



# Lansdowne 2.0 Event Centre

## Transportation Impact Assessment

11/07/2025



PLACE



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# **LANSDOWNE 2.0**

## **EVENT CENTRE (PHASE 1)**

**Transportation Impact Assessment Report**  
**Step 4 – Strategy Report**

11/07/2025

## DOCUMENT CONTROL ISSUE SHEET


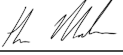
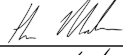
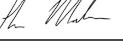
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## Certification Form for Transportation Impact Assessment (TIA) Study

### 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 registered<sup>1</sup> professional in good standing, whose field of expertise
  - is either transportation engineering
  - or transportation planning.

<sup>1</sup> 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 11 day of July, 2025.  
(City)

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Signature of individual certifier that they meet the above four criteria

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**Stamp**



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**Appendix B – Intersection Collision Data**

**Appendix C – NCHRP 684 Internal Trip Capture Estimation Worksheets**

**Appendix D – Vehicle Swept Path Analysis**

**Appendix E – MMLOS Analysis Data**

**Appendix F – Construction Access**

**Appendix G – TDM Summary & Check Lists**

**Appendix H – 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 <sup>2</sup> ) [sq-ft] {unites}	<p><b>Phase 1:</b></p> <p><b>Indoor Multi-Purpose Event Centre:</b> 5,500 seats (6,500 spectators)</p> <p><b>Phase 2:</b></p> <p><b>New North Stadium Stands:</b> 11,200 seats (12,100 spectators)</p> <p><b>Phase 3:</b></p> <p><b>Office:</b> 2,323 m<sup>2</sup> [25,000 sq-ft] (net increase of 1,324 m<sup>2</sup> or 14,240 sq-ft)</p> <p><b>Retail:</b> 4,611 m<sup>2</sup> [49,635 sq-ft] (net increase of 802 m<sup>2</sup> or 8,635 sq-ft)</p> <p><b>Residential:</b> 770 new dwelling units</p>
Number of Accesses and Locations	<p>Four existing site access locations:</p> <ol style="list-style-type: none"> <li>1. Bank Street / Exhibition Way</li> <li>2. Bank Street / Marché Way</li> <li>3. Queen Elizabeth Driveway / Princess Patricia Way</li> <li>4. Holmwood Parking Garage Ramp (Private, Residents Only Access)</li> </ol>
Phase of Development	<p>Phase 1 - Event Center (2028) <i>Existing Land Use</i></p> <p>Phase 2 - North Stadium Stands + Retail Podium (2029/2030) <i>Existing Land Use</i></p> <p>Phase 3 – Residential Towers (2031)</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 Triggers

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-Detached	60 units	✘
Multi-Use Family (Low-Rise)	90 units	✘
Multi-Use Family (High-Rise)	150 units	✓
Office	1,400 m <sup>2</sup>	✘
Industrial	7,000 m <sup>2</sup>	✘
Fast-food restaurant or coffee shop	110 m <sup>2</sup>	✘
Destination retail	1,800 m <sup>2</sup>	✓
Gas station or convenience market	90 m <sup>2</sup>	✘

\* 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: Location Triggers

	Yes	No
Does the development propose a new driveway to a boundary street that is designated as part of the City's Transit Priority, Rapid Transit or Cross-Town Bikeways?	✓	
Is the development in a Design Priority Area (DPA) or Transit-oriented Development (TOD) zone?	✓	
Is the development located in a "Hub" identified as a Protected Major Transit Station Areas (PMTSA)? *		✘

\*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 Screening Summary

Table 1.5: TIA Screening 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

#### 2.1.1 PROPOSED DEVELOPMENT

The City of Ottawa is proceeding with a Site Plan Control application for a new multi-purpose event centre 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 event centre replaces the existing TD Place Arena (previously known as the Ottawa Civic Centre) with a multi-purpose venue with a seated capacity of 5,500 seats (total spectator capacity of 6,500 including standing-only).

This Site Plan Application for the new event centre represents the first 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 event centre.

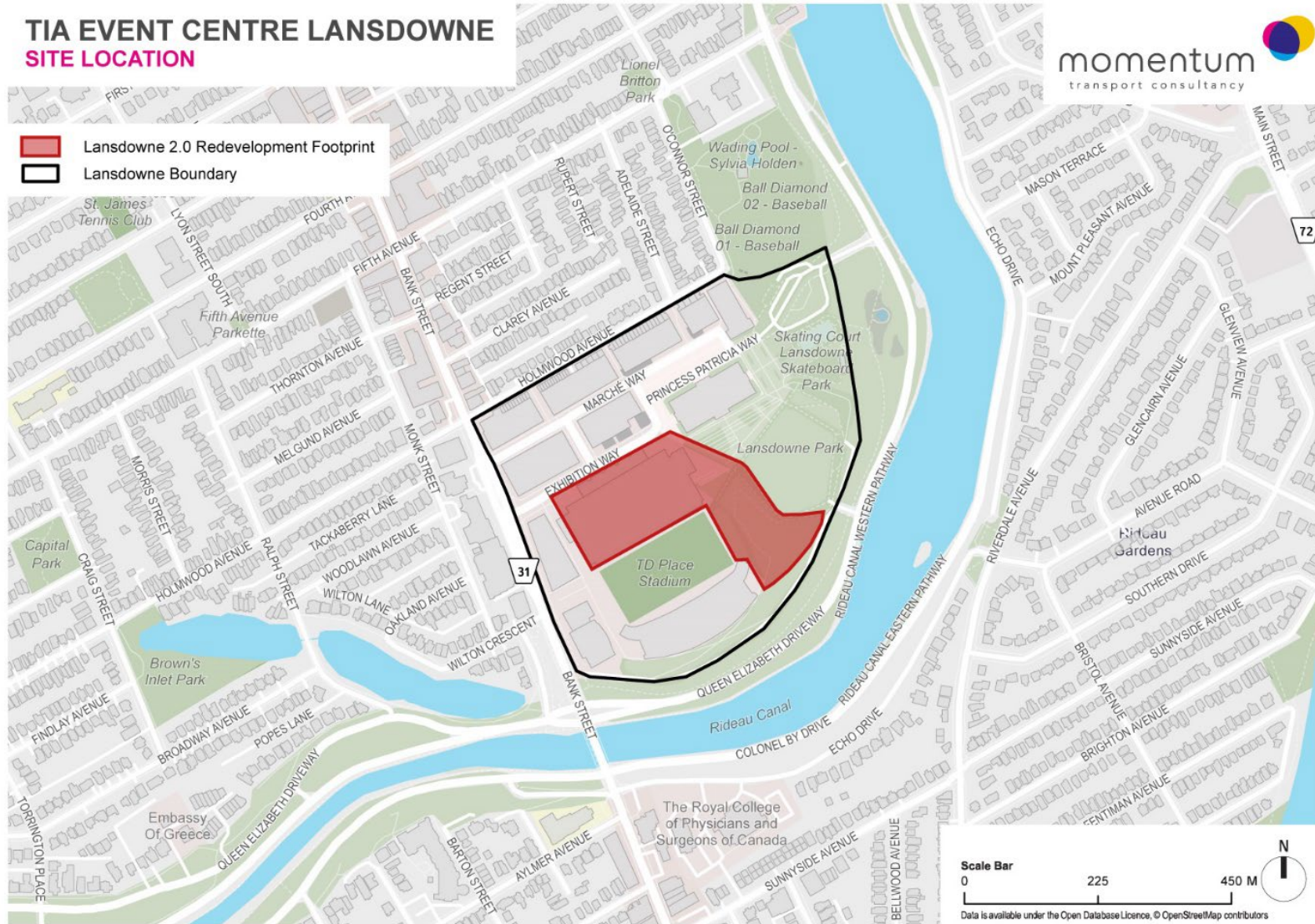
The Lansdowne 2.0 redevelopment plan features a new multi-purpose event centre, new north stadium stands, as well as additional residential housing, destination retail, and office space.

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 ft<sup>2</sup> 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



This Transportation Impact Assessment (TIA) is submitted in support of the Site Plan Application for Phase 1 of the Lansdowne 2.0 redevelopment plan.

The proposed improvements include the construction of a new 5,550 seat (6,500 attendee) multi-purpose event centre and associated public realm improvements at the Great Lawn south of the Aberdeen Pavilion. Other improvements include the provision of a dedicated layby for media and broadcast trucks south of the new event centre.

Spectator access to the new event centre will be provided at the North Main Entrance facing the Aberdeen Pavilion and Exhibition Way.

Additional gateway entrances are provided at the South Entrance (Patio) and East Entrance (Terrace) which will be used for evacuation egress, and when required for events with expanded capacity inclusive of additional floor seating and standing-only tickets (i.e. 6,500 attendees).

All event centre entrance locations connect to multi-use pathways within Lansdowne with connections to existing external pathways located on Queen Elizabeth Driveway and 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.

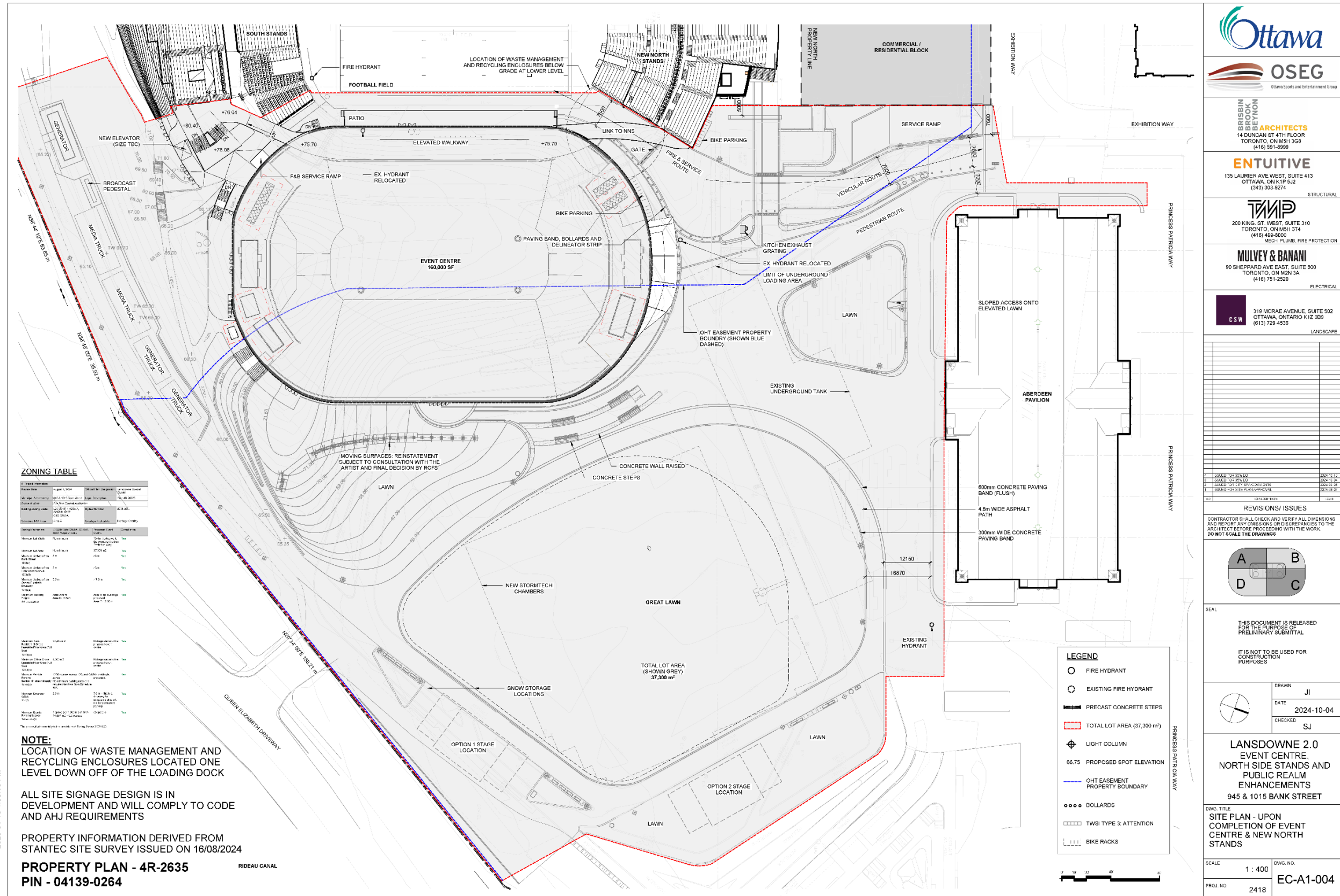
Access for deliveries and servicing will be facilitated at the Bank Street at Exhibition Way intersection and/or Marche Way. Service deliveries and garbage pickup to the new event centre will be facilitated via the existing service ramp location on Exhibition Way, which will continue to provide access to a consolidated underground loading dock and servicing bay for both the event centre and stadium.

Similar to how access is currently managed during events, truck deliveries and garbage pickup timings will be closely coordinated through the site operator as part of the traffic management plan for varying event sizes.

Truck deliveries and the load-in / load-out of shows and concerts at the new event centre will be facilitated at the existing service ramp located on Exhibition Way. The new event centre will feature a 14.6m 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** illustrates the proposed Site Plan for the new Event Centre at Lansdowne.

Figure 2.2: Lansdowne 2.0 Event Centre Site Plan



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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.

The construction site plan for this phase is shown in **Figure 2.3**.

**Phase 2:**

*Phase 2* 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.

The construction site plan for this phase is shown in **Figure 2.4**.

**Phase 3:**

*Phase 3* consists of replacing the existing 41,000 ft<sup>2</sup> of commercial retail and box office annex to the Stadium on Exhibition Way with 49,635 ft<sup>2</sup> of new podium-level commercial retail space. This represents a net increase of 8,635 ft<sup>2</sup> of commercial retail space from what is currently provided today.

The existing 10,760 ft<sup>2</sup> of office space will also be extended, by a net increase of 14,240 ft<sup>2</sup>, resulting in a total office space of 25,000 ft<sup>2</sup>.

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 3 is anticipated to be completed between 2032 and 2036.

The construction site plan for this phase is shown in **Figure 2.5**. Further details on site access during construction are detailed in section 4.4.2. Prior to the start of construction, the contractor will provide a traffic management plan, a construction site pedestrian control plan and traffic protection plan for City review.

**Figure 2.6** illustrates a rendering of the Lansdowne 2.0 redevelopment concept at buildout.

Figure 2.3: Phase 1 Site Construction Plan

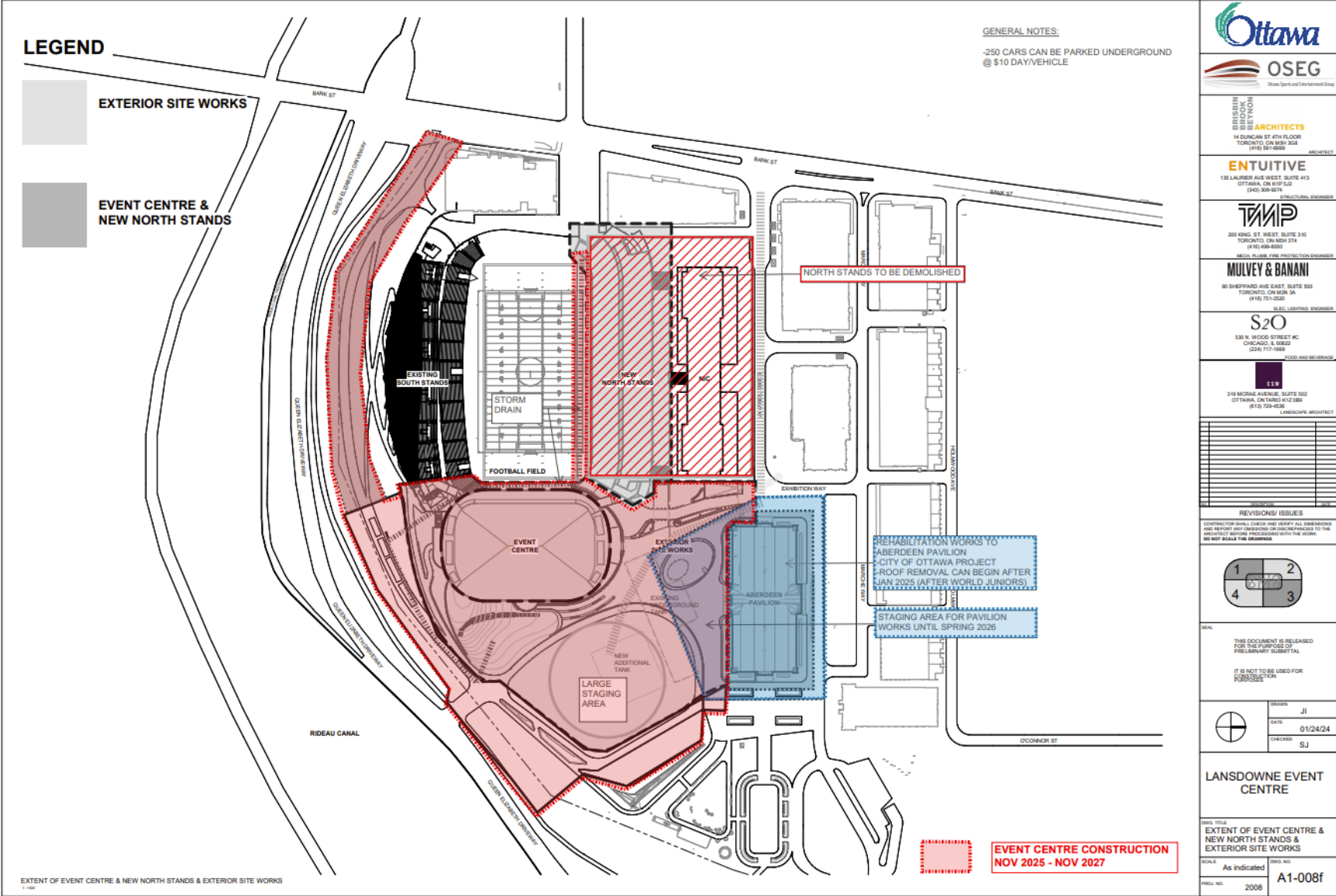


Figure 2.4: Phase 2 Site Construction Plan

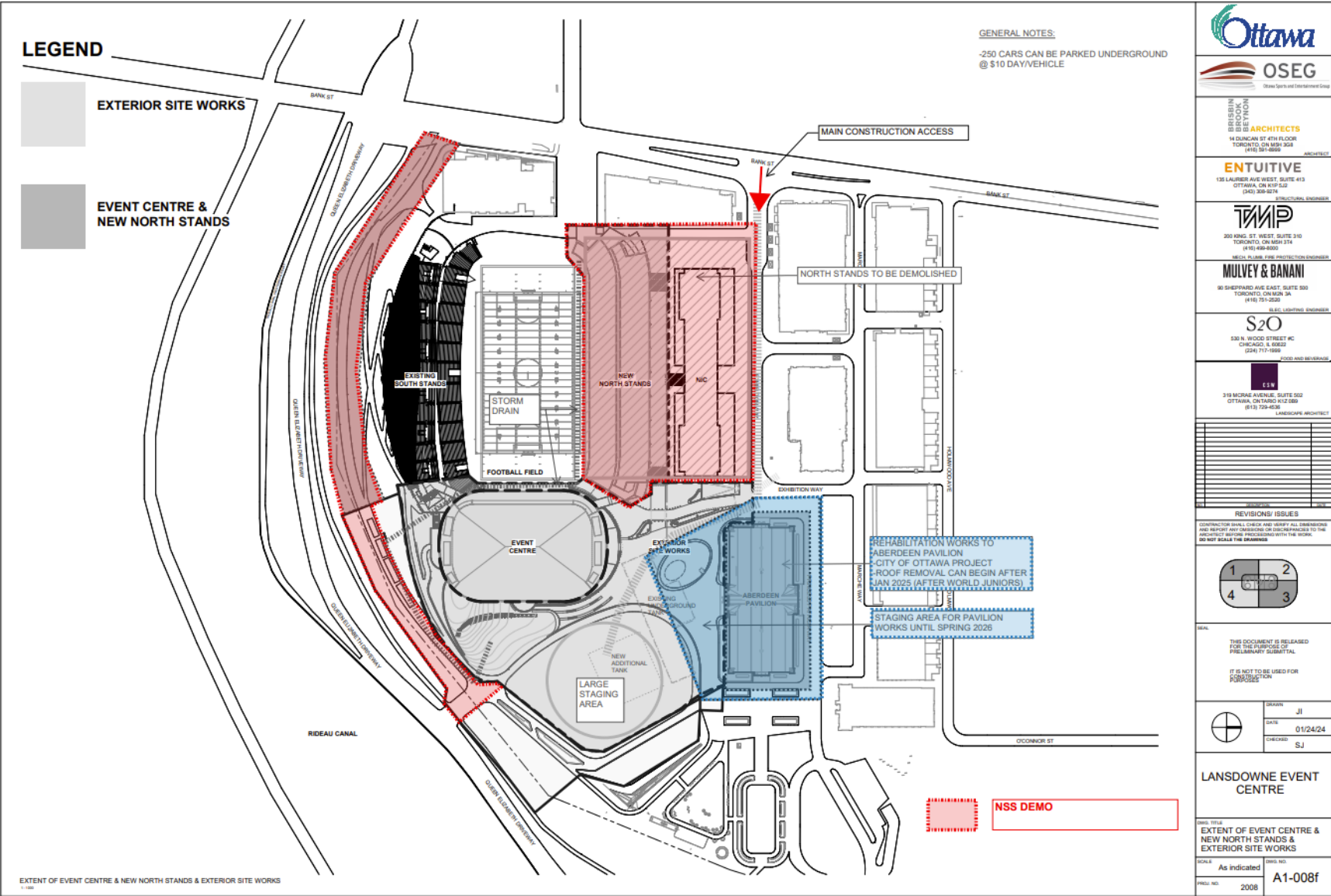


Figure 2.5: Phase 3 Site Construction Plan

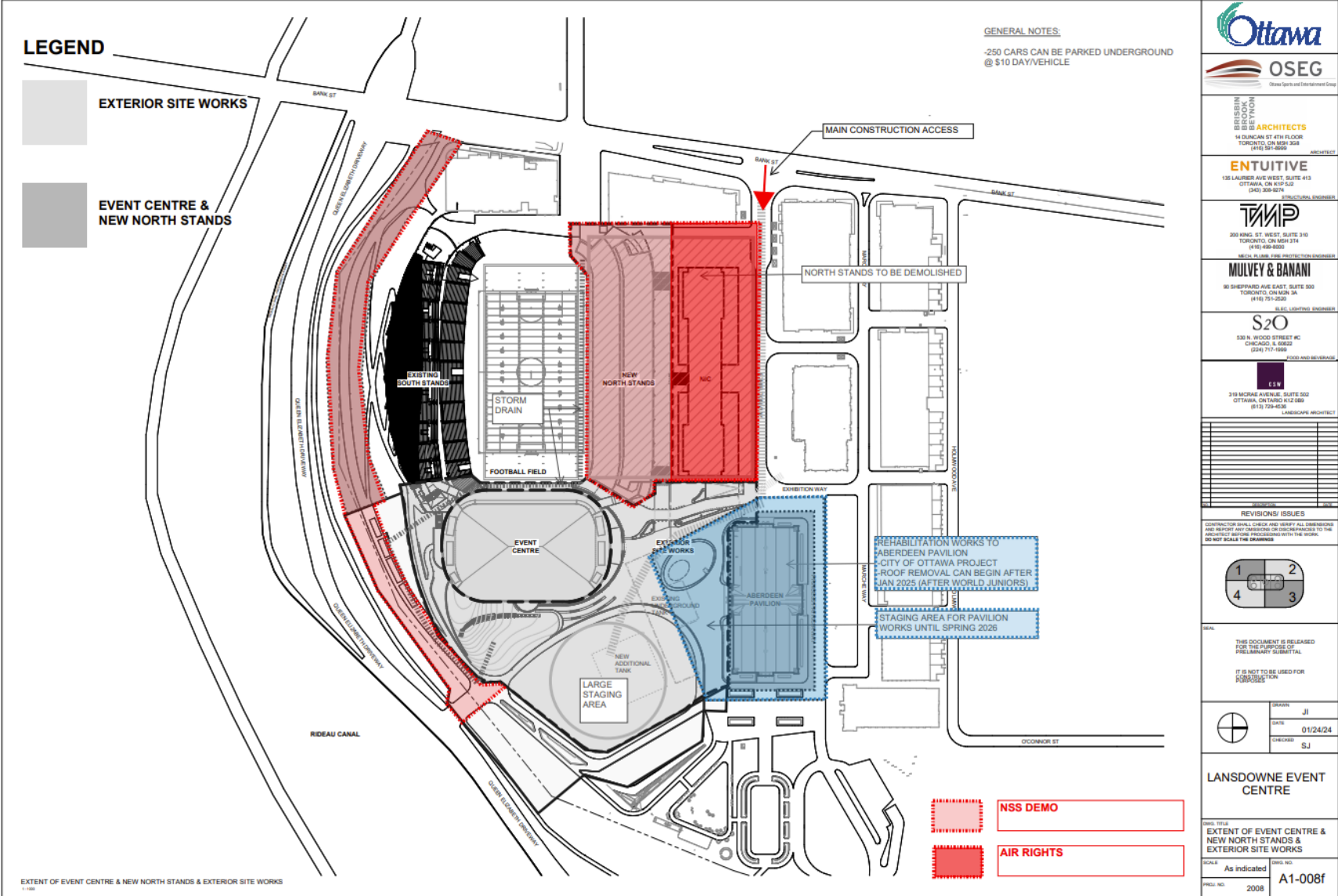


Figure 2.6: Lansdowne 2.0 Redevelopment Concept



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.

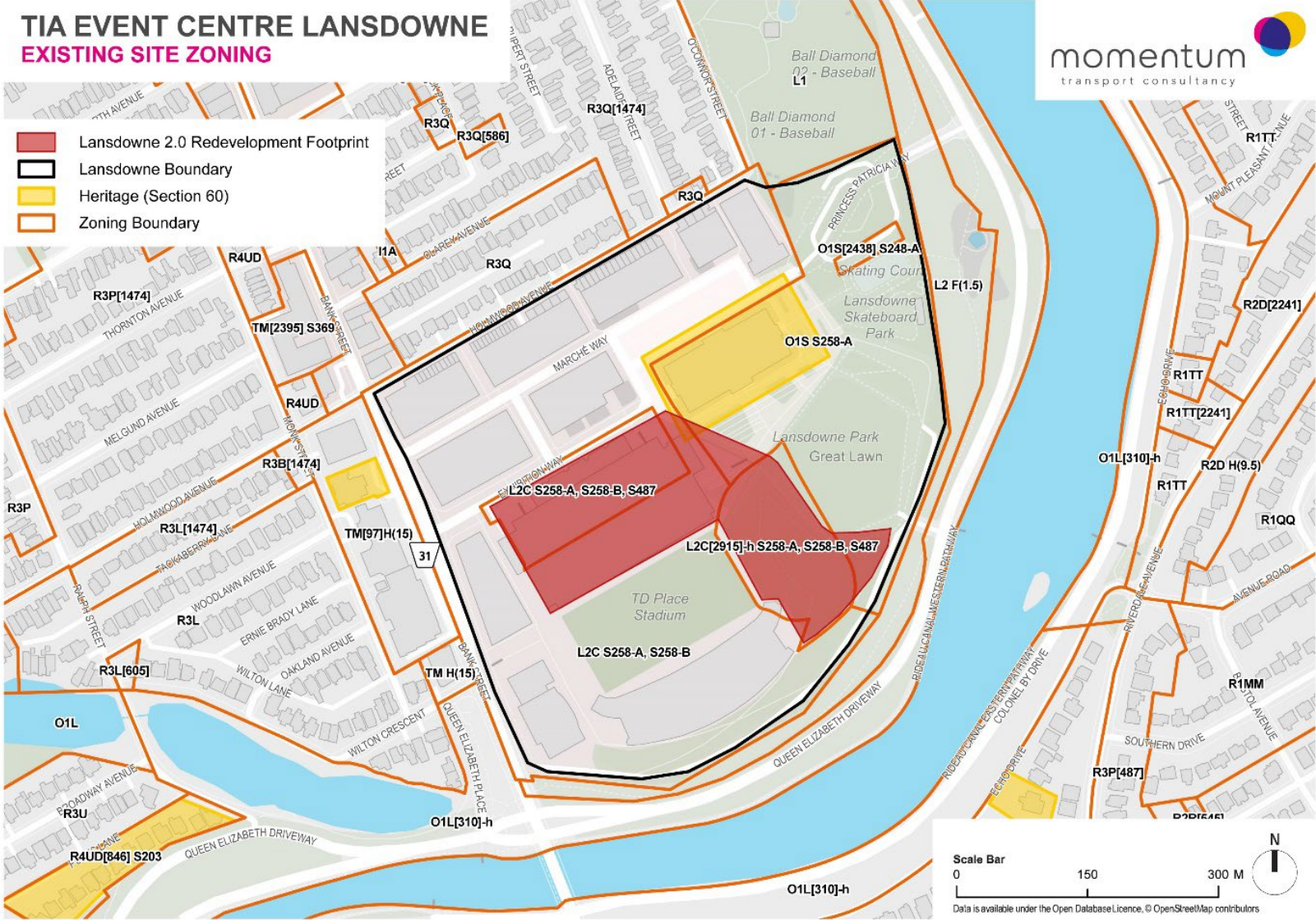
The eastern portion of the proposed site is zoned O1S S258-A and as outlined in the City of Ottawa's Zoning By-Law, the purpose of the O1- Parks and Open Space Zone is to:

- 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 TD Place 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 2.7** illustrates the existing site zoning at Lansdowne.

Figure 2.7: Existing Site Zoning



## 2.1.2 EXISTING CONDITIONS

### 2.1.2.1 Roads and Traffic Control

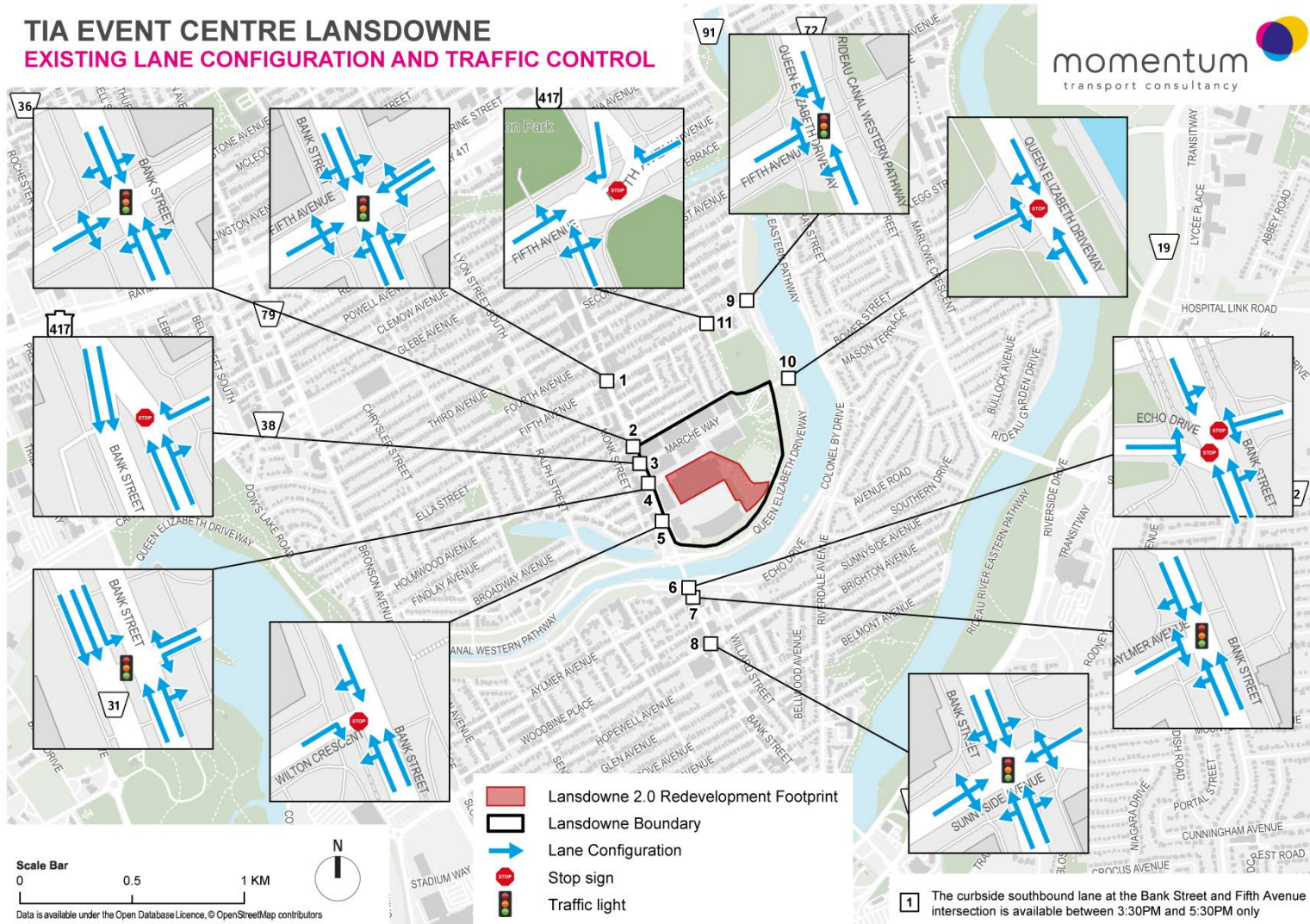
The roadways and intersections under consideration in the study area are described below:

- **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 Local Cycling Route as per the City of Ottawa's Bike Plan and is also 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. Queen Elizabeth Driveway is designated as a Major Pathway as per the City of Ottawa Bike Plan. 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 roadway is designated as a Local Route per the City of Ottawa Bike Plan. 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 and TD Place. 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 and TD Place. 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. Across the frontage of the subject site, 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 northside.
- **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 Aylmer 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. The roadway west of the intersection with Bank Street is designated as local route as per the City of Ottawa Bike Plan. 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. The roadway is designated as a local route as per the City of Ottawa Bike Plan. 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.

**Figure 2.8** illustrates the existing lane configuration and traffic control.

Figure 2.8: Existing Lane Configuration and Traffic Control



### **2.1.2.2 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 Bank Street) which forms a connection to the O'Connor Street bike lanes and cycle tracks.

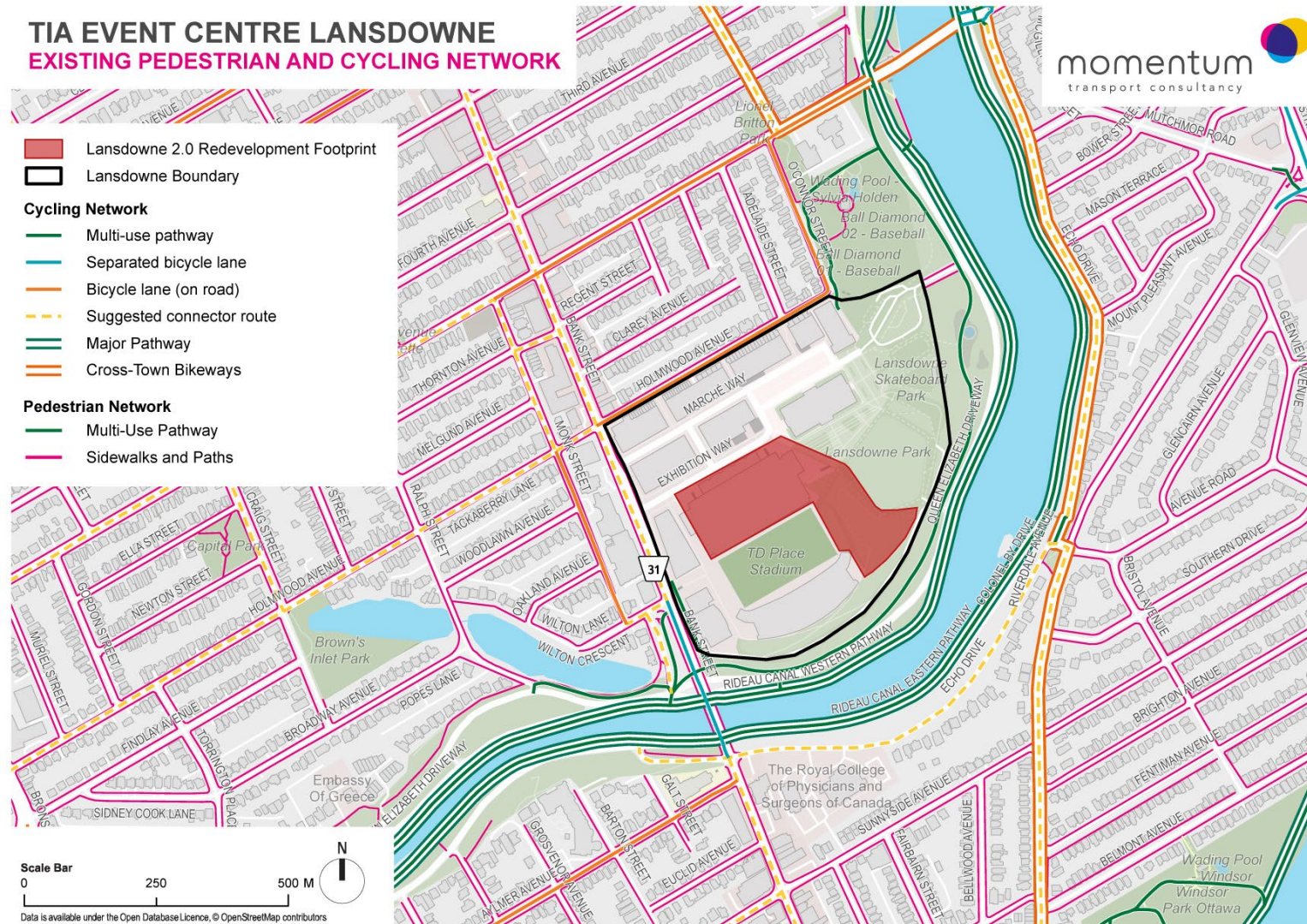
Queen Elizabeth Driveway, which is under the jurisdiction of the NCC, features off-street multi-use pathways.

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 2.9** illustrates existing and planned pedestrian and cycling facilities within the vicinity of Lansdowne.

Figure 2.9: Existing Pedestrian and Cycling Network



### 2.1.2.3 Transit

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

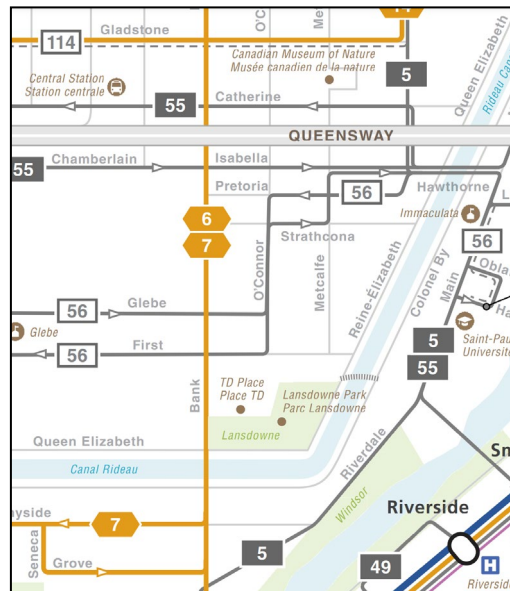
Route 6 is a Frequent Route that runs 7 days per week in all time periods between Greenboro and Rockcliffe. It runs with 15-minute headways or less during the weekday peak periods and 15-minute or less headways during the weekend peak periods.

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 2.10** illustrates transit routes in the vicinity of Lansdowne.

Figure 2.10: Study Area Transit Route and Stops

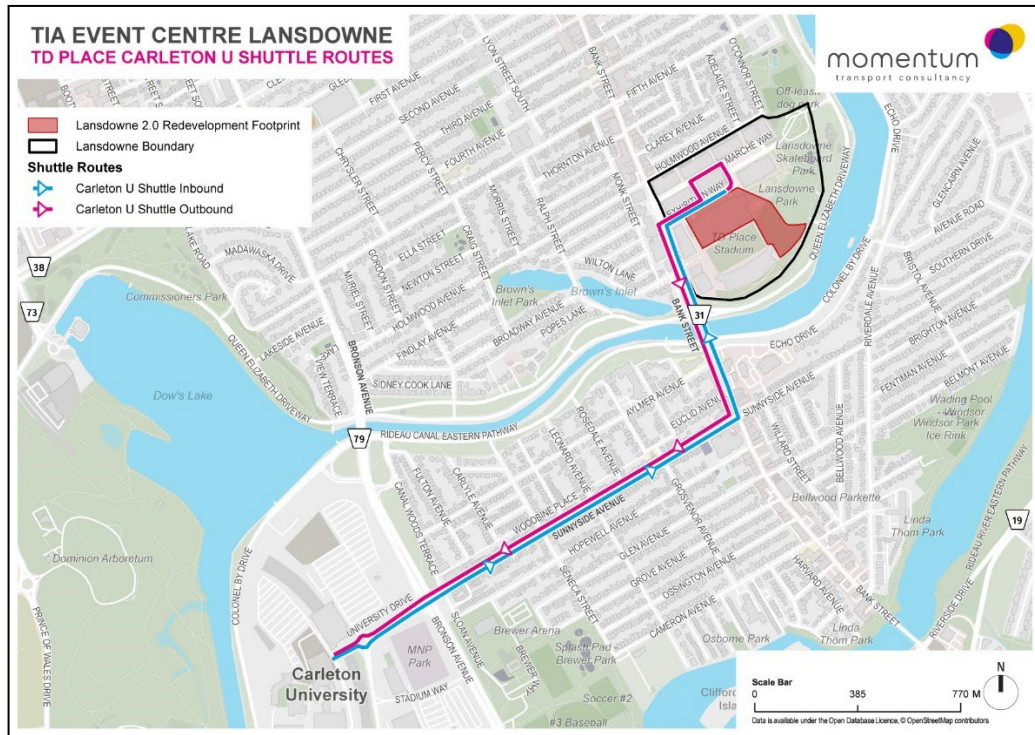


Enhanced transit services are provided to support special events at Lansdowne and TD Place. This includes the provision of free transit to ticketholders for all events held at Lansdowne through an innovative program that is the first of its kind for large venues. The cost of transit service is free of 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 2.11** illustrates the Carleton U shuttle route for Ottawa 67's and PHLW Ottawa games.

