HOLMWOOD AVE

Traffic Control: Traffic signal

Total Collisions: 21

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2015-Jan-05, Mon,19:25	Clear	Rear end	Non-fatal injury	Slush	South	Unknown	Unknown	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2016-May-17, Tue,17:08	Clear	Rear end	P.D. only	Dry	North	Going ahead	Pick-up truck	Other motor vehicle	0
					North	Stopped	Pick-up truck	Other motor vehicle	
2016-May-25, Wed,08:51	Clear	Rear end	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2016-Jun-16, Thu,09:00	Clear	Sideswipe	P.D. only	Dry	South	Going ahead	Motorcycle	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2016-Jul-07, Thu,14:06	Clear	Rear end	P.D. only	Dry	North	Going ahead	Unknown	Other motor vehicle	0
					North	Turning left	Automobile, station wagon	Other motor vehicle	
2016-Aug-12, Fri,11:30	Clear	Rear end	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					North	Stopped	Pick-up truck	Other motor vehicle	
2016-Nov-15, Tue,15:24	Clear	Rear end	Non-fatal injury	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					North	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2016-Dec-18, Sun,12:26	Clear	Approaching	Non-fatal injury	Loose snow	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2017-Mar-17, Fri,12:17	Clear	Turning movement	P.D. only	Dry	North	Turning left	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2017-May-10, Wed,20:45	Clear	Turning movement	P.D. only	Dry	North	Turning left	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2018-Aug-22, Wed,09:23	Clear	Turning movement	Non-fatal injury	Dry	North	Turning left	Automobile, station wagon	Cyclist	0
					South	Going ahead	Bicycle	Other motor vehicle	
2018-Oct-05, Fri,22:45	Clear	Sideswipe	P.D. only	Dry	South	Unknown	Unknown	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	



Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2015 To: December 31, 2021

Location: BANK ST @ HOLMWOOD AVE

Traffic Control: Traffic signal

Total Collisions: 21

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2019-Nov-21, Thu,13:56	Clear	Sideswipe	P.D. only	Dry	South	Changing lanes	Truck - dump	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Dec-13, Fri,18:00	Rain	Turning movement	P.D. only	Wet	North	Turning left	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Unknown	Other motor vehicle	
2019-Dec-28, Sat,11:42	Clear	Turning movement	P.D. only	Wet	North	Turning left	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2020-Jan-14, Tue,12:20	Clear	Rear end	P.D. only	Wet	North	Going ahead	Pick-up truck	Other motor vehicle	0
					North	Turning right	Automobile, station wagon	Other motor vehicle	
2020-Aug-15, Sat,20:23	Clear	Rear end	P.D. only	Dry	North	Unknown	Unknown	Other motor vehicle	0
					North	Stopped	Automobile, station wagon	Other motor vehicle	
2020-Sep-04, Fri,11:00	Clear	Turning movement	P.D. only	Dry	South	Turning left	Pick-up truck	Other motor vehicle	0
					North	Stopped	Automobile, station wagon	Other motor vehicle	
2020-Sep-04, Fri,17:40	Clear	Sideswipe	P.D. only	Dry	South	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2021-Jun-22, Tue,08:00	Clear	Other	P.D. only	Dry	West	Reversing	Truck - closed	Other motor vehicle	0
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2021-Sep-20, Mon,11:35	Clear	Angle	P.D. only	Dry	East	Turning right	Unknown	Other motor vehicle	0
					North	Going ahead	Pick-up truck	Other motor vehicle	

Location: BANK ST @ MARCHE WAY

Traffic Control: Stop sign

Total Collisions: 2

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2018-Nov-25, Sun,06:25	Freezing Rain	SMV other	Non-fatal injury	Ice	West	Turning right	Automobile, station wagon	Pedestrian	1



Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2015 To: December 31, 2021

Location: BANK ST @ MARCHE WAY

Traffic Control: Stop sign

Total Collisions: 2

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2021-Aug-30, Mon,17:06	Clear	Rear end	P.D. only	Dry	North	Slowing or stopping	Pick-up truck	Other motor vehicle	0
					North	Turning right	Automobile, station wagon	Other motor vehicle	

Location: BANK ST @ SUNNYSIDE AVE

Traffic Control: Traffic signal

Total Collisions: 37

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2015-Jan-15, Thu,20:34	Clear	Sideswipe	P.D. only	Slush	South	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2015-Jan-22, Thu,10:28	Clear	Rear end	P.D. only	Ice	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2015-Feb-11, Wed,22:08	Snow	Angle	P.D. only	Loose snow	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2015-Mar-18, Wed,16:25	Clear	Rear end	P.D. only	Dry	South	Unknown	Unknown	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2015-May-13, Wed,18:10	Clear	Rear end	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Stopped	Pick-up truck	Other motor vehicle	
2015-May-26, Tue,07:02	Clear	Sideswipe	Non-fatal injury	Dry	East	Going ahead	Automobile, station wagon	Cyclist	0
					East	Going ahead	Bicycle	Other motor vehicle	
2015-Jun-18, Thu,15:38	Clear	Sideswipe	P.D. only	Dry	North	Going ahead	Truck - tractor	Other motor vehicle	0
					North	Stopped	Automobile, station wagon	Other motor vehicle	
2015-Jun-25, Thu,09:30	Clear	Rear end	P.D. only	Dry	South	Slowing or stopping	Motorcycle	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2015-Jun-28, Sun,20:10	Rain	Rear end	P.D. only	Wet	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Stopped	Automobile, station wagon	Other motor vehicle	



Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2015 To: December 31, 2021

Location: BANK ST @ SUNNYSIDE AVE

Traffic Control: Traffic signal

Total Collisions: 37

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
2015-Sep-29, Tue,17:59	Rain	Turning movement	Non-fatal injury	Wet	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					North	Turning left	Automobile, station wagon	Other motor vehicle	
2015-Sep-30, Wed,15:00	Clear	Rear end	P.D. only	Dry	North	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					North	Stopped	Automobile, station wagon	Other motor vehicle	
2015-Oct-15, Thu,12:42	Rain	Rear end	P.D. only	Wet	East	Going ahead	Pick-up truck	Other motor vehicle	0
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2015-Dec-29, Tue,15:30	Snow	Sideswipe	P.D. only	Loose snow	North	Unknown	Unknown	Other motor vehicle	0
					North	Going ahead	Pick-up truck	Other motor vehicle	
2016-Jun-09, Thu,20:39	Clear	Rear end	P.D. only	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Stopped	Automobile, station wagon	Other motor vehicle	
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2016-Oct-08, Sat,21:31	Clear	Rear end	P.D. only	Dry	North	Going ahead	Unknown	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2016-Nov-30, Wed,16:44	Rain	SMV other	Non-fatal injury	Wet	South	Going ahead	Automobile, station wagon	Pedestrian	1
2016-Dec-17, Sat,11:41	Clear	Rear end	P.D. only	Loose snow	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2017-Jan-28, Sat,08:58	Rain	Turning movement	P.D. only	Wet	North	Turning left	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2017-Mar-14, Tue,12:42	Clear	Turning movement	P.D. only	Loose snow	North	Turning left	Pick-up truck	Other motor vehicle	0
					South	Going ahead	Passenger van	Other motor vehicle	
2017-May-20, Sat,17:53	Clear	Sideswipe	P.D. only	Dry	South	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	



Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2015 To: December 31, 2021

Location: BANK ST @ SUNNYSIDE AVE

Traffic Control: Traffic signal

Total Collisions: 37

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2017-Jun-25, Sun,09:30	Clear	Sideswipe	P.D. only	Dry	South	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2017-Aug-10, Thu,13:59	Clear	Sideswipe	P.D. only	Dry	North	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Truck - tractor	Other motor vehicle	
2017-Sep-11, Mon,07:46	Clear	Turning movement	Non-fatal injury	Dry	North	Turning left	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2017-Sep-25, Mon,21:17	Clear	Turning movement	Non-fatal injury	Dry	East	Turning left	Bicycle	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Cyclist	
2017-Nov-09, Thu,21:06	Rain	SMV other	Non-fatal injury	Wet	South	Turning left	Automobile, station wagon	Pedestrian	1
2018-Aug-01, Wed,16:36	Clear	Turning movement	P.D. only	Dry	East	Turning left	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2018-Sep-14, Fri,13:34	Clear	SMV other	Non-fatal injury	Dry	North	Turning left	Automobile, station wagon	Pedestrian	1
2018-Oct-06, Sat,16:40	Clear	Sideswipe	P.D. only	Dry	South	Changing lanes	Municipal transit bus	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2018-Oct-31, Wed,15:51	Rain	Rear end	Non-fatal injury	Wet	South	Going ahead	Passenger van	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
					South	Stopped	Automobile, station wagon	Other motor vehicle	
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Feb-02, Sat,09:50	Snow	Rear end	P.D. only	Loose snow	South	Going ahead	Unknown	Other motor vehicle	0
					South	Stopped	Pick-up truck	Other motor vehicle	
2019-Apr-26, Fri,15:15	Rain	Sideswipe	P.D. only	Wet	North	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Sep-27, Fri,14:04	Clear	Sideswipe	P.D. only	Dry	South	Stopped	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	



Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2015 To: December 31, 2021

Location: BANK ST @ SUNNYSIDE AVE

Traffic Control: Traffic signal

Total Collisions: 37

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
2020-Aug-08, Sat,17:53	Clear	Sideswipe	P.D. only	Dry	South	Turning right	Municipal transit bus	Other motor vehicle	0
					South	Going ahead	Pick-up truck	Other motor vehicle	
2021-Feb-15, Mon,08:29	Clear	Turning movement	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					North	Turning left	Automobile, station wagon	Other motor vehicle	
2021-May-11, Tue,10:51	Clear	Turning movement	Non-fatal injury	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Turning left	Pick-up truck	Other motor vehicle	
2021-Aug-26, Thu,15:23	Clear	SMV other	Non-fatal injury	Dry	North	Going ahead	Motorcycle	Skidding/sliding	0
2021-Oct-02, Sat,01:00	Rain	Turning movement	P.D. only	Wet	South	Turning left	Pick-up truck	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	

Location: BANK ST @ WILTON CRES

Traffic Control: Stop sign

Total Collisions: 26

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
2015-Jan-30, Fri,15:45	Clear	Rear end	Non-fatal injury	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					North	Turning left	Automobile, station wagon	Other motor vehicle	
2015-Apr-03, Fri,22:13	Rain	Turning movement	P.D. only	Wet	South	Turning right	Pick-up truck	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2015-Sep-25, Fri,12:22	Clear	Turning movement	Non-fatal injury	Dry	North	Turning left	Automobile, station wagon	Cyclist	0
					South	Going ahead	Bicycle	Other motor vehicle	
2015-Oct-25, Sun,22:40	Clear	Turning movement	P.D. only	Dry	North	Turning left	Pick-up truck	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2016-Feb-07, Sun,12:07	Clear	Rear end	Non-fatal injury	Dry	North	Going ahead	Truck - closed	Other motor vehicle	0
					North	Turning left	Automobile, station wagon	Other motor vehicle	



Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2015 To: December 31, 2021

Location: BANK ST @ WILTON CRES

Traffic Control: Stop sign

Total Collisions: 26

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2016-Apr-01, Fri,18:31	Clear	Angle	P.D. only	Dry	East	Turning right	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Municipal transit bus	Other motor vehicle	
2016-Apr-19, Tue,14:40	Clear	Rear end	P.D. only	Dry	North	Going ahead	Delivery van	Other motor vehicle	0
					North	Turning left	Automobile, station wagon	Other motor vehicle	
2016-May-28, Sat,14:38	Clear	Angle	P.D. only	Dry	East	Turning left	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2016-Jun-15, Wed,14:08	Clear	Turning movement	Non-fatal injury	Dry	North	Turning left	Automobile, station wagon	Cyclist	0
					South	Going ahead	Bicycle	Other motor vehicle	
2016-Oct-01, Sat,13:19	Clear	Angle	P.D. only	Dry	East	Turning right	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Pick-up truck	Other motor vehicle	
2016-Oct-11, Tue,10:30	Clear	Angle	Non-fatal injury	Dry	East	Turning right	Automobile, station wagon	Cyclist	0
					North	Going ahead	Bicycle	Other motor vehicle	
2016-Dec-12, Mon,14:20	Drifting Snow	Rear end	P.D. only	Packed snow	South	Going ahead	Municipal transit bus	Other motor vehicle	0
					South	Slowing or stopping	Pick-up truck	Other motor vehicle	
2017-Jul-28, Fri,17:07	Clear	Turning movement	Non-fatal injury	Dry	North	Turning left	Automobile, station wagon	Cyclist	0
					South	Going ahead	Bicycle	Other motor vehicle	
2017-Sep-24, Sun,13:23	Clear	Sideswipe	Non-fatal injury	Dry	North	Stopped	Automobile, station wagon	Cyclist	0
					North	Going ahead	Bicycle	Other motor vehicle	
2017-Dec-14, Thu,08:45	Clear	Angle	P.D. only	Dry	East	Turning right	Automobile, station wagon	Other motor vehicle	0
					South	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2018-Jan-12, Fri,12:22	Rain	Sideswipe	P.D. only	Wet	North	Unknown	Automobile, station wagon	Other motor vehicle	0
					North	Unknown	Automobile, station wagon	Other motor vehicle	



Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2015 **To:** December 31, 2021

Location: BANK ST @ WILTON CRES

Traffic Control: Stop sign

Total Collisions: 26

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
2018-Jun-19, Tue,13:49	Clear	Turning movement	Non-fatal injury	Dry	North	Turning left	Automobile, station wagon	Cyclist	0
					South	Going ahead	Bicycle	Other motor vehicle	
2018-Oct-19, Fri,22:50	Clear	Rear end	Non-fatal injury	Wet	North	Going ahead	Pick-up truck	Other motor vehicle	0
					North	Stopped	Automobile, station wagon	Other motor vehicle	
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
					North	Stopped	Automobile, station wagon	Other motor vehicle	
2018-Nov-15, Thu,17:00	Clear	Rear end	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					North	Stopped	Automobile, station wagon	Other motor vehicle	
2018-Dec-12, Wed,11:20	Clear	Rear end	P.D. only	Dry	East	Unknown	Unknown	Other motor vehicle	0
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Jun-01, Sat,15:40	Clear	Turning movement	P.D. only	Dry	South	Making "U" turn	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Jun-23, Sun,22:45	Clear	Turning movement	P.D. only	Dry	North	Turning left	Unknown	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Jul-14, Sun,10:45	Clear	Sideswipe	P.D. only	Dry	South	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Dec-21, Sat,06:39	Clear	SMV other	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Curb	0
2020-Feb-21, Fri,15:23	Clear	Rear end	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					North	Stopped	Automobile, station wagon	Other motor vehicle	
					North	Turning left	Automobile, station wagon	Other motor vehicle	
2021-Nov-27, Sat,19:59	Rain	Turning movement	Non-fatal injury	Wet	North	Turning left	Pick-up truck	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	



Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2015 To: December 31, 2021

Location: FIFTH AVE @ QUEEN ELIZABETH DRWY

Traffic Control: Traffic signal

Total Collisions: 10

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2016-Jan-12, Tue,15:10	Snow	Rear end	P.D. only	Dry	South	Slowing or stopping	Pick-up truck	Other motor vehicle	0
					South	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2016-Jan-13, Wed,08:30	Clear	Sideswipe	P.D. only	Loose snow	North	Unknown	Unknown	Other motor vehicle	0
					North	Stopped	Automobile, station wagon	Other motor vehicle	
2016-Apr-15, Fri,18:32	Clear	Turning movement	P.D. only	Dry	North	Turning left	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Pick-up truck	Other motor vehicle	
2016-Apr-23, Sat,19:45	Clear	Rear end	P.D. only	Dry	East	Slowing or stopping	Pick-up truck	Other motor vehicle	0
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2016-Aug-20, Sat,17:15	Clear	SMV other	P.D. only	Dry	South	Turning left	Pick-up truck	Pole (sign, parking meter)	0
2016-Oct-16, Sun,10:35	Rain	Turning movement	Non-fatal injury	Wet	South	Making "U" turn	Automobile, station wagon	Other motor vehicle	0
					South	Overtaking	Pick-up truck	Other motor vehicle	
2016-Dec-29, Thu,16:50	Snow	Rear end	Non-fatal injury	Slush	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					North	Slowing or stopping	Truck-other	Other motor vehicle	
2017-Jul-06, Thu,20:45	Clear	Rear end	P.D. only	Dry	North	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					North	Slowing or stopping	Truck - closed	Other motor vehicle	
2017-Dec-15, Fri,18:19	Snow	Rear end	P.D. only	Loose snow	North	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					North	Stopped	Passenger van	Other motor vehicle	
2019-Jan-17, Thu,17:20	Clear	Rear end	P.D. only	Wet	South	Going ahead	Passenger van	Other motor vehicle	0
					South	Stopped	Pick-up truck	Other motor vehicle	

Location: PRINCESS PATRICIA WAY @ QUEEN ELIZABETH DRWY

Traffic Control: Stop sign

Total Collisions: 8

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
---------------	-------------	-------------	----------------	----------------	----------	-------------------	--------------	-------------	---------



Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2015 To: December 31, 2021

Location: PRINCESS PATRICIA WAY @ QUEEN ELIZABETH DRWY

Traffic Control: Stop sign

Total Collisions: 8

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2016-May-18, Wed,11:56	Clear	Rear end	P.D. only	Dry	North	Going ahead	Motorcycle	Other motor vehicle	0
					North	Stopped	Automobile, station wagon	Other motor vehicle	
2017-May-06, Sat,15:30	Rain	Approaching	Non-fatal injury	Wet	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					North	Stopped	Automobile, station wagon	Other motor vehicle	
2017-Jun-30, Fri,17:48	Clear	Rear end	P.D. only	Wet	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					North	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2018-Mar-19, Mon,23:36	Clear	Sideswipe	P.D. only	Dry	South	Merging	Automobile, station wagon	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Feb-15, Fri,18:12	Clear	Angle	P.D. only	Wet	East	Turning left	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Mar-03, Sun,21:00	Clear	Angle	P.D. only	Wet	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Turning left	Automobile, station wagon	Other motor vehicle	
2019-Apr-22, Mon,20:38	Clear	Turning movement	Non-fatal injury	Dry	North	Turning left	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Motorcycle	Other motor vehicle	
2019-Aug-24, Sat,17:05	Clear	Angle	Non-fatal injury	Dry	East	Turning left	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	

APPENDIX C - MMLOS ANALYSIS DATA

Multi-Modal Level of Service - Intersections Form

Consultant	Momentum
Scenario	Existing / Future
Intersection	Bank Street / Holmwood Avenue

Project	Lansdowne 2.0 - NNS
Date	December 2024

INTERSECTION		Bank Street & Holmwood Avenue			
Crossing Side		NORTH	SOUTH	EAST	WEST
Pedestrian	Lanes	4	4	0 - 2	0 - 2
	Median	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m
	Conflicting Left Turns	Permissive	No left turn / Prohib.	Permissive	Permissive
	Conflicting Right Turns	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control
	Right Turns on Red (RTor) ?	RTOR allowed	RTOR prohibited	RTOR allowed	RTOR allowed
	Ped Signal Leading Interval?	Yes	Yes	No	No
	Right Turn Channel	No Channel	No Channel	No Channel	No Channel
	Corner Radius	3-5m	3-5m	3-5m	3-5m
	Crosswalk Type	Zebra stripe hi-vis markings	Zebra stripe hi-vis markings	Zebra stripe hi-vis markings	Zebra stripe hi-vis markings
	PETSI Score	60	71	90	90
	Ped. Exposure to Traffic LoS	C	C	A	A
	Cycle Length	75	75	75	75
	Effective Walk Time	7	7	37	37
	Average Pedestrian Delay	31	31	10	10
Pedestrian Delay LoS	41	41	10	10	
Level of Service	D	D	B	B	
		D			
Approach From		NORTH	SOUTH	EAST	WEST
Bicycle	Bicycle Lane Arrangement on Approach	Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic
	IF Dedicated Right Turn Lane, THEN Right Turn Configuration, ELSE <blank>				
	Dedicated Right Turning Speed	>25 km/h	>25 km/h	>25 km/h	>25 km/h
	Cyclist Through Movement				
	Separated or Mixed Traffic	0	0	0	0
	Left Turn Approach	No lane crossed	One lane crossed	No lane crossed	No lane crossed
	Operating Speed	> 40 to ≤ 50 km/h	> 40 to ≤ 50 km/h	≤ 40 km/h	≤ 40 km/h
	Left Turning Cyclist	B	D	B	B
Level of Service	B	D	B	B	
		D			
Transit	Average Signal Delay	≤ 10 sec	≤ 10 sec		≤ 40 sec
	Level of Service	B	B	-	E
		E			
Truck	Effective Corner Radius	< 10 m	< 10 m		< 10 m
	Number of Receiving Lanes on Departure from Intersection	1	1		1
	Level of Service	F	F	-	F
		F			
Auto	Volume to Capacity Ratio	0.0 - 0.60			
	Level of Service	A			

Multi-Modal Level of Service - Intersections Form

Consultant	Momentum
Scenario	Existing / Future
Intersection	Bank Street / Exhibition Way

Project	Lansdowne 2.0 - NNS
Date	December 2024

INTERSECTIONS		Bank Street & Exhibition Way			
Crossing Side		NORTH	SOUTH	EAST	WEST
Pedestrian	Lanes	5	4	3	
	Median	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	
	Conflicting Left Turns	No left turn / Prohib.	Permissive	Protected/ Permissive	
	Conflicting Right Turns	Permissive or yield control	No right turn	Permissive or yield control	
	Right Turns on Red (RTor) ?	RTOR allowed	RTOR prohibited	RTOR allowed	
	Ped Signal Leading Interval?	Yes	Yes	No	
	Right Turn Channel	No Channel	No Right Turn	No Channel	
	Corner Radius	10-15m	No Right Turn	10-15m	
	Crosswalk Type	Std transverse markings	Std transverse markings	Std transverse markings	
	PETSI Score	47	73	70	
	Ped. Exposure to Traffic LoS	D	C	C	-
	Cycle Length	75	75	75	
	Effective Walk Time	10	10	19	
Average Pedestrian Delay	28	28	21		
Pedestrian Delay LoS	C	C	C	-	
Level of Service	D				
Approach From		NORTH	SOUTH	EAST	WEST
Bicycle	Bicycle Lane Arrangement on Approach	Mixed Traffic	Mixed Traffic	Mixed Traffic	
	IF Dedicated Right Turn Lane, THEN Right Turn Configuration, ELSE <blank>			≤ 50 m	
	Dedicated Right Turning Speed	>25 km/h	>25 km/h	>25 km/h	
	Cyclist Through Movement	E			
	Separated or Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic	-
	Left Turn Approach	≥ 2 lanes crossed		One lane crossed	
	Operating Speed	> 40 to ≤ 50 km/h		≤ 40 km/h	
Left Turning Cyclist	E	-	B	-	
Level of Service	E	-	E	-	
Level of Service		E			
Transit	Average Signal Delay	≤ 10 sec	≤ 10 sec	≤ 30 sec	
	Level of Service	B	B	D	-
Level of Service		D			
Truck	Effective Corner Radius		10 - 15 m	10 - 15 m	
	Number of Receiving Lanes on Departure from Intersection		≥ 2	≥ 2	
Level of Service	-	B	B	-	
Level of Service		B			
Auto	Volume to Capacity Ratio	0.0 - 0.60			
	Level of Service	A			

Multi-Modal Level of Service - Intersections Form

Consultant	Momentum
Scenario	Existing / Future
Intersection	Queen Elizabeth Drive / Fifth Avenue

Project	Lansdowne 2.0 - NNS
Date	December 2024

INTERSECTION		Queen Elizabeth Drive & Fifth Avenue			
Crossing Side		NORTH	SOUTH	EAST	WEST
Pedestrian	Lanes	0 - 2	0 - 2		0 - 2
	Median	No Median - 2.4 m	No Median - 2.4 m		No Median - 2.4 m
	Conflicting Left Turns	Permissive	No left turn / Prohib.		Permissive
	Conflicting Right Turns	No right turn	Permissive or yield control		Permissive or yield control
	Right Turns on Red (RTOR) ?	RTOR prohibited	RTOR allowed		RTOR prohibited
	Ped Signal Leading Interval?	Yes	Yes		Yes
	Right Turn Channel	No Right Turn	No Channel		No Channel
	Corner Radius	No Right Turn	3-5m		5-10m
	Crosswalk Type	Zebra stripe hi-vis markings	Zebra stripe hi-vis markings		Zebra stripe hi-vis markings
	PETSI Score	108	100		94
	Ped. Exposure to Traffic LoS	A	A		A
	Cycle Length	80	80	0	80
	Effective Walk Time	18	18	0	35
Average Pedestrian Delay	24	24		13	
Pedestrian Delay LoS	C	C		B	
Level of Service	C				
Approach From		NORTH	SOUTH	EAST	WEST
Bicycle	Bicycle Lane Arrangement on Approach IF Dedicated Right Turn Lane, THEN Right Turn Configuration, ELSE <blank>	Mixed Traffic	Curb Bike Lane, Cul-de-sac Not Applicable		Curb Bike Lane, Cul-de-sac Not Applicable
	Dedicated Right Turning Speed	>25 km/h	Not Applicable		
	Cyclist Through Movement		Not Applicable		Not Applicable
	Separated or Mixed Traffic	Mixed Traffic	Separated		Separated
	Left Turn Approach	No lane crossed	No lane crossed		No lane crossed
	Operating Speed	> 40 to ≤ 50 km/h	> 40 to ≤ 50 km/h		> 40 to ≤ 50 km/h
Left Turning Cyclist	B	B		B	
Level of Service	B				
Transit	Average Signal Delay				
	Level of Service		0	0	0
Truck	Effective Corner Radius Number of Receiving Lanes on Departure from Intersection				
	Level of Service		0	0	0
Auto	Volume to Capacity Ratio	0.0 - 0.60			
	Level of Service	A			

Multi-Modal Level of Service - Segments Form

Consultant	Momentum
Scenario	Existing / Future
Segment	Bank Street

Project	Lansdowne 2.0 - NNS
Date	December 2024

SEGMENTS		Bank St	Section 1	Section 2A	Section 2B	Section 3	Section 4
			5 Ave - Holmwood	(SB) Holmwood - Wilton	(NB) Holmwood - Wilton	Wilton - Aylmer	Aylmer - Sunnyside
Pedestrian	Sidewalk Width	C	≥ 2 m	≥ 2 m	≥ 2 m	≥ 2 m	1.8 m
	Boulevard Width		0.5 - 2 m	< 0.5	> 2 m	0.5 - 2 m	0.5 - 2 m
	Avg Daily Curb Lane Traffic Volume		> 3000	> 3000	> 3000	> 3000	> 3000
	Operating Speed		> 30 to 50 km/h	> 30 to 50 km/h	> 30 to 50 km/h	> 30 to 50 km/h	> 30 to 50 km/h
	On-Street Parking		yes	no	no	no	yes
	Exposure to Traffic PLoS	B	C	B	C	C	
	Level of Service	B	C	B	C	C	
Bicycle	Type of Cycling Facility	E	Mixed Traffic	Mixed Traffic	Curbside Bike Lane	Physically Separated	Mixed Traffic
	Number of Travel Lanes		4-5 lanes total	4-5 lanes total	2 ea. dir. (w median)		4-5 lanes total
	Operating Speed		>40 to <50 km/h	>40 to <50 km/h	≤ 50 km/h		>40 to <50 km/h
	# of Lanes & Operating Speed LoS		E	E	C	-	E
	Bike Lane (+ Parking Lane) Width				≥ 1.2 to <1.5 m		
	Bike Lane Width LoS		-	-	C	-	-
	Bike Lane Blockages				Frequent		
	Blockage LoS		-	-	C	-	-
	Level of Service	E	E	C	A	E	
Transit	Facility Type	F	Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic
	Friction or Ratio Transit:Posted Speed		Vt/Vp ≤ 0.4	Vt/Vp ≤ 0.4	Vt/Vp ≤ 0.4	Vt/Vp ≥ 0.8	Vt/Vp ≤ 0.4
	Level of Service		F	F	F	D	F
Truck	Truck Lane Width	D	≤ 3.2 m	> 3.7 m	≤ 3.2 m	≤ 3.5 m	≤ 3.5 m
	Travel Lanes per Direction		> 1	> 1	> 1	1	> 1
	Level of Service		D	A	D	C	A

Multi-Modal Level of Service - Segments Form

Consultant	Momentum
Scenario	Existing / Future
Segment	Holmwood Avenue

Project	Lansdowne 2.0 - NNS
Date	December 2024

SEGMENTS		Holmwood Ave	Section 5A Northside	Section 5B Southside
Pedestrian	Sidewalk Width	B	1.8 m	1.8 m
	Boulevard Width		< 0.5 m	< 0.5 m
	Avg Daily Curb Lane Traffic Volume		≤ 3000	≤ 3000
	Operating Speed		> 30 to 50 km/h	> 30 to 50 km/h
	On-Street Parking		no	yes
	Exposure to Traffic PLoS	B	B	
	Level of Service	B	B	
Bicycle	Type of Cycling Facility	C	Curbside Bike Lane	Mixed Traffic
	Number of Travel Lanes		≤ 1 each direction	≤ 2 (no centreline)
	Operating Speed		≤ 50 km/h	>40 to <50 km/h
	# of Lanes & Operating Speed LoS		A	B
	Bike Lane (+ Parking Lane) Width		≥ 1.2 to <1.5 m	
	Bike Lane Width LoS		C	-
	Bike Lane Blockages		Rare	
	Blockage LoS		A	-
	Level of Service	C	B	
Transit	Facility Type	-		
	Friction or Ratio Transit:Posted Speed			
	Level of Service		-	-
Truck	Truck Lane Width	-		
	Travel Lanes per Direction			
	Level of Service		-	-

Multi-Modal Level of Service - Segments Form

Consultant	Momentum
Scenario	Existing / Future
Segment	Queen Elizabeth Driveway (QED)

Project	Lansdowne 2.0 - NNS
Date	December 2024

SEGMENTS		QED	Section 6A	Section 6B	Section 7	Section 8
			Fifth Ave - Fourth Ave. (SB)	Fifth Ave - Fourth Ave. (NB)	Fifth Ave - Princess Patricia Way	South of Princess Patricia Way
Pedestrian	Sidewalk Width	F	no sidewalk	≥ 2 m	≥ 2 m	≥ 2 m
	Boulevard Width		n/a	0.5 - 2 m	> 2 m	> 2 m
	Avg Daily Curb Lane Traffic Volume		> 3000	> 3000	> 3000	> 3000
	Operating Speed		> 30 to 50 km/h	> 30 to 50 km/h	> 30 to 50 km/h	> 30 to 50 km/h
	On-Street Parking		no	no	no	no
	Exposure to Traffic PLoS	F	C	B	B	
	Level of Service	F	C	B	-	
Bicycle	Type of Cycling Facility	A	Physically Separated	Physically Separated	Physically Separated	Physically Separated
	Number of Travel Lanes					
	Operating Speed					
	# of Lanes & Operating Speed LoS		-	-	-	-
	Bike Lane (+ Parking Lane) Width					
	Bike Lane Width LoS		-	-	-	-
	Bike Lane Blockages					
	Blockage LoS		-	-	-	-
	Level of Service	A	A	A	A	
Transit	Facility Type	-				
	Friction or Ratio Transit:Posted Speed					
	Level of Service		-	-	-	-
Truck	Truck Lane Width	-				
	Travel Lanes per Direction					
	Level of Service		-	-	-	-
Auto	Level of Service	Not Applicable				

**APPENDIX D - CONSTRUCTION HAUL
ROUTE ASSESSMENT**

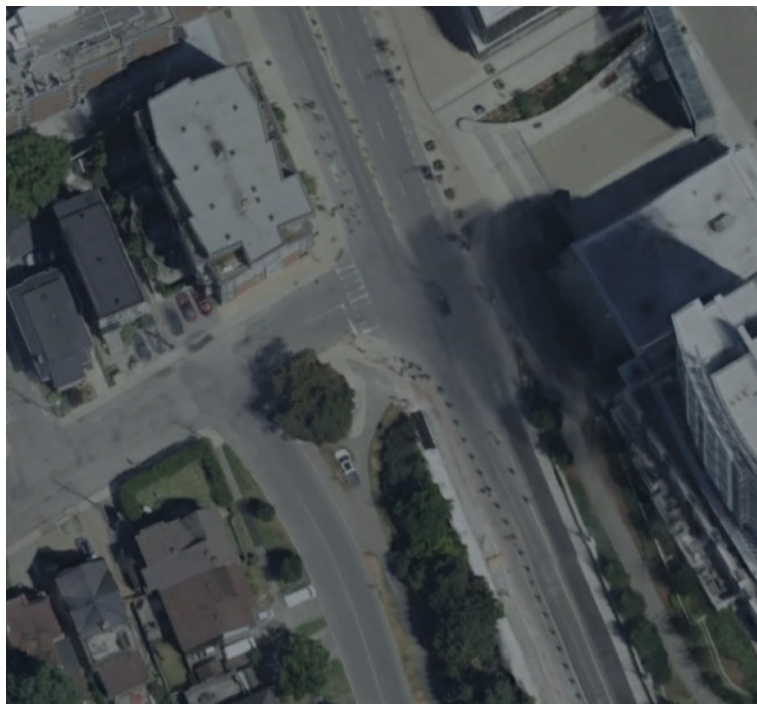


APPENDIX D – LANSDOWNE 2.0 CONSTRUCTION HAUL ROUTE ASSESSMENT

Project	Lansdowne 2.0 – North Side Stands
Report Title	Appendix D – Lansdowne 2.0 Construction Haul Route Review
Date	20/12/2024
Prepared by	Momentum Transport Consultancy
Prepared for	City of Ottawa

Context

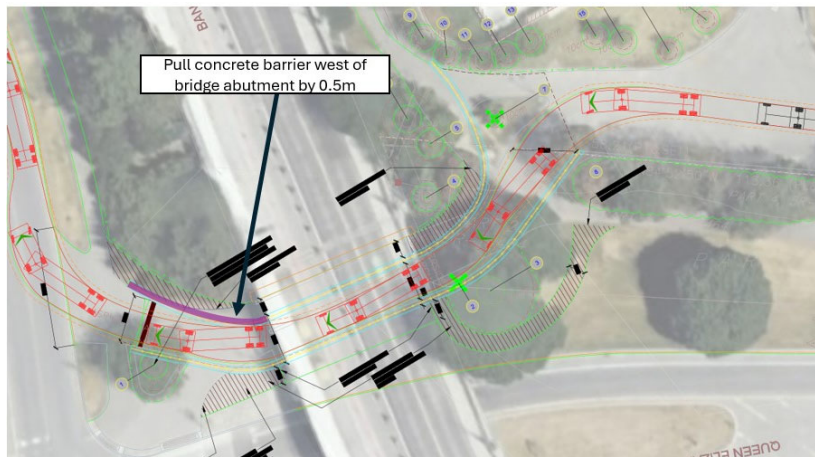
- 1.1 This Appendix describes construction tracking along Bank Street, which has been studied in detail using Swept Path Analysis.
- 1.2 The aerial image provided, as well as Google Maps, shows a Bank Street layout under construction and does not have the current layout with cycle routes. See below:



- 1.3 An aerial image and 2022 design layout for Bank Street has been provided to complete the tracking of the intersection. See below:



- 1.4 Therefore, Momentum have made some sketch offsets of the current arrangement based on the below assumptions to try match the street view. For more accuracy, an updated aerial, OS base map or topographical survey would be required.
- 1.5 The temporary haul route is shown below.





1.6 Bank Street north of intersection:

- 2x 3.25m northbound lanes remain
- Only left-hand side 3.25m southbound lane remains
- Right-hand side lane turned into 1.5m cycle lane and a 0.5m offset for the physical barrier that stops just after the traffic light





1.7 Bank Street south of intersection:

- Use existing curbs and offset 1.5m cycle lane from each side
- Use remaining carriageway to make 3 lanes (original arrangement had 4 lanes through the bridge)
- Step-up cycle path starts just after the grass radius to the west

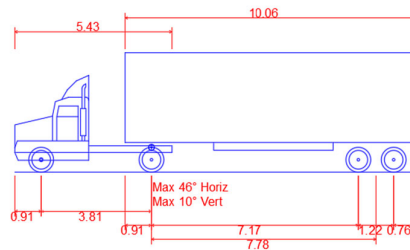




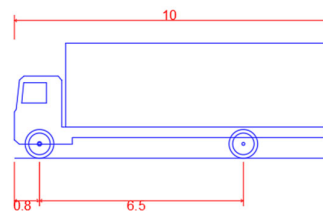


Swept Path Analysis Summary

- 1.8 Completed for previously tracked WB-12 which can use the haul road and then largest rigid of the previously tracked rigid (10m MSU).

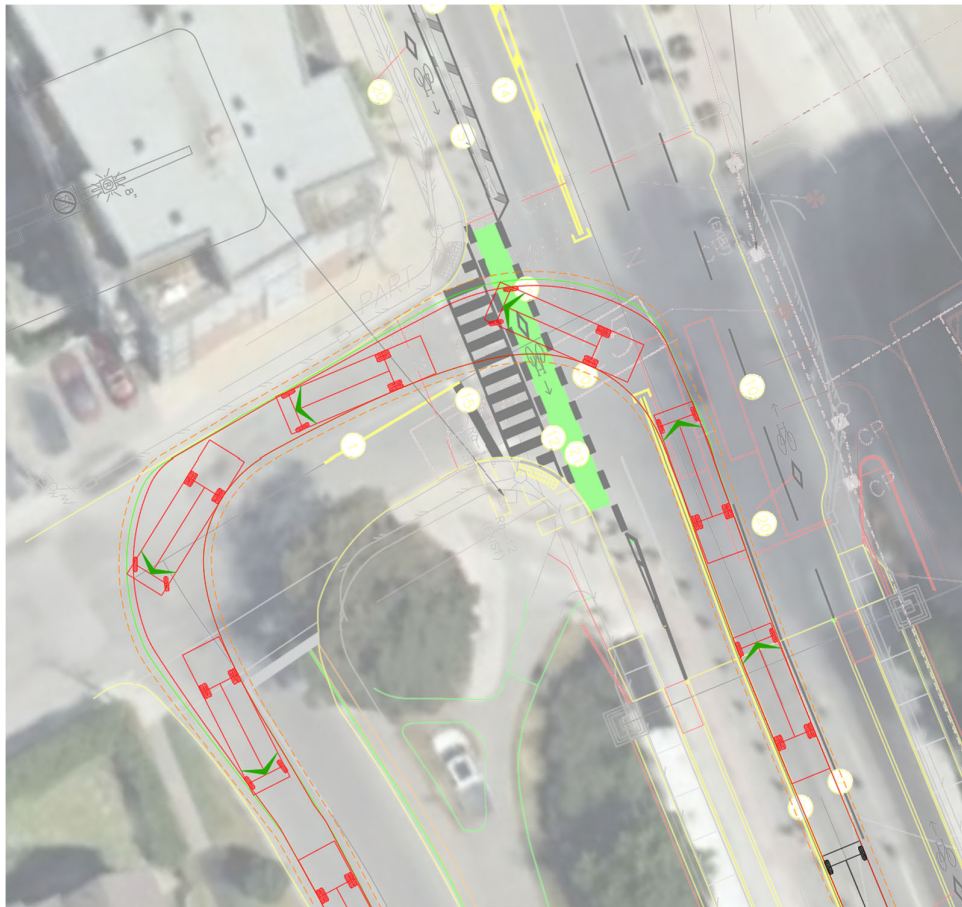


WB-12 - Intermediate Semi-Trailer	
Overall Length	13.870m
Overall Width	2.440m
Overall Body Height	4.110m
Min Body Ground Clearance	0.407m
Track Width	2.440m
Lock to lock time	4.00s
Max Steering Angle (Virtual)	20.30°



MSU - Medium Single Unit Truck	
Overall Length	10.000m
Overall Width	2.600m
Overall Body Height	3.650m
Min Body Ground Clearance	0.445m
Track Width	2.600m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	11.100m

MSU INGRESS TO SITE





- MSU southbound with right turn (above left) can make manoeuvre without overrunning opposite lane, stop line, or curb radius. No traffic flagger is required.
- MSU northbound with left turn (above right) can make manoeuvre without overrunning opposite lane, stop line, or curb radius. No traffic flagger is required.

MSU EGRESS FROM SITE







- 1.9 MSU southbound with right turn (above left) can make manoeuvre without overrunning curb radius. Will required looking both ways at both stop lines for oncoming traffic due to slight lane overrun into opposing traffic when making turn.
- 1.10 MSU northbound with left turn (above middle) can make manoeuvre without overrunning curb radius.
- 1.11 MSU can safely stop within the lane at second stop line before making the turn into Bank Street (above right in white vehicle outline)



WB-12 INGRESS TO SITE



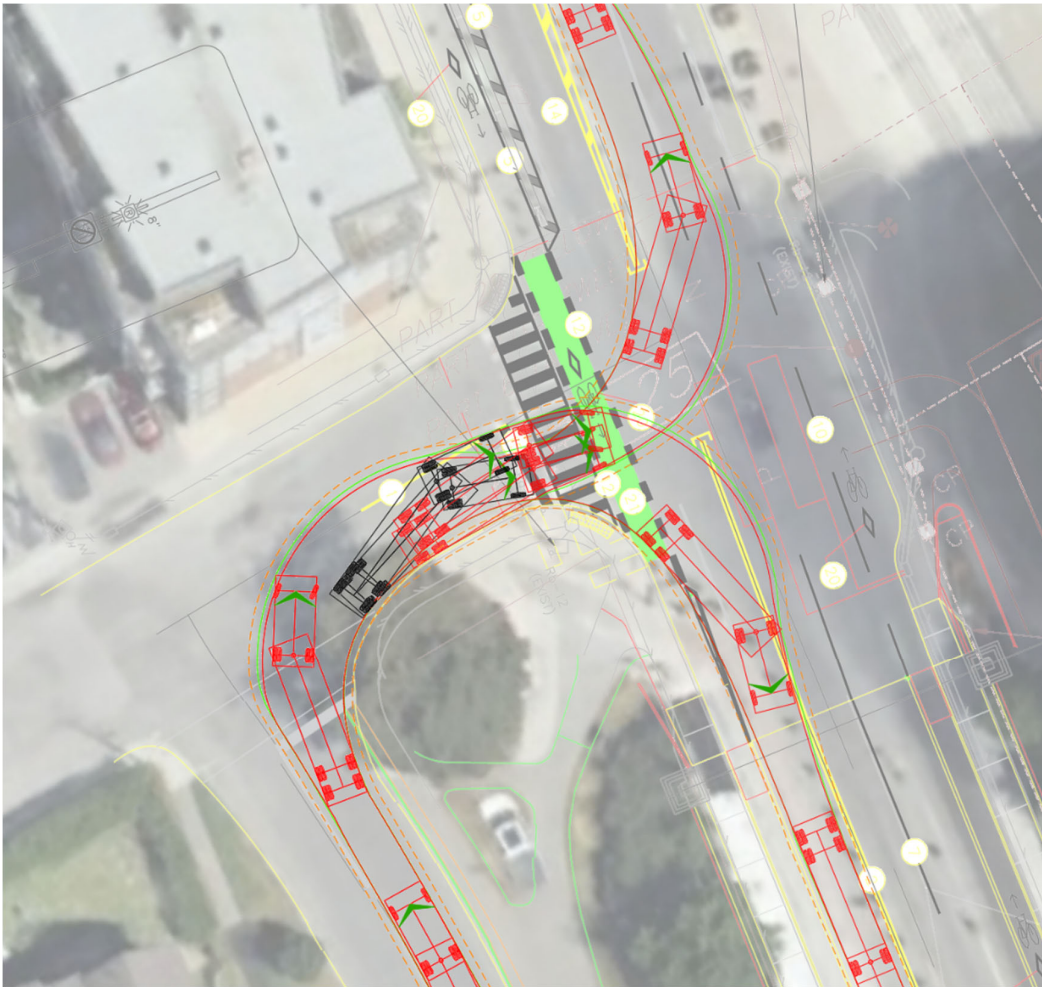


- 1.12 WB-12 southbound with right turn (above left) can make manoeuvre without overrunning curb radius. Traffic flaggers required to assist manoeuvre as vehicle overruns opposite lane and stop line at both junctions.
- 1.13 WB-12 northbound with left turn (above right) can make manoeuvre without overrunning curb radius. Traffic flaggers required to assist manoeuvre as vehicle overruns opposite lane and stop line at both junctions.



WB-12 EGRESS FROM SITE





- 1.14 WB-12 southbound with right turn (above left) can make manoeuvre without overrunning curb radius. Traffic flaggers required to assist manoeuvre as vehicle overruns opposite lane at both junctions when turning.
- 1.15 WB-12 northbound with left turn (above middle) can make manoeuvre without overrunning curb radius. Traffic flaggers required to assist manoeuvre as vehicle overruns opposite lane at both junctions when turning.
- 1.16 WB-12 cannot safely stop within the lane at second stop line before making the turn into Bank Street (above right in white vehicle outline) and requires both lanes. Traffic Flaggers required to assist with management of manoeuvres for this vehicle type.



Project & Document Details

Project Name	Lansdowne 2.0 – TIA NSS
Project Number	C000241
Document Title	Appendix D – Bank Street Tracking

Document History

Issue	Status	Reason for Issue	Issued to
1.0		Accompany TIA report	City of Ottawa

Issue Control

Issue	Date	Author	Contributors	Authorisation	
				Name	Signature
1.0	20/12/24	JH	AA, NBO	HM	

APPENDIX E - TDM CHECKLIST



TDM MEASURES CHECKLIST NON-RESIDENTIAL DEVELOPMENTS (OFFICE, INSTITUTIONAL OR INDUSTRIAL)

Project	Lansdowne 2.0 – Event Center
Report Title	TDM Measures checklist non-residential developments
Date	06/12/2024
Prepared by	Momentum Transport Consultancy
Prepared for	City of Ottawa

1. TDM PROGRAM MANAGEMENT

1.1 Program coordinator

1.1.1. Designate an internal coordinator, or contract with an external coordinator

- ✓ TDM coordinator currently in place for the wider development site.

1.2 Travel surveys

1.2.1. Conduct periodic surveys to identify travel-related behaviors, attitudes, challenges and solutions, and to track progress

- ✓ Period surveys currently in place for the wider development site, OSEG takes annual travel surveys for particular events at Lansdowne 2.0.

2. WALKING AND CYCLING

2.1 Information on walking/cycling routes & destinations

2.1.1. Display local area maps with walking/cycling access

- ✓ Online maps are available on the City of Ottawa website.
- ✓ OSEG/Lansdowne maps are available throughout the site.

2.2 Bicycle skills training

Commuter Travel

2.2.1. Offer on-site cycling courses for commuters, or subsidize off-site courses

- ✗ Annual workshops are already in place in other parts of the site and would be offered to the North Side Stands staff.

2.3 Valet bike parking

Visitor Travel

Offer secure valet bike parking during stadium events when demand exceeds fixed supply (e.g. for festivals, concerts, games)

- ✓ OSEG is currently working with a partnership with CAA for Bike Valet. The valet parking is currently located at the north western corner of the Aberdeen Plaza and would be located at the same place at opening of Lansdowne 2.0.

3. TRANSIT

3.1 Transit information

3.1.1. Display relevant transit schedules and route maps at entrances

- ✓ Not applicable.

3.1.2. Provide online links to OC Transpo and STO information

- ✓ Links are provided when booking tickets and on booking confirmation email.
- ✓ OC Transpo website has a dedicated Lansdowne trip planning tool.

3.1.3. Provide real-time arrival information display at entrances

- ✗ Not applicable for the Event Center entrances.

3.2 Transit fare incentives

Commuter travel

3.2.1. Offer preloaded PRESTO cards to encourage commuters to use transit

- ✗ Not applicable.

3.2.2. Subsidize or reimburse monthly transit pass purchases by employees

- ✗ Not applicable.

Visitor travel

3.2.3. Arrange inclusion of same-day transit fare in price of tickets (e.g. for festivals, concerts, games)

- ✓ Free transit is offered on event days to all ticket holders starting three hours before and three hours after the event.
- ✓ The service is provided at no cost to ticket holders.
- ✓ The cost of service is borne by OSEG.

3.3 Enhanced public transit service

Commuter travel

3.3.1. Contract with OC Transpo to provide enhanced transit services (e.g. for shift changes, weekends)

- ✓ There is close coordination between OSEG and OC Transpo to provide enhanced services during events for visitors and staff.

Visitor Travel



3.3.2. Contract with OC Transpo to provide enhanced transit services (e.g. for festivals, concerts, games)

- ✓ Enhanced transit service has been operating with additional OC Transpo buses provided on Bank Street for events above 5,000 capacity. Additional services are requested based on estimated drop count to OC Transpo
- ✓ Service ranges from two to eight extra trips depending on numbers.

3.4 Private transit vehicles

Commuter travel

3.4.1. Provide shuttle service when OC Transpo cannot offer sufficient quality or capacity to serve demand (e.g. for shift changes, weekends).

- ✗ Not applicable as transit enhancements are delivered by OC Transpo.

Visitor travel

3.4.2. Provide shuttle service when OC Transpo cannot offer sufficient quality or capacity to serve demand (e.g. for festivals, concerts, games).

- ✓ Private OSEG shuttles are provided from Carleton University for Ottawa 67's and Ottawa Charge games at Lansdowne.

4. RIDESHARING

4.1 Ridematching service

Commuter travel

4.1.1. Provide a dedicated ridematching portal at OttawaRideMatch.com

- ✗ Not Applicable as general OttawaRideMatch.com portal is not available for use.

4.2 Carpooling parking price incentives

Commuter travel

4.2.1. Provide discounts on parking costs for registered carpools

- ✓ There is currently no discount provided on parking costs for registered carpools but an option is being developed for weekdays during business hours, up to 5pm.

4.3 Vanpool service

Commuter travel

4.3.1. Provide a vanpooling service for long-distance commuters

- ✓ The site currently offers parking for group buses and based on staging space available on site, arrangements could be made available for vanpooling.

5. CARSHARING AND BIKESHARING

5.1 Bikeshare stations & memberships

5.1.1. Contract with provider to install on-site bikeshare station for use by commuters and visitors

- ✓ Micromobility e-scooter trials have been running in Ottawa since 2022 and could be expected to be continued up until opening date.

5.2 Carshare vehicles & memberships

Commuter travel

5.2.1. Contract with provider to install on-site carshare vehicles and promote their use by tenants

- ✓ Two E-Charging units for Communauto are to be implemented in front of the condo residential tower on Exhibition Way.

5.2.2. Provide employees with carshare memberships for local business travel

- ✓ The site will look at providing employees carshare memberships for when Communauto is implemented on site.

6. PARKING

6.1 Priced parking

Commuter travel

6.1.1. Charge for long-term parking (daily, weekly, monthly)

- ✓ Daily parking rate varies by day and event, between \$20 and \$30 as of November 2024. There is no weekly rate available to commuters. Monthly rate is not available to the general public but is available to tenants at \$155.

6.1.2. Unbundle parking cost from lease rates at multi-tenant sites

- ✗ Not applicable as the North Side Stands are not a residential development.

Visitor travel

6.1.3. Charge for short-term parking

- ✓ It currently costs 17\$ for visitors to park on-site during an event. The number of parking tickets available to buy by visitors is limited.

7. TDM MARKETING & COMMUNICATIONS

7.1 Multimodal travel information

Commuter travel

7.1.1. Provide a multimodal travel option information package to new/relocating employees and students

- ✓ Information promoting walking and cycling as a convenient way to travel to TD Place is featured throughout TD Place communications and on the City of Ottawa Lansdowne Park website.

Visitor travel



7.1.2. Include multimodal travel option information in invitations or advertising that attract visitors or customers (e.g. for festivals, concerts, games)

- ✓ Multi-travel option information included in booking confirmation and reminder email.
- ✓ Information promoting walking and cycling as a convenient way to travel to TD Place is featured throughout TD Place communications and on the City of Ottawa Lansdowne Park website.

7.2 Personalized trip planning

Commuter travel

7.2.1. Offer personalized trip planning to new/relocating employees

- ✓ Information promoting walking and cycling as a convenient way to travel to TD Place is featured throughout TD Place communications and on the City of Ottawa Lansdowne Park website.

Promotions

7.3.1. Deliver promotions and incentives to maintain awareness, build understanding, and encourage trial of sustainable modes

- ✓ OC Transpo filmed a promotional video with both mascots in 2024 to raise encourage travel using sustainable modes of transportation.

8. OTHER INCENTIVES AND AMENITIES

8.1 Emergency ride home

Commuter travel

8.1.1. Provide emergency ride home service to non-driving commuters

- ✗ TD Place Stadium makes emergency ride-home available for employees and TD Place guests through onsite Security Department.

8.2 Alternative work arrangements

Commuter travel

8.2.1. Encourage flexible work hours

- ✗ Not applicable as the venue employees work around the events schedule.

8.2.2. Encourage compressed workweeks

- ✗ Not applicable as the venue employees work around the events schedule.

8.2.3. Encourage telework

- ✗ Not applicable as the venue employees have to be on-site for work.

8.3 Local business travel options

Commuter travel

8.3.1. Provide local business travel options that minimize the need for employees to bring a personal car to work

- ✓ A fare Free zone on Bank Street to support local businesses will be introduced to reduce the reliance on auto travel.

8.4 Commuter incentives

Commuter travel

8.4.1. Offer employees a taxable, mode-neutral commuting allowance

- ✗ Not applicable due to a large proportion of employees living far away from the site.

8.5 On-site amenities

Commuter travel

8.5.1. Provide on-site amenities/services to minimize mid-day or mid-commute errands

- ✓ Secure bike parking for employees, shower and changing rooms are available on the wider Lansdowne 2.0 site for employees.



Project & Document Details

Project Name	Lansdowne 2.0 – TIA Event Center
Project Number	C000218
Document Title	TDM Measures Checklist- Non-Residential Developments

Document History

Issue	Status	Reason for Issue	Issued to
1.0	Completed	Addressing city of Ottawa comments	CoO, OSEG

Issue Control

Issue	Date	Author	Contributors	Authorisation	
				Name	Signature
1.0	06/12/24	AD		HM	



TDM-SUPPORTIVE DEVELOPMENT DESIGN AND INFRASTRUCTURE CHECKLIST (OFFICE, INSTITUTIONAL OR INDUSTRIAL)

Project	Lansdowne 2.0 – North Stadium Stands
Report Title	TDM Measures checklist non-residential developments
Date	19/12/2024
Prepared by	Momentum Transport Consultancy
Prepared for	City of Ottawa

1. WALKING & CYCLING: ROUTES

1.1 Building location & access points

1.1.1. Locate building close to the street, and do not locate parking areas between the street and building entrances

- ✓ 600 on-site parking spaces would be available for event days and included underground parking.

1.1.2. Locate building entrances in order to minimize walking distances to sidewalks and transit stops/stations

- ✓ The North Side Stands entrance gates are located on Exhibition Way, a short distance walk from Bank Street.

1.1.3. Locate building doors and windows to ensure visibility of pedestrians from the building, for their security and comfort

- ✗ N/A as the North Side Stands building is not located on-street.

1.2 Facilities for walking & cycling

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)

- ✓ Convenient and wide pedestrian link to Bank Street through Exhibition Way.

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)

- ✓ Wide pedestrian walkways are on Exhibition Way around the North Side stands as shown in Figure 1 and figure 2 below.

Figure 1: Plan of the North Stadium Stands and Event Centre footprint

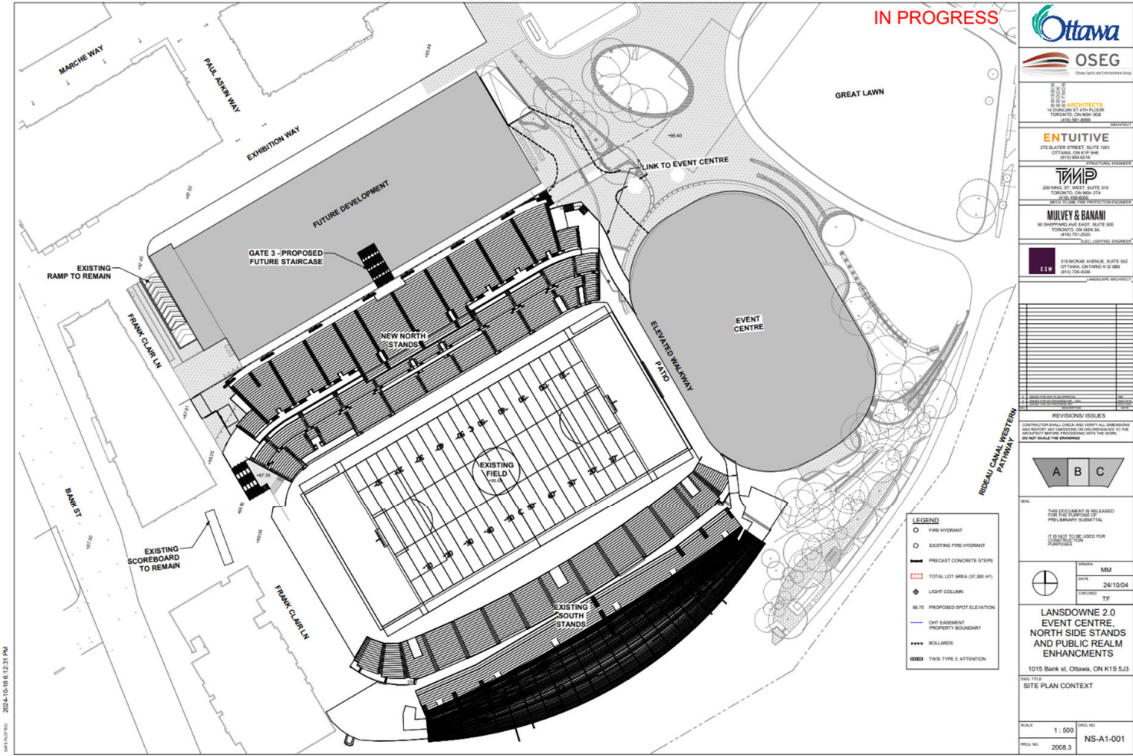
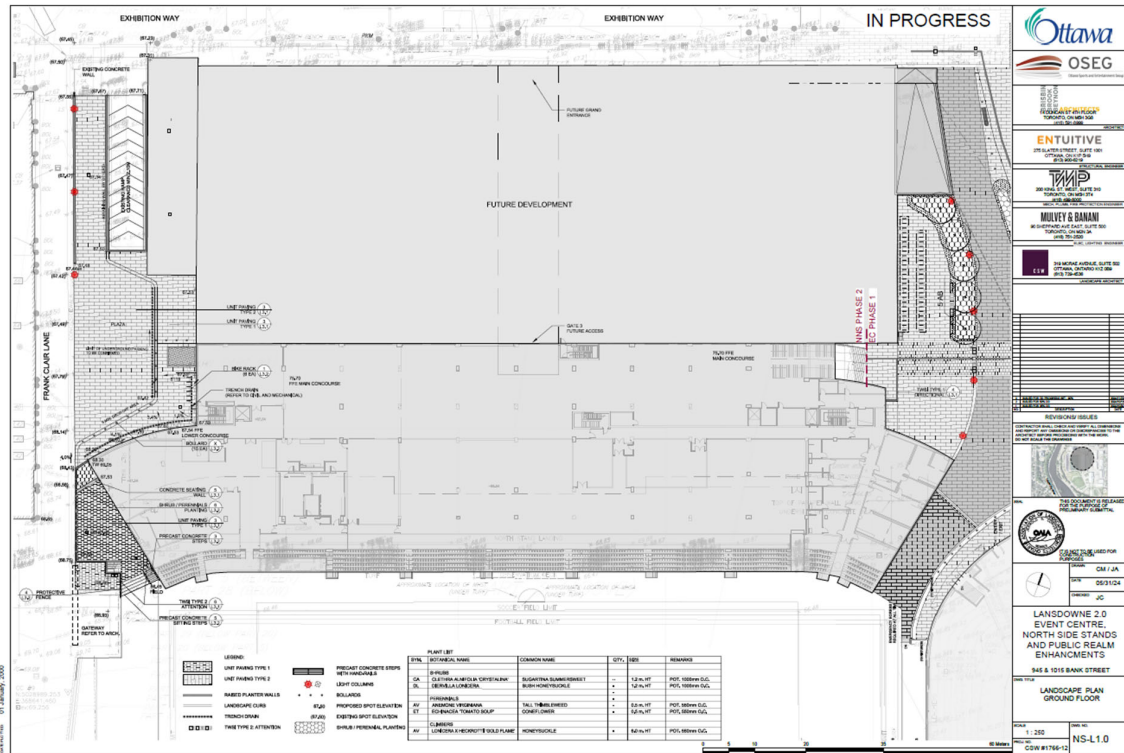




Figure 2: North Stadium Stands Public Realm Enhancements



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)

- ✓ Smooth and well drained pedestrian pavements are provided around the North Side stands on Exhibition Way and with the direct link to the Event Centre as shown in Figure 1 above.

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)

- ✓ Sidewalks on Exhibition Way are wide and the North Side Stands can be accessed by lifts at Gate 2 and Gate 3.

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)

- ✓ As part of the Bank Street Canal Bridge Rehabilitation Project, 1.5m cycle tracks have been implemented on both sides of the Bank Street Bridge between Exhibition Way and Aylmer Avenue in conjunction with a 3-lane cross-section (2 northbound lanes, 1 southbound lane). Other than the newly installed cycling lanes on the Bank Street Bridge, there is a northbound bike lane on Bank Street across the frontage of the site.

1.2.6. Provide safe, direct and attractive walking routes from building entrances to nearby transit stops

- ✓ Bus stops on either side of Bank Street can both be accessed safely via wide pavements or crossing a signalised intersection.

1.2.7. Ensure that walking routes to transit stops are secure, visible, lighted, shaded and wind-protected wherever possible

- ✓ Retail units canopies and lampposts on Exhibition Way provide transit users shelter and light on their route.

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

- ✓ Exhibition and Marché Way and other roads have a speed limit of 30 km/h.

1.3 Amenities for walking & cycling

1.3.1. Provide lighting, landscaping and benches along walking and cycling routes between building entrances and streets, sidewalks and trails

- ✓ Lampposts and benches are provided along Marché and Exhibition Ways.

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)

- ✓ Lansdowne currently features a wayfinding signage system throughout the public realm to help orient visitors and provide directions on access and circulation, as well as to stadium gates, transit bus and shuttle stop locations, public realm amenities (i.e. the Aberdeen Pavilion, the Horticulture Building), on-site tenants and businesses, and access points to the underground parking garage.
- ✓ Wayfinding and code required signage for Lansdowne 2.0 will be revised as required to support the interim phase of construction and operations of the new Event Centre (Phase 1) and new North Stadium Stands (Phase 2).
- ✓ Final Wayfinding and code required signage will be implemented to support the full build-out of Lansdowne 2.0. The revised wayfinding system, which is subject to a City of Ottawa led review and approval process, will continue to provide visitors with directions on access and circulation, including directional information to transit bus stop and shuttle locations, as well as connections to key pedestrian and cycling facilities.

2. WALKING & CYCLING: END-OF-TRIP FACILITIES

2.1 Bicycle parking

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)

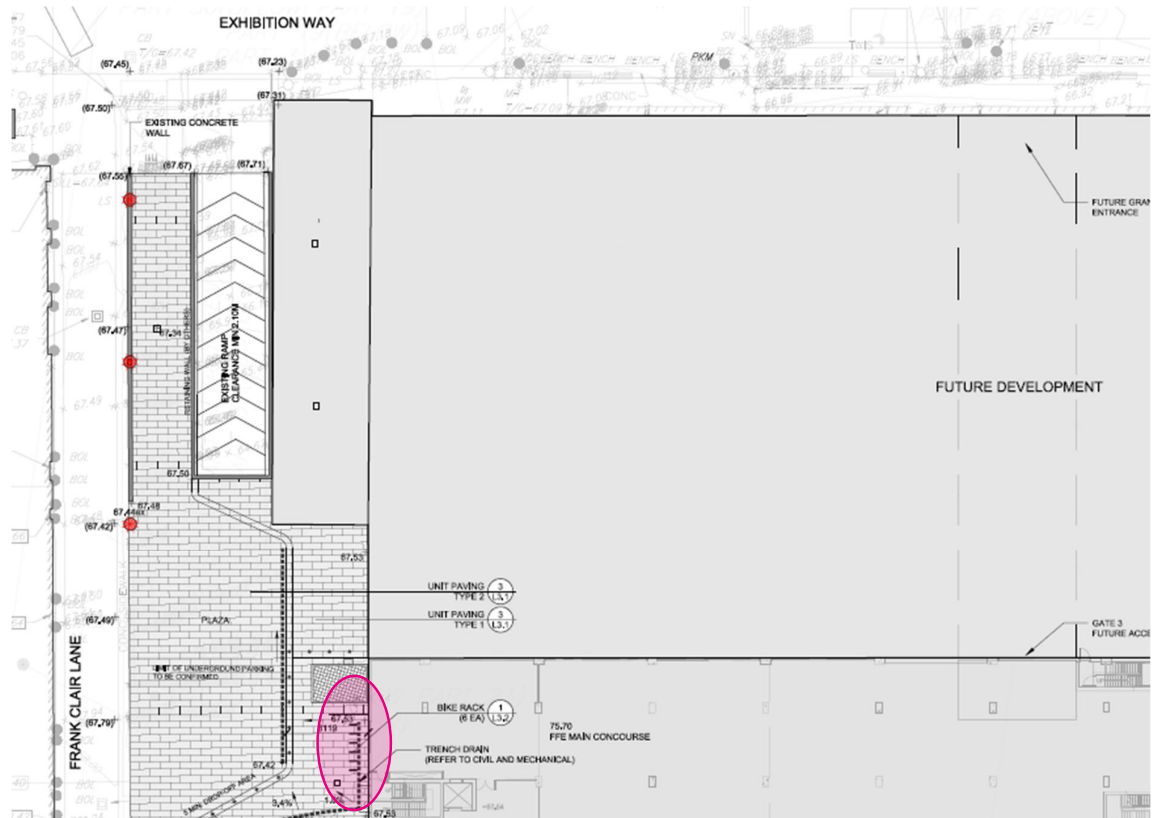
- ✓ Cycle parking stands are provided on-street along Marché and Exhibition Ways.



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)

- ✓ Six bicycle racks providing 12 additional bicycle parking spaces are to be provided on the western side of the North Side Stands as part of the proposed site plan application for the North Side Stands (Phase 2) as shown in Figure 3

Figure 3: Cycle racks on the western side of NSS



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)

- ✗ No internal cycle parking spaces are provided as part of Phase 2 – North Side Stands of the development. Internal cycle parking is provided as part of the wider Lansdowne 2.0 development.

2.1.4. 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

- ✓ Six bicycle racks providing 12 additional bicycle parking spaces are to be provided on the western side of the North Side Stands as part of the proposed site plan application for the North Side Stands (Phase 2).

- ✘ As part of the overall Lansdowne 2.0 project, additional bicycle parking spaces are required to subsequent phases of development at Lansdowne, namely Phase 3 for the new retail podium and two residential towers. Based on the City of Ottawa Zoning By-Laws, the minimum bicycle parking requirement for the subject property is 0.5 spaces per dwelling unit. To offset the reduced parking requirements and to encourage alternative modes of transportation, the residential bicycle parking rate is proposed to be increased to 1 space per dwelling unit, for a total of 770 bicycle parking spaces. All other bicycle parking requirements for non-residential uses are not proposed to be changed and will comply with the applicable requirements of Section 111 of the Zoning By-law.
- ✘ The total number and allocation of bicycle parking spaces will be finalized in subsequent phases of design development for Lansdowne 2.0.

2.2 Secure bicycle parking

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)

- ✘ Only 12 additional bicycle parking spaces are to be provided as part of the proposed site plan application for the North Side Stands (Phase 2).

2.2.2. Provide secure bicycle parking spaces equivalent to the expected number of commuter cyclists (assuming the cycling mode share target is met).

- ✓ Six bicycle racks providing 12 additional bicycle parking spaces are to be provided on the western side of the North Side Stands as part of the proposed site plan application for the North Side Stands (Phase 2).

2.3 Shower & change facilities

2.3.1. Provide shower and change facilities for the use of active commuters

- ✘ No shower and change facilities are proposed as part of the proposed site plan application for the North Side Stands (Phase 2) but showers are provided for the wider site and will be accessible to staff.

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

- ✘ No dedicated lockers are proposed as part of the proposed site plan application for the North Side Stands (Phase 2) but showers are provided for the wider site and will be accessible to staff.

2.4 Bicycle repair station

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)

- ✓ There is a bike repair station in the public area on Princess Patricia Way.

3. TRANSIT

3.1 Customer amenities

3.1.1. Provide shelters, lighting and benches at any on-site transit stops



- ✘ Not applicable as no on-site transit stops are provided.

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

- ✓ Sheltered bus stops with benches are provided on Bank Street.

3.1.3. Provide a secure and comfortable interior waiting area by integrating any on-site transit stops into the building

- ✘ Not applicable

4. RIDESHARING

4.1 Pick-up & drop-off facilities

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

- ✘ Accessible shuttle drop off will be available at Gate 4

4.2 Carpooling parking

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

- ✓ Two E-Charging units for Communauto will be provided in front of the condo residential tower on Exhibition Way.

4.2.2. At large developments, provide spaces for carpools in a separate, access-controlled parking area to simplify enforcement

- ✘ Not applicable

5. CARSHARING AND BIKESHARING

5.1 Carshare parking spaces

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)

- ✘ Not applicable, to be confirmed as part of Phase 3 of Lansdowne 2.0.

5.2 Bikeshare station location

5.2.1. Provide a designated bikeshare station area near a major building entrance, preferably lighted and sheltered with a direct walkway connection

- ✘ Not applicable, to be confirmed as part of Phase 3 of Lansdowne 2.0.

6. Parking

6.1 Number of parking spaces

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

- ✘ Not applicable, as no parking spaces are provided as part of Phase 2 of Lansdowne 2.0.

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

- ✘ Not applicable, as no parking spaces are provided as part of Phase 2 of Lansdowne 2.0.

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)

- ✘ Not applicable as no parking spaces are provided as part of Phase 2 of Lansdowne 2.0.

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).

- ✘ Not applicable as no parking spaces are provided as part of Phase 2 of Lansdowne 2.0.

6.2 Separate long-term & short-term parking areas

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)

- ✓ Barriers are located within the basement car park accessible via Exhibition Way. Within this car park, barriers divide long stay parking and the Whole Foods, residential parking.

7. OTHER

7.1 On-site amenities to minimize off-site trips

Commuter travel

7.1.1. Provide on-site amenities to minimize mid-day or mid-commute errands

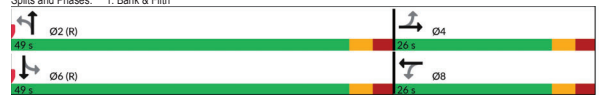
- ✓ Non-food and food retail as well as services are provided on Exhibition Way and Marché Way.

APPENDIX F - SYNCHRO SUMMARY SHEETS

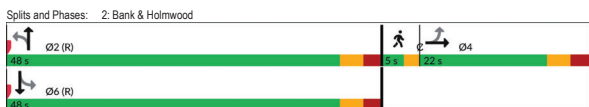
Existing scenario

2024 Weekday AM Peak Hour

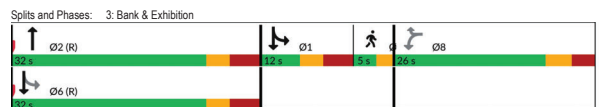
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	37	57	47	49	9	534	19	410
Future Volume (vph)	37	57	47	49	9	534	19	410
Lane Group Flow (vph)	0	135	52	86	0	635	0	515
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases	4	2	8	2	2	6	6	6
Permitted Phases	4	8	8	2	6	6	6	6
Minimum Split (s)	26.0	26.0	26.0	26.0	49.0	49.0	49.0	49.0
Total Split (s)	26.0	26.0	26.0	26.0	49.0	49.0	49.0	49.0
Total Split (%)	34.7%	34.7%	34.7%	34.7%	65.3%	65.3%	65.3%	65.3%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag								
Lead-Lag Optimize?								
Act Effct Green (s)	20.5	20.5	20.5		43.5		43.5	
Actuated g/C Ratio	0.27	0.27	0.27		0.58		0.58	
v/c Ratio	0.36	0.18	0.21		0.38		0.32	
Control Delay (s/veh)	21.9	22.9	15.9		3.7		8.5	
Queue Delay	0.0	0.0	0.0		0.0		0.0	
Total Delay (s/veh)	21.9	22.9	15.9		3.7		8.5	
LOS	C	C	B		A		A	
Approach Delay (s/veh)	21.9		18.5		3.7		8.5	
Approach LOS	C		B		A		A	
Queue Length 50th (m)	12.9	5.6	5.7		6.6		17.1	
Queue Length 95th (m)	27.2	14.0	16.0		8.1		25.6	
Internal Link Dist (m)	49.7		112.4		195.6		190.0	
Turn Bay Length (m)			45.0					
Base Capacity (vph)	376	290	418		1655		1594	
Starvation Cap Reductn	0	0	0		0		0	
Spillback Cap Reductn	0	0	0		0		0	
Storage Cap Reductn	0	0	0		0		0	
Reduced v/c Ratio	0.36	0.18	0.21		0.38		0.32	



Lane Group	EBT	NBL	NBT	SBL	SBT	Ø3
Lane Configurations						
Traffic Volume (vph)	21	16	521	11	366	
Future Volume (vph)	21	16	521	11	366	
Lane Group Flow (vph)	85	0	627	0	443	
Turn Type	NA	Perm	NA	Perm	NA	
Protected Phases	4	2	2	6	3	
Permitted Phases	4	2	2	6	3	
Detector Phase	4	2	2	6	3	
Switch Phase						
Minimum Initial (s)	4.4	10.0	10.0	4.0	4.0	1.0
Minimum Split (s)	22.0	48.0	48.0	48.0	48.0	5.0
Total Split (s)	22.0	48.0	48.0	48.0	48.0	5.0
Total Split (%)	29.3%	64.0%	64.0%	64.0%	64.0%	7%
Yellow Time (s)	3.0	3.0	3.0	3.0	2.0	0.0
All-Red Time (s)	2.6	2.2	2.2	2.2	2.2	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.6	5.2	5.2	5.2	5.2	0.0
Lead/Lag		Lag				Lead
Lead-Lag Optimize?						
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	None
Act Effct Green (s)	10.0	57.5	57.5	57.5	57.5	
Actuated g/C Ratio	0.13	0.77	0.77	0.77	0.77	
v/c Ratio	0.47	0.29	0.29	0.21	0.21	
Control Delay (s/veh)	37.6	1.0	1.0	3.1	3.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	37.6	1.0	1.0	3.1	3.1	
LOS	D	A	A	A	A	
Approach Delay (s/veh)	37.6	1.0	1.0	3.1	3.1	
Approach LOS	D	A	A	A	A	
Queue Length 50th (m)	11.3	1.7	1.7	6.9	6.9	
Queue Length 95th (m)	22.6	4.5	4.5	13.2	13.2	
Internal Link Dist (m)	39.8		31.5	195.6	195.6	
Turn Bay Length (m)						
Base Capacity (vph)	298		2141	2154	2154	
Starvation Cap Reductn	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	
Reduced v/c Ratio	0.29	0.29	0.29	0.21	0.21	



Lane Group	WBL	WBR	NBT	SBL	SBT	Ø6	Ø7
Lane Configurations							
Traffic Volume (vph)	51	32	495	64	332		
Future Volume (vph)	51	32	495	64	332		
Lane Group Flow (vph)	57	36	661	71	369		
Turn Type	Perm	Perm	NA	custom	NA		
Protected Phases	8	8	2	1	16	6	7
Permitted Phases	8	8	2	1	16	6	7
Detector Phase	8	8	2	1	16	6	7
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	1.0	10.0	4.0	4.0
Minimum Split (s)	26.0	26.0	27.0	7.9	44.0	8.0	8.0
Total Split (s)	26.0	26.0	32.0	12.0	32.0	5.0	5.0
Total Split (%)	34.7%	34.7%	42.7%	16.0%	43%	7%	7%
Yellow Time (s)	3.3	3.3	3.0	3.0	3.0	2.0	2.0
All-Red Time (s)	3.0	3.0	3.9	3.9	3.9	0.0	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.3	6.9	6.9	6.9	0.0	0.0
Lead/Lag				Lead			Lag
Lead-Lag Optimize?				Yes			Yes
Recall Mode	None	None	C-Max	None	C-Max	None	None
Act Effct Green (s)	10.3	10.3	42.7	47.8	56.1		
Actuated g/C Ratio	0.14	0.14	0.57	0.64	0.75		
v/c Ratio	0.29	0.20	0.41	0.17	0.16		
Control Delay (s/veh)	33.0	13.2	10.6	11.6	9.0		
Queue Delay	0.0	0.0	0.0	0.0	0.0		
Total Delay (s/veh)	33.0	13.2	10.6	11.6	9.0		
LOS	C	B	B	B	A		
Approach Delay (s/veh)	25.3		10.6		9.4		
Approach LOS	C		B		A		
Queue Length 50th (m)	7.4	0.0	26.3	5.7	15.7		
Queue Length 95th (m)	17.2	7.4	40.3	12.2	22.9		
Internal Link Dist (m)	30.6		33.7		44.8		
Turn Bay Length (m)			40.0				
Base Capacity (vph)	377	316	1623	427	2350		
Starvation Cap Reductn	0	0	0	0	0		
Spillback Cap Reductn	0	0	0	0	0		
Storage Cap Reductn	0	0	0	0	0		
Reduced v/c Ratio	0.15	0.11	0.41	0.17	0.16		



Intersection						
Intersection Delay, s/veh	7.6					
Intersection LOS	A					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		4	4		4	
Traffic Vol, veh/h	5	104	65	5	5	5
Future Vol, veh/h	5	104	70	5	5	5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	116	72	6	6	6
Number of Lanes	0	1	1	0	1	0
Approach	EB	WB	SB			
Opposing Approach	WB	EB				
Opposing Lanes	1	1	0			
Conflicting Approach Left	SB		WB			
Conflicting Lanes Left	1	0	1			
Conflicting Approach Right		SB	EB			
Conflicting Lanes Right	0	1	1			
HCM Control Delay, s/veh	7.7	7.4	7.2			
HCM LOS	A	A	A			

Lane	EBLn1	WBLn1	SBLn1
Vol Left, %	5%	0%	50%
Vol Thru, %	95%	93%	0%
Vol Right, %	0%	7%	50%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	109	70	10
LT Vol	5	0	5
Through Vol	104	65	0
RT Vol	0	5	5
Lane Flow Rate	121	78	11
Geometry Grp	1	1	1
Degree of Util (X)	0.135	0.086	0.013
Departure Headway (Hd)	4.021	4.001	4.074
Convergence, Y/N	Yes	Yes	Yes
Cap	893	894	866
Service Time	2.041	2.03	2.157
HCM Lane V/C Ratio	0.135	0.087	0.013
HCM Control Delay, s/veh	7.7	7.4	7.2
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.5	0.3	0

Intersection						
Intersection Delay, s/veh	7.9					
Intersection LOS	A					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	4			4	4	
Traffic Vol, veh/h	2	5	65	55	69	40
Future Vol, veh/h	2	5	65	55	69	40
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	6	72	61	77	44
Number of Lanes	1	0	0	1	1	0
Approach	EB	WB	WB	NB	SB	SB
Opposing Approach	WB	EB				
Opposing Lanes	1	1	0			
Conflicting Approach Left		NB	EB			
Conflicting Lanes Left	0	1	1			
Conflicting Approach Right	NB		WB			
Conflicting Lanes Right	1	0	1			
HCM Control Delay, s/veh	6.9	8.1	7.8			
HCM LOS	A	A	A			

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	63%	0%	54%
Vol Thru, %	0%	29%	46%
Vol Right, %	37%	71%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	109	7	120
LT Vol	69	0	65
Through Vol	0	2	55
RT Vol	40	5	0
Lane Flow Rate	121	8	133
Geometry Grp	1	1	1
Degree of Util (X)	0.137	0.008	0.158
Departure Headway (Hd)	4.086	3.822	4.262
Convergence, Y/N	Yes	Yes	Yes
Cap	866	820	835
Service Time	2.164	1.915	2.32
HCM Lane V/C Ratio	0.14	0.009	0.159
HCM Control Delay, s/veh	7.8	6.9	8.1
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.5	0	0.6

Intersection						
Intersection Delay, s/veh	7.6					
Intersection LOS	A					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	4			4	4	
Traffic Vol, veh/h	2	5	5	119	5	5
Future Vol, veh/h	2	5	5	119	5	5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	6	6	132	6	6
Number of Lanes	1	0	0	1	1	0
Approach	EB	WB	WB	NB	SB	SB
Opposing Approach	WB	EB				
Opposing Lanes	1	1	0			
Conflicting Approach Left		NB	EB			
Conflicting Lanes Left	0	1	1			
Conflicting Approach Right	NB		WB			
Conflicting Lanes Right	1	0	1			
HCM Control Delay, s/veh	6.7	7.7	7.1			
HCM LOS	A	A	A			

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	50%	0%	4%
Vol Thru, %	0%	29%	96%
Vol Right, %	50%	71%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	10	7	124
LT Vol	5	0	5
Through Vol	0	2	119
RT Vol	5	5	0
Lane Flow Rate	11	8	138
Geometry Grp	1	1	1
Degree of Util (X)	0.012	0.008	0.152
Departure Headway (Hd)	3.985	3.627	3.968
Convergence, Y/N	Yes	Yes	Yes
Cap	890	865	908
Service Time	2.045	1.656	1.972
HCM Lane V/C Ratio	0.012	0.008	0.152
HCM Control Delay, s/veh	7.1	6.7	7.7
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0	0	0.5

Intersection												
Intersection Delay, s/veh	7.8											
Intersection LOS	A											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4					4	4		4		4
Traffic Vol, veh/h	65	40	0	0	0	70	18	31	23	0	0	105
Future Vol, veh/h	65	40	0	0	0	70	18	31	23	0	0	105
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	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	72	44	0	0	0	78	20	34	26	0	0	117
Number of Lanes	0	1	0	0	0	1	0	1	0	0	0	1
Approach	EB	WB	WB	NB	NB	SB	SB	SB	SB	SB	SB	SB
Opposing Approach	WB	EB										
Opposing Lanes	1	1	0									
Conflicting Approach Left	SB			NB	EB							
Conflicting Lanes Left	1	1	1	1	1							
Conflicting Approach Right	NB			SB	WB							
Conflicting Lanes Right	1	1	1	1	1							
HCM Control Delay, s/veh	8.4			7.3	7.8							7.4
HCM LOS	A			A	A							A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	25%	62%	0%	0%
Vol Thru, %	43%	38%	0%	0%
Vol Right, %	32%	0%	100%	100%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	72	105	70	105
LT Vol	18	65	0	0
Through Vol	31	40	0	0
RT Vol	23	0	70	105
Lane Flow Rate	80	117	78	117
Geometry Grp	1	1	1	1
Degree of Util (X)	0.096	0.148	0.084	0.125
Departure Headway (Hd)	4.341	4.562	3.881	3.855
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	828	791	926	932
Service Time	2.356	2.562	1.935	1.868
HCM Lane V/C Ratio	0.097	0.148	0.084	0.126
HCM Control Delay, s/veh	7.8	8.4	7.3	7.4
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.3	0.5	0.3	0.4

Intersection						
Int Delay, s/veh	5.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗	↖	↗	↖	
Traffic Vol, veh/h	1	182	138	608	351	25
Future Vol, veh/h	1	182	138	608	351	25
Conflicting Peds, #/hr	0	0	178	0	0	107
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	None	None	None	None	None	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	1	202	153	676	390	28

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	1226	582	596
Stage 1	582	-	-
Stage 2	644	-	-
Critical Hdwy	6.675	6.275	4.175
Critical Hdwy Stg 1	5.475	-	-
Critical Hdwy Stg 2	5.875	-	-
Follow-up Hdwy	3.54753	3.4752	2.475
Pot Cap-1 Maneuver	180	505	961
Stage 1	550	-	-
Stage 2	479	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	90	410	780
Mov Cap-2 Maneuver	90	-	-
Stage 1	339	-	-
Stage 2	389	-	-

Approach	EB	NB	SB
HCM Control Delay, s/42.04		3.44	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBL1	SBT	SBR
Capacity (veh/h)	634	-	410	-	-
HCM Lane V/C Ratio	0.197	-	0.493	-	-
HCM Control Delay (s/veh)	10.7	1.8	22	-	-
HCM Lane LOS	B	A	C	-	-
HCM 95th %tile Q(veh)	0.7	-	2.7	-	-

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗	↖	↗	↖	
Traffic Vol, veh/h	0	26	0	735	523	0
Future Vol, veh/h	0	26	0	735	523	0
Conflicting Peds, #/hr	0	0	0	0	0	86
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	None	None	None	None	None	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	0	29	0	817	581	0

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	-	581	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	6.275	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-3.3475	-
Pot Cap-1 Maneuver	0	506	0
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	506	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/42.55		0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	EBL1	SBT
Capacity (veh/h)	-	506	-	-
HCM Lane V/C Ratio	-	0.057	-	-
HCM Control Delay (s/veh)	-	12.6	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	0.2	-	-

Intersection						
Int Delay, s/veh	1.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↖	↗	↖	↗	↖	↗
Traffic Vol, veh/h	19	23	63	241	269	68
Future Vol, veh/h	19	23	63	241	269	68
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	None	None	None	None	None	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	21	26	70	268	299	76

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	744	337	374
Stage 1	337	-	-
Stage 2	408	-	-
Critical Hdwy	6.4	6.2	4.1
Critical Hdwy Stg 1	5.4	-	-
Critical Hdwy Stg 2	5.4	-	-
Follow-up Hdwy	3.5	3.3	2.2
Pot Cap-1 Maneuver	385	710	1195
Stage 1	728	-	-
Stage 2	676	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	358	710	1195
Mov Cap-2 Maneuver	358	-	-
Stage 1	678	-	-
Stage 2	676	-	-

Approach	EB	NB	SB
HCM Control Delay, s/43.09		1.7	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBL1	SBT	SBR
Capacity (veh/h)	373	-	492	-	-
HCM Lane V/C Ratio	0.059	-	0.095	-	-
HCM Control Delay (s/veh)	8.2	0	13.1	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.2	-	0.3	-	-

Intersection						
Int Delay, s/veh	0.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↖	↗	↖	↗	↖
Traffic Vol, veh/h	0	33	527	7	0	398
Future Vol, veh/h	0	33	527	7	0	398
Conflicting Peds, #/hr	0	0	0	100	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	None	None	None	None	None	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	-	-	-
Grade, %	0	-	-	-	-	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	15	6	0	0	5
Mvmt Flow	0	37	586	8	0	442

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	-	397	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	7.2	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	3.45	-
Pot Cap-1 Maneuver	0	567	0
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	507	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/42.65		0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBL1	SBT
Capacity (veh/h)	-	507	-	-
HCM Lane V/C Ratio	-	0.072	-	-
HCM Control Delay (s/veh)	-	12.6	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	0.2	-	-

Intersection						
Int Delay, s/veh	1.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	[Diagram]					
Traffic Vol, veh/h	104	60	5	65	18	5
Future Vol, veh/h	104	60	5	65	18	5
Conflicting Peds, #/hr	0	100	100	0	100	100
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	None	None	None	None	None	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	116	67	6	72	20	6

Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	282	0	432	349
Stage 1	-	-	-	-	249	-
Stage 2	-	-	-	-	183	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1280	-	580	694
Stage 1	-	-	-	-	793	-
Stage 2	-	-	-	-	848	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1145	-	462	555
Mov Cap-2 Maneuver	-	-	-	-	462	-
Stage 1	-	-	-	-	709	-
Stage 2	-	-	-	-	755	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0.58	12.93
HCM LOS	B		

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	479	-	-	129	-
HCM Lane V/C Ratio	0.053	-	-	0.005	-
HCM Control Delay (s/veh)	12.9	-	-	8.2	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %ile Q(veh)	0.2	-	-	0	-

Intersection						
Int Delay, s/veh	0.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	[Diagram]					
Traffic Vol, veh/h	5	37	116	15	5	4
Future Vol, veh/h	5	37	116	15	5	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	None	None	None	None	None	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	41	129	17	6	4

Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	146	0	-	0	189	137
Stage 1	-	-	-	-	137	-
Stage 2	-	-	-	-	52	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1437	-	-	-	800	911
Stage 1	-	-	-	-	889	-
Stage 2	-	-	-	-	970	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	1437	-	-	-	796	911
Mov Cap-2 Maneuver	-	-	-	-	796	-
Stage 1	-	-	-	-	886	-
Stage 2	-	-	-	-	970	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0.89	0	9.32
HCM LOS	A		

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	214	-	-	-	844
HCM Lane V/C Ratio	0.004	-	-	-	0.012
HCM Control Delay (s/veh)	7.5	0	-	-	9.3
HCM Lane LOS	A	A	-	-	A
HCM 95th %ile Q(veh)	0	-	-	-	0

Existing scenario

2024 Weekday PM Peak Hour

Queues

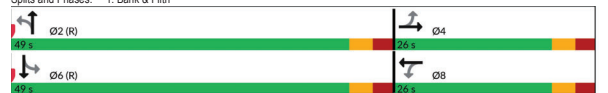
1: Bank & Fifth

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	[Diagram]							
Traffic Volume (vph)	45	52	58	37	16	435	28	559
Future Volume (vph)	45	52	58	37	16	435	28	559
Lane Group Flow (vph)	0	158	64	79	0	534	0	692
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases	4	8	8	2	2	6	6	6
Permitted Phases	4	8	8	2	2	6	6	6
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	26.0	26.0	26.0	26.0	49.0	49.0	49.0	49.0
Total Split (s)	26.0	26.0	26.0	26.0	49.0	49.0	49.0	49.0
Total Split (%)	34.7%	34.7%	34.7%	34.7%	65.3%	65.3%	65.3%	65.3%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Act Effect Green (s)	12.6	12.6	12.6	12.6	51.4	51.4	51.4	51.4
Actuated g/C Ratio	0.17	0.17	0.17	0.17	0.69	0.69	0.69	0.69
v/c Ratio	0.65	0.39	0.29	0.27	0.27	0.36	0.36	0.36
Control Delay (s/veh)	35.1	33.1	17.7	8.7	6.1	6.1	6.1	6.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	35.1	33.1	17.7	8.7	6.1	6.1	6.1	6.1
LOS	D	C	B	A	A	A	A	A
Approach Delay (s/veh)	35.1	24.6	8.7	6.1	6.1	6.1	6.1	6.1
Approach LOS	D	C	A	A	A	A	A	A
Queue Length 50th (m)	16.8	8.2	5.0	11.5	17.5	17.5	17.5	17.5
Queue Length 95th (m)	31.7	17.3	14.4	43.2	34.0	34.0	34.0	34.0
Internal Link Dist (m)	49.7	45.0	112.4	195.6	190.0	190.0	190.0	190.0
Turn Bay Length (m)								
Base Capacity (vph)	375	265	419	1951	1939	1939	1939	1939
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	0.24	0.19	0.27	0.36	0.36	0.36	0.36

Intersection Summary

Cycle Length: 75
Actuated Cycle Length: 75
Offset: 47 (63%), Referenced to phase 2:NBL and 6:SBTL, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.65
Intersection Signal Delay (s/veh): 11.7
Intersection Capacity Utilization 65.8%
ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 1: Bank & Fifth





Lane Group	EBL	NBL	NBT	SBT	Ø4
Lane Configurations	↔	↔	↔	↔	↔
Traffic Volume (vph)	34	37	189	502	
Future Volume (vph)	34	37	189	502	
Lane Group Flow (vph)	75	0	251	628	
Turn Type	Prot	Perm	NA	NA	
Protected Phases	10	2	6	4	
Permitted Phases		2			
Detector Phase	10	2	2	6	
Switch Phase					
Minimum Initial (s)	10.0	4.0	4.0	4.0	4.0
Minimum Split (s)	21.0	48.0	48.0	48.0	11.0
Total Split (s)	21.0	48.0	48.0	48.0	11.0
Total Split (%)	28.3%	60.0%	60.0%	60.0%	14%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.7	3.8	3.8	3.8	2.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.7				6.8
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	Min	None	None	C-Max	None
Act Effct Green (s)	10.7		56.8	56.8	
Actuated g/C Ratio	0.13		0.71	0.71	
v/c Ratio	0.37		0.24	0.53	
Control Delay (s/veh)	36.6		5.0	7.7	
Queue Delay	0.0		0.0	0.0	
Total Delay (s/veh)	36.6		5.0	7.7	
LOS	D		A	A	
Approach Delay (s/veh)	36.6		5.0	7.7	
Approach LOS	D		A	A	
Queue Length 50th (m)	10.7		10.6	35.2	
Queue Length 95th (m)	22.0		21.5	66.0	
Internal Link Dist (m)	57.2		0.1	5.9	
Turn Bay Length (m)					
Base Capacity (vph)	293		1028	1178	
Starvation Cap Reductn	0		0	0	
Spillback Cap Reductn	0		0	0	
Storage Cap Reductn	0		0	0	
Reduced v/c Ratio	0.26		0.24	0.53	
Intersection Summary					
Cycle Length: 80					
Actuated Cycle Length: 80					
Offset: 0 (0%), Referenced to phase 6:SBT, Start of Green					
Natural Cycle: 80					
Control Type: Actuated-Coordinated					
Maximum v/c Ratio: 0.53					
Intersection Signal Delay (s/veh): 9.2	Intersection LOS: A				
Intersection Capacity Utilization 62.6%	ICU Level of Service B				
Analysis Period (min) 15					

Splits and Phases: 9: Queen Elizabeth Drive & Fifth



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	5	118	136	5	5	5
Future Volume (vph)	5	118	136	5	5	5
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		0.995	0.932			
Flt Protected		0.998	0.976			
Satd. Flow (prot)	0	1683	1678	0	1534	0
Flt Permitted		0.998	0.976			
Satd. Flow (perm)	0	1683	1678	0	1534	0
Link Speed (k/h)		30	30			
Link Distance (m)		61.9	92.7		69.2	
Travel Time (s)		7.4	11.1		8.3	
Conf. Peds. (#/hr)	100			100	100	100
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	6	131	151	6	6	6
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	137	157	0	12	0
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		3.2	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		1.6	1.6		1.6	
Two way Left Turn Lane						
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.14
Turning Speed (k/h)	24			14	24	14
Sign Control		Stop	Stop		Stop	
Intersection Summary						
Area Type: Other						
Control Type: Unsignalized						
Intersection Capacity Utilization 32.8%	ICU Level of Service A					
Analysis Period (min) 15						

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	3	5	5	5	5	5
Future Volume (vph)	3	5	5	5	5	5
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	0.910			0.932		
Flt Protected				0.976	0.976	
Satd. Flow (prot)	1535	0	0	1646	1534	0
Flt Permitted				0.976	0.976	
Satd. Flow (perm)	1535	0	0	1646	1534	0
Link Speed (k/h)		30		30	30	
Link Distance (m)		115.2		88.5	69.2	
Travel Time (s)		13.8		10.6	8.3	
Conf. Peds. (#/hr)		100	100		100	100
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	3	6	6	6	6	6
Shared Lane Traffic (%)						
Lane Group Flow (vph)	9	0	0	12	12	0
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)		0.0		0.0	3.2	
Link Offset(m)		0.0		0.0	0.0	
Crosswalk Width(m)		1.6		1.6	1.6	
Two way Left Turn Lane						
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.14
Turning Speed (k/h)		14	24		24	14
Sign Control	Stop			Stop	Stop	
Intersection Summary						
Area Type: Other						
Control Type: Unsignalized						
Intersection Capacity Utilization 32.7%	ICU Level of Service A					
Analysis Period (min) 15						

Lanes, Volumes, Timings
14: Exhibition & Marche

08/01/2024

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	3	5	136	5	5	118
Future Volume (vph)	3	5	136	5	5	118
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	0.910			0.871		
Flt Protected			0.954	0.998		
Satd. Flow (prot)	1535	0	0	1609	1466	0
Flt Permitted			0.954	0.998		
Satd. Flow (perm)	1535	0	0	1609	1466	0
Link Speed (kh)	30		30	30		30
Link Distance (m)	88.5		119.7	28.7		25.4
Travel Time (s)	10.6		14.4	3.4		8.3
Confl. Peds. (#/hr)		100	100	100	100	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	3	6	151	6	6	131
Shared Lane Traffic (%)						
Lane Group Flow (vph)	9	0	0	157	137	0
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Left	Right	Right
Median Width(m)	0.0		0.0	3.2		0.0
Link Offset(m)	0.0		0.0	0.0		0.0
Crosswalk Width(m)	1.6		1.6	1.6		1.6
Two way Left Turn Lane						
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.14
Turning Speed (kh)		14	24		24	14
Sign Control	Stop		Stop	Stop		Stop
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	35.3%			ICU Level of Service A		
Analysis Period (min)	15					

Existing Weekday PM Peak Hour Lansdowne 2.0 Transportation Impact Assessment 9:50 am 01/13/2023

Synchro 12 Report
Page 3

HCM 7th TWSC
4: Bank & Wilton

08/01/2024

Intersection						
Int Delay, s/veh	10.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Vol, veh/h	3	226	207	540	545	48
Future Vol, veh/h	3	226	207	540	545	48
Conflicting Peds. #/hr	0	0	178	0	0	167
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	None	None	None	None	None	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	251	230	600	606	53
Major/Minor						
Minor2	Minor1	Major2				
Conflicting Flow All	1570	810	837	0	-	0
Stage 1	810	-	-	-	-	-
Stage 2	760	-	-	-	-	-
Critical Hdwy	6.63	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.83	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	2.219	-	-	-
Pot Cap-1 Maneuver	111	379	795	-	-	-
Stage 1	436	-	-	-	-	-
Stage 2	423	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	42	308	645	-	-	-
Mov Cap-2 Maneuver	42	-	-	-	-	-
Stage 1	203	-	-	-	-	-
Stage 2	344	-	-	-	-	-
Approach						
EB	NB	SB				
HCM Control Delay, s/62.93	6.17	0				
HCM LOS	F					
Minor Lane/Major Mvmt						
NBL	NBTEBLn1	SBT	SBR			
Capacity (veh/h)	538	-	308	-	-	-
HCM Lane V/C Ratio	0.356	-	0.817	-	-	-
HCM Control Delay (s/veh)	13.6	3.3	52.9	-	-	-
HCM Lane LOS	B	A	F	-	-	-
HCM 95th %tile Q(veh)	1.6	-	6.8	-	-	-

Existing Weekday PM Peak Hour Lansdowne 2.0 Transportation Impact Assessment 9:50 am 01/13/2023

Synchro 12 Report
Page 1

Lanes, Volumes, Timings
37: O' Connor & Fifth

08/01/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	72	38	0	0	0	100	39	26	29	0	0	90
Future Volume (vph)	72	38	0	0	0	100	39	26	29	0	0	90
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.865		0.958				
Flt Protected			0.968					0.980				
Satd. Flow (prot)	0	1632	0	0	0	1459	0	1583	0	0	0	1459
Flt Permitted			0.968					0.980				
Satd. Flow (perm)	0	1632	0	0	0	1459	0	1583	0	0	0	1459
Link Speed (kh)		30			30			30				30
Link Distance (m)		211.4			68.9			224.9				85.7
Travel Time (s)		25.4			8.3			27.0				10.3
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
Adj. Flow (vph)	80	42	0	0	0	111	43	29	32	0	0	100
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	122	0	0	0	111	0	104	0	0	0	100
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)	0.0		0.0		0.0		0.0		0.0		0.0	
Link Offset(m)	0.0		0.0		0.0		0.0		0.0		0.0	
Crosswalk Width(m)	1.6		1.6		1.6		1.6		1.6		1.6	
Two way Left Turn Lane												
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Turning Speed (kh)	97		97	97		97	97		97	97		97
Sign Control	Stop		Stop	Stop		Stop	Stop		Stop	Stop		Stop
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	28.4%						ICU Level of Service A					
Analysis Period (min)	15											

Existing Weekday PM Peak Hour Lansdowne 2.0 Transportation Impact Assessment 9:50 am 01/13/2023

Synchro 12 Report
Page 4

HCM 7th TWSC
5: Bank & Echo

08/01/2024

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Vol, veh/h	0	23	0	755	780	2
Future Vol, veh/h	0	23	0	755	780	2
Conflicting Peds. #/hr	0	0	0	0	0	86
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	None	None	None	None	None	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	26	0	839	867	2
Major/Minor						
Minor2	Minor1	Major2				
Conflicting Flow All	-	954	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.23	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.319	-	-	-	-
Pot Cap-1 Maneuver	0	313	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	284	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach						
EB	NB	SB				
HCM Control Delay, s/v 18.9	0	0				
HCM LOS	C					
Minor Lane/Major Mvmt						
NBTEBLn1	SBT	SBR				
Capacity (veh/h)	-	284	-	-	-	-
HCM Lane V/C Ratio	-	0.09	-	-	-	-
HCM Control Delay (s/veh)	-	18.9	-	-	-	-
HCM Lane LOS	-	C	-	-	-	-
HCM 95th %tile Q(veh)	-	0.3	-	-	-	-

Existing Weekday PM Peak Hour Lansdowne 2.0 Transportation Impact Assessment 9:50 am 01/13/2023

Synchro 12 Report
Page 2

Intersection					
Int Delay, s/veh	2.6				
Movement	EBL	EBR	NBL	NBT	SBR
Lane Configurations	W	W	W	W	W
Traffic Vol, veh/h	51	54	45	249	480
Future Vol, veh/h	51	54	45	249	480
Conflicting Peds, #/hr	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free
RT Channelized	None	None	None	None	None
Storage Length	0	-	-	-	-
Veh in Median Storage, #	0	-	0	0	-
Grade, %	0	-	0	0	-
Peak Hour Factor	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0
Mvmt Flow	57	60	50	277	533
Major/Minor					
Conflicting Flow All	947	570	607	0	0
Stage 1	570	-	-	-	-
Stage 2	377	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-
Pot Cap-1 Maneuver	292	525	981	-	-
Stage 1	570	-	-	-	-
Stage 2	698	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	275	525	981	-	-
Mov Cap-2 Maneuver	275	-	-	-	-
Stage 1	535	-	-	-	-
Stage 2	698	-	-	-	-
Approach					
	EB	NB	SB		
HCM Control Delay, s/veh	49.49	1.36	0		
HCM LOS	C				
Minor Lane/Major Mvmt					
	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	276	-	364	-	-
HCM Lane V/C Ratio	0.051	-	0.321	-	-
HCM Control Delay (s/veh)	8.9	0	19.5	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.2	-	1.4	-	-

Intersection					
Int Delay, s/veh	1.8				
Movement	EBT	EBR	WBL	WBT	NBL
Lane Configurations	W	W	W	W	W
Traffic Vol, veh/h	118	122	5	136	43
Future Vol, veh/h	118	122	5	136	43
Conflicting Peds, #/hr	0	100	100	0	100
Sign Control	Free	Free	Free	Free	Stop
RT Channelized	None	None	None	None	None
Storage Length	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0
Grade, %	0	-	-	0	0
Peak Hour Factor	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2
Mvmt Flow	131	136	6	151	48
Major/Minor					
Conflicting Flow All	0	0	367	0	561
Stage 1	-	-	-	-	299
Stage 2	-	-	-	-	262
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1192	-	489
Stage 1	-	-	-	-	752
Stage 2	-	-	-	-	782
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1066	-	389
Mov Cap-2 Maneuver	-	-	-	-	389
Stage 1	-	-	-	-	673
Stage 2	-	-	-	-	695
Approach					
	EB	WB	NB		
HCM Control Delay, s/v	0	0.3	15.41		
HCM LOS			C		
Minor Lane/Major Mvmt					
	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	399	-	-	64	-
HCM Lane V/C Ratio	0.134	-	-	0.005	-
HCM Control Delay (s/veh)	15.4	-	-	8.4	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.5	-	-	0	-

Intersection					
Int Delay, s/veh	0.8				
Movement	WBL	WBR	NBT	NBR	SBL
Lane Configurations	W	W	W	W	W
Traffic Vol, veh/h	5	72	522	7	1
Future Vol, veh/h	5	72	522	7	1
Conflicting Peds, #/hr	0	0	0	100	0
Sign Control	Stop	Stop	Free	Free	Free
RT Channelized	None	None	None	None	None
Storage Length	-	0	-	-	-
Veh in Median Storage, #	0	-	0	-	0
Grade, %	0	-	0	-	0
Peak Hour Factor	90	90	90	90	90
Heavy Vehicles, %	0	3	2	0	0
Mvmt Flow	6	80	580	8	1
Major/Minor					
Conflicting Flow All	1012	394	0	0	688
Stage 1	684	-	-	-	-
Stage 2	328	-	-	-	-
Critical Hdwy	6.8	6.96	-	-	4.1
Critical Hdwy Stg 1	5.8	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-
Follow-up Hdwy	3.5	3.33	-	-	2.2
Pot Cap-1 Maneuver	239	602	-	-	916
Stage 1	468	-	-	-	-
Stage 2	708	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	213	539	-	-	819
Mov Cap-2 Maneuver	213	-	-	-	-
Stage 1	418	-	-	-	-
Stage 2	707	-	-	-	-
Approach					
	WB	NB	SB		
HCM Control Delay, s/veh	85	0	0.02		
HCM LOS	B				
Minor Lane/Major Mvmt					
	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	539	819	-
HCM Lane V/C Ratio	-	-	0.149	0.001	-
HCM Control Delay (s/veh)	-	-	12.8	9.4	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.5	0	-

Intersection					
Int Delay, s/veh	2.4				
Movement	EBL	EBT	WBT	WBR	SBL
Lane Configurations	W	W	W	W	W
Traffic Vol, veh/h	5	56	23	88	49
Future Vol, veh/h	5	56	23	88	49
Conflicting Peds, #/hr	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop
RT Channelized	None	None	None	None	None
Storage Length	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0
Grade, %	-	0	0	-	0
Peak Hour Factor	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2
Mvmt Flow	6	62	26	98	54
Major/Minor					
Conflicting Flow All	123	0	-	0	148
Stage 1	-	-	-	-	74
Stage 2	-	-	-	-	73
Critical Hdwy	4.12	-	-	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	2.218	-	-	-	3.518
Pot Cap-1 Maneuver	1464	-	-	-	844
Stage 1	-	-	-	-	948
Stage 2	-	-	-	-	950
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	1464	-	-	-	841
Mov Cap-2 Maneuver	-	-	-	-	841
Stage 1	-	-	-	-	945
Stage 2	-	-	-	-	950
Approach					
	EB	WB	SB		
HCM Control Delay, s/v	0.61	0	9.54		
HCM LOS			A		
Minor Lane/Major Mvmt					
	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	148	-	-	-	853
HCM Lane V/C Ratio	0.004	-	-	-	0.07
HCM Control Delay (s/veh)	7.5	0	-	-	9.5
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Existing scenario

2024 Saturday Peak Hour

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	44	39	65	43	20	461	19	510
Traffic Volume (vph)	44	39	65	43	20	461	19	510
Future Volume (vph)	0	138	72	102	0	560	0	617
Lane Group Flow (vph)	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Turn Type	4	2	8	2	6	6	6	6
Protected Phases	4	8	8	2	2	2	6	6
Permitted Phases	4	4	8	8	2	2	2	6
Detector Phase	4	4	8	8	2	2	2	6
Switch Phase	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Initial (s)	26.0	26.0	26.0	26.0	49.0	49.0	49.0	49.0
Minimum Split (s)	26.0	26.0	26.0	26.0	49.0	49.0	49.0	49.0
Total Split (s)	34.7%	34.7%	34.7%	34.7%	65.3%	65.3%	65.3%	65.3%
Total Split (%)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Yellow Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
All-Red Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lost Time Adjust (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Total Lost Time (s)								
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Act Effect Green (s)	11.7	11.7	11.7	11.7	55.6	55.6	55.6	55.6
Actuated g/C Ratio	0.16	0.16	0.16	0.16	0.74	0.74	0.74	0.74
v/c Ratio	0.63	0.46	0.39	0.27	0.27	0.29	0.29	0.29
Control Delay (s/veh)	34.2	36.6	18.5	8.6	8.6	5.1	5.1	5.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	34.2	36.6	18.5	8.6	8.6	5.1	5.1	5.1
LOS	C	D	B	A	A	A	A	A
Approach Delay (s/veh)	34.2	36.6	18.5	8.6	8.6	5.1	5.1	5.1
Approach LOS	C	D	B	A	A	A	A	A
Queue Length 50th (m)	13.9	9.4	6.0	11.5	14.3	14.3	14.3	14.3
Queue Length 95th (m)	28.1	19.4	17.0	47.2	28.2	28.2	28.2	28.2
Internal Link Dist (m)	49.7	45.0	195.6	195.6	195.6	195.6	195.6	195.6
Turn Bay Length (m)								
Base Capacity (vph)	361	276	421	2097	2122	2122	2122	2122
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	0.38	0.26	0.24	0.27	0.29	0.29	0.29	0.29

Intersection Summary

Cycle Length: 75	Actuated Cycle Length: 75
Offset: 47 (63%), Referenced to phase 2:NBL and 6:SBTL, Start of Green	Natural Cycle: 75
Control Type: Actuated-Coordinated	Maximum v/c Ratio: 0.63
Intersection Signal Delay (s/veh): 11.6	Intersection LOS: B
Intersection Capacity Utilization 55.8%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 1: Bank & Fifth



Lane Group	EBT	NBL	NBT	SBL	SBT	Ø3
Lane Configurations	44	27	469	29	522	
Traffic Volume (vph)	9	27	469	29	522	
Future Volume (vph)	107	0	599	0	636	
Lane Group Flow (vph)	NA	Perm	NA	Perm	NA	
Turn Type	4	2	6	3	6	3
Protected Phases	4	2	6	6	6	6
Permitted Phases	4	2	6	6	6	6
Detector Phase	4	2	6	6	6	6
Switch Phase	4.4	10.0	10.0	4.0	4.0	1.0
Minimum Initial (s)	22.0	48.0	48.0	48.0	48.0	5.0
Minimum Split (s)	22.0	48.0	48.0	48.0	48.0	5.0
Total Split (s)	29.3%	64.0%	64.0%	64.0%	64.0%	7%
Total Split (%)	3.0	3.0	3.0	3.0	2.0	2.0
Yellow Time (s)	2.6	2.2	2.2	2.2	2.2	0.0
All-Red Time (s)	0.0	0.0	0.0	0.0	0.0	0.0
Lost Time Adjust (s)	5.6	5.2	5.2	5.2	5.2	5.2
Total Lost Time (s)						
Lead/Lag	Lag					Lead
Lead-Lag Optimize?						
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	None
Act Effect Green (s)	11.3	56.4	56.4	56.4	56.4	56.4
Actuated g/C Ratio	0.15	0.75	0.75	0.75	0.75	0.75
v/c Ratio	0.54	0.29	0.30	0.30	0.30	0.30
Control Delay (s/veh)	38.5	3.1	5.5	5.5	5.5	5.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	38.5	3.1	5.5	5.5	5.5	5.5
LOS	D	A	A	A	A	A
Approach Delay (s/veh)	38.5	3.1	5.5	5.5	5.5	5.5
Approach LOS	D	A	A	A	A	A
Queue Length 50th (m)	14.2	3.2	24.0	24.0	24.0	24.0
Queue Length 95th (m)	26.7	15.9	41.2	41.2	41.2	41.2
Internal Link Dist (m)	39.8	31.5	195.6	195.6	195.6	195.6
Turn Bay Length (m)						
Base Capacity (vph)	291	2040	2106	2106	2106	2106
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	0.29	0.30	0.30	0.30	0.30

Intersection Summary

Cycle Length: 75	Actuated Cycle Length: 75
Offset: 74 (99%), Referenced to phase 2:NBL and 6:SBTL, Start of Green	Natural Cycle: 75
Control Type: Actuated-Coordinated	Maximum v/c Ratio: 0.54
Intersection Signal Delay (s/veh): 7.0	Intersection LOS: A
Intersection Capacity Utilization 62.9%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 2: Bank & Holmwood



Lane Group	WBL	WBR	NBT	SBL	SBT	Ø1	Ø7
Lane Configurations	83	68	429	119	452		
Traffic Volume (vph)	83	68	429	119	452		
Future Volume (vph)	92	76	604	132	502		
Lane Group Flow (vph)	Perm	Perm	NA	Perm	NA		
Turn Type	8	8	2	6	1	7	7
Protected Phases	8	8	2	6	6	6	6
Permitted Phases	8	8	2	6	6	6	6
Detector Phase	8	8	2	6	6	6	6
Switch Phase	10.0	10.0	10.0	10.0	10.0	1.0	1.0
Minimum Initial (s)	26.0	26.0	39.0	39.0	39.0	5.0	5.0
Minimum Split (s)	26.0	26.0	39.0	39.0	39.0	5.0	5.0
Total Split (s)	34.7%	34.7%	52.0%	52.0%	52.0%	7%	7%
Total Split (%)	3.3	3.3	3.0	3.0	3.0	2.0	3.5
Yellow Time (s)	3.0	3.0	3.9	3.9	3.9	0.0	0.0
All-Red Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lost Time Adjust (s)	6.3	6.3	6.9	6.9	6.9	6.9	6.9
Total Lost Time (s)							
Lead/Lag	Lag	Lag					Lead
Lead-Lag Optimize?							Yes
Recall Mode	None	None	C-Max	C-Max	C-Max	None	None
Act Effect Green (s)	11.1	11.1	55.4	55.4	55.4	55.4	55.4
Actuated g/C Ratio	0.15	0.15	0.74	0.74	0.74	0.74	0.74
v/c Ratio	0.41	0.33	0.28	0.28	0.21	0.21	0.21
Control Delay (s/veh)	34.4	11.6	4.6	5.0	3.1	3.1	3.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	34.4	11.6	4.6	5.0	3.1	3.1	3.1
LOS	C	B	A	A	A	A	A
Approach Delay (s/veh)	24.1	4.6	3.5	3.5	3.5	3.5	3.5
Approach LOS	C	B	A	A	A	A	A
Queue Length 50th (m)	12.2	0.0	12.9	4.0	8.1	8.1	8.1
Queue Length 95th (m)	23.9	10.3	23.4	8.1	11.0	11.0	11.0
Internal Link Dist (m)	30.6	33.7	44.8	44.8	44.8	44.8	44.8
Turn Bay Length (m)							
Base Capacity (vph)	399	351	2160	467	2342	2342	2342
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.23	0.22	0.28	0.28	0.21	0.21	0.21

Intersection Summary

Cycle Length: 75	Actuated Cycle Length: 75
Offset: 70 (93%), Referenced to phase 2:NBT and 6:SBTL, Start of Green	Natural Cycle: 75
Control Type: Actuated-Coordinated	Maximum v/c Ratio: 0.41
Intersection Signal Delay (s/veh): 6.4	Intersection LOS: A
Intersection Capacity Utilization 58.8%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 3: Bank & Exhibition



Intersection	
Intersection Delay, s/veh	7.3
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	T			T	T	
Traffic Vol, veh/h	15	5	5	70	5	5
Future Vol, veh/h	15	5	5	70	5	5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	17	6	6	78	6	6
Number of Lanes	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay, s/veh	7	7.4	7
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	50%	0%	7%
Vol Thru, %	0%	75%	93%
Vol Right, %	50%	25%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	10	20	75
LT Vol	5	0	5
Through Vol	0	15	70
RT Vol	5	5	0
Lane Flow Rate	11	22	83
Geometry Grp	1	1	1
Degree of Util (X)	0.012	0.024	0.092
Departure Headway (Hd)	3.916	3.866	3.984
Convergence, Y/N	Yes	Yes	Yes
Cap	509	927	903
Service Time	1.959	1.895	1.991
HCM Lane V/C Ratio	0.012	0.024	0.092
HCM Control Delay, s/veh	7	7	7.4
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0	0.1	0.3

Intersection	
Intersection Delay, s/veh	8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		T					T	T				T
Traffic Vol, veh/h	39	46	0	0	0	0	90	56	38	35	0	0
Future Vol, veh/h	39	46	0	0	0	0	90	56	38	35	0	0
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	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	43	51	0	0	0	0	100	62	42	39	0	0
Number of Lanes	0	1	0	0	0	0	1	0	1	0	0	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB		NB	EB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB		SB	WB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	8.4	7.5	8.4	7.5
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	43%	46%	0%	0%
Vol Thru, %	29%	54%	0%	0%
Vol Right, %	27%	0%	100%	100%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	129	85	90	101
LT Vol	56	39	0	0
Through Vol	38	46	0	0
RT Vol	35	0	90	101
Lane Flow Rate	143	94	100	112
Geometry Grp	1	1	1	1
Degree of Util (X)	0.175	0.123	0.111	0.122
Departure Headway (Hd)	4.403	4.684	3.999	3.926
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	816	767	897	913
Service Time	2.423	2.103	2.019	1.946
HCM Lane V/C Ratio	0.175	0.123	0.111	0.123
HCM Control Delay, s/veh	8.4	8.4	7.5	7.5
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.6	0.4	0.4	0.4

Intersection	
Intersection Delay, s/veh	8
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	T			T	T	
Traffic Vol, veh/h	15	5	83	5	101	20
Future Vol, veh/h	15	5	83	5	101	20
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	17	6	92	6	112	22
Number of Lanes	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay, s/veh	7.3	8.1	8.1
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	83%	0%	94%
Vol Thru, %	0%	75%	6%
Vol Right, %	17%	25%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	121	20	88
LT Vol	101	0	83
Through Vol	0	15	5
RT Vol	20	5	0
Lane Flow Rate	134	22	98
Geometry Grp	1	1	1
Degree of Util (X)	0.157	0.026	0.119
Departure Headway (Hd)	4.21	4.2	4.378
Convergence, Y/N	Yes	Yes	Yes
Cap	843	858	810
Service Time	2.283	2.2	2.456
HCM Lane V/C Ratio	0.159	0.026	0.121
HCM Control Delay, s/veh	8.1	7.3	8.1
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.6	0.1	0.4

Intersection	
Int Delay, s/veh	5.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		T	T	T	T	T
Traffic Vol, veh/h	3	172	113	539	490	53
Future Vol, veh/h	3	172	113	539	490	53
Conflicting Peds, #/hr	0	0	178	0	0	107
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	3	191	126	599	544	59

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	1302	752	781
Stage 1	752	-	-
Stage 2	551	-	-
Critical Hdwy	6.645	6.245	4.145
Critical Hdwy Stg 1	5.445	-	-
Critical Hdwy Stg 2	5.845	-	-
Follow-up Hdwy	3.52853	3.2852	2.285
Pot Cap-1 Maneuver	163	407	829
Stage 1	462	-	-
Stage 2	540	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	83	331	673
Mov Cap-2 Maneuver	83	-	-
Stage 1	291	-	-
Stage 2	438	-	-

Approach	EB	NB	SB
HCM Control Delay, s/veh	3.52	0	
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBTEBLn1	SBT	SBR
Capacity (veh/h)	561	-	331	-
HCM Lane V/C Ratio	0.187	-	0.578	-
HCM Control Delay (s/veh)	11.6	1.8	29.8	-
HCM Lane LOS	B	A	D	-
HCM 95th-tile Q(veh)	0.7	-	3.4	-

Intersection					
Int Delay, s/veh	0.3				
Movement	EBL	EBR	NBL	NBT	SBT
Lane Configurations					
Traffic Vol, veh/h	1	31	0	641	654
Future Vol, veh/h	1	31	0	641	654
Conflicting Peds, #/hr	0	0	0	0	86
Sign Control	Stop	Stop	Free	Free	Free
RT Channelized	None	None	None	None	None
Storage Length	-	0	-	-	-
Veh in Median Storage, #	0	-	0	0	-
Grade, %	0	-	0	0	-
Peak Hour Factor	90	90	90	90	90
Heavy Vehicles, %	3	3	3	3	3
Mvmt Flow	1	34	0	712	727
Major/Minor	Minor2	Major1	Major2		
Conflicting Flow All	1083	727	-	0	-
Stage 1	727	-	-	-	-
Stage 2	356	-	-	-	-
Critical Hdwy	6.645	6.245	-	-	-
Critical Hdwy Stg 1	5.445	-	-	-	-
Critical Hdwy Stg 2	5.845	-	-	-	-
Follow-up Hdwy	3.52853	3.285	-	-	-
Pot Cap-1 Maneuver	224	421	0	-	0
Stage 1	475	-	0	-	0
Stage 2	678	-	0	-	0
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	224	421	-	-	-
Mov Cap-2 Maneuver	224	-	-	-	-
Stage 1	475	-	-	-	-
Stage 2	678	-	-	-	-
Approach	EB	NB	SB		
HCM Control Delay, s/4.31	B	0	0		
HCM LOS	B				
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	
Capacity (veh/h)	-	421	-	-	-
HCM Lane V/C Ratio	-	0.082	-	-	-
HCM Control Delay (s/veh)	-	14.3	-	-	-
HCM Lane LOS	-	B	-	-	-
HCM 95th %tile Q(veh)	-	0.3	-	-	-

Intersection					
Int Delay, s/veh	0.8				
Movement	WBL	WBR	NBT	NBR	SBL
Lane Configurations					
Traffic Vol, veh/h	6	69	479	18	2
Future Vol, veh/h	6	69	479	18	2
Conflicting Peds, #/hr	0	0	0	100	0
Sign Control	Free	Free	Free	Free	Free
RT Channelized	None	None	None	None	None
Storage Length	-	0	-	-	-
Veh in Median Storage, #	0	-	0	-	0
Grade, %	0	-	0	-	0
Peak Hour Factor	90	90	90	90	90
Heavy Vehicles, %	0	0	2	0	2
Mvmt Flow	7	77	532	20	2
Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	961	376	0	0	652
Stage 1	642	-	-	-	-
Stage 2	318	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.14
Critical Hdwy Stg 1	5.8	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.22
Pot Cap-1 Maneuver	258	627	-	-	930
Stage 1	491	-	-	-	-
Stage 2	716	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	230	561	-	-	832
Mov Cap-2 Maneuver	230	-	-	-	-
Stage 1	439	-	-	-	-
Stage 2	714	-	-	-	-
Approach	WB	NB	SB		
HCM Control Delay, s/4.243	B	0	0.03		
HCM LOS	B				
Minor Lane/Major Mvmt	NBL	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	561	832	-
HCM Lane V/C Ratio	-	-	0.137	0.003	-
HCM Control Delay (s/veh)	-	-	12.4	9.3	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.5	0	-

Intersection					
Int Delay, s/veh	3				
Movement	EBL	EBR	NBL	NBT	SBT
Lane Configurations					
Traffic Vol, veh/h	67	54	54	204	245
Future Vol, veh/h	67	54	54	204	245
Conflicting Peds, #/hr	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free
RT Channelized	None	None	None	None	None
Storage Length	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0
Grade, %	0	-	-	0	0
Peak Hour Factor	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0
Mvmt Flow	74	60	60	227	272
Major/Minor	Minor2	Major1	Major2		
Conflicting Flow All	688	341	410	0	-
Stage 1	341	-	-	-	-
Stage 2	347	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-
Pot Cap-1 Maneuver	415	706	1160	-	-
Stage 1	725	-	-	-	-
Stage 2	720	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	391	706	1160	-	-
Mov Cap-2 Maneuver	391	-	-	-	-
Stage 1	682	-	-	-	-
Stage 2	720	-	-	-	-
Approach	EB	NB	SB		
HCM Control Delay, s/45.16	C	1.73	0		
HCM LOS	C				
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	377	-	488	-	-
HCM Lane V/C Ratio	0.052	-	0.276	-	-
HCM Control Delay (s/veh)	8.3	0	15.2	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.2	-	1.1	-	-

Intersection					
Int Delay, s/veh	2.9				
Movement	EBT	EBR	WBL	WBT	NBL
Lane Configurations					
Traffic Vol, veh/h	116	117	5	83	68
Future Vol, veh/h	116	117	5	83	68
Conflicting Peds, #/hr	0	100	100	0	100
Sign Control	Free	Free	Free	Free	Stop
RT Channelized	None	None	None	None	None
Storage Length	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0
Grade, %	0	-	-	0	0
Peak Hour Factor	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2
Mvmt Flow	129	130	6	92	76
Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	359	0	497
Stage 1	-	-	-	-	294
Stage 2	-	-	-	-	203
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1200	-	532
Stage 1	-	-	-	-	756
Stage 2	-	-	-	-	831
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1073	-	423
Mov Cap-2 Maneuver	-	-	-	-	423
Stage 1	-	-	-	-	676
Stage 2	-	-	-	-	739
Approach	EB	WB	NB		
HCM Control Delay, s/v	0	0.48	15.34		
HCM LOS			C		
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	429	-	-	102	-
HCM Lane V/C Ratio	0.189	-	-	0.005	-
HCM Control Delay (s/veh)	15.3	-	-	8.4	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.7	-	-	0	-

Intersection						
Int Delay, s/veh	3.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	30	72	106	91	5
Future Vol, veh/h	5	30	72	106	91	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	None	None	None	None	None	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	33	80	118	101	6
Major/Minor						
Conflicting Flow All	198	0	-	0	183	139
Stage 1	-	-	-	-	139	-
Stage 2	-	-	-	-	44	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1375	-	-	-	806	909
Stage 1	-	-	-	-	888	-
Stage 2	-	-	-	-	978	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	1375	-	-	-	803	909
Mov Cap-2 Maneuver	-	-	-	-	803	-
Stage 1	-	-	-	-	884	-
Stage 2	-	-	-	-	978	-
Approach						
EB	WB	SB				
HCM Control Delay, s/v 1.09	0	10.13				
HCM LOS	B					
Minor Lane/Major Mvmt						
Capacity (veh/h)	257	-	-	-	808	
HCM Lane V/C Ratio	0.004	-	-	-	0.132	
HCM Control Delay (s/veh)	7.6	0	-	-	10.1	
HCM Lane LOS	A	A	-	-	B	
HCM 95th %ile Q(veh)	0	-	-	-	0.5	

Existing scenario

2024 Sunday Peak Hour

Queues

1: Bank & Fifth

08/01/2024

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	52	36	118	64	15	468	22	486
Future Volume (vph)	52	36	118	64	15	468	22	486
Lane Group Flow (vph)	0	126	131	112	0	566	0	608
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases	4	8	8	2	2	6	6	6
Permitted Phases	4	8	8	2	2	6	6	6
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	26.0	26.0	26.0	26.0	49.0	49.0	49.0	49.0
Total Split (s)	26.0	26.0	26.0	26.0	49.0	49.0	49.0	49.0
Total Split (%)	34.7%	34.7%	34.7%	34.7%	65.3%	65.3%	65.3%	65.3%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lag							
Lead-Lag Optimize?	None							
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	14.0	14.0	14.0	14.0	50.0	50.0	50.0	50.0
Actuated g/C Ratio	0.19	0.19	0.19	0.19	0.67	0.67	0.67	0.67
v/c Ratio	0.53	0.65	0.36	0.30	0.30	0.33	0.33	0.33
Control Delay (s/veh)	30.2	41.7	20.1	7.9	6.5	6.5	6.5	6.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	30.2	41.7	20.1	7.9	6.5	6.5	6.5	6.5
LOS	C	D	C	C	A	A	A	A
Approach Delay (s/veh)	30.2	31.8	7.9	6.5	6.5	6.5	6.5	6.5
Approach LOS	C	C	A	A	A	A	A	A
Queue Length 50th (m)	13.6	17.3	9.0	32.0	15.8	15.8	15.8	15.8
Queue Length 95th (m)	26.4	30.7	20.0	51.3	30.8	30.8	30.8	30.8
Internal Link Dist (m)	49.7	112.4	195.6	190.0	190.0	190.0	190.0	190.0
Turn Bay Length (m)	45.0							
Base Capacity (vph)	338	297	431	1903	1869	1869	1869	1869
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	0.37	0.44	0.26	0.30	0.33	0.33	0.33	0.33
Intersection Summary								
Cycle Length: 75								
Actuated Cycle Length: 75								
Offset: 42 (56%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green								
Natural Cycle: 75								
Control Type: Actuated-Coordinated								
Maximum v/c Ratio: 0.65								
Intersection Signal Delay (s/veh): 12.9	Intersection LOS: B							
Intersection Capacity Utilization 58.2%	ICU Level of Service B							
Analysis Period (min) 15								
Splits and Phases: 1: Bank & Fifth								

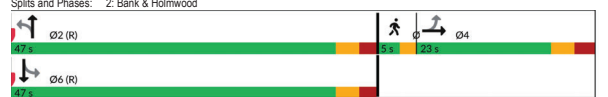


Queues

2: Bank & Holmwood

08/01/2024

Lane Group	EBT	WBT	NBL	NBT	SBL	SBT	Ø3
Lane Configurations							
Traffic Volume (vph)	17	0	31	484	22	519	
Future Volume (vph)	17	0	31	484	22	519	
Lane Group Flow (vph)	107	2	0	670	0	639	
Turn Type	NA	NA	Perm	NA	Perm	NA	
Protected Phases	4	2	2	6	3	6	
Permitted Phases	4	2	2	6	6	6	
Detector Phase	4	2	2	6	6	6	
Switch Phase							
Minimum Initial (s)	4.4	10.0	10.0	4.0	4.0	1.0	
Minimum Split (s)	23.0	47.0	47.0	47.0	47.0	5.0	
Total Split (s)	23.0	47.0	47.0	47.0	47.0	5.0	
Total Split (%)	30.7%	62.7%	62.7%	62.7%	62.7%	7%	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	2.0	
All-Red Time (s)	2.2	2.2	2.2	2.2	2.2	0.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.6	5.2	5.2	5.2	5.2	5.2	
Lead/Lag	Lag						
Lead-Lag Optimize?	None						
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	None	
Act Effct Green (s)	11.2	0.0	56.4	56.4	56.4	56.4	
Actuated g/C Ratio	0.15	0.00	0.75	0.75	0.75	0.75	
v/c Ratio	0.53	0.01	0.34	0.30	0.30	0.30	
Control Delay (s/veh)	38.2	0.0	7.2	8.2	8.2	8.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	38.2	0.0	7.2	8.2	8.2	8.2	
LOS	D	A	A	A	A	A	
Approach Delay (s/veh)	38.2	7.2	8.2	8.2	8.2	8.2	
Approach LOS	D	A	A	A	A	A	
Queue Length 50th (m)	14.2	0.0	30.2	19.5	19.5	19.5	
Queue Length 95th (m)	26.7	0.0	49.5	44.3	44.3	44.3	
Internal Link Dist (m)	39.8	116.8	31.5	195.6	195.6	195.6	
Turn Bay Length (m)	45.0						
Base Capacity (vph)	313	143	1966	2124	2124	2124	
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	0.34	0.01	0.34	0.30	0.30	0.30	
Intersection Summary							
Cycle Length: 75							
Actuated Cycle Length: 75							
Offset: 16 (21%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green							
Natural Cycle: 75							
Control Type: Actuated-Coordinated							
Maximum v/c Ratio: 0.53							
Intersection Signal Delay (s/veh): 10.0	Intersection LOS: A						
Intersection Capacity Utilization 58%	ICU Level of Service H						
Analysis Period (min) 15							
Splits and Phases: 2: Bank & Holmwood							



Queues
3: Bank & Exhibition

08/01/2024

Lane Group	WBL	WBR	NBT	SBL	SBT	Ø3	Ø6	Ø7
Lane Configurations								
Traffic Volume (vph)	120	63	397	170	423			
Future Volume (vph)	120	63	397	170	423			
Lane Group Flow (vph)	133	70	570	189	470			
Turn Type	Perm	Perm	NA	custom	NA			
Protected Phases		2	1	16	3	6	7	
Permitted Phases	8	8		6				
Detector Phase	8	8	2	1	16			
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	1.0	3.0	10.0	3.0	
Minimum Split (s)	26.0	26.0	27.0	7.9	5.0	27.0	5.0	
Total Split (s)	26.0	26.0	27.0	12.0	5.0	27.0	5.0	
Total Split (%)	34.7%	34.7%	36.0%	10.0%	7%	36%	7%	
Yellow Time (s)	3.3	3.3	3.0	3.0	2.0	3.0	2.0	
All-Red Time (s)	3.0	3.0	3.9	3.9	0.0	3.9	0.0	
Last Time Adjust (s)	0.0	0.0	0.0	0.0				
Total Lost Time (s)	6.3	6.3	6.9	6.9				
Lead/Lag			Lead		Lag			
Lead-Lag Optimize?			Yes		Yes			
Recall Mode	None	None	C-Max	None	None	C-Max	None	
Act Effect Green (s)	12.5	12.5	40.6	45.7	54.0			
Actuated g/C Ratio	0.17	0.17	0.54	0.61	0.72			
v/c Ratio	0.53	0.29	0.36	0.41	0.21			
Control Delay (s/veh)	35.8	10.2	11.3	12.4	5.1			
Queue Delay	0.0	0.0	0.0	0.0	0.0			
Total Delay (s/veh)	35.8	10.2	11.3	12.4	5.1			
LOS	D	B	B	B	A			
Approach Delay (s/veh)	27.0		11.3		7.1			
Approach LOS	C		B		A			
Queue Length 50th (m)	17.6	0.0	21.9	7.5	10.4			
Queue Length 95th (m)	31.2	9.4	37.9	26.0	23.4			
Internal Link Dist (m)	30.6		33.7		44.8			
Turn Bay Length (m)				40.0				
Base Capacity (vph)	399	347	1584	462	2283			
Starvation Cap Reductn	0	0	0	0	0			
Spillback Cap Reductn	0	0	0	0	0			
Storage Cap Reductn	0	0	0	0	0			
Reduced v/c Ratio	0.33	0.20	0.36	0.41	0.21			
Intersection Summary								
Cycle Length: 75								
Actuated Cycle Length: 75								
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green								
Natural Cycle: 75								
Control Type: Actuated-Coordinated								
Maximum v/c Ratio: 0.53								
Intersection Signal Delay (s/veh): 11.6								
Intersection Capacity Utilization 59.6%								
Analysis Period (min) 15								

Splits and Phases: 3: Bank & Exhibition

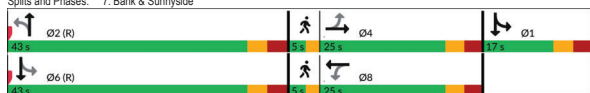


Queues
7: Bank & Sunnyside

08/01/2024

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	Ø3	Ø6	Ø7
Lane Configurations											
Traffic Volume (vph)	41	32	15	49	18	448	113	482			
Future Volume (vph)	41	32	15	49	18	448	113	482			
Lane Group Flow (vph)	0	114	0	185	0	530	0	751			
Turn Type	Perm	NA	Perm	NA	Perm	NA	custom	NA			
Protected Phases		4		8		2	1	16	3	6	7
Permitted Phases	4		8		2		6				
Detector Phase	4	4	8	8	2	2	1	16			
Switch Phase											
Minimum Initial (s)	6.4	6.4	5.3	5.3	17.0	17.0	5.0		1.0	17.0	1.0
Minimum Split (s)	25.0	25.0	25.0	25.0	43.0	43.0	17.0		5.0	43.0	5.0
Total Split (s)	25.0	25.0	25.0	25.0	43.0	43.0	17.0		5.0	43.0	5.0
Total Split (%)	27.8%	27.8%	27.8%	27.8%	47.8%	47.8%	18.9%		6%	48%	6%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0		2.0	3.0	2.0
All-Red Time (s)	2.6	2.6	2.6	2.6	3.0	3.0	2.9		0.0	3.0	0.0
Last Time Adjust (s)											
Total Lost Time (s)											
Lead/Lag		Lag	Lag	Lag	Lag				Lead	Lead	
Lead-Lag Optimize?		Yes	Yes	Yes	Yes				Yes	Yes	
Recall Mode	None	None	None	None	C-Max	C-Max	None		None	C-Max	None
Act Effect Green (s)	14.6		14.6		44.6	44.6	58.0				
Actuated g/C Ratio	0.16		0.16		0.50	0.50	0.64				
v/c Ratio	0.78		0.70		0.37	0.37	0.49				
Control Delay (s/veh)	67.8		32.8		16.5	16.5	4.7				
Queue Delay	0.0		0.0		0.0	0.0	0.0				
Total Delay (s/veh)	67.8		32.8		16.5	16.5	4.7				
LOS	E		C		B	B	A				
Approach Delay (s/veh)	67.8		32.8		16.5	16.5	4.7				
Approach LOS	E		C		B	B	A				
Queue Length 50th (m)	19.1		16.5		28.7	28.7	8.6				
Queue Length 95th (m)	34.5		35.5		47.5	47.5	11.3				
Internal Link Dist (m)			75.1		136.0		63.1				
Turn Bay Length (m)											
Base Capacity (vph)		199		333		1417		1547			
Starvation Cap Reductn		0		0		0		0			
Spillback Cap Reductn		0		0		0		0			
Storage Cap Reductn		0		0		0		0			
Reduced v/c Ratio		0.57		0.56		0.37		0.49			
Intersection Summary											
Cycle Length: 90											
Actuated Cycle Length: 90											
Offset: 23 (26%), Referenced to phase 2:NBT and 6:SBTL, Start of Green											
Natural Cycle: 90											
Control Type: Actuated-Coordinated											
Maximum v/c Ratio: 0.78											
Intersection Signal Delay (s/veh): 16.5											
Intersection Capacity Utilization 72.1%											
Analysis Period (min) 15											

Splits and Phases: 7: Bank & Sunnyside

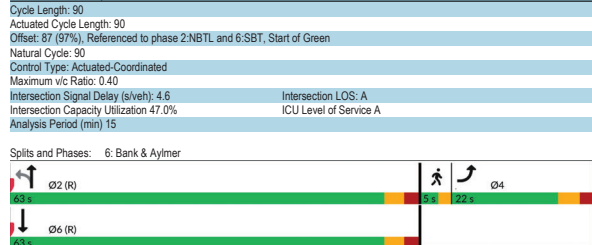


Queues
6: Bank & Aylmer

08/01/2024

Lane Group	EBL	NBL	NBT	SBT	Ø3
Lane Configurations					
Traffic Volume (vph)	50	13	972	627	
Future Volume (vph)	50	13	972	627	
Lane Group Flow (vph)	76	0	650	753	
Turn Type	Prot	Perm	NA	NA	
Protected Phases		4	2	6	3
Permitted Phases	4	2		6	
Detector Phase	4	2	2	6	
Switch Phase					
Minimum Initial (s)	10.0	30.0	30.0	30.0	1.0
Minimum Split (s)	22.0	63.0	63.0	63.0	4.0
Total Split (s)	22.0	63.0	63.0	63.0	5.0
Total Split (%)	24.4%	70.0%	70.0%	70.0%	6%
Yellow Time (s)	3.3	3.0	3.0	3.0	2.0
All-Red Time (s)	2.2	2.2	2.2	2.2	0.0
Last Time Adjust (s)	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.5	5.2	5.2	5.2	
Lead/Lag		Lag			Lead
Lead-Lag Optimize?		Yes			Yes
Recall Mode	None	C-Max	C-Max	C-Max	None
Act Effect Green (s)	10.8		72.6	72.6	
Actuated g/C Ratio	0.12		0.81	0.81	
v/c Ratio	0.40		0.27	0.31	
Control Delay (s/veh)	35.7		2.4	3.4	
Queue Delay	0.0		0.0	0.0	
Total Delay (s/veh)	35.7		2.4	3.4	
LOS	D		A	A	
Approach Delay (s/veh)	35.7		2.4	3.4	
Approach LOS	D		A	A	
Queue Length 50th (m)	9.6		10.8	15.8	
Queue Length 95th (m)	21.9		14.3	26.2	
Internal Link Dist (m)	76.7		28.1	10.1	
Turn Bay Length (m)					
Base Capacity (vph)	281		2411	2463	
Starvation Cap Reductn	0		0	0	
Spillback Cap Reductn	0		0	0	
Storage Cap Reductn	0		0	0	
Reduced v/c Ratio	0.27		0.27	0.31	
Intersection Summary					
Cycle Length: 90					
Actuated Cycle Length: 90					
Offset: 87 (97%), Referenced to phase 2:NBT and 6:SBT, Start of Green					
Natural Cycle: 90					
Control Type: Actuated-Coordinated					
Maximum v/c Ratio: 0.40					
Intersection Signal Delay (s/veh): 4.6					
Intersection Capacity Utilization 47.0%					
Analysis Period (min) 15					

Splits and Phases: 6: Bank & Aylmer

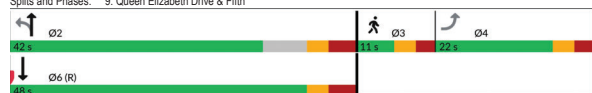


Queues
9: Queen Elizabeth Drive & Fifth

08/01/2024

Lane Group	EBL	NBL	NBT	SBT	Ø3
Lane Configurations					
Traffic Volume (vph)	12	198	12	11	
Future Volume (vph)	12	198	12	11	
Lane Group Flow (vph)	154	0	233	40	
Turn Type	Perm	Perm	NA	NA	
Protected Phases		4	2	6	3
Permitted Phases	4	2		6	
Detector Phase	4	2	2	6	
Switch Phase					
Minimum Initial (s)	10.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	42.0	42.0	42.0	9.7
Total Split (s)	22.0	42.0	42.0	42.0	11.0
Total Split (%)	27.2%	51.9%	51.9%	59.3%	14%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.7	3.8	3.8	3.8	2.7
Last Time Adjust (s)	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.7	6.8	6.8	6.8	
Lead/Lag		Lag			Lead
Lead-Lag Optimize?		Yes			Yes
Recall Mode	Min	None	None	C-Max	None
Act Effect Green (s)	14.0		54.5	54.5	
Actuated g/C Ratio	0.17		0.67	0.67	
v/c Ratio	0.61		0.29	0.04	
Control Delay (s/veh)	40.6		7.3	5.6	
Queue Delay	0.0		0.0	0.0	
Total Delay (s/veh)	40.6		7.3	5.6	
LOS	D		A	A	
Approach Delay (s/veh)	40.6		7.3	5.6	
Approach LOS	D		A	A	
Queue Length 50th (m)	22.3		12.4	1.8	
Queue Length 95th (m)	37.4		27.9	5.7	
Internal Link Dist (m)	57.2		0.1	5.9	
Turn Bay Length (m)					
Base Capacity (vph)	306		804	1026	
Starvation Cap Reductn	0		0	0	
Spillback Cap Reductn	0		0	0	
Storage Cap Reductn	0		0	0	
Reduced v/c Ratio	0.50		0.29	0.04	
Intersection Summary					
Cycle Length: 81					
Actuated Cycle Length: 81					
Offset: 0 (0%), Referenced to phase 6:SBT, Start of Green					
Natural Cycle: 75					
Control Type: Actuated-Coordinated					
Maximum v/c Ratio: 0.61					
Intersection Signal Delay (s/veh): 19.1					
Intersection Capacity Utilization 38.3%					
Analysis Period (min) 15					

Splits and Phases: 9: Queen Elizabeth Drive & Fifth



Intersection						
Intersection Delay, s/veh	7.9					
Intersection LOS	A					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔	↔		↔	↔
Traffic Vol, veh/h	5	141	100	5	5	5
Future Vol, veh/h	5	141	100	5	5	5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	157	111	6	6	6
Number of Lanes	0	1	1	0	1	0
Approach	EB	WB	SB			
Opposing Approach	WB	EB				
Opposing Lanes	1	1	0			
Conflicting Approach Left	SB		WB			
Conflicting Lanes Left	1	0	1			
Conflicting Approach Right		SB	EB			
Conflicting Lanes Right	0	1	1			
HCM Control Delay, s/veh	8	7.7	7.4			
HCM LOS	A	A	A			

Lane	EBLn1	WBLn1	SBLn1
Vol Left, %	3%	0%	50%
Vol Thru, %	97%	95%	0%
Vol Right, %	0%	5%	50%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	146	105	10
LT Vol	5	0	5
Through Vol	141	100	0
RT Vol	0	5	5
Lane Flow Rate	162	117	11
Geometry Grp	1	1	1
Degree of Util (X)	0.182	0.131	0.013
Departure Headway (Hd)	4.048	4.046	4.328
Convergence, Y/N	Yes	Yes	Yes
Cap	866	853	832
Service Time	2.076	2.084	2.328
HCM Lane V/C Ratio	0.183	0.133	0.013
HCM Control Delay, s/veh	8	7.7	7.4
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.7	0.5	0

Intersection						
Intersection Delay, s/veh	8					
Intersection LOS	A					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔			↔	↔	
Traffic Vol, veh/h	14	5	54	3	122	24
Future Vol, veh/h	14	5	54	3	122	24
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	16	6	60	3	136	27
Number of Lanes	1	0	0	1	1	0
Approach	EB	WB	WB	NB	SB	SB
Opposing Approach	WB	EB				
Opposing Lanes	1	1	0			
Conflicting Approach Left		NB	EB			
Conflicting Lanes Left	0	1	1			
Conflicting Approach Right	NB		WB			
Conflicting Lanes Right	1	0	1			
HCM Control Delay, s/veh	7.3	7.9	8.2			
HCM LOS	A	A	A			

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	84%	0%	95%
Vol Thru, %	0%	74%	5%
Vol Right, %	16%	26%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	146	19	57
LT Vol	122	0	54
Through Vol	0	14	3
RT Vol	24	5	0
Lane Flow Rate	162	21	63
Geometry Grp	1	1	1
Degree of Util (X)	0.187	0.025	0.078
Departure Headway (Hd)	4.148	4.216	4.425
Convergence, Y/N	Yes	Yes	Yes
Cap	860	854	798
Service Time	2.202	2.216	2.516
HCM Lane V/C Ratio	0.188	0.025	0.079
HCM Control Delay, s/veh	8.2	7.3	7.9
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.7	0.1	0.3

Intersection						
Intersection Delay, s/veh	7.9					
Intersection LOS	A					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔			↔	↔	
Traffic Vol, veh/h	14	5	5	158	5	5
Future Vol, veh/h	14	5	5	158	5	5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	16	6	6	176	6	6
Number of Lanes	1	0	0	1	1	0
Approach	EB	WB	WB	NB	SB	SB
Opposing Approach	WB	EB				
Opposing Lanes	1	1	0			
Conflicting Approach Left		NB	EB			
Conflicting Lanes Left	0	1	1			
Conflicting Approach Right	NB		WB			
Conflicting Lanes Right	1	0	1			
HCM Control Delay, s/veh	7.1	8	7.2			
HCM LOS	A	A	A			

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	50%	0%	3%
Vol Thru, %	0%	74%	97%
Vol Right, %	50%	26%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	10	19	163
LT Vol	5	0	5
Through Vol	0	14	158
RT Vol	5	5	0
Lane Flow Rate	11	21	181
Geometry Grp	1	1	1
Degree of Util (X)	0.013	0.023	0.2
Departure Headway (Hd)	4.083	3.93	3.976
Convergence, Y/N	Yes	Yes	Yes
Cap	864	807	906
Service Time	2.166	1.969	1.985
HCM Lane V/C Ratio	0.013	0.023	0.2
HCM Control Delay, s/veh	7.2	7.1	8
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0	0.1	0.7

Intersection												
Intersection Delay, s/veh	9.8											
Intersection LOS	A											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔					↔	↔		↔		↔
Traffic Vol, veh/h	67	79	0	0	0	223	97	65	60	0	0	101
Future Vol, veh/h	67	79	0	0	0	223	97	65	60	0	0	101
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	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	74	88	0	0	0	248	108	72	67	0	0	112
Number of Lanes	0	1	0	0	0	1	0	1	0	0	0	1
Approach	EB	WB	WB	NB	NB	SB	SB	SB	SB	SB	SB	SB
Opposing Approach	WB	EB	SB									
Opposing Lanes	1	1	1									
Conflicting Approach Left	SB		NB	EB								
Conflicting Lanes Left	1	1	1									
Conflicting Approach Right	NB		SB	WB								
Conflicting Lanes Right	1	1	1									
HCM Control Delay, s/veh	9.9	9.9	9.4	10.6								
HCM LOS	A	A	B	A								

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	44%	46%	0%	0%
Vol Thru, %	29%	54%	0%	0%
Vol Right, %	27%	0%	100%	100%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	222	146	223	101
LT Vol	97	67	0	0
Through Vol	65	79	0	0
RT Vol	60	0	223	101
Lane Flow Rate	247	162	248	112
Geometry Grp	1	1	1	1
Degree of Util (X)	0.339	0.234	0.304	0.144
Departure Headway (Hd)	4.943	5.183	4.417	4.619
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	720	855	805	765
Service Time	3.028	3.272	2.496	2.717
HCM Lane V/C Ratio	0.343	0.236	0.308	0.146
HCM Control Delay, s/veh	10.6	9.9	9.4	8.5
HCM Lane LOS	B	A	A	A
HCM 95th-tile Q	1.5	0.9	1.3	0.5

Intersection						
Int Delay, s/veh						
	4.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	149	105	527	473	59
Future Vol, veh/h	5	149	105	527	473	59
Conflicting Peds, #/hr	0	0	178	0	0	107
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	-	None	-	None	-
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	6	166	117	586	526	66

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All			
Stage 1	736	-	-
Stage 2	526	-	-
Critical Hdwy			
Critical Hdwy Stg 1	6.645	6.245	4.145
Critical Hdwy Stg 2	5.945	-	-
Follow-up Hdwy	3.52853	3.2852	2.285
Pot Cap-1 Maneuver			
Stage 1	470	-	-
Stage 2	556	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	91	337	680
Mov Cap-2 Maneuver	91	-	-
Stage 1	303	-	-
Stage 2	451	-	-

Approach	EB	NB	SB
HCM Control Delay, s/25.53			
HCM LOS	D	3.28	0

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	569	-	337	-	-
HCM Lane V/C Ratio	0.172	-	0.491	-	-
HCM Control Delay (s/veh)	11.4	1.7	25.5	-	-
HCM Lane LOS	B	A	D	-	-
HCM 95th %tile Q(veh)	0.6	-	2.6	-	-

Intersection						
Int Delay, s/veh						
	1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	68	0	607	626	1
Future Vol, veh/h	2	68	0	607	626	1
Conflicting Peds, #/hr	0	0	0	0	0	86
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	2	76	0	674	696	1

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All			
Stage 1	782	-	-
Stage 2	337	-	-
Critical Hdwy			
Critical Hdwy Stg 1	6.645	6.245	-
Critical Hdwy Stg 2	5.945	-	-
Follow-up Hdwy	3.52853	3.285	-
Pot Cap-1 Maneuver			
Stage 1	448	-	-
Stage 2	693	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	176	356	-
Mov Cap-2 Maneuver	176	-	-
Stage 1	407	-	-
Stage 2	630	-	-

Approach	EB	NB	SB
HCM Control Delay, s/47.83			
HCM LOS	C	0	0

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	356	-	-	-
HCM Lane V/C Ratio	-	0.212	-	-	-
HCM Control Delay (s/veh)	-	17.8	-	-	-
HCM Lane LOS	-	C	-	-	-
HCM 95th %tile Q(veh)	-	0.8	-	-	-

Intersection						
Int Delay, s/veh						
	5.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	84	132	69	125	65	57
Future Vol, veh/h	84	132	69	125	65	57
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	93	147	77	139	72	63

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All			
Stage 1	104	-	-
Stage 2	292	-	-
Critical Hdwy			
Critical Hdwy Stg 1	6.4	6.2	4.1
Critical Hdwy Stg 2	5.4	-	-
Follow-up Hdwy	3.5	3.3	2.2
Pot Cap-1 Maneuver			
Stage 1	613	956	1461
Stage 2	925	-	-
Stage 2	762	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	578	966	1461
Mov Cap-2 Maneuver	578	-	-
Stage 1	873	-	-
Stage 2	762	-	-

Approach	EB	NB	SB
HCM Control Delay, s/41.88			
HCM LOS	B	2.7	0

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	640	-	762	-	-
HCM Lane V/C Ratio	0.052	-	0.315	-	-
HCM Control Delay (s/veh)	7.6	0	11.9	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.2	-	1.4	-	-

Intersection						
Int Delay, s/veh						
	1.9					
Movement	WBL	WBR	NBL	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	7	156	452	19	0	578
Future Vol, veh/h	7	156	452	19	0	578
Conflicting Peds, #/hr	0	0	0	100	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	-	0
Grade, %	0	-	0	-	-	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	2	0	2	2
Mvmt Flow	8	173	502	21	0	642

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All			
Stage 1	613	-	-
Stage 2	321	-	-
Critical Hdwy			
Critical Hdwy Stg 1	6.8	6.9	-
Critical Hdwy Stg 2	5.8	-	-
Follow-up Hdwy	3.5	3.3	-
Pot Cap-1 Maneuver			
Stage 1	268	641	-
Stage 1	509	-	-
Stage 2	714	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	240	573	-
Mov Cap-2 Maneuver	240	-	-
Stage 1	455	-	-
Stage 2	714	-	-

Approach	WB	NB	SB
HCM Control Delay, s/43.98			
HCM LOS	B	0	0

Minor Lane/Major Mvmt	NBL	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	573	-
HCM Lane V/C Ratio	-	-	0.302	-
HCM Control Delay (s/veh)	-	-	14	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	1.3	-

Intersection						
Int Delay, s/veh	3.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	[Diagram]					
Traffic Vol, veh/h	141	145	5	100	83	5
Future Vol, veh/h	141	145	5	100	83	5
Conflicting Peds, #/hr	0 100 100 0 100 100					
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	None	None	None	None	None	None
Storage Length	-					
Veh in Median Storage, #	0					
Grade, %	0					
Peak Hour Factor	90					
Heavy Vehicles, %	2					
Mvmt Flow	157	161	6	111	92	6

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	418
Stage 1	-	-	337
Stage 2	-	-	222
Critical Hdwy	-	4.12	6.42
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	-	2.218	3.518
Pot Cap-1 Maneuver	-	1141	490
Stage 1	-	-	723
Stage 2	-	-	815
Platoon blocked, %	-		
Mov Cap-1 Maneuver	-	1020	389
Mov Cap-2 Maneuver	-	-	389
Stage 1	-	-	646
Stage 2	-	-	724

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0.41	17.12
HCM LOS	C		

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	394	-	-	86	-
HCM Lane V/C Ratio	0.248	-	-	0.005	-
HCM Control Delay (s/veh)	17.1	-	-	8.5	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %ile Q(veh)	1	-	-	0	-

Intersection						
Int Delay, s/veh	5.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	[Diagram]					
Traffic Vol, veh/h	5	50	52	74	166	5
Future Vol, veh/h	5	50	52	74	166	5
Conflicting Peds, #/hr	0 0 0 0 0 0					
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	None	None	None	None	None	None
Storage Length	-					
Veh in Median Storage, #	0					
Grade, %	0					
Peak Hour Factor	90					
Heavy Vehicles, %	2					
Mvmt Flow	6	56	58	82	184	6

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	140	0	0
Stage 1	-	-	99
Stage 2	-	-	67
Critical Hdwy	4.12	-	6.42
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	2.218	-	3.518
Pot Cap-1 Maneuver	1443	-	825
Stage 1	-	-	925
Stage 2	-	-	956
Platoon blocked, %	-		
Mov Cap-1 Maneuver	1443	-	822
Mov Cap-2 Maneuver	-	-	822
Stage 1	-	-	921
Stage 2	-	-	956

Approach	EB	WB	SB
HCM Control Delay, s/v	0.68	0	10.66
HCM LOS	B		

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	164	-	-	-	825
HCM Lane V/C Ratio	0.004	-	-	-	0.23
HCM Control Delay (s/veh)	7.5	0	-	-	10.7
HCM Lane LOS	A	A	-	-	B
HCM 95th %ile Q(veh)	0	-	-	-	0.9

Existing scenario

2024 Minor Event Ingress

Queues

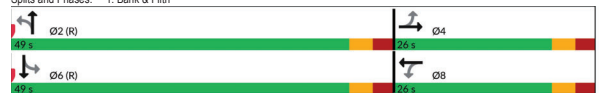
1: Bank & Fifth

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	[Diagram]							
Traffic Volume (vph)	50	56	65	45	16	482	25	557
Future Volume (vph)	50	56	65	45	16	482	25	557
Lane Group Flow (vph)	0	154	72	84	0	585	0	673
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases	4 8 8 2 2 6 6							
Permitted Phases	4 8 8 2 2 6 6							
Detector Phase	4 4 8 8 2 2 6 6							
Switch Phase	-							
Minimum Initial (s)	4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0							
Minimum Split (s)	26.0 26.0 26.0 26.0 49.0 49.0 49.0 49.0							
Total Split (s)	26.0 26.0 26.0 26.0 49.0 49.0 49.0 49.0							
Total Split (%)	34.7% 34.7% 34.7% 34.7% 65.3% 65.3% 65.3% 65.3%							
Yellow Time (s)	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0							
All-Red Time (s)	2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5							
Lost Time Adjust (s)	0.0 0.0 0.0 0.0 0.0 0.0							
Total Lost Time (s)	5.5 5.5 5.5 5.5 5.5 5.5							
Lead/Lag	-							
Lead-Lag Optimize?	-							
Recall Mode	None None None None C-Max C-Max C-Max C-Max							
Act Effect Green (s)	13.1 13.1 13.1 13.1 50.9 50.9 50.9 50.9							
Actuated g/C Ratio	0.17 0.17 0.17 0.17 0.68 0.68 0.68 0.68							
v/c Ratio	0.65 0.42 0.30 0.30 0.30 0.35 0.35 0.35							
Control Delay (s/veh)	36.9 33.3 19.0 10.0 6.3 6.3 6.3 6.3							
Queue Delay	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0							
Total Delay (s/veh)	36.9 33.3 19.0 10.0 6.3 6.3 6.3 6.3							
LOS	D C B B A A							
Approach Delay (s/veh)	36.9 33.3 19.0 10.0 6.3 6.3 6.3 6.3							
Approach LOS	D C B B A A							
Queue Length 50th (m)	17.7 9.2 6.1 17.3 17.4 17.4 17.4 17.4							
Queue Length 95th (m)	32.3 18.8 15.6 49.8 33.6 33.6 33.6 33.6							
Internal Link Dist (m)	49.7 45.0 112.4 195.6 190.0 190.0 190.0 190.0							
Turn Bay Length (m)	-							
Base Capacity (vph)	361 270 423 1931 1925 1925 1925 1925							
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	0.43 0.27 0.20 0.30 0.35 0.35 0.35 0.35							

Intersection Summary

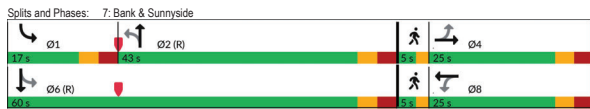
Cycle Length: 75
Actuated Cycle Length: 75
Offset: 47 (63%), Referenced to phase 2:NBL and 6:SBTL, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.65
Intersection Signal Delay (s/veh): 12.6
Intersection Capacity Utilization 61.9%
ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 1: Bank & Fifth



Queues
7: Bank & Sunnyside

08/01/2024



Existing (2022) Minor Event Ingress Peak Hour Lansdowne 2.0 Transportation Impact Assessment 12:45 pm 05/05/2023 Page 6

HCM 7th AWSC
12: Exhibition & Paul Askin

08/01/2024

Intersection						
Intersection Delay, s/veh	8.4					
Intersection LOS	A					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔	↔		↔	↔
Traffic Vol, veh/h	5	222	117	5	5	5
Future Vol, veh/h	5	222	117	5	5	5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	247	130	6	6	6
Number of Lanes	0	1	1	0	1	0
Approach	EB	WB	SB			
Opposing Approach	WB	EB				
Opposing Lanes	1	1	0			
Conflicting Approach Left	SB		WB			
Conflicting Lanes Left	1	0	1			
Conflicting Approach Right		SB	EB			
Conflicting Lanes Right	0	1	1			
HCM Control Delay, s/veh	8.7	7.9	7.6			
HCM LOS	A	A	A			

Lane	EBLn1	WBLn1	SBLn1
Vol Left, %	2%	0%	50%
Vol Thru, %	98%	96%	0%
Vol Right, %	0%	4%	50%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	227	122	10
LT Vol	5	0	5
Through Vol	222	117	0
RT Vol	0	5	5
Lane Flow Rate	252	136	11
Geometry Grp	1	1	1
Degree of Util (X)	0.284	0.155	0.014
Departure Headway (Hd)	4.059	4.117	4.56
Convergence, Y/N	Yes	Yes	Yes
Cap	863	865	790
Service Time	2.036	2.175	2.56
HCM Lane V/C Ratio	0.285	0.157	0.014
HCM Control Delay, s/veh	8.7	7.9	7.6
HCM Lane LOS	A	A	A
HCM 95th-tile Q	1.2	0.5	0

Existing (2022) Minor Event Ingress Peak Hour Lansdowne 2.0 Transportation Impact Assessment 12:45 pm 05/05/2023 Page 1

Queues
9: Queen Elizabeth Drive & Fifth

08/01/2024

Lane Group	EBL	NBL	NBT	SBT	Ø4
Lane Configurations	↔	↔	↔	↔	↔
Traffic Volume (vph)	51	51	215	519	
Future Volume (vph)	51	51	215	519	
Lane Group Flow (vph)	97	0	296	670	
Turn Type	Prot	Perm	NA	NA	
Protected Phases	10	2	6	4	
Permitted Phases	2				
Detector Phase	10	2	2	6	
Switch Phase					
Minimum Initial (s)	10.0	4.0	4.0	4.0	4.0
Minimum Split (s)	21.0	48.0	48.0	48.0	11.0
Total Split (s)	21.0	48.0	48.0	48.0	11.0
Total Split (%)	28.3%	60.0%	60.0%	60.0%	14%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.7	3.8	3.8	3.8	2.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.7			6.8	6.8
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	Min	None	None	Max	None
Act Effct Green (s)	10.7			41.2	41.2
Actuated g/C Ratio	0.17			0.64	0.64
v/c Ratio	0.39			0.34	0.63
Control Delay (s/veh)	28.6			6.8	10.7
Queue Delay	0.0			0.0	0.0
Total Delay (s/veh)	28.6			6.8	10.7
LOS	C			A	B
Approach Delay (s/veh)	28.6			6.8	10.7
Approach LOS	C			A	B
Queue Length 50th (m)	10.4			13.2	39.4
Queue Length 95th (m)	22.4			27.9	78.2
Internal Link Dist (m)	57.2			0.1	5.9
Turn Bay Length (m)					
Base Capacity (vph)	367			878	1058
Starvation Cap Reductn	0			0	0
Spillback Cap Reductn	0			0	0
Storage Cap Reductn	0			0	0
Reduced v/c Ratio	0.26			0.34	0.63

Intersection Summary	
Cycle Length	80
Actuated Cycle Length	64.4
Natural Cycle	80
Control Type	Actuated-Uncoordinated
Maximum v/c Ratio	0.63
Intersection Signal Delay (s/veh)	11.2
Intersection LOS	B
Intersection Capacity Utilization	73.6%
ICU Level of Service	D
Analysis Period (min)	15



HCM 7th AWSC
13: Paul Askin & Marche

08/01/2024

Intersection						
Intersection Delay, s/veh	7.2					
Intersection LOS	A					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Vol, veh/h	16	5	5	48	5	5
Future Vol, veh/h	16	5	5	48	5	5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	18	6	6	53	6	6
Number of Lanes	1	0	0	1	1	0
Approach	EB	WB	NB			
Opposing Approach	WB	EB	NB			
Opposing Lanes	1	1	0			
Conflicting Approach Left		NB	EB			
Conflicting Lanes Left	0	1	1			
Conflicting Approach Right	NB		WB			
Conflicting Lanes Right	1	0	1			
HCM Control Delay, s/veh	7	7.3	7			
HCM LOS	A	A	A			

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	50%	0%	9%
Vol Thru, %	0%	76%	91%
Vol Right, %	50%	24%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	16	10	53
LT Vol	5	0	5
Through Vol	0	16	48
RT Vol	5	5	0
Lane Flow Rate	11	23	59
Geometry Grp	1	1	1
Degree of Util (X)	0.012	0.025	0.065
Departure Headway (Hd)	3.876	3.854	3.99
Convergence, Y/N	Yes	Yes	Yes
Cap	921	931	902
Service Time	1.908	1.869	1.907
HCM Lane V/C Ratio	0.012	0.025	0.065
HCM Control Delay, s/veh	7	7.3	7
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0	0.1	0.2

Existing (2022) Minor Event Ingress Peak Hour Lansdowne 2.0 Transportation Impact Assessment 12:45 pm 05/05/2023 Page 2

Intersection						
Intersection Delay, s/veh	9.4					
Intersection LOS	A					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Vol, veh/h	16	5	117	44	211	16
Future Vol, veh/h	16	5	117	44	211	16
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	18	6	130	49	234	18
Number of Lanes	1	0	0	1	1	0
Approach	EB	WB	NB			
Opposing Approach	WB	EB	NB			
Opposing Lanes	1	1	0			
Conflicting Approach Left		NB	EB			
Conflicting Lanes Left	0	1	1			
Conflicting Approach Right	NB		WB			
Conflicting Lanes Right	1	0	1			
HCM Control Delay, s/veh	7.8	9.2	9.7			
HCM LOS	A	A	A			

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	93%	0%	73%
Vol Thru, %	0%	76%	27%
Vol Right, %	7%	24%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	227	21	161
LT Vol	211	0	117
Through Vol	0	16	44
RT Vol	16	5	0
Lane Flow Rate	252	23	179
Geometry Grp	1	1	1
Degree of Util (X)	0.32	0.03	0.234
Departure Headway (Hd)	4.57	4.62	4.719
Convergence, Y/N	Yes	Yes	Yes
Cap	789	775	762
Service Time	2.589	2.648	2.741
HCM Lane V/C Ratio	0.319	0.03	0.235
HCM Control Delay, s/veh	9.7	7.8	9.2
HCM Lane LOS	A	A	A
HCM 95th-tile Q	1.4	0.1	0.9

Intersection						
Int Delay, s/veh	10.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Vol, veh/h	5	260	139	638	466	53
Future Vol, veh/h	5	260	139	638	466	53
Conflicting Peds, #/hr	0	0	178	0	0	107
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	6	289	154	709	518	59
Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1389	725	755	0	-	0
Stage 1	725	-	-	-	-	-
Stage 2	663	-	-	-	-	-
Critical Hdwy	6.645	6.245	4.145	-	-	-
Critical Hdwy Stg 1	5.445	-	-	-	-	-
Critical Hdwy Stg 2	5.945	-	-	-	-	-
Follow-up Hdwy	3.52853	3.2852	2.285	-	-	-
Pot Cap-1 Maneuver	144	422	848	-	-	-
Stage 1	476	-	-	-	-	-
Stage 2	473	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	68	342	688	-	-	-
Mov Cap-2 Maneuver	68	-	-	-	-	-
Stage 1	278	-	-	-	-	-
Stage 2	384	-	-	-	-	-
Approach	EB	NB	SB			
HCM Control Delay, s/62.66	3.98		0			
HCM LOS	F					
Minor Lane/Major Mvmt	NBL	NBTEBLn1	SBT	SBR		
Capacity (veh/h)	563	-	342	-	-	-
HCM Lane V/C Ratio	0.224	-	0.844	-	-	-
HCM Control Delay (s/veh)	11.7	2.3	52.7	-	-	-
HCM Lane LOS	B	A	F	-	-	-
HCM 95th %tile Q(veh)	0.9	-	7.6	-	-	-

Intersection												
Intersection Delay, s/veh	8.3											
Intersection LOS	A											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Vol, veh/h	59	50	0	0	0	135	61	40	37	0	0	80
Future Vol, veh/h	59	50	0	0	0	135	61	40	37	0	0	80
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	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	66	56	0	0	0	150	68	44	41	0	0	89
Number of Lanes	0	1	0	0	0	1	0	1	0	0	0	1
Approach	EB	WB					NB	SB				
Opposing Approach	WB	EB					SB	NB				
Opposing Lanes	1	1					1	1				
Conflicting Approach Left	SB	NB					EB	WB				
Conflicting Lanes Left	1	1					1	1				
Conflicting Approach Right	NB	SB					WB	EB				
Conflicting Lanes Right	1	1					1	1				
HCM Control Delay, s/veh	8.7	7.9					8.7	7.6				
HCM LOS	A	A					A	A				

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	44%	54%	0%	0%
Vol Thru, %	29%	46%	0%	0%
Vol Right, %	27%	0%	100%	100%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	138	109	135	80
LT Vol	61	59	0	0
Through Vol	40	50	0	0
RT Vol	37	0	135	80
Lane Flow Rate	153	121	150	89
Geometry Grp	1	1	1	1
Degree of Util (X)	0.194	0.16	0.168	0.102
Departure Headway (Hd)	4.556	4.743	4.024	4.114
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	787	756	891	869
Service Time	2.588	2.774	2.054	2.148
HCM Lane V/C Ratio	0.194	0.16	0.168	0.102
HCM Control Delay, s/veh	8.7	8.7	7.9	7.6
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.7	0.6	0.6	0.3

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Vol, veh/h	4	36	0	762	734	0
Future Vol, veh/h	4	36	0	762	734	0
Conflicting Peds, #/hr	0	0	0	0	0	86
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	4	40	0	847	816	0
Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1239	816	-	0	-	0
Stage 1	816	-	-	-	-	-
Stage 2	423	-	-	-	-	-
Critical Hdwy	6.645	6.245	-	-	-	-
Critical Hdwy Stg 1	5.445	-	-	-	-	-
Critical Hdwy Stg 2	5.945	-	-	-	-	-
Follow-up Hdwy	3.52853	3.285	-	-	-	-
Pot Cap-1 Maneuver	179	374	0	-	-	0
Stage 1	432	-	0	-	-	0
Stage 2	627	-	0	-	-	0
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	179	374	-	-	-	-
Mov Cap-2 Maneuver	179	-	-	-	-	-
Stage 1	432	-	-	-	-	-
Stage 2	627	-	-	-	-	-
Approach	EB	NB	SB			
HCM Control Delay, s/45.77	0		0			
HCM LOS	C					
Minor Lane/Major Mvmt	NBTEBLn1	SBT				
Capacity (veh/h)	-	374	-	-	-	-
HCM Lane V/C Ratio	-	0.107	-	-	-	-
HCM Control Delay (s/veh)	-	15.8	-	-	-	-
HCM Lane LOS	-	C	-	-	-	-
HCM 95th %tile Q(veh)	-	0.4	-	-	-	-

Intersection					
Int Delay, s/veh	3.4				
Movement	EBL	EBR	NBL	NBT	SBR
Lane Configurations	W	W	W	W	W
Traffic Vol, veh/h	58	52	110	211	316
Future Vol, veh/h	58	52	110	211	316
Conflicting Peds, #/hr	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free
RT Channelized	None	None	None	None	None
Storage Length	0	-	-	-	-
Veh in Median Storage, #	0	-	0	0	-
Grade, %	0	-	0	0	-
Peak Hour Factor	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0
Mvmt Flow	64	58	122	234	351
Mvmt Flow	272	351	234	122	58
Major/Minor	Minor2	Major1	Major2		
Conflicting Flow All	966	487	623	0	0
Stage 1	487	-	-	-	-
Stage 2	479	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-
Pot Cap-1 Maneuver	285	584	968	-	-
Stage 1	622	-	-	-	-
Stage 2	627	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	243	584	968	-	-
Mov Cap-2 Maneuver	243	-	-	-	-
Stage 1	531	-	-	-	-
Stage 2	627	-	-	-	-
Approach	EB	NB	SB		
HCM Control Delay, s/1.71	3.17	0	0		
HCM LOS	C				
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	617	-	336	-	-
HCM Lane V/C Ratio	0.126	-	0.364	-	-
HCM Control Delay (s/veh)	9.3	0	21.7	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.4	-	1.6	-	-

Intersection						
Int Delay, s/veh	3.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	W	W	W	W	W	W
Traffic Vol, veh/h	222	129	5	117	87	5
Future Vol, veh/h	222	129	5	117	87	5
Conflicting Peds, #/hr	0	100	100	0	100	100
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	None	None	None	None	None	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	247	143	6	130	97	6
Mvmt Flow	97	130	6	143	247	6
Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	490	0	659	
Stage 1	-	-	-	418	-	
Stage 2	-	-	-	241	-	
Critical Hdwy	-	-	4.12	-	6.42	
Critical Hdwy Stg 1	-	-	-	-	5.42	
Critical Hdwy Stg 2	-	-	-	-	5.42	
Follow-up Hdwy	-	-	2.218	-	3.518	
Pot Cap-1 Maneuver	-	-	1073	-	428	
Stage 1	-	-	-	-	664	
Stage 2	-	-	-	-	799	
Platoon blocked, %	-	-	-	-	-	
Mov Cap-1 Maneuver	-	-	960	-	340	
Mov Cap-2 Maneuver	-	-	-	-	340	
Stage 1	-	-	-	-	594	
Stage 2	-	-	-	-	710	
Approach	EB	WB	NB			
HCM Control Delay, s/v	0	0.36	19.79			
HCM LOS			C			
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	345	-	-	74	-	
HCM Lane V/C Ratio	0.297	-	-	0.006	-	
HCM Control Delay (s/veh)	19.8	-	-	8.8	0	
HCM Lane LOS	C	-	-	A	A	
HCM 95th %tile Q(veh)	1.2	-	-	0	-	

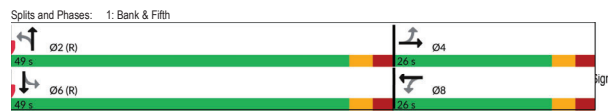
Intersection						
Int Delay, s/veh	0.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	W	W	W	W
Traffic Vol, veh/h	0	53	501	19	2	560
Future Vol, veh/h	0	53	501	19	2	560
Conflicting Peds, #/hr	0	0	0	100	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	None	None	None	None	None	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	2	0	2	2
Mvmt Flow	0	59	557	21	2	622
Mvmt Flow	622	21	557	2	59	0
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	-	389	0	0	678	
Stage 1	-	-	-	-	-	
Stage 2	-	-	-	-	-	
Critical Hdwy	-	6.9	-	-	4.14	
Critical Hdwy Stg 1	-	-	-	-	-	
Critical Hdwy Stg 2	-	-	-	-	-	
Follow-up Hdwy	-	3.3	-	-	2.22	
Pot Cap-1 Maneuver	0	615	-	-	910	
Stage 1	0	-	-	-	-	
Stage 2	0	-	-	-	-	
Platoon blocked, %	-	-	-	-	-	
Mov Cap-1 Maneuver	-	550	-	-	814	
Mov Cap-2 Maneuver	-	-	-	-	-	
Stage 1	-	-	-	-	-	
Stage 2	-	-	-	-	-	
Approach	WB	NB	SB			
HCM Control Delay, s/42.32	0	0	0.03			
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBR/WBLn1	SBL	SBT		
Capacity (veh/h)	-	-	550	814	-	
HCM Lane V/C Ratio	-	-	0.107	0.003	-	
HCM Control Delay (s/veh)	-	-	12.3	9.4	-	
HCM Lane LOS	-	-	B	A	-	
HCM 95th %tile Q(veh)	-	-	0.4	0	-	

Intersection						
Int Delay, s/veh	2.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	W	W	W	W	W	W
Traffic Vol, veh/h	5	27	156	199	83	5
Future Vol, veh/h	5	27	156	199	83	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	None	None	None	None	None	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	30	173	221	92	6
Mvmt Flow	92	221	173	30	6	6
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	394	0	-	0	325	
Stage 1	-	-	-	-	284	
Stage 2	-	-	-	-	41	
Critical Hdwy	4.12	-	-	-	6.42	
Critical Hdwy Stg 1	-	-	-	-	5.42	
Critical Hdwy Stg 2	-	-	-	-	5.42	
Follow-up Hdwy	2.218	-	-	-	3.518	
Pot Cap-1 Maneuver	1164	-	-	-	669	
Stage 1	-	-	-	-	764	
Stage 2	-	-	-	-	981	
Platoon blocked, %	-	-	-	-	-	
Mov Cap-1 Maneuver	1164	-	-	-	666	
Mov Cap-2 Maneuver	-	-	-	-	666	
Stage 1	-	-	-	-	761	
Stage 2	-	-	-	-	981	
Approach	EB	WB	SB			
HCM Control Delay, s/v1.27	0	0	11.29			
HCM LOS			B			
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR/SBLn1		
Capacity (veh/h)	281	-	-	670	-	
HCM Lane V/C Ratio	0.005	-	-	0.146	-	
HCM Control Delay (s/veh)	8.1	0	-	11.3	-	
HCM Lane LOS	A	A	-	B	-	
HCM 95th %tile Q(veh)	0	-	-	0.5	-	

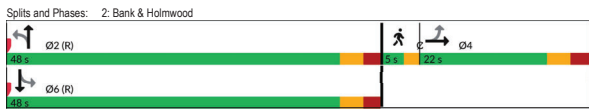
Existing scenario

2024 Minor Event Egress

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations		↔		↔		↔	↔	↔
Traffic Volume (vph)	41	9	47	24	16	457	20	344
Future Volume (vph)	41	9	47	24	16	457	20	344
Lane Group Flow (vph)	0	84	52	61	0	538	0	427
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases	4		8		2		6	
Permitted Phases	4	4	8	8	2	2	6	6
Detector Phase								
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	26.0	26.0	26.0	26.0	49.0	49.0	49.0	49.0
Total Split (s)	26.0	26.0	26.0	26.0	49.0	49.0	49.0	49.0
Total Split (%)	34.7%	34.7%	34.7%	34.7%	65.3%	65.3%	65.3%	65.3%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Act Effect Green (s)	9.4	9.4	9.4	9.4	57.9	57.9	57.9	57.9
Actuated g/C Ratio	0.13	0.13	0.13	0.13	0.77	0.77	0.77	0.77
v/c Ratio	0.51	0.34	0.30	0.24	0.24	0.20	0.20	0.20
Control Delay (s/veh)	31.9	34.4	19.5	6.0	3.6	3.6	3.6	3.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	31.9	34.4	19.5	6.0	3.6	3.6	3.6	3.6
LOS	C	C	B	A	A	A	A	A
Approach Delay (s/veh)	31.9	34.4	19.5	6.0	3.6	3.6	3.6	3.6
Approach LOS	C	C	B	A	A	A	A	A
Queue Length 50th (m)	7.5	6.9	3.5	12.8	7.5	7.5	7.5	7.5
Queue Length 95th (m)	18.8	15.5	12.6	34.2	15.6	15.6	15.6	15.6
Internal Link Dist (m)	49.7		112.4	195.6				
Turn Bay Length (m)								
Base Capacity (vph)	330	341	402	2251	2168	2168	2168	2168
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	0.25	0.15	0.15	0.24	0.20	0.20	0.20	0.20



Lane Group	EBT	NBL	NBT	SBL	SBT	Ø3
Lane Configurations	↔		↔		↔	
Traffic Volume (vph)	7	52	445	22	325	
Future Volume (vph)	7	52	445	22	325	
Lane Group Flow (vph)	84	0	579	0	424	
Turn Type	NA	Perm	NA	Perm	NA	
Protected Phases	4		2		6	3
Permitted Phases		2		6		
Detector Phase	4	2	2	6	6	
Switch Phase						
Minimum Initial (s)	4.4	10.0	10.0	4.0	4.0	1.0
Minimum Split (s)	22.0	48.0	48.0	48.0	48.0	5.0
Total Split (s)	22.0	48.0	48.0	48.0	48.0	5.0
Total Split (%)	29.3%	64.0%	64.0%	64.0%	64.0%	7%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	2.0
All-Red Time (s)	2.6	2.2	2.2	2.2	2.2	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.6	5.2	5.2	5.2	5.2	
Lead/Lag		Lag				Lead
Lead-Lag Optimize?						
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	None
Act Effect Green (s)	9.9	57.5	57.5	57.5	57.5	
Actuated g/C Ratio	0.13	0.77	0.77	0.77	0.77	
v/c Ratio	0.47	0.29	0.20	0.20	0.20	
Control Delay (s/veh)	37.7	3.7	4.4	4.4	4.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	37.7	3.7	4.4	4.4	4.4	
LOS	D	A	A	A	A	
Approach Delay (s/veh)	37.7	3.7	4.4	4.4	4.4	
Approach LOS	D	A	A	A	A	
Queue Length 50th (m)	11.2	8.8	12.4			
Queue Length 95th (m)	22.3	22.1	24.4			
Internal Link Dist (m)	39.8		31.5	195.6		
Turn Bay Length (m)						
Base Capacity (vph)	296	2029	2106			
Starvation Cap Reductn	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	
Reduced v/c Ratio	0.28	0.29	0.20			



Lane Group	WBL	WBR	NBT	SBL	SBT	Ø1	Ø7
Lane Configurations		↔	↔	↔	↔		
Traffic Volume (vph)	187	213	187	111	253		
Future Volume (vph)	187	213	187	111	253		
Lane Group Flow (vph)	208	237	297	123	281		
Turn Type	Prot	Perm	NA	Perm	NA		
Protected Phases	8		2		6	1	7
Permitted Phases	8	8		6			
Detector Phase	8	8	2	6	6		
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	1.0	1.0
Minimum Split (s)	26.0	26.0	39.0	44.0	44.0	5.0	5.0
Total Split (s)	26.0	26.0	39.0	44.0	44.0	5.0	5.0
Total Split (%)	34.7%	34.7%	52.0%	58.7%	58.7%	7%	7%
Yellow Time (s)	3.3	3.3	3.0	3.0	3.0	2.0	3.5
All-Red Time (s)	3.0	3.0	3.9	3.9	3.9	0.0	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	6.3	6.3	6.9	6.9	6.9		
Lead/Lag		Lag	Lag	Lag		Lead	Lead
Lead-Lag Optimize?							
Recall Mode	None	None	C-Max	C-Max	C-Max	None	None
Act Effect Green (s)	14.9	14.9	46.9	46.9	46.9		
Actuated g/C Ratio	0.20	0.20	0.63	0.63	0.63		
v/c Ratio	0.64	0.57	0.17	0.25	0.14		
Control Delay (s/veh)	36.4	9.6	4.9	5.8	4.4		
Queue Delay	0.0	0.0	0.0	0.0	0.0		
Total Delay (s/veh)	36.4	9.6	4.9	5.8	4.4		
LOS	D	A	A	A	A		
Approach Delay (s/veh)	22.1	4.9	4.8	4.8	4.8		
Approach LOS	C	A	A	A	A		
Queue Length 50th (m)	27.3	0.0	5.4	4.2	5.0		
Queue Length 95th (m)	43.5	16.2	12.4	8.8	7.6		
Internal Link Dist (m)	30.6		33.7	44.8			
Turn Bay Length (m)				40.0			
Base Capacity (vph)	431	471	1777	502	1985		
Starvation Cap Reductn	0	0	0	0	0		
Spillback Cap Reductn	0	0	0	0	0		
Storage Cap Reductn	0	0	0	0	0		
Reduced v/c Ratio	0.48	0.50	0.17	0.25	0.14		



Queues
6: Bank & Aylmer

08/01/2024

Lane Group	EBL	NBL	NBT	SBT	Ø3
Lane Configurations	↖ ↗	↖ ↗	↖ ↗	↖ ↗	
Traffic Volume (vph)	4	1	155	191	
Future Volume (vph)	4	1	155	191	
Lane Group Flow (vph)	7	0	173	219	
Turn Type	Prot	Perm	NA	NA	
Protected Phases	4	2	6	3	
Permitted Phases	4	2		6	
Detector Phase	4	2	2	6	
Switch Phase					
Minimum Initial (s)	10.0	30.0	30.0	30.0	1.0
Minimum Split (s)	22.0	63.0	63.0	63.0	5.0
Total Split (s)	22.0	63.0	63.0	63.0	5.0
Total Split (%)	24.4%	70.0%	70.0%	70.0%	6%
Yellow Time (s)	3.3	3.0	3.0	3.0	2.0
All-Red Time (s)	2.2	2.2	2.2	2.2	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.5		5.2	5.2	
Lead/Lag	Lag				Lead
Lead-Lag Optimize?					
Recall Mode	Ped	C-Max	C-Max	C-Max	Max
Act Effect Green (s)	14.0	60.3	60.3	60.3	
Actuated g/C Ratio	0.16		0.67	0.67	
v/c Ratio	0.03	0.08	0.10	0.10	
Control Delay (s/veh)	27.2		5.3	5.2	
Queue Delay	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	27.2		5.3	5.2	
LOS	C	A	A	A	
Approach Delay (s/veh)	27.2		5.3	5.2	
Approach LOS	C	A	A	A	
Queue Length 50th (m)	0.6		4.8	6.0	
Queue Length 95th (m)	4.4		8.1	9.6	
Internal Link Dist (m)	76.7		28.1	10.1	
Turn Bay Length (m)					
Base Capacity (vph)	253	2043	2103		
Starvation Cap Reductn	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	
Storage Cap Reductn	0	0	0	0	
Reduced v/c Ratio	0.03		0.08	0.10	

Splits and Phases: 6: Bank & Aylmer

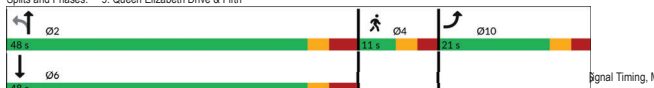


Queues
9: Queen Elizabeth Drive & Fifth

08/01/2024

Lane Group	EBL	NBL	NBT	SBT	Ø4
Lane Configurations	↖ ↗	↖ ↗	↖ ↗	↖ ↗	
Traffic Volume (vph)	64	31	264	152	
Future Volume (vph)	64	31	264	152	
Lane Group Flow (vph)	102	0	327	206	
Turn Type	Prot	Perm	NA	NA	
Protected Phases	10		2	6	4
Permitted Phases			2		
Detector Phase	10	2	2	6	
Switch Phase					
Minimum Initial (s)	10.0	4.0	4.0	4.0	4.0
Minimum Split (s)	21.0	48.0	48.0	48.0	11.0
Total Split (s)	21.0	48.0	48.0	48.0	11.0
Total Split (%)	26.3%	60.0%	60.0%	60.0%	14%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.7	3.8	3.8	3.8	2.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.7		6.8	6.8	
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	Min	None	None	Max	None
Act Effect Green (s)	10.8		41.2	41.2	
Actuated g/C Ratio	0.17		0.64	0.64	
v/c Ratio	0.39		0.32	0.20	
Control Delay (s/veh)	28.7		6.5	5.6	
Queue Delay	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	28.7		6.5	5.6	
LOS	C	A	A	A	
Approach Delay (s/veh)	28.7		6.5	5.6	
Approach LOS	C	A	A	A	
Queue Length 50th (m)	11.0		14.3	8.2	
Queue Length 95th (m)	23.4		29.4	18.0	
Internal Link Dist (m)	57.2		0.1	5.9	
Turn Bay Length (m)					
Base Capacity (vph)	370	1030	1051		
Starvation Cap Reductn	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	
Storage Cap Reductn	0	0	0	0	
Reduced v/c Ratio	0.28		0.32	0.20	

Splits and Phases: 9: Queen Elizabeth Drive & Fifth



Queues
7: Bank & Sunnyside

08/01/2024

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	Ø3	Ø7
Lane Configurations	↖ ↗	↖ ↗	↖ ↗	↖ ↗	↖ ↗	↖ ↗	↖ ↗	↖ ↗		
Traffic Volume (vph)	28	7	5	12	12	236	33	411		
Future Volume (vph)	28	7	5	12	12	236	33	411		
Lane Group Flow (vph)	0	60	0	55	0	281	0	541		
Turn Type	Perm	NA	Perm	NA	Perm	NA	pm-pt	NA		
Protected Phases		4		8		2	1	6	3	7
Permitted Phases	4		8		2		6			
Detector Phase	4	4	8	8	2	2	1	6		
Switch Phase										
Minimum Initial (s)	6.4	6.4	5.3	5.3	17.0	17.0	5.0	17.0	1.0	1.0
Minimum Split (s)	25.0	25.0	25.0	25.0	43.0	43.0	17.0	60.0	5.0	5.0
Total Split (s)	25.0	25.0	25.0	25.0	43.0	43.0	17.0	60.0	5.0	5.0
Total Split (%)	27.8%	27.8%	27.8%	27.8%	47.8%	47.8%	18.9%	66.7%	6%	6%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0
All-Red Time (s)	2.6	2.6	2.6	2.6	3.0	3.0	2.9	3.0	0.0	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	5.6		5.6		6.0					
Lead/Lag	Lag	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	Max	Max	None	Max	None	None
Act Effect Green (s)	10.1		9.5		65.1		65.1			
Actuated g/C Ratio	0.13		0.12		0.82		0.82			
v/c Ratio	0.48		0.33		0.12		0.24			
Control Delay (s/veh)	44.4		20.8		3.2		3.5			
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Total Delay (s/veh)	44.4		20.8		3.2		3.5			
LOS	D		C		A		A			
Approach Delay (s/veh)	44.4		20.8		3.2		3.5			
Approach LOS	D		C		A		A			
Queue Length 50th (m)	9.3		2.8		5.4		11.3			
Queue Length 95th (m)	19.1		11.9		11.0		21.2			
Internal Link Dist (m)	75.1		136.0		63.1		79.0			
Turn Bay Length (m)										
Base Capacity (vph)	241		304		2387		2225			
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	0.25		0.18		0.12		0.24			

Splits and Phases: 7: Bank & Sunnyside



HCM 7th AWSC
12: Exhibition & Paul Askin

08/01/2024

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖ ↗	↖ ↗	↖ ↗	↖ ↗	↖ ↗	↖ ↗
Traffic Vol. veh/h	5	190	275	5	5	5
Future Vol. veh/h	5	190	275	5	5	5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	211	306	6	6	6
Number of Lanes	0	1	1	0	1	0
Approach	EB	WB	WB	SB	SB	
Opposing Approach	WB		EB			
Opposing Lanes	1	1	0			
Conflicting Approach Left	SB			WB		
Conflicting Lanes Left	1	0	1			
Conflicting Approach Right		SB		EB		
Conflicting Lanes Right	0	1	1			
HCM Control Delay, s/veh	8.7	9.4	7.9			
HCM LOS	A	A	A			

Lane	EBLn1	WBLn1	SBLn1
Vol Left, %	3%	0%	50%
Vol Thru, %	97%	98%	0%
Vol Right, %	0%	2%	50%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	195	280	10
LT Vol	5	0	5
Through Vol	190	275	0
RT Vol	0	5	5
Lane Flow Rate	217	311	11
Geometry Grp	1	1	1
Degree of Util (X)	0.252	0.355	0.015
Departure Headway (Hd)	4.191	4.105	4.857
Convergence, Y/N	Yes	Yes	Yes
Cap	967	668	741
Service Time	2.267	2.164	2.857
HCM Lane V/C Ratio	0.256	0.358	0.015
HCM Control Delay, s/veh	8.7	9.4	7.9
HCM Lane LOS	A	A	A
HCM 95th-tile Q	1	1.6	0

Intersection						
Intersection Delay, s/veh	7.8					
Intersection LOS	A					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	24	5	5	144	5	5
Future Vol, veh/h	24	5	29	144	5	5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	27	6	6	160	6	6
Number of Lanes	1	0	0	1	1	0
Approach	EB	WB	WB	NB		
Opposing Approach	WB	EB				
Opposing Lanes	1	1		0		
Conflicting Approach Left	NB		EB			
Conflicting Lanes Left	0		1		1	
Conflicting Approach Right	NB		WB			
Conflicting Lanes Right	1		0		1	
HCM Control Delay, s/veh	7.2		7.9		7.2	
HCM LOS	A		A		A	

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	50%	0%	3%
Vol Thru, %	0%	83%	97%
Vol Right, %	50%	17%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	10	29	149
LT Vol	5	0	5
Through Vol	0	24	144
RT Vol	5	5	0
Lane Flow Rate	11	32	166
Geometry Grp	1	1	1
Degree of Util (X)	0.013	0.036	0.183
Departure Headway (Hd)	4.074	3.973	3.985
Convergence, Y/N	Yes	Yes	Yes
Cap	866	898	904
Service Time	2.157	2.009	1.997
HCM Lane V/C Ratio	0.013	0.036	0.184
HCM Control Delay, s/veh	7.2	7.2	7.9
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0	0.1	0.7

Intersection												
Intersection Delay, s/veh	7.3											
Intersection LOS	A											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	43	0	0	0	0	64	10	10	49	0	0
Future Vol, veh/h	10	43	0	0	0	0	64	10	10	49	0	0
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	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	48	0	0	0	0	71	11	11	54	0	0
Number of Lanes	0	1	0	0	0	0	1	0	1	0	0	0
Approach	EB	EBT	EBR	WB	NB	SB						
Opposing Approach	WB	EB		SB		NB						
Opposing Lanes	1	1		1		1						
Conflicting Approach Left	SB		NB		EB		WB					
Conflicting Lanes Left	1		1		1		1					
Conflicting Approach Right	NB		SB		WB		EB					
Conflicting Lanes Right	1		1		1		1					
HCM Control Delay, s/veh	7.7		7.1		7.3		7.1					
HCM LOS	A		A		A		A					
Lane	NBLn1	EBLn1	WBLn1	SBLn1								
Vol Left, %	14%	19%	0%	0%								
Vol Thru, %	14%	81%	0%	0%								
Vol Right, %	71%	0%	100%	100%								
Sign Control	Stop	Stop	Stop	Stop								
Traffic Vol by Lane	69	53	64	94								
LT Vol	10	10	0	0								
Through Vol	10	43	0	0								
RT Vol	49	0	64	94								
Lane Flow Rate	77	59	71	104								
Geometry Grp	1	1	1	1								
Degree of Util (X)	0.082	0.071	0.073	0.105								
Departure Headway (Hd)	3.841	4.34	3.691	3.616								
Convergence, Y/N	Yes	Yes	Yes	Yes								
Cap	922	819	959	979								
Service Time	1.909	2.4	1.759	1.695								
HCM Lane V/C Ratio	0.084	0.072	0.074	0.106								
HCM Control Delay, s/veh	7.3	7.7	7.1	7.1								
HCM Lane LOS	A	A	A	A								
HCM 95th-tile Q	0.3	0.2	0.2	0.4								

Intersection						
Intersection Delay, s/veh	8.3					
Intersection LOS	A					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	24	5	73	5	129	66
Future Vol, veh/h	24	5	73	5	129	66
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	27	6	81	6	143	73
Number of Lanes	1	0	0	1	1	0
Approach	EB	WB	WB	NB		
Opposing Approach	WB	EB				
Opposing Lanes	1	1		0		
Conflicting Approach Left	NB		EB			
Conflicting Lanes Left	0		1		1	
Conflicting Approach Right	NB		WB			
Conflicting Lanes Right	1		0		1	
HCM Control Delay, s/veh	7.6		8.2		8.5	
HCM LOS	A		A		A	

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	66%	0%	94%
Vol Thru, %	0%	83%	6%
Vol Right, %	34%	17%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	195	29	78
LT Vol	129	0	73
Through Vol	0	24	5
RT Vol	66	5	0
Lane Flow Rate	217	32	87
Geometry Grp	1	1	1
Degree of Util (X)	0.245	0.04	0.112
Departure Headway (Hd)	4.069	4.415	4.641
Convergence, Y/N	Yes	Yes	Yes
Cap	869	815	777
Service Time	2.157	2.418	2.643
HCM Lane V/C Ratio	0.25	0.039	0.112
HCM Control Delay, s/veh	8.5	7.6	8.2
HCM Lane LOS	A	A	A
HCM 95th-tile Q	1	0.1	0.4

Intersection										
Int Delay, s/veh	3									
Movement	EBL	EBR	NBL	NBT	SBT	SBR				
Lane Configurations										
Traffic Vol, veh/h	2	108	46	276	389	65				
Future Vol, veh/h	2	108	46	276	389	65				
Conflicting Peds, #/hr	0	0	178	0	0	107				
Sign Control	Stop	Stop	Free	Free	Free	Free				
RT Channelized	-	None	-	None	-	None				
Storage Length	-	0	-	0	-	0				
Veh in Median Storage, #	0	-	0	0	0	0				
Grade, %	0	-	-	0	0	0				
Peak Hour Factor	90	90	90	90	90	90				
Heavy Vehicles, %	3	3	3	3	3	3				
Mvmt Flow	2	120	51	307	432	72				
Major/Minor	Minor2	Major1	Major2							
Conflicting Flow All	902	646	682	0						
Stage 1	646	-	-	-						
Stage 2	256	-	-	-						
Critical Hdwy	6.645	6.245	4.145	-						
Critical Hdwy Stg 1	5.445	-	-	-						
Critical Hdwy Stg 2	5.845	-	-	-						
Follow-up Hdwy	3.52853	3.2852	2.285	-						
Pot Cap-1 Maneuver	291	468	903	-						
Stage 1	518	-	-	-						
Stage 2	762	-	-	-						
Platoon blocked, %	-	-	-	-						
Mov Cap-1 Maneuver	177	380	733	-						
Mov Cap-2 Maneuver	177	-	-	-						
Stage 1	388	-	-	-						
Stage 2	618	-	-	-						
Approach	EB	NB	SB							
HCM Control Delay, s/48.79	1.97	0								
HCM LOS	C									
Minor Lane/Major Mvmt	NBL	NBEBLn1	SBT	SBR						
Capacity (veh/h)	514	-	380	-						
HCM Lane V/C Ratio	0.07	-	0.316	-						
HCM Control Delay (s/veh)	10.3	0.6	18.8	-						
HCM Lane LOS	B	A	C	-						
HCM 95th-tile Q(veh)	0.2	-	1.3	-						

Intersection table for HCM 7th TWSC 5: Bank & Echo. Includes Int Delay (0.2), Movement (EBL, EBR, NBL, NBT, SBT, SBR), Lane Configurations, Traffic Vol, Future Vol, Conflicting Peds, Sign Control, RT Channelized, Storage Length, Veh in Median Storage, Grade, Peak Hour Factor, Heavy Vehicles, and Mvmt Flow.

Major/Minor table for HCM 7th TWSC 5: Bank & Echo. Shows Conflicting Flow All, Stage 1, Stage 2, Critical Hdwy, Critical Hdwy Stg 1, Critical Hdwy Stg 2, Follow-up Hdwy, Pot Cap-1 Maneuver, Stage 1, Stage 2, Platoon blocked, Mov Cap-1 Maneuver, Mov Cap-2 Maneuver, Stage 1, Stage 2.

Approach table for HCM 7th TWSC 5: Bank & Echo. Shows EB, NB, SB, HCM Control Delay, HCM LOS.

Minor Lane/Major Mvmt table for HCM 7th TWSC 5: Bank & Echo. Shows Capacity, HCM Lane V/C Ratio, HCM Control Delay, HCM Lane LOS, HCM 95th %ile Q.

Intersection table for HCM 7th TWSC 8: Queen Elizabeth Driveway. Includes Int Delay (10.4), Movement (EBL, EBR, NBL, NBT, SBT, SBR), Lane Configurations, Traffic Vol, Future Vol, Conflicting Peds, Sign Control, RT Channelized, Storage Length, Veh in Median Storage, Grade, Peak Hour Factor, Heavy Vehicles, and Mvmt Flow.

Major/Minor table for HCM 7th TWSC 8: Queen Elizabeth Driveway. Shows Conflicting Flow All, Stage 1, Stage 2, Critical Hdwy, Critical Hdwy Stg 1, Critical Hdwy Stg 2, Follow-up Hdwy, Pot Cap-1 Maneuver, Stage 1, Stage 2, Platoon blocked, Mov Cap-1 Maneuver, Mov Cap-2 Maneuver, Stage 1, Stage 2.

Approach table for HCM 7th TWSC 8: Queen Elizabeth Driveway. Shows EB, NB, SB, HCM Control Delay, HCM LOS.

Minor Lane/Major Mvmt table for HCM 7th TWSC 8: Queen Elizabeth Driveway. Shows Capacity, HCM Lane V/C Ratio, HCM Control Delay, HCM Lane LOS, HCM 95th %ile Q.

Intersection table for HCM 7th TWSC 10: Bank & Marche. Includes Int Delay (2.1), Movement (WBL, WBR, NBT, NBR, SBL, SBT), Lane Configurations, Traffic Vol, Future Vol, Conflicting Peds, Sign Control, RT Channelized, Storage Length, Veh in Median Storage, Grade, Peak Hour Factor, Heavy Vehicles, and Mvmt Flow.

Major/Minor table for HCM 7th TWSC 10: Bank & Marche. Shows Conflicting Flow All, Stage 1, Stage 2, Critical Hdwy, Critical Hdwy Stg 1, Critical Hdwy Stg 2, Follow-up Hdwy, Pot Cap-1 Maneuver, Stage 1, Stage 2, Platoon blocked, Mov Cap-1 Maneuver, Mov Cap-2 Maneuver, Stage 1, Stage 2.

Approach table for HCM 7th TWSC 10: Bank & Marche. Shows WB, NB, SB, HCM Control Delay, HCM LOS.

Minor Lane/Major Mvmt table for HCM 7th TWSC 10: Bank & Marche. Shows Capacity, HCM Lane V/C Ratio, HCM Control Delay, HCM Lane LOS, HCM 95th %ile Q.

Intersection table for HCM 7th TWSC 11: Garage & Exhibition. Includes Int Delay (5.2), Movement (EBT, EBR, WBL, WBT, NBL, NBR), Lane Configurations, Traffic Vol, Future Vol, Conflicting Peds, Sign Control, RT Channelized, Storage Length, Veh in Median Storage, Grade, Peak Hour Factor, Heavy Vehicles, and Mvmt Flow.

Major/Minor table for HCM 7th TWSC 11: Garage & Exhibition. Shows Conflicting Flow All, Stage 1, Stage 2, Critical Hdwy, Critical Hdwy Stg 1, Critical Hdwy Stg 2, Follow-up Hdwy, Pot Cap-1 Maneuver, Stage 1, Stage 2, Platoon blocked, Mov Cap-1 Maneuver, Mov Cap-2 Maneuver, Stage 1, Stage 2.

Approach table for HCM 7th TWSC 11: Garage & Exhibition. Shows EB, WB, NB, HCM Control Delay, HCM LOS.

Minor Lane/Major Mvmt table for HCM 7th TWSC 11: Garage & Exhibition. Shows Capacity, HCM Lane V/C Ratio, HCM Control Delay, HCM Lane LOS, HCM 95th %ile Q.

Intersection						
Int Delay, s/veh	9.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	70	73	5	347	5
Future Vol, veh/h	1	70	73	5	347	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	None	None	None	None	None	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	78	81	6	386	6

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	87	0	0	164	84
Stage 1	-	-	-	84	-
Stage 2	-	-	-	80	-
Critical Hdwy	4.12	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	3.518	3.318
Pot Cap-1 Maneuver	1509	-	-	827	975
Stage 1	-	-	-	939	-
Stage 2	-	-	-	943	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	1509	-	-	826	975
Mov Cap-2 Maneuver	-	-	-	826	-
Stage 1	-	-	-	939	-
Stage 2	-	-	-	943	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0.1	0	13.18
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	25	-	-	-	828
HCM Lane V/C Ratio	0.001	-	-	-	0.472
HCM Control Delay (s/veh)	7.4	0	-	-	13.2
HCM Lane LOS	A	A	-	-	B
HCM 95th %ile Q(veh)	0	-	-	-	2.6

Existing scenario

2024 Major Event Ingress

Queues

1: Bank & Fifth

11/20/2024

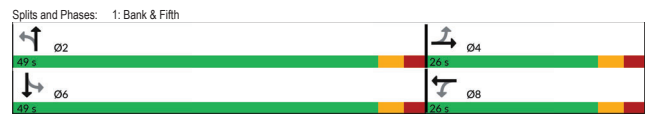
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	60	53	71	61	23	453	31	599
Future Volume (vph)	60	53	71	61	23	453	31	599
Lane Group Flow (vph)	0	166	79	126	0	569	0	764
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases	4		8		2		6	
Permitted Phases	4		8		2		6	
Detector Phase	4		4		8		8	
Switch Phase	4.0		4.0		4.0		4.0	
Minimum Initial (s)	4.0		4.0		4.0		4.0	
Minimum Split (s)	26.0		26.0		49.0		49.0	
Total Split (s)	26.0		26.0		49.0		49.0	
Total Split (%)	34.7%		34.7%		65.3%		65.3%	
Yellow Time (s)	3.0		3.0		3.0		3.0	
All-Red Time (s)	2.5		2.5		2.5		2.5	
Lost Time Adjust (s)	0.0		0.0		0.0		0.0	
Total Lost Time (s)	5.5		5.5		5.5		5.5	
Lead/Lag								
Lead-Lag Optimize?	None							
Recall Mode	None							
Act Effct Green (s)	13.5		13.5		46.4		46.4	
Actuated g/C Ratio	0.19		0.19		0.65		0.65	
v/c Ratio	0.67		0.42		0.32		0.42	
Control Delay (s/veh)	35.8		30.3		17.4		6.5	
Queue Delay	0.0		0.0		0.0		0.0	
Total Delay (s/veh)	35.8		30.3		17.4		6.5	
LOS	D		C		B		A	
Approach Delay (s/veh)	35.8		22.4		6.5		7.4	
Approach LOS	D		C		A		A	
Queue Length 50th (m)	16.9		8.8		7.6		14.0	
Queue Length 95th (m)	34.5		19.8		20.3		28.7	
Internal Link Dist (m)	49.7		112.4		195.6		190.0	
Turn Bay Length (m)	366		289		454		1791	
Base Capacity (vph)	366		289		454		1791	
Starvation Cap Reductn	0		0		0		0	
Spillback Cap Reductn	0		0		0		0	
Storage Cap Reductn	0		0		0		0	
Reduced v/c Ratio	0.45		0.27		0.28		0.32	

Intersection Summary	
Cycle Length: 75	
Actuated Cycle Length: 71	
Natural Cycle: 75	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.67	
Intersection Signal Delay (s/veh): 11.6	Intersection LOS: B
Intersection Capacity Utilization 68.9%	ICU Level of Service C
Analysis Period (min) 15	

Queues

1: Bank & Fifth

11/20/2024



Queues
2: Bank & Holmwood 11/20/2024

Lane Group	EBT	NBL	NBT	SBL	SBT	Ø3
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	37	67	479	53	554	
Future Volume (vph)	37	67	479	53	554	
Lane Group Flow (vph)	150	0	737	0	729	
Turn Type	NA	Perm	NA	Perm	NA	
Protected Phases	4		2		6	3
Permitted Phases		2		6		
Detector Phase	4	2	2	6	6	
Switch Phase						
Minimum Initial (s)	4.4	10.0	10.0	4.0	4.0	1.0
Minimum Split (s)	22.0	48.0	48.0	48.0	48.0	5.0
Total Split (s)	22.0	48.0	48.0	48.0	48.0	5.0
Total Split (%)	29.3%	64.0%	64.0%	64.0%	64.0%	7%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	2.0
All-Red Time (s)	2.6	2.2	2.2	2.2	2.2	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.6		5.2		5.2	
Lead/Lag	Lag					Lead
Lead-Lag Optimize?						
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	None
Act Effct Green (s)	13.2		51.0		51.0	
Actuated g/C Ratio	0.18		0.68		0.68	
v/c Ratio	0.61		0.48		0.42	
Control Delay (s/veh)	38.5		3.5		6.7	
Queue Delay	0.0		0.0		0.0	
Total Delay (s/veh)	38.5		3.5		6.7	
LOS	D		A		A	
Approach Delay (s/veh)	38.5		3.5		6.7	
Approach LOS	D		A		A	
Queue Length 50th (m)	19.8		1.0		19.7	
Queue Length 95th (m)	34.1		40.9		37.4	
Internal Link Dist (m)	39.8		31.5		195.6	
Turn Bay Length (m)						
Base Capacity (vph)	314		1547		1739	
Starvation Cap Reductn	0		0		0	
Spillback Cap Reductn	0		0		0	
Storage Cap Reductn	0		0		0	
Reduced v/c Ratio	0.48		0.48		0.42	
Intersection Summary						
Cycle Length: 75						
Actuated Cycle Length: 75						
Offset: 74 (99%), Referenced to phase 2:NBL and 6:SBTL, Start of Green						
Natural Cycle: 75						
Control Type: Actuated-Coordinated						
Maximum v/c Ratio: 0.61						
Intersection Signal Delay (s/veh): 8.2						
Intersection Capacity Utilization 72.0%						
Analysis Period (min) 15						

Existing Major Event Ingress Peak Hour Lansdowne 2.0 Transportation Impact Assessment 12:47 pm 05/05/2023 Existing Signal Timing, Major Event Page 3

Queues
2: Bank & Holmwood 11/20/2024



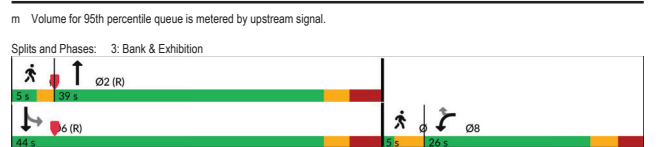
Existing Major Event Ingress Peak Hour Lansdowne 2.0 Transportation Impact Assessment 12:47 pm 05/05/2023 Existing Signal Timing, Major Event Page 4

Queues
3: Bank & Exhibition 11/20/2024

Lane Group	WBL	WBR	NBT	SBL	SBT	Ø1	Ø7
Lane Configurations	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	47	37	620	44	563		
Future Volume (vph)	47	37	620	44	563		
Lane Group Flow (vph)	52	41	757	49	626		
Turn Type	Prot	Perm	NA	Perm	NA		
Protected Phases	8		2		6	1	7
Permitted Phases		8		6			
Detector Phase	8	8	2	6	6		
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	1.0	1.0
Minimum Split (s)	26.0	26.0	39.0	44.0	44.0	5.0	5.0
Total Split (s)	26.0	26.0	39.0	44.0	44.0	5.0	5.0
Total Split (%)	34.7%	34.7%	52.0%	58.7%	58.7%	7%	7%
Yellow Time (s)	3.3	3.3	3.0	3.0	3.0	2.0	3.5
All-Red Time (s)	3.0	3.0	3.9	3.9	3.9	0.0	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	6.3	6.3	6.9	6.9	6.9		
Lead/Lag	Lag	Lag	Lag			Lead	Lead
Lead-Lag Optimize?			Yes			Yes	Yes
Recall Mode	None	None	C-Max	C-Max	C-Max	None	None
Act Effct Green (s)	10.1	10.1	56.3	56.3	56.3		
Actuated g/C Ratio	0.13	0.13	0.75	0.75	0.75		
v/c Ratio	0.24	0.22	0.33	0.11	0.26		
Control Delay (s/veh)	32.0	13.2	4.6	4.1	3.6		
Queue Delay	0.0	0.0	0.0	0.0	0.0		
Total Delay (s/veh)	32.0	13.2	4.6	4.1	3.6		
LOS	C	B	A	A	A		
Approach Delay (s/veh)	23.7		4.6		3.6		
Approach LOS	C		A		A		
Queue Length 50th (m)	6.7	0.0	18.6	1.8	13.1		
Queue Length 95th (m)	16.1	8.1	27.1	m4.6	17.1		
Internal Link Dist (m)	30.6		33.7		44.8		
Turn Bay Length (m)				40.0			
Base Capacity (vph)	429	325	2315	429	2382		
Starvation Cap Reductn	0	0	0	0	0		
Spillback Cap Reductn	0	0	0	0	0		
Storage Cap Reductn	0	0	0	0	0		
Reduced v/c Ratio	0.12	0.13	0.33	0.11	0.26		
Intersection Summary							
Cycle Length: 75							
Actuated Cycle Length: 75							
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green							
Natural Cycle: 75							
Control Type: Actuated-Coordinated							
Maximum v/c Ratio: 0.33							
Intersection Signal Delay (s/veh): 5.3							
Intersection Capacity Utilization 61.7%							
Analysis Period (min) 15							

Existing Major Event Ingress Peak Hour Lansdowne 2.0 Transportation Impact Assessment 12:47 pm 05/05/2023 Existing Signal Timing, Major Event Page 5

Queues
3: Bank & Exhibition 11/20/2024



Existing Major Event Ingress Peak Hour Lansdowne 2.0 Transportation Impact Assessment 12:47 pm 05/05/2023 Existing Signal Timing, Major Event Page 6

Queues
6: Bank & Aylmer

11/20/2024

Lane Group	EBL	NBL	NBT	SBT	Ø3
Lane Configurations	↖	↖	↖	↖	↖
Traffic Volume (vph)	88	13	714	745	
Future Volume (vph)	88	13	714	745	
Lane Group Flow (vph)	125	0	807	882	
Turn Type	Prot	Perm	NA	NA	
Protected Phases	4		2	6	3
Permitted Phases	4	2		6	
Detector Phase	4	2	2	6	
Switch Phase					
Minimum Initial (s)	10.0	30.0	30.0	30.0	1.0
Minimum Split (s)	22.0	63.0	63.0	63.0	5.0
Total Split (s)	22.0	63.0	63.0	63.0	5.0
Total Split (%)	24.4%	70.0%	70.0%	70.0%	6%
Yellow Time (s)	3.3	3.0	3.0	3.0	2.0
All-Red Time (s)	2.2	2.2	2.2	2.2	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.5		5.2	5.2	
Lead/Lag	Lag				Lead
Lead-Lag Optimize?					
Recall Mode	Ped	C-Max	C-Max	C-Max	Max
Act Effct Green (s)	14.6		59.7	59.7	
Actualized g/C Ratio	0.16		0.66	0.66	
v/c Ratio	0.50		0.41	0.43	
Control Delay (s/veh)	38.1		7.8	7.9	
Queue Delay	0.0		0.0	0.0	
Total Delay (s/veh)	38.1		7.8	7.9	
LOS	D		A	A	
Approach Delay (s/veh)	38.1		7.8	7.9	
Approach LOS	D		A	A	
Queue Length 50th (m)	17.9		29.1	31.8	
Queue Length 95th (m)	33.9		43.3	47.0	
Internal Link Dist (m)	76.7		28.1	10.1	
Turn Bay Length (m)					
Base Capacity (vph)	282		1985	2047	
Starvation Cap Reductn	0		0	0	
Spillback Cap Reductn	0		0	0	
Storage Cap Reductn	0		0	0	
Reduced v/c Ratio	0.44		0.41	0.43	
Intersection Summary					
Cycle Length: 90					
Actuated Cycle Length: 90					
Offset: 87 (97%), Referenced to phase 2:NBL and 6:SBT, Start of Green					
Natural Cycle: 90					
Control Type: Actuated-Coordinated					
Maximum v/c Ratio: 0.50					
Intersection Signal Delay (s/veh): 9.9					
Intersection Capacity Utilization 51.2%					
Analysis Period (min) 15					

Existing Major Event Ingress Peak Hour Lansdowne 2.0 Transportation Impact Assessment 12:47 pm 05/05/2023 Existing Major Event
Page 7

Queues
6: Bank & Aylmer

11/20/2024



Existing Major Event Ingress Peak Hour Lansdowne 2.0 Transportation Impact Assessment 12:47 pm 05/05/2023 Existing Major Event
Page 8

Queues
7: Bank & Sunnyside

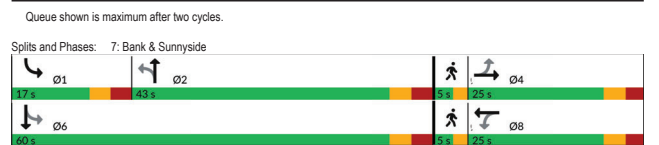
11/20/2024

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	Ø3	Ø7
Lane Configurations	↖	↖	↖	↖	↖	↖	↖	↖	↖	↖
Traffic Volume (vph)	51	76	13	81	26	509	135	605		
Future Volume (vph)	51	76	13	81	26	509	135	605		
Lane Group Flow (vph)	0	181	0	273	0	625	0	912		
Turn Type	Perm	NA	Perm	NA	Perm	NA	pm+pt	NA		
Protected Phases		4		8		2	1	6	3	7
Permitted Phases	4		8		2		6			
Detector Phase	4	4	8	8	2	2	1	6		
Switch Phase										
Minimum Initial (s)	6.4	6.4	5.3	5.3	17.0	17.0	5.0	17.0	1.0	1.0
Minimum Split (s)	25.0	25.0	25.0	25.0	43.0	43.0	17.0	60.0	5.0	5.0
Total Split (s)	25.0	25.0	25.0	25.0	43.0	43.0	17.0	60.0	5.0	5.0
Total Split (%)	27.8%	27.8%	27.8%	27.8%	47.8%	47.8%	18.9%	66.7%	6%	6%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0
All-Red Time (s)	2.6	2.6	2.6	2.6	3.0	3.0	2.9	3.0	0.0	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	5.6		5.6	5.6	6.0	6.0		6.0		
Lead/Lag	Lag	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lead
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	Max	Max	None	Max	None	None
Act Effct Green (s)	18.7		18.7	18.7	54.0	54.0		54.0		
Actualized g/C Ratio	0.22		0.22	0.22	0.64	0.64		0.64		
v/c Ratio	0.84		0.82	0.82	0.36	0.68		0.68		
Control Delay (s/veh)	64.5		43.7	43.7	7.8	12.8		12.8		
Queue Delay	0.0		0.0	0.0	0.0	0.0		0.0		
Total Delay (s/veh)	64.5		43.7	43.7	7.8	12.8		12.8		
LOS	E		D	D	A	B		B		
Approach Delay (s/veh)	64.5		43.7	43.7	7.8	12.8		12.8		
Approach LOS	E		D	D	A	B		B		
Queue Length 50th (m)	28.0		29.6	29.6	22.2	43.8		43.8		
Queue Length 95th (m)	#62.2		#69.7	63.1	31.4	64.8		64.8		
Internal Link Dist (m)	75.1		136.0	63.1	79.0			79.0		
Turn Bay Length (m)										
Base Capacity (vph)	224		340	1743	1339					
Starvation Cap Reductn	0		0	0	0			0		
Spillback Cap Reductn	0		0	0	0			0		
Storage Cap Reductn	0		0	0	0			0		
Reduced v/c Ratio	0.81		0.80	0.36	0.68			0.68		
Intersection Summary										
Cycle Length: 90										
Actuated Cycle Length: 84.3										
Natural Cycle: 90										
Control Type: Actuated-Uncoordinated										
Maximum v/c Ratio: 0.84										
Intersection Signal Delay (s/veh): 20.2										
Intersection Capacity Utilization 87.5%										
Analysis Period (min) 15										
# 95th percentile volume exceeds capacity, queue may be longer.										

Existing Major Event Ingress Peak Hour Lansdowne 2.0 Transportation Impact Assessment 12:47 pm 05/05/2023 Existing Major Event
Page 9

Queues
7: Bank & Sunnyside

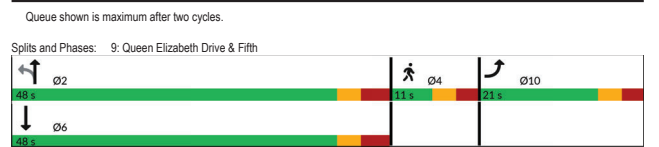
11/20/2024



Existing Major Event Ingress Peak Hour Lansdowne 2.0 Transportation Impact Assessment 12:47 pm 05/05/2023 Existing Major Event
Page 10

Lane Group	EBL	NBL	NBT	SBT	Ø4
Lane Configurations	↖	↖	↖	↖	↖
Traffic Volume (vph)	62	69	255	629	
Future Volume (vph)	62	69	255	629	
Lane Group Flow (vph)	166	0	360	836	
Turn Type	Prot	Perm	NA	NA	
Protected Phases	10		2	6	4
Permitted Phases	2				
Detector Phase	10	2	2	6	
Switch Phase					
Minimum Initial (s)	10.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.7	10.8	10.8	31.8	9.7
Total Split (s)	21.0	48.0	48.0	48.0	11.0
Total Split (%)	26.3%	60.0%	60.0%	60.0%	14%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.7	3.8	3.8	3.8	2.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.7		6.8	6.8	
Lead/Lag					
Recall Mode	Min	None	None	Max	None
Act Effct Green (s)	12.4		41.3	41.3	
Actualized g/C Ratio	0.19		0.62	0.62	
v/c Ratio	0.58		0.56	0.81	
Control Delay (s/veh)	33.3		11.9	18.9	
Queue Delay	0.0		0.0	0.0	
Total Delay (s/veh)	33.3		11.9	18.9	
LOS	C		B	B	
Approach Delay (s/veh)	33.3		11.9	18.9	
Approach LOS	C		B	B	
Queue Length 50th (m)	18.8		21.9	67.5	
Queue Length 95th (m)	35.6		49.3	#156.5	
Internal Link Dist (m)	57.2		0.1	5.9	
Turn Bay Length (m)					
Base Capacity (vph)	352		646	1027	
Starvation Cap Reductn	0		0	0	
Spillback Cap Reductn	0		0	0	
Storage Cap Reductn	0		0	0	
Reduced v/c Ratio	0.47		0.56	0.81	
Intersection Summary					
Cycle Length: 80					
Actuated Cycle Length: 66.2					
Natural Cycle: 65					
Control Type: Actuated-Uncoordinated					
Maximum v/c Ratio: 0.81					
Intersection Signal Delay (s/veh): 18.8	Intersection LOS: B				
Intersection Capacity Utilization 86.4%	ICU Level of Service E				
Analysis Period (min) 15					
# 95th percentile volume exceeds capacity, queue may be longer.					

Existing Major Event Ingress Peak Hour Lansdowne 2.0 Transportation Impact Assessment 12:47 pm 05/05/2023 Existing Signal Timing, Major Event Page 11



Existing Major Event Ingress Peak Hour Lansdowne 2.0 Transportation Impact Assessment 12:47 pm 05/05/2023 Existing Signal Timing, Major Event Page 12

HCM 7th AWSC
12: Exhibition & Paul Askin 08/01/2024

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↖	↖		↖	
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0
Number of Lanes	0	1	1	0	1	0
Approach						
Opposing Approach	WB		EB		SB	
Opposing Lanes	1		1		0	
Conflicting Approach Left	SB		WB			
Conflicting Lanes Left	1		0		1	
Conflicting Approach Right			SB		EB	
Conflicting Lanes Right	0		1		1	
HCM Control Delay, s/veh	0		0		0	
HCM LOS	-		-		-	
Lane						
Vol Left, %	0%	0%	0%	0%	0%	0%
Vol Thru, %	100%	100%	100%	100%	100%	100%
Vol Right, %	0%	0%	0%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	0	0	0	0	0
LT Vol	0	0	0	0	0	0
Through Vol	0	0	0	0	0	0
RT Vol	0	0	0	0	0	0
Lane Flow Rate	0	0	0	0	0	0
Geometry Grp	1	1	1	1	1	1
Degree of Util (X)	0	0	0	0	0	0
Departure Headway (Hd)	3.934	3.934	3.934	3.934	3.934	3.934
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	0	0	0	0	0	0
Service Time	1.934	1.934	1.934	1.934	1.934	1.934
HCM Lane V/C Ratio	0	0	0	0	0	0
HCM Control Delay, s/veh	6.9	6.9	6.9	6.9	6.9	6.9
HCM Lane LOS	N	N	N	N	N	N
HCM 95th-tile Q	0	0	0	0	0	0

HCM 7th AWSC
13: Paul Askin & Marche 08/01/2024

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↖			↖	↖	
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0
Number of Lanes	1	0	0	1	1	0
Approach						
Opposing Approach	WB		EB		NB	
Opposing Lanes	1		1		0	
Conflicting Approach Left			NB		EB	
Conflicting Lanes Left	0		1		1	
Conflicting Approach Right	NB		WB			
Conflicting Lanes Right	1		0		1	
HCM Control Delay, s/veh	0		0		0	
HCM LOS	-		-		-	
Lane						
Vol Left, %	0%	0%	0%	0%	0%	0%
Vol Thru, %	100%	100%	100%	100%	100%	100%
Vol Right, %	0%	0%	0%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	0	0	0	0	0
LT Vol	0	0	0	0	0	0
Through Vol	0	0	0	0	0	0
RT Vol	0	0	0	0	0	0
Lane Flow Rate	0	0	0	0	0	0
Geometry Grp	1	1	1	1	1	1
Degree of Util (X)	0	0	0	0	0	0
Departure Headway (Hd)	3.934	3.934	3.934	3.934	3.934	3.934
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	0	0	0	0	0	0
Service Time	1.934	1.934	1.934	1.934	1.934	1.934
HCM Lane V/C Ratio	0	0	0	0	0	0
HCM Control Delay, s/veh	6.9	6.9	6.9	6.9	6.9	6.9
HCM Lane LOS	N	N	N	N	N	N
HCM 95th-tile Q	0	0	0	0	0	0

Intersection						
Intersection Delay, s/veh	0					
Intersection LOS	-					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔			↔	↔	
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0
Number of Lanes	1	0	0	1	1	0
Approach	EB	WB		NB	SB	
Opposing Approach	WB	EB		NB	SB	
Opposing Lanes	1	1		0	1	
Conflicting Approach Left		NB		EB		
Conflicting Lanes Left	0	1		1	0	
Conflicting Approach Right	NB	WB		NB	SB	
Conflicting Lanes Right	1	0		1	0	
HCM Control Delay, s/veh	0	0		0	0	
HCM LOS	-	-		-	-	

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	0%	0%	0%
Vol Thru, %	100%	100%	100%
Vol Right, %	0%	0%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	0	0	0
LT Vol	0	0	0
Through Vol	0	0	0
RT Vol	0	0	0
Lane Flow Rate	0	0	0
Geometry Grp	1	1	1
Degree of Util (X)	0	0	0
Departure Headway (Hd)	3.934	3.934	3.934
Convergence, Y/N	Yes	Yes	Yes
Cap	0	0	0
Service Time	1.934	1.934	1.934
HCM Lane V/C Ratio	0	0	0
HCM Control Delay, s/veh	6.9	6.9	6.9
HCM Lane LOS	N	N	N
HCM 95th-tile Q	0	0	0

Intersection						
Int Delay, s/veh	14.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Vol, veh/h	0	266	104	702	518	103
Future Vol, veh/h	0	266	104	702	518	103
Conflicting Peds, #/hr	0	0	178	0	0	167
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	296	116	780	576	114

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	- 811	868	0 - 0
Stage 1	-	-	- - -
Stage 2	-	-	- - -
Critical Hdwy	- 6.245	4.145	- - -
Critical Hdwy Stg 1	-	-	- - -
Critical Hdwy Stg 2	-	-	- - -
Follow-up Hdwy	-3.32852	2.285	- - -
Pot Cap-1 Maneuver	0	377	769 - - -
Stage 1	0	-	- - -
Stage 2	0	-	- - -
Platoon blocked, %	-	-	- - -
Mov Cap-1 Maneuver	- 306	624	- - -
Mov Cap-2 Maneuver	-	-	- - -
Stage 1	-	-	- - -
Stage 2	-	-	- - -

Approach	EB	NB	SB
HCM Control Delay, s/veh	3.48	0	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBTEBLn1	SBT	SBR
Capacity (veh/h)	465	- 306	- -	- -
HCM Lane V/C Ratio	0.185	- 0.967	- -	- -
HCM Control Delay (s/veh)	12.1	2.2	81.3	- -
HCM Lane LOS	B	A	F	- -
HCM 95th %tile Q(veh)	0.7	- 9.9	- -	- -

Intersection												
Intersection Delay, s/veh	9.3											
Intersection LOS	A											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔	↔				↔	↔			↔	↔
Traffic Vol, veh/h	66	56	0	0	0	192	57	58	93	0	0	127
Future Vol, veh/h	66	56	0	0	0	192	57	58	93	0	0	127
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	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	73	62	0	0	0	213	63	64	103	0	0	141
Number of Lanes	0	1	0	0	0	1	0	1	0	0	0	1
Approach	EB	WB		NB	WB		NB	WB		NB	SB	
Opposing Approach	WB	EB		NB	WB		NB	WB		NB	SB	
Opposing Lanes	1	1		1	1		1	1		1	1	
Conflicting Approach Left	SB	NB		EB	WB		NB	WB		NB	SB	
Conflicting Lanes Left	1	1		1	1		1	1		1	1	
Conflicting Approach Right	NB	WB		NB	WB		NB	WB		NB	SB	
Conflicting Lanes Right	1	1		1	1		1	1		1	1	
HCM Control Delay, s/veh	9.5	9		9.8	9		9.8	9		9.8	8.5	
HCM LOS	A	A		A	A		A	A		A	A	

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	27%	54%	0%	0%
Vol Thru, %	28%	46%	0%	0%
Vol Right, %	45%	0%	100%	100%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	208	122	192	127
LT Vol	57	66	0	0
Through Vol	58	56	0	0
RT Vol	93	0	192	127
Lane Flow Rate	231	136	213	141
Geometry Grp	1	1	1	1
Degree of Util (X)	0.301	0.194	0.259	0.174
Departure Headway (Hd)	4.693	5.147	4.369	4.433
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	760	691	815	802
Service Time	2.76	3.221	2.434	2.506
HCM Lane V/C Ratio	0.304	0.197	0.261	0.176
HCM Control Delay, s/veh	9.8	9.5	9	8.5
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	1.3	0.7	1	0.6

Intersection						
Int Delay, s/veh	0.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Vol, veh/h	0	72	0	784	757	0
Future Vol, veh/h	0	72	0	784	757	0
Conflicting Peds, #/hr	0	0	0	0	0	86
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	80	0	871	841	0

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	- 841	- 0	- 0
Stage 1	-	-	- - -
Stage 2	-	-	- - -
Critical Hdwy	- 6.245	- - -	- - -
Critical Hdwy Stg 1	-	-	- - -
Critical Hdwy Stg 2	-	-	- - -
Follow-up Hdwy	-3.3285	- - -	- - -
Pot Cap-1 Maneuver	0	362	0 - - -
Stage 1	0	-	- - -
Stage 2	0	-	- - -
Platoon blocked, %	-	-	- - -
Mov Cap-1 Maneuver	- 362	- - -	- - -
Mov Cap-2 Maneuver	-	-	- - -
Stage 1	-	-	- - -
Stage 2	-	-	- - -

Approach	EB	NB	SB
HCM Control Delay, s/veh	47.76	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBTEBLn1	SBT
Capacity (veh/h)	- 362	-
HCM Lane V/C Ratio	- 0.221	-
HCM Control Delay (s/veh)	- 17.8	-
HCM Lane LOS	- C	-
HCM 95th %tile Q(veh)	- 0.8	-

Intersection					
Int Delay, s/veh	8.7				
Movement	EBL	EBR	NBL	NBT	SBR
Lane Configurations	W	W	W	W	W
Traffic Vol, veh/h	94	97	105	232	441
Future Vol, veh/h	94	97	105	232	441
Conflicting Peds, #/hr	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free
RT Channelized	None	None	None	None	None
Storage Length	0	-	-	-	-
Veh in Median Storage, #	0	-	0	0	-
Grade, %	0	-	0	0	-
Peak Hour Factor	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0
Mvmt Flow	104	108	117	258	490
Major/Minor	Minor2	Major1	Major2		
Conflicting Flow All	1123	632	774	0	0
Stage 1	632	-	-	-	-
Stage 2	491	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-
Pot Cap-1 Maneuver	229	484	850	-	-
Stage 1	533	-	-	-	-
Stage 2	619	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	193	484	850	-	-
Mov Cap-2 Maneuver	193	-	-	-	-
Stage 1	448	-	-	-	-
Stage 2	619	-	-	-	-
Approach	EB	NB	SB		
HCM Control Delay, s/60.28	3.09	0			
HCM LOS	F				
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	561	-	278	-	-
HCM Lane V/C Ratio	0.137	-	0.765	-	-
HCM Control Delay (s/veh)	9.9	0	50.3	-	-
HCM Lane LOS	A	A	F	-	-
HCM 95th %tile Q(veh)	0.5	-	5.7	-	-

Intersection					
Int Delay, s/veh	0				
Movement	WBL	WBR	NBT	NBR	SBL
Lane Configurations	W	W	W	W	W
Traffic Vol, veh/h	0	0	681	0	0
Future Vol, veh/h	0	0	681	0	0
Conflicting Peds, #/hr	0	0	0	100	0
Sign Control	Stop	Stop	Free	Free	Free
RT Channelized	None	None	None	None	None
Storage Length	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	0
Grade, %	0	-	0	-	0
Peak Hour Factor	90	90	90	90	90
Heavy Vehicles, %	0	0	2	0	2
Mvmt Flow	0	0	757	0	676
Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	-	478	0	0	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-
Pot Cap-1 Maneuver	0	539	-	-	0
Stage 1	0	-	-	-	0
Stage 2	0	-	-	-	0
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	482	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Approach	WB	NB	SB		
HCM Control Delay, s/v	0	0	0		
HCM LOS	A				
Minor Lane/Major Mvmt	NBT	NBR/WBLn1	SBT		
Capacity (veh/h)	-	-	-		
HCM Lane V/C Ratio	-	-	-		
HCM Control Delay (s/veh)	-	0	-		
HCM Lane LOS	-	A	-		
HCM 95th %tile Q(veh)	-	-	-		

Intersection					
Int Delay, s/veh	0				
Movement	EBT	EBR	WBL	WBT	NBL
Lane Configurations	W	W	W	W	W
Traffic Vol, veh/h	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0
Conflicting Peds, #/hr	0	100	100	0	100
Sign Control	Free	Free	Free	Free	Stop
RT Channelized	None	None	None	None	None
Storage Length	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0
Grade, %	0	-	-	0	0
Peak Hour Factor	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2
Mvmt Flow	0	0	0	0	0
Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	101	0	202
Stage 1	-	-	-	101	-
Stage 2	-	-	-	-	101
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1491	-	786
Stage 1	-	-	-	923	-
Stage 2	-	-	-	-	923
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1333	-	629
Mov Cap-2 Maneuver	-	-	-	-	629
Stage 1	-	-	-	-	825
Stage 2	-	-	-	-	825
Approach	EB	WB	NB		
HCM Control Delay, s/v	0	0	0		
HCM LOS			A		
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1333	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s/veh)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection					
Int Delay, s/veh	0				
Movement	EBL	EBT	WBT	WBR	SBL
Lane Configurations	W	W	W	W	W
Traffic Vol, veh/h	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop
RT Channelized	None	None	None	None	None
Storage Length	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0
Grade, %	-	0	0	-	0
Peak Hour Factor	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2
Mvmt Flow	0	0	0	0	0
Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	1	0	-	0	1
Stage 1	-	-	-	-	1
Stage 2	-	-	-	-	0
Critical Hdwy	4.12	-	-	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	2.218	-	-	-	3.518
Pot Cap-1 Maneuver	1622	-	-	-	1022
Stage 1	-	-	-	-	1022
Stage 2	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	1622	-	-	-	1022
Mov Cap-2 Maneuver	-	-	-	-	1022
Stage 1	-	-	-	-	1022
Stage 2	-	-	-	-	-
Approach	EB	WB	SB		
HCM Control Delay, s/v	0	0	0		
HCM LOS			A		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR/SBLn1	SBT
Capacity (veh/h)	1622	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s/veh)	0	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

Existing scenario

2024 Major Event Egress

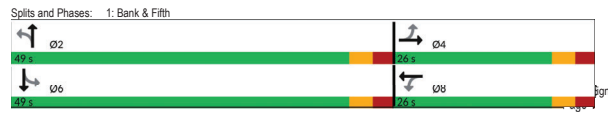
Queues

1: Bank & Fifth

08/01/2024

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	74	32	39	68	21	308	19	340
Future Volume (vph)	74	32	39	68	21	308	19	340
Lane Group Flow (vph)	0	147	43	143	0	392	0	441
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases	4	8	8	2	2	6	6	6
Permitted Phases	4	4	8	8	2	2	6	6
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	26.0	26.0	26.0	26.0	49.0	49.0	49.0	49.0
Total Split (s)	26.0	26.0	26.0	26.0	49.0	49.0	49.0	49.0
Total Split (%)	34.7%	34.7%	34.7%	34.7%	65.3%	65.3%	65.3%	65.3%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Max	Max	Max	Max
Act Effect Green (s)	13.1	12.9	12.9	12.9	48.0	48.0	48.0	48.0
Actuated g/C Ratio	0.19	0.19	0.19	0.19	0.70	0.70	0.70	0.70
v/c Ratio	0.65	0.22	0.45	0.20	0.20	0.23	0.23	0.23
Control Delay (s/veh)	36.0	24.7	19.3	5.6	5.6	5.6	5.6	5.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	36.0	24.7	19.3	5.6	5.6	5.6	5.6	5.6
LOS	D	C	B	A	A	A	A	A
Approach Delay (s/veh)	36.0	20.5	5.6	5.6	5.6	5.6	5.6	5.6
Approach LOS	D	C	A	A	A	A	A	A
Queue Length 50th (m)	15.3	4.6	9.3	8.7	9.8	9.8	9.8	9.8
Queue Length 95th (m)	31.8	12.1	23.1	18.9	21.1	21.1	21.1	21.1
Internal Link Dist (m)	49.7	45.0	112.4	195.6	190.0	190.0	190.0	190.0
Turn Bay Length (m)								
Base Capacity (vph)	345	320	469	1945	1954	1954	1954	1954
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	0.43	0.13	0.30	0.20	0.20	0.23	0.23	0.23

Intersection Summary	
Cycle Length: 75	
Actuated Cycle Length: 68.4	
Natural Cycle: 75	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.65	
Intersection Signal Delay (s/veh): 11.8	Intersection LOS: B
Intersection Capacity Utilization 71.9%	ICU Level of Service C
Analysis Period (min) 15	



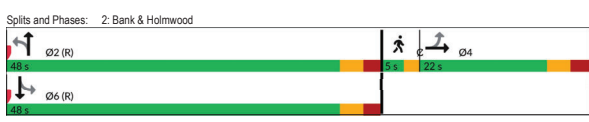
Queues

2: Bank & Holmwood

08/01/2024

Lane Group	EBT	NBL	NBT	SBL	SBT	Ø3
Lane Configurations						
Traffic Volume (vph)	21	49	259	30	270	
Future Volume (vph)	21	49	259	30	270	
Lane Group Flow (vph)	143	0	405	0	401	
Turn Type	NA	Perm	NA	Perm	NA	
Protected Phases	4	2	2	6	3	
Permitted Phases	4	2	2	6	6	
Detector Phase	4	2	2	6	6	
Switch Phase						
Minimum Initial (s)	4.4	10.0	10.0	4.0	4.0	1.0
Minimum Split (s)	22.0	48.0	48.0	48.0	48.0	5.0
Total Split (s)	22.0	48.0	48.0	48.0	48.0	5.0
Total Split (%)	29.3%	64.0%	64.0%	64.0%	64.0%	7%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	2.0
All-Red Time (s)	2.6	2.2	2.2	2.2	2.2	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.6	5.2	5.2	5.2	5.2	0.0
Lead/Lag						Lead
Lead-Lag Optimize?						
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	None
Act Effect Green (s)	13.1	51.1	51.1	51.1	51.1	
Actuated g/C Ratio	0.17	0.68	0.68	0.68	0.68	
v/c Ratio	0.61	0.25	0.23	0.23	0.23	
Control Delay (s/veh)	38.7	5.0	4.8	4.8	4.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	38.7	5.0	4.8	4.8	4.8	
LOS	D	A	A	A	A	
Approach Delay (s/veh)	38.7	5.0	4.8	4.8	4.8	
Approach LOS	D	A	A	A	A	
Queue Length 50th (m)	18.9	8.4	8.0	8.0	8.0	
Queue Length 95th (m)	32.8	17.4	16.6	16.6	16.6	
Internal Link Dist (m)	39.8	31.5	195.6	195.6	195.6	
Turn Bay Length (m)						
Base Capacity (vph)	304	1645	1778	1778	1778	
Starvation Cap Reductn	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	
Reduced v/c Ratio	0.47	0.25	0.23	0.23	0.23	

Intersection Summary	
Cycle Length: 75	
Actuated Cycle Length: 75	
Offset: 74 (99%), Referenced to phase 2:NBL and 6:SBT, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.61	
Intersection Signal Delay (s/veh): 10.0	Intersection LOS: B
Intersection Capacity Utilization 59.2%	ICU Level of Service B
Analysis Period (min) 15	



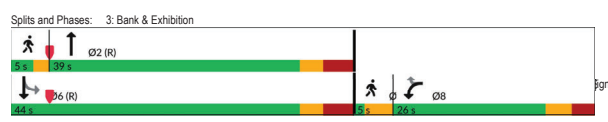
Queues

3: Bank & Exhibition

08/01/2024

Lane Group	NBT	SBT	Ø1	Ø7	Ø8
Lane Configurations					
Traffic Volume (vph)	350	333			
Future Volume (vph)	350	333			
Lane Group Flow (vph)	389	370			
Turn Type	NA	NA			
Protected Phases	2	6	1	7	8
Permitted Phases	2	6			
Detector Phase	2	6			
Switch Phase					
Minimum Initial (s)	10.0	10.0	1.0	1.0	10.0
Minimum Split (s)	39.0	44.0	5.0	5.0	26.0
Total Split (s)	39.0	44.0	5.0	5.0	26.0
Total Split (%)	52.0%	58.7%	7%	7%	35%
Yellow Time (s)	3.0	3.0	2.0	3.5	3.3
All-Red Time (s)	3.9	3.9	0.0	0.0	3.0
Lost Time Adjust (s)	0.0	0.0			
Total Lost Time (s)	6.9	6.9			
Lead/Lag	Lag	Lead	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	
Recall Mode	C-Max	C-Max	None	None	None
Act Effect Green (s)	75.0	75.0			
Actuated g/C Ratio	1.00	1.00			
v/c Ratio	0.12	0.12			
Control Delay (s/veh)	0.1	0.1			
Queue Delay	0.0	0.0			
Total Delay (s/veh)	0.1	0.1			
LOS	A	A			
Approach Delay (s/veh)	0.1	0.1			
Approach LOS	A	A			
Queue Length 50th (m)	0.0	0.0			
Queue Length 95th (m)	0.0	0.0			
Internal Link Dist (m)	33.7	44.8			
Turn Bay Length (m)					
Base Capacity (vph)	3204	3173			
Starvation Cap Reductn	0	0			
Spillback Cap Reductn	0	0			
Storage Cap Reductn	0	0			
Reduced v/c Ratio	0.12	0.12			

Intersection Summary	
Cycle Length: 75	
Actuated Cycle Length: 75	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.12	
Intersection Signal Delay (s/veh): 0.1	Intersection LOS: A
Intersection Capacity Utilization 43.5%	ICU Level of Service A
Analysis Period (min) 15	



Intersection						
Intersection Delay, s/veh	0					
Intersection LOS	-					
Movement						
EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0
Number of Lanes	1	0	0	1	1	0
Approach						
EB			WB	NB		
Opposing Approach	WB		EB			
Opposing Lanes	1		1	0		
Conflicting Approach Left			NB	EB		
Conflicting Lanes Left	0		1	1		
Conflicting Approach Right	NB			WB		
Conflicting Lanes Right	1		0	1		
HCM Control Delay, s/veh	0		0	0		
HCM LOS	-		-	-		
Lane						
NBLn1	EBLn1	WBLn1				
Vol Left, %	0%	0%	0%			
Vol Thru, %	100%	100%	100%			
Vol Right, %	0%	0%	0%			
Sign Control	Stop	Stop	Stop			
Traffic Vol by Lane	0	0	0			
LT Vol	0	0	0			
Through Vol	0	0	0			
RT Vol	0	0	0			
Lane Flow Rate	0	0	0			
Geometry Grp	1	1	1			
Degree of Util (X)	0	0	0			
Departure Headway (Hd)	3.934	3.934	3.934			
Convergence, Y/N	Yes	Yes	Yes			
Cap	0	0	0			
Service Time	1.934	1.934	1.934			
HCM Lane V/C Ratio	0	0	0			
HCM Control Delay, s/veh	6.9	6.9	6.9			
HCM Lane LOS	N	N	N			
HCM 95th-tile Q	0	0	0			

Intersection											
Intersection Delay, s/veh	10										
Intersection LOS	A										
Movement											
EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR	
Lane Configurations											
Traffic Vol, veh/h	24	51	0	0	0	108	114	97	141	0	
Future Vol, veh/h	24	51	0	0	0	109	114	97	141	0	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	
Mvmt Flow	27	57	0	0	0	121	127	108	157	0	
Number of Lanes	0	1	0	0	0	1	0	1	0	0	
Approach											
EB						WB	NB			SB	
Opposing Approach	WB					EB	SB			NB	
Opposing Lanes	1					1	1			1	
Conflicting Approach Left	SB					NB	EB			WB	
Conflicting Lanes Left	1					1	1			1	
Conflicting Approach Right	NB					SB	WB			EB	
Conflicting Lanes Right	1					1	1			1	
HCM Control Delay, s/veh	8.9					8.3	11.1			7.6	
HCM LOS	A					A	B			A	
Lane											
NBLn1	EBLn1	WBLn1	SBLn1								
Vol Left, %	32%	32%	0%	0%							
Vol Thru, %	28%	68%	0%	0%							
Vol Right, %	40%	0%	100%	100%							
Sign Control	Stop	Stop	Stop	Stop							
Traffic Vol by Lane	352	75	109	53							
LT Vol	114	24	0	0							
Through Vol	97	51	0	0							
RT Vol	141	0	109	53							
Lane Flow Rate	391	83	121	59							
Geometry Grp	1	1	1	1							
Degree of Util (X)	0.468	0.119	0.15	0.07							
Departure Headway (Hd)	4.307	5.145	4.444	4.249							
Convergence, Y/N	Yes	Yes	Yes	Yes							
Cap	837	694	803	859							
Service Time	2.34	3.196	2.491	2.296							
HCM Lane V/C Ratio	0.467	0.12	0.151	0.07							
HCM Control Delay, s/veh	11.1	8.9	8.3	7.6							
HCM Lane LOS	B	A	A	A							
HCM 95th-tile Q	2.5	0.4	0.5	0.2							