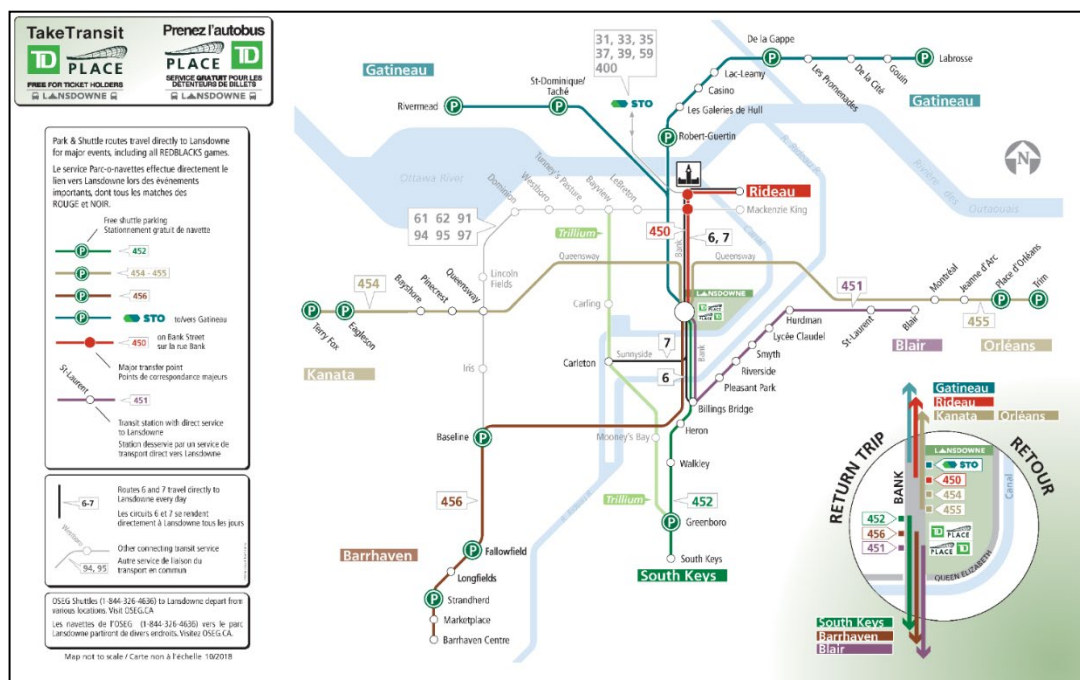
Figure 2.11: Carleton U Park & Shuttle Route (Ottawa 67's and PWHL Ottawa)



For major events, which include events with 10,000 or more attendees, dedicated Park & Shuttle services are provided with event day services provided from OC Transpo and STO 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 2.12 illustrates special event transit and shuttle services to TD Place.

Figure 2.12: Enhanced Transit and Shuttle Service to TD Place



#### 2.1.2.4 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 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 2.13** through **Figure 2.15**.

Figure 2.13: Existing Internal Site Circulation

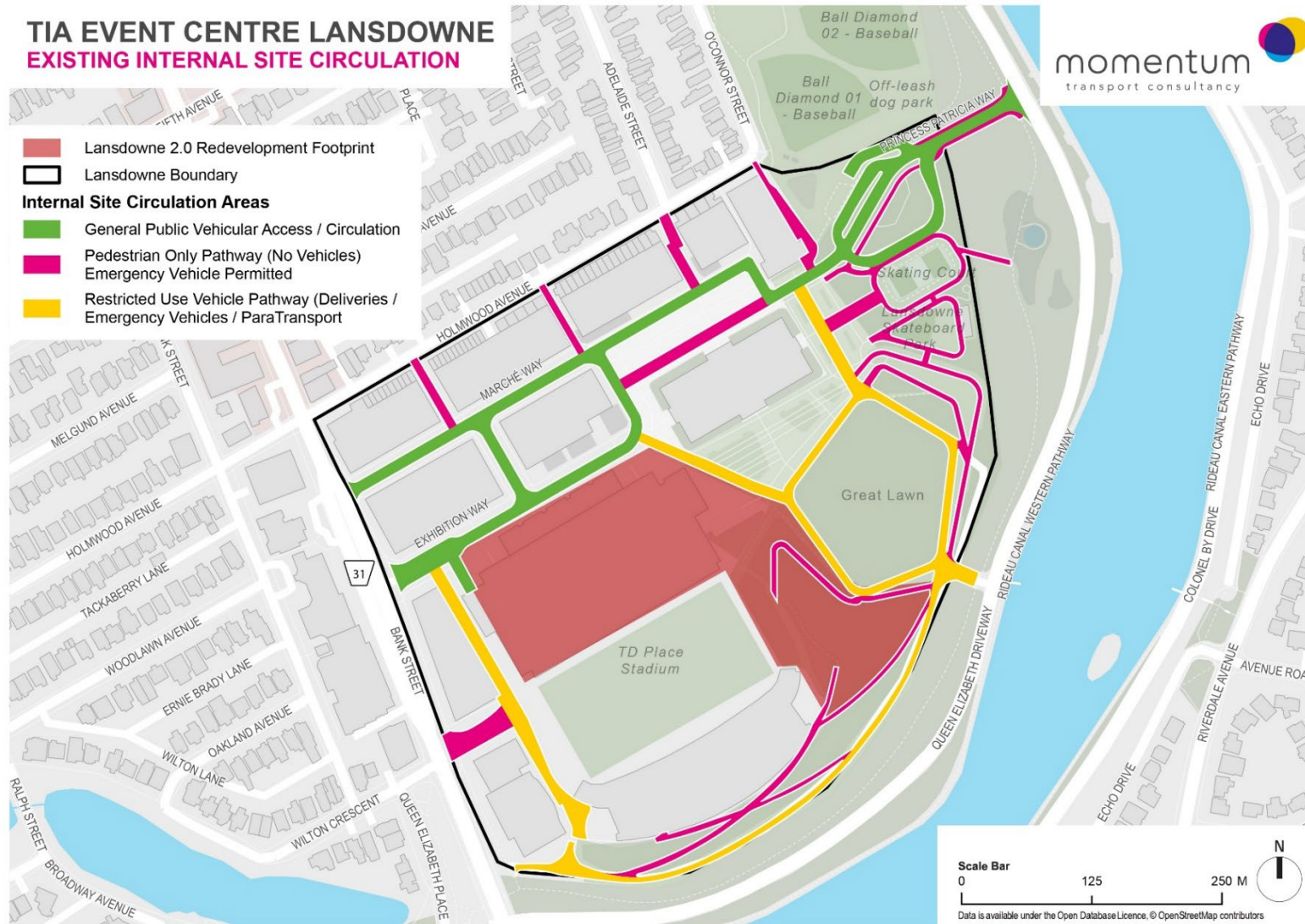


Figure 2.14: Existing Internal Site Circulation (Minor Events)

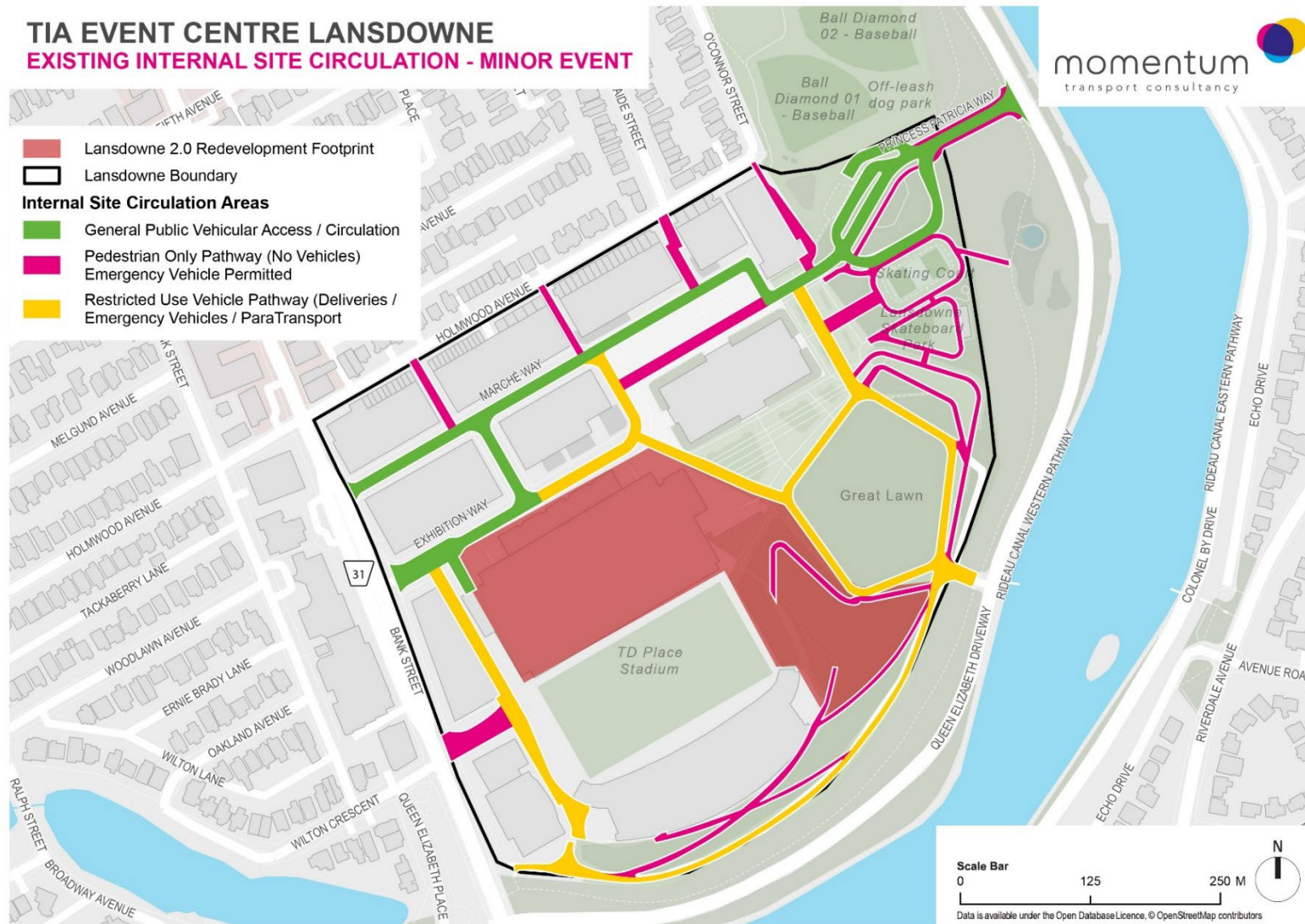
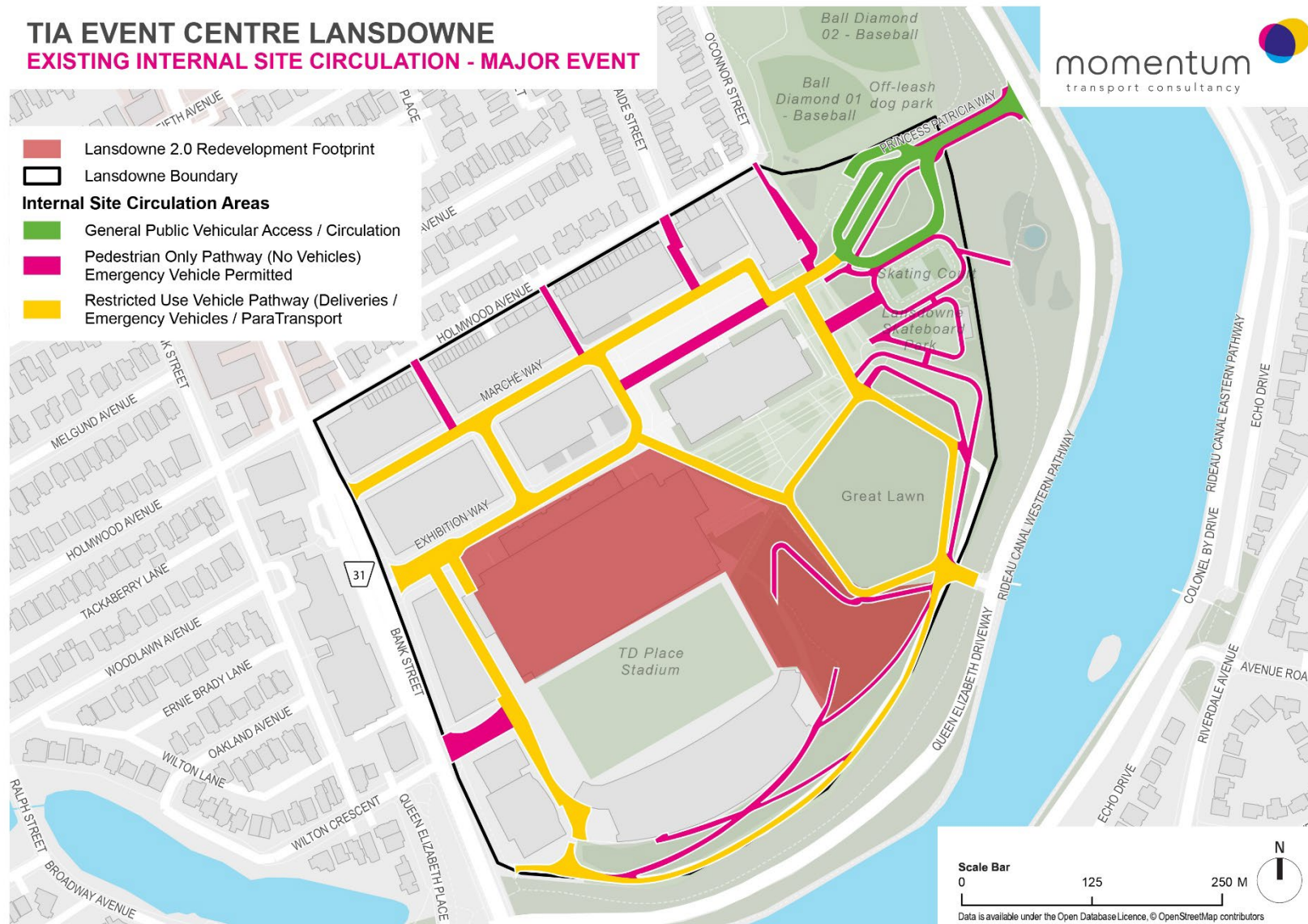


Figure 2.15: Existing Internal Site Circulation (Major Events)



### 2.1.2.5 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 3<sup>rd</sup>, 2022 / Wednesday, May 11<sup>th</sup>, 2022 (Weekday AM and PM).

#### Weekend Saturday Peak Period (Mid-Day Peak):

- Saturday, May 7<sup>th</sup>, 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 9<sup>th</sup>, 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 9<sup>th</sup>, 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 14<sup>th</sup>, 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 2.16** through **Figure 2.30**.