Intersection						
Intersection Delay, s/veh	0					
Intersection LOS	-					
Movement						
EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0
Number of Lanes	1	0	0	1	1	0
Approach						
EB			WB	NB		
Opposing Approach	WB		EB			
Opposing Lanes	1		1	0		
Conflicting Approach Left			NB	EB		
Conflicting Lanes Left	0		1	1		
Conflicting Approach Right	NB			WB		
Conflicting Lanes Right	1		0	1		
HCM Control Delay, s/veh	0		0	0		
HCM LOS	-		-	-		
Lane						
NBLn1	EBLn1	WBLn1				
Vol Left, %	0%	0%	0%			
Vol Thru, %	100%	100%	100%			
Vol Right, %	0%	0%	0%			
Sign Control	Stop	Stop	Stop			
Traffic Vol by Lane	0	0	0			
LT Vol	0	0	0			
Through Vol	0	0	0			
RT Vol	0	0	0			
Lane Flow Rate	0	0	0			
Geometry Grp	1	1	1			
Degree of Util (X)	0	0	0			
Departure Headway (Hd)	3.934	3.934	3.934			
Convergence, Y/N	Yes	Yes	Yes			
Cap	0	0	0			
Service Time	1.934	1.934	1.934			
HCM Lane V/C Ratio	0	0	0			
HCM Control Delay, s/veh	6.9	6.9	6.9			
HCM Lane LOS	N	N	N			
HCM 95th-tile Q	0	0	0			

Intersection						
Int Delay, s/veh	0.1					
Movement						
EBL	EBR	NBL	NBT	SBT	SBR	
Lane Configurations						
Traffic Vol, veh/h	0	5	0	350	280	66
Future Vol, veh/h	0	5	0	350	280	66
Conflicting Peds, #/hr	0	0	178	0	0	107
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	6	0	389	311	73
Major/Minor						
Minor2	Major1	Major2				
Conflicting Flow All	- 526	562	0	-	0	
Stage 1	-	-	-	-	-	
Stage 2	-	-	-	-	-	
Critical Hdwy	- 6.245	4.145	-	-	-	
Critical Hdwy Stg 1	-	-	-	-	-	
Critical Hdwy Stg 2	-	-	-	-	-	
Follow-up Hdwy	- 3.32852	2.285	-	-	-	
Pot Cap-1 Maneuver	0	549	1001	-	-	
Stage 1	0	-	-	-	-	
Stage 2	0	-	-	-	-	
Platoon blocked, %	-	-	-	-	-	
Mov Cap-1 Maneuver	- 445	812	-	-	-	
Mov Cap-2 Maneuver	-	-	-	-	-	
Stage 1	-	-	-	-	-	
Stage 2	-	-	-	-	-	
Approach						
EB		NB		SB		
HCM Control Delay, s/veh	0	0		0		
HCM LOS	B					
Minor Lane/Major Mvmt						
NBL	NBT	EBLn1	SBT	SBR		
Capacity (veh/h)	812	- 445	-	-		
HCM Lane V/C Ratio	-	- 0.012	-	-		
HCM Control Delay (s/veh)	0	- 13.2	-	-		
HCM Lane LOS	A	- B	-	-		
HCM 95th-tile Q(veh)	0	- 0	-	-		

Intersection					
Int Delay, s/veh	0.5				
Movement	EBL	EBR	NBL	NBR	SB
Lane Configurations		↕	↕	↕	↕
Traffic Vol, veh/h	0	32	0	350	290
Future Vol, veh/h	0	32	0	350	290
Conflicting Peds, #/hr	0	0	0	0	86
Sign Control	Stop	Stop	Free	Free	Free
RT Channelized	-	None	-	None	-
Storage Length	-	0	-	-	-
Veh in Median Storage, #	0	-	0	0	-
Grade, %	0	-	0	0	-
Peak Hour Factor	90	90	90	90	90
Heavy Vehicles, %	3	3	3	3	3
Mvmt Flow	0	36	0	389	322
Major/Minor	Minor2	Major1	Major2		
Conflicting Flow All	-	322	0	-	0
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	6.245	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	-3.3285	-	-	-
Pot Cap-1 Maneuver	0	715	0	-	0
Stage 1	0	-	0	-	0
Stage 2	0	-	0	-	0
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	715	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Approach	EB	NB	SB		
HCM Control Delay, s/v/10.3	0	0	0		
HCM LOS	B				
Minor Lane/Major Mvmt	NBTEBLn1	SBT			
Capacity (veh/h)	-	715	-		
HCM Lane V/C Ratio	-	0.05	-		
HCM Control Delay (s/veh)	-	10.3	-		
HCM Lane LOS	-	B	-		
HCM 95th %tile Q(veh)	-	0.2	-		

Intersection						
Int Delay, s/veh	19					
Movement	EBL	EBR	NBL	NBR	SBT	SBR
Lane Configurations		↕		↕	↕	↕
Traffic Vol, veh/h	238	210	50	109	215	127
Future Vol, veh/h	238	210	50	109	215	127
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	0	0	-
Grade, %	0	-	0	0	-	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	264	233	56	121	239	141
Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	542	309	380	0	-	0
Stage 1	309	-	-	-	-	-
Stage 2	232	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	505	735	1190	-	-	-
Stage 1	749	-	-	-	-	-
Stage 2	811	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	480	735	1190	-	-	-
Mov Cap-2 Maneuver	480	-	-	-	-	-
Stage 1	711	-	-	-	-	-
Stage 2	811	-	-	-	-	-
Approach	EB	NB	SB			
HCM Control Delay, s/v/39.4	0	2.57	0			
HCM LOS	E					
Minor Lane/Major Mvmt	NBL	NBTEBLn1	SBT	SBR		
Capacity (veh/h)	566	-	573	-	-	-
HCM Lane V/C Ratio	0.047	-	0.868	-	-	-
HCM Control Delay (s/veh)	8.2	0	39.4	-	-	-
HCM Lane LOS	A	A	E	-	-	-
HCM 95th %tile Q(veh)	0.1	-	9.7	-	-	-

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBL	NBR	SBL	SBT
Lane Configurations		↕	↕		↕	↕
Traffic Vol, veh/h	0	0	350	0	0	333
Future Vol, veh/h	0	0	350	0	0	333
Conflicting Peds, #/hr	0	0	0	100	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	2	0	2	2
Mvmt Flow	0	0	389	0	0	370
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	-	294	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	708	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	633	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s/v	0	0	0			
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBR/WBLn1	SBT			
Capacity (veh/h)	-	-	-			
HCM Lane V/C Ratio	-	-	-			
HCM Control Delay (s/veh)	-	-	0			
HCM Lane LOS	-	-	A			
HCM 95th %tile Q(veh)	-	-	-			

Intersection						
Int Delay, s/veh	0					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↕	↕		↕	↕	↕
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	100	100	0	100	100
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0
Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	101	0	202	201
Stage 1	-	-	-	-	101	-
Stage 2	-	-	-	-	-	101
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1491	-	786	840
Stage 1	-	-	-	-	923	-
Stage 2	-	-	-	-	-	923
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1333	-	629	671
Mov Cap-2 Maneuver	-	-	-	-	629	-
Stage 1	-	-	-	-	825	-
Stage 2	-	-	-	-	-	825
Approach	EB	WB	NB			
HCM Control Delay, s/v	0	0	0			
HCM LOS			A			
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	-	-	-	1333	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-
HCM Control Delay (s/veh)	0	-	-	0	-	-
HCM Lane LOS	A	-	-	A	-	-
HCM 95th %tile Q(veh)	-	-	-	0	-	-

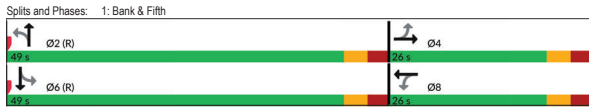
Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	None	None	None	None	None	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0
Major/Minor						
Conflicting Flow All	1	0	-	0	1	1
Stage 1	-	-	-	-	1	-
Stage 2	-	-	-	-	0	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1622	-	-	-	1022	1083
Stage 1	-	-	-	-	1022	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	1622	-	-	-	1022	1083
Mov Cap-2 Maneuver	-	-	-	-	1022	-
Stage 1	-	-	-	-	1022	-
Stage 2	-	-	-	-	-	-
Approach						
EB	WB	SB				
HCM Control Delay, s/v	0	0	0			
HCM LOS	A					
Minor Lane/Major Mvmt						
Capacity (veh/h)	1622	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-
HCM Control Delay (s/veh)	0	-	-	-	0	-
HCM Lane LOS	A	-	-	-	A	-
HCM 95th %ile Q(veh)	0	-	-	-	-	-

2028 Baseline Conditions Weekday AM

Existing (2022) Major Event Egress Peak Hour Lansdowne 2.0 Transportation Impact Assessment 12:47 pm 05/05/2024 12:28 PM Signal Timing, A Page 6

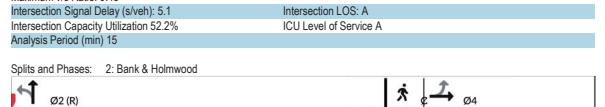
Queues
 1: Bank & Fifth 12/06/2024

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	38	59	48	50	9	554	20	429
Future Volume (vph)	38	59	48	50	9	554	20	429
Lane Group Flow (vph)	0	140	53	89	0	659	0	538
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases	4		8		2		6	
Permitted Phases	4		8		2		6	
Minimum Split (s)	26.0	26.0	26.0	26.0	49.0	49.0	49.0	49.0
Total Split (s)	26.0	26.0	26.0	26.0	49.0	49.0	49.0	49.0
Total Split (%)	34.7%	34.7%	34.7%	34.7%	65.3%	65.3%	65.3%	65.3%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead-Lag	-							
Lead-Lag Optimize?	-							
Act Effect Green (s)	20.5	20.5	20.5	20.5	43.5	43.5	43.5	43.5
Actuated g/C Ratio	0.27	0.27	0.27	0.27	0.58	0.58	0.58	0.58
v/c Ratio	0.37	0.18	0.21	0.21	0.40	0.34	0.34	0.34
Control Delay (s/veh)	22.2	23.0	15.9	15.9	2.9	8.7	8.7	8.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	22.2	23.0	15.9	15.9	2.9	8.7	8.7	8.7
LOS	C	C	B	B	A	A	A	A
Approach Delay (s/veh)	22.2	18.6		2.9		8.7	8.7	
Approach LOS	C	B		A		A	A	
Queue Length 50th (m)	13.5	5.7	6.0	6.0	4.6	18.1	18.1	18.1
Queue Length 95th (m)	28.4	14.1	16.4	16.4	5.3	27.0	27.0	27.0
Internal Link Dist (m)	49.7	112.4		195.6		190.0	190.0	
Turn Bay Length (m)	45.0							
Base Capacity (vph)	376	287	419	419	1655	1590	1590	1590
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	0.37	0.18	0.21	0.21	0.40	0.34	0.34	0.34
Intersection Summary								
Cycle Length: 75								
Actuated Cycle Length: 75								
Offset: 33 (44%), Referenced to phase 2:NBT and 6:SBTL, Start of Green								
Natural Cycle: 75								
Control Type: Pretimed								
Maximum v/c Ratio: 0.40								
Intersection Signal Delay (s/veh): 8.3					Intersection LOS: A			
Intersection Capacity Utilization 54.9%								
Analysis Period (min): 15								



Queues
 2: Bank & Holmwood 12/06/2024

Lane Group	EBT	NBL	NBT	SBL	SBT	Ø3
Lane Configurations						
Traffic Volume (vph)	22	16	541	11	384	
Future Volume (vph)	22	16	541	11	384	
Lane Group Flow (vph)	88	0	650	0	465	
Turn Type	NA	Perm	NA	Perm	NA	
Protected Phases	4	2	6	6	3	
Permitted Phases	4	2	6	6	3	
Detector Phase	4	2	2	6	6	
Switch Phase	-					
Minimum Initial (s)	4.4	10.0	10.0	4.0	4.0	1.0
Minimum Split (s)	22.0	48.0	48.0	48.0	48.0	5.0
Total Split (s)	22.0	48.0	48.0	48.0	48.0	5.0
Total Split (%)	29.3%	64.0%	64.0%	64.0%	64.0%	7%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	2.0
All-Red Time (s)	2.6	2.2	2.2	2.2	2.2	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.6	5.2	5.2	5.2	5.2	
Lead-Lag	Lag		Lead			
Lead-Lag Optimize?	-					
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	None
Act Effect Green (s)	10.1	57.4	57.4	57.4	57.4	
Actuated g/C Ratio	0.13	0.77	0.77	0.77	0.77	
v/c Ratio	0.48	0.30	0.22	0.22	0.22	
Control Delay (s/veh)	37.8	2.1	3.2	3.2	3.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	37.8	2.1	3.2	3.2	3.2	
LOS	D	A	A	A	A	
Approach Delay (s/veh)	37.8	2.1	3.2	3.2	3.2	
Approach LOS	D	A	A	A	A	
Queue Length 50th (m)	11.7	1.7	7.4	7.4	7.4	
Queue Length 95th (m)	23.3	4.6	14.1	14.1	14.1	
Internal Link Dist (m)	39.8	31.5	195.6	195.6	195.6	
Turn Bay Length (m)	-					
Base Capacity (vph)	298	2138	2149	2149	2149	
Starvation Cap Reductn	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	
Reduced v/c Ratio	0.30	0.30	0.22	0.22	0.22	
Intersection Summary						
Cycle Length: 75						
Actuated Cycle Length: 75						
Offset: 28 (37%), Referenced to phase 2:NBT and 6:SBTL, Start of Green						
Natural Cycle: 75						
Control Type: Actuated-Coordinated						
Maximum v/c Ratio: 0.48						
Intersection Signal Delay (s/veh): 5.1				Intersection LOS: A		
Intersection Capacity Utilization 52.2%						
Analysis Period (min): 15						





Lane Group	EBL	NBL	NBT	SBT	Ø4
Lane Configurations	↖	↘	↕	↕	↖
Traffic Volume (vph)	47	24	224	289	
Future Volume (vph)	47	24	224	289	
Lane Group Flow (vph)	72	0	276	374	
Turn Type	Prot	Perm	NA	NA	
Protected Phases	10		2	6	4
Permitted Phases		2			
Detector Phase	10	2	2	6	
Switch Phase					
Minimum Initial (s)	10.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	32.0	32.0	32.0	16.0
Total Split (s)	22.0	32.0	32.0	32.0	16.0
Total Spill (%)	31.4%	45.7%	45.7%	45.7%	23%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.7	3.8	3.8	3.8	2.7
Lost Time Adj (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.7				6.8
Lead-Lag					
Lead-Lag Optimize?					
Recall Mode	None	None	None	Max	None
Act Effct Green (s)	10.1		36.1	36.1	
Actuated g/C Ratio	0.20		0.73	0.73	
v/c Ratio	0.23		0.24	0.31	
Control Delay (s/veh)	18.7		5.8	6.2	
Queue Delay	0.0		0.0	0.0	
Total Delay (s/veh)	18.7		5.8	6.2	
LOS	B		A	A	
Approach Delay (s/veh)	18.7		5.8	6.2	
Approach LOS	B		A	A	
Queue Length 50th (m)	6.6		11.6	16.9	
Queue Length 95th (m)	13.1		22.7	31.6	
Internal Link Dist (m)	57.2		0.1	5.9	
Turn Bay Length (m)					
Base Capacity (vph)	519		1170	1212	
Starvation Cap Reductn	0		0	0	
Spillback Cap Reductn	0		0	0	
Storage Cap Reductn	0		0	0	
Reduced v/c Ratio	0.14		0.24	0.31	

Intersection Summary

Cycle Length: 70
 Actuated Cycle Length: 49.3
 Natural Cycle: 70
 Control Type: Semi Act-Uncooord
 Maximum v/c Ratio: 0.31

Intersection Signal Delay (s/veh): 7.3
 Intersection LOS: A
 Intersection Capacity Utilization: 52.3%
 ICU Level of Service A
 Analysis Period (min): 15



Timing, 2028 Bt

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↖	↘	↖	↖	↖	↖
Traffic Vol. veh/h	2	5	5	123	5	5
Future Vol. veh/h	2	5	5	123	5	5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	6	6	137	6	6
Number of Lanes	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay, s/veh	6.7	7.7	7.1
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	50%	0%	4%
Vol Thru, %	0%	29%	96%
Vol Right, %	50%	71%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	10	7	123
LT Vol	5	0	5
Through Vol	0	2	123
RT Vol	5	5	0
Lane Flow Rate	11	8	142
Geometry Grp	1	1	1
Degree of Util (X)	0.012	0.008	0.157
Departure Headway (Hd)	3.993	3.63	3.967
Convergence, Y/N	Yes	Yes	Yes
Cap	888	984	909
Service Time	2.055	1.66	1.972
HCM Lane V/C Ratio	0.012	0.008	0.156
HCM Control Delay, s/veh	7.1	6.7	7.7
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0	0	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↖	↖	↖	↖	↖
Traffic Vol. veh/h	5	107	67	5	5	5
Future Vol. veh/h	5	107	67	5	5	5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	119	74	6	6	6
Number of Lanes	0	1	1	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	1	1
HCM Control Delay, s/veh	7.7	7.4	7.2
HCM LOS	A	A	A

Lane	EBLn1	WBLn1	SBLn1
Vol Left, %	4%	0%	50%
Vol Thru, %	96%	93%	0%
Vol Right, %	0%	7%	50%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	112	72	10
LT Vol	5	0	5
Through Vol	107	67	0
RT Vol	0	5	5
Lane Flow Rate	124	80	11
Geometry Grp	1	1	1
Degree of Util (X)	0.139	0.089	0.013
Departure Headway (Hd)	4.022	4.005	4.084
Convergence, Y/N	Yes	Yes	Yes
Cap	892	894	863
Service Time	2.043	2.034	2.17
HCM Lane V/C Ratio	0.139	0.089	0.013
HCM Control Delay, s/veh	7.7	7.4	7.2
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.5	0.3	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↖	↘	↖	↖	↖	↖
Traffic Vol. veh/h	2	5	67	57	71	41
Future Vol. veh/h	2	5	67	57	71	41
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	6	74	63	79	46
Number of Lanes	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	NB
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay, s/veh	7	8.2	7.9
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	63%	0%	54%
Vol Thru, %	0%	29%	46%
Vol Right, %	37%	71%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	112	7	124
LT Vol	71	0	67
Through Vol	0	2	57
RT Vol	41	5	0
Lane Flow Rate	124	8	138
Geometry Grp	1	1	1
Degree of Util (X)	0.141	0.008	0.163
Departure Headway (Hd)	4.092	3.83	4.267
Convergence, Y/N	Yes	Yes	Yes
Cap	865	917	834
Service Time	2.174	1.927	2.328
HCM Lane V/C Ratio	0.143	0.009	0.165
HCM Control Delay, s/veh	7.9	7	8.2
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.5	0	0.6

Intersection

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑				↑		↑				↑
Traffic Vol, veh/h	67	41	0	0	0	72	19	32	24	0	0	108
Future Vol, veh/h	67	41	0	0	0	72	19	32	24	0	0	108
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	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	74	46	0	0	0	80	21	36	27	0	0	120
Number of Lanes	0	1	0	0	0	1	0	1	0	0	0	1

Approach

EB	NB	SB	
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay, s/veh	8.4	7.3	7.9
HCM LOS	A	A	A

Lane

NBLn1	EBLn1	WBLn1	SBLn1	
Vol Left, %	25%	62%	0%	0%
Vol Thru, %	43%	38%	0%	0%
Vol Right, %	32%	0%	100%	100%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	75	108	72	108
LT Vol	19	67	0	0
Through Vol	32	41	0	0
RT Vol	24	0	72	108
Lane Flow Rate	83	120	80	120
Geometry Grp	1	1	1	1
Degree of Util (X)	0.101	0.153	0.087	0.129
Departure Headway (Hd)	4.358	4.583	3.9	3.872
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	824	761	920	928
Service Time	2.376	2.583	1.917	1.888
HCM Lane V/C Ratio	0.101	0.152	0.087	0.129
HCM Control Delay, s/veh	7.9	8.4	7.3	7.5
HCM Lane LOS	A	A	A	A
HCM 95th %ile Q	0.3	0.5	0.3	0.4

Intersection

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↑	↑	↑	↑	
Traffic Vol, veh/h	0	27	0	761	546	0
Future Vol, veh/h	0	27	0	761	546	0
Conflicting Peds, #/hr	0	0	0	0	86	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	0	30	0	846	607	0

Major/Minor

Minor2	Major1	Major2	
Conflicting Flow All	- 607	- 0	- 0
Stage 1	- -	- -	- -
Stage 2	- -	- -	- -
Critical Hdwy	- 6.275	- -	- -
Critical Hdwy Stg 1	- -	- -	- -
Critical Hdwy Stg 2	- -	- -	- -
Follow-up Hdwy	- -3.3475	- -	- -
Pot Cap-1 Maneuver	0 489	0 -	0 -
Stage 1	0 -	0 -	0 -
Stage 2	0 -	0 -	0 -
Platoon blocked, %	- -	- -	- -
Mov Cap-1 Maneuver	- 489	- -	- -
Mov Cap-2 Maneuver	- -	- -	- -
Stage 1	- -	- -	- -
Stage 2	- -	- -	- -

Approach

EB	NB	SB
HCM Control Delay, s/42.85	0	0
HCM LOS	B	-

Minor Lane/Major Mvmt

NBL	NBT	SBT	SBR
Capacity (veh/h)	- 489	- -	- -
HCM Lane V/C Ratio	- 0.061	- -	- -
HCM Control Delay (s/veh)	- 12.8	- -	- -
HCM Lane LOS	- B	- -	- -
HCM 95th %ile Q(veh)	- 0.2	- -	- -

Intersection

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↑		↑	↑	↑
Traffic Vol, veh/h	1	188	142	630	369	26
Future Vol, veh/h	1	188	142	630	369	26
Conflicting Peds, #/hr	0	0	178	0	0	107
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	1	209	158	700	410	29

Major/Minor

Minor2	Major1	Major2				
Conflicting Flow All	1268	602	617	0	-	0
Stage 1	602	-	-	-	-	-
Stage 2	666	-	-	-	-	-
Critical Hdwy	6.675	6.275	4.175	-	-	-
Critical Hdwy Stg 1	5.475	-	-	-	-	-
Critical Hdwy Stg 2	5.275	-	-	-	-	-
Follow-up Hdwy	3.54753	3.4752	2.475	-	-	-
Pot Cap-1 Maneuver	169	491	944	-	-	-
Stage 1	538	-	-	-	-	-
Stage 2	467	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	83	399	766	-	-	-
Mov Cap-2 Maneuver	83	-	-	-	-	-
Stage 1	325	-	-	-	-	-
Stage 2	379	-	-	-	-	-

Approach

EB	NB	SB
HCM Control Delay, s/43.53	3.58	0
HCM LOS	C	-

Minor Lane/Major Mvmt

NBL	NBT	SBT	SBR	
Capacity (veh/h)	617	- 399	- -	- -
HCM Lane V/C Ratio	0.206	- 0.524	- -	- -
HCM Control Delay (s/veh)	10.9	1.9	23.5	- -
HCM Lane LOS	B	A	C	- -
HCM 95th %ile Q(veh)	0.8	- 2.9	- -	- -

Intersection

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↑		↑	↑	↑
Traffic Vol, veh/h	20	24	65	248	277	70
Future Vol, veh/h	20	24	65	248	277	70
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	22	27	72	276	308	78

Major/Minor

Minor2	Major1	Major2				
Conflicting Flow All	767	347	386	0	-	0
Stage 1	347	-	-	-	-	-
Stage 2	420	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	373	701	1184	-	-	-
Stage 1	720	-	-	-	-	-
Stage 2	667	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	346	701	1184	-	-	-
Mov Cap-2 Maneuver	346	-	-	-	-	-
Stage 1	668	-	-	-	-	-
Stage 2	667	-	-	-	-	-

Approach

EB	NB	SB
HCM Control Delay, s/43.38	1.71	0
HCM LOS	B	-

Minor Lane/Major Mvmt

NBL	NBT	SBT	SBR	
Capacity (veh/h)	374	- 478	- -	- -
HCM Lane V/C Ratio	0.061	- 0.102	- -	- -
HCM Control Delay (s/veh)	8.2	0	13.4	- -
HCM Lane LOS	A	A	B	- -
HCM 95th %ile Q(veh)	0.2	- 0.3	- -	- -

Intersection					
Int Delay, s/veh	0.4				
Movement	WBL	WBR	NBT	NBR	SBL
Lane Configurations					
Traffic Vol, veh/h	0	34	547	7	0
Future Vol, veh/h	0	34	547	7	0
Conflicting Peds, #/hr	0	0	0	100	0
Sign Control	Stop	Stop	Free	Free	Free
RT Channelized	None	None	None	None	None
Storage Length	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	0
Grade, %	0	-	0	-	0
Peak Hour Factor	90	90	90	90	90
Heavy Vehicles, %	0	15	6	0	0
Mvmt Flow	0	38	608	8	0
Major/Minor					
Conflicting Flow All	-	408	0	0	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	7.2	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	3.45	-	-	-
Pot Cap-1 Maneuver	0	558	-	-	0
Stage 1	0	-	-	-	0
Stage 2	0	-	-	-	0
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	499	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Approach					
WB	NB	SB			
HCM Control Delay, s/v	2.81	0	0		
HCM LOS	B				
Minor Lane/Major Mvmt					
NBT	NBR/WBLn1	SBL			
Capacity (veh/h)	-	-	499		
HCM Lane V/C Ratio	-	-	0.076		
HCM Control Delay (s/veh)	-	-	12.8		
HCM Lane LOS	-	-	B		
HCM 95th %tile Q(veh)	-	-	0.2		

Intersection					
Int Delay, s/veh	1.3				
Movement	EBT	EBR	WBL	WBT	NBL
Lane Configurations					
Traffic Vol, veh/h	107	60	5	67	18
Future Vol, veh/h	107	60	5	67	18
Conflicting Peds, #/hr	0	100	100	0	100
Sign Control	Free	Free	Free	Stop	Stop
RT Channelized	None	None	None	None	None
Storage Length	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0
Grade, %	0	-	-	0	0
Peak Hour Factor	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2
Mvmt Flow	119	67	6	74	20
Major/Minor					
Major1	Major2	Minor1			
Conflicting Flow All	0	0	286	0	438
Stage 1	-	-	-	-	252
Stage 2	-	-	-	-	186
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1277	-	576
Stage 1	-	-	-	-	790
Stage 2	-	-	-	-	846
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1141	-	458
Mov Cap-2 Maneuver	-	-	-	-	458
Stage 1	-	-	-	-	706
Stage 2	-	-	-	-	753
Approach					
EB	WB	NB			
HCM Control Delay, s/v	0	0.57	12.99		
HCM LOS			B		
Minor Lane/Major Mvmt					
NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	476	-	-	125	
HCM Lane V/C Ratio	0.054	-	-	0.005	
HCM Control Delay (s/veh)	13	-	-	8.2	0
HCM Lane LOS	B	-	-	A	
HCM 95th %tile Q(veh)	0.2	-	-	0	

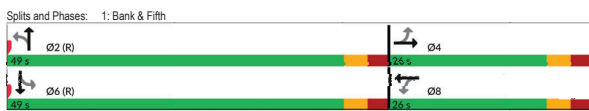
Intersection					
Int Delay, s/veh	0.7				
Movement	EBL	EBT	WBT	WBR	SBL
Lane Configurations					
Traffic Vol, veh/h	5	38	120	15	5
Future Vol, veh/h	5	38	120	15	5
Conflicting Peds, #/hr	0	0	0	0	0
Sign Control	Free	Free	Free	Stop	Stop
RT Channelized	None	None	None	None	None
Storage Length	-	-	-	-	-
Veh in Median Storage, #	0	0	0	0	0
Grade, %	-	0	0	-	0
Peak Hour Factor	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2
Mvmt Flow	6	42	133	17	6
Major/Minor					
Major1	Major2	Minor2			
Conflicting Flow All	150	0	-	0	195
Stage 1	-	-	-	-	142
Stage 2	-	-	-	-	53
Critical Hdwy	4.12	-	-	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	2.218	-	-	-	3.518
Pot Cap-1 Maneuver	1431	-	-	-	794
Stage 1	-	-	-	-	885
Stage 2	-	-	-	-	969
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	1431	-	-	-	791
Mov Cap-2 Maneuver	-	-	-	-	791
Stage 1	-	-	-	-	882
Stage 2	-	-	-	-	969
Approach					
EB	WB	SB			
HCM Control Delay, s/v	0.88	0	9.35		
HCM LOS			A		
Minor Lane/Major Mvmt					
EBL	EBT	WBT	WBR/SBLn1		
Capacity (veh/h)	209	-	-	838	
HCM Lane V/C Ratio	0.004	-	-	0.012	
HCM Control Delay (s/veh)	7.5	0	-	9.3	
HCM Lane LOS	A	A	-	A	
HCM 95th %tile Q(veh)	0	-	-	0	

2028 Baseline Conditions Weekday PM

Queues
1: Bank & Fifth

12/06/2024

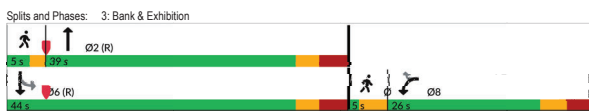
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↔		↔		↔		↔	
Traffic Volume (vph)	46	54	60	38	16	450	29	584
Future Volume (vph)	46	54	60	38	16	450	29	584
Lane Group Flow (vph)	0		162		67		81	
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases	4		8		2		6	
Permitted Phases	4		8		2		6	
Detector Phase	4		8		2		6	
Switch Phase	4		8		2		6	
Minimum Initial (s)	4.0		4.0		4.0		4.0	
Minimum Split (s)	26.0		26.0		26.0		26.0	
Total Split (s)	26.0		26.0		26.0		26.0	
Total Split (%)	34.7%		34.7%		34.7%		65.3%	
Yellow Time (s)	3.0		3.0		3.0		3.0	
All-Red Time (s)	2.5		2.5		2.5		2.5	
Last Time Adjust (s)	0.0		0.0		0.0		0.0	
Total Lost Time (s)	5.5		5.5		5.5		5.5	
Lead/Lag	Lag		Lag		Lag		Lead	
Recall Mode	None		None		C-Max		C-Max	
Act Efect Green (s)	13.1		13.1		13.1		50.9	
Actuated g/C Ratio	0.17		0.17		0.17		0.68	
v/c Ratio	0.67		0.41		0.29		0.39	
Control Delay (s/veh)	35.8		33.2		17.4		11.0	
Queue Delay (s)	0.0		0.0		0.0		0.0	
Total Delay (s/veh)	35.8		33.2		17.4		11.0	
LOS	D		C		B		A	
Approach Delay (s/veh)	35.8		33.2		17.4		11.0	
Approach LOS	D		C		B		A	
Queue Length 50th (m)	17.5		8.5		5.1		19.5	
Queue Length 95th (m)	32.4		17.7		14.6		49.1	
Internal Link Dist (m)	49.7		112.4		195.6		190.0	
Turn Bay Length (m)	45.0							
Base Capacity (vph)	364		256		409		1878	
Starvation Cap Reductn	0		0		0		0	
Spillback Cap Reductn	0		0		0		0	
Storage Cap Reductn	0		0		0		0	
Reduced v/c Ratio	0.45		0.26		0.20		0.29	



Queues
3: Bank & Exhibition

12/06/2024

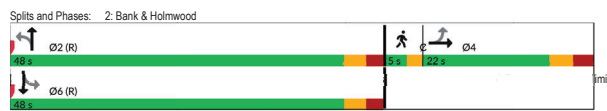
Lane Group	WBL	WBR	NBT	SBL	SBT	Ø1	Ø7	
Lane Configurations	↔		↔		↔		↔	
Traffic Volume (vph)	122	63	469	116	498			
Future Volume (vph)	122	63	469	116	498			
Lane Group Flow (vph)	136		70		667		129	
Turn Type	Prot	Perm	NA	Perm	NA			
Protected Phases	8		2		6		1	
Permitted Phases	8		2		6		1	
Detector Phase	8		2		6		1	
Switch Phase	8		2		6		1	
Minimum Initial (s)	10.0		10.0		10.0		1.0	
Minimum Split (s)	26.0		39.0		44.0		5.0	
Total Split (s)	26.0		39.0		44.0		5.0	
Total Split (%)	34.7%		52.0%		58.7%		7%	
Yellow Time (s)	3.3		3.0		3.0		2.0	
All-Red Time (s)	3.0		3.0		3.0		3.0	
Last Time Adjust (s)	0.0		0.0		0.0		0.0	
Total Lost Time (s)	6.3		6.3		6.9		6.9	
Lead/Lag	Lag		Lag		Lag		Lead	
Recall Mode	None		C-Max		C-Max		None	
Act Efect Green (s)	12.5		12.5		53.9		53.9	
Actuated g/C Ratio	0.17		0.17		0.72		0.72	
v/c Ratio	0.53		0.29		0.33		0.24	
Control Delay (s/veh)	35.7		10.3		5.7		3.2	
Queue Delay (s)	0.0		0.0		0.0		0.0	
Total Delay (s/veh)	35.7		10.3		5.7		3.2	
LOS	D		B		A		A	
Approach Delay (s/veh)	27.1		5.7		3.6		3.6	
Approach LOS	D		B		A		A	
Queue Length 50th (m)	18.0		0.0		16.4		3.7	
Queue Length 95th (m)	31.7		9.4		30.7		7.0	
Internal Link Dist (m)	30.6		33.7		40.0		44.8	
Turn Bay Length (m)	40.5		341		1997		421	
Base Capacity (vph)	405		341		1997		421	
Starvation Cap Reductn	0		0		0		0	
Spillback Cap Reductn	0		0		0		0	
Storage Cap Reductn	0		0		0		0	
Reduced v/c Ratio	0.34		0.21		0.33		0.31	



Queues
2: Bank & Holmwood

12/06/2024

Lane Group	EBT	NBL	NBT	SBL	SBT	Ø3
Lane Configurations	↔		↔		↔	
Traffic Volume (vph)	18	26	498	28	560	
Future Volume (vph)	18	26	498	28	560	
Lane Group Flow (vph)	112		0		638	
Turn Type	NA	Perm	NA	Perm	NA	
Protected Phases	4		2		6	
Permitted Phases	4		2		6	
Detector Phase	4		2		6	
Switch Phase	4		2		6	
Minimum Initial (s)	4.4		10.0		4.0	
Minimum Split (s)	22.0		48.0		48.0	
Total Split (s)	22.0		48.0		48.0	
Total Split (%)	29.3%		64.0%		64.0%	
Yellow Time (s)	3.0		3.0		3.0	
All-Red Time (s)	2.6		2.2		2.2	
Last Time Adjust (s)	0.0		0.0		0.0	
Total Lost Time (s)	5.6		5.2		5.2	
Lead/Lag	Lag		Lag		Lead	
Recall Mode	None		C-Max		C-Max	
Act Efect Green (s)	11.6		56.0		56.0	
Actuated g/C Ratio	0.15		0.75		0.75	
v/c Ratio	0.55		0.32		0.34	
Control Delay (s/veh)	38.8		2.0		5.0	
Queue Delay (s)	0.0		0.0		0.0	
Total Delay (s/veh)	38.8		2.0		5.0	
LOS	D		A		A	
Approach Delay (s/veh)	38.8		2.0		5.0	
Approach LOS	D		A		A	
Queue Length 50th (m)	14.8		4.1		24.5	
Queue Length 95th (m)	27.6		9.4		23.7	
Internal Link Dist (m)	39.8		31.5		195.6	
Turn Bay Length (m)	287		1965		2036	
Base Capacity (vph)	287		1965		2036	
Starvation Cap Reductn	0		0		0	
Spillback Cap Reductn	0		0		0	
Storage Cap Reductn	0		0		0	
Reduced v/c Ratio	0.39		0.32		0.34	



Queues
6: Bank & Aylmer

12/06/2024

Lane Group	EBL	NBL	NBT	SBT	Ø3	
Lane Configurations	↔		↔		↔	
Traffic Volume (vph)	56	21	685	747		
Future Volume (vph)	56	21	685	747		
Lane Group Flow (vph)	89		0		784	
Turn Type	Prot	Perm	NA	NA		
Protected Phases	4		2		6	
Permitted Phases	4		2		6	
Detector Phase	4		2		6	
Switch Phase	4		2		6	
Minimum Initial (s)	10.0		30.0		30.0	
Minimum Split (s)	22.0		63.0		63.0	
Total Split (s)	22.0		63.0		63.0	
Total Split (%)	24.4%		70.0%		70.0%	
Yellow Time (s)	3.3		3.0		3.0	
All-Red Time (s)	2.2		2.2		2.2	
Last Time Adjust (s)	0.0		0.0		0.0	
Total Lost Time (s)	5.5		5.2		5.2	
Lead/Lag	Lag		Lag		Lead	
Recall Mode	Ped		C-Max		C-Max	
Act Efect Green (s)	14.1		60.2		60.2	
Actuated g/C Ratio	0.19		0.67		0.67	
v/c Ratio	0.37		0.41		0.48	
Control Delay (s/veh)	31.5		5.1		8.0	
Queue Delay (s)	0.0		0.0		0.0	
Total Delay (s/veh)	31.5		5.1		8.0	
LOS	C		A		A	
Approach Delay (s/veh)	31.5		5.1		8.0	
Approach LOS	C		A		A	
Queue Length 50th (m)	10.6		17.4		34.8	
Queue Length 95th (m)	24.2		m22.0		47.8	
Internal Link Dist (m)	76.7		28.1		10.1	
Turn Bay Length (m)	275		1910		1958	
Base Capacity (vph)	275		1910		1958	
Starvation Cap Reductn	0		0		0	
Spillback Cap Reductn	0		0		67	
Storage Cap Reductn	0		0		0	
Reduced v/c Ratio	0.32		0.41		0.49	



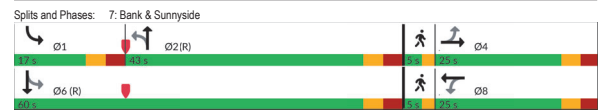
Queues
7: Bank & Sunnyside

12/06/2024

Lane Group	EBL	EBT	WBL	NBL	NBT	SBL	SBT	Ø3	Ø7
Lane Configurations	←	←	←	←	←	←	←		
Traffic Volume (vph)	52	80	16	82	14	424	206	744	
Future Volume (vph)	52	80	16	82	14	424	206	744	
Lane Group Flow (vph)	0	180	0	383	0	510	0	1159	
Turn Type	Perm	NA	Perm	NA	Perm	NA	pm-pt	NA	
Protected Phases	4	4	8	8	2	2	6	3	7
Permitted Phases	4	4	8	8	2	2	6		
Detector Phase	4	4	8	8	2	2	1	6	
Switch Phase									
Minimum Initial (s)	6.4	6.4	5.3	5.3	17.0	17.0	5.0	17.0	1.0
Minimum Split (s)	25.0	25.0	25.0	25.0	43.0	43.0	17.0	60.0	5.0
Total Split (s)	25.0	25.0	25.0	25.0	43.0	43.0	17.0	60.0	5.0
Total Split (%)	27.8%	27.8%	27.8%	27.8%	47.8%	47.8%	18.9%	66.7%	6%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0
All-Red Time (s)	2.6	2.6	2.6	2.6	3.0	3.0	2.9	3.0	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0			
Total Lost Time (s)	5.6	5.6			6.0	6.0			
Lead/Lag	Lag	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	C-Max	C-Max	None	C-Max	None
Act Effct Green (s)	24.4	24.4			54.0	54.0			
Actuated g/C Ratio	0.27	0.27			0.60	0.60			
v/c Ratio	0.69	0.95			0.30	0.92			
Control Delay (s/veh)	45.2	57.6			9.3	24.0			
Queue Delay (s/veh)	0.0	0.0			0.0	0.0			
Total Delay (s/veh)	45.2	57.6			9.3	24.0			
LOS	D	E			A	C			
Approach Delay (s/veh)	45.2	57.6			9.3	24.0			
Approach LOS	D	E			A	C			
Queue Length 50th (m)	27.8				45.8	20.5			86.1
Queue Length 95th (m)	#57.1				#101.8	29.1			#139.4
Internal Link Dist (m)	75.1				136.0	63.1			79.0
Turn Bay Length (m)									
Base Capacity (vph)	261				403	1678			1263
Starvation Cap Reductn	0				0	0			0
Spillback Cap Reductn	0				0	0			0
Storage Cap Reductn	0				0	0			0
Reduced v/c Ratio	0.69	0.95			0.30	0.92			
Intersection Summary									
Cycle Length: 90									
Actuated Cycle Length: 90									
Offset: 23 (26%), Referenced to phase 2:NBL and 6:SBTL, Start of Green									
Natural Cycle: 90									
Control Type: Actuated-Coordinated									
Maximum v/c Ratio: 0.95									
Intersection Signal Delay (s/veh): 28.1									
Intersection Capacity Utilization 95.4%									
Analysis Period (min) 15									
# 95th percentile volume exceeds capacity, queue may be longer.									
Queue shown is maximum after two cycles.									

Queues
7: Bank & Sunnyside

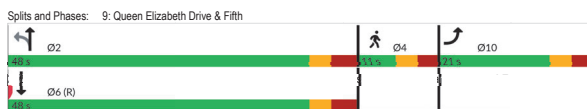
12/06/2024



Queues
9: Queen Elizabeth Drive & Fifth

12/06/2024

Lane Group	EBL	NBL	NBT	SBT	Ø4
Lane Configurations	←	←	←	←	←
Traffic Volume (vph)	35	38	195	517	
Future Volume (vph)	35	38	195	517	
Lane Group Flow (vph)	77	0	259	646	
Turn Type	Prot	Perm	NA	NA	
Protected Phases	10	2	6	4	
Permitted Phases	2				
Detector Phase	10	2	6		
Switch Phase					
Minimum Initial (s)	10.0	4.0	4.0	4.0	4.0
Minimum Split (s)	21.0	48.0	48.0	48.0	11.0
Total Split (s)	21.0	48.0	48.0	48.0	11.0
Total Split (%)	26.3%	60.0%	60.0%	60.0%	14%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.7	3.8	3.8	3.8	2.7
Lost Time Adjust (s)	0.0	0.0	0.0		
Total Lost Time (s)	5.7		6.8	6.8	
Lead/Lag					
Lead-Lag Optimize?	None	None	None	C-Max	None
Act Effct Green (s)	10.8		61.2	61.2	
Actuated g/C Ratio	0.14		0.77	0.77	
v/c Ratio	0.37		0.23	0.51	
Control Delay (s/veh)	36.7		4.6	7.0	
Queue Delay (s/veh)	0.0		0.0	0.0	
Total Delay (s/veh)	36.7		4.6	7.0	
LOS	D		A	A	
Approach Delay (s/veh)	36.7		4.6	7.0	
Approach LOS	D		A	A	
Queue Length 50th (m)	11.0		11.0	36.9	
Queue Length 95th (m)	22.5		22.4	69.2	
Internal Link Dist (m)	57.2		0.1	5.9	
Turn Bay Length (m)					
Base Capacity (vph)	293		1105	1270	
Starvation Cap Reductn	0		0	0	
Spillback Cap Reductn	0		0	0	
Storage Cap Reductn	0		0	0	
Reduced v/c Ratio	0.26		0.23	0.51	
Intersection Summary					
Cycle Length: 80					
Actuated Cycle Length: 80					
Offset: 0 (0%), Referenced to phase 6:SBT, Start of Green					
Natural Cycle: 80					
Control Type: Actuated-Coordinated					
Maximum v/c Ratio: 0.51					
Intersection Signal Delay (s/veh): 8.7					
Intersection Capacity Utilization 63.8%					
Analysis Period (min) 15					



HCM 7th AWSC
12: Exhibition & Paul Askin

11/28/2024

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	←	←	←	←	←	←
Traffic Vol. veh/h	5	122	140	5	5	5
Future Vol. veh/h	5	122	140	5	5	5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	136	156	6	6	6
Number of Lanes	0	1	1	0	1	0
Approach						
Opposing Approach		WB		EB		
Opposing Lanes		1		1		
Conflicting Approach Left		SB		WB		
Conflicting Lanes Left		1		0		
Conflicting Approach Right		0		SB		
Conflicting Lanes Right		0		1		
HCM Control Delay, s/veh		7.9		8		
HCM LOS		A		A		
Lane						
EBLn1		WBLn1		SBLn1		
Vol Left, %		4%		0%		
Vol Thru, %		96%		97%		
Vol Right, %		0%		3%		
Sign Control		Stop		Stop		
Traffic Vol by Lane		127		145		
LT Vol		5		0		
Through Vol		122		140		
RT Vol		0		5		
Lane Flow Rate		141		161		
Geometry Grp		1		1		
Degree of Util (X)		0.16		0.181		
Departure Headway (Hd)		4.081		4.038		
Convergence, Y/N		Yes		Yes		
Cap		876		886		
Service Time		2.121		2.075		
HCM Lane V/C Ratio		0.161		0.182		
HCM Control Delay, s/veh		7.9		8		
HCM Lane LOS		A		A		
HCM 95th-ile Q		0.6		0.7		

Intersection	
Intersection Delay, s/veh	6.9
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Vol, veh/h	3	5	5	5	5	5
Future Vol, veh/h	3	5	5	5	5	5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	6	6	6	6	6
Number of Lanes	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay, s/veh	6.6	7.1	6.8
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	50%	0%	50%
Vol Thru, %	0%	38%	50%
Vol Right, %	50%	63%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	10	8	10
LT Vol	5	0	5
Through Vol	0	3	5
RT Vol	5	5	0
Lane Flow Rate	11	9	11
Geometry Grp	1	1	1
Degree of Util (X)	0.012	0.009	0.013
Departure Headway (Hd)	3.769	3.587	4.06
Convergence, Y/N	Yes	Yes	Yes
Cap	953	1002	886
Service Time	1.777	1.593	2.065
HCM Lane V/C Ratio	0.012	0.009	0.012
HCM Control Delay, s/veh	6.8	6.6	7.1
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0	0	0

Intersection	
Intersection Delay, s/veh	8
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Vol, veh/h	3	5	140	5	5	122
Future Vol, veh/h	3	5	140	5	5	122
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	6	156	6	6	136
Number of Lanes	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay, s/veh	7.1	8.5	7.4
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	4%	0%	97%
Vol Thru, %	0%	38%	3%
Vol Right, %	96%	63%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	127	8	145
LT Vol	5	0	140
Through Vol	0	3	5
RT Vol	122	5	0
Lane Flow Rate	141	9	161
Geometry Grp	1	1	1
Degree of Util (X)	0.148	0.01	0.196
Departure Headway (Hd)	3.765	3.931	4.381
Convergence, Y/N	Yes	Yes	Yes
Cap	958	895	815
Service Time	1.765	2.025	2.429
HCM Lane V/C Ratio	0.147	0.01	0.198
HCM Control Delay, s/veh	7.4	7.1	8.5
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.5	0	0.7

Intersection	
Intersection Delay, s/veh	8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔				↔		↔				↔
Traffic Vol, veh/h	74	39	0	0	0	103	40	27	30	0	0	93
Future Vol, veh/h	74	39	0	0	0	103	40	27	30	0	0	93
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	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	82	43	0	0	0	114	44	30	33	0	0	103
Number of Lanes	0	1	0	0	0	1	0	1	0	0	0	1

Approach	EB	WB	NB	SB
Opposing Approach	WB		EB	SB
Opposing Lanes	1		1	1
Conflicting Approach Left	SB		NB	EB
Conflicting Lanes Left	1		1	1
Conflicting Approach Right	NB		SB	WB
Conflicting Lanes Right	1		1	1
HCM Control Delay, s/veh	8.6		7.5	8.2
HCM LOS	A		A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	41%	65%	0%	0%
Vol Thru, %	28%	35%	0%	0%
Vol Right, %	31%	0%	100%	100%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	97	113	103	93
LT Vol	40	74	0	0
Through Vol	27	39	0	0
RT Vol	30	0	103	93
Lane Flow Rate	108	126	114	103
Geometry Grp	1	1	1	1
Degree of Util (X)	0.134	0.162	0.125	0.115
Departure Headway (Hd)	4.471	4.641	3.942	3.991
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	803	773	910	899
Service Time	2.491	2.663	1.963	2.01
HCM Lane V/C Ratio	0.134	0.163	0.125	0.115
HCM Control Delay, s/veh	8.2	8.6	7.5	7.5
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.5	0.6	0.4	0.4

Intersection	
Int Delay, s/veh	12.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↔	↔	↔	↔	↔
Traffic Vol, veh/h	3	233	213	558	570	49
Future Vol, veh/h	3	233	213	558	570	49
Conflicting Peds, #/hr	0	0	178	0	0	107
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	0
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	3	259	237	620	633	54

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	1622	839	866
Stage 1	839	-	-
Stage 2	783	-	-
Critical Hdwy	6.675	6.275	4.175
Critical Hdwy Stg 1	5.475	-	-
Critical Hdwy Stg 2	5.875	-	-
Follow-up Hdwy	3.54753	3.4752	2.475
Pot Cap-1 Maneuver	100	359	760
Stage 1	417	-	-
Stage 2	406	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	36	291	617
Mov Cap-2 Maneuver	36	-	-
Stage 1	181	-	-
Stage 2	329	-	-

Approach	EB	NB	SB
HCM Control Delay, s/66.86		6.73	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBTEBLn1	SBT	SBR
Capacity (veh/h)	510	-	291	-
HCM Lane V/C Ratio	0.384	-	0.888	-
HCM Control Delay (s/veh)	14.4	3.8	66.9	-
HCM Lane LOS	B	A	F	-
HCM 95th-tile Q(veh)	1.8	-	8	-

Intersection					
Int Delay, s/veh	0.3				
Movement	EBL	EBR	NBL	NBT	SBT
Lane Configurations					
Traffic Vol, veh/h	0	24	0	780	812
Future Vol, veh/h	0	24	0	780	812
Conflicting Peds, #/hr	0	0	0	0	86
Sign Control	Stop	Stop	Free	Free	Free
RT Channelized	None	None	None	None	None
Storage Length	-	0	-	-	-
Veh in Median Storage, #	0	-	0	0	-
Grade, %	0	-	0	0	-
Peak Hour Factor	90	90	90	90	90
Heavy Vehicles, %	5	5	5	5	5
Mvmt Flow	0	27	0	867	902
Major/Minor					
Minor2	Minor1	Major2			
Conflicting Flow All	989	0	0		
Stage 1	-	-	-		
Stage 2	-	-	-		
Critical Hdwy	6.275	-	-		
Critical Hdwy Stg 1	-	-	-		
Critical Hdwy Stg 2	-	-	-		
Follow-up Hdwy	-3.3475	-	-		
Pot Cap-1 Maneuver	0	293	0	-	
Stage 1	0	-	0	-	
Stage 2	0	-	0	-	
Platoon blocked, %	-	-	-		
Mov Cap-1 Maneuver	-	267	-	-	
Mov Cap-2 Maneuver	-	-	-	-	
Stage 1	-	-	-	-	
Stage 2	-	-	-	-	
Approach					
EB	NB	SB			
HCM Control Delay, s/v	20	0	0		
HCM LOS	C				
Minor Lane/Major Mvmt					
NBL	NBEBLn1	SBL	SBR		
Capacity (veh/h)	267	-	-		
HCM Lane V/C Ratio	0.1	-	-		
HCM Control Delay (s/veh)	20	-	-		
HCM Lane LOS	C	-	-		
HCM 95th %tile Q(veh)	0.3	-	-		

Intersection					
Int Delay, s/veh	0.9				
Movement	WBL	WBR	NBT	NBR	SBL
Lane Configurations					
Traffic Vol, veh/h	5	74	540	7	1 613
Future Vol, veh/h	5	74	540	7	1 613
Conflicting Peds, #/hr	0	0	0	100	0
Sign Control	Stop	Stop	Free	Free	Free
RT Channelized	None	None	None	None	None
Storage Length	-	0	-	-	-
Veh in Median Storage, #	0	-	0	-	0
Grade, %	0	-	0	-	0
Peak Hour Factor	90	90	90	90	90
Heavy Vehicles, %	0	15	6	0	5
Mvmt Flow	6	82	600	8	1 681
Major/Minor					
Minor1	Minor2	Major1	Major2		
Conflicting Flow All	1047	404	0	0	708
Stage 1	704	-	-	-	-
Stage 2	343	-	-	-	-
Critical Hdwy	6.8	7.2	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-
Follow-up Hdwy	3.5	3.45	-	2.2	-
Pot Cap-1 Maneuver	227	561	-	900	-
Stage 1	457	-	-	-	-
Stage 2	696	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	203	502	-	805	-
Mov Cap-2 Maneuver	203	-	-	-	-
Stage 1	409	-	-	-	-
Stage 2	695	-	-	-	-
Approach					
WB	NB	SB			
HCM Control Delay, s/v	3.58	0	0.02		
HCM LOS	B				
Minor Lane/Major Mvmt					
NBL	NBR	NBEBLn1	SBL	SBR	
Capacity (veh/h)	-	-	502	805	-
HCM Lane V/C Ratio	-	-	0.164	0.001	-
HCM Control Delay (s/veh)	-	-	13.6	9.5	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.6	0	-

Intersection					
Int Delay, s/veh	2.7				
Movement	EBL	EBR	NBL	NBT	SBT
Lane Configurations					
Traffic Vol, veh/h	53	56	46	257	495
Future Vol, veh/h	53	56	46	257	495
Conflicting Peds, #/hr	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free
RT Channelized	None	None	None	None	None
Storage Length	0	-	-	-	-
Veh in Median Storage, #	0	-	0	0	-
Grade, %	0	-	0	0	-
Peak Hour Factor	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0
Mvmt Flow	59	62	51	286	550
Major/Minor					
Minor2	Minor1	Major2			
Conflicting Flow All	976	588	626	0	0
Stage 1	588	-	-	-	-
Stage 2	388	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-
Pot Cap-1 Maneuver	281	513	966	-	-
Stage 1	559	-	-	-	-
Stage 2	690	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	263	513	966	-	-
Mov Cap-2 Maneuver	263	-	-	-	-
Stage 1	524	-	-	-	-
Stage 2	690	-	-	-	-
Approach					
EB	NB	SB			
HCM Control Delay, s/v	20.56	1.36	0		
HCM LOS	C				
Minor Lane/Major Mvmt					
NBL	NBEBLn1	SBL	SBR		
Capacity (veh/h)	273	-	351	-	-
HCM Lane V/C Ratio	0.053	-	0.345	-	-
HCM Control Delay (s/veh)	8.9	0	20.6	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.2	-	1.5	-	-

Intersection					
Int Delay, s/veh	1.8				
Movement	EBT	EBR	WBL	WBT	NBL
Lane Configurations					
Traffic Vol, veh/h	122	122	5	140	43
Future Vol, veh/h	122	122	5	140	43
Conflicting Peds, #/hr	0	100	100	0	100
Sign Control	Free	Free	Free	Stop	Stop
RT Channelized	None	None	None	None	None
Storage Length	-	-	-	-	-
Veh in Median Storage, #	0	-	0	0	-
Grade, %	0	-	0	0	-
Peak Hour Factor	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2
Mvmt Flow	136	136	6	156	48
Major/Minor					
Major1	Major2	Minor1			
Conflicting Flow All	0	0	371	0	570
Stage 1	-	-	-	-	303
Stage 2	-	-	-	-	267
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1187	-	483
Stage 1	-	-	-	-	749
Stage 2	-	-	-	-	778
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1062	-	384
Mov Cap-2 Maneuver	-	-	-	-	384
Stage 1	-	-	-	-	670
Stage 2	-	-	-	-	692
Approach					
EB	WB	NB			
HCM Control Delay, s/v	0	0.29	15.55		
HCM LOS	C				
Minor Lane/Major Mvmt					
NBLn1	EBS	EBR	WBL	WBT	
Capacity (veh/h)	395	-	62	-	
HCM Lane V/C Ratio	0.135	-	0.005	-	
HCM Control Delay (s/veh)	15.5	-	8.4	0	
HCM Lane LOS	C	-	A	A	
HCM 95th %tile Q(veh)	0.5	-	0	-	

Intersection					
Int Delay, s/veh	2.4				
Movement	EBL	EBT	WBT	WBR	SBL
Lane Configurations					
Traffic Vol, veh/h	5	58	24	91	50
Future Vol, veh/h	5	58	24	91	50
Conflicting Peds, #/hr	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop
RT Channelized	None	None	None	None	None
Storage Length	-	-	-	0	-
Veh in Median Storage, #	0	0	0	0	0
Grade, %	-	0	0	0	-
Peak Hour Factor	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2
Mvmt Flow	6	64	27	101	56

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	128	0	153
Stage 1	-	-	77
Stage 2	-	-	76
Critical Hdwy	4.12	-	6.42
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	2.219	-	3.518
Pot Cap-1 Maneuver	1458	-	839
Stage 1	-	-	946
Stage 2	-	-	947
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1458	-	836
Mov Cap-2 Maneuver	-	-	836
Stage 1	-	-	942
Stage 2	-	-	947

Approach	EB	WB	SB
HCM Control Delay, s/v 0.59	0	9.58	
HCM LOS		A	

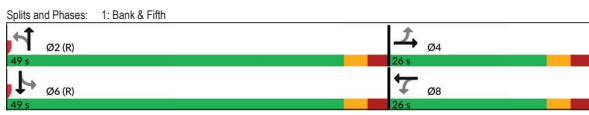
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	143	-	-	-	847
HCM Lane V/C Ratio	0.004	-	-	-	0.072
HCM Control Delay (s/veh)	7.5	0	-	-	9.6
HCM Lane LOS	A	A	-	-	A
HCM 95th %ile Q(veh)	0	-	-	-	0.2

2028 Construction Impact Weekday AM

Queues
1: Bank & Fifth 12/06/2024

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	38	59	50	50	9	556	20	445
Future Volume (vph)	38	59	50	50	9	556	20	445
Lane Group Flow (vph)	0	140	56	89	0	667	0	555
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases	4		8		2		6	
Permitted Phases	4		8		2		6	
Minimum Split (s)	26.0	26.0	26.0	26.0	49.0	49.0	49.0	49.0
Total Split (s)	26.0	26.0	26.0	26.0	49.0	49.0	49.0	49.0
Total Split (%)	34.7%	34.7%	34.7%	34.7%	65.3%	65.3%	65.3%	65.3%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag								
Lead-Lag Optimize?								
Act Effect Green (s)	20.5	20.5	20.5	20.5	43.5	43.5	43.5	43.5
Actuated g/C Ratio	0.27	0.27	0.27	0.27	0.58	0.58	0.58	0.58
v/c Ratio	0.37	0.20	0.21	0.21	0.41	0.37	0.37	0.37
Control Delay (s/veh)	22.2	23.1	15.9	15.9	2.9	8.9	2.9	8.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	22.2	23.1	15.9	15.9	2.9	8.9	2.9	8.9
LOS	C	C	B	B	A	A	A	A
Approach Delay (s/veh)	22.2		18.7		2.9		8.9	
Approach LOS	C		B		A		A	
Queue Length 50th (m)	13.5	6.1	6.0	6.0	4.7	19.2	4.7	19.2
Queue Length 95th (m)	28.4	14.8	16.4	16.4	5.4	28.4	5.4	28.4
Internal Link Dist (m)	49.7		112.4		195.6		190.0	
Turn Bay Length (m)			45.0					
Base Capacity (vph)	376	287	419	419	1632	1517	1632	1517
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	0.37	0.20	0.21	0.21	0.41	0.37	0.37	0.37

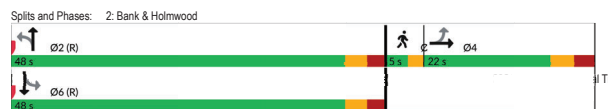
Intersection Summary
 Cycle Length: 75
 Actuated Cycle Length: 75
 Offset: 33 (44%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
 Natural Cycle: 75
 Control Type: Pretimed
 Maximum v/c Ratio: 0.41
 Intersection Signal Delay (s/veh): 8.5
 Intersection LOS: A
 Intersection Capacity Utilization: 55.3%
 ICU Level of Service B
 Analysis Period (min): 15



Queues
2: Bank & Holmwood 12/06/2024

Lane Group	EBT	NBL	NBT	SBL	SBT	Ø3
Lane Configurations						
Traffic Volume (vph)	22	16	547	11	401	
Future Volume (vph)	22	16	547	11	401	
Lane Group Flow (vph)	88	0	657	0	484	
Turn Type	NA	Perm	NA	Perm	NA	
Protected Phases	4		2		6	3
Permitted Phases	4		2		6	3
Detector Phase	4	2	2	6	6	
Switch Phase						
Minimum Initial (s)	4.4	10.0	10.0	4.0	4.0	1.0
Minimum Split (s)	22.0	48.0	48.0	48.0	48.0	5.0
Total Split (s)	22.0	48.0	48.0	48.0	48.0	5.0
Total Split (%)	29.3%	64.0%	64.0%	64.0%	64.0%	7%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	2.0
All-Red Time (s)	2.6	2.2	2.2	2.2	2.2	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.6	5.2	5.2	5.2	5.2	0.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	None
Act Effect Green (s)	10.1	57.4	57.4	10.1	57.4	0.77
Actuated g/C Ratio	0.13	0.77	0.77	0.13	0.77	0.077
v/c Ratio	0.48	0.31	0.31	0.48	0.31	0.24
Control Delay (s/veh)	37.8	2.3	2.3	37.8	2.3	3.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	37.8	2.3	2.3	37.8	2.3	3.2
LOS	D	A	A	D	A	A
Approach Delay (s/veh)	37.8	2.3	2.3	37.8	2.3	3.2
Approach LOS	D	A	A	D	A	A
Queue Length 50th (m)	11.7	1.8	1.8	11.7	1.8	7.8
Queue Length 95th (m)	23.3	4.8	4.8	23.3	4.8	15.0
Internal Link Dist (m)	39.8	31.5	31.5	39.8	31.5	195.6
Turn Bay Length (m)						
Base Capacity (vph)	298	2118	2118	298	2118	2048
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	0.30	0.31	0.31	0.30	0.31	0.24

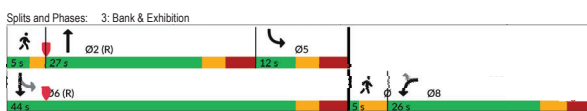
Intersection Summary
 Cycle Length: 75
 Actuated Cycle Length: 75
 Offset: 28 (37%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
 Natural Cycle: 75
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.48
 Intersection Signal Delay (s/veh): 5.2
 Intersection LOS: A
 Intersection Capacity Utilization: 52.3%
 ICU Level of Service A
 Analysis Period (min): 15



Queues
3: Bank & Exhibition

12/06/2024

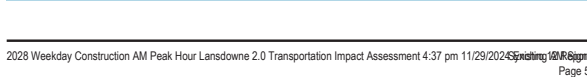
Lane Group	WBL	WBR	NBT	SBL	SBT	Ø1	Ø7
Lane Configurations	↔	↔	↕	↕	↕	↕	↕
Traffic Volume (vph)	49	35	514	61	369		
Future Volume (vph)	49	35	514	61	369		
Lane Group Flow (vph)	54	39	674	68	410		
Turn Type	Prot	Perm	NA	pm-pt	NA		
Protected Phases	8	2	5	6	1	7	
Permitted Phases	8		6				
Detector Phase	8	8	2	5	6		
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	1.0	10.0	1.0	1.0
Minimum Split (s)	26.0	26.0	27.0	12.0	44.0	5.0	5.0
Total Split (s)	26.0	26.0	27.0	12.0	44.0	5.0	5.0
Total Split (%)	34.7%	34.7%	36.0%	10.0%	58.7%	7%	7%
Yellow Time (s)	3.3	3.3	3.0	3.0	3.0	2.0	3.5
All-Red Time (s)	3.0	3.0	3.9	3.9	3.9	0.0	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	6.3	6.3	6.9	6.9	6.9		
Lead/Lag	Lag	Lag	Lag	Lag	Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	C-Max	None	C-Max	None	None
Act Effct Green (s)	10.2	10.2	46.6	54.8	56.2		
Actuated g/C Ratio	0.14	0.14	0.62	0.73	0.75		
v/c Ratio	0.26	0.23	0.38	0.15	0.18		
Control Delay (s/veh)	32.4	14.0	10.1	8.4	6.7		
Queue Delay	0.0	0.0	0.0	0.0	0.0		
Total Delay (s/veh)	32.4	14.0	10.1	8.4	6.7		
LOS	C	B	B	A	A		
Approach Delay (s/veh)	24.7		10.1		6.9		
Approach LOS	C		B		A		
Queue Length 50th (m)	7.0	0.0	27.3	4.9	16.9		
Queue Length 95th (m)	16.5	7.8	40.8	11.4	25.1		
Internal Link Dist (m)	30.6		33.7		44.8		
Turn Bay Length (m)			40.0				
Base Capacity (vph)	405	283	1777	452	2247		
Starvation Cap Reductn	0	0	0	0	0		
Spillback Cap Reductn	0	0	0	0	0		
Storage Cap Reductn	0	0	0	0	0		
Reduced v/c Ratio	0.13	0.14	0.38	0.15	0.18		



Queues
7: Bank & Sunnyside

12/06/2024

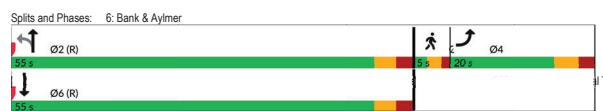
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	Ø3	Ø7
Lane Configurations	↔	↔	↔	↔	↔	↕	↕	↕		
Traffic Volume (vph)	58	60	19	60	23	975	189	413		
Future Volume (vph)	58	60	19	60	23	975	189	413		
Lane Group Flow (vph)	0	144	0	392	0	1123	0	717		
Turn Type	Perm	NA	Perm	NA	Perm	NA	pm-pt	NA		
Protected Phases	4	4	8	8	2	2	1	6	3	7
Permitted Phases	4		8		2		6			
Detector Phase	4	4	8	8	2	2	1	6		
Switch Phase										
Minimum Initial (s)	6.4	6.4	5.3	5.3	17.0	17.0	5.0	17.0	1.0	1.0
Minimum Split (s)	26.0	26.0	26.0	26.0	38.0	38.0	11.0	49.0	5.0	5.0
Total Split (s)	26.0	26.0	26.0	26.0	38.0	38.0	11.0	49.0	5.0	5.0
Total Split (%)	32.5%	32.5%	32.5%	32.5%	47.5%	47.5%	13.8%	61.3%	6%	6%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0
All-Red Time (s)	2.6	2.6	2.6	2.6	3.0	3.0	2.9	3.0	0.0	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0				
Total Lost Time (s)	5.6	5.6	5.6	5.6	6.0	6.0				
Lead/Lag	Lag	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	Max	Max	None	Max	None	None
Act Effct Green (s)	17.9	17.9	17.9	17.9	43.1	43.1	0.59	0.59		
Actuated g/C Ratio	0.25	0.25	0.25	0.25	0.59	0.59	1.04d			
v/c Ratio	0.76	0.76	0.31	0.31	0.65	0.65	1.04d			
Control Delay (s/veh)	51.7	51.7	40.1	40.1	12.5	12.5	19.1			
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0				
Total Delay (s/veh)	51.7	51.7	40.1	40.1	12.5	12.5	19.1			
LOS	D	D	D	D	B	B				
Approach Delay (s/veh)	51.7	51.7	40.1	40.1	12.5	12.5	19.1			
Approach LOS	D	D	D	D	B	B				
Queue Length 50th (m)	18.2	18.2	25.0	25.0	62.5	62.5	37.3			
Queue Length 95th (m)	44.3	44.3	75.5	75.5	72.7	72.7	67.7			
Internal Link Dist (m)	75.1	75.1	136.0	136.0	63.1	63.1	79.0			
Turn Bay Length (m)										
Base Capacity (vph)	217	217	462	462	1740	1740	931			
Starvation Cap Reductn	0	0	0	0	0	0	0			
Spillback Cap Reductn	0	0	0	0	0	0	0			
Storage Cap Reductn	0	0	0	0	0	0	0			
Reduced v/c Ratio	0.66	0.66	0.85	0.85	0.65	0.65	0.77			



Queues
6: Bank & Aylmer

12/06/2024

Lane Group	EBL	NBL	NBT	SBT	Ø3
Lane Configurations	↔	↔	↕	↕	
Traffic Volume (vph)	64	15	711	549	
Future Volume (vph)	64	15	711	549	
Lane Group Flow (vph)	81	0	807	670	
Turn Type	Prot	Perm	NA	NA	
Protected Phases	4	2	2	6	3
Permitted Phases	4	2		6	
Detector Phase	4	2	2	6	
Switch Phase					
Minimum Initial (s)	10.0	30.0	30.0	30.0	1.0
Minimum Split (s)	20.0	55.0	55.0	55.0	5.0
Total Split (s)	20.0	55.0	55.0	55.0	5.0
Total Split (%)	29.0%	60.8%	60.8%	60.8%	6%
Yellow Time (s)	3.3	3.0	3.0	3.0	2.0
All-Red Time (s)	2.2	2.2	2.2	2.2	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.5	5.2	5.2	5.2	
Lead/Lag	Lag				Lead
Lead-Lag Optimize?					
Recall Mode	Ped	C-Max	C-Max	C-Max	Max
Act Effct Green (s)	14.0	50.3	50.3		
Actuated g/C Ratio	0.18	0.63	0.63		
v/c Ratio	0.30	0.44	0.37		
Control Delay (s/veh)	29.6	8.5	7.6		
Queue Delay	0.0	0.0	0.0		
Total Delay (s/veh)	29.6	8.5	7.6		
LOS	C	A	A		
Approach Delay (s/veh)	29.6	8.5	7.6		
Approach LOS	C	A	A		
Queue Length 50th (m)	9.7	29.3	22.0		
Queue Length 95th (m)	21.8	40.4	31.2		
Internal Link Dist (m)	76.7	28.1	10.1		
Turn Bay Length (m)					
Base Capacity (vph)	280	1844	1815		
Starvation Cap Reductn	0	0	0		
Spillback Cap Reductn	0	0	0		
Storage Cap Reductn	0	0	0		
Reduced v/c Ratio	0.29	0.44	0.37		

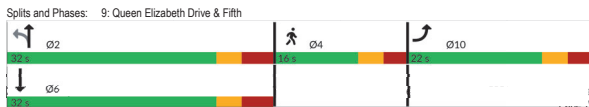


Queues
7: Bank & Sunnyside

12/06/2024



Lane Group	EBL	NBL	NBT	SBT	Ø4
Lane Configurations	W		W	W	
Traffic Volume (vph)	47	27	225	293	
Future Volume (vph)	47	27	225	293	
Lane Group Flow (vph)	82	0	280	379	
Turn Type	Prot	Perm	NA	NA	
Protected Phases	10		2	6	4
Permitted Phases		2			
Detector Phase	10	2	2	6	
Switch Phase					
Minimum Initial (s)	10.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	32.0	32.0	32.0	16.0
Total Split (s)	22.0	32.0	32.0	32.0	16.0
Total Spill (%)	31.4%	45.7%	45.7%	45.7%	23%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.7	3.8	3.8	3.8	2.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.7		6.8	6.8	
Lead-Lag					
Lead-Lag Optimize?					
Recall Mode	None	None	None	Max	None
Act Effct Green (s)	10.2		33.8	33.8	
Actuated g/C Ratio	0.20		0.65	0.65	
v/c Ratio	0.27		0.27	0.35	
Control Delay (s/veh)	19.7		6.8	7.3	
Queue Delay	0.0		0.0	0.0	
Total Delay (s/veh)	19.7		6.8	7.3	
LOS	B		A	A	
Approach Delay (s/veh)	19.7		6.8	7.3	
Approach LOS	B		A	A	
Queue Length 50th (m)	6.8		11.9	17.2	
Queue Length 95th (m)	14.5		23.4	32.5	
Internal Link Dist (m)	57.2		0.1	5.9	
Turn Bay Length (m)					
Base Capacity (vph)	495		1035	1082	
Starvation Cap Reductn	0		0	0	
Spillback Cap Reductn	0		0	0	
Storage Cap Reductn	0		0	0	
Reduced v/c Ratio	0.17		0.27	0.35	
Intersection Summary					
Cycle Length: 70					
Actuated Cycle Length: 51.7					
Natural Cycle: 70					
Control Type: Semi Act-Uncoord					
Maximum v/c Ratio: 0.35					
Intersection Signal Delay (s/veh): 8.5	Intersection LOS: A				
Intersection Capacity Utilization 55.1%	ICU Level of Service B				
Analysis Period (min) 15					



Intersection						
Intersection Delay, s/veh	7.6					
Intersection LOS	A					
Movement						
	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	W			W	W	
Traffic Vol, veh/h	2	5	5	123	5	5
Future Vol, veh/h	2	5	5	123	5	5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	6	6	137	6	6
Number of Lanes	1	0	0	1	1	0
Approach						
	EB	WB	WB	NB	NB	
Opposing Approach	WB		EB			
Opposing Lanes	1		1		0	
Conflicting Approach Left			NB		EB	
Conflicting Lanes Left	0		1		1	
Conflicting Approach Right	NB				WB	
Conflicting Lanes Right	1		0		1	
HCM Control Delay, s/veh	6.7		7.7		7.1	
HCM LOS	A		A		A	
Lane						
	NBLn1	EBLn1	WBLn1	WBLn1	NBLn1	NBLn1
Vol Left, %	50%	0%	0%	4%		
Vol Thru, %	0%	29%	96%			
Vol Right, %	50%	71%	0%			
Sign Control	Stop	Stop	Stop			
Traffic Vol by Lane	10	7	123			
LT Vol	5	0	5			
Through Vol	0	2	123			
RT Vol	5	5	0			
Lane Flow Rate	11	8	142			
Geometry Grp	1	1	1			
Degree of Util (X)	0.012	0.008	0.157			
Departure Headway (Hd)	3.993	3.63	3.967			
Convergence, Y/N	Yes	Yes	Yes			
Cap	888	984	309			
Service Time	2.055	1.66	1.972			
HCM Lane V/C Ratio	0.012	0.008	0.156			
HCM Control Delay, s/veh	7.1	6.7	7.7			
HCM Lane LOS	A	A	A			
HCM 95th-tile Q	0	0	0.6			

Intersection						
Intersection Delay, s/veh	7.9					
Intersection LOS	A					
Movement						
	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	W	W	W	W	W	W
Traffic Vol, veh/h	5	153	83	5	5	5
Future Vol, veh/h	5	153	83	5	5	5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	170	92	6	6	6
Number of Lanes	0	1	1	0	1	0
Approach						
	EB	WB	WB	NB	NB	
Opposing Approach	WB		EB			
Opposing Lanes	1		1		0	
Conflicting Approach Left	SB				WB	
Conflicting Lanes Left	1		0		1	
Conflicting Approach Right			SB		EB	
Conflicting Lanes Right	0		1		1	
HCM Control Delay, s/veh	8.1		7.6		7.4	
HCM LOS	A		A		A	
Lane						
	EBLn1	WBLn1	WBLn1	NBLn1	NBLn1	NBLn1
Vol Left, %	3%	0%	50%			
Vol Thru, %	97%	94%	0%			
Vol Right, %	0%	6%	50%			
Sign Control	Stop	Stop	Stop			
Traffic Vol by Lane	158	88	10			
LT Vol	5	0	5			
Through Vol	153	83	0			
RT Vol	0	5	5			
Lane Flow Rate	176	98	11			
Geometry Grp	1	1	1			
Degree of Util (X)	0.197	0.11	0.013			
Departure Headway (Hd)	4.033	4.05	4.318			
Convergence, Y/N	Yes	Yes	Yes			
Cap	890	881	834			
Service Time	2.058	2.091	2.318			
HCM Lane V/C Ratio	0.198	0.111	0.013			
HCM Control Delay, s/veh	8.1	7.6	7.4			
HCM Lane LOS	A	A	A			
HCM 95th-tile Q	0.7	0.4	0			

Intersection						
Intersection Delay, s/veh	8.3					
Intersection LOS	A					
Movement						
	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	W			W	W	
Traffic Vol, veh/h	2	5	67	57	87	87
Future Vol, veh/h	2	5	67	57	87	87
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	6	74	63	97	97
Number of Lanes	1	0	0	1	1	0
Approach						
	EB	WB	WB	NB	NB	
Opposing Approach	WB		EB			
Opposing Lanes	1		1		0	
Conflicting Approach Left			NB		EB	
Conflicting Lanes Left	0		1		1	
Conflicting Approach Right	NB				WB	
Conflicting Lanes Right	1		0		1	
HCM Control Delay, s/veh	7.1		8.4		8.2	
HCM LOS	A		A		A	
Lane						
	NBLn1	EBLn1	WBLn1	WBLn1	NBLn1	NBLn1
Vol Left, %	50%	0%	54%			
Vol Thru, %	0%	29%	46%			
Vol Right, %	50%	71%	0%			
Sign Control	Stop	Stop	Stop			
Traffic Vol by Lane	174	7	124			
LT Vol	87	0	67			
Through Vol	0	2	57			
RT Vol	87	5	0			
Lane Flow Rate	193	8	138			
Geometry Grp	1	1	1			
Degree of Util (X)	0.214	0.009	0.168			
Departure Headway (Hd)	3.985	4.08	4.388			
Convergence, Y/N	Yes	Yes	Yes			
Cap	885	852	807			
Service Time	2.078	2.08	2.473			
HCM Lane V/C Ratio	0.218	0.009	0.171			
HCM Control Delay, s/veh	8.2	7.1	8.4			
HCM Lane LOS	A	A	A			
HCM 95th-tile Q	0.8	0	0.6			

Intersection
Int Delay, s/veh 7.8
Intersection LOS A
Movement EBL EBT EBR WBL WBT WBR NBL NBT NBR SBL SBT SBR
Lane Configurations
Traffic Vol, veh/h
Future Vol, veh/h
Peak Hour Factor
Heavy Vehicles, %
Mvmt Flow
Approach EB NB SB
Opposing Approach
Opposing Lanes
Conflicting Approach Left
Conflicting Lanes Left
Conflicting Approach Right
Conflicting Lanes Right
HCM Control Delay, s/veh
HCM LOS

Lane NBLn1 EBLn1 WBLn1 SBLn1
Vol Left, %
Vol Thru, %
Vol Right, %
Sign Control
Traffic Vol by Lane
LT Vol
Through Vol
RT Vol
Lane Flow Rate
Geometry Grp
Degree of Util (X)
Departure Headway (Hd)
Convergence, Y/N
Cap
Service Time
HCM Lane V/C Ratio
HCM Control Delay, s/veh
HCM Lane LOS
HCM 95th %ile Q

Intersection
Int Delay, s/veh 0.3
Movement EBL EBR NBL NBT SBT SBR
Lane Configurations
Traffic Vol, veh/h
Future Vol, veh/h
Conflicting Peds, #/hr
Sign Control
RT Channelized
Storage Length
Veh in Median Storage, #
Grade, %
Peak Hour Factor
Heavy Vehicles, %
Mvmt Flow
Major/Minor Minor2 Major1 Major2
Conflicting Flow All
Stage 1
Stage 2
Critical Hdwy
Critical Hdwy Stg 1
Critical Hdwy Stg 2
Follow-up Hdwy
Pot Cap-1 Maneuver
Stage 1
Stage 2
Platoon blocked, %
Mov Cap-1 Maneuver
Mov Cap-2 Maneuver
Stage 1
Stage 2
Approach EB NB SB
HCM Control Delay, s/veh
HCM LOS

Minor Lane/Major Mvmt NBL NBT EBLn1 SBT
Capacity (veh/h)
HCM Lane V/C Ratio
HCM Control Delay (s/veh)
HCM Lane LOS
HCM 95th %ile Q(veh)

Intersection
Int Delay, s/veh 6.3
Movement EBL EBR NBL NBT SBT SBR
Lane Configurations
Traffic Vol, veh/h
Future Vol, veh/h
Conflicting Peds, #/hr
Sign Control
RT Channelized
Storage Length
Veh in Median Storage, #
Grade, %
Peak Hour Factor
Heavy Vehicles, %
Mvmt Flow
Major/Minor Minor2 Major1 Major2
Conflicting Flow All
Stage 1
Stage 2
Critical Hdwy
Critical Hdwy Stg 1
Critical Hdwy Stg 2
Follow-up Hdwy
Pot Cap-1 Maneuver
Stage 1
Stage 2
Platoon blocked, %
Mov Cap-1 Maneuver
Mov Cap-2 Maneuver
Stage 1
Stage 2
Approach EB NB SB
HCM Control Delay, s/veh
HCM LOS

Minor Lane/Major Mvmt NBL NBT EBLn1 SBT SBR
Capacity (veh/h)
HCM Lane V/C Ratio
HCM Control Delay (s/veh)
HCM Lane LOS
HCM 95th %ile Q(veh)

Intersection
Int Delay, s/veh 1.8
Movement EBL EBR NBL NBT SBT SBR
Lane Configurations
Traffic Vol, veh/h
Future Vol, veh/h
Conflicting Peds, #/hr
Sign Control
RT Channelized
Storage Length
Veh in Median Storage, #
Grade, %
Peak Hour Factor
Heavy Vehicles, %
Mvmt Flow
Major/Minor Minor2 Major1 Major2
Conflicting Flow All
Stage 1
Stage 2
Critical Hdwy
Critical Hdwy Stg 1
Critical Hdwy Stg 2
Follow-up Hdwy
Pot Cap-1 Maneuver
Stage 1
Stage 2
Platoon blocked, %
Mov Cap-1 Maneuver
Mov Cap-2 Maneuver
Stage 1
Stage 2
Approach EB NB SB
HCM Control Delay, s/veh
HCM LOS

Minor Lane/Major Mvmt NBL NBT EBLn1 SBT SBR
Capacity (veh/h)
HCM Lane V/C Ratio
HCM Control Delay (s/veh)
HCM Lane LOS
HCM 95th %ile Q(veh)

Intersection						
Int Delay, s/veh						
0.4						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗ ↘	↗ ↘			↗ ↘
Traffic Vol, veh/h	0	34	553	7	0	434
Future Vol, veh/h	0	34	553	7	0	434
Conflicting Peds, #/hr	0	0	0	100	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	None	None	None	None	None	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	15	7	0	0	11
Mvmt Flow	0	38	614	8	0	482
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	-	411	0	0	-	
Stage 1	-	-	-	-	-	
Stage 2	-	-	-	-	-	
Critical Hdwy	-	7.2	-	-	-	
Critical Hdwy Stg 1	-	-	-	-	-	
Critical Hdwy Stg 2	-	-	-	-	-	
Follow-up Hdwy	-	3.45	-	-	-	
Pot Cap-1 Maneuver	0	555	-	-	0	
Stage 1	0	-	-	-	0	
Stage 2	0	-	-	-	0	
Platoon blocked, %	-	-	-	-	-	
Mov Cap-1 Maneuver	-	496	-	-	-	
Mov Cap-2 Maneuver	-	-	-	-	-	
Stage 1	-	-	-	-	-	
Stage 2	-	-	-	-	-	
Approach	WB	NB	SB			
HCM Control Delay, s/veh	2.85	0	0			
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT		
Capacity (veh/h)	-	-	496	-		
HCM Lane V/C Ratio	-	-	0.076	-		
HCM Control Delay (s/veh)	-	-	12.9	-		
HCM Lane LOS	-	-	B	-		
HCM 95th %tile Q(veh)	-	-	0.2	-		

Intersection							
Int Delay, s/veh							
0							
Movement	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	↗	↘	↗ ↘	↗ ↘	↗ ↘	↗ ↘	
Traffic Vol, veh/h	153	0	0	83	0	0	
Future Vol, veh/h	153	0	0	83	0	0	
Conflicting Peds, #/hr	0	100	100	0	100	100	
Sign Control	Free	Free	Free	Free	Stop	Stop	
RT Channelized	None	None	None	None	None	None	
Storage Length	-	-	-	-	-	-	
Veh in Median Storage, #	0	-	-	0	0	-	
Grade, %	0	-	-	0	0	-	
Peak Hour Factor	90	90	90	90	90	90	
Heavy Vehicles, %	2	2	2	2	2	2	
Mvmt Flow	170	0	0	92	0	0	
Major/Minor	Major1	Major2	Minor1				
Conflicting Flow All	0	0	270	0	462	370	
Stage 1	-	-	-	-	270	-	
Stage 2	-	-	-	-	192	-	
Critical Hdwy	-	-	4.12	-	6.42	6.22	
Critical Hdwy Stg 1	-	-	-	-	5.42	-	
Critical Hdwy Stg 2	-	-	-	-	5.42	-	
Follow-up Hdwy	-	-	2.218	-	3.518	3.318	
Pot Cap-1 Maneuver	-	-	1293	-	558	676	
Stage 1	-	-	-	-	775	-	
Stage 2	-	-	-	-	840	-	
Platoon blocked, %	-	-	-	-	-	-	
Mov Cap-1 Maneuver	-	-	1157	-	446	540	
Mov Cap-2 Maneuver	-	-	-	-	446	-	
Stage 1	-	-	-	-	693	-	
Stage 2	-	-	-	-	751	-	
Approach	EB	WB	NB				
HCM Control Delay, s/veh	0	0	0				
HCM LOS			A				
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT		
Capacity (veh/h)	-	-	-	1157	-		
HCM Lane V/C Ratio	-	-	-	-	-		
HCM Control Delay (s/veh)	-	-	-	0	-		
HCM Lane LOS	-	-	-	A	-		
HCM 95th %tile Q(veh)	-	-	-	0	-		

Intersection						
Int Delay, s/veh						
2.2						
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↗	↘	↗ ↘	↗ ↘	↗ ↘	↗ ↘
Traffic Vol, veh/h	51	38	120	35	8	10
Future Vol, veh/h	51	38	120	35	8	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	None	None	None	None	None	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	57	42	133	39	9	11
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	172	0	-	0	308	153
Stage 1	-	-	-	-	153	-
Stage 2	-	-	-	-	156	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.219	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1405	-	-	-	684	893
Stage 1	-	-	-	-	875	-
Stage 2	-	-	-	-	873	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	1405	-	-	-	656	893
Mov Cap-2 Maneuver	-	-	-	-	656	-
Stage 1	-	-	-	-	839	-
Stage 2	-	-	-	-	873	-
Approach	EB	WB	SB			
HCM Control Delay, s/veh	4.4	0	9.8			
HCM LOS			A			
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBR
Capacity (veh/h)	1031	-	-	-	769	-
HCM Lane V/C Ratio	0.04	-	-	-	0.026	-
HCM Control Delay (s/veh)	7.7	0	-	-	9.8	-
HCM Lane LOS	A	A	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	-	0.1	-

2028 Construction Impact Weekday PM

Queues
1: Bank & Fifth 12/06/2024

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	46	54	63	38	16	448	29	590
Traffic Volume (vph)	46	54	63	38	16	448	29	590
Future Volume (vph)	0	162	70	81	0	560	0	729
Lane Group Flow (vph)		Perm	NA	Perm	NA	Perm	NA	Perm
Protected Phases	4	2	8	2	2	6	6	6
Permitted Phases	4	4	8	8	2	2	2	6
Detector Phase								
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	26.0	26.0	26.0	26.0	49.0	49.0	49.0	49.0
Total Split (s)	26.0	26.0	26.0	26.0	49.0	49.0	49.0	49.0
Total Split (%)	34.7%	34.7%	34.7%	34.7%	65.3%	65.3%	65.3%	65.3%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Act Efect Green (s)	13.1	13.1	13.1	13.1	50.9	50.9	50.9	50.9
Actuated g/C Ratio	0.17	0.17	0.17	0.17	0.68	0.68	0.68	0.68
v/c Ratio	0.67	0.43	0.29	0.30	0.30	0.40	0.40	0.40
Control Delay (s/veh)	35.8	33.9	17.4	10.9	6.8	6.8	6.8	6.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	35.8	33.9	17.4	10.9	6.8	6.8	6.8	6.8
LOS	D	C	B	B	A	A	A	A
Approach Delay (s/veh)	35.8		25.0	10.9	6.8	6.8	6.8	6.8
Approach LOS	D		C	B	A	A	A	A
Queue Length 50th (m)	17.5	8.9	5.1	18.7	19.6			
Queue Length 95th (m)	32.4	18.5	14.6	50.1	38.6			
Internal Link Dist (m)	49.7		112.4	195.6	190.0			
Turn Bay Length (m)			45.0					
Base Capacity (vph)	364	256	409	1843	1803			
Starvation Cap Reductn	0	0	0	0	0			
Spillback Cap Reductn	0	0	0	0	0			
Storage Cap Reductn	0	0	0	0	0			
Reduced v/c Ratio	0.45	0.27	0.20	0.30	0.40			

Intersection Summary
Cycle Length: 75
Actuated Cycle Length: 75
Offset: 47 (63%), Referenced to phase 2:NBL and 6:SBTL, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.67
Intersection Signal Delay (s/veh): 12.9
Intersection LOS: B
Intersection Capacity Utilization 67.7%
ICU Level of Service C
Analysis Period (min) 15



Timing, 2028

Queues
2: Bank & Holmwood 12/06/2024

Lane Group	EBT	NBL	NBT	SBL	SBT	Ø3
Lane Configurations	46	26	505	28	570	
Traffic Volume (vph)	18	26	505	28	570	
Future Volume (vph)	112	0	646	0	695	
Lane Group Flow (vph)		NA	Perm	NA	Perm	NA
Protected Phases	4	2	2	6	3	
Permitted Phases	4	2	2	6	6	
Detector Phase						
Switch Phase						
Minimum Initial (s)	4.4	10.0	10.0	4.0	4.0	1.0
Minimum Split (s)	22.0	48.0	48.0	48.0	48.0	5.0
Total Split (s)	22.0	48.0	48.0	48.0	48.0	5.0
Total Split (%)	29.3%	64.0%	64.0%	64.0%	64.0%	7%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	2.0
All-Red Time (s)	2.6	2.2	2.2	2.2	2.2	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.6	5.2	5.2	5.2	5.2	0.0
Lead/Lag						Lead
Lead-Lag Optimize?						
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	None
Act Efect Green (s)	11.6	56.0	56.0	56.0	56.0	
Actuated g/C Ratio	0.15	0.75	0.75	0.75	0.75	
v/c Ratio	0.55	0.33	0.33	0.35	0.35	
Control Delay (s/veh)	38.8	2.0	5.1	5.1	5.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	38.8	2.0	5.1	5.1	5.1	
LOS	D	A	A	A	A	
Approach Delay (s/veh)	38.8	2.0	5.1	5.1	5.1	
Approach LOS	D	A	A	A	A	
Queue Length 50th (m)	14.8	4.1	25.8			
Queue Length 95th (m)	27.6	9.4	26.2			
Internal Link Dist (m)	39.8	31.5	195.6			
Turn Bay Length (m)						
Base Capacity (vph)	287	1950	1970			
Starvation Cap Reductn	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	
Reduced v/c Ratio	0.39	0.33	0.35			

Intersection Summary
Cycle Length: 75
Actuated Cycle Length: 75
Offset: 74 (99%), Referenced to phase 2:NBL and 6:SBTL, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.55
Intersection Signal Delay (s/veh): 6.3
Intersection LOS: A
Intersection Capacity Utilization 64.9%
ICU Level of Service C
Analysis Period (min) 15

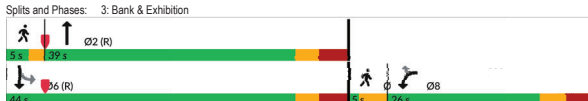


Timing, 2028

Queues
3: Bank & Exhibition 12/06/2024

Lane Group	WBL	WBR	NBT	SBL	SBT	Ø1	Ø7
Lane Configurations	114	61	469	102	518		
Traffic Volume (vph)	114	61	469	102	518		
Future Volume (vph)	127	68	645	113	576		
Lane Group Flow (vph)		Prot	Perm	NA	Perm	NA	
Protected Phases	8	2	2	6	1	7	
Permitted Phases	8	8		6			
Detector Phase	8	8	2	6	6		
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	1.0	1.0
Minimum Split (s)	26.0	26.0	39.0	44.0	44.0	5.0	5.0
Total Split (s)	26.0	26.0	39.0	44.0	44.0	5.0	5.0
Total Split (%)	34.7%	34.7%	52.0%	58.7%	58.7%	7%	7%
Yellow Time (s)	3.3	3.3	3.0	3.0	3.0	2.0	3.5
All-Red Time (s)	3.0	3.0	3.9	3.9	3.9	0.0	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.3	6.9	6.9	6.9	0.0	0.0
Lead/Lag						Lead	Lead
Lead-Lag Optimize?						Yes	Yes
Recall Mode	None	None	C-Max	C-Max	C-Max	None	None
Act Efect Green (s)	12.2	12.2	54.2	54.2	54.2		
Actuated g/C Ratio	0.16	0.16	0.72	0.72	0.72		
v/c Ratio	0.51	0.30	0.32	0.27	0.26		
Control Delay (s/veh)	35.4	11.0	5.5	5.0	3.2		
Queue Delay	0.0	0.0	0.0	0.0	0.0		
Total Delay (s/veh)	35.4	11.0	5.5	5.0	3.2		
LOS	D	B	A	A	A		
Approach Delay (s/veh)	26.9		5.5	3.5	3.5		
Approach LOS	C	A	A	A	A		
Queue Length 50th (m)	16.8	0.0	15.8	3.2	8.5		
Queue Length 95th (m)	30.2	9.4	29.0	6.1	10.6		
Internal Link Dist (m)	30.6		43.7	40.0	44.8		
Turn Bay Length (m)							
Base Capacity (vph)	405	318	2031	411	2187		
Starvation Cap Reductn	0	0	0	0	0		
Spillback Cap Reductn	0	0	0	0	0		
Storage Cap Reductn	0	0	0	0	0		
Reduced v/c Ratio	0.31	0.21	0.32	0.27	0.26		

Intersection Summary
Cycle Length: 75
Actuated Cycle Length: 75
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.51
Intersection Signal Delay (s/veh): 7.3
Intersection LOS: A
Intersection Capacity Utilization 59.7%
ICU Level of Service B
Analysis Period (min) 15



Timing, 2028

Table with columns: Intersection, Intersection Delay, s/veh, Intersection LOS, Movement, Lane Configurations, Traffic Vol, veh/h, Future Vol, veh/h, Peak Hour Factor, Heavy Vehicles, %, Mvmt Flow, Number of Lanes, Approach, Opposing Approach, Opposing Lanes, Conflicting Approach Left, Conflicting Lanes Left, Conflicting Approach Right, Conflicting Lanes Right, HCM Control Delay, s/veh, HCM LOS.

Table with columns: Lane, EBLn1, WBLn1, SBLn1, Vol Left, %, Vol Thru, %, Vol Right, %, Sign Control, Traffic Vol by Lane, LT Vol, Through Vol, RT Vol, Lane Flow Rate, Geometry Grp, Degree of Util (X), Departure Headway (Hd), Convergence, Y/N, Cap, Service Time, HCM Lane ViC Ratio, HCM Control Delay, s/veh, HCM Lane LOS, HCM 95th-tile Q.

Table with columns: Intersection, Intersection Delay, s/veh, Intersection LOS, Movement, Lane Configurations, Traffic Vol, veh/h, Future Vol, veh/h, Peak Hour Factor, Heavy Vehicles, %, Mvmt Flow, Number of Lanes, Approach, Opposing Approach, Opposing Lanes, Conflicting Approach Left, Conflicting Lanes Left, Conflicting Approach Right, Conflicting Lanes Right, HCM Control Delay, s/veh, HCM LOS.

Table with columns: Lane, NBLn1, EBLn1, WBLn1, Vol Left, %, Vol Thru, %, Vol Right, %, Sign Control, Traffic Vol by Lane, LT Vol, Through Vol, RT Vol, Lane Flow Rate, Geometry Grp, Degree of Util (X), Departure Headway (Hd), Convergence, Y/N, Cap, Service Time, HCM Lane ViC Ratio, HCM Control Delay, s/veh, HCM Lane LOS, HCM 95th-tile Q.

Table with columns: Intersection, Intersection Delay, s/veh, Intersection LOS, Movement, Lane Configurations, Traffic Vol, veh/h, Future Vol, veh/h, Peak Hour Factor, Heavy Vehicles, %, Mvmt Flow, Number of Lanes, Approach, Opposing Approach, Opposing Lanes, Conflicting Approach Left, Conflicting Lanes Left, Conflicting Approach Right, Conflicting Lanes Right, HCM Control Delay, s/veh, HCM LOS.

Table with columns: Lane, NBLn1, EBLn1, WBLn1, Vol Left, %, Vol Thru, %, Vol Right, %, Sign Control, Traffic Vol by Lane, LT Vol, Through Vol, RT Vol, Lane Flow Rate, Geometry Grp, Degree of Util (X), Departure Headway (Hd), Convergence, Y/N, Cap, Service Time, HCM Lane ViC Ratio, HCM Control Delay, s/veh, HCM Lane LOS, HCM 95th-tile Q.

Table with columns: Intersection, Intersection Delay, s/veh, Intersection LOS, Movement, Lane Configurations, Traffic Vol, veh/h, Future Vol, veh/h, Peak Hour Factor, Heavy Vehicles, %, Mvmt Flow, Number of Lanes, Approach, Opposing Approach, Opposing Lanes, Conflicting Approach Left, Conflicting Lanes Left, Conflicting Approach Right, Conflicting Lanes Right, HCM Control Delay, s/veh, HCM LOS.

Table with columns: Lane, NBLn1, EBLn1, WBLn1, SBLn1, Vol Left, %, Vol Thru, %, Vol Right, %, Sign Control, Traffic Vol by Lane, LT Vol, Through Vol, RT Vol, Lane Flow Rate, Geometry Grp, Degree of Util (X), Departure Headway (Hd), Convergence, Y/N, Cap, Service Time, HCM Lane ViC Ratio, HCM Control Delay, s/veh, HCM Lane LOS, HCM 95th-tile Q.

Intersection table for Bank & Wilton. Includes columns for Int Delay, Movement, Lane Configurations, Traffic Vol, Future Vol, Conflicting Peds, Sign Control, RT Channelized, Storage Length, Veh in Median Storage, Grade, Peak Hour Factor, Heavy Vehicles, Mvmt Flow, Major/Minor, Conflicting Flow All, Critical Hdwy, Pot Cap-1 Maneuver, Platoon blocked, Mov Cap-1 Maneuver, Mov Cap-2 Maneuver, Approach, HCM Control Delay, HCM LOS, Minor Lane/Major Mvmt, Capacity, HCM Lane V/C Ratio, HCM Control Delay (s/veh), HCM Lane LOS, HCM 95th %tile Q(veh).

Intersection table for Bank & Echo. Includes columns for Int Delay, Movement, Lane Configurations, Traffic Vol, Future Vol, Conflicting Peds, Sign Control, RT Channelized, Storage Length, Veh in Median Storage, Grade, Peak Hour Factor, Heavy Vehicles, Mvmt Flow, Major/Minor, Conflicting Flow All, Critical Hdwy, Pot Cap-1 Maneuver, Platoon blocked, Mov Cap-1 Maneuver, Mov Cap-2 Maneuver, Approach, HCM Control Delay, HCM LOS, Minor Lane/Major Mvmt, Capacity, HCM Lane V/C Ratio, HCM Control Delay (s/veh), HCM Lane LOS, HCM 95th %tile Q(veh).

Intersection table for Queen Elizabeth Driveway. Includes columns for Int Delay, Movement, Lane Configurations, Traffic Vol, Future Vol, Conflicting Peds, Sign Control, RT Channelized, Storage Length, Veh in Median Storage, Grade, Peak Hour Factor, Heavy Vehicles, Mvmt Flow, Major/Minor, Conflicting Flow All, Critical Hdwy, Pot Cap-1 Maneuver, Platoon blocked, Mov Cap-1 Maneuver, Mov Cap-2 Maneuver, Approach, HCM Control Delay, HCM LOS, Minor Lane/Major Mvmt, Capacity, HCM Lane V/C Ratio, HCM Control Delay (s/veh), HCM Lane LOS, HCM 95th %tile Q(veh).

Intersection table for Bank & Marche. Includes columns for Int Delay, Movement, Lane Configurations, Traffic Vol, Future Vol, Conflicting Peds, Sign Control, RT Channelized, Storage Length, Veh in Median Storage, Grade, Peak Hour Factor, Heavy Vehicles, Mvmt Flow, Major/Minor, Conflicting Flow All, Critical Hdwy, Pot Cap-1 Maneuver, Platoon blocked, Mov Cap-1 Maneuver, Mov Cap-2 Maneuver, Approach, HCM Control Delay, HCM LOS, Minor Lane/Major Mvmt, Capacity, HCM Lane V/C Ratio, HCM Control Delay (s/veh), HCM Lane LOS, HCM 95th %tile Q(veh).

Intersection						
Int Delay, s/veh	0					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	T			T	T	
Traffic Vol, veh/h	210	0	0	174	0	0
Future Vol, veh/h	210	0	0	174	0	0
Conflicting Peds, #/hr	0	100	100	0	100	100
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	233	0	0	193	0	0
Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	333	0	627	433
Stage 1	-	-	-	-	333	-
Stage 2	-	-	-	-	293	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1226	-	448	622
Stage 1	-	-	-	-	726	-
Stage 2	-	-	-	-	757	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1096	-	358	498
Mov Cap-2 Maneuver	-	-	-	-	358	-
Stage 1	-	-	-	-	649	-
Stage 2	-	-	-	-	677	-
Approach	EB	WB	NB			
HCM Control Delay, s/v	0	0	0			
HCM LOS	A					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	-	-	-	1096	-	
HCM Lane V/C Ratio	-	-	-	-	-	
HCM Control Delay (s/veh)	0	-	-	0	-	
HCM Lane LOS	A	-	-	A	-	
HCM 95th %tile Q(veh)	-	-	-	0	-	

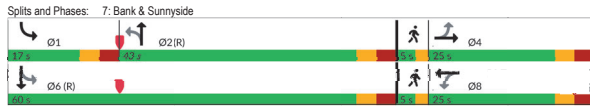
Intersection							
Int Delay, s/veh	4.7						
Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations		T	T	T	T	T	
Traffic Vol, veh/h	94	58	24	129	65	39	
Future Vol, veh/h	94	58	24	129	65	39	
Conflicting Peds, #/hr	0	0	0	0	0	0	
Sign Control	Free	Free	Free	Free	Stop	Stop	
RT Channelized	-	None	-	None	-	None	
Storage Length	-	-	-	-	-	-	
Veh in Median Storage, #	-	0	0	-	0	-	
Grade, %	-	0	0	-	0	-	
Peak Hour Factor	90	90	90	90	90	90	
Heavy Vehicles, %	2	2	2	2	2	2	
Mvmt Flow	104	64	27	143	72	43	
Major/Minor	Major1	Major2	Minor2				
Conflicting Flow All	170	0	-	0	372	98	
Stage 1	-	-	-	-	98	-	
Stage 2	-	-	-	-	273	-	
Critical Hdwy	4.12	-	-	-	6.42	6.22	
Critical Hdwy Stg 1	-	-	-	-	5.42	-	
Critical Hdwy Stg 2	-	-	-	-	5.42	-	
Follow-up Hdwy	2.218	-	-	-	3.518	3.318	
Pot Cap-1 Maneuver	1407	-	-	-	629	958	
Stage 1	-	-	-	-	926	-	
Stage 2	-	-	-	-	773	-	
Platoon blocked, %	-	-	-	-	-	-	
Mov Cap-1 Maneuver	1407	-	-	-	581	958	
Mov Cap-2 Maneuver	-	-	-	-	581	-	
Stage 1	-	-	-	-	854	-	
Stage 2	-	-	-	-	773	-	
Approach	EB	WB	SB				
HCM Control Delay, s/v	4.8	0	11.36				
HCM LOS	B						
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1		
Capacity (veh/h)	1113	-	-	-	681		
HCM Lane V/C Ratio	0.074	-	-	-	0.17		
HCM Control Delay (s/veh)	7.8	0	-	-	11.4		
HCM Lane LOS	A	A	-	-	B		
HCM 95th %tile Q(veh)	0.2	-	-	-	0.6		

2028 Baseline Conditions Saturday

Queues
7: Bank & Sunnyside

12/06/2024

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	Ø3	Ø7
Lane Configurations	41	37	20	57	29	481	82	537		
Traffic Volume (vph)	41	37	20	57	29	481	82	537		
Future Volume (vph)	0	135	0	195	0	692	0	749		
Lane Group Flow (vph)										
Turn Type	Perm	NA	Perm	NA	Perm	NA	pm-pt	NA		
Protected Phases	4		8		2		6		3	7
Permitted Phases	4		8		2		6			
Detector Phase	4	4	8	8	2	2	1	6		
Switch Phase										
Minimum Initial (s)	6.4	6.4	5.3	5.3	17.0	17.0	5.0	17.0	1.0	1.0
Minimum Split (s)	25.0	25.0	25.0	25.0	43.0	43.0	17.0	60.0	5.0	5.0
Total Split (s)	25.0	25.0	25.0	25.0	43.0	43.0	17.0	60.0	5.0	5.0
Total Spilt (%)	27.8%	27.8%	27.8%	27.8%	47.8%	47.8%	18.9%	66.7%	6%	6%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0
All-Red Time (s)	2.6	2.6	2.6	2.6	3.0	3.0	2.9	3.0	0.0	0.0
Last Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	5.6	5.6	5.6	5.6	6.0	6.0				
Lead/Lag	Lag	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	C-Max	C-Max	None	C-Max	None	None
Act Efect Green (s)	16.6	16.6	16.6	16.6	61.8	61.8				
Actuated g/C Ratio	0.18	0.18	0.18	0.18	0.69	0.69				
v/c Ratio	0.75	0.75	0.71	0.71	0.32	0.46				
Control Delay (s/veh)	58.6	36.2	36.2	36.2	6.9	4.0				
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0				
Total Delay (s/veh)	58.6	36.2	36.2	36.2	6.9	4.0				
LOS	E	D	D	D	A	A				
Approach Delay (s/veh)	58.6	36.2	36.2	36.2	6.9	4.0				
Approach LOS	E	D	D	D	A	A				
Queue Length 50th (m)	22.3	21.0	18.7	18.7	7.6	7.6				
Queue Length 95th (m)	38.0	39.6	35.2	35.2	9.7	9.7				
Internal Link Dist (m)	75.1	136.0	63.1	63.1	79.0	79.0				
Turn Bay Length (m)										
Base Capacity (vph)	221	322	1853	1612						
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	0.61	0.61	0.32	0.46						



HCM 7th TWSC
4: Bank & Wilton

11/28/2024

Intersection						
Int Delay, s/veh	6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	41	37	20	57	29	481
Traffic Vol, veh/h	3	177	116	557	513	55
Future Vol, veh/h	3	177	116	557	513	55
Conflicting Peds, #/hr	0	0	178	0	0	167
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	None	None	None	None	None	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	0	0	0
Grade, %	0	-	-	0	0	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	3	197	129	619	570	61

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	1346	779	809
Stage 1	779	-	-
Stage 2	567	-	-
Critical Hdwy	6.675	6.275	4.175
Critical Hdwy Slg 1	5.475	-	-
Critical Hdwy Slg 2	5.875	-	-
Follow-up Hdwy	3.54753	3.44752	2.475
Pot Cap-1 Maneuver	151	389	798
Stage 1	445	-	-
Stage 2	525	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	76	316	648
Mov Cap-2 Maneuver	76	-	-
Stage 1	274	-	-
Stage 2	426	-	-

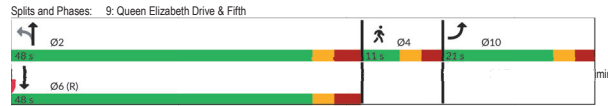
Approach	EB	NB	SB
HCM Control Delay, s/Ø3.51		3.73	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	537	-	316	-	-
HCM Lane V/C Ratio	0.199	-	0.623	-	-
HCM Control Delay (s/veh)	11.9	2	33.5	-	-
HCM Lane LOS	B	A	D	-	-
HCM 95th %tile Q(veh)	0.7	-	3.9	-	-

Queues
9: Queen Elizabeth Drive & Fifth

12/06/2024

Lane Group	EBL	NBL	NBT	SBT	Ø4
Lane Configurations	54	41	242	349	
Traffic Volume (vph)	54	41	242	349	
Future Volume (vph)	93	0	315	446	
Lane Group Flow (vph)					
Turn Type	Prot	Perm	NA	NA	
Protected Phases	10	2	2	6	4
Permitted Phases	10	2	2	6	
Detector Phase	10	2	2	6	
Switch Phase					
Minimum Initial (s)	10.0	4.0	4.0	4.0	4.0
Minimum Split (s)	21.0	48.0	48.0	48.0	11.0
Total Split (s)	21.0	48.0	48.0	48.0	11.0
Total Spilt (%)	26.3%	60.0%	60.0%	60.0%	14%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.7	3.8	3.8	3.8	2.7
Last Time Adjust (s)	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.7	6.8	6.8		
Lead/Lag					
Lead-Lag Optimize?	None	None	None	C-Max	None
Recall Mode	None	None	None	C-Max	None
Act Efect Green (s)	11.2	60.8	60.8		
Actuated g/C Ratio	0.14	0.76	0.76		
v/c Ratio	0.43	0.27	0.35		
Control Delay (s/veh)	37.4	5.1	5.6		
Queue Delay	0.0	0.0	0.0		
Total Delay (s/veh)	37.4	5.1	5.6		
LOS	D	A	A		
Approach Delay (s/veh)	37.4	5.1	5.6		
Approach LOS	D	A	A		
Queue Length 50th (m)	13.3	14.0	21.4		
Queue Length 95th (m)	25.5	28.9	42.4		
Internal Link Dist (m)	57.2	0.1	5.9		
Turn Bay Length (m)					
Base Capacity (vph)	297	1149	1258		
Starvation Cap Reductn	0	0	0		
Spillback Cap Reductn	0	0	0		
Storage Cap Reductn	0	0	0		
Reduced v/c Ratio	0.31	0.27	0.35		



HCM 7th TWSC
5: Bank & Echo

11/28/2024

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	1	32	0	662	682	0
Traffic Vol, veh/h	1	32	0	662	682	0
Future Vol, veh/h	1	32	0	662	682	0
Conflicting Peds, #/hr	0	0	0	0	0	86
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	None	None	None	None	None	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	0	0	0
Grade, %	0	-	-	0	0	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	1	36	0	736	758	0

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	1126	758	0
Stage 1	758	-	-
Stage 2	368	-	-
Critical Hdwy	6.675	6.275	-
Critical Hdwy Slg 1	5.475	-	-
Critical Hdwy Slg 2	5.875	-	-
Follow-up Hdwy	3.54753	3.44752	-
Pot Cap-1 Maneuver	208	400	0
Stage 1	455	-	-
Stage 2	664	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	208	400	-
Mov Cap-2 Maneuver	208	-	-
Stage 1	455	-	-
Stage 2	664	-	-

Approach	EB	NB	SB
HCM Control Delay, s/Ø4.88		0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	-	400	-	-
HCM Lane V/C Ratio	-	-	0.089	-	-
HCM Control Delay (s/veh)	-	-	14.9	-	-
HCM Lane LOS	-	-	B	-	-
HCM 95th %tile Q(veh)	-	-	0.3	-	-

Intersection						
Int Delay, s/veh						
	3.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W	W		W	W	W
Traffic Vol, veh/h	69	56	56	210	252	128
Future Vol, veh/h	69	56	56	210	252	128
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	None	None	None	None	None	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	0	-	-
Grade, %	0	-	0	0	-	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	77	62	62	233	280	142

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	709	351	422
Stage 1	351	-	-
Stage 2	358	-	-
Critical Hdwy	6.4	6.2	4.1
Critical Hdwy Stg 1	5.4	-	-
Critical Hdwy Stg 2	5.4	-	-
Follow-up Hdwy	3.5	3.3	2.2
Pot Cap-1 Maneuver	404	697	1148
Stage 1	717	-	-
Stage 2	712	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	379	697	1148
Mov Cap-2 Maneuver	379	-	-
Stage 1	672	-	-
Stage 2	712	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	15.65	1.75	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBLn1	SBT	SBR
Capacity (veh/h)	379	-	476	-
HCM Lane V/C Ratio	0.054	-	0.292	-
HCM Control Delay (s/veh)	8.3	0	15.7	-
HCM Lane LOS	A	A	C	-
HCM 95th %tile Q(veh)	0.2	-	1.2	-

Intersection						
Int Delay, s/veh						
	0.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	W	W	W	W
Traffic Vol, veh/h	6	71	496	19	2	590
Future Vol, veh/h	6	71	496	19	2	590
Conflicting Peds, #/hr	0	0	0	100	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	None	None	None	None	None	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	-
Grade, %	0	-	0	-	-	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	15	6	0	0	5
Mvmt Flow	7	79	551	21	2	656

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	994	386	0
Stage 1	662	-	-
Stage 2	332	-	-
Critical Hdwy	6.8	7.2	-
Critical Hdwy Stg 1	5.8	-	-
Critical Hdwy Stg 2	5.8	-	-
Follow-up Hdwy	3.5	3.45	-
Pot Cap-1 Maneuver	245	577	-
Stage 1	480	-	-
Stage 2	705	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	219	516	-
Mov Cap-2 Maneuver	219	-	-
Stage 1	429	-	-
Stage 2	702	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	13.24	0	0.03
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR/WBLn1	SBL	SBT
Capacity (veh/h)	-	-	516	830
HCM Lane V/C Ratio	-	-	0.153	0.003
HCM Control Delay (s/veh)	-	-	13.2	9.4
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.5	0

Intersection						
Int Delay, s/veh						
	2.9					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	W	W	W	W	W	W
Traffic Vol, veh/h	120	117	5	86	68	5
Future Vol, veh/h	120	117	5	86	68	5
Conflicting Peds, #/hr	0	100	100	0	100	100
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	None	None	None	None	None	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	133	130	6	96	76	6

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	363
Stage 1	-	-	298
Stage 2	-	-	207
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	1195
Stage 1	-	-	527
Stage 2	-	-	651
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1069
Mov Cap-2 Maneuver	-	-	419
Stage 1	-	-	673
Stage 2	-	-	736

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0.46	15.47
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	425	-	-	99	-
HCM Lane V/C Ratio	0.191	-	-	0.005	-
HCM Control Delay (s/veh)	15.5	-	-	8.4	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.7	-	-	0	-

Intersection						
Int Delay, s/veh						
	3.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	W	W	W	W	W	W
Traffic Vol, veh/h	5	31	74	109	94	5
Future Vol, veh/h	5	31	74	109	94	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	None	None	None	None	None	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	34	82	121	104	6

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	203	0	-
Stage 1	-	-	188
Stage 2	-	-	143
Critical Hdwy	4.12	-	-
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	2.218	-	-
Pot Cap-1 Maneuver	1368	-	-
Stage 1	-	-	801
Stage 2	-	-	905
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1368	-	-
Mov Cap-2 Maneuver	-	-	797
Stage 1	-	-	881
Stage 2	-	-	977

Approach	EB	WB	SB
HCM Control Delay, s/v	1.06	0	10.2
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR/SBLn1
Capacity (veh/h)	250	-	-	802
HCM Lane V/C Ratio	0.004	-	-	0.137
HCM Control Delay (s/veh)	7.6	0	-	10.2
HCM Lane LOS	A	A	-	B
HCM 95th %tile Q(veh)	0	-	-	0.5

Intersection						
Intersection Delay, s/veh	7.7					
Intersection LOS	A					
Movement						
	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔	↔		↔	↔
Traffic Vol, veh/h	5	120	86	5	5	5
Future Vol, veh/h	5	120	86	5	5	5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	133	96	6	6	6
Number of Lanes	0	1	1	0	1	0
Approach						
	EB	WB	SB			
Opposing Approach	WB	EB				
Opposing Lanes	1	1			0	
Conflicting Approach Left	SB			WB		
Conflicting Lanes Left	1	0		1		
Conflicting Approach Right		SB	EB			
Conflicting Lanes Right	0	1	1			
HCM Control Delay, s/veh	7.8	7.6	7.3			
HCM LOS	A	A	A			
Lane						
	EBLn1	WBLn1	SBLn1			
Vol Left, %	4%	0%	50%			
Vol Thru, %	96%	95%	0%			
Vol Right, %	0%	5%	50%			
Sign Control	Stop	Stop	Stop			
Traffic Vol by Lane	125	91	10			
LT Vol	5	0	5			
Through Vol	120	86	0			
RT Vol	0	5	5			
Lane Flow Rate	139	101	11			
Geometry Grp	1	1	1			
Degree of Util (X)	0.156	0.113	0.013			
Departure Headway (Hd)	4.037	4.024	4.247			
Convergence, Y/N	Yes	Yes	Yes			
Cap	889	889	848			
Service Time	2.062	2.057	2.247			
HCM Lane V/C Ratio	0.156	0.114	0.013			
HCM Control Delay, s/veh	7.8	7.6	7.3			
HCM Lane LOS	A	A	A			
HCM 95th-tile Q	0.6	0.4	0			

Intersection						
Intersection Delay, s/veh	7.3					
Intersection LOS	A					
Movement						
	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔			↔	↔	
Traffic Vol, veh/h	15	5	5	72	5	5
Future Vol, veh/h	15	5	5	72	5	5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	17	6	6	80	6	6
Number of Lanes	1	0	0	1	1	0
Approach						
	EB	WB	NB			
Opposing Approach	WB	EB				
Opposing Lanes	1	1			0	
Conflicting Approach Left		NB	EB			
Conflicting Lanes Left	0	1	1			
Conflicting Approach Right	NB		WB			
Conflicting Lanes Right	1	0	1			
HCM Control Delay, s/veh	7	7.4	7			
HCM LOS	A	A	A			
Lane						
	NBLn1	EBLn1	WBLn1			
Vol Left, %	50%	0%	6%			
Vol Thru, %	0%	75%	94%			
Vol Right, %	50%	25%	0%			
Sign Control	Stop	Stop	Stop			
Traffic Vol by Lane	10	20	77			
LT Vol	5	0	5			
Through Vol	0	15	72			
RT Vol	5	5	0			
Lane Flow Rate	11	22	86			
Geometry Grp	1	1	1			
Degree of Util (X)	0.012	0.024	0.095			
Departure Headway (Hd)	3.92	3.867	3.983			
Convergence, Y/N	Yes	Yes	Yes			
Cap	908	926	903			
Service Time	1.965	1.887	1.991			
HCM Lane V/C Ratio	0.012	0.024	0.095			
HCM Control Delay, s/veh	7	7	7.4			
HCM Lane LOS	A	A	A			
HCM 95th-tile Q	0	0.1	0.3			

Intersection						
Intersection Delay, s/veh	8					
Intersection LOS	A					
Movement						
	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔			↔	↔	
Traffic Vol, veh/h	15	5	86	5	104	21
Future Vol, veh/h	15	5	86	5	104	21
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	17	6	96	6	116	23
Number of Lanes	1	0	0	1	1	0
Approach						
	EB	WB	NB			
Opposing Approach	WB	EB				
Opposing Lanes	1	1			0	
Conflicting Approach Left		NB	EB			
Conflicting Lanes Left	0	1	1			
Conflicting Approach Right	NB		WB			
Conflicting Lanes Right	1	0	1			
HCM Control Delay, s/veh	7.3	8.1	8.1			
HCM LOS	A	A	A			
Lane						
	NBLn1	EBLn1	WBLn1			
Vol Left, %	83%	0%	95%			
Vol Thru, %	0%	75%	5%			
Vol Right, %	17%	25%	0%			
Sign Control	Stop	Stop	Stop			
Traffic Vol by Lane	125	20	91			
LT Vol	104	0	86			
Through Vol	0	15	5			
RT Vol	21	5	0			
Lane Flow Rate	139	22	101			
Geometry Grp	1	1	1			
Degree of Util (X)	0.163	0.026	0.123			
Departure Headway (Hd)	4.213	4.216	4.384			
Convergence, Y/N	Yes	Yes	Yes			
Cap	842	854	807			
Service Time	2.289	2.216	2.469			
HCM Lane V/C Ratio	0.165	0.026	0.125			
HCM Control Delay, s/veh	8.1	7.3	8.1			
HCM Lane LOS	A	A	A			
HCM 95th-tile Q	0.6	0.1	0.4			

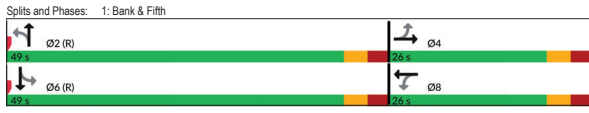
Intersection												
Intersection Delay, s/veh	8											
Intersection LOS	A											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔				↔		↔				↔
Traffic Vol, veh/h	40	48	0	0	0	93	58	39	36	0	0	104
Future Vol, veh/h	40	48	0	0	0	93	58	39	36	0	0	104
Peak Hour Factor	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	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	44	53	0	0	0	103	64	43	40	0	0	116
Number of Lanes	0	1	0	0	0	1	0	1	0	0	0	1
Approach	EB	WB					NB	SB				
Opposing Approach	WB	EB					SB	NB				
Opposing Lanes	1	1					1	1				
Conflicting Approach Left	SB	NB					EB	WB				
Conflicting Lanes Left	1	1					1	1				
Conflicting Approach Right	NB	SB					WB	EB				
Conflicting Lanes Right	1	1					1	1				
HCM Control Delay, s/veh	8.4			7.6			8.4			7.5		
HCM LOS	A			A			A			A		

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	44%	45%	0%	0%
Vol Thru, %	29%	55%	0%	0%
Vol Right, %	27%	0%	100%	100%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	133	88	93	104
LT Vol	58	40	0	0
Through Vol	39	48	0	0
RT Vol	36	0	93	104
Lane Flow Rate	148	98	103	116
Geometry Grp	1	1	1	1
Degree of Util (X)	0.182	0.128	0.115	0.127
Departure Headway (Hd)	4.425	4.704	4.022	3.949
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	811	763	891	908
Service Time	2.446	2.729	2.047	1.97
HCM Lane V/C Ratio	0.182	0.128	0.116	0.126
HCM Control Delay, s/veh	8.4	8.4	7.6	7.5
HCM Lane LOS	A	A	A	A
HCM 95th-ile Q	0.7	0.4	0.4	0.4

2028 Baseline Conditions Sunday

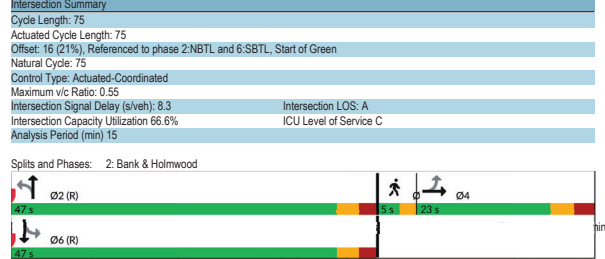
Queues 1: Bank & Fifth 12/06/2024

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	53	37	120	65	15	479	22	504
Future Volume (vph)	53	37	120	65	15	479	22	504
Lane Group Flow (vph)	0	129	133	114	0	579	0	630
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases	4	8	2	2	6	6	6	6
Permitted Phases	4	8	2	2	6	6	6	6
Minimum Split (s)	26.0	26.0	26.0	26.0	49.0	49.0	49.0	49.0
Total Split (s)	26.0	26.0	26.0	26.0	49.0	49.0	49.0	49.0
Total Split (%)	34.7%	34.7%	34.7%	34.7%	65.3%	65.3%	65.3%	65.3%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead-Lag	Lead-Lag Optimize?							
Act Effect Green (s)	20.5	20.5	20.5	43.5	43.5	43.5	43.5	43.5
Actuated g/C Ratio	0.27	0.27	0.27	0.58	0.58	0.58	0.58	0.58
v/c Ratio	0.38	0.45	0.27	0.36	0.39	0.39	0.39	0.39
Control Delay (s/veh)	22.6	28.5	16.6	10.3	9.2	9.2	9.2	9.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	22.6	28.5	16.6	10.3	9.2	9.2	9.2	9.2
LOS	C	C	B	B	A	A	A	A
Approach Delay (s/veh)	22.6	23.0	10.3	9.2	9.2	9.2	9.2	9.2
Approach LOS	C	C	B	B	A	A	A	A
Queue Length 50th (m)	12.4	15.6	8.1	31.5	22.3	22.3	22.3	22.3
Queue Length 95th (m)	26.8	31.3	20.2	48.5	32.5	32.5	32.5	32.5
Internal Link Dist (m)	49.7	112.4	195.6	190.0	190.0	190.0	190.0	190.0
Turn Bay Length (m)	45.0							
Base Capacity (vph)	341	294	424	1623	1597	1597	1597	1597
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	0.38	0.45	0.27	0.36	0.39	0.39	0.39	0.39
Intersection Summary								
Cycle Length: 75								
Actuated Cycle Length: 75								
Offset: 42 (56%), Referenced to phase 2:NBT and 6:SBTL, Start of Green								
Natural Cycle: 75								
Control Type: Pretimed								
Maximum v/c Ratio: 0.45								
Intersection Signal Delay (s/veh): 12.9					Intersection LOS: B			
Intersection Capacity Utilization 58.8%					ICU Level of Service B			
Analysis Period (min) 15								



Queues 2: Bank & Holmwood 12/06/2024

Lane Group	EBT	NBL	NBT	SBL	SBT	Ø3
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	17	32	506	22	537	537
Future Volume (vph)	17	32	506	22	537	537
Lane Group Flow (vph)	109	0	687	0	660	660
Turn Type	NA	Perm	NA	Perm	NA	NA
Protected Phases	4	2	2	6	3	3
Permitted Phases	4	2	2	6	3	3
Detector Phase	4	2	2	6	6	6
Switch Phase	Switch Phase					
Minimum Initial (s)	4.4	10.0	10.0	4.0	4.0	1.0
Minimum Split (s)	23.0	47.0	47.0	47.0	47.0	5.0
Total Split (s)	23.0	47.0	47.0	47.0	47.0	5.0
Total Split (%)	30.7%	62.7%	62.7%	62.7%	62.7%	7%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	2.0
All-Red Time (s)	2.6	2.2	2.2	2.2	2.2	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.6	5.2	5.2	5.2	5.2	5.2
Lead-Lag	Lead-Lag Optimize?					
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	None
Act Effect Green (s)	11.5	56.1	56.1	56.1	56.1	56.1
Actuated g/C Ratio	0.15	0.75	0.75	0.75	0.75	0.75
v/c Ratio	0.55	0.36	0.36	0.32	0.32	0.32
Control Delay (s/veh)	38.5	2.3	9.6	9.6	9.6	9.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	38.5	2.3	9.6	9.6	9.6	9.6
LOS	D	A	A	A	A	A
Approach Delay (s/veh)	38.5	2.3	9.6	9.6	9.6	9.6
Approach LOS	D	A	A	A	A	A
Queue Length 50th (m)	14.4	5.1	30.1	30.1	30.1	30.1
Queue Length 95th (m)	26.3	11.8	47.2	47.2	47.2	47.2
Internal Link Dist (m)	39.8	31.5	195.6	195.6	195.6	195.6
Turn Bay Length (m)	45.0					
Base Capacity (vph)	304	1892	2056	2056	2056	2056
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	0.36	0.36	0.32	0.32	0.32	0.32
Intersection Summary						
Cycle Length: 75						
Actuated Cycle Length: 75						
Offset: 16 (21%), Referenced to phase 2:NBT and 6:SBTL, Start of Green						
Natural Cycle: 75						
Control Type: Actuated-Coordinated						
Maximum v/c Ratio: 0.55						
Intersection Signal Delay (s/veh): 8.3				Intersection LOS: A		
Intersection Capacity Utilization 66.6%				ICU Level of Service C		
Analysis Period (min) 15						



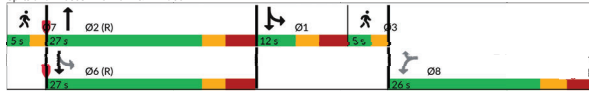
Queues
3: Bank & Exhibition

12/06/2024

Table with 10 columns: Lane Group, WBL, WBR, NBT, SBL, SBT, Ø3, Ø6, Ø7. Rows include Lane Configurations, Traffic Volume, Future Volume, Lane Group Flow, Turn Type, Protected Phases, Permitted Phases, Detector Phase, Switch Phase, Minimum Initial, Minimum Split, Total Split, Total Spilt, Yellow Time, All-Red Time, Lost Time Adjust, Total Lost Time, Lead/Lag, Recall Mode, Act Effect Green, Actuated g/C Ratio, v/c Ratio, Control Delay, Queue Delay, Total Delay, LOS, Approach Delay, Approach LOS, Queue Length, Internal Link, Turn Bay Length, Base Capacity, Starvation Cap, Spillback Cap, Storage Cap, Reduced v/c Ratio.

Intersection Summary
Cycle Length: 75
Actuated Cycle Length: 75
Offset: 15 (20%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.58
Intersection Signal Delay (s/veh): 11.5
Intersection Capacity Utilization 57.7%
Analysis Period (min) 15

Splits and Phases: 3: Bank & Exhibition



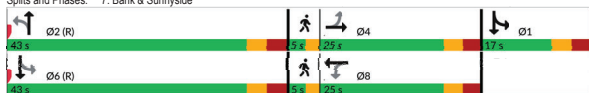
Queues
7: Bank & Sunnyside

12/06/2024

Table with 10 columns: Lane Group, EBL, EBT, WBL, WBT, NBL, NBT, SBL, SBT, Ø3, Ø6, Ø7. Rows include Lane Configurations, Traffic Volume, Future Volume, Lane Group Flow, Turn Type, Protected Phases, Permitted Phases, Detector Phase, Switch Phase, Minimum Initial, Minimum Split, Total Split, Total Spilt, Yellow Time, All-Red Time, Lost Time Adjust, Total Lost Time, Lead/Lag, Recall Mode, Act Effect Green, Actuated g/C Ratio, v/c Ratio, Control Delay, Queue Delay, Total Delay, LOS, Approach Delay, Approach LOS, Queue Length, Internal Link, Turn Bay Length, Base Capacity, Starvation Cap, Spillback Cap, Storage Cap, Reduced v/c Ratio.

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 23 (26%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.77
Intersection Signal Delay (s/veh): 16.8
Intersection Capacity Utilization 73.3%
Analysis Period (min) 15

Splits and Phases: 7: Bank & Sunnyside



Queues
6: Bank & Aylmer

12/06/2024

Table with 6 columns: Lane Group, EBL, NBL, NBT, SBT, Ø3. Rows include Lane Configurations, Traffic Volume, Future Volume, Lane Group Flow, Turn Type, Protected Phases, Permitted Phases, Detector Phase, Switch Phase, Minimum Initial, Minimum Split, Total Split, Total Spilt, Yellow Time, All-Red Time, Lost Time Adjust, Total Lost Time, Lead/Lag, Recall Mode, Act Effect Green, Actuated g/C Ratio, v/c Ratio, Control Delay, Queue Delay, Total Delay, LOS, Approach Delay, Approach LOS, Queue Length, Internal Link, Turn Bay Length, Base Capacity, Starvation Cap, Spillback Cap, Storage Cap, Reduced v/c Ratio.

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 87 (97%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.43
Intersection Signal Delay (s/veh): 4.9
Intersection Capacity Utilization 49.7%
Analysis Period (min) 15

Splits and Phases: 6: Bank & Aylmer



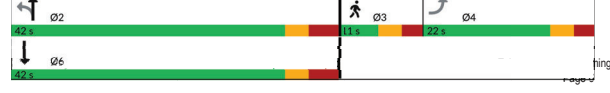
Queues
9: Queen Elizabeth Drive & Fifth

12/06/2024

Table with 6 columns: Lane Group, EBL, NBL, NBT, SBT, Ø3. Rows include Lane Configurations, Traffic Volume, Future Volume, Lane Group Flow, Turn Type, Protected Phases, Permitted Phases, Detector Phase, Switch Phase, Minimum Initial, Minimum Split, Total Split, Total Spilt, Yellow Time, All-Red Time, Lost Time Adjust, Total Lost Time, Lead/Lag, Recall Mode, Act Effect Green, Actuated g/C Ratio, v/c Ratio, Control Delay, Queue Delay, Total Delay, LOS, Approach Delay, Approach LOS, Queue Length, Internal Link, Turn Bay Length, Base Capacity, Starvation Cap, Spillback Cap, Storage Cap, Reduced v/c Ratio.

Intersection Summary
Cycle Length: 75
Actuated Cycle Length: 59.9
Natural Cycle: 75
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.53
Intersection Signal Delay (s/veh): 15.4
Intersection Capacity Utilization 38.7%
Analysis Period (min) 15

Splits and Phases: 9: Queen Elizabeth Drive & Fifth



Intersection						
Intersection Delay, s/veh	7.9					
Intersection LOS	A					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	↕
Traffic Vol, veh/h	5	146	103	5	5	5
Future Vol, veh/h	5	146	103	5	5	5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	162	114	6	6	6
Number of Lanes	0	1	1	0	1	0
Approach	EB	WB	SB			
Opposing Approach	WB	EB				
Opposing Lanes	1	1	0			
Conflicting Approach Left	SB		WB			
Conflicting Lanes Left	1	0	1			
Conflicting Approach Right		SB	EB			
Conflicting Lanes Right	0	1	1			
HCM Control Delay, s/veh	8	7.7	7.4			
HCM LOS	A	A	A			

Lane	EBLn1	WBLn1	SBLn1
Vol Left, %	3%	0%	50%
Vol Thru, %	97%	95%	0%
Vol Right, %	0%	5%	50%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	151	108	10
LT Vol	5	0	5
Through Vol	146	103	0
RT Vol	0	5	5
Lane Flow Rate	168	120	11
Geometry Grp	1	1	1
Degree of Util (X)	0.189	0.135	0.013
Departure Headway (Hd)	4.05	4.051	4.349
Convergence, Y/N	Yes	Yes	Yes
Cap	886	882	828
Service Time	2.079	2.09	2.349
HCM Lane V/C Ratio	0.19	0.136	0.013
HCM Control Delay, s/veh	8	7.7	7.4
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.7	0.5	0

Intersection						
Intersection Delay, s/veh	7.9					
Intersection LOS	A					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↕			↕	↕	↕
Traffic Vol, veh/h	14	5	5	163	5	5
Future Vol, veh/h	14	5	5	163	5	5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	16	6	6	181	6	6
Number of Lanes	1	0	0	1	1	0
Approach	EB	WB	NB			
Opposing Approach	WB	EB	NB			
Opposing Lanes	1	1	0			
Conflicting Approach Left		NB	EB			
Conflicting Lanes Left	0	1	1			
Conflicting Approach Right	NB		WB			
Conflicting Lanes Right	1	0	1			
HCM Control Delay, s/veh	7.1	8	7.2			
HCM LOS	A	A	A			

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	50%	0%	3%
Vol Thru, %	0%	74%	97%
Vol Right, %	50%	26%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	10	19	168
LT Vol	5	0	5
Through Vol	0	14	163
RT Vol	5	5	0
Lane Flow Rate	11	21	187
Geometry Grp	1	1	1
Degree of Util (X)	0.013	0.023	0.206
Departure Headway (Hd)	4.093	3.934	3.976
Convergence, Y/N	Yes	Yes	Yes
Cap	862	906	905
Service Time	2.177	1.974	1.985
HCM Lane V/C Ratio	0.013	0.023	0.207
HCM Control Delay, s/veh	7.2	7.1	8
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0	0.1	0.8

Intersection						
Intersection Delay, s/veh	8					
Intersection LOS	A					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↕			↕	↕	↕
Traffic Vol, veh/h	14	5	56	3	126	25
Future Vol, veh/h	14	5	56	3	126	25
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	16	6	62	3	140	28
Number of Lanes	1	0	0	1	1	0
Approach	EB	WB	NB			
Opposing Approach	WB	EB	NB			
Opposing Lanes	1	1	0			
Conflicting Approach Left		NB	EB			
Conflicting Lanes Left	0	1	1			
Conflicting Approach Right	NB		WB			
Conflicting Lanes Right	1	0	1			
HCM Control Delay, s/veh	7.3	7.9	8.2			
HCM LOS	A	A	A			

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	83%	0%	95%
Vol Thru, %	0%	74%	5%
Vol Right, %	17%	26%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	151	19	59
LT Vol	126	0	56
Through Vol	0	14	3
RT Vol	25	5	0
Lane Flow Rate	168	21	66
Geometry Grp	1	1	1
Degree of Util (X)	0.193	0.025	0.081
Departure Headway (Hd)	4.151	4.23	4.435
Convergence, Y/N	Yes	Yes	Yes
Cap	859	851	796
Service Time	2.207	2.23	2.528
HCM Lane V/C Ratio	0.196	0.025	0.083
HCM Control Delay, s/veh	8.2	7.3	7.9
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.7	0.1	0.3

Intersection												
Intersection Delay, s/veh	9.9											
Intersection LOS	A											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕					↕	↕	↕			↕
Traffic Vol, veh/h	68	81	0	0	0	227	99	66	61	0	0	103
Future Vol, veh/h	68	81	0	0	0	227	99	66	61	0	0	103
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	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	76	90	0	0	0	252	110	73	68	0	0	114
Number of Lanes	0	1	0	0	0	1	0	1	0	0	0	1
Approach	EB	WB	NB	WB	NB	SB						
Opposing Approach	WB	EB	NB	WB	NB	SB						
Opposing Lanes	1	1	1	1	1	1						
Conflicting Approach Left	SB		NB	EB		WB						
Conflicting Lanes Left	1	1	1	1	1	1						
Conflicting Approach Right	NB		SB	WB		EB						
Conflicting Lanes Right	1	1	1	1	1	1						
HCM Control Delay, s/veh	10			9.6		10.7						
HCM LOS	A			A		B						

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	44%	46%	0%	0%
Vol Thru, %	29%	54%	0%	0%
Vol Right, %	27%	0%	100%	100%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	226	149	227	103
LT Vol	99	68	0	0
Through Vol	66	81	0	0
RT Vol	61	0	227	103
Lane Flow Rate	251	166	252	114
Geometry Grp	1	1	1	1
Degree of Util (X)	0.346	0.24	0.311	0.151
Departure Headway (Hd)	4.967	5.209	4.442	4.751
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	716	680	800	760
Service Time	3.06	3.307	2.53	2.751
HCM Lane V/C Ratio	0.351	0.244	0.315	0.15
HCM Control Delay, s/veh	10.7	10	9.6	8.6
HCM Lane LOS	B	A	A	A
HCM 95th-tile Q	1.5	0.9	1.3	0.5

Intersection table for Bank & Wilton. Includes columns for Int Delay, Movement (EBL, EBR, NBL, NBT, SBT, SBR), Lane Configurations, Traffic Vol, Future Vol, Conflicting Peds, Sign Control, RT Channelized, Storage Length, Veh in Median Storage, Grade, Peak Hour Factor, Heavy Vehicles, and Mvmt Flow.

Major/Minor table for Bank & Wilton. Includes columns for Minor2, Major1, Major2, and rows for Conflicting Flow All, Critical Hdwy, Pot Cap-1 Maneuver, Platoon blocked, Mov Cap-1 Maneuver, and Mov Cap-2 Maneuver.

Approach table for Bank & Wilton. Columns: EB, NB, SB. Rows: HCM Control Delay, HCM LOS.

Minor Lane/Major Mvmt table for Bank & Wilton. Columns: NBL, NBTEBLn1, SBT, SBR. Rows: Capacity, HCM Lane V/C Ratio, HCM Control Delay, HCM Lane LOS, HCM 95th %tile Q.

Intersection table for Bank & Echo. Includes columns for Int Delay, Movement (EBL, EBR, NBL, NBT, SBT, SBR), Lane Configurations, Traffic Vol, Future Vol, Conflicting Peds, Sign Control, RT Channelized, Storage Length, Veh in Median Storage, Grade, Peak Hour Factor, Heavy Vehicles, and Mvmt Flow.

Major/Minor table for Bank & Echo. Includes columns for Minor2, Major1, Major2, and rows for Conflicting Flow All, Critical Hdwy, Pot Cap-1 Maneuver, Platoon blocked, Mov Cap-1 Maneuver, and Mov Cap-2 Maneuver.

Approach table for Bank & Echo. Columns: EB, NB, SB. Rows: HCM Control Delay, HCM LOS.

Minor Lane/Major Mvmt table for Bank & Echo. Columns: NBTEBLn1, SBT, SBR. Rows: Capacity, HCM Lane V/C Ratio, HCM Control Delay, HCM Lane LOS, HCM 95th %tile Q.

Intersection table for Queen Elizabeth Driveway. Includes columns for Int Delay, Movement (EBL, EBR, NBL, NBT, SBT, SBR), Lane Configurations, Traffic Vol, Future Vol, Conflicting Peds, Sign Control, RT Channelized, Storage Length, Veh in Median Storage, Grade, Peak Hour Factor, Heavy Vehicles, and Mvmt Flow.

Major/Minor table for Queen Elizabeth Driveway. Includes columns for Minor2, Major1, Major2, and rows for Conflicting Flow All, Critical Hdwy, Pot Cap-1 Maneuver, Platoon blocked, Mov Cap-1 Maneuver, and Mov Cap-2 Maneuver.

Approach table for Queen Elizabeth Driveway. Columns: EB, NB, SB. Rows: HCM Control Delay, HCM LOS.

Minor Lane/Major Mvmt table for Queen Elizabeth Driveway. Columns: NBL, NBTEBLn1, SBT, SBR. Rows: Capacity, HCM Lane V/C Ratio, HCM Control Delay, HCM Lane LOS, HCM 95th %tile Q.

Intersection table for Bank & Marche. Includes columns for Int Delay, Movement (WBL, WBR, NBT, NBR, SBL, SBT), Lane Configurations, Traffic Vol, Future Vol, Conflicting Peds, Sign Control, RT Channelized, Storage Length, Veh in Median Storage, Grade, Peak Hour Factor, Heavy Vehicles, and Mvmt Flow.

Major/Minor table for Bank & Marche. Includes columns for Minor1, Major1, Major2, and rows for Conflicting Flow All, Critical Hdwy, Pot Cap-1 Maneuver, Platoon blocked, Mov Cap-1 Maneuver, and Mov Cap-2 Maneuver.

Approach table for Bank & Marche. Columns: WB, NB, SB. Rows: HCM Control Delay, HCM LOS.

Minor Lane/Major Mvmt table for Bank & Marche. Columns: NBT, NBR/WBLn1, SBT. Rows: Capacity, HCM Lane V/C Ratio, HCM Control Delay, HCM Lane LOS, HCM 95th %tile Q.

Intersection						
Int Delay, s/veh	3.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	T T T T T T					
Traffic Vol, veh/h	146	145	5	103	83	5
Future Vol, veh/h	146	145	5	103	83	5
Conflicting Peds, #/hr	0	100	100	0	100	100
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	None	None	None	None	None	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	162	161	6	114	92	6
Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	423	0	568	443
Stage 1	-	-	-	-	343	-
Stage 2	-	-	-	-	226	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1136	-	484	615
Stage 1	-	-	-	-	719	-
Stage 2	-	-	-	-	812	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1016	-	385	492
Mov Cap-2 Maneuver	-	-	-	-	385	-
Stage 1	-	-	-	-	643	-
Stage 2	-	-	-	-	722	-
Approach	EB	WB	NB			
HCM Control Delay, s/v	0	0.4	17.31			
HCM LOS	C					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	390	-	-	83	-	
HCM Lane V/C Ratio	0.251	-	-	0.005	-	
HCM Control Delay (s/veh)	17.3	-	-	8.6	0	
HCM Lane LOS	C	-	-	A	A	
HCM 95th %tile Q(veh)	1	-	-	0	-	

Intersection						
Int Delay, s/veh	5.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	T T T T T T					
Traffic Vol, veh/h	5	51	54	76	171	5
Future Vol, veh/h	5	51	54	76	171	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	None	None	None	None	None	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	57	60	84	190	6
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	144	0	-	0	170	102
Stage 1	-	-	-	-	102	-
Stage 2	-	-	-	-	68	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1438	-	-	-	820	953
Stage 1	-	-	-	-	922	-
Stage 2	-	-	-	-	955	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	1438	-	-	-	817	953
Mov Cap-2 Maneuver	-	-	-	-	817	-
Stage 1	-	-	-	-	918	-
Stage 2	-	-	-	-	955	-
Approach	EB	WB	SB			
HCM Control Delay, s/v	0.67	0	10.76			
HCM LOS	B					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	161	-	-	-	820	
HCM Lane V/C Ratio	0.004	-	-	-	0.238	
HCM Control Delay (s/veh)	7.5	0	-	-	10.8	
HCM Lane LOS	A	A	-	-	B	
HCM 95th %tile Q(veh)	0	-	-	-	0.9	

2028 Baseline Conditions Minor Event Ingress

Queues
7: Bank & Sunnyside

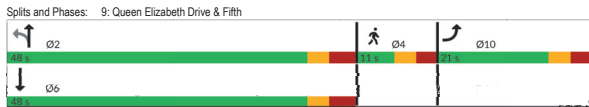
12/06/2024

Lane Group	EBL	EBT	WBL	NBL	NBT	SBL	SBT	Ø3	Ø7
Lane Configurations	←		←		←		←		
Traffic Volume (vph)	57	52	18	59	20	473	106	540	
Future Volume (vph)	57	52	18	59	20	473	106	540	
Lane Group Flow (vph)	0		151		0		267		0
Turn Type	Perm	NA	Perm	NA	Perm	NA	pm-pt	NA	
Protected Phases	4		8		2		1		6
Permitted Phases	4		8		2		1		6
Detector Phase	4		8		2		1		6
Switch Phase	4		8		2		1		6
Minimum Initial (s)	6.4	6.4	5.3	5.3	17.0	17.0	5.0	17.0	1.0
Minimum Split (s)	25.0	25.0	25.0	25.0	43.0	43.0	17.0	60.0	5.0
Total Split (s)	25.0	25.0	25.0	25.0	43.0	43.0	17.0	60.0	5.0
Total Split (%)	27.8%	27.8%	27.8%	27.8%	47.8%	47.8%	18.9%	66.7%	6%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0
All-Red Time (s)	2.6	2.6	2.6	2.6	3.0	3.0	2.9	3.0	0.0
Lost Time Adjust (s)	0.0		0.0		0.0		0.0		
Total Lost Time (s)	5.6		5.6		6.0		6.0		
Lead/Lag	Lag	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	C-Max	C-Max	None	C-Max	None
Act Effct Green (s)	21.1	21.1	21.1	21.1	57.3	57.3	57.3	57.3	57.3
Actuated g/C Ratio	0.23	0.23	0.23	0.23	0.64	0.64	0.64	0.64	0.64
v/c Ratio	0.71	0.71	0.76	0.76	0.32	0.32	0.56	0.56	0.56
Control Delay (s/veh)	49.5	49.5	33.3	33.3	8.5	8.5	7.7	7.7	7.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	49.5	49.5	33.3	33.3	8.5	8.5	7.7	7.7	7.7
LOS	D	D	C	C	A	A	A	A	A
Approach Delay (s/veh)	49.5	49.5	33.3	33.3	8.5	8.5	7.7	7.7	7.7
Approach LOS	D	D	C	C	A	A	A	A	A
Queue Length 50th (m)	23.1	23.1	24.8	24.8	22.7	22.7	14.6	14.6	14.6
Queue Length 95th (m)	#44.5	#44.5	#53.8	#53.8	32.7	32.7	57.4	57.4	57.4
Internal Link Dist (m)	75.1	75.1	136.0	136.0	63.1	63.1	79.0	79.0	79.0
Turn Bay Length (m)									
Base Capacity (vph)	225	225	364	364	1798	1798	1414	1414	1414
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	0.67	0.67	0.73	0.73	0.32	0.32	0.56	0.56	0.56
Intersection Summary									
Cycle Length: 90									
Actuated Cycle Length: 90									
Offset: 23 (26%), Referenced to phase 2:NBT and 6:SBT, Start of Green									
Natural Cycle: 90									
Control Type: Actuated-Coordinated									
Maximum v/c Ratio: 0.76									
Intersection Signal Delay (s/veh): 15.4	Intersection LOS: B								
Intersection Capacity Utilization 80.9%	ICU Level of Service D								
Analysis Period (min) 15									
# 95th percentile volume exceeds capacity, queue may be longer.									
Queue shown is maximum after two cycles.									

Queues
9: Queen Elizabeth Drive & Fifth

12/06/2024

Lane Group	EBL	NBL	NBT	SBT	Ø4
Lane Configurations	←		←		
Traffic Volume (vph)	51	53	220	527	
Future Volume (vph)	51	53	220	527	
Lane Group Flow (vph)	98		303		683
Turn Type	Prot	Perm	NA	NA	
Protected Phases	10		2		6
Permitted Phases	2		4		
Detector Phase	10		2		6
Switch Phase	10		2		6
Minimum Initial (s)	10.0	4.0	4.0	4.0	4.0
Minimum Split (s)	21.0	48.0	48.0	48.0	11.0
Total Split (s)	21.0	48.0	48.0	48.0	11.0
Total Split (%)	26.3%	60.0%	60.0%	60.0%	14%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.7	3.8	3.8	3.8	2.7
Lost Time Adjust (s)	0.0		0.0		0.0
Total Lost Time (s)	5.7		6.8		6.8
Lead/Lag	Lag	Lag	Lag	Lag	Lag
Lead-Lag Optimize?	None	None	None	None	None
Recall Mode	None	None	None	Max	None
Act Effct Green (s)	10.8	48.7	48.7	48.7	11.0
Actuated g/C Ratio	0.16	0.72	0.72	0.72	0.12
v/c Ratio	0.40	0.31	0.57	0.57	0.12
Control Delay (s/veh)	30.0	6.1	9.0	9.0	9.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	30.0	6.1	9.0	9.0	9.0
LOS	C	A	A	A	A
Approach Delay (s/veh)	30.0	6.1	9.0	9.0	9.0
Approach LOS	C	A	A	A	A
Queue Length 50th (m)	10.6	13.6	40.6	40.6	10.6
Queue Length 95th (m)	22.6	28.8	81.3	81.3	22.6
Internal Link Dist (m)	57.2	0.1	5.9	5.9	57.2
Turn Bay Length (m)					
Base Capacity (vph)	353	988	1197	1197	353
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.28	0.31	0.57	0.57	0.57
Intersection Summary					
Cycle Length: 80					
Actuated Cycle Length: 67.3					
Natural Cycle: 80					
Control Type: Actuated-Uncoordinated					
Maximum v/c Ratio: 0.57					
Intersection Signal Delay (s/veh): 10.1	Intersection LOS: B				
Intersection Capacity Utilization 74.8%	ICU Level of Service D				
Analysis Period (min) 15					



Queues
7: Bank & Sunnyside

12/06/2024

Lane Group	EBL	EBT	WBL	NBL	NBT	SBL	SBT	Ø3	Ø7

HCM 7th AWSC
12: Exhibition & Paul Askin

11/28/2024

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Intersection						
Intersection Delay, s/veh	8.8					
Intersection LOS	A					
Lane Configurations	←		←		←	
Traffic Vol, veh/h	227	0	0	0	0	122
Future Vol, veh/h	227	0	0	0	0	122
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	252	0	0	0	0	136
Number of Lanes	0	1	1	0	1	0
Approach	EB	WB	SB	SB		
Opposing Approach	WB	EB				
Opposing Lanes	1	1				
Conflicting Approach Left	SB			WB		
Conflicting Lanes Left	1	0		1		
Conflicting Approach Right		SB		EB		
Conflicting Lanes Right	0	1		1		
HCM Control Delay, s/veh	9.4	0	0	7.6		
HCM LOS	A	-		A		
Lane	EBLn1	WBLn1	SBLn1			
Vol Left, %	100%	0%	0%			
Vol Thru, %	0%	100%	0%			
Vol Right, %	0%	0%	100%			
Sign Control	Stop	Stop	Stop			
Traffic Vol by Lane	227	0	122			
LT Vol	227	0	0			
Through Vol	0	0	0			
RT Vol	0	0	122			
Lane Flow Rate	252	0	136			
Geometry Grp	1	1	1			
Degree of Util (X)	0.306	0	0.148			
Departure Headway (Hd)	4.37	4.487	3.932			
Convergence, Y/N	Yes	Yes	Yes			
Cap	817	0	918			
Service Time	2.426	2.5	1.932			
HCM Lane V/C Ratio	0.308	0	0.148			
HCM Control Delay, s/veh	9.4	7.5	7.6			
HCM Lane LOS	A	N	A			
HCM 95th-tile Q	1.3	0	0.5			

Intersection	
Intersection Delay, s/veh	8.9
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔			↔	↔	↔
Traffic Vol, veh/h	11	11	81	81	114	114
Future Vol, veh/h	11	11	81	81	114	114
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	12	90	90	127	127
Number of Lanes	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay, s/veh	7.6	9	9
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	50%	0%	50%
Vol Thru, %	0%	50%	50%
Vol Right, %	50%	50%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	228	22	162
LT Vol	114	0	81
Through Vol	0	11	81
RT Vol	114	11	0
Lane Flow Rate	253	24	180
Geometry Grp	1	1	1
Degree of Util (X)	0.297	0.03	0.232
Departure Headway (Hd)	4.225	4.415	4.631
Convergence, Y/N	Yes	Yes	Yes
Cap	854	811	778
Service Time	2.24	2.44	2.649
HCM Lane V/C Ratio	0.296	0.03	0.231
HCM Control Delay, s/veh	9	7.6	9
HCM Lane LOS	A	A	A
HCM 95th-tile Q	1.2	0.1	0.9

Intersection	
Intersection Delay, s/veh	7.8
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔			↔	↔	↔
Traffic Vol, veh/h	32	0	0	161	0	0
Future Vol, veh/h	32	0	0	161	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	36	0	0	179	0	0
Number of Lanes	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	0	1
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay, s/veh	7.3	7.9	0
HCM LOS	A	A	-

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	0%	0%	0%
Vol Thru, %	100%	100%	100%
Vol Right, %	0%	0%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	0	32	161
LT Vol	0	0	0
Through Vol	0	32	161
RT Vol	0	0	0
Lane Flow Rate	0	36	179
Geometry Grp	1	1	1
Degree of Util (X)	0	0.04	0.197
Departure Headway (Hd)	4.304	4.066	3.961
Convergence, Y/N	Yes	Yes	Yes
Cap	0	879	911
Service Time	2.392	2.098	1.967
HCM Lane V/C Ratio	0	0.041	0.196
HCM Control Delay, s/veh	7.4	7.3	7.9
HCM Lane LOS	N	A	A
HCM 95th-tile Q	0	0.1	0.7

Intersection	
Intersection Delay, s/veh	8.3
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔				↔		↔			↔	↔
Traffic Vol, veh/h	61	51	0	0	0	139	61	42	37	0	0	82
Future Vol, veh/h	61	51	0	0	0	139	61	42	37	0	0	82
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	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	68	57	0	0	0	154	68	47	41	0	0	91
Number of Lanes	0	1	0	0	0	1	0	1	0	0	0	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	8.7	7.9	8.7	7.7
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	44%	54%	0%	0%
Vol Thru, %	30%	46%	0%	0%
Vol Right, %	26%	0%	100%	100%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	140	112	139	82
LT Vol	61	61	0	0
Through Vol	42	51	0	0
RT Vol	37	0	139	82
Lane Flow Rate	156	124	154	91
Geometry Grp	1	1	1	1
Degree of Util (X)	0.198	0.165	0.173	0.105
Departure Headway (Hd)	4.579	4.762	4.043	4.137
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	762	753	887	865
Service Time	2.611	2.794	2.072	2.172
HCM Lane V/C Ratio	0.199	0.165	0.174	0.105
HCM Control Delay, s/veh	8.7	8.7	7.9	7.7
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.7	0.6	0.6	0.4

Intersection	
Int Delay, s/veh	12.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Vol, veh/h	5	268	143	649	477	55
Future Vol, veh/h	5	268	143	649	477	55
Conflicting Peds, #/hr	0	0	178	0	0	107
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	6	298	159	721	530	61

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	1417	739	769
Stage 1	739	-	-
Stage 2	678	-	-
Critical Hdwy	6.675	6.275	4.175
Critical Hdwy Stg 1	5.475	-	-
Critical Hdwy Stg 2	5.875	-	-
Follow-up Hdwy	3.54753	3.4752	2.475
Pot Cap-1 Maneuver	136	410	827
Stage 1	465	-	-
Stage 2	460	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	63	333	671
Mov Cap-2 Maneuver	63	-	-
Stage 1	265	-	-
Stage 2	373	-	-

Approach	EB	NB	SB
HCM Control Delay, s/62.12	4.2	0	
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBTLn1	SBT	SBR
Capacity (veh/h)	537	-	333	-
HCM Lane V/C Ratio	0.237	-	0.894	-
HCM Control Delay (s/veh)	12	2.5	62.1	-
HCM Lane LOS	B	A	F	-
HCM 95th-tile Q(veh)	0.9	-	8.6	-

Intersection					
Int Delay, s/veh	0.4				
Movement	EBL	EBR	NBL	NBT	SBT
Lane Configurations		↕	↕	↕	↕
Traffic Vol, veh/h	4	37	0	777	753
Future Vol, veh/h	4	37	0	777	753
Conflicting Peds, #/hr	0	0	0	0	86
Sign Control	Stop	Stop	Free	Free	Free
RT Channelized	None	None	None	None	None
Storage Length	-	0	-	-	-
Veh in Median Storage, #	0	-	0	0	-
Grade, %	0	-	0	0	-
Peak Hour Factor	90	90	90	90	90
Heavy Vehicles, %	5	5	5	5	5
Mvmt Flow	4	41	0	863	837
Major/Minor					
Conflicting Flow All	1268	837	-	0	-
Stage 1	837	-	-	-	-
Stage 2	432	-	-	-	-
Critical Hdwy	6.675	6.275	-	-	-
Critical Hdwy Stg 1	5.475	-	-	-	-
Critical Hdwy Stg 2	5.875	-	-	-	-
Follow-up Hdwy	3.54753	3.475	-	-	-
Pot Cap-1 Maneuver	169	360	0	-	0
Stage 1	417	-	0	-	0
Stage 2	616	-	0	-	0
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	169	360	-	-	-
Mov Cap-2 Maneuver	169	-	-	-	-
Stage 1	417	-	-	-	-
Stage 2	616	-	-	-	-
Approach					
EB	NB	SB			
HCM Control Delay, s/veh	0	0			
HCM LOS	C				
Minor Lane/Major Mvmt					
Capacity (veh/h)	-	360	-	-	-
HCM Lane V/C Ratio	-	0.114	-	-	-
HCM Control Delay (s/veh)	-	16.3	-	-	-
HCM Lane LOS	-	C	-	-	-
HCM 95th %tile Q(veh)	-	0.4	-	-	-

Intersection						
Int Delay, s/veh	3.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↕	↕	↕	↕	↕	↕
Traffic Vol, veh/h	58	52	110	217	326	245
Future Vol, veh/h	58	52	110	217	326	245
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free
RT Channelized	None	None	None	None	None	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	0	0	-
Grade, %	0	-	0	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	64	58	122	241	362	272
Major/Minor						
Conflicting Flow All	984	498	634	0	-	0
Stage 1	498	-	-	-	-	-
Stage 2	486	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	278	576	958	-	-	-
Stage 1	615	-	-	-	-	-
Stage 2	623	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	237	576	958	-	-	-
Mov Cap-2 Maneuver	237	-	-	-	-	-
Stage 1	524	-	-	-	-	-
Stage 2	623	-	-	-	-	-
Approach						
EB	NB	SB				
HCM Control Delay, s/veh	3.13	0				
HCM LOS	C					
Minor Lane/Major Mvmt						
Capacity (veh/h)	606	-	328	-	-	-
HCM Lane V/C Ratio	0.128	-	0.372	-	-	-
HCM Control Delay (s/veh)	9.3	0	22.3	-	-	-
HCM Lane LOS	A	A	C	-	-	-
HCM 95th %tile Q(veh)	0.4	-	1.7	-	-	-

Intersection						
Int Delay, s/veh	0.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↕	↕	↕	↕	↕
Traffic Vol, veh/h	0	53	511	19	2	572
Future Vol, veh/h	0	53	511	19	2	572
Conflicting Peds, #/hr	0	0	0	100	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	None	None	None	None	None	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	15	6	0	0	5
Mvmt Flow	0	59	568	21	2	636
Major/Minor						
Conflicting Flow All	-	394	0	0	689	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.2	-	-	4.1	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.45	-	-	2.2	-
Pot Cap-1 Maneuver	0	569	-	-	915	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	509	-	-	818	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach						
WB	NB	SB				
HCM Control Delay, s/veh	0	0.03				
HCM LOS	B					
Minor Lane/Major Mvmt						
Capacity (veh/h)	-	-	509	818	-	-
HCM Lane V/C Ratio	-	-	0.116	0.003	-	-
HCM Control Delay (s/veh)	-	-	13	9.4	-	-
HCM Lane LOS	-	-	B	A	-	-
HCM 95th %tile Q(veh)	-	-	0.4	0	-	-

Intersection						
Int Delay, s/veh	3.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↕	↕	↕	↕	↕	↕
Traffic Vol, veh/h	222	129	5	117	87	5
Future Vol, veh/h	222	129	5	117	87	5
Conflicting Peds, #/hr	0	100	0	100	0	100
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	None	None	None	None	None	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	247	143	6	130	97	6
Major/Minor						
Conflicting Flow All	0	0	490	0	659	518
Stage 1	-	-	-	-	418	-
Stage 2	-	-	-	-	241	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1073	-	428	557
Stage 1	-	-	-	-	664	-
Stage 2	-	-	-	-	799	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	960	-	340	446
Mov Cap-2 Maneuver	-	-	-	-	340	-
Stage 1	-	-	-	-	594	-
Stage 2	-	-	-	-	710	-
Approach						
EB	WB	NB				
HCM Control Delay, s/veh	0	0.36	19.79			
HCM LOS		C				
Minor Lane/Major Mvmt						
Capacity (veh/h)	345	-	-	74	-	-
HCM Lane V/C Ratio	0.297	-	-	0.006	-	-
HCM Control Delay (s/veh)	19.8	-	-	8.8	0	-
HCM Lane LOS	C	-	-	A	A	-
HCM 95th %tile Q(veh)	1.2	-	-	0	-	-

Intersection						
Int Delay, s/veh	2.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔	↔	↔	↔	↔
Traffic Vol, veh/h	5	27	156	199	83	5
Future Vol, veh/h	5	27	156	199	83	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	None	None	None	None	None	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	30	173	221	92	6
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	394	0	-	0	325	284
Stage 1	-	-	-	-	284	-
Stage 2	-	-	-	-	41	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1164	-	-	-	669	755
Stage 1	-	-	-	-	764	-
Stage 2	-	-	-	-	981	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	1164	-	-	-	666	755
Mov Cap-2 Maneuver	-	-	-	-	666	-
Stage 1	-	-	-	-	761	-
Stage 2	-	-	-	-	981	-
Approach	EB	WB	SB			
HCM Control Delay, s/v 1.27		0	11.29			
HCM LOS			B			
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR/SBLn1		
Capacity (veh/h)	281	-	-	670		
HCM Lane V/C Ratio	0.005	-	-	0.146		
HCM Control Delay (s/veh)	8.1	0	-	11.3		
HCM Lane LOS	A	A	-	B		
HCM 95th %tile Q(veh)	0	-	-	0.5		

2028 Baseline Conditions Minor Event Egress

Queues

1: Bank & Fifth

12/06/2024

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations		↔	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	42	9	48	25	16	460	21	350
Future Volume (vph)	42	9	48	25	16	460	21	350
Lane Group Flow (vph)	0	86	53	64	0	541	0	436
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases	4		8		8	2	2	6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	26.0	26.0	26.0	26.0	49.0	49.0	49.0	49.0
Total Split (s)	26.0	26.0	26.0	26.0	49.0	49.0	49.0	49.0
Total Split (%)	34.7%	34.7%	34.7%	34.7%	65.3%	65.3%	65.3%	65.3%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
LeadLag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Act Effect Green (s)	9.5	9.5	9.5	9.5	57.8	57.8	57.8	57.8
Actuated g/C Ratio	0.13	0.13	0.13	0.13	0.77	0.77	0.77	0.77
v/c Ratio	0.52	0.34	0.32	0.32	0.25	0.21	0.21	0.21
Control Delay (s/veh)	32.1	34.6	19.5	19.5	6.5	3.7	3.7	3.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	32.1	34.6	19.5	19.5	6.5	3.7	3.7	3.7
LOS	C	C	B	B	A	A	A	A
Approach Delay (s/veh)	32.1	34.6	26.3	26.3	6.5	3.7	3.7	3.7
Approach LOS	C	C	C	C	A	A	A	A
Queue Length 50th (m)	7.6	7.0	3.6	3.6	13.6	7.8	7.8	7.8
Queue Length 95th (m)	19.2	15.6	13.0	13.0	36.7	16.4	16.4	16.4
Internal Link Dist (m)	49.7	45.0	112.4	112.4	195.6	190.0	190.0	190.0
Turn Bay Length (m)								
Base Capacity (vph)	324	331	396	396	2203	2115	2115	2115
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	0.16	0.16	0.25	0.21	0.21	0.21

Intersection Summary

Cycle Length: 75
Actuated Cycle Length: 75
Offset: 47 (63%), Referenced to phase 2:NBL and 6:SBL, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.52
Intersection Signal Delay (s/veh): 9.3
Intersection Capacity Utilization 52.9%
Analysis Period (min) 15
ICU Level of Service A

Splits and Phases: 1: Bank & Fifth



Queues
9: Queen Elizabeth Drive & Fifth

12/06/2024

Lane Group	EBL	NBL	NBT	SBT	Ø4
Lane Configurations	W				
Traffic Volume (vph)	64	32	264	155	
Future Volume (vph)	64	32	264	155	
Lane Group Flow (vph)	103	0	329	210	
Turn Type	Prot	Perm	NA	NA	
Protected Phases	10		2	6	4
Permitted Phases		2			
Detector Phase	10	2	2	6	
Switch Phase					
Minimum Initial (s)	10.0	4.0	4.0	4.0	4.0
Minimum Split (s)	21.0	48.0	48.0	48.0	11.0
Total Split (s)	21.0	48.0	48.0	48.0	11.0
Total Split (%)	26.3%	60.0%	60.0%	60.0%	14%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.7	3.8	3.8	3.8	2.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.7		6.8	6.8	
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	None	None	None	Max	None
Act Eftct Green (s)	10.9		48.1	48.1	
Actuated g/C Ratio	0.16		0.72	0.72	
v/c Ratio	0.41		0.28	0.18	
Control Delay (s/veh)	29.9		5.8	5.1	
Queue Delay	0.0		0.0	0.0	
Total Delay (s/veh)	29.9		5.8	5.1	
LOS	C		A	A	
Approach Delay (s/veh)	29.9		5.8	5.1	
Approach LOS	C		A	A	
Queue Length 50th (m)	11.1		14.4	8.4	
Queue Length 95th (m)	23.5		29.6	18.3	
Internal Link Dist (m)	57.2		0.1	5.9	
Turn Bay Length (m)					
Base Capacity (vph)	359		1159	1186	
Starvation Cap Reductn	0		0	0	
Spillback Cap Reductn	0		0	0	
Storage Cap Reductn	0		0	0	
Reduced v/c Ratio	0.29		0.28	0.18	



HCM 7th AWSC
13: Paul Askin & Marche

11/28/2024

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	W					
Traffic Vol. veh/h	15	15	39	39	98	98
Future Vol. veh/h	15	15	39	39	98	98
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	17	17	43	43	109	109
Number of Lanes	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay, s/veh	7.4	8.1	8.3
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	50%	0%	50%
Vol Thru, %	0%	50%	50%
Vol Right, %	50%	50%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	156	30	78
LT Vol	98	0	39
Through Vol	0	15	39
RT Vol	98	15	0
Lane Flow Rate	218	33	87
Geometry Grp	1	1	1
Degree of Util (X)	0.238	0.039	0.107
Departure Headway (Hd)	3.941	4.202	4.445
Convergence, Y/N	Yes	Yes	Yes
Cap	859	857	794
Service Time	2.016	2.202	2.54
HCM Lane V/C Ratio	0.242	0.035	0.11
HCM Control Delay, s/veh	8.3	7.4	8.1
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.9	0.1	0.4

HCM 7th AWSC
12: Exhibition & Paul Askin

11/28/2024

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol. veh/h	195	0	0	0	0	280
Future Vol. veh/h	195	0	0	0	0	280
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	217	0	0	0	0	311
Number of Lanes	0	1	1	0	1	0

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	1	1
HCM Control Delay, s/veh	9.7	0	8.9
HCM LOS	A	-	A

Lane	EBLn1	WBLn1	SBLn1
Vol Left, %	100%	0%	0%
Vol Thru, %	0%	100%	0%
Vol Right, %	0%	0%	100%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	195	0	280
LT Vol	195	0	0
Through Vol	0	0	0
RT Vol	0	0	280
Lane Flow Rate	217	0	311
Geometry Grp	1	1	1
Degree of Util (X)	0.289	0	0.336
Departure Headway (Hd)	4.796	4.841	3.885
Convergence, Y/N	Yes	Yes	Yes
Cap	754	0	927
Service Time	2.796	2.879	1.899
HCM Lane V/C Ratio	0.288	0	0.336
HCM Control Delay, s/veh	9.7	7.9	8.9
HCM Lane LOS	A	N	A
HCM 95th-tile Q	1.2	0	1.5

HCM 7th AWSC
14: Exhibition & Marche

11/28/2024

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	W					
Traffic Vol. veh/h	71	0	0	78	0	0
Future Vol. veh/h	71	0	0	78	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	79	0	0	87	0	0
Number of Lanes	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay, s/veh	7.4	7.4	0
HCM LOS	A	A	-

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	0%	0%	0%
Vol Thru, %	100%	100%	100%
Vol Right, %	0%	0%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	0	71	78
LT Vol	0	0	0
Through Vol	0	71	78
RT Vol	0	0	0
Lane Flow Rate	0	79	87
Geometry Grp	1	1	1
Degree of Util (X)	0	0.088	0.096
Departure Headway (Hd)	4.218	3.998	3.992
Convergence, Y/N	Yes	Yes	Yes
Cap	0	898	900
Service Time	2.288	2.014	2.007
HCM Lane V/C Ratio	0	0.088	0.097
HCM Control Delay, s/veh	7.3	7.4	7.4
HCM Lane LOS	N	A	A
HCM 95th-tile Q	0	0.3	0.3

Intersection table for 37: O' Connor & Fifth. Includes Intersection Delay (7.3), LOS (A), Movement table with lane configurations and traffic volumes, and Approach table with opposing and conflicting lane details.

Lane table for 37: O' Connor & Fifth. Provides detailed traffic flow metrics including Volume Left/Through/Right percentages, Lane Flow Rate, and HCM Lane LOS (A).

Intersection table for 4: Bank & Wilton. Includes Intersection Delay (3.2), LOS (A), Movement table with lane configurations and traffic volumes, and Approach table.

Major/Minor table for 4: Bank & Wilton. Details confliction flow and critical highway metrics for various stages and platoons.

Approach table for 4: Bank & Wilton. Shows HCM Control Delay (49.37) and HCM LOS (C) for the intersection.

Minor Lane/Major Mvmt table for 4: Bank & Wilton. Provides capacity, HCM Lane V/C Ratio, and HCM Lane LOS (B) details.

Intersection table for 5: Bank & Echo. Includes Intersection Delay (0.2), LOS (B), Movement table with lane configurations and traffic volumes, and Approach table.

Major/Minor table for 5: Bank & Echo. Details confliction flow and critical highway metrics for various stages and platoons.

Approach table for 5: Bank & Echo. Shows HCM Control Delay (40.43) and HCM LOS (B) for the intersection.

Minor Lane/Major Mvmt table for 5: Bank & Echo. Provides capacity, HCM Lane V/C Ratio, and HCM Lane LOS (B) details.

Intersection table for 8: Queen Elizabeth Driveway. Includes Intersection Delay (10.4), LOS (C), Movement table with lane configurations and traffic volumes, and Approach table.

Major/Minor table for 8: Queen Elizabeth Driveway. Details confliction flow and critical highway metrics for various stages and platoons.

Approach table for 8: Queen Elizabeth Driveway. Shows HCM Control Delay (46.25) and HCM LOS (C) for the intersection.

Minor Lane/Major Mvmt table for 8: Queen Elizabeth Driveway. Provides capacity, HCM Lane V/C Ratio, and HCM Lane LOS (A) details.

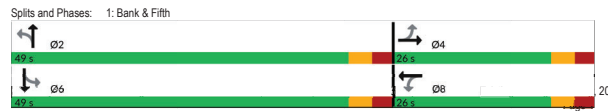
Intersection						
Int Delay, s/veh	2.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↖			↗
Traffic Vol, veh/h	5	144	414	29	0	363
Future Vol, veh/h	5	144	414	29	0	363
Conflicting Peds, #/hr	0	0	0	100	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	15	6	0	0	5
Mvmt Flow	6	160	460	32	0	403
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	778	346	0	0	-	-
Stage 1	576	-	-	-	-	-
Stage 2	202	-	-	-	-	-
Critical Hdwy	6.8	7.2	-	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.45	-	-	-	-
Pot Cap-1 Maneuver	337	614	-	-	0	-
Stage 1	531	-	-	-	0	-
Stage 2	818	-	-	-	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	302	549	-	-	-	-
Mov Cap-2 Maneuver	302	-	-	-	-	-
Stage 1	475	-	-	-	-	-
Stage 2	818	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s/4.24		0	0			
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBR/WBLn1	SBT			
Capacity (veh/h)	-	-	549	-	-	-
HCM Lane V/C Ratio	-	-	0.292	-	-	-
HCM Control Delay (s/veh)	-	-	14.2	-	-	-
HCM Lane LOS	-	-	B	-	-	-
HCM 95th %tile Q(veh)	-	-	1.2	-	-	-

Intersection						
Int Delay, s/veh	5.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↖	↗		↖	↗	
Traffic Vol, veh/h	190	1	0	280	120	5
Future Vol, veh/h	190	1	0	280	120	5
Conflicting Peds, #/hr	0	100	100	0	100	100
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	211	1	0	311	133	6
Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	312	0	723	412
Stage 1	-	-	-	-	312	-
Stage 2	-	-	-	-	411	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1248	-	333	640
Stage 1	-	-	-	-	742	-
Stage 2	-	-	-	-	669	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1116	-	314	512
Mov Cap-2 Maneuver	-	-	-	-	314	-
Stage 1	-	-	-	-	664	-
Stage 2	-	-	-	-	598	-
Approach	EB	WB	NB			
HCM Control Delay, s/v	0	0	24.68			
HCM LOS			C			
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	319	-	-	1116	-	-
HCM Lane V/C Ratio	0.435	-	-	-	-	-
HCM Control Delay (s/veh)	24.7	-	-	0	-	-
HCM Lane LOS	C	-	-	A	-	-
HCM 95th %tile Q(veh)	2.1	-	-	0	-	-

Intersection						
Int Delay, s/veh	9.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↗			↖	↗
Traffic Vol, veh/h	1	70	73	5	347	5
Future Vol, veh/h	1	70	73	5	347	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	78	81	6	386	6
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	87	0	-	0	164	84
Stage 1	-	-	-	-	84	-
Stage 2	-	-	-	-	80	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1509	-	-	-	827	975
Stage 1	-	-	-	-	939	-
Stage 2	-	-	-	-	943	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	1509	-	-	-	826	975
Mov Cap-2 Maneuver	-	-	-	-	826	-
Stage 1	-	-	-	-	939	-
Stage 2	-	-	-	-	943	-
Approach	EB	WB	SB			
HCM Control Delay, s/v	0.1	0	13.18			
HCM LOS			B			
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR/SBLn1		
Capacity (veh/h)	25	-	-	828	-	-
HCM Lane V/C Ratio	0.001	-	-	0.472	-	-
HCM Control Delay (s/veh)	7.4	0	-	13.2	-	-
HCM Lane LOS	A	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	-	2.6	-	-

2028 Baseline Conditions Major Event Ingress

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	62	55	73	63	24	466	32	614
Future Volume (vph)	62	55	73	63	24	466	32	614
Lane Group Flow (vph)	0	171	81	133	0	596	0	785
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases	4		8		2		6	
Permitted Phases	4	4	8	8	2	2	6	6
Detector Phase								
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	26.0	26.0	26.0	26.0	49.0	49.0	49.0	49.0
Total Split (s)	26.0	26.0	26.0	26.0	49.0	49.0	49.0	49.0
Total Split (%)	34.7%	34.7%	34.7%	34.7%	65.3%	65.3%	65.3%	65.3%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Max	Max	Max	Max
Act Effct Green (s)	13.8	13.8	13.8	13.8	45.9	45.9	45.9	45.9
Actuated g/C Ratio	0.19	0.19	0.19	0.19	0.65	0.65	0.65	0.65
v/c Ratio	0.69	0.43	0.42	0.34	0.34	0.45	0.45	0.45
Control Delay (s/veh)	36.8	30.6	17.6	6.8	7.8	7.8	7.8	7.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	36.8	30.6	17.6	6.8	7.8	7.8	7.8	7.8
LOS	D	C	B	A	A	A	A	A
Approach Delay (s/veh)	36.8	30.6	17.6	6.8	7.8	7.8	7.8	7.8
Approach LOS	D	C	B	A	A	A	A	A
Queue Length 50th (m)	17.7	9.1	8.0	15.0	22.2	22.2	22.2	22.2
Queue Length 95th (m)	35.7	20.5	21.2	30.1	43.5	43.5	43.5	43.5
Internal Link Dist (m)	49.7		112.4		195.6		190.0	
Turn Bay Length (m)			45.0					
Base Capacity (vph)	359	281	447	1740	1747	1747	1747	1747
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	0.48	0.29	0.30	0.34	0.34	0.45	0.45	0.45



Lane Group	EBT	NBL	NBT	SBL	SBT	Ø3
Lane Configurations						
Traffic Volume (vph)	38	69	492	53	569	
Future Volume (vph)	38	69	492	53	569	
Lane Group Flow (vph)	154	0	755	0	747	
Turn Type	NA	Perm	NA	Perm	NA	
Protected Phases	4	2		6	3	
Permitted Phases		2		6		
Detector Phase	4	2	2	6	6	
Switch Phase						
Minimum Initial (s)	4.4	10.0	10.0	4.0	4.0	1.0
Minimum Split (s)	22.0	48.0	48.0	48.0	48.0	5.0
Total Split (s)	22.0	48.0	48.0	48.0	48.0	5.0
Total Split (%)	29.3%	64.0%	64.0%	64.0%	64.0%	7%
Yellow Time (s)	3.0	3.0	3.0	3.0	2.0	
All-Red Time (s)	2.6	2.2	2.2	2.2	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.6	5.2	5.2	5.2	5.2	
Lead/Lag		Lag			Lead	
Lead-Lag Optimize?						
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	None
Act Effct Green (s)	13.6	50.6	50.6	50.6	50.6	
Actuated g/C Ratio	0.18	0.67	0.67	0.67	0.67	
v/c Ratio	0.63	0.51	0.51	0.45	0.45	
Control Delay (s/veh)	38.8	4.0	4.0	7.3	7.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	38.8	4.0	4.0	7.3	7.3	
LOS	D	A	A	A	A	
Approach Delay (s/veh)	38.8	4.0	4.0	7.3	7.3	
Approach LOS	D	A	A	A	A	
Queue Length 50th (m)	20.3	1.1	1.1	21.2	21.2	
Queue Length 95th (m)	34.8	44.7	44.7	40.2	40.2	
Internal Link Dist (m)	39.8		31.5		195.6	
Turn Bay Length (m)						
Base Capacity (vph)	307	1482	1675			
Starvation Cap Reductn	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	
Reduced v/c Ratio	0.50	0.51	0.51	0.45	0.45	



Lane Group	WBL	WBR	NBT	SBL	SBT	Ø1	Ø7
Lane Configurations							
Traffic Volume (vph)	47	37	635	44	590		
Future Volume (vph)	47	37	635	44	590		
Lane Group Flow (vph)	52	41	774	49	644		
Turn Type	Prot	Perm	NA	Perm	NA		
Protected Phases	8	2		6	1	7	
Permitted Phases		8		6			
Detector Phase	8	8	2	6	6		
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	1.0	1.0
Minimum Split (s)	26.0	26.0	39.0	44.0	44.0	5.0	5.0
Total Split (s)	26.0	26.0	39.0	44.0	44.0	5.0	5.0
Total Split (%)	34.7%	34.7%	52.0%	58.7%	58.7%	7%	7%
Yellow Time (s)	3.3	3.3	3.0	3.0	2.0	3.5	3.5
All-Red Time (s)	3.0	3.0	3.9	3.9	3.9	0.0	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	6.3	6.3	6.9	6.9	6.9		
Lead/Lag		Lag	Lag	Lag		Lead	Lead
Lead-Lag Optimize?		Yes	Yes	Yes		Yes	Yes
Recall Mode	None	None	C-Max	C-Max	C-Max	None	None
Act Effct Green (s)	10.2	10.2	56.3	56.3	56.3		
Actuated g/C Ratio	0.14	0.14	0.75	0.75	0.75		
v/c Ratio	0.25	0.22	0.35	0.12	0.27		
Control Delay (s/veh)	32.3	13.2	4.8	4.3	3.6		
Queue Delay	0.0	0.0	0.0	0.0	0.0		
Total Delay (s/veh)	32.3	13.2	4.8	4.3	3.6		
LOS	C	B	A	A	A		
Approach Delay (s/veh)	23.9		4.8	3.7	3.7		
Approach LOS	C	A	A	A	A		
Queue Length 50th (m)	6.7	0.0	19.5	1.8	13.4		
Queue Length 95th (m)	16.1	8.1	29.0	m4.3	17.5		
Internal Link Dist (m)	30.6		33.7		44.8		
Turn Bay Length (m)							
Base Capacity (vph)	405	319	2204	403	2357		
Starvation Cap Reductn	0	0	0	0	0		
Spillback Cap Reductn	0	0	0	0	0		
Storage Cap Reductn	0	0	0	0	0		
Reduced v/c Ratio	0.13	0.13	0.35	0.12	0.27		



Queues
6: Bank & Aylmer

12/06/2024

Lane Group	EBL	NBL	NBT	SBT	Ø3
Lane Configurations	↔	↔	↔	↔	
Traffic Volume (vph)	91	13	730	766	
Future Volume (vph)	91	13	730	766	
Lane Group Flow (vph)	129	0	625	907	
Turn Type	Prot	Perm	NA	NA	
Protected Phases	4	2	2	6	3
Permitted Phases	4	2	2	6	
Detector Phase	4	2	2	6	
Switch Phase					
Minimum Initial (s)	10.0	30.0	30.0	30.0	1.0
Minimum Split (s)	22.0	63.0	63.0	63.0	5.0
Total Split (s)	22.0	63.0	63.0	63.0	5.0
Total Split (%)	24.4%	70.0%	70.0%	70.0%	6%
Yellow Time (s)	3.3	3.0	3.0	3.0	2.0
All-Red Time (s)	2.2	2.2	2.2	2.2	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.5	5.2	5.2	5.2	
Lead/Lag	Lag				Lead
Lead-Lag Optimize?					
Recall Mode	Ped	C-Max	C-Max	C-Max	Max
Act Effct Green (s)	14.6	59.7	59.7	59.7	
Actuated g/C Ratio	0.16	0.66	0.66	0.66	
v/c Ratio	0.52	0.42	0.45	0.45	
Control Delay (s/veh)	38.6	8.1	8.2	8.2	
Queue Delay (s/veh)	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	38.6	8.1	8.2	8.2	
LOS	D	A	A	A	
Approach Delay (s/veh)	38.6	8.1	8.2	8.2	
Approach LOS	D	A	A	A	
Queue Length 50th (m)	18.4	30.3	33.5	33.5	
Queue Length 95th (m)	34.7	45.0	49.4	49.4	
Internal Link Dist (m)	76.7	28.1	10.1		
Turn Bay Length (m)					
Base Capacity (vph)	278	1943	2004		
Starvation Cap Reductn	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	
Storage Cap Reductn	0	0	0	0	
Reduced v/c Ratio	0.46	0.42	0.45		

Splits and Phases: 6: Bank & Aylmer



Queues
9: Queen Elizabeth Drive & Fifth

12/06/2024

Lane Group	EBL	NBL	NBT	SBT	Ø4
Lane Configurations	↔	↔	↔	↔	
Traffic Volume (vph)	93	71	260	640	
Future Volume (vph)	93	71	260	640	
Lane Group Flow (vph)	203	0	368	852	
Turn Type	Prot	Perm	NA	NA	
Protected Phases	10	2	2	6	4
Permitted Phases		2			
Detector Phase	10	2	2	6	
Switch Phase					
Minimum Initial (s)	10.0	4.0	4.0	4.0	4.0
Minimum Split (s)	21.0	48.0	48.0	48.0	11.0
Total Split (s)	21.0	48.0	48.0	48.0	11.0
Total Split (%)	26.3%	60.0%	60.0%	60.0%	14%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.7	3.8	3.8	3.8	2.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.7	6.8	6.8	6.8	
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	None	None	None	Max	None
Act Effct Green (s)	13.5	42.4	42.4	42.4	
Actuated g/C Ratio	0.20	0.62	0.62	0.62	
v/c Ratio	0.67	0.61	0.83	0.83	
Control Delay (s/veh)	36.9	13.9	20.6	20.6	
Queue Delay (s/veh)	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	36.9	13.9	20.6	20.6	
LOS	D	B	C	C	
Approach Delay (s/veh)	36.9	13.9	20.6	20.6	
Approach LOS	D	B	C	C	
Queue Length 50th (m)	23.5	26.2	78.3	78.3	
Queue Length 95th (m)	43.2	54.6	#161.1	#161.1	
Internal Link Dist (m)	57.2	0.1	5.9		
Turn Bay Length (m)					
Base Capacity (vph)	343	608	1022		
Starvation Cap Reductn	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	
Storage Cap Reductn	0	0	0	0	
Reduced v/c Ratio	0.59	0.61	0.83		

Splits and Phases: 9: Queen Elizabeth Drive & Fifth



Queues
7: Bank & Sunnyside

12/06/2024

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	Ø3	Ø7
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔		
Traffic Volume (vph)	53	78	13	83	27	519	139	622		
Future Volume (vph)	53	78	13	83	27	519	139	622		
Lane Group Flow (vph)	0	187	0	280	0	638	0	937		
Turn Type	Perm	NA	Perm	NA	Perm	NA	pm+pt	NA		
Protected Phases	4	8	8	8	2	2	1	6	3	7
Permitted Phases	4	8	8	8	2	2	1	6		
Detector Phase	4	8	8	8	2	2	1	6		
Switch Phase										
Minimum Initial (s)	6.4	6.4	5.3	5.3	17.0	17.0	5.0	17.0	1.0	1.0
Minimum Split (s)	25.0	25.0	25.0	25.0	43.0	43.0	17.0	60.0	5.0	5.0
Total Split (s)	25.0	25.0	25.0	25.0	43.0	43.0	17.0	60.0	5.0	5.0
Total Split (%)	27.8%	27.8%	27.8%	27.8%	47.8%	47.8%	18.9%	66.7%	6%	6%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0
All-Red Time (s)	2.6	2.6	2.6	2.6	3.0	3.0	2.9	3.0	0.0	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0				
Total Lost Time (s)	5.6	5.6	5.6	5.6	6.0	6.0				
Lead/Lag	Lag	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	Max	Max	None	Max	None	None
Act Effct Green (s)	19.4	19.4	19.4	19.4	54.0	54.0				
Actuated g/C Ratio	0.23	0.23	0.23	0.23	0.64	0.64				
v/c Ratio	0.85	0.83	0.37	0.37	0.71	0.71				
Control Delay (s/veh)	65.2	43.6	8.1	8.1	13.9	13.9				
Queue Delay (s/veh)	0.0	0.0	0.0	0.0	0.0	0.0				
Total Delay (s/veh)	65.2	43.6	8.1	8.1	13.9	13.9				
LOS	E	D	A	A	B	B				
Approach Delay (s/veh)	65.2	43.6	8.1	8.1	13.9	13.9				
Approach LOS	E	D	A	A	B	B				
Queue Length 50th (m)	29.2	30.8	22.8	22.8	46.4	46.4				
Queue Length 95th (m)	#64.8	#72.2	32.2	32.2	69.1	69.1				
Internal Link Dist (m)	75.1	136.0	63.1	79.0						
Turn Bay Length (m)										
Base Capacity (vph)	221	339	1720	1315						
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	0.85	0.83	0.37	0.37	0.71	0.71				

Splits and Phases: 7: Bank & Sunnyside



HCM 7th AWSC
12: Exhibition & Paul Askin

11/28/2024

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Vol. veh/h	0	0	0	0	0	0
Future Vol. veh/h	0	0	0	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0
Number of Lanes	0	1	1	0	1	0

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right	SB		EB
Conflicting Lanes Right	0	1	1
HCM Control Delay, s/veh	0	0	0
HCM LOS	-	-	-

Lane	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	0%
Vol Thru, %	100%	100%	100%
Vol Right, %	0%	0%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	0	0	0
LT Vol	0	0	0
Through Vol	0	0	0
RT Vol	0	0	0
Lane Flow Rate	0	0	0
Geometry Grp	1	1	1
Degree of Util (X)	0	0	0
Departure Headway (Hd)	3.934	3.934	3.934
Convergence, Y/N	Yes	Yes	Yes
Cap	0	0	0
Service Time	1.934	1.934	1.934
HCM Lane v/c Ratio	0	0	0
HCM Control Delay, s/veh	6.9	6.9	6.9
HCM Lane LOS	N	N	N
HCM 95th-ile Q	0	0	0

Intersection						
Intersection Delay, s/veh	0					
Intersection LOS	-					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔			↔	↔	
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0
Number of Lanes	1	0	0	1	1	0
Approach	EB	WB		NB		
Opposing Approach	WB	EB				
Opposing Lanes	1	1		0		
Conflicting Approach Left		NB		EB		
Conflicting Lanes Left	0	1		1		
Conflicting Approach Right	NB			WB		
Conflicting Lanes Right	1	0		1		
HCM Control Delay, s/veh	0	0		0		
HCM LOS	-	-		-		
Lane	NBLn1	EBLn1	WBLn1			
Vol Left, %	0%	0%	0%			
Vol Thru, %	100%	100%	100%			
Vol Right, %	0%	0%	0%			
Sign Control	Stop	Stop	Stop			
Traffic Vol by Lane	0	0	0			
LT Vol	0	0	0			
Through Vol	0	0	0			
RT Vol	0	0	0			
Lane Flow Rate	0	0	0			
Geometry Grp	1	1	1			
Degree of Util (X)	0	0	0			
Departure Headway (Hd)	3.934	3.934	3.934			
Convergence, Y/N	Yes	Yes	Yes			
Cap	0	0	0			
Service Time	1.934	1.934	1.934			
HCM Lane V/C Ratio	0	0	0			
HCM Control Delay, s/veh	6.9	6.9	6.9			
HCM Lane LOS	N	N	N			
HCM 95th-ile Q	0	0	0			

Intersection												
Intersection Delay, s/veh	9.3											
Intersection LOS	A											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔					↔	↔			↔	↔
Traffic Vol, veh/h	66	56	0	0	0	192	57	60	93	0	0	127
Future Vol, veh/h	66	56	0	0	0	192	57	60	93	0	0	127
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	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	73	62	0	0	0	213	63	67	103	0	0	141
Number of Lanes	0	1	0	0	0	1	0	1	0	0	0	1
Approach	EB	WB		NB	SB				WB			
Opposing Approach	WB	EB		SB	NB				WB			
Opposing Lanes	1	1		1	1				1			
Conflicting Approach Left	SB	NB		EB	WB				WB			
Conflicting Lanes Left	1	1		1	1				1			
Conflicting Approach Right	NB	SB		WB	EB				WB			
Conflicting Lanes Right	1	1		1	1				1			
HCM Control Delay, s/veh	9.5	9		9.8	8.5				8.5			
HCM LOS	A	A		A	A				A			
Lane	NBLn1	EBLn1	WBLn1	SBLn1								
Vol Left, %	27%	54%	0%	0%								
Vol Thru, %	29%	46%	0%	0%								
Vol Right, %	44%	0%	100%	100%								
Sign Control	Stop	Stop	Stop	Stop								
Traffic Vol by Lane	210	122	192	127								
LT Vol	57	66	0	0								
Through Vol	60	56	0	0								
RT Vol	93	0	192	127								
Lane Flow Rate	233	136	213	141								
Geometry Grp	1	1	1	1								
Degree of Util (X)	0.304	0.194	0.259	0.174								
Departure Headway (Hd)	4.695	5.153	4.375	4.436								
Convergence, Y/N	Yes	Yes	Yes	Yes								
Cap	758	691	815	800								
Service Time	2.762	3.227	2.44	2.509								
HCM Lane V/C Ratio	0.307	0.197	0.261	0.176								
HCM Control Delay, s/veh	9.8	9.5	9	8.5								
HCM Lane LOS	A	A	A	A								
HCM 95th-ile Q	1.3	0.7	1	0.6								

Intersection						
Intersection Delay, s/veh	0					
Intersection LOS	-					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔			↔	↔	
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0
Number of Lanes	1	0	0	1	1	0
Approach	EB	WB		NB		
Opposing Approach	WB	EB				
Opposing Lanes	1	1		0		
Conflicting Approach Left		NB		EB		
Conflicting Lanes Left	0	1		1		
Conflicting Approach Right	NB			WB		
Conflicting Lanes Right	1	0		1		
HCM Control Delay, s/veh	0	0		0		
HCM LOS	-	-		-		
Lane	NBLn1	EBLn1	WBLn1			
Vol Left, %	0%	0%	0%			
Vol Thru, %	100%	100%	100%			
Vol Right, %	0%	0%	0%			
Sign Control	Stop	Stop	Stop			
Traffic Vol by Lane	0	0	0			
LT Vol	0	0	0			
Through Vol	0	0	0			
RT Vol	0	0	0			
Lane Flow Rate	0	0	0			
Geometry Grp	1	1	1			
Degree of Util (X)	0	0	0			
Departure Headway (Hd)	3.934	3.934	3.934			
Convergence, Y/N	Yes	Yes	Yes			
Cap	0	0	0			
Service Time	1.934	1.934	1.934			
HCM Lane V/C Ratio	0	0	0			
HCM Control Delay, s/veh	6.9	6.9	6.9			
HCM Lane LOS	N	N	N			
HCM 95th-ile Q	0	0	0			

Intersection											
Int Delay, s/veh	17.7										
Movement	EBL	EBR	NBL	NBT	SBT	SBR					
Lane Configurations		↔		↔	↔	↔					
Traffic Vol, veh/h	5	274	107	718	532	106					
Future Vol, veh/h	5	274	107	718	532	106					
Conflicting Peds, #/hr	0	0	178	0	0	107					
Sign Control	Stop	Stop	Free	Free	Free	Free					
RT Channelized	-	None	-	None	-	None					
Storage Length	-	0	-	-	-	-					
Veh in Median Storage, #	0	-	-	0	0	-					
Grade, %	0	-	-	0	0	-					
Peak Hour Factor	90	90	90	90	90	90					
Heavy Vehicles, %	5	5	5	5	5	5					
Mvmt Flow	6	304	119	798	591	118					
Major/Minor	Minor2	Major1	Major2								
Conflicting Flow All	1465	828	887	0	-	-					
Stage 1	828	-	-	-	-	-					
Stage 2	637	-	-	-	-	-					
Critical Hdwy	6.675	6.275	4.175	-	-	-					
Critical Hdwy Stg 1	5.475	-	-	-	-	-					
Critical Hdwy Stg 2	5.875	-	-	-	-	-					
Follow-up Hdwy	3.54753	3.4752	2.475	-	-	-					
Pot Cap-1 Maneuver	127	364	746	-	-	-					
Stage 1	421	-	-	-	-	-					
Stage 2	483	-	-	-	-	-					
Platoon blocked, %	-	-	-	-	-	-					
Mov Cap-1 Maneuver	62	-	296	605	-	-					
Mov Cap-2 Maneuver	62	-	-	-	-	-					
Stage 1	256	-	-	-	-	-					
Stage 2	392	-	-	-	-	-					
Approach	EB	WB	SB								
HCM Control Delay, s/93.38		3.7	0								
HCM LOS	F										
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR						
Capacity (veh/h)	467	-	296	-	-						
HCM Lane V/C Ratio	0.196	-	1.03	-	-						
HCM Control Delay (s/veh)	12.4	2.4	99.4	-	-						
HCM Lane LOS	B	A	F	-	-						
HCM 95th %ile Q(veh)	0.7	-	11.3	-	-						
Notes											
-- Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon											

Intersection					
Int Delay, s/veh	0.8				
Movement	EBL	EBR	NBL	NBT	SBT
Lane Configurations					
Traffic Vol, veh/h	1	74	0	802	779
Future Vol, veh/h	1	74	0	802	779
Conflicting Peds, #/hr	0	0	0	0	86
Sign Control	Stop	Stop	Free	Free	Free
RT Channelized	None	None	None	None	None
Storage Length	-	0	-	-	-
Veh in Median Storage, #	0	-	0	0	-
Grade, %	0	-	0	0	-
Peak Hour Factor	90	90	90	90	90
Heavy Vehicles, %	5	5	5	5	5
Mvmt Flow	1	82	0	891	866

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	1311	866	-
Stage 1	866	-	-
Stage 2	446	-	-
Critical Hdwy	6.675	6.275	-
Critical Hdwy Stg 1	5.475	-	-
Critical Hdwy Stg 2	5.875	-	-
Follow-up Hdwy	3.54753	3.475	-
Pot Cap-1 Maneuver	159	346	0
Stage 1	404	-	-
Stage 2	606	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	159	346	-
Mov Cap-2 Maneuver	159	-	-
Stage 1	404	-	-
Stage 2	606	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v 18.6		0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT
Capacity (veh/h)	-	346	-	-
HCM Lane V/C Ratio	-	0.237	-	-
HCM Control Delay (s/veh)	-	18.6	-	-
HCM Lane LOS	-	C	-	-
HCM 95th %tile Q(veh)	-	0.9	-	-

Intersection					
Int Delay, s/veh	0				
Movement	WBL	WBR	NBT	NBR	SBL
Lane Configurations					
Traffic Vol, veh/h	0	0	672	0	625
Future Vol, veh/h	0	0	672	0	625
Conflicting Peds, #/hr	0	0	0	100	0
Sign Control	Stop	Stop	Free	Free	Free
RT Channelized	None	None	None	None	None
Storage Length	-	0	-	-	-
Veh in Median Storage, #	0	-	0	-	0
Grade, %	0	-	0	-	0
Peak Hour Factor	90	90	90	90	90
Heavy Vehicles, %	0	15	6	0	5
Mvmt Flow	0	0	747	0	694

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	-	473	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	7.2	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	3.45	-
Pot Cap-1 Maneuver	0	504	-
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	450	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s/veh)	-	-	0	-
HCM Lane LOS	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	-

Intersection					
Int Delay, s/veh	9.2				
Movement	EBL	EBR	NBL	NBT	SBT
Lane Configurations					
Traffic Vol, veh/h	94	97	105	239	454
Future Vol, veh/h	94	97	105	239	454
Conflicting Peds, #/hr	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free
RT Channelized	None	None	None	None	None
Storage Length	0	-	-	-	-
Veh in Median Storage, #	0	-	0	0	-
Grade, %	0	-	0	0	-
Peak Hour Factor	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0
Mvmt Flow	104	108	117	266	504

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	1146	647	789
Stage 1	647	-	-
Stage 2	499	-	-
Critical Hdwy	6.4	6.2	4.1
Critical Hdwy Stg 1	5.4	-	-
Critical Hdwy Stg 2	5.4	-	-
Follow-up Hdwy	3.5	3.3	2.2
Pot Cap-1 Maneuver	223	475	840
Stage 1	525	-	-
Stage 2	614	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	186	475	840
Mov Cap-2 Maneuver	186	-	-
Stage 1	440	-	-
Stage 2	614	-	-

Approach	EB	NB	SB
HCM Control Delay, s/43.37	F	3.05	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT
Capacity (veh/h)	549	-	269	-
HCM Lane V/C Ratio	0.139	-	0.788	-
HCM Control Delay (s/veh)	10	0	54.4	-
HCM Lane LOS	A	A	F	-
HCM 95th %tile Q(veh)	0.5	-	6	-

Intersection					
Int Delay, s/veh	5.5				
Movement	EBT	EBR	WBL	WBT	NBL
Lane Configurations					
Traffic Vol, veh/h	0	105	0	0	84
Future Vol, veh/h	0	105	0	0	84
Conflicting Peds, #/hr	0	100	100	0	100
Sign Control	Free	Free	Free	Stop	Stop
RT Channelized	None	None	None	None	None
Storage Length	-	-	-	-	-
Veh in Median Storage, #	0	-	0	0	0
Grade, %	0	-	0	0	-
Peak Hour Factor	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2
Mvmt Flow	0	117	0	0	93

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	217
Stage 1	-	-	158
Stage 2	-	-	101
Critical Hdwy	-	4.12	6.42
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	-	2.218	3.518
Pot Cap-1 Maneuver	-	1353	729
Stage 1	-	-	870
Stage 2	-	-	923
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	1210	583
Mov Cap-2 Maneuver	-	-	583
Stage 1	-	-	778
Stage 2	-	-	825

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0	12.35
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL
Capacity (veh/h)	583	-	1210	-
HCM Lane V/C Ratio	0.16	-	-	-
HCM Control Delay (s/veh)	12.3	-	0	-
HCM Lane LOS	B	-	A	-
HCM 95th %tile Q(veh)	0.6	-	0	-

Intersection						
Int Delay, s/veh	3.9					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	361	191	0
Future Vol, veh/h	0	0	0	361	191	0
Conflicting Peds, #/hr	0					
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	None	None	None	None	None	None
Storage Length	-					
Veh in Median Storage, #	0	0	0	0	0	0
Grade, %	-					
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	401	212	0
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	401	0	0	201	201	
Stage 1	-	-	-	201	-	
Stage 2	-	-	-	0	-	
Critical Hdwy	4.12	-	-	6.42	6.22	
Critical Hdwy Stg 1	-	-	-	5.42	-	
Critical Hdwy Stg 2	-	-	-	5.42	-	
Follow-up Hdwy	2.219	-	-	3.518	3.318	
Pot Cap-1 Maneuver	1158	-	-	788	840	
Stage 1	-	-	-	833	-	
Stage 2	-	-	-	-	-	
Platoon blocked, %	-					
Mov Cap-1 Maneuver	1158	-	-	788	840	
Mov Cap-2 Maneuver	-	-	-	788	-	
Stage 1	-	-	-	833	-	
Stage 2	-	-	-	-	-	
Approach	EB	WB	SB			
HCM Control Delay, s/v	0	0	11.24			
HCM LOS	B					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1158	-	-	-	788	
HCM Lane V/C Ratio	-	-	-	-	0.269	
HCM Control Delay (s/veh)	0	-	-	-	11.2	
HCM Lane LOS	A	-	-	-	B	
HCM 95th %tile Q(veh)	0	-	-	-	1.1	

2028 Baseline Conditions Major Event Egress

Queues

1: Bank & Fifth

12/06/2024

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	76	33	40	70	22	317	20	349
Future Volume (vph)	76	33	40	70	22	317	20	349
Lane Group Flow (vph)	0	151	44	205	0	404	0	453
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases	4 8 8 2 2 6 6							
Permitted Phases	4 8 8 2 2 6 6							
Detector Phase	4 4 8 8 2 2 6 6							
Switch Phase								
Minimum Initial (s)	4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0							
Minimum Split (s)	26.0 26.0 26.0 26.0 49.0 49.0 49.0 49.0							
Total Split (s)	26.0 26.0 26.0 26.0 49.0 49.0 49.0 49.0							
Total Split (%)	34.7% 34.7% 34.7% 34.7% 65.3% 65.3% 65.3% 65.3%							
Yellow Time (s)	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0							
All-Red Time (s)	2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5							
Lost Time Adjust (s)	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0							
Total Lost Time (s)	5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5							
Lead-Lag								
Lead-Lag Optimize?								
Recall Mode	None None None None Max Max Max Max							
Act Effct Green (s)	14.0 14.0 14.0 14.0 44.5 44.5 44.5 44.5							
Adjusted g/C Ratio	0.20 0.20 0.20 0.20 0.64 0.64 0.64 0.64							
v/c Ratio	0.76 0.21 0.58 0.23 0.26 0.26 0.26 0.26							
Control Delay (s/veh)	46.3 24.4 18.8 6.3 6.3 6.3 6.3 6.3							
Queue Delay	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0							
Total Delay (s/veh)	46.3 24.4 18.8 6.3 6.3 6.3 6.3 6.3							
LOS	D C B A A A A							
Approach Delay (s/veh)	46.3 19.8 6.3 6.3 6.3 6.3 6.3 6.3							
Approach LOS	D B A A A A A							
Queue Length 50th (m)	16.3 4.7 10.7 9.7 10.9 10.9 10.9 10.9							
Queue Length 95th (m)	34.8 12.3 28.6 19.6 21.8 21.8 21.8 21.8							
Internal Link Dist (m)	49.7 45.0 112.4 195.6 190.0 190.0 190.0 190.0							
Turn Bay Length (m)								
Base Capacity (vph)	285 308 467 1737 1746 1746 1746 1746							
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	0.53 0.14 0.44 0.23 0.26 0.26 0.26 0.26							

Intersection Summary

Cycle Length: 75	
Actuated Cycle Length: 69.6	
Natural Cycle: 75	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.76	
Intersection Signal Delay (s/veh): 13.8	Intersection LOS: B
Intersection Capacity Utilization 73.1%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 1: Bank & Fifth



Queues
2: Bank & Holmwood

12/06/2024

Lane Group	EBT	NBL	NBT	SBL	SBT	Ø3
Lane Configurations	←↑	←↑	←↑	←↑	←↑	
Traffic Volume (vph)	22	50	267	30	278	
Future Volume (vph)	22	50	267	30	278	
Lane Group Flow (vph)	147	0	416	0	412	
Turn Type	NA	Perm	NA	Perm	NA	
Protected Phases	4	2	2	6	3	
Permitted Phases	4	2	2	6	6	
Detector Phase	4	2	2	6	6	
Switch Phase						
Minimum Initial (s)	4.4	10.0	10.0	4.0	4.0	1.0
Minimum Split (s)	22.0	48.0	48.0	48.0	48.0	5.0
Total Split (s)	22.0	48.0	48.0	48.0	48.0	5.0
Total Split (%)	29.3%	64.0%	64.0%	64.0%	64.0%	7%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	2.0
All-Red Time (s)	2.6	2.2	2.2	2.2	2.2	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.6	5.2	5.2	5.2	5.2	
Lead/Lag	Lag					Lead
Lead-Lag Optimize?						
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	None
Act Effct Green (s)	13.5	50.7	50.7	50.7	50.7	
Actuated g/C Ratio	0.18	0.68	0.68	0.68	0.68	
v/c Ratio	0.62	0.26	0.24	0.24	0.24	
Control Delay (s/veh)	39.2	4.3	5.1	5.1	5.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	39.2	4.3	5.1	5.1	5.1	
LOS	D	A	A	A	A	
Approach Delay (s/veh)	39.2	4.3	5.1	5.1	5.1	
Approach LOS	D	A	A	A	A	
Queue Length 50th (m)	19.4	9.0	8.5	8.5	8.5	
Queue Length 95th (m)	33.6	18.6	17.7	17.7	17.7	
Internal Link Dist (m)	39.8	31.5	195.6			
Turn Bay Length (m)						
Base Capacity (vph)	298	1584	1717			
Starvation Cap Reductn	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	
Reduced v/c Ratio	0.49	0.26	0.24	0.24	0.24	

Intersection Summary
 Cycle Length: 75
 Actuated Cycle Length: 75
 Offset: 74 (99%), Referenced to phase 2:NBL and 6:SBT, Start of Green
 Natural Cycle: 75
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.62
 Intersection Signal Delay (s/veh): 9.9
 Intersection Capacity Utilization 59.5%
 Analysis Period (min) 15

Splits and Phases: 2: Bank & Holmwood



Queues
6: Bank & Aylmer

12/06/2024

Lane Group	EBL	NBL	NBT	SBT	Ø3
Lane Configurations	←↑	←↑	←↑	←↑	
Traffic Volume (vph)	19	16	331	297	
Future Volume (vph)	19	16	331	297	
Lane Group Flow (vph)	38	0	386	356	
Turn Type	Prot	Perm	NA	NA	
Protected Phases	4	2	6	3	
Permitted Phases	4	2	6	6	
Detector Phase	4	2	2	6	
Switch Phase					
Minimum Initial (s)	10.0	30.0	30.0	30.0	1.0
Minimum Split (s)	22.0	63.0	63.0	63.0	5.0
Total Split (s)	22.0	63.0	63.0	63.0	5.0
Total Split (%)	24.4%	70.0%	70.0%	70.0%	6%
Yellow Time (s)	3.3	3.0	3.0	3.0	2.0
All-Red Time (s)	2.2	2.2	2.2	2.2	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.5	5.2	5.2	5.2	
Lead/Lag	Lag				Lead
Lead-Lag Optimize?					
Recall Mode	Ped	C-Max	C-Max	C-Max	Max
Act Effct Green (s)	14.0	60.3	60.3	60.3	
Actuated g/C Ratio	0.16	0.67	0.67	0.67	
v/c Ratio	0.17	0.20	0.18	0.18	
Control Delay (s/veh)	23.9	6.0	5.5	5.5	
Queue Delay	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	23.9	6.0	5.5	5.5	
LOS	C	A	A	A	
Approach Delay (s/veh)	23.9	6.0	5.5	5.5	
Approach LOS	C	A	A	A	
Queue Length 50th (m)	3.2	11.7	10.0	10.0	
Queue Length 95th (m)	11.7	17.1	15.0	15.0	
Internal Link Dist (m)	76.7	28.1	10.1		
Turn Bay Length (m)					
Base Capacity (vph)	258	1934	2011		
Starvation Cap Reductn	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	
Storage Cap Reductn	0	0	0	0	
Reduced v/c Ratio	0.15	0.20	0.18	0.18	

Intersection Summary
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 87 (97%), Referenced to phase 2:NBL and 6:SBT, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.20
 Intersection Signal Delay (s/veh): 6.6
 Intersection Capacity Utilization 45.6%
 Analysis Period (min) 15

Splits and Phases: 6: Bank & Aylmer



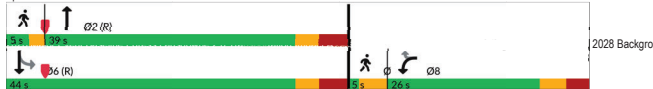
Queues
3: Bank & Exhibition

12/06/2024

Lane Group	WBL	WBR	NBT	SBL	SBT	Ø1	Ø7
Lane Configurations	←↑	←↑	←↑	←↑	←↑		
Traffic Volume (vph)	1	4	359	1	342		
Future Volume (vph)	1	4	359	1	342		
Lane Group Flow (vph)	1	4	359	1	380		
Turn Type	Prot	Perm	NA	Perm	NA		
Protected Phases	8	2	6	1	7		
Permitted Phases	8	8	6	6	6		
Detector Phase	8	8	2	6	6		
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	1.0	1.0
Minimum Split (s)	26.0	26.0	39.0	44.0	44.0	5.0	5.0
Total Split (s)	26.0	26.0	39.0	44.0	44.0	5.0	5.0
Total Split (%)	34.7%	34.7%	52.0%	58.7%	58.7%	7%	7%
Yellow Time (s)	3.3	3.3	3.0	3.0	3.0	2.0	3.5
All-Red Time (s)	3.0	3.0	3.9	3.9	3.9	0.0	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	6.3	6.3	6.9	6.9	6.9		
Lead/Lag	Lag	Lag	Lag	Lead	Lead		
Lead-Lag Optimize?							
Recall Mode	None	None	C-Max	C-Max	C-Max	None	None
Act Effct Green (s)	10.0	10.0	70.4	70.4	70.4		
Actuated g/C Ratio	0.13	0.13	0.94	0.94	0.94		
v/c Ratio	0.00	0.03	0.14	0.00	0.13		
Control Delay (s/veh)	28.0	19.5	1.4	2.0	1.0		
Queue Delay	0.0	0.0	0.0	0.0	0.0		
Total Delay (s/veh)	28.0	19.5	1.4	2.0	1.0		
LOS	C	B	A	A	A		
Approach Delay (s/veh)	21.2	1.4	1.0	1.0	1.0		
Approach LOS	C	A	A	A	A		
Queue Length 50th (m)	0.1	0.0	0.0	0.0	0.0		
Queue Length 95th (m)	1.4	2.6	13.2	m0.1	9.7		
Internal Link Dist (m)	30.6	33.7	40.0		44.8		
Turn Bay Length (m)							
Base Capacity (vph)	405	292	2865	669	2948		
Starvation Cap Reductn	0	0	0	0	0		
Spillback Cap Reductn	0	0	0	0	0		
Storage Cap Reductn	0	0	0	0	0		
Reduced v/c Ratio	0.00	0.01	0.14	0.00	0.13		

Intersection Summary
 Cycle Length: 75
 Actuated Cycle Length: 75
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Natural Cycle: 75
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.14
 Intersection Signal Delay (s/veh): 1.3
 Intersection Capacity Utilization 43.5%
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Bank & Exhibition



Queues
7: Bank & Sunnyside

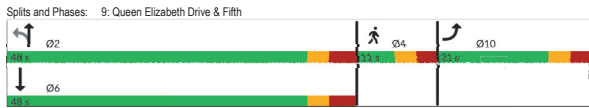
12/06/2024

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	Ø3	Ø7
Lane Configurations	←↑	←↑	←↑	←↑	←↑	←↑	←↑	←↑		
Traffic Volume (vph)	31	28	16	35	20	269	14	304		
Future Volume (vph)	31	28	16	35	20	269	14	304		
Lane Group Flow (vph)	0	91	0	98	0	329	0	387		
Turn Type	Perm	NA	Perm	NA	Perm	NA	pm+pt	NA		
Protected Phases	4	4	8	8	2	1	6	3	7	
Permitted Phases	4	4	8	8	2	2	6	6		
Detector Phase	4	4	8	8	2	2	1	6		
Switch Phase										
Minimum Initial (s)	6.4	6.4	5.3	5.3	17.0	17.0	5.0	17.0	1.0	1.0
Minimum Split (s)	25.0	25.0	25.0	25.0	43.0	43.0	17.0	60.0	5.0	5.0
Total Split (s)	25.0	25.0	25.0	25.0	43.0	43.0	17.0	60.0	5.0	5.0
Total Split (%)	27.8%	27.8%	27.8%	27.8%	47.8%	47.8%	18.9%	66.7%	6%	6%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0
All-Red Time (s)	2.6	2.6	2.6	2.6	3.0	3.0	2.9	3.0	0.0	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0				
Total Lost Time (s)	5.6	5.6	5.6	5.6	6.0	6.0				
Lead/Lag	Lag	Lag	Lag	Lag	Lag	Lag	Lead	Lead		
Lead-Lag Optimize?										
Recall Mode	None	None	None	None	Max	Max	None	Max	None	None
Act Effct Green (s)	11.5	11.3	60.1	60.1						
Actuated g/C Ratio	0.14	0.14	0.76	0.76						
v/c Ratio	0.55	0.47	0.15	0.18						
Control Delay (s/veh)	43.3	27.8	4.2	4.2						
Queue Delay	0.0	0.0	0.0	0.0						
Total Delay (s/veh)	43.3	27.8	4.2	4.2						
LOS	D	C	A	A						
Approach Delay (s/veh)	43.3	27.8	4.2	4.2						
Approach LOS	D	C	A	A						
Queue Length 50th (m)	12.5	8.2	6.8	8.0						
Queue Length 95th (m)	26.1	21.4	14.2	16.2						
Internal Link Dist (m)	75.1	136.0	63.1	79.0						
Turn Bay Length (m)										
Base Capacity (vph)	281	329	2141	2110						
Starvation Cap Reductn	0	0	0	0						
Spillback Cap Reductn	0	0	0	0						
Storage Cap Reductn	0	0	0	0						
Reduced v/c Ratio	0.32	0.30	0.15	0.18						

Intersection Summary
 Cycle Length: 90
 Actuated Cycle Length: 79.4
 Natural Cycle: 90
 Control Type: Actuated-Uncoordinated

Lane Group	EBL	NBL	NBT	SBT	Ø4
Lane Configurations	Y				
Traffic Volume (vph)	141	43	300	288	
Future Vol. (veh/h)	141	43	300	288	
Lane Group Flow (vph)	226	0	381	387	
Turn Type	Prot	Perm	NA	NA	
Protected Phases	10	2	6	4	
Permitted Phases		2			
Detector Phase	10	2	2	6	
Switch Phase					
Minimum Initial (s)	10.0	4.0	4.0	4.0	4.0
Minimum Split (s)	21.0	48.0	48.0	48.0	11.0
Total Split (s)	21.0	48.0	48.0	48.0	11.0
Total Spilt (%)	26.3%	60.0%	60.0%	60.0%	14%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.7	3.8	3.8	3.8	2.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.7		6.8	6.8	
LeadLag					
Lead-Lag Optimize?					
Recall Mode	None	None	None	Max	None
Act Effct Green (s)	13.8		41.4	41.4	
Actuated g/C Ratio	0.20		0.61	0.61	
v/c Ratio	0.71		0.40	0.40	
Control Delay (s/veh)	38.6		8.7	8.5	
Queue Delay	0.0		0.0	0.0	
Total Delay (s/veh)	38.6		8.7	8.5	
LOS	D		A	A	
Approach Delay (s/veh)	38.6		8.7	8.5	
Approach LOS	D		A	A	
Queue Length 50th (m)	26.6		23.4	24.1	
Queue Length 95th (m)	#52.7		39.7	40.3	
Internal Link Dist (m)	57.2		0.1	5.9	
Turn Bay Length (m)					
Base Capacity (vph)	353		942	1003	
Starvation Cap Reductn	0		0	0	
Spillback Cap Reductn	0		0	0	
Storage Cap Reductn	0		0	0	
Reduced v/c Ratio	0.64		0.40	0.40	

Intersection Summary	
Cycle Length: 80	
Actuated Cycle Length: 67.7	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.71	
Intersection Signal Delay (s/veh): 15.4	Intersection LOS: B
Intersection Capacity Utilization 67.9%	ICU Level of Service C
Analysis Period (min) 15	
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	



Intersection						
Intersection Delay, s/veh	0					
Intersection LOS	-					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol. (veh/h)	0	0	0	0	0	0
Future Vol. (veh/h)	0	0	0	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0
Number of Lanes	1	0	0	1	1	0
Approach	EB	WB	NB	WB	NB	
Opposing Approach	WB		EB			
Opposing Lanes	1		1	0		
Conflicting Approach Left			NB	EB		
Conflicting Lanes Left	0		1	1		
Conflicting Approach Right	NB			WB		
Conflicting Lanes Right	1		0	1		
HCM Control Delay, s/veh	0		0	0		
HCM LOS	-		-	-		

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	0%	0%	0%
Vol Thru, %	100%	100%	100%
Vol Right, %	0%	0%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	0	0	0
LT Vol	0	0	0
Through Vol	0	0	0
RT Vol	0	0	0
Lane Flow Rate	0	0	0
Geometry Grp	1	1	1
Degree of Util (X)	0	0	0
Departure Headway (Hd)	3.934	3.934	3.934
Convergence, Y/N	Yes	Yes	Yes
Cap	0	0	0
Service Time	1.934	1.934	1.934
HCM Lane V/C Ratio	0	0	0
HCM Control Delay, s/veh	6.9	6.9	6.9
HCM Lane LOS	N	N	N
HCM 95th-tile Q	0	0	0

Intersection						
Intersection Delay, s/veh	0					
Intersection LOS	-					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol. (veh/h)	0	0	0	0	0	0
Future Vol. (veh/h)	0	0	0	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0
Number of Lanes	0	1	1	0	1	0
Approach	EB	WB	SB	WB	SB	
Opposing Approach	WB		EB			
Opposing Lanes	1		1	0		
Conflicting Approach Left			SB		WB	
Conflicting Lanes Left	1		0		1	
Conflicting Approach Right			SB		EB	
Conflicting Lanes Right	0		1		1	
HCM Control Delay, s/veh	0		0		0	
HCM LOS	-		-		-	

Lane	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	0%
Vol Thru, %	100%	100%	100%
Vol Right, %	0%	0%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	0	0	0
LT Vol	0	0	0
Through Vol	0	0	0
RT Vol	0	0	0
Lane Flow Rate	0	0	0
Geometry Grp	1	1	1
Degree of Util (X)	0	0	0
Departure Headway (Hd)	3.934	3.934	3.934
Convergence, Y/N	Yes	Yes	Yes
Cap	0	0	0
Service Time	1.934	1.934	1.934
HCM Lane V/C Ratio	0	0	0
HCM Control Delay, s/veh	6.9	6.9	6.9
HCM Lane LOS	N	N	N
HCM 95th-tile Q	0	0	0

Intersection						
Intersection Delay, s/veh	0					
Intersection LOS	-					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol. (veh/h)	0	0	0	0	0	0
Future Vol. (veh/h)	0	0	0	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0
Number of Lanes	1	0	0	1	1	0
Approach	EB	WB	NB	WB	NB	
Opposing Approach	WB		EB			
Opposing Lanes	1		1	0		
Conflicting Approach Left			NB	EB		
Conflicting Lanes Left	0		1	1		
Conflicting Approach Right	NB			WB		
Conflicting Lanes Right	1		0	1		
HCM Control Delay, s/veh	0		0	0		
HCM LOS	-		-	-		

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	0%	0%	0%
Vol Thru, %	100%	100%	100%
Vol Right, %	0%	0%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	0	0	0
LT Vol	0	0	0
Through Vol	0	0	0
RT Vol	0	0	0
Lane Flow Rate	0	0	0
Geometry Grp	1	1	1
Degree of Util (X)	0	0	0
Departure Headway (Hd)	3.934	3.934	3.934
Convergence, Y/N	Yes	Yes	Yes
Cap	0	0	0
Service Time	1.934	1.934	1.934
HCM Lane V/C Ratio	0	0	0
HCM Control Delay, s/veh	6.9	6.9	6.9
HCM Lane LOS	N	N	N
HCM 95th-tile Q	0	0	0

Intersection												
Intersection Delay, s/veh		10.1										
Intersection LOS		B										
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	24	51	0	0	0	109	114	100	141	0	0	53
Future Vol, veh/h	24	51	0	0	0	109	114	100	141	0	0	53
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	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	27	57	0	0	0	121	127	111	157	0	0	59
Number of Lanes	0	1	0	0	0	1	0	1	0	0	0	1
Approach	EB	EBT	EBR	WB	WB	NB	NB	NB	NB	SB	SBT	SBR
Opposing Approach	WB									EB	SB	NB
Opposing Lanes	1									1	1	1
Conflicting Approach Left	SB									NB	EB	WB
Conflicting Lanes Left	1									1	1	1
Conflicting Approach Right	NB									SB	WB	EB
Conflicting Lanes Right	1									1	1	1
HCM Control Delay, s/veh	8.9						8.3 11.2					
HCM LOS	A						A B					

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	32%	32%	0%	0%
Vol Thru, %	28%	68%	0%	0%
Vol Right, %	40%	0%	100%	100%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	355	75	109	53
LT Vol	114	24	0	0
Through Vol	100	51	0	0
RT Vol	141	0	109	53
Lane Flow Rate	394	83	121	59
Geometry Grp	1	1	1	1
Degree of Util (X)	0.472	0.119	0.15	0.07
Departure Headway (Hd)	4.308	5.153	4.452	4.253
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	836	693	802	838
Service Time	2.342	3.204	2.498	2.3
HCM Lane V/C Ratio	0.471	0.12	0.151	0.07
HCM Control Delay, s/veh	11.2	8.9	8.3	7.6
HCM Lane LOS	B	A	A	A
HCM 95th %ile Q	2.6	0.4	0.5	0.2

Intersection							
Int Delay, s/veh		0.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR	
Lane Configurations							
Traffic Vol, veh/h	0	5	0	352	288	68	
Future Vol, veh/h	0	5	0	352	288	68	
Conflicting Peds, #/hr	0	0	178	0	0	107	
Sign Control	Stop	Stop	Free	Free	Free	Free	
RT Channelized	-	None	-	None	-	None	
Storage Length	-	0	-	-	-	-	
Veh in Median Storage, #	0	-	0	0	0	-	
Grade, %	0	-	-	0	0	-	
Peak Hour Factor	90	90	90	90	90	90	
Heavy Vehicles, %	5	5	5	5	5	5	
Mvmt Flow	0	6	0	391	320	76	

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	-	536 574	0 - 0
Stage 1	-	-	- - -
Stage 2	-	-	- - -
Critical Hdwy	-	6.275 4.175	- - -
Critical Hdwy Stg 1	-	-	- - -
Critical Hdwy Stg 2	-	-	- - -
Follow-up Hdwy	-	-3.34752 2475	- - -
Pot Cap-1 Maneuver	0	537 980	- - -
Stage 1	0	-	- - -
Stage 2	0	-	- - -
Platoon blocked, %	-	-	- - -
Mov Cap-1 Maneuver	-	436 795	- - -
Mov Cap-2 Maneuver	-	-	- - -
Stage 1	-	-	- - -
Stage 2	-	-	- - -

Approach	EB	NB	SB
HCM Control Delay, s/43.37		0	0
HCM LOS	B		

Intersection						
Int Delay, s/veh		0.5				
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	33	0	335	299	0
Future Vol, veh/h	0	33	0	335	299	0
Conflicting Peds, #/hr	0	0	0	0	0	86
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	0	37	0	372	332	0

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	-	332 - 0	- - 0
Stage 1	-	-	- - -
Stage 2	-	-	- - -
Critical Hdwy	-	6.275	- - -
Critical Hdwy Stg 1	-	-	- - -
Critical Hdwy Stg 2	-	-	- - -
Follow-up Hdwy	-	-3.3475	- - -
Pot Cap-1 Maneuver	0	701 0	- - 0
Stage 1	0	-	- - 0
Stage 2	0	-	- - 0
Platoon blocked, %	-	-	- - -
Mov Cap-1 Maneuver	-	701	- - -
Mov Cap-2 Maneuver	-	-	- - -
Stage 1	-	-	- - -
Stage 2	-	-	- - -

Approach	EB	NB	SB
HCM Control Delay, s/40.42		0	0
HCM LOS	B		

Intersection							
Int Delay, s/veh		19.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR	
Lane Configurations							
Traffic Vol, veh/h	238	210	50	112	222	127	
Future Vol, veh/h	238	210	50	112	222	127	
Conflicting Peds, #/hr	0	0	0	0	0	0	
Sign Control	Stop	Stop	Free	Free	Free	Free	
RT Channelized	-	None	-	None	-	None	
Storage Length	0	-	-	-	-	-	
Veh in Median Storage, #	0	-	-	0	0	-	
Grade, %	0	-	-	0	0	-	
Peak Hour Factor	90	90	90	90	90	90	
Heavy Vehicles, %	0	0	0	0	0	0	
Mvmt Flow	264	233	56	124	247	141	

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	553 317 388	0 - 0	- - 0
Stage 1	317	-	- - -
Stage 2	236	-	- - -
Critical Hdwy	6.4 6.2 4.1	- - -	- - -
Critical Hdwy Stg 1	5.4	-	- - -
Critical Hdwy Stg 2	5.4	-	- - -
Follow-up Hdwy	3.5 3.3 2.2	- - -	- - -
Pot Cap-1 Maneuver	498 728 1182	- - -	- - -
Stage 1	743	-	- - -
Stage 2	808	-	- - -
Platoon blocked, %	-	-	- - -
Mov Cap-1 Maneuver	473 728 1182	- - -	- - -
Mov Cap-2 Maneuver	473	-	- - -
Stage 1	705	-	- - -
Stage 2	808	-	- - -

Approach	EB	NB	SB
HCM Control Delay, s/41.39		2.53	0
HCM LOS	E		

Intersection						
Int Delay, s/veh						
	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	430	0	0	343
Future Vol, veh/h	0	0	430	0	0	343
Conflicting Peds, #/hr	0	0	0	100	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	None	None	None	None	None	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	0	-
Grade, %	0	-	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	15	6	0	0	5
Mvmt Flow	0	0	478	0	0	381
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	-	339	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.2	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.45	-	-	-	-
Pot Cap-1 Maneuver	0	621	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	555	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s/v	0	0	0			
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBR/WBLn1	SBT			
Capacity (veh/h)	-	-	-			
HCM Lane V/C Ratio	-	-	-			
HCM Control Delay (s/veh)	-	-	0			
HCM Lane LOS	-	-	A			
HCM 95th %tile Q(veh)	-	-	-			

Intersection						
Int Delay, s/veh						
	7.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	0	1	0	0	5	0
Future Vol, veh/h	0	1	0	0	5	0
Conflicting Peds, #/hr	0	100	100	0	100	100
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	None	None	None	None	None	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	0	-
Grade, %	0	-	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1	0	0	6	0
Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	101	0	202	201
Stage 1	-	-	-	-	101	-
Stage 2	-	-	-	-	101	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1491	-	787	840
Stage 1	-	-	-	-	923	-
Stage 2	-	-	-	-	923	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1333	-	629	672
Mov Cap-2 Maneuver	-	-	-	-	629	-
Stage 1	-	-	-	-	826	-
Stage 2	-	-	-	-	825	-
Approach	EB	WB	NB			
HCM Control Delay, s/v	0	0	10.77			
HCM LOS			B			
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	629	-	-	1333	-	
HCM Lane V/C Ratio	0.009	-	-	-	-	
HCM Control Delay (s/veh)	10.8	-	-	0	-	
HCM Lane LOS	B	-	-	A	-	
HCM 95th %tile Q(veh)	0	-	-	0	-	

Intersection						
Int Delay, s/veh						
	9.9					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	177	448	0
Future Vol, veh/h	0	0	0	177	448	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	None	None	None	None	None	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	197	498	0
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	197	0	0	98	98	
Stage 1	-	-	-	98	-	
Stage 2	-	-	-	0	-	
Critical Hdwy	4.12	-	-	6.42	6.22	
Critical Hdwy Stg 1	-	-	-	5.42	-	
Critical Hdwy Stg 2	-	-	-	5.42	-	
Follow-up Hdwy	2.219	-	-	3.518	3.318	
Pot Cap-1 Maneuver	1376	-	-	901	958	
Stage 1	-	-	-	926	-	
Stage 2	-	-	-	-	-	
Platoon blocked, %	-	-	-	-	-	
Mov Cap-1 Maneuver	1376	-	-	901	958	
Mov Cap-2 Maneuver	-	-	-	901	-	
Stage 1	-	-	-	926	-	
Stage 2	-	-	-	-	-	
Approach	EB	WB	SB			
HCM Control Delay, s/v	0	0	13.82			
HCM LOS			B			
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR/SBLn1		
Capacity (veh/h)	1376	-	-	901		
HCM Lane V/C Ratio	-	-	-	0.553		
HCM Control Delay (s/veh)	0	-	-	13.8		
HCM Lane LOS	A	-	-	B		
HCM 95th %tile Q(veh)	0	-	-	3.5		

Table with 13 columns: Lane Group, EBL, NBL, NBT, SBT, Ø3. Rows include Lane Configurations, Traffic Volume (vph), Future Volume (vph), Lane Group Flow (vph), Turn Type, Protected Phases, Permitted Phases, Detector Phase, Switch Phase, Minimum Initial (s), Minimum Split (s), Total Split (s), Total Split (%), Yellow Time (s), All-Red Time (s), Lost Time Adjust (s), Total Lost Time (s), Lead/Lag, Recall Mode, Act Effect Green (s), Actuated g/C Ratio, v/c Ratio, Control Delay (s/veh), Queue Delay, Total Delay (s/veh), LOS, Approach Delay (s/veh), Approach LOS, Queue Length 50th (m), Queue Length 95th (m), Internal Link Dist (m), Turn Bay Length (m), Base Capacity (vph), Starvation Cap Reductn, Spillback Cap Reductn, Storage Cap Reductn, Reduced v/c Ratio.

Intersection Summary
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 4 (5%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.44
Intersection Signal Delay (s/veh): 6.8
Intersection Capacity Utilization 53.6%
ICU Level of Service A
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

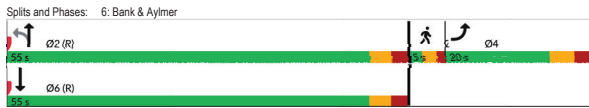


Table with 13 columns: Lane Group, EBL, NBL, NBT, SBT, Ø3, Ø7. Rows include Lane Configurations, Traffic Volume (vph), Future Volume (vph), Lane Group Flow (vph), Turn Type, Protected Phases, Permitted Phases, Detector Phase, Switch Phase, Minimum Initial (s), Minimum Split (s), Total Split (s), Total Split (%), Yellow Time (s), All-Red Time (s), Lost Time Adjust (s), Total Lost Time (s), Lead/Lag, Recall Mode, Act Effect Green (s), Actuated g/C Ratio, v/c Ratio, Control Delay (s/veh), Queue Delay, Total Delay (s/veh), LOS, Approach Delay (s/veh), Approach LOS, Queue Length 50th (m), Queue Length 95th (m), Internal Link Dist (m), Turn Bay Length (m), Base Capacity (vph), Starvation Cap Reductn, Spillback Cap Reductn, Storage Cap Reductn, Reduced v/c Ratio.

Intersection Summary
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 4 (5%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.44
Intersection Signal Delay (s/veh): 6.8
Intersection Capacity Utilization 53.6%
ICU Level of Service A
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.



Table with 13 columns: Lane Group, EBL, EBT, WBL, WBT, NBL, NBT, SBL, SBT, Ø3, Ø7. Rows include Lane Configurations, Traffic Volume (vph), Future Volume (vph), Lane Group Flow (vph), Turn Type, Protected Phases, Permitted Phases, Detector Phase, Switch Phase, Minimum Initial (s), Minimum Split (s), Total Split (s), Total Split (%), Yellow Time (s), All-Red Time (s), Lost Time Adjust (s), Total Lost Time (s), Lead/Lag, Recall Mode, Act Effect Green (s), Actuated g/C Ratio, v/c Ratio, Control Delay (s/veh), Queue Delay, Total Delay (s/veh), LOS, Approach Delay (s/veh), Approach LOS, Queue Length 50th (m), Queue Length 95th (m), Internal Link Dist (m), Turn Bay Length (m), Base Capacity (vph), Starvation Cap Reductn, Spillback Cap Reductn, Storage Cap Reductn, Reduced v/c Ratio.

Intersection Summary
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 10 (13%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.87
Intersection Signal Delay (s/veh): 20.1
Intersection Capacity Utilization 95.3%
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.
d) Defacto Left Lane. Recode with 1 though lane as a left lane.

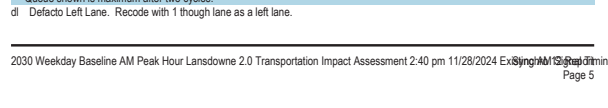


Table with 13 columns: Lane Group, EBL, NBL, NBT, SBT, Ø4. Rows include Lane Configurations, Traffic Volume (vph), Future Volume (vph), Lane Group Flow (vph), Turn Type, Protected Phases, Permitted Phases, Detector Phase, Switch Phase, Minimum Initial (s), Minimum Split (s), Total Split (s), Total Split (%), Yellow Time (s), All-Red Time (s), Lost Time Adjust (s), Total Lost Time (s), Lead/Lag, Recall Mode, Act Effect Green (s), Actuated g/C Ratio, v/c Ratio, Control Delay (s/veh), Queue Delay, Total Delay (s/veh), LOS, Approach Delay (s/veh), Approach LOS, Queue Length 50th (m), Queue Length 95th (m), Internal Link Dist (m), Turn Bay Length (m), Base Capacity (vph), Starvation Cap Reductn, Spillback Cap Reductn, Storage Cap Reductn, Reduced v/c Ratio.