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

Figure 2.16: Existing Weekday AM and PM Traffic Volumes

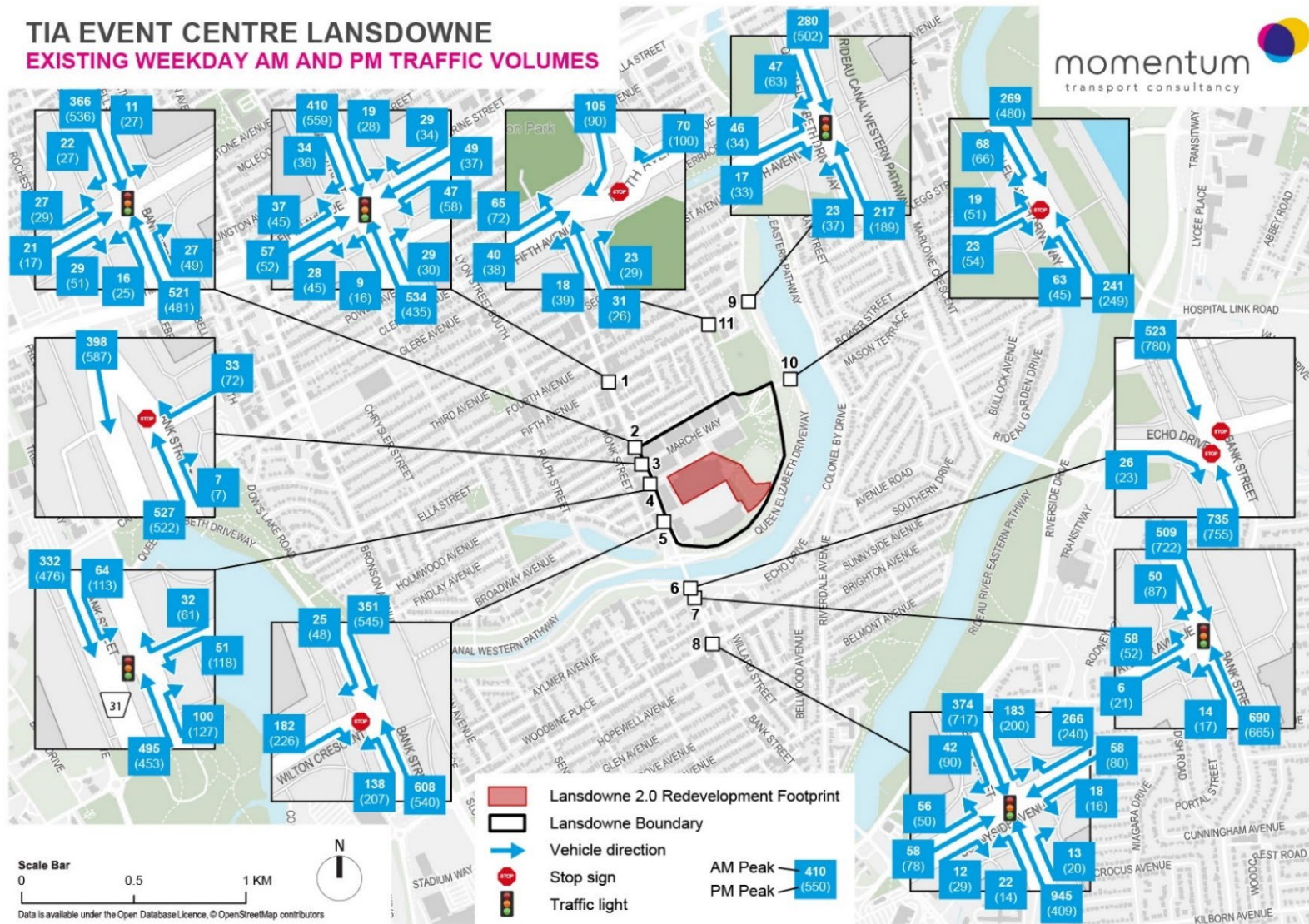


Figure 2.17: Existing Weekday AM and PM On-site Traffic Volumes

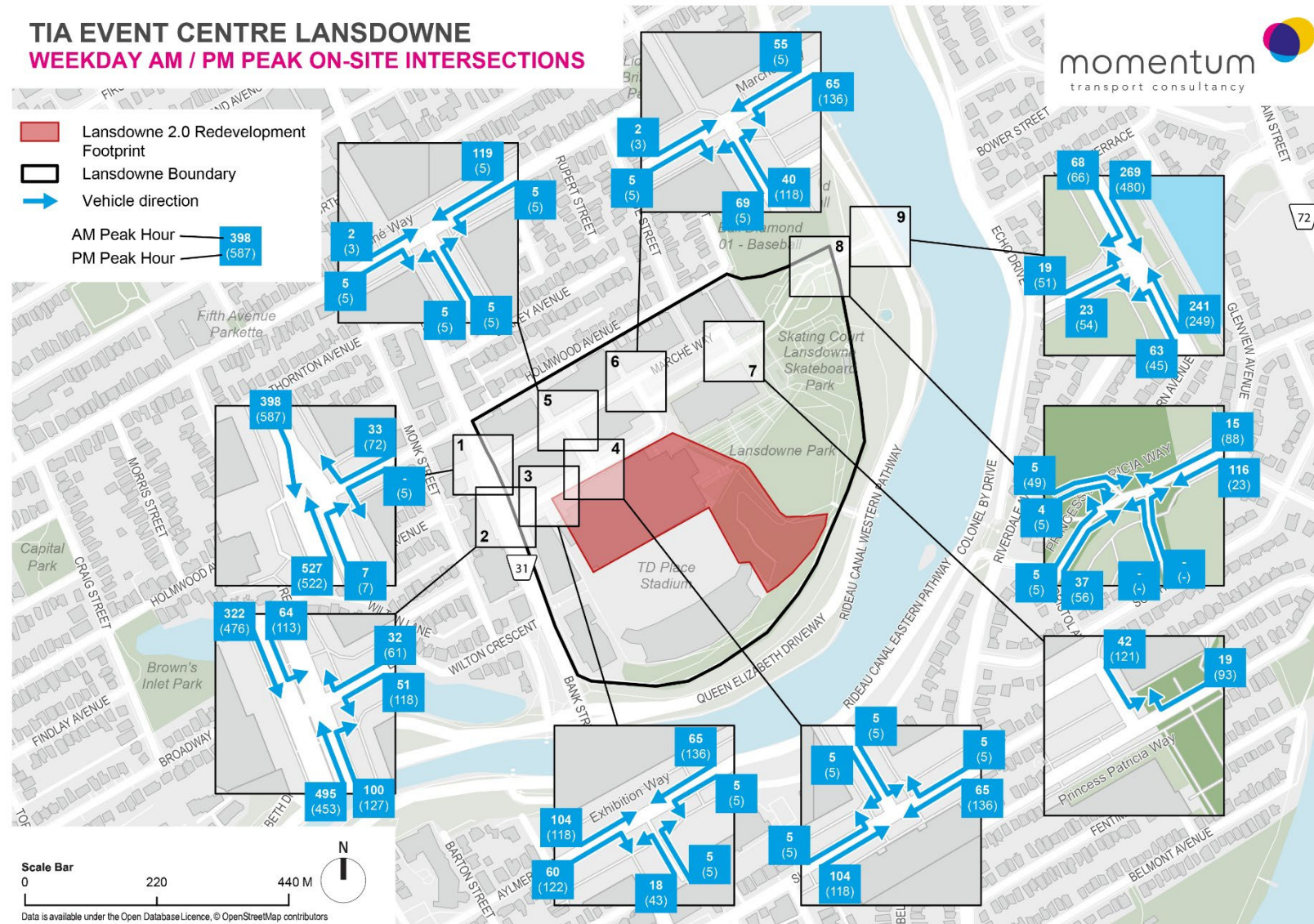


Figure 2.18: Existing Weekday/Weekend Pedestrian Volumes

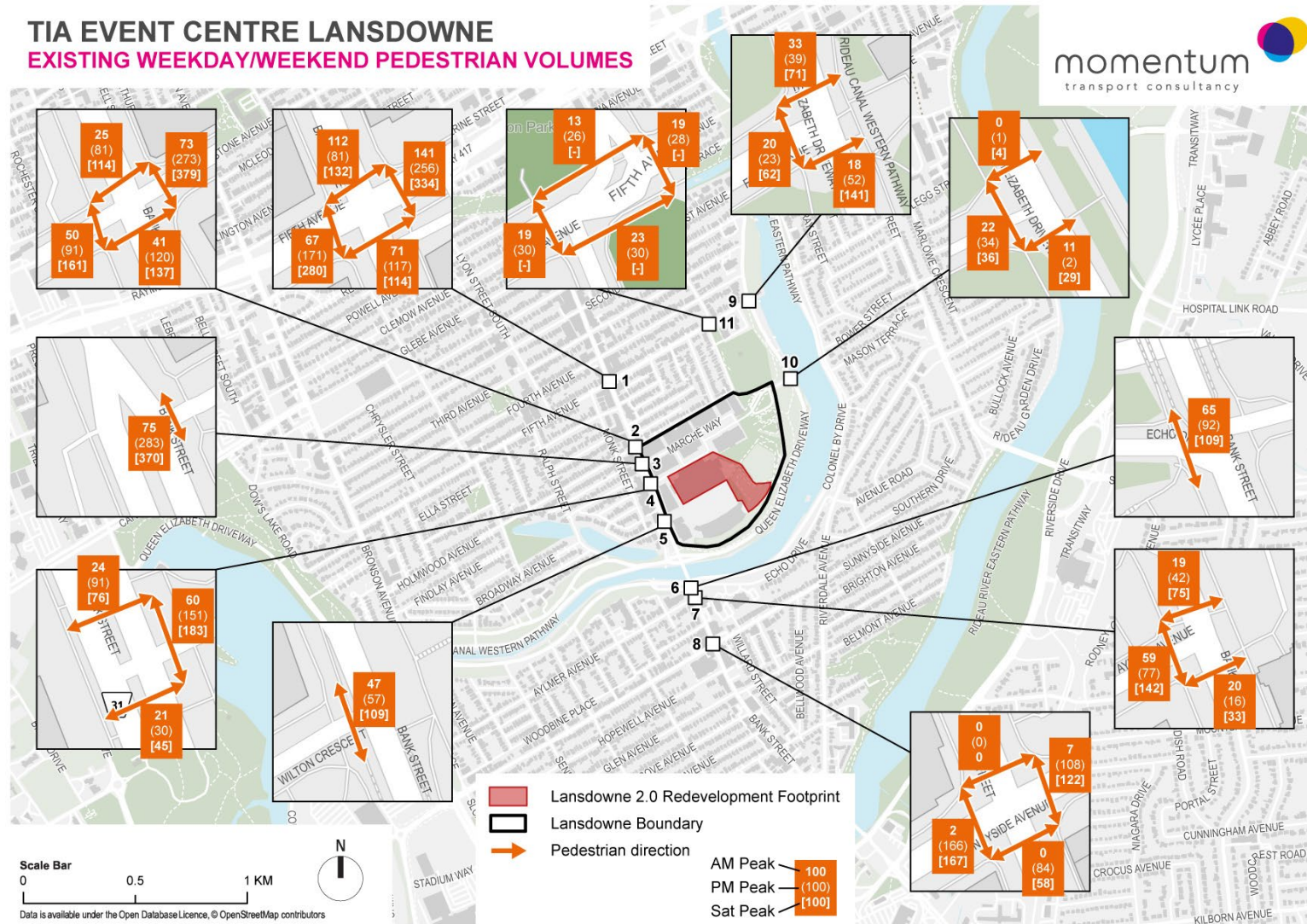


Figure 2.19: Existing Weekday/Weekend Bicycle Volumes

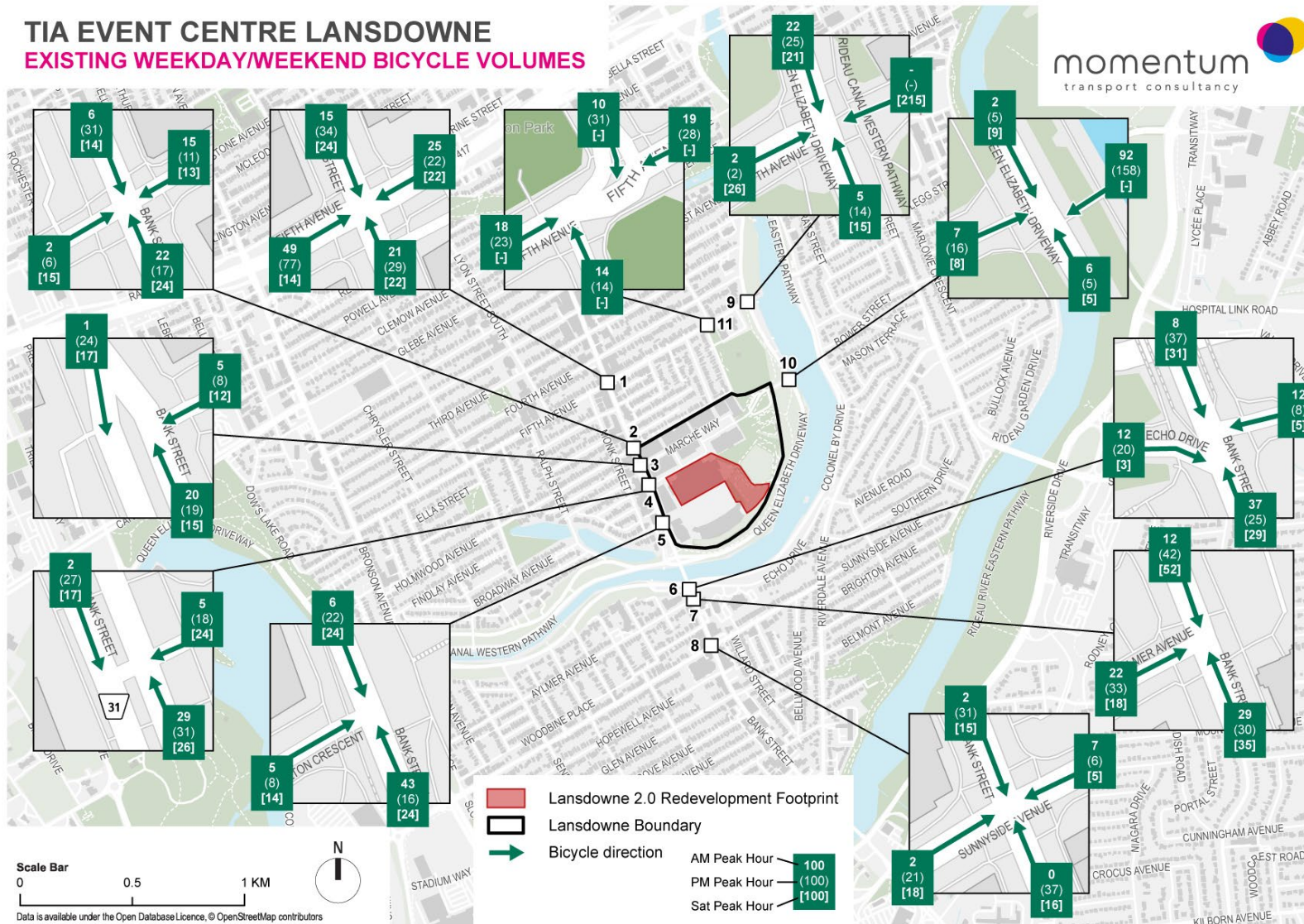


Figure 2.20: Existing Saturday PM Traffic Volumes

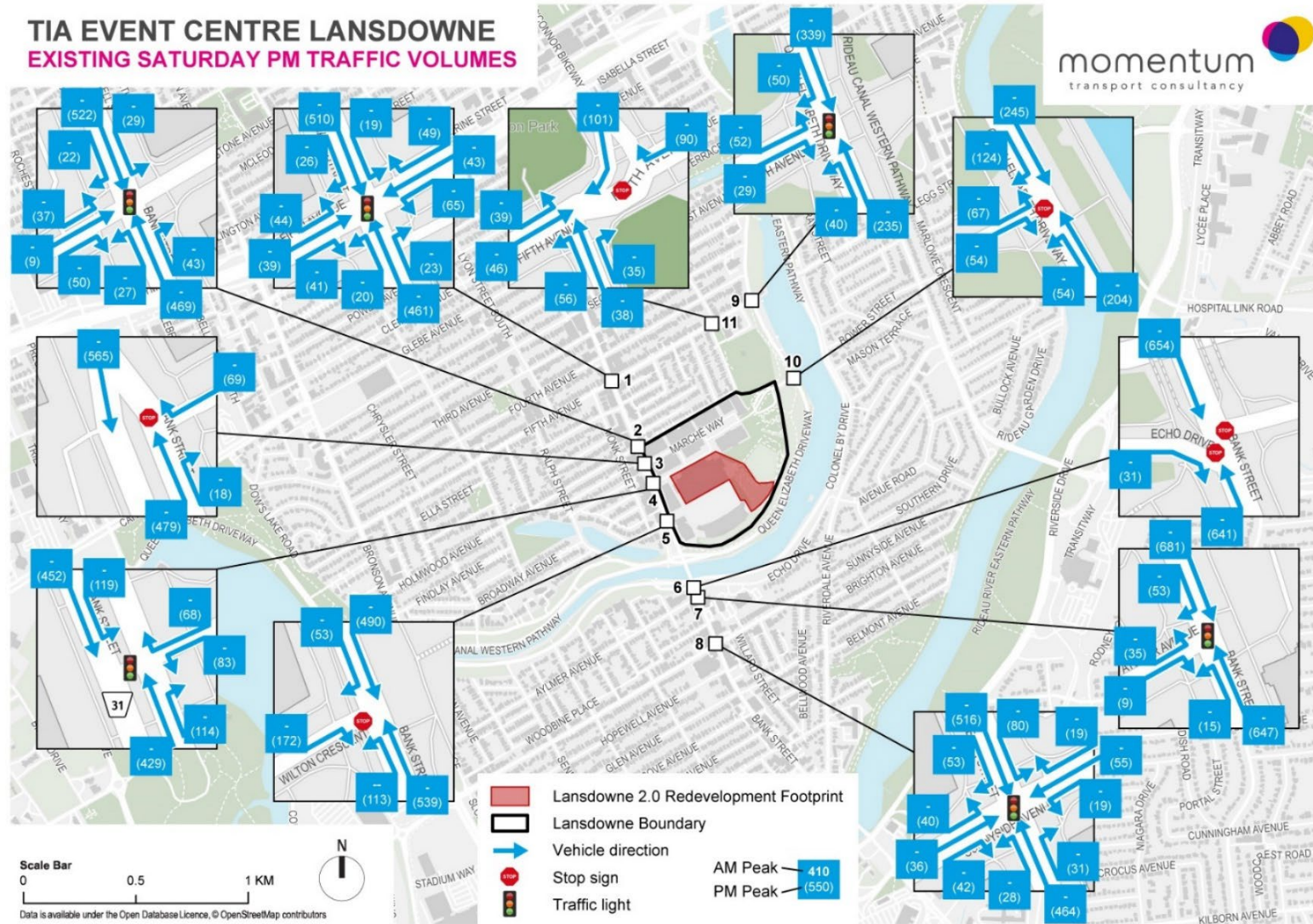


Figure 2.21: Existing Saturday PM On-site Traffic Volumes

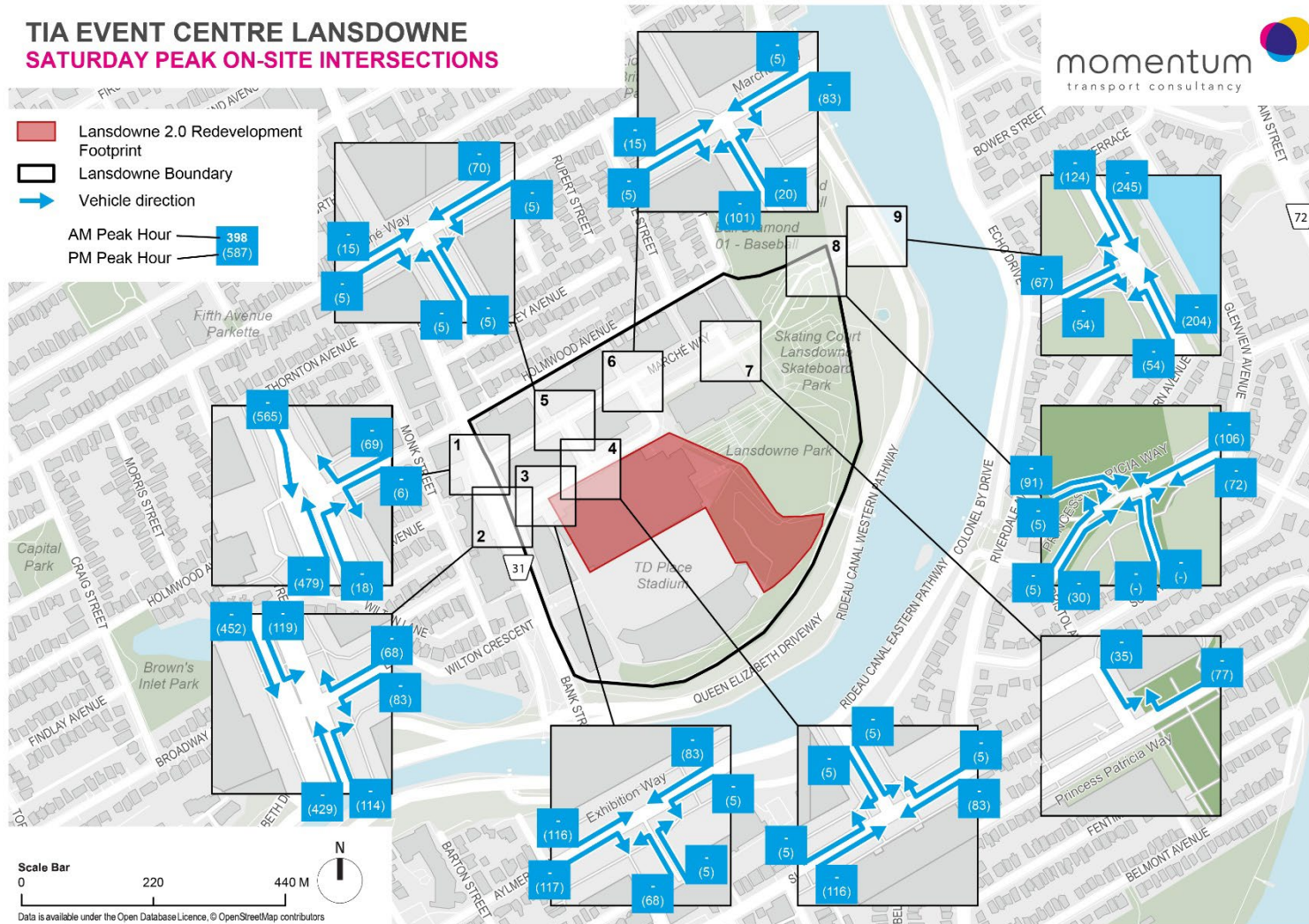


Figure 2.22: Existing Sunday PM Traffic Volumes

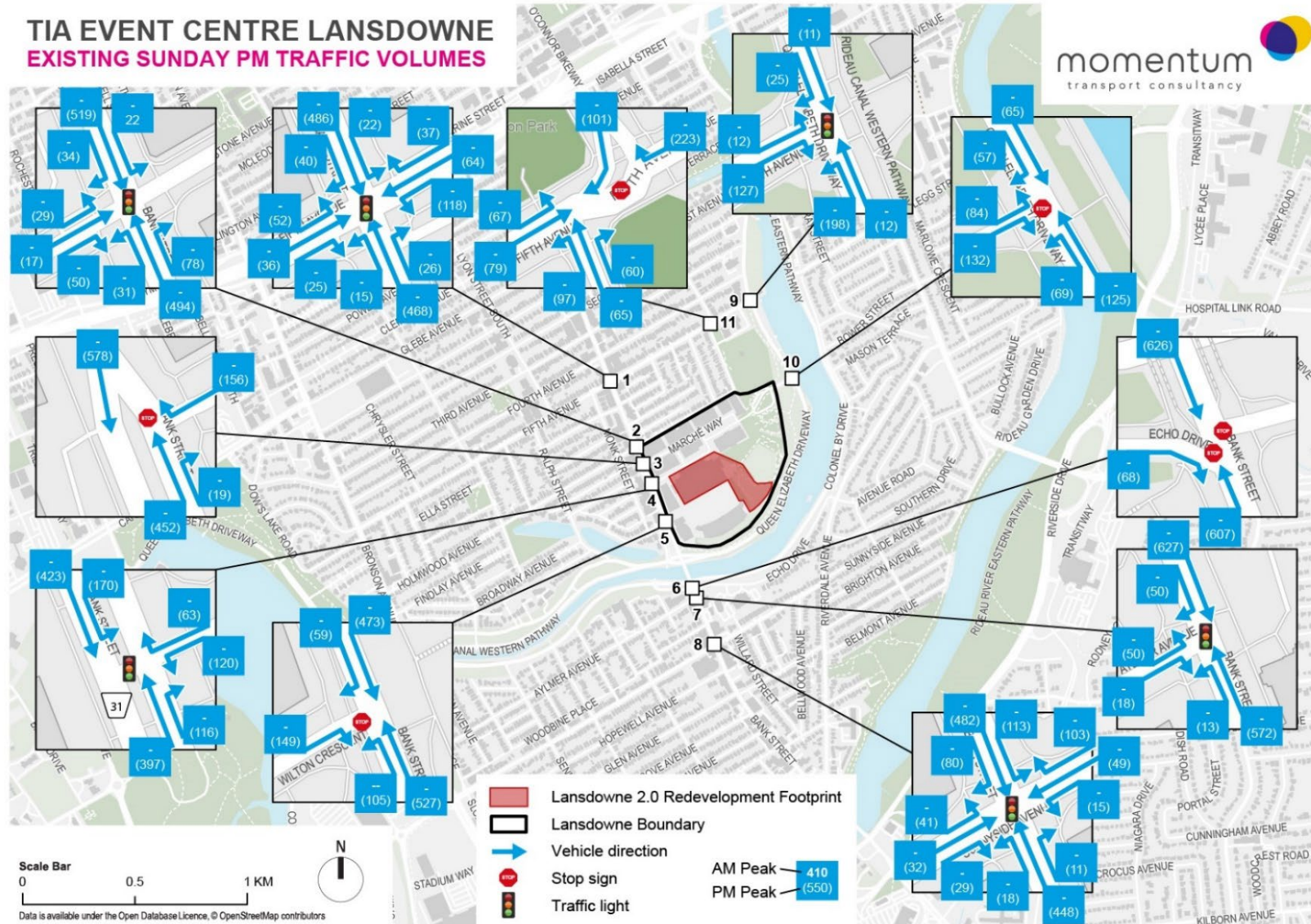


Figure 2.23: Existing Sunday PM On-site Traffic Volumes

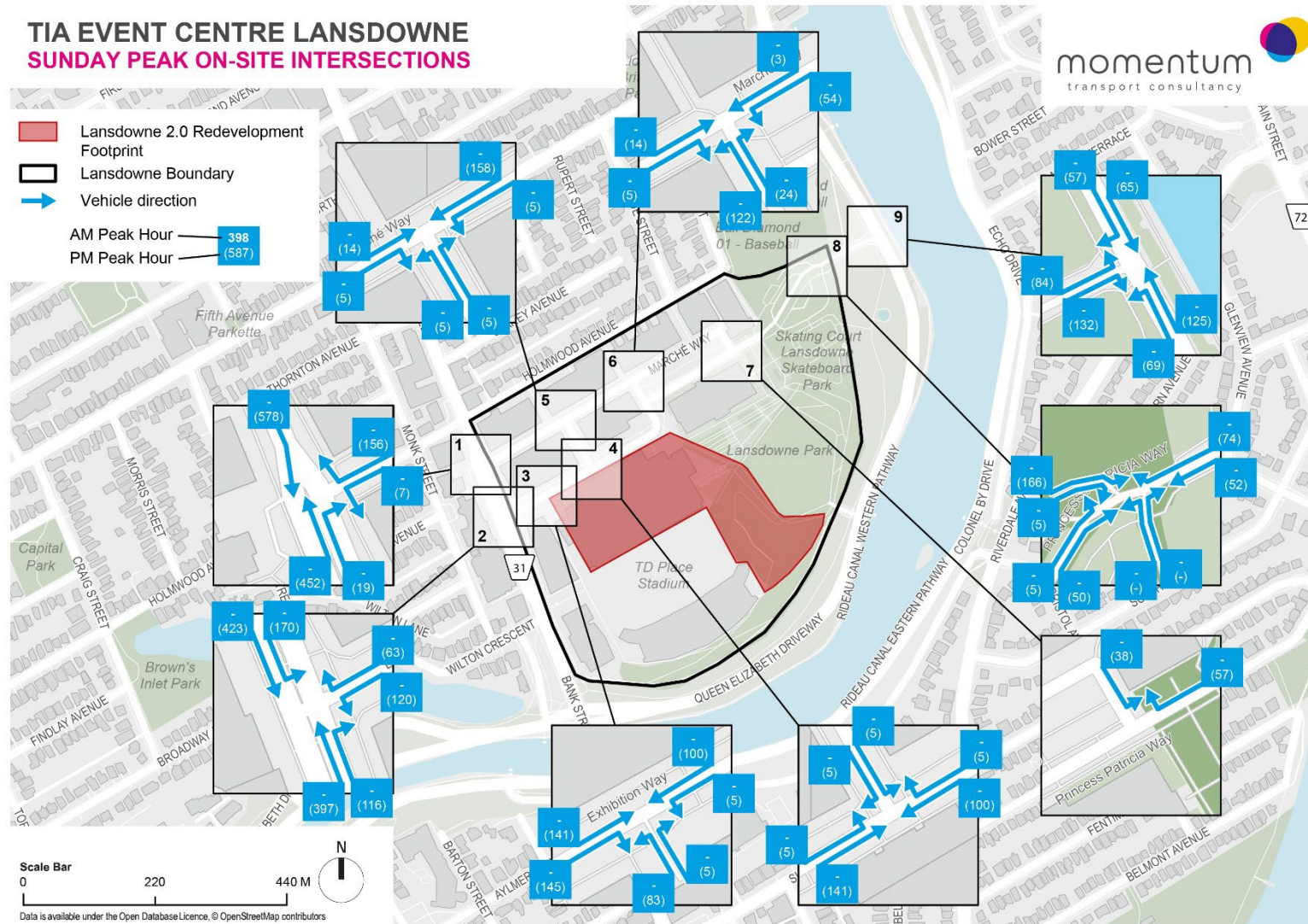


Figure 2.24: Existing Minor Event Traffic Volumes

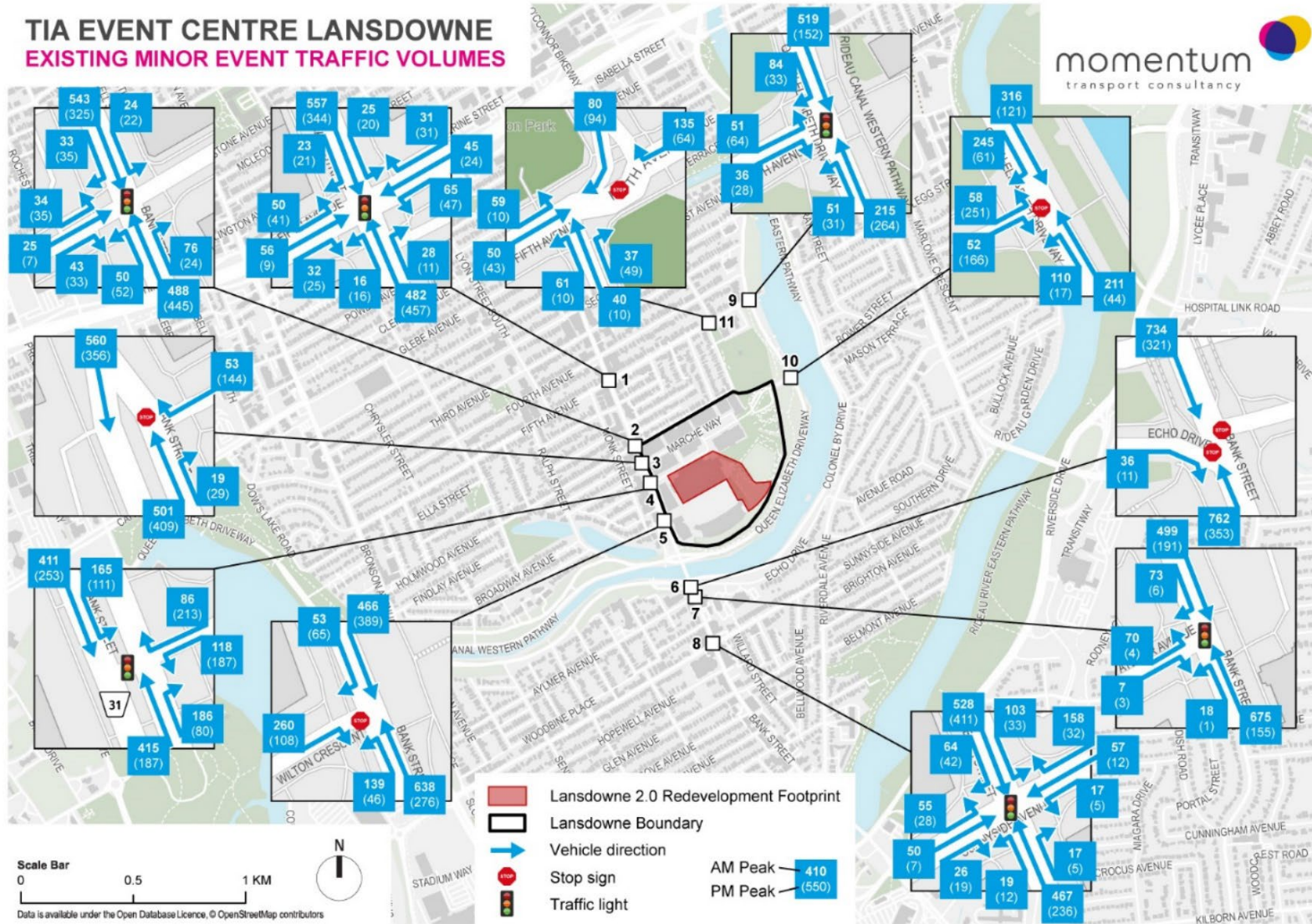


Figure 2.25: Existing Minor event Ingress/Egress On-site Traffic Volumes

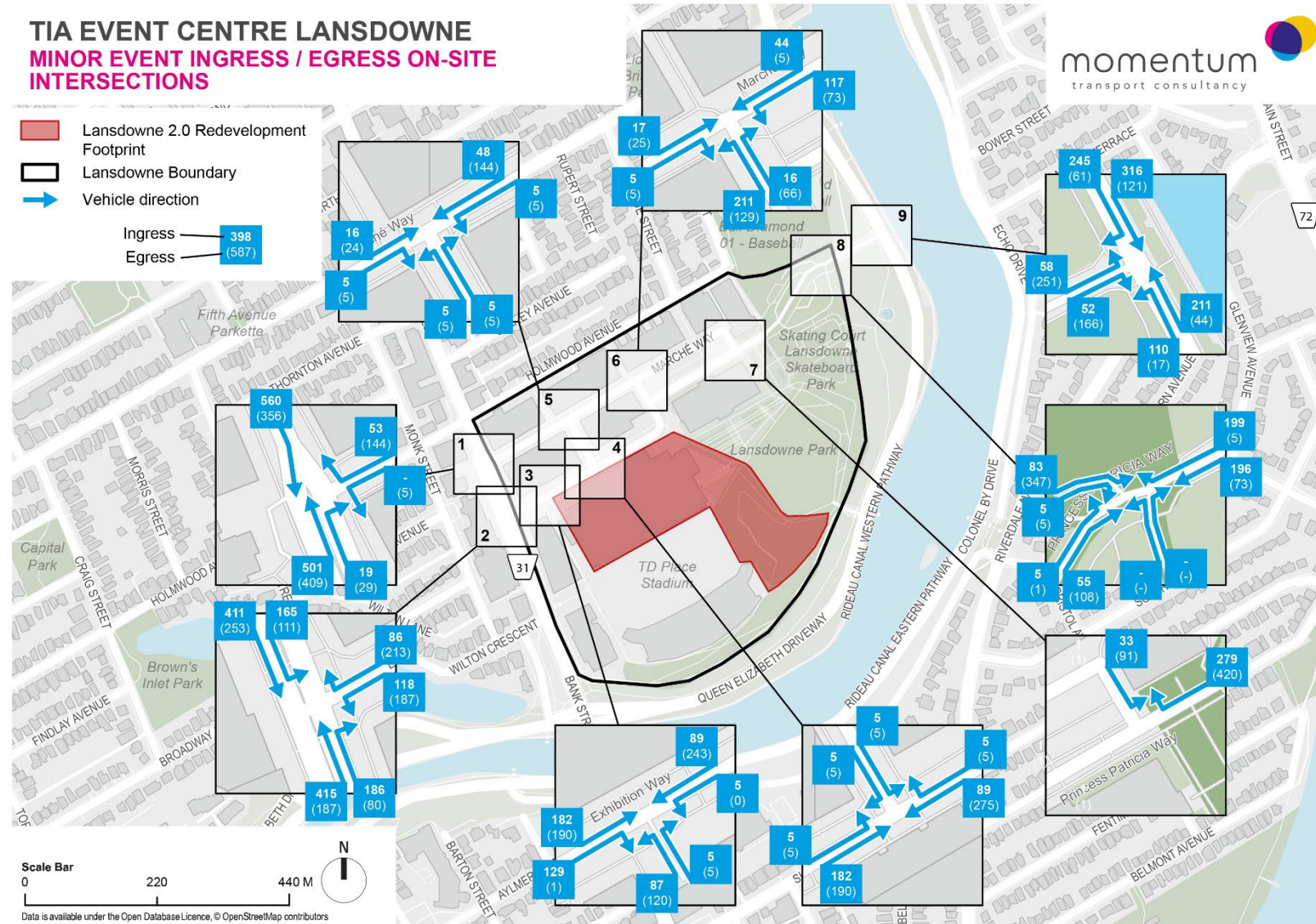


Figure 2.26: Existing Minor Event Pedestrian Volumes

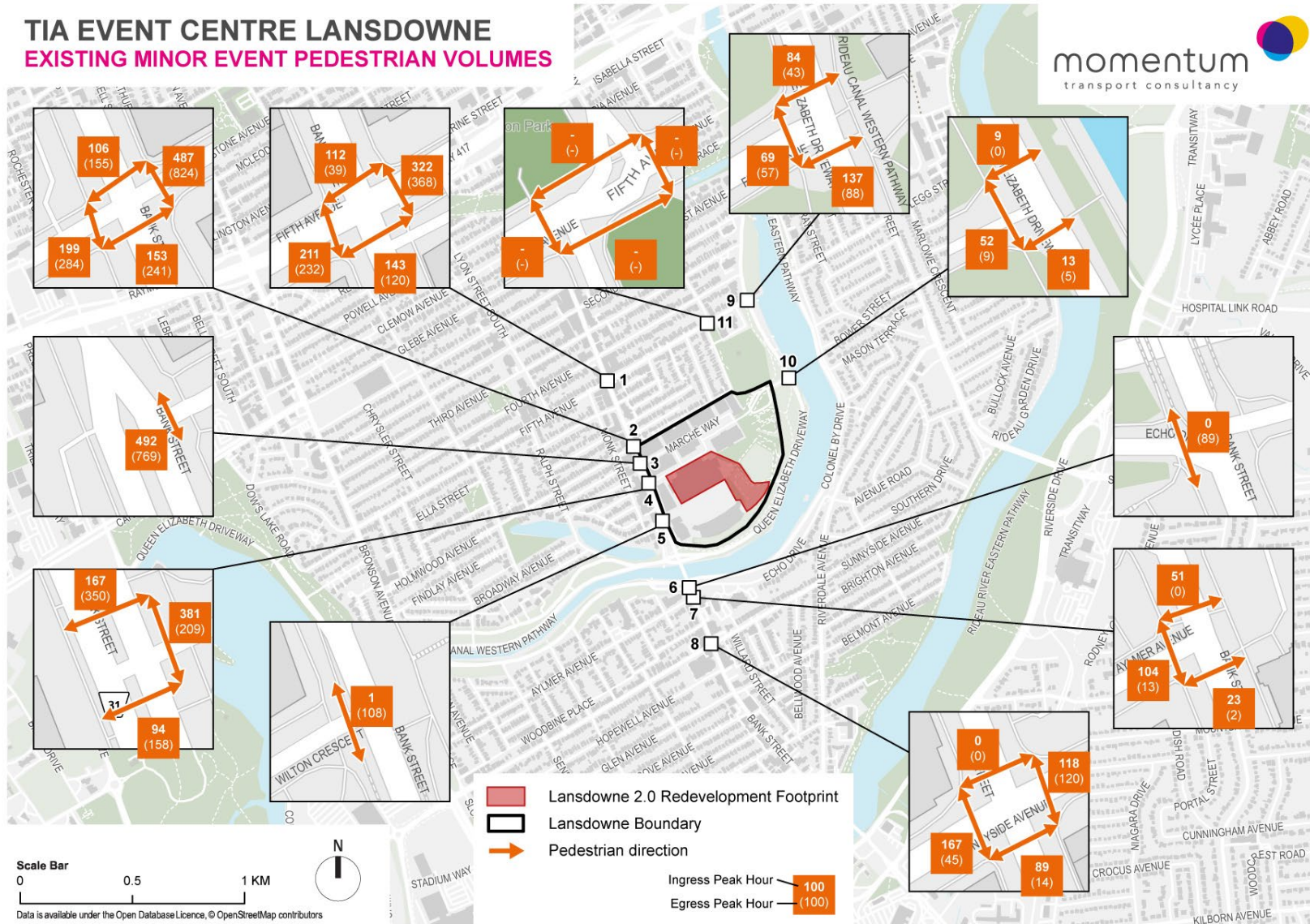


Figure 2.27: Existing Minor Event Bicycle Volumes

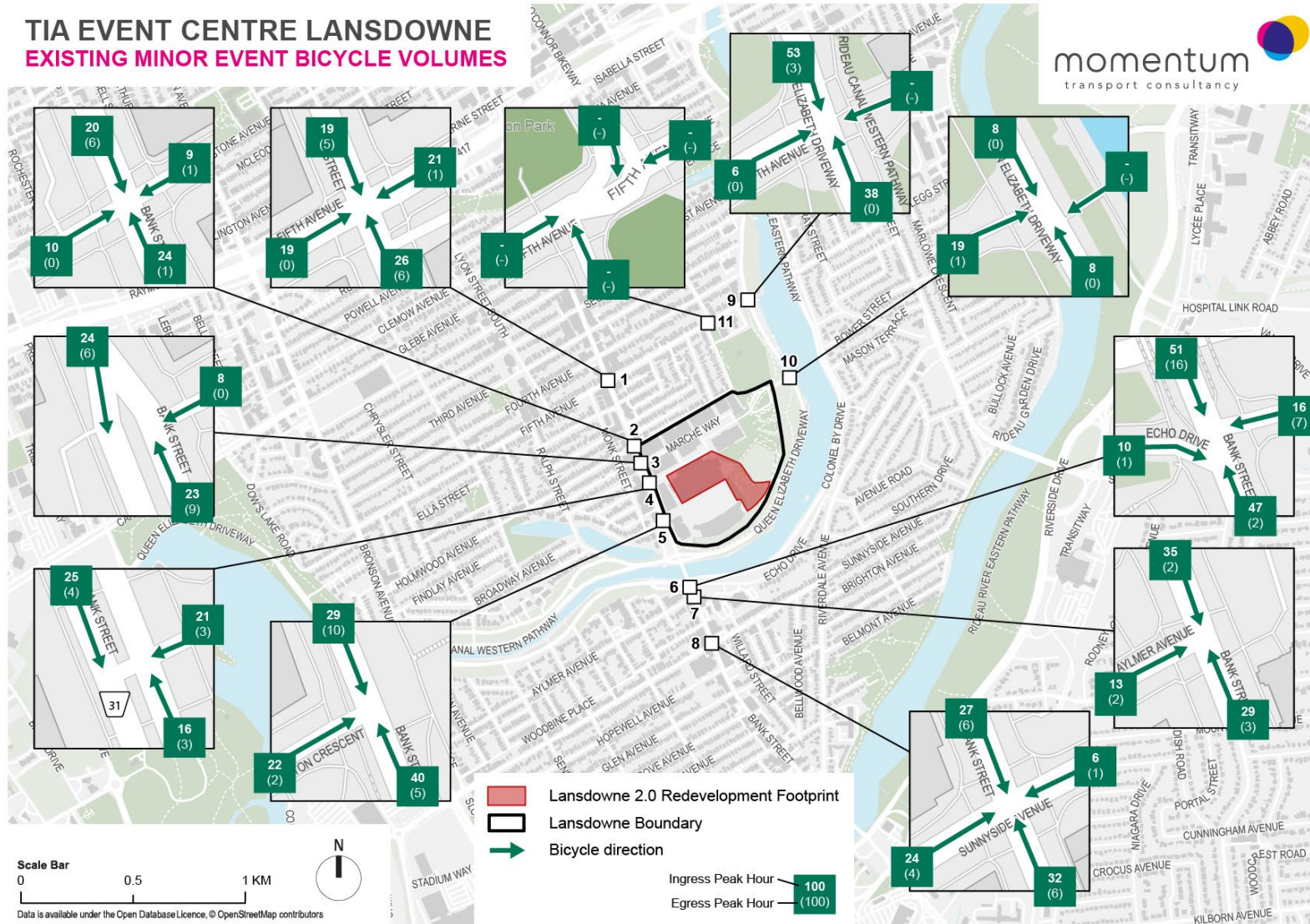


Figure 2.28: Existing Major Event Traffic Volumes

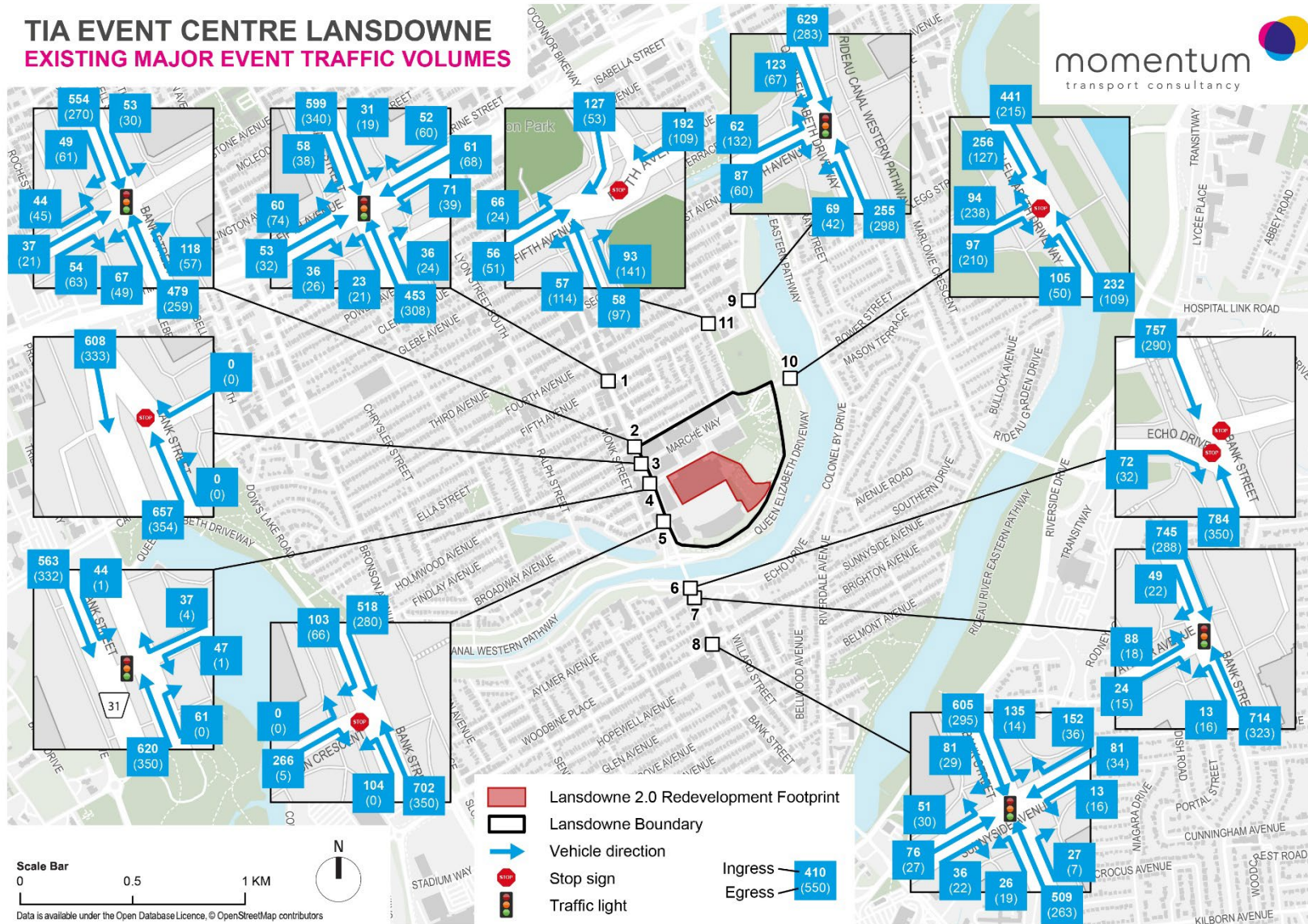


Figure 2.29: Existing Major Event Pedestrian Volumes

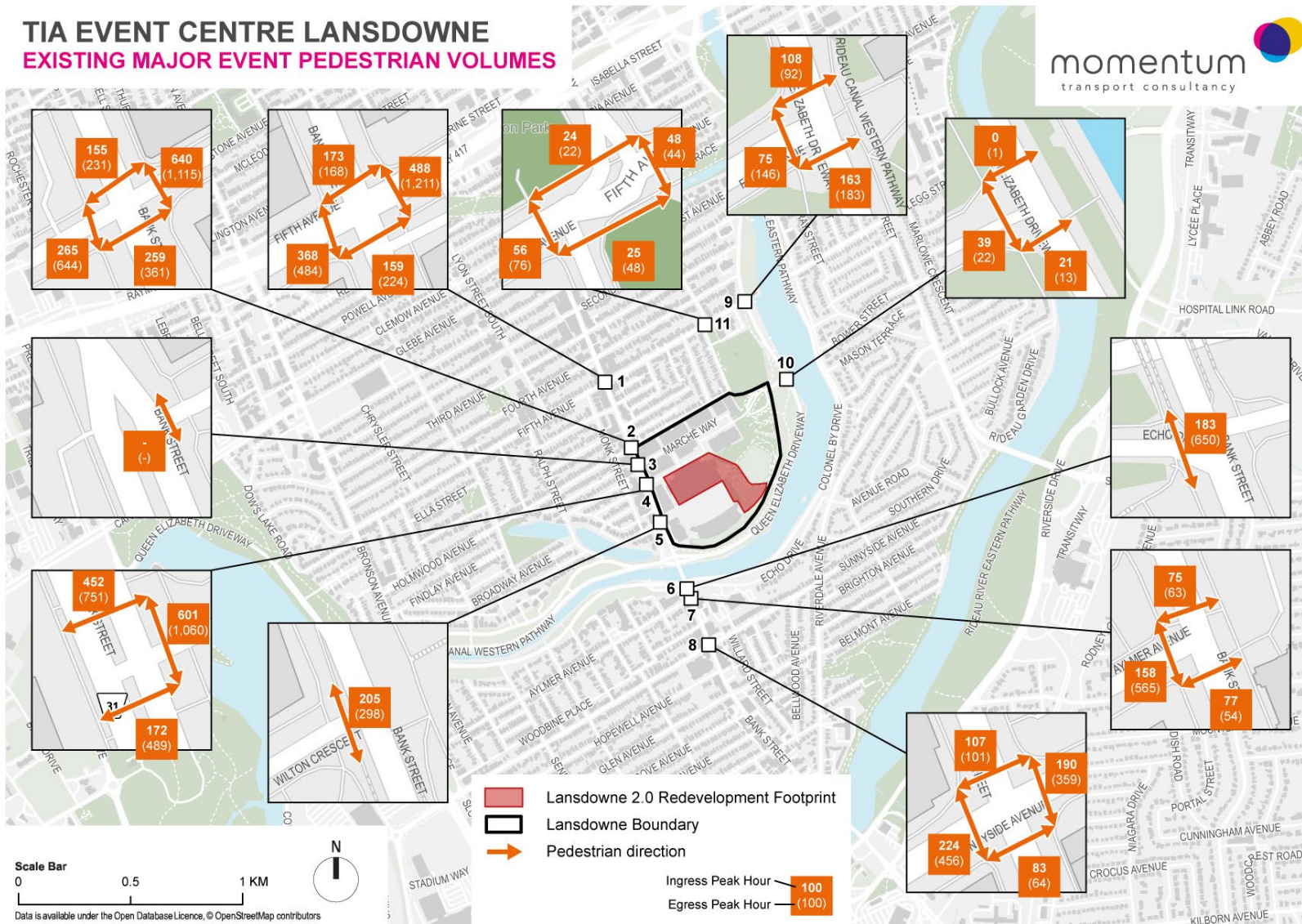
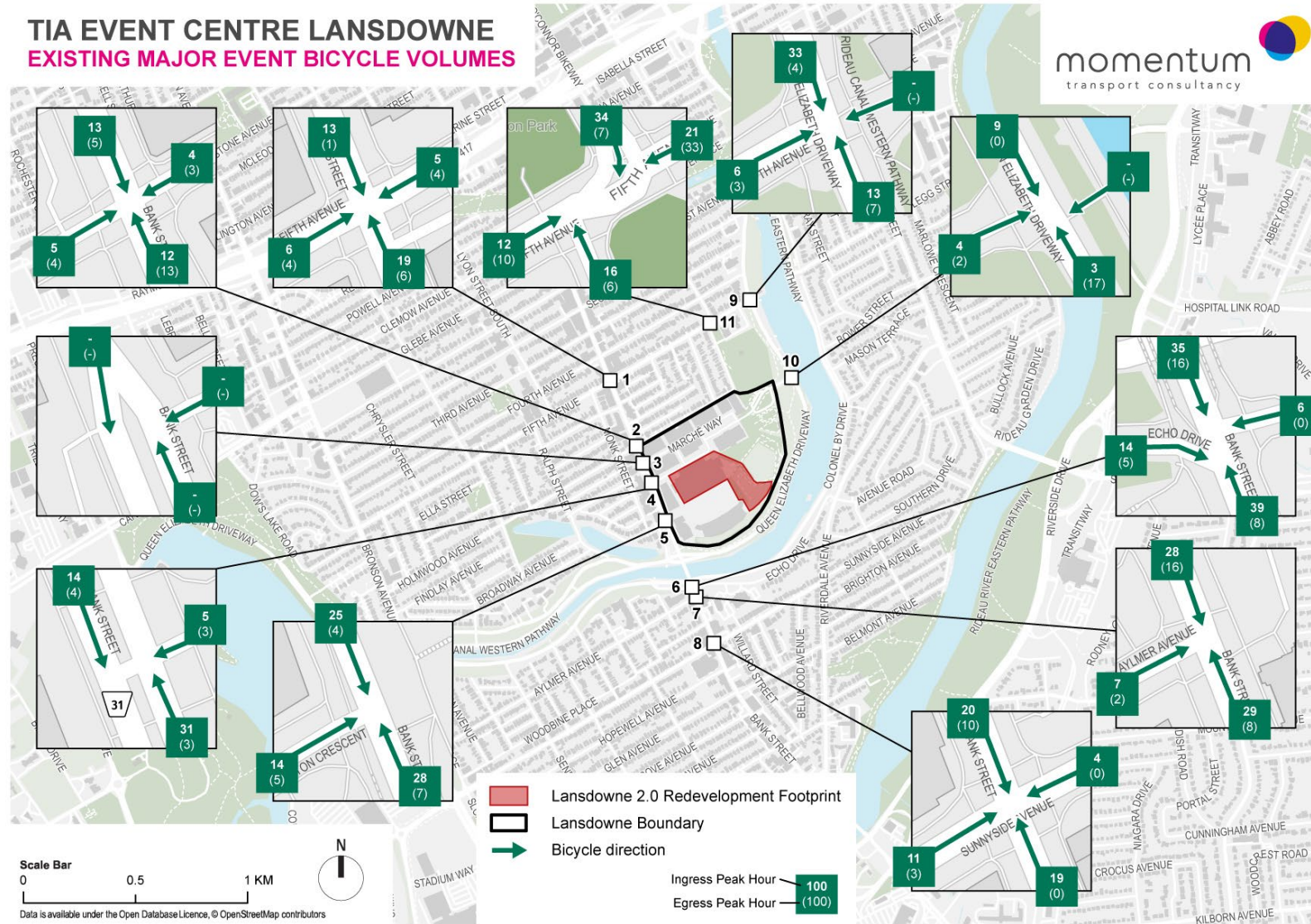


Figure 2.30: Existing Major Event Bicycle Volumes



**Notable movements:**

- The busiest corridor for vehicles, bicycles, and pedestrians is along Bank Street.
- On weekdays, weekends, and minor events, the busiest entrance to the site for vehicles and bicycles is at Bank Street and Exhibition Way.
- On weekdays, weekends, and minor events, the busiest entrance to the site for pedestrians is at Bank Street and Marché Way.
- Vehicle access to the parking garages is shared between the garages, with a higher proportion using the Bank Street entrance on weekdays, and a higher proportion using the Princess Patricia Way entrance on weekends.

**2.1.2.5 Collision History**

Collision data was provided by the City of Ottawa for the period January 2018 to December 2022 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 and boundary streets.

*Table 2.1: Collision Summary*

LOCATION	CLASS	IMPACT TYPE					INTERSECTION TOTAL
		Sideswipe	Angle / Turning	Rear End	Single Vehicle	Other	
Bank St at Exhibition Way	Property Damage	1		4		1	<b>6</b>
	Non-Fatal Injury						<b>0</b>
Bank St at Marche Way	Property Damage			1			<b>1</b>
	Non-Fatal Injury					1	<b>1</b>
Bank St at Fifth Ave	Property Damage	3	3	5			<b>11</b>
	Non-Fatal Injury		4	1	2		<b>7</b>
Bank St at Holmwood Ave	Property Damage	5	6	2		1	<b>14</b>
	Non-Fatal Injury		1				<b>1</b>
Bank St at Wilton Crescent	Property Damage	2	2	3	1		<b>8</b>
	Non-Fatal Injury		2	1			<b>3</b>
Bank St at Echo Dr	Property Damage	1	1			1	<b>3</b>

LOCATION	CLASS	IMPACT TYPE					INTERSECTION TOTAL
		Sideswipe	Angle / Turning	Rear End	Single Vehicle	Other	
	Non-Fatal Injury						0
Bank St at Aylmer Ave	Property Damage	5	2	2			9
	Non-Fatal Injury		1		1		2
Bank St at Sunnyside Ave	Property Damage	6	4	3			13
	Non-Fatal Injury		2	2	2		6
Queen Elizabeth Dr at Fifth Ave	Property Damage			1			1
	Non-Fatal Injury				1		1
Queen Elizabeth Dr at Princess Patricia Way	Property Damage	1	2				3
	Non-Fatal Injury		2				2
Fifth Avenue at O'Connor Street	Property Damage						0
	Non-Fatal Injury						0
Bank St between Echo Dr and Aylmer Ave	Property Damage					1	1
	Non-Fatal Injury						0
Bank St between Exhibition Way and Wilton Crescent	Property Damage	2				1	3
	Non-Fatal Injury						0
Bank St between Holmwood Ave and Marche Way	Property Damage	1		1			2
	Non-Fatal Injury						0
Bank St between Marche Way and Exhibition Way	Property Damage	2		1	1		4
	Non-Fatal Injury						0
Bank St between Wilton Crescent and Echo Dr	Property Damage			2		1	3
	Non-Fatal Injury			1			1

LOCATION	CLASS	IMPACT TYPE					INTERSECTION TOTAL
		Sideswipe	Angle / Turning	Rear End	Single Vehicle	Other	
Holmwood Ave between Adelaide St and O'Connor St	Property Damage				1		1
	Non-Fatal Injury						0
Holmwood Ave between Bank St and Adelaide St	Property Damage				4		4
	Non-Fatal Injury						0
Queen Elizabeth Drwy between Queen Elizabeth Pl and Princess Patricia Way	Property Damage			2		2	4
	Non-Fatal Injury				1		1
<b>TOTAL</b>	<b>Property Damage</b>	<b>29</b>	<b>20</b>	<b>27</b>	<b>7</b>	<b>8</b>	<b>91</b>
	<b>Non-Fatal Injury</b>	<b>0</b>	<b>12</b>	<b>5</b>	<b>7</b>	<b>1</b>	<b>25</b>

The collision data in its entirety can be found in **Appendix B**.

### Analysis of Reported Collisions

The majority of reported collisions that occurred in the noted 4-year period (2018 to 2022) were classified as Property Damage only (78%).

**'Hot Spot' Analysis** – Locations with six or more reported collisions have been identified as 'hot spots' and studied further to identify possible trends. **Table 2.2** lists each hot spot generally in order from most to fewest collisions.

Table 2.2: Analysis of Collision Hotspots

Intersection	Total Collisions	Non-Fatal Injuries	Property Damage	Locational / Directional Trends
Bank St at Sunnyside Ave	19	6	13	4 of 6 turning movement collisions at this intersection involved southbound-left and northbound-through vehicles. 4 of 5 rear end collisions involved southbound-through and southbound-stopped (or slowing/stopping).
Bank St at Fifth Ave	18	7	11	3 of 7 non-fatal injuries at this intersection involved westbound vehicles turning left and colliding with vulnerable road users (2 of these injuries were pedestrians and 1 was an eastbound-through cyclist). None of the property damage-only collisions included the westbound-left movement. 3 of 7 turning/angle collisions involved northbound through vehicles.

Bank St at Holmwood Ave	15	1	14	4 of 7 turning/angle collisions at this intersection involved northbound vehicles turning left and southbound through vehicles (including one cyclist).
Bank St at Wilton Crescent	11	3	8	3 of 4 turning movement collisions at this intersection involved northbound-left and southbound-through vehicles (including one cyclist). 3 of 4 rear end collisions involved northbound-through and northbound-stopped vehicles.
Bank St at Aylmer Ave	11	2	9	None observed
Bank St at Exhibition	6	0	6	None observed

**COMMENTARY – Turn Across Path Collisions**

At **Bank Street and Sunnyside Avenue**, the southbound movement was most notable with eight (8) reported collisions. This included four (4) rear end collisions and four (4) collisions involving t southbound vehicles turning left that collided with northbound-through vehicles.

Similar patterns were observed at **Bank Street intersections with Wilton Crescent** and **Holmwood Ave**.

**Suggested Mitigation for City of Ottawa Consideration:**

- The Bank Street and Sunnyside Avenue and Bank Street and Holmwood Avenue intersections could benefit from a review of signal timing. For the intersection at Sunnyside, the review particularly for northbound and southbound left-turning movements which operate under permissive phasing within a shared thru-left lane should be undertaken. Changes to the traffic light phasing at the intersection of **Bank Street and Holmwood Avenue** is already planned by the City to provide fully protected northbound and southbound left turns.
- The Bank Street and Wilton Crescent intersection could benefit from more obvious advanced prompts that cue northbound motorists to both recognize the change in design context following the bridge as well as the presence of Wilton Crescent.

**COMMENTARY – Vulnerable Road User Collisions**

**Table 2.3** shows collisions involving vulnerable road users. Nine of the 10 collisions resulted in non-fatal injuries and one resulted in property damage.

**Bank Street at Fifth Avenue** data indicated three occasions where westbound vehicles turned left and collided with pedestrians and bicyclists. This location could benefit from further study (such as through a Road Safety Audit) to determine potential contributing factors that may be common between the collisions. Specifically, the study should consider items such as (but not necessarily limited to) eastbound stop bar placement, sight lines, and signal timing.

It is worth noting that the collisions data available were recorded prior to the implementation of bicycle infrastructure improvements along the Bank Street Bridge in 2023.

**COMMENTARY – Influence of Environmental Conditions**

Aside from vehicle manoeuvres, other potential factors contributing to collisions are likely to include environmental context like weather conditions, time of year, and time of day. For instance, of the 116 total collisions during the 5-year period, 63% (73 collisions) occurred in adverse weather conditions (28 collisions occurred during rain, snow, or freezing rain) or low-light environments (45 collisions occurred in the dark or at dusk or dawn).

**Figure 2.31** shows collisions by month throughout the five-year period. Collisions appear to be less likely to occur in late spring and summer months. The month of August has a relatively high proportion of collisions (about 10%). However, these results are skewed by the pandemic, as no collisions are recorded between April and July 2020. Moreover, contextual factors are likely not relevant in all collision instances, as 88 collisions occurred during clear weather conditions, and 53 of these occurred in daylight. Driver behaviours likely contribute to these otherwise unaccounted-for collisions.

*Figure 2.31: Collisions by Month in Lansdowne Study Area, 2018-2022*

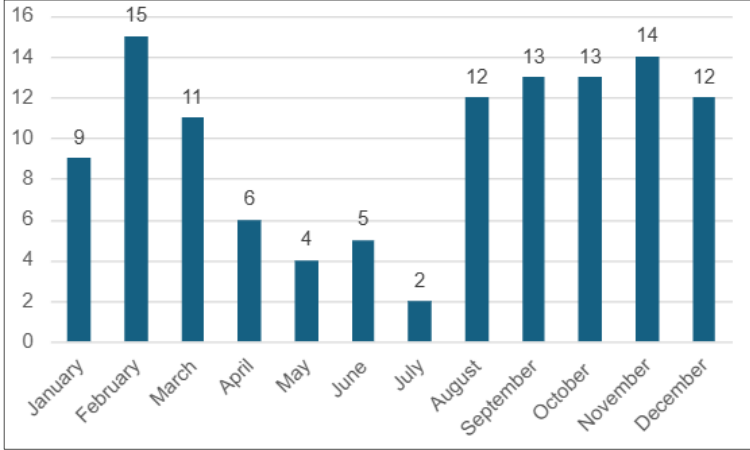


Table 2.3: Collisions involving pedestrians and cyclists on boundary segments and intersections

Accident Date	Accident Time	Location	Initial Impact Type	Vehicle 1 Type	Vehicle 2 Type	Environment Condition	Light	Classification Of Accident	Vehicle 1 Initial Direction	Vehicle 1 Manoeuvre	Vehicle 2 Initial Direction	Vehicle 2 Manoeuvre	No Of Pedestrians
6/19/2018	13:49	BANK ST @ WILTON CRES	Turning movement	Automobile, station wagon	Bicycle	Clear	Daylight	Non-fatal injury	North	Turning left	South	Going ahead	0
8/22/2018	9:23	BANK ST @ HOLMWOOD AVE	Turning movement	Automobile, station wagon	Bicycle	Clear	Daylight	Non-fatal injury	North	Turning left	South	Going ahead	0
9/14/2018	13:34	BANK ST @ SUNNYSIDE AVE	SMV other	Automobile, station wagon		Clear	Daylight	Non-fatal injury	North	Turning left			1
10/22/2018	17:02	BANK ST btwn HOLMWOOD AVE & MARCHE WAY	Sideswipe	Automobile, station wagon	Bicycle	Clear	Daylight	P.D. only	South	Overtaking	South	Going ahead	0
11/25/2018	6:25	BANK ST @ MARCHE WAY	SMV other	Automobile, station wagon		Freezing Rain	Dawn	Non-fatal injury	West	Turning right			1
3/7/2019	13:38	BANK ST @ FIFTH AVE	SMV other	Automobile, station wagon		Clear	Daylight	Non-fatal injury	West	Turning left			1
10/3/2019	6:13	BANK ST @ FIFTH AVE	Turning movement	Bicycle	Automobile, station wagon	Clear	Dark	Non-fatal injury	North	Going ahead	South	Turning left	0
11/5/2020	11:11	BANK ST @ FIFTH AVE	SMV other	Pick-up truck		Clear	Daylight	Non-fatal injury	West	Turning left			1
3/17/2021	13:56	BANK ST @ FIFTH AVE	Turning movement	Automobile, station wagon	Bicycle	Clear	Daylight	Non-fatal injury	West	Turning left	East	Going ahead	0
11/16/2022	17:23	AYLMER AVE @ BANK ST	SMV other	Automobile, station wagon		Clear	Dark	Non-fatal injury	North	Turning left			1

### 2.1.3 PLANNED CONDITIONS

#### Road Network Modifications

**Table 2.4** 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 2.4: 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
	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)
	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

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 Fall 2025.

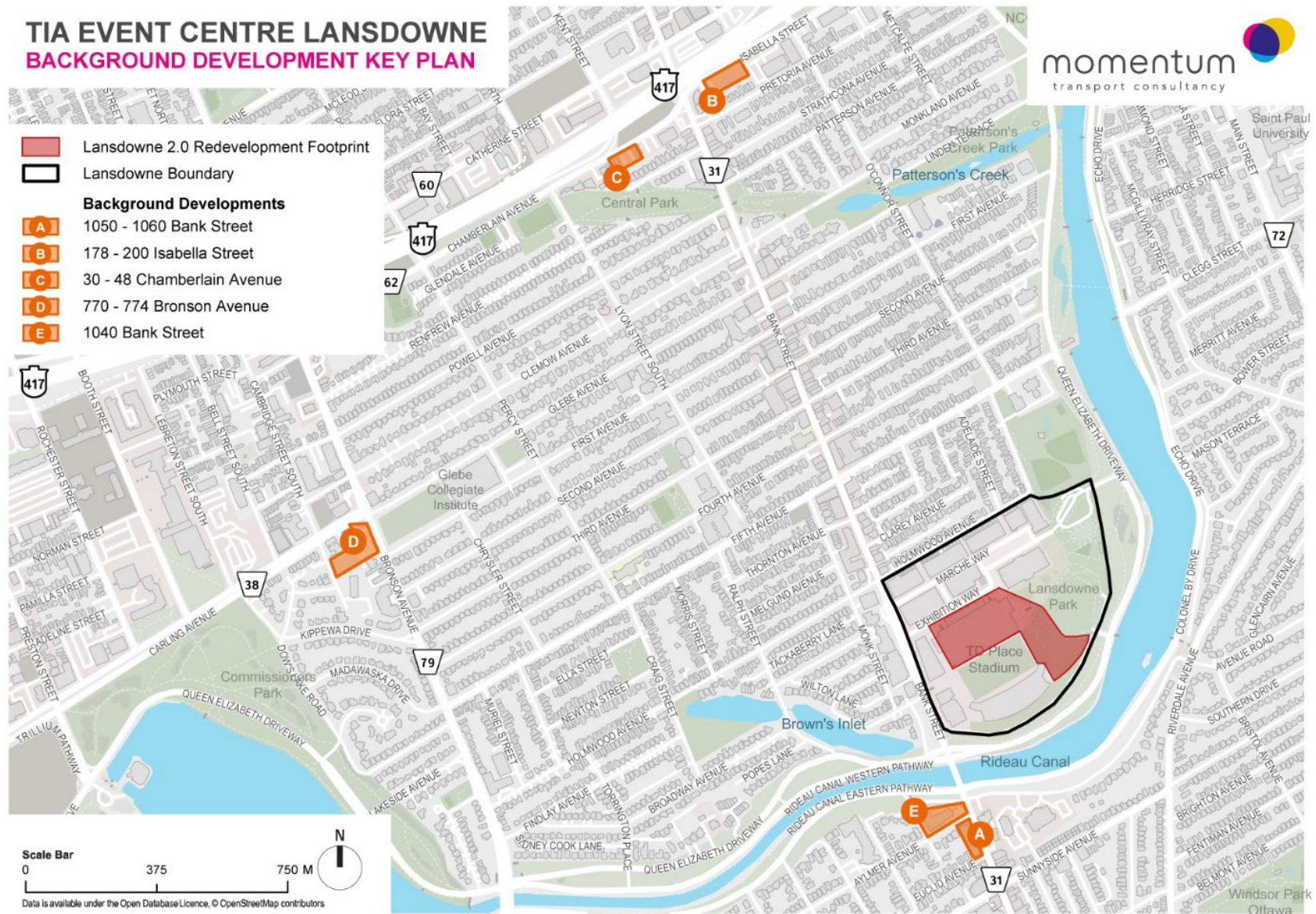
#### Future Background Developments

Several new developments are proposed in the vicinity of Lansdowne. The location of background developments are described in **Table 2.5** and illustrated in **Figure 2.32**.

Table 2.5: 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 <sup>2</sup> 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 <sup>2</sup> 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 <sup>2</sup> 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 2.32: Background Developments Key Plan



## 2.2 Study Area and Time Periods

### 2.2.1 STUDY AREA

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

### 2.2.2 TIME PERIODS

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

- Weekday AM Peak Hour of roadway
- Weekday PM Peak Hour of roadway
- Saturday Mid-Day Peak Hour of roadway
- Sunday Mid-Day Peak Hour of roadway
- Weekday Minor and Major Events: Ingress and Egress Peak Hour

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.

### 2.2.3 HORIZON YEARS

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

- **Existing Conditions** – Representative of current operating conditions at Lansdowne.
- **2028** – Representative of anticipated completion and interim operating conditions of the new event centre during the construction of subsequent phases of Lansdowne 2.0 (i.e. – new north stadium stands and podium retail / residential towers).
- **2033** – Representative of anticipated full build-out of Lansdowne 2.0, inclusive of the new event centre, north stadium stands, podium retail, and residential towers.

## 2.3 Exemptions Review

**Table 2.6** summarizes the Exemptions Review table from the City of Ottawa's 2017 *Transportation Impact Assessment Guidelines*.

Table 2.6: Exemptions Review

Module	Element	Exemption Considerations	Exempted?
<b>Design Review Component</b>			
<b>4.1 Development Design</b>	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
<b>4.2 Parking</b>	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
<b>4.3 Boundary Street Design</b>		All	No
<b>Network Impact Component</b>			
<b>4.5 Transportation Demand Management</b>	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
	4.5.2 Need and Opportunity	All	No
	4.5.3 TDM Program	All	No
<b>4.6 Neighbourhood Traffic Calming</b>	4.6.1 Adjacent Neighbourhoods	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:  1. Access to Collector or Local;	No

Module	Element	Exemption Considerations	Exempted?
		<p>2. "Significant sensitive land use presence" exists, where there is at least two of the following adjacent to the subject street segment:</p> <ul style="list-style-type: none"> <li>• School (within 250m walking distance);</li> <li>• Park;</li> <li>• Retirement / Older Adult Facility (i.e. long-term care and retirement homes);</li> <li>• Licenced Child Care Centre;</li> <li>• Community Centre; or</li> <li>• 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.</li> </ul> <p>3. Application is for Zoning By-Law Amendment or Draft Plan of Subdivision;</p> <p>4. At least 75 site-generated auto trips;</p> <p>5. Site Trip Infiltration is expected. Site traffic will increase peak hour vehicle volumes along the route by 50% or more</p>	
<b>4.7 Transit</b>	4.7.1 Transit Route Capacity	> 75 site transit trips	No
	4.7.2 Transit Priority Requirements	> 75 site auto trips	No
<b>4.8 Network Concept</b>		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
<b>4.9 Intersection Design</b>	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

#### 3.1.1 TRIP GENERATION AND MODE SHARES

##### 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 ft<sup>2</sup> 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 the weekday AM and PM peak periods, weekend Saturday and Sunday peak periods, as well as ingress and egress traffic demands for minor and major events held at Lansdowne are summarized in Section 2.1.5.

##### 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. Over the next five years, an average of 78% of the events (132 out of 169 per year) are expected to have under 5000 attendees. Although small events are expected to occur more frequently at Lansdowne, their attendance will be similar to current levels.

**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.

**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 for 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.

As part of a sensitivity assessment of trip generation rates, alternate ITE trip generation rates were evaluated for LUC 222 (Multi-Family Residential) and LUC 820 (Shopping Center) using the Peak Hour of Adjacent Roadway rates. The trip generation rates used as part of the sensitivity assessment, Option B, are outlined in **Table 3.2**.

Table 3.1: Lansdowne 2.0 Land Uses and Trip Generation Rates – Option A

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%	<b>0.76 / unit</b>	64%	36%	<b>0.58 / unit</b>	56%	44%	<b>0.74 / unit</b>	51%	49%	<b>0.85 / Unit</b>
820	Shopping Center	Vehicle Trips	8.6 ksf	55%	45%	<b>2.87 / ksf</b>	50%	50%	<b>4.09 / ksf</b>	52%	48%	<b>4.40 / ksf</b>	49%	51%	<b>2.35 / ksf</b>
710	General Office	Person Trips	14.2 ksf	87%	13%	<b>1.22 / ksf</b>	21%	79%	<b>1.28 / ksf</b>	48%	52%	<b>0.27 / ksf</b>	36%	64%	<b>0.17 / ksf</b>

Table 3.2: Lansdowne 2.0 Land Uses and Trip Generation Rates – Option B

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)	Vehicle ** Trips	770 units	26%	74%	<b>0.27 / unit</b>	62%	38%	<b>0.32 / unit</b>	57%	43%	<b>0.36 / unit</b>	53%	47%	<b>0.30 / unit</b>
820	Shopping Center	Vehicle Trips	8.6 ksf	62%	38%	<b>0.84 / ksf</b>	48%	52%	<b>3.40 / ksf</b>	52%	48%	<b>4.40 / ksf</b>	49%	51%	<b>2.35 / ksf</b>
710	General Office	Person Trips	14.2 ksf	87%	13%	<b>n/a*</b>	21%	79%	<b>1.28 / ksf</b>	48%	52%	<b>0.27 / ksf</b>	36%	64%	<b>0.17 / ksf</b>

\* Fitted curve equation is applied as the data plot features more than 20 points.

\*\* Vehicle trips are converted to person trips using the auto occupancy factor of 1.28 as per the TRANS Trip Generation Manual.

**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.

The calculation of trip internalization factors considered both the proposed land uses, and the existing land uses on the site. A portion of visitors to existing land uses on site will also visit the proposed land uses, and so these complementary trips were included in the overall reduction of new site trips.

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 3.3** 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).

NCHRP 684 Internal Trip Capture Estimation worksheets are included in **Appendix C**.

*Table 3.3: 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 3.4**.

As part of a sensitivity analysis of adopted trip generation rates, the transportation demands calculated using less conservative trip rates (Option B) are outlined in **Table 3.5**.

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 represents 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. No changes in the provision of enhanced transit or shuttle services are expected.

As illustrated in the tables below, the forecasted trip generation potential using Option A rates are higher than those of the sensitivity assessment under Option B. As a result, the trip generation rates assumed under Option A are carried forward as part of this study.

Table 3.4: Lansdowne 2.0 Person Trips Generated by Land Use – Option A

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)	<b>Person Trips</b>	<b>94</b>	<b>492</b>	<b>585</b>	<b>286</b>	<b>161</b>	<b>447</b>	<b>319</b>	<b>251</b>	<b>570</b>	<b>334</b>	<b>321</b>	<b>655</b>
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
		<b>Person Trips</b>	<b>14</b>	<b>12</b>	<b>27</b>	<b>16</b>	<b>16</b>	<b>31</b>	<b>21</b>	<b>19</b>	<b>42</b>	<b>11</b>	<b>11</b>	<b>22</b>
710	General Office	<b>Person Trips</b>	<b>15</b>	<b>2</b>	<b>17</b>	<b>4</b>	<b>14</b>	<b>18</b>	<b>2</b>	<b>2</b>	<b>4</b>	<b>1</b>	<b>2</b>	<b>2</b>
<b>Lansdowne 2.0 New Person Trips (Peak Hour)</b>			<b>123</b>	<b>506</b>	<b>629</b>	<b>305</b>	<b>191</b>	<b>496</b>	<b>342</b>	<b>272</b>	<b>615</b>	<b>345</b>	<b>334</b>	<b>679</b>

Table 3.5: Lansdowne 2.0 Person Trips Generated by Land Use – Option B

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)	Auto Trips (Peak Hour)	54	154	208	153	94	246	158	119	277	122	109	231
		Auto Trip to Person Trip Factor	1.28 persons per vehicle											
		<b>Person Trips</b>	<b>69</b>	<b>197</b>	<b>266</b>	<b>196</b>	<b>120</b>	<b>315</b>	<b>202</b>	<b>153</b>	<b>355</b>	<b>157</b>	<b>139</b>	<b>296</b>
820	Shopping Plaza	Auto Trips (Peak Hour)	4	3	7	14	15	29	20	18	38	10	10	20
		Auto Trip to Person Trip Factor	1.28 persons per vehicle											
		Initial Person Trips	6	4	9	18	20	38	25	23	49	13	13	26
		Internalization Factor	15%			30%			15%			15%		
		Internalization Trip Reduction	-1	-1	-1	-5	-6	-11	-4	-4	-7	-2	-2	-4
		<b>Person Trips</b>	<b>5</b>	<b>3</b>	<b>8</b>	<b>13</b>	<b>14</b>	<b>27</b>	<b>21</b>	<b>19</b>	<b>42</b>	<b>11</b>	<b>11</b>	<b>22</b>
710	General Office	<b>Person Trips</b>	<b>27</b>	<b>4</b>	<b>31</b>	<b>4</b>	<b>14</b>	<b>18</b>	<b>2</b>	<b>2</b>	<b>4</b>	<b>1</b>	<b>2</b>	<b>2</b>
<b>Lansdowne 2.0 New Person Trips (Peak Hour)</b>			<b>86</b>	<b>160</b>	<b>247</b>	<b>170</b>	<b>122</b>	<b>291</b>	<b>181</b>	<b>141</b>	<b>323</b>	<b>134</b>	<b>121</b>	<b>255</b>

Based on **Table 3.4**, 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 3.6**.

Table 3.6: Assumed Mode Share by Land Use

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

**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 3.7: Lansdowne 2.0 Future Trip Generation by Travel Mode – Option A

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	<b>Auto Driver</b>		35	130	165	79	52	132	89	71	159	89	86	175	
	<b>Passenger</b>		9	40	49	24	14	38	26	21	47	27	26	53	
	<b>Transit</b>		29	123	152	73	46	119	82	65	146	84	81	164	
	<b>Cycling</b>		7	28	35	17	11	27	18	15	33	19	18	37	
	<b>Walking</b>		43	186	229	112	68	180	127	101	228	127	123	250	
	<b>Total Person Trips (Peak Hour)</b>		<b>123</b>	<b>506</b>	<b>629</b>	<b>305</b>	<b>191</b>	<b>496</b>	<b>342</b>	<b>272</b>	<b>614</b>	<b>345</b>	<b>334</b>	<b>679</b>	

Table 3.8: Lansdowne 2.0 Future Trip Generation by Travel Mode – Option B

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%	14	50	64	50	31	80	52	39	90	40	35	75
		Passenger	8%	4	16	20	16	10	25	16	12	28	13	11	24
		Transit	25%	13	48	61	48	29	77	50	37	87	38	34	72
		Cycling	6%	3	11	14	11	7	17	11	8	20	9	8	16
		Walking	37%	20	72	92	71	44	115	74	56	130	57	51	108
820	Shopping Center	Auto Driver	31%	1	1	2	4	4	8	6	6	12	3	3	7
		Passenger	3%	0	0	0	0	0	1	1	1	1	0	0	1
		Transit	14%	1	0	1	2	2	4	3	3	6	2	2	3
		Cycling	4%	0	0	0	0	0	1	1	1	1	0	0	1
		Walking	49%	2	1	4	6	7	13	10	9	20	5	6	11
710	Office	Auto Driver	45%	12	2	14	2	6	8	1	1	2	0	1	1
		Passenger	7%	2	0	2	0	1	1	0	0	0	0	0	0
		Transit	29%	8	1	9	1	4	5	1	1	1	0	0	1
		Cycling	8%	2	0	3	0	1	1	0	0	0	0	0	0
		Walking	11%	3	0	3	0	2	2	0	0	0	0	0	0
Lansdowne 2.0 Additional Person Trips	<b>Auto Driver</b>		27	53	80	56	41	97	59	46	105	44	40	83	
	<b>Passenger</b>		6	16	22	16	11	27	17	13	30	13	12	24	
	<b>Transit</b>		22	50	72	51	35	86	53	41	94	40	36	76	
	<b>Cycling</b>		5	11	17	12	8	20	12	9	21	9	8	17	
	<b>Walking</b>		25	74	99	78	52	130	84	65	150	63	56	119	
	<b>Total Person Trips (Peak Hour)</b>		<b>86</b>	<b>204</b>	<b>290</b>	<b>212</b>	<b>148</b>	<b>360</b>	<b>225</b>	<b>225</b>	<b>399</b>	<b>168</b>	<b>152</b>	<b>320</b>	

The total additional number of trips generated by the Lansdowne 2.0 development are outlined above by mode.

Additional trips calculated using the adopted rates (Option A) are shown in **Table 3.7**. New trips calculated under the less conservative rates as part of the sensitivity assessment (Option B) are shown in **Table 3.8**.

In this study, the Option A generated trips have been used to calculate future traffic volumes, ensuring a “worst-case” scenario assessment of the site’s potential impact on the surrounding neighbourhood. Given the high traffic circulation already existing in the area, and residents’ concerns about the impact of the further development of the Lansdowne site, this conservative approach helps to understand the full extent of the potential impact of the additional site generated traffic.

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, respectively.

### 3.1.2 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 3.9** outlines the trip distribution assumptions to/from Lansdowne based on the 2011 TRANS Origin-Destination Survey.

*Table 3.9: Site Trip Directional Distribution*

Direction	Trip Distribution
North	35%
East	21%
South	32%
West	13%
Total	<b>100%</b>

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 3.10** 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 3.10: Refined Directional Trip Distribution Assumptions*

Direction	Study Area Trip Distribution
North	50%
South	50%

### 3.1.3 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 QED.

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 3.11** 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.

Table 3.11: 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	49	47
Queen Elizabeth Driveway	11	39	24	16	27	21	27	26
Holmwood Access*	5	20	12	8	13	11	13	13
<b>Total New Vehicle Trips</b>	<b>35</b>	<b>130</b>	<b>79</b>	<b>52</b>	<b>89</b>	<b>71</b>	<b>89</b>	<b>86</b>
	<b>165</b>		<b>132</b>		<b>159</b>		<b>175</b>	

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

Figure 3.1 illustrates the assumed site trip assignment assumptions for Lansdowne 2.0 additional vehicle trips.

Lansdowne 2.0 additional site generated vehicle trips are illustrated in Figure 3.2 through Figure 3.4.

Figure 3.1: Lansdowne 2.0 Site Traffic Assignment Assumptions

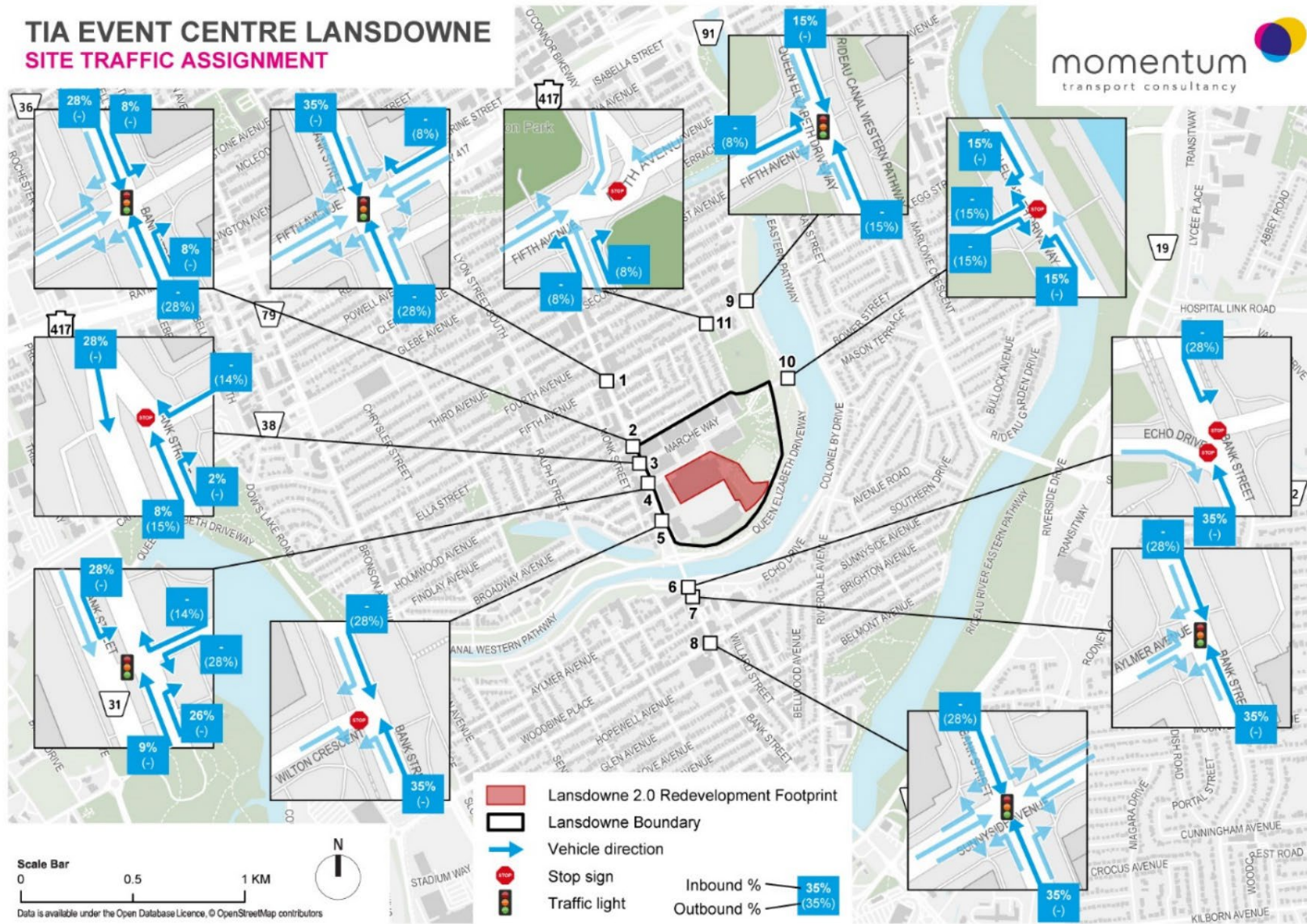


Figure 3.2: Lansdowne 2.0 Site Volumes (Weekday AM/PM Peak)

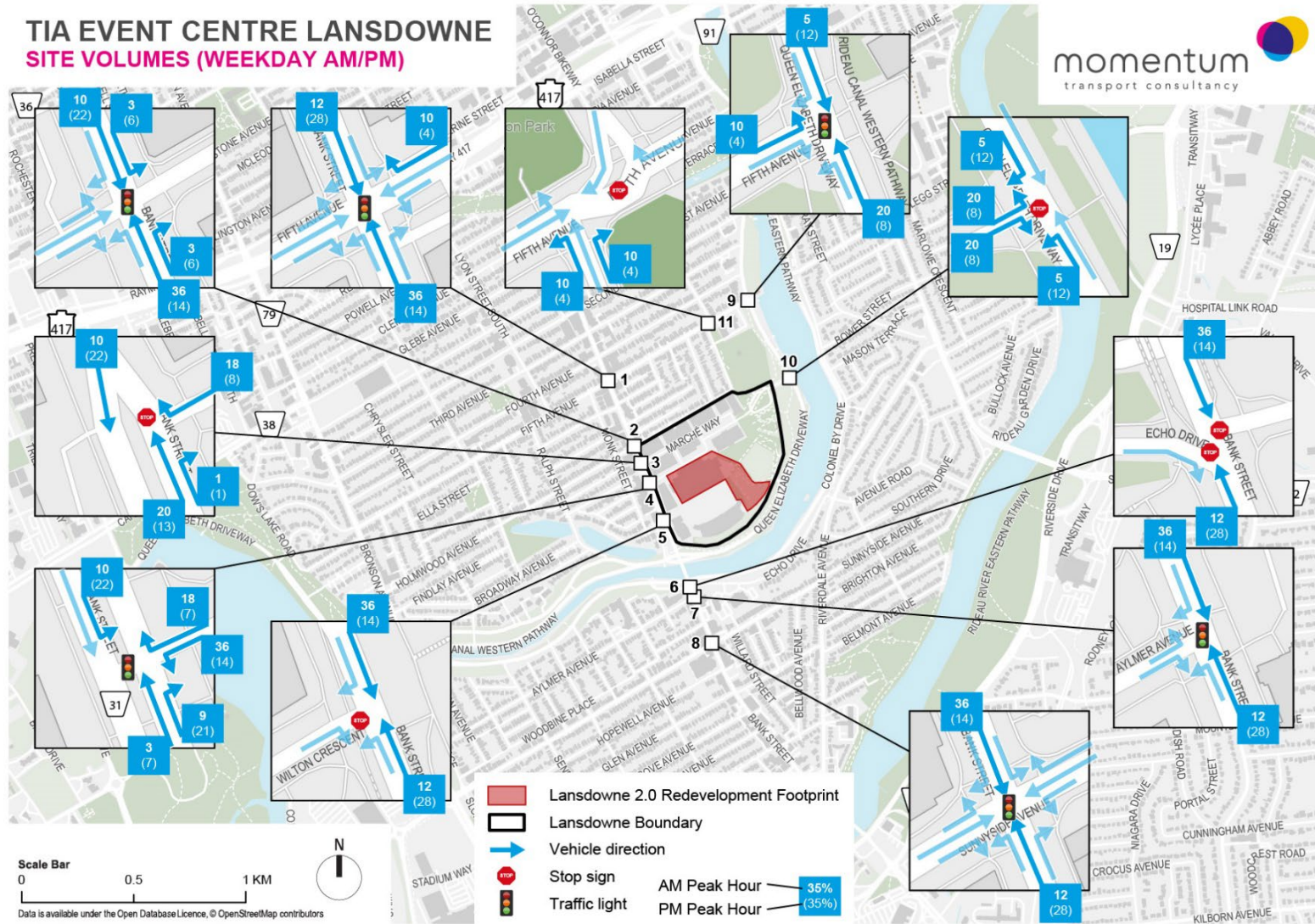


Figure 3.3: Lansdowne 2.0 Site Volumes (Saturday Peak)

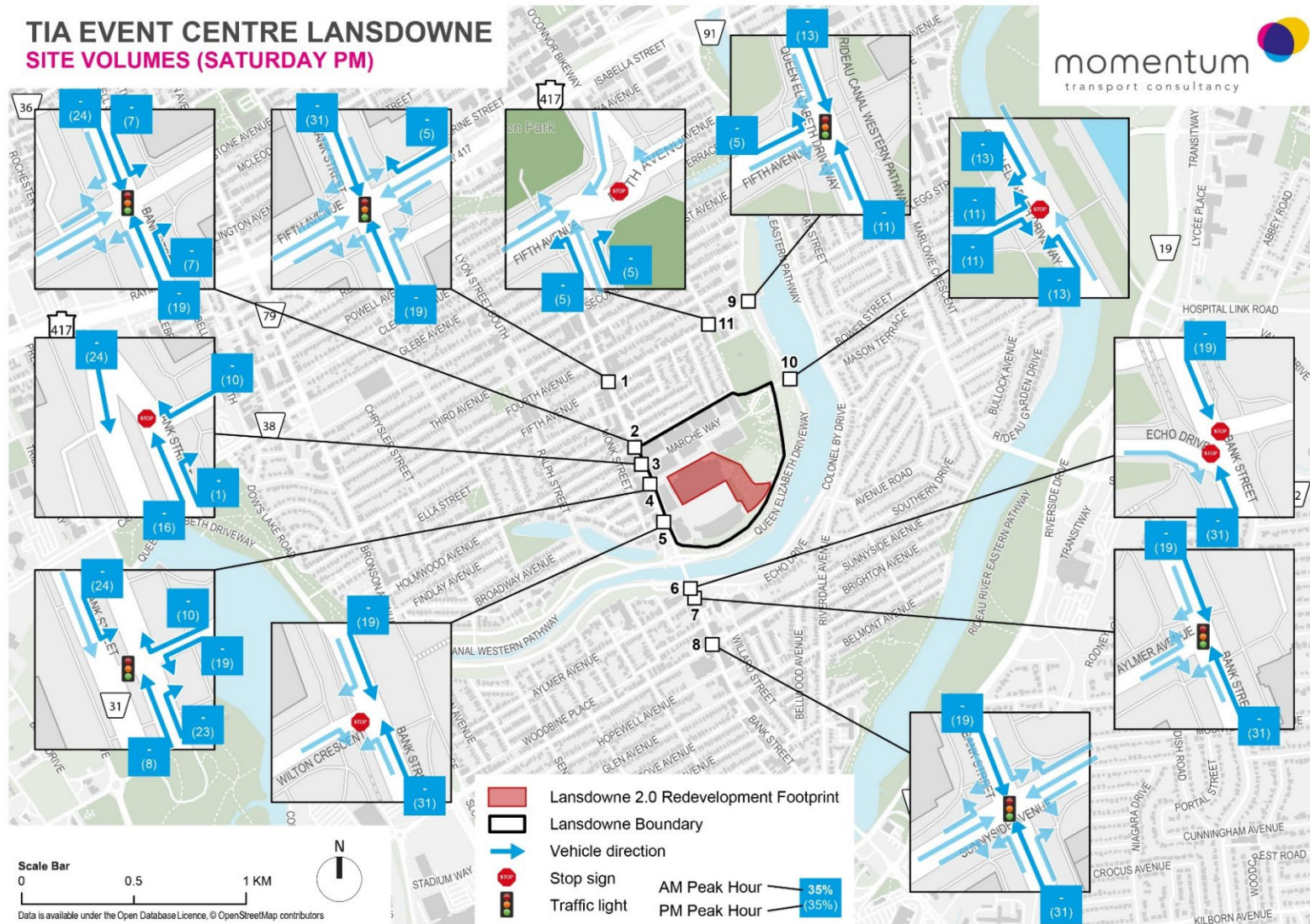
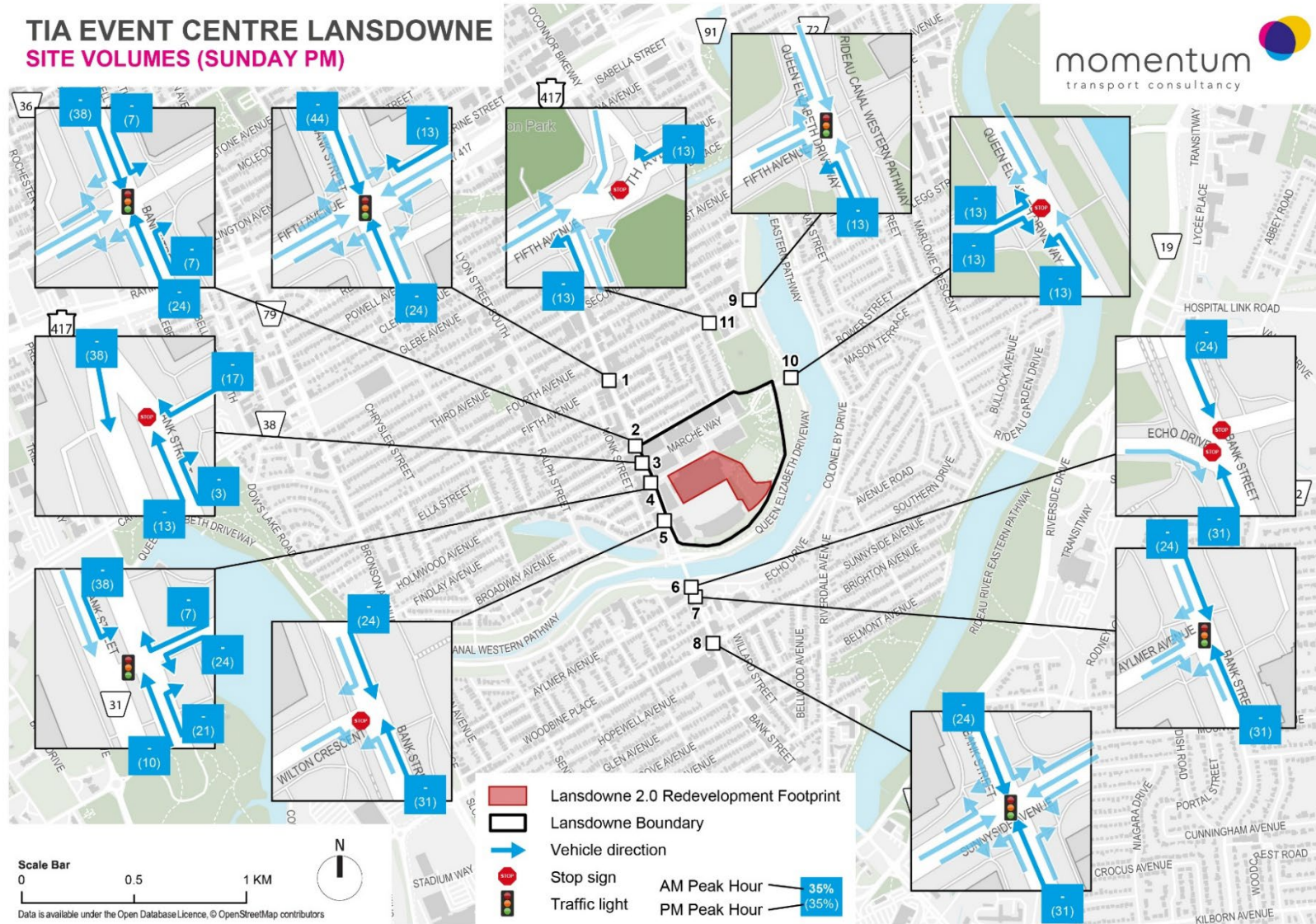


Figure 3.4: Lansdowne 2.0 Site Volumes (Sunday Peak)



## 3.2 Background Network Travel Demands

### 3.2.1 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 Fall 2025.

### 3.2.2 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 0.5% annual background growth rate was applied to forecast future background growth in traffic volumes.

### 3.2.3 OTHER DEVELOPMENTS

As outlined in Section 2.1.8, 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.

## 3.4 Future Traffic Volumes

### 3.4.1 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 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 North Stadium Stands (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 Phase 2 and 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 of the subsequent Phase 2 and Phase 3.

While construction phasing details for Phase 2 and Phase 3 are still under development and will be addressed as part of subsequent approval phases, 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. The time and duration of impacts is still unknown.

To assess traffic operations during the operation of the new Event Centre, the 2028 horizon year was assumed to include the temporary closure of the Bank Street underground garage ramp. 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, public access to the underground parking garage will occur at 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 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 their journey to Lansdowne.

**Figure 3.5** through **Figure 3.13** summarize 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 Total Future Traffic Volumes (Weekday AM / PM)

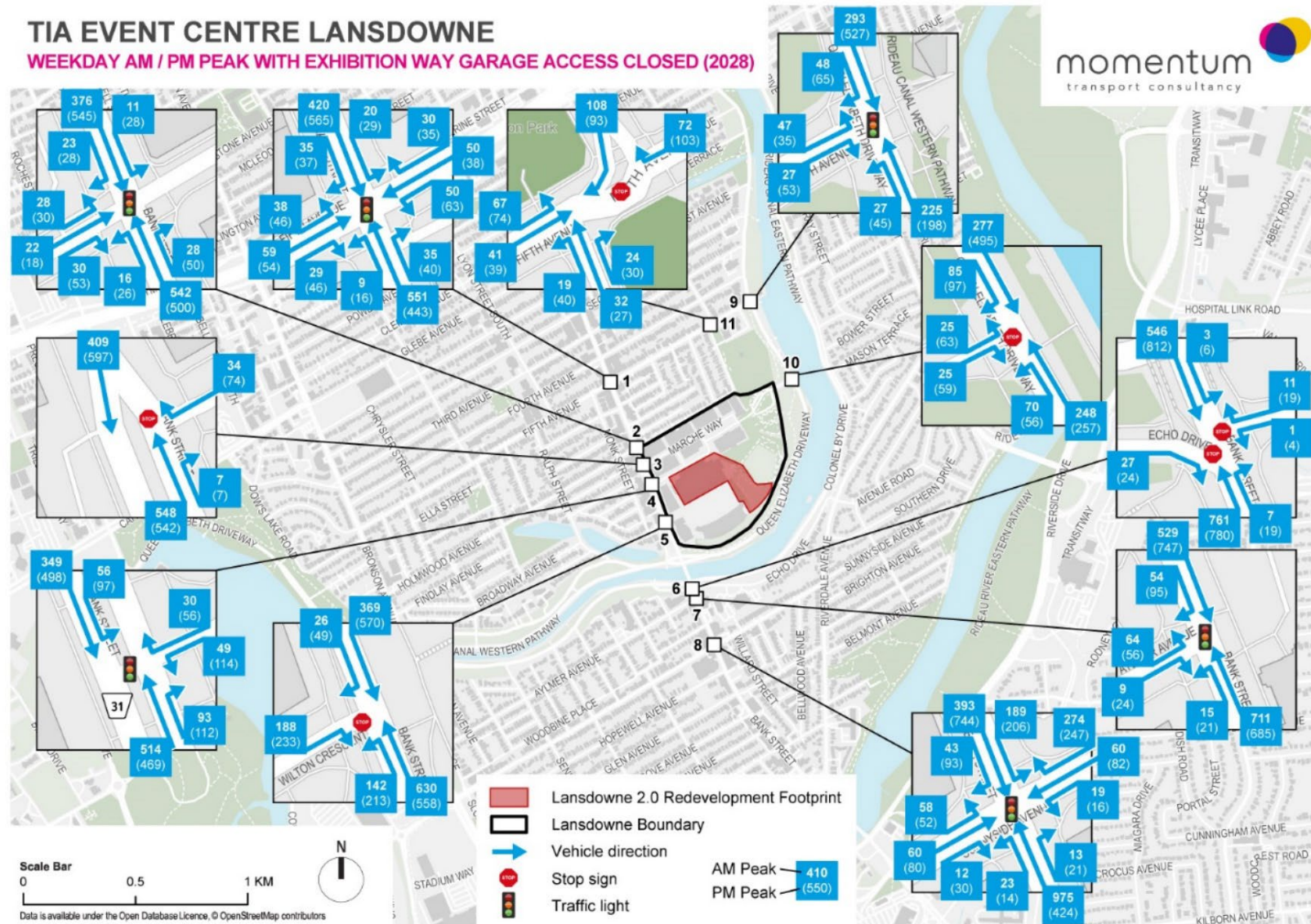




Figure 3.7: 2028 Total Future Traffic Volumes (Saturday PM)

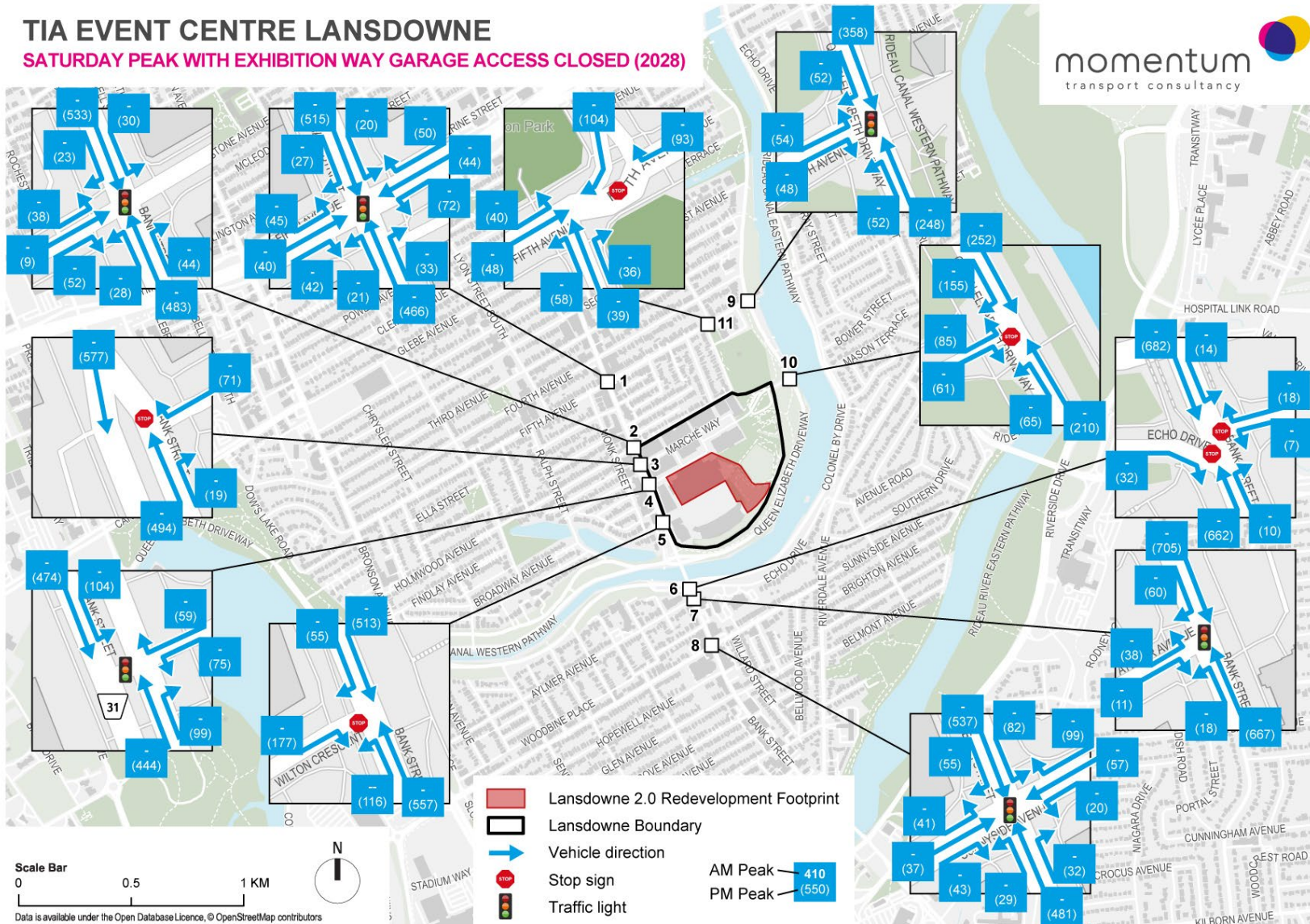


Figure 3.8: 2028 Total Future Traffic Volumes on-site (Saturday PM)

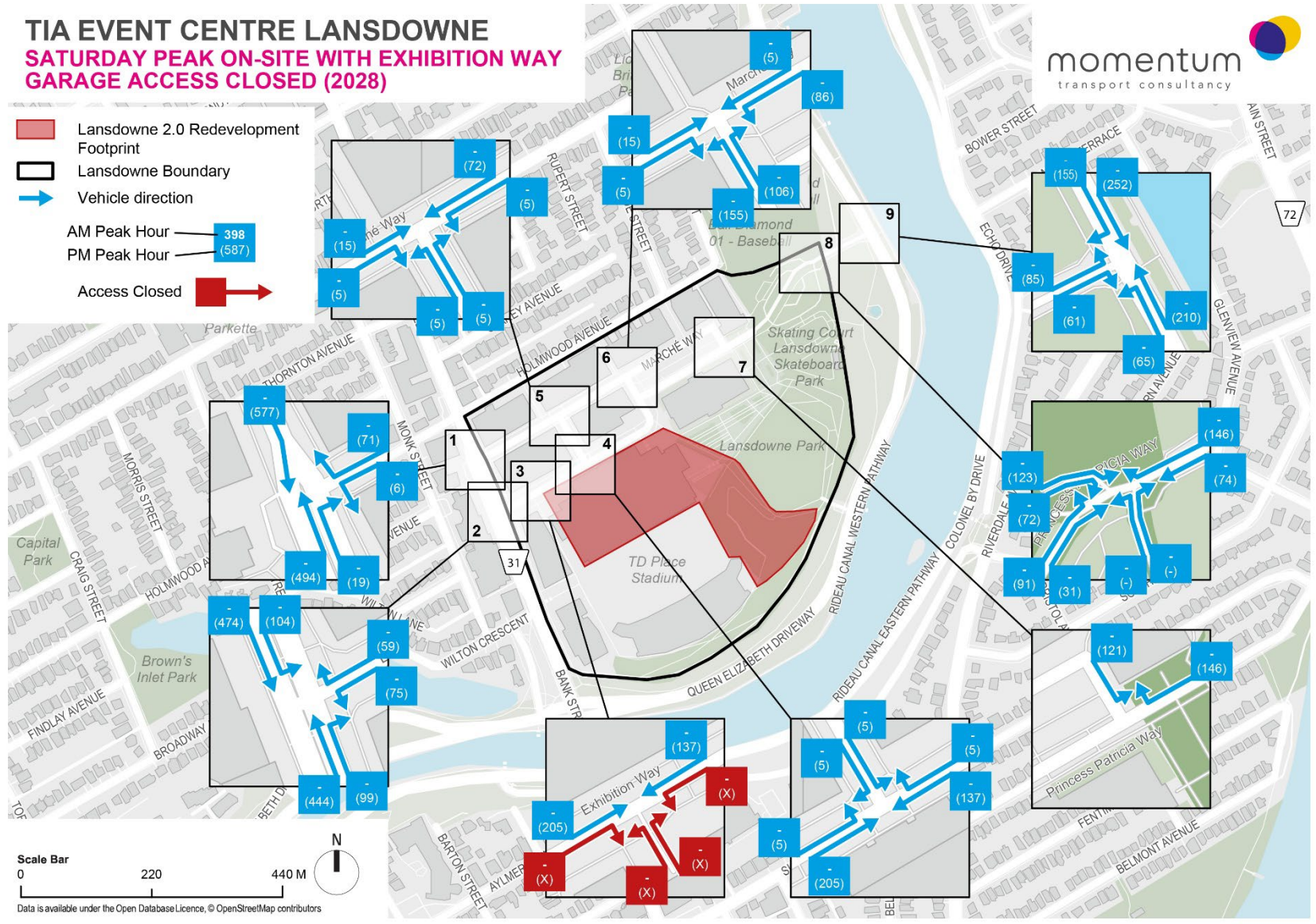


Figure 3.9: 2028 Total Future On-Site Traffic Volumes (Sunday PM)