Intersection Summary
Cycle Length: 70
Actuated Cycle Length: 70
Offset: 0 (0%), Referenced to phase 6:SBT, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.31
Intersection Signal Delay (s/veh): 7.0
Intersection Capacity Utilization 52.4%
ICU Level of Service A
Analysis Period (min) 15



Intersection						
Intersection Delay, s/veh	7.6					
Intersection LOS	A					
Movement						
	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↗	↘		↖	↙
Traffic Vol, veh/h	5	108	68	5	5	5
Future Vol, veh/h	5	108	68	5	5	5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	120	76	6	6	6
Number of Lanes	0	1	1	0	1	0
Approach						
Opposing Approach	WB	EB		SB		
Opposing Lanes	1	1		0		
Conflicting Approach Left	SB			WB		
Conflicting Lanes Left	1	0		1		
Conflicting Approach Right		SB	EB		WB	
Conflicting Lanes Right	0	1	1		1	
HCM Control Delay, s/veh	7.7	7.4		7.2		
HCM LOS	A	A		A		

Lane	EBLn1	WBLn1	SBLn1
Vol Left, %	4%	0%	50%
Vol Thru, %	96%	93%	0%
Vol Right, %	0%	7%	50%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	113	73	10
LT Vol	5	0	5
Through Vol	108	68	0
RT Vol	0	5	5
Lane Flow Rate	126	81	11
Geometry Grp	1	1	1
Degree of Util (X)	0.14	0.09	0.013
Departure Headway (Hd)	4.023	4.006	4.087
Convergence, Y/N	Yes	Yes	Yes
Cap	893	893	863
Service Time	2.044	2.036	2.174
HCM Lane VIC Ratio	0.141	0.091	0.013
HCM Control Delay, s/veh	7.7	7.4	7.2
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.5	0.3	0

Intersection						
Intersection Delay, s/veh	8					
Intersection LOS	A					
Movement						
	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↗	↘		↖	↙	↘
Traffic Vol, veh/h	2	5	68	57	72	42
Future Vol, veh/h	2	5	68	57	72	42
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	6	76	63	80	47
Number of Lanes	1	0	0	1	1	0
Approach						
Opposing Approach	WB	EB		NB		
Opposing Lanes	1	1		0		
Conflicting Approach Left		NB		EB		
Conflicting Lanes Left	0	1		1		
Conflicting Approach Right	NB			WB		
Conflicting Lanes Right	1	0		1		
HCM Control Delay, s/veh	7	8.2		7.9		
HCM LOS	A	A		A		

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	63%	0%	54%
Vol Thru, %	0%	29%	46%
Vol Right, %	37%	71%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	114	7	125
LT Vol	72	0	68
Through Vol	0	2	57
RT Vol	42	5	0
Lane Flow Rate	127	8	139
Geometry Grp	1	1	1
Degree of Util (X)	0.144	0.009	0.165
Departure Headway (Hd)	4.092	3.935	4.272
Convergence, Y/N	Yes	Yes	Yes
Cap	864	815	832
Service Time	2.178	1.935	2.335
HCM Lane VIC Ratio	0.147	0.009	0.167
HCM Control Delay, s/veh	7.9	7	8.2
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.5	0	0.6

Intersection						
Intersection Delay, s/veh	7.6					
Intersection LOS	A					
Movement						
	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↗	↘		↖	↙	↘
Traffic Vol, veh/h	2	5	5	124	5	5
Future Vol, veh/h	2	5	5	124	5	5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	6	6	138	6	6
Number of Lanes	1	0	0	1	1	0
Approach						
Opposing Approach	WB	EB		NB		
Opposing Lanes	1	1		0		
Conflicting Approach Left		NB		EB		
Conflicting Lanes Left	0	1		1		
Conflicting Approach Right	NB			WB		
Conflicting Lanes Right	1	0		1		
HCM Control Delay, s/veh	6.7	7.7		7.1		
HCM LOS	A	A		A		

2030 Baseline Conditions Weekday AM

Lane	EBLn1	WBLn1	SBLn1
Vol Left, %	50%	0%	4%
Vol Thru, %	0%	29%	96%
Vol Right, %	50%	71%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	10	7	129
LT Vol	5	0	5
Through Vol	0	2	124
RT Vol	5	5	0
Lane Flow Rate	11	8	143
Geometry Grp	1	1	1
Degree of Util (X)	0.012	0.008	0.158
Departure Headway (Hd)	3.995	3.631	3.967
Convergence, Y/N	Yes	Yes	Yes
Cap	888	963	909
Service Time	2.057	1.661	1.972
HCM Lane VIC Ratio	0.012	0.008	0.157
HCM Control Delay, s/veh	7.1	6.7	7.7
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0	0	0.6

Intersection												
Intersection Delay, s/veh	7.8											
Intersection LOS	A											
Movement												
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↗	↘		↖	↙		↖	↙			↘
Traffic Vol, veh/h	68	41	0	0	0	73	19	32	24	0	0	109
Future Vol, veh/h	68	41	0	0	0	73	19	32	24	0	0	109
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	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	76	46	0	0	0	81	21	36	27	0	0	121
Number of Lanes	0	1	0	0	0	1	0	1	0	0	0	1
Approach												
Opposing Approach	WB	EB			WB		NB			SB		
Opposing Lanes	1	1			1		1			1		
Conflicting Approach Left	SB	NB			EB			WB				
Conflicting Lanes Left	1	1			1			1				
Conflicting Approach Right	NB	SB			WB			EB				
Conflicting Lanes Right	1	1			1			1				
HCM Control Delay, s/veh	8.4	7.3			7.9			7.5				
HCM LOS	A	A			A			A				

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	25%	62%	0%	0%
Vol Thru, %	43%	38%	0%	0%
Vol Right, %	32%	0%	100%	100%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	75	109	73	109
LT Vol	19	68	0	0
Through Vol	32	41	0	0
RT Vol	24	0	73	109
Lane Flow Rate	83	121	81	121
Geometry Grp	1	1	1	1
Degree of Util (X)	0.101	0.154	0.088	0.13
Departure Headway (Hd)	4.365	4.586	3.904	3.878
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	823	787	920	926
Service Time	2.381	2.586	1.92	1.892
HCM Lane VIC Ratio	0.101	0.154	0.088	0.131
HCM Control Delay, s/veh	7.9	8.4	7.3	7.5
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.3	0.5	0.3	0.4

Intersection						
Int Delay, s/veh	5.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔ ↗ ↘ ↖					
Traffic Vol, veh/h	1	189	144	637	372	26
Future Vol, veh/h	1	189	144	637	372	26
Conflicting Peds, #/hr	0	0	178	0	0	107
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	None	None	None	None	None	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	1	210	160	708	413	29

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1280	606	620	0	-	0
Stage 1	606	-	-	-	-	-
Stage 2	674	-	-	-	-	-
Critical Hdwy	6.675	6.275	4.175	-	-	-
Critical Hdwy Stg 1	5.475	-	-	-	-	-
Critical Hdwy Stg 2	5.875	-	-	-	-	-
Follow-up Hdwy	3.54753	3.4752	2.475	-	-	-
Pot Cap-1 Maneuver	166	489	941	-	-	-
Stage 1	536	-	-	-	-	-
Stage 2	462	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	81	397	764	-	-	-
Mov Cap-2 Maneuver	81	-	-	-	-	-
Stage 1	322	-	-	-	-	-
Stage 2	375	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/23.79		3.63	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBTEBLn1	SBT	SBR
Capacity (veh/h)	614	-	397	-
HCM Lane V/C Ratio	0.209	-	0.529	-
HCM Control Delay (s/veh)	11	2	23.8	-
HCM Lane LOS	B	A	C	-
HCM 95th %tile Q(veh)	0.8	-	3	-

Intersection						
Int Delay, s/veh	1.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔ ↗ ↘ ↖					
Traffic Vol, veh/h	20	24	66	251	280	71
Future Vol, veh/h	20	24	66	251	280	71
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	None	None	None	None	None	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	22	27	73	279	311	79

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	776	351	390	0	-	0
Stage 1	351	-	-	-	-	-
Stage 2	426	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	369	697	1180	-	-	-
Stage 1	717	-	-	-	-	-
Stage 2	663	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	342	697	1180	-	-	-
Mov Cap-2 Maneuver	342	-	-	-	-	-
Stage 1	665	-	-	-	-	-
Stage 2	663	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/43.48		1.72	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBTEBLn1	SBT	SBR
Capacity (veh/h)	375	-	473	-
HCM Lane V/C Ratio	0.062	-	0.103	-
HCM Control Delay (s/veh)	8.3	0	13.5	-
HCM Lane LOS	A	A	B	-
HCM 95th %tile Q(veh)	0.2	-	0.3	-

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔ ↗ ↘ ↖					
Traffic Vol, veh/h	0	27	0	769	551	0
Future Vol, veh/h	0	27	0	769	551	0
Conflicting Peds, #/hr	0	0	0	0	0	86
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	None	None	None	None	None	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	0	30	0	854	612	0

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	-	612	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.275	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-
Pot Cap-1 Maneuver	0	485	0	-	-	0
Stage 1	0	-	0	-	-	0
Stage 2	0	-	0	-	-	0
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	485	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/42.91		0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBTEBLn1	SBT
Capacity (veh/h)	-	485
HCM Lane V/C Ratio	-	0.062
HCM Control Delay (s/veh)	-	12.9
HCM Lane LOS	-	B
HCM 95th %tile Q(veh)	-	0.2

Intersection						
Int Delay, s/veh	0.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔ ↗ ↘ ↖					
Traffic Vol, veh/h	0	34	552	7	0	421
Future Vol, veh/h	0	34	552	7	0	421
Conflicting Peds, #/hr	0	0	0	100	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	None	None	None	None	None	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	0	-
Grade, %	0	-	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	15	6	0	0	5
Mvmt Flow	0	38	613	8	0	468

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	-	411	0	0	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	7.2	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	3.45	-	-	-
Pot Cap-1 Maneuver	0	555	-	-	0
Stage 1	0	-	-	-	0
Stage 2	0	-	-	-	0
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	497	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/42.85		0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR/WBLn1	SBT
Capacity (veh/h)	-	-	497
HCM Lane V/C Ratio	-	-	0.076
HCM Control Delay (s/veh)	-	-	12.8
HCM Lane LOS	-	-	B
HCM 95th %tile Q(veh)	-	-	0.2

Intersection						
Int Delay, s/veh	1.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	108	62	5	68	19	5
Future Vol, veh/h	108	62	5	68	19	5
Conflicting Peds, #/hr	0	100	100	0	100	100
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	None	None	None	None	None	None
Storage Length					0	
Vehicle in Median Storage, #	0			0	0	
Grade, %	0			0	0	
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	120	69	6	76	21	6

Major/Minor	Major1	Major2	Minor1	Minor2		
Conflicting Flow All	0	0	289	0	441	354
Stage 1	-	-	-	-	254	-
Stage 2	-	-	-	-	187	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2,218	-	3,518	3,318
Pot Cap-1 Maneuver	-	-	1,273	-	574	689
Stage 1	-	-	-	-	788	-
Stage 2	-	-	-	-	845	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1,138	-	456	551
Mov Cap-2 Maneuver	-	-	-	-	456	-
Stage 1	-	-	-	-	705	-
Stage 2	-	-	-	-	752	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0.56	13.06
HCM LOS	-	-	B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	473	-	-	123	-
HCM Lane V/C Ratio	0.056	-	-	0.005	-
HCM Control Delay (s/veh)	13.1	-	-	8.2	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0	-

Intersection						
Int Delay, s/veh	0.6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	39	121	16	5	4
Future Vol, veh/h	5	39	121	16	5	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	None	None	None	None	None	None
Storage Length						
Vehicle in Median Storage, #	0	0	0	0	0	0
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	43	134	18	6	4

Major/Minor	Major1	Major2	Minor2				
Conflicting Flow All	152	0	-	0	198	143	
Stage 1	-	-	-	-	143	-	
Stage 2	-	-	-	-	54	-	
Critical Hdwy	4.12	-	-	-	6.42	6.22	
Critical Hdwy Stg 1	-	-	-	-	5.42	-	
Critical Hdwy Stg 2	-	-	-	-	5.42	-	
Follow-up Hdwy	-	-	2,218	-	-	3,518	3,318
Pot Cap-1 Maneuver	1429	-	-	-	791	904	
Stage 1	-	-	-	-	884	-	
Stage 2	-	-	-	-	968	-	
Platoon blocked, %	-	-	-	-	-	-	
Mov Cap-1 Maneuver	1429	-	-	-	788	904	
Mov Cap-2 Maneuver	-	-	-	-	788	-	
Stage 1	-	-	-	-	880	-	
Stage 2	-	-	-	-	968	-	

Approach	EB	WB	SB
HCM Control Delay, s/v	0.86	0	9.36
HCM LOS	A	-	A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	205	-	-	-	836
HCM Lane V/C Ratio	0.004	-	-	-	0.012
HCM Control Delay (s/veh)	7.5	0	-	-	9.4
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

2030 Baseline Conditions Weekday PM

Queues 1: Bank & Fifth

11/28/2024

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	47	54	60	39	17	455	29	590
Future Volume (vph)	47	54	60	39	17	455	29	590
Lane Group Flow (vph)	0	164	67	82	0	559	0	729
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases	4	8	8	2	2	6	6	6
Permitted Phases	4	8	8	2	2	6	6	6
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	26.0	26.0	26.0	26.0	49.0	49.0	49.0	49.0
Total Split (s)	26.0	26.0	26.0	26.0	49.0	49.0	49.0	49.0
Total Split (%)	34.7%	34.7%	34.7%	34.7%	65.3%	65.3%	65.3%	65.3%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	13.2	13.2	13.2	13.2	50.8	50.8	50.8	50.8
Actuated g/C Ratio	0.18	0.18	0.18	0.18	0.68	0.68	0.68	0.68
v/c Ratio	0.67	0.41	0.30	0.30	0.30	0.39	0.39	0.39
Control Delay (s/veh)	35.8	33.1	17.4	11.1	6.7	6.7	6.7	6.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	35.8	33.1	17.4	11.1	6.7	6.7	6.7	6.7
LOS	D	C	B	B	B	A	A	A
Approach Delay (s/veh)	35.8	24.5	11.1	6.7	6.7	6.7	6.7	6.7
Approach LOS	D	C	B	B	B	A	A	A
Queue Length 50th (m)	17.6	8.5	5.2	20.0	19.5	19.5	19.5	19.5
Queue Length 95th (m)	32.7	17.7	14.7	49.9	38.0	38.0	38.0	38.0
Internal Link Dist (m)	49.7	45.0	112.4	195.6	195.6	195.6	195.6	195.6
Turn Bay Length (m)								
Base Capacity (vph)	364	255	409	1870	1862	1862	1862	1862
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	0.45	0.26	0.20	0.30	0.30	0.39	0.39	0.39
Intersection Summary								
Cycle Length: 75								
Actuated Cycle Length: 75								
Offset: 47 (63%), Referenced to phase 2:NBL and 6:SBTL, Start of Green								
Natural Cycle: 75								
Control Type: Actuated-Coordinated								
Maximum v/c Ratio: 0.67								
Intersection Signal Delay (s/veh): 12.9	Intersection LOS: B							
Intersection Capacity Utilization 67.9%	ICU Level of Service C							
Analysis Period (min): 15								



Queues
7: Bank & Sunnyside

11/28/2024



HCM 7th AWSC
12: Exhibition & Paul Askin

11/28/2024

Intersection						
Intersection Delay, s/veh	7.9					
Intersection LOS	A					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔	↔		↔	↔
Traffic Vol, veh/h	5	123	142	5	5	5
Future Vol, veh/h	5	123	142	5	5	5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	137	158	6	6	6
Number of Lanes	0	1	1	0	1	0
Approach	EB	WB	SB	EB	WB	SB
Opposing Approach	WB	EB	SB	WB	EB	SB
Opposing Lanes	1	1	0	1	1	0
Conflicting Approach Left	SB		WB	SB		WB
Conflicting Lanes Left	1	0	1	1	0	1
Conflicting Approach Right		SB	EB		SB	EB
Conflicting Lanes Right	0	1	1	0	1	1
HCM Control Delay, s/veh	7.9	8	7.4	7.9	8	7.4
HCM LOS	A	A	A	A	A	A

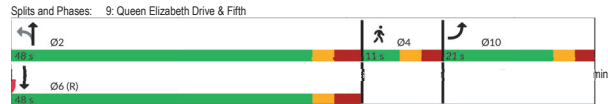
Lane	EBLn1	WBLn1	SBLn1
Vol Left, %	4%	0%	50%
Vol Thru, %	96%	97%	0%
Vol Right, %	0%	3%	50%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	128	147	10
LT Vol	5	0	5
Through Vol	123	142	0
RT Vol	0	5	5
Lane Flow Rate	142	163	11
Geometry Grp	1	1	1
Degree of Util (X)	0.161	0.183	0.014
Departure Headway (Hd)	4.083	4.039	4.385
Convergence, Y/N	Yes	Yes	Yes
Cap	875	885	821
Service Time	2.123	2.076	2.385
HCM Lane V/C Ratio	0.162	0.184	0.013
HCM Control Delay, s/veh	7.9	8	7.4
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.6	0.7	0

Queues
9: Queen Elizabeth Drive & Fifth

11/28/2024

Lane Group	EBL	NBL	NBT	SBT	Ø4
Lane Configurations	↔	↔	↔	↔	↔
Traffic Volume (vph)	35	39	197	522	
Future Volume (vph)	35	39	197	522	
Lane Group Flow (vph)	77	0	262	653	
Turn Type	Prot	Perm	NA	NA	
Protected Phases	10	2	6	4	
Permitted Phases		2			
Detector Phase	10	2	2	6	
Switch Phase					
Minimum Initial (s)	10.0	4.0	4.0	4.0	4.0
Minimum Split (s)	21.0	48.0	48.0	48.0	11.0
Total Split (s)	21.0	48.0	48.0	48.0	11.0
Total Split (%)	28.3%	60.0%	60.0%	60.0%	14%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.7	3.8	3.8	3.8	2.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.7			6.8	6.8
Lead-Lag					
Lead-Lag Optimize?					
Recall Mode	None	None	None	C-Max	None
Act Effct Green (s)	10.8		61.2	61.2	
Actuated g/C Ratio	0.14		0.77	0.77	
v/c Ratio	0.37		0.24	0.51	
Control Delay (s/veh)	36.7		4.7	7.1	
Queue Delay (s/veh)	0.0		0.0	0.0	
Total Delay (s/veh)	36.7		4.7	7.1	
LOS	D		A	A	
Approach Delay (s/veh)	36.7		4.7	7.1	
Approach LOS	D		A	A	
Queue Length 50th (m)	11.0		11.2	37.6	
Queue Length 95th (m)	22.5		22.8	70.8	
Internal Link Dist (m)	57.2		0.1	5.9	
Turn Bay Length (m)					
Base Capacity (vph)	293		1100	1270	
Starvation Cap Reductn	0		0	0	
Spillback Cap Reductn	0		0	0	
Storage Cap Reductn	0		0	0	
Reduced v/c Ratio	0.26		0.24	0.51	

Intersection Summary	
Cycle Length	80
Actuated Cycle Length	80
Offset	0 (0%), Referenced to phase 6:SBT, Start of Green
Natural Cycle	80
Control Type	Actuated-Coordinated
Maximum v/c Ratio	0.51
Intersection Signal Delay (s/veh)	8.7
Intersection Capacity Utilization	64.9%
Analysis Period (min)	15
Intersection LOS	A
ICU Level of Service	C



HCM 7th AWSC
13: Paul Askin & Marche

11/28/2024

Intersection						
Intersection Delay, s/veh	6.9					
Intersection LOS	A					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Vol, veh/h	3	5	5	5	5	5
Future Vol, veh/h	3	5	5	5	5	5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	6	6	6	6	6
Number of Lanes	1	0	0	1	1	0
Approach	EB	WB	NB	EB	WB	NB
Opposing Approach	WB	EB	NB	WB	EB	NB
Opposing Lanes	1	1	0	1	1	0
Conflicting Approach Left		NB	EB		NB	EB
Conflicting Lanes Left	0	1	1	0	1	1
Conflicting Approach Right	NB		WB	NB		WB
Conflicting Lanes Right	1	0	1	1	0	1
HCM Control Delay, s/veh	6.6	7.1	6.8	6.6	7.1	6.8
HCM LOS	A	A	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	50%	0%	50%
Vol Thru, %	0%	38%	50%
Vol Right, %	50%	63%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	10	8	10
LT Vol	5	0	5
Through Vol	0	3	5
RT Vol	5	5	0
Lane Flow Rate	11	9	11
Geometry Grp	1	1	1
Degree of Util (X)	0.012	0.009	0.013
Departure Headway (Hd)	3.769	3.587	4.06
Convergence, Y/N	Yes	Yes	Yes
Cap	953	1002	886
Service Time	1.777	1.593	2.065
HCM Lane V/C Ratio	0.012	0.009	0.012
HCM Control Delay, s/veh	6.8	6.6	7.1
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0	0	0

Intersection						
Intersection Delay, s/veh	8					
Intersection LOS	A					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔		↔		↔	
Traffic Vol, veh/h	3	5	142	5	5	123
Future Vol, veh/h	3	5	142	5	5	123
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	6	158	6	6	137
Number of Lanes	1	0	0	1	1	0
Approach	EB	WB	WB	NB		
Opposing Approach	WB	EB				
Opposing Lanes	1	1		0		
Conflicting Approach Left	0		NB		EB	
Conflicting Lanes Left	0		1		1	
Conflicting Approach Right	NB		WB			
Conflicting Lanes Right	1		0		1	
HCM Control Delay, s/veh	7.1	8.5		7.4		
HCM LOS	A	A		A		

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	4%	0%	97%
Vol Thru, %	0%	38%	3%
Vol Right, %	96%	63%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	128	8	147
LT Vol	5	0	142
Through Vol	0	3	5
RT Vol	123	5	0
Lane Flow Rate	142	9	163
Geometry Grp	1	1	1
Degree of Util (X)	0.149	0.01	0.199
Departure Headway (Hd)	3.77	3.935	4.383
Convergence, Y/N	Yes	Yes	Yes
Cap	957	893	815
Service Time	1.77	2.03	2.431
HCM Lane V/C Ratio	0.148	0.01	0.2
HCM Control Delay, s/veh	7.4	7.1	8.5
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.5	0	0.7

Intersection						
Int Delay, s/veh	13.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔		↔		↔	
Traffic Vol, veh/h	3	235	215	564	575	50
Future Vol, veh/h	3	235	215	564	575	50
Conflicting Peds, #/hr	0	0	178	0	0	107
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	3	261	239	627	639	56

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	1636	845	872
Stage 1	845	-	-
Stage 2	791	-	-
Critical Hdwy	6.675	6.275	4.175
Critical Hdwy Stg 1	5.475	-	-
Critical Hdwy Stg 2	5.875	-	-
Follow-up Hdwy	3.54753	3.44752	2.2475
Pot Cap-1 Maneuver	98	356	755
Stage 1	414	-	-
Stage 2	402	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	34	289	613
Stage 1	177	-	-
Stage 2	326	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v0.11	6.85	0	
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBTEBLn1	SBT	SBR
Capacity (veh/h)	506	-	289	-
HCM Lane V/C Ratio	0.39	-	0.903	-
HCM Control Delay (s/veh)	14.6	3.9	70.1	-
HCM Lane LOS	B	A	F	-
HCM 95th-tile Q(veh)	1.8	-	8.3	-

Intersection												
Intersection Delay, s/veh	8											
Intersection LOS	A											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔		↔		↔		↔		↔		↔	
Traffic Vol, veh/h	75	40	0	0	0	104	41	27	30	0	0	94
Future Vol, veh/h	75	40	0	0	0	104	41	27	30	0	0	94
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	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	83	44	0	0	0	116	46	30	33	0	0	104
Number of Lanes	0	1	0	0	0	1	0	1	0	0	0	1
Approach	EB	EBT	EBR	WB	NB	NB	SB	SB	SB			
Opposing Approach	WB	EB		WB		NB		SB				
Opposing Lanes	1	1		1		1		1				
Conflicting Approach Left	SB		NB		EB							
Conflicting Lanes Left	1		1		1							
Conflicting Approach Right	NB		SB		WB							
Conflicting Lanes Right	1		1		1							
HCM Control Delay, s/veh	8.6	7.5		8.2		7.5						
HCM LOS	A	A		A		A						

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	42%	65%	0%	0%
Vol Thru, %	28%	35%	0%	0%
Vol Right, %	31%	0%	100%	100%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	98	115	104	94
LT Vol	41	75	0	0
Through Vol	27	40	0	0
RT Vol	30	0	104	94
Lane Flow Rate	109	128	116	104
Geometry Grp	1	1	1	1
Degree of Util (X)	0.136	0.165	0.127	0.116
Departure Headway (Hd)	4.483	4.646	3.948	3.999
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	800	773	908	896
Service Time	2.505	2.67	1.972	2.022
HCM Lane V/C Ratio	0.136	0.166	0.128	0.116
HCM Control Delay, s/veh	8.2	8.6	7.5	7.5
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.5	0.6	0.4	0.4

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔		↔		↔	
Traffic Vol, veh/h	0	24	0	788	820	2
Future Vol, veh/h	0	24	0	788	820	2
Conflicting Peds, #/hr	0	0	0	0	0	66
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	0	27	0	876	911	2

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	-	998	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	6.275	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-3.3475	-
Pot Cap-1 Maneuver	0	290	0
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	263	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v20.2	0	0	
HCM LOS	C		

Minor Lane/Major Mvmt	NBTEBLn1	SBT	SBR
Capacity (veh/h)	-	263	-
HCM Lane V/C Ratio	-	0.101	-
HCM Control Delay (s/veh)	-	20.2	-
HCM Lane LOS	-	C	-
HCM 95th-tile Q(veh)	-	0.3	-

Intersection						
Int Delay, s/veh						
Int Delay, s/veh	2.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W	W	W	W	W	W
Traffic Vol, veh/h	53	56	47	259	500	69
Future Vol, veh/h	53	56	47	259	500	69
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	None	None	None	None	None	None
Storage Length	0	0	0	0	0	0
Veh in Median Storage, #	0	0	0	0	0	0
Grade, %	0	0	0	0	0	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	59	62	52	288	556	77

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	986	594	632
Stage 1	594	-	-
Stage 2	392	-	-
Critical Hdwy	6.4	6.2	4.1
Critical Hdwy Stg 1	5.4	-	-
Critical Hdwy Stg 2	5.4	-	-
Follow-up Hdwy	3.5	3.3	2.2
Pot Cap-1 Maneuver	277	509	960
Stage 1	556	-	-
Stage 2	687	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	259	509	960
Mov Cap-2 Maneuver	259	-	-
Stage 1	520	-	-
Stage 2	687	-	-

Approach	EB	NB	SB
HCM Control Delay, s/0.87	1.38	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBLn1	SBT	SBR
Capacity (veh/h)	276	-	346	-
HCM Lane V/C Ratio	0.054	-	0.35	-
HCM Control Delay (s/veh)	9	0	20.9	-
HCM Lane LOS	A	A	C	-
HCM 95th %tile Q(veh)	0.2	-	1.5	-

Intersection						
Int Delay, s/veh						
Int Delay, s/veh	0.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	W	W	W	W
Traffic Vol, veh/h	5	75	545	7	1	619
Future Vol, veh/h	5	75	545	7	1	619
Conflicting Peds, #/hr	0	0	0	0	100	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	None	None	None	None	None	None
Storage Length	0	0	0	0	0	0
Veh in Median Storage, #	0	0	0	0	0	0
Grade, %	0	0	0	0	0	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	15	6	0	0	5
Mvmt Flow	6	83	606	8	1	688

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	1056	407	0
Stage 1	709	-	-
Stage 2	346	-	-
Critical Hdwy	6.8	7.2	-
Critical Hdwy Stg 1	5.8	-	-
Critical Hdwy Stg 2	5.8	-	-
Follow-up Hdwy	3.5	3.45	-
Pot Cap-1 Maneuver	224	559	-
Stage 1	454	-	-
Stage 2	694	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	200	500	-
Mov Cap-2 Maneuver	200	-	-
Stage 1	406	-	-
Stage 2	692	-	-

Approach	WB	NB	SB
HCM Control Delay, s/0.64	0	0.02	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR/WBLn1	SBL	SBT
Capacity (veh/h)	-	-	500	801
HCM Lane V/C Ratio	-	-	0.167	0.001
HCM Control Delay (s/veh)	-	-	13.6	9.5
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.6	0

Intersection						
Int Delay, s/veh						
Int Delay, s/veh	1.9					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	W	W	W	W	W	W
Traffic Vol, veh/h	123	127	5	142	45	5
Future Vol, veh/h	123	127	5	142	45	5
Conflicting Peds, #/hr	0	100	100	0	100	100
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	None	None	None	None	None	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	0	0	0	0	0
Grade, %	0	0	0	0	0	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	137	141	6	158	50	6

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	378
Stage 1	-	-	307
Stage 2	-	-	269
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	1181
Stage 1	-	-	746
Stage 2	-	-	776
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1056
Mov Cap-2 Maneuver	-	-	381
Stage 1	-	-	667
Stage 2	-	-	690

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0.29	15.73
HCM LOS	C		

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	391	-	-	61	-
HCM Lane V/C Ratio	0.142	-	-	0.005	-
HCM Control Delay (s/veh)	15.7	-	-	8.4	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.5	-	-	0	-

Intersection						
Int Delay, s/veh						
Int Delay, s/veh	2.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	W	W	W	W	W	W
Traffic Vol, veh/h	5	58	24	92	51	5
Future Vol, veh/h	5	58	24	92	51	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	None	None	None	None	None	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	0	0	0	0	0
Grade, %	0	0	0	0	0	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	64	27	102	57	6

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	129	0	0
Stage 1	-	-	153
Stage 2	-	-	78
Critical Hdwy	4.12	-	-
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	2.218	-	-
Pot Cap-1 Maneuver	1457	-	-
Stage 1	-	-	838
Stage 2	-	-	983
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1457	-	-
Mov Cap-2 Maneuver	-	-	835
Stage 1	-	-	942
Stage 2	-	-	947

Approach	EB	WB	SB
HCM Control Delay, s/v0.59	0	9.59	0
HCM LOS	A		


Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR/SBLn1
Capacity (veh/h)	143	-	-	846
HCM Lane V/C Ratio	0.004	-	-	0.074
HCM Control Delay (s/veh)	7.5	0	-	9.6
HCM Lane LOS	A	A	-	A
HCM 95th %tile Q(veh)	0	-	-	0.2

2030 Construction Impact Weekday AM

Queues

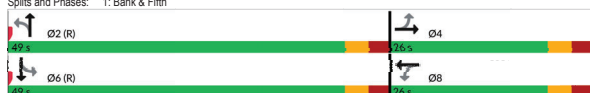
1: Bank & Fifth

11/29/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	39	59	49	51	9	565	20	459
Future Volume (vph)	39	59	49	51	9	565	20	459
Lane Group Flow (vph)	0	141	54	90	0	671	0	571
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases	4		8		2		6	
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	26.0	26.0	26.0	26.0	49.0	49.0	49.0	49.0
Total Split (s)	26.0	26.0	26.0	26.0	49.0	49.0	49.0	49.0
Total Split (%)	34.7%	34.7%	34.7%	34.7%	65.3%	65.3%	65.3%	65.3%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	12.3	12.3	12.3	12.3	51.7	51.7	51.7	51.7
Actuated g/C Ratio	0.16	0.16	0.16	0.16	0.69	0.69	0.69	0.69
v/c Ratio	0.62	0.33	0.34	0.34	0.34	0.31	0.31	0.31
Control Delay (s/veh)	36.5	31.6	21.1	21.1	1.5	5.6	5.6	5.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	36.5	31.6	21.1	21.1	1.5	5.6	5.6	5.6
LOS	D	C	C	C	A	A	A	A
Approach Delay (s/veh)	36.5		25.0		1.5	5.6		
Approach LOS	D		C		A	A		
Queue Length 50th (m)	16.1	6.9	7.1	7.1	2.0	13.5		
Queue Length 95th (m)	30.2	15.3	17.3	17.3	4.4	26.6		
Internal Link Dist (m)	49.7		112.4		195.6	190.0		
Turn Bay Length (m)			45.0					
Base Capacity (vph)	365	271	420	420	1952	1821		
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	0.39	0.20	0.21	0.21	0.34	0.31		
Intersection Summary								
Cycle Length: 75								
Actuated Cycle Length: 75								
Offset: 33 (44%), Referenced to phase 2:NBT and 6:SBT, Start of Green								
Natural Cycle: 75								
Control Type: Actuated-Coordinated								
Maximum v/c Ratio: 0.62								
Intersection Signal Delay (s/veh): 8.5	Intersection LOS: A							
Intersection Capacity Utilization 55.6%	ICU Level of Service B							
Analysis Period (min) 15								


Splits and Phases: 1: Bank & Fifth



Queues

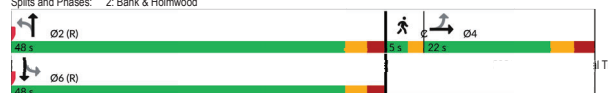
2: Bank & Holmwood

11/29/2024



Lane Group	EBT	NBL	NBT	SBL	SBT	Ø3
Lane Configurations						
Traffic Volume (vph)	22	17	551	11	413	
Future Volume (vph)	22	17	551	11	413	
Lane Group Flow (vph)	88	0	662	0	497	
Turn Type	NA	Perm	NA	Perm	NA	
Protected Phases	4		2		6	3
Permitted Phases		2		6		
Detector Phase	4	2	2	6	6	
Switch Phase						
Minimum Initial (s)	4.4	10.0	10.0	4.0	4.0	1.0
Minimum Split (s)	22.0	48.0	48.0	48.0	48.0	5.0
Total Split (s)	22.0	48.0	48.0	48.0	48.0	5.0
Total Split (%)	29.3%	64.0%	64.0%	64.0%	64.0%	7%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	2.0
All-Red Time (s)	2.6	2.2	2.2	2.2	2.2	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.6	5.2	5.2	5.2	5.2	
Lead/Lag		Lag				Lead
Lead-Lag Optimize?						
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	None
Act Effct Green (s)	10.1	57.4	57.4	57.4	57.4	
Actuated g/C Ratio	0.13	0.77	0.77	0.77	0.77	
v/c Ratio	0.48	0.31	0.31	0.24	0.24	
Control Delay (s/veh)	37.8	2.2	2.2	3.3	3.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	37.8	2.2	2.2	3.3	3.3	
LOS	D	A	A	A	A	
Approach Delay (s/veh)	37.8	2.2	2.2	3.3	3.3	
Approach LOS	D	A	A	A	A	
Queue Length 50th (m)	11.7	1.8	1.8	8.2	8.2	
Queue Length 95th (m)	23.3	5.0	5.0	15.5	15.5	
Internal Link Dist (m)	39.8		31.5	195.6		
Turn Bay Length (m)						
Base Capacity (vph)	298	2116	2048			
Starvation Cap Reductn	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	
Reduced v/c Ratio	0.30	0.31	0.24			
Intersection Summary						
Cycle Length: 75						
Actuated Cycle Length: 75						
Offset: 28 (37%), Referenced to phase 2:NBT and 6:SBT, Start of Green						
Natural Cycle: 75						
Control Type: Actuated-Coordinated						
Maximum v/c Ratio: 0.48						
Intersection Signal Delay (s/veh): 5.1	Intersection LOS: A					
Intersection Capacity Utilization 53.2%	ICU Level of Service A					
Analysis Period (min) 15						

Splits and Phases: 2: Bank & Holmwood



Lane Group	WBL	WBR	NBT	SBL	SBT	Ø1	Ø7
Lane Configurations	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	53	38	519	72	373		
Future Volume (vph)	53	38	519	72	373		
Lane Group Flow (vph)	59	42	693	80	414		
Turn Type	Prot	Perm	NA	pm+pt	NA		
Protected Phases	8	2	5	6	1	7	
Permitted Phases		8		6			
Detector Phase	8	8	2	5	6		
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	1.0	10.0	1.0	1.0
Minimum Split (s)	26.0	26.0	27.0	12.0	44.0	5.0	5.0
Total Split (s)	26.0	26.0	27.0	12.0	44.0	5.0	5.0
Total Split (%)	34.7%	34.7%	36.0%	10.0%	58.7%	7%	7%
Yellow Time (s)	3.3	3.3	3.0	3.0	3.0	2.0	3.5
All-Red Time (s)	3.0	3.0	3.9	3.9	3.9	0.0	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	6.3	6.3	6.9	6.9	6.9		
Lead/Lag	Lag	Lag	Lag	Lag	Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	C-Max	None	C-Max	None	None
Act Effct Green (s)	10.3	10.3	46.5	54.8	56.1		
Actuated g/C Ratio	0.14	0.14	0.62	0.73	0.75		
v/c Ratio	0.29	0.25	0.39	0.18	0.18		
Control Delay (s/veh)	32.6	13.9	10.3	9.6	7.0		
Queue Delay	0.0	0.0	0.0	0.0	0.0		
Total Delay (s/veh)	32.6	13.9	10.3	9.6	7.0		
LOS	C	B	B	A	A		
Approach Delay (s/veh)	24.8		10.3	7.4			
Approach LOS	C		B	A			
Queue Length 50th (m)	7.6	0.0	28.2	4.6	13.2		
Queue Length 95th (m)	17.5	8.0	42.7	13.2	25.5		
Internal Link Dist (m)	30.6		33.7	40.0	44.8		
Turn Bay Length (m)				40.0			
Base Capacity (vph)	405	288	1764	448	2244		
Starvation Cap Reductn	0	0	0	0	0		
Spillback Cap Reductn	0	0	0	0	0		
Storage Cap Reductn	0	0	0	0	0		
Reduced v/c Ratio	0.15	0.15	0.39	0.18	0.18		

Intersection Summary

Cycle Length: 75
 Actuated Cycle Length: 75
 Offset: 25 (33%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
 Natural Cycle: 75
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.39
 Intersection Signal Delay (s/veh): 10.3
 Intersection Capacity Utilization 56.6%
 Analysis Period (min) 15

Intersection LOS: B
 ICU Level of Service B



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	Ø3	Ø7
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	58	60	19	60	23	984	190	417		
Future Volume (vph)	58	60	19	60	23	984	190	417		
Lane Group Flow (vph)	0	144	0	396	0	1135	0	723		
Turn Type	Perm	NA	Perm	NA	Perm	NA	pm+pt	NA		
Protected Phases	4	8	8	2	2	1	6	3	7	
Permitted Phases	4		8		2		6			
Detector Phase	4	4	8	8	2	2	1	6		
Switch Phase										
Minimum Initial (s)	6.4	6.4	5.3	5.3	17.0	17.0	5.0	17.0	1.0	1.0
Minimum Split (s)	26.0	26.0	26.0	26.0	38.0	38.0	11.0	49.0	5.0	5.0
Total Split (s)	26.0	26.0	26.0	26.0	38.0	38.0	11.0	49.0	5.0	5.0
Total Split (%)	32.5%	32.5%	32.5%	32.5%	47.5%	47.5%	13.8%	61.3%	6%	6%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0
All-Red Time (s)	2.6	2.6	2.6	2.6	3.0	3.0	2.9	3.0	0.0	0.0
Lost Time Adjust (s)		0.0		0.0		0.0		0.0		
Total Lost Time (s)		5.6		5.6		6.0		6.0		
Lead/Lag	Lag	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	C-Max	C-Max	None	C-Max	None	None
Act Effct Green (s)	21.6		21.6		46.8		46.8			
Actuated g/C Ratio	0.27		0.27		0.59		0.59			
v/c Ratio	0.64		0.87		0.66		1.11d			
Control Delay (s/veh)	38.0		33.6		14.7		20.4			
Queue Delay	0.0		0.0		0.0		0.0			
Total Delay (s/veh)	38.0		33.6		14.7		20.4			
LOS	D		C		B		C			
Approach Delay (s/veh)	38.0		33.6		14.7		20.4			
Approach LOS	D		C		B		C			
Queue Length 50th (m)	17.8		25.4		63.7		22.9			
Queue Length 95th (m)	36.1		#74.4		86.9		#84.6			
Internal Link Dist (m)	75.1		136.0		63.1		79.0			
Turn Bay Length (m)										
Base Capacity (vph)	245		474		1714		907			
Starvation Cap Reductn	0		0		0		0			
Spillback Cap Reductn	0		0		0		0			
Storage Cap Reductn	0		0		0		0			
Reduced v/c Ratio	0.59		0.84		0.66		0.80			

Intersection Summary

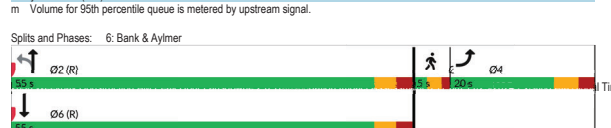
Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 10 (13%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.87
 Intersection Signal Delay (s/veh): 20.9
 Intersection Capacity Utilization 95.8%
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 dl Defacto Left Lane. Recode with 1 through 1 lane as a left lane.

Lane Group	EBL	NBL	NBT	SBT	Ø3
Lane Configurations	↔	↔	↔	↔	↔
Traffic Volume (vph)	64	16	718	555	
Future Volume (vph)	64	16	718	555	
Lane Group Flow (vph)	81	0	816	677	
Turn Type	Prot	Perm	NA	NA	
Protected Phases	4	2	6	3	
Permitted Phases	4	2		6	
Detector Phase	4	2	2	6	
Switch Phase					
Minimum Initial (s)	10.0	30.0	30.0	30.0	1.0
Minimum Split (s)	20.0	55.0	55.0	55.0	5.0
Total Split (s)	20.0	55.0	55.0	55.0	5.0
Total Split (%)	29.0%	60.8%	60.8%	60.8%	6%
Yellow Time (s)	3.3	3.0	3.0	3.0	2.0
All-Red Time (s)	2.2	2.2	2.2	2.2	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.5	5.2	5.2	5.2	
Lead/Lag	Lag			Lead	
Lead-Lag Optimize?					
Recall Mode	Ped	C-Max	C-Max	C-Max	Max
Act Effct Green (s)	14.0		50.3	50.3	
Actuated g/C Ratio	0.18		0.63	0.63	
v/c Ratio	0.30		0.44	0.37	
Control Delay (s/veh)	29.6		4.1	7.6	
Queue Delay	0.0		0.0	0.0	
Total Delay (s/veh)	29.6		4.1	7.6	
LOS	C		A	A	
Approach Delay (s/veh)	29.6		4.1	7.6	
Approach LOS	C		A	A	
Queue Length 50th (m)	9.7		13.8	22.3	
Queue Length 95th (m)	21.8		m17.2	31.5	
Internal Link Dist (m)	76.7		26.1	10.1	
Turn Bay Length (m)					
Base Capacity (vph)	280		1840	1817	
Starvation Cap Reductn	0		0	0	
Spillback Cap Reductn	0		0	0	
Storage Cap Reductn	0		0	0	
Reduced v/c Ratio	0.29		0.44	0.37	

Intersection Summary

Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 4 (5%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Natural Cycle: 80
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.44
 Intersection Signal Delay (s/veh): 6.9
 Intersection Capacity Utilization 53.6%
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Intersection LOS: A
 ICU Level of Service A



Lane Group	Ø1	Ø2 (R)	Ø4	Ø6 (R)	Ø8
Lane Configurations	↔	↔	↔	↔	↔
Traffic Volume (vph)	14	38	14	26	76
Future Volume (vph)	14	38	14	26	76
Lane Group Flow (vph)	14	38	14	26	76
Turn Type	Prot	Perm	NA	Perm	NA
Protected Phases	4	8	8	2	2
Permitted Phases	4		8		2
Detector Phase	4	4	8	8	2
Switch Phase					
Minimum Initial (s)	6.4	6.4	5.3	5.3	17.0
Minimum Split (s)	26.0	26.0	26.0	26.0	38.0
Total Split (s)	26.0	26.0	26.0	26.0	38.0
Total Split (%)	32.5%	32.5%	32.5%	32.5%	47.5%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.6	2.6	2.6	2.6	3.0
Lost Time Adjust (s)		0.0		0.0	
Total Lost Time (s)		5.6		5.6	
Lead/Lag	Lag	Lag	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	C-Max
Act Effct Green (s)	21.6		21.6		46.8
Actuated g/C Ratio	0.27		0.27		0.59
v/c Ratio	0.64		0.87		0.66
Control Delay (s/veh)	38.0		33.6		14.7
Queue Delay	0.0		0.0		0.0
Total Delay (s/veh)	38.0		33.6		14.7
LOS	D		C		B
Approach Delay (s/veh)	38.0		33.6		14.7
Approach LOS	D		C		B
Queue Length 50th (m)	17.8		25.4		63.7
Queue Length 95th (m)	36.1		#74.4		86.9
Internal Link Dist (m)	75.1		136.0		63.1
Turn Bay Length (m)					
Base Capacity (vph)	245		474		1714
Starvation Cap Reductn	0		0		0
Spillback Cap Reductn	0		0		0
Storage Cap Reductn	0		0		0
Reduced v/c Ratio	0.59		0.84		0.66

Intersection Summary

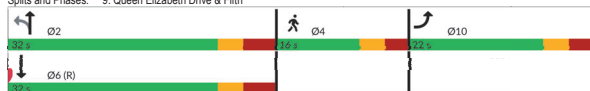
Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 10 (13%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.87
 Intersection Signal Delay (s/veh): 20.9
 Intersection Capacity Utilization 95.8%
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 dl Defacto Left Lane. Recode with 1 through 1 lane as a left lane.

Queues
9: Queen Elizabeth Drive & Fifth

11/29/2024

Table with columns: Lane Group, EBL, NBL, NBT, SBT, Ø4. Includes sub-sections: Lane Configurations, Traffic Volume (vph), Future Volume (vph), Lane Group Flow (vph), Turn Type, Protected Phases, Permitted Phases, Detector Phase, Switch Phase, Minimum Initial (s), Minimum Split (s), Total Split (s), Total Split (%), Yellow Time (s), All-Red Time (s), Lost Time Adjust (s), Total Lost Time (s), LeadLag, Lead-Lag Optimize?, Recall Mode, Act Effct Green (s), Actuated g/C Ratio, v/c Ratio, Control Delay (s/veh), Queue Delay, Total Delay (s/veh), LOS, Approach Delay (s/veh), Approach LOS, Queue Length 50th (m), Queue Length 95th (m), Internal Link Dist (m), Turn Bay Length (m), Base Capacity (vph), Starvation Cap Reductn, Spillback Cap Reductn, Storage Cap Reductn, Reduced v/c Ratio. Includes Intersection Summary with Cycle Length, Actuated Cycle Length, Offset, Natural Cycle, Control Type, Maximum v/c Ratio, Intersection Signal Delay, Intersection Capacity Utilization, and Analysis Period.

Splits and Phases: 9: Queen Elizabeth Drive & Fifth



Timing, 2033

HCM 7th AWSC
13: Paul Askin & Marche

11/29/2024

Table with columns: Movement, EBT, EBR, WBL, WBT, NBL, NBR. Includes sub-sections: Lane Configurations, Traffic Vol, veh/h, Future Vol, veh/h, Peak Hour Factor, Heavy Vehicles, %, Mvmt Flow, Number of Lanes, Approach, Oposing Approach, Oposing Lanes, Conflicting Approach Left, Conflicting Lanes Left, Conflicting Approach Right, Conflicting Lanes Right, HCM Control Delay, s/veh, HCM LOS.

Table with columns: Lane, NBLn1, EBLn1, WBLn1. Includes sub-sections: Vol Left, %, Vol Thru, %, Vol Right, %, Sign Control, Traffic Vol by Lane, LT Vol, Through Vol, RT Vol, Lane Flow Rate, Geometry Grp, Degree of Util (X), Departure Headway (Hd), Convergence, Y/N, Cap, Service Time, HCM Lane V/C Ratio, HCM Control Delay, s/veh, HCM Lane LOS, HCM 95th-tile Q.

HCM 7th AWSC
12: Exhibition & Paul Askin

11/29/2024

Table with columns: Movement, EBL, EBT, WBT, WBR, SBL, SBR. Includes sub-sections: Lane Configurations, Traffic Vol, veh/h, Future Vol, veh/h, Peak Hour Factor, Heavy Vehicles, %, Mvmt Flow, Number of Lanes, Approach, Oposing Approach, Oposing Lanes, Conflicting Approach Left, Conflicting Lanes Left, Conflicting Approach Right, Conflicting Lanes Right, HCM Control Delay, s/veh, HCM LOS. Includes Lane section with columns: Lane, EBLn1, WBLn1, SBLn1. Includes sub-sections: Vol Left, %, Vol Thru, %, Vol Right, %, Sign Control, Traffic Vol by Lane, LT Vol, Through Vol, RT Vol, Lane Flow Rate, Geometry Grp, Degree of Util (X), Departure Headway (Hd), Convergence, Y/N, Cap, Service Time, HCM Lane V/C Ratio, HCM Control Delay, s/veh, HCM Lane LOS, HCM 95th-tile Q.

HCM 7th AWSC
14: Exhibition & Marche

11/29/2024

Table with columns: Movement, EBT, EBR, WBL, WBT, NBL, NBR. Includes sub-sections: Lane Configurations, Traffic Vol, veh/h, Future Vol, veh/h, Peak Hour Factor, Heavy Vehicles, %, Mvmt Flow, Number of Lanes, Approach, Oposing Approach, Oposing Lanes, Conflicting Approach Left, Conflicting Lanes Left, Conflicting Approach Right, Conflicting Lanes Right, HCM Control Delay, s/veh, HCM LOS.

Table with columns: Lane, NBLn1, EBLn1, WBLn1. Includes sub-sections: Vol Left, %, Vol Thru, %, Vol Right, %, Sign Control, Traffic Vol by Lane, LT Vol, Through Vol, RT Vol, Lane Flow Rate, Geometry Grp, Degree of Util (X), Departure Headway (Hd), Convergence, Y/N, Cap, Service Time, HCM Lane V/C Ratio, HCM Control Delay, s/veh, HCM Lane LOS, HCM 95th-tile Q.

Intersection													
Intersection Delay, s/veh	7.8												
Intersection LOS	A												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Vol, veh/h	68	41	0	0	0	73	19	32	24	0	0	109	
Future Vol, veh/h	68	41	0	0	0	73	19	32	24	0	0	109	
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	2	2	2	2	2	2	2	2	2	2	2	
Mvmt Flow	76	46	0	0	0	81	21	36	27	0	0	121	
Number of Lanes	0	1	0	0	0	1	0	1	0	0	0	1	
Approach	EB	EBT	EBR	WB	WB	NB	NB	NB	SB	SB	SB	SBR	
Opposing Approach	WB					EB	SB	NB					
Opposing Lanes	1					1	1	1					
Conflicting Approach Left	SB					NB	EB	WB					
Conflicting Lanes Left	1					1	1	1					
Conflicting Approach Right	NB					SB	WB	EB					
Conflicting Lanes Right	1					1	1	1					
HCM Control Delay, s/veh	8.4						7.3			7.9		7.5	
HCM LOS	A						A			A		A	

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	25%	62%	0%	0%
Vol Thru, %	43%	38%	0%	0%
Vol Right, %	32%	0%	100%	100%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	75	109	73	109
LT Vol	19	68	0	0
Through Vol	32	41	0	0
RT Vol	24	0	73	109
Lane Flow Rate	83	121	81	121
Geometry Grp	1	1	1	1
Degree of Util (X)	0.101	0.154	0.088	0.13
Departure Headway (Hd)	4.365	4.586	3.904	3.878
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	823	787	920	926
Service Time	2.381	2.586	1.92	1.892
HCM Lane V/C Ratio	0.101	0.154	0.088	0.131
HCM Control Delay, s/veh	7.9 8.4 7.3 7.5			
HCM Lane LOS	A A A A			
HCM 95th %ile Q	0.3	0.5	0.3	0.4

Intersection						
Int Delay, s/veh	6.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	209	144	637	372	46
Future Vol, veh/h	1	209	144	637	372	46
Conflicting Peds, #/hr	0	0	178	0	0	107
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	None	None	None	None	None	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	0	0	-
Grade, %	0	-	0	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	5	15	5	5	5	48
Mvmt Flow	1	232	160	708	413	51

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1291	617	642	0	-	0
Stage 1	617	-	-	-	-	-
Stage 2	674	-	-	-	-	-
Critical Hdwy	6.675	6.425	4.175	-	-	-
Critical Hdwy Stg 1	5.475	-	-	-	-	-
Critical Hdwy Stg 2	5.875	-	-	-	-	-
Follow-up Hdwy	3.54753	4.4252	2.475	-	-	-
Pot Cap-1 Maneuver	164	460	923	-	-	-
Stage 1	530	-	-	-	-	-
Stage 2	462	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	79	374	749	-	-	-
Mov Cap-2 Maneuver	79	-	-	-	-	-
Stage 1	316	-	-	-	-	-
Stage 2	375	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/29.21	3.71		
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT/EBLn1	SBT	SBR
Capacity (veh/h)	602	-	374	-
HCM Lane V/C Ratio	0.214	-	0.622	-
HCM Control Delay (s/veh)	11.1	2	29.2	-
HCM Lane LOS	B	A	D	-
HCM 95th %ile Q(veh)	0.8	-	4	-

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	27	0	769	571	0
Future Vol, veh/h	0	27	0	769	571	0
Conflicting Peds, #/hr	0	0	0	0	86	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	None	None	None	None	None	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	0	-	-
Grade, %	0	-	0	0	-	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	5	5	5	5	9	5
Mvmt Flow	0	30	0	854	634	0

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	-	634	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.275	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-3.3475	-	-	-	-
Pot Cap-1 Maneuver	0	471	0	-	-	0
Stage 1	0	-	0	-	-	0
Stage 2	0	-	0	-	-	0
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	471	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/43.16	0		
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT/EBLn1	SBT	SBR
Capacity (veh/h)	-	471	-	-
HCM Lane V/C Ratio	-	0.064	-	-
HCM Control Delay (s/veh)	-	13.2	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %ile Q(veh)	-	0.2	-	-

Intersection						
Int Delay, s/veh	1.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	20	24	66	251	280	71
Future Vol, veh/h	20	24	66	251	280	71
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	None	None	None	None	None	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	0	0	-
Grade, %	0	-	0	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	22	27	73	279	311	79

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	776	351	390	0	-	0
Stage 1	351	-	-	-	-	-
Stage 2	426	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	369	697	1180	-	-	-
Stage 1	717	-	-	-	-	-
Stage 2	663	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	342	697	1180	-	-	-
Mov Cap-2 Maneuver	342	-	-	-	-	-
Stage 1	665	-	-	-	-	-
Stage 2	663	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/43.48	1.72		
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT/EBLn1	SBT	SBR
Capacity (veh/h)	375	-	473	-
HCM Lane V/C Ratio	0.062	-	0.103	-
HCM Control Delay (s/veh)	8.3	0	13.5	-
HCM Lane LOS	A	A	B	-
HCM 95th %ile Q(veh)	0.2	-	0.3	-

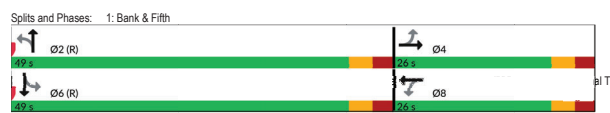
Intersection					
Int Delay, s/veh	0.4				
Movement	WBL	WBR	NBT	NBR	SBL
Lane Configurations		↕	↕		↕
Traffic Vol, veh/h	0	34	557	7	0
Future Vol, veh/h	0	34	557	7	0
Conflicting Peds, #/hr	0	0	0	100	0
Sign Control	Stop	Stop	Free	Free	Free
RT Channelized	None	None	None	None	None
Storage Length	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	0
Grade, %	0	-	0	-	0
Peak Hour Factor	90	90	90	90	90
Heavy Vehicles, %	0	15	7	0	0
Mvmt Flow	0	38	619	8	0
Major/Minor					
Conflicting Flow All	Minor1	Major1	Major2		
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	7.2	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	3.45	-	-	-
Pot Cap-1 Maneuver	0	553	-	-	0
Stage 1	0	-	-	-	0
Stage 2	0	-	-	-	0
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	494	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Approach					
	WB	NB	SB		
HCM Control Delay, s/v	2.88	0	0		
HCM LOS	B				
Minor Lane/Major Mvmt					
	NBT	NBR/WBLn1	SBT		
Capacity (veh/h)	-	-	494		
HCM Lane V/C Ratio	-	-	0.076		
HCM Control Delay (s/veh)	-	-	12.9		
HCM Lane LOS	-	-	B		
HCM 95th %tile Q(veh)	-	-	0.2		

Intersection					
Int Delay, s/veh	1.3				
Movement	EBT	EBR	WBL	WBT	NBL
Lane Configurations	↕	↕	↕	↕	↕
Traffic Vol, veh/h	108	62	5	68	19
Future Vol, veh/h	108	62	5	68	19
Conflicting Peds, #/hr	0	100	100	0	100
Sign Control	Free	Free	Free	Free	Stop
RT Channelized	None	None	None	None	None
Storage Length	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0
Grade, %	0	-	-	0	0
Peak Hour Factor	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2
Mvmt Flow	120	69	6	76	21
Major/Minor					
Conflicting Flow All	Major1	Major2	Minor1		
Stage 1	0	0	289	0	441
Stage 2	-	-	-	-	254
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1273	-	574
Stage 1	-	-	-	-	788
Stage 2	-	-	-	-	845
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1138	-	456
Mov Cap-2 Maneuver	-	-	-	-	456
Stage 1	-	-	-	-	705
Stage 2	-	-	-	-	752
Approach					
	EB	WB	NB		
HCM Control Delay, s/v	0	0.56	13.06		
HCM LOS			B		
Minor Lane/Major Mvmt					
	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	473	-	-	123	-
HCM Lane V/C Ratio	0.056	-	-	0.005	-
HCM Control Delay (s/veh)	13.1	-	-	8.2	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0	-

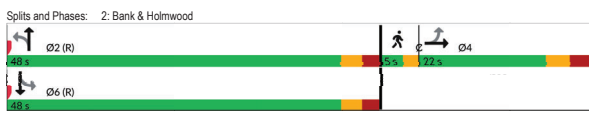
Intersection					
Int Delay, s/veh	0.6				
Movement	EBL	EBT	WBT	WBR	SBL
Lane Configurations	↕	↕	↕	↕	↕
Traffic Vol, veh/h	5	39	121	16	5
Future Vol, veh/h	5	39	121	16	5
Conflicting Peds, #/hr	0	0	0	0	0
Sign Control	Free	Free	Free	Stop	Stop
RT Channelized	None	None	None	None	None
Storage Length	-	-	-	-	-
Veh in Median Storage, #	-	0	0	-	0
Grade, %	-	0	0	-	0
Peak Hour Factor	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2
Mvmt Flow	6	43	134	18	6
Major/Minor					
Conflicting Flow All	Major1	Major2	Minor2		
Stage 1	152	0	0	198	143
Stage 2	-	-	-	-	143
Critical Hdwy	4.12	-	-	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	2.218	-	-	-	3.518
Pot Cap-1 Maneuver	1429	-	-	-	791
Stage 1	-	-	-	-	884
Stage 2	-	-	-	-	968
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	1429	-	-	-	788
Mov Cap-2 Maneuver	-	-	-	-	788
Stage 1	-	-	-	-	880
Stage 2	-	-	-	-	968
Approach					
	EB	WB	SB		
HCM Control Delay, s/v	0.86	0	9.36		
HCM LOS			A		
Minor Lane/Major Mvmt					
	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	205	-	-	-	836
HCM Lane V/C Ratio	0.004	-	-	-	0.012
HCM Control Delay (s/veh)	7.5	0	-	-	9.4
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

2030 Construction Impact Weekday PM

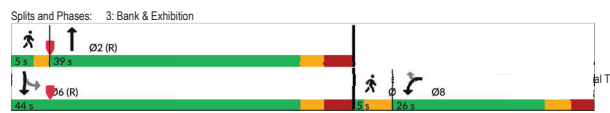
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	47	54	60	39	17	460	29	615
Traffic Volume (vph)	47	54	60	39	17	460	29	615
Future Volume (vph)	0	164	67	82	0	564	0	756
Lane Group Flow (vph)	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases	4	2	8	2	6	6	6	6
Permitted Phases	4	4	8	8	2	2	2	6
Detector Phase	4	4	8	8	2	2	2	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	26.0	26.0	26.0	26.0	49.0	49.0	49.0	49.0
Total Split (s)	26.0	26.0	26.0	26.0	49.0	49.0	49.0	49.0
Total Split (%)	34.7%	34.7%	34.7%	34.7%	65.3%	65.3%	65.3%	65.3%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	13.2	13.2	13.2	13.2	50.8	50.8	50.8	50.8
Actuated g/C Ratio	0.18	0.18	0.18	0.18	0.68	0.68	0.68	0.68
v/c Ratio	0.67	0.41	0.30	0.30	0.30	0.42	0.42	0.42
Control Delay (s/veh)	35.8	33.1	17.4	11.2	7.0	7.0	7.0	7.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	35.8	33.1	17.4	11.2	7.0	7.0	7.0	7.0
LOS	D	C	B	B	B	A	A	A
Approach Delay (s/veh)	35.8	24.5	11.2	7.0	7.0	7.0	7.0	7.0
Approach LOS	D	C	B	B	A	A	A	A
Queue Length 50th (m)	17.6	8.5	5.2	20.2	20.9	20.9	20.9	20.9
Queue Length 95th (m)	32.7	17.7	14.7	50.8	40.7	40.7	40.7	40.7
Internal Link Dist (m)	49.7	112.4	195.6	195.6	190.0	190.0	190.0	190.0
Turn Bay Length (m)		45.0						
Base Capacity (vph)	364	255	409	1852	1804	1804	1804	1804
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	0.45	0.26	0.20	0.30	0.30	0.42	0.42	0.42



Lane Group	EBT	NBL	NBT	SBL	SBT	Ø3
Lane Configurations	47	26	508	28	591	
Traffic Volume (vph)	18	26	508	28	591	
Future Volume (vph)	112	0	650	0	719	
Lane Group Flow (vph)	NA	Perm	NA	Perm	NA	
Protected Phases	4	2	6	6	3	
Permitted Phases	4	2	2	2	6	
Detector Phase	4	2	2	2	6	
Switch Phase						
Minimum Initial (s)	4.4	10.0	10.0	4.0	4.0	1.0
Minimum Split (s)	22.0	48.0	48.0	48.0	48.0	5.0
Total Split (s)	22.0	48.0	48.0	48.0	48.0	5.0
Total Split (%)	29.3%	64.0%	64.0%	64.0%	64.0%	7%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	2.0
All-Red Time (s)	2.6	2.2	2.2	2.2	2.2	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.6	5.2	5.2	5.2	5.2	0.0
Lead/Lag		Lag				Lead
Lead-Lag Optimize?						
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	None
Act Effct Green (s)	11.6	56.0	56.0	56.0	56.0	0.75
Actuated g/C Ratio	0.15	0.75	0.75	0.75	0.75	0.36
v/c Ratio	0.55	0.33	0.33	0.36	0.36	0.36
Control Delay (s/veh)	38.8	2.0	5.0	5.0	5.0	5.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	38.8	2.0	5.0	5.0	5.0	5.0
LOS	D	A	A	A	A	A
Approach Delay (s/veh)	38.8	2.0	5.0	5.0	5.0	5.0
Approach LOS	D	A	A	A	A	A
Queue Length 50th (m)	14.8	4.2	25.2	25.2	25.2	25.2
Queue Length 95th (m)	27.6	9.8	24.3	24.3	24.3	24.3
Internal Link Dist (m)	39.8	31.5	195.6	195.6	195.6	195.6
Turn Bay Length (m)						
Base Capacity (vph)	287	1948	1975	1975	1975	1975
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	0.39	0.33	0.36	0.36	0.36	0.36



Lane Group	WBL	WBR	NBT	SBL	SBT	Ø1	Ø7
Lane Configurations	123	68	473	123	523		
Traffic Volume (vph)	123	68	473	123	523		
Future Volume (vph)	137	76	673	137	581		
Lane Group Flow (vph)	Prot	Perm	NA	Perm	NA		
Protected Phases	8	2	6	6	1	7	
Permitted Phases	8	8	6	6	6	6	
Detector Phase	8	8	2	6	6	6	
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	1.0	1.0
Minimum Split (s)	26.0	26.0	39.0	44.0	44.0	5.0	5.0
Total Split (s)	26.0	26.0	39.0	44.0	44.0	5.0	5.0
Total Split (%)	34.7%	34.7%	52.0%	58.7%	58.7%	7%	7%
Yellow Time (s)	3.3	3.3	3.0	3.0	3.0	2.0	3.5
All-Red Time (s)	3.0	3.0	3.9	3.9	3.9	0.0	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.3	6.9	6.9	6.9	0.0	0.0
Lead/Lag	Lag	Lag	Lag			Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes			Yes	Yes
Recall Mode	None	None	C-Max	C-Max	C-Max	None	None
Act Effct Green (s)	12.5	12.5	53.9	53.9	53.9	0.72	0.72
Actuated g/C Ratio	0.17	0.17	0.72	0.72	0.72	0.34	0.34
v/c Ratio	0.53	0.32	0.34	0.34	0.34	0.27	0.27
Control Delay (s/veh)	35.8	10.7	5.7	5.9	3.3	3.3	3.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	35.8	10.7	5.7	5.9	3.3	3.3	3.3
LOS	D	B	A	A	A	A	A
Approach Delay (s/veh)	26.8	5.7	3.8	3.8	3.8	3.8	3.8
Approach LOS	C	A	A	A	A	A	A
Queue Length 50th (m)	18.1	0.0	16.7	3.9	8.6	8.6	8.6
Queue Length 95th (m)	31.8	9.8	31.1	7.5	11.1	11.1	11.1
Internal Link Dist (m)	30.6	33.7	40.0	44.8	44.8	44.8	44.8
Turn Bay Length (m)							
Base Capacity (vph)	405	327	1997	404	2174	2174	2174
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.34	0.23	0.34	0.34	0.27	0.27	0.27



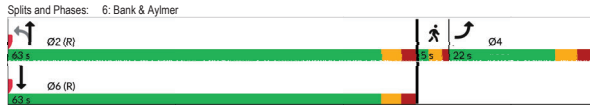
Queues
6: Bank & Aylmer

11/29/2024

Lane Group	EBL	NBL	NBT	SBT	Ø3
Lane Configurations	↔	↔	↕	↕	
Traffic Volume (vph)	56	21	692	774	
Future Volume (vph)	56	21	692	774	
Lane Group Flow (vph)	89	0	792	967	
Turn Type	Prot	Perm	NA	NA	
Protected Phases	4	2	6	3	
Permitted Phases	4	2	6		
Detector Phase	4	2	2	6	
Switch Phase					
Minimum Initial (s)	10.0	30.0	30.0	30.0	1.0
Minimum Split (s)	22.0	63.0	63.0	63.0	5.0
Total Split (s)	22.0	63.0	63.0	63.0	5.0
Total Split (%)	24.4%	70.0%	70.0%	70.0%	6%
Yellow Time (s)	3.3	3.0	3.0	3.0	2.0
All-Red Time (s)	2.2	2.2	2.2	2.2	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.5	5.2	5.2	5.2	
Lead/Lag	Lag			Lead	
Lead-Lag Optimize?					
Recall Mode	Ped	C-Max	C-Max	C-Max	Max
Act Effct Green (s)	14.1	60.2	60.2	60.2	
Actuated g/C Ratio	0.16	0.67	0.67	0.67	
v/c Ratio	0.37	0.42	0.51	0.51	
Control Delay (s/veh)	31.5	5.1	8.3	8.3	
Queue Delay	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	31.5	5.1	8.4	8.4	
LOS	C	A	A	A	
Approach Delay (s/veh)	31.5	5.1	8.4	8.4	
Approach LOS	C	A	A	A	
Queue Length 50th (m)	10.6	17.5	37.1	37.1	
Queue Length 95th (m)	24.2	m22.2	51.2	51.2	
Internal Link Dist (m)	76.7	28.1	10.1	10.1	
Turn Bay Length (m)					
Base Capacity (vph)	275	1906	1911	1911	
Starvation Cap Reductn	0	0	0	0	
Spillback Cap Reductn	0	0	89	89	
Storage Cap Reductn	0	0	0	0	
Reduced v/c Ratio	0.32	0.42	0.53	0.53	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 87 (97%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.51
Intersection Signal Delay (s/veh): 8.1
Intersection Capacity Utilization 56.8%
Analysis Period (min) 15
ICU Level of Service B
m Volume for 95th percentile queue is metered by upstream signal.



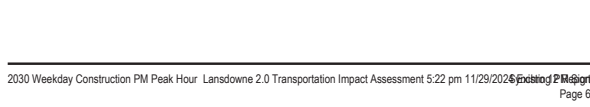
Queues
7: Bank & Sunnyside

11/29/2024

Lane Group	EBL	NBL	NBT	SBT	Ø4
Lane Configurations	↔	↔	↕	↕	
Traffic Volume (vph)	35	39	197	522	
Future Volume (vph)	35	39	197	522	
Lane Group Flow (vph)	77	0	262	653	
Turn Type	Prot	Perm	NA	NA	
Protected Phases	10	2	6	4	
Permitted Phases	2				
Detector Phase	10	2	2	6	
Switch Phase					
Minimum Initial (s)	10.0	4.0	4.0	4.0	4.0
Minimum Split (s)	21.0	48.0	48.0	48.0	11.0
Total Split (s)	21.0	48.0	48.0	48.0	11.0
Total Split (%)	26.3%	60.0%	60.0%	60.0%	14%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.7	3.8	3.8	3.8	2.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.7	6.8	6.8	6.8	
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	None	None	None	C-Max	None
Act Effct Green (s)	10.8	61.2	61.2	61.2	
Actuated g/C Ratio	0.14	0.77	0.77	0.77	
v/c Ratio	0.37	0.24	0.51	0.51	
Control Delay (s/veh)	36.7	4.7	7.1	7.1	
Queue Delay	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	36.7	4.7	7.1	7.1	
LOS	D	A	A	A	
Approach Delay (s/veh)	36.7	4.7	7.1	7.1	
Approach LOS	D	A	A	A	
Queue Length 50th (m)	11.0	11.2	37.6	37.6	
Queue Length 95th (m)	22.5	22.8	70.8	70.8	
Internal Link Dist (m)	57.2	0.1	5.9	5.9	
Turn Bay Length (m)					
Base Capacity (vph)	293	1100	1270	1270	
Starvation Cap Reductn	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	
Storage Cap Reductn	0	0	0	0	
Reduced v/c Ratio	0.26	0.24	0.51	0.51	

Intersection Summary

Cycle Length: 80
Actuated Cycle Length: 80
Offset: 0 (0%), Referenced to phase 6:SBT, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.51
Intersection Signal Delay (s/veh): 8.7
Intersection Capacity Utilization 64.9%
Analysis Period (min) 15
ICU Level of Service C



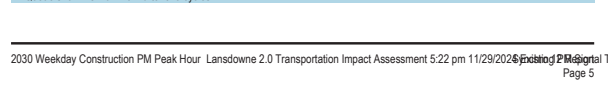
Queues
7: Bank & Sunnyside

11/29/2024

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	Ø3	Ø7
Lane Configurations	↔	↔	↔	↔	↔	↕	↕	↕		
Traffic Volume (vph)	52	81	17	83	15	429	208	771		
Future Volume (vph)	52	81	17	83	15	429	208	771		
Lane Group Flow (vph)	0	181	0	289	0	517	0	1192		
Turn Type	Perm	NA	Perm	NA	Perm	NA	pm+pt	NA		
Protected Phases	4	4	8	8	2	2	1	6	3	7
Permitted Phases	4	4	8	8	2	2	1	6		
Detector Phase	4	4	8	8	2	2	1	6		
Switch Phase										
Minimum Initial (s)	6.4	6.4	5.3	5.3	17.0	17.0	5.0	17.0	1.0	1.0
Minimum Split (s)	25.0	25.0	25.0	25.0	43.0	43.0	17.0	60.0	5.0	5.0
Total Split (s)	25.0	25.0	25.0	25.0	43.0	43.0	17.0	60.0	5.0	5.0
Total Split (%)	27.8%	27.8%	27.8%	27.8%	47.8%	47.8%	18.9%	66.7%	6%	6%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0
All-Red Time (s)	2.6	2.6	2.6	2.6	3.0	3.0	2.9	3.0	0.0	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	5.6	5.6	5.6	5.6	6.0	6.0	6.0	6.0		
Lead/Lag	Lag	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	C-Max	C-Max	None	C-Max	None	None
Act Effct Green (s)	24.4	24.4	24.4	24.4	54.0	54.0	54.0	54.0		
Actuated g/C Ratio	0.27	0.27	0.27	0.27	0.60	0.60	0.60	0.60		
v/c Ratio	0.70	0.70	0.97	0.97	0.31	0.31	0.96	0.96		
Control Delay (s/veh)	45.9	60.9	9.3	9.3	30.6	30.6	30.6	30.6		
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Total Delay (s/veh)	45.9	60.9	9.3	9.3	30.6	30.6	30.6	30.6		
LOS	D	D	E	E	A	A	C	C		
Approach Delay (s/veh)	45.9	60.9	9.3	9.3	30.6	30.6	30.6	30.6		
Approach LOS	D	D	E	E	A	A	C	C		
Queue Length 50th (m)	28.1	28.1	47.3	47.3	20.9	20.9	93.8	93.8		
Queue Length 95th (m)	#57.9	#57.9	#104.4	#104.4	29.6	29.6	#148.4	#148.4		
Internal Link Dist (m)	75.1	75.1	136.0	136.0	63.1	63.1	79.0	79.0		
Turn Bay Length (m)										
Base Capacity (vph)	259	259	403	403	1668	1668	1241	1241		
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	0.70	0.70	0.97	0.97	0.31	0.31	0.96	0.96		

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 23 (26%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.97
Intersection Signal Delay (s/veh): 32.2
Intersection Capacity Utilization 95.7%
Analysis Period (min) 15
ICU Level of Service F
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



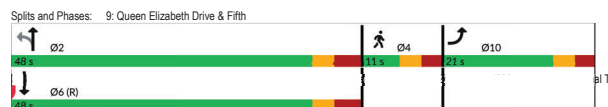
Queues
9: Queen Elizabeth Drive & Fifth

11/29/2024

Lane Group	EBL	NBL	NBT	SBT	Ø4
Lane Configurations	↔	↔	↕	↕	
Traffic Volume (vph)	35	39	197	522	
Future Volume (vph)	35	39	197	522	
Lane Group Flow (vph)	77	0	262	653	
Turn Type	Prot	Perm	NA	NA	
Protected Phases	10	2	6	4	
Permitted Phases	2				
Detector Phase	10	2	2	6	
Switch Phase					
Minimum Initial (s)	10.0	4.0	4.0	4.0	4.0
Minimum Split (s)	21.0	48.0	48.0	48.0	11.0
Total Split (s)	21.0	48.0	48.0	48.0	11.0
Total Split (%)	26.3%	60.0%	60.0%	60.0%	14%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.7	3.8	3.8	3.8	2.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.7	6.8	6.8	6.8	
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	None	None	None	C-Max	None
Act Effct Green (s)	10.8	61.2	61.2	61.2	
Actuated g/C Ratio	0.14	0.77	0.77	0.77	
v/c Ratio	0.37	0.24	0.51	0.51	
Control Delay (s/veh)	36.7	4.7	7.1	7.1	
Queue Delay	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	36.7	4.7	7.1	7.1	
LOS	D	A	A	A	
Approach Delay (s/veh)	36.7	4.7	7.1	7.1	
Approach LOS	D	A	A	A	
Queue Length 50th (m)	11.0	11.2	37.6	37.6	
Queue Length 95th (m)	22.5	22.8	70.8	70.8	
Internal Link Dist (m)	57.2	0.1	5.9	5.9	
Turn Bay Length (m)					
Base Capacity (vph)	293	1100	1270	1270	
Starvation Cap Reductn	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	
Storage Cap Reductn	0	0	0	0	
Reduced v/c Ratio	0.26	0.24	0.51	0.51	

Intersection Summary

Cycle Length: 80
Actuated Cycle Length: 80
Offset: 0 (0%), Referenced to phase 6:SBT, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.51
Intersection Signal Delay (s/veh): 8.7
Intersection Capacity Utilization 64.9%
Analysis Period (min) 15
ICU Level of Service C



Intersection						
Intersection Delay, s/veh	7.9					
Intersection LOS	A					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	↕
Traffic Vol, veh/h	5	123	142	5	5	5
Future Vol, veh/h	5	123	142	5	5	5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	137	158	6	6	6
Number of Lanes	0	1	1	0	1	0
Approach	EB	WB	WB	SB		
Opposing Approach	WB	EB				
Opposing Lanes	1	1		0		
Conflicting Approach Left	SB	WB				
Conflicting Lanes Left	1	0		1		
Conflicting Approach Right		SB	EB			
Conflicting Lanes Right	0	1	1		1	
HCM Control Delay, s/veh	7.9	8	7.4			
HCM LOS	A	A	A			

Lane	EBLn1	WBLn1	SBLn1
Vol Left, %	4%	0%	50%
Vol Thru, %	96%	97%	0%
Vol Right, %	0%	3%	50%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	128	147	10
LT Vol	5	0	5
Through Vol	123	142	0
RT Vol	0	5	5
Lane Flow Rate	142	163	11
Geometry Grp	1	1	1
Degree of Util (X)	0.161	0.183	0.014
Departure Headway (Hd)	4.083	4.039	4.385
Convergence, Y/N	Yes	Yes	Yes
Cap	875	885	821
Service Time	2.123	2.076	2.385
HCM Lane V/C Ratio	0.162	0.184	0.013
HCM Control Delay, s/veh	7.9	8	7.4
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.6	0.7	0

Intersection						
Intersection Delay, s/veh	6.9					
Intersection LOS	A					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↕			↕	↕	↕
Traffic Vol, veh/h	3	5	5	5	5	5
Future Vol, veh/h	3	5	5	5	5	5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	6	6	6	6	6
Number of Lanes	1	0	0	1	1	0
Approach	EB	WB	WB	NB		
Opposing Approach	WB	EB		NB		
Opposing Lanes	1	1		0		
Conflicting Approach Left		NB		EB		
Conflicting Lanes Left	0	1		1		
Conflicting Approach Right	NB	WB				
Conflicting Lanes Right	1	0		1		
HCM Control Delay, s/veh	6.6	7.1		6.8		
HCM LOS	A	A		A		

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	50%	0%	50%
Vol Thru, %	0%	38%	50%
Vol Right, %	50%	63%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	10	8	10
LT Vol	5	0	5
Through Vol	0	3	5
RT Vol	5	5	0
Lane Flow Rate	11	9	11
Geometry Grp	1	1	1
Degree of Util (X)	0.012	0.009	0.013
Departure Headway (Hd)	3.769	3.587	4.06
Convergence, Y/N	Yes	Yes	Yes
Cap	953	1002	886
Service Time	1.777	1.593	2.065
HCM Lane V/C Ratio	0.012	0.009	0.012
HCM Control Delay, s/veh	6.8	6.6	7.1
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0	0	0

Intersection						
Intersection Delay, s/veh	8					
Intersection LOS	A					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↕			↕	↕	↕
Traffic Vol, veh/h	3	5	142	5	5	123
Future Vol, veh/h	3	5	142	5	5	123
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	6	158	6	6	137
Number of Lanes	1	0	0	1	1	0
Approach	EB	WB	WB	NB	SB	SB
Opposing Approach	WB	EB		NB		
Opposing Lanes	1	1		0		
Conflicting Approach Left		NB		EB		
Conflicting Lanes Left	0	1		1		
Conflicting Approach Right	NB	WB				
Conflicting Lanes Right	1	0		1		
HCM Control Delay, s/veh	7.1	8.5		7.4		
HCM LOS	A	A		A		

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	4%	0%	97%
Vol Thru, %	0%	38%	3%
Vol Right, %	96%	63%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	128	8	147
LT Vol	5	0	142
Through Vol	0	3	5
RT Vol	123	5	0
Lane Flow Rate	142	9	163
Geometry Grp	1	1	1
Degree of Util (X)	0.149	0.01	0.199
Departure Headway (Hd)	3.77	3.935	4.383
Convergence, Y/N	Yes	Yes	Yes
Cap	957	893	815
Service Time	1.77	2.03	2.431
HCM Lane V/C Ratio	0.148	0.01	0.2
HCM Control Delay, s/veh	7.4	7.1	8.5
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.5	0	0.7

Intersection												
Intersection Delay, s/veh	8											
Intersection LOS	A											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕					↕	↕	↕			↕
Traffic Vol, veh/h	75	40	0	0	0	104	41	27	30	0	0	94
Future Vol, veh/h	75	40	0	0	0	104	41	27	30	0	0	94
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	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	83	44	0	0	0	116	46	30	33	0	0	104
Number of Lanes	0	1	0	0	0	1	0	1	0	0	0	1
Approach	EB	WB	WB	NB	SB	SB			SB			
Opposing Approach	WB	EB		NB					SB			
Opposing Lanes	1	1		1					1			
Conflicting Approach Left	SB	NB		EB					WB			
Conflicting Lanes Left	1	1		1					1			
Conflicting Approach Right	NB	WB		WB					EB			
Conflicting Lanes Right	1	1		1					1			
HCM Control Delay, s/veh	8.6	7.5		8.2					7.5			
HCM LOS	A	A		A					A			

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	42%	65%	0%	0%
Vol Thru, %	28%	35%	0%	0%
Vol Right, %	31%	0%	100%	100%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	98	115	104	94
LT Vol	41	75	0	0
Through Vol	27	40	0	0
RT Vol	30	0	104	94
Lane Flow Rate	109	128	116	104
Geometry Grp	1	1	1	1
Degree of Util (X)	0.136	0.165	0.127	0.116
Departure Headway (Hd)	4.483	4.646	3.948	3.999
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	800	773	908	896
Service Time	2.505	2.67	1.972	2.022
HCM Lane V/C Ratio	0.136	0.166	0.128	0.116
HCM Control Delay, s/veh	8.2	8.6	7.5	7.5
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.5	0.6	0.4	0.4

Intersection						
Int Delay, s/veh	19					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	255	215	564	575	70
Future Vol, veh/h	3	255	215	564	575	70
Conflicting Peds, #/hr	0	0	178	0	0	107
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	5	13	5	5	5	34
Mvmt Flow	3	283	239	627	639	78

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	1648	856	895
Stage 1	856	-	-
Stage 2	792	-	-
Critical Hdwy	6.675	6.395	4.175
Critical Hdwy Stg 1	5.475	-	-
Critical Hdwy Stg 2	5.875	-	-
Follow-up Hdwy	3.5475	3.4235	2.2475
Pot Cap-1 Maneuver	97	336	740
Stage 1	409	-	-
Stage 2	401	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	25	-	273
Mov Cap-2 Maneuver	25	-	601
Stage 1	130	-	-
Stage 2	326	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v05.6		6	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	601	-	273	-	-
HCM Lane V/C Ratio	0.397	-	1.038	-	-
HCM Control Delay (s/veh)	14.9	2.6	105.6	-	-
HCM Lane LOS	B	A	F	-	-
HCM 95th %ile Q (veh)	1.9	-	11	-	-

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	24	0	788	840	2
Future Vol, veh/h	0	24	0	788	840	2
Conflicting Peds, #/hr	0	0	0	0	0	86
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	5	5	5	5	7	5
Mvmt Flow	0	27	0	876	933	2

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	-	1020	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	6.275	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	-
Pot Cap-1 Maneuver	0	281	0
Stage 1	0	-	0
Stage 2	0	-	0
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	255	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v20.8		0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	255	-	-	-
HCM Lane V/C Ratio	-	0.105	-	-	-
HCM Control Delay (s/veh)	-	20.8	-	-	-
HCM Lane LOS	-	C	-	-	-
HCM 95th %ile Q (veh)	-	0.3	-	-	-

Intersection						
Int Delay, s/veh	2.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	53	56	47	259	500	69
Future Vol, veh/h	53	56	47	259	500	69
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	59	62	52	288	566	77

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	987	595	633
Stage 1	595	-	-
Stage 2	392	-	-
Critical Hdwy	6.4	6.2	4.1
Critical Hdwy Stg 1	5.4	-	-
Critical Hdwy Stg 2	5.4	-	-
Follow-up Hdwy	3.5	3.3	2.2
Pot Cap-1 Maneuver	277	508	960
Stage 1	555	-	-
Stage 2	687	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	259	508	960
Mov Cap-2 Maneuver	259	-	-
Stage 1	519	-	-
Stage 2	687	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v13.7		1.4	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	960	-	346	-	-
HCM Lane V/C Ratio	0.054	-	0.35	-	-
HCM Control Delay (s/veh)	9	0	20.9	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %ile Q (veh)	0.2	-	1.5	-	-

Intersection						
Int Delay, s/veh	0.9					
Movement	WBL	WBR	NBL	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	75	550	7	1	644
Future Vol, veh/h	5	75	550	7	1	644
Conflicting Peds, #/hr	0	0	0	100	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	15	7	0	0	9
Mvmt Flow	6	83	611	8	1	716

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	1075	410	0
Stage 1	715	-	-
Stage 2	360	-	-
Critical Hdwy	6.8	7.2	4.1
Critical Hdwy Stg 1	5.8	-	-
Critical Hdwy Stg 2	5.8	-	-
Follow-up Hdwy	3.5	3.45	2.2
Pot Cap-1 Maneuver	218	556	892
Stage 1	451	-	-
Stage 2	683	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	194	497	798
Mov Cap-2 Maneuver	194	-	-
Stage 1	403	-	-
Stage 2	682	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v13.7		0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	497	798	-
HCM Lane V/C Ratio	-	-	0.168	0.001	-
HCM Control Delay (s/veh)	-	-	13.7	9.5	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %ile Q (veh)	-	-	0.6	0	-

Intersection						
Int Delay, s/veh	1.9					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	[Diagram]					
Traffic Vol, veh/h	123	127	5	142	45	5
Future Vol, veh/h	123	127	5	142	45	5
Conflicting Peds, #/hr	0	100	100	0	100	100
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	None	None	None	None	None	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	0	0	-	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	137	141	6	158	50	6

Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	378	0	578	408
Stage 1	-	-	-	-	308	-
Stage 2	-	-	-	-	270	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1180	-	478	643
Stage 1	-	-	-	-	745	-
Stage 2	-	-	-	-	775	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1055	-	380	514
Mov Cap-2 Maneuver	-	-	1055	-	380	-
Stage 1	-	-	-	-	666	-
Stage 2	-	-	-	-	689	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0.3	15.8
HCM LOS	C		

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	390	-	-	1055	-
HCM Lane V/C Ratio	0.142	-	-	0.005	-
HCM Control Delay (s/veh)	15.8	-	-	8.4	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q (veh)	0.5	-	-	0	-

Intersection						
Int Delay, s/veh	2.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	[Diagram]					
Traffic Vol, veh/h	5	58	24	92	51	5
Future Vol, veh/h	5	58	24	92	51	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	None	None	None	None	None	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	0	0	0	0	0
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	64	27	102	57	6

Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	129	0	-	0	154	78
Stage 1	-	-	-	-	78	-
Stage 2	-	-	-	-	76	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1457	-	-	-	838	983
Stage 1	-	-	-	-	945	-
Stage 2	-	-	-	-	947	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	1457	-	-	-	835	983
Mov Cap-2 Maneuver	-	-	-	-	835	-
Stage 1	-	-	-	-	941	-
Stage 2	-	-	-	-	947	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0.6	0	9.6
HCM LOS	A		

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1457	-	-	-	846
HCM Lane V/C Ratio	0.004	-	-	-	0.074
HCM Control Delay (s/veh)	7.5	0	-	-	9.6
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q (veh)	0	-	-	-	0.2

2030 Baseline Conditions Saturday

Queues

1: Bank & Fifth

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	[Diagram]							
Traffic Volume (vph)	46	41	68	45	21	482	20	539
Future Volume (vph)	46	41	68	45	21	482	20	539
Lane Group Flow (vph)	0	145	76	107	0	596	0	651
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases	4	8	8	2	2	6	6	6
Permitted Phases	4	8	8	2	2	6	6	6
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	26.0	26.0	26.0	26.0	49.0	49.0	49.0	49.0
Total Split (s)	26.0	26.0	26.0	26.0	49.0	49.0	49.0	49.0
Total Split (%)	34.7%	34.7%	34.7%	34.7%	65.3%	65.3%	65.3%	65.3%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	12.2	12.2	12.2	12.2	51.8	51.8	51.8	51.8
Actuated g/C Ratio	0.16	0.16	0.16	0.16	0.69	0.69	0.69	0.69
v/c Ratio	0.65	0.48	0.40	0.31	0.31	0.34	0.34	0.34
Control Delay (s/veh)	35.0	36.7	18.1	9.6	5.9	5.9	5.9	5.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	35.0	36.7	18.1	9.6	5.9	5.9	5.9	5.9
LOS	C	D	B	A	A	A	A	A
Approach Delay (s/veh)	35.0	0	25.8	9.6	5.9	5.9	5.9	5.9
Approach LOS	C	C	C	A	A	A	A	A
Queue Length 50th (m)	14.8	9.9	6.2	15.0	15.8	15.8	15.8	15.8
Queue Length 95th (m)	29.3	20.0	17.4	50.3	31.3	31.3	31.3	31.3
Internal Link Dist (m)	49.7	45.0	112.4	195.6	190.0	190.0	190.0	190.0
Turn Bay Length (m)								
Base Capacity (vph)	354	269	415	1914	1938	1938	1938	1938
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	0.41	0.28	0.26	0.31	0.34	0.34	0.34	0.34

Intersection Summary	
Cycle Length: 75	
Actuated Cycle Length: 75	
Offset: 47 (63%), Referenced to phase 2:NBLT and 6:SBLT, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.65	
Intersection Signal Delay (s/veh): 12.3	Intersection LOS: B
Intersection Capacity Utilization 57.7%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 1: Bank & Fifth

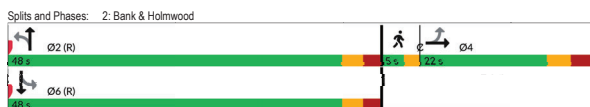


Queues
2: Bank & Holmwood

11/28/2024

Table with 7 columns: Lane Group, EBT, NBL, NBT, SBL, SBT, Ø3. Rows include Lane Configurations, Traffic Volume (vph), Future Volume (vph), Lane Group Flow (vph), Turn Type, Protected Phases, Permitted Phases, Detector Phase, Switch Phase, Minimum Initial (s), Minimum Split (s), Total Split (s), Total Split (%), Yellow Time (s), All-Red Time (s), Lost Time Adjust (s), Total Lost Time (s), Lead/Lag, Recall Mode, Act Effect Green (s), Actuated g/C Ratio, v/c Ratio, Control Delay (s/veh), Queue Delay, Total Delay (s/veh), LOS, Approach Delay (s/veh), Approach LOS, Queue Length 50th (m), Queue Length 95th (m), Internal Link Dist (m), Turn Bay Length (m), Base Capacity (vph), Starvation Cap Reductn, Spillback Cap Reductn, Storage Cap Reductn, Reduced v/c Ratio.

Intersection Summary
Cycle Length: 75
Actuated Cycle Length: 75
Offset: 74 (99%), Referenced to phase 2:NBL and 6:SBTL, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.55
Intersection Signal Delay (s/veh): 6.8
Intersection Capacity Utilization 64.7%
Analysis Period (min) 15



Queues
6: Bank & Aylmer

11/28/2024

Table with 7 columns: Lane Group, EBL, NBL, NBT, SBL, SBT, Ø3. Rows include Lane Configurations, Traffic Volume (vph), Future Volume (vph), Lane Group Flow (vph), Turn Type, Protected Phases, Permitted Phases, Detector Phase, Switch Phase, Minimum Initial (s), Minimum Split (s), Total Split (s), Total Split (%), Yellow Time (s), All-Red Time (s), Lost Time Adjust (s), Total Lost Time (s), Lead/Lag, Recall Mode, Act Effect Green (s), Actuated g/C Ratio, v/c Ratio, Control Delay (s/veh), Queue Delay, Total Delay (s/veh), LOS, Approach Delay (s/veh), Approach LOS, Queue Length 50th (m), Queue Length 95th (m), Internal Link Dist (m), Turn Bay Length (m), Base Capacity (vph), Starvation Cap Reductn, Spillback Cap Reductn, Storage Cap Reductn, Reduced v/c Ratio.

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 87 (97%), Referenced to phase 2:NBL and 6:SBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.43
Intersection Signal Delay (s/veh): 7.5
Intersection Capacity Utilization 54.7%
Analysis Period (min) 15



Queues
3: Bank & Exhibition

11/28/2024

Table with 8 columns: Lane Group, WBL, WBR, NBT, SBL, SBT, Ø1, Ø7. Rows include Lane Configurations, Traffic Volume (vph), Future Volume (vph), Lane Group Flow (vph), Turn Type, Protected Phases, Permitted Phases, Detector Phase, Switch Phase, Minimum Initial (s), Minimum Split (s), Total Split (s), Total Split (%), Yellow Time (s), All-Red Time (s), Lost Time Adjust (s), Total Lost Time (s), Lead/Lag, Recall Mode, Act Effect Green (s), Actuated g/C Ratio, v/c Ratio, Control Delay (s/veh), Queue Delay, Total Delay (s/veh), LOS, Approach Delay (s/veh), Approach LOS, Queue Length 50th (m), Queue Length 95th (m), Internal Link Dist (m), Turn Bay Length (m), Base Capacity (vph), Starvation Cap Reductn, Spillback Cap Reductn, Storage Cap Reductn, Reduced v/c Ratio.

Intersection Summary
Cycle Length: 75
Actuated Cycle Length: 75
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.42
Intersection Signal Delay (s/veh): 6.4
Intersection Capacity Utilization 59.5%
Analysis Period (min) 15



Queues
7: Bank & Sunnyside

11/28/2024

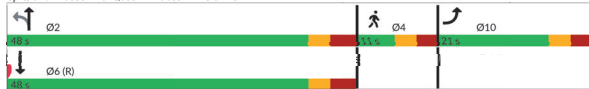
Table with 9 columns: Lane Group, EBL, EBT, WBL, WBT, NBL, NBT, SBL, SBT, Ø3, Ø7. Rows include Lane Configurations, Traffic Volume (vph), Future Volume (vph), Lane Group Flow (vph), Turn Type, Protected Phases, Permitted Phases, Detector Phase, Switch Phase, Minimum Initial (s), Minimum Split (s), Total Split (s), Total Split (%), Yellow Time (s), All-Red Time (s), Lost Time Adjust (s), Total Lost Time (s), Lead/Lag, Lead-Lag Optimize?, Act Effect Green (s), Actuated g/C Ratio, v/c Ratio, Control Delay (s/veh), Queue Delay, Total Delay (s/veh), LOS, Approach Delay (s/veh), Approach LOS, Queue Length 50th (m), Queue Length 95th (m), Internal Link Dist (m), Turn Bay Length (m), Base Capacity (vph), Starvation Cap Reductn, Spillback Cap Reductn, Storage Cap Reductn, Reduced v/c Ratio.

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 23 (26%), Referenced to phase 2:NBL and 6:SBTL, Start of Green
Natural Cycle: 90
Control Type: Pretimed
Maximum v/c Ratio: 0.63
Intersection Signal Delay (s/veh): 17.2
Intersection Capacity Utilization 71.6%
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	NBL	NBT	SBT	Ø4
Lane Configurations	↔	↔	↔	↔	↔
Traffic Volume (vph)	54	42	245	353	
Future Volume (vph)	54	42	245	353	
Lane Group Flow (vph)	93	0	319	450	
Turn Type	Prot	Perm	NA	NA	
Protected Phases	10	2	6	4	
Permitted Phases		2			
Detector Phase	10	2	2	6	
Switch Phase					
Minimum Initial (s)	10.0	4.0	4.0	4.0	4.0
Minimum Split (s)	21.0	48.0	48.0	48.0	11.0
Total Split (s)	21.0	48.0	48.0	48.0	11.0
Total Spilt (%)	26.3%	60.0%	60.0%	60.0%	14%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.7	3.8	3.8	3.8	2.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.7				6.8
LeadLag					
Lead-Lag Optimize?					
Recall Mode	Min	None	None	C-Max	None
Act Effct Green (s)	11.2		56.3	56.3	
Actuated g/C Ratio	0.14		0.70	0.70	
v/c Ratio	0.43		0.30	0.39	
Control Delay (s/veh)	37.4		5.6	6.2	
Queue Delay	0.0		0.0	0.0	
Total Delay (s/veh)	37.4		5.6	6.2	
LOS	D		A	A	
Approach Delay (s/veh)	37.4		5.6	6.2	
Approach LOS	D		A	A	
Queue Length 50th (m)	13.3		14.2	21.7	
Queue Length 95th (m)	25.5		29.4	42.9	
Internal Link Dist (m)	57.2		0.1	5.9	
Turn Bay Length (m)					
Base Capacity (vph)	297		1061	1166	
Starvation Cap Reductn	0		0	0	
Spillback Cap Reductn	0		0	0	
Storage Cap Reductn	0		0	0	
Reduced v/c Ratio	0.31		0.30	0.39	
Intersection Summary					
Cycle Length: 80					
Actuated Cycle Length: 80					
Offset: 0 (0%), Referenced to phase 6:SBT, Start of Green					
Natural Cycle: 80					
Control Type: Actuated-Coordinated					
Maximum v/c Ratio: 0.43					
Intersection Signal Delay (s/veh): 9.4	Intersection LOS: A				
Intersection Capacity Utilization 63.4%	ICU Level of Service B				
Analysis Period (min) 15					

Splits and Phases: 9: Queen Elizabeth Drive & Fifth



Intersection						
Intersection Delay, s/veh	7.3					
Intersection LOS	A					
Movement						
	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Vol, veh/h	16	5	5	73	5	5
Future Vol, veh/h	16	5	5	73	5	5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	18	6	6	81	6	6
Number of Lanes	1	0	0	1	1	0
Approach						
	EB	WB	WB	NB		
Opposing Approach	WB	EB				
Opposing Lanes	1	1		0		
Conflicting Approach Left	0		NB	EB		
Conflicting Lanes Left	0		1	1		
Conflicting Approach Right	NB		WB			
Conflicting Lanes Right	1		0		1	
HCM Control Delay, s/veh	7		7.4		7	
HCM LOS	A		A		A	
Lane						
	NBLn1	EBLn1	WBLn1			
Vol Left, %	50%	0%	6%			
Vol Thru, %	0%	76%	94%			
Vol Right, %	50%	24%	0%			
Sign Control	Stop	Stop	Stop			
Traffic Vol by Lane	10	21	78			
LT Vol	5	0	5			
Through Vol	0	16	73			
RT Vol	5	5	0			
Lane Flow Rate	11	23	87			
Geometry Grp	1	1	1			
Degree of Util (X)	0.012	0.025	0.096			
Departure Headway (Hd)	3.924	3.875	3.984			
Convergence, Y/N	Yes	Yes	Yes			
Cap	907	925	903			
Service Time	1.968	1.896	1.991			
HCM Lane V/C Ratio	0.012	0.025	0.096			
HCM Control Delay, s/veh	7	7	7.4			
HCM Lane LOS	A	A	A			
HCM 95th-tile Q	0	0.1	0.3			

Intersection						
Intersection Delay, s/veh	7.7					
Intersection LOS	A					
Movement						
	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Vol, veh/h	5	121	86	5	5	5
Future Vol, veh/h	5	121	86	5	5	5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	134	96	6	6	6
Number of Lanes	0	1	1	0	1	0
Approach						
	EB	WB	WB	SB		
Opposing Approach	WB	EB		SB		
Opposing Lanes	1	1		0		
Conflicting Approach Left	SB		WB			
Conflicting Lanes Left	1		0		1	
Conflicting Approach Right	SB		EB			
Conflicting Lanes Right	0		1		1	
HCM Control Delay, s/veh	7.8		7.6		7.3	
HCM LOS	A		A		A	
Lane						
	EBLn1	WBLn1	SBLn1			
Vol Left, %	4%	0%	50%			
Vol Thru, %	96%	95%	0%			
Vol Right, %	0%	5%	50%			
Sign Control	Stop	Stop	Stop			
Traffic Vol by Lane	126	91	10			
LT Vol	5	0	5			
Through Vol	121	86	0			
RT Vol	0	5	5			
Lane Flow Rate	140	101	11			
Geometry Grp	1	1	1			
Degree of Util (X)	0.157	0.113	0.013			
Departure Headway (Hd)	4.037	4.024	4.249			
Convergence, Y/N	Yes	Yes	Yes			
Cap	889	889	847			
Service Time	2.062	2.058	2.249			
HCM Lane V/C Ratio	0.157	0.114	0.013			
HCM Control Delay, s/veh	7.8	7.6	7.3			
HCM Lane LOS	A	A	A			
HCM 95th-tile Q	0.6	0.4	0			

Intersection						
Intersection Delay, s/veh	8					
Intersection LOS	A					
Movement						
	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Vol, veh/h	16	5	86	5	105	21
Future Vol, veh/h	16	5	86	5	105	21
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	18	6	96	6	117	23
Number of Lanes	1	0	0	1	1	0
Approach						
	EB	WB	WB	NB		
Opposing Approach	WB	EB				
Opposing Lanes	1	1		0		
Conflicting Approach Left	0		NB	EB		
Conflicting Lanes Left	0		1	1		
Conflicting Approach Right	NB		WB			
Conflicting Lanes Right	1		0		1	
HCM Control Delay, s/veh	7.3		8.1		8.1	
HCM LOS	A		A		A	
Lane						
	NBLn1	EBLn1	WBLn1			
Vol Left, %	83%	0%	95%			
Vol Thru, %	0%	76%	5%			
Vol Right, %	17%	24%	0%			
Sign Control	Stop	Stop	Stop			
Traffic Vol by Lane	126	21	91			
LT Vol	105	0	86			
Through Vol	0	16	5			
RT Vol	21	5	0			
Lane Flow Rate	140	23	101			
Geometry Grp	1	1	1			
Degree of Util (X)	0.164	0.027	0.123			
Departure Headway (Hd)	4.216	4.225	4.387			
Convergence, Y/N	Yes	Yes	Yes			
Cap	841	852	807			
Service Time	2.292	2.225	2.472			
HCM Lane V/C Ratio	0.166	0.027	0.125			
HCM Control Delay, s/veh	8.1	7.3	8.1			
HCM Lane LOS	A	A	A			
HCM 95th-tile Q	0.6	0.1	0.4			

Intersection													
Int Delay, s/veh 8.1													
Intersection LOS A													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Vol, veh/h	41	48	0	0	0	94	59	39	36	0	0	105	
Future Vol, veh/h	41	48	0	0	0	94	59	39	36	0	0	105	
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	2	2	2	2	2	2	2	2	2	2	2	
Mvmt Flow	46	53	0	0	0	104	66	43	40	0	0	117	
Number of Lanes	0	1	0	0	0	1	0	1	0	0	0	1	
Approach	EB					WB	NB	SB					
Opposing Approach	WB					EB	SB	NB					
Opposing Lanes	1					1	1	1					
Conflicting Approach Left	SB					NB	EB	WB					
Conflicting Lanes Left	1					1	1	1					
Conflicting Approach Right	NB					SB	WB	EB					
Conflicting Lanes Right	1					1	1	1					
HCM Control Delay, s/veh	8.4						7.6		8.5			7.6	
HCM LOS	A						A		A			A	

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	44%	46%	0%	0%
Vol Thru, %	29%	54%	0%	0%
Vol Right, %	27%	0%	100%	100%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	134	89	94	105
LT Vol	59	41	0	0
Through Vol	39	48	0	0
RT Vol	36	0	94	105
Lane Flow Rate	149	99	104	117
Geometry Grp	1	1	1	1
Degree of Util (X)	0.183	0.129	0.117	0.128
Departure Headway (Hd)	4.432	4.712	4.028	3.955
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	810	761	890	906
Service Time	2.455	2.736	2.051	1.977
HCM Lane V/C Ratio	0.184	0.13	0.117	0.129
HCM Control Delay, s/veh	8.5	8.4	7.6	7.6
HCM Lane LOS	A	A	A	A
HCM 95th %ile Q	0.7	0.4	0.4	0.4

Intersection						
Int Delay, s/veh 0.4						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	32	0	669	689	0
Future Vol, veh/h	1	32	0	669	689	0
Conflicting Peds, #/hr	0	0	0	0	0	86
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	None	None	None	None	None	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	1	36	0	743	766	0

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	1137	766	- 0 - 0
Stage 1	766	-	- - - -
Stage 2	372	-	- - - -
Critical Hdwy	6.675	6.275	- - - -
Critical Hdwy Stg 1	5.475	-	- - - -
Critical Hdwy Stg 2	5.875	-	- - - -
Follow-up Hdwy	3.54753	3.4752	- - - -
Pot Cap-1 Maneuver	205	396	0 - - 0
Stage 1	451	-	0 - - 0
Stage 2	661	-	0 - - 0
Platoon blocked, %	-	-	- - - -
Mov Cap-1 Maneuver	205	396	- - - -
Mov Cap-2 Maneuver	205	-	- - - -
Stage 1	451	-	- - - -
Stage 2	661	-	- - - -
Approach	EB	NB	SB
HCM Control Delay, s/4.99	0 0		
HCM LOS	B		
Minor Lane/Major Mvmt	NBL	NBTLn1	SBT
Capacity (veh/h)	- 396	-	-
HCM Lane V/C Ratio	- 0.09	-	-
HCM Control Delay (s/veh)	- 15	-	-
HCM Lane LOS	- B	-	-
HCM 95th %ile Q(veh)	- 0.3	-	-

Intersection						
Int Delay, s/veh 6.2						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	179	118	563	518	55
Future Vol, veh/h	3	179	118	563	518	55
Conflicting Peds, #/hr	0	0	178	0	0	107
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	None	None	None	None	None	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	3	199	131	626	576	61

Major/Minor	Minor2	Major1	Major2	
Conflicting Flow All	1359	784	815 0 - 0	
Stage 1	784	-	- - - -	
Stage 2	575	-	- - - -	
Critical Hdwy	6.675	6.275	4.175 - - -	
Critical Hdwy Stg 1	5.475	-	- - - -	
Critical Hdwy Stg 2	5.875	-	- - - -	
Follow-up Hdwy	3.54753	3.4752	2.475 - - -	
Pot Cap-1 Maneuver	148	386	794 - - -	
Stage 1	442	-	- - - -	
Stage 2	520	-	- - - -	
Platoon blocked, %	-	-	- - - -	
Mov Cap-1 Maneuver	74	313	645 - - -	
Mov Cap-2 Maneuver	74	-	- - - -	
Stage 1	271	-	- - - -	
Stage 2	422	-	- - - -	
Approach	EB	NB	SB	
HCM Control Delay, s/4.47	3.8 0			
HCM LOS	D			
Minor Lane/Major Mvmt	NBL	NBTLn1	SBT	SBR
Capacity (veh/h)	533	- 313	- -	-
HCM Lane V/C Ratio	0.203	- 0.635	- -	-
HCM Control Delay (s/veh)	12	2.1	34.5	- -
HCM Lane LOS	B	A	D	- -
HCM 95th %ile Q(veh)	0.8	- 4.1	- -	-

Intersection						
Int Delay, s/veh 3.2						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	70	56	56	212	255	129
Future Vol, veh/h	70	56	56	212	255	129
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	None	None	None	None	None	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	78	62	62	236	283	143

Major/Minor	Minor2	Major1	Major2	
Conflicting Flow All	715	355	427 0 - 0	
Stage 1	355	-	- - - -	
Stage 2	360	-	- - - -	
Critical Hdwy	6.4	6.2	4.1 - - -	
Critical Hdwy Stg 1	5.4	-	- - - -	
Critical Hdwy Stg 2	5.4	-	- - - -	
Follow-up Hdwy	3.5	3.3	2.2 - - -	
Pot Cap-1 Maneuver	400	693	1143 - - -	
Stage 1	714	-	- - - -	
Stage 2	710	-	- - - -	
Platoon blocked, %	-	-	- - - -	
Mov Cap-1 Maneuver	375	693	1143 - - -	
Mov Cap-2 Maneuver	375	-	- - - -	
Stage 1	669	-	- - - -	
Stage 2	710	-	- - - -	
Approach	EB	NB	SB	
HCM Control Delay, s/4.83	1.74 0			
HCM LOS	C			
Minor Lane/Major Mvmt	NBL	NBTLn1	SBT	SBR
Capacity (veh/h)	376	- 471	- -	-
HCM Lane V/C Ratio	0.054	- 0.297	- -	-
HCM Control Delay (s/veh)	8.3	0	15.8	- -
HCM Lane LOS	A	A	C	- -
HCM 95th %ile Q(veh)	0.2	- 1.2	- -	-

Intersection						
Int Delay, s/veh	0.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	6	72	500	19	2	596
Future Vol, veh/h	6	72	500	19	2	596
Conflicting Peds, #/hr	0	0	0	100	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	None	None	None	None	None	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	15	6	0	0	5
Mvmt Flow	7	80	556	21	2	662
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1002	388	0	0	677	0
Stage 1	666	-	-	-	-	-
Stage 2	336	-	-	-	-	-
Critical Hdwy	6.8	7.2	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.45	-	-	2.2	-
Pot Cap-1 Maneuver	243	575	-	-	924	-
Stage 1	478	-	-	-	-	-
Stage 2	702	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	216	514	-	-	827	-
Mov Cap-2 Maneuver	216	-	-	-	-	-
Stage 1	427	-	-	-	-	-
Stage 2	700	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s/v	3.29	0	0.03			
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBR/WBLn1	SBL	SBT		
Capacity (veh/h)	-	-	514	827	-	-
HCM Lane V/C Ratio	-	-	0.156	0.003	-	-
HCM Control Delay (s/veh)	-	-	13.3	9.4	-	-
HCM Lane LOS	-	-	B	A	-	-
HCM 95th %tile Q(veh)	-	-	0.5	0	-	-

Intersection						
Int Delay, s/veh	3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	121	122	5	86	71	5
Future Vol, veh/h	121	122	5	86	71	5
Conflicting Peds, #/hr	0	100	100	0	100	100
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	None	None	None	None	None	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	134	136	6	96	79	6
Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	370	0	509	402
Stage 1	-	-	-	-	302	-
Stage 2	-	-	-	-	207	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1189	-	524	648
Stage 1	-	-	-	-	750	-
Stage 2	-	-	-	-	828	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1063	-	417	518
Mov Cap-2 Maneuver	-	-	-	-	417	-
Stage 1	-	-	-	-	670	-
Stage 2	-	-	-	-	736	-
Approach	EB	WB	NB			
HCM Control Delay, s/v	0	0.46	15.65			
HCM LOS			C			
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	422	-	-	99	-	-
HCM Lane V/C Ratio	0.2	-	-	0.005	-	-
HCM Control Delay (s/veh)	15.6	-	-	8.4	0	-
HCM Lane LOS	C	-	-	A	A	-
HCM 95th %tile Q(veh)	0.7	-	-	0	-	-

Intersection						
Int Delay, s/veh	3.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	31	75	110	95	5
Future Vol, veh/h	5	31	75	110	95	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	None	None	None	None	None	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	34	83	122	106	6
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	206	0	-	0	190	144
Stage 1	-	-	-	-	144	-
Stage 2	-	-	-	-	46	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.219	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1366	-	-	-	799	903
Stage 1	-	-	-	-	883	-
Stage 2	-	-	-	-	977	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	1366	-	-	-	796	903
Mov Cap-2 Maneuver	-	-	-	-	796	-
Stage 1	-	-	-	-	879	-
Stage 2	-	-	-	-	977	-
Approach	EB	WB	SB			
HCM Control Delay, s/v	1.06	0	10.22			
HCM LOS			B			
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR/SBLn1		
Capacity (veh/h)	250	-	-	800	-	-
HCM Lane V/C Ratio	0.004	-	-	0.139	-	-
HCM Control Delay (s/veh)	7.6	0	-	10.2	-	-
HCM Lane LOS	A	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	-	0.5	-	-

2030 Baseline Conditions Sunday

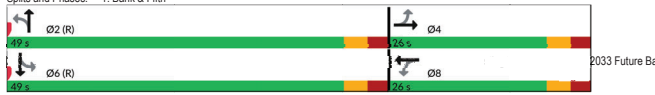
Queues

1: Bank & Fifth

11/28/2024

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↔ ↗ ↘ ↙ ↘ ↗ ↘ ↙							
Traffic Volume (vph)	54	37	122	66	15	484	23	509
Future Volume (vph)	54	37	122	66	15	484	23	509
Lane Group Flow (vph)	0	130	126	115	0	585	0	638
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases	4	4	8	8	2	2	6	6
Permitted Phases	4	4	8	8	2	2	6	6
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	26.0	26.0	26.0	26.0	49.0	49.0	49.0	49.0
Total Split (s)	26.0	26.0	26.0	26.0	49.0	49.0	49.0	49.0
Total Split (%)	34.7%	34.7%	34.7%	34.7%	65.3%	65.3%	65.3%	65.3%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	14.4	14.4	14.4	14.4	49.6	49.6	49.6	49.6
Actuated g/C Ratio	0.19	0.19	0.19	0.19	0.66	0.66	0.66	0.66
v/c Ratio	0.55	0.57	0.37	0.37	0.32	0.32	0.35	0.35
Control Delay (s/veh)	30.7	43.2	20.2	20.2	7.2	7.2	6.9	6.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	30.7	43.2	20.2	20.2	7.2	7.2	6.9	6.9
LOS	D	D	C	C	A	A	A	A
Approach Delay (s/veh)	30.7	43.2	20.2	20.2	7.2	7.2	6.9	6.9
Approach LOS	D	D	C	C	A	A	A	A
Queue Length 50th (m)	14.1	17.9	9.3	9.3	27.5	27.5	17.5	17.5
Queue Length 95th (m)	27.3	32.1	20.5	20.5	49.0	49.0	33.0	33.0
Internal Link Dist (m)	49.7 112.4 195.6 190.0							
Turn Bay Length (m)	45.0							
Base Capacity (vph)	331		289		423		1851	
Starvation Cap Reductn	0		0		0		0	
Spillback Cap Reductn	0		0		0		0	
Storage Cap Reductn	0		0		0		0	
Reduced v/c Ratio	0.39	0.47	0.27	0.27	0.32	0.32	0.35	0.35

Splits and Phases: 1: Bank & Fifth



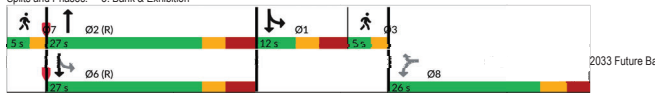
Queues

3: Bank & Exhibition

11/28/2024

Lane Group	WBL	WBR	NBT	SBL	SBT	Ø3	Ø6	Ø7
Lane Configurations	↔ ↗ ↘ ↙ ↘ ↗ ↘ ↙							
Traffic Volume (vph)	124	65	411	175	444			
Future Volume (vph)	124	65	411	175	444			
Lane Group Flow (vph)	138	72	590	194	493			
Turn Type	Perm	Perm	NA	custom	NA			
Protected Phases	2	1	16	3	6	7		
Permitted Phases	8	8	6					
Detector Phase	8	8	2	1	16			
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	4.0	1.0	10.0	1.0	
Minimum Split (s)	26.0	26.0	27.0	10.9	5.0	27.0	5.0	
Total Split (s)	26.0	26.0	27.0	12.0	5.0	27.0	5.0	
Total Split (%)	34.7%	34.7%	36.0%	16.0%	7%	36%	7%	
Yellow Time (s)	3.3	3.3	3.0	3.0	2.0	3.0	2.0	
All-Red Time (s)	3.0	3.0	3.9	3.9	0.0	3.9	0.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0				
Total Lost Time (s)	6.3	6.3	6.9	6.9				
Lead/Lag			Lead		Lag			
Lead-Lag Optimize?	Yes		Yes		Yes		Yes	
Recall Mode	None	None	C-Max	None	None	C-Max	None	
Act Effct Green (s)	13.0	13.0	40.1	45.2	53.4			
Actuated g/C Ratio	0.17	0.17	0.53	0.60	0.71			
v/c Ratio	0.56	0.29	0.40	0.45	0.22			
Control Delay (s/veh)	36.5	9.9	12.1	10.9	4.7			
Queue Delay	0.0	0.0	0.0	0.0	0.0			
Total Delay (s/veh)	36.5	9.9	12.1	10.9	4.7			
LOS	D	A	B	B	A			
Approach Delay (s/veh)	27.4	12.1	12.1	10.9	6.4			
Approach LOS	D	A	B	B	A			
Queue Length 50th (m)	18.2	0.0	23.8	8.7	11.6			
Queue Length 95th (m)	32.0	9.4	41.4	16.6	12.1			
Internal Link Dist (m)	30.6 33.7 40.0 44.8							
Turn Bay Length (m)	37.7 342 1488 427 2238							
Starvation Cap Reductn	0		0		0		0	
Spillback Cap Reductn	0		0		0		0	
Storage Cap Reductn	0		0		0		0	
Reduced v/c Ratio	0.37	0.21	0.40	0.45	0.22			

Splits and Phases: 3: Bank & Exhibition



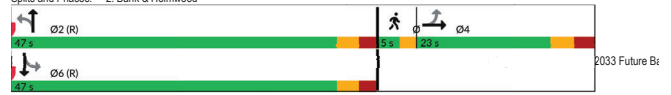
Queues

2: Bank & Holmwood

11/28/2024

Lane Group	EBT	NBL	NBT	SBL	SBT	Ø3
Lane Configurations	↔ ↗ ↘ ↙ ↘ ↗ ↘ ↙					
Traffic Volume (vph)	18	32	511	23	543	
Future Volume (vph)	18	32	511	23	543	
Lane Group Flow (vph)	111	0	693	0	668	
Turn Type	NA	Perm	NA	Perm	NA	
Protected Phases	4	2	2	6	3	
Permitted Phases	4	2	2	6	3	
Detector Phase	4	2	2	6	3	
Switch Phase						
Minimum Initial (s)	4.4	10.0	10.0	4.0	4.0	1.0
Minimum Split (s)	23.0	47.0	47.0	47.0	47.0	5.0
Total Split (s)	23.0	47.0	47.0	47.0	47.0	5.0
Total Split (%)	30.7%	62.7%	62.7%	62.7%	62.7%	7%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	2.0
All-Red Time (s)	2.6	2.2	2.2	2.2	2.2	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.6	5.2	5.2	5.2	5.2	
Lead/Lag	Lag			Lead		
Lead-Lag Optimize?						
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	None
Act Effct Green (s)	11.6	56.1	56.1	56.1	56.1	
Actuated g/C Ratio	0.15	0.75	0.75	0.75	0.75	
v/c Ratio	0.55	0.37	0.37	0.33	0.33	
Control Delay (s/veh)	38.6	2.4	8.8	8.8	8.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	38.6	2.4	8.8	8.8	8.8	
LOS	D	A	A	A	A	
Approach Delay (s/veh)	38.6	2.4	8.8	8.8	8.8	
Approach LOS	D	A	A	A	A	
Queue Length 50th (m)	14.7	5.2	23.6			
Queue Length 95th (m)	27.3	12.0	47.8			
Internal Link Dist (m)	39.8 31.5 195.6					
Turn Bay Length (m)	304 1890 2043					
Base Capacity (vph)	304		1890		2043	
Starvation Cap Reductn	0		0		0	
Spillback Cap Reductn	0		0		0	
Storage Cap Reductn	0		0		0	
Reduced v/c Ratio	0.37	0.37	0.37	0.33	0.33	

Splits and Phases: 2: Bank & Holmwood



Queues

6: Bank & Aylmer

11/28/2024

Lane Group	EBL	NBL	NBT	SBT	Ø3
Lane Configurations	↔ ↗ ↘ ↙ ↘ ↗ ↘ ↙				
Traffic Volume (vph)	54	16	589	649	
Future Volume (vph)	54	16	589	649	
Lane Group Flow (vph)	83	0	672	784	
Turn Type	Prot	Perm	NA	NA	
Protected Phases	4	2	6	3	
Permitted Phases	4	2	6	3	
Detector Phase	4	2	6	3	
Switch Phase					
Minimum Initial (s)	10.0	30.0	30.0	30.0	1.0
Minimum Split (s)	22.0	63.0	63.0	63.0	5.0
Total Split (s)	22.0	63.0	63.0	63.0	5.0
Total Split (%)	24.4%	70.0%	70.0%	70.0%	6%
Yellow Time (s)	3.3	3.0	3.0	3.0	2.0
All-Red Time (s)	2.2	2.2	2.2	2.2	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.5	5.2	5.2	5.2	
Lead/Lag	Lag			Lead	
Lead-Lag Optimize?					
Recall Mode	None	C-Max	C-Max	C-Max	None
Act Effct Green (s)	11.1	72.4	72.4	72.4	
Actuated g/C Ratio	0.12	0.80	0.80	0.80	
v/c Ratio	0.43	0.29	0.33	0.33	
Control Delay (s/veh)	35.9	2.6	3.6	3.6	
Queue Delay	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	35.9	2.6	3.6	3.6	
LOS	D	A	A	A	
Approach Delay (s/veh)	35.9	2.6	3.6	3.6	
Approach LOS	D	A	A	A	
Queue Length 50th (m)	10.5	11.3	16.8		
Queue Length 95th (m)	23.2	16.0	29.1		
Internal Link Dist (m)	76.7 28.1 10.1				
Turn Bay Length (m)	276 2332 2398				
Base Capacity (vph)	276		2332		2398
Starvation Cap Reductn	0		0		0
Spillback Cap Reductn	0		0		0
Storage Cap Reductn	0		0		0
Reduced v/c Ratio	0.30	0.29	0.33	0.33	

Splits and Phases: 6: Bank & Aylmer



Queues
7: Bank & Sunnyside

11/28/2024

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	Ø3	Ø6	Ø7
Lane Configurations											
Traffic Volume (vph)	42	33	15	50	19	465	116	502			
Future Volume (vph)	42	33	15	50	19	465	116	502			
Lane Group Flow (vph)	0	117	0	191	0	550	0	778			
Turn Type	Perm	NA	Perm	NA	Perm	NA	custom	NA			
Protected Phases	4	4	8	8	2	1	1	6	3	6	7
Permitted Phases	4		8		2		6				
Minimum Split (s)	25.0	25.0	25.0	25.0	43.0	43.0	17.0		5.0	43.0	5.0
Total Split (s)	25.0	25.0	25.0	25.0	43.0	43.0	17.0		5.0	43.0	5.0
Total Split (%)	27.8%	27.8%	27.8%	27.8%	47.8%	47.8%	18.9%		6%	48%	6%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0		2.0	3.0	2.0
All-Red Time (s)	2.6	2.6	2.6	2.6	3.0	3.0	2.9		0.0	3.0	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Total Lost Time (s)	5.6		5.6		6.0						
Lead/Lag	Lag	Lag	Lag	Lag				Lead		Lead	
Lead-Lag Optimize?		Yes	Yes							Yes	
Act Effect Green (s)	19.4		19.4		37.0		48.2				
Actuated g/C Ratio	0.22		0.22		0.41		0.54				
v/c Ratio	0.52		0.60		0.47		0.63				
Control Delay (s/veh)	40.5		26.8		20.9		10.4				
Queue Delay	0.0		0.0		0.0		0.0				
Total Delay (s/veh)	40.5		26.8		20.9		10.4				
LOS	D		C		C		B				
Approach Delay (s/veh)	40.5		26.8		20.9		10.4				
Approach LOS	D		C		C		B				
Queue Length 50th (m)	18.0		16.5		35.4		34.9				
Queue Length 95th (m)	35.2		39.0		49.6		25.2				
Internal Link Dist (m)	75.1		136.0		63.1		79.0				
Turn Bay Length (m)											
Base Capacity (vph)	226		318		1170		1232				
Starvation Cap Reductn	0		0		0		0				
Spillback Cap Reductn	0		0		0		0				
Storage Cap Reductn	0		0		0		0				
Reduced v/c Ratio	0.52		0.60		0.47		0.63				

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 23 (26%), Referenced to phase 2-NBTL and 6-SBTL, Start of Green	
Natural Cycle: 90	
Control Type: Pre-timed	
Maximum v/c Ratio: 0.63	
Intersection Signal Delay (s/veh): 18.0	Intersection LOS: B
Intersection Capacity Utilization 73.5%	ICU Level of Service D
Analysis Period (min): 15	



2030 Sunday Baseline Peak Hour Lansdowne 2.0 Transportation Impact Assessment 2:58 pm 11/28/2024 Existing BM Signal 27 Page 5

HCM 7th AWSC
12: Exhibition & Paul Askin

11/28/2024

Intersection	
Intersection Delay, s/veh	7.9
Intersection LOS	A
Movement	
Lane Configurations	
Traffic Vol, veh/h	5 146 103 5 5 5
Future Vol, veh/h	5 146 103 5 5 5
Peak Hour Factor	0.90 0.90 0.90 0.90 0.90 0.90
Heavy Vehicles, %	2 2 2 2 2 2
Mvmt Flow	6 162 114 6 6 6
Number of Lanes	0 1 1 0 1 0
Approach	
Opposing Approach	WB EB
Opposing Lanes	1 1 0
Conflicting Approach Left	SB WB
Conflicting Lanes Left	1 0 1
Conflicting Approach Right	SB EB
Conflicting Lanes Right	0 1 1
HCM Control Delay, s/veh	8 7.7 7.4
HCM LOS	A A A

Lane	EBLn1	WBLn1	SBLn1
Vol Left, %	3%	0%	50%
Vol Thru, %	97%	95%	0%
Vol Right, %	0%	5%	50%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	151	108	10
LT Vol	5	0	5
Through Vol	146	103	0
RT Vol	0	5	5
Lane Flow Rate	168	120	11
Geometry Grp	1	1	1
Degree of Util (X)	0.189	0.135	0.013
Departure Headway (Hd)	4.05	4.051	4.349
Convergence, Y/N	Yes	Yes	Yes
Cap	866	862	828
Service Time	2.079	2.09	2.349
HCM Lane V/C Ratio	0.19	0.136	0.013
HCM Control Delay, s/veh	8	7.7	7.4
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.7	0.5	0

2030 Sunday Baseline Peak Hour Lansdowne 2.0 Transportation Impact Assessment 2:58 pm 11/28/2024 Existing BM Signal 27 Page 1

Queues
9: Queen Elizabeth Drive & Fifth

11/28/2024

Lane Group	EBL	NBL	NBT	SBT	Ø3
Lane Configurations					
Traffic Volume (vph)	12	204	12	11	
Future Volume (vph)	12	204	12	11	
Lane Group Flow (vph)	159	0	240	41	
Turn Type	Perm	Perm	NA	NA	
Protected Phases	2	2	6	3	
Permitted Phases	4	2			
Detector Phase	4	2	2	6	
Switch Phase					
Minimum Initial (s)	10.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	42.0	42.0	42.0	8.0
Total Split (s)	22.0	42.0	42.0	42.0	11.0
Total Split (%)	29.3%	50.0%	50.0%	50.0%	15%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.7	3.8	3.8	3.8	0.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.7	6.8	6.8		
Lead/Lag	Lag			Lead	
Lead-Lag Optimize?	Yes			Yes	
Recall Mode	Min	None	None	Max	None
Act Effect Green (s)	12.2		35.3	35.3	
Actuated g/C Ratio	0.20		0.59	0.59	
v/c Ratio	0.53		0.34	0.05	
Control Delay (s/veh)	28.3		8.7	6.2	
Queue Delay	0.0		0.0	0.0	
Total Delay (s/veh)	28.3		8.7	6.2	
LOS	C		A	A	
Approach Delay (s/veh)	28.3		8.7	6.2	
Approach LOS	C		A	A	
Queue Length 50th (m)	15.7		11.4	1.6	
Queue Length 95th (m)	31.0		27.7	5.6	
Internal Link Dist (m)	57.2		0.1	5.9	
Turn Bay Length (m)					
Base Capacity (vph)	400		701	896	
Starvation Cap Reductn	0		0	0	
Spillback Cap Reductn	0		0	0	
Storage Cap Reductn	0		0	0	
Reduced v/c Ratio	0.40		0.34	0.05	

Intersection Summary	
Cycle Length: 75	
Actuated Cycle Length: 60	
Natural Cycle: 75	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.53	
Intersection Signal Delay (s/veh): 15.5	Intersection LOS: B
Intersection Capacity Utilization 38.9%	ICU Level of Service A
Analysis Period (min): 15	



2033 Future Bt

HCM 7th AWSC
13: Paul Askin & Marche

11/28/2024

Intersection	
Intersection Delay, s/veh	7.9
Intersection LOS	A
Movement	
Lane Configurations	
Traffic Vol, veh/h	14 5 5 163 5 5
Future Vol, veh/h	14 5 5 163 5 5
Peak Hour Factor	0.90 0.90 0.90 0.90 0.90 0.90
Heavy Vehicles, %	2 2 2 2 2 2
Mvmt Flow	16 6 6 181 6 6
Number of Lanes	1 0 0 1 1 0
Approach	
Opposing Approach	WB EB
Opposing Lanes	1 1 0
Conflicting Approach Left	NB EB
Conflicting Lanes Left	0 1 1
Conflicting Approach Right	NB WB
Conflicting Lanes Right	1 0 1
HCM Control Delay, s/veh	7.1 8 7.2
HCM LOS	A A A

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	50%	0%	3%
Vol Thru, %	0%	74%	97%
Vol Right, %	50%	26%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	10	19	163
LT Vol	5	0	5
Through Vol	0	14	163
RT Vol	5	5	0
Lane Flow Rate	11	21	187
Geometry Grp	1	1	1
Degree of Util (X)	0.013	0.023	0.206
Departure Headway (Hd)	4.093	3.934	3.976
Convergence, Y/N	Yes	Yes	Yes
Cap	862	906	905
Service Time	2.177	1.974	1.985
HCM Lane V/C Ratio	0.013	0.023	0.207
HCM Control Delay, s/veh	7.2	7.1	8
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0	0.1	0.8

2030 Sunday Baseline Peak Hour Lansdowne 2.0 Transportation Impact Assessment 2:58 pm 11/28/2024 Existing BM Signal 27 Page 2

Intersection						
Intersection Delay, s/veh	8					
Intersection LOS	A					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔		↔		↔	
Traffic Vol, veh/h	14	5	56	3	126	25
Future Vol, veh/h	14	5	56	3	126	25
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	16	6	62	3	140	28
Number of Lanes	1	0	0	1	1	0
Approach	EB	WB	WB	NB		
Opposing Approach	WB	EB		NB		
Opposing Lanes	1	1		0		
Conflicting Approach Left	0		1		1	
Conflicting Lanes Left	0		1		1	
Conflicting Approach Right	NB		WB		EB	
Conflicting Lanes Right	1		0		1	
HCM Control Delay, s/veh	7.3		7.9		8.2	
HCM LOS	A		A		A	

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	83%	0%	95%
Vol Thru, %	0%	74%	5%
Vol Right, %	17%	26%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	151	19	59
LT Vol	126	0	56
Through Vol	0	14	3
RT Vol	25	5	0
Lane Flow Rate	168	21	66
Geometry Grp	1	1	1
Degree of Util (X)	0.193	0.025	0.081
Departure Headway (Hd)	4.151	4.23	4.435
Convergence, Y/N	Yes	Yes	Yes
Cap	859	851	796
Service Time	2.207	2.23	2.528
HCM Lane V/C Ratio	0.196	0.025	0.083
HCM Control Delay, s/veh	8.2	7.3	7.9
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.7	0.1	0.3

Intersection						
Int Delay, s/veh	4.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔		↔		↔	
Traffic Vol, veh/h	5	154	108	545	495	61
Future Vol, veh/h	5	154	108	545	495	61
Conflicting Peds, #/hr	0	0	178	0	0	107
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	6	171	120	606	550	68

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	1305	762	796
Stage 1	762	-	-
Stage 2	543	-	-
Critical Hdwy	6.675	6.275	4.175
Critical Hdwy Stg 1	5.475	-	-
Critical Hdwy Stg 2	5.875	-	-
Follow-up Hdwy	3.54753	3.44752	2.4475
Pot Cap-1 Maneuver	160	398	808
Stage 1	453	-	-
Stage 2	540	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	82	323	656
Mov Cap-2 Maneuver	82	-	-
Stage 1	287	-	-
Stage 2	439	-	-
Approach	EB	NB	SB
HCM Control Delay, s/28.06	3.48		
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBTEBLn1	SBT	SBR
Capacity (veh/h)	545	-	323	-
HCM Lane V/C Ratio	0.183	-	0.53	-
HCM Control Delay (s/veh)	11.7	1.8	28.1	-
HCM Lane LOS	B	A	D	-
HCM 95th-tile Q(veh)	0.7	-	2.9	-

Intersection												
Intersection Delay, s/veh	9.9											
Intersection LOS	A											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔		↔		↔		↔		↔		↔	
Traffic Vol, veh/h	69	82	0	0	0	230	100	66	61	0	0	104
Future Vol, veh/h	69	82	0	0	0	230	100	66	61	0	0	104
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	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	77	91	0	0	0	256	111	73	68	0	0	116
Number of Lanes	0	1	0	0	0	1	0	1	0	0	0	1
Approach	EB	EB	WB	NB	NB	SB						
Opposing Approach	WB	EB		EB			NB					
Opposing Lanes	1	1		1			1					
Conflicting Approach Left	SB		NB		EB		WB					
Conflicting Lanes Left	1		1		1		1					
Conflicting Approach Right	NB		SB		WB		EB					
Conflicting Lanes Right	1		1		1		1					
HCM Control Delay, s/veh	10.1		9.6		10.8		8.6					
HCM LOS	B		A		B		A					

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	44%	46%	0%	0%
Vol Thru, %	29%	54%	0%	0%
Vol Right, %	27%	0%	100%	100%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	227	151	230	104
LT Vol	100	89	0	0
Through Vol	66	82	0	0
RT Vol	61	0	230	104
Lane Flow Rate	252	168	256	116
Geometry Grp	1	1	1	1
Degree of Util (X)	0.349	0.248	0.316	0.153
Departure Headway (Hd)	5.088	5.323	4.453	4.77
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	711	680	795	755
Service Time	3.088	3.323	2.548	2.78
HCM Lane V/C Ratio	0.354	0.247	0.322	0.154
HCM Control Delay, s/veh	10.8	10.1	9.6	8.6
HCM Lane LOS	B	B	A	A
HCM 95th-tile Q	1.6	1	1.4	0.5

Intersection						
Int Delay, s/veh	1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔		↔		↔	
Traffic Vol, veh/h	2	70	0	627	653	1
Future Vol, veh/h	2	70	0	627	653	1
Conflicting Peds, #/hr	0	0	0	0	0	86
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	2	78	0	697	726	1

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	1160	812	0
Stage 1	812	-	-
Stage 2	348	-	-
Critical Hdwy	6.675	6.275	-
Critical Hdwy Stg 1	5.475	-	-
Critical Hdwy Stg 2	5.875	-	-
Follow-up Hdwy	3.54753	3.44752	-
Pot Cap-1 Maneuver	198	372	0
Stage 1	429	-	-
Stage 2	679	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	164	338	-
Mov Cap-2 Maneuver	164	-	-
Stage 1	390	-	-
Stage 2	617	-	-
Approach	EB	NB	SB
HCM Control Delay, s/18.8	0		
HCM LOS	C		

Minor Lane/Major Mvmt	NBTEBLn1	SBT	SBR
Capacity (veh/h)	-	338	-
HCM Lane V/C Ratio	-	0.23	-
HCM Control Delay (s/veh)	-	18.8	-
HCM Lane LOS	-	C	-
HCM 95th-tile Q(veh)	-	0.9	-

Intersection						
Int Delay, s/veh						
Int Delay, s/veh	5.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Vol, veh/h	87	136	71	129	67	59
Future Vol, veh/h	87	136	71	129	67	59
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	None	None	None	None	None	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	0	-	-
Grade, %	0	-	0	0	-	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	97	151	79	143	74	66

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	408	107	140
Stage 1	107	-	-
Stage 2	301	-	-
Critical Hdwy	6.4	6.2	4.1
Critical Hdwy Stg 1	5.4	-	-
Critical Hdwy Stg 2	5.4	-	-
Follow-up Hdwy	3.5	3.3	2.2
Pot Cap-1 Maneuver	603	952	1456
Stage 1	922	-	-
Stage 2	755	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	568	952	1456
Mov Cap-2 Maneuver	568	-	-
Stage 1	868	-	-
Stage 2	755	-	-

Approach	EB	NB	SB
HCM Control Delay, s/42.11	B	2.7	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBL	EBT	SBL	SBR
Capacity (veh/h)	639	-	753	-	-	-
HCM Lane V/C Ratio	0.054	-	0.329	-	-	-
HCM Control Delay (s/veh)	7.6	0	12.1	-	-	-
HCM Lane LOS	A	A	B	-	-	-
HCM 95th %tile Q(veh)	0.2	-	1.4	-	-	-

Intersection						
Int Delay, s/veh						
Int Delay, s/veh	2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Vol, veh/h	7	161	468	20	0	604
Future Vol, veh/h	7	161	468	20	0	604
Conflicting Peds, #/hr	0	0	0	100	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	None	None	None	None	None	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	-
Grade, %	0	-	0	-	-	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	15	6	0	0	5
Mvmt Flow	8	179	520	22	0	671

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	967	371	0
Stage 1	631	-	-
Stage 2	336	-	-
Critical Hdwy	6.8	7.2	-
Critical Hdwy Stg 1	5.8	-	-
Critical Hdwy Stg 2	5.8	-	-
Follow-up Hdwy	3.5	3.45	-
Pot Cap-1 Maneuver	258	590	-
Stage 1	498	-	-
Stage 2	702	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	228	528	-
Mov Cap-2 Maneuver	228	-	-
Stage 1	445	-	-
Stage 2	702	-	-

Approach	WB	NB	SB
HCM Control Delay, s/45.28	C	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBL	WBR	SBL	SBR
Capacity (veh/h)	-	-	528	-	-	-
HCM Lane V/C Ratio	-	-	0.339	-	-	-
HCM Control Delay (s/veh)	-	-	15.3	-	-	-
HCM Lane LOS	-	-	C	-	-	-
HCM 95th %tile Q(veh)	-	-	1.5	-	-	-

Intersection						
Int Delay, s/veh						
Int Delay, s/veh	3.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Vol, veh/h	146	149	5	103	86	5
Future Vol, veh/h	146	149	5	103	86	5
Conflicting Peds, #/hr	0	100	100	0	100	100
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	None	None	None	None	None	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	162	166	6	114	96	6

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	428
Stage 1	-	-	345
Stage 2	-	-	226
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	1132
Stage 1	-	-	717
Stage 2	-	-	812
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1012
Mov Cap-2 Maneuver	-	-	384
Stage 1	-	-	641
Stage 2	-	-	722

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0.4	17.51
HCM LOS			C

Minor Lane/Major Mvmt	NBL	EBT	EBR	WBL	WBT
Capacity (veh/h)	388	-	-	83	-
HCM Lane V/C Ratio	0.26	-	-	0.005	-
HCM Control Delay (s/veh)	17.5	-	-	8.6	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	1	-	-	0	-

Intersection						
Int Delay, s/veh						
Int Delay, s/veh	5.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Vol, veh/h	5	51	54	76	171	5
Future Vol, veh/h	5	51	54	76	171	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	None	None	None	None	None	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	57	60	84	190	6

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	144	0	0
Stage 1	-	-	102
Stage 2	-	-	68
Critical Hdwy	4.12	-	6.42
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	2.218	-	3.518
Pot Cap-1 Maneuver	1438	-	820
Stage 1	-	-	922
Stage 2	-	-	955
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1438	-	817
Mov Cap-2 Maneuver	-	-	817
Stage 1	-	-	918
Stage 2	-	-	955

Approach	EB	WB	SB
HCM Control Delay, s/v0.67		0	10.76
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBL	SBR
Capacity (veh/h)	161	-	-	-	820	-
HCM Lane V/C Ratio	0.004	-	-	-	0.238	-
HCM Control Delay (s/veh)	7.5	0	-	-	10.8	-
HCM Lane LOS	A	A	-	-	B	-
HCM 95th %tile Q(veh)	0	-	-	-	0.9	-

2030 Baseline Conditions Minor Event Ingress

Queues 1: Bank & Fifth

11/28/2024

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	52	58	68	47	17	496	26	572
Future Volume (vph)	52	58	68	47	17	496	26	572
Lane Group Flow (vph)	0	159	76	120	0	602	0	685
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases	4		8		2		6	
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	26.0	26.0	26.0	26.0	49.0	49.0	49.0	49.0
Total Split (s)	26.0	26.0	26.0	26.0	49.0	49.0	49.0	49.0
Total Split (%)	34.7%	34.7%	34.7%	34.7%	65.3%	65.3%	65.3%	65.3%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	13.5	13.5	13.5	13.5	50.5	50.5	50.5	50.5
Actuated g/C Ratio	0.18	0.18	0.18	0.18	0.67	0.67	0.67	0.67
v/c Ratio	0.66	0.43	0.40	0.32	0.32	0.36	0.36	0.36
Control Delay (s/veh)	37.3	33.3	16.1	10.6	6.6	6.6	6.6	6.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	37.3	33.3	16.1	10.6	6.6	6.6	6.6	6.6
LOS	D	C	B	B	B	A	A	A
Approach Delay (s/veh)	37.3		22.8		10.6		6.6	
Approach LOS	D		C		B		A	
Queue Length 50th (m)	18.4	9.6	6.3	3.8	18.6	18.5	18.5	18.5
Queue Length 95th (m)	33.3	19.5	17.9	9.2	52.9	35.6	35.6	35.6
Internal Link Dist (m)	49.7		112.4		195.6	190.0	190.0	190.0
Turn Bay Length (m)			45.0					
Base Capacity (vph)	356	268	426		1911		1905	
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	0.45	0.28	0.28		0.32		0.36	
Intersection Summary								
Cycle Length: 75								
Actuated Cycle Length: 75								
Offset: 47 (63%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green								
Natural Cycle: 75								
Control Type: Actuated-Coordinated								
Maximum v/c Ratio: 0.66								
Intersection Signal Delay (s/veh): 12.9	Intersection LOS: B							
Intersection Capacity Utilization 63.5%	ICU Level of Service B							
Analysis Period (min) 15								

Splits and Phases: 1: Bank & Fifth

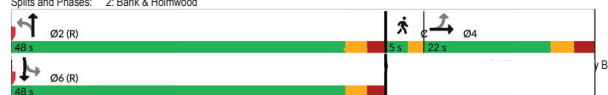


Queues 2: Bank & Holmwood

11/28/2024

Lane Group	EBT	NBL	NBT	SBL	SBT	Ø3
Lane Configurations						
Traffic Volume (vph)	26	52	502	24	558	
Future Volume (vph)	26	52	502	24	558	
Lane Group Flow (vph)	118	0	700	0	685	
Turn Type	NA	Perm	NA	Perm	NA	
Protected Phases	4		2		6	3
Permitted Phases		2		6		
Detector Phase	4	2	2	6	6	
Switch Phase						
Minimum Initial (s)	4.4	10.0	10.0	4.0	4.0	1.0
Minimum Split (s)	22.0	48.0	48.0	48.0	48.0	5.0
Total Split (s)	22.0	48.0	48.0	48.0	48.0	5.0
Total Split (%)	29.3%	64.0%	64.0%	64.0%	64.0%	7%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	2.0
All-Red Time (s)	2.6	2.2	2.2	2.2	2.2	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.6	5.2	5.2	5.2	5.2	0.0
Lead/Lag	Lag					Lead
Lead-Lag Optimize?						
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	None
Act Effct Green (s)	11.6	56.1	56.1	56.1	56.1	0.75
Actuated g/C Ratio	0.15	0.75	0.75	0.75	0.75	0.03
v/c Ratio	0.55	0.38	0.38	0.33	0.33	0.33
Control Delay (s/veh)	38.2	2.9	4.8	4.8	4.8	4.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	38.2	2.9	4.8	4.8	4.8	4.8
LOS	D	A	A	A	A	A
Approach Delay (s/veh)	38.2		2.9		4.8	
Approach LOS	D		A		A	
Queue Length 50th (m)	15.6	6.4	22.7	22.7	22.7	2.0
Queue Length 95th (m)	28.7	14.0	9.0	9.0	9.0	2.0
Internal Link Dist (m)	39.8		31.5		195.6	
Turn Bay Length (m)						
Base Capacity (vph)	303	1846	2103			
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	0.39	0.38	0.33	0.33	0.33	0.33
Intersection Summary						
Cycle Length: 75						
Actuated Cycle Length: 75						
Offset: 74 (99%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green						
Natural Cycle: 75						
Control Type: Actuated-Coordinated						
Maximum v/c Ratio: 0.55						
Intersection Signal Delay (s/veh): 6.6	Intersection LOS: A					
Intersection Capacity Utilization 67.4%	ICU Level of Service C					
Analysis Period (min) 15						

Splits and Phases: 2: Bank & Holmwood



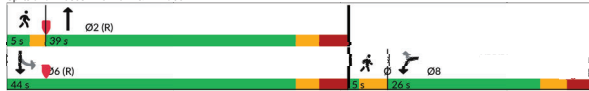
Queues
3: Bank & Exhibition

11/28/2024

Table with 10 columns: Lane Group, WBL, WBR, NBT, SBL, SBT, Ø1, Ø7. Rows include Lane Configurations, Traffic Volume (vph), Future Volume (vph), Lane Group Flow (vph), Turn Type, Protected Phases, Permitted Phases, Detector Phase, Switch Phase, Minimum Initial (s), Minimum Split (s), Total Split (s), Total Split (%), Yellow Time (s), All-Red Time (s), Lost Time Adjust (s), Total Lost Time (s), Lead/Lag, Lead-Lag Optimize?, Recall Mode, Act Effect Green (s), Actuated g/C Ratio, v/c Ratio, Control Delay (s/veh), Queue Delay, Total Delay (s/veh), LOS, Approach Delay (s/veh), Approach LOS, Queue Length 50th (m), Queue Length 95th (m), Internal Link Dist (m), Turn Bay Length (m), Base Capacity (vph), Starvation Cap Reductn, Spillback Cap Reductn, Storage Cap Reductn, Reduced v/c Ratio.