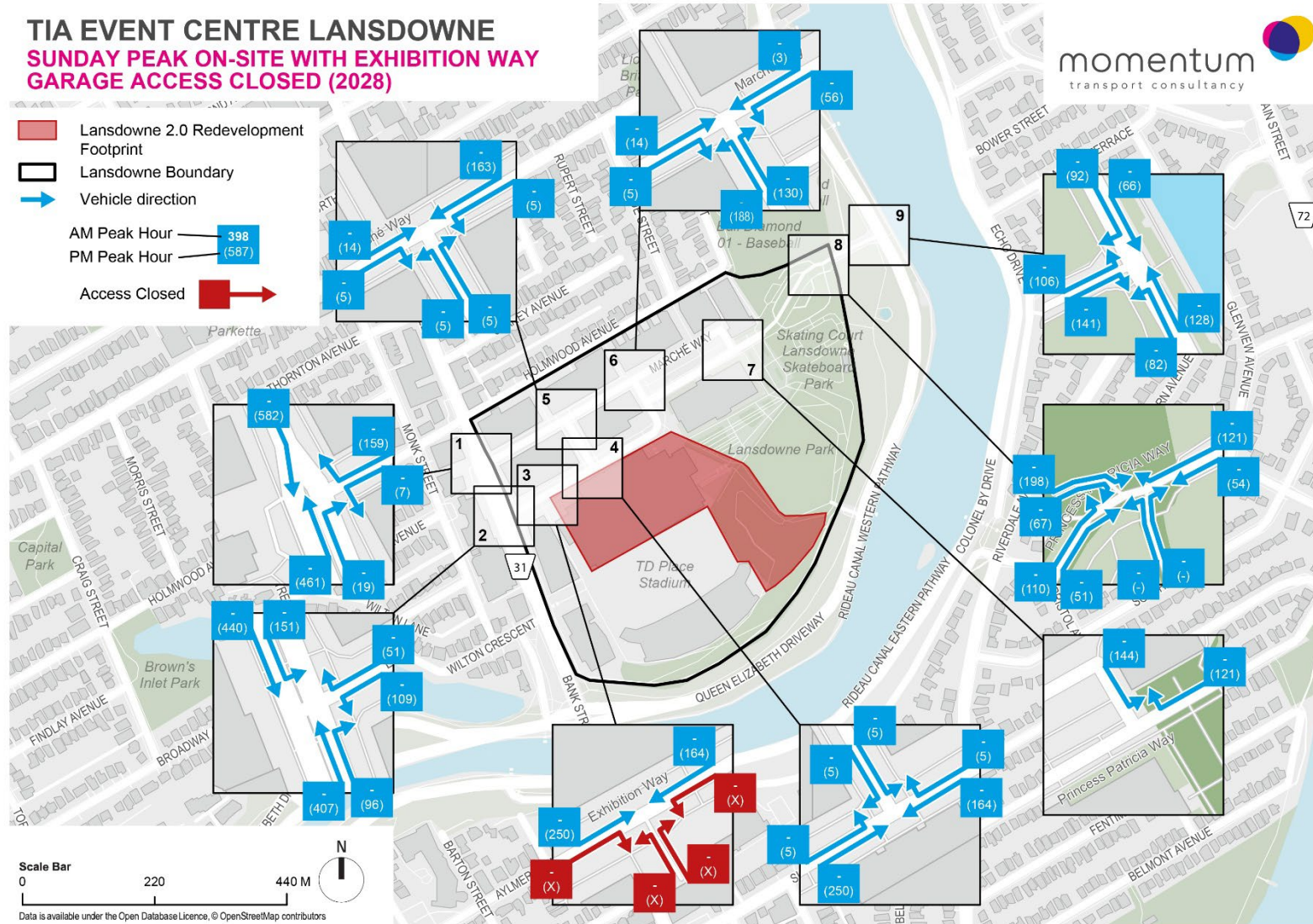


Figure 3.10: 2028 Total Future Traffic Volumes (Sunday PM)

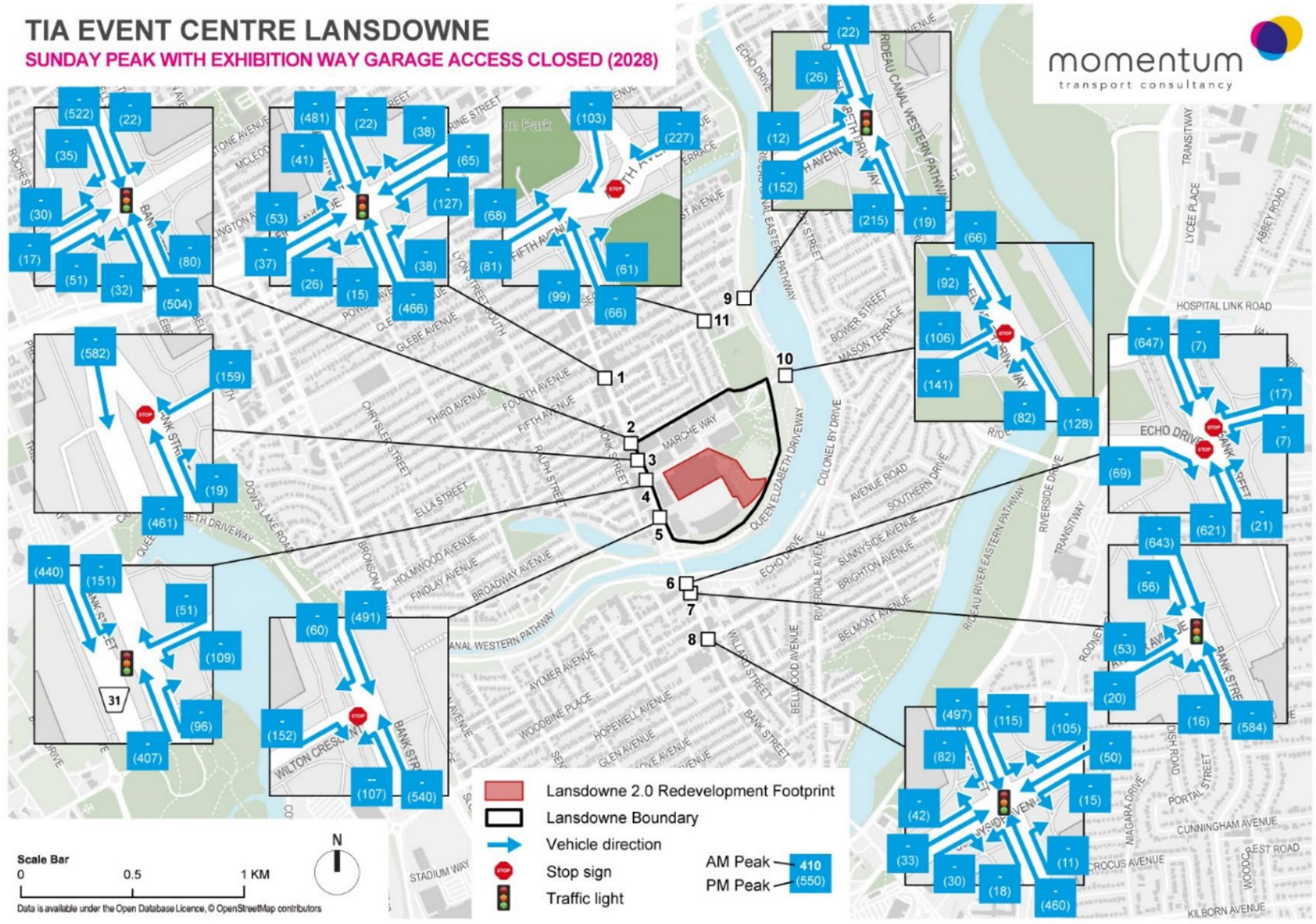


Figure 3.11: 2028 Total Future Traffic Volumes Minor Event

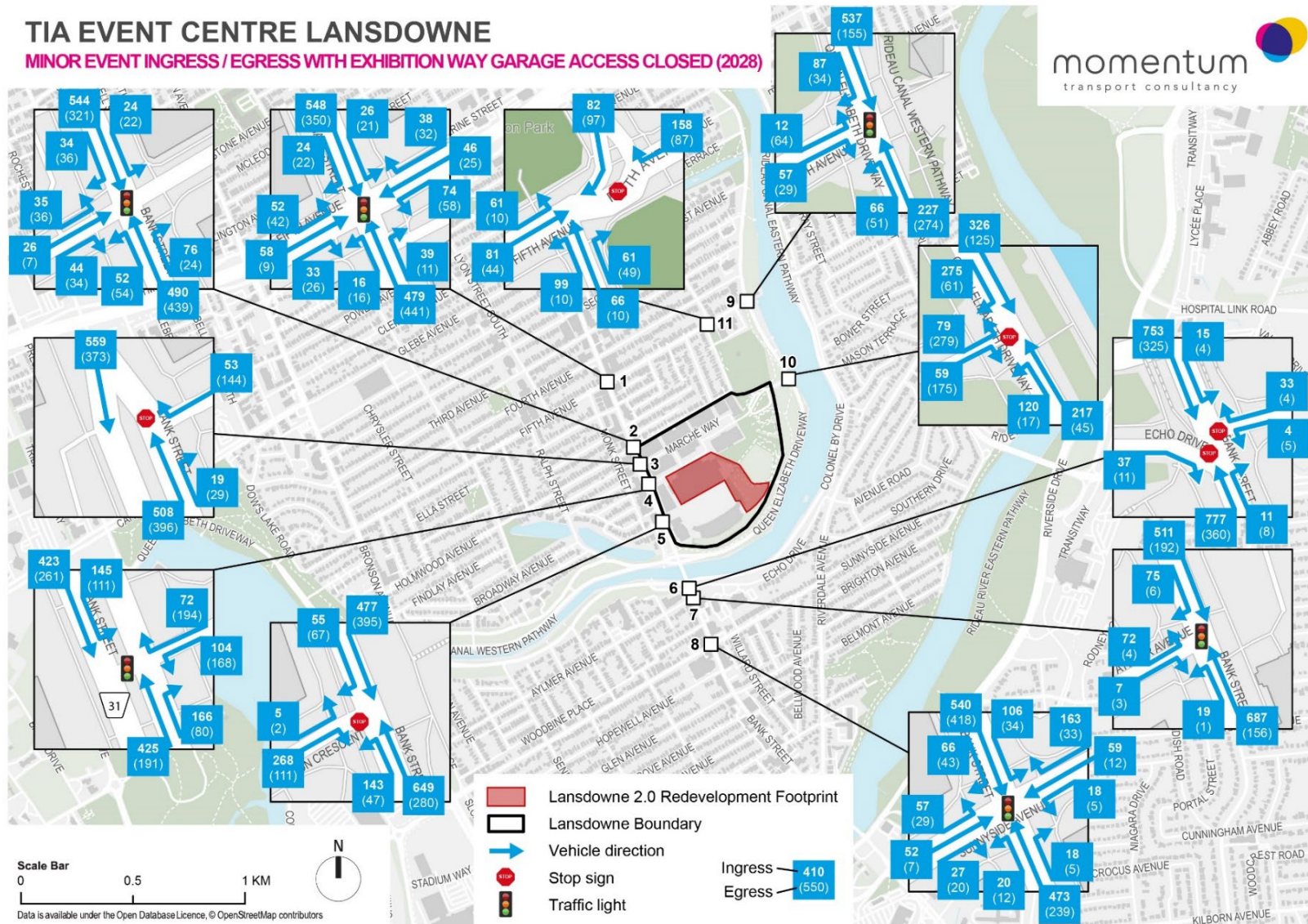


Figure 3.12: 2028 Total Future Traffic Volumes On-site Minor Event

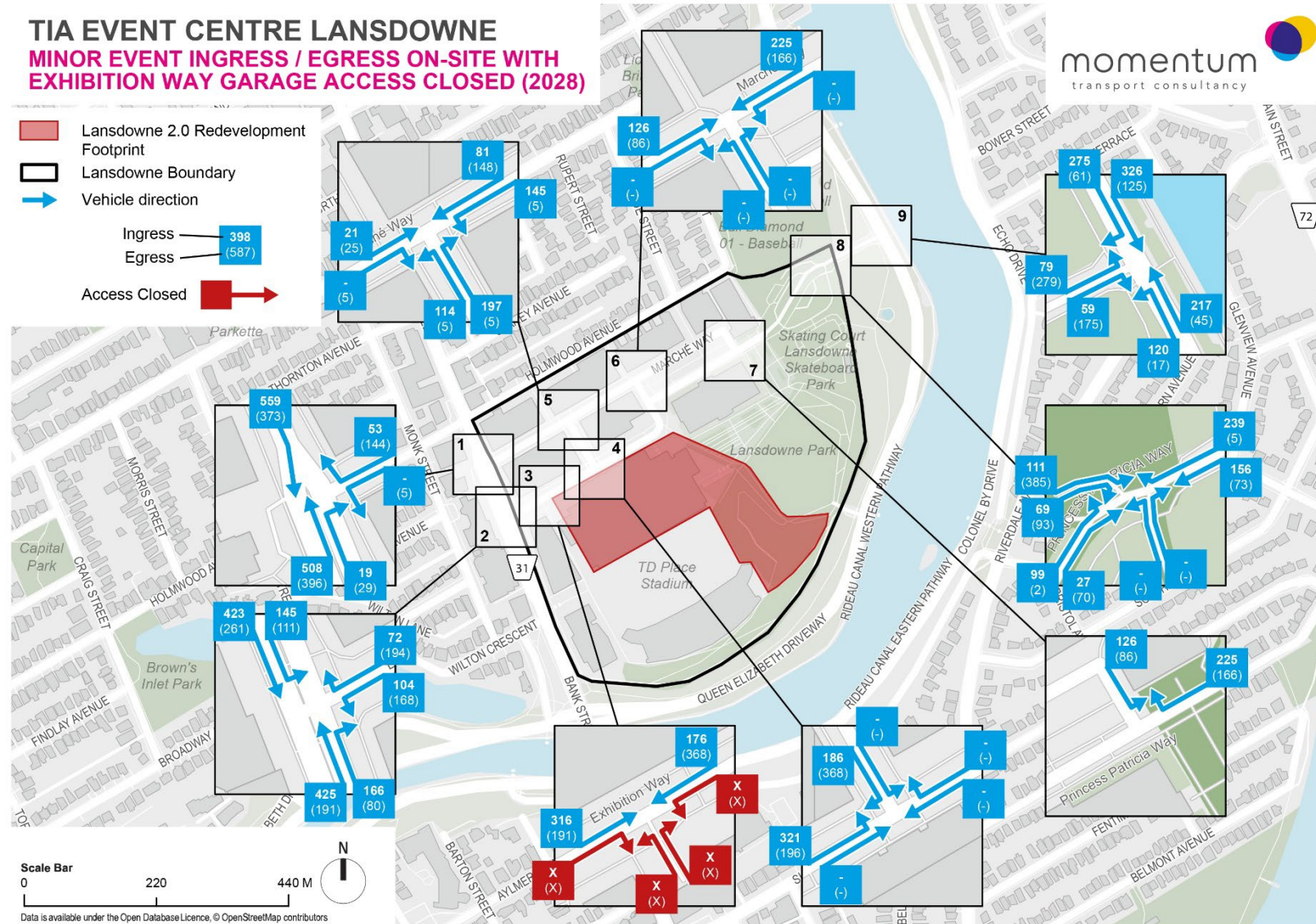
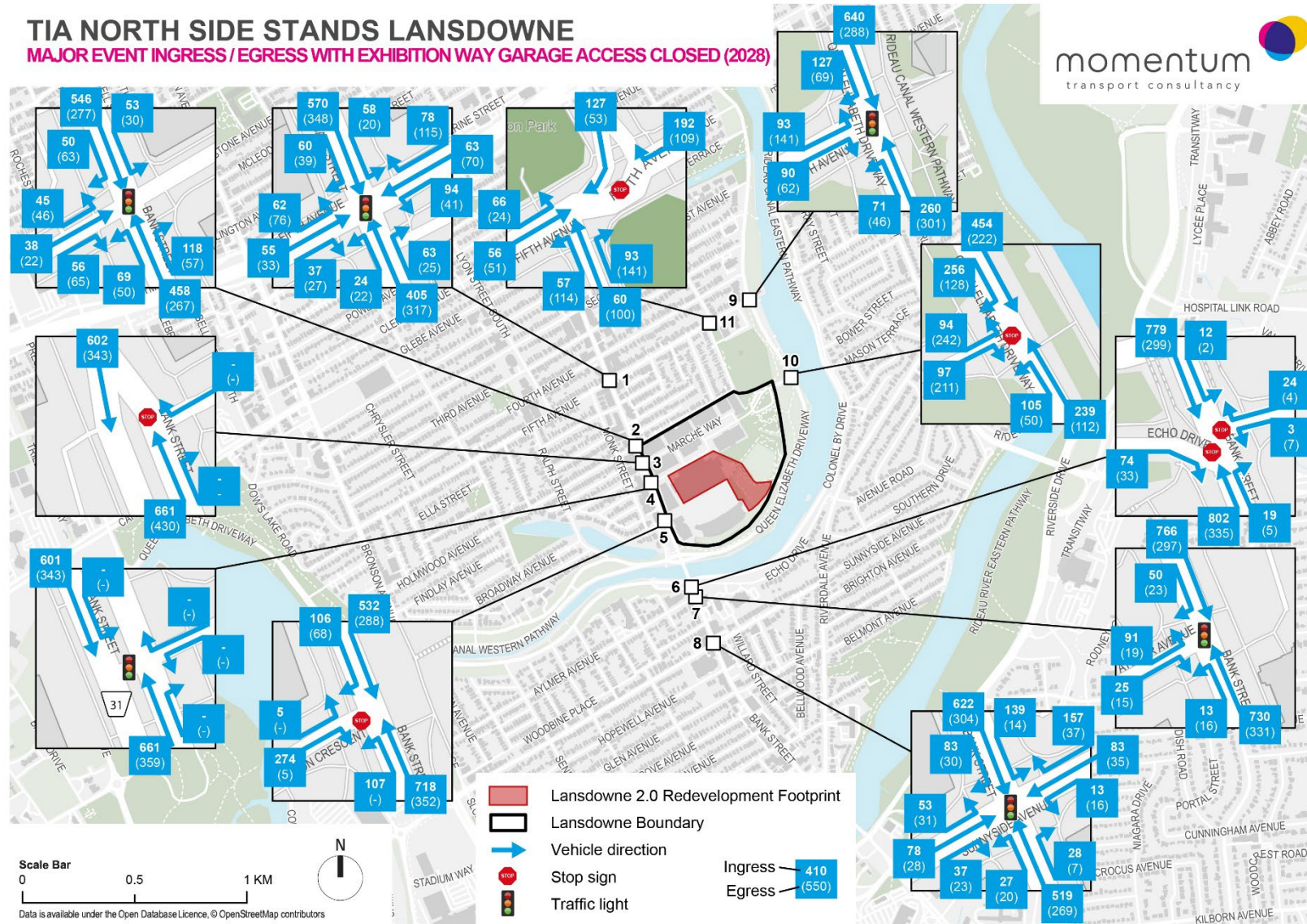


Figure 3.13: 2028 Total Future Traffic Volumes Major Event



### 3.4.2 2033 TOTAL FUTURE TRAFFIC VOLUMES

The 2033 Total Future 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 Total Future volumes were estimated by superimposing existing traffic volumes, background traffic assumptions, and site generated traffic forecasts (as described below).

#### Background Traffic Growth Assumptions:

2033 Total Future traffic volumes were developed by applying a 0.5% annual background growth rate to existing traffic volumes and adding background volumes expected to be generated by nearby pending development proposals anticipated to be built out before 2033.

#### Site Generated Traffic Forecasts:

Estimations for new site generated trips during the future Weekday AM, Weekday PM, Saturday and Sunday scenarios are summarized in **Table 3.11** and **Figure 3.1** through **Figure 3.4**.

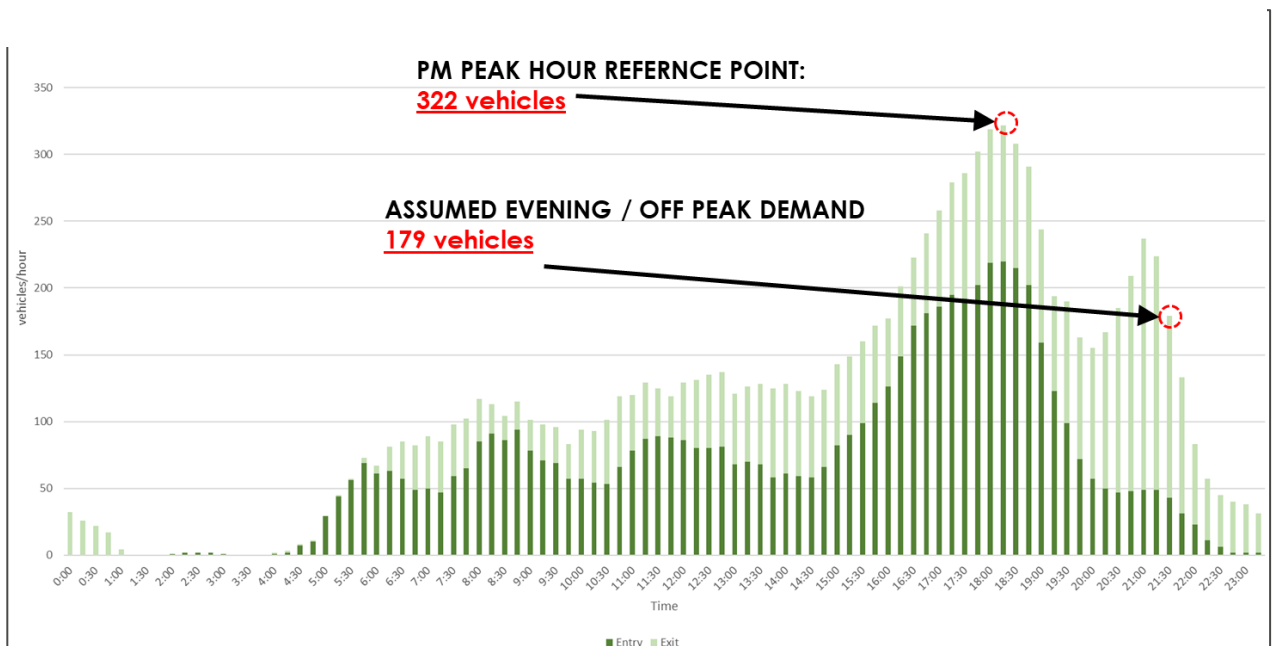
#### Site Generated Traffic During Event Ingress:

The estimated weekday PM peak site generated trips were also used as the site generated traffic volumes during the ingress of minor and major events, as the ingress occurs in the late afternoon.

#### Site Generated Traffic During Event Egress:

The site generated traffic during the egress of minor and major events was estimated by applying a reduction factor to the weekday PM peak site generated trips. The egress occurs in the late evening, and so a ratio was calculated to compare afternoon and evening site traffic. Parking garage data for May 3, 2022 is illustrated in **Figure 3.14**, which shows that the site activity for a regular weekday in the late evening (9:30pm – 10:30pm) is equal to approximately 55% of the site activity during the PM peak period. Based on this, 55% of the site generated trips estimated for the PM peak hour are added on as site generated trips during the event egress scenarios.

Figure 3.14: Lansdowne Weekday Parking Activity (May 3, 2022)



**Figure 3.15** through **Figure 3.32** summarize projected 2033 traffic volumes inclusive of background development growth and full-build out site generated traffic volumes for Lansdowne 2.0.