Intersection Summary
Cycle Length: 75
Actuated Cycle Length: 75
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.50
Intersection Signal Delay (s/veh): 7.6
Intersection Capacity Utilization 63.2%
Analysis Period (min) 15

Splits and Phases: 3: Bank & Exhibition



Queues
7: Bank & Sunnyside

11/28/2024

Table with 10 columns: Lane Group, EBL, EBT, WBL, WBT, NBL, NBT, SBL, SBT, Ø3, Ø7. Rows include Lane Configurations, Traffic Volume (vph), Future Volume (vph), Lane Group Flow (vph), Turn Type, Protected Phases, Permitted Phases, Detector Phase, Switch Phase, Minimum Initial (s), Minimum Split (s), Total Split (s), Total Split (%), Yellow Time (s), All-Red Time (s), Lost Time Adjust (s), Total Lost Time (s), Lead/Lag, Lead-Lag Optimize?, Recall Mode, Act Effect Green (s), Actuated g/C Ratio, v/c Ratio, Control Delay (s/veh), Queue Delay, Total Delay (s/veh), LOS, Approach Delay (s/veh), Approach LOS, Queue Length 50th (m), Queue Length 95th (m), Internal Link Dist (m), Turn Bay Length (m), Base Capacity (vph), Starvation Cap Reductn, Spillback Cap Reductn, Storage Cap Reductn, Reduced v/c Ratio.

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 17 (19%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.75
Intersection Signal Delay (s/veh): 15.3
Intersection Capacity Utilization 81.2%
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues
6: Bank & Aylmer

11/28/2024

Table with 6 columns: Lane Group, EBL, NBL, NBT, SBT, Ø3. Rows include Lane Configurations, Traffic Volume (vph), Future Volume (vph), Lane Group Flow (vph), Turn Type, Protected Phases, Permitted Phases, Detector Phase, Switch Phase, Minimum Initial (s), Minimum Split (s), Total Split (s), Total Split (%), Yellow Time (s), All-Red Time (s), Lost Time Adjust (s), Total Lost Time (s), Lead/Lag, Lead-Lag Optimize?, Recall Mode, Act Effect Green (s), Actuated g/C Ratio, v/c Ratio, Control Delay (s/veh), Queue Delay, Total Delay (s/veh), LOS, Approach Delay (s/veh), Approach LOS, Queue Length 50th (m), Queue Length 95th (m), Internal Link Dist (m), Turn Bay Length (m), Base Capacity (vph), Starvation Cap Reductn, Spillback Cap Reductn, Storage Cap Reductn, Reduced v/c Ratio.

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 87 (97%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.40
Intersection Signal Delay (s/veh): 7.7
Intersection Capacity Utilization 55.2%
Analysis Period (min) 15

Splits and Phases: 6: Bank & Aylmer



Queues
7: Bank & Sunnyside

11/28/2024

Table with 10 columns: Lane Group, EBL, EBT, WBL, WBT, NBL, NBT, SBL, SBT, Ø3, Ø7. Rows include Lane Configurations, Traffic Volume (vph), Future Volume (vph), Lane Group Flow (vph), Turn Type, Protected Phases, Permitted Phases, Detector Phase, Switch Phase, Minimum Initial (s), Minimum Split (s), Total Split (s), Total Split (%), Yellow Time (s), All-Red Time (s), Lost Time Adjust (s), Total Lost Time (s), Lead/Lag, Lead-Lag Optimize?, Recall Mode, Act Effect Green (s), Actuated g/C Ratio, v/c Ratio, Control Delay (s/veh), Queue Delay, Total Delay (s/veh), LOS, Approach Delay (s/veh), Approach LOS, Queue Length 50th (m), Queue Length 95th (m), Internal Link Dist (m), Turn Bay Length (m), Base Capacity (vph), Starvation Cap Reductn, Spillback Cap Reductn, Storage Cap Reductn, Reduced v/c Ratio.

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 17 (19%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.75
Intersection Signal Delay (s/veh): 15.3
Intersection Capacity Utilization 81.2%
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	NBL	NBT	SBT	Ø4
Lane Configurations	Y				
Traffic Volume (vph)	52	53	221	530	
Future Vol. (vph)	52	53	221	530	
Lane Group Flow (vph)	99	0	305	686	
Turn Type	Prot	Perm	NA	NA	
Protected Phases	10		2	6	4
Permitted Phases			2		
Detector Phase	10	2	2	6	
Switch Phase					
Minimum Initial (s)	10.0	4.0	4.0	4.0	4.0
Minimum Split (s)	21.0	48.0	48.0	48.0	11.0
Total Split (s)	21.0	48.0	48.0	48.0	11.0
Total Spilt (%)	26.3%	60.0%	60.0%	60.0%	14%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.7	3.8	3.8	3.8	2.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.7		6.8	6.8	
LeadLag					
Lead-Lag Optimize?					
Recall Mode	Min	None	None	Max	None
Act Effct Green (s)	10.8		41.2	41.2	
Actuated g/C Ratio	0.17		0.64	0.64	
v/c Ratio	0.39		0.35	0.65	
Control Delay (s/veh)	28.7		7.0	11.1	
Queue Delay	0.0		0.0	0.0	
Total Delay (s/veh)	28.7		7.0	11.1	
LOS	C		A	B	
Approach Delay (s/veh)	28.7		7.0	11.1	
Approach LOS	C		A	B	
Queue Length 50th (m)	10.7		13.7	40.9	
Queue Length 95th (m)	22.7		29.2	82.4	
Internal Link Dist (m)	57.2		0.1	5.9	
Turn Bay Length (m)					
Base Capacity (vph)	367		871	1057	
Starvation Cap Reductn	0		0	0	
Spillback Cap Reductn	0		0	0	
Storage Cap Reductn	0		0	0	
Reduced v/c Ratio	0.27		0.35	0.65	
Intersection Summary					
Cycle Length: 80					
Actuated Cycle Length: 64.5					
Natural Cycle: 80					
Control Type: Actuated-Uncoordinated					
Maximum v/c Ratio: 0.65					
Intersection Signal Delay (s/veh): 11.5	Intersection LOS: B				
Intersection Capacity Utilization 74.8%	ICU Level of Service D				
Analysis Period (min) 15					

Splits and Phases: 9: Queen Elizabeth Drive & Fifth



Intersection						
Intersection Delay, s/veh						
Intersection LOS						
Intersection Delay, s/veh: 8.9						
Intersection LOS: A						
Movement						
	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	Y					
Traffic Vol. (veh/h)	11	11	81	81	114	114
Future Vol. (veh/h)	11	11	81	81	114	114
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	12	90	90	127	127
Number of Lanes	1	0	0	1	1	0
Approach						
	EB	WB	WB	NB		
Opposing Approach	WB		EB			
Opposing Lanes	1		1	0		
Conflicting Approach Left			NB	EB		
Conflicting Lanes Left	0		1	1		
Conflicting Approach Right	NB			WB		
Conflicting Lanes Right	1		0	1		
HCM Control Delay, s/veh	7.6		9	9		
HCM LOS	A		A	A		

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	50%	0%	50%
Vol Thru, %	0%	50%	50%
Vol Right, %	50%	50%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	228	22	162
LT Vol	114	0	81
Through Vol	0	11	81
RT Vol	114	11	0
Lane Flow Rate	253	24	180
Geometry Grp	1	1	1
Degree of Util (X)	0.297	0.03	0.232
Departure Headway (Hd)	4.225	4.415	4.631
Convergence, Y/N	Yes	Yes	Yes
Cap	854	811	778
Service Time	2.24	2.44	2.649
HCM Lane V/C Ratio	0.296	0.03	0.231
HCM Control Delay, s/veh	9	7.6	9
HCM Lane LOS	A	A	A
HCM 95th-tile Q	1.2	0.1	0.9

Intersection						
Intersection Delay, s/veh						
Intersection LOS						
Intersection Delay, s/veh: 8.8						
Intersection LOS: A						
Movement						
	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	Y					
Traffic Vol. (veh/h)	227	0	0	0	0	122
Future Vol. (veh/h)	227	0	0	0	0	122
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	252	0	0	0	0	136
Number of Lanes	0	1	1	0	1	0
Approach						
	EB	WB	WB	SB		
Opposing Approach	WB		EB			
Opposing Lanes	1		1	0		
Conflicting Approach Left	SB			WB		
Conflicting Lanes Left	1		0	1		
Conflicting Approach Right			SB	EB		
Conflicting Lanes Right	0		1	1		
HCM Control Delay, s/veh	9.4		0	7.6		
HCM LOS	A		-	A		

Lane	EBLn1	WBLn1	SBLn1
Vol Left, %	100%	0%	0%
Vol Thru, %	0%	100%	0%
Vol Right, %	0%	0%	100%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	227	0	122
LT Vol	227	0	0
Through Vol	0	0	0
RT Vol	0	0	122
Lane Flow Rate	252	0	136
Geometry Grp	1	1	1
Degree of Util (X)	0.306	0	0.148
Departure Headway (Hd)	4.37	4.487	3.932
Convergence, Y/N	Yes	Yes	Yes
Cap	817	0	918
Service Time	2.426	2.5	1.932
HCM Lane V/C Ratio	0.308	0	0.148
HCM Control Delay, s/veh	9.4	7.5	7.6
HCM Lane LOS	A	N	A
HCM 95th-tile Q	1.3	0	0.5

Intersection						
Intersection Delay, s/veh						
Intersection LOS						
Intersection Delay, s/veh: 7.8						
Intersection LOS: A						
Movement						
	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	Y					
Traffic Vol. (veh/h)	32	0	0	161	0	0
Future Vol. (veh/h)	32	0	0	161	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	36	0	0	179	0	0
Number of Lanes	1	0	0	1	1	0
Approach						
	EB	WB	WB	NB		
Opposing Approach	WB		EB			
Opposing Lanes	1		1	0		
Conflicting Approach Left			NB	EB		
Conflicting Lanes Left	0		1	1		
Conflicting Approach Right	NB			WB		
Conflicting Lanes Right	1		0	1		
HCM Control Delay, s/veh	7.3		7.9	0		
HCM LOS	A		A	-		

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	0%	0%	0%
Vol Thru, %	100%	100%	100%
Vol Right, %	0%	0%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	0	32	161
LT Vol	0	0	0
Through Vol	0	32	161
RT Vol	0	0	0
Lane Flow Rate	0	36	179
Geometry Grp	1	1	1
Degree of Util (X)	0	0.04	0.197
Departure Headway (Hd)	4.304	4.066	3.961
Convergence, Y/N	Yes	Yes	Yes
Cap	0	879	911
Service Time	2.392	2.098	1.967
HCM Lane V/C Ratio	0	0.041	0.196
HCM Control Delay, s/veh	7.4	7.3	7.9
HCM Lane LOS	N	A	A
HCM 95th-tile Q	0	0.1	0.7

Queues
6: Bank & Aylmer

11/28/2024

Table with 5 columns: Lane Group, EBL, NBL, NBT, SBT, Ø3. Rows include Lane Configurations, Traffic Volume (vph), Future Volume (vph), Lane Group Flow (vph), Turn Type, Protected Phases, Permitted Phases, Detector Phase, Switch Phase, Minimum Initial (s), Minimum Split (s), Total Split (s), Total Split (%), Yellow Time (s), All-Red Time (s), Lost Time Adjust (s), Total Lost Time (s), Lead/Lag, Recall Mode, Act Effect Green (s), Actuated g/C Ratio, v/c Ratio, Control Delay (s/veh), Queue Delay, Total Delay (s/veh), LOS, Approach Delay (s/veh), Approach LOS, Queue Length 50th (m), Queue Length 95th (m), Internal Link Dist (m), Turn Bay Length (m), Base Capacity (vph), Starvation Cap Reductn, Spillback Cap Reductn, Storage Cap Reductn, Reduced v/c Ratio, Intersection Summary, Cycle Length: 90, Actuated Cycle Length: 90, Offset: 87 (97%), Referenced to phase 2:NBT and 6:SBT, Start of Green, Natural Cycle: 90, Control Type: Actuated-Coordinated, Maximum v/c Ratio: 0.52, Intersection Signal Delay (s/veh): 10.2, Intersection Capacity Utilization 52.6%, Analysis Period (min) 15.

Splits and Phases: 6: Bank & Aylmer



Queues
9: Queen Elizabeth Drive & Fifth

11/28/2024

Table with 5 columns: Lane Group, EBL, NBL, NBT, SBT, Ø4. Rows include Lane Configurations, Traffic Volume (vph), Future Volume (vph), Lane Group Flow (vph), Turn Type, Protected Phases, Permitted Phases, Detector Phase, Switch Phase, Minimum Initial (s), Minimum Split (s), Total Split (s), Total Split (%), Yellow Time (s), All-Red Time (s), Lost Time Adjust (s), Total Lost Time (s), Lead/Lag, Recall Mode, Act Effect Green (s), Actuated g/C Ratio, v/c Ratio, Control Delay (s/veh), Queue Delay, Total Delay (s/veh), LOS, Approach Delay (s/veh), Approach LOS, Queue Length 50th (m), Queue Length 95th (m), Internal Link Dist (m), Turn Bay Length (m), Base Capacity (vph), Starvation Cap Reductn, Spillback Cap Reductn, Storage Cap Reductn, Reduced v/c Ratio, Intersection Summary, Cycle Length: 80, Actuated Cycle Length: 67.2, Natural Cycle: 90, Control Type: Actuated-Uncoordinated, Maximum v/c Ratio: 0.85, Intersection Signal Delay (s/veh): 22.0, Intersection Capacity Utilization 90.2%, Analysis Period (min) 15.

Splits and Phases: 9: Queen Elizabeth Drive & Fifth



Queues
7: Bank & Sunnyside

11/28/2024

Table with 8 columns: Lane Group, EBL, EBT, WBL, WBT, NBL, NBT, SBL, SBT, Ø3, Ø7. Rows include Lane Configurations, Traffic Volume (vph), Future Volume (vph), Lane Group Flow (vph), Turn Type, Protected Phases, Permitted Phases, Detector Phase, Switch Phase, Minimum Initial (s), Minimum Split (s), Total Split (s), Total Split (%), Yellow Time (s), All-Red Time (s), Lost Time Adjust (s), Total Lost Time (s), Lead/Lag, Recall Mode, Act Effect Green (s), Actuated g/C Ratio, v/c Ratio, Control Delay (s/veh), Queue Delay, Total Delay (s/veh), LOS, Approach Delay (s/veh), Approach LOS, Queue Length 50th (m), Queue Length 95th (m), Internal Link Dist (m), Turn Bay Length (m), Base Capacity (vph), Starvation Cap Reductn, Spillback Cap Reductn, Storage Cap Reductn, Reduced v/c Ratio, Intersection Summary, Cycle Length: 90, Actuated Cycle Length: 85, Natural Cycle: 90, Control Type: Actuated-Uncoordinated, Maximum v/c Ratio: 0.85, Intersection Signal Delay (s/veh): 21.5, Intersection Capacity Utilization 89.5%, Analysis Period (min) 15.

Splits and Phases: 7: Bank & Sunnyside



HCM 7th AWSC
12: Exhibition & Paul Askin

11/28/2024

Table with 8 columns: Movement, EBL, EBT, WBT, WBR, SBL, SBR. Rows include Lane Configurations, Traffic Vol, veh/h, Future Vol, veh/h, Peak Hour Factor, Heavy Vehicles, %, Mvmt Flow, Number of Lanes, Approach, Opposing Approach, Opposing Lanes, Conflicting Approach Left, Conflicting Lanes Left, Conflicting Approach Right, Conflicting Lanes Right, HCM Control Delay, s/veh, HCM LOS, Lane, Vol Left, %, Vol Thru, %, Vol Right, %, Sign Control, Traffic Vol by Lane, LT Vol, Through Vol, RT Vol, Lane Flow Rate, Geometry Grp, Degree of Util (X), Departure Headway (Hd), Convergence, Y/N, Cap, Service Time, HCM Lane V/C Ratio, HCM Control Delay, s/veh, HCM Lane LOS, HCM 95th-ile Q.

Intersection						
Intersection Delay, s/veh	0					
Intersection LOS	-					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔			↔	↔	
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0
Number of Lanes	1	0	0	1	1	0
Approach	EB	WB		NB		
Opposing Approach	WB	EB				
Opposing Lanes	1	1		0		
Conflicting Approach Left		NB		EB		
Conflicting Lanes Left	0	1		1		
Conflicting Approach Right	NB			WB		
Conflicting Lanes Right	1	0		1		
HCM Control Delay, s/veh	0	0		0		
HCM LOS	-	-		-		

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	0%	0%	0%
Vol Thru, %	100%	100%	100%
Vol Right, %	0%	0%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	0	0	0
LT Vol	0	0	0
Through Vol	0	0	0
RT Vol	0	0	0
Lane Flow Rate	0	0	0
Geometry Grp	1	1	1
Degree of Util (X)	0	0	0
Departure Headway (Hd)	3.934	3.934	3.934
Convergence, Y/N	Yes	Yes	Yes
Cap	0	0	0
Service Time	1.934	1.934	1.934
HCM Lane V/C Ratio	0	0	0
HCM Control Delay, s/veh	6.9	6.9	6.9
HCM Lane LOS	N	N	N
HCM 95th-tile Q	0	0	0

Intersection												
Intersection Delay, s/veh	9.3											
Intersection LOS	A											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔					↔	↔			↔	↔
Traffic Vol, veh/h	66	56	0	0	0	192	57	60	93	0	0	127
Future Vol, veh/h	66	56	0	0	0	192	57	60	93	0	0	127
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	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	73	62	0	0	0	213	63	67	103	0	0	141
Number of Lanes	0	1	0	0	0	1	0	1	0	0	0	1
Approach	EB	EB		WB		NB	SB		SB			
Opposing Approach	WB	EB		SB		NB	SB		SB			
Opposing Lanes	1	1		1		1	1		1			
Conflicting Approach Left	SB	NB		EB		WB	SB		SB			
Conflicting Lanes Left	1	1		1		1	1		1			
Conflicting Approach Right	NB	SB		WB		EB	SB		SB			
Conflicting Lanes Right	1	1		1		1	1		1			
HCM Control Delay, s/veh	9.5	9		9.8		8.5	8.5		8.5			
HCM LOS	A	A		A		A	A		A			
Lane	NBLn1	EBLn1	WBLn1	SBLn1								
Vol Left, %	27%	54%	0%	0%								
Vol Thru, %	29%	46%	0%	0%								
Vol Right, %	44%	0%	100%	100%								
Sign Control	Stop	Stop	Stop	Stop								
Traffic Vol by Lane	66	210	122	192								
LT Vol	57	66	0	0								
Through Vol	60	56	0	0								
RT Vol	93	0	192	127								
Lane Flow Rate	233	136	213	141								
Geometry Grp	1	1	1	1								
Degree of Util (X)	0.304	0.194	0.259	0.174								
Departure Headway (Hd)	4.695	5.153	4.375	4.436								
Convergence, Y/N	Yes	Yes	Yes	Yes								
Cap	758	691	815	800								
Service Time	2.762	3.227	2.44	2.509								
HCM Lane V/C Ratio	0.307	0.197	0.261	0.176								
HCM Control Delay, s/veh	9.8	9.5	9	8.5								
HCM Lane LOS	A	A	A	A								
HCM 95th-tile Q	1.3	0.7	1	0.6								

Intersection						
Intersection Delay, s/veh	0					
Intersection LOS	-					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔			↔	↔	
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0
Number of Lanes	1	0	0	1	1	0
Approach	EB	WB		NB		
Opposing Approach	WB	EB				
Opposing Lanes	1	1		0		
Conflicting Approach Left		NB		EB		
Conflicting Lanes Left	0	1		1		
Conflicting Approach Right	NB			WB		
Conflicting Lanes Right	1	0		1		
HCM Control Delay, s/veh	0	0		0		
HCM LOS	-	-		-		

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	0%	0%	0%
Vol Thru, %	100%	100%	100%
Vol Right, %	0%	0%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	0	0	0
LT Vol	0	0	0
Through Vol	0	0	0
RT Vol	0	0	0
Lane Flow Rate	0	0	0
Geometry Grp	1	1	1
Degree of Util (X)	0	0	0
Departure Headway (Hd)	3.934	3.934	3.934
Convergence, Y/N	Yes	Yes	Yes
Cap	0	0	0
Service Time	1.934	1.934	1.934
HCM Lane V/C Ratio	0	0	0
HCM Control Delay, s/veh	6.9	6.9	6.9
HCM Lane LOS	N	N	N
HCM 95th-tile Q	0	0	0

Intersection										
Int Delay, s/veh	18.1									
Movement	EBL	EBR	NBL	NBT	SBT	SBR				
Lane Configurations		↔	↔	↔	↔	↔				
Traffic Vol, veh/h	5	277	108	723	537	107				
Future Vol, veh/h	5	277	108	723	537	107				
Conflicting Peds, #/hr	0	0	178	0	0	107				
Sign Control	Stop	Stop	Free	Free	Free	Free				
RT Channelized	-	None	-	None	-	None				
Storage Length	-	0	-	-	-	-				
Veh in Median Storage, #	0	-	-	0	0	-				
Grade, %	0	-	-	0	0	-				
Peak Hour Factor	90	90	90	90	90	90				
Heavy Vehicles, %	3	3	3	3	3	3				
Mvmt Flow	6	308	120	803	597	119				
Major/Minor	Minor2	Major1	Major2							
Conflicting Flow All	1476	834	894	0	-	0				
Stage 1	834	-	-	-	-	-				
Stage 2	642	-	-	-	-	-				
Critical Hdwy	6.645	6.245	4.145	-	-	-				
Critical Hdwy Stg 1	5.445	-	-	-	-	-				
Critical Hdwy Stg 2	5.945	-	-	-	-	-				
Follow-up Hdwy	3.52853	3.2852	2.285	-	-	-				
Pot Cap-1 Maneuver	127	365	752	-	-	-				
Stage 1	423	-	-	-	-	-				
Stage 2	485	-	-	-	-	-				
Platoon blocked, %	-	-	-	-	-	-				
Mov Cap-1 Maneuver	62	-	296	610	-	-				
Mov Cap-2 Maneuver	62	-	-	-	-	-				
Stage 1	256	-	-	-	-	-				
Stage 2	394	-	-	-	-	-				
Approach	EB	WB	SB							
HCM Control Delay, s/veh	10.171	3.7	0							
HCM LOS	F									
Minor Lane/Major Mvmt	NBL	NBTEBLn1	SBT	SBR						
Capacity (veh/h)	468	-	296	-						
HCM Lane V/C Ratio	0.197	-	1.039	-						
HCM Control Delay (s/veh)	12.3	2.4	101.7	-						
HCM Lane LOS	B	A	F	-						
HCM 95th-tile Q(veh)	0.7	-	11.5	-						
Notes	--: Volume exceeds capacity \$: Delay exceeds 300s -: Computation Not Defined *: All major volume in platoon									

Intersection					
Int Delay, s/veh					
Int Delay, s/veh	0.8				
Movement	EBL	EBR	NBL	NBT	SBT
Lane Configurations					
Traffic Vol, veh/h	1	75	0	809	786
Future Vol, veh/h	1	75	0	809	786
Conflicting Peds, #/hr	0	0	0	0	86
Sign Control	Stop	Stop	Free	Free	Free
RT Channelized	-	-	-	-	-
Storage Length	-	0	-	-	-
Veh in Median Storage, #	0	-	0	0	-
Grade, %	0	-	0	0	-
Peak Hour Factor	90	90	90	90	90
Heavy Vehicles, %	3	3	3	3	3
Mvmt Flow	1	83	0	899	873

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	1323	873	0
Stage 1	873	-	-
Stage 2	449	-	-
Critical Hdwy	6.645	6.245	-
Critical Hdwy Stg 1	5.445	-	-
Critical Hdwy Stg 2	5.845	-	-
Follow-up Hdwy	3.5285	3.3285	-
Pot Cap-1 Maneuver	158	347	0
Stage 1	405	-	-
Stage 2	608	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	158	347	-
Mov Cap-2 Maneuver	158	-	-
Stage 1	405	-	-
Stage 2	608	-	-

Approach	EB	NB	SB
HCM Control Delay, s/veh	18.65	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT
Capacity (veh/h)	-	347	-	-
HCM Lane V/C Ratio	-	0.24	-	-
HCM Control Delay (s/veh)	-	18.6	-	-
HCM Lane LOS	-	C	-	-
HCM 95th %tile Q(veh)	-	0.9	-	-

Intersection					
Int Delay, s/veh					
Int Delay, s/veh	9.4				
Movement	EBL	EBR	NBL	NBT	SBT
Lane Configurations					
Traffic Vol, veh/h	94	97	105	241	459
Future Vol, veh/h	94	97	105	241	459
Conflicting Peds, #/hr	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free
RT Channelized	-	-	-	-	-
Storage Length	0	-	-	-	-
Veh in Median Storage, #	0	-	0	0	-
Grade, %	0	-	0	0	-
Peak Hour Factor	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0
Mvmt Flow	104	108	117	268	510

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	1153	652	794
Stage 1	652	-	-
Stage 2	501	-	-
Critical Hdwy	6.4	6.2	4.1
Critical Hdwy Stg 1	5.4	-	-
Critical Hdwy Stg 2	5.4	-	-
Follow-up Hdwy	3.5	3.3	2.2
Pot Cap-1 Maneuver	220	471	836
Stage 1	522	-	-
Stage 2	613	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	184	471	836
Mov Cap-2 Maneuver	184	-	-
Stage 1	437	-	-
Stage 2	613	-	-

Approach	EB	NB	SB
HCM Control Delay, s/veh	65.95	3.04	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT
Capacity (veh/h)	546	-	267	-
HCM Lane V/C Ratio	0.14	-	0.796	-
HCM Control Delay (s/veh)	10	0	56	-
HCM Lane LOS	B	A	F	-
HCM 95th %tile Q(veh)	0.5	-	6.1	-

Intersection					
Int Delay, s/veh					
Int Delay, s/veh	0				
Movement	WBL	WBR	NBT	NBR	SBL
Lane Configurations					
Traffic Vol, veh/h	0	0	677	0	0
Future Vol, veh/h	0	0	677	0	0
Conflicting Peds, #/hr	0	0	0	100	0
Sign Control	Stop	Stop	Free	Free	Free
RT Channelized	-	-	-	-	-
Storage Length	-	0	-	-	-
Veh in Median Storage, #	0	-	0	-	-
Grade, %	0	-	0	-	-
Peak Hour Factor	90	90	90	90	90
Heavy Vehicles, %	0	0	2	0	2
Mvmt Flow	0	0	752	0	0

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	-	476	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	6.9	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	3.3	-
Pot Cap-1 Maneuver	0	541	-
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	483	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/veh	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s/veh)	-	-	0	-
HCM Lane LOS	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	-

Intersection					
Int Delay, s/veh					
Int Delay, s/veh	5.5				
Movement	EBT	EBR	WBL	WBT	NBL
Lane Configurations					
Traffic Vol, veh/h	0	105	0	0	84
Future Vol, veh/h	0	105	0	0	84
Conflicting Peds, #/hr	0	100	0	100	100
Sign Control	Free	Free	Free	Stop	Stop
RT Channelized	-	-	-	-	-
Storage Length	-	-	-	-	-
Veh in Median Storage, #	0	-	0	0	-
Grade, %	0	-	0	0	-
Peak Hour Factor	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2
Mvmt Flow	0	117	0	0	93

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	217
Stage 1	-	-	158
Stage 2	-	-	101
Critical Hdwy	-	4.12	6.42
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	-	2.218	3.518
Pot Cap-1 Maneuver	-	1353	729
Stage 1	-	-	870
Stage 2	-	-	923
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	1210	583
Mov Cap-2 Maneuver	-	-	583
Stage 1	-	-	778
Stage 2	-	-	825

Approach	EB	WB	NB
HCM Control Delay, s/veh	0	0	12.35
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	WBL	WBT
Capacity (veh/h)	583	-	1210	-
HCM Lane V/C Ratio	0.16	-	-	-
HCM Control Delay (s/veh)	12.3	-	0	-
HCM Lane LOS	B	-	A	-
HCM 95th %tile Q(veh)	0.6	-	0	-

Intersection						
Int Delay, s/veh	3.9					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	361	191	0
Future Vol, veh/h	0	0	0	361	191	0
Conflicting Peds, #/hr	0					
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	None	None	None	None	None	None
Storage Length	-					
Veh in Median Storage, #	-					
Grade, %	-					
Peak Hour Factor	90					
Heavy Vehicles, %	2					
Mvmt Flow	0	0	0	401	212	0
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	401	0	0	201	201	
Stage 1	-	-	-	201	-	
Stage 2	-	-	-	0	-	
Critical Hdwy	4.12	-	-	6.42	6.22	
Critical Hdwy Stg 1	-	-	-	5.42	-	
Critical Hdwy Stg 2	-	-	-	5.42	-	
Follow-up Hdwy	2.219	-	-	3.518	3.318	
Pot Cap-1 Maneuver	1158	-	-	788	840	
Stage 1	-	-	-	833	-	
Stage 2	-	-	-	-	-	
Platoon blocked, %	-					
Mov Cap-1 Maneuver	1158	-	-	788	840	
Mov Cap-2 Maneuver	-	-	-	788	-	
Stage 1	-	-	-	833	-	
Stage 2	-	-	-	-	-	
Approach	EB	WB	SB			
HCM Control Delay, s/v	0	0	11.24			
HCM LOS	B					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1158	-	-	-	788	
HCM Lane V/C Ratio	-	-	-	-	0.269	
HCM Control Delay (s/veh)	0	-	-	-	11.2	
HCM Lane LOS	A	-	-	-	B	
HCM 95th %tile Q(veh)	0	-	-	-	1.1	

2030 Baseline Conditions Major Event Egress

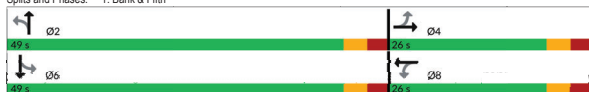
2030 Major Event Baseline Ingress Peak Hour Lansdowne 2.0 Transportation Impact Assessment 3:41 pm 11/28/2024 Total Delay Background 4 Page 6

Queues 1: Bank & Fifth

11/28/2024

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	77	33	41	71	22	320	20	353
Future Volume (vph)	77	33	41	71	22	320	20	353
Lane Group Flow (vph)	0	153	46	206	0	408	0	458
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases	4 8 8 2 2 6 6							
Permitted Phases	4 4 8 8 2 2 6 6							
Detector Phase	4 4 8 8 2 2 6 6							
Switch Phase	-							
Minimum Initial (s)	4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0							
Minimum Split (s)	26.0 26.0 26.0 26.0 49.0 49.0 49.0 49.0							
Total Split (s)	26.0 26.0 26.0 26.0 49.0 49.0 49.0 49.0							
Total Split (%)	34.7% 34.7% 34.7% 34.7% 65.3% 65.3% 65.3% 65.3%							
Yellow Time (s)	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0							
All-Red Time (s)	2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5							
Lost Time Adjust (s)	0.0 0.0 0.0 0.0 0.0 0.0							
Total Lost Time (s)	5.5 5.5 5.5 5.5 5.5 5.5							
Lead/Lag	-							
Lead-Lag Optimize?	-							
Recall Mode	None None None None Max Max Max Max							
Act Effect Green (s)	14.1 14.1 14.1 14.1 44.5 44.5 44.5 44.5							
Actuated g/C Ratio	0.20 0.20 0.20 0.20 0.64 0.64 0.64 0.64							
v/c Ratio	0.75 0.21 0.58 0.23 0.26 0.26							
Control Delay (s/veh)	45.7 24.4 18.8 6.2 6.3							
Queue Delay	0.0 0.0 0.0 0.0 0.0 0.0							
Total Delay (s/veh)	45.7 24.4 18.8 6.2 6.3							
LOS	D C B A A A							
Approach Delay (s/veh)	45.7 19.8 6.2 6.3							
Approach LOS	D B A A A							
Queue Length 50th (m)	16.5 4.9 11.1 9.8 11.0							
Queue Length 95th (m)	35.2 12.7 29.1 19.7 22.1							
Internal Link Dist (m)	49.7 45.0 112.4 195.6 190.0							
Turn Bay Length (m)	-							
Base Capacity (vph)	289 314 475 1770 1778							
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	0.53 0.15 0.43 0.23 0.26							
Intersection Summary	-							
Cycle Length: 75	-							
Actuated Cycle Length: 69.6	-							
Natural Cycle: 75	-							
Control Type: Actuated-Uncoordinated	-							
Maximum v/c Ratio: 0.75	-							
Intersection Signal Delay (s/veh): 13.7	Intersection LOS: B							
Intersection Capacity Utilization 73.2%	ICU Level of Service D							
Analysis Period (min) 15	-							

Splits and Phases: 1: Bank & Fifth



Queues 2: Bank & Holmwood

11/28/2024

Lane Group	EBT	NBL	NBT	SBL	SBT	Ø3
Lane Configurations						
Traffic Volume (vph)	22	51	269	30	281	-
Future Volume (vph)	22	51	269	30	281	-
Lane Group Flow (vph)	149	0	419	0	415	-
Turn Type	NA	Perm	NA	Perm	NA	-
Protected Phases	4 2 2 6 3					
Permitted Phases	4 2 2 6 6					
Detector Phase	4 2 2 6 6					
Switch Phase	-					
Minimum Initial (s)	4.4 10.0 10.0 4.0 4.0 1.0					
Minimum Split (s)	22.0 48.0 48.0 48.0 48.0 5.0					
Total Split (s)	22.0 48.0 48.0 48.0 48.0 5.0					
Total Split (%)	29.3% 64.0% 64.0% 64.0% 64.0% 7%					
Yellow Time (s)	3.0 3.0 3.0 3.0 3.0 2.0					
All-Red Time (s)	2.6 2.2 2.2 2.2 2.2 0.0					
Lost Time Adjust (s)	0.0 0.0 0.0 0.0					
Total Lost Time (s)	5.6 5.2 5.2 5.2					
Lead/Lag	Lag Lead					
Lead-Lag Optimize?	-					
Recall Mode	None C-Max C-Max C-Max None					
Act Effect Green (s)	13.4 50.8 50.8					
Actuated g/C Ratio	0.18 0.68 0.68					
v/c Ratio	0.62 0.26 0.23					
Control Delay (s/veh)	38.9 4.2 5.0					
Queue Delay	0.0 0.0 0.0					
Total Delay (s/veh)	38.9 4.2 5.0					
LOS	D A A A					
Approach Delay (s/veh)	38.9 4.2 5.0					
Approach LOS	D A A A					
Queue Length 50th (m)	19.7 9.0 8.5					
Queue Length 95th (m)	33.8 18.5 17.6					
Internal Link Dist (m)	39.8 31.5 195.6					
Turn Bay Length (m)	-					
Base Capacity (vph)	305 1629 1771					
Starvation Cap Reductn	0 0 0					
Spillback Cap Reductn	0 0 0					
Storage Cap Reductn	0 0 0					
Reduced v/c Ratio	0.49 0.26 0.23					
Intersection Summary	-					
Cycle Length: 75	-					
Actuated Cycle Length: 75	-					
Offset: 74 (99%), Referenced to phase 2:NBL and 6:SBT, Start of Green	-					
Natural Cycle: 75	-					
Control Type: Actuated-Coordinated	-					
Maximum v/c Ratio: 0.62	-					
Intersection Signal Delay (s/veh): 9.8	Intersection LOS: A					
Intersection Capacity Utilization 59.6%	ICU Level of Service B					
Analysis Period (min) 15	-					

Splits and Phases: 2: Bank & Holmwood



Queues
3: Bank & Exhibition

11/28/2024

Table with 7 columns: Lane Group, WBL, WBR, NBT, SBL, SBT, Ø1, Ø7. Rows include Lane Configurations, Traffic Volume (vph), Future Volume (vph), Lane Group Flow (vph), Turn Type, Protected Phases, Permitted Phases, Detector Phase, Switch Phase, Minimum Initial (s), Minimum Split (s), Total Split (s), Total Spilt (%), Yellow Time (s), All-Red Time (s), Last Time Adjust (s), Total Lost Time (s), Lead/Lag, Lead-Lag Optimize?, Recall Mode, Act Efect Green (s), Actuated g/C Ratio, v/c Ratio, Control Delay (s/veh), Queue Delay, Total Delay (s/veh), LOS, Approach Delay (s/veh), Approach LOS, Queue Length 50th (m), Queue Length 95th (m), Internal Link Dist (m), Turn Bay Length (m), Base Capacity (vph), Starvation Cap Reductn, Spillback Cap Reductn, Storage Cap Reductn, Reduced v/c Ratio.

Intersection Summary
Cycle Length: 75
Actuated Cycle Length: 75
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBL, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.13
Intersection Signal Delay (s/veh): 1.3
Intersection Capacity Utilization 43.5%
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.



Queues
7: Bank & Sunnyside

11/28/2024

Table with 11 columns: Lane Group, EBL, EBT, WBL, WBT, NBL, NBT, SBL, SBT, Ø3, Ø7. Rows include Lane Configurations, Traffic Volume (vph), Future Volume (vph), Lane Group Flow (vph), Turn Type, Protected Phases, Permitted Phases, Detector Phase, Switch Phase, Minimum Initial (s), Minimum Split (s), Total Split (s), Total Spilt (%), Yellow Time (s), All-Red Time (s), Last Time Adjust (s), Total Lost Time (s), Lead/Lag, Lead-Lag Optimize?, Recall Mode, Act Efect Green (s), Actuated g/C Ratio, v/c Ratio, Control Delay (s/veh), Queue Delay, Total Delay (s/veh), LOS, Approach Delay (s/veh), Approach LOS, Queue Length 50th (m), Queue Length 95th (m), Internal Link Dist (m), Turn Bay Length (m), Base Capacity (vph), Starvation Cap Reductn, Spillback Cap Reductn, Storage Cap Reductn, Reduced v/c Ratio.

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 79.3
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.55
Intersection Signal Delay (s/veh): 10.7
Intersection Capacity Utilization 45.7%
Analysis Period (min) 15



Queues
6: Bank & Aylmer

11/28/2024

Table with 6 columns: Lane Group, EBL, NBL, NBT, SBT, Ø3. Rows include Lane Configurations, Traffic Volume (vph), Future Volume (vph), Lane Group Flow (vph), Turn Type, Protected Phases, Permitted Phases, Detector Phase, Switch Phase, Minimum Initial (s), Minimum Split (s), Total Split (s), Total Spilt (%), Yellow Time (s), All-Red Time (s), Last Time Adjust (s), Total Lost Time (s), Lead/Lag, Lead-Lag Optimize?, Recall Mode, Act Efect Green (s), Actuated g/C Ratio, v/c Ratio, Control Delay (s/veh), Queue Delay, Total Delay (s/veh), LOS, Approach Delay (s/veh), Approach LOS, Queue Length 50th (m), Queue Length 95th (m), Internal Link Dist (m), Turn Bay Length (m), Base Capacity (vph), Starvation Cap Reductn, Spillback Cap Reductn, Storage Cap Reductn, Reduced v/c Ratio.

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 87 (97%), Referenced to phase 2:NBL and 6:SBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.20
Intersection Signal Delay (s/veh): 6.6
Intersection Capacity Utilization 45.6%
Analysis Period (min) 15

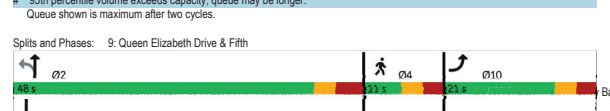


Queues
9: Queen Elizabeth Drive & Fifth

11/28/2024

Table with 6 columns: Lane Group, EBL, NBL, NBT, SBT, Ø4. Rows include Lane Configurations, Traffic Volume (vph), Future Volume (vph), Lane Group Flow (vph), Turn Type, Protected Phases, Permitted Phases, Detector Phase, Switch Phase, Minimum Initial (s), Minimum Split (s), Total Split (s), Total Spilt (%), Yellow Time (s), All-Red Time (s), Last Time Adjust (s), Total Lost Time (s), Lead/Lag, Lead-Lag Optimize?, Recall Mode, Act Efect Green (s), Actuated g/C Ratio, v/c Ratio, Control Delay (s/veh), Queue Delay, Total Delay (s/veh), LOS, Approach Delay (s/veh), Approach LOS, Queue Length 50th (m), Queue Length 95th (m), Internal Link Dist (m), Turn Bay Length (m), Base Capacity (vph), Starvation Cap Reductn, Spillback Cap Reductn, Storage Cap Reductn, Reduced v/c Ratio.

Intersection Summary
Cycle Length: 80
Actuated Cycle Length: 67.5
Natural Cycle: 65
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.71
Intersection Signal Delay (s/veh): 15.4
Intersection Capacity Utilization 68.1%
Analysis Period (min) 15
5th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Intersection						
Intersection Delay, s/veh	0					
Intersection LOS	-					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0
Number of Lanes	0	1	1	0	1	0
Approach	EB	WB	WB	SB		
Opposing Approach	WB	EB				
Opposing Lanes	1	1		0		
Conflicting Approach Left	SB		WB			
Conflicting Lanes Left	1	0	1			
Conflicting Approach Right		SB		EB		
Conflicting Lanes Right	0	1		1		
HCM Control Delay, s/veh	0	0	0	0		
HCM LOS	-	-	-	-		
Lane	EBLn1	WBLn1	SBLn1			
Vol Left, %	0%	0%	0%			
Vol Thru, %	100%	100%	100%			
Vol Right, %	0%	0%	0%			
Sign Control	Stop	Stop	Stop			
Traffic Vol by Lane	0	0	0			
LT Vol	0	0	0			
Through Vol	0	0	0			
RT Vol	0	0	0			
Lane Flow Rate	0	0	0			
Geometry Grp	1	1	1			
Degree of Util (X)	0	0	0			
Departure Headway (Hd)	3.934	3.934	3.934			
Convergence, Y/N	Yes	Yes	Yes			
Cap	0	0	0			
Service Time	1.934	1.934	1.934			
HCM Lane V/C Ratio	0	0	0			
HCM Control Delay, s/veh	6.9	6.9	6.9			
HCM Lane LOS	N	N	N			
HCM 95th-tile Q	0	0	0			

Intersection						
Intersection Delay, s/veh	0					
Intersection LOS	-					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↕			↕	↕	
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0
Number of Lanes	1	0	0	1	1	0
Approach	EB	WB	WB	NB	SB	SB
Opposing Approach	WB		EB			
Opposing Lanes	1		1	0		
Conflicting Approach Left			NB	EB		
Conflicting Lanes Left	0		1	1		
Conflicting Approach Right	NB			WB		
Conflicting Lanes Right	1		0	1		
HCM Control Delay, s/veh	0		0	0		
HCM LOS	-		-	-		
Lane	NBLn1	EBLn1	WBLn1	SBLn1		
Vol Left, %	0%	0%	0%			
Vol Thru, %	100%	100%	100%			
Vol Right, %	0%	0%	0%			
Sign Control	Stop	Stop	Stop			
Traffic Vol by Lane	0	0	0			
LT Vol	0	0	0			
Through Vol	0	0	0			
RT Vol	0	0	0			
Lane Flow Rate	0	0	0			
Geometry Grp	1	1	1			
Degree of Util (X)	0	0	0			
Departure Headway (Hd)	3.934	3.934	3.934			
Convergence, Y/N	Yes	Yes	Yes			
Cap	0	0	0			
Service Time	1.934	1.934	1.934			
HCM Lane V/C Ratio	0	0	0			
HCM Control Delay, s/veh	6.9	6.9	6.9			
HCM Lane LOS	N	N	N			
HCM 95th-tile Q	0	0	0			

Intersection						
Intersection Delay, s/veh	0					
Intersection LOS	-					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↕			↕	↕	
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0
Number of Lanes	1	0	0	1	1	0
Approach	EB	WB	WB	NB	SB	SB
Opposing Approach	WB		EB			
Opposing Lanes	1		1	0		
Conflicting Approach Left			NB	EB		
Conflicting Lanes Left	0		1	1		
Conflicting Approach Right	NB			WB		
Conflicting Lanes Right	1		0	1		
HCM Control Delay, s/veh	0		0	0		
HCM LOS	-		-	-		
Lane	NBLn1	EBLn1	WBLn1	SBLn1		
Vol Left, %	0%	0%	0%			
Vol Thru, %	100%	100%	100%			
Vol Right, %	0%	0%	0%			
Sign Control	Stop	Stop	Stop			
Traffic Vol by Lane	0	0	0			
LT Vol	0	0	0			
Through Vol	0	0	0			
RT Vol	0	0	0			
Lane Flow Rate	0	0	0			
Geometry Grp	1	1	1			
Degree of Util (X)	0	0	0			
Departure Headway (Hd)	3.934	3.934	3.934			
Convergence, Y/N	Yes	Yes	Yes			
Cap	0	0	0			
Service Time	1.934	1.934	1.934			
HCM Lane V/C Ratio	0	0	0			
HCM Control Delay, s/veh	6.9	6.9	6.9			
HCM Lane LOS	N	N	N			
HCM 95th-tile Q	0	0	0			

Intersection												
Intersection Delay, s/veh	10.1											
Intersection LOS	B											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕					↕	↕				↕
Traffic Vol, veh/h	24	51	0	0	0	109	114	101	141	0	0	53
Future Vol, veh/h	24	51	0	0	0	109	114	101	141	0	0	53
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	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	27	57	0	0	0	121	127	112	157	0	0	59
Number of Lanes	0	1	0	0	0	1	0	1	0	0	0	1
Approach	EB	WB	WB	NB	SB	SB	EB	NB	SB	SB	SB	SB
Opposing Approach	WB		EB				WB		NB		SB	
Opposing Lanes	1		1				1		1		1	
Conflicting Approach Left	SB						NB	EB			WB	
Conflicting Lanes Left	1						1	1			1	
Conflicting Approach Right	NB						SB	WB			EB	
Conflicting Lanes Right	1						1	1			1	
HCM Control Delay, s/veh	8.9						8.3	11.2			7.6	
HCM LOS	A						A	B			A	
Lane	NBLn1	EBLn1	WBLn1	SBLn1								
Vol Left, %	32%	32%	0%	0%								
Vol Thru, %	28%	68%	0%	0%								
Vol Right, %	40%	0%	100%	100%								
Sign Control	Stop	Stop	Stop	Stop								
Traffic Vol by Lane	356	75	109	53								
LT Vol	114	24	0	0								
Through Vol	101	51	0	0								
RT Vol	141	0	109	53								
Lane Flow Rate	396	83	121	59								
Geometry Grp	1	1	1	1								
Degree of Util (X)	0.474	0.119	0.15	0.07								
Departure Headway (Hd)	4.31	5.157	4.456	4.254								
Convergence, Y/N	Yes	Yes	Yes	Yes								
Cap	635	653	802	838								
Service Time	2.342	3.208	2.502	2.302								
HCM Lane V/C Ratio	0.474	0.12	0.151	0.07								
HCM Control Delay, s/veh	11.2	8.9	8.3	7.6								
HCM Lane LOS	B	A	A	A								
HCM 95th-tile Q	2.6	0.4	0.5	0.2								

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	5	0	355	291	69
Future Vol, veh/h	0	5	0	355	291	69
Conflicting Peds, #/hr	0	0	178	0	0	107
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	None	None	None	None	None	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	6	0	394	323	77
Major/Minor						
Minor2	Major1		Major2			
Conflicting Flow All	-	540	578	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.245	4.145	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-3.3285	2.285	-	-	-
Pot Cap-1 Maneuver	0	639	988	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	437	802	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach						
EB	NB		SB			
HCM Control Delay, s/v	13.34	0	0	-	-	-
HCM LOS	B	-	-	-	-	-
Minor Lane/Major Mvmt						
NBL	NBTEBLn1	SBT	SBR	-	-	
Capacity (veh/h)	802	-	437	-	-	
HCM Lane V/C Ratio	-	-	0.013	-	-	
HCM Control Delay (s/veh)	0	-	13.3	-	-	
HCM Lane LOS	A	-	B	-	-	
HCM 95th %tile Q(veh)	0	-	0	-	-	

Intersection						
Int Delay, s/veh	0.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	33	0	338	302	0
Future Vol, veh/h	0	33	0	338	302	0
Conflicting Peds, #/hr	0	0	0	0	0	86
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	None	None	None	None	None	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	37	0	376	336	0
Major/Minor						
Minor2	Major1		Major2			
Conflicting Flow All	-	336	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.245	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-
Pot Cap-1 Maneuver	0	703	0	-	-	0
Stage 1	0	-	0	-	-	0
Stage 2	0	-	0	-	-	0
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	703	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach						
EB	NB		SB			
HCM Control Delay, s/v	10.4	0	0	-	-	-
HCM LOS	B	-	-	-	-	-
Minor Lane/Major Mvmt						
NBTEBLn1	SBT	-	-	-	-	
Capacity (veh/h)	-	703	-	-	-	
HCM Lane V/C Ratio	-	0.052	-	-	-	
HCM Control Delay (s/veh)	-	10.4	-	-	-	
HCM Lane LOS	-	B	-	-	-	
HCM 95th %tile Q(veh)	-	0.2	-	-	-	

Intersection						
Int Delay, s/veh	20					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	238	210	50	113	224	127
Future Vol, veh/h	238	210	50	113	224	127
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	None	None	None	None	None	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	264	233	56	126	249	141
Major/Minor						
Minor2	Major1		Major2			
Conflicting Flow All	556	319	390	0	-	0
Stage 1	319	-	-	-	-	-
Stage 2	237	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	495	726	1180	-	-	-
Stage 1	741	-	-	-	-	-
Stage 2	807	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	470	726	1180	-	-	-
Mov Cap-2 Maneuver	470	-	-	-	-	-
Stage 1	704	-	-	-	-	-
Stage 2	807	-	-	-	-	-
Approach						
EB	NB		SB			
HCM Control Delay, s/v	42.01	2.52	0	-	-	-
HCM LOS	E	-	-	-	-	-
Minor Lane/Major Mvmt						
NBL	NBTEBLn1	SBT	SBR	-	-	
Capacity (veh/h)	552	-	563	-	-	
HCM Lane V/C Ratio	0.047	-	0.884	-	-	
HCM Control Delay (s/veh)	8.2	0	42	-	-	
HCM Lane LOS	A	A	E	-	-	
HCM 95th %tile Q(veh)	0.1	-	10.2	-	-	

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	433	0	0	347
Future Vol, veh/h	0	0	433	0	0	347
Conflicting Peds, #/hr	0	0	0	100	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	None	None	None	None	None	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	2	0	2	2
Mvmt Flow	0	0	481	0	0	386
Major/Minor						
Minor1	Major1		Major2			
Conflicting Flow All	-	341	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	661	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	591	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach						
WB	NB		SB			
HCM Control Delay, s/v	0	0	0	0	-	-
HCM LOS	A	-	-	-	-	-
Minor Lane/Major Mvmt						
NBT	NBRWBLn1	SBT	-	-	-	
Capacity (veh/h)	-	-	-	-	-	
HCM Lane V/C Ratio	-	-	-	-	-	
HCM Control Delay (s/veh)	-	0	-	-	-	
HCM Lane LOS	-	-	A	-	-	
HCM 95th %tile Q(veh)	-	-	-	-	-	

Intersection						
Int Delay, s/veh	7.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔ ↘ ↙ ↘ ↙ ↘					
Traffic Vol, veh/h	0	1	0	0	5	0
Future Vol, veh/h	0	1	0	0	5	0
Conflicting Peds, #/hr	0	100	100	0	100	100
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	None	None	None	None	None	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1	0	0	6	0

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	202
Stage 1	-	-	101
Stage 2	-	-	101
Critical Hdwy	-	4.12	6.42
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	-	2.218	3.518
Pot Cap-1 Maneuver	-	1491	840
Stage 1	-	-	923
Stage 2	-	-	923
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	1333	672
Mov Cap-2 Maneuver	-	-	629
Stage 1	-	-	826
Stage 2	-	-	825

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0	10.77
HCM LOS	B		

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	629	-	-	1333	-
HCM Lane V/C Ratio	0.009	-	-	-	-
HCM Control Delay (s/veh)	10.8	-	-	0	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection						
Int Delay, s/veh	9.9					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↔ ↘ ↙ ↘ ↙ ↘					
Traffic Vol, veh/h	0	0	0	177	448	0
Future Vol, veh/h	0	0	0	177	448	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	None	None	None	None	None	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	0	0	0	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	197	498	0

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	197	0	98
Stage 1	-	-	98
Stage 2	-	-	0
Critical Hdwy	4.12	-	6.42
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	2.218	-	3.518
Pot Cap-1 Maneuver	1376	-	958
Stage 1	-	-	926
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1376	-	958
Mov Cap-2 Maneuver	-	-	901
Stage 1	-	-	926
Stage 2	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0	0	13.82
HCM LOS	B		

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1376	-	-	-	901
HCM Lane V/C Ratio	-	-	-	-	0.553
HCM Control Delay (s/veh)	0	-	-	-	13.8
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	3.5

2033 Scenario

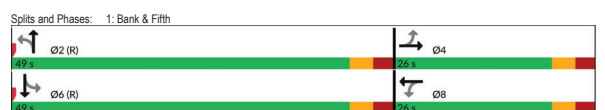
Weekday AM Peak Hour

Baseline Conditions

Queues
1: Bank & Fifth 08/01/2024

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↔ ↘ ↙ ↘ ↙ ↘ ↘ ↙ ↘							
Traffic Volume (vph)	39	60	50	52	10	568	20	440
Future Volume (vph)	39	60	50	52	10	568	20	440
Lane Group Flow (vph)	0	143	56	92	0	676	0	551
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases	4	8	8	2	2	6	6	6
Permitted Phases	4	8	8	2	2	6	6	6
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Spirt (s)	26.0	26.0	26.0	26.0	49.0	49.0	49.0	49.0
Total Spitt (s)	26.0	26.0	26.0	26.0	49.0	49.0	49.0	49.0
Total Spitt (%)	34.7%	34.7%	34.7%	34.7%	65.3%	65.3%	65.3%	65.3%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead-Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	12.3	12.3	12.3	12.3	51.7	51.7	51.7	51.7
Actuated g/C Ratio	0.16	0.16	0.16	0.16	0.69	0.69	0.69	0.69
v/c Ratio	0.63	0.35	0.35	0.35	0.34	0.29	0.29	0.29
Control Delay (s/veh)	36.5	32.0	21.1	1.5	5.5	5.5	5.5	5.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	36.5	32.0	21.1	1.5	5.5	5.5	5.5	5.5
LOS	D	C	C	A	A	A	A	A
Approach Delay (s/veh)	36.5	32.0	21.1	1.5	5.5	5.5	5.5	5.5
Approach LOS	D	C	C	A	A	A	A	A
Queue Length 50th (m)	16.3	7.1	7.2	1.9	12.6	12.6	12.6	12.6
Queue Length 95th (m)	30.5	15.6	17.6	4.4	25.2	25.2	25.2	25.2
Internal Link Dist (m)	49.7	45.0	112.4	195.6	190.0	190.0	190.0	190.0
Turn Bay Length (m)								
Base Capacity (vph)	366	269	420	1963	1891	1891	1891	1891
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	0.21	0.22	0.34	0.29	0.29	0.29	0.29

Intersection Summary	
Cycle Length: 75	
Actuated Cycle Length: 75	
Offset: 33 (44%), Referenced to phase 2:NBLT and 6:SBLT, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.63	
Intersection Signal Delay (s/veh): 8.5	Intersection LOS: A
Intersection Capacity Utilization 55.2%	ICU Level of Service B
Analysis Period (min) 15	

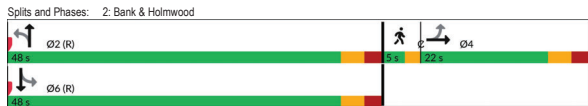


Queues
2: Bank & Holmwood

08/01/2024

Table with 7 columns: Lane Group, EBT, NBL, NBT, SBL, SBT, Ø3. Rows include Lane Configurations, Traffic Volume (vph), Future Volume (vph), Lane Group Flow (vph), Turn Type, Protected Phases, Permitted Phases, Detector Phase, Switch Phase, Minimum Initial (s), Minimum Split (s), Total Split (s), Total Spilt (%), Yellow Time (s), All-Red Time (s), Lost Time Adjust (s), Total Lost Time (s), Lead/Lag, and Recall Mode.

Intersection Summary
Cycle Length: 75
Actuated Cycle Length: 75
Offset: 28 (37%), Referenced to phase 2:NBL and 6:SBTL, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.48
Intersection Signal Delay (s/veh): 5.2
Intersection Capacity Utilization 53.5%
Analysis Period (min) 15



Queues
6: Bank & Aylmer

08/01/2024

Table with 7 columns: Lane Group, EBL, NBL, NBT, SBL, SBT, Ø3. Rows include Lane Configurations, Traffic Volume (vph), Future Volume (vph), Lane Group Flow (vph), Turn Type, Protected Phases, Permitted Phases, Detector Phase, Switch Phase, Minimum Initial (s), Minimum Split (s), Total Split (s), Total Spilt (%), Yellow Time (s), All-Red Time (s), Lost Time Adjust (s), Total Lost Time (s), Lead/Lag, and Recall Mode.

Intersection Summary
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 4 (5%), Referenced to phase 2:NBL and 6:SBT, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.45
Intersection Signal Delay (s/veh): 6.8
Intersection Capacity Utilization 53.9%
Analysis Period (min) 15
m. Volume for 95th percentile queue is metered by upstream signal.



Queues
3: Bank & Exhibition

08/01/2024

Table with 8 columns: Lane Group, WBL, WBR, NBT, SBL, SBT, Ø1, Ø7. Rows include Lane Configurations, Traffic Volume (vph), Future Volume (vph), Lane Group Flow (vph), Turn Type, Protected Phases, Permitted Phases, Detector Phase, Switch Phase, Minimum Initial (s), Minimum Split (s), Total Split (s), Total Spilt (%), Yellow Time (s), All-Red Time (s), Lost Time Adjust (s), Total Lost Time (s), Lead/Lag, and Recall Mode.

Intersection Summary
Cycle Length: 75
Actuated Cycle Length: 75
Offset: 25 (33%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.40
Intersection Signal Delay (s/veh): 10.3
Intersection Capacity Utilization 56.7%
Analysis Period (min) 15

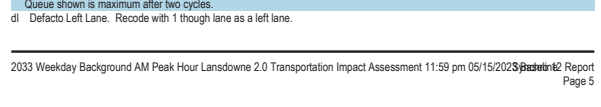


Queues
7: Bank & Sunnyside

08/01/2024

Table with 8 columns: Lane Group, EBL, EBT, WBL, WBT, NBL, NBT, SBL, SBT, Ø3, Ø7. Rows include Lane Configurations, Traffic Volume (vph), Future Volume (vph), Lane Group Flow (vph), Turn Type, Protected Phases, Permitted Phases, Detector Phase, Switch Phase, Minimum Initial (s), Minimum Split (s), Total Split (s), Total Spilt (%), Yellow Time (s), All-Red Time (s), Lost Time Adjust (s), Total Lost Time (s), Lead/Lag, and Recall Mode.

Intersection Summary
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 10 (13%), Referenced to phase 2:NBL and 6:SBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.88
Intersection Signal Delay (s/veh): 20.7
Intersection Capacity Utilization 96.8%
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
dl Defacto Left Lane. Recode with 1 though lane as a left lane.



Queues
7: Bank & Sunnyside

08/01/2024



Queues
9: Queen Elizabeth Drive & Fifth

08/01/2024

Lane Group	EBL	NBL	NBT	SBT	Ø4
Lane Configurations	↔	↔	↔	↔	↔
Traffic Volume (vph)	49	24	229	296	
Future Volume (vph)	49	24	229	296	
Lane Group Flow (vph)	74	0	281	385	
Turn Type	Prot	Perm	NA	NA	
Protected Phases	10	2	6	4	
Permitted Phases		2			
Detector Phase	10	2	2	6	
Switch Phase					
Minimum Initial (s)	10.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	32.0	32.0	32.0	16.0
Total Split (s)	22.0	32.0	32.0	32.0	16.0
Total Split (%)	31.4%	45.7%	45.7%	45.7%	23%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.7	3.8	3.8	3.8	2.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.7				6.8
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	None	None	None	C-Max	None
Act Effct Green (s)	10.4		51.6	51.6	
Adjusted g/C Ratio	0.15		0.74	0.74	
v/c Ratio	0.32		0.24	0.32	
Control Delay (s/veh)	30.5		5.0	5.4	
Queue Delay (s)	0.0		0.0	0.0	
Total Delay (s/veh)	30.5		5.0	5.4	
LOS	C		A	A	
Approach Delay (s/veh)	30.5		5.0	5.4	
Approach LOS	C		A	A	
Queue Length 50th (m)	8.9		11.9	17.5	
Queue Length 95th (m)	19.3		23.1	32.6	
Internal Link Dist (m)	57.2		0.1	5.9	
Turn Bay Length (m)					
Base Capacity (vph)	365		1177	1218	
Starvation Cap Reductn	0		0	0	
Spillback Cap Reductn	0		0	0	
Storage Cap Reductn	0		0	0	
Reduced v/c Ratio	0.20		0.24	0.32	
Intersection Summary					
Cycle Length: 70					
Actuated Cycle Length: 70					
Offset: 0 (0%), Referenced to phase 6:SBT, Start of Green					
Natural Cycle: 70					
Control Type: Actuated-Coordinated					
Maximum v/c Ratio: 0.32					
Intersection Signal Delay (s/veh): 7.8					Intersection LOS: A
Intersection Capacity Utilization 52.6%					ICU Level of Service A
Analysis Period (min) 15					

Splits and Phases: 9: Queen Elizabeth Drive & Fifth



HCM 7th AWSC
12: Exhibition & Paul Askin

11/25/2024

Intersection						
Intersection Delay, s/veh	7.6					
Intersection LOS	A					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔	↔	↔	↔	↔
Traffic Vol, veh/h	5	110	69	5	5	5
Future Vol, veh/h	5	110	69	5	5	5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	122	77	6	6	6
Number of Lanes	0	1	1	0	1	0
Approach	EB	WB	SB			
Opposing Approach	WB	EB				
Opposing Lanes	1	1	0			
Conflicting Approach Left	SB		WB			
Conflicting Lanes Left	1	0	1			
Conflicting Approach Right		SB	EB			
Conflicting Lanes Right	0	1	1			
HCM Control Delay, s/veh	7.7	7.4	7.2			
HCM LOS	A	A	A			

Lane	EBLn1	WBLn1	SBLn1
Vol Left, %	4%	0%	50%
Vol Thru, %	96%	93%	0%
Vol Right, %	0%	7%	50%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	115	74	10
LT Vol	5	0	5
Through Vol	110	69	0
RT Vol	0	5	5
Lane Flow Rate	128	82	11
Geometry Grp	1	1	1
Degree of Util (X)	0.143	0.092	0.013
Departure Headway (Hd)	4.024	4.009	4.093
Convergence, Y/N	Yes	Yes	Yes
Cap	892	893	861
Service Time	2.045	2.039	2.183
HCM Lane V/C Ratio	0.143	0.092	0.013
HCM Control Delay, s/veh	7.7	7.4	7.2
HCM Lane LOS	A	A	A
HCM 95th-ile Q	0.5	0.3	0

HCM 7th AWSC
13: Paul Askin & Marche

11/25/2024

Intersection						
Intersection Delay, s/veh	7.6					
Intersection LOS	A					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Vol, veh/h	2	5	5	126	5	5
Future Vol, veh/h	2	5	5	126	5	5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	6	6	140	6	6
Number of Lanes	1	0	0	1	1	0
Approach	EB	WB	NB			
Opposing Approach	WB	EB				
Opposing Lanes	1	1	0			
Conflicting Approach Left		NB	EB			
Conflicting Lanes Left	0	1	1			
Conflicting Approach Right	NB		WB			
Conflicting Lanes Right	1	0	1			
HCM Control Delay, s/veh	6.7	7.7	7.1			
HCM LOS	A	A	A			

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	50%	0%	4%
Vol Thru, %	0%	29%	96%
Vol Right, %	50%	71%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	10	7	131
LT Vol	5	0	5
Through Vol	0	2	126
RT Vol	5	5	0
Lane Flow Rate	11	8	146
Geometry Grp	1	1	1
Degree of Util (X)	0.012	0.008	0.16
Departure Headway (Hd)	3.999	3.633	3.967
Convergence, Y/N	Yes	Yes	Yes
Cap	887	983	908
Service Time	2.061	1.662	1.972
HCM Lane V/C Ratio	0.012	0.008	0.161
HCM Control Delay, s/veh	7.1	6.7	7.7
HCM Lane LOS	A	A	A
HCM 95th-ile Q	0	0	0.6

Intersection						
Intersection Delay, s/veh	8					
Intersection LOS	A					

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Vol, veh/h	2	5	69	58	73	42
Future Vol, veh/h	2	5	69	58	73	42
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	6	77	64	81	47
Number of Lanes	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay, s/veh	7	8.2	7.9
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	63%	0%	54%
Vol Thru, %	0%	29%	46%
Vol Right, %	37%	71%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	115	7	127
LT Vol	73	0	69
Through Vol	0	2	58
RT Vol	42	5	0
Lane Flow Rate	128	8	141
Geometry Grp	1	1	1
Degree of Util (X)	0.145	0.009	0.168
Departure Headway (Hd)	4.099	3.94	4.274
Convergence, Y/N	Yes	Yes	Yes
Cap	863	914	833
Service Time	2.186	1.94	2.337
HCM Lane V/C Ratio	0.148	0.009	0.169
HCM Control Delay, s/veh	7.9	7	8.2
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.5	0	0.6

Intersection												
Intersection Delay, s/veh	7.8											
Intersection LOS	A											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Vol, veh/h	69	42	0	0	0	74	19	33	25	0	0	111
Future Vol, veh/h	69	42	0	0	0	74	19	33	25	0	0	111
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	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	77	47	0	0	0	82	21	37	28	0	0	123
Number of Lanes	0	1	0	0	0	1	0	1	0	0	0	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	8.5	7.3	7.9	7.5
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	25%	62%	0%	0%
Vol Thru, %	43%	38%	0%	0%
Vol Right, %	32%	0%	100%	100%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	77	111	74	111
LT Vol	19	69	0	0
Through Vol	33	42	0	0
RT Vol	25	0	74	111
Lane Flow Rate	86	123	82	123
Geometry Grp	1	1	1	1
Degree of Util (X)	0.104	0.158	0.089	0.133
Departure Headway (Hd)	4.374	4.599	3.918	3.89
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	821	784	916	924
Service Time	2.389	2.599	1.936	1.905
HCM Lane V/C Ratio	0.105	0.157	0.09	0.133
HCM Control Delay, s/veh	7.9	8.5	7.3	7.5
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.3	0.6	0.3	0.5

Intersection						
Int Delay, s/veh	0.3					

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Vol, veh/h	0	27	0	780	559	0
Future Vol, veh/h	0	27	0	780	559	0
Conflicting Peds, #/hr	0	0	0	0	0	86
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	0	0	-	-
Grade, %	0	-	0	0	-	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	0	30	0	867	621	0

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	- 621	- 0	- 0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	- 6.275	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-3.3475	-	-
Pot Cap-1 Maneuver	0 480	0 -	0 -
Stage 1	0 -	0 -	0 -
Stage 2	0 -	0 -	0 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	- 480	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/13.01		0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	EBLn1	SBT
Capacity (veh/h)	-	480	-
HCM Lane V/C Ratio	-	0.063	-
HCM Control Delay (s/veh)	-	13	-
HCM Lane LOS	-	B	-
HCM 95th %tile Q(veh)	-	0.2	-

Intersection						
Int Delay, s/veh	1.6					

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Vol, veh/h	20	24	67	255	284	72
Future Vol, veh/h	20	24	67	255	284	72
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	0	-	-
Grade, %	0	-	0	0	-	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	22	27	74	283	316	80

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	788	356	396
Stage 1	356	-	-
Stage 2	432	-	-
Critical Hdwy	6.4	6.2	4.1
Critical Hdwy Stg 1	5.4	-	-
Critical Hdwy Stg 2	5.4	-	-
Follow-up Hdwy	3.5	3.3	2.2
Pot Cap-1 Maneuver	363	693	1174
Stage 1	714	-	-
Stage 2	659	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	336	693	1174
Mov Cap-2 Maneuver	336	-	-
Stage 1	660	-	-
Stage 2	659	-	-

Approach	EB	NB	SB
HCM Control Delay, s/13.61		1.72	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBLn1	SBT	SBR
Capacity (veh/h)	-	375	-	-
HCM Lane V/C Ratio	-	0.063	-	-
HCM Control Delay (s/veh)	-	8.3	-	-
HCM Lane LOS	-	A	-	-
HCM 95th %tile Q(veh)	-	0.2	-	-

Intersection						
Int Delay, s/veh	0.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	35	561	7	0	427
Future Vol, veh/h	0	35	561	7	0	427
Conflicting Peds, #/hr	0	0	0	100	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	15	6	0	0	5
Mvmt Flow	0	39	623	8	0	474

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	-	416	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	7.2	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	3.45	-
Pot Cap-1 Maneuver	0	551	-
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	493	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v12.93		0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	493	-
HCM Lane V/C Ratio	-	-	0.079	-
HCM Control Delay (s/veh)	-	-	12.9	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0.3	-

Intersection						
Int Delay, s/veh	1.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	110	63	5	69	19	5
Future Vol, veh/h	110	63	5	69	19	5
Conflicting Peds, #/hr	0	100	100	0	100	100
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	122	70	6	77	21	6

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	292
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	4.12	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	2.218	-
Pot Cap-1 Maneuver	-	1269	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	1135	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0.55	13.1
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	471	-	-	122	-
HCM Lane V/C Ratio	0.057	-	-	0.005	-
HCM Control Delay (s/veh)	13.1	-	-	8.2	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0	-

Intersection						
Int Delay, s/veh	0.6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	39	123	16	5	4
Future Vol, veh/h	5	39	123	16	5	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	43	137	18	6	4

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	154	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.12	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.218	-	-
Pot Cap-1 Maneuver	1426	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1426	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0.86	0	9.37
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	205	-	-	-	833
HCM Lane V/C Ratio	0.004	-	-	-	0.012
HCM Control Delay (s/veh)	7.5	0	-	-	9.4
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

2033 Scenario

Weekday AM Peak Hour

Future Volumes

Queues
2: Bank & Holmwood

07/31/2024

Lane Group	EBT	NBL	NBT	SBL	SBT	Ø3
Lane Configurations	↔	↔	↔	↔	↔	
Traffic Volume (vph)	22	17	590	14	403	
Future Volume (vph)	22	17	590	14	403	
Lane Group Flow (vph)	50	0	709	0	490	
Turn Type	NA	Perm	NA	Perm	NA	
Protected Phases	4	2	6	6	3	
Permitted Phases	4	2	6	6	3	
Detector Phase	4	2	2	6	6	
Switch Phase						
Minimum Initial (s)	4.4	10.0	10.0	4.0	4.0	1.0
Minimum Split (s)	22.0	48.0	48.0	48.0	48.0	5.0
Total Split (s)	22.0	48.0	48.0	48.0	48.0	5.0
Total Split (%)	29.3%	64.0%	64.0%	64.0%	64.0%	7%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	2.0
All-Red Time (s)	2.6	2.2	2.2	2.2	2.2	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.6	5.2	5.2	5.2	5.2	
Lead/Lag	Lag					Lead
Lead-Lag Optimize?						
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	None
Act Effct Green (s)	10.2	57.3	57.3	57.3	57.3	
Actuated g/C Ratio	0.14	0.76	0.76	0.76	0.76	
v/c Ratio	0.49	0.33	0.23	0.23	0.23	
Control Delay (s/veh)	37.7	1.9	3.2	3.2	3.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	37.7	1.9	3.2	3.2	3.2	
LOS	D	A	A	A	A	
Approach Delay (s/veh)	37.7	1.9	3.2	3.2	3.2	
Approach LOS	D	A	A	A	A	
Queue Length 50th (m)	12.0	2.5	8.0	8.0	8.0	
Queue Length 95th (m)	23.5	6.6	15.1	15.1	15.1	
Internal Link Dist (m)	39.8	31.5	195.6			
Turn Bay Length (m)						
Base Capacity (vph)	298	2132	2125			
Starvation Cap Reductn	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	
Reduced v/c Ratio	0.30	0.33	0.23			

Intersection Summary
 Cycle Length: 75
 Actuated Cycle Length: 75
 Offset: 28 (37%), Referenced to phase 2:NBL and 6:SBTL, Start of Green
 Natural Cycle: 75
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.48
 Intersection Signal Delay (s/veh): 4.9
 Intersection Capacity Utilization 54.6%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service A

Splits and Phases: 2: Bank & Holmwood



Queues
6: Bank & Aylmer

07/31/2024

Lane Group	EBL	NBL	NBT	SBL	SBT	Ø3
Lane Configurations	↔	↔	↔	↔	↔	
Traffic Volume (vph)	65	16	741	578		
Future Volume (vph)	65	16	741	578		
Lane Group Flow (vph)	82	0	841	703		
Turn Type	Prot	Perm	NA	NA		
Protected Phases	4	2	6	6	3	
Permitted Phases	4	2	6	6	3	
Detector Phase	4	2	2	6	6	
Switch Phase						
Minimum Initial (s)	10.0	30.0	30.0	30.0	1.0	
Minimum Split (s)	20.0	55.0	55.0	55.0	5.0	
Total Split (s)	20.0	55.0	55.0	55.0	5.0	
Total Split (%)	25.0%	68.8%	68.8%	68.8%	6%	
Yellow Time (s)	3.3	3.0	3.0	3.0	2.0	
All-Red Time (s)	2.2	2.2	2.2	2.2	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		
Total Lost Time (s)	5.5	5.2	5.2	5.2		
Lead/Lag	Lag					Lead
Lead-Lag Optimize?						
Recall Mode	Ped	C-Max	C-Max	C-Max	Max	
Act Effct Green (s)	14.0	50.3	50.3	50.3		
Actuated g/C Ratio	0.18	0.83	0.63	0.63		
v/c Ratio	0.30	0.46	0.37	0.37		
Control Delay (s/veh)	29.7	4.1	7.6	7.6		
Queue Delay	0.0	0.0	0.0	0.0		
Total Delay (s/veh)	29.7	4.1	7.6	7.6		
LOS	C	A	A	A		
Approach Delay (s/veh)	29.7	4.1	7.6	7.6		
Approach LOS	C	A	A	A		
Queue Length 50th (m)	9.9	14.3	23.2	23.2		
Queue Length 95th (m)	22.1	m17.3	32.6	32.6		
Internal Link Dist (m)	76.7	28.1	10.1			
Turn Bay Length (m)						
Base Capacity (vph)	280	1840	1881			
Starvation Cap Reductn	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	
Reduced v/c Ratio	0.29	0.46	0.37			

Intersection Summary
 Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 4 (5%), Referenced to phase 2:NBL and 6:SBT, Start of Green
 Natural Cycle: 80
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.46
 Intersection Signal Delay (s/veh): 6.9
 Intersection Capacity Utilization 54.3%
 Analysis Period (min) 15
 m: Volume for 95th percentile queue is metered by upstream signal.
 Intersection LOS: A
 ICU Level of Service A

Splits and Phases: 6: Bank & Aylmer



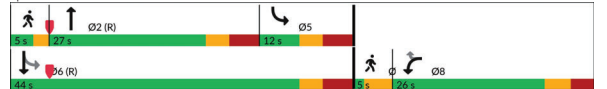
Queues
3: Bank & Exhibition

07/31/2024

Lane Group	WBL	WBR	NBT	SBL	SBT	Ø1	Ø7
Lane Configurations	↔	↔	↔	↔	↔		
Traffic Volume (vph)	90	51	530	77	358		
Future Volume (vph)	90	51	530	77	358		
Lane Group Flow (vph)	100	57	717	86	398		
Turn Type	Prot	Perm	NA	pm+pt	NA		
Protected Phases	8	2	5	6	1	7	
Permitted Phases	8	2	5	6	1	7	
Detector Phase	8	8	2	5	6		
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	1.0	10.0	1.0	1.0
Minimum Split (s)	26.0	26.0	27.0	12.0	44.0	5.0	5.0
Total Split (s)	26.0	26.0	27.0	12.0	44.0	5.0	5.0
Total Split (%)	34.7%	34.7%	36.0%	16.0%	58.7%	7%	7%
Yellow Time (s)	3.3	3.3	3.0	3.0	3.0	2.0	3.5
All-Red Time (s)	3.0	3.0	3.9	3.9	3.9	0.0	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	6.3	6.3	6.9	6.9	6.9		
Lead/Lag	Lag	Lag	Lag			Lead	Lead
Lead-Lag Optimize?			Yes			Yes	Yes
Recall Mode	None	None	C-Max	None	C-Max	None	None
Act Effct Green (s)	11.3	11.3	45.6	53.8	55.2		
Actuated g/C Ratio	0.15	0.15	0.61	0.72	0.74		
v/c Ratio	0.43	0.27	0.42	0.19	0.17		
Control Delay (s/veh)	34.6	11.5	11.3	10.5	7.5		
Queue Delay	0.0	0.0	0.0	0.0	0.0		
Total Delay (s/veh)	34.6	11.5	11.3	10.5	7.5		
LOS	C	B	B	B	A		
Approach Delay (s/veh)	26.2	11.3	8.0				
Approach LOS	C	B	A				
Queue Length 50th (m)	13.3	0.0	29.6	4.9	12.5		
Queue Length 95th (m)	25.4	8.9	48.8	14.2	24.5		
Internal Link Dist (m)	30.6		33.7	44.8			
Turn Bay Length (m)				40.0			
Base Capacity (vph)	405	331	1719	459	2310		
Starvation Cap Reductn	0	0	0	0	0		
Spillback Cap Reductn	0	0	0	0	0		
Storage Cap Reductn	0	0	0	0	0		
Reduced v/c Ratio	0.25	0.17	0.42	0.19	0.17		

Intersection Summary
 Cycle Length: 75
 Actuated Cycle Length: 75
 Offset: 25 (33%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
 Natural Cycle: 75
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.43
 Intersection Signal Delay (s/veh): 11.9
 Intersection Capacity Utilization 57.7%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service B

Splits and Phases: 3: Bank & Exhibition



Queues
7: Bank & Sunnyside

07/31/2024

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	Ø3	Ø7
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔		
Traffic Volume (vph)	59	61	19	61	23	1012	193	439		
Future Volume (vph)	59	61	19	61	23	1012	193	439		
Lane Group Flow (vph)	0	148	0	401	0	1166	0	751		
Turn Type	Perm	NA	Perm	NA	Perm	NA	pm+pt	NA		
Protected Phases	4	8	8	2	2	6	1	6	3	7
Permitted Phases	4	8	8	2	2	6	1	6	3	7
Detector Phase	4	4	8	8	2	2	1	6		
Switch Phase										
Minimum Initial (s)	6.4	6.4	5.3	5.3	17.0	17.0	5.0	17.0	1.0	1.0
Minimum Split (s)	26.0	26.0	26.0	26.0	38.0	38.0	11.0	49.0	5.0	5.0
Total Split (s)	26.0	26.0	26.0	26.0	38.0	38.0	11.0	49.0	5.0	5.0
Total Split (%)	32.5%	32.5%	32.5%	32.5%	47.5%	47.5%	13.8%	61.3%	6%	6%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0
All-Red Time (s)	2.6	2.6	2.6	2.6	3.0	3.0	2.9	3.0	0.0	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0				
Total Lost Time (s)	5.6	5.6	5.6	5.6	6.0	6.0				
Lead/Lag	Lag	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lead
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	C-Max	C-Max	None	C-Max	None	None
Act Effct Green (s)	22.0	22.0	22.0	22.0	46.4	46.4				
Actuated g/C Ratio	0.28	0.28	0.28	0.28	0.58	0.58				
v/c Ratio	0.65	0.65	0.88	0.88	0.69	1.20d				
Control Delay (s/veh)	38.3	33.7	15.4	21.4						
Queue Delay	0.0	0.0	0.0	0.0						
Total Delay (s/veh)	38.3	33.7	15.4	21.4						
LOS	D	C	B	C						
Approach Delay (s/veh)	38.3	33.7	15.4	21.4						
Approach LOS	D	C	B	C						
Queue Length 50th (m)	18.5	26.2	66.5	23.8						
Queue Length 95th (m)	37.4	#76.1	91.0	#67.9						
Internal Link Dist (m)	75.1	156.0	63.1	79.0						
Turn Bay Length (m)										
Base Capacity (vph)	246	4								

Queues
7: Bank & Sunnyside

07/31/2024



Queues
9: Queen Elizabeth Drive & Fifth

07/31/2024

Lane Group	EBL	NBL	NBT	SBT	Ø4
Lane Configurations	↔	↔	↔	↔	↔
Traffic Volume (vph)	58	24	249	301	
Future Volume (vph)	58	24	249	301	
Lane Group Flow (vph)	84	0	304	390	
Turn Type	Prot	Perm	NA	NA	
Protected Phases	10	2	6	4	
Permitted Phases		2			
Detector Phase	10	2	2	6	
Switch Phase					
Minimum Initial (s)	10.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	32.0	32.0	32.0	16.0
Total Split (s)	22.0	32.0	32.0	32.0	16.0
Total Split (%)	31.4%	45.7%	45.7%	45.7%	23%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.7	3.8	3.8	3.8	2.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.7				6.8
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	None	None	None	C-Max	None
Act Effct Green (s)	10.7		51.3	51.3	
Actuated g/C Ratio	0.15		0.73	0.73	
v/c Ratio	0.35		0.26	0.32	
Control Delay (s/veh)	30.8		5.2	5.7	
Queue Delay (s)	0.0		0.0	0.0	
Total Delay (s/veh)	30.8		5.2	5.7	
LOS	C		A	A	
Approach Delay (s/veh)	30.8		5.2	5.7	
Approach LOS	C		A	A	
Queue Length 50th (m)	10.1		13.1	17.8	
Queue Length 95th (m)	21.1		26.1	34.5	
Internal Link Dist (m)	57.2		0.1	5.9	
Turn Bay Length (m)					
Base Capacity (vph)	366		1175	1213	
Starvation Cap Reductn	0		0	0	
Spillback Cap Reductn	0		0	0	
Storage Cap Reductn	0		0	0	
Reduced v/c Ratio	0.23		0.26	0.32	
Intersection Summary					
Cycle Length: 70					
Actuated Cycle Length: 70					
Offset: 0 (0%), Referenced to phase 6:SBT, Start of Green					
Natural Cycle: 70					
Control Type: Actuated-Coordinated					
Maximum v/c Ratio: 0.35					
Intersection Signal Delay (s/veh): 8.2					Intersection LOS: A
Intersection Capacity Utilization 53.6%					ICU Level of Service A
Analysis Period (min) 15					

Splits and Phases: 9: Queen Elizabeth Drive & Fifth



HCM 7th AWSC
12: Exhibition & Paul Askin

11/20/2024

Intersection	
Intersection Delay, s/veh	7.7
Intersection LOS	A

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔	↔	↔	↔	↔
Traffic Vol, veh/h	13	117	70	5	5	5
Future Vol, veh/h	13	117	70	5	5	5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	14	130	78	6	6	6
Number of Lanes	0	1	1	0	1	0
Approach	EB	WB	WB	SB	SB	EB
Opposing Approach	WB	EB				
Opposing Lanes	1	1				
Conflicting Approach Left	SB			WB		
Conflicting Lanes Left	1			1		
Conflicting Approach Right		SB		EB		
Conflicting Lanes Right		1		1		
HCM Control Delay, s/veh	7.8	7.5	7.3			
HCM LOS	A	A	A			

Lane	EBLn1	WBLn1	SBLn1
Vol Left, %	10%	0%	50%
Vol Thru, %	90%	93%	0%
Vol Right, %	0%	7%	50%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	130	75	10
LT Vol	13	0	5
Through Vol	117	70	0
RT Vol	0	5	5
Lane Flow Rate	144	83	11
Geometry Grp	1	1	1
Degree of Util (X)	0.162	0.093	0.013
Departure Headway (Hd)	4.036	4.021	4.122
Convergence, Y/N	Yes	Yes	Yes
Cap	890	889	853
Service Time	2.058	2.055	2.221
HCM Lane V/C Ratio	0.162	0.093	0.013
HCM Control Delay, s/veh	7.8	7.5	7.3
HCM Lane LOS	A	A	A
HCM 95th-ile Q	0.6	0.3	0

HCM 7th AWSC
13: Paul Askin & Marche

11/20/2024

Intersection	
Intersection Delay, s/veh	7.7
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Vol, veh/h	3	5	5	137	12	6
Future Vol, veh/h	3	5	5	137	12	6
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	6	6	152	13	7
Number of Lanes	1	0	0	1	1	0
Approach	EB	WB	WB	NB	NB	EB
Opposing Approach	WB	EB				
Opposing Lanes	1	1				
Conflicting Approach Left		NB		EB		
Conflicting Lanes Left		1		1		
Conflicting Approach Right	NB			WB		
Conflicting Lanes Right				1		
HCM Control Delay, s/veh	6.8	7.8	7.3			
HCM LOS	A	A	A			

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	67%	0%	4%
Vol Thru, %	0%	38%	96%
Vol Right, %	33%	63%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	18	8	142
LT Vol	12	0	5
Through Vol	0	3	137
RT Vol	6	5	0
Lane Flow Rate	20	9	158
Geometry Grp	1	1	1
Degree of Util (X)	0.023	0.009	0.175
Departure Headway (Hd)	4.156	3.712	3.983
Convergence, Y/N	Yes	Yes	Yes
Cap	852	960	904
Service Time	2.226	1.751	1.994
HCM Lane V/C Ratio	0.023	0.009	0.175
HCM Control Delay, s/veh	7.3	6.8	7.8
HCM Lane LOS	A	A	A
HCM 95th-ile Q	0.1	0	0.6

Intersection	
Intersection Delay, s/veh	8.1
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Vol, veh/h	4	5	70	63	80	43
Future Vol, veh/h	4	5	70	63	80	43
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	6	78	70	89	48
Number of Lanes	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay, s/veh	7.1	8.3	8
HCM LOS	A	A	A

Intersection	
Intersection Delay, s/veh	7.9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔	↔				↔	↔	↔			↔
Traffic Vol, veh/h	69	42	0	0	0	0	74	29	33	34	0	0
Future Vol, veh/h	69	42	0	0	0	0	74	29	33	34	0	0
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	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	77	47	0	0	0	0	82	32	37	38	0	0
Number of Lanes	0	1	0	0	0	0	1	0	1	0	0	1

Approach	EB	WB	NB	SB
Opposing Approach	WB		EB	SB
Opposing Lanes	1		1	1
Conflicting Approach Left	SB		NB	EB
Conflicting Lanes Left	1		1	1
Conflicting Approach Right	NB		SB	WB
Conflicting Lanes Right	1		1	1
HCM Control Delay, s/veh	8.5		7.4	8
HCM LOS	A		A	A

Intersection	
Int Delay, s/veh	5.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Vol, veh/h	1	192	146	659	414	26
Future Vol, veh/h	1	192	146	659	414	26
Conflicting Peds, #/hr	0	0	178	0	0	107
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	1	213	162	732	460	29

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	1343	652	667
Stage 1	652	-	-
Stage 2	691	-	-
Critical Hdwy	6.675	6.275	4.175
Critical Hdwy Stg 1	5.475	-	-
Critical Hdwy Stg 2	5.875	-	-
Follow-up Hdwy	3.5475	3.3475	2.2475
Pot Cap-1 Maneuver	152	460	904
Stage 1	510	-	-
Stage 2	453	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	72	373	733
Mov Cap-2 Maneuver	72	-	-
Stage 1	299	-	-
Stage 2	368	-	-

Approach	EB	NB	SB
HCM Control Delay, s/26.74		3.83	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	584	-	373	-	-
HCM Lane V/C Ratio	0.221	-	0.571	-	-
HCM Control Delay (s/veh)	11.3	2.2	26.7	-	-
HCM Lane LOS	B	A	D	-	-
HCM 95th %ile Q(veh)	0.8	-	3.4	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Vol, veh/h	0	27	0	793	595	0
Future Vol, veh/h	0	27	0	793	595	0
Conflicting Peds, #/hr	0	0	0	0	0	86
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	0	30	0	881	661	0

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	-	661	-
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	6.275	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	3.3475	-
Pot Cap-1 Maneuver	0	455	0
Stage 1	0	-	0
Stage 2	0	-	0
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	455	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/13.47		0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	-	455	-	-
HCM Lane V/C Ratio	-	-	0.066	-	-
HCM Control Delay (s/veh)	-	-	13.5	-	-
HCM Lane LOS	-	-	B	-	-
HCM 95th %ile Q(veh)	-	-	0.2	-	-

Intersection						
Int Delay, s/veh	2.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔			↔	↔	
Traffic Vol, veh/h	40	44	72	255	284	77
Future Vol, veh/h	40	44	72	255	284	77
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	44	49	80	283	316	86

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	802	358	401
Stage 1	358	-	-
Stage 2	443	-	-
Critical Hdwy	6.4	6.2	4.1
Critical Hdwy Stg 1	5.4	-	-
Critical Hdwy Stg 2	5.4	-	-
Follow-up Hdwy	3.5	3.3	2.2
Pot Cap-1 Maneuver	356	690	1168
Stage 1	712	-	-
Stage 2	651	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	327	690	1168
Mov Cap-2 Maneuver	327	-	-
Stage 1	654	-	-
Stage 2	651	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v15.03		1.83	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	396	-	452	-	-
HCM Lane V/C Ratio	0.068	-	0.207	-	-
HCM Control Delay (s/veh)	8.3	0	15	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.2	-	0.8	-	-

Intersection						
Int Delay, s/veh	0.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↔	↔		↔	↔
Traffic Vol, veh/h	0	53	581	8	0	437
Future Vol, veh/h	0	53	581	8	0	437
Conflicting Peds, #/hr	0	0	0	100	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	15	6	0	0	5
Mvmt Flow	0	59	646	9	0	486

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	-	427	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	7.2	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	3.45	-
Pot Cap-1 Maneuver	0	541	-
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	484	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v13.47		0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	484	-
HCM Lane V/C Ratio	-	-	0.122	-
HCM Control Delay (s/veh)	-	-	13.5	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0.4	-

Intersection						
Int Delay, s/veh	3.8					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔			↔	↔	
Traffic Vol, veh/h	114	78	5	70	71	17
Future Vol, veh/h	114	78	5	70	71	17
Conflicting Peds, #/hr	0	100	100	0	100	100
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	127	87	6	78	79	19

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	313
Stage 1	-	-	270
Stage 2	-	-	189
Critical Hdwy	-	4.12	6.42
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	-	2.218	3.518
Pot Cap-1 Maneuver	-	1247	560
Stage 1	-	-	775
Stage 2	-	-	843
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	1115	446
Mov Cap-2 Maneuver	-	-	446
Stage 1	-	-	693
Stage 2	-	-	750

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0.55	14.89
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	461	-	-	120	-
HCM Lane V/C Ratio	0.212	-	-	0.005	-
HCM Control Delay (s/veh)	14.9	-	-	8.2	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.8	-	-	0	-

2033 Scenario

Weekday PM Peak Hour

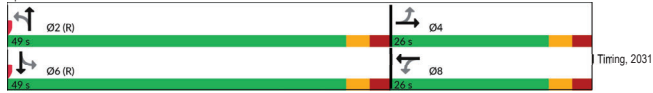
Baseline Conditions

Queues
1: Bank & Fifth

08/01/2024

Table with 8 columns: Lane Group, EBL, EBT, WBL, WBT, NBL, NBT, SBL, SBT. Rows include Traffic Volume, Future Volume, Lane Group Flow, Turn Type, Protected Phases, Permitted Phases, Detector Phase, Switch Phase, Minimum Initial, Minimum Split, Total Split, Total Split (%), Yellow Time, All-Red Time, Lost Time Adjust, Total Lost Time, Lead/Lag, and Intersection Summary.

Splits and Phases: 1: Bank & Fifth

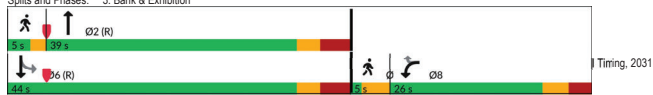


Queues
3: Bank & Exhibition

08/01/2024

Table with 7 columns: Lane Group, WBL, WBR, NBT, SBL, Ø1, Ø7. Rows include Traffic Volume, Future Volume, Lane Group Flow, Turn Type, Protected Phases, Permitted Phases, Detector Phase, Switch Phase, Minimum Initial, Minimum Split, Total Split, Total Split (%), Yellow Time, All-Red Time, Lost Time Adjust, Total Lost Time, Lead/Lag, and Intersection Summary.

Splits and Phases: 3: Bank & Exhibition



Queues
2: Bank & Holmwood

08/01/2024

Table with 7 columns: Lane Group, EBT, NBL, NBT, SBL, SBT, Ø3. Rows include Traffic Volume, Future Volume, Lane Group Flow, Turn Type, Protected Phases, Permitted Phases, Detector Phase, Switch Phase, Minimum Initial, Minimum Split, Total Split, Total Split (%), Yellow Time, All-Red Time, Lost Time Adjust, Total Lost Time, Lead/Lag, and Intersection Summary.

Splits and Phases: 2: Bank & Holmwood

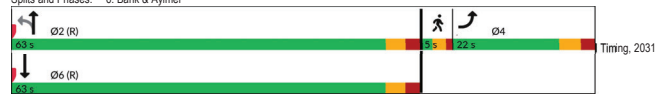


Queues
6: Bank & Aylmer

08/01/2024

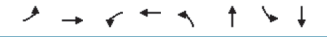
Table with 5 columns: Lane Group, EBL, NBL, NBT, SBT, Ø3. Rows include Traffic Volume, Future Volume, Lane Group Flow, Turn Type, Protected Phases, Permitted Phases, Detector Phase, Switch Phase, Minimum Initial, Minimum Split, Total Split, Total Split (%), Yellow Time, All-Red Time, Lost Time Adjust, Total Lost Time, Lead/Lag, and Intersection Summary.