Figure 3.15: 2033 Future Background Traffic Volumes Weekday AM PM Peak

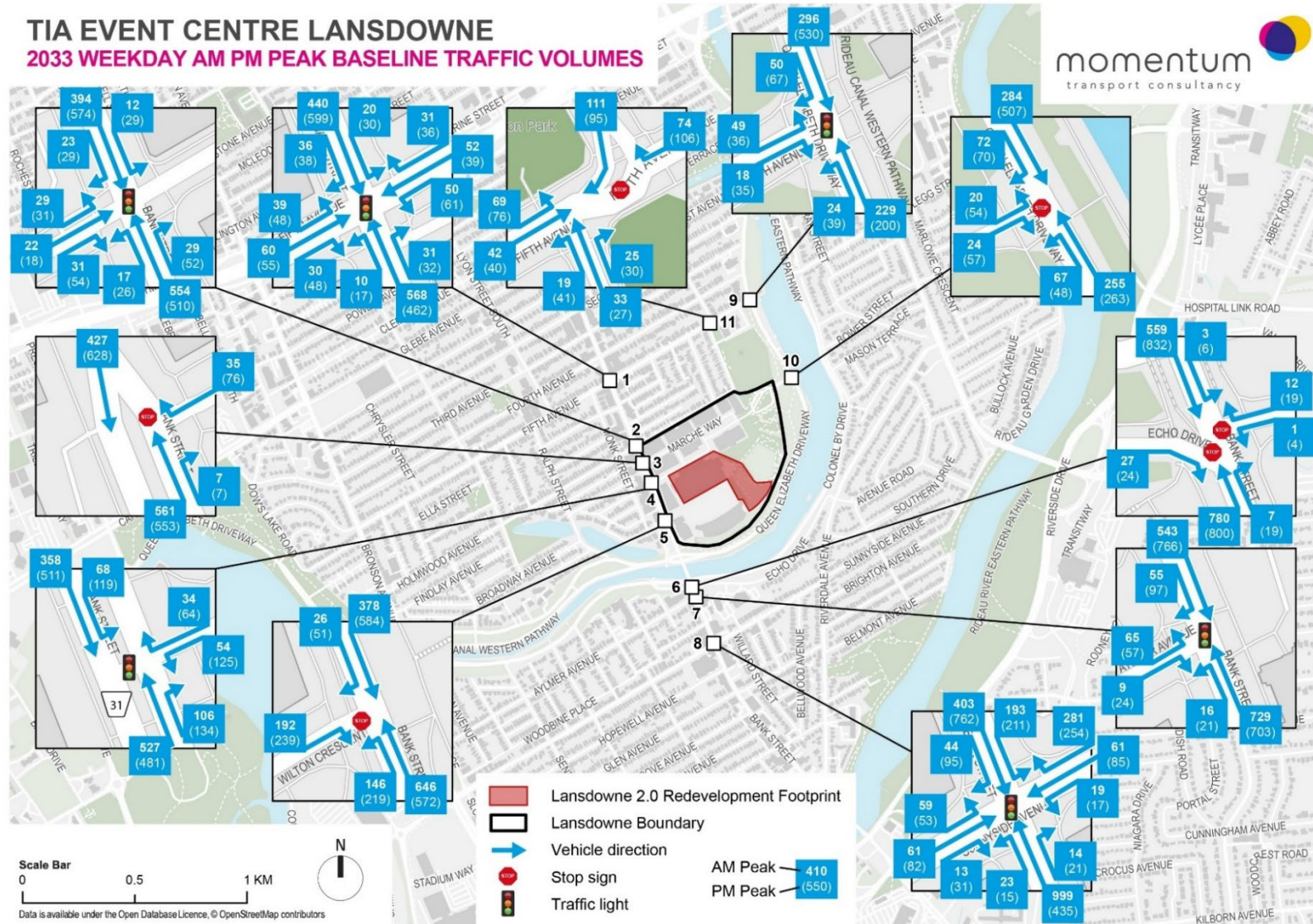




Figure 3.17: 2033 Future Background Traffic Volumes Saturday Peak

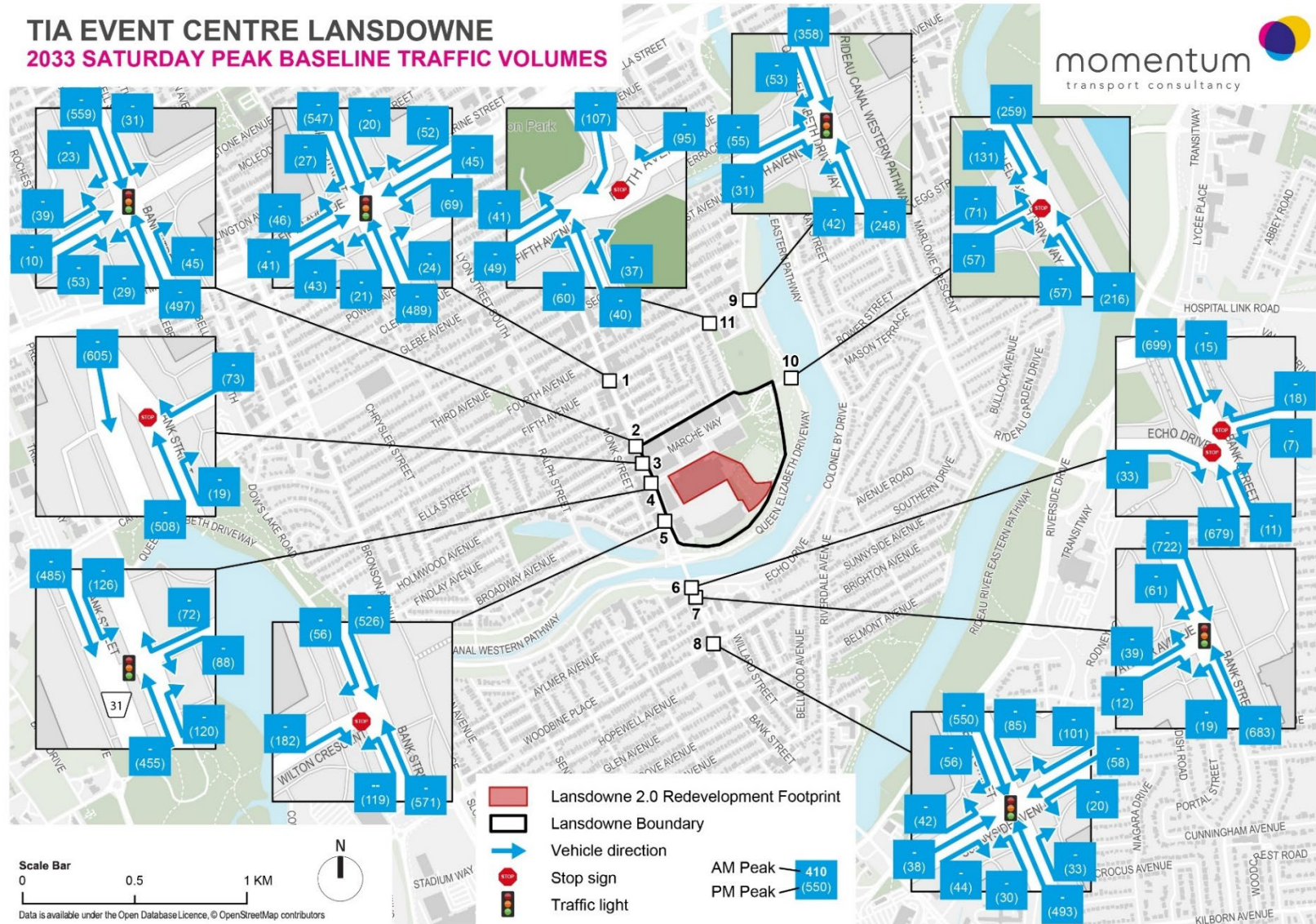


Figure 3.18: 2033 Future Background Traffic Volumes Saturday Peak On-Site

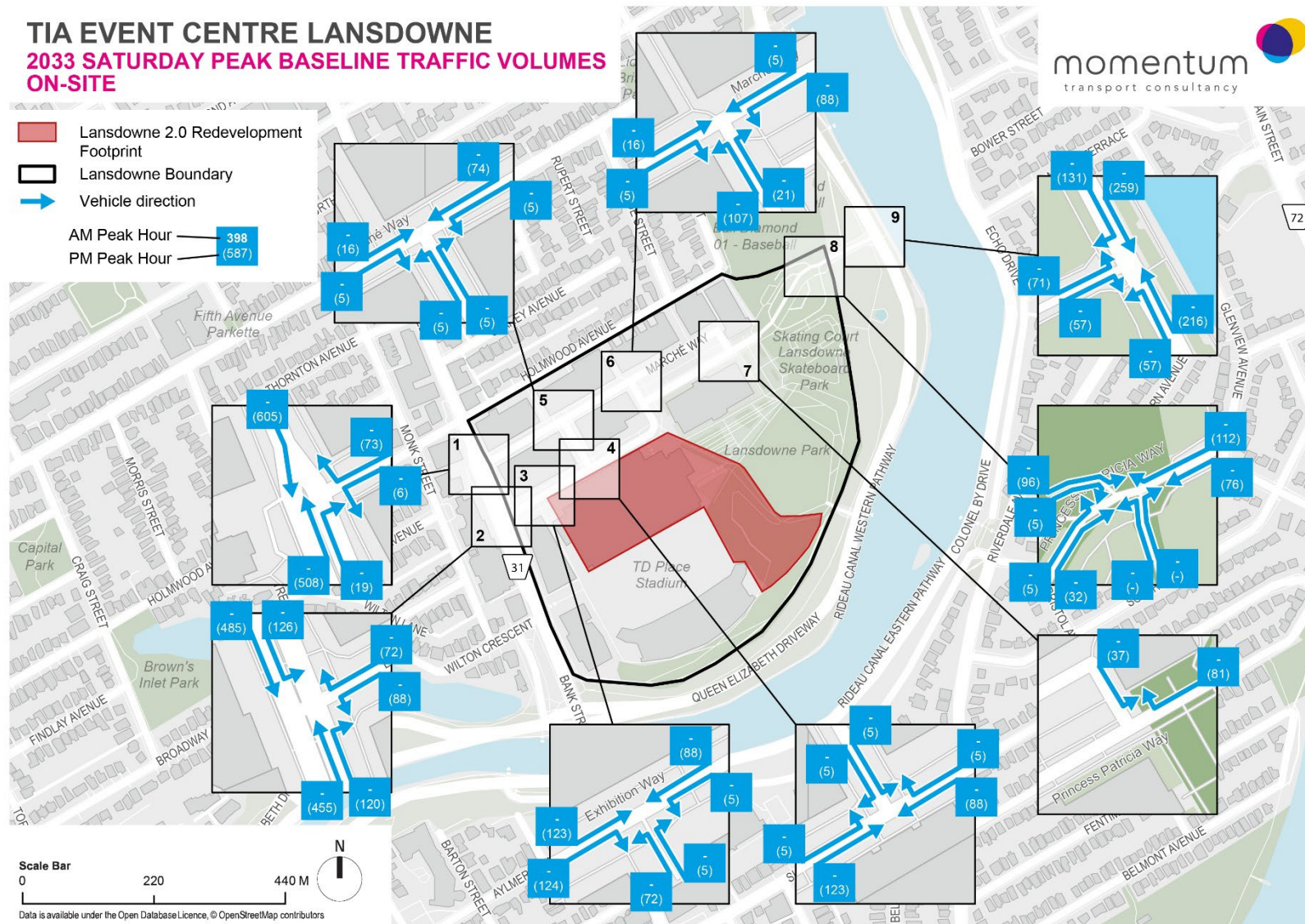


Figure 3.19: 2033 Future Background Traffic Volumes Sunday Peak

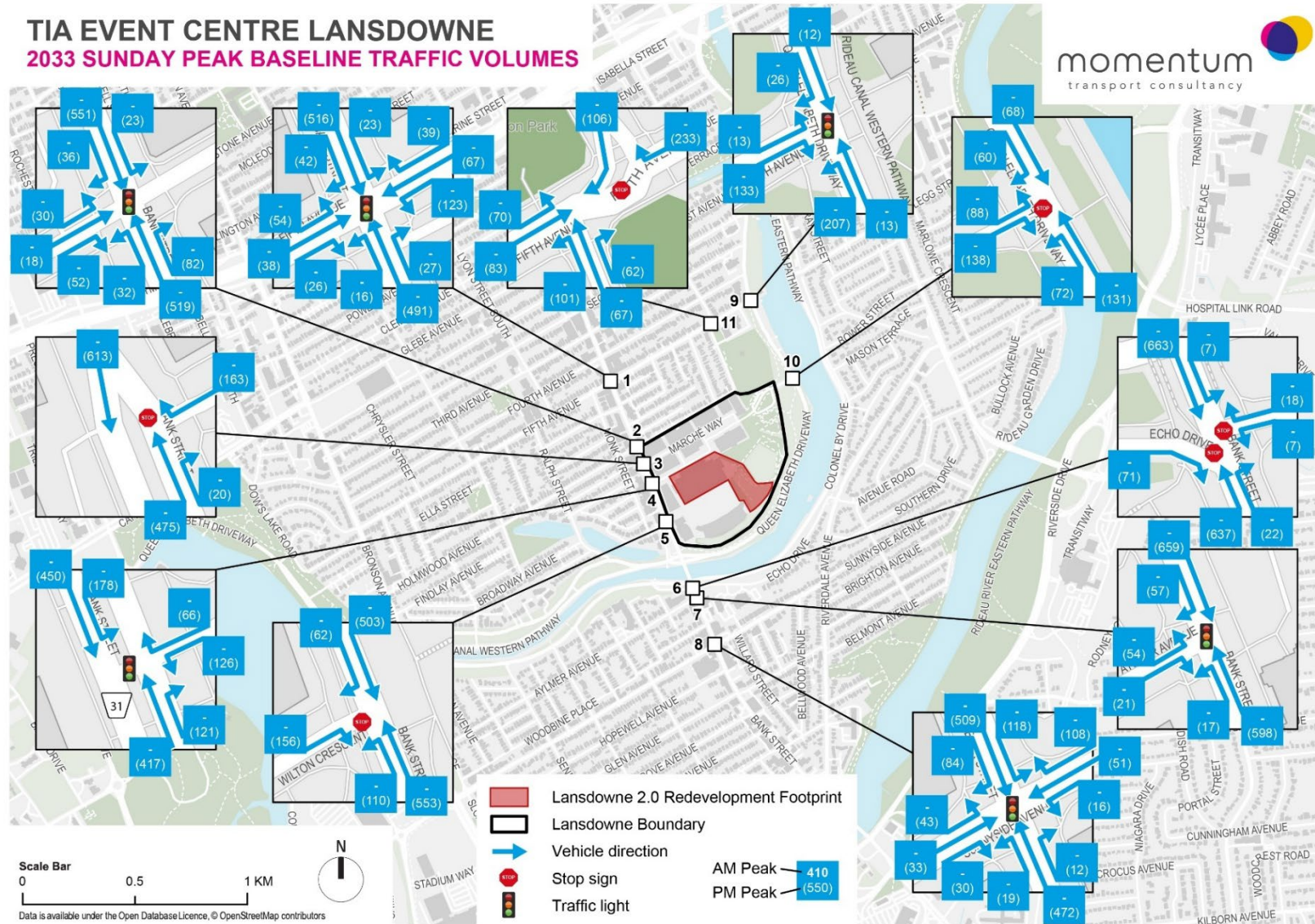


Figure 3.20: 2033 Future Background Traffic Volumes Sunday Peak On-Site

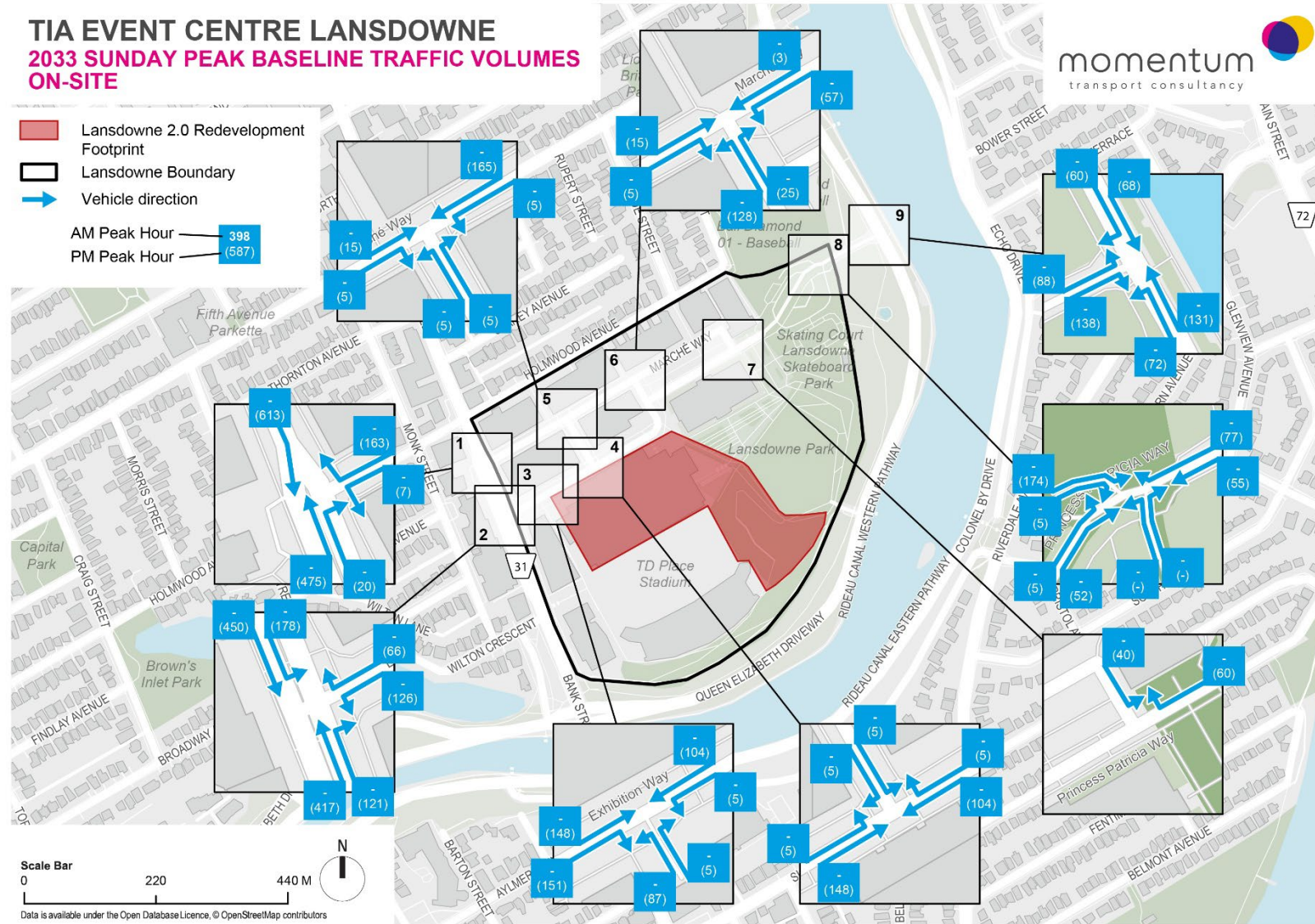


Figure 3.21: 2033 Future Background Traffic Volumes Minor Event

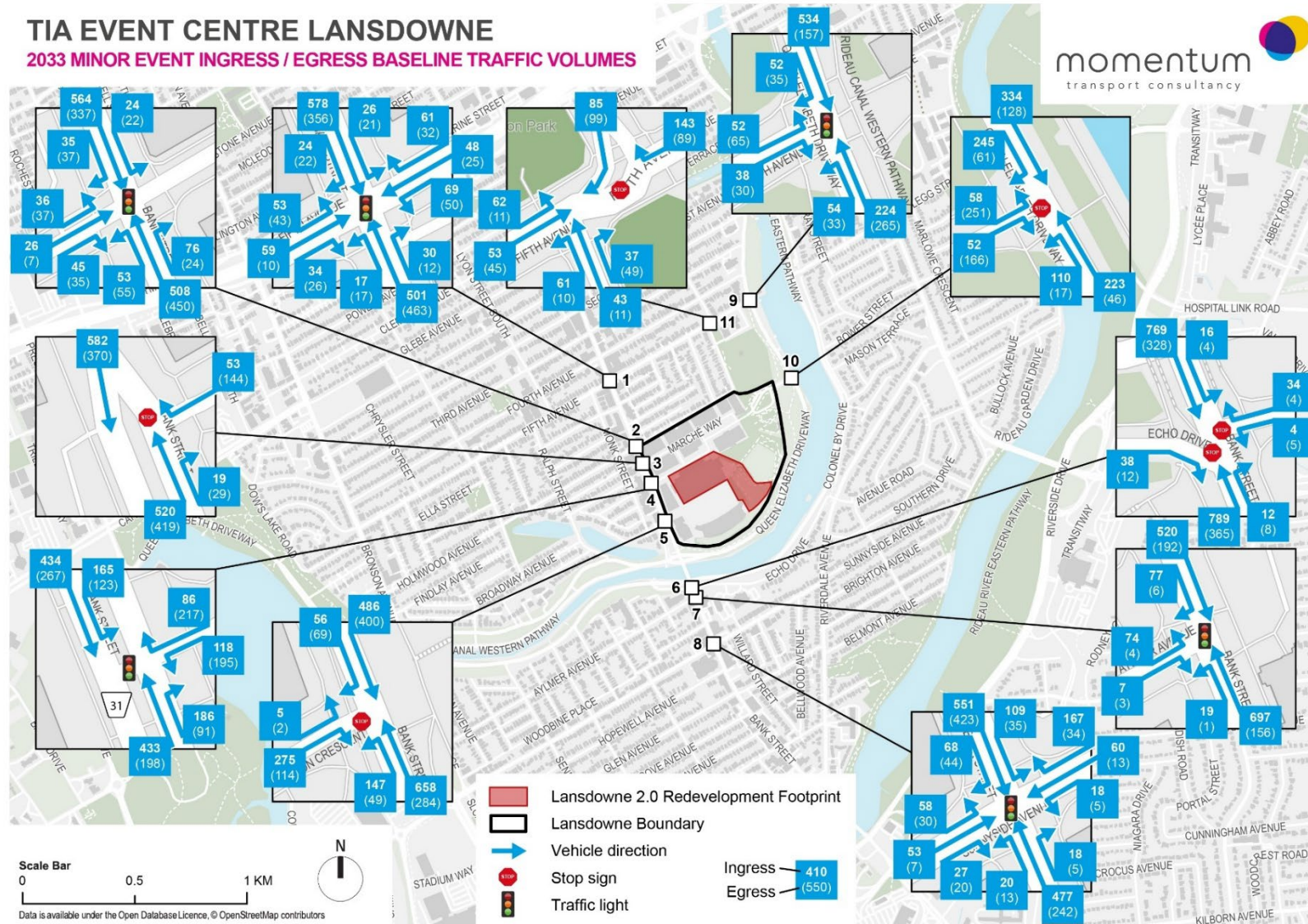


Figure 3.22: 2033 Future Background Traffic Volumes Minor Event On-Site

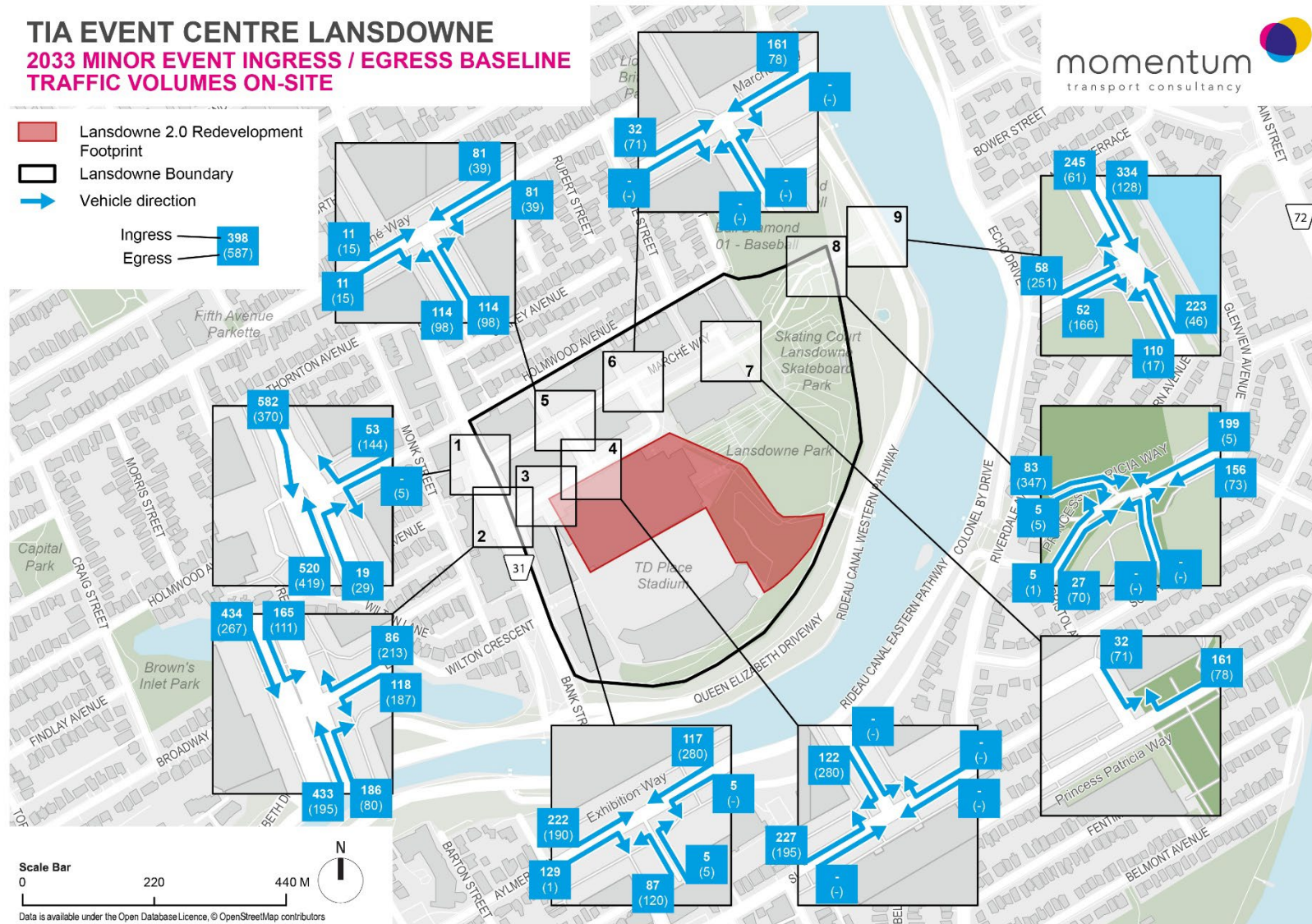


Figure 3.23: 2033 Future Background Traffic Volumes Major Event

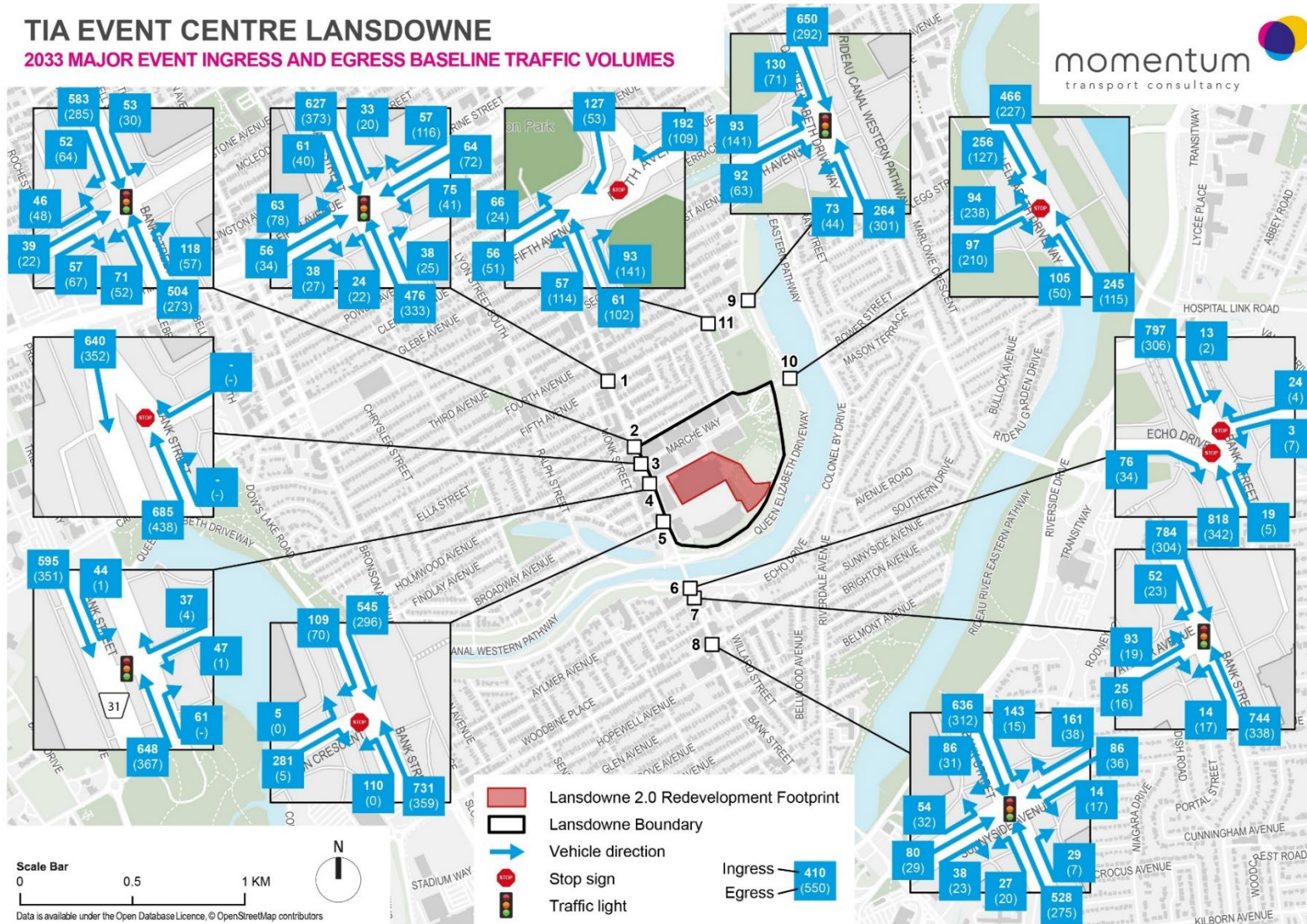


Figure 3.24: 2033 Total Future Traffic Volumes (Weekday AM / PM)

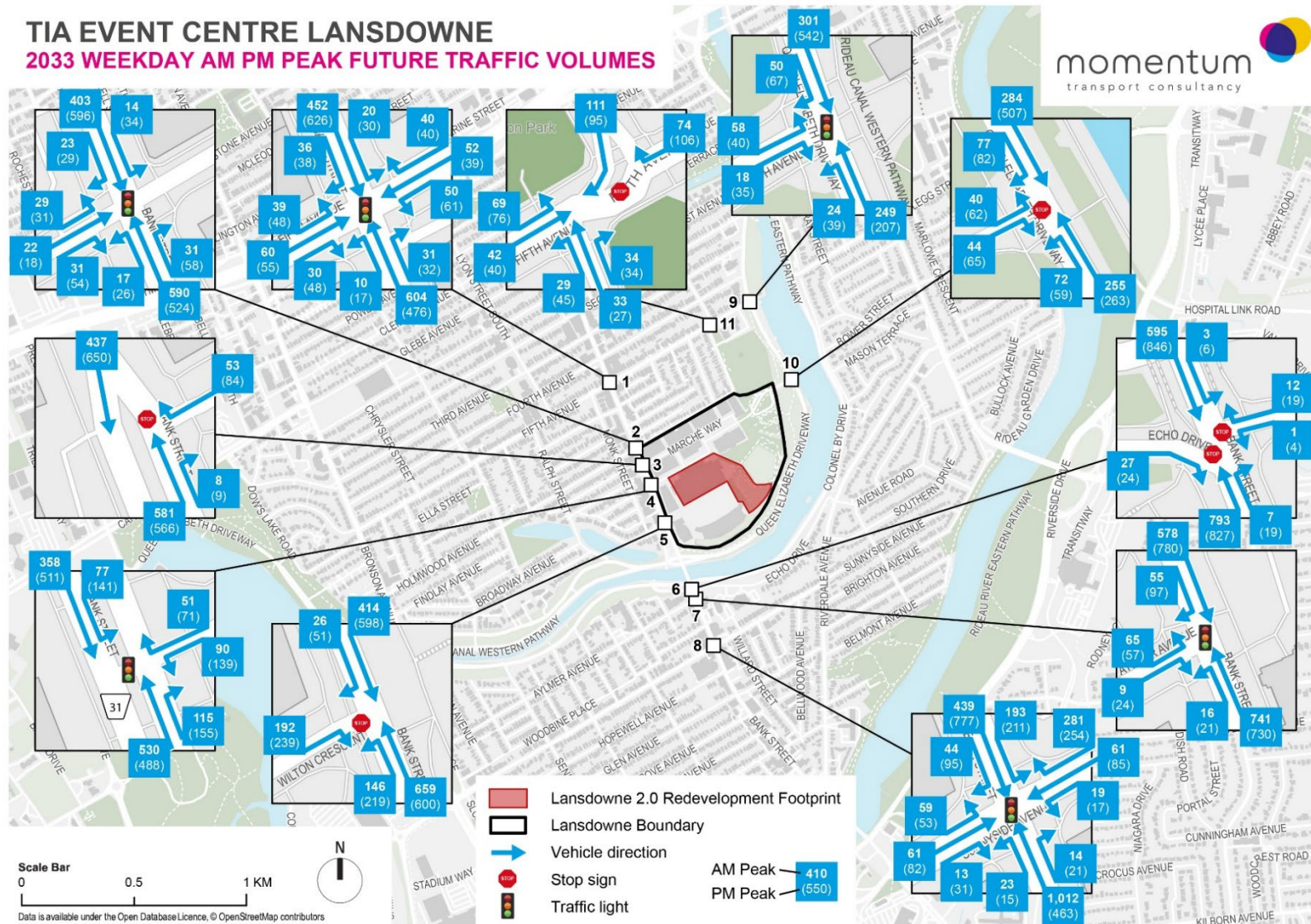


Figure 3.25: 2033 Total Future Traffic Volumes Weekday AM PM Peak On-Site

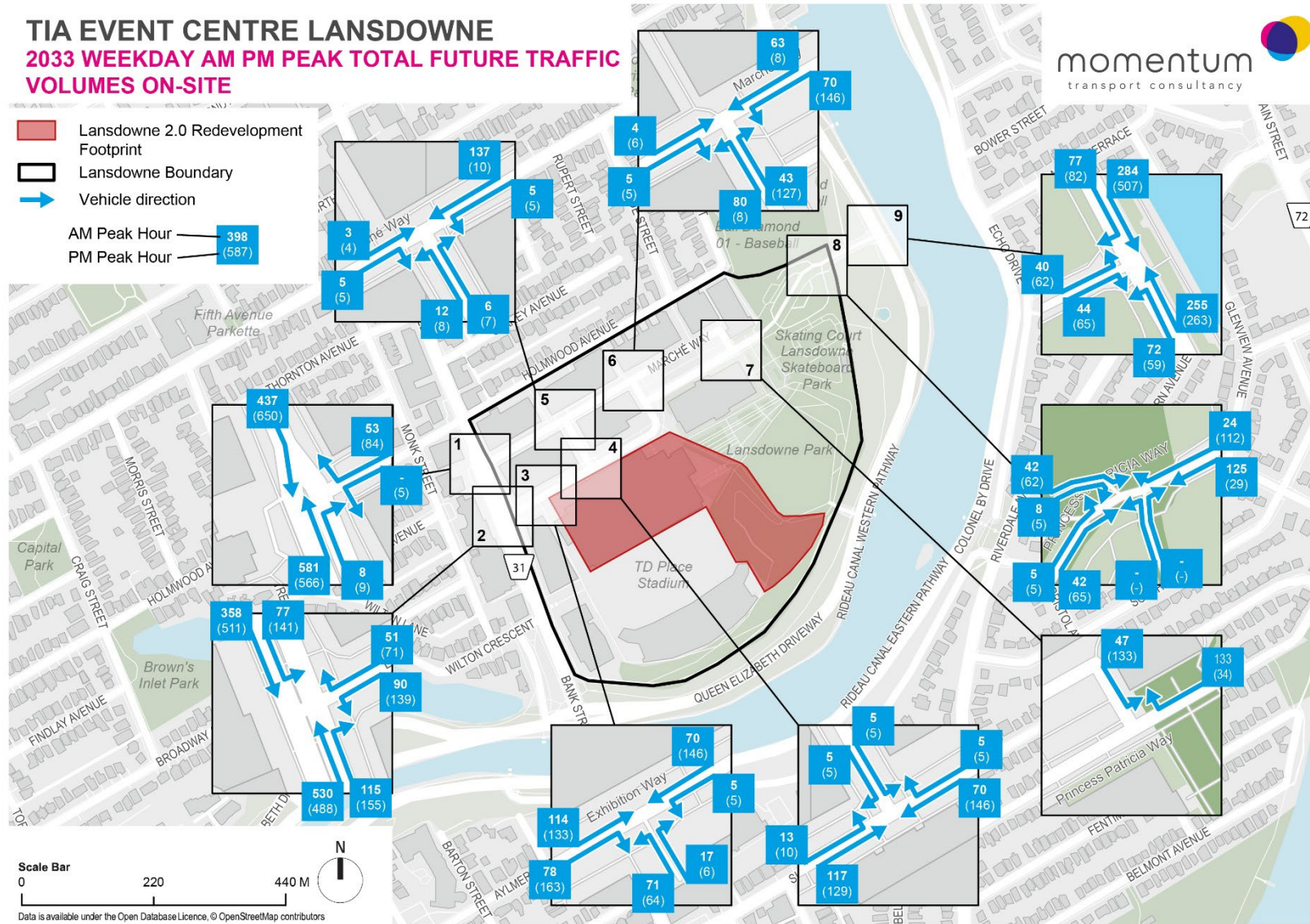


Figure 3.26: 2033 Total Future Traffic Volumes (Saturday PM)

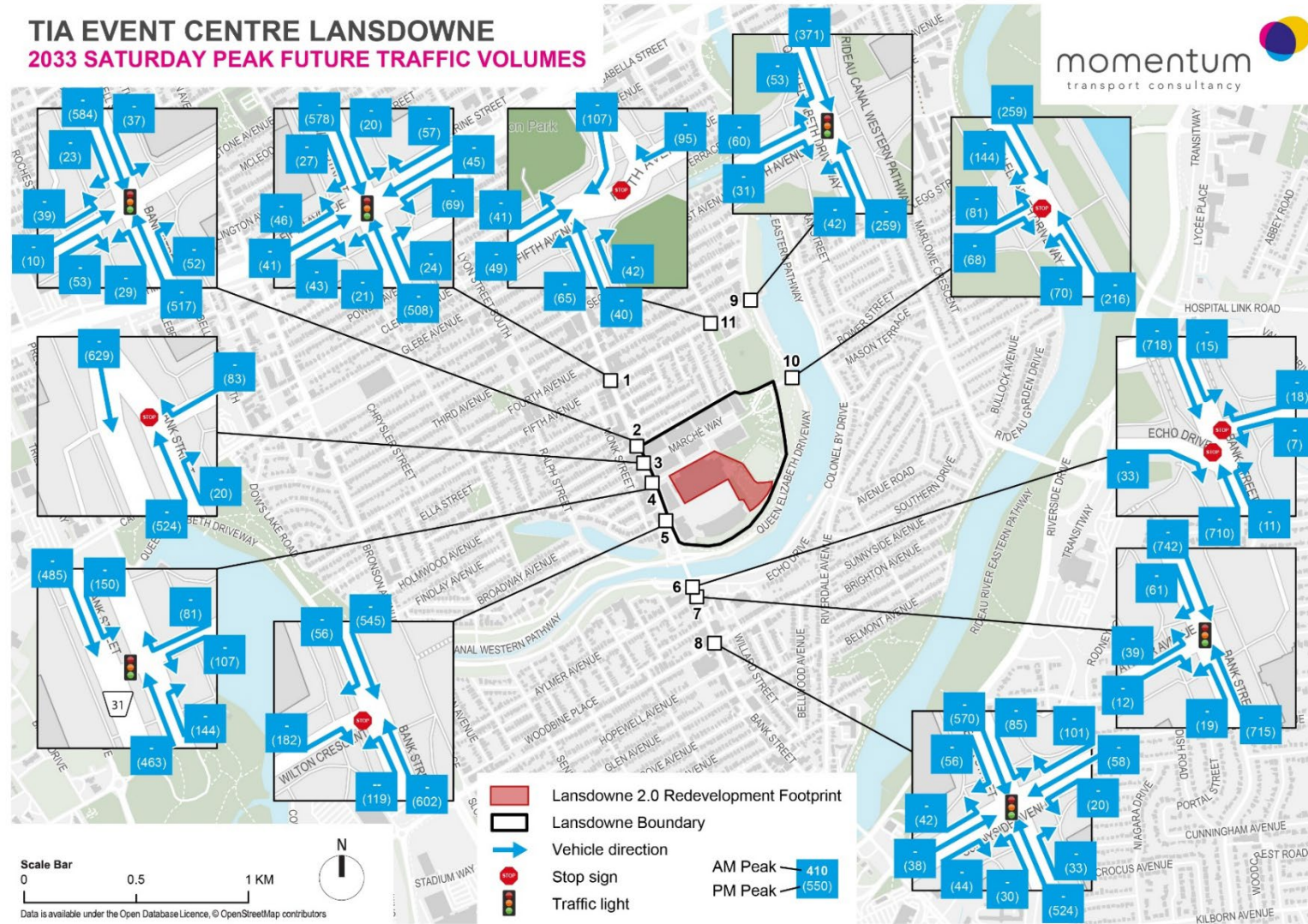


Figure 3.27: 2033 Total Future Traffic Volumes Saturday Peak On-Site

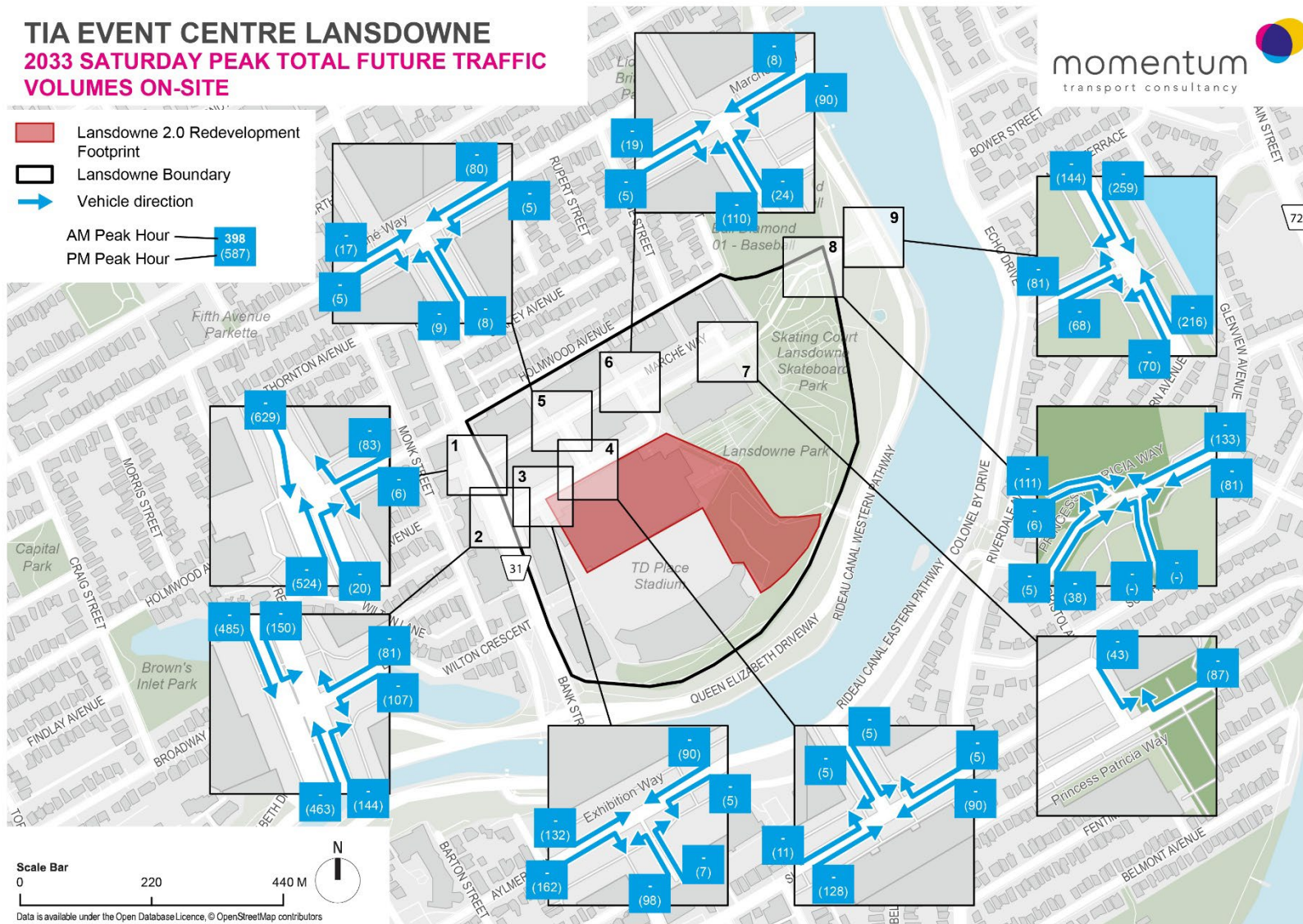


Figure 3.28: 2033 Total Future Traffic Volumes (Sunday PM)

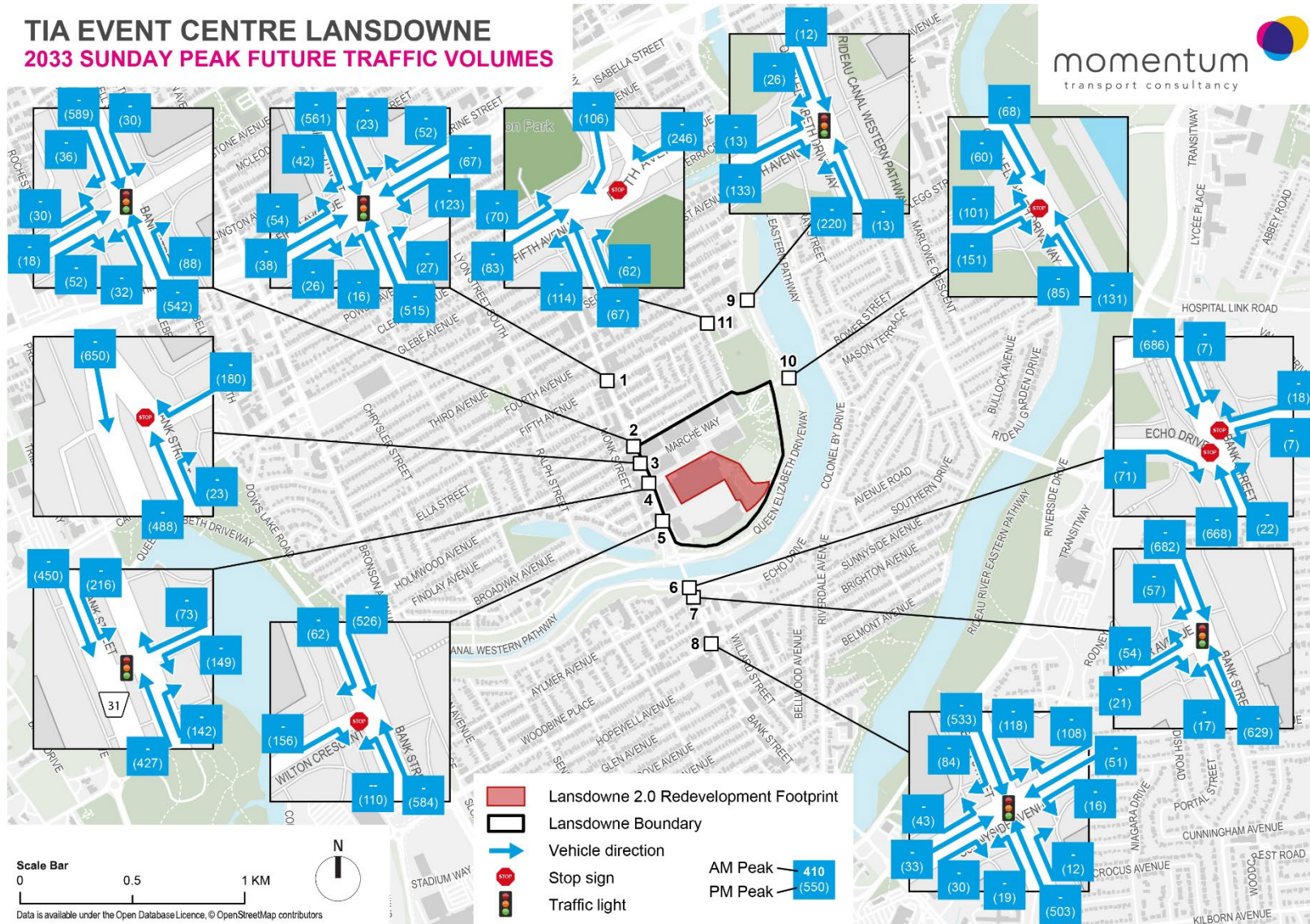


Figure 3.29: 2033 Total Future Traffic Volumes Sunday Peak On-Site

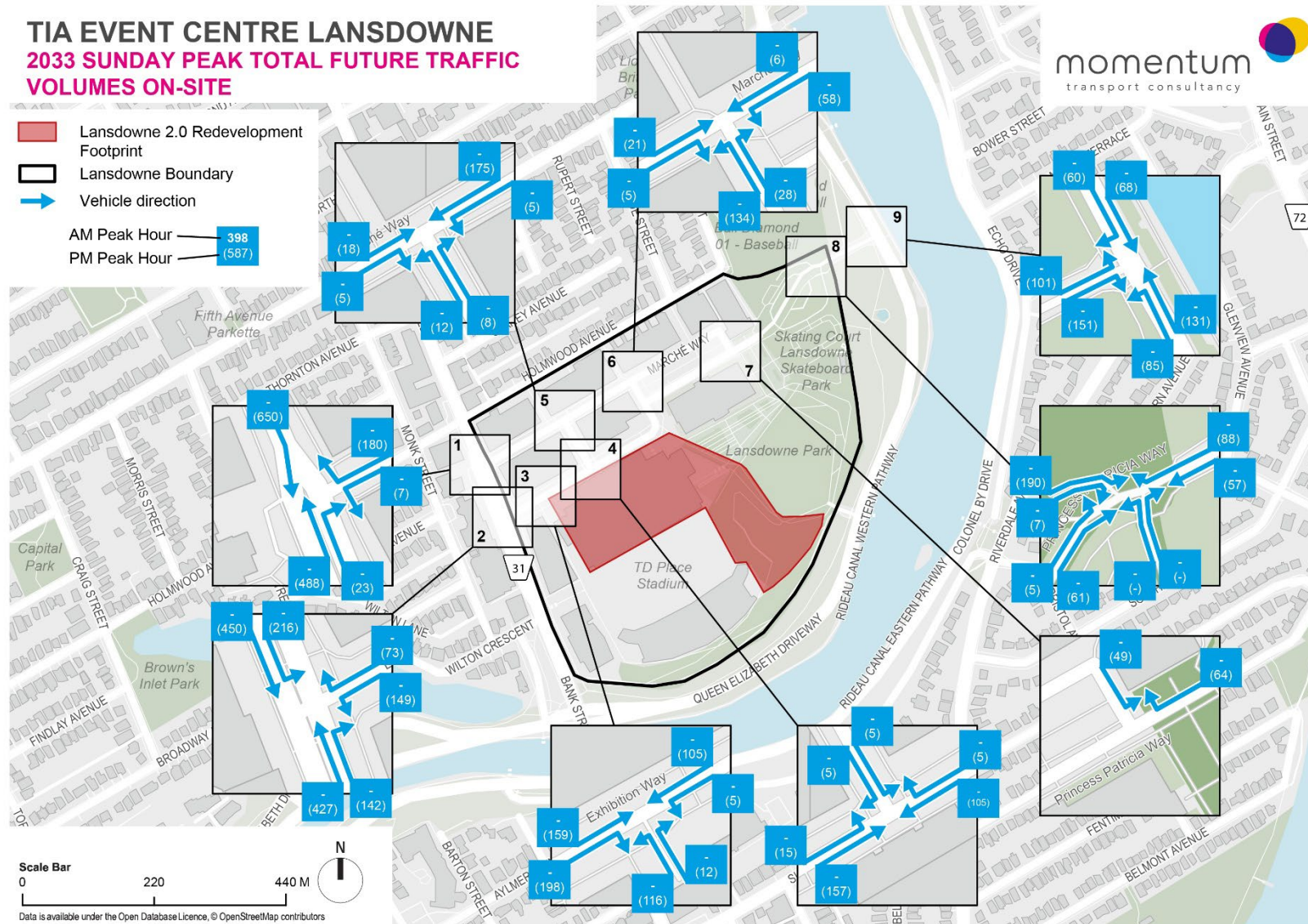


Figure 3.30: 2033 Total Future Traffic Volumes Minor Event (Ingress and Egress)

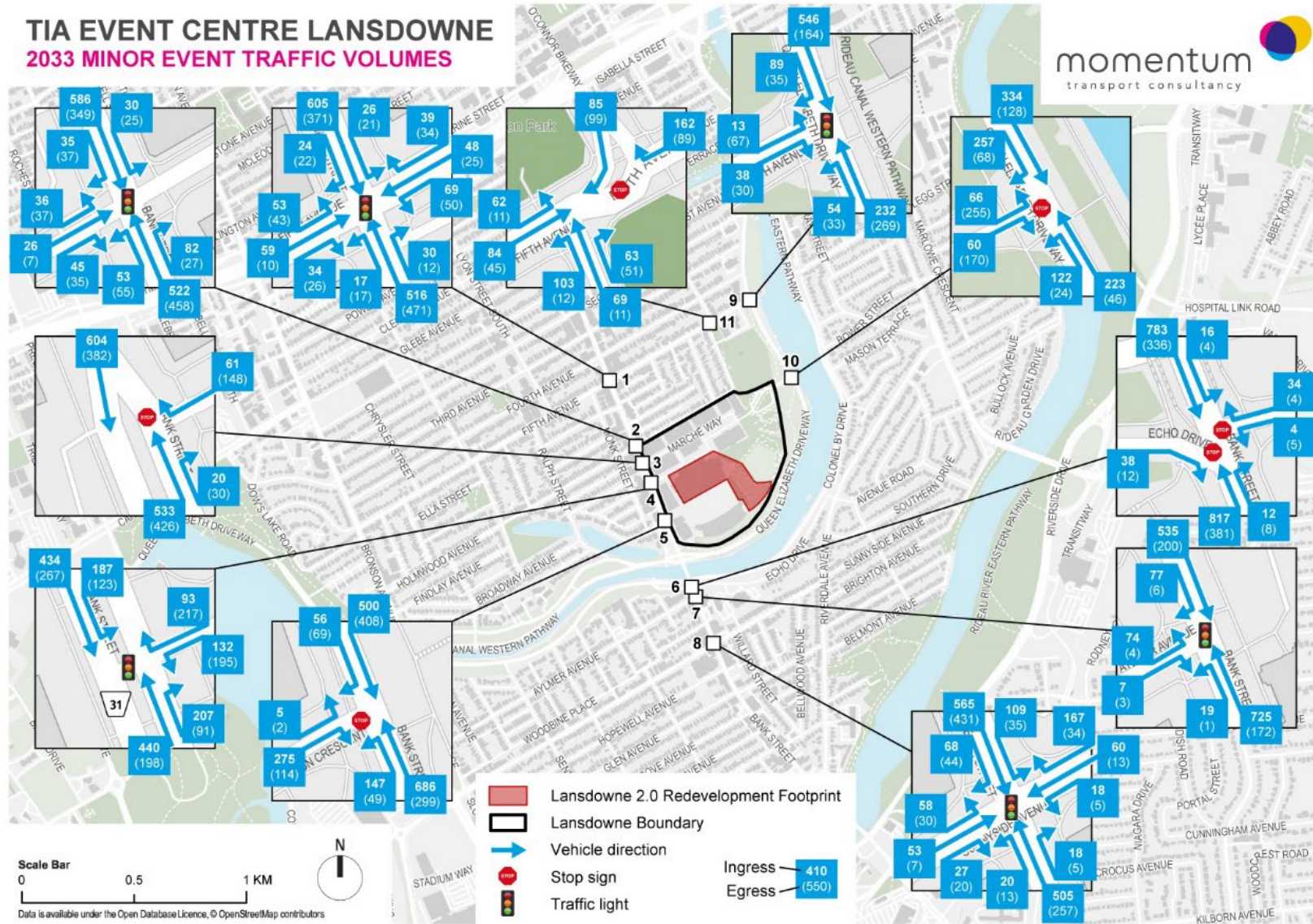


Figure 3.31: 2033 Total Future Traffic Volumes Minor Event On-Site

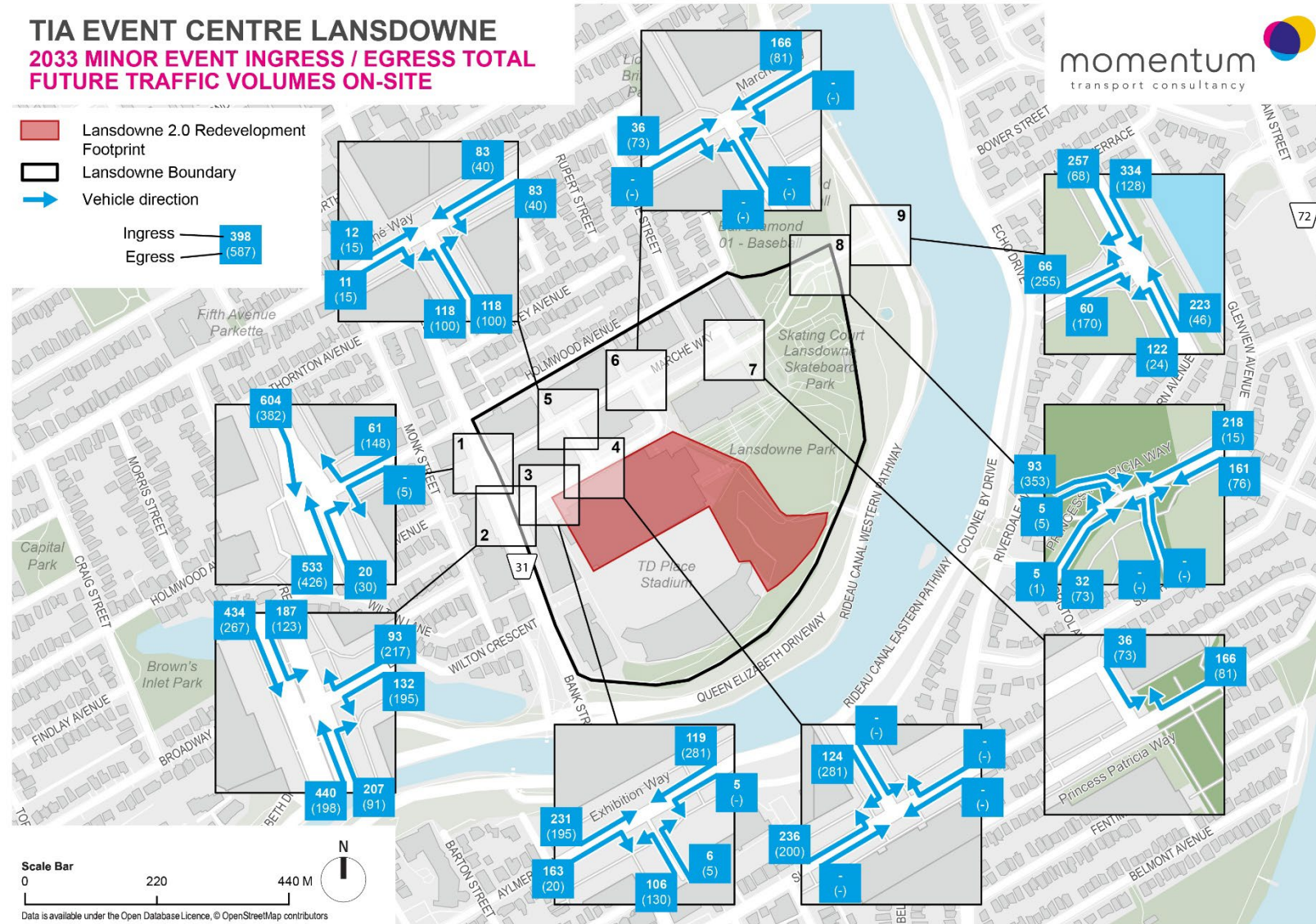
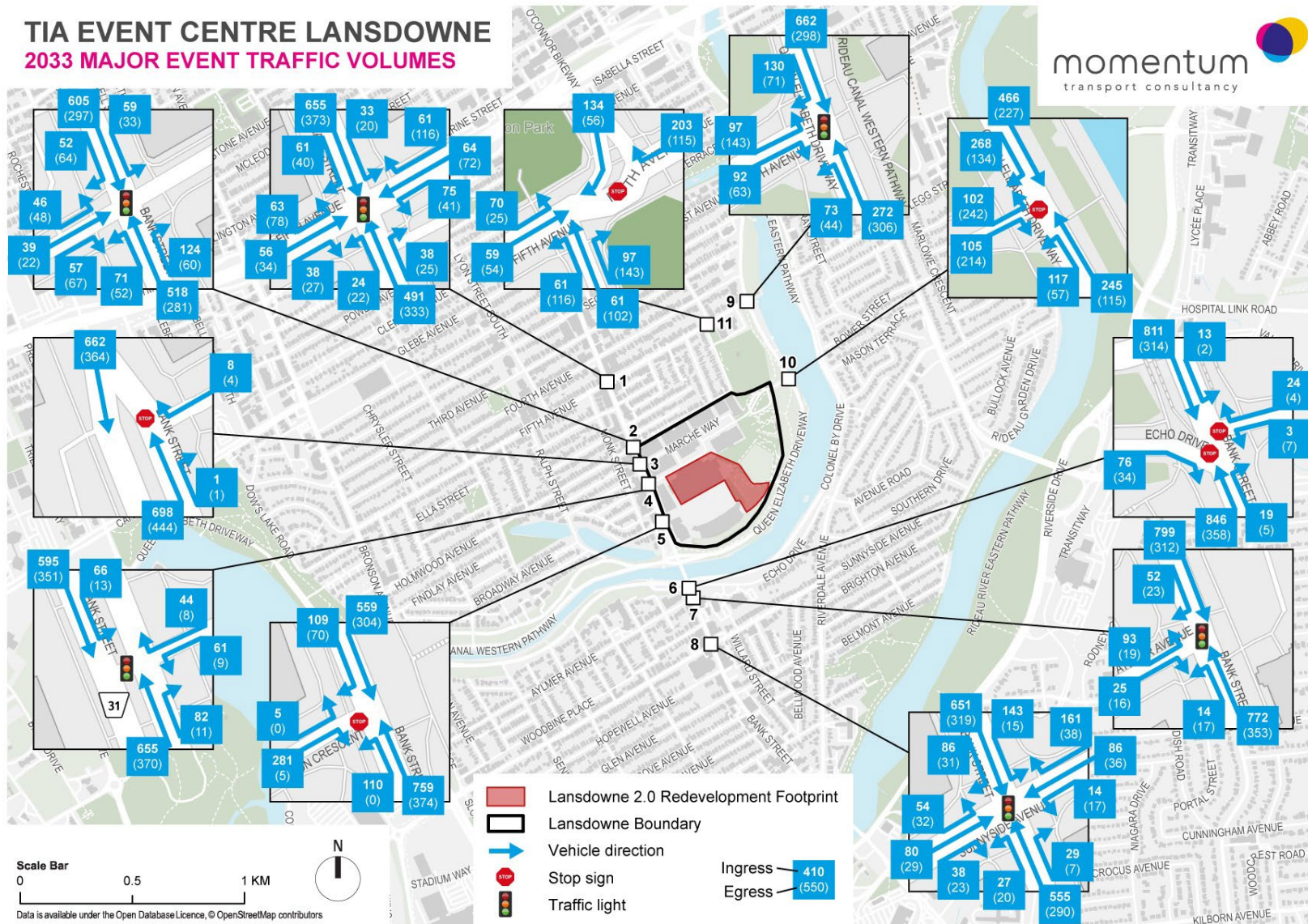


Figure 3.32: 2033 Total Future Traffic Volumes Major Event (Ingress and Egress)



## 4. STRATEGY REPORT

### 4.1 Development Design

#### 4.1.1 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 contemplated at the Queen Elizabeth Driveway and Princess Patricia Way site access intersection to Lansdowne. 110 bicycle parking spaces are to be provided as part of the proposed site plan application for the Event Centre (Phase 1) and the North Side Stands (Phase 2), which will be more evenly distributed across the Lansdowne 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. A partnership with CAA is currently being explored for Bike Valet during major events.

**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 to Lansdowne.

**Parking areas:** Lansdowne currently features an underground parking garage with a total of 1,380 spaces for public and residential use. As part of the 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 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. A residents-only private access to the underground garage is also available on Holmwood Avenue.

**Transit facilities:** Transit stops for OC Transpo routes 6 and 7 are currently serviced by stops located at the intersection of Bank Street and Exhibition Way. In addition, these bus stops accommodate 450-series enhanced transit service during Major Events held at Lansdowne. There are sidewalks along both sides of Bank Street as well as adequate pedestrian crosswalks to access the transit stops. The new multi-purpose event centre will be located within the 400-meter transit catchment area.

#### 4.1.2 CIRCULATION AND ACCESS

Site access and circulation at Lansdowne is 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 a restricted / limit-use pathway for emergency vehicle access, deliveries, and designated shuttle services including accessible ParaTranspo service.

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.

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/drop-off). 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**.

Vehicle swept path analyses were completed to verify that design vehicles are able to access and circulate within the limited access pathways for vehicles. This includes the designated accessible passenger pick-up and drop-off for the new event centre for ParaTranspo vehicles, as well as large 53' truck and trailers accessing the Great Lawn from Exhibition Way to support load-in and load-out activities for programming and events hosted outdoors in the public realm.

**Appendix D** includes excerpts of vehicle turning templates illustrating vehicle access and circulation.

#### 4.1.3 NEW STREET NETWORKS

Not applicable; exempted during screening and scoping.

Figure 4.1: Lansdowne 2.0 Internal Site Circulation Plan (Regular Operations)

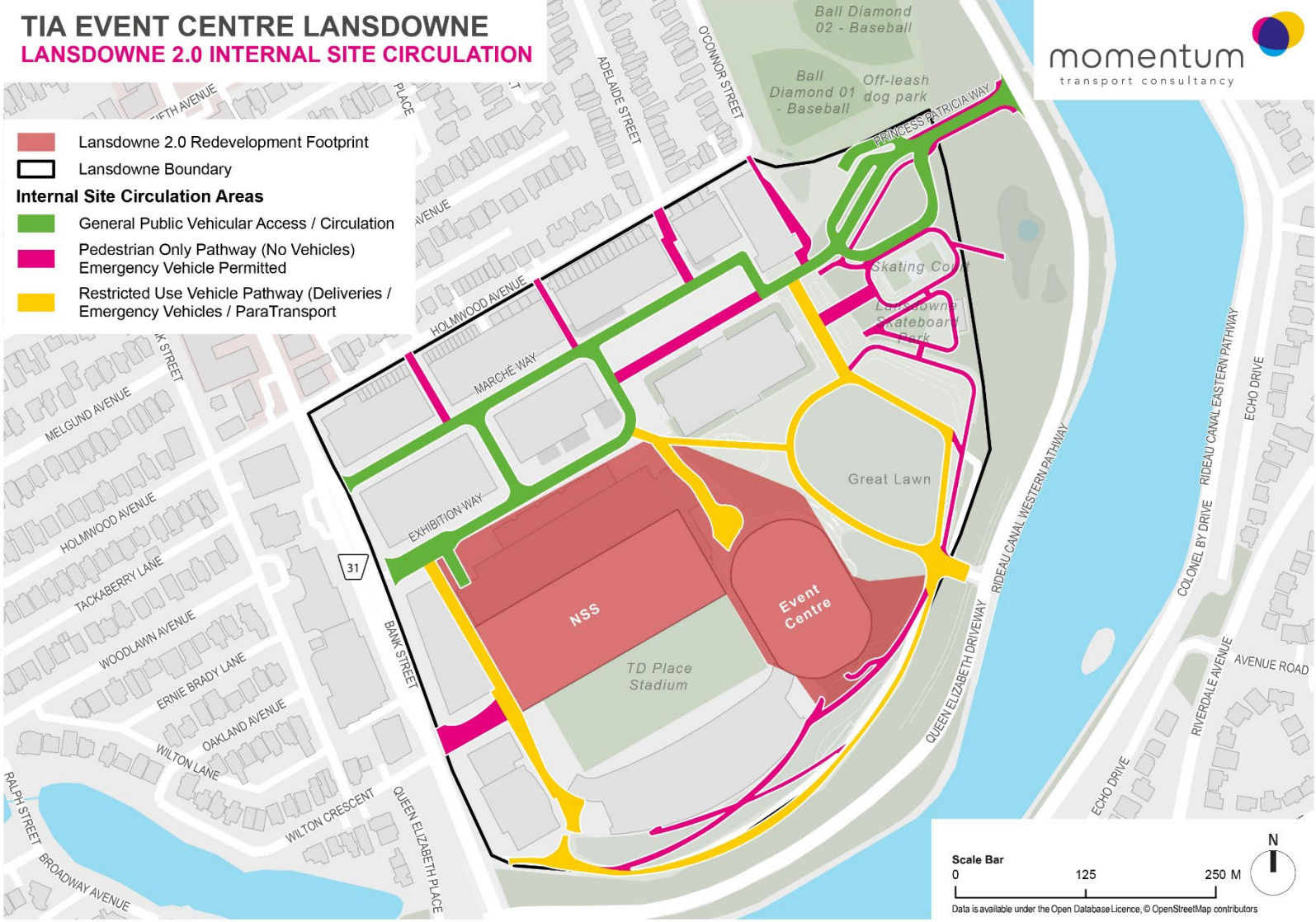


Figure 4.2: Lansdowne 2.0 Internal Site Circulation Plan (Minor Events)



Figure 4.3: Lansdowne 2.0 Internal Site Circulation Plan (Major Events)



## 4.2 Parking

### 4.2.1 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), 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.

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 subsequent phases of development.

**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 approximately 267 surface level bike rings throughout the public realm at Lansdowne. This equates to approximately 534 surface level bike parking spaces, assuming that one bike ring provides parking for two bicycles (one on each side of the bike ring).

As part of the redevelopment plan, 103 existing bike rings (206 spaces) will be removed from locations including Gate 2 and Gate 3, the area south of the Aberdeen Pavilion, and the southern portion of the Great Lawn. Lansdowne 2.0 (Phases 1 and 2) will re-add 55 bike rings (110 spaces), which will be more evenly distributed throughout the site and will include locations at the Great Lawn. With the removals and additions, this equates to a net loss of 48 bike rings or 96 surface level bike parking spaces – resulting in a total count of **219 bike rings (438 bike parking spaces)** after Phase 1 and Phase 2 are built out. This is illustrated in **Figure 4.4**, which displays the bike parking that will be retained as well as the proposed additional bike parking. The 16 proposed additional spaces on the west side of the NSS are associated with Phase 2, and all other proposed spaces are associated with Phase 1.

Additionally, the underground parking garage has 410 designated secure bicycle parking spaces. This includes vertical and horizontal bike parking within 14 bicycle parking rooms throughout the garage, each allocated for a different building in the Lansdowne development.

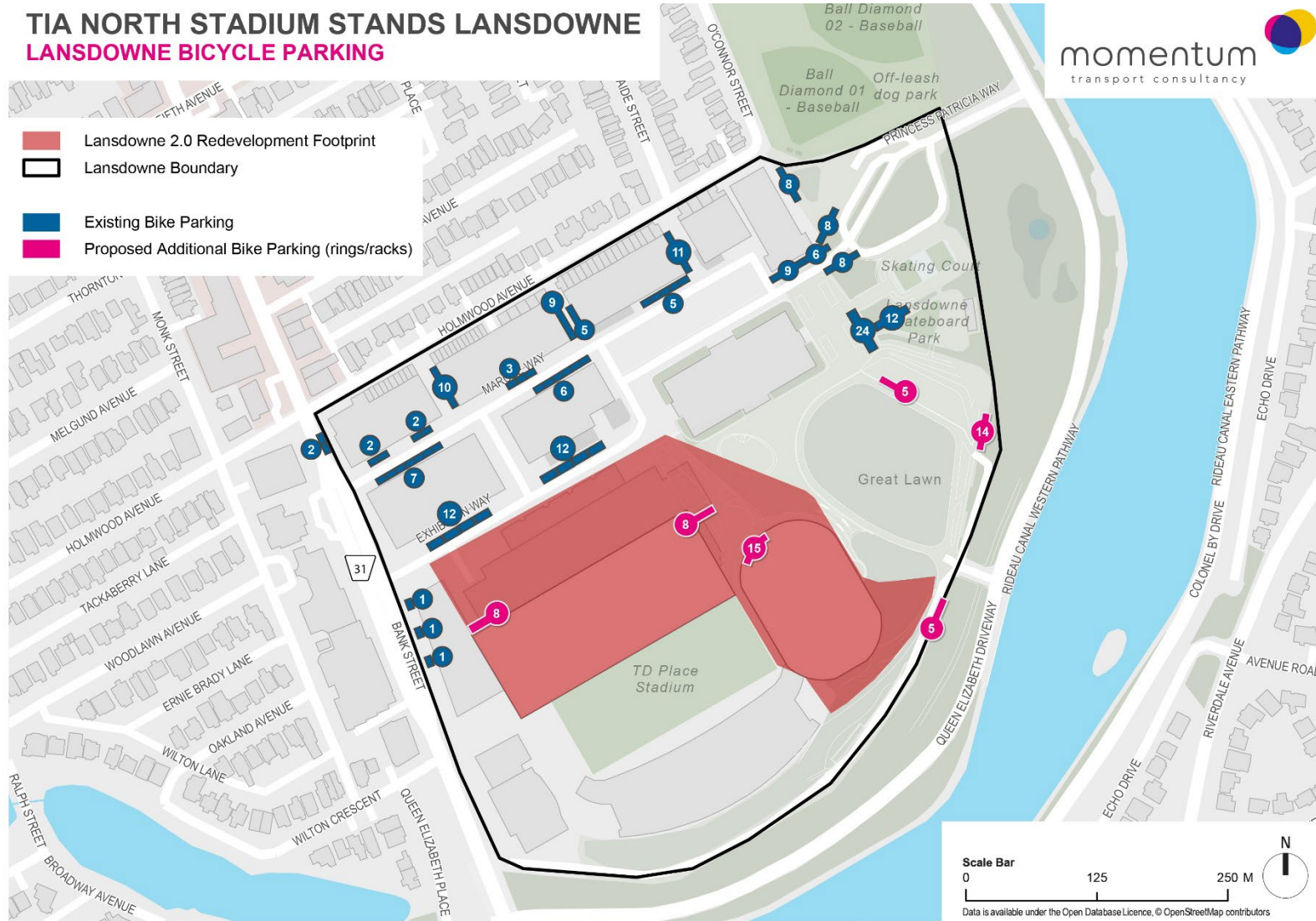
In addition, for major events held on site at the stadium with attendance levels of 15,000 or more, free valet bike parking storage is provided near TD Place Gate 4 south of the Aberdeen Pavilion.

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.

Figure 4.4: Site Plan with Cycle Parking for Phases 1 and 2



## 4.3 Boundary Street Design

### 4.3.1 DESIGN CONCEPT

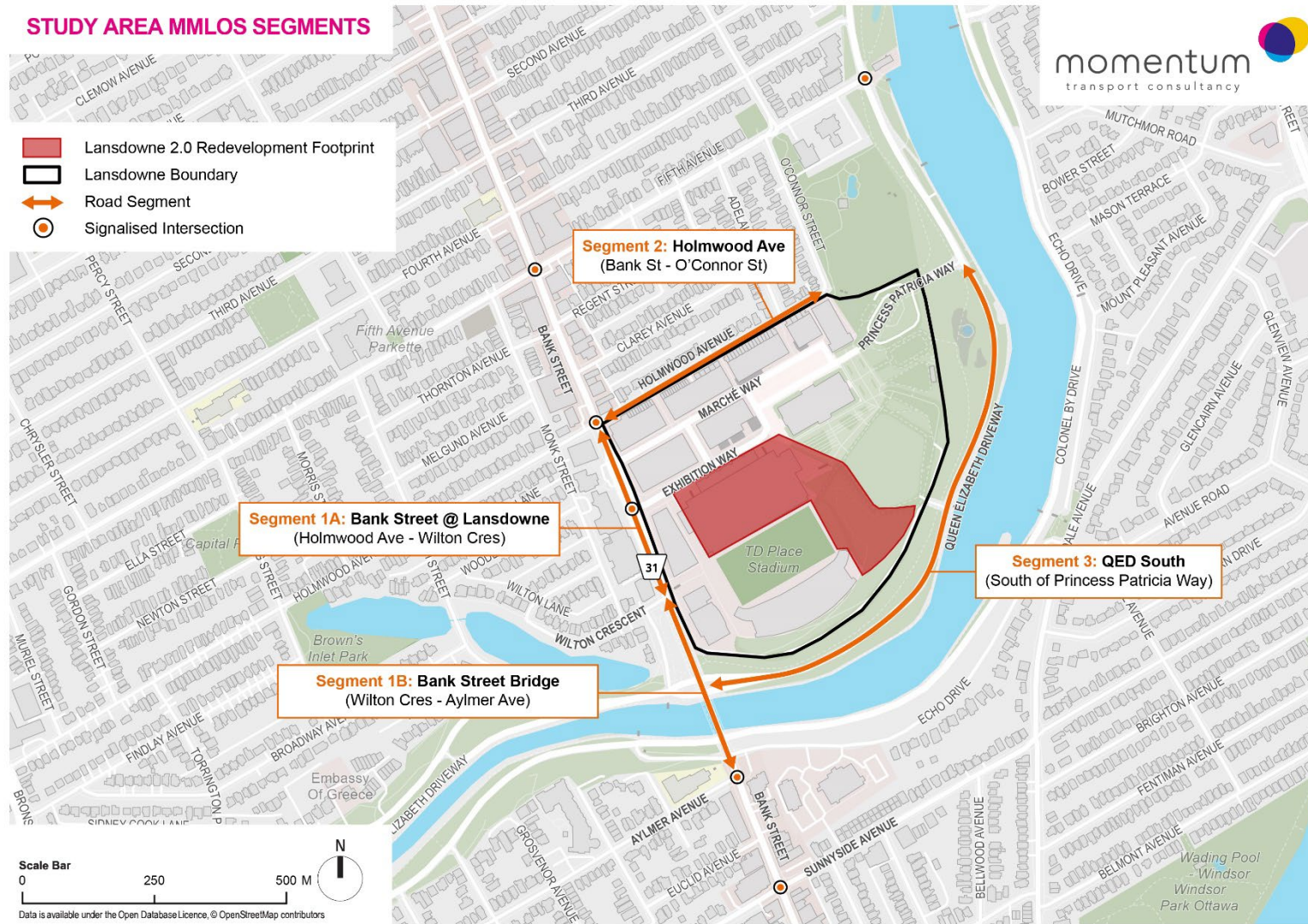
Lansdowne is located in a unique geographic location within the City of Ottawa as it interfaces with Bank Street, a traditional Mainstreet, to the west; Holmwood Avenue, a local residential street, to the north; and the Queen Elizabeth Driveway, a Federally Owned Road that is a scenic parkway with regional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

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 1** – Bank Street at Lansdowne (Holmwood Avenue to Aylmer Avenue)
- **Segment 2** – Holmwood Avenue (Bank Street to O'Connor Street)
- **Segment 3** – QED South (South of Princess Patricia Way)

**Figure 4.5** illustrates the locations of the assessed MMLOS segments.

Figure 4.5: Study area MMLOS segments



**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 a Federally Owned Road 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. This is demonstrated in **Table 4.2**.

**Appendix E** 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
1A	<b>Bank Street @ Lansdowne (Holmwood Ave - Wilton Cres)</b>	B	B	C	E	D	F	D	D

Segment		PLOS		BLOS		TLOS		TkLOS	
		Target	Actual	Target	Actual	Target	Actual	Target	Actual
1B	Bank Street @ Lansdowne (Wilton Cres- Aylmer Ave)	B	C	N/A	N/A	D	D	D	C
2	Holmwood Ave (Bank St - O'Connor St)	C	B	B	C	N/A	N/A	N/A	N/A
3	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
1A	Bank Street @ Lansdowne (Holmwood Ave - Wilton Cres)	B	B	C	E	D	F	D	D
1B	Bank Street @ Lansdowne (Wilton Cres- Alymer Ave)	B	C	N/A	N/A	D	D	D	C
2	Holmwood Ave (Bank St - O'Connor St)	C	B	B	C	N/A	N/A	N/A	N/A
3	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	E	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

Table 4.4: 2033 Future 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

**MMLOS – Roadway Segments**

Table 4.1 and Table 4.2 summarize MMLOS under Existing and 2033 Total Future conditions for roadway segments fronting Lansdowne. As summarized in the tables, no significant changes to MMLOS are expected to occur on these segments.

Potential improvements to bicycle and transit levels of services on Bank Street may occur in the future as a result of the currently ongoing *Bank Street Active Transportation and Transit Priority Feasibility Study*.

**Bank Street (Holmwood Ave - Wilton Crescent)**

The **PLOS target of B** along Bank Street, across the frontage of Lansdowne, is currently being met on both the east and west side of the road segment. This indicates that pedestrians experience a high level of comfort along this segment.

The **BLOS target of C** along Bank Street, across the frontage of Lansdowne, is currently met in the northbound travel direction as there is a curbside bike lane. However, in the southbound travel direction there is no dedicated bicycling facility. As a whole segment, Bank Street, across the frontage of Lansdowne, does not meet the BLOS target, resulting in reduced comfort for cyclists.

This **BLOS target of C** is not currently being met north of Wilton Crescent due to the number of vehicle lanes and lack of bicycling facilities. The BLOS target of C is, however, met over the Bank Street Bridge, between Wilton Crescent and Aylmer Avenue, due to the recently installed bicycle facilities. In order to improve the BLOS on Bank Street, improved bicycling facilities would be required.

The **TLOS target of D** along Bank Street, across the frontage of Lansdowne, is currently not being met due to the mixed operating condition of transit along the corridor and resulting congestion related delays. To improve the TLOS along Bank Street, improved transit priority measures can be implemented to limit delays to transit along the corridor.

**Bank Street (Wilton Crescent - Aylmer Ave)**

The **PLOS target of B** along Bank Street, between Wilton Crescent and Aylmer Avenue is not being met because of the boulevard width, resulting in reduced comfort for pedestrians.

The **TLOS target of D** along Bank Street, between Wilton Crescent and Aylmer Avenue is being met, indicating short delays.

The **TkLOS target of D** along Bank Street, between Wilton Crescent and Aylmer Avenue is being met, indicating unimpeded movements and short delays.

### **Holmwood Avenue:**

The **BLOS target of B** along Holmwood Avenue is currently being met on the southside of the road segment. However, the north side has a **BLOS C** due to the narrow bicycle lane width. Therefore, as a whole segment, Holmwood Avenue does not meet the BLOS target of B, resulting in reduced comfort for cyclists.

The **PLOS target of C** on Holmwood Avenue is being met, indicating a high level of comfort for pedestrians

### **Queen Elizabeth Driveway:**

The **PLOS target of A** along Queen Elizabeth Driveway is met for the sections south of Fifth Avenue which utilizes the multi-use pathway. North of Fifth Avenue, however, the **PLOS is F** because of the lack of a proper sidewalk on the west side of the corridor. It was noted, however, that there is an alternative sidewalk that is adjacent to the recent development at the Northwest corner of the intersection.

The **BLOS target of B** along Queen Elizabeth Driveway is currently being met due to the provision of a multi-use pathways along the Rideau Canal. It is notable however that this facility is shared with other users which can impact the quality of the service in practice and may put some of the higher speed cyclists into the traffic lane, especially during busy times.

### **MMLOS – Intersections**

**Table 4.3** and **Table 4.4** summarize MMLOS under Existing and 2033 Total Future conditions for signalized intersections. As summarized in the tables, no significant changes to MMLOS are expected to occur on these segments.

Potential improvements to bicycle and transit levels of services on Bank Street may occur in the future as a result of the currently ongoing *Bank Street Active Transportation and Transit Priority Feasibility Study*.

### **Intersection of Bank Street / Holmwood Avenue:**

The **PLOS target of B** at this intersection is being met for pedestrians traveling in the eastbound and westbound direction. However, the target is not met in the northbound and southbound directions due to the number of traffic lanes pedestrians must cross. To improve PLOS in these directions, measures such as reducing crossing distances with refuge islands or enhancing signal timing could be explored.

The **BLOS target of C** at the intersection is met for westbound cyclists due to the continuous bike lane between the south side of Holmwood Avenue and the west side of Bank Street. However, the lack of continuous and protected bicycling facilities in the other directions significantly impact the BLOS at this intersection.

The **TLOS target of D** at this intersection is not met due to the high average signal delay in the westbound direction, leading to significant delays.

The **TkLOS target of E** is not met at this intersection, causing movement restrictions and significant delays for trucks.

The **ALOS target of D** is being met at this intersection, leading to low lane utilization.

### **Intersection of Bank Street / Exhibition Way:**

The **PLOS target of B** at this intersection is not met due to the number of traffic lanes on Bank Street to cross for pedestrians and the significant pedestrian delay experienced. To improve the PLOS at this intersection, increasing the pedestrian walk phase could be considered.

The **BLOS target of C** is not met at this intersection due to the lack of continuity in the curbside bike lane on the west side of Bank Street, south of Exhibition Way. Northbound cyclists must cross five traffic lanes to access Exhibition Way. To improve the BLOS, enhanced cycling facilities between Bank Street and Exhibition Way should be implemented to ensure safer connections for cyclists.

The **TLOS target of D** is met at this intersection, leading to minimal delays.

The **TkLOS target of D** is being met at this intersection, allowing smooth movement and minimal delays for trucks.

The **ALOS target of D** is being met at this intersection, leading to low lane utilisation.

### **Queen Elizabeth Driveway / Fifth Avenue:**

The **PLOS target of C** is being met at this intersection, suggesting minimal delays, a high level of comfort, and low risk for pedestrians.

The **BLOS target of B** is being met at this intersection, signifying a high level of comfort for cyclists.

The **ALOS target of D** is being met at this intersection, indicating low lane utilization.

## 4.4 Access Intersection Design

### 4.4.1 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 / 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.

### 4.4.2 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 event centre and stadium, 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.

Holmwood Avenue, Marché Way, and Exhibition Way shall remain open to the public during construction. See **Figure 4.6** for the construction traffic site circulation routes. Along the restricted roadway and secondary construction access routes, pedestrian and cyclist access will not be restricted. Along the primary construction access routes, temporary pedestrian and cyclist pathways will be 3m wide where possible.

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 4.7**.

Prior to the start of construction, the contractor will provide a traffic management plan, a construction site pedestrian control plan and traffic protection plan for City review.

Figure 4.6: Lansdowne 2.0 Construction Traffic Site Circulation

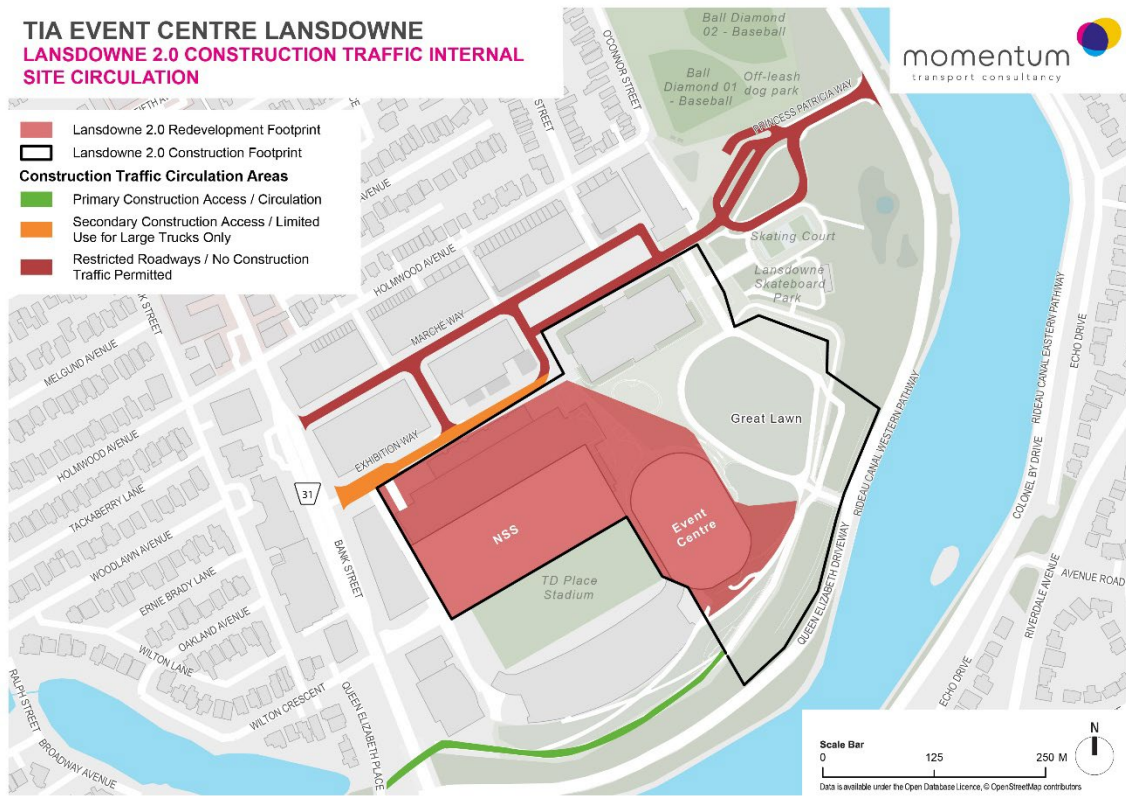
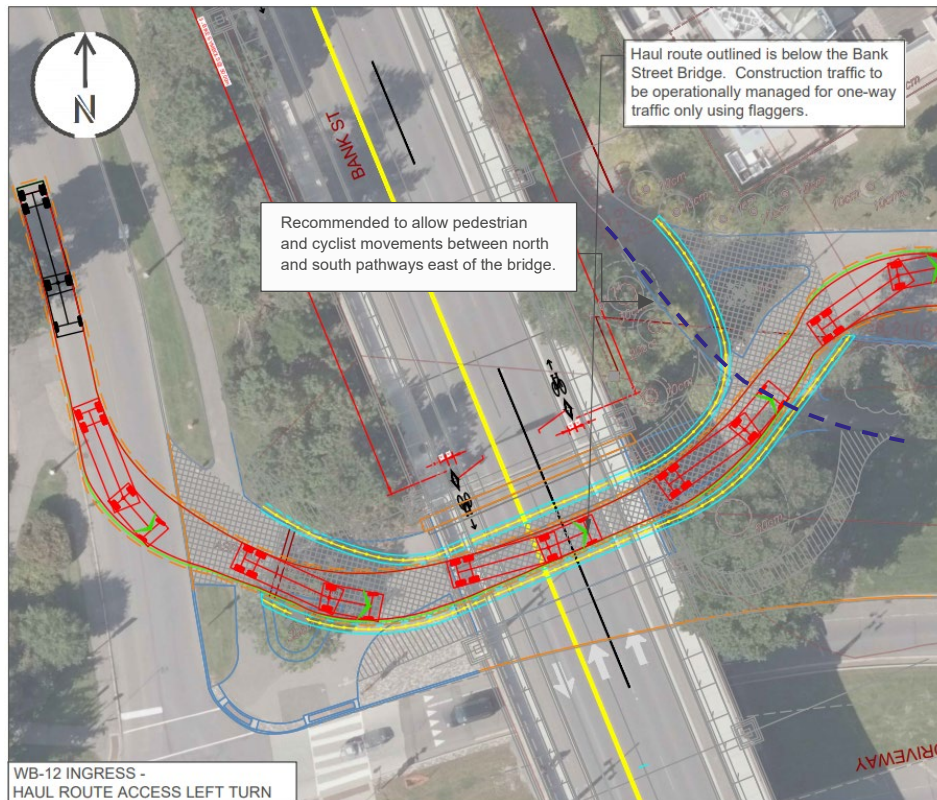


Figure 4.7: Lansdowne 2.0 Temporary Construction Haul Route Access



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.

**Figure 4.8** 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.

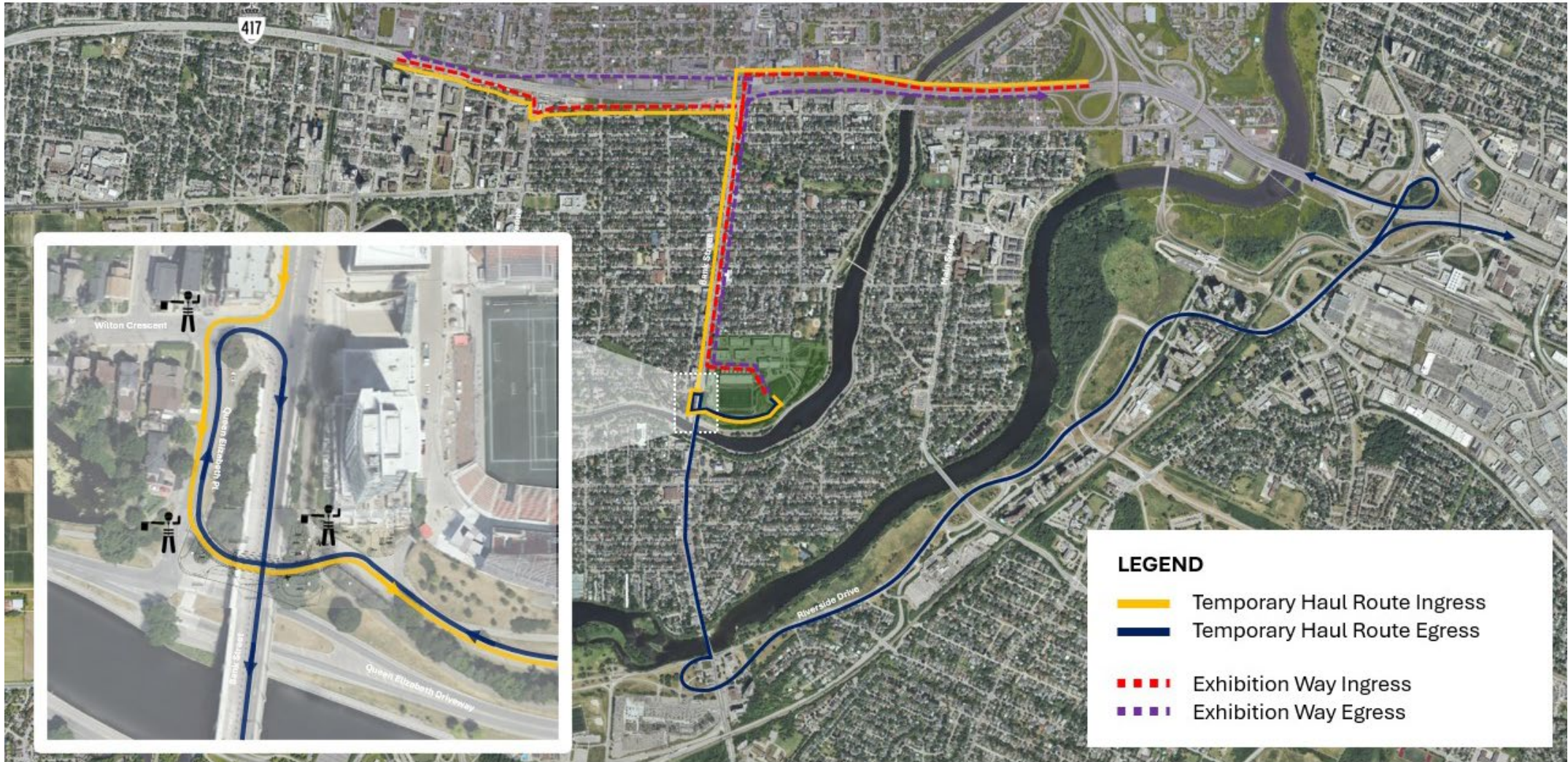
Construction traffic exiting the site is assumed to travel towards Highway 417 through two different patterns. Construction traffic exiting through the temporary haul route onto Wilton Crescent are assumed to turn right onto Bank Street to head southbound due to the existing eastbound left-turn restriction 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.

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

Figure 4.8: Lansdowne 2.0 Construction Haul Routes



## 4.5 Transportation Demand Management

### 4.5.1 CONTEXT FOR TDM

#### Development Location and involved Parties

Lansdowne 2.0 is located in a Design Priority Area (DPA), as specified by the Official Plan. Lansdowne is owned by the City of Ottawa, and is co-managed and operated with the Ottawa Sports and Entertainment Group (OSEG) through a public-private partnership. The stadium and future event centre will continue to be leased by the City to OSEG to host tenant sporting teams and special events at Lansdowne.

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), as well as for 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 sit 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.

The current transit service enhancements and TDM measures will sufficiently serve the 5,500 seat Event Centre as it replaces the programming provided at the existing 9,800 seat TD Place Arena, and therefore it is not expected to generate additional transportation demands to Lansdowne.

## 4.5.2 NEED AND OPPORTUNITY

### The Importance of Alternative Modes

Lansdowne's unique urban setting and its role as a venue for large-scale events make sustainable transportation options critical. With limited space for private vehicles, alternative modes such as transit, cycling, walking, and ridesharing ensure seamless access while minimizing congestion and enhancing the overall event experience. These modes also align with the community's goals for reducing environmental impact and fostering vibrant, accessible neighborhoods.

### Periodic Modal Share Analysis

Modal share surveys for major and minor events are conducted by OSEG on an annual basis to gauge the effectiveness of the TDM program. This annual assessment helps to track progress and identify any adjustments that might be required to continue to meet TDM targets.

Based on 2023 modal share data, the TDM modal shares for events held at Lansdowne continue to be within set targets with a high adoption of transit, shuttle, and active modes as the primary travel options to travel to Lansdowne for events.

For major events (attendance levels of 10,000 or more), the transit and shuttle modal share continues to show improvement and signs of recovery since the COVID-19 pandemic. Transit and shuttle modal shares increased from **42.2%** in 2022 to **47.1%** in 2023. It is anticipated modal shares will continue to improve over time as transit ridership levels continue to recover. The target modal share for on-street parking is **26%**, which was effectively met in 2019. Modal shares for on-site parking (**3.8%**), cycling (**1.5%**), and walking (**8.2%**) continue to fall within modal share targets for major events.

For minor events (attendance levels that are less than 10,000), transit modal shares continue to meet and exceed set targets for transit and active modes. For Ottawa 67's games, the transit modal shares in 2023 was **24.5%**, exceeding the 10-20% target. This success is attributed to excellent communication of travel options to ticket holders, and the provision of shuttle service from Carleton University for Ottawa 67's games held at Lansdowne.

Modal shares for other minor events, such as concerts and shows, continue to meet TDM targets for transit (**13.6%**) and active modes (**9.3%**).

Modal shares for Ottawa BlackJacks and Ottawa Athletico matches for 2023 were also met. While the transit mode share average was **8.2%**, slightly below the 10% target, the walking and cycling mode share was **17.2%**, far exceeding the 5-10% target for active modes. It is worth noting that the auto mode share for Ottawa BlackJacks and Ottawa Athletico matches was also within the set targets with **66.2%** in 2023.

Modal share summaries for 2023 events held at Lansdowne are included in **Appendix G**.

### TDM Success and Future Potential

The current TDM program for events at Lansdowne has already achieved significant progress, with tenant team games surpassing active mode targets. By continuing to invest in targeted measures—such as enhanced wayfinding, coordinated transit services, and cycling infrastructure—Lansdowne can strengthen its role as a leader in sustainable event hosting while providing a high-quality experience for all visitors.

### 4.5.3 TDM PROGRAM

An updated Transportation Demand Management Strategy for Lansdowne 2.0 was developed in support of the proposed event centre and new north stadium stands.

Also, the City of Ottawa's TDM-Supportive Design and Infrastructure elements checklist and TDM Measures checklist were consulted to identify and incorporate TDM supportive measures.

Both the Transportation Demand Management Measures Overview and TDM checklists are included in **Appendix G**.

## 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

### 4.7.1 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.

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 167 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, depending on the bus type.

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 / hr to 2200 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 167 passengers per hour, can be accommodated within the current scheduled services on Bank Street.

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 2 and Phase 3 of development.

#### **4.7.2 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

### 4.8.1 INTERSECTION CONTROL

The existing intersection control for Lansdowne will be maintained as part of the Lansdowne 2.0 redevelopment.

### 4.8.2 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 using the 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.

Intersection LOS summaries are outlined below for all study horizon periods.

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

### Summary of results

The scenarios analysed include the existing conditions, as well as projections for 2028 and 2033, covering weekday AM and PM peaks, Saturday and Sunday peaks, and major and minor event ingress and egress. In the 2028 scenario, the impact of the Bank Street parking garage entry closure is analysed. For 2033, the horizon year, both future background conditions and total future trip scenarios are assessed.

Overall, the level of service (LOS) for most intersections is acceptable and is presented for all scenarios and intersections in **Table 4.5**. However, certain movements and intersections operate at or near capacity. These specific instances are detailed below:

- The intersection of Bank Street and Sunnyside Avenue is projected to operate at or close to theoretical capacity (LOS E) during the weekday PM peak in all scenarios.
- This intersection operates at a LOS of D during the weekday AM peak across all scenarios and for the total future major event ingress scenario.
- The eastbound approach at the intersection of Bank Street and Wilton Crescent is currently at or near capacity in the PM peak and minor and major events for all scenarios, as well as the Saturday peak of 2033.

Delays at this intersection are primarily associated with limited gaps in traffic in the southbound direction due to the recently installed 3-lane cross-section of Bank Street. Even during events at Lansdowne, the delays are not directly caused by event traffic held at Lansdowne.

Although some movements approach or reach capacity, the entire intersection is expected to operate acceptably in all scenarios.

- For major events, delays are long on the eastbound approach of Queen Elizabeth Driveway and Princess Patricia Way and queue lengths reach 108.6m, which stretches back past the parking garage entrance. However, the operations at Queen Elizabeth Driveway / Princess Patricia Way will be controlled by police officers during major events rather than stop control. As such, Synchro analysis showing LOS of F and E may not accurately represent real-world operations. The performance of these intersections is effectively managed through the deployment of Ottawa Police Point Duty as part of the traffic management measures for major events at Lansdowne.

During construction phases, with the temporary closure of the Exhibition Way garage ramp and the assumed re-routed traffic, all internal intersections within the study area at Lansdowne are projected to operate with acceptable delays or queues. However, the 2028 scenario indicates that construction hauling activities should cease before the PM peak hour to avoid any negative impacts.

No additional mitigation measures are recommended to improve intersection operations.

The MMLOS analysis of the signalized intersections (Bank Street and Holmwood Avenue, Bank street and Exhibition Way, Queen Elizabeth Drive and Fifth Avenue) was presented in section 4.3.1 and shows the following:

- The intersection of Bank Street and Holmwood Avenue does not meet the target levels of service for pedestrians, cyclists, transit, or trucks. However, it does meet the target for automobiles.

This results in long delays for cyclists and pedestrians, along with low comfort levels and high safety risks for pedestrians. Additionally, trucks and transit experience significant delays, while lane utilization for vehicles remains low.

- The intersection of Bank Street and Exhibition Way fails to meet the target levels of service for pedestrians and cyclists but meets them for trucks, transit, and automobiles.

This leads to long delays for cyclists and pedestrians, contributing to low comfort levels and increased risks for pedestrians. However, trucks and transit experience only short delays, and lane utilization for vehicles remains low.

- The Queen Elizabeth Drive and Fifth Avenue intersection meets target levels of service for pedestrians, cyclists, and vehicles. However, transit and truck levels of service are not applicable.

As a result, pedestrians and cyclists experience short delays, high comfort levels, and low risks, while lane utilization for vehicles remains low.