Splits and Phases: 6: Bank & Aylmer



Queues
7: Bank & Sunnyside

08/01/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	Ø3	Ø7
Lane Configurations										
Traffic Volume (vph)	53	82	17	85	15	435	211	762		
Future Volume (vph)	53	82	17	85	15	435	211	762		
Lane Group Flow (vph)	0	184	0	395	0	523	0	1187		
Turn Type	Perm	NA	Perm	NA	Perm	NA	pm+pt	NA		
Protected Phases	4		8		2		1	6	3	7
Permitted Phases	4		8		2		6			
Detector Phase	4	4	8	8	2	2	1	6		
Switch Phase										
Minimum Initial (s)	6.4	6.4	5.3	5.3	17.0	17.0	5.0	17.0	1.0	1.0
Minimum Split (s)	25.0	25.0	25.0	25.0	43.0	43.0	17.0	60.0	5.0	5.0
Total Split (s)	25.0	25.0	25.0	25.0	43.0	43.0	17.0	60.0	5.0	5.0
Total Split (%)	27.8%	27.8%	27.8%	27.8%	47.8%	47.8%	18.9%	66.7%	6%	6%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0
All-Red Time (s)	2.6	2.6	2.6	2.6	3.0	3.0	2.9	3.0	0.0	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	5.6		5.6		6.0		6.0			
Lead/Lag	Lag	Lag	Lag	Lag	Lag	Lag	Lead		Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes
Recall Mode	None	None	None	None	C-Max	C-Max	None	C-Max	None	None
Act Effct Green (s)	24.4		24.4		54.0		54.0			
Actuated g/C Ratio	0.27		0.27		0.60		0.60			
v/c Ratio	0.72		0.98		0.31		0.94			
Control Delay (s/veh)	47.9		64.6		9.4		27.7			
Queue Delay	0.0		0.0		0.0		0.0			
Total Delay (s/veh)	47.9		64.6		9.4		27.7			
LOS	D		E		A		C			
Approach Delay (s/veh)	47.9		64.6		9.4		27.7			
Approach LOS	D		E		A		C			
Queue Length 50th (m)	28.8		49.1		21.1		91.3			
Queue Length 95th (m)	#60.1		#107.2		30.0		#145.6			
Internal Link Dist (m)	75.1		136.0		63.1		79.0			
Turn Bay Length (m)										
Base Capacity (vph)	255		403		1670		1258			
Starvation Cap Reductn	0		0		0		0			
Spillback Cap Reductn	0		0		0		0			
Storage Cap Reductn	0		0		0		0			
Reduced v/c Ratio	0.72		0.98		0.31		0.94			

Intersection Summary
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 23 (26%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.98
 Intersection Signal Delay (s/veh): 31.5
 Intersection Capacity Utilization 96.4%
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Queues
7: Bank & Sunnyside

08/01/2024




Splits and Phases: 7: Bank & Sunnyside

Phase	Duration	Direction
Ø1	17 s	Left
Ø2 (R)	43 s	Right
Ø6 (R)	64 s	Right
Ø4	25 s	Through
Ø8	25 s	Through

Queues
9: Queen Elizabeth Drive & Fifth


08/01/2024



Lane Group	EBL	NBL	NBT	SBT	Ø4
Lane Configurations					
Traffic Volume (vph)	36	39	200	530	
Future Volume (vph)	36	39	200	530	
Lane Group Flow (vph)	79	0	265	663	
Turn Type	Prot	Perm	NA	NA	
Protected Phases	10		2	6	4
Permitted Phases		2			
Detector Phase	10	2	2	6	
Switch Phase					
Minimum Initial (s)	10.0	4.0	4.0	4.0	4.0
Minimum Split (s)	21.0	48.0	48.0	48.0	11.0
Total Split (s)	21.0	48.0	48.0	48.0	11.0
Total Split (%)	26.3%	60.0%	60.0%	60.0%	14%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.7	3.8	3.8	3.8	2.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.7		6.8	6.8	
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	None	None	None	C-Max	None
Act Effct Green (s)	10.9		61.1	61.1	
Actuated g/C Ratio	0.14		0.76	0.76	
v/c Ratio	0.38		0.24	0.52	
Control Delay (s/veh)	36.8		4.7	7.2	
Queue Delay	0.0		0.0	0.0	
Total Delay (s/veh)	36.8		4.7	7.2	
LOS	D		A	A	
Approach Delay (s/veh)	36.8		4.7	7.2	
Approach LOS	D		A	A	
Queue Length 50th (m)	11.3		11.3	38.6	
Queue Length 95th (m)	22.8		23.3	73.1	
Internal Link Dist (m)	57.2		0.1	5.9	
Turn Bay Length (m)					
Base Capacity (vph)	293		1099	1269	
Starvation Cap Reductn	0		0	0	
Spillback Cap Reductn	0		0	0	
Storage Cap Reductn	0		0	0	
Reduced v/c Ratio	0.27		0.24	0.52	

Intersection Summary
 Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 0 (0%), Referenced to phase 6:SBT, Start of Green
 Natural Cycle: 80
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.52
 Intersection Signal Delay (s/veh): 8.9
 Intersection Capacity Utilization 65.0%
 Analysis Period (min) 15

Splits and Phases: 9: Queen Elizabeth Drive & Fifth



Phase	Duration	Direction
Ø2	48 s	Through
Ø4	11 s	Through
Ø10	21 s	Through

HCM 7th AWSC
12: Exhibition & Paul Askin

11/25/2024

Intersection

Intersection Delay, s/veh	7.9
Intersection LOS	A

Movement

	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	125	144	5	5	5
Future Vol, veh/h	5	125	144	5	5	5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mixed Flow	6	139	160	6	6	6
Number of Lanes	0	1	1	0	1	0

Approach

	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	1	1
HCM Control Delay, s/veh	7.9	8	7.5
HCM LOS	A	A	A

Lane

	EBLn1	WBLn1	SBLn1
Vol Left, %	4%	0%	50%
Vol Thru, %	96%	97%	0%
Vol Right, %	0%	3%	50%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	130	149	10
LT Vol	5	0	5
Through Vol	125	144	0
RT Vol	0	5	5
Lane Flow Rate	144	166	11
Geometry Grp	1	1	1
Degree of Util (X)	0.164	0.186	0.014
Departure Headway (Hd)	4.084	4.041	4.396
Convergence, Y/N	Yes	Yes	Yes
Cap	875	886	819
Service Time	2.125	2.079	2.396
HCM Lane V/C Ratio	0.165	0.187	0.013
HCM Control Delay, s/veh	7.9	8	7.5
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.6	0.7	0

Intersection	
Intersection Delay, s/veh	6.9
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Vol, veh/h	3	5	5	5	5	5
Future Vol, veh/h	3	5	5	5	5	5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	6	6	6	6	6
Number of Lanes	1	0	0	1	1	0
Approach		EB	WB	NB		
Opposing Approach	WB	EB				
Opposing Lanes	1	1	0			
Conflicting Approach Left	NB		EB			
Conflicting Lanes Left	0	1	1			
Conflicting Approach Right	NB	WB		NB		
Conflicting Lanes Right	1	0	1		1	
HCM Control Delay, s/veh	6.6	7.1	6.8			
HCM LOS	A	A	A			

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	50%	0%	50%
Vol Thru, %	0%	38%	50%
Vol Right, %	50%	63%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	10	8	10
LT Vol	5	0	5
Through Vol	0	3	5
RT Vol	5	5	0
Lane Flow Rate	11	9	11
Geometry Grp	1	1	1
Degree of Util (X)	0.012	0.009	0.013
Departure Headway (Hd)	3.769	3.587	4.06
Convergence, Y/N	Yes	Yes	Yes
Cap	953	1002	886
Service Time	1.777	1.593	2.065
HCM Lane V/C Ratio	0.012	0.009	0.012
HCM Control Delay, s/veh	6.8	6.6	7.1
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0	0	0

Intersection	
Intersection Delay, s/veh	8.1
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Vol, veh/h	3	5	144	5	5	125
Future Vol, veh/h	3	5	144	5	5	125
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	6	160	6	6	139
Number of Lanes	1	0	0	1	1	0
Approach		EB	WB	NB		
Opposing Approach	WB	EB				
Opposing Lanes	1	1	0			
Conflicting Approach Left	NB		EB			
Conflicting Lanes Left	0	1	1			
Conflicting Approach Right	NB	WB		NB		
Conflicting Lanes Right	1	0	1		1	
HCM Control Delay, s/veh	7.1	8.6	7.5			
HCM LOS	A	A	A			

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	4%	0%	97%
Vol Thru, %	0%	38%	3%
Vol Right, %	96%	63%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	130	8	149
LT Vol	5	0	144
Through Vol	0	3	5
RT Vol	125	5	0
Lane Flow Rate	144	9	166
Geometry Grp	1	1	1
Degree of Util (X)	0.152	0.01	0.202
Departure Headway (Hd)	3.776	3.941	4.387
Convergence, Y/N	Yes	Yes	Yes
Cap	956	892	815
Service Time	1.776	2.038	2.437
HCM Lane V/C Ratio	0.151	0.01	0.204
HCM Control Delay, s/veh	7.5	7.1	8.6
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.5	0	0.8

Intersection	
Intersection Delay, s/veh	8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Vol, veh/h	76	40	0	0	0	106	41	27	30	0	0	95
Future Vol, veh/h	76	40	0	0	0	106	41	27	30	0	0	95
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	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	84	44	0	0	0	118	46	30	33	0	0	106
Number of Lanes	0	1	0	0	0	1	0	1	0	0	0	1
Approach		EB	WB				SB					
Opposing Approach	WB	EB	SB	NB								
Opposing Lanes	1	1	1	1								
Conflicting Approach Left	SB	NB		EB								
Conflicting Lanes Left	1	1		1								
Conflicting Approach Right	NB	SB		WB								
Conflicting Lanes Right	1	1		1								
HCM Control Delay, s/veh	8.6	7.6		8.2								
HCM LOS	A	A		A								

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	42%	66%	0%	0%
Vol Thru, %	28%	34%	0%	0%
Vol Right, %	31%	0%	100%	100%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	98	116	106	95
LT Vol	41	76	0	0
Through Vol	27	40	0	0
RT Vol	30	0	106	95
Lane Flow Rate	109	129	118	106
Geometry Grp	1	1	1	1
Degree of Util (X)	0.136	0.167	0.129	0.117
Departure Headway (Hd)	4.493	4.653	3.953	4.007
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	799	772	907	895
Service Time	2.514	2.674	1.975	2.029
HCM Lane V/C Ratio	0.136	0.167	0.13	0.118
HCM Control Delay, s/veh	8.2	8.6	7.6	7.6
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.5	0.6	0.4	0.4

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Vol, veh/h	0	24	0	800	832	2
Future Vol, veh/h	0	24	0	800	832	2
Conflicting Peds, #/hr	0	0	0	0	0	86
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	0	-	-
Grade, %	0	-	0	0	-	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	0	27	0	889	924	2

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	- 1012	- 0	- 0
Stage 1	- -	- -	- -
Stage 2	- -	- -	- -
Critical Hdwy	- 6.275	- -	- -
Critical Hdwy Stg 1	- -	- -	- -
Critical Hdwy Stg 2	- -	- -	- -
Follow-up Hdwy	- 3.3475	- -	- -
Pot Cap-1 Maneuver	0 285	0 -	- -
Stage 1	0 -	0 -	- -
Stage 2	0 -	0 -	- -
Platoon blocked, %	- -	- -	- -
Mov Cap-1 Maneuver	- 259	- -	- -
Mov Cap-2 Maneuver	- -	- -	- -
Stage 1	- -	- -	- -
Stage 2	- -	- -	- -

Approach	EB	NB	SB
HCM Control Delay, s/20.51	0	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	- 259	- -	- -	- -
HCM Lane V/C Ratio	- 0.103	- -	- -	- -
HCM Control Delay (s/veh)	- 20.5	- -	- -	- -
HCM Lane LOS	- C	- -	- -	- -
HCM 95th %tile Q(veh)	- 0.3	- -	- -	- -

Intersection						
Int Delay, s/veh	2.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔		↔	↔	↔	↔
Traffic Vol, veh/h	54	57	48	263	507	70
Future Vol, veh/h	54	57	48	263	507	70
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	60	63	53	292	563	78

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	1001	602	641
Stage 1	602	-	-
Stage 2	399	-	-
Critical Hdwy	6.4	6.2	4.1
Critical Hdwy Stg 1	5.4	-	-
Critical Hdwy Stg 2	5.4	-	-
Follow-up Hdwy	3.5	3.3	2.2
Pot Cap-1 Maneuver	271	503	953
Stage 1	551	-	-
Stage 2	682	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	253	503	953
Mov Cap-2 Maneuver	253	-	-
Stage 1	514	-	-
Stage 2	682	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v21.49		1.39	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	278	-	340	-	-
HCM Lane V/C Ratio	0.056	-	0.363	-	-
HCM Control Delay (s/veh)	9	0	21.5	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.2	-	1.6	-	-

Intersection						
Int Delay, s/veh	0.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↔	↔	↔	↔	↔
Traffic Vol, veh/h	5	76	553	7	1	628
Future Vol, veh/h	5	76	553	7	1	628
Conflicting Peds, #/hr	0	0	0	100	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	15	6	0	0	5
Mvmt Flow	6	84	614	8	1	698

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	1069	411	0
Stage 1	718	-	-
Stage 2	351	-	-
Critical Hdwy	6.8	7.2	4.1
Critical Hdwy Stg 1	5.8	-	-
Critical Hdwy Stg 2	5.8	-	-
Follow-up Hdwy	3.5	3.45	2.2
Pot Cap-1 Maneuver	219	555	889
Stage 1	449	-	-
Stage 2	690	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	196	496	795
Mov Cap-2 Maneuver	196	-	-
Stage 1	402	-	-
Stage 2	688	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v13.74		0	0.02
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	496	795	-
HCM Lane V/C Ratio	-	-	0.17	0.001	-
HCM Control Delay (s/veh)	-	-	13.7	9.5	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.6	0	-

Intersection						
Int Delay, s/veh	1.8					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔		↔	↔	↔	↔
Traffic Vol, veh/h	125	129	5	144	45	5
Future Vol, veh/h	125	129	5	144	45	5
Conflicting Peds, #/hr	0	100	100	0	100	100
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	139	143	6	160	50	6

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	382
Stage 1	-	-	311
Stage 2	-	-	271
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	1176
Stage 1	-	-	743
Stage 2	-	-	774
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1052
Mov Cap-2 Maneuver	-	-	378
Stage 1	-	-	665
Stage 2	-	-	688

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0.28	15.82
HCM LOS	C		

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	388	-	-	60	-
HCM Lane V/C Ratio	0.143	-	-	0.005	-
HCM Control Delay (s/veh)	15.8	-	-	8.4	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.5	-	-	0	-

Intersection						
Int Delay, s/veh	2.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔	↔	↔	↔	↔
Traffic Vol, veh/h	5	59	24	93	52	5
Future Vol, veh/h	5	59	24	93	52	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	66	27	103	58	6

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	130	0	0
Stage 1	-	-	155
Stage 2	-	-	78
Critical Hdwy	4.12	-	6.42
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	2.218	-	3.518
Pot Cap-1 Maneuver	1455	-	836
Stage 1	-	-	945
Stage 2	-	-	946
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1455	-	833
Mov Cap-2 Maneuver	-	-	833
Stage 1	-	-	941
Stage 2	-	-	946

Approach	EB	WB	SB
HCM Control Delay, s/v	0.58	0	9.61
HCM LOS			A

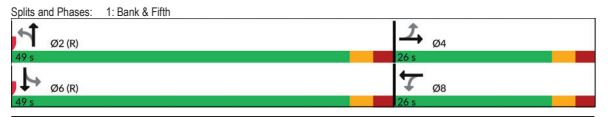
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	141	-	-	-	844
HCM Lane V/C Ratio	0.004	-	-	-	0.075
HCM Control Delay (s/veh)	7.5	0	-	-	9.6
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.2

2033 Scenario

Weekday PM Peak Hour

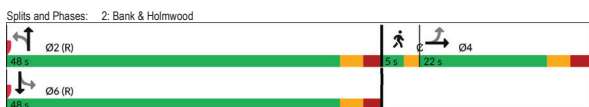
Future Volumes

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	48	55	61	39	17	476	30	626
Traffic Volume (vph)	48	55	61	39	17	476	30	626
Future Volume (vph)	0	167	68	87	0	584	0	771
Lane Group Flow (vph)	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases	4	2	8	2	6	6	6	6
Permitted Phases	4	2	8	2	6	6	6	6
Minimum Split (s)	26.0	26.0	26.0	26.0	49.0	49.0	49.0	49.0
Total Split (%)	34.7%	34.7%	34.7%	34.7%	65.3%	65.3%	65.3%	65.3%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag								
Lead-Lag Optimize?								
Act Effect Green (s)	20.5	20.5	20.5	43.5	43.5	43.5	43.5	43.5
Actuated g/C Ratio	0.27	0.27	0.27	0.58	0.58	0.58	0.58	0.58
v/c Ratio	0.45	0.25	0.21	0.37	0.48	0.48	0.48	0.48
Control Delay (s/veh)	22.8	24.3	13.7	15.1	10.3	10.3	10.3	10.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	22.8	24.3	13.7	15.1	10.3	10.3	10.3	10.3
LOS	C	C	B	B	B	B	B	B
Approach Delay (s/veh)	22.8	18.3	15.1	10.3	10.3	10.3	10.3	10.3
Approach LOS	C	B	B	B	B	B	B	B
Queue Length 50th (m)	15.6	7.5	4.6	28.5	29.8	29.8	29.8	29.8
Queue Length 95th (m)	32.7	17.5	14.7	53.9	42.4	42.4	42.4	42.4
Internal Link Dist (m)	49.7	112.4	195.6	195.6	195.0	195.0	195.0	195.0
Turn Bay Length (m)		45.0						
Base Capacity (vph)	371	272	409	1598	1592	1592	1592	1592
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	0.45	0.25	0.21	0.37	0.48	0.48	0.48	0.48

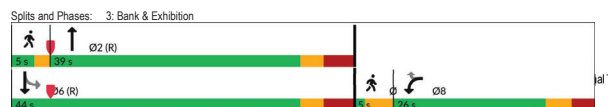


2033 Weekday Full Build-Out PM Peak Hour Lansdowne 2.0 Transportation Impact Assessment 5:20 pm 07/31/2024 Existing Signal Timing, 2021 Page 1

Lane Group	EBT	NBL	NBT	SBL	SBT	Ø3
Lane Configurations	48	26	524	34	596	
Traffic Volume (vph)	18	26	524	34	596	
Future Volume (vph)	114	0	675	0	732	
Lane Group Flow (vph)	NA	Perm	NA	Perm	NA	
Turn Type	4	2	2	6	3	
Protected Phases	4	2	2	6	6	
Permitted Phases	4	2	2	6	6	
Detector Phase	4	2	2	6	6	
Switch Phase						
Minimum Initial (s)	4.4	10.0	10.0	4.0	4.0	1.0
Minimum Split (s)	22.0	48.0	48.0	48.0	48.0	5.0
Total Split (%)	29.3%	64.0%	64.0%	64.0%	64.0%	7%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	2.0
All-Red Time (s)	2.6	2.2	2.2	2.2	2.2	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.6	5.2	5.2	5.2	5.2	
Lead/Lag						Lead
Lead-Lag Optimize?						
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	None
Act Effect Green (s)	11.7	55.9	55.9	55.9	55.9	
Actuated g/C Ratio	0.16	0.75	0.75	0.75	0.75	
v/c Ratio	0.56	0.35	0.37	0.37	0.37	
Control Delay (s/veh)	38.8	2.1	3.4	3.4	3.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	38.8	2.1	3.4	3.4	3.4	
LOS	D	A	A	A	A	
Approach Delay (s/veh)	38.8	2.1	3.4	3.4	3.4	
Approach LOS	D	A	A	A	A	
Queue Length 50th (m)	15.1	4.6	6.4	6.4	6.4	
Queue Length 95th (m)	27.8	10.4	16.1	16.1	16.1	
Internal Link Dist (m)	39.8	31.5	195.6	195.6	195.6	
Turn Bay Length (m)						
Base Capacity (vph)	288	1950	2001	2001	2001	
Starvation Cap Reductn	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	
Reduced v/c Ratio	0.40	0.35	0.37	0.37	0.37	



Lane Group	WBL	WBR	NBT	SBL	SBT	Ø1	Ø7
Lane Configurations	139	71	488	141	511		
Traffic Volume (vph)	139	71	488	141	511		
Future Volume (vph)	154	79	714	157	568		
Lane Group Flow (vph)	Prot	Perm	NA	Perm	NA		
Turn Type	8	2	6	1	7		
Protected Phases	8	2	6	6	6		
Permitted Phases	8	2	6	6	6		
Detector Phase	8	2	6	6	6		
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	1.0	1.0
Minimum Split (s)	26.0	26.0	39.0	44.0	44.0	5.0	5.0
Total Split (%)	26.0	26.0	39.0	44.0	44.0	5.0	5.0
Total Split (%)	34.7%	34.7%	52.0%	58.7%	58.7%	7%	7%
Yellow Time (s)	3.3	3.3	3.0	3.0	3.0	2.0	3.5
All-Red Time (s)	3.0	3.0	3.9	3.9	3.9	0.0	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	6.3	6.3	6.9	6.9	6.9		
Lead/Lag						Lead	Lead
Lead-Lag Optimize?						Yes	Yes
Recall Mode	None	None	C-Max	C-Max	C-Max	None	None
Act Effect Green (s)	13.2	13.2	48.6	48.6	48.6		
Actuated g/C Ratio	0.18	0.18	0.65	0.65	0.65		
v/c Ratio	0.57	0.31	0.40	0.43	0.28		
Control Delay (s/veh)	36.1	9.7	6.8	8.0	3.9		
Queue Delay	0.0	0.0	0.0	0.0	0.0		
Total Delay (s/veh)	36.1	9.7	6.8	8.0	3.9		
LOS	D	A	A	A	A		
Approach Delay (s/veh)	27.1	6.8	4.8	4.8	4.8		
Approach LOS	C	A	A	A	A		
Queue Length 50th (m)	20.3	0.0	18.6	4.5	8.4		
Queue Length 95th (m)	34.7	9.7	34.8	9.5	11.4		
Internal Link Dist (m)	30.6	33.7	40.0	44.8	44.8		
Turn Bay Length (m)							
Base Capacity (vph)	405	347	1790	365	2035		
Starvation Cap Reductn	0	0	0	0	0		
Spillback Cap Reductn	0	0	0	0	0		
Storage Cap Reductn	0	0	0	0	0		
Reduced v/c Ratio	0.38	0.23	0.40	0.43	0.28		



Queues
6: Bank & Aylmer

07/31/2024

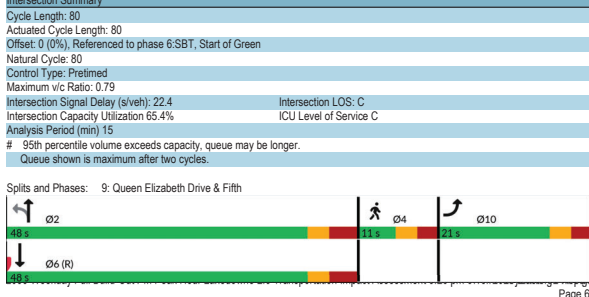
Lane Group	EBL	NBL	NBT	SBT	Ø3
Lane Configurations	↔	↔	↔	↔	
Traffic Volume (vph)	57	21	730	780	
Future Volume (vph)	57	21	730	780	
Lane Group Flow (vph)	90	0	834	975	
Turn Type	Prot	Perm	NA	NA	
Protected Phases	4	2	6	3	
Permitted Phases	4	2	6	3	
Detector Phase	4	2	2	6	
Switch Phase					
Minimum Initial (s)	10.0	30.0	30.0	30.0	1.0
Minimum Split (s)	22.0	63.0	63.0	63.0	5.0
Total Split (s)	22.0	63.0	63.0	63.0	5.0
Total Split (%)	24.4%	70.0%	70.0%	70.0%	6%
Yellow Time (s)	3.3	3.0	3.0	3.0	2.0
All-Red Time (s)	2.2	2.2	2.2	2.2	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.5	5.2	5.2	5.2	
Lead/Lag	Lag				Lead
Lead-Lag Optimize?					
Recall Mode	Ped	C-Max	C-Max	C-Max	Max
Act Effct Green (s)	14.1	60.2	60.2	60.2	
Actuated g/C Ratio	0.16	0.67	0.67	0.67	
v/c Ratio	0.38	0.44	0.50	0.50	
Control Delay (s/veh)	31.6	4.7	8.2	8.2	
Queue Delay	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	31.6	4.7	8.2	8.2	
LOS	C	A	A	A	
Approach Delay (s/veh)	31.6	4.7	8.2	8.2	
Approach LOS	C	A	A	A	
Queue Length 50th (m)	10.7	13.8	37.1	37.1	
Queue Length 95th (m)	24.5	m17.4	51.0	51.0	
Internal Link Dist (m)	76.7	28.1	10.1		
Turn Bay Length (m)					
Base Capacity (vph)	275	1910	1959		
Starvation Cap Reductn	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	
Storage Cap Reductn	0	0	0	0	
Reduced v/c Ratio	0.33	0.44	0.50		



Queues
9: Queen Elizabeth Drive & Fifth

07/31/2024

Lane Group	EBL	NBL	NBT	SBT	Ø4
Lane Configurations	↔	↔	↔	↔	
Traffic Volume (vph)	40	39	207	542	
Future Volume (vph)	40	39	207	542	
Lane Group Flow (vph)	83	0	273	676	
Turn Type	Prot	Perm	NA	NA	
Protected Phases	10	2	6	4	
Permitted Phases	10	2	6	4	
Minimum Split (s)	21.0	48.0	48.0	48.0	11.0
Total Split (s)	21.0	48.0	48.0	48.0	11.0
Total Split (%)	26.3%	60.0%	60.0%	60.0%	14%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.7	3.8	3.8	3.8	2.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.7	6.8	6.8	6.8	
Lead/Lag					
Lead-Lag Optimize?					
Act Effct Green (s)	15.3	41.2	41.2	41.2	
Actuated g/C Ratio	0.19	0.52	0.52	0.52	
v/c Ratio	0.28	0.43	0.79	0.79	
Control Delay (s/veh)	30.7	14.7	24.5	24.5	
Queue Delay	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	30.7	14.7	24.5	24.5	
LOS	C	B	C	C	
Approach Delay (s/veh)	30.7	14.7	24.5	24.5	
Approach LOS	C	B	C	C	
Queue Length 50th (m)	10.9	24.2	79.0	79.0	
Queue Length 95th (m)	23.1	42.4	#129.4	#129.4	
Internal Link Dist (m)	57.2	0.1	5.9		
Turn Bay Length (m)					
Base Capacity (vph)	294	641	855		
Starvation Cap Reductn	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	
Storage Cap Reductn	0	0	0	0	
Reduced v/c Ratio	0.28	0.43	0.79		

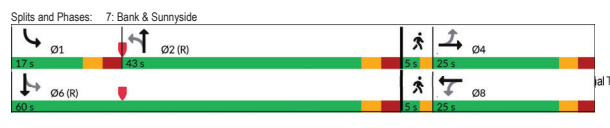


Queues
7: Bank & Sunnyside

07/31/2024

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	Ø3	Ø7
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔		
Traffic Volume (vph)	53	82	17	85	15	463	211	777		
Future Volume (vph)	53	82	17	85	15	463	211	777		
Lane Group Flow (vph)	0	184	0	385	0	554	0	1203		
Turn Type	Perm	NA	Perm	NA	Perm	NA	pm+pt	NA		
Protected Phases	4	8	8	2	4	1	6	3	7	
Permitted Phases	4	8	8	2	4	1	6	3	7	
Minimum Split (s)	25.0	25.0	25.0	25.0	43.0	43.0	17.0	60.0	5.0	5.0
Total Split (s)	25.0	25.0	25.0	25.0	43.0	43.0	17.0	60.0	5.0	5.0
Total Split (%)	27.8%	27.8%	27.8%	27.8%	47.8%	47.8%	18.9%	66.7%	6%	6%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0
All-Red Time (s)	2.6	2.6	2.6	2.6	3.0	3.0	2.9	3.0	0.0	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	5.6	5.6	5.6	5.6	6.0	6.0	6.0	6.0		
Lead/Lag	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lead
Lead-Lag Optimize?		Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes
Act Effct Green (s)	19.4	19.4	37.0	37.0	54.0	54.0	54.0	54.0		
Actuated g/C Ratio	0.22	0.22	0.41	0.41	0.60	0.60	0.60	0.60		
v/c Ratio	1.23	1.14	0.48	0.48	0.95	0.95	0.95	0.95		
Control Delay (s/veh)	184.2	116.2	21.0	21.0	27.0	27.0	27.0	27.0		
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Total Delay (s/veh)	184.2	116.2	21.0	21.0	27.0	27.0	27.0	27.0		
LOS	F	F	C	C	C	C	C	C		
Approach Delay (s/veh)	184.2	116.2	21.0	21.0	27.0	27.0	27.0	27.0		
Approach LOS	F	F	C	C	C	C	C	C		
Queue Length 50th (m)	-39.6	-61.9	35.6	35.6	23.3	23.3	23.3	23.3		
Queue Length 95th (m)	#79.2	#116.6	50.2	50.2	#117.3	#117.3	#117.3	#117.3		
Internal Link Dist (m)	75.1	136.0	63.1	63.1	79.0	79.0	79.0	79.0		
Turn Bay Length (m)										
Base Capacity (vph)	149	347	1143	1143	1262	1262	1262	1262		
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	1.23	1.14	0.48	0.48	0.95	0.95	0.95	0.95		

Intersection Summary
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 23 (26%), Referenced to phase 2:NBL and 6:SBT, Start of Green
 Natural Cycle: 100
 Control Type: Pretimed
 Maximum v/c Ratio: 1.23
 Intersection Signal Delay (s/veh): 53.0
 Intersection LOS: D
 Intersection Capacity Utilization 96.8%
 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.



HCM 7th AWSC
12: Exhibition & Paul Askin

11/20/2024

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Vol, veh/h	10	129	146	5	5	5
Future Vol, veh/h	10	129	146	5	5	5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mixed Flow	11	143	162	6	6	6
Number of Lanes	0	1	1	0	1	0

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	1	1
HCM Control Delay, s/veh	8	8	7.5
HCM LOS	A	A	A

Lane	EBLn1	WBLn1	SBLn1
Vol Left, %	7%	0%	50%
Vol Thru, %	93%	97%	0%
Vol Right, %	0%	3%	50%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	139	151	10
LT Vol	10	0	5
Through Vol	129	146	0
RT Vol	0	5	5
Lane Flow Rate	154	168	11
Geometry Grp	1	1	1
Degree of U/I (X)	0.176	0.189	0.014
Departure Headway (Hd)	4.093	4.048	4.423
Convergence, Y/N	Yes	Yes	Yes
Cap	873	883	814
Service Time	2.135	2.089	2.423
HCM Lane V/C Ratio	0.176	0.19	0.014
HCM Control Delay, s/veh	8	8	7.5
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.6	0.7	0

Intersection	
Intersection Delay, s/veh	6.9
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔			↔	↔	
Traffic Vol, veh/h	4	5	5	10	8	7
Future Vol, veh/h	4	5	5	10	8	7
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	6	6	11	9	8
Number of Lanes	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay, s/veh	6.7	7.1	6.9
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	53%	0%	33%
Vol Thru, %	0%	44%	67%
Vol Right, %	47%	56%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	15	9	15
LT Vol	8	0	5
Through Vol	0	4	10
RT Vol	7	5	0
Lane Flow Rate	17	10	17
Geometry Grp	1	1	1
Degree of Util (X)	0.018	0.01	0.019
Departure Headway (Hd)	3.807	3.643	4.038
Convergence, Y/N	Yes	Yes	Yes
Cap	943	986	890
Service Time	1.817	1.652	2.045
HCM Lane V/C Ratio	0.018	0.01	0.019
HCM Control Delay, s/veh	6.9	6.7	7.1
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.1	0	0.1

Intersection	
Intersection Delay, s/veh	8.1
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔			↔	↔	
Traffic Vol, veh/h	6	5	146	8	8	127
Future Vol, veh/h	6	5	146	8	8	127
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	6	162	9	9	141
Number of Lanes	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay, s/veh	7.2	8.6	7.5
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	6%	0%	95%
Vol Thru, %	0%	55%	5%
Vol Right, %	94%	45%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	135	11	154
LT Vol	8	0	146
Through Vol	0	6	8
RT Vol	127	5	0
Lane Flow Rate	150	12	171
Geometry Grp	1	1	1
Degree of Util (X)	0.159	0.014	0.209
Departure Headway (Hd)	3.813	4.162	4.396
Convergence, Y/N	Yes	Yes	Yes
Cap	947	865	811
Service Time	1.813	2.162	2.451
HCM Lane V/C Ratio	0.158	0.014	0.211
HCM Control Delay, s/veh	7.5	7.2	8.6
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.6	0	0.8

Intersection	
Intersection Delay, s/veh	8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔					↔	↔				↔
Traffic Vol, veh/h	76	40	0	0	0	106	45	27	34	0	0	95
Future Vol, veh/h	76	40	0	0	0	106	45	27	34	0	0	95
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	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	84	44	0	0	0	118	50	30	38	0	0	106
Number of Lanes	0	1	0	0	0	1	0	1	0	0	0	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	8.6	8.6	7.6	8.3
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	42%	66%	0%	0%
Vol Thru, %	25%	34%	0%	0%
Vol Right, %	32%	0%	100%	100%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	106	116	106	95
LT Vol	45	76	0	0
Through Vol	27	40	0	0
RT Vol	34	0	106	95
Lane Flow Rate	118	129	118	106
Geometry Grp	1	1	1	1
Degree of Util (X)	0.147	0.167	0.13	0.118
Departure Headway (Hd)	4.487	4.675	3.976	4.02
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	800	768	902	892
Service Time	2.509	2.699	1.999	2.042
HCM Lane V/C Ratio	0.148	0.168	0.131	0.119
HCM Control Delay, s/veh	8.3	8.6	7.6	7.6
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.5	0.6	0.4	0.4

Intersection	
Int Delay, s/veh	15.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↔		↔	↔	
Traffic Vol, veh/h	3	239	219	600	598	51
Future Vol, veh/h	3	239	219	600	598	51
Conflicting Peds, #/hr	0	0	178	0	0	107
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	0	0	-	-
Grade, %	0	-	0	0	-	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	3	266	243	667	664	57

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	1691	871	899
Stage 1	871	-	-
Stage 2	820	-	-
Critical Hdwy	6.675	6.275	4.175
Critical Hdwy Stg 1	5.475	-	-
Critical Hdwy Stg 2	5.875	-	-
Follow-up Hdwy	3.5475	3.3475	2.2475
Pot Cap-1 Maneuver	91	344	738
Stage 1	402	-	-
Stage 2	388	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	30	279	599
Mov Cap-2 Maneuver	30	-	-
Stage 1	164	-	-
Stage 2	315	-	-

Approach	EB	NB	SB
HCM Control Delay, s/veh	82.08	7.21	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	488	-	279	-	-
HCM Lane V/C Ratio	4.006	-	0.951	-	-
HCM Control Delay (s/veh)	15.1	4.3	82.1	-	-
HCM Lane LOS	C	A	F	-	-
HCM 95th %ile Q(veh)	2	-	9.2	-	-

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↕		↕↕	↕	
Traffic Vol, veh/h	0	24	0	827	846	2
Future Vol, veh/h	0	24	0	827	846	2
Conflicting Peds, #/hr	0	0	0	0	0	86
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	0	27	0	919	940	2

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	- 1027	- 0	- 0
Stage 1	- -	- -	- -
Stage 2	- -	- -	- -
Critical Hdwy	- 6.275	- -	- -
Critical Hdwy Stg 1	- -	- -	- -
Critical Hdwy Stg 2	- -	- -	- -
Follow-up Hdwy	-3.3475	- -	- -
Pot Cap-1 Maneuver	0 279	0 -	- -
Stage 1	0 - 0	- -	- -
Stage 2	0 - 0	- -	- -
Platoon blocked, %	- -	- -	- -
Mov Cap-1 Maneuver	- 253	- -	- -
Mov Cap-2 Maneuver	- -	- -	- -
Stage 1	- -	- -	- -
Stage 2	- -	- -	- -

Approach	EB	NB	SB
HCM Control Delay, s/v20.88		0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBL1	SBT	SBR
Capacity (veh/h)	-	253	-	-	-
HCM Lane V/C Ratio	-	0.105	-	-	-
HCM Control Delay (s/veh)	-	20.9	-	-	-
HCM Lane LOS	-	C	-	-	-
HCM 95th %tile Q(veh)	-	0.3	-	-	-

Intersection						
Int Delay, s/veh	3.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↕			↕	↕	
Traffic Vol, veh/h	62	65	59	263	507	82
Future Vol, veh/h	62	65	59	263	507	82
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	69	72	66	292	563	91

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	1032 609 654	0 -	0 -
Stage 1	609 - -	- -	- -
Stage 2	423 - -	- -	- -
Critical Hdwy	6.4 6.2 4.1	- -	- -
Critical Hdwy Stg 1	5.4 - -	- -	- -
Critical Hdwy Stg 2	5.4 - -	- -	- -
Follow-up Hdwy	3.5 3.3 2.2	- -	- -
Pot Cap-1 Maneuver	260 499 942	- -	- -
Stage 1	547 - -	- -	- -
Stage 2	665 - -	- -	- -
Platoon blocked, %	- -	- -	- -
Mov Cap-1 Maneuver	238 499 942	- -	- -
Mov Cap-2 Maneuver	238 - -	- -	- -
Stage 1	501 - -	- -	- -
Stage 2	665 - -	- -	- -

Approach	EB	NB	SB
HCM Control Delay, s/v24.27		1.67	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBL1	SBT	SBR
Capacity (veh/h)	330	-	325	-	-
HCM Lane V/C Ratio	0.07	-	0.434	-	-
HCM Control Delay (s/veh)	9.1	0	24.3	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.2	-	2.1	-	-

Intersection						
Int Delay, s/veh	1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↕↕				↕↕
Traffic Vol, veh/h	5 84	566 9	1 650			
Future Vol, veh/h	5 84	566 9	1 650			
Conflicting Peds, #/hr	0	0	100	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	0	-
Grade, %	0	-	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	15	6	0	0	5
Mvmt Flow	6 93	629 10	1 722			

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	1097 419	0 0	739 0
Stage 1	734 - -	- -	- -
Stage 2	363 - -	- -	- -
Critical Hdwy	6.8 7.2	- -	4.1 -
Critical Hdwy Stg 1	5.8 - -	- -	- -
Critical Hdwy Stg 2	5.8 - -	- -	- -
Follow-up Hdwy	3.5 3.45	- -	2.2 -
Pot Cap-1 Maneuver	211 548	- -	877 -
Stage 1	441 - -	- -	- -
Stage 2	680 - -	- -	- -
Platoon blocked, %	- -	- -	- -
Mov Cap-1 Maneuver	188 490	- -	784 -
Mov Cap-2 Maneuver	188 - -	- -	- -
Stage 1	394 - -	- -	- -
Stage 2	679 - -	- -	- -

Approach	WB	NB	SB
HCM Control Delay, s/v14.07		0	0.01
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBR	WBL1	SBL	SBT
Capacity (veh/h)	-	490	784	-	-
HCM Lane V/C Ratio	-	0.191	0.001	-	-
HCM Control Delay (s/veh)	-	14.1	9.6	-	-
HCM Lane LOS	-	B	A	-	-
HCM 95th %tile Q(veh)	-	0.7	0	-	-

Intersection						
Int Delay, s/veh	2.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↕			↕	↕	
Traffic Vol, veh/h	133 163	5 146	64 6			
Future Vol, veh/h	133 163	5 146	64 6			
Conflicting Peds, #/hr	0	100	100	0	100	100
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	0	0	0	-
Grade, %	0	-	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	148 181	6 162	71 7			

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0 0 429	0 612	438
Stage 1	- - -	- -	338 -
Stage 2	- - -	- -	273 -
Critical Hdwy	- - 4.12	6.42 6.22	- -
Critical Hdwy Stg 1	- - -	5.42 -	- -
Critical Hdwy Stg 2	- - -	5.42 -	- -
Follow-up Hdwy	- - 2.218	- 3.518	3.318
Pot Cap-1 Maneuver	- - 1131	- 457	618
Stage 1	- - -	- 722	-
Stage 2	- - -	- 773	-
Platoon blocked, %	- -	- -	- -
Mov Cap-1 Maneuver	- - 1011	- 363	494
Mov Cap-2 Maneuver	- - -	- 363	-
Stage 1	- - -	- 646	-
Stage 2	- - -	- 687	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0.28	17.24
HCM LOS			C

Minor Lane/Major Mvmt	NBL1	EBT	EBR	WBL	WBT
Capacity (veh/h)	371	-	-	60	-
HCM Lane V/C Ratio	0.209	-	-	0.005	-
HCM Control Delay (s/veh)	17.2	-	-	8.6	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.8	-	-	0	-

Intersection						
Int Delay, s/veh	2.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔	↔		↔	↔
Traffic Vol, veh/h	5	65	29	112	62	5
Future Vol, veh/h	5	65	29	112	62	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	72	32	124	69	6

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	157	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.12	-	6.42
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	2.218	-	3.518
Pot Cap-1 Maneuver	1423	-	812
Stage 1	-	-	929
Stage 2	-	-	940
Platoon blocked, %	-	-	-
Mov Cap-2 Maneuver	1423	-	809
Mov Cap-2 Maneuver	-	-	809
Stage 1	-	-	925
Stage 2	-	-	940

Approach	EB	WB	SB
HCM Control Delay, s/v	0.54	0	9.84
HCM LOS	A	A	A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	120	-	-	-	818
HCM Lane V/C Ratio	0.004	-	-	-	0.091
HCM Control Delay (s/veh)	7.5	0	-	-	9.8
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.3

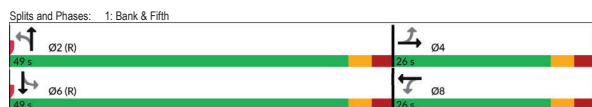
2033 Scenario

Saturday Peak Hour

Baseline Conditions

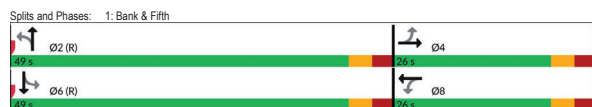
Queues
1: Bank & Fifth 08/06/2024

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations		↔	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	54	38	123	67	16	491	23	516
Future Volume (vph)	54	38	123	67	16	491	23	516
Lane Group Flow (vph)	0	131	137	117	0	594	0	645
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases	4	8	8	2	2	6	6	6
Permitted Phases	4	8	8	2	2	6	6	6
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	26.0	26.0	26.0	26.0	49.0	49.0	49.0	49.0
Total Split (s)	26.0	26.0	26.0	26.0	49.0	49.0	49.0	49.0
Total Split (%)	34.7%	34.7%	34.7%	34.7%	65.3%	65.3%	65.3%	65.3%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	14.5	14.5	14.5	14.5	49.5	49.5	49.5	49.5
Actuated g/C Ratio	0.19	0.19	0.19	0.19	0.66	0.66	0.66	0.66
v/c Ratio	0.55	0.67	0.38	0.32	0.32	0.36	0.36	0.36
Control Delay (s/veh)	30.6	43.3	20.4	7.3	6.9	6.9	6.9	6.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	30.6	43.3	20.4	7.3	6.9	6.9	6.9	6.9
LOS	C	D	C	C	A	A	A	A
Approach Delay (s/veh)	30.6	32.7	7.3	6.9	6.9	6.9	6.9	6.9
Approach LOS	C	C	A	A	A	A	A	A
Queue Length 50th (m)	14.2	18.0	9.6	28.2	17.9	17.9	17.9	17.9
Queue Length 95th (m)	27.4	32.3	20.9	50.0	33.6	33.6	33.6	33.6
Internal Link Dist (m)	49.7	45.0	112.4	195.6	190.0	190.0	190.0	190.0
Turn Bay Length (m)								
Base Capacity (vph)	332	288	423	1845	1810	1810	1810	1810
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	0.48	0.28	0.32	0.32	0.36	0.36	0.36



Queues
1: Bank & Fifth 08/01/2024

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations		↔	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	46	41	69	45	21	489	20	547
Future Volume (vph)	46	41	69	45	21	489	20	547
Lane Group Flow (vph)	0	145	77	108	0	593	0	660
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases	4	8	8	2	2	6	6	6
Permitted Phases	4	8	8	2	2	6	6	6
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	26.0	26.0	26.0	26.0	49.0	49.0	49.0	49.0
Total Split (s)	26.0	26.0	26.0	26.0	49.0	49.0	49.0	49.0
Total Split (%)	34.7%	34.7%	34.7%	34.7%	65.3%	65.3%	65.3%	65.3%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	12.2	12.2	12.2	12.2	51.8	51.8	51.8	51.8
Actuated g/C Ratio	0.16	0.16	0.16	0.16	0.69	0.69	0.69	0.69
v/c Ratio	0.65	0.48	0.40	0.31	0.34	0.34	0.34	0.34
Control Delay (s/veh)	35.0	37.0	18.0	9.8	5.9	5.9	5.9	5.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	35.0	37.0	18.0	9.8	5.9	5.9	5.9	5.9
LOS	C	D	B	A	A	A	A	A
Approach Delay (s/veh)	35.0	25.9	9.8	5.9	5.9	5.9	5.9	5.9
Approach LOS	C	C	A	A	A	A	A	A
Queue Length 50th (m)	14.8	10.0	6.2	15.3	16.2	16.2	16.2	16.2
Queue Length 95th (m)	29.3	20.2	17.3	51.5	31.8	31.8	31.8	31.8
Internal Link Dist (m)	49.7	45.0	112.4	195.6	190.0	190.0	190.0	190.0
Turn Bay Length (m)								
Base Capacity (vph)	354	269	415	1915	1939	1939	1939	1939
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	0.41	0.29	0.26	0.31	0.34	0.34	0.34	0.34



Queues 2: Bank & Holmwood

08/01/2024

Lane Group	EBT	NBL	NBT	SBL	SBT	Ø3
Lane Configurations						
Traffic Volume (vph)	10	29	497	31	559	
Future Volume (vph)	10	29	497	31	559	
Lane Group Flow (vph)	113	0	634	0	681	
Turn Type	NA	Perm	NA	Perm	NA	
Protected Phases	4	2	2	6	3	
Permitted Phases	4	2	2	6	3	
Detector Phase	4	2	2	6	3	
Switch Phase						
Minimum Initial (s)	4.4	10.0	10.0	4.0	4.0	1.0
Minimum Split (s)	22.0	48.0	48.0	48.0	48.0	5.0
Total Split (s)	22.0	48.0	48.0	48.0	48.0	5.0
Total Split (%)	29.3%	64.0%	64.0%	64.0%	64.0%	7%
Yellow Time (s)	3.0	3.0	3.0	3.0	2.0	
All-Red Time (s)	2.6	2.2	2.2	2.2	2.0	
Last Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.6	5.2	5.2	5.2	5.2	
Lead/Lag	Lag					Lead
Lead-Lag Optimize?						
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	None
Act Effct Green (s)	11.7	55.9	55.9	55.9	55.9	
Actuated g/C Ratio	0.16	0.75	0.75	0.75	0.75	
v/c Ratio	0.56	0.32	0.32	0.34	0.34	
Control Delay (s/veh)	38.9	2.3	2.3	5.9	5.9	
Queue Delay (s)	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	38.9	2.3	2.3	5.9	5.9	
LOS	D	A	A	A	A	
Approach Delay (s/veh)	38.9	2.3	2.3	5.9	5.9	
Approach LOS	D	A	A	A	A	
Queue Length 50th (m)	14.9	4.1	4.1	27.2	27.2	
Queue Length 95th (m)	27.7	9.7	9.7	46.1	46.1	
Internal Link Dist (m)	39.8	31.5	31.5	195.6	195.6	
Turn Bay Length (m)						
Base Capacity (vph)	285	1958	1958	2023	2023	
Starvation Cap Reductn	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	
Reduced v/c Ratio	0.40	0.32	0.32	0.34	0.34	

Splits and Phases: 2: Bank & Holmwood



Queues 6: Bank & Aylmer

08/01/2024

Lane Group	EBL	NBL	NBT	SBL	SBT	Ø3
Lane Configurations						
Traffic Volume (vph)	39	19	663	722	722	
Future Volume (vph)	39	19	663	722	722	
Lane Group Flow (vph)	56	0	780	870	870	
Turn Type	Prot	Perm	NA	NA	NA	
Protected Phases	4	2	6	6	3	
Permitted Phases	4	2	6	6	3	
Detector Phase	4	2	6	6	3	
Switch Phase						
Minimum Initial (s)	10.0	30.0	30.0	30.0	1.0	
Minimum Split (s)	22.0	63.0	63.0	63.0	5.0	
Total Split (s)	22.0	63.0	63.0	63.0	5.0	
Total Split (%)	24.4%	70.0%	70.0%	70.0%	6%	
Yellow Time (s)	3.3	3.0	3.0	3.0	2.0	
All-Red Time (s)	2.2	2.2	2.2	2.2	1.0	
Last Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.5	5.2	5.2	5.2	5.2	
Lead/Lag	Lag					Lead
Lead-Lag Optimize?						
Recall Mode	Ped	C-Max	C-Max	C-Max	Max	
Act Effct Green (s)	14.0	60.3	60.3	60.3		
Actuated g/C Ratio	0.16	0.67	0.67	0.67		
v/c Ratio	0.24	0.40	0.43	0.43		
Control Delay (s/veh)	30.0	6.1	7.5	7.5		
Queue Delay (s)	0.0	0.0	0.0	0.0		
Total Delay (s/veh)	30.0	6.1	7.5	7.5		
LOS	C	A	A	A		
Approach Delay (s/veh)	30.0	6.1	7.5	7.5		
Approach LOS	C	A	A	A		
Queue Length 50th (m)	6.6	15.2	31.5	31.5		
Queue Length 95th (m)	17.3	30.8	42.3	42.3		
Internal Link Dist (m)	76.7	28.1	10.1	10.1		
Turn Bay Length (m)						
Base Capacity (vph)	276	1930	2004	2004		
Starvation Cap Reductn	0	0	0	0		
Spillback Cap Reductn	0	0	0	0		
Storage Cap Reductn	0	0	0	0		
Reduced v/c Ratio	0.20	0.40	0.43	0.43		

Splits and Phases: 6: Bank & Aylmer



Queues 3: Bank & Exhibition

08/01/2024

Lane Group	WBL	WBR	NBT	SBL	SBT	Ø1	Ø7
Lane Configurations							
Traffic Volume (vph)	88	72	455	126	485		
Future Volume (vph)	88	72	455	126	485		
Lane Group Flow (vph)	98	60	639	140	539		
Turn Type	Prot	Perm	NA	Perm	NA		
Protected Phases	8	2	2	6	1	7	
Permitted Phases	8	2	2	6	1	7	
Detector Phase	8	2	2	6	1	7	
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	10.0	1.0	1.0	
Minimum Split (s)	26.0	26.0	39.0	44.0	44.0	5.0	5.0
Total Split (s)	26.0	26.0	39.0	44.0	44.0	5.0	5.0
Total Split (%)	34.7%	34.7%	52.0%	58.7%	58.7%	7%	7%
Yellow Time (s)	3.3	3.3	3.0	3.0	2.0	3.5	
All-Red Time (s)	3.0	3.0	3.9	3.9	3.9	0.0	0.0
Last Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.3	6.3	6.9	6.9	6.9		
Lead/Lag	Lag	Lag	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	C-Max	C-Max	C-Max	None	None
Act Effct Green (s)	11.2	11.2	55.2	55.2	55.2		
Actuated g/C Ratio	0.15	0.15	0.74	0.74	0.74		
v/c Ratio	0.43	0.34	0.31	0.32	0.23		
Control Delay (s/veh)	34.6	11.6	4.9	5.1	2.8		
Queue Delay (s)	0.0	0.0	0.0	0.0	0.0		
Total Delay (s/veh)	34.6	11.6	4.9	5.1	2.8		
LOS	C	B	A	A	A		
Approach Delay (s/veh)	24.3	4.9	3.3	3.3	3.3		
Approach LOS	C	A	A	A	A		
Queue Length 50th (m)	13.0	0.0	14.1	3.8	6.4		
Queue Length 95th (m)	25.1	10.5	26.1	6.6	9.6		
Internal Link Dist (m)	30.6		33.7	44.8	44.8		
Turn Bay Length (m)			40.0				
Base Capacity (vph)	405	348	2055	440	2314		
Starvation Cap Reductn	0	0	0	0	0		
Spillback Cap Reductn	0	0	0	0	0		
Storage Cap Reductn	0	0	0	0	0		
Reduced v/c Ratio	0.24	0.23	0.31	0.32	0.23		

Splits and Phases: 3: Bank & Exhibition

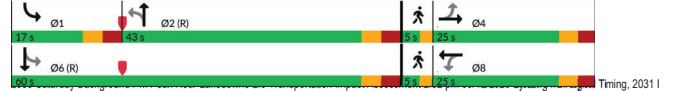


Queues 7: Bank & Sunnyside

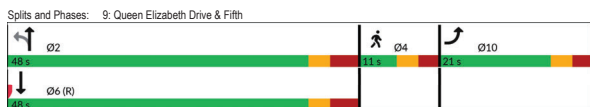
08/01/2024

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	Ø3	Ø7
Lane Configurations										
Traffic Volume (vph)	42	38	20	58	30	493	85	550		
Future Volume (vph)	42	38	20	58	30	493	85	550		
Lane Group Flow (vph)	0	138	0	198	0	618	0	767		
Turn Type	Perm	NA	Perm	NA	Perm	NA	pm+pt	NA		
Protected Phases	4	8	2	4	1	6	3	7		
Permitted Phases	4	8	2	4	1	6	3	7		
Detector Phase	4	8	2	4	1	6	3	7		
Switch Phase										
Minimum Initial (s)	25.0	25.0	25.0	25.0	43.0	17.0	60.0	5.0	5.0	
Total Split (s)	25.0	25.0	25.0	25.0	43.0	43.0	17.0	60.0	5.0	5.0
Total Split (%)	27.8%	27.8%	27.8%	27.8%	47.8%	47.8%	18.9%	66.7%	6%	6%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	
All-Red Time (s)	2.6	2.6	2.6	2.6	3.0	3.0	2.9	3.0	0.0	0.0
Last Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	5.6	5.6	5.6	5.6	6.0	6.0	6.0			
Lead/Lag	Lag	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lead
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	Yes	Yes		Yes
Act Effct Green (s)	19.4	19.4	19.4	37.0	54.0	54.0				
Actuated g/C Ratio	0.22	0.22	0.22	0.41	0.60	0.60				
v/c Ratio	0.61	0.64	0.64	0.56	0.54	0.54				
Control Delay (s/veh)	44.9	32.0	32.0	22.4	4.7	4.7				
Queue Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0				
Total Delay (s/veh)	44.9	32.0	32.0	22.4	4.7	4.7				
LOS	D	C	C	C	A	A				
Approach Delay (s/veh)	44.9	32.0	32.0	22.4	4.7	4.7				
Approach LOS	D	C	C	C	A	A				
Queue Length 50th (m)	21.7	20.6	20.6	41.3	8.0	8.0				
Queue Length 95th (m)	#43.8	#44.2	#44.2	57.8	10.0	10.0				
Internal Link Dist (m)	75.1	136.0	136.0	63.1	79.0	79.0				
Turn Bay Length (m)										
Base Capacity (vph)	226	308	308	1100	1409	1409				
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	0.61	0.64	0.64	0.56	0.54	0.54				

Splits and Phases: 7: Bank & Sunnyside



Lane Group	EBL	NBL	NBT	SBT	Ø4
Lane Configurations	↔	↔	↕	↕	
Traffic Volume (vph)	55	42	248	358	
Future Volume (vph)	55	42	248	358	
Lane Group Flow (vph)	95	0	323	457	
Turn Type	Prot	Perm	NA	NA	
Protected Phases	10	2	6	4	
Permitted Phases	2				
Detector Phase	10	2	2	6	
Switch Phase					
Minimum Initial (s)	10.0	4.0	4.0	4.0	4.0
Minimum Split (s)	21.0	48.0	48.0	48.0	11.0
Total Split (s)	21.0	48.0	48.0	48.0	11.0
Total Spilt (%)	26.3%	60.0%	60.0%	60.0%	14%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.7	3.8	3.8	3.8	2.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.7	6.8	6.8	6.8	
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	Min	None	None	C-Max	None
Act Effct Green (s)	11.3		56.2	56.2	
Actuated g/C Ratio	0.14		0.70	0.70	
v/c Ratio	0.43		0.30	0.39	
Control Delay (s/veh)	37.5		5.7	6.3	
Queue Delay	0.0		0.0	0.0	
Total Delay (s/veh)	37.5		5.7	6.3	
LOS	D		A	A	
Approach Delay (s/veh)	37.5		5.7	6.3	
Approach LOS	D		A	A	
Queue Length 50th (m)	13.6		14.5	22.3	
Queue Length 95th (m)	26.1		29.9	44.1	
Internal Link Dist (m)	57.2		0.1	5.9	
Turn Bay Length (m)					
Base Capacity (vph)	297		1060	1165	
Starvation Cap Reductn	0		0	0	
Spillback Cap Reductn	0		0	0	
Storage Cap Reductn	0		0	0	
Reduced v/c Ratio	0.32		0.30	0.39	
Intersection Summary					
Cycle Length: 80					
Actuated Cycle Length: 80					
Offset: 0 (0%), Referenced to phase 6:SBT, Start of Green					
Natural Cycle: 80					
Control Type: Actuated-Coordinated					
Maximum v/c Ratio: 0.43					
Intersection Signal Delay (s/veh): 9.5					
Intersection Capacity Utilization 63.9%					
Analysis Period (min) 15					
Intersection LOS: A					
ICU Level of Service B					



Intersection						
Intersection Delay, s/veh	7.7					
Intersection LOS	A					
Movement						
	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	↕
Traffic Vol, veh/h	5	123	88	5	5	5
Future Vol, veh/h	5	123	88	5	5	5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	137	98	6	6	6
Number of Lanes	0	1	1	0	1	0
Approach						
	EB	WB	SB			
Opposing Approach	WB	EB				
Opposing Lanes	1	1	0			
Conflicting Approach Left	SB		WB			
Conflicting Lanes Left	1	0	1			
Conflicting Approach Right		SB	EB			
Conflicting Lanes Right	0	1	1			
HCM Control Delay, s/veh	7.8	7.6	7.3			
HCM LOS	A	A	A			
Lane						
	EBLn1	WBLn1	SBLn1			
Vol Left, %	4%	0%	50%			
Vol Thru, %	96%	95%	0%			
Vol Right, %	0%	5%	50%			
Sign Control	Stop	Stop	Stop			
Traffic Vol by Lane	128	93	10			
LT Vol	5	0	5			
Through Vol	123	88	0			
RT Vol	0	5	5			
Lane Flow Rate	142	103	11			
Geometry Grp	1	1	1			
Degree of Util (X)	0.16	0.116	0.013			
Departure Headway (Hd)	4.039	4.027	4.26			
Convergence, Y/N	Yes	Yes	Yes			
Cap	897	888	845			
Service Time	2.065	2.061	2.26			
HCM Lane V/C Ratio	0.16	0.116	0.013			
HCM Control Delay, s/veh	7.8	7.6	7.3			
HCM Lane LOS	A	A	A			
HCM 95th-tile Q	0.6	0.4	0			

Intersection						
Intersection Delay, s/veh	7.3					
Intersection LOS	A					
Movement						
	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↕		↕	↕	↕	
Traffic Vol, veh/h	16	5	5	74	5	5
Future Vol, veh/h	16	5	5	74	5	5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	18	6	6	82	6	6
Number of Lanes	1	0	0	1	1	0
Approach						
	EB	WB	NB			
Opposing Approach	WB	EB				
Opposing Lanes	1	1	0			
Conflicting Approach Left		NB	EB			
Conflicting Lanes Left	0	1	1			
Conflicting Approach Right	NB		WB			
Conflicting Lanes Right	1	0	1			
HCM Control Delay, s/veh	7	7.4	7			
HCM LOS	A	A	A			
Lane						
	NBLn1	EBLn1	WBLn1			
Vol Left, %	50%	0%	6%			
Vol Thru, %	0%	76%	94%			
Vol Right, %	50%	24%	0%			
Sign Control	Stop	Stop	Stop			
Traffic Vol by Lane	10	21	79			
LT Vol	5	0	5			
Through Vol	0	16	74			
RT Vol	5	5	0			
Lane Flow Rate	11	23	88			
Geometry Grp	1	1	1			
Degree of Util (X)	0.012	0.025	0.097			
Departure Headway (Hd)	3.926	3.876	3.984			
Convergence, Y/N	Yes	Yes	Yes			
Cap	907	924	903			
Service Time	1.97	1.896	1.991			
HCM Lane V/C Ratio	0.012	0.025	0.097			
HCM Control Delay, s/veh	7	7	7.4			
HCM Lane LOS	A	A	A			
HCM 95th-tile Q	0	0.1	0.3			

Intersection						
Intersection Delay, s/veh	8.1					
Intersection LOS	A					
Movement						
	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↕		↕	↕	↕	
Traffic Vol, veh/h	16	5	88	5	107	21
Future Vol, veh/h	16	5	88	5	107	21
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	18	6	98	6	119	23
Number of Lanes	1	0	0	1	1	0
Approach						
	EB	WB	NB			
Opposing Approach	WB	EB				
Opposing Lanes	1	1	0			
Conflicting Approach Left		NB	EB			
Conflicting Lanes Left	0	1	1			
Conflicting Approach Right	NB		WB			
Conflicting Lanes Right	1	0	1			
HCM Control Delay, s/veh	7.4	8.1	8.2			
HCM LOS	A	A	A			
Lane						
	NBLn1	EBLn1	WBLn1			
Vol Left, %	84%	0%	95%			
Vol Thru, %	0%	76%	5%			
Vol Right, %	16%	24%	0%			
Sign Control	Stop	Stop	Stop			
Traffic Vol by Lane	128	21	93			
LT Vol	107	0	88			
Through Vol	0	16	5			
RT Vol	21	5	0			
Lane Flow Rate	142	23	103			
Geometry Grp	1	1	1			
Degree of Util (X)	0.167	0.027	0.126			
Departure Headway (Hd)	4.222	4.234	4.391			
Convergence, Y/N	Yes	Yes	Yes			
Cap	839	851	805			
Service Time	2.3	2.234	2.478			
HCM Lane V/C Ratio	0.169	0.027	0.128			
HCM Control Delay, s/veh	8.2	7.4	8.1			
HCM Lane LOS	A	A	A			
HCM 95th-tile Q	0.6	0.1	0.4			

Intersection													
Int Delay, s/veh	8.1												
Intersection LOS	A												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↕				↕		↕				↕	
Traffic Vol, veh/h	41	49	0	0	0	95	60	40	37	0	0	107	
Future Vol, veh/h	41	49	0	0	0	95	60	40	37	0	0	107	
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	2	2	2	2	2	2	2	2	2	2	2	
Mvmt Flow	46	54	0	0	0	106	67	44	41	0	0	119	
Number of Lanes	0	1	0	0	0	1	0	1	0	0	0	1	
Approach	EB					WB			NB				SB
Opposing Approach	WB					EB			SB				NB
Opposing Lanes	1					1			1				1
Conflicting Approach Left	SB					NB			EB				WB
Conflicting Lanes Left	1					1			1				1
Conflicting Approach Right	NB					SB			WB				EB
Conflicting Lanes Right	1					1			1				1
HCM Control Delay, s/veh	8.5					7.6			8.5				7.6
HCM LOS	A					A			A				A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	44%	46%	0%	0%
Vol Thru, %	29%	54%	0%	0%
Vol Right, %	27%	0%	100%	100%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	137	90	95	107
LT Vol	60	41	0	0
Through Vol	40	49	0	0
RT Vol	37	0	95	107
Lane Flow Rate	152	100	106	119
Geometry Grp	1	1	1	1
Degree of Util (X)	0.188	0.131	0.119	0.131
Departure Headway (Hd)	4.442	4.726	4.044	3.966
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	808	759	887	904
Service Time	2.464	2.753	2.069	1.99
HCM Lane V/C Ratio	0.188	0.132	0.12	0.132
HCM Control Delay, s/veh	8.5	8.5	7.6	7.6
HCM Lane LOS	A	A	A	A
HCM 95th Q	0.7	0.4	0.4	0.5

Intersection						
Int Delay, s/veh	6.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↕		↕	↕	↕
Traffic Vol, veh/h	3	182	119	571	526	56
Future Vol, veh/h	3	182	119	571	526	56
Conflicting Peds, #/hr	0	0	178	0	0	107
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	3	202	132	634	584	62

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	1375	794	825
Stage 1	794	-	-
Stage 2	582	-	-
Critical Hdwy	6.675	6.275	4.175
Critical Hdwy Stg 1	5.475	-	-
Critical Hdwy Stg 2	5.875	-	-
Follow-up Hdwy	3.5475	3.3475	2.2475
Pot Cap-1 Maneuver	145	381	788
Stage 1	438	-	-
Stage 2	516	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	71	309	639
Mov Cap-2 Maneuver	71	-	-
Stage 1	266	-	-
Stage 2	419	-	-

Approach	EB	NB	SB
HCM Control Delay, s/veh	13	3.86	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	527	-	309	-	-
HCM Lane V/C Ratio	0.207	-	0.653	-	-
HCM Control Delay (s/veh)	12.1	2.1	36.1	-	-
HCM Lane LOS	B	A	E	-	-
HCM 95th %ile Q(veh)	0.8	-	4.3	-	-

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↕		↕	↕	↕
Traffic Vol, veh/h	1	33	0	679	699	0
Future Vol, veh/h	1	33	0	679	699	0
Conflicting Peds, #/hr	0	0	0	0	0	86
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	1	37	0	754	777	0

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	1154	777	0
Stage 1	777	-	-
Stage 2	377	-	-
Critical Hdwy	6.675	6.275	-
Critical Hdwy Stg 1	5.475	-	-
Critical Hdwy Stg 2	5.875	-	-
Follow-up Hdwy	3.5475	3.3475	-
Pot Cap-1 Maneuver	200	390	0
Stage 1	446	-	-
Stage 2	657	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	200	390	-
Mov Cap-2 Maneuver	200	-	-
Stage 1	446	-	-
Stage 2	657	-	-

Approach	EB	NB	SB
HCM Control Delay, s/veh	15.19	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	390	-	-	-
HCM Lane V/C Ratio	-	0.094	-	-	-
HCM Control Delay (s/veh)	-	15.2	-	-	-
HCM Lane LOS	-	C	-	-	-
HCM 95th %ile Q(veh)	-	0.3	-	-	-

Intersection						
Int Delay, s/veh	3.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↕		↕	↕	↕
Traffic Vol, veh/h	71	57	57	216	259	131
Future Vol, veh/h	71	57	57	216	259	131
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	79	63	63	240	288	146

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	727	361	433
Stage 1	361	-	-
Stage 2	367	-	-
Critical Hdwy	6.4	6.2	4.1
Critical Hdwy Stg 1	5.4	-	-
Critical Hdwy Stg 2	5.4	-	-
Follow-up Hdwy	3.5	3.3	2.2
Pot Cap-1 Maneuver	394	689	1137
Stage 1	710	-	-
Stage 2	705	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	368	689	1137
Mov Cap-2 Maneuver	368	-	-
Stage 1	664	-	-
Stage 2	705	-	-

Approach	EB	NB	SB
HCM Control Delay, s/veh	16.13	1.74	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	376	-	465	-	-
HCM Lane V/C Ratio	0.056	-	0.306	-	-
HCM Control Delay (s/veh)	8.4	0	16.1	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %ile Q(veh)	0.2	-	1.3	-	-

Intersection						
Int Delay, s/veh	0.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	6	73	508	19	2	605
Future Vol, veh/h	6	73	508	19	2	605
Conflicting Peds, #/hr	0	0	0	100	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	15	6	0	0	5
Mvmt Flow	7	81	564	21	2	672

Major/Minor	Minor1	Major1	Major2	Minor2
Conflicting Flow All	1016	393	0	686
Stage 1	675	-	-	-
Stage 2	341	-	-	-
Critical Hdwy	6.8	7.2	-	4.1
Critical Hdwy Stg 1	5.8	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-
Follow-up Hdwy	3.5	3.45	-	2.2
Pot Cap-1 Maneuver	238	571	-	917
Stage 1	473	-	-	-
Stage 2	698	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	212	510	-	820
Mov Cap-2 Maneuver	212	-	-	-
Stage 1	423	-	-	-
Stage 2	696	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v13.38		0	0.03
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	510	820	-
HCM Lane V/C Ratio	-	-	0.159	0.003	-
HCM Control Delay (s/veh)	-	-	13.4	9.4	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.6	0	-

Intersection						
Int Delay, s/veh	3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	123	124	5	88	72	5
Future Vol, veh/h	123	124	5	88	72	5
Conflicting Peds, #/hr	0	100	100	0	100	100
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	137	138	6	98	80	6

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	374
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	4.12	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	2.218	-
Pot Cap-1 Maneuver	-	1184	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	1059	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0.45	15.78
HCM LOS	C		

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	419	-	-	97	-
HCM Lane V/C Ratio	0.204	-	-	0.005	-
HCM Control Delay (s/veh)	15.8	-	-	8.4	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.8	-	-	0	-

Intersection						
Int Delay, s/veh	3.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	32	76	112	96	5
Future Vol, veh/h	5	32	76	112	96	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	36	84	124	107	6

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	209	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.12	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.218	-	-
Pot Cap-1 Maneuver	1362	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1362	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s/v	1.03	0	10.26
HCM LOS	B		

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	243	-	-	-	797
HCM Lane V/C Ratio	0.004	-	-	-	0.141
HCM Control Delay (s/veh)	7.7	0	-	-	10.3
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.5

2033 Scenario

Saturday Peak Hour

Future Volumes

Queues
1: Bank & Fifth

11/25/2024

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↔		↔		↔		↔	
Traffic Volume (vph)	46	41	69	45	21	508	20	578
Future Volume (vph)	46	41	69	45	21	508	20	578
Lane Group Flow (vph)	0	145	77	113	0	614	0	694
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases	4		8		2		6	
Permitted Phases	4		8		2		6	
Minimum Split (s)	26.0	26.0	26.0	26.0	49.0	49.0	49.0	49.0
Total Split (s)	26.0	26.0	26.0	26.0	49.0	49.0	49.0	49.0
Total Split (%)	34.7%	34.7%	34.7%	34.7%	65.3%	65.3%	65.3%	65.3%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag	Lead-Lag Optimize?							
Act Effect Green (s)	20.5	20.5	20.5		43.5		43.5	
Actuated g/C Ratio	0.27	0.27	0.27		0.58		0.58	
v/c Ratio	0.40	0.27	0.27		0.38		0.43	
Control Delay (s/veh)	20.9	24.6	12.8		14.1		9.6	
Queue Delay (s/veh)	0.0	0.0	0.0		0.0		0.0	
Total Delay (s/veh)	20.9	24.6	12.8		14.1		9.6	
LOS	C	C	B		B		A	
Approach Delay (s/veh)	20.9		17.6		14.1		9.6	
Approach LOS	C		B		B		A	
Queue Length 50th (m)	12.6	8.5	5.3		25.8		25.7	
Queue Length 95th (m)	28.0	19.2	17.0		56.0		36.6	
Internal Link Dist (m)	49.7		112.4		195.6		190.0	
Turn Bay Length (m)		45.0						
Base Capacity (vph)	363	285	416		1605		1631	
Starvation Cap Reductn	0	0	0		0		0	
Spillback Cap Reductn	0	0	0		0		0	
Storage Cap Reductn	0	0	0		0		0	
Reduced v/c Ratio	0.40	0.27	0.27		0.38		0.43	
Intersection Summary								
Cycle Length: 75								
Actuated Cycle Length: 75								
Offset: 47 (63%), Referenced to phase 2:NBL and 6:SBTL, Start of Green								
Natural Cycle: 75								
Control Type: Pre-timed								
Maximum v/c Ratio: 0.43								
Intersection Signal Delay (s/veh): 13.2								
Intersection Capacity Utilization 58.8%								
Analysis Period (min) 15								

Splits and Phases: 1: Bank & Fifth



ing, 2033 Bac

Queues
2: Bank & Holmwood

11/25/2024



Queues
2: Bank & Holmwood

11/25/2024

Lane Group	EBT	NBL	NBT	SBL	SBT	Ø3
Lane Configurations	↔		↔		↔	
Traffic Volume (vph)	10	29	517	37	584	
Future Volume (vph)	10	29	517	37	584	
Lane Group Flow (vph)	113	0	664	0	716	
Turn Type	NA	Perm	NA	Perm	NA	
Protected Phases	4		2		6	
Permitted Phases	4		2		6	
Detector Phase	4		2		6	
Switch Phase						
Minimum Initial (s)	4.4	10.0	10.0	4.0	4.0	1.0
Minimum Split (s)	22.0	48.0	48.0	48.0	48.0	5.0
Total Split (s)	22.0	48.0	48.0	48.0	48.0	5.0
Total Split (%)	29.3%	64.0%	64.0%	64.0%	64.0%	7%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	2.0
All-Red Time (s)	2.6	2.2	2.2	2.2	2.2	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.6	5.2	5.2	5.2	5.2	0.0
Lead/Lag	Lag					
Lead-Lag Optimize?	Lead-Lag Optimize?					
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	None
Act Effect Green (s)	11.7	55.9	55.9	55.9	55.9	
Actuated g/C Ratio	0.16	0.75	0.75	0.75	0.75	
v/c Ratio	0.56	0.34	0.36	0.36	0.36	
Control Delay (s/veh)	38.9	2.3	3.9	3.9	3.9	
Queue Delay (s/veh)	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	38.9	2.3	3.9	3.9	3.9	
LOS	D	A	A	A	A	
Approach Delay (s/veh)	38.9	2.3	3.9	3.9	3.9	
Approach LOS	D	A	A	A	A	
Queue Length 50th (m)	14.9	4.7	6.8	6.8	6.8	
Queue Length 95th (m)	27.7	10.9	28.3	28.3	28.3	
Internal Link Dist (m)	39.8	31.5	195.6	195.6	195.6	
Turn Bay Length (m)		285	1946	1990	1990	
Base Capacity (vph)	285	1946	1990	1990	1990	
Starvation Cap Reductn	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	
Reduced v/c Ratio	0.40	0.34	0.36	0.36	0.36	
Intersection Summary						
Cycle Length: 75						
Actuated Cycle Length: 75						
Offset: 74 (99%), Referenced to phase 2:NBL and 6:SBTL, Start of Green						
Natural Cycle: 75						
Control Type: Actuated-Coordinated						
Maximum v/c Ratio: 0.56						
Intersection Signal Delay (s/veh): 5.8						
Intersection Capacity Utilization 67.1%						
Analysis Period (min) 15						

2033 Saturday Full-Build Out PM Peak Hour Lansdowne 2.0 Transportation Impact Assessment 5:40 pm 07/31/2024 ExSim 2033 Bac

Page 2

Queues
3: Bank & Exhibition

11/25/2024

Lane Group	WBL	WBR	NBT	SBL	SBT	Ø1	Ø7
Lane Configurations	↔		↔		↔		
Traffic Volume (vph)	107	81	463	150	485		
Future Volume (vph)	107	81	463	150	485		
Lane Group Flow (vph)	119	90	674	167	539		
Turn Type	Prot	Perm	NA	Perm	NA		
Protected Phases	8		2		6		7
Permitted Phases	8		2		6		7
Detector Phase	8		2		6		7
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	1.0	1.0
Minimum Split (s)	26.0	26.0	39.0	44.0	44.0	5.0	5.0
Total Split (s)	26.0	26.0	39.0	44.0	44.0	5.0	5.0
Total Split (%)	34.7%	34.7%	52.0%	58.7%	58.7%	7%	7%
Yellow Time (s)	3.3	3.3	3.0	3.0	3.0	2.0	3.5
All-Red Time (s)	3.0	3.0	3.9	3.9	3.9	0.0	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.3	6.9	6.9	6.9	0.0	0.0
Lead/Lag	Lag	Lag	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Lead-Lag Optimize?						
Recall Mode	None	None	C-Max	C-Max	C-Max	None	None
Act Effect Green (s)	11.9	11.9	54.5	54.5	54.5		
Actuated g/C Ratio	0.16	0.16	0.73	0.73	0.73		
v/c Ratio	0.49	0.36	0.34	0.40	0.24		
Control Delay (s/veh)	35.2	10.8	5.3	6.9	3.0		
Queue Delay (s/veh)	0.0	0.0	0.0	0.0	0.0		
Total Delay (s/veh)	35.2	10.8	5.3	6.9	3.0		
LOS	D	B	A	A	A		
Approach Delay (s/veh)	24.7		5.3	3.9	3.9		
Approach LOS	C		A	A	A		
Queue Length 50th (m)	15.8	0.0	15.8	4.8	8.0		
Queue Length 95th (m)	28.8	10.8	29.2	9.7	9.8		
Internal Link Dist (m)	30.6		33.7	44.8	44.8		
Turn Bay Length (m)			40.0				
Base Capacity (vph)	405	356	2002	422	2283		
Starvation Cap Reductn	0	0	0	0	0		
Spillback Cap Reductn	0	0	0	0	0		
Storage Cap Reductn	0	0	0	0	0		
Reduced v/c Ratio	0.29	0.25	0.34	0.40	0.24		
Intersection Summary							
Cycle Length: 75							
Actuated Cycle Length: 75							
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green							
Natural Cycle: 75							
Control Type: Actuated-Coordinated							
Maximum v/c Ratio: 0.49							
Intersection Signal Delay (s/veh): 7.3							
Intersection Capacity Utilization 61.4%							
Analysis Period (min) 15							

2033 Saturday Full-Build Out PM Peak Hour Lansdowne 2.0 Transportation Impact Assessment 5:40 pm 07/31/2024 ExSim 2033 Bac

Page 4

2033 Saturday Full-Build Out PM Peak Hour Lansdowne 2.0 Transportation Impact Assessment 5:40 pm 07/31/2024 ExSim 2033 Bac

Page 3

Queues

3: Bank & Exhibition

11/25/2024

Splits and Phases: 3: Bank & Exhibition



Queues

6: Bank & Aylmer

11/25/2024

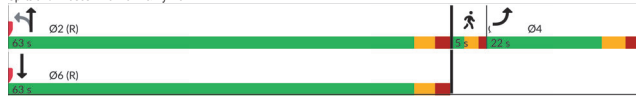
Lane Group	EBL	NBL	NBT	SBT	Ø3
Lane Configurations	↔	↔	↕	↕	
Traffic Volume (vph)	39	19	715	742	
Future Volume (vph)	39	19	715	742	
Lane Group Flow (vph)	56	0	815	892	
Turn Type	Prot	Perm	NA	NA	
Protected Phases	4	2	6	3	
Permitted Phases	4	2	6	6	
Detector Phase	4	2	2	6	
Switch Phase					
Minimum Initial (s)	10.0	30.0	30.0	30.0	1.0
Minimum Split (s)	22.0	63.0	63.0	63.0	5.0
Total Split (s)	22.0	63.0	63.0	63.0	5.0
Total Split (%)	24.4%	70.0%	70.0%	70.0%	6%
Yellow Time (s)	3.3	3.0	3.0	3.0	2.0
All-Red Time (s)	2.2	2.2	2.2	2.2	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.5		5.2	5.2	
Lead/Lag	Lag				Lead
Lead-Lag Optimize?					
Recall Mode	Ped	C-Max	C-Max	C-Max	Max
Act Effect Green (s)	14.0		60.3	60.3	
Actualized g/C Ratio	0.16		0.67	0.67	
v/c Ratio	0.24		0.42	0.44	
Control Delay (s/veh)	30.0		6.6	7.6	
Queue Delay	0.0		0.0	0.0	
Total Delay (s/veh)	30.0		6.6	7.6	
LOS	C		A	A	
Approach Delay (s/veh)	30.0		6.6	7.6	
Approach LOS	C		A	A	
Queue Length 50th (m)	6.6		16.0	32.6	
Queue Length 95th (m)	17.3		35.7	43.7	
Internal Link Dist (m)	76.7		28.1	10.1	
Turn Bay Length (m)					
Base Capacity (vph)	276		1930	2008	
Starvation Cap Reductn	0		0	0	
Spillback Cap Reductn	0		0	0	
Storage Cap Reductn	0		0	0	
Reduced v/c Ratio	0.20		0.42	0.44	
Intersection Summary					
Cycle Length: 90					
Actuated Cycle Length: 90					
Offset: 87 (97%), Referenced to phase 2:NBL and 6:SBT, Start of Green					
Natural Cycle: 90					
Control Type: Actuated-Coordinated					
Maximum v/c Ratio: 0.44					
Intersection Signal Delay (s/veh): 7.9					
Intersection Capacity Utilization 55.9%					
Analysis Period (min) 15					

Queues

6: Bank & Aylmer

11/25/2024

Splits and Phases: 6: Bank & Aylmer



Queues

7: Bank & Sunnyside

11/25/2024

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	Ø3	Ø7
Lane Configurations	↔	↔	↔	↔	↔	↕	↕	↕		
Traffic Volume (vph)	42	38	20	38	30	524	85	570		
Future Volume (vph)	42	38	20	38	30	524	85	570		
Lane Group Flow (vph)	0	138	0	198	0	652	0	789		
Turn Type	Perm	NA	Perm	NA	Perm	NA	pm+pt	NA		
Protected Phases	4	4	8	8	2	2	1	6	3	7
Permitted Phases	4	8			2	6				
Minimum Split (s)	25.0	25.0	25.0	25.0	43.0	43.0	17.0	60.0	5.0	5.0
Total Split (s)	25.0	25.0	25.0	25.0	43.0	43.0	17.0	60.0	5.0	5.0
Total Split (%)	27.8%	27.8%	27.8%	27.8%	47.8%	47.8%	18.9%	66.7%	6%	6%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0
All-Red Time (s)	2.6	2.6	2.6	2.6	3.0	3.0	2.9	3.0	0.0	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	5.6		5.6	5.6	6.0	6.0	6.0	6.0		
Lead/Lag	Lag	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lead
Lead-Lag Optimize?		Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes
Act Effect Green (s)	19.4		19.4	19.4	37.0	37.0		54.0		
Actualized g/C Ratio	0.22		0.22	0.22	0.41	0.41		0.60		
v/c Ratio	0.61		0.64	0.64	0.59	0.59		0.56		
Control Delay (s/veh)	44.9		32.0	32.0	23.1	23.1		4.9		
Queue Delay	0.0		0.0	0.0	0.0	0.0		0.0		
Total Delay (s/veh)	44.9		32.0	32.0	23.1	23.1		4.9		
LOS	D		C	C	C	C		A		
Approach Delay (s/veh)	44.9		32.0	32.0	23.1	23.1		4.9		
Approach LOS	D		C	C	C	C		A		
Queue Length 50th (m)	21.7		20.6	20.6	44.4	44.4		8.2		
Queue Length 95th (m)	#43.8		#44.2	#44.2	61.7	61.7		10.2		
Internal Link Dist (m)	75.1		136.0	136.0	63.1	63.1		79.0		
Turn Bay Length (m)										
Base Capacity (vph)	226		308	308	1103	1103		1399		
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	0.61		0.64	0.64	0.59	0.59		0.56		
Intersection Summary										
Cycle Length: 90										
Actuated Cycle Length: 90										
Offset: 23 (26%), Referenced to phase 2:NBL and 6:SBTL, Start of Green										
Natural Cycle: 90										
Control Type: Pretimed										
Maximum v/c Ratio: 0.64										
Intersection Signal Delay (s/veh): 17.7										
Intersection Capacity Utilization 73.8%										
Analysis Period (min) 15										
# 55th percentile volume exceeds capacity, queue may be longer.										
Queue shown is maximum after two cycles.										

Queues

7: Bank & Sunnyside

11/25/2024

Splits and Phases: 7: Bank & Sunnyside



Queues

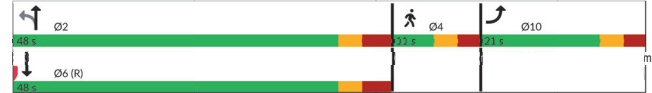
9: Queen Elizabeth Drive & Fifth

11/25/2024

Splits and Phases: 9: Queen Elizabeth Drive & Fifth

Lane Group	EBL	NBL	NBT	SBT	Ø4
Lane Configurations	↔	↔	↔	↔	↔
Traffic Volume (vph)	60	42	259	371	
Future Volume (vph)	60	42	259	371	
Lane Group Flow (vph)	101	0	335	471	
Turn Type	Prot	Perm	NA	NA	
Protected Phases	10		2	6	4
Permitted Phases		2			
Minimum Split (s)	21.0	48.0	48.0	48.0	11.0
Total Split (s)	21.0	48.0	48.0	48.0	11.0
Total Split (%)	26.3%	60.0%	60.0%	60.0%	14%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.7	3.8	3.8	3.8	2.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.7		6.8	6.8	
Lead/Lag					
Lead-Lag Optimize?					
Act Effect Green (s)	15.3		41.2	41.2	
Actuated g/C Ratio	0.19		0.52	0.52	
v/c Ratio	0.34		0.43	0.55	
Control Delay (s/veh)	31.7		14.4	16.3	
Queue Delay	0.0		0.0	0.0	
Total Delay (s/veh)	31.7		14.4	16.3	
LOS	C		B	B	
Approach Delay (s/veh)	31.7		14.4	16.3	
Approach LOS	C		B	B	
Queue Length 50th (m)	13.4		29.9	45.6	
Queue Length 95th (m)	27.0		49.4	72.1	
Internal Link Dist (m)	57.2		0.1	5.9	
Turn Bay Length (m)					
Base Capacity (vph)	298		771	853	
Starvation Cap Reductn	0		0	0	
Spillback Cap Reductn	0		0	0	
Storage Cap Reductn	0		0	0	
Reduced v/c Ratio	0.34		0.43	0.55	
Intersection Summary					
Cycle Length: 80					
Actuated Cycle Length: 80					
Offset: 0 (0%), Referenced to phase 6:SBT, Start of Green					
Natural Cycle: 80					
Control Type: Pretimed					
Maximum v/c Ratio: 0.55					
Intersection Signal Delay (s/veh): 17.3			Intersection LOS: B		
Intersection Capacity Utilization 65.3%			ICU Level of Service C		
Analysis Period (min) 15					

Splits and Phases: 9: Queen Elizabeth Drive & Fifth



HCM 7th AWSC

11: O' Connor & Fifth

11/25/2024

Intersection	
Intersection Delay, s/veh	9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔	↔			↔		↔	↔			↔
Traffic Vol, veh/h	0	132	162	5	90	0	98	0	7	0	0	0
Future Vol, veh/h	0	132	162	5	90	0	98	0	7	0	0	0
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	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	147	180	6	100	0	109	0	8	0	0	0
Number of Lanes	0	1	0	0	0	1	0	1	0	0	0	1
Approach		EB		WB		NB		SB				
Opposing Approach	WB		EB		SB		NB					
Opposing Lanes	1		1		1		1					
Conflicting Approach Left	SB		NB		EB		WB					
Conflicting Lanes Left	1		1		1		1					
Conflicting Approach Right	NB		SB		WB		EB					
Conflicting Lanes Right	1		1		1		1					
HCM Control Delay, s/veh	9.3		8.3		9		0					
HCM LOS	A		A		A							

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	93%	0%	5%	0%
Vol Thru, %	0%	45%	95%	100%
Vol Right, %	7%	55%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	105	294	95	0
LT Vol	98	0	5	0
Through Vol	0	132	90	0
RT Vol	7	162	0	0
Lane Flow Rate	117	327	106	0
Geometry Grp	1	1	1	1
Degree of Util (X)	0.162	0.365	0.134	0
Departure Headway (Hd)	4.992	4.026	4.57	5.017
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	719	895	785	0
Service Time	3.023	2.042	2.593	3.056
HCM Lane V/C Ratio	0.163	0.365	0.135	0
HCM Control Delay, s/veh	9	9.3	8.3	8.1
HCM Lane LOS	A	A	A	N
HCM 95th-ile Q	0.6	1.7	0.5	0

HCM 7th AWSC

12: Exhibition & Paul Askin

11/25/2024

Intersection	
Intersection Delay, s/veh	7.8
Intersection LOS	A

Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations		↔	↔		↔	↔		
Traffic Vol, veh/h	11	128	90	5	5	5		
Future Vol, veh/h	11	128	90	5	5	5		
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90		
Heavy Vehicles, %	2	2	2	2	2	2		
Mvmt Flow	12	142	100	6	6	6		
Number of Lanes	0	1	1	0	1	0		
Approach		EB		WB		SB		
Opposing Approach	WB		EB		SB		NB	
Opposing Lanes	1		1		0		0	
Conflicting Approach Left	SB		NB		WB		EB	
Conflicting Lanes Left	1		0		1		1	
Conflicting Approach Right	NB		SB		WB		EB	
Conflicting Lanes Right	0		1		1		1	
HCM Control Delay, s/veh	7.9		7.6		7.3		0	
HCM LOS	A		A		A			

Lane	EBLn1	WBLn1	SBLn1
Vol Left, %	8%	0%	50%
Vol Thru, %	92%	95%	0%
Vol Right, %	0%	5%	50%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	139	95	10
LT Vol	11	0	5
Through Vol	128	90	0
RT Vol	0	5	5
Lane Flow Rate	154	106	11
Geometry Grp	1	1	1
Degree of Util (X)	0.174	0.118	0.013
Departure Headway (Hd)	4.048	4.037	4.29
Convergence, Y/N	Yes	Yes	Yes
Cap	887	886	839
Service Time	2.074	2.074	2.29
HCM Lane V/C Ratio	0.174	0.12	0.013
HCM Control Delay, s/veh	7.9	7.6	7.3
HCM Lane LOS	A	A	A
HCM 95th-ile Q	0.6	0.4	0

Intersection	
Intersection Delay, s/veh	7.4
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Vol, veh/h	17	5	5	80	9	8
Future Vol, veh/h	17	5	5	80	9	8
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	19	6	6	89	10	9
Number of Lanes	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay, s/veh	7	7.5	7.1
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	53%	0%	6%
Vol Thru, %	0%	77%	94%
Vol Right, %	47%	23%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	17	22	85
LT Vol	9	0	5
Through Vol	0	17	80
RT Vol	8	5	0
Lane Flow Rate	19	24	94
Geometry Grp	1	1	1
Degree of Util (X)	0.021	0.026	0.105
Departure Headway (Hd)	3.963	3.902	3.998
Convergence, Y/N	Yes	Yes	Yes
Cap	898	917	899
Service Time	2.011	1.927	2.009
HCM Lane V/C Ratio	0.021	0.026	0.105
HCM Control Delay, s/veh	7.1	7	7.5
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.1	0.1	0.4

Intersection	
Intersection Delay, s/veh	8.1
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Vol, veh/h	19	5	90	8	110	24
Future Vol, veh/h	19	5	90	8	110	24
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	21	6	100	9	122	27
Number of Lanes	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay, s/veh	7.4	8.2	8.2
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	82%	0%	92%
Vol Thru, %	0%	79%	8%
Vol Right, %	18%	21%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	134	24	98
LT Vol	110	0	90
Through Vol	0	19	8
RT Vol	24	5	0
Lane Flow Rate	149	27	109
Geometry Grp	1	1	1
Degree of Util (X)	0.175	0.032	0.133
Departure Headway (Hd)	4.226	4.274	4.4
Convergence, Y/N	Yes	Yes	Yes
Cap	838	843	803
Service Time	2.31	2.274	2.493
HCM Lane V/C Ratio	0.178	0.032	0.136
HCM Control Delay, s/veh	8.2	7.4	8.2
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.6	0.1	0.5

Intersection	
Int Delay, s/veh	6.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Vol, veh/h	3	182	119	602	545	56
Future Vol, veh/h	3	182	119	602	545	56
Conflicting Peds, #/hr	0	0	178	0	0	107
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	0	-	-
Grade, %	0	-	0	0	-	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	3	202	132	669	606	62

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	1414	815	846
Stage 1	815	-	-
Stage 2	599	-	-
Critical Hdwy	6.675	6.275	4.175
Critical Hdwy Stg 1	5.475	-	-
Critical Hdwy Stg 2	5.875	-	-
Follow-up Hdwy	3.5475	3.3475	2.2475
Pot Cap-1 Maneuver	137	371	773
Stage 1	428	-	-
Stage 2	506	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	67	301	627
Mov Cap-2 Maneuver	67	-	-
Stage 1	257	-	-
Stage 2	410	-	-

Approach	EB	NB	SB
HCM Control Delay, s/38.38		3.92	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	511	-	301	-	-
HCM Lane V/C Ratio	0.211	-	0.672	-	-
HCM Control Delay (s/veh)	12.3	2.3	38.4	-	-
HCM Lane LOS	B	A	E	-	-
HCM 95th %tile Q(veh)	0.8	-	4.5	-	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Vol, veh/h	1	33	0	710	718	0
Future Vol, veh/h	1	33	0	710	718	0
Conflicting Peds, #/hr	0	0	0	0	0	86
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	0	-	-
Grade, %	0	-	0	0	-	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	1	37	0	789	798	0

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	1192	798	0
Stage 1	798	-	-
Stage 2	394	-	-
Critical Hdwy	6.675	6.275	-
Critical Hdwy Stg 1	5.475	-	-
Critical Hdwy Stg 2	5.875	-	-
Follow-up Hdwy	3.5475	3.3475	-
Pot Cap-1 Maneuver	189	379	0
Stage 1	436	-	-
Stage 2	643	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	189	379	-
Mov Cap-2 Maneuver	189	-	-
Stage 1	436	-	-
Stage 2	643	-	-

Approach	EB	NB	SB
HCM Control Delay, s/15.51		0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT
Capacity (veh/h)	-	379	-	-
HCM Lane V/C Ratio	-	0.097	-	-
HCM Control Delay (s/veh)	-	15.5	-	-
HCM Lane LOS	-	C	-	-
HCM 95th %tile Q(veh)	-	0.3	-	-

Intersection						
Int Delay, s/veh	3.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔			↔	↔	
Traffic Vol, veh/h	81	68	70	216	259	144
Future Vol, veh/h	81	68	70	216	259	144
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	90	76	78	240	288	160

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	763	368	448
Stage 1	368	-	-
Stage 2	396	-	-
Critical Hdwy	6.4	6.2	4.1
Critical Hdwy Stg 1	5.4	-	-
Critical Hdwy Stg 2	5.4	-	-
Follow-up Hdwy	3.5	3.3	2.2
Pot Cap-1 Maneuver	375	682	1123
Stage 1	705	-	-
Stage 2	685	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	345	682	1123
Mov Cap-2 Maneuver	345	-	-
Stage 1	648	-	-
Stage 2	685	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v17.78		2.07	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBL1	SBT	SBR
Capacity (veh/h)	441	-	446	-	-
HCM Lane V/C Ratio	0.069	-	0.372	-	-
HCM Control Delay (s/veh)	8.4	0	17.8	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.2	-	1.7	-	-

Intersection						
Int Delay, s/veh	1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↔	↔		↔	↔
Traffic Vol, veh/h	6	83	524	20	2	629
Future Vol, veh/h	6	83	524	20	2	629
Conflicting Peds, #/hr	0	0	0	100	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	15	6	0	0	5
Mvmt Flow	7	92	582	22	2	699

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	1047	402	0
Stage 1	693	-	-
Stage 2	354	-	-
Critical Hdwy	6.8	7.2	4.1
Critical Hdwy Stg 1	5.8	-	-
Critical Hdwy Stg 2	5.8	-	-
Follow-up Hdwy	3.5	3.45	2.2
Pot Cap-1 Maneuver	227	563	903
Stage 1	463	-	-
Stage 2	687	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	202	503	807
Mov Cap-2 Maneuver	202	-	-
Stage 1	414	-	-
Stage 2	685	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v13.76		0	0.03
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBL1	SBL	SBT
Capacity (veh/h)	-	-	503	807	-
HCM Lane V/C Ratio	-	-	0.183	0.003	-
HCM Control Delay (s/veh)	-	-	13.8	9.5	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.7	0	-

Intersection						
Int Delay, s/veh	3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔			↔	↔	
Traffic Vol, veh/h	123	124	5	88	72	5
Future Vol, veh/h	123	124	5	88	72	5
Conflicting Peds, #/hr	0	100	100	0	100	100
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	137	138	6	98	80	6

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	374
Stage 1	-	-	306
Stage 2	-	-	209
Critical Hdwy	-	4.12	6.42
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	-	2.218	3.518
Pot Cap-1 Maneuver	-	1184	520
Stage 1	-	-	747
Stage 2	-	-	826
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	1059	414
Mov Cap-2 Maneuver	-	-	414
Stage 1	-	-	668
Stage 2	-	-	735

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0.45	15.78
HCM LOS	C		

Minor Lane/Major Mvmt	NBL1	EBT	EBR	WBL	WBT
Capacity (veh/h)	419	-	-	97	-
HCM Lane V/C Ratio	0.204	-	-	0.005	-
HCM Control Delay (s/veh)	15.8	-	-	8.4	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.8	-	-	0	-

Intersection						
Int Delay, s/veh	3.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔	↔		↔	↔
Traffic Vol, veh/h	5	32	76	112	96	5
Future Vol, veh/h	5	32	76	112	96	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	36	84	124	107	6

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	209	0	0
Stage 1	-	-	193
Stage 2	-	-	147
Critical Hdwy	4.12	-	6.42
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	2.218	-	3.518
Pot Cap-1 Maneuver	1362	-	796
Stage 1	-	-	881
Stage 2	-	-	976
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1362	-	792
Mov Cap-2 Maneuver	-	-	792
Stage 1	-	-	877
Stage 2	-	-	976

Approach	EB	WB	SB
HCM Control Delay, s/v	1.03	0	10.26
HCM LOS	B		

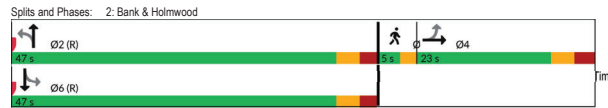
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBL1
Capacity (veh/h)	243	-	-	-	797
HCM Lane V/C Ratio	0.004	-	-	-	0.141
HCM Control Delay (s/veh)	7.7	0	-	-	10.3
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.5

2033 Scenario

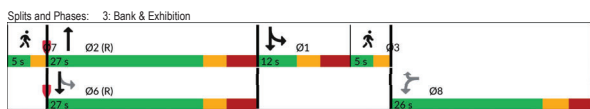
Sunday Peak Hour

Baseline Conditions

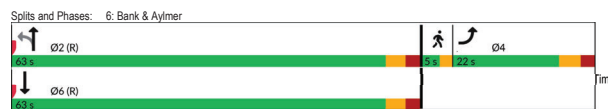
Lane Group	EBT	NBL	NBT	SBL	SBT	Ø3
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	18	32	519	23	551	
Future Volume (vph)	18	32	519	23	551	
Lane Group Flow (vph)	111	0	704	0	678	
Turn Type	NA	Perm	NA	Perm	NA	
Protected Phases	4	2		6	3	
Permitted Phases		2		6		
Detector Phase	4	2	2	6	6	
Switch Phase						
Minimum Initial (s)	4.4	10.0	10.0	4.0	4.0	1.0
Minimum Split (s)	23.0	47.0	47.0	47.0	47.0	5.0
Total Split (s)	23.0	47.0	47.0	47.0	47.0	5.0
Total Split (%)	30.7%	62.7%	62.7%	62.7%	62.7%	7%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	2.0
All-Red Time (s)	2.6	2.2	2.2	2.2	2.2	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.6	5.2	5.2	5.2	5.2	
Lead/Lag	Lag					Lead
Lead-Lag Optimize?						
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	None
Act Effct Green (s)	11.6	56.1	56.1	56.1	56.1	
Actuated g/C Ratio	0.15	0.75	0.75	0.75	0.75	
v/c Ratio	0.55	0.37	0.37	0.33	0.33	
Control Delay (s/veh)	38.6	2.4	2.4	8.9	8.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	38.6	2.4	2.4	8.9	8.9	
LOS	D	A	A	A	A	
Approach Delay (s/veh)	38.6	2.4	2.4	8.9	8.9	
Approach LOS	D	A	A	A	A	
Queue Length 50th (m)	14.7	5.3	5.3	24.5	24.5	
Queue Length 95th (m)	27.3	12.1	12.1	48.9	48.9	
Internal Link Dist (m)	39.8	31.5	31.5	195.6	195.6	
Turn Bay Length (m)						
Base Capacity (vph)	304	1890	1890	2043	2043	
Starvation Cap Reductn	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	
Reduced v/c Ratio	0.37	0.37	0.37	0.33	0.33	



Lane Group	WBL	WBR	NBT	SBL	SBT	Ø3	Ø6	Ø7
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	126	66	417	178	450			
Future Volume (vph)	126	66	417	178	450			
Lane Group Flow (vph)	140	73	597	198	500			
Turn Type	Perm	Perm	NA	custom	NA			
Protected Phases	2	1	16	3	6	7		
Permitted Phases	8	8		6				
Detector Phase	8	8	2	1	16			
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	4.0	1.0	10.0	1.0	
Minimum Split (s)	26.0	26.0	27.0	10.9	5.0	27.0	5.0	
Total Split (s)	26.0	26.0	27.0	12.0	5.0	27.0	5.0	
Total Split (%)	34.7%	34.7%	36.0%	16.0%	7%	36%	7%	
Yellow Time (s)	3.3	3.3	3.0	3.0	2.0	3.0	2.0	
All-Red Time (s)	3.0	3.0	3.9	3.9	0.0	3.9	0.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0				
Total Lost Time (s)	6.3	6.3	6.9	6.9				
Lead/Lag			Lead		Lag			
Lead-Lag Optimize?			Yes		Yes			
Recall Mode	None	None	C-Max	None	None	C-Max	None	
Act Effct Green (s)	13.1	13.1	40.0	45.1	53.4			
Actuated g/C Ratio	0.17	0.17	0.53	0.60	0.71			
v/c Ratio	0.56	0.29	0.40	0.47	0.22			
Control Delay (s/veh)	36.6	9.8	12.2	11.4	4.7			
Queue Delay	0.0	0.0	0.0	0.0	0.0			
Total Delay (s/veh)	36.6	9.8	12.2	11.4	4.7			
LOS	D	A	B	B	A			
Approach Delay (s/veh)	27.4	12.2	12.2	6.6	6.6			
Approach LOS	C	B	B	A	A			
Queue Length 50th (m)	18.5	0.0	24.3	8.7	11.5			
Queue Length 95th (m)	32.4	9.3	42.2	17.2	12.3			
Internal Link Dist (m)	30.6	33.7		40.0	44.8			
Turn Bay Length (m)								
Base Capacity (vph)	377	343	1486	424	2235			
Starvation Cap Reductn	0	0	0	0	0			
Spillback Cap Reductn	0	0	0	0	0			
Storage Cap Reductn	0	0	0	0	0			
Reduced v/c Ratio	0.37	0.21	0.40	0.47	0.22			



Lane Group	EBL	NBL	NBT	SBT	Ø3
Lane Configurations	↔	↔	↔	↔	↔
Traffic Volume (vph)	54	17	598	659	
Future Volume (vph)	54	17	598	659	
Lane Group Flow (vph)	83	0	683	795	
Turn Type	Prot	Perm	NA	NA	
Protected Phases	4	2	6	3	
Permitted Phases	4	2	6		
Detector Phase	4	2	2	6	
Switch Phase					
Minimum Initial (s)	10.0	30.0	30.0	30.0	1.0
Minimum Split (s)	22.0	63.0	63.0	63.0	5.0
Total Split (s)	22.0	63.0	63.0	63.0	5.0
Total Split (%)	24.4%	70.0%	70.0%	70.0%	6%
Yellow Time (s)	3.3	3.0	3.0	3.0	2.0
All-Red Time (s)	2.2	2.2	2.2	2.2	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.5	5.2	5.2	5.2	
Lead/Lag	Lag				Lead
Lead-Lag Optimize?					
Recall Mode	None	C-Max	C-Max	C-Max	None
Act Effct Green (s)	11.1	72.4	72.4	72.4	
Actuated g/C Ratio	0.12	0.80	0.80	0.80	
v/c Ratio	0.43	0.29	0.33	0.33	
Control Delay (s/veh)	35.9	2.7	3.7	3.7	
Queue Delay	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	35.9	2.7	3.7	3.7	
LOS	D	A	A	A	
Approach Delay (s/veh)	35.9	2.7	3.7	3.7	
Approach LOS	D	A	A	A	
Queue Length 50th (m)	10.5	11.5	17.1	17.1	
Queue Length 95th (m)	23.2	16.9	29.5	29.5	
Internal Link Dist (m)	76.7	28.1	10.1	10.1	
Turn Bay Length (m)					
Base Capacity (vph)	276	2328	2400	2400	
Starvation Cap Reductn	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	
Storage Cap Reductn	0	0	0	0	
Reduced v/c Ratio	0.30	0.29	0.33	0.33	



Queues
7: Bank & Sunnyside

08/06/2024

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	Ø3	Ø6	Ø7
Lane Configurations		↔	↔	↔	↔	↔	↔	↔			
Traffic Volume (vph)	43	33	16	51	19	472	118	509			
Future Volume (vph)	43	33	16	51	19	472	118	509			
Lane Group Flow (vph)	0	118	0	195	0	558	0	750			
Turn Type	Perm	NA	Perm	NA	Perm	NA	custom	NA			
Protected Phases	4		8		2		1	16	3	6	7
Permitted Phases	4		8		2		6				
Minimum Split (s)	25.0	25.0	25.0	25.0	43.0	43.0	17.0		5.0	43.0	5.0
Total Split (s)	25.0	25.0	25.0	25.0	43.0	43.0	17.0		5.0	43.0	5.0
Total Split (%)	27.8%	27.8%	27.8%	27.8%	47.8%	47.8%	18.9%		6%	48%	6%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0		2.0	3.0	2.0
All-Red Time (s)	2.6	2.6	2.6	2.6	3.0	3.0	2.9		0.0	3.0	0.0
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)	5.6		5.6		6.0						
Lead/Lag	Lag	Lag	Lag	Lag				Lead		Lead	
Lead-Lag Optimize?	Yes	Yes								Yes	
Act Effect Green (s)	19.4		19.4		37.0		48.2				
Actuated g/C Ratio	0.22		0.22		0.41		0.54				
v/c Ratio	0.53		0.61		0.48		0.65				
Control Delay (s/veh)	41.1		27.5		21.0		10.7				
Queue Delay	0.0		0.0		0.0		0.0				
Total Delay (s/veh)	41.1		27.5		21.0		10.7				
LOS	D		C		C		B				
Approach Delay (s/veh)	41.1		27.5		21.0		10.7				
Approach LOS	D		C		C		B				
Queue Length 50th (m)	18.2		17.2		36.0		35.6				
Queue Length 95th (m)	35.5		39.9		50.5		27.1				
Internal Link Dist (m)	75.1		136.0		63.1		79.0				
Turn Bay Length (m)											
Base Capacity (vph)	223		318		1170		1224				
Starvation Cap Reductn	0		0		0		0				
Spillback Cap Reductn	0		0		0		0				
Storage Cap Reductn	0		0		0		0				
Reduced v/c Ratio	0.53		0.61		0.48		0.65				

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 23 (26%), Referenced to phase 2:NBL and 6:SBTL, Start of Green	
Natural Cycle: 90	
Control Type: Pretimed	
Maximum v/c Ratio: 0.65	
Intersection Signal Delay (s/veh): 18.3	Intersection LOS: B
Intersection Capacity Utilization 73.8%	ICU Level of Service D
Analysis Period (min): 15	

Splits and Phases: 7: Bank & Sunnyside



2033 Sunday Background PM Peak Hour Lansdowne 2.0 Transportation Impact Assessment 2:15 pm 07/15/2024 Existing Signal Timing, 2031 F1 Page 5

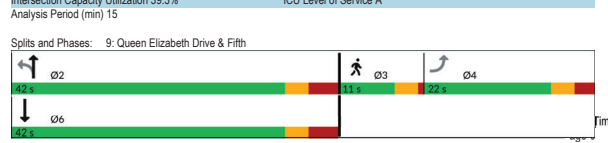
Queues
9: Queen Elizabeth Drive & Fifth

08/06/2024

Lane Group	EBL	NBL	NBT	SBT	Ø3
Lane Configurations	↔	↔	↔	↔	↔
Traffic Volume (vph)	13	207	13	12	
Future Volume (vph)	13	207	13	12	
Lane Group Flow (vph)	162	0	244	42	
Turn Type	Perm	Perm	NA	NA	
Protected Phases	2		6	3	
Permitted Phases	4		2		
Detector Phase	4		2	6	
Switch Phase					
Minimum Initial (s)	10.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	42.0	42.0	42.0	8.0
Total Split (s)	22.0	42.0	42.0	42.0	11.0
Total Split (%)	29.3%	50.0%	50.0%	50.0%	15%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.7	3.8	3.8	3.8	0.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.7		6.8	6.8	
Lead/Lag	Lag				Lead
Lead-Lag Optimize?	Yes				Yes
Recall Mode	Min	None	None	Max	None
Act Effect Green (s)	12.3		35.2	35.2	
Actuated g/C Ratio	0.21		0.59	0.59	
v/c Ratio	0.54		0.35	0.05	
Control Delay (s/veh)	28.4		8.8	6.2	
Queue Delay	0.0		0.0	0.0	
Total Delay (s/veh)	28.4		8.8	6.2	
LOS	C		A	A	
Approach Delay (s/veh)	28.4		8.8	6.2	
Approach LOS	C		A	A	
Queue Length 50th (m)	16.0		11.8	1.7	
Queue Length 95th (m)	31.4		28.3	5.7	
Internal Link Dist (m)	97.2		0.1	5.9	
Turn Bay Length (m)					
Base Capacity (vph)	400		701	897	
Starvation Cap Reductn	0		0	0	
Spillback Cap Reductn	0		0	0	
Storage Cap Reductn	0		0	0	
Reduced v/c Ratio	0.41		0.35	0.05	

Intersection Summary	
Cycle Length: 75	
Actuated Cycle Length: 60	
Natural Cycle: 75	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.54	
Intersection Signal Delay (s/veh): 15.6	Intersection LOS: B
Intersection Capacity Utilization 39.3%	ICU Level of Service A
Analysis Period (min): 15	

Splits and Phases: 9: Queen Elizabeth Drive & Fifth



2033 Sunday Background PM Peak Hour Lansdowne 2.0 Transportation Impact Assessment 2:15 pm 07/15/2024 Existing Signal Timing, 2031 F1 Page 5

HCM 7th AWSC
12: Exhibition & Paul Askin

11/25/2024

Intersection	
Intersection Delay, s/veh	7.9
Intersection LOS	A

Movement	EBL	EBT	WBL	WBR	SBL	SBR
Lane Configurations		↔	↔	↔	↔	↔
Traffic Vol, veh/h	5	148	104	5	5	5
Future Vol, veh/h	5	148	104	5	5	5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	164	116	6	6	6
Number of Lanes	0	1	1	0	1	0

Approach		EB	WB	SB
Opposing Approach	WB	EB		
Opposing Lanes	1	1	0	
Conflicting Approach Left	SB		WB	
Conflicting Lanes Left	1	0	1	
Conflicting Approach Right		SB	EB	
Conflicting Lanes Right	0	1	1	
HCM Control Delay, s/veh	8	7.7	7.4	
HCM LOS	A	A	A	

Lane	EBLn1	WBLn1	SBLn1
Vol Left, %	3%	0%	50%
Vol Thru, %	97%	95%	0%
Vol Right, %	0%	5%	50%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	153	109	10
LT Vol	5	0	5
Through Vol	148	104	0
RT Vol	0	5	5
Lane Flow Rate	170	121	11
Geometry Grp	1	1	1
Degree of Util (X)	0.191	0.136	0.013
Departure Headway (Hd)	4.051	4.053	4.354
Convergence, Y/N	Yes	Yes	Yes
Cap	886	882	827
Service Time	2.08	2.092	2.354
HCM Lane V/C Ratio	0.192	0.137	0.013
HCM Control Delay, s/veh	8	7.7	7.4
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.7	0.5	0

2033 Sunday Background PM Peak Hour Lansdowne 2.0 Transportation Impact Assessment 2:15 pm 07/15/2024 Existing Signal Timing, 2033 Future Page 1

HCM 7th AWSC
13: Paul Askin & Marche

11/25/2024

Intersection	
Intersection Delay, s/veh	7.9
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Vol, veh/h	15	5	5	165	5	5
Future Vol, veh/h	15	5	5	165	5	5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	17	6	6	183	6	6
Number of Lanes	1	0	0	1	1	0

Approach		EB	WB	NB
Opposing Approach	WB	EB		
Opposing Lanes	1	1	0	
Conflicting Approach Left		NB	EB	
Conflicting Lanes Left	0	1	1	
Conflicting Approach Right	NB		WB	
Conflicting Lanes Right	1	0	1	
HCM Control Delay, s/veh	7.1	8	7.2	
HCM LOS	A	A	A	

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	50%	0%	3%
Vol Thru, %	0%	75%	97%
Vol Right, %	50%	25%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	10	20	170
LT Vol	5	0	5
Through Vol	0	15	165
RT Vol	5	5	0
Lane Flow Rate	11	22	189
Geometry Grp	1	1	1
Degree of Util (X)	0.013	0.024	0.209
Departure Headway (Hd)	4.098	3.944	3.976
Convergence, Y/N	Yes	Yes	Yes
Cap	860	904	907
Service Time	2.185	1.985	1.986
HCM Lane V/C Ratio	0.013	0.024	0.208
HCM Control Delay, s/veh	7.2	7.1	8
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0	0.1	0.8

2033 Sunday Background PM Peak Hour Lansdowne 2.0 Transportation Impact Assessment 2:15 pm 07/15/2024 Existing Signal Timing, 2033 Future Page 2

Intersection	
Intersection Delay, s/veh	8.1
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Vol, veh/h	15	5	57	3	128	25
Future Vol, veh/h	15	5	57	3	128	25
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	17	6	63	3	142	26
Number of Lanes	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay, s/veh	7.4	7.9	8.2
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	84%	0%	95%
Vol Thru, %	0%	75%	5%
Vol Right, %	16%	25%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	153	20	60
LT Vol	128	0	57
Through Vol	0	15	3
RT Vol	25	5	0
Lane Flow Rate	170	22	67
Geometry Grp	1	1	1
Degree of Util (X)	0.196	0.026	0.082
Departure Headway (Hd)	4.157	4.245	4.44
Convergence, Y/N	Yes	Yes	Yes
Cap	857	848	795
Service Time	2.213	2.245	2.535
HCM Lane V/C Ratio	0.198	0.026	0.084
HCM Control Delay, s/veh	8.2	7.4	7.9
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.7	0.1	0.3

Intersection	
Intersection Delay, s/veh	10
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔	↔				↔	↔				↔
Traffic Vol, veh/h	70	83	0	0	0	233	101	67	62	0	0	106
Future Vol, veh/h	70	83	0	0	0	233	101	67	62	0	0	106
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	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	76	92	0	0	0	259	112	74	69	0	0	118
Number of Lanes	0	1	0	0	0	1	0	1	0	0	0	1

Approach	EB	WB	NB	SB
Opposing Approach	WB		EB	SB
Opposing Lanes	1		1	1
Conflicting Approach Left	SB		NB	EB
Conflicting Lanes Left	1		1	1
Conflicting Approach Right	NB		SB	WB
Conflicting Lanes Right	1		1	1
HCM Control Delay, s/veh	10.2		9.7	10.9
HCM LOS	B		A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	44%	46%	0%	0%
Vol Thru, %	29%	54%	0%	0%
Vol Right, %	27%	0%	100%	100%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	230	153	233	106
LT Vol	101	70	0	0
Through Vol	67	83	0	0
RT Vol	62	0	233	106
Lane Flow Rate	256	170	259	118
Geometry Grp	1	1	1	1
Degree of Util (X)	0.355	0.253	0.322	0.157
Departure Headway (Hd)	5.113	5.349	4.573	4.799
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	708	675	792	750
Service Time	3.113	3.349	2.573	2.809
HCM Lane V/C Ratio	0.362	0.252	0.327	0.157
HCM Control Delay, s/veh	10.9	10.2	9.7	8.7
HCM Lane LOS	B	B	A	A
HCM 95th-tile Q	1.6	1	1.4	0.6

Intersection	
Int Delay, s/veh	5.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Vol, veh/h	5	156	110	553	503	62
Future Vol, veh/h	5	156	110	553	503	62
Conflicting Peds, #/hr	0	0	178	0	0	107
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	0	0	-
Grade, %	0	-	0	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	6	173	122	614	559	69

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	1323	771	806
Stage 1	771	-	-
Stage 2	552	-	-
Critical Hdwy	6.675	6.275	4.175
Critical Hdwy Stg 1	5.475	-	-
Critical Hdwy Stg 2	5.875	-	-
Follow-up Hdwy	3.5475	3.3475	2.2475
Pot Cap-1 Maneuver	156	393	801
Stage 1	448	-	-
Stage 2	535	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	80	319	650
Mov Cap-2 Maneuver	80	-	-
Stage 1	281	-	-
Stage 2	434	-	-

Approach	EB	NB	SB
HCM Control Delay, s/veh	3.56	0	
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	530	-	319	-	-
HCM Lane V/C Ratio	0.188	-	0.544	-	-
HCM Control Delay (s/veh)	11.8	1.9	29	-	-
HCM Lane LOS	B	A	D	-	-
HCM 95th %tile Q(veh)	0.7	-	3.1	-	-

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Vol, veh/h	2	71	0	637	663	1
Future Vol, veh/h	2	71	0	637	663	1
Conflicting Peds, #/hr	0	0	0	0	0	86
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	0	0	-
Grade, %	0	-	0	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	2	79	0	708	737	1

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	1177	823	0
Stage 1	823	-	-
Stage 2	354	-	-
Critical Hdwy	6.675	6.275	-
Critical Hdwy Stg 1	5.475	-	-
Critical Hdwy Stg 2	5.875	-	-
Follow-up Hdwy	3.5475	3.3475	-
Pot Cap-1 Maneuver	193	366	0
Stage 1	424	-	-
Stage 2	675	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	160	333	-
Mov Cap-2 Maneuver	160	-	-
Stage 1	385	-	-
Stage 2	613	-	-

Approach	EB	NB	SB
HCM Control Delay, s/veh	19.13	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	333	-	-	-
HCM Lane V/C Ratio	-	0.237	-	-	-
HCM Control Delay (s/veh)	-	19.1	-	-	-
HCM Lane LOS	-	C	-	-	-
HCM 95th %tile Q(veh)	-	0.9	-	-	-

Intersection						
Int Delay, s/veh	5.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔			↔	↔	
Traffic Vol, veh/h	88	138	72	131	68	60
Future Vol, veh/h	88	138	72	131	68	60
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	98	153	80	146	76	67

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	414	109	142
Stage 1	109	-	-
Stage 2	306	-	-
Critical Hdwy	6.4	6.2	4.1
Critical Hdwy Stg 1	5.4	-	-
Critical Hdwy Stg 2	5.4	-	-
Follow-up Hdwy	3.5	3.3	2.2
Pot Cap-1 Maneuver	598	950	1453
Stage 1	921	-	-
Stage 2	752	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	562	950	1453
Mov Cap-2 Maneuver	562	-	-
Stage 1	865	-	-
Stage 2	752	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v12.21		2.7	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBL1	SBT	SBR
Capacity (veh/h)	638	-	749	-	-
HCM Lane V/C Ratio	0.055	-	0.335	-	-
HCM Control Delay (s/veh)	7.6	0	12.2	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.2	-	1.5	-	-

Intersection						
Int Delay, s/veh	2.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			↔	↔	↔	↔
Traffic Vol, veh/h	7	163	475	20	0	613
Future Vol, veh/h	7	163	475	20	0	613
Conflicting Peds, #/hr	0	0	0	100	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	15	6	0	0	5
Mvmt Flow	8	181	528	22	0	681

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	979	375	0
Stage 1	639	-	-
Stage 2	341	-	-
Critical Hdwy	6.8	7.2	-
Critical Hdwy Stg 1	5.8	-	-
Critical Hdwy Stg 2	5.8	-	-
Follow-up Hdwy	3.5	3.45	-
Pot Cap-1 Maneuver	251	587	-
Stage 1	493	-	-
Stage 2	698	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	224	525	-
Mov Cap-2 Maneuver	224	-	-
Stage 1	441	-	-
Stage 2	698	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v15.44		0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBL1	SBT
Capacity (veh/h)	-	-	525	-
HCM Lane V/C Ratio	-	-	0.345	-
HCM Control Delay (s/veh)	-	-	15.4	-
HCM Lane LOS	-	-	C	-
HCM 95th %tile Q(veh)	-	-	1.5	-

Intersection						
Int Delay, s/veh	3.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔			↔	↔	
Traffic Vol, veh/h	148	151	5	104	87	5
Future Vol, veh/h	148	151	5	104	87	5
Conflicting Peds, #/hr	0	100	100	0	100	100
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	164	168	6	116	97	6

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	432
Stage 1	-	-	348
Stage 2	-	-	227
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	1127
Stage 1	-	-	715
Stage 2	-	-	811
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1008
Mov Cap-2 Maneuver	-	-	381
Stage 1	-	-	639
Stage 2	-	-	721

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0.39	17.66
HCM LOS			C

Minor Lane/Major Mvmt	NBL1	EBT	EBR	WBL	WBT
Capacity (veh/h)	386	-	-	83	-
HCM Lane V/C Ratio	0.265	-	-	0.006	-
HCM Control Delay (s/veh)	17.7	-	-	8.6	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	1.1	-	-	0	-

Intersection						
Int Delay, s/veh	5.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔	↔		↔	
Traffic Vol, veh/h	5	52	55	77	174	5
Future Vol, veh/h	5	52	55	77	174	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	58	61	86	193	6

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	147	0	0
Stage 1	-	-	173
Stage 2	-	-	104
Critical Hdwy	4.12	-	6.42
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	2.218	-	3.518
Pot Cap-1 Maneuver	1435	-	817
Stage 1	-	-	920
Stage 2	-	-	954
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1435	-	814
Mov Cap-2 Maneuver	-	-	814
Stage 1	-	-	917
Stage 2	-	-	954

Approach	EB	WB	SB
HCM Control Delay, s/v	0.66	0	10.82
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBL1
Capacity (veh/h)	158	-	-	-	817
HCM Lane V/C Ratio	0.004	-	-	-	0.243
HCM Control Delay (s/veh)	7.5	0	-	-	10.8
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	1

2033 Scenario

Sunday Peak Hour

Future Volumes

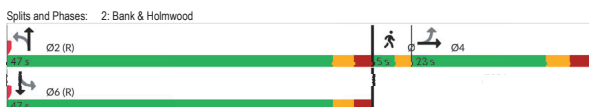
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	54	38	123	67	16	515	23	561
Future Volume (vph)	54	38	123	67	16	515	23	561
Lane Group Flow (vph)	0	131	137	132	0	620	0	696
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases	4	4	8	8	2	2	6	6
Permitted Phases	4		8		2		6	
Minimum Split (s)	26.0	26.0	26.0	26.0	49.0	49.0	49.0	49.0
Total Split (s)	26.0	26.0	26.0	26.0	49.0	49.0	49.0	49.0
Total Split (%)	34.7%	34.7%	34.7%	34.7%	65.3%	65.3%	65.3%	65.3%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag								
Lead-Lag Optimize?								
Act Effct Green (s)	20.5	20.5	20.5		43.5		43.5	
Actuated g/C Ratio	0.27	0.27	0.27		0.58		0.58	
v/c Ratio	0.39	0.47	0.31		0.38		0.44	
Control Delay (s/veh)	22.9	29.0	15.9		10.0		9.7	
Queue Delay	0.0	0.0	0.0		0.0		0.0	
Total Delay (s/veh)	22.9	29.0	15.9		10.0		9.7	
LOS	C	C	B		A		A	
Approach Delay (s/veh)	22.9		22.6		10.0		9.7	
Approach LOS	C		C		A		A	
Queue Length 50th (m)	12.7	16.1	8.7		34.2		25.6	
Queue Length 95th (m)	27.3	32.2	22.0		47.5		36.9	
Internal Link Dist (m)	49.7		112.4		195.6		190.0	
Turn Bay Length (m)			45.0					
Base Capacity (vph)	338	293	424		1623		1598	
Starvation Cap Reductn	0	0	0		0		0	
Spillback Cap Reductn	0	0	0		0		0	
Storage Cap Reductn	0	0	0		0		0	
Reduced v/c Ratio	0.39	0.47	0.31		0.38		0.44	

Intersection Summary	
Cycle Length: 75	
Actuated Cycle Length: 75	
Offset: 42 (56%), Referenced to phase 2:NBT and 6:SBTL, Start of Green	
Natural Cycle: 75	
Control Type: Pretimed	
Maximum v/c Ratio: 0.47	
Intersection Signal Delay (s/veh): 12.8	Intersection LOS: B
Intersection Capacity Utilization 61.2%	ICU Level of Service B
Analysis Period (min) 15	



Lane Group	EBT	NBL	NBT	SBL	SBT	O3
Lane Configurations						
Traffic Volume (vph)	18	32	542	30	589	
Future Volume (vph)	18	32	542	30	589	
Lane Group Flow (vph)	111	0	736	0	727	
Turn Type	NA	Perm	NA	Perm	NA	
Protected Phases	4	2		6	3	
Permitted Phases		2		6		
Detector Phase	4	2	2	6	6	
Switch Phase						
Minimum Initial (s)	4.4	10.0	10.0	4.0	4.0	1.0
Minimum Split (s)	23.0	47.0	47.0	47.0	47.0	5.0
Total Split (s)	23.0	47.0	47.0	47.0	47.0	5.0
Total Split (%)	30.7%	62.7%	62.7%	62.7%	62.7%	7%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	2.0
All-Red Time (s)	2.6	2.2	2.2	2.2	2.2	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.6	5.2	5.2	5.2	5.2	
Lead/Lag		Lag			Lead	
Lead-Lag Optimize?						
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	None
Act Effct Green (s)	11.6		56.1		56.1	
Actuated g/C Ratio	0.15		0.75		0.75	
v/c Ratio	0.55		0.39		0.36	
Control Delay (s/veh)	38.6		2.4		10.3	
Queue Delay	0.0		0.0		0.0	
Total Delay (s/veh)	38.6		2.4		10.3	
LOS	D		A		B	
Approach Delay (s/veh)	38.6		2.4		10.3	
Approach LOS	D		A		B	
Queue Length 50th (m)	14.7		6.1		35.2	
Queue Length 95th (m)	27.3		13.4		64.7	
Internal Link Dist (m)	39.8		31.5		195.6	
Turn Bay Length (m)						
Base Capacity (vph)	304		1881		2013	
Starvation Cap Reductn	0		0		0	
Spillback Cap Reductn	0		0		0	
Storage Cap Reductn	0		0		0	
Reduced v/c Ratio	0.37		0.39		0.36	

Intersection Summary	
Cycle Length: 75	
Actuated Cycle Length: 75	
Offset: 16 (21%), Referenced to phase 2:NBT and 6:SBTL, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.55	
Intersection Signal Delay (s/veh): 8.6	Intersection LOS: A
Intersection Capacity Utilization 69.9%	ICU Level of Service C
Analysis Period (min) 15	



Lane Group	WBL	WBR	NBT	SBL	SBT	O3	O6	O7
Lane Configurations								
Traffic Volume (vph)	149	73	427	216	450			
Future Volume (vph)	149	73	427	216	450			
Lane Group Flow (vph)	166	81	632	240	500			
Turn Type	Perm	Perm	NA	custom	NA			
Protected Phases	8	8	2	1	16	3	6	7
Permitted Phases	8	8		6				
Detector Phase	8	8	2	1	16			
Switch Phase								
Minimum Initial (s)	4.0	4.0	10.0	4.0	1.0	5.1	3.0	
Minimum Split (s)	26.0	26.0	27.0	12.0	5.0	27.0	5.0	
Total Split (s)	26.0	26.0	27.0	12.0	5.0	27.0	5.0	
Total Split (%)	34.7%	34.7%	36.0%	16.0%	7%	36%	7%	
Yellow Time (s)	3.3	3.3	3.0	3.0	2.0	3.0	2.0	
All-Red Time (s)	3.0	3.0	3.9	3.9	0.0	3.9	0.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.3	6.3	6.9	6.9				
Lead/Lag				Lead		Lag		
Lead-Lag Optimize?				Yes		Yes		
Recall Mode	None	None	C-Max	None	None	C-Max	None	
Act Effct Green (s)	14.0	14.0	35.8	40.9	47.8			
Actuated g/C Ratio	0.19	0.19	0.48	0.55	0.84			
v/c Ratio	0.63	0.31	0.48	0.64	0.25			
Control Delay (s/veh)	38.2	9.4	14.3	19.0	4.6			
Queue Delay	0.0	0.0	0.0	0.0	0.0			
Total Delay (s/veh)	38.2	9.4	14.3	19.0	4.6			
LOS	D	A	B	B	A			
Approach Delay (s/veh)	28.8		14.3		9.2			
Approach LOS	C		B		A			
Queue Length 50th (m)	21.8	0.0	27.1	6.9	7.5			
Queue Length 95th (m)	36.6	9.6	47.2	#20.8	12.4			
Internal Link Dist (m)	30.6		33.7	0	44.8			
Turn Bay Length (m)								
Base Capacity (vph)	371	334	1326	374	2004			
Starvation Cap Reductn	0	0	0	0	0			
Spillback Cap Reductn	0	0	0	0	0			
Storage Cap Reductn	0	0	0	0	0			
Reduced v/c Ratio	0.45	0.24	0.48	0.64	0.25			

Intersection Summary	
Cycle Length: 75	
Actuated Cycle Length: 75	
Offset: 15 (20%), Referenced to phase 2:NBT and 6:SBTL, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.64	
Intersection Signal Delay (s/veh): 14.2	Intersection LOS: B
Intersection Capacity Utilization 61.8%	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.	



2033 Sunday Full Build-Out PM Peak Hour Lansdowne 2.0 Transportation Impact Assessment 5:53 pm 07/31/2024 **Signal Timing, 2033!**
Page 4

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	Ø3	Ø6	Ø7
Lane Configurations											
Traffic Volume (vph)	43	33	16	51	19	503	118	533			
Future Volume (vph)	43	33	16	51	19	503	118	533			
Lane Group Flow (vph)	0	118	0	195	0	593	0	816			
Turn Type	Perm	NA	Perm	NA	Perm	NA	custom	NA			
Protected Phases	4	4	8	8	2	2	1	1.6	3	6	7
Permitted Phases	4	4	8	8	2	2	1	1.6			
Detector Phase	4	4	8	8	2	2	1	1.6			
Switch Phase											
Minimum Initial (s)	6.4	6.4	5.3	5.3	17.0	17.0	5.0	1.0	17.0	1.0	
Minimum Split (s)	25.0	25.0	25.0	25.0	43.0	43.0	17.0	5.0	43.0	5.0	
Total Split (s)	25.0	25.0	25.0	25.0	43.0	43.0	17.0	5.0	43.0	5.0	
Total Split (%)	27.8%	27.8%	27.8%	27.8%	47.8%	47.8%	18.9%	6%	48%	6%	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	2.0	3.0	2.0	
All-Red Time (s)	2.6	2.6	2.6	2.6	3.0	3.0	2.9	0.0	3.0	0.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Total Lost Time (s)	5.6	5.6	5.6	5.6	6.0	6.0					
Lead/Lag	Lag	Lag	Lag	Lag				Lead		Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				Yes		Yes	
Recall Mode	None	None	None	None	C-Max	C-Max	None	None	C-Max	None	
Act Effect Green (s)	15.5	15.5	15.5	15.5	43.5	43.5	57.1				
Actuated g/C Ratio	0.17	0.17	0.17	0.17	0.48	0.48	0.63				
v/c Ratio	0.77	0.77	0.72	0.72	0.43	0.55					
Control Delay (s/veh)	64.9	34.8	34.8	34.8	17.7	5.8					
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0					
Total Delay (s/veh)	64.9	34.8	34.8	34.8	17.7	5.8					
LOS	E	C	C	C	B	A					
Approach Delay (s/veh)	64.9	34.8	34.8	34.8	17.7	5.8					
Approach LOS	E	C	C	C	B	A					
Queue Length 50th (m)	19.7	18.4	34.7	34.7	9.6						
Queue Length 95th (m)	34.8	37.5	54.0	54.0	12.4						
Internal Link Dist (m)	75.1	136.0	63.1	79.0							
Turn Bay Length (m)											
Base Capacity (vph)	200	325	1381	1491							
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	0.59	0.60	0.43	0.55							
Intersection Summary											
Cycle Length: 90											
Actuated Cycle Length: 90											
Offset: 23 (26%), Referenced to phase 2:NBT and 6:SBT, Start of Green											
Natural Cycle: 90											
Control Type: Actuated-Coordinated											
Maximum v/c Ratio: 0.77											
Intersection Signal Delay (s/veh): 17.2											
Intersection Capacity Utilization 74.5%											
Analysis Period (min) 15											



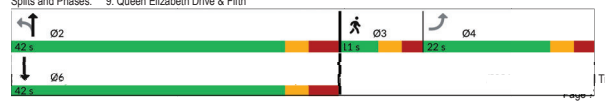
Timing, 2033!

Lane Group	EBL	NBL	NBT	SBT	Ø3
Lane Configurations					
Traffic Volume (vph)	54	17	629	682	
Future Volume (vph)	54	17	629	682	
Lane Group Flow (vph)	83	0	718	821	
Turn Type	Prot	Perm	NA	NA	
Protected Phases	4	2	6	3	
Permitted Phases	4	2	6		
Detector Phase	4	2	2	6	
Switch Phase					
Minimum Initial (s)	10.0	30.0	30.0	30.0	1.0
Minimum Split (s)	22.0	63.0	63.0	63.0	5.0
Total Split (s)	22.0	63.0	63.0	63.0	5.0
Total Split (%)	24.4%	70.0%	70.0%	70.0%	6%
Yellow Time (s)	3.3	3.0	3.0	3.0	2.0
All-Red Time (s)	2.2	2.2	2.2	2.2	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		
Total Lost Time (s)	5.5	5.2	5.2		
Lead/Lag	Lag				Lead
Lead-Lag Optimize?					
Recall Mode	None	C-Max	C-Max	C-Max	None
Act Effect Green (s)	11.1	72.4	72.4		
Actuated g/C Ratio	0.12	0.80	0.80		
v/c Ratio	0.43	0.31	0.34		
Control Delay (s/veh)	35.9	3.0	3.7		
Queue Delay	0.0	0.0	0.0		
Total Delay (s/veh)	35.9	3.0	3.7		
LOS	D	A	A		
Approach Delay (s/veh)	35.9	3.0	3.7		
Approach LOS	D	A	A		
Queue Length 50th (m)	10.5	12.4	17.9		
Queue Length 95th (m)	23.2	20.4	30.8		
Internal Link Dist (m)	76.7	28.1	10.1		
Turn Bay Length (m)					
Base Capacity (vph)	276	2329	2403		
Starvation Cap Reductn	0	0	0		
Spillback Cap Reductn	0	0	0		
Storage Cap Reductn	0	0	0		
Reduced v/c Ratio	0.30	0.31	0.34		
Intersection Summary					
Cycle Length: 90					
Actuated Cycle Length: 90					
Offset: 87 (97%), Referenced to phase 2:NBT and 6:SBT, Start of Green					
Natural Cycle: 90					
Control Type: Actuated-Coordinated					
Maximum v/c Ratio: 0.43					
Intersection Signal Delay (s/veh): 5.1					
Intersection Capacity Utilization 51.8%					
Analysis Period (min) 15					



Timing, 2033!

Lane Group	EBL	NBL	NBT	SBT	Ø3
Lane Configurations					
Traffic Volume (vph)	13	220	13	12	
Future Volume (vph)	13	220	13	12	
Lane Group Flow (vph)	162	0	258	42	
Turn Type	Perm	Perm	NA	NA	
Protected Phases	4	2	6	3	
Permitted Phases	4	2	6		
Detector Phase	4	2	2	6	
Switch Phase					
Minimum Initial (s)	10.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	42.0	42.0	42.0	9.7
Total Split (s)	22.0	42.0	42.0	42.0	11.0
Total Split (%)	29.3%	50.0%	50.0%	50.0%	15%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.7	3.8	3.8	3.8	2.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.7	6.8	6.8		
Lead/Lag	Lag				Lead
Lead-Lag Optimize?	Yes				Yes
Recall Mode	Min	Max	Max	Max	None
Act Effect Green (s)	12.3	35.2	35.2		
Actuated g/C Ratio	0.21	0.59	0.59		
v/c Ratio	0.54	0.37	0.05		
Control Delay (s/veh)	28.4	9.0	6.2		
Queue Delay	0.0	0.0	0.0		
Total Delay (s/veh)	28.4	9.0	6.2		
LOS	C	A	A		
Approach Delay (s/veh)	28.4	9.0	6.2		
Approach LOS	C	A	A		
Queue Length 50th (m)	16.0	12.7	1.7		
Queue Length 95th (m)	31.4	30.1	5.7		
Internal Link Dist (m)	57.2	0.1	5.9		
Turn Bay Length (m)					
Base Capacity (vph)	400	700	897		
Starvation Cap Reductn	0	0	0		
Spillback Cap Reductn	0	0	0		
Storage Cap Reductn	0	0	0		
Reduced v/c Ratio	0.41	0.37	0.05		
Intersection Summary					
Cycle Length: 75					
Actuated Cycle Length: 60					
Natural Cycle: 75					
Control Type: Semi Act-Uncoord					
Maximum v/c Ratio: 0.54					
Intersection Signal Delay (s/veh): 15.6					
Intersection Capacity Utilization 40.1%					
Analysis Period (min) 15					



Timing, 2033!

Intersection						
Intersection Delay, s/veh	8					
Intersection LOS	A					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	↕
Traffic Vol, veh/h	15	157	105	5	5	5
Future Vol, veh/h	15	157	105	5	5	5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	17	174	117	6	6	6
Number of Lanes	0	1	1	0	1	0
Approach	EB	WB	WB	SB		
Opposing Approach	WB	EB				
Opposing Lanes	1	1		0		
Conflicting Approach Left	SB	WB				
Conflicting Lanes Left	1	0		1		
Conflicting Approach Right		SB	EB			
Conflicting Lanes Right	0	1	1		1	
HCM Control Delay, s/veh	8.2	7.8		7.5		
HCM LOS	A	A		A		

Lane	EBLn1	WBLn1	SBLn1
Vol Left, %	9%	0%	50%
Vol Thru, %	91%	95%	0%
Vol Right, %	0%	5%	50%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	172	110	10
LT Vol	15	0	5
Through Vol	157	105	0
RT Vol	0	5	5
Lane Flow Rate	191	122	11
Geometry Grp	1	1	1
Degree of Util (X)	0.216	0.138	0.014
Departure Headway (Hd)	4.062	4.069	4.404
Convergence, Y/N	Yes	Yes	Yes
Cap	883	876	818
Service Time	2.095	2.115	2.404
HCM Lane V/C Ratio	0.216	0.139	0.013
HCM Control Delay, s/veh	8.2	7.8	7.5
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.8	0.5	0

Intersection						
Intersection Delay, s/veh	8					
Intersection LOS	A					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↕			↕	↕	↕
Traffic Vol, veh/h	18	5	5	175	12	8
Future Vol, veh/h	18	5	5	175	12	8
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	20	6	6	194	13	9
Number of Lanes	1	0	0	1	1	0
Approach	EB	WB	WB	NB		
Opposing Approach	WB	EB		NB		
Opposing Lanes	1	1		0		
Conflicting Approach Left		NB		EB		
Conflicting Lanes Left	0	1		1		
Conflicting Approach Right	NB	WB				
Conflicting Lanes Right	1	0		1		
HCM Control Delay, s/veh	7.2	8.2		7.4		
HCM LOS	A	A		A		

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	60%	0%	3%
Vol Thru, %	0%	78%	97%
Vol Right, %	40%	22%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	20	23	180
LT Vol	12	0	5
Through Vol	0	18	175
RT Vol	8	5	0
Lane Flow Rate	22	26	200
Geometry Grp	1	1	1
Degree of Util (X)	0.026	0.028	0.222
Departure Headway (Hd)	4.204	3.992	3.998
Convergence, Y/N	Yes	Yes	Yes
Cap	838	891	900
Service Time	2.298	2.042	2.014
HCM Lane V/C Ratio	0.026	0.029	0.222
HCM Control Delay, s/veh	7.4	7.2	8.2
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.1	0.1	0.8

Intersection						
Intersection Delay, s/veh	8.1					
Intersection LOS	A					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↕			↕	↕	↕
Traffic Vol, veh/h	21	5	58	6	134	28
Future Vol, veh/h	21	5	58	6	134	28
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	23	6	64	7	149	31
Number of Lanes	1	0	0	1	1	0
Approach	EB	WB	WB	NB		
Opposing Approach	WB	EB		NB		
Opposing Lanes	1	1		0		
Conflicting Approach Left		NB		EB		
Conflicting Lanes Left	0	1		1		
Conflicting Approach Right	NB	WB				
Conflicting Lanes Right	1	0		1		
HCM Control Delay, s/veh	7.5	8		8.3		
HCM LOS	A	A		A		

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	83%	0%	91%
Vol Thru, %	0%	81%	9%
Vol Right, %	17%	19%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	162	26	64
LT Vol	134	0	58
Through Vol	0	21	6
RT Vol	28	5	0
Lane Flow Rate	180	29	71
Geometry Grp	1	1	1
Degree of Util (X)	0.208	0.035	0.09
Departure Headway (Hd)	4.169	4.31	4.558
Convergence, Y/N	Yes	Yes	Yes
Cap	851	835	791
Service Time	2.238	2.311	2.559
HCM Lane V/C Ratio	0.212	0.035	0.09
HCM Control Delay, s/veh	8.3	7.5	8
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.8	0.1	0.3

Intersection												
Intersection Delay, s/veh	10.4											
Intersection LOS	B											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕					↕	↕	↕			↕
Traffic Vol, veh/h	70	83	0	0	0	246	114	67	62	0	0	106
Future Vol, veh/h	70	83	0	0	0	246	114	67	62	0	0	106
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	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	78	92	0	0	0	273	127	74	69	0	0	118
Number of Lanes	0	1	0	0	0	1	0	1	0	0	0	1
Approach	EB	WB	WB	NB	NB	SB						
Opposing Approach	WB	EB		SB		NB						
Opposing Lanes	1	1		1		1						
Conflicting Approach Left	SB	NB		EB		WB						
Conflicting Lanes Left	1	1		1		1						
Conflicting Approach Right	NB	SB		WB		EB						
Conflicting Lanes Right	1	1		1		1						
HCM Control Delay, s/veh	10.3	10.2		11.4		8.8						
HCM LOS	B	B		B		A						

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	47%	46%	0%	0%
Vol Thru, %	28%	54%	0%	0%
Vol Right, %	26%	0%	100%	100%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	243	153	246	106
LT Vol	114	70	0	0
Through Vol	67	83	0	0
RT Vol	62	0	246	106
Lane Flow Rate	270	170	273	118
Geometry Grp	1	1	1	1
Degree of Util (X)	0.387	0.256	0.353	0.16
Departure Headway (Hd)	5.161	5.418	4.646	4.876
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	697	663	779	734
Service Time	3.195	3.456	2.646	2.915
HCM Lane V/C Ratio	0.387	0.256	0.35	0.161
HCM Control Delay, s/veh	11.4	10.3	10.2	8.8
HCM Lane LOS	B	B	B	A
HCM 95th-tile Q	1.8	1	1.6	0.6

Intersection
Int Delay, s/veh 5.2
Movement EBL EBR NBL NBT SBT SBR
Lane Configurations
Traffic Vol, veh/h
Future Vol, veh/h
Conflicting Peds, #/hr
Sign Control
RT Channelized
Storage Length
Veh in Median Storage, #
Grade, %
Peak Hour Factor
Heavy Vehicles, %
Mvmt Flow

Major/Minor
Minor2 Major1 Major2
Conflicting Flow All
Stage 1
Stage 2
Critical Hdwy
Critical Hdwy Stg 1
Critical Hdwy Stg 2
Follow-up Hdwy
Pot Cap-1 Maneuver
Stage 1
Stage 2
Platoon blocked, %
Mov Cap-1 Maneuver
Mov Cap-2 Maneuver
Stage 1
Stage 2

Approach EB NB SB
HCM Control Delay, s/49.71
HCM LOS D

Minor Lane/Major Mvmt NBL NBTEBLn1 SBT SBR
Capacity (veh/h)
HCM Lane V/C Ratio
HCM Control Delay (s/veh)
HCM Lane LOS
HCM 95th %tile Q(veh)

Intersection
Int Delay, s/veh 1
Movement EBL EBR NBL NBT SBT SBR
Lane Configurations
Traffic Vol, veh/h
Future Vol, veh/h
Conflicting Peds, #/hr
Sign Control
RT Channelized
Storage Length
Veh in Median Storage, #
Grade, %
Peak Hour Factor
Heavy Vehicles, %
Mvmt Flow

Major/Minor
Minor2 Major1 Major2
Conflicting Flow All
Stage 1
Stage 2
Critical Hdwy
Critical Hdwy Stg 1
Critical Hdwy Stg 2
Follow-up Hdwy
Pot Cap-1 Maneuver
Stage 1
Stage 2
Platoon blocked, %
Mov Cap-1 Maneuver
Mov Cap-2 Maneuver
Stage 1
Stage 2

Approach EB NB SB
HCM Control Delay, s/49.77
HCM LOS C

Minor Lane/Major Mvmt NBTEBLn1 SBT SBR
Capacity (veh/h)
HCM Lane V/C Ratio
HCM Control Delay (s/veh)
HCM Lane LOS
HCM 95th %tile Q(veh)

Intersection
Int Delay, s/veh 6.6
Movement EBL EBR NBL NBT SBT SBR
Lane Configurations
Traffic Vol, veh/h
Future Vol, veh/h
Conflicting Peds, #/hr
Sign Control
RT Channelized
Storage Length
Veh in Median Storage, #
Grade, %
Peak Hour Factor
Heavy Vehicles, %
Mvmt Flow

Major/Minor
Minor2 Major1 Major2
Conflicting Flow All
Stage 1
Stage 2
Critical Hdwy
Critical Hdwy Stg 1
Critical Hdwy Stg 2
Follow-up Hdwy
Pot Cap-1 Maneuver
Stage 1
Stage 2
Platoon blocked, %
Mov Cap-1 Maneuver
Mov Cap-2 Maneuver
Stage 1
Stage 2

Approach EB NB SB
HCM Control Delay, s/43.06
HCM LOS B

Minor Lane/Major Mvmt NBL NBTEBLn1 SBT SBR
Capacity (veh/h)
HCM Lane V/C Ratio
HCM Control Delay (s/veh)
HCM Lane LOS
HCM 95th %tile Q(veh)

Intersection
Int Delay, s/veh 2.3
Movement WBL WBR NBT NBR SBL SBT
Lane Configurations
Traffic Vol, veh/h
Future Vol, veh/h
Conflicting Peds, #/hr
Sign Control
RT Channelized
Storage Length
Veh in Median Storage, #
Grade, %
Peak Hour Factor
Heavy Vehicles, %
Mvmt Flow

Major/Minor
Minor1 Major1 Major2
Conflicting Flow All
Stage 1
Stage 2
Critical Hdwy
Critical Hdwy Stg 1
Critical Hdwy Stg 2
Follow-up Hdwy
Pot Cap-1 Maneuver
Stage 1
Stage 2
Platoon blocked, %
Mov Cap-1 Maneuver
Mov Cap-2 Maneuver
Stage 1
Stage 2

Approach WB NB SB
HCM Control Delay, s/46.27
HCM LOS C

Minor Lane/Major Mvmt NBT NBRWBLn1 SBT
Capacity (veh/h)
HCM Lane V/C Ratio
HCM Control Delay (s/veh)
HCM Lane LOS
HCM 95th %tile Q(veh)

Intersection						
Int Delay, s/veh	4.5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	159	198	5	105	116	12
Future Vol, veh/h	159	198	5	105	116	12
Conflicting Peds, #/hr	0	100	100	0	100	100
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	- None	- None	- None	- None	- None	- None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	0	0	-	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	177	220	6	117	129	13

Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	497	0	614	487
Stage 1	-	-	-	-	387	-
Stage 2	-	-	-	-	228	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1067	-	455	581
Stage 1	-	-	-	-	687	-
Stage 2	-	-	-	-	810	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	954	-	362	464
Mov Cap-2 Maneuver	-	-	-	-	362	-
Stage 1	-	-	-	-	614	-
Stage 2	-	-	-	-	720	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0.4	20.73
HCM LOS	C		

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	369	-	-	82	-
HCM Lane V/C Ratio	0.385	-	-	0.006	-
HCM Control Delay (s/veh)	20.7	-	-	8.8	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	1.8	-	-	0	-

Intersection						
Int Delay, s/veh	5.5					
Movement	EBL	EBT	WBL	WBR	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	5	61	57	88	190	7
Future Vol, veh/h	5	61	57	88	190	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	- None	- None	- None	- None	- None	- None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	0	0	0	0	-
Grade, %	-	0	0	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	68	63	98	211	8

Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	161	0	-	0	191	112
Stage 1	-	-	-	-	112	-
Stage 2	-	-	-	-	79	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1418	-	-	-	798	941
Stage 1	-	-	-	-	912	-
Stage 2	-	-	-	-	944	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	1418	-	-	-	795	941
Mov Cap-2 Maneuver	-	-	-	-	795	-
Stage 1	-	-	-	-	909	-
Stage 2	-	-	-	-	944	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0.57	0	11.2
HCM LOS	B		

Minor Lane/Major Mvmt	EBL	EBT	WBL	WBR	SBLn1
Capacity (veh/h)	136	-	-	-	799
HCM Lane V/C Ratio	0.004	-	-	-	0.274
HCM Control Delay (s/veh)	7.5	0	-	-	11.2
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	1.1

2033 Scenario

Minor Event Ingress

Baseline Conditions

Queues

1: Bank & Fifth

11/26/2024

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	53	59	69	48	17	501	26	578
Future Volume (vph)	53	59	69	48	17	501	26	578
Lane Group Flow (vph)	0	163	77	121	0	609	0	698
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases	4 8 8 2 2 6							
Permitted Phases	4 8 8 2 2 6							
Detector Phase	4 4 8 8 2 2 6 6							
Switch Phase								
Minimum Initial (s)	4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0							
Minimum Split (s)	26.0 26.0 26.0 26.0 49.0 49.0 49.0 49.0							
Total Split (s)	26.0 26.0 26.0 26.0 49.0 49.0 49.0 49.0							
Total Split (%)	34.7% 34.7% 34.7% 34.7% 65.3% 65.3% 65.3% 65.3%							
Yellow Time (s)	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0							
All-Red Time (s)	2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5							
Lost Time Adjust (s)	0.0 0.0 0.0 0.0 0.0 0.0							
Total Lost Time (s)	5.5 5.5 5.5 5.5 5.5 5.5							
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None None None None C-Max C-Max C-Max							
Act Effect Green (s)	13.7 13.7 13.7 13.7 13.7 13.7 13.7 13.7							
Actuated g/C Ratio	0.18 0.18 0.18 0.18 0.67 0.67 0.67 0.67							
v/c Ratio	0.67 0.44 0.39 0.32 0.32 0.37							
Control Delay (s/veh)	37.4 33.2 16.1 10.8 6.8							
Queue Delay	0.0 0.0 0.0 0.0 0.0							
Total Delay (s/veh)	37.4 33.2 16.1 10.8 6.8							
LOS	D C B B A							
Approach Delay (s/veh)	37.4 33.2 16.1 10.8 6.8							
Approach LOS	D C B B A							
Queue Length 50th (m)	18.9 9.8 6.4 19.1 19.0							
Queue Length 95th (m)	33.9 19.6 17.8 54.1 36.3							
Internal Link Dist (m)	49.7 45.0 112.4 195.6 190.0							
Turn Bay Length (m)								
Base Capacity (vph)	356 265 426 1902 1896							
Starvation Cap Reductn	0 0 0 0 0							
Spillback Cap Reductn	0 0 0 0 0							
Storage Cap Reductn	0 0 0 0 0							
Reduced v/c Ratio	0.46 0.29 0.28 0.32 0.37							

Intersection Summary	
Cycle Length: 75	
Actuated Cycle Length: 75	
Offset: 47 (63%), Referenced to phase 2:NBL and 6:SBL, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.67	
Intersection Signal Delay (s/veh): 13.1	Intersection LOS: B
Intersection Capacity Utilization 63.8%	ICU Level of Service B
Analysis Period (min) 15	

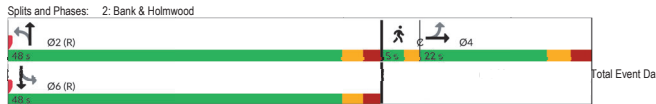
Splits and Phases: 1: Bank & Fifth

Queues
2: Bank & Holmwood

11/26/2024

Table with 7 columns: Lane Group, EBT, NBL, NBT, SBL, SBT, Ø3. Rows include Lane Configurations, Traffic Volume (vph), Future Volume (vph), Lane Group Flow (vph), Turn Type, Protected Phases, Permitted Phases, Detector Phase, Switch Phase, Minimum Initial (s), Minimum Split (s), Total Split (s), Total Split (%), Yellow Time (s), All-Red Time (s), Lost Time Adjust (s), Total Lost Time (s), Lead/Lag, Lead-Lag Optimize?, Recall Mode, Act Effct Green (s), Actuated g/C Ratio, v/c Ratio, Control Delay (s/veh), Queue Delay, Total Delay (s/veh), LOS, Approach Delay (s/veh), Approach LOS, Queue Length 50th (m), Queue Length 95th (m), Internal Link Dist (m), Turn Bay Length (m), Base Capacity (vph), Starvation Cap Reductn, Spillback Cap Reductn, Storage Cap Reductn, Reduced v/c Ratio.

Intersection Summary
Cycle Length: 75
Actuated Cycle Length: 75
Offset: 74 (99%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.55
Intersection Signal Delay (s/veh): 6.6 Intersection LOS: A
Intersection Capacity Utilization 67.8% ICU Level of Service C
Analysis Period (min) 15



Queues
6: Bank & Aylmer

11/26/2024

Table with 7 columns: Lane Group, EBL, NBL, NBT, SBL, SBT, Ø3. Rows include Lane Configurations, Traffic Volume (vph), Future Volume (vph), Lane Group Flow (vph), Turn Type, Protected Phases, Permitted Phases, Detector Phase, Switch Phase, Minimum Initial (s), Minimum Split (s), Total Split (s), Total Split (%), Yellow Time (s), All-Red Time (s), Lost Time Adjust (s), Total Lost Time (s), Lead/Lag, Lead-Lag Optimize?, Recall Mode, Act Effct Green (s), Actuated g/C Ratio, v/c Ratio, Control Delay (s/veh), Queue Delay, Total Delay (s/veh), LOS, Approach Delay (s/veh), Approach LOS, Queue Length 50th (m), Queue Length 95th (m), Internal Link Dist (m), Turn Bay Length (m), Base Capacity (vph), Starvation Cap Reductn, Spillback Cap Reductn, Storage Cap Reductn, Reduced v/c Ratio.

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 87 (97%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.40
Intersection Signal Delay (s/veh): 7.8 Intersection LOS: A
Intersection Capacity Utilization 55.4% ICU Level of Service B
Analysis Period (min) 15

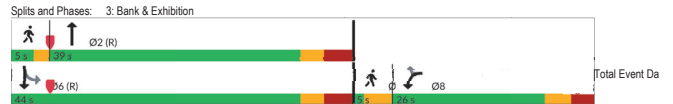


Queues
3: Bank & Exhibition

11/26/2024

Table with 9 columns: Lane Group, WBL, WBR, NBT, SBL, SBT, Ø1, Ø7. Rows include Lane Configurations, Traffic Volume (vph), Future Volume (vph), Lane Group Flow (vph), Turn Type, Protected Phases, Permitted Phases, Detector Phase, Switch Phase, Minimum Initial (s), Minimum Split (s), Total Split (s), Total Split (%), Yellow Time (s), All-Red Time (s), Lost Time Adjust (s), Total Lost Time (s), Lead/Lag, Lead-Lag Optimize?, Recall Mode, Act Effct Green (s), Actuated g/C Ratio, v/c Ratio, Control Delay (s/veh), Queue Delay, Total Delay (s/veh), LOS, Approach Delay (s/veh), Approach LOS, Queue Length 50th (m), Queue Length 95th (m), Internal Link Dist (m), Turn Bay Length (m), Base Capacity (vph), Starvation Cap Reductn, Spillback Cap Reductn, Storage Cap Reductn, Reduced v/c Ratio.

Intersection Summary
Cycle Length: 75
Actuated Cycle Length: 75
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.50
Intersection Signal Delay (s/veh): 7.6 Intersection LOS: A
Intersection Capacity Utilization 63.3% ICU Level of Service B
Analysis Period (min) 15



Queues
7: Bank & Sunnyside

11/26/2024

Table with 11 columns: Lane Group, EBL, EBT, WBL, WBT, NBL, NBT, SBL, SBT, Ø3, Ø7. Rows include Lane Configurations, Traffic Volume (vph), Future Volume (vph), Lane Group Flow (vph), Turn Type, Protected Phases, Permitted Phases, Detector Phase, Switch Phase, Minimum Initial (s), Minimum Split (s), Total Split (s), Total Split (%), Yellow Time (s), All-Red Time (s), Lost Time Adjust (s), Total Lost Time (s), Lead/Lag, Lead-Lag Optimize?, Recall Mode, Act Effct Green (s), Actuated g/C Ratio, v/c Ratio, Control Delay (s/veh), Queue Delay, Total Delay (s/veh), LOS, Approach Delay (s/veh), Approach LOS, Queue Length 50th (m), Queue Length 95th (m), Internal Link Dist (m), Turn Bay Length (m), Base Capacity (vph), Starvation Cap Reductn, Spillback Cap Reductn, Storage Cap Reductn, Reduced v/c Ratio.

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 17 (19%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.76
Intersection Signal Delay (s/veh): 15.5 Intersection LOS: B
Intersection Capacity Utilization 82.1% 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.

Queues
7: Bank & Sunnyside

11/26/2024

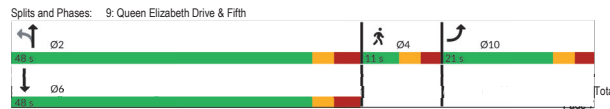


Queues
9: Queen Elizabeth Drive & Fifth

11/26/2024

Lane Group	EBL	NBL	NBT	SBT	Ø4
Lane Configurations	←	←	←	←	←
Traffic Volume (vph)	52	54	224	534	
Future Volume (vph)	52	54	224	534	
Lane Group Flow (vph)	100	0	309	692	
Turn Type	Prot	Perm	NA	NA	
Protected Phases	10	2	6	4	
Permitted Phases		2			
Detector Phase	10	2	2	6	
Switch Phase					
Minimum Initial (s)	10.0	4.0	4.0	4.0	4.0
Minimum Split (s)	21.0	48.0	48.0	48.0	11.0
Total Split (s)	21.0	48.0	48.0	48.0	11.0
Total Split (%)	26.3%	60.0%	60.0%	60.0%	14%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.7	3.8	3.8	3.8	2.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.7				6.8
Lead-Lag					
Lead-Lag Optimize?					
Recall Mode	Min	None	None	Max	None
Act Effct Green (s)	10.8			41.2	41.2
Actuated g/C Ratio	0.17		0.64	0.64	
v/c Ratio	0.39		0.36	0.65	
Control Delay (s/veh)	28.8		7.1	11.2	
Queue Delay (s/veh)	0.0		0.0	0.0	
Total Delay (s/veh)	28.8		7.1	11.2	
LOS	C		A	B	
Approach Delay (s/veh)	28.8		7.1	11.2	
Approach LOS	C		A	B	
Queue Length 50th (m)	10.8		14.0	41.6	
Queue Length 95th (m)	23.0		29.7	83.6	
Internal Link Dist (m)	57.2		0.1	5.9	
Turn Bay Length (m)					
Base Capacity (vph)	367		868	1057	
Starvation Cap Reductn	0		0	0	
Spillback Cap Reductn	0		0	0	
Storage Cap Reductn	0		0	0	
Reduced v/c Ratio	0.27		0.36	0.65	

Intersection Summary	
Cycle Length:	80
Actuated Cycle Length:	64.5
Natural Cycle:	80
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.65
Intersection Signal Delay (s/veh):	11.7
Intersection LOS:	B
Intersection Capacity Utilization:	75.4%
ICU Level of Service:	D
Analysis Period (min):	15



HCM 7th AWSC
12: Exhibition & Paul Askin

11/26/2024

Intersection						
Intersection Delay, s/veh	8.8					
Intersection LOS	A					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	←	←	←	←	←	←
Traffic Vol, veh/h	227	0	0	0	0	122
Future Vol, veh/h	227	0	0	0	0	122
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	252	0	0	0	0	136
Number of Lanes	0	1	1	0	1	0
Approach	EB	WB	SB			
Opposing Approach	WB	EB				
Opposing Lanes	1	1	0			
Conflicting Approach Left	SB		WB			
Conflicting Lanes Left	1	0	1			
Conflicting Approach Right		SB	EB			
Conflicting Lanes Right	0	1	1			
HCM Control Delay, s/veh	9.4	0	7.6			
HCM LOS	A	-	A			

Lane	EBLn1	WBLn1	SBLn1
Vol Left, %	100%	0%	0%
Vol Thru, %	0%	100%	0%
Vol Right, %	0%	0%	100%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	227	0	122
LT Vol	227	0	0
Through Vol	0	0	0
RT Vol	0	0	122
Lane Flow Rate	252	0	136
Geometry Grp	1	1	1
Degree of Util (X)	0.306	0	0.148
Departure Headway (Hd)	4.37	4.487	3.932
Convergence, Y/N	Yes	Yes	Yes
Cap	817	0	918
Service Time	2.426	2.5	1.932
HCM Lane V/C Ratio	0.308	0	0.148
HCM Control Delay, s/veh	9.4	7.5	7.6
HCM Lane LOS	A	N	A
HCM 95th-ile Q	1.3	0	0.5

HCM 7th AWSC
13: Paul Askin & Marche

11/26/2024

Intersection						
Intersection Delay, s/veh	8.9					
Intersection LOS	A					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	←	←	←	←	←	←
Traffic Vol, veh/h	11	11	81	81	114	114
Future Vol, veh/h	11	11	81	81	114	114
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	12	90	90	127	127
Number of Lanes	1	0	0	1	1	0
Approach	EB	WB	NB			
Opposing Approach	WB	EB	NB			
Opposing Lanes	1	1	0			
Conflicting Approach Left		NB	EB			
Conflicting Lanes Left	0	1	1			
Conflicting Approach Right	NB		WB			
Conflicting Lanes Right	1	0	1			
HCM Control Delay, s/veh	7.6	9	9			
HCM LOS	A	A	A			

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	50%	0%	50%
Vol Thru, %	0%	50%	50%
Vol Right, %	50%	50%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	228	22	162
LT Vol	114	0	81
Through Vol	0	11	81
RT Vol	114	11	0
Lane Flow Rate	253	24	180
Geometry Grp	1	1	1
Degree of Util (X)	0.297	0.03	0.232
Departure Headway (Hd)	4.225	4.415	4.631
Convergence, Y/N	Yes	Yes	Yes
Cap	854	811	778
Service Time	2.24	2.44	2.649
HCM Lane V/C Ratio	0.296	0.03	0.231
HCM Control Delay, s/veh	9	7.6	9
HCM Lane LOS	A	A	A
HCM 95th-ile Q	1.2	0.1	0.9

Intersection						
Intersection Delay, s/veh	7.8					
Intersection LOS	A					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	32	0	0	161	0	0
Future Vol, veh/h	32	0	0	161	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	36	0	0	179	0	0
Number of Lanes	1	0	0	1	1	0
Approach	EB		WB		NB	
Opposing Approach	WB		EB		NB	
Opposing Lanes	1		1		0	
Conflicting Approach Left	0		NB		EB	
Conflicting Lanes Left	0		1		1	
Conflicting Approach Right	NB		0		WB	
Conflicting Lanes Right	1		0		1	
HCM Control Delay, s/veh	7.3		7.9		0	
HCM LOS	A		A		-	

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	0%	0%	0%
Vol Thru, %	100%	100%	100%
Vol Right, %	0%	0%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	0	32	161
LT Vol	0	0	0
Through Vol	0	32	161
RT Vol	0	0	0
Lane Flow Rate	0	36	179
Geometry Grp	1	1	1
Degree of Util (X)	0	0.04	0.197
Departure Headway (Hd)	4.304	4.066	3.961
Convergence, Y/N	Yes	Yes	Yes
Cap	0	879	911
Service Time	2.392	2.098	1.967
HCM Lane V/C Ratio	0	0.041	0.196
HCM Control Delay, s/veh	7.4	7.3	7.9
HCM Lane LOS	N	A	A
HCM 95th-tile Q	0	0.1	0.7

Intersection						
Int Delay, s/veh	13.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	275	147	658	486	56
Future Vol, veh/h	5	275	147	658	486	56
Conflicting Peds, #/hr	0	0	178	0	0	107
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	6	306	163	731	540	62

Major/Minor	Minor2	Major1	Major2	
Conflicting Flow All	1441	749	780	
Stage 1	749	-	-	
Stage 2	692	-	-	
Critical Hdwy	6.645	6.245	4.145	
Critical Hdwy Stg 1	5.445	-	-	
Critical Hdwy Stg 2	5.945	-	-	
Follow-up Hdwy	3.52853	3.22852	2.2285	
Pot Cap-1 Maneuver	133	409	829	
Stage 1	464	-	-	
Stage 2	457	-	-	
Platoon blocked, %	-	-	-	
Mov Cap-1 Maneuver	61	332	673	
Mov Cap-2 Maneuver	61	-	-	
Stage 1	262	-	-	
Stage 2	371	-	-	
Approach	EB	NB	SB	
HCM Control Delay, s/veh	67.47			
HCM LOS	F			
Minor Lane/Major Mvmt	NBL	NBTEBLn1	SBT	SBR
Capacity (veh/h)	537	-	332	-
HCM Lane V/C Ratio	0.243	-	0.921	-
HCM Control Delay (s/veh)	12.1	2.5	67.5	-
HCM Lane LOS	B	A	F	-
HCM 95th-tile Q(veh)	0.9	-	9.2	-

Intersection												
Intersection Delay, s/veh	8.4											
Intersection LOS	A											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	62	53	0	0	0	143	61	43	37	0	0	85
Future Vol, veh/h	62	53	0	0	0	143	61	43	37	0	0	85
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	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	69	59	0	0	0	159	68	48	41	0	0	94
Number of Lanes	0	1	0	0	0	1	0	1	0	0	0	1
Approach	EB		WB			NB		SB				
Opposing Approach	WB		EB			SB		NB				
Opposing Lanes	1		1			1		1				
Conflicting Approach Left	SB		NB			EB		WB				
Conflicting Lanes Left	1		1			1		1				
Conflicting Approach Right	NB		SB			WB		EB				
Conflicting Lanes Right	1		1			1		1				
HCM Control Delay, s/veh	8.8		8.8			8.8		7.7				
HCM LOS	A		A			A		A				

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	43%	54%	0%	0%
Vol Thru, %	30%	46%	0%	0%
Vol Right, %	26%	0%	100%	100%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	141	115	143	85
LT Vol	61	82	0	0
Through Vol	43	53	0	0
RT Vol	37	0	143	85
Lane Flow Rate	157	128	159	94
Geometry Grp	1	1	1	1
Degree of Util (X)	0.2	0.17	0.179	0.109
Departure Headway (Hd)	4.603	4.779	4.058	4.159
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	779	750	883	859
Service Time	2.636	2.81	2.089	2.195
HCM Lane V/C Ratio	0.202	0.171	0.18	0.109
HCM Control Delay, s/veh	8.8	8.8	8	7.7
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.7	0.6	0.6	0.4

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	4	38	0	789	769	0
Future Vol, veh/h	4	38	0	789	769	0
Conflicting Peds, #/hr	0	0	0	0	0	86
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	4	42	0	877	854	0

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	1293	854	0
Stage 1	854	-	-
Stage 2	438	-	-
Critical Hdwy	6.645	6.245	-
Critical Hdwy Stg 1	5.445	-	-
Critical Hdwy Stg 2	5.945	-	-
Follow-up Hdwy	3.52853	3.22852	-
Pot Cap-1 Maneuver	166	355	0
Stage 1	414	-	-
Stage 2	616	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	166	355	-
Mov Cap-2 Maneuver	166	-	-
Stage 1	414	-	-
Stage 2	616	-	-
Approach	EB	NB	SB
HCM Control Delay, s/veh	46.49		
HCM LOS	C		
Minor Lane/Major Mvmt	NBTEBLn1	SBT	
Capacity (veh/h)	-	355	
HCM Lane V/C Ratio	-	0.119	
HCM Control Delay (s/veh)	-	16.5	
HCM Lane LOS	-	C	
HCM 95th-tile Q(veh)	-	0.4	

Intersection					
Int Delay, s/veh	3.5				
Movement	EBL	EBR	NBL	NBT	SBR
Lane Configurations	W	W	W	W	W
Traffic Vol, veh/h	58	52	110	223	334
Future Vol, veh/h	58	52	110	223	334
Conflicting Peds, #/hr	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free
RT Channelized	None	None	None	None	None
Storage Length	0	-	-	-	-
Veh in Median Storage, #	0	-	0	0	-
Grade, %	0	-	0	0	-
Peak Hour Factor	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0
Mvmt Flow	64	58	122	248	371

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	999	507	643
Stage 1	507	-	-
Stage 2	492	-	-
Critical Hdwy	6.4	6.2	4.1
Critical Hdwy Stg 1	5.4	-	-
Critical Hdwy Stg 2	5.4	-	-
Follow-up Hdwy	3.5	3.3	2.2
Pot Cap-1 Maneuver	272	569	951
Stage 1	609	-	-
Stage 2	619	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	232	569	951
Mov Cap-2 Maneuver	232	-	-
Stage 1	518	-	-
Stage 2	619	-	-

Approach	EB	NB	SB
HCM Control Delay, s/22.88		3.09	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBLn1	SBL	SBLn1
Capacity (veh/h)	595	-	322	-
HCM Lane V/C Ratio	0.128	-	0.38	-
HCM Control Delay (s/veh)	9.3	0	22.9	-
HCM Lane LOS	A	A	C	-
HCM 95th %tile Q(veh)	0.4	-	1.7	-

Intersection					
Int Delay, s/veh	0.6				
Movement	WBL	WBR	NBT	NBR	SBL
Lane Configurations	W	W	W	W	W
Traffic Vol, veh/h	0	53	520	19	2
Future Vol, veh/h	0	53	520	19	2
Conflicting Peds, #/hr	0	0	0	100	0
Sign Control	Stop	Stop	Free	Free	Free
RT Channelized	None	None	None	None	None
Storage Length	-	0	-	-	-
Veh in Median Storage, #	0	-	0	-	-
Grade, %	0	-	0	-	-
Peak Hour Factor	90	90	90	90	90
Heavy Vehicles, %	0	0	2	0	2
Mvmt Flow	0	59	578	21	2

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	-	399	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	6.9	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	3.3	-
Pot Cap-1 Maneuver	0	606	-
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	542	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/42.45		0	0.03
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR/WBLn1	SBL	SBLn1
Capacity (veh/h)	-	-	542	799
HCM Lane V/C Ratio	-	-	0.109	0.003
HCM Control Delay (s/veh)	-	-	12.5	9.5
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.4	0

Intersection					
Int Delay, s/veh	3.3				
Movement	EBT	EBR	WBL	WBT	NBL
Lane Configurations	W	W	W	W	W
Traffic Vol, veh/h	222	129	5	117	87
Future Vol, veh/h	222	129	5	117	87
Conflicting Peds, #/hr	0	100	0	100	100
Sign Control	Free	Free	Free	Stop	Stop
RT Channelized	None	None	None	None	None
Storage Length	-	-	-	0	-
Veh in Median Storage, #	0	-	0	0	-
Grade, %	0	-	0	0	-
Peak Hour Factor	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2
Mvmt Flow	247	143	6	130	97

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	490
Stage 1	-	-	418
Stage 2	-	-	241
Critical Hdwy	-	4.12	-
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	-	2.218	-
Pot Cap-1 Maneuver	-	1073	-
Stage 1	-	-	664
Stage 2	-	-	799
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	960	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	594
Stage 2	-	-	710

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0.36	19.79
HCM LOS	C		

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	345	-	-	74	-
HCM Lane V/C Ratio	0.297	-	-	0.006	-
HCM Control Delay (s/veh)	19.8	-	-	8.8	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	1.2	-	-	0	-

Intersection					
Int Delay, s/veh	2.2				
Movement	EBL	EBT	WBT	WBR	SBL
Lane Configurations	W	W	W	W	W
Traffic Vol, veh/h	5	27	156	199	83
Future Vol, veh/h	5	27	156	199	83
Conflicting Peds, #/hr	0	0	0	0	0
Sign Control	Free	Free	Free	Stop	Stop
RT Channelized	None	None	None	None	None
Storage Length	-	-	-	0	-
Veh in Median Storage, #	0	0	0	0	0
Grade, %	-	0	0	-	-
Peak Hour Factor	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2
Mvmt Flow	6	30	173	221	92

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	394	0	0
Stage 1	-	-	284
Stage 2	-	-	41
Critical Hdwy	4.12	-	-
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	2.218	-	-
Pot Cap-1 Maneuver	1164	-	-
Stage 1	-	-	764
Stage 2	-	-	981
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1164	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	761
Stage 2	-	-	981

Approach	EB	WB	SB
HCM Control Delay, s/v1.27		0	11.29
HCM LOS		B	

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR/SBLn1
Capacity (veh/h)	281	-	-	670
HCM Lane V/C Ratio	0.005	-	-	0.146
HCM Control Delay (s/veh)	8.1	0	-	11.3
HCM Lane LOS	A	A	-	B
HCM 95th %tile Q(veh)	0	-	-	0.5

Intersection						
Intersection Delay, s/veh	8.9					
Intersection LOS	A					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔	↔	↔	↔	↔
Traffic Vol, veh/h	236	0	0	0	0	124
Future Vol, veh/h	236	0	0	0	0	124
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	262	0	0	0	0	138
Number of Lanes	0	1	1	0	1	0
Approach	EB	WB		SB		
Opposing Approach	WB	EB				
Opposing Lanes	1	1		0		
Conflicting Approach Left	SB			WB		
Conflicting Lanes Left	1	0		1		
Conflicting Approach Right		SB		EB		
Conflicting Lanes Right	0	1		1		
HCM Control Delay, s/veh	9.5	0		7.7		
HCM LOS	A	-		A		

Lane	EBLn1	WBLn1	SBLn1
Vol Left, %	100%	0%	0%
Vol Thru, %	0%	100%	0%
Vol Right, %	0%	0%	100%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	236	0	124
LT Vol	236	0	0
Through Vol	0	0	0
RT Vol	0	0	124
Lane Flow Rate	262	0	138
Geometry Grp	1	1	1
Degree of Util (X)	0.319	0	0.151
Departure Headway (Hd)	4.374	4.505	3.958
Convergence, Y/N	Yes	Yes	Yes
Cap	816	0	912
Service Time	2.431	2.518	1.958
HCM Lane V/C Ratio	0.321	0	0.151
HCM Control Delay, s/veh	9.5	7.5	7.7
HCM Lane LOS	A	N	A
HCM 95th-ile Q	1.4	0	0.5

Intersection						
Intersection Delay, s/veh	9					
Intersection LOS	A					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Vol, veh/h	12	11	83	83	118	118
Future Vol, veh/h	12	11	83	83	118	118
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	13	12	92	92	131	131
Number of Lanes	1	0	0	1	1	0
Approach	EB	WB		NB		
Opposing Approach	WB	EB				
Opposing Lanes	1	1		0		
Conflicting Approach Left		NB		EB		
Conflicting Lanes Left	0	1		1		
Conflicting Approach Right	NB			WB		
Conflicting Lanes Right	1	0		1		
HCM Control Delay, s/veh	7.6	9.1		9.1		
HCM LOS	A	A		A		

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	50%	0%	50%
Vol Thru, %	0%	52%	50%
Vol Right, %	50%	48%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	236	23	166
LT Vol	118	0	83
Through Vol	0	12	83
RT Vol	118	11	0
Lane Flow Rate	262	26	184
Geometry Grp	1	1	1
Degree of Util (X)	0.309	0.032	0.238
Departure Headway (Hd)	4.238	4.454	4.651
Convergence, Y/N	Yes	Yes	Yes
Cap	850	803	773
Service Time	2.255	2.484	2.675
HCM Lane V/C Ratio	0.308	0.032	0.238
HCM Control Delay, s/veh	9.1	7.6	9.1
HCM Lane LOS	A	A	A
HCM 95th-ile Q	1.3	0.1	0.9

Intersection						
Intersection Delay, s/veh	7.9					
Intersection LOS	A					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Vol, veh/h	36	0	0	166	0	0
Future Vol, veh/h	36	0	0	166	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	40	0	0	184	0	0
Number of Lanes	1	0	0	1	1	0
Approach	EB	WB		NB		
Opposing Approach	WB	EB				
Opposing Lanes	1	1		0		
Conflicting Approach Left		NB		EB		
Conflicting Lanes Left	0	1		1		
Conflicting Approach Right	NB			WB		
Conflicting Lanes Right	1	0		1		
HCM Control Delay, s/veh	7.3	8		0		
HCM LOS	A	A		-		

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	0%	0%	0%
Vol Thru, %	100%	100%	100%
Vol Right, %	0%	0%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	0	36	166
LT Vol	0	0	0
Through Vol	0	36	166
RT Vol	0	0	0
Lane Flow Rate	0	40	184
Geometry Grp	1	1	1
Degree of Util (X)	0	0.045	0.203
Departure Headway (Hd)	4.321	4.071	3.964
Convergence, Y/N	Yes	Yes	Yes
Cap	0	878	909
Service Time	2.412	2.103	1.971
HCM Lane V/C Ratio	0	0.046	0.202
HCM Control Delay, s/veh	7.4	7.3	8
HCM Lane LOS	N	A	A
HCM 95th-ile Q	0	0.1	0.8

Intersection												
Intersection Delay, s/veh	8.4											
Intersection LOS	A											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Vol, veh/h	62	53	0	0	0	143	65	43	41	0	0	85
Future Vol, veh/h	62	53	0	0	0	143	65	43	41	0	0	85
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	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	69	59	0	0	0	159	72	46	46	0	0	94
Number of Lanes	0	1	0	0	0	1	0	1	0	0	0	1
Approach	EB		WB			NB			SB			
Opposing Approach	WB		EB			SB			NB			
Opposing Lanes	1		1			1			1			
Conflicting Approach Left	SB		NB			EB			WB			
Conflicting Lanes Left	1		1			1			1			
Conflicting Approach Right	NB		SB			WB			EB			
Conflicting Lanes Right	1		1			1			1			
HCM Control Delay, s/veh	8.8		8.8			8.9			7.7			
HCM LOS	A		A			A			A			

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	44%	54%	0%	0%
Vol Thru, %	29%	46%	0%	0%
Vol Right, %	28%	0%	100%	100%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	149	115	143	85
LT Vol	65	62	0	0
Through Vol	43	53	0	0
RT Vol	41	0	143	85
Lane Flow Rate	166	128	159	94
Geometry Grp	1	1	1	1
Degree of Util (X)	0.211	0.17	0.18	0.109
Departure Headway (Hd)	4.598	4.799	4.079	4.171
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	780	746	879	857
Service Time	2.631	2.833	2.11	2.208
HCM Lane V/C Ratio	0.213	0.172	0.181	0.11
HCM Control Delay, s/veh	8.9	8.8	8	7.7
HCM Lane LOS	A	A	A	A
HCM 95th-ile Q	0.8	0.6	0.7	0.4

HCM 7th TWSC
4: Bank & Wilton

11/21/2024

Intersection						
Int Delay, s/veh 14.3						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	275	147	686	500	56
Future Vol, veh/h	5	275	147	686	500	56
Conflicting Peds, #/hr	0	0	178	0	0	107
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	6	306	163	762	556	62

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	1472	765	796
Stage 1	765	-	-
Stage 2	708	-	-
Critical Hdwy	6,645	6,245	4,145
Critical Hdwy Stg 1	5,445	-	-
Critical Hdwy Stg 2	5,845	-	-
Follow-up Hdwy	3,5285	3,3285	2,2285
Pot Cap-1 Maneuver	127	400	818
Stage 1	456	-	-
Stage 2	448	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	58	325	664
Mov Cap-2 Maneuver	58	-	-
Stage 1	255	-	-
Stage 2	364	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v72.41		4.34	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLN1	SBT	SBR
Capacity (veh/h)	524	-	325	-	-
HCM Lane V/C Ratio	0.246	-	0.94	-	-
HCM Control Delay (s/veh)	12.2	2.7	72.4	-	-
HCM Lane LOS	B	A	F	-	-
HCM 95th %tile Q(veh)	1	-	9.6	-	-

HCM 7th TWSC
5: Bank & Echo

11/21/2024

Intersection						
Int Delay, s/veh 0.4						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	4	38	0	817	783	0
Future Vol, veh/h	4	38	0	817	783	0
Conflicting Peds, #/hr	0	0	0	0	0	86
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	4	42	0	908	870	0

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	1324	870	0
Stage 1	870	-	-
Stage 2	454	-	-
Critical Hdwy	6,645	6,245	-
Critical Hdwy Stg 1	5,445	-	-
Critical Hdwy Stg 2	5,845	-	-
Follow-up Hdwy	3,5285	3,3285	-
Pot Cap-1 Maneuver	158	348	0
Stage 1	407	-	0
Stage 2	605	-	0
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	158	348	-
Mov Cap-2 Maneuver	158	-	-
Stage 1	407	-	-
Stage 2	605	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v16.77		0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLN1	SBT	SBR
Capacity (veh/h)	-	-	348	-	-
HCM Lane V/C Ratio	-	-	0.121	-	-
HCM Control Delay (s/veh)	-	-	16.8	-	-
HCM Lane LOS	-	-	C	-	-
HCM 95th %tile Q(veh)	-	-	0.4	-	-

HCM 7th TWSC
8: Queen Elizabeth Driveway /Queen Elizabeth Driveway & Princess Patricia Way 11/21/2024

Intersection						
Int Delay, s/veh 4.2						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	66	60	122	223	334	257
Future Vol, veh/h	66	60	122	223	334	257
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	73	67	136	248	371	286

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	1033	514	657
Stage 1	514	-	-
Stage 2	519	-	-
Critical Hdwy	6.4	6.2	4.1
Critical Hdwy Stg 1	5.4	-	-
Critical Hdwy Stg 2	5.4	-	-
Follow-up Hdwy	3.5	3.3	2.2
Pot Cap-1 Maneuver	260	565	940
Stage 1	605	-	-
Stage 2	601	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	216	565	940
Mov Cap-2 Maneuver	216	-	-
Stage 1	504	-	-
Stage 2	601	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v26.26		3.35	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLN1	SBT	SBR
Capacity (veh/h)	637	-	306	-	-
HCM Lane V/C Ratio	0.144	-	0.457	-	-
HCM Control Delay (s/veh)	9.5	0	26.3	-	-
HCM Lane LOS	A	A	D	-	-
HCM 95th %tile Q(veh)	0.5	-	2.3	-	-

HCM 7th TWSC
10: Bank & Marche 11/21/2024

Intersection						
Int Delay, s/veh 0.7						
Movement	WBL	WBR	NBL	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	61	533	20	2	604
Future Vol, veh/h	0	61	533	20	2	604
Conflicting Peds, #/hr	0	0	0	100	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	2	0	2	2
Mvmt Flow	0	68	592	22	2	671

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	-	407	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	6.9	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	3.3	-
Pot Cap-1 Maneuver	0	599	-
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	536	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v12.69		0	0.03
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBR	WBLN1	SBL	SBT
Capacity (veh/h)	-	-	536	788	-
HCM Lane V/C Ratio	-	-	0.127	0.003	-
HCM Control Delay (s/veh)	-	-	12.7	9.6	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.4	0	-

Intersection						
Int Delay, s/veh	4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔ ↗ ↘					
Traffic Vol, veh/h	231	163	5	119	106	6
Future Vol, veh/h	231	163	5	119	106	6
Conflicting Peds, #/hr	0	100	100	0	100	100
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	257	181	6	132	118	7

Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	538	0	691	547
Stage 1	-	-	-	-	447	-
Stage 2	-	-	-	-	243	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1030	-	411	537
Stage 1	-	-	-	-	644	-
Stage 2	-	-	-	-	797	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	921	-	326	429
Mov Cap-2 Maneuver	-	-	-	-	326	-
Stage 1	-	-	-	-	576	-
Stage 2	-	-	-	-	708	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0.36	22.33
HCM LOS	C		

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	330	-	-	73	-
HCM Lane V/C Ratio	0.377	-	-	0.006	-
HCM Control Delay (s/veh)	22.3	-	-	8.9	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	1.7	-	-	0	-

Intersection						
Int Delay, s/veh	2.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↔ ↗ ↘					
Traffic Vol, veh/h	5	32	161	218	93	5
Future Vol, veh/h	5	32	161	218	93	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	36	179	242	103	6

Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	421	0	-	0	347	300
Stage 1	-	-	-	-	300	-
Stage 2	-	-	-	-	47	-
Critical Hdwy	-	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1138	-	-	-	650	740
Stage 1	-	-	-	-	752	-
Stage 2	-	-	-	-	976	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	1138	-	-	-	647	740
Mov Cap-2 Maneuver	-	-	-	-	647	-
Stage 1	-	-	-	-	748	-
Stage 2	-	-	-	-	976	-

Approach	EB	WB	SB
HCM Control Delay, s/v	1.11	0	11.64
HCM LOS	B		

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	243	-	-	-	651
HCM Lane V/C Ratio	0.005	-	-	-	0.167
HCM Control Delay (s/veh)	8.2	0	-	-	11.6
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.6

2033 Scenario

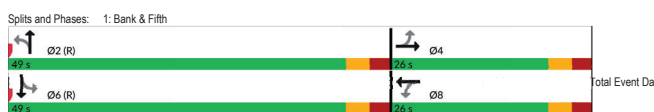
Minor Event Egress

Baseline Conditions

Queues
1: Bank & Fifth 11/26/2024

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↔ ↗ ↘							
Traffic Volume (vph)	43	10	90	25	17	463	21	356
Future Volume (vph)	43	10	90	25	17	463	21	356
Lane Group Flow (vph)	0	88	56	64	0	546	0	443
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases	4	8	8	2	2	6	6	6
Permitted Phases	4	8	8	2	2	6	6	6
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	26.0	26.0	26.0	26.0	49.0	49.0	49.0	49.0
Total Split (s)	26.0	26.0	26.0	26.0	49.0	49.0	49.0	49.0
Total Split (%)	34.7%	34.7%	34.7%	34.7%	65.3%	65.3%	65.3%	65.3%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	9.5	9.5	9.5	9.5	57.8	57.8	57.8	57.8
Adjusted g/C Ratio	0.13	0.13	0.13	0.13	0.77	0.77	0.77	0.77
v/c Ratio	0.52	0.36	0.31	0.24	0.24	0.21	0.21	0.21
Control Delay (s/veh)	32.1	35.0	19.3	6.3	3.7	3.7	3.7	3.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	32.1	35.0	19.3	6.3	3.7	3.7	3.7	3.7
LOS	C	C	B	A	A	A	A	A
Approach Delay (s/veh)	32.1	26.6	6.3	3.7	3.7	3.7	3.7	3.7
Approach LOS	C	C	A	A	A	A	A	A
Queue Length 50th (m)	7.9	7.4	3.6	13.3	8.0	8.0	8.0	8.0
Queue Length 95th (m)	19.6	16.3	12.9	36.3	16.6	16.6	16.6	16.6
Internal Link Dist (m)	49.7	45.0	112.4	195.6	190.0	190.0	190.0	190.0
Turn Bay Length (m)								
Base Capacity (vph)	331	335	403	2236	2157	2157	2157	2157
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	0.17	0.16	0.24	0.24	0.21	0.21	0.21

Intersection Summary
 Cycle Length: 75
 Actuated Cycle Length: 75
 Offset: 47 (63%), Referenced to phase 2:NBL and 6:SBTL, Start of Green
 Natural Cycle: 75
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.52
 Intersection Signal Delay (s/veh): 9.3
 Intersection LOS: A
 Intersection Capacity Utilization 53.1%
 ICU Level of Service A
 Analysis Period (min) 15



Intersection						
Intersection Delay, s/veh	9.2					
Intersection LOS	A					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↓	↓
Traffic Vol, veh/h	195	0	0	0	0	280
Future Vol, veh/h	195	0	0	0	0	280
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	217	0	0	0	0	311
Number of Lanes	0	1	1	0	1	0
Approach	EB	WB	WB	SB		
Opposing Approach	WB	EB				
Opposing Lanes	1	1		0		
Conflicting Approach Left	SB			WB		
Conflicting Lanes Left	1		0	1		
Conflicting Approach Right		SB		EB		
Conflicting Lanes Right	0	1		1		
HCM Control Delay, s/veh	9.7	0		8.9		
HCM LOS	A			A		

Lane	EBLn1	WBLn1	SBLn1
Vol Left, %	100%	0%	0%
Vol Thru, %	0%	100%	0%
Vol Right, %	0%	0%	100%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	195	0	280
LT Vol	195	0	0
Through Vol	0	0	0
RT Vol	0	0	280
Lane Flow Rate	217	0	311
Geometry Grp	1	1	1
Degree of Util (X)	0.289	0	0.336
Departure Headway (Hd)	4.796	4.841	3.885
Convergence, Y/N	Yes	Yes	Yes
Cap	754	0	927
Service Time	2.796	2.879	1.899
HCM Lane V/C Ratio	0.288	0	0.335
HCM Control Delay, s/veh	9.7	7.9	8.9
HCM Lane LOS	A	N	A
HCM 95th-tile Q	1.2	0	1.5

Intersection						
Intersection Delay, s/veh	8.2					
Intersection LOS	A					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↓			↑	↑	↑
Traffic Vol, veh/h	15	15	39	39	98	98
Future Vol, veh/h	15	15	39	39	98	98
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	17	17	43	43	109	109
Number of Lanes	1	0	0	1	1	0
Approach	EB	WB	WB	NB		
Opposing Approach	WB	EB				
Opposing Lanes	1	1		0		
Conflicting Approach Left		NB		EB		
Conflicting Lanes Left	0	1		1		
Conflicting Approach Right	NB			WB		
Conflicting Lanes Right	1	0		1		
HCM Control Delay, s/veh	7.4	8.1		8.3		
HCM LOS	A	A		A		

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	50%	0%	50%
Vol Thru, %	0%	50%	50%
Vol Right, %	50%	50%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	196	30	78
LT Vol	98	0	39
Through Vol	0	15	39
RT Vol	98	15	0
Lane Flow Rate	218	33	87
Geometry Grp	1	1	1
Degree of Util (X)	0.238	0.039	0.107
Departure Headway (Hd)	3.941	4.202	4.445
Convergence, Y/N	Yes	Yes	Yes
Cap	899	857	794
Service Time	2.016	2.202	2.54
HCM Lane V/C Ratio	0.242	0.039	0.111
HCM Control Delay, s/veh	8.3	7.4	8.1
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.9	0.1	0.4

Intersection						
Intersection Delay, s/veh	7.4					
Intersection LOS	A					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↓			↑	↑	↑
Traffic Vol, veh/h	71	0	0	78	0	0
Future Vol, veh/h	71	0	0	78	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	79	0	0	87	0	0
Number of Lanes	1	0	0	1	1	0
Approach	EB	WB	WB	NB		
Opposing Approach	WB	EB				
Opposing Lanes	1	1		0		
Conflicting Approach Left		NB		EB		
Conflicting Lanes Left	0	1		1		
Conflicting Approach Right	NB			WB		
Conflicting Lanes Right	1	0		1		
HCM Control Delay, s/veh	7.4		7.4	0		
HCM LOS	A		A	-		

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	0%	0%	0%
Vol Thru, %	100%	100%	100%
Vol Right, %	0%	0%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	0	71	78
LT Vol	0	0	0
Through Vol	0	71	78
RT Vol	0	0	0
Lane Flow Rate	0	79	87
Geometry Grp	1	1	1
Degree of Util (X)	0	0.088	0.096
Departure Headway (Hd)	4.218	3.998	3.992
Convergence, Y/N	Yes	Yes	Yes
Cap	0	898	900
Service Time	2.288	2.014	2.007
HCM Lane V/C Ratio	0	0.088	0.097
HCM Control Delay, s/veh	7.3	7.4	7.4
HCM Lane LOS	N	A	A
HCM 95th-tile Q	0	0.3	0.3

Intersection												
Intersection Delay, s/veh	7.3											
Intersection LOS	A											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↓					↑	↑	↑			↑
Traffic Vol, veh/h	11	45	0	0	0	68	10	11	49	0	0	99
Future Vol, veh/h	11	45	0	0	0	68	10	11	49	0	0	99
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	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	50	0	0	0	76	11	12	54	0	0	110
Number of Lanes	0	1	0	0	0	1	0	1	0	0	0	1
Approach	EB	WB	WB	NB	NB	SB						
Opposing Approach	WB	EB										
Opposing Lanes	1	1										
Conflicting Approach Left	SB			NB	EB							
Conflicting Lanes Left	1			1	1							
Conflicting Approach Right	NB			SB	WB							
Conflicting Lanes Right	1			1	1							
HCM Control Delay, s/veh	7.8			7.1	7.3							
HCM LOS	A			A	A							

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	14%	20%	0%	0%
Vol Thru, %	16%	80%	0%	0%
Vol Right, %	70%	0%	100%	100%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	70	56	68	99
LT Vol	10	11	0	0
Through Vol	11	45	0	0
RT Vol	49	0	68	99
Lane Flow Rate	78	62	76	110
Geometry Grp	1	1	1	1
Degree of Util (X)	0.084	0.075	0.078	0.111
Departure Headway (Hd)	3.865	4.357	3.705	3.63
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	915	815	954	974
Service Time	1.938	2.422	1.777	1.704
HCM Lane V/C Ratio	0.085	0.076	0.08	0.113
HCM Control Delay, s/veh	7.3	7.8	7.1	7.2
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.3	0.2	0.3	0.4

Intersection table for HCM 7th TWSC 4: Bank & Wilton. Includes columns for Int Delay, s/veh (3.2), Movement (EBL, EBR, NBL, NBT, SBT, SBR), Lane Configurations, Traffic Vol, Future Vol, Conflicting Peds, Sign Control, RT Channelized, Storage Length, Veh in Median Storage, Grade, Peak Hour Factor, Heavy Vehicles, Mvmt Flow, Major/Minor, Conflicting Flow All, Critical Hdwy, Pot Cap-1 Manuever, Platoon blocked, Mov Cap-1 Manuever, Mov Cap-2 Manuever, Approach, HCM Control Delay, HCM LOS, Minor Lane/Major Mvmt, Capacity, HCM Lane V/C Ratio, HCM Control Delay, HCM Lane LOS, HCM 95th %tile Q(veh).

Intersection table for HCM 7th TWSC 8: Queen Elizabeth Driveway /Queen Elizabeth Driveway & Princess Patricia Way. Includes columns for Int Delay, s/veh (10.4), Movement (EBL, EBR, NBL, NBT, SBT, SBR), Lane Configurations, Traffic Vol, Future Vol, Conflicting Peds, Sign Control, RT Channelized, Storage Length, Veh in Median Storage, Grade, Peak Hour Factor, Heavy Vehicles, Mvmt Flow, Major/Minor, Conflicting Flow All, Critical Hdwy, Pot Cap-1 Manuever, Platoon blocked, Mov Cap-1 Manuever, Mov Cap-2 Manuever, Approach, HCM Control Delay, HCM LOS, Minor Lane/Major Mvmt, Capacity, HCM Lane V/C Ratio, HCM Control Delay, HCM Lane LOS, HCM 95th %tile Q(veh).

Intersection table for HCM 7th TWSC 5: Bank & Echo. Includes columns for Int Delay, s/veh (0.2), Movement (EBL, EBR, NBL, NBT, SBT, SBR), Lane Configurations, Traffic Vol, Future Vol, Conflicting Peds, Sign Control, RT Channelized, Storage Length, Veh in Median Storage, Grade, Peak Hour Factor, Heavy Vehicles, Mvmt Flow, Major/Minor, Conflicting Flow All, Critical Hdwy, Pot Cap-1 Manuever, Platoon blocked, Mov Cap-1 Manuever, Mov Cap-2 Manuever, Approach, HCM Control Delay, HCM LOS, Minor Lane/Major Mvmt, Capacity, HCM Lane V/C Ratio, HCM Control Delay, HCM Lane LOS, HCM 95th %tile Q(veh).

Intersection table for HCM 7th TWSC 10: Bank & Marche. Includes columns for Int Delay, s/veh (2.1), Movement (WBL, WBR, NBL, NBR, SBL, SBT), Lane Configurations, Traffic Vol, Future Vol, Conflicting Peds, Sign Control, RT Channelized, Storage Length, Veh in Median Storage, Grade, Peak Hour Factor, Heavy Vehicles, Mvmt Flow, Major/Minor, Conflicting Flow All, Critical Hdwy, Pot Cap-1 Manuever, Platoon blocked, Mov Cap-1 Manuever, Mov Cap-2 Manuever, Approach, HCM Control Delay, HCM LOS, Minor Lane/Major Mvmt, Capacity, HCM Lane V/C Ratio, HCM Control Delay, HCM Lane LOS, HCM 95th %tile Q(veh).

Intersection						
Int Delay, s/veh						
5.2						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Vol, veh/h	190	1	0	280	120	5
Future Vol, veh/h	190	1	0	280	120	5
Conflicting Peds, #/hr	0	100	100	0	100	100
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	211	1	0	311	133	6

Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	312	0	723	412
Stage 1	-	-	-	-	312	-
Stage 2	-	-	-	-	411	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1248	-	393	640
Stage 1	-	-	-	-	742	-
Stage 2	-	-	-	-	669	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1116	-	314	512
Mov Cap-2 Maneuver	-	-	-	-	314	-
Stage 1	-	-	-	-	664	-
Stage 2	-	-	-	-	598	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0	24.68
HCM LOS	C		

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	319	-	-	1116	-
HCM Lane V/C Ratio	0.435	-	-	-	-
HCM Control Delay (s/veh)	24.7	-	-	0	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	2.1	-	-	0	-

Intersection						
Int Delay, s/veh						
9.3						
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Vol, veh/h	1	70	73	5	347	5
Future Vol, veh/h	1	70	73	5	347	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	0	0	0	0	0
Grade, %	-	0	0	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	78	81	6	386	6

Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	87	0	-	0	164	84
Stage 1	-	-	-	-	84	-
Stage 2	-	-	-	-	80	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1509	-	-	-	827	975
Stage 1	-	-	-	-	939	-
Stage 2	-	-	-	-	943	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	1509	-	-	-	826	975
Mov Cap-2 Maneuver	-	-	-	-	826	-
Stage 1	-	-	-	-	939	-
Stage 2	-	-	-	-	943	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0.1	0	13.18
HCM LOS	B		

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	25	-	-	-	828
HCM Lane V/C Ratio	0.001	-	-	-	0.472
HCM Control Delay (s/veh)	7.4	0	-	-	13.2
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	2.6

2033 Scenario

Minor Event Egress

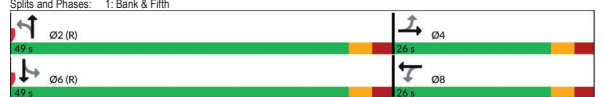
Future Volumes

Queues

1: Bank & Fifth

08/01/2024

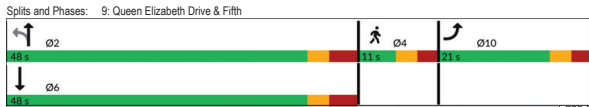
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	43	10	50	25	17	471	21	371
Future Volume (vph)	43	10	50	25	17	471	21	371
Lane Group Flow (vph)	0	88	56	66	0	555	0	459
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases	4	8	8	2	2	6	6	6
Permitted Phases	4	8	8	2	2	6	6	6
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	26.0	26.0	26.0	26.0	49.0	49.0	49.0	49.0
Total Split (s)	26.0	26.0	26.0	26.0	49.0	49.0	49.0	49.0
Total Split (%)	34.7%	34.7%	34.7%	34.7%	65.3%	65.3%	65.3%	65.3%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead-Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	9.5	9.5	9.5	9.5	57.8	57.8	57.8	57.8
Actuated g/C Ratio	0.13	0.13	0.13	0.13	0.77	0.77	0.77	0.77
v/c Ratio	0.52	0.36	0.32	0.25	0.25	0.21	0.21	0.21
Control Delay (s/veh)	32.2	35.0	19.2	6.4	3.7	3.7	3.7	3.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	32.2	35.0	19.2	6.4	3.7	3.7	3.7	3.7
LOS	C	C	B	A	A	A	A	A
Approach Delay (s/veh)	32.2	35.0	26.4	6.4	3.7	3.7	3.7	3.7
Approach LOS	C	C	C	A	A	A	A	A
Queue Length 50th (m)	7.9	7.4	3.6	14.0	8.4	8.4	8.4	8.4
Queue Length 95th (m)	19.6	16.3	13.1	37.3	17.2	17.2	17.2	17.2
Internal Link Dist (m)	49.7	45.0	112.4	195.6	190.0	190.0	190.0	190.0
Turn Bay Length (m)								
Base Capacity (vph)	330	335	403	2237	2163	2163	2163	2163
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	0.17	0.16	0.25	0.21	0.21	0.21	0.21
Intersection Summary								
Cycle Length: 75								
Actuated Cycle Length: 75								
Offset: 47 (63%), Referenced to phase 2:NBT and 6:SBL, Start of Green								
Natural Cycle: 75								
Control Type: Actuated-Coordinated								
Maximum v/c Ratio: 0.52								
Intersection Signal Delay (s/veh): 9.2								
Intersection Capacity Utilization 53.4%								
ICU Level of Service A								
Analysis Period (min) 15								
Splits and Phases: 1: Bank & Fifth								



Queues
9: Queen Elizabeth Drive & Fifth

08/01/2024

Lane Group	EBL	NBL	NBT	SBT	Ø4
Lane Configurations	⤴		⤵	⤴	
Traffic Volume (vph)	67	33	269	164	
Future Volume (vph)	67	33	269	164	
Lane Group Flow (vph)	107	0	336	221	
Turn Type	Prot	Perm	NA	NA	
Protected Phases	10	2	6	4	
Permitted Phases	2				
Detector Phase	10	2	2	6	
Switch Phase					
Minimum Initial (s)	10.0	4.0	4.0	4.0	4.0
Minimum Split (s)	21.0	48.0	48.0	48.0	11.0
Total Split (s)	21.0	48.0	48.0	48.0	11.0
Total Split (%)	26.3%	60.0%	60.0%	60.0%	14%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.7	3.8	3.8	3.8	2.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.7		6.8	6.8	
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	Min	None	None	Max	None
Act Effct Green (s)	10.9		41.2	41.2	
Actuated g/C Ratio	0.17		0.64	0.64	
v/c Ratio	0.41		0.33	0.21	
Control Delay (s/veh)	29.0		6.7	5.7	
Queue Delay	0.0		0.0	0.0	
Total Delay (s/veh)	29.0		6.7	5.7	
LOS	C		A	A	
Approach Delay (s/veh)	29.0		6.7	5.7	
Approach LOS	C		A	A	
Queue Length 50th (m)	11.6		14.8	8.9	
Queue Length 95th (m)	24.3		30.8	19.4	
Internal Link Dist (m)	57.2		0.1	5.9	
Turn Bay Length (m)					
Base Capacity (vph)	370		1023	1049	
Starvation Cap Reductn	0		0	0	
Spillback Cap Reductn	0		0	0	
Storage Cap Reductn	0		0	0	
Reduced v/c Ratio	0.29		0.33	0.21	
Intersection Summary					
Cycle Length: 80					
Actuated Cycle Length: 64.6					
Natural Cycle: 80					
Control Type: Actuated-Uncoordinated					
Maximum v/c Ratio: 0.41					
Intersection Signal Delay (s/veh): 10.0	Intersection LOS: A				
Intersection Capacity Utilization 52.6%	ICU Level of Service A				
Analysis Period (min) 15					



HCM 7th AWSC
13: Paul Askin & Marche

11/21/2024

Intersection						
Intersection Delay, s/veh	8.3					
Intersection LOS	A					
Movement						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	⤴			⤵	⤴	
Traffic Vol, veh/h	16	15	41	42	102	102
Future Vol, veh/h	16	15	41	42	102	102
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	18	17	46	47	113	113
Number of Lanes	1	0	0	1	1	0
Approach						
Approach	EB	WB	NB			
Opposing Approach	WB	EB				
Opposing Lanes	1	1	0			
Conflicting Approach Left		NB	EB			
Conflicting Lanes Left	0	1	1			
Conflicting Approach Right	NB		WB			
Conflicting Lanes Right	1	0	1			
HCM Control Delay, s/veh	7.4	8.2	8.4			
HCM LOS	A	A	A			
Lane						
Lane	NBLn1	EBLn1	WBLn1			
Vol Left, %	50%	0%	49%			
Vol Thru, %	0%	52%	51%			
Vol Right, %	50%	48%	0%			
Sign Control	Stop	Stop	Stop			
Traffic Vol by Lane	204	31	83			
LT Vol	102	0	41			
Through Vol	0	16	42			
RT Vol	102	15	0			
Lane Flow Rate	227	34	92			
Geometry Grp	1	1	1			
Degree of Util (X)	0.249	0.041	0.117			
Departure Headway (Hd)	3.953	4.24	4.561			
Convergence, Y/N	Yes	Yes	Yes			
Cap	895	849	790			
Service Time	2.039	2.243	2.563			
HCM Lane V/C Ratio	0.254	0.04	0.116			
HCM Control Delay, s/veh	8.4	7.4	8.2			
HCM Lane LOS	A	A	A			
HCM 95th-tile Q	1	0.1	0.4			

HCM 7th AWSC
12: Exhibition & Paul Askin

11/21/2024

Intersection						
Intersection Delay, s/veh	9.3					
Intersection LOS	A					
Movement						
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		⤴	⤵		⤴	
Traffic Vol, veh/h	204	0	0	0	0	282
Future Vol, veh/h	204	0	0	0	0	282
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	227	0	0	0	0	313
Number of Lanes	0	1	1	0	1	0
Approach						
Approach	EB	WB	SB			
Opposing Approach	WB	EB				
Opposing Lanes	1	1	0			
Conflicting Approach Left	SB		WB			
Conflicting Lanes Left	1	0	1			
Conflicting Approach Right		SB	EB			
Conflicting Lanes Right	0	1	1			
HCM Control Delay, s/veh	9.9	0	8.9			
HCM LOS	A	-	A			
Lane						
Lane	EBLn1	WBLn1	SBLn1			
Vol Left, %	100%	0%	0%			
Vol Thru, %	0%	100%	0%			
Vol Right, %	0%	0%	100%			
Sign Control	Stop	Stop	Stop			
Traffic Vol by Lane	204	0	282			
LT Vol	204	0	0			
Through Vol	0	0	0			
RT Vol	0	0	282			
Lane Flow Rate	227	0	313			
Geometry Grp	1	1	1			
Degree of Util (X)	0.302	0	0.34			
Departure Headway (Hd)	4.804	4.86	3.911			
Convergence, Y/N	Yes	Yes	Yes			
Cap	753	0	921			
Service Time	2.804	2.9	1.925			
HCM Lane V/C Ratio	0.301	0	0.34			
HCM Control Delay, s/veh	9.9	7.9	8.9			
HCM Lane LOS	A	N	A			
HCM 95th-tile Q	1.3	0	1.5			

Intersection							
Int Delay, s/veh 2.1							
Movement	WBL	WBR	NBT	NBR	SBL	SBT	
Lane Configurations							
Traffic Vol, veh/h	5	152	431	30	0	392	
Future Vol, veh/h	5	152	431	30	0	392	
Conflicting Peds, #/hr	0	0	0	100	0	0	
Sign Control	Stop	Stop	Free	Free	Free	Free	
RT Channelized	-	None	-	None	-	None	
Storage Length	-	0	-	-	-	-	
Veh in Median Storage, #	0	-	0	-	-	-	
Grade, %	0	-	0	-	-	0	
Peak Hour Factor	90	90	90	90	90	90	
Heavy Vehicles, %	0	0	2	0	2	2	
Mvmt Flow	6	169	479	33	0	436	

Major/Minor	Minor1	Major1	Major2	Minor2
Conflicting Flow All	813	356	0	0
Stage 1	596	-	-	-
Stage 2	218	-	-	-
Critical Hdwy	6.8	6.9	-	-
Critical Hdwy Stg 1	5.8	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-
Follow-up Hdwy	3.5	3.3	-	-
Pot Cap-1 Maneuver	320	646	-	0
Stage 1	519	-	-	0
Stage 2	804	-	-	0
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	286	578	-	-
Mov Cap-2 Maneuver	286	-	-	-
Stage 1	464	-	-	-
Stage 2	804	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v13.78		0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	578	-
HCM Lane V/C Ratio	-	-	0.292	-
HCM Control Delay (s/veh)	-	-	13.8	-
HCM Lane LOS	-	-	B	-
HCM 95th %ile Q(veh)	-	-	1.2	-

Intersection							
Int Delay, s/veh 6.4							
Movement	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations							
Traffic Vol, veh/h	199	35	0	282	139	6	
Future Vol, veh/h	199	35	0	282	139	6	
Conflicting Peds, #/hr	0	100	100	0	100	100	
Sign Control	Free	Free	Free	Free	Stop	Stop	
RT Channelized	-	None	-	None	-	None	
Storage Length	-	-	-	-	0	-	
Veh in Median Storage, #	0	-	-	0	0	-	
Grade, %	0	-	-	0	0	-	
Peak Hour Factor	90	90	90	90	90	90	
Heavy Vehicles, %	2	2	2	2	2	2	
Mvmt Flow	221	39	0	313	154	7	

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	0	0	360	754
Stage 1	-	-	-	413
Stage 2	-	-	-	341
Critical Hdwy	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	5.42
Follow-up Hdwy	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	1199	-	377
Stage 1	-	-	-	720
Stage 2	-	-	-	668
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	-	1072	-	301
Mov Cap-2 Maneuver	-	-	-	301
Stage 1	-	-	-	644
Stage 2	-	-	-	597

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0	29.08
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	306	-	-	1072	-
HCM Lane V/C Ratio	0.526	-	-	-	-
HCM Control Delay (s/veh)	29.1	-	-	0	-
HCM Lane LOS	D	-	-	A	-
HCM 95th %ile Q(veh)	2.9	-	-	0	-

Intersection							
Int Delay, s/veh 9.3							
Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations							
Traffic Vol, veh/h	1	75	78	24	357	5	
Future Vol, veh/h	1	75	78	24	357	5	
Conflicting Peds, #/hr	0	0	0	0	0	0	
Sign Control	Free	Free	Free	Free	Stop	Stop	
RT Channelized	-	None	-	None	-	None	
Storage Length	-	-	-	-	0	-	
Veh in Median Storage, #	-	0	0	-	0	-	
Grade, %	-	0	0	-	0	-	
Peak Hour Factor	90	90	90	90	90	90	
Heavy Vehicles, %	2	2	2	2	2	2	
Mvmt Flow	1	83	87	27	397	6	

Major/Minor	Major1	Major2	Minor2	Minor1
Conflicting Flow All	113	0	0	166
Stage 1	-	-	-	100
Stage 2	-	-	-	86
Critical Hdwy	4.12	-	-	6.42
Critical Hdwy Stg 1	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	5.42
Follow-up Hdwy	2.218	-	-	3.518
Pot Cap-1 Maneuver	1476	-	-	804
Stage 1	-	-	-	924
Stage 2	-	-	-	938
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	1476	-	-	803
Mov Cap-2 Maneuver	-	-	-	803
Stage 1	-	-	-	923
Stage 2	-	-	-	938

Approach	EB	WB	SB
HCM Control Delay, s/v	0.1	0	13.86
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	24	-	-	-	805
HCM Lane V/C Ratio	0.001	-	-	-	0.5
HCM Control Delay (s/veh)	7.4	0	-	-	13.9
HCM Lane LOS	A	A	-	-	B
HCM 95th %ile Q(veh)	0	-	-	-	2.8

Intersection table for HCM 7th TWSC 4: Bank & Wilton. Includes columns for Int Delay, s/veh (19.6), Movement (EBL, EBR, NBL, NBT, SBT, SBR), Lane Configurations, Traffic Vol, Future Vol, Conflicting Peds, Sign Control, RT Channelized, Storage Length, Veh in Median Storage, Grade, Peak Hour Factor, Heavy Vehicles, and Mvmt Flow.

Major/Minor table for HCM 7th TWSC 4: Bank & Wilton. Columns include Major/Minor, Minor2, Major1, Major2, and rows for Conflicting Flow All, Stage 1, Stage 2, Critical Hdwy, Critical Hdwy Stg 1, Critical Hdwy Stg 2, Follow-up Hdwy, Pot Cap-1 Maneuver, Stage 1, Stage 2, Platoon blocked, Mov Cap-1 Maneuver, Mov Cap-2 Maneuver, Stage 1, Stage 2.

Approach table for HCM 7th TWSC 4: Bank & Wilton. Columns include Approach (EB, NB, SB), HCM Control Delay, s/veh (0.98), and HCM LOS (F).

Minor Lane/Major Mvmt table for HCM 7th TWSC 4: Bank & Wilton. Columns include Minor Lane/Major Mvmt, NBL, NBTEBLn1, SBT, SBR, Capacity, HCM Lane V/C Ratio, HCM Control Delay, HCM Lane LOS, and HCM 95th %tile Q(veh).

Notes: - Volume exceeds capacity \$ Delay exceeds 300s + Computation Not Defined * All major volume in platoon

Intersection table for HCM 7th TWSC 5: Bank & Echo. Includes columns for Int Delay, s/veh (0.9), Movement (EBL, EBR, NBL, NBT, SBT, SBR), Lane Configurations, Traffic Vol, Future Vol, Conflicting Peds, Sign Control, RT Channelized, Storage Length, Veh in Median Storage, Grade, Peak Hour Factor, Heavy Vehicles, and Mvmt Flow.

Major/Minor table for HCM 7th TWSC 5: Bank & Echo. Columns include Major/Minor, Minor2, Major1, Major2, and rows for Conflicting Flow All, Stage 1, Stage 2, Critical Hdwy, Critical Hdwy Stg 1, Critical Hdwy Stg 2, Follow-up Hdwy, Pot Cap-1 Maneuver, Stage 1, Stage 2, Platoon blocked, Mov Cap-1 Maneuver, Mov Cap-2 Maneuver, Stage 1, Stage 2.

Approach table for HCM 7th TWSC 5: Bank & Echo. Columns include Approach (EB, NB, SB), HCM Control Delay, s/veh (19), and HCM LOS (C).

Minor Lane/Major Mvmt table for HCM 7th TWSC 5: Bank & Echo. Columns include Minor Lane/Major Mvmt, NBTEBLn1, SBT, Capacity, HCM Lane V/C Ratio, HCM Control Delay, HCM Lane LOS, and HCM 95th %tile Q(veh).

Intersection table for HCM 7th TWSC 8: Queen Elizabeth Driveway. Includes columns for Int Delay, s/veh (9.7), Movement (EBL, EBR, NBL, NBT, SBT, SBR), Lane Configurations, Traffic Vol, Future Vol, Conflicting Peds, Sign Control, RT Channelized, Storage Length, Veh in Median Storage, Grade, Peak Hour Factor, Heavy Vehicles, and Mvmt Flow.

Major/Minor table for HCM 7th TWSC 8: Queen Elizabeth Driveway. Columns include Major/Minor, Minor2, Major1, Major2, and rows for Conflicting Flow All, Stage 1, Stage 2, Critical Hdwy, Critical Hdwy Stg 1, Critical Hdwy Stg 2, Follow-up Hdwy, Pot Cap-1 Maneuver, Stage 1, Stage 2, Platoon blocked, Mov Cap-1 Maneuver, Mov Cap-2 Maneuver, Stage 1, Stage 2.

Approach table for HCM 7th TWSC 8: Queen Elizabeth Driveway. Columns include Approach (EB, NB, SB), HCM Control Delay, s/veh (68.51), and HCM LOS (F).

Minor Lane/Major Mvmt table for HCM 7th TWSC 8: Queen Elizabeth Driveway. Columns include Minor Lane/Major Mvmt, NBL, NBTEBLn1, SBT, SBR, Capacity, HCM Lane V/C Ratio, HCM Control Delay, HCM Lane LOS, and HCM 95th %tile Q(veh).

Intersection table for HCM 7th TWSC 10: Bank & Marche. Includes columns for Int Delay, s/veh (0), Movement (WBL, WBR, NBT, NBR, SBL, SBT), Lane Configurations, Traffic Vol, Future Vol, Conflicting Peds, Sign Control, RT Channelized, Storage Length, Veh in Median Storage, Grade, Peak Hour Factor, Heavy Vehicles, and Mvmt Flow.

Major/Minor table for HCM 7th TWSC 10: Bank & Marche. Columns include Major/Minor, Minor1, Major1, Major2, and rows for Conflicting Flow All, Stage 1, Stage 2, Critical Hdwy, Critical Hdwy Stg 1, Critical Hdwy Stg 2, Follow-up Hdwy, Pot Cap-1 Maneuver, Stage 1, Stage 2, Platoon blocked, Mov Cap-1 Maneuver, Mov Cap-2 Maneuver, Stage 1, Stage 2.

Approach table for HCM 7th TWSC 10: Bank & Marche. Columns include Approach (WB, NB, SB), HCM Control Delay, s/veh (0), and HCM LOS (A).

Minor Lane/Major Mvmt table for HCM 7th TWSC 10: Bank & Marche. Columns include Minor Lane/Major Mvmt, NBT, NBR/WBLn1, SBT, Capacity, HCM Lane V/C Ratio, HCM Control Delay, HCM Lane LOS, and HCM 95th %tile Q(veh).

2033 Scenario

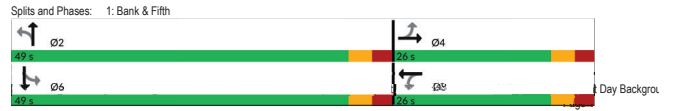
Major Event Egress

Baseline Conditions

Queues
1: Bank & Fifth

11/26/2024

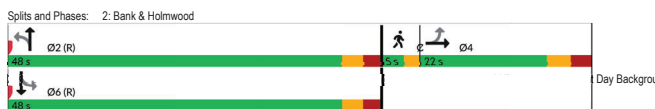
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	78	34	41	72	22	325	20	357
Future Volume (vph)	78	34	41	72	22	325	20	357
Lane Group Flow (vph)	0	155	46	207	0	413	0	463
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases	4		8		2		6	
Permitted Phases	4	4	8	8	2	2	6	6
Detector Phase								
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	26.0	26.0	26.0	26.0	49.0	49.0	49.0	49.0
Total Split (s)	26.0	26.0	26.0	26.0	49.0	49.0	49.0	49.0
Total Split (%)	34.7%	34.7%	34.7%	34.7%	65.3%	65.3%	65.3%	65.3%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Max	Max	Max	Max
Act Effct Green (s)	14.2	14.2	14.2	14.2	44.4	44.4	44.4	44.4
Actuated g/C Ratio	0.20	0.20	0.20	0.20	0.64	0.64	0.64	0.64
v/c Ratio	0.76	0.21	0.57	0.23	0.23	0.26	0.26	0.26
Control Delay (s/veh)	46.1	24.4	18.9	6.3	6.4	6.4	6.4	6.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	46.1	24.4	18.9	6.3	6.4	6.4	6.4	6.4
LOS	D	C	B	A	A	A	A	A
Approach Delay (s/veh)	46.1	19.9	6.3	6.4	6.4	6.4	6.4	6.4
Approach LOS	D	B	A	A	A	A	A	A
Queue Length 50th (m)	16.8	4.9	11.3	10.1	11.3	11.3	11.3	11.3
Queue Length 95th (m)	35.6	12.7	29.4	20.1	22.3	22.3	22.3	22.3
Internal Link Dist (m)	49.7		112.4	195.6				
Turn Bay Length (m)			45.0					
Base Capacity (vph)	289	312	473	1766	1774	1774	1774	1774
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	0.54	0.15	0.44	0.23	0.23	0.26	0.26	0.26



Queues
2: Bank & Holmwood

11/26/2024

Lane Group	EBT	NBL	NBT	SBL	SBT	Ø3
Lane Configurations						
Traffic Volume (vph)	22	52	273	30	285	
Future Volume (vph)	22	52	273	30	285	
Lane Group Flow (vph)	151	0	424	0	421	
Turn Type	NA	Perm	NA	Perm	NA	
Protected Phases	4	2		6	3	
Permitted Phases	4	2	2	6	6	
Detector Phase						
Switch Phase						
Minimum Initial (s)	4.4	10.0	10.0	4.0	4.0	1.0
Minimum Split (s)	22.0	48.0	48.0	48.0	48.0	5.0
Total Split (s)	22.0	48.0	48.0	48.0	48.0	5.0
Total Split (%)	29.3%	64.0%	64.0%	64.0%	64.0%	7%
Yellow Time (s)	3.0	3.0	3.0	3.0	2.0	2.0
All-Red Time (s)	2.6	2.2	2.2	2.2	2.2	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.6	5.2	5.2	5.2	5.2	0.0
Lead/Lag		Lag				Lead
Lead-Lag Optimize?						
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	None
Act Effct Green (s)	13.5	50.7	50.7	50.7	50.7	0.68
Actuated g/C Ratio	0.18	0.68	0.68	0.68	0.68	0.24
v/c Ratio	0.62	0.26	0.26	0.24	0.24	0.13
Control Delay (s/veh)	38.9	4.3	4.3	5.0	5.0	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	38.9	4.3	4.3	5.0	5.0	0.0
LOS	D	A	A	A	A	A
Approach Delay (s/veh)	38.9	4.3	4.3	5.0	5.0	0.0
Approach LOS	D	A	A	A	A	A
Queue Length 50th (m)	19.9	9.2	9.2	8.7	8.7	0.0
Queue Length 95th (m)	34.2	19.0	19.0	18.0	18.0	0.0
Internal Link Dist (m)	39.8	31.5	31.5	195.6	195.6	0.0
Turn Bay Length (m)						
Base Capacity (vph)	306	1625	1625	1768	1768	0.0
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	0.49	0.26	0.26	0.24	0.24	0.00



Queues
3: Bank & Exhibition

11/26/2024

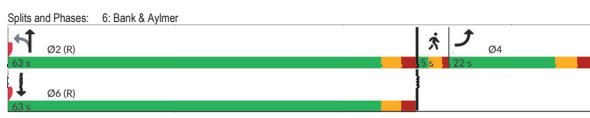
Lane Group	WBL	WBR	NBT	SBL	SBT	Ø1	Ø7
Lane Configurations							
Traffic Volume (vph)	1	4	367	1	351		
Future Volume (vph)	1	4	367	1	351		
Lane Group Flow (vph)	1	4	408	1	390		
Turn Type	Prot	Perm	NA	Perm	NA		
Protected Phases	8	2		6	1	7	
Permitted Phases	8	8		6	6		
Detector Phase	8	8	2	6	6		
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	1.0	1.0
Minimum Split (s)	26.0	26.0	39.0	44.0	44.0	5.0	5.0
Total Split (s)	26.0	26.0	39.0	44.0	44.0	5.0	5.0
Total Split (%)	34.7%	34.7%	52.0%	58.7%	58.7%	7%	7%
Yellow Time (s)	3.3	3.3	3.0	3.0	3.0	2.0	3.5
All-Red Time (s)	3.0	3.0	3.9	3.9	3.9	0.0	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.3	6.9	6.9	6.9	0.0	0.0
Lead/Lag	Lag	Lag	Lag			Lead	Lead
Lead-Lag Optimize?							
Recall Mode	None	None	C-Max	C-Max	C-Max	None	None
Act Effct Green (s)	10.0	10.0	70.4	70.4	70.4	0.94	0.94
Actuated g/C Ratio	0.13	0.13	0.94	0.94	0.94	0.13	0.13
v/c Ratio	0.00	0.03	0.14	0.00	0.13	0.13	0.13
Control Delay (s/veh)	28.0	19.5	1.4	2.0	1.0	0.0	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	28.0	19.5	1.4	2.0	1.0	0.0	0.0
LOS	C	B	A	A	A	A	A
Approach Delay (s/veh)	21.2	1.4	1.0	1.0	1.0	0.0	0.0
Approach LOS	C	A	A	A	A	A	A
Queue Length 50th (m)	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Queue Length 95th (m)	1.4	2.5	13.3	m0.1	10.0	0.0	0.0
Internal Link Dist (m)	30.6	33.7	44.0	44.8	44.8	0.0	0.0
Turn Bay Length (m)							
Base Capacity (vph)	429	298	3006	697	2977	0.0	0.0
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.00	0.01	0.14	0.00	0.13	0.00	0.13



Queues
6: Bank & Aylmer

11/26/2024

Lane Group	EBL	NBL	NBT	SBT	Ø3
Lane Configurations	↔	↔	↔	↔	
Traffic Volume (vph)	19	17	338	304	
Future Volume (vph)	19	17	338	304	
Lane Group Flow (vph)	39	0	395	364	
Turn Type	Prot	Perm	NA	NA	
Protected Phases	4	2	6	3	
Permitted Phases	4	2	6	3	
Detector Phase	4	2	2	6	
Switch Phase					
Minimum Initial (s)	10.0	30.0	30.0	30.0	1.0
Minimum Split (s)	22.0	63.0	63.0	63.0	5.0
Total Split (s)	22.0	63.0	63.0	63.0	5.0
Total Split (%)	24.4%	70.0%	70.0%	6%	
Yellow Time (s)	3.3	3.0	3.0	2.0	
All-Red Time (s)	2.2	2.2	2.2	2.2	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.5	5.2	5.2	6.0	
Lead/Lag	Lag				Lead
Lead-Lag Optimize?					
Recall Mode	Ped	C-Max	C-Max	C-Max	Max
Act Effct Green (s)	14.0	60.3	60.3	60.3	
Actuated g/C Ratio	0.16	0.67	0.67	0.67	
v/c Ratio	0.17	0.20	0.18	0.18	
Control Delay (s/veh)	23.5	6.0	5.5	5.5	
Queue Delay	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	23.5	6.0	5.5	5.5	
LOS	C	A	A	A	
Approach Delay (s/veh)	23.5	6.0	5.5	5.5	
Approach LOS	C	A	A	A	
Queue Length 50th (m)	3.2	12.0	10.2	10.2	
Queue Length 95th (m)	11.9	17.5	15.3	15.3	
Internal Link Dist (m)	76.7	28.1	10.1	10.1	
Turn Bay Length (m)					
Base Capacity (vph)	262	1968	2052	2052	
Starvation Cap Reductn	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	
Storage Cap Reductn	0	0	0	0	
Reduced v/c Ratio	0.15	0.20	0.18	0.18	



Queues
9: Queen Elizabeth Drive & Fifth

11/26/2024

Lane Group	EBL	NBL	NBT	SBT	Ø4
Lane Configurations	↔	↔	↔	↔	
Traffic Volume (vph)	141	44	301	292	
Future Volume (vph)	141	44	301	292	
Lane Group Flow (vph)	227	0	383	403	
Turn Type	Prot	Perm	NA	NA	
Protected Phases	10	2	6	4	
Permitted Phases	10	2	6	4	
Detector Phase	10	2	2	6	
Switch Phase					
Minimum Initial (s)	10.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.7	10.8	10.8	31.8	9.7
Total Split (s)	21.0	48.0	48.0	48.0	11.0
Total Split (%)	26.3%	60.0%	60.0%	60.0%	14%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.7	3.8	3.8	3.8	2.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.7	6.8	6.8	6.8	
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	Min	None	None	Max	None
Act Effct Green (s)	13.8	41.2	41.2	41.2	
Actuated g/C Ratio	0.20	0.81	0.81	0.81	
v/c Ratio	0.71	0.41	0.40	0.40	
Control Delay (s/veh)	38.8	8.8	8.8	8.8	
Queue Delay	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	38.8	8.8	8.8	8.8	
LOS	D	A	A	A	
Approach Delay (s/veh)	38.8	8.8	8.8	8.8	
Approach LOS	D	A	A	A	
Queue Length 50th (m)	26.8	23.5	24.6	24.6	
Queue Length 95th (m)	52.7	39.9	41.2	41.2	
Internal Link Dist (m)	57.2	0.1	5.9	5.9	
Turn Bay Length (m)					
Base Capacity (vph)	354	939	1002	1002	
Starvation Cap Reductn	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	
Storage Cap Reductn	0	0	0	0	
Reduced v/c Ratio	0.64	0.41	0.40	0.40	



Queues
7: Bank & Sunnyside

11/26/2024

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	Ø3	Ø7
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔		
Traffic Volume (vph)	32	29	17	36	20	275	15	312		
Future Volume (vph)	32	29	17	36	20	275	15	312		
Lane Group Flow (vph)	0	94	0	101	0	538	0	368		
Turn Type	Perm	NA	Perm	NA	Perm	NA	pm-pt	NA		
Protected Phases	4	8	8	2	2	1	6	3	7	
Permitted Phases	4	8	8	2	2	1	6	3	7	
Detector Phase	4	4	8	8	2	2	1	6		
Switch Phase										
Minimum Initial (s)	6.4	6.4	5.3	5.3	17.0	17.0	5.0	17.0	1.0	1.0
Minimum Split (s)	25.0	25.0	25.0	25.0	43.0	43.0	17.0	60.0	5.0	5.0
Total Split (s)	25.0	25.0	25.0	25.0	43.0	43.0	17.0	60.0	5.0	5.0
Total Split (%)	27.8%	27.8%	27.8%	27.8%	47.8%	47.8%	18.9%	66.7%	6%	6%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0
All-Red Time (s)	2.6	2.6	2.6	2.6	3.0	3.0	2.9	3.0	0.0	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	5.6	5.6	5.6	5.6	6.0	6.0	6.0	6.0		
Lead/Lag	Lag	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	Max	Max	None	Max	None	None
Act Effct Green (s)	11.7	11.5	11.5	11.5	59.8	59.8	59.8	59.8		
Actuated g/C Ratio	0.15	0.15	0.15	0.15	0.75	0.75	0.75	0.75		
v/c Ratio	0.56	0.48	0.16	0.16	0.19	0.19	0.19	0.19		
Control Delay (s/veh)	43.6	28.4	4.3	4.3	4.3	4.3	4.3	4.3		
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Total Delay (s/veh)	43.6	28.4	4.3	4.3	4.3	4.3	4.3	4.3		
LOS	D	C	A	A	A	A	A	A		
Approach Delay (s/veh)	43.6	28.4	4.3	4.3	4.3	4.3	4.3	4.3		
Approach LOS	D	C	A	A	A	A	A	A		
Queue Length 50th (m)	12.9	8.7	7.1	8.3	8.3	8.3	8.3	8.3		
Queue Length 95th (m)	26.7	22.2	14.7	16.9	16.9	16.9	16.9	16.9		
Internal Link Dist (m)	75.1	136.0	63.1	79.0	79.0	79.0	79.0	79.0		
Turn Bay Length (m)										
Base Capacity (vph)	280	328	2135	2099	2099	2099	2099	2099		
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	0.31	0.16	0.16	0.19	0.19	0.19	0.19		



HCM 7th AWSC
37: O' Connor & Fifth Avenue

11/26/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔					↔	↔				↔
Traffic Vol. veh/h	24	51	0	0	0	109	114	102	141	0	0	53
Future Vol. veh/h	24	51	0	0	0	109	114	102	141	0	0	53
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	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	27	57	0	0	0	121	127	113	157	0	0	59
Number of Lanes	0	1	0	0	0	1	0	1	0	0	0	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	8.9	8.3	11.2	7.6
HCM LOS	A	A	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	32%	32%	0%	0%
Vol Thru, %	29%	68%	0%	0%
Vol Right, %	39%	0%	100%	100%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	357	75	109	53
LT Vol	114	24	0	0
Through Vol	102	51	0	0
RT Vol	141	0	109	53
Lane Flow Rate	397	83	121	59
Geometry Grp	1	1	1	1
Degree of Util (X)	0.475	0.119	0.15	0.07
Departure Headway (Hd)	4.31	5.159	4.458	4.255
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	633	693	801	837
Service Time	2.343	3.21	2.504	2.303
HCM Lane V/C Ratio	0.477	0.12	0.151	0.07
HCM Control Delay, s/veh	11.2	8.9	8.3	7.6
HCM Lane LOS	B	A	A	A
HCM 95th-Hile Q	2.6	0.4	0.5	0.2

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↕		↕		↕
Traffic Vol, veh/h	0	5	0	359	296	70
Future Vol, veh/h	0	5	0	359	296	70
Conflicting Peds, #/hr	0	0	178	0	0	107
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	6	0	399	329	78
Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	-	546	585	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.245	4.145	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-3.3285	2.285	-	-	-
Pot Cap-1 Maneuver	0	634	982	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	434	797	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	NB	SB			
HCM Control Delay, s/veh	3.41	0	0			
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBEBLn1	SBT	SBR		
Capacity (veh/h)	797	-	434	-		
HCM Lane V/C Ratio	-	-	0.013	-		
HCM Control Delay (s/veh)	0	-	13.4	-		
HCM Lane LOS	A	-	B	-		
HCM 95th %tile Q(veh)	0	-	0	-		

Intersection						
Int Delay, s/veh	20.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↕			↕		↕
Traffic Vol, veh/h	238	210	50	115	227	127
Future Vol, veh/h	238	210	50	115	227	127
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	264	233	56	128	252	141
Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	562	323	393	0	-	0
Stage 1	323	-	-	-	-	-
Stage 2	239	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	492	723	1176	-	-	-
Stage 1	738	-	-	-	-	-
Stage 2	806	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	467	723	1176	-	-	-
Mov Cap-2 Maneuver	467	-	-	-	-	-
Stage 1	701	-	-	-	-	-
Stage 2	806	-	-	-	-	-
Approach	EB	NB	SB			
HCM Control Delay, s/veh	3.05	2.49	0			
HCM LOS	E					
Minor Lane/Major Mvmt	NBL	NBEBLn1	SBT	SBR		
Capacity (veh/h)	545	-	560	-		
HCM Lane V/C Ratio	0.047	-	0.889	-		
HCM Control Delay (s/veh)	8.2	0	43	-		
HCM Lane LOS	A	A	E	-		
HCM 95th %tile Q(veh)	0.1	-	10.3	-		

Intersection						
Int Delay, s/veh	0.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↕		↕		↕
Traffic Vol, veh/h	0	34	0	342	306	0
Future Vol, veh/h	0	34	0	342	306	0
Conflicting Peds, #/hr	0	0	0	0	0	86
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	38	0	380	340	0
Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	-	340	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.245	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-3.3285	-	-	-	-
Pot Cap-1 Maneuver	0	699	0	-	-	0
Stage 1	0	-	0	-	-	0
Stage 2	0	-	0	-	-	0
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	699	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	NB	SB			
HCM Control Delay, s/veh	0.45	0	0			
HCM LOS	B					
Minor Lane/Major Mvmt	NBEBLn1	SBT				
Capacity (veh/h)	-	699	-			
HCM Lane V/C Ratio	-	0.054	-			
HCM Control Delay (s/veh)	-	10.4	-			
HCM Lane LOS	-	B	-			
HCM 95th %tile Q(veh)	-	0.2	-			

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↕	↕	↕	↕	↕
Traffic Vol, veh/h	0	0	438	0	0	352
Future Vol, veh/h	0	0	438	0	0	352
Conflicting Peds, #/hr	0	0	0	100	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	2	0	2	2
Mvmt Flow	0	0	487	0	0	391
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	-	343	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	658	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	589	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s/veh	0	0	0			
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT		
Capacity (veh/h)	-	-	-	-	-	
HCM Lane V/C Ratio	-	-	-	-	-	
HCM Control Delay (s/veh)	-	-	0	-	-	
HCM Lane LOS	-	-	A	-	-	
HCM 95th %tile Q(veh)	-	-	-	-	-	

2033 Scenario

Major Event Egress

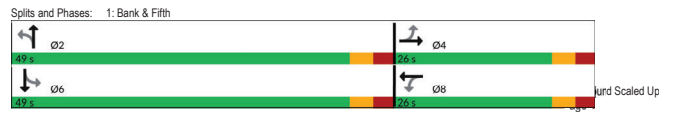
Future Volumes

Queues 1: Bank & Fifth

08/06/2024

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	78	34	41	72	22	333	20	373
Future Volume (vph)	78	34	41	72	22	333	20	373
Lane Group Flow (vph)	0	155	46	200	0	422	0	460
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases	4		8		2		6	
Permitted Phases	4	4	8	8	2	2	6	6
Detector Phase								
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	26.0	26.0	26.0	26.0	49.0	49.0	49.0	49.0
Total Split (s)	26.0	26.0	26.0	26.0	49.0	49.0	49.0	49.0
Total Split (%)	34.7%	34.7%	34.7%	34.7%	65.3%	65.3%	65.3%	65.3%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Max	Max	Max	Max
Act Effct Green (s)	14.2	14.2	14.2	14.2	44.4	44.4	44.4	44.4
Actuated g/C Ratio	0.20	0.20	0.20	0.20	0.64	0.64	0.64	0.64
v/c Ratio	0.76	0.21	0.58	0.24	0.24	0.27	0.27	0.27
Control Delay (s/veh)	46.5	24.3	18.9	6.4	6.5	6.5	6.5	6.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	46.5	24.3	18.9	6.4	6.5	6.5	6.5	6.5
LOS	D	C	B	A	A	A	A	A
Approach Delay (s/veh)	46.5	19.9	19.9	6.4	6.5	6.5	6.5	6.5
Approach LOS	D	B	B	A	A	A	A	A
Queue Length 50th (m)	16.8	4.9	11.3	10.4	12.0	12.0	12.0	12.0
Queue Length 95th (m)	35.7	12.7	29.6	20.5	23.3	23.3	23.3	23.3
Internal Link Dist (m)	49.7		112.4	195.6	190.0			
Turn Bay Length (m)			45.0					
Base Capacity (vph)	287	312	474	1765	1776	1776	1776	1776
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	0.54	0.15	0.44	0.24	0.24	0.27	0.27	0.27

Intersection Summary	
Cycle Length: 75	
Actuated Cycle Length: 69.6	
Natural Cycle: 75	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.76	
Intersection Signal Delay (s/veh): 13.8	Intersection LOS: B
Intersection Capacity Utilization 73.6%	ICU Level of Service D
Analysis Period (min) 15	

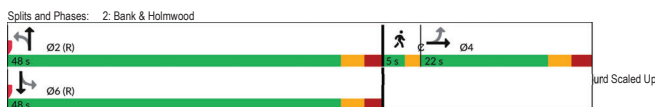


Queues 2: Bank & Holmwood

08/06/2024

Lane Group	EBT	NBL	NBT	SBL	SBT	Ø3
Lane Configurations						
Traffic Volume (vph)	22	52	281	33	297	
Future Volume (vph)	22	52	281	33	297	
Lane Group Flow (vph)	151	0	437	0	438	
Turn Type	NA	Perm	NA	Perm	NA	
Protected Phases	4	2		6	3	
Permitted Phases		2		6		
Detector Phase	4	2	2	6	6	
Switch Phase						
Minimum Initial (s)	4.4	10.0	10.0	4.0	4.0	1.0
Minimum Split (s)	22.0	48.0	48.0	48.0	48.0	5.0
Total Split (s)	22.0	48.0	48.0	48.0	48.0	5.0
Total Split (%)	29.3%	64.0%	64.0%	64.0%	64.0%	7%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	2.0
All-Red Time (s)	2.6	2.2	2.2	2.2	2.2	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.6	5.2	5.2	5.2	5.2	
Lead/Lag		Lag				Lead
Lead-Lag Optimize?						
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	None
Act Effct Green (s)	13.5	50.7	50.7	50.7	50.7	
Actuated g/C Ratio	0.18	0.68	0.68	0.68	0.68	
v/c Ratio	0.62	0.27	0.27	0.25	0.25	
Control Delay (s/veh)	38.9	3.6	3.6	5.2	5.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	38.9	3.6	3.6	5.2	5.2	
LOS	D	A	A	A	A	
Approach Delay (s/veh)	38.9	3.6	3.6	5.2	5.2	
Approach LOS	D	A	A	A	A	
Queue Length 50th (m)	19.9	9.5	9.3			
Queue Length 95th (m)	34.2	20.1	19.1			
Internal Link Dist (m)	39.8	31.5	195.6			
Turn Bay Length (m)						
Base Capacity (vph)	306	1620	1755			
Starvation Cap Reductn	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	
Reduced v/c Ratio	0.49	0.27	0.25			

Intersection Summary	
Cycle Length: 75	
Actuated Cycle Length: 75	
Offset: 74 (99%), Referenced to phase 2:NBL and 6:SBT, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.62	
Intersection Signal Delay (s/veh): 9.5	Intersection LOS: A
Intersection Capacity Utilization 59.7%	ICU Level of Service B
Analysis Period (min) 15	



Queues 3: Bank & Exhibition

08/06/2024

Lane Group	WBL	WBR	NBT	SBL	SBT	Ø1	Ø7
Lane Configurations							
Traffic Volume (vph)	9	8	370	13	351		
Future Volume (vph)	9	8	370	13	351		
Lane Group Flow (vph)	10	9	423	14	390		
Turn Type	Prot	Perm	NA	Perm	NA		
Protected Phases	8	2		6	1	7	
Permitted Phases		8		6			
Detector Phase	8	8	2	6	6		
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	1.0	1.0
Minimum Split (s)	26.0	26.0	39.0	44.0	44.0	5.0	5.0
Total Split (s)	26.0	26.0	39.0	44.0	44.0	5.0	5.0
Total Split (%)	34.7%	34.7%	52.0%	58.7%	58.7%	7%	7%
Yellow Time (s)	3.3	3.3	3.0	3.0	3.0	2.0	3.5
All-Red Time (s)	3.0	3.0	3.9	3.9	3.9	0.0	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	6.3	6.3	6.9	6.9	6.9		
Lead/Lag		Lag	Lag	Lag		Lead	Lead
Lead-Lag Optimize?		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	C-Max	C-Max	C-Max	None	None
Act Effct Green (s)	10.0	10.0	65.7	65.7	65.7		
Actuated g/C Ratio	0.13	0.13	0.88	0.88	0.88		
v/c Ratio	0.05	0.06	0.15	0.02	0.14		
Control Delay (s/veh)	29.0	17.5	2.4	2.6	1.8		
Queue Delay	0.0	0.0	0.0	0.0	0.0		
Total Delay (s/veh)	29.0	17.5	2.4	2.6	1.8		
LOS	C	B	A	A	A		
Approach Delay (s/veh)	23.6	2.4	1.8				
Approach LOS	C	A	A	A	A		
Queue Length 50th (m)	1.3	0.0	0.0	0.0	0.0		
Queue Length 95th (m)	5.3	3.9	13.7	m1.5	10.1		
Internal Link Dist (m)	30.6		33.7	40.0	44.8		
Turn Bay Length (m)							
Base Capacity (vph)	429	302	2773	644	2780		
Starvation Cap Reductn	0	0	0	0	0		
Spillback Cap Reductn	0	0	0	0	0		
Storage Cap Reductn	0	0	0	0	0		
Reduced v/c Ratio	0.02	0.03	0.15	0.02	0.14		

Intersection Summary	
Cycle Length: 75	
Actuated Cycle Length: 75	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.15	
Intersection Signal Delay (s/veh): 2.6	Intersection LOS: A
Intersection Capacity Utilization 43.5%	ICU Level of Service A
Analysis Period (min) 15	



Queues
6: Bank & Aylmer

08/06/2024

Lane Group	EBL	NBL	NBT	SBT	Ø3
Lane Configurations	[Diagram]				
Traffic Volume (vph)	19	17	353	312	
Future Volume (vph)	19	17	353	312	
Lane Group Flow (vph)	38	0	411	373	
Turn Type	Prot	Perm	NA	NA	
Protected Phases	4	2	6	3	
Permitted Phases	4	2	6		
Detector Phase	4	2	2	6	
Switch Phase					
Minimum Initial (s)	10.0	30.0	30.0	30.0	1.0
Minimum Split (s)	22.0	63.0	63.0	63.0	5.0
Total Split (s)	22.0	63.0	63.0	63.0	5.0
Total Split (%)	24.4%	70.0%	70.0%	70.0%	6%
Yellow Time (s)	3.3	3.0	3.0	3.0	2.0
All-Red Time (s)	2.2	2.2	2.2	2.2	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.5	5.2	5.2	5.2	
Lead/Lag	Lag				Lead
Lead-Lag Optimize?					
Recall Mode	Ped	C-Max	C-Max	C-Max	Max
Act Effct Green (s)	14.0		60.3	60.3	
Actuated g/C Ratio	0.16		0.67	0.67	
v/c Ratio	0.17		0.21	0.18	
Control Delay (s/veh)	23.5		6.0	5.6	
Queue Delay	0.0		0.0	0.0	
Total Delay (s/veh)	23.5		6.0	5.6	
LOS	C		A	A	
Approach Delay (s/veh)	23.5		6.0	5.6	
Approach LOS	C		A	A	
Queue Length 50th (m)	3.2		12.5	10.6	
Queue Length 95th (m)	11.9		18.2	15.7	
Internal Link Dist (m)	76.7		28.1	10.1	
Turn Bay Length (m)					
Base Capacity (vph)	262		1971	2055	
Starvation Cap Reductn	0		0	0	
Spillback Cap Reductn	0		0	0	
Storage Cap Reductn	0		0	0	
Reduced v/c Ratio	0.15		0.21	0.18	
Intersection Summary					
Cycle Length:	90				
Actuated Cycle Length:	90				
Offset:	87 (97%), Referenced to phase 2:NBT and 6:SBT, Start of Green				
Natural Cycle:	90				
Control Type:	Actuated-Coordinated				
Maximum v/c Ratio:	0.21				
Intersection Signal Delay (s/veh):	6.6				Intersection LOS: A
Intersection Capacity Utilization:	45.6%			ICU Level of Service A	
Analysis Period (min):	15				

Splits and Phases: 6: Bank & Aylmer

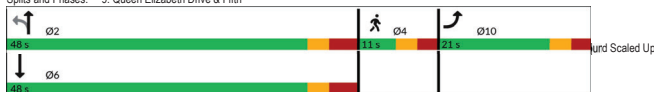


Queues
9: Queen Elizabeth Drive & Fifth

08/06/2024

Lane Group	EBL	NBL	NBT	SBT	Ø4
Lane Configurations	[Diagram]				
Traffic Volume (vph)	143	44	306	298	
Future Volume (vph)	143	44	306	298	
Lane Group Flow (vph)	229	0	389	410	
Turn Type	Prot	Perm	NA	NA	
Protected Phases	10	2	6	6	
Permitted Phases	2				
Detector Phase	10	2	2	6	
Switch Phase					
Minimum Initial (s)	10.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.7	10.8	10.8	31.8	9.7
Total Split (s)	21.0	48.0	48.0	48.0	11.0
Total Split (%)	26.3%	60.0%	60.0%	60.0%	14%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.7	3.8	3.8	3.8	2.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.7				6.8
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	Min	None	None	Max	None
Act Effct Green (s)	13.9		41.2	41.2	
Actuated g/C Ratio	0.21		0.81	0.81	
v/c Ratio	0.72		0.41	0.41	
Control Delay (s/veh)	39.0		8.9	8.7	
Queue Delay	0.0		0.0	0.0	
Total Delay (s/veh)	39.0		8.9	8.7	
LOS	D		A	A	
Approach Delay (s/veh)	39.0		8.9	8.7	
Approach LOS	D		A	A	
Queue Length 50th (m)	27.0		24.0	25.2	
Queue Length 95th (m)	53.5		40.7	42.0	
Internal Link Dist (m)	57.2		0.1	5.9	
Turn Bay Length (m)					
Base Capacity (vph)	353		938	1001	
Starvation Cap Reductn	0		0	0	
Spillback Cap Reductn	0		0	0	
Storage Cap Reductn	0		0	0	
Reduced v/c Ratio	0.65		0.41	0.41	
Intersection Summary					
Cycle Length:	80				
Actuated Cycle Length:	67.6				
Natural Cycle:	65				
Control Type:	Actuated-Uncoordinated				
Maximum v/c Ratio:	0.72				
Intersection Signal Delay (s/veh):	15.5				Intersection LOS: B
Intersection Capacity Utilization:	69.2%			ICU Level of Service C	
Analysis Period (min):	15				
# 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.					

Splits and Phases: 9: Queen Elizabeth Drive & Fifth



Queues
7: Bank & Sunnyside

08/06/2024

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	Ø3	Ø7	
Lane Configurations	[Diagram]										
Traffic Volume (vph)	32	29	17	36	20	290	15	319			
Future Volume (vph)	32	29	17	36	20	290	15	319			
Lane Group Flow (vph)	0	94	0	101	0	952	0	465			
Turn Type	Perm	NA	Perm	NA	Perm	NA	pm+pt	NA			
Protected Phases	4	8	8	2	2	1	6	3	7		
Permitted Phases	4	8	8	2	2	6					
Detector Phase	4	4	8	8	2	2	1	6			
Switch Phase											
Minimum Initial (s)	6.4	6.4	5.3	5.3	17.0	17.0	5.0	17.0	1.0	1.0	
Minimum Split (s)	25.0	25.0	25.0	25.0	43.0	43.0	17.0	60.0	5.0	5.0	
Total Split (s)	25.0	25.0	25.0	25.0	43.0	43.0	17.0	60.0	5.0	5.0	
Total Split (%)	27.8%	27.8%	27.8%	27.8%	47.8%	47.8%	18.9%	66.7%	6%	6%	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	
All-Red Time (s)	2.6	2.6	2.6	2.6	3.0	3.0	2.9	3.0	0.0	0.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0					
Total Lost Time (s)	5.6	5.6	5.6	5.6	6.0	6.0					
Lead/Lag	Lag	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	Max	Max	None	Max	None	None	
Act Effct Green (s)	11.7	11.5	11.5	11.5	59.8	59.8					
Actuated g/C Ratio	0.15	0.15	0.15	0.15	0.75	0.75					
v/c Ratio	0.56	0.48	0.16	0.19	0.19						
Control Delay (s/veh)	43.6	28.4	4.4	4.3							
Queue Delay	0.0	0.0	0.0	0.0							
Total Delay (s/veh)	43.6	28.4	4.4	4.3							
LOS	D	C	A	A	A	A					
Approach Delay (s/veh)	43.6	28.4	4.4	4.3							
Approach LOS	D	C	A	A	A	A					
Queue Length 50th (m)	12.9	8.7	7.5	8.5							
Queue Length 95th (m)	26.7	22.2	15.4	17.3							
Internal Link Dist (m)	75.1	136.0	63.1	79.0							
Turn Bay Length (m)											
Base Capacity (vph)	280	328	2144	2100							
Starvation Cap Reductn	0	0	0	0							
Spillback Cap Reductn	0	0	0	0							
Storage Cap Reductn	0	0	0	0							
Reduced v/c Ratio	0.34	0.31	0.16	0.19							
Intersection Summary											
Cycle Length:	90										
Actuated Cycle Length:	79.3										
Natural Cycle:	90										
Control Type:	Actuated-Uncoordinated										
Maximum v/c Ratio:	0.56										
Intersection Signal Delay (s/veh):	10.8										Intersection LOS: B
Intersection Capacity Utilization:	46.2%									ICU Level of Service A	
Analysis Period (min):	15										

Splits and Phases: 7: Bank & Sunnyside



HCM 7th AWSC
37: O' Connor & Fifth Avenue

08/01/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	[Diagram]											
Traffic Vol. veh/h	25	54	0	0	0	115	116	102	143	0	0	96
Future Vol. veh/h	25	54	0	0	0	115	116	102	143	0	0	96
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	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	28	60	0	0	0	128	129	113	159	0	0	62
Number of Lanes	0	1	0	0	0	1	0	1	0	0	0	1
Approach	EB	EB	WB	NB	SB							
Opposing Approach	WB		EB	SB								
Opposing Lanes	1		1	1								
Conflicting Approach Left	SB		NB	EB								
Conflicting Lanes Left	1		1	1								
Conflicting Approach Right	NB		SB	WB								
Conflicting Lanes Right	1		1	1								
HCM Control Delay, s/veh	9		8.4	11.4								
HCM LOS	A		A	B								
Lane	NBLn1	EBLn1	WBLn1	SBLn1								
Vol Left, %	32%	32%	0%	0%								
Vol Thru, %	28%	68%	0%	0%								
Vol Right, %	40%	0%	100%	100%								
Sign Control	Stop	Stop	Stop	Stop								
Traffic Vol by Lane	361	79	115	56								
LT Vol	116	25	0	0								
Through Vol	102	54	0	0								
RT Vol	143	0	115	56								
Lane Flow Rate	401	88	128	62								
Geometry Grp	1	1	1	1								
Degree of Util (X)	0.484	0.127	0.159	0.074								
Departure Headway (Hd)	4.342	5.19	4.488	4.294								
Convergence, Y/N	Yes	Yes	Yes	Yes								
Cap	826	688	795	829								
Service Time	2.379	3.244	2.538	2.348								
HCM Lane V/C Ratio	0.485	0.128	0.161	0.075								
HCM Control Delay, s/veh	11.4	9	8.4	7.7								
HCM Lane LOS	B	A	A	A								
HCM 95th-Hile Q	2.7	0.4	0.6	0.2								

2033 Major Event Egress Peak Hour Lansdowne 2.0 Transportation Impact Assessment 1:38 pm 05/17/2023 Total Egress Delay 2380 and Scaled Up

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	5	0	374	304	70
Future Vol, veh/h	0	5	0	374	304	70
Conflicting Peds, #/hr	0	0	178	0	0	107
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	None	None	None	None	None	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	6	0	416	338	78

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	- 555	594	0 - 0
Stage 1	- -	- -	- -
Stage 2	- -	- -	- -
Critical Hdwy	- 6.245	4.145	- -
Critical Hdwy Stg 1	- -	- -	- -
Critical Hdwy Stg 2	- -	- -	- -
Follow-up Hdwy	- 3.3285	2.285	- -
Pot Cap-1 Maneuver	0 528	975	- -
Stage 1	0 -	- -	- -
Stage 2	0 -	- -	- -
Platoon blocked, %	- -	- -	- -
Mov Cap-1 Maneuver	- 429	791	- -
Mov Cap-2 Maneuver	- -	- -	- -
Stage 1	- -	- -	- -
Stage 2	- -	- -	- -

Approach	EB	NB	SB
HCM Control Delay, s/43.51		0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBTEBLn1	SBT	SBR
Capacity (veh/h)	791	- 429	- -	- -
HCM Lane V/C Ratio	- -	0.013	- -	- -
HCM Control Delay (s/veh)	0 -	13.5	- -	- -
HCM Lane LOS	A	B	- -	- -
HCM 95th %tile Q(veh)	0 -	0	- -	- -

Intersection						
Int Delay, s/veh	0.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	34	0	358	314	0
Future Vol, veh/h	0	34	0	358	314	0
Conflicting Peds, #/hr	0	0	0	0	0	86
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	None	None	None	None	None	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	38	0	398	349	0

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	- 349	- 0	- 0
Stage 1	- -	- -	- -
Stage 2	- -	- -	- -
Critical Hdwy	- 6.245	- -	- -
Critical Hdwy Stg 1	- -	- -	- -
Critical Hdwy Stg 2	- -	- -	- -
Follow-up Hdwy	- 3.3285	- -	- -
Pot Cap-1 Maneuver	0 691	0	- 0
Stage 1	0 -	0 -	- 0
Stage 2	0 -	0 -	- 0
Platoon blocked, %	- -	- -	- -
Mov Cap-1 Maneuver	- 691	- -	- -
Mov Cap-2 Maneuver	- -	- -	- -
Stage 1	- -	- -	- -
Stage 2	- -	- -	- -

Approach	EB	NB	SB
HCM Control Delay, s/40.51		0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBTEBLn1	SBT
Capacity (veh/h)	- 691	- -
HCM Lane V/C Ratio	- 0.055	- -
HCM Control Delay (s/veh)	- 10.5	- -
HCM Lane LOS	- B	- -
HCM 95th %tile Q(veh)	- 0.2	- -

Intersection						
Int Delay, s/veh	23.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	242	214	57	115	227	134
Future Vol, veh/h	242	214	57	115	227	134
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	None	None	None	None	None	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	269	238	63	128	252	149

Major/Minor	Minor2	Major1	Major2	
Conflicting Flow All	581	327	401	0 - 0
Stage 1	327	- -	- -	- -
Stage 2	254	- -	- -	- -
Critical Hdwy	6.4	6.2	4.1	- -
Critical Hdwy Stg 1	5.4	- -	- -	- -
Critical Hdwy Stg 2	5.4	- -	- -	- -
Follow-up Hdwy	3.5	3.3	2.2	- -
Pot Cap-1 Maneuver	479	719	1168	- -
Stage 1	735	- -	- -	- -
Stage 2	793	- -	- -	- -
Platoon blocked, %	- -	- -	- -	- -
Mov Cap-1 Maneuver	451	719	1168	- -
Mov Cap-2 Maneuver	451	- -	- -	- -
Stage 1	693	- -	- -	- -
Stage 2	793	- -	- -	- -

Approach	EB	NB	SB
HCM Control Delay, s/49.99		2.74	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBTEBLn1	SBT	SBR
Capacity (veh/h)	597	- 547	- -	- -
HCM Lane V/C Ratio	0.054	- 0.927	- -	- -
HCM Control Delay (s/veh)	8.3	0 50	- -	- -
HCM Lane LOS	A	A E	- -	- -
HCM 95th %tile Q(veh)	0.2	- 11.5	- -	- -

Intersection						
Int Delay, s/veh	0.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	4	444	1	0	364
Future Vol, veh/h	0	4	444	1	0	364
Conflicting Peds, #/hr	0	0	0	100	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	None	None	None	None	None	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	-	-	-
Grade, %	0	-	-	-	-	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	2	0	2	2
Mvmt Flow	0	4	493	1	0	404

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	- 347	0	0 - -
Stage 1	- -	- -	- -
Stage 2	- -	- -	- -
Critical Hdwy	- 6.9	- -	- -
Critical Hdwy Stg 1	- -	- -	- -
Critical Hdwy Stg 2	- -	- -	- -
Follow-up Hdwy	- 3.3	- -	- -
Pot Cap-1 Maneuver	0 655	- -	- 0
Stage 1	0 -	- -	- 0
Stage 2	0 -	- -	- 0
Platoon blocked, %	- -	- -	- -
Mov Cap-1 Maneuver	- 585	- -	- -
Mov Cap-2 Maneuver	- -	- -	- -
Stage 1	- -	- -	- -
Stage 2	- -	- -	- -

Approach	WB	NB	SB
HCM Control Delay, s/11.2		0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR/WBLn1	SBT
Capacity (veh/h)	- -	585	- -
HCM Lane V/C Ratio	- -	0.008	- -
HCM Control Delay (s/veh)	- -	11.2	- -
HCM Lane LOS	- -	B	- -
HCM 95th %tile Q(veh)	- -	0	- -