Table 4.5: Summary of Intersection Level of Service Results

Intersections			Bank St & Fifth Ave	Bank St & Holmwood Ave	Bank St & Exhibition Way	Bank St & Wilton Cr	Bank St & Echo D	Bank St & Aylmer Ave	Bank St & Sunnyside Ave	QED & Princess Patricia Way	Queen Elizabeth Dr & Fifth Ave	Bank St & Marche Way	Fifth Ave & O'Connor St	Garage Access at Exhibition Way	Exhibition Way and Service Roadway	Marché Way and Service Roadway	Marché Way and Exhibition Way	Garage Access at Princess Patricia Way	
Year	Scenario	Time period																	
Existing		Weekday AM	A	A	A	A	A	A	D	A	A	A	A	A	A	A	A	A	
		Weekday PM	B	A	A	B	A	A	E	A	A	A	A	A	A	A	A	A	
		Saturday Peak	B	A	A	A	A	A	B	A	A	A	A	A	A	A	A	A	
		Sunday Peak	B	A	A	A	A	A	C	A	A	A	A	A	A	A	A	A	
		Minor Event - Ingress	B	A	A	B	A	A	C	A	A	A	A	A	A	A	A	A	
		Minor Event - Egress	A	A	B	A	A	A	A	B	A	A	A	A	A	A	A	A	
		Major Event - Ingress	B	B	A	B	A	A	C	A	C		A						
		Major Event - Egress	B	B	A	A	A	A	A	B	B		A						
2028	Future with construction impact	Weekday AM	A	A	A	A	A	A	D	A	A	A	A	A	A	A	A	A	
		Weekday PM	B	A	A	B	A	A	E	A	A	A	A	A	A	A	A	A	
		Saturday Peak	B	A	A	A	A	A	B	A	A	A	A	A	A	A	A	A	
		Sunday Peak	B	A	A	A	A	A	C	A	B	A	A	A	A	A	A	A	
		Minor Event - Ingress	B	A	A	B	A	A	C	A	B	A	A	A	A	B	A	A	
		Minor Event - Egress	A	A	B	A	A	A	A	B	A	A	A	A	A	A	A	A	B
		Major Event - Ingress	C	B	A	B	B	A	C	D	C		A						
		Major Event - Egress	C	A	A	A	B	A	A	A	B		B						
2033	Future Background	Weekday AM	A	A	A	A	B	A	D	A	A	B	A	A	A	A	A		
		Weekday PM	B	A	A	B	C	A	E	A	A	A	A	A	A	A	A		
		Saturday Peak	B	A	A	A	A	A	B	A	A	A	A	A	A	A	A		

Intersections			Bank St & Fifth Ave	Bank St & Holmwood Ave	Bank St & Exhibition Way	Bank St & Wilton Cr	Bank St & Echo D	Bank St & Aylmer Ave	Bank St & Sunnyside Ave	QED & Princess Patricia Way	Queen Elizabeth Dr & Fifth Ave	Bank St & Marche Way	Fifth Ave & O'Connor St	Garage Access at Exhibition Way	Exhibition Way and Service Roadway	Marché Way and Service Roadway	Marché Way and Exhibition Way	Garage Access at Princess Patricia Way	
Year	Scenario	Time period																	
	Future Background (Con't)	Sunday Peak	B	A	A	A	A	A	C	A	A	A	A	A	A	A	A	A	
		Minor Event - Ingress	B	A	A	B	A	A	A	A	B	A	A	A	A	A	A	A	A
		Minor Event - Egress	A	A	B	A	A	A	A	A	B	A	A	A	A	A	A	A	A
		Major Event - Ingress	B	B	A	B	A	A	A	C	A	D		A					
		Major Event - Egress	D	B	A	A	A	A	A	A	C	B		B					
	Total Future	Weekday AM	A	A	A	A	A	A	A	D	A	A	A	A	A	A	A	A	A
		Weekday PM	B	A	A	B	A	A	A	E	A	A	A	A	A	A	A	A	A
		Saturday Peak	B	A	A	A	A	A	A	B	A	A	A	A	A	A	A	A	A
		Sunday Peak	B	A	B	A	A	A	A	C	A	A	A	B	A	A	A	A	A
		Minor Event - Ingress	B	A	A	B	A	A	A	C	A	B	A	A	A	A	A	A	A
		Minor Event - Egress	A	A	B	A	A	A	A	A	B	A	A	A	A	A	A	A	A
		Major Event - Ingress	B	B	A	C	A	A	A	D	B	D		A					
	Major Event - Egress	C	B	A	A	A	A	A	A	C	B		A						

## Existing Conditions

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

### Existing Weekday AM and PM Peak

**Table 4.6** summarizes intersection performance under Existing Weekday AM and PM peak hour conditions. As shown in the table below, all study area intersections are currently operating with overall acceptable levels of service under the 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 Weekday AM and PM Peak LOS Summary

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
<b>Overall Intersection</b>		<b>A</b>	<b>B</b>	<b>0.38</b>	<b>0.65</b>	<b>8.6</b>	<b>12.1</b>	--	--		
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	0.30	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
		<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.47</b>	<b>0.53</b>	<b>5.4</b>	<b>6.1</b>	--	--
Bank St & Exhibition Way	Signalized	WB	L	A	A	0.29	0.54	33.0	35.1	17.2	30.8
			Right	A	A	0.20	0.29	13.3	10.5	7.5	9.4
		NB	L / Th / R	A	A	0.41	0.31	10.1	5.2	40	27.6
		SB	L	A	A	0.17	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
<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.41</b>	<b>0.54</b>	<b>10.1</b>	<b>7.3</b>	--	--		
Bank St & Wilton Cr	Minor Stop	EB	R	C	D	0.49	0.82	22.0	53.2	15.6	40.8
		NB	L	B	B	0.20	0.36	10.7	13.6	5.7	13.7
			Th	A	A	--	--	1.8	3.3	5.7	13.7
		<b>Overall Intersection</b>		<b>A</b>	<b>B</b>	<b>0.49</b>	<b>0.82</b>	<b>5.1</b>	<b>10.2</b>	--	--
Bank St & Echo Dr	Minor Stop	EB	R	B	B	0.06	0.07	12.5	16.1	1.2	1.2
		<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.06</b>	<b>0.07</b>	<b>0.3</b>	<b>0.2</b>	--	--

Intersection	Intersection Control	Approach / Movement		LOS		V/C		Total Delay (s)		Queue 95th (m)	
				AM	PM	AM	PM	AM	PM	AM	PM
Bank St & Aylmer Ave	Signalized	EB	L / R	A	A	0.35	0.34	29.5	31.1	19.9	22.8
		NB	L / Th	A	A	0.34	0.38	3.8	4.9	16.8	19.6
		SB	Th / R	A	A	0.27	0.45	7.2	7.6	28.1	43.7
		<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.35</b>	<b>0.45</b>	<b>6.5</b>	<b>7.5</b>	--	--
Bank St & Sunnyside Ave	Signalized	EB	L / Th / R	B	B	0.68	0.65	26.8	42.2	32.6	53.6
		WB	L / Th / R	D	E	0.87	0.93	22.5	53.1	67.9	98.3
		NB	L / Th / R	D	A	0.86	0.43	16.4	9.2	80.8	28
		SB	L / Th / R	B	E	0.67	0.91	19.2	20.2	30.7	130.2
		<b>Overall Intersection</b>		<b>D</b>	<b>E</b>	<b>0.87</b>	<b>0.93</b>	<b>1.6</b>	<b>2.6</b>	--	--
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	B	0.10	0.32	13.1	19.5	1.8	8.4
		<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.10</b>	<b>0.32</b>	<b>1.6</b>	<b>2.6</b>	--	--
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	5.0	21.9	21.5
		SB	Th / R	A	A	0.42	0.53	8.6	7.7	30.5	66
		<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.42</b>	<b>0.53</b>	<b>9.2</b>	<b>9.2</b>	--	--
Bank St & Marche Way	Minor Stop	WB	L / R	C	B	0.57	0.15	21.1	12.9	21	3
		<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.57</b>	<b>0.15</b>	<b>4.6</b>	<b>0.8</b>	--	--
Fifth Ave & O'Connor St	All-Way Stop	EB	L / Th	A	A	0.14	0.15	7.9	8.0	--	--
		WB	R	A	A	0.07	0.10	6.4	6.5	--	--
		NB	L / Th / R	A	A	0.09	0.12	7.5	7.7	--	--
		SB	R	A	A	0.10	0.09	6.6	6.5	--	--
		<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.14</b>	<b>0.15</b>	<b>7.1</b>	<b>7.2</b>	--	--

Intersection	Intersection Control	Approach / Movement		LOS		V/C		Total Delay (s)		Queue 95th (m)	
				AM	PM	AM	PM	AM	PM	AM	PM
Garage Access at Exhibition Way	Two-Way Stop	WB	Th/L	A	A	0.00	0.01	0.0	0.1	0	0.1
		NB	L / R	B	B	0.05	0.14	12.9	15.6	0.2	3.6
		<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.11</b>	<b>0.16</b>	<b>1.3</b>	<b>1.9</b>	--	--
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	--	--
		<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.14</b>	<b>0.18</b>	<b>7.6</b>	<b>7.9</b>	--	--
Marché Way and Service Roadway	All-Way Stop	EB	L / Th	A	A	0.00	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	--	--
		<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.15</b>	<b>0.01</b>	<b>7.6</b>	<b>6.9</b>	--	--
Marché Way and Exhibition Way	All-Way Stop	EB	Th / R	A	A	0.00	0.01	6.9	7.0	--	--
		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	--	--
		<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.16</b>	<b>0.19</b>	<b>8.0</b>	<b>7.9</b>	--	--
Garage Access at Princess Patricia Way	Two-Way Stop	EB	L	A	A	0.00	0.00	0.0	0.0	0.1	0.1
			Th	A	A	0.0	0.0	1.0	0.7	0.1	0.1
		SB	L / R	A	A	0.01	0.07	9.3	9.5	0.3	1.7
		<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.09</b>	<b>0.07</b>	<b>0.7</b>	<b>2.5</b>	--	--

L - Left, Th - Through, R - Right

### Existing Saturday Peak Hour

**Table 4.7** summarize intersection performance under Existing Saturday Peak Hour conditions. As summarized below, all study area intersections are currently operating with overall acceptable levels of service.

Table 4.7: Existing Saturday Peak Hour LOS Summary

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
<b>Overall Intersection</b>				<b>B</b>	<b>0.63</b>	<b>9.7</b>	<b>--</b>
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	0.30	3.6	16.1
		<b>Overall Intersection</b>				<b>A</b>	<b>0.54</b>
Bank St & Exhibition Way	Signalized	WB	L	A	0.41	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
<b>Overall Intersection</b>				<b>A</b>	<b>0.41</b>	<b>7</b>	<b>--</b>
Bank St & Wilton Cr	Minor Stop	EB	R	C	0.58	29.9	20.4
		NB	L	B	0.19	11.6	4.2
			Th	A	--	1.8	4.2
		<b>Overall Intersection</b>				<b>A</b>	<b>0.58</b>
Bank St & Echo Dr	Minor Stop	EB	R	B	0.08	14.3	1.8
		<b>Overall Intersection</b>				<b>A</b>	<b>0.08</b>
Bank St & Aylmer Ave	Signalized	EB	L / R	A	0.20	30.2	15.8
		NB	L / Th	A	0.37	5.5	22.4
		SB	Th / R	A	0.40	7.2	38.4
		<b>Overall Intersection</b>				<b>A</b>	<b>0.40</b>
Bank St & Sunnyside Ave	Signalized	EB	L / Th / R	B	0.63	59.8	37.5
		WB	L / Th / R	B	0.66	35.9	38.6
		NB	L / Th / R	A	0.40	6.6	32.6
		SB	L / Th / R	A	0.48	4.1	11.2
		<b>Overall Intersection</b>				<b>B</b>	<b>0.66</b>

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	B	0.28	15.2	6.6
		<b>Overall Intersection</b>		<b>A</b>	<b>0.28</b>	<b>3</b>	<b>--</b>
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
		<b>Overall Intersection</b>		<b>A</b>	<b>0.42</b>	<b>9.2</b>	<b>--</b>
Bank St & Marche Way	Minor Stop	WB	L / R	B	0.14	12.4	3
		<b>Overall Intersection</b>		<b>A</b>	<b>0.14</b>	<b>0.8</b>	<b>--</b>
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	0.10	6.6	--
		<b>Overall Intersection</b>		<b>A</b>	<b>0.16</b>	<b>7.2</b>	<b>--</b>
Garage Access at Exhibition Way	Two-Way Stop	WB	Th / L	A	0.00	8.4	0
		NB	L / R	B	0.18	15.3	0.7
		<b>Overall Intersection</b>		<b>A</b>	<b>0.19</b>	<b>2.9</b>	<b>--</b>
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	--
		<b>Overall Intersection</b>		<b>A</b>	<b>0.15</b>	<b>7.7</b>	<b>--</b>
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	--
		<b>Overall Intersection</b>		<b>A</b>	<b>0.09</b>	<b>7.3</b>	<b>--</b>
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	--
		<b>Overall Intersection</b>		<b>A</b>	<b>0.16</b>	<b>8</b>	<b>--</b>
Garage Access at Princess Patricia Way	Two-Way Stop	EB	L	A	--	7.6	0.1
			Th	A	--	0	0.1
		SB	L / R	B	0.13	10.1	3.5
		<b>Overall Intersection</b>		<b>A</b>	<b>0.13</b>	<b>3.3</b>	<b>--</b>

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

### Existing Sunday Peak Hour

**Table 4.8** summarize intersection performance under Existing Sunday Peak Hour conditions. As summarized below, all study area intersections are currently operating with overall acceptable levels of service on Weekend Sunday peak periods with concurrent events at Lansdowne. No mitigation measure is recommended to improve intersection operations.

Table 4.8: Existing Sunday Peak Hour LOS Summary

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	0.30	7.9	51.3
		SB	L / Th / R	A	0.33	6.5	30.8
<b>Overall Intersection</b>				<b>B</b>	<b>0.65</b>	<b>12.9</b>	<b>--</b>
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
		SB	L / Th / R	A	0.30	8.2	44.3
		<b>Overall Intersection</b>				<b>A</b>	<b>0.53</b>
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
<b>Overall Intersection</b>				<b>A</b>	<b>0.53</b>	<b>11.6</b>	<b>--</b>
Bank St & Wilton Cr	Minor Stop	EB	R	C	0.62	25.5	28.8
		NB	L	B	0.18	11.4	5.1
			Th	A	--	1.7	5.1
		<b>Overall Intersection</b>				<b>A</b>	<b>0.62</b>
Bank St & Echo Dr	Minor Stop	EB	R	B	0.21	17.8	0.8
		<b>Overall Intersection</b>				<b>A</b>	<b>0.41</b>
Bank St & Aylmer Ave	Signalized	EB	L / R	A	0.40	35.7	21.9
		NB	L / Th	A	0.27	2.4	14.3
		SB	Th / R	A	0.31	3.4	26.2
		<b>Overall Intersection</b>				<b>A</b>	<b>0.40</b>
Bank St & Sunnyside Ave	Signalized	EB	L / Th / R	C	0.78	67.8	34.5
		WB	L / Th / R	B	0.70	32.8	35.5
		NB	L / Th / R	A	0.37	16.5	47.5
		SB	L / Th / R	A	0.49	4.7	11.3
		<b>Overall Intersection</b>				<b>C</b>	<b>0.78</b>

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	7.6	0.2
		EB	L / R	B	0.31	11.9	1.4
		<b>Overall Intersection</b>		<b>A</b>	<b>0.23</b>	<b>5.3</b>	<b>--</b>
Queen Elizabeth Dr & Fifth Ave	Signalized	EB	L / R	A	0.59	40.6	37.4
		NB	L / Th	A	0.30	7.3	27.9
		SB	Th / R	A	0.04	5.6	5.7
		<b>Overall Intersection</b>		<b>A</b>	<b>0.59</b>	<b>19.1</b>	<b>--</b>
Bank St & Marche Way	Minor Stop	WB	L / R	B	0.30	14	1.3
		<b>Overall Intersection</b>		<b>A</b>	<b>0.27</b>	<b>1.9</b>	<b>--</b>
Fifth Ave & O'Connor St	All-Way Stop	EB	L / Th	A	0.23	9.9	0.9
		WB	R	A	0.30	9.4	1.3
		NB	L / Th / R	B	0.34	10.6	1.5
		SB	R	A	0.14	8.5	0.5
		<b>Overall Intersection</b>		<b>A</b>	<b>0.34</b>	<b>9.8</b>	<b>--</b>
Garage Access at Exhibition Way	Two-Way Stop	WB	Th / L	A	0.00	8.5	0
		NB	L / R	B	0.24	17.1	1
		<b>Overall Intersection</b>		<b>A</b>	<b>0.25</b>	<b>3.2</b>	<b>--</b>
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
		<b>Overall Intersection</b>		<b>A</b>	<b>0.18</b>	<b>7.9</b>	<b>--</b>
Marché Way and Service Roadway	All-Way Stop	EB	L / Th	A	0.02	7.1	0.1
		WB	L / Th	A	0.20	8	0.7
		NB	L / R	A	0.01	7.2	0
		<b>Overall Intersection</b>		<b>A</b>	<b>0.20</b>	<b>7.9</b>	<b>--</b>
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
		<b>Overall Intersection</b>		<b>A</b>	<b>0.19</b>	<b>8</b>	<b>--</b>
Garage Access at Princess Patricia Way	Two-Way Stop	EB	L	A	--	7.5	0
			Th	A	--	0	--
		SB	L / R	B	0.23	10.7	0.9
		<b>Overall Intersection</b>		<b>A</b>	<b>0.23</b>	<b>5.3</b>	<b>--</b>

L - Left, Th - Through, R - Right

### Existing Minor Event (Arena)

**Table 4.9** summarize intersection performance during ingress and egress for a Minor Event held at Lansdowne under current conditions. As summarized in the table below, all study area intersections are currently operating with acceptable overall levels of service.

No mitigation measures are recommended to improve intersection operations.

Table 4.9: Existing Minor Event (Arena) LOS Summary

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	0.65	0.51	36.9	31.9	32.3	18.8
		WB	L	A	A	0.42	0.34	33.3	34.4	18.8	15.5
			Th / R	A	A	0.30	0.30	19	19.5	15.6	12.6
		NB	L / Th / R	A	A	0.30	0.24	10	3.5	49.8	34.2
		SB	L / Th / R	A	A	0.35	0.20	6.3	3.6	33.6	15.6
		<b>Overall Intersection</b>		<b>B</b>	<b>A</b>	<b>0.65</b>	<b>0.51</b>	<b>12.6</b>	<b>9</b>	<b>--</b>	<b>--</b>
Bank St & Holmwood Ave	Signalized	EB	L / Th / R	A	A	0.54	0.47	38.1	37.7	27.8	22.3
		NB	L / Th / R	A	A	0.37	0.29	2.9	4.2	13.9	22.1
		SB	L / Th / R	A	A	0.32	0.20	4.8	2.7	20.2	24.4
				<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.54</b>	<b>0.47</b>	<b>6.5</b>	<b>6.6</b>
Bank St & Exhibition Way	Signalized	WB	L	A	B	0.52	0.66	35.1	39.7	30.8	43.5
			Right	A	A	0.38	0.59	10.5	10.2	11.2	16.2
		NB	L / Th / R	A	A	0.35	0.16	4.9	4.8	26.6	12.4
		SB	L	A	A	0.45	0.25	7.4	8.9	10.5	8.8
			Th	A	A	0.21	0.14	3.1	6.5	8.8	7.6
				<b>Overall Intersection</b>		<b>A</b>	<b>B</b>	<b>0.52</b>	<b>0.66</b>	<b>7.6</b>	<b>11.6</b>
Bank St & Wilton Cr	Minor Stop	EB	R	D	B	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
				<b>Overall Intersection</b>		<b>B</b>	<b>A</b>	<b>0.85</b>	<b>0.32</b>	<b>10.5</b>	<b>2.9</b>
Bank St & Echo Dr	Minor Stop	EB	R	B	B	0.11	0.02	15.8	10.4	2.4	0.6
				<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.11</b>	<b>0.02</b>	<b>0.4</b>	<b>0.2</b>

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	4.6	23.6	8.1
		SB	Th / R	A	A	0.32	0.10	6.4	5.2	28	9.6
		<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.39</b>	<b>0.10</b>	<b>7.6</b>	<b>5.7</b>	--	--
Bank St & Sunnyside Ave	Signalized	EB	L / Th / R	C	A	0.73	0.51	52.2	51.5	#42.6	19.1
		WB	L / Th / R	C	A	0.76	0.33	32.6	22.4	49.7	11.9
		NB	L / Th / R	A	A	0.30	0.12	8.1	3.4	32.2	11
		SB	L / Th / R	A	A	0.53	0.25	7.5	2.5	23.4	21.2
		<b>Overall Intersection</b>		<b>C</b>	<b>A</b>	<b>0.76</b>	<b>0.51</b>	<b>15.2</b>	<b>7</b>	--	--
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	B	0.36	0.59	21.6	16.1	9.6	24
		<b>Overall Intersection</b>		<b>A</b>	<b>B</b>	<b>0.36</b>	<b>0.59</b>	<b>3.4</b>	<b>10.4</b>	--	--
Queen Elizabeth Dr & Fifth Ave	Signalized	EB	L / R	A	A	0.44	0.45	28.6	37.7	22.4	23.4
		NB	L / Th	A	A	0.31	0.29	6.8	5.6	27.9	29.4
		SB	Th / R	A	A	0.58	0.18	10.7	4.9	78.2	18
		<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.58</b>	<b>0.45</b>	<b>11.2</b>	<b>9.8</b>	--	--
Bank St & Marche Way	Minor Stop	WB	L / R	B	B	0.11	0.27	12.3	13.4	2.4	6.6
		<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.11</b>	<b>0.27</b>	<b>0.6</b>	<b>2.1</b>	--	--
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	--	--
		<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.18</b>	<b>0.09</b>	<b>7.4</b>	<b>6.8</b>	--	--

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	Th / L	A	A	--	--	8.8	0	0	0
		NB	L / R	B	C	0.29	0.43	19.8	24.7	1.2	2.1
		<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.30</b>	<b>0.44</b>	<b>3.3</b>	<b>5.2</b>	<b>--</b>	<b>--</b>
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
		<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.29</b>	<b>0.36</b>	<b>8.4</b>	<b>9.1</b>	<b>--</b>	<b>--</b>
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
		<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.07</b>	<b>0.18</b>	<b>7.2</b>	<b>7.8</b>	<b>--</b>	<b>--</b>
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
		<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.32</b>	<b>0.25</b>	<b>9.4</b>	<b>8.3</b>	<b>--</b>	<b>--</b>
Garage Access at Princess Patricia Way	Two-Way Stop	EB	L	A	A	--	--	8.1	7.4	0	0
			Th	A	A	--	--	0	0	--	0
		SB	L / R	B	B	0.14	0.47	11.3	13.2	0.5	19.6
		<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.14</b>	<b>0.47</b>	<b>2.2</b>	<b>9.3</b>	<b>--</b>	<b>--</b>

L - Left, Th - Through, R - Right

### Existing Major Event (Stadium)

**Table 4.10** summarize intersection performance during ingress and egress for a Major Event held at Lansdowne under current conditions. As illustrated below, all study area intersections are currently operating with overall acceptable levels of service during Major Events held at the Stadium 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 4.10: Existing Major Event (Stadium) LOS Summary

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	0.68	0.67	37.9	39.2	34.5	31.8
		WB	L	A	A	0.43	0.22	32.5	26.3	19.9	12.1
			Th / R	A	A	0.40	0.46	18.3	20.1	20.3	23.1
		NB	L / Th / R	A	A	0.31	0.21	6.8	4.9	31.2	16
		SB	L / Th / R	A	A	0.42	0.24	7.3	5.8	41.4	21.1
		<b>Overall Intersection</b>		<b>B</b>	<b>B</b>	<b>0.68</b>	<b>0.67</b>	<b>11.6</b>	<b>11.8</b>	<b>--</b>	<b>--</b>
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	7.1	5	38.8	17.4
		SB	L / Th / R	A	A	0.42	0.23	4	3.1	17.1	9.2
				<b>Overall Intersection</b>		<b>B</b>	<b>B</b>	<b>0.61</b>	<b>0.61</b>	<b>8.2</b>	<b>10</b>
Bank St & Exhibition Way	Signalized	WB	L	<i>Movements Temporarily Restricted During Major Events</i>							
			Right								
		NB	L / Th / R	A	A	0.32	0.12	4.3	0.1	27.2	0
		SB	L	<i>Movements Temporarily Restricted During Major Events</i>							
			Th	A	A	0.26	0.12	4.1	0.1	22	0
		<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.32</b>	<b>0.12</b>	<b>5.3</b>	<b>0.1</b>	<b>--</b>	<b>--</b>
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	A	--	--	2.2	--	5.3	0
				<b>Overall Intersection</b>		<b>B</b>	<b>A</b>	<b>0.97</b>	<b>0.01</b>	<b>14.2</b>	<b>0.1</b>
Bank St & Echo Dr	Minor Stop	EB	R	B	B	0.22	0.05	17.7	10.3	4.8	1.2
				<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.22</b>	<b>0.05</b>	<b>0.8</b>	<b>0.5</b>

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	0.50	0.17	38.1	23.5	33.9	11.4
		NB	L / Th	A	A	0.41	0.19	5.5	4.9	24.9	13.4
		SB	Th / R	A	A	0.43	0.17	7.9	4.9	47	14.4
		<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.50</b>	<b>0.19</b>	<b>9.9</b>	<b>6.6</b>	--	--
Bank St & Sunnyside Ave	Signalized	EB	L / Th / R	B	A	0.69	0.57	45	50.3	#51.3	27.2
		WB	L / Th / R	C	A	0.75	0.50	35.2	31.5	37.2	22.7
		NB	L / Th / R	A	A	0.37	0.15	9.4	4	37.2	14
		SB	L / Th / R	C	A	0.71	0.17	10.8	1.2	83.5	3.4
		<b>Overall Intersection</b>		<b>C</b>	<b>A</b>	<b>0.75</b>	<b>0.57</b>	<b>20.2</b>	<b>10.6</b>	--	--
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	D	D	0.77	0.87	50.3	39.7	34.2	58.8
		<b>Overall Intersection</b>		<b>A</b>	<b>B</b>	<b>0.77</b>	<b>0.87</b>	<b>8.7</b>	<b>19.2</b>	--	--
Queen Elizabeth Dr & Fifth Ave	Signalized	EB	L / R	B	B	0.62	0.67	39.9	39.6	39.2	47.6
		NB	L / Th	A	A	0.50	0.38	10.5	9.1	52.8	48.6
		SB	Th / R	C	A	0.76	0.37	16.3	8.9	#174.4	48.6
		<b>Overall Intersection</b>		<b>C</b>	<b>B</b>	<b>0.76</b>	<b>0.67</b>	<b>18.8</b>	<b>14.6</b>	--	--
Bank St & Marche Way	Minor Stop	WB	L / R	<i>Movements Temporarily Restricted During Major Events</i>							
		<b>Overall Intersection</b>									
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	A	0.26	0.43	8.4	10	--	--
		SB	R	A	A	0.13	0.05	6.7	6.4	--	--
		<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.26</b>	<b>0.43</b>	<b>7.7</b>	<b>8.8</b>	--	--

L - Left, Th - Through, R - Right

## 2028 Future Conditions

Intersection operational analysis under 2028 Future Conditions is summarized in this section. This horizon year represents an interim operating condition for Lansdowne 2.0, whereby the new event centre is complete and open, while Phase 2 (new north stadium stands) and Phase 3 (retail podium and residential towers) are under construction.

This horizon year also assumes that the Bank Street garage ramp is temporarily closed to accommodate Phase 2 and Phase 3 construction as described in earlier sections.

### 2028 Future Weekday AM and PM Peak

**Table 4.11** summarize intersection performance under 2028 Future Weekday AM and PM peak hour conditions. As shown in the table below, all study area intersections are projected to operate with overall acceptable levels of service under the Weekday AM and PM peak hour conditions.

The intersection of Bank Street and Sunnyside Avenue is projected to continue to operate 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 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.

With the temporary closure of the Exhibition Way garage ramp and assumed re-routed traffic patterns, all internal study area intersections are projected to continue to operate acceptably with low delays and short queues.

Table 4.11: 2028 Future Weekday AM and PM Peak LOS Summary

Intersection	Intersection Control	Approach / Movement		LOS		V/C		Total		Queue	
				AM	PM	AM	PM	Delay (s)		95th (m)	
				AM	PM	AM	PM	AM	PM	AM	PM
Bank St & Fifth Ave	Signalized	EB	L / Th / R	A	B	0.37	0.67	22.2	22.5	28.4	31.7
		WB	L	A	A	0.20	0.43	23.1	24.4	14.8	17.9
			Th / R	A	A	0.21	0.29	15.9	14.1	16.4	14.3
		NB	L / Th / R	A	A	0.40	0.30	3.5	13.9	5.3	50.1
		SB	L / Th / R	A	A	0.33	0.38	8.6	9.8	26.4	37.5
<b>Overall Intersection</b>		<b>A</b>	<b>B</b>	<b>0.40</b>	<b>0.67</b>	<b>8.6</b>	<b>13.4</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
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	0.30	0.33	2.2	1.9	4.4	9.1
		SB	L / Th / R	A	A	0.21	0.33	3.1	3.4	13.6	14.3
		<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.48</b>	<b>0.55</b>	<b>5.2</b>	<b>5.5</b>	<b>--</b>	<b>--</b>
Bank St & Exhibition Way	Signalized	WB	L	A	A	0.20	0.55	22.9	39.5	13	32
			Right	A	A	0.14	0.27	10.3	11	5.9	9.2
		NB	L / Th / R	A	A	0.31	0.32	4.7	5.5	24	30.5
		SB	L	A	A	0.14	0.25	5.9	7.9	7.2	16.1
			Th	A	A	0.16	0.24	4.2	5.4	13.6	26.2
		<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.31</b>	<b>0.55</b>	<b>5.6</b>	<b>8.8</b>	<b>--</b>	<b>--</b>
Bank St & Wilton Cr	Minor Stop	EB	R	C	E	0.52	0.89	23.5	66.9	27.4	88.7
		NB	L	B	B	0.21	0.38	10.9	14.4	6.1	15.2
			Th	A	A	--	--	1.9	3.8	--	--
		<b>Overall Intersection</b>		<b>A</b>	<b>B</b>	<b>0.52</b>	<b>0.89</b>	<b>5.3</b>	<b>12.9</b>	<b>--</b>	<b>--</b>
Bank St & Echo Dr	Minor Stop	EB	R	B	B	0.06	0.10	12.8	20	2.2	3.2
		<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.36</b>	<b>0.53</b>	<b>0.3</b>	<b>0.3</b>	<b>--</b>	<b>--</b>

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	0.38	0.37	29.6	31.5	21.8	24.2
		NB	L / Th	A	A	0.35	0.41	3.5	4.3	m15.2	m14.2
		SB	Th / R	A	A	0.28	0.48	7.4	8	29.5	47.8
		<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.38</b>	<b>0.48</b>	<b>6.5</b>	<b>7.6</b>	--	--
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	0.45	14.4	20.4	85.4	45.7
		SB	L / Th / R	F	E	1.10dl	0.94	29.6	28.5	#79.7	#109.8
		<b>Overall Intersection</b>		<b>D</b>	<b>E</b>	<b>0.87</b>	<b>0.95</b>	<b>23.6</b>	<b>33</b>	--	--
QED & Princess Patricia Way	Minor Stop	NB	L / Th	A	A	0.06	0.06	8.3	9.1	1.6	1.7
		EB	L / R	B	C	0.12	0.42	14.1	23.7	3.1	15.2
		<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.10</b>	<b>0.42</b>	<b>1.8</b>	<b>2.6</b>	--	--
Queen Elizabeth Dr & Fifth Ave	Signalized	EB	L / R	A	A	0.25	0.45	23.8	31.8	19.2	26.3
		NB	L / Th	A	A	0.34	0.28	21.3	15	48.5	42.6
		SB	Th / R	A	A	0.43	0.57	24.5	23.2	67.2	119.7
		<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.43</b>	<b>0.57</b>	<b>23.2</b>	<b>21.9</b>	--	--
Bank St & Marche Way	Minor Stop	WB	L / R	B	A	0.08	0.16	12.8	9.5	1.4	4.5
		<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.08</b>	<b>0.16</b>	<b>0.4</b>	<b>0.9</b>	--	--
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	0.10	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
		<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.15</b>	<b>0.16</b>	<b>7.8</b>	<b>8</b>	--	--

Intersection	Intersection Control	Approach / Movement		LOS		V/C		Total		Queue	
				AM	PM	AM	PM	Delay (s)		95th (m)	
								AM	PM	AM	PM
Exhibition Way and Service Roadway	All-Way Stop	EB	L / Th	A	A	0.19	0.28	8.1	8.7	0.7	1.1
		WB	Th / R	A	A	0.11	0.23	7.6	8.4	0.4	0.9
		SB	L / R	A	A	0.01	0.01	7.4	7.7	0	--
		<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.20</b>	<b>0.53</b>	<b>7.9</b>	<b>8.5</b>	<b>--</b>	<b>--</b>
Marché Way and Service Roadway	All-Way Stop	EB	L / Th	A	A	0.00	0.01	6.7	6.6	--	--
		WB	L / Th	A	A	0.15	0.01	7.7	7.1	0.6	--
		NB	L / R	A	A	0.01	0.01	7.1	6.8	--	--
		<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.16</b>	<b>0.01</b>	<b>7.6</b>	<b>6.9</b>	<b>--</b>	<b>--</b>
Marché Way and Exhibition Way	All-Way Stop	EB	Th / R	A	A	0.00	0.01	7.1	7.4	--	--
		WB	L / Th	A	A	0.17	0.21	8.4	9	0.6	0.8
		NB	L / R	A	A	0.21	0.29	8.2	8.5	0.8	1.3
		<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.21</b>	<b>0.30</b>	<b>8.3</b>	<b>8.7</b>	<b>--</b>	<b>--</b>
Garage Access at Princess Patricia Way	Two-Way Stop	EB	L	A	A	0.04	0.07	7.7	7.8	1.0	1.8
			Th	A	A	0.00	0.00	0.0	0.0	0.0	0.0
		SB	L / R	A	B	0.03	0.17	9.8	11.4	0.6	4.6
		<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.04</b>	<b>0.17</b>	<b>2.2</b>	<b>4.7</b>	<b>--</b>	<b>--</b>

L - Left, Th - Through, R - Right

### 2028 Future Saturday Peak Hour

**Table 4.12** summarize intersection performance under 2028 Future Saturday Peak Hour conditions. As summarized below, all study area intersections are projected to continue to operate with overall acceptable levels of service.

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 continue to operate acceptably with low delays and short queues.

Table 4.12: 2028 Future Saturday Peak Hour LOS

Intersection	Intersection Control	Approach / Movement		LOS	V/C	Total Delay (s)	Queue 95th (m)
Bank St & Fifth Ave	Signalized	EB	L / Th / R	B	0.64	20.6	27
		WB	L	A	0.50	24.7	19.9
			Th / R	A	0.40	13.2	16.5
		NB	L / Th / R	A	0.30	12.9	51
		SB	L / Th / R	A	0.32	9.2	32.2
		<b>Overall Intersection</b>				<b>B</b>	<b>0.64</b>
Bank St & Holmwood Ave	Signalized	EB	L / Th / R	A	0.55	38.8	27.2
		NB	L / Th / R	A	0.31	2.3	9
		SB	L / Th / R	A	0.32	3.9	22
		<b>Overall Intersection</b>				<b>A</b>	<b>0.55</b>
Bank St & Exhibition Way	Signalized	WB	L	A	0.37	33.9	22.2
			Right	A	0.31	12.0	9.7
		NB	L / Th / R	A	0.29	4.6	23.3
		SB	L	A	0.26	4.8	7.5
			Th	A	0.23	3.2	13
		<b>Overall Intersection</b>				<b>A</b>	<b>0.37</b>
Bank St & Wilton Cr	Minor Stop	EB	R	C	0.62	33.5	41.9
		NB	L	B	0.20	11.9	6
			Th	A	--	2.0	--
		<b>Overall Intersection</b>				<b>A</b>	<b>0.62</b>
Bank St & Echo Dr	Minor Stop	EB	R	B	0.08	14.9	3.6
		<b>Overall Intersection</b>				<b>A</b>	<b>0.08</b>
Bank St & Aylmer Ave	Signalized	EB	L / R	A	0.23	30.2	16.7
		NB	L / Th	A	0.39	5.8	28.1
		SB	Th / R	A	0.42	7.4	41
		<b>Overall Intersection</b>				<b>A</b>	<b>0.42</b>

Intersection	Intersection Control	Approach / Movement		LOS	V/C	Total Delay (s)	Queue 95th (m)
Bank St & Sunnyside Ave	Signalized	EB	L / Th / R	B	0.62	45.7	#41.1
		WB	L / Th / R	B	0.66	33.4	#44.0
		NB	L / Th / R	A	0.34	7.2	29.4
		SB	L / Th / R	A	0.48	6.6	21.1
		<b>Overall Intersection</b>		<b>B</b>	<b>0.66</b>	<b>13.1</b>	<b>--</b>
QED & Princess Patricia Way	Minor Stop	NB	L / Th	A	0.07	8.4	1.6
		EB	L / R	B	0.36	17.6	11.9
		<b>Overall Intersection</b>		<b>A</b>	<b>0.36</b>	<b>3.8</b>	<b>--</b>
Queen Elizabeth Dr & Fifth Ave	Signalized	EB	L / R	A	0.49	32.7	29.7
		NB	L / Th	A	0.33	14.6	49.9
		SB	Th / R	A	0.40	15.9	69.1
		<b>Overall Intersection</b>		<b>A</b>	<b>0.49</b>	<b>17.5</b>	<b>--</b>
Bank St & Marche Way	Minor Stop	WB	L / R	B	0.15	13.2	0.5
		<b>Overall Intersection</b>		<b>A</b>	<b>0.15</b>	<b>0.9</b>	<b>--</b>
Fifth Ave & O'Connor St	All-Way Stop	EB	L / Th	A	0.18	8.4	--
		WB	R	A	0.13	8.4	--
		NB	L / Th / R	A	0.12	7.6	--
		SB	R	A	0.13	7.5	--
		<b>Overall Intersection</b>		<b>A</b>	<b>0.18</b>	<b>8.0</b>	<b>--</b>
Exhibition Way and Service Roadway	All-Way Stop	EB	L / Th	A	0.27	8.6	--
		WB	Th / R	A	0.18	8.1	--
		SB	L / R	A	0.01	7.6	--
		<b>Overall Intersection</b>		<b>A</b>	<b>0.27</b>	<b>8.4</b>	<b>--</b>
Marché Way and Service Roadway	All-Way Stop	EB	L / Th	A	0.01	7.0	--
		WB	L / Th	A	0.02	7.0	--
		NB	L / R	A	0.10	7.4	--
		<b>Overall Intersection</b>		<b>A</b>	<b>--</b>	<b>7.3</b>	<b>--</b>
Marché Way and Exhibition Way	All-Way Stop	EB	Th / R	A	0.31	9.2	--
		WB	L / Th	A	0.03	7.7	--
		NB	L / R	A	0.14	8.6	--
		<b>Overall Intersection</b>		<b>A</b>	<b>0.31</b>	<b>9.0</b>	<b>--</b>
Garage Access at Princess Patricia Way	Two-Way Stop	EB	L	A	0.08	7.9	1.9
			Th	A	--	0.0	--
		SB	L / R	B	0.34	13.4	11.2
		<b>Overall Intersection</b>		<b>A</b>	<b>0.34</b>	<b>6.2</b>	<b>--</b>

L - Left, Th - Through, R - Right

### 2028 Future Sunday Peak Hour

**Table 4.13** summarize intersection performance under 2028 Future Saturday Peak Hour conditions. As summarized below, all study area intersections are projected to continue to operate with overall acceptable levels of service.

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 low delays and short queues.

Table 4.13: 2028 Future Sunday Peak Hour LOS Summary

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	29.7	26.8
		WB	L	B	0.68	43.5	33.2
			Th / R	A	0.36	19.7	20.2
		NB	L / Th / R	A	0.32	8.2	52.8
		SB	L / Th / R	A	0.33	6.8	30.9
<b>Overall Intersection</b>				<b>B</b>	<b>0.68</b>	<b>13.4</b>	<b>--</b>
Bank St & Holmwood Ave	Signalized	EB	L / Th / R	A	0.55	38.5	26.9
		NB	L / Th / R	A	0.36	7.8	53.2
		SB	L / Th / R	A	0.31	8.5	44.5
		<b>Overall Intersection</b>				<b>A</b>	<b>0.55</b>
Bank St & Exhibition Way	Signalized	WB	L	A	0.51	36.0	29.0
			Right	A	0.25	10.5	8.6
		NB	L / Th / R	A	0.36	11.5	38.0
		SB	L	A	0.38	11.2	23.3
			Th	A	0.22	5.2	26.2
<b>Overall Intersection</b>				<b>A</b>	<b>0.51</b>	<b>11.3</b>	<b>--</b>
Bank St & Wilton Cr	Minor Stop	EB	R	C	0.52	27.5	32.4
		NB	L	B	0.18	11.7	4.2
			Th	A	--	1.8	4.2
<b>Overall Intersection</b>				<b>A</b>	<b>0.52</b>	<b>4.8</b>	<b>--</b>
Bank St & Echo Dr	Minor Stop	EB	R	B	0.23	18.6	8.3
		<b>Overall Intersection</b>				<b>A</b>	<b>0.23</b>
Bank St & Aylmer Ave	Signalized	EB	L / R	A	0.43	36.0	23.1
		NB	L / Th	A	0.29	8.4	58.7
		SB	Th / R	A	0.32	3.6	28.4
		<b>Overall Intersection</b>				<b>A</b>	<b>0.43</b>

Intersection	Intersection Control	Approach / Movement		LOS	V/C	Total Delay (s)	Queue 95th (m)
Bank St & Sunnyside Ave	Signalized	EB	L / Th / R	C	0.78	66.7	35.1
		WB	L / Th / R	B	0.70	33.0	36.5
		NB	L / Th / R	A	0.39	16.9	48.7
		SB	L / Th / R	A	0.51	13.4	65.8
		<b>Overall Intersection</b>		<b>C</b>	<b>0.78</b>	<b>20.7</b>	<b>--</b>
QED & Princess Patricia Way	Minor Stop	NB	L / Th	A	0.06	7.7	3.3
		EB	L / R	B	0.39	13.3	13.3
		<b>Overall Intersection</b>		<b>A</b>	<b>0.39</b>	<b>6.4</b>	<b>--</b>
Queen Elizabeth Dr & Fifth Ave	Signalized	EB	L / R	B	0.64	37.4	39.4
		NB	L / Th	A	0.34	8.7	33.7
		SB	Th / R	A	0.05	6.4	7.4
		<b>Overall Intersection</b>		<b>B</b>	<b>0.64</b>	<b>19.0</b>	<b>--</b>
Bank St & Marche Way	Minor Stop	WB	L / R	B	0.33	15.1	9.3
		<b>Overall Intersection</b>		<b>A</b>	<b>0.33</b>	<b>2.0</b>	<b>--</b>
Fifth Ave & O'Connor St	All-Way Stop	EB	L / Th	A	0.24	10.0	--
		WB	R	A	0.32	0.6	--
		NB	L / Th / R	B	0.35	10.7	--
		SB	R	A	0.15	8.6	--
		<b>Overall Intersection</b>		<b>A</b>	<b>0.35</b>	<b>9.9</b>	<b>--</b>
Exhibition Way and Service Roadway	All-Way Stop	EB	L / Th	A	0.32	9.1	--
		WB	Th / R	A	0.22	8.4	--
		SB	L / R	A	0.01	7.8	--
		<b>Overall Intersection</b>		<b>A</b>	<b>0.32</b>	<b>8.8</b>	<b>--</b>
Marché Way and Service Roadway	All-Way Stop	EB	L / Th	A	0.01	7.2	--
		WB	L / Th	A	0.02	7.1	--
		NB	L / R	A	0.21	8.0	--
		<b>Overall Intersection</b>		<b>A</b>	<b>0.21</b>	<b>7.9</b>	<b>--</b>
Marché Way and Exhibition Way	All-Way Stop	EB	Th / R	A	0.40	9.6	--
		WB	L / Th	A	0.03	7.8	--
		NB	L / R	A	0.10	8.4	--
		<b>Overall Intersection</b>		<b>A</b>	<b>0.40</b>	<b>9.3</b>	<b>--</b>
Garage Access at Princess Patricia Way	Two-Way Stop	EB	L	A	0.09	7.9	2.2
			Th	A	--	0.0	2.2
		SB	L / R	B	0.50	16.9	20.7
		<b>Overall Intersection</b>		<b>A</b>	<b>0.50</b>	<b>8.9</b>	<b>--</b>

L - Left, Th - Through, R - Right

### 2028 Future Minor Event (Event Centre)

**Table 4.14** summarize intersection performance during ingress and egress for a minor event held at the new event centre at Lansdowne under 2028 future conditions. As summarized in the table below, all study area intersections are projected to operate with overall acceptable levels of service during the ingress and egress period.

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.

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 continue to operate acceptably with low delays and short queues.

No mitigation measures are recommended to improve intersection operations.

Table 4.14: 2028 Future Minor Event (Event Centre) LOS Summary

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	0.50	37.6	30.7	33.3	19.1
		WB	L	A	A	0.47	0.40	34.7	35.9	20.9	18.1
			Th / R	A	A	0.40	0.30	16.0	18.9	17.6	12.9
		NB	L / Th / R	A	A	0.32	0.24	5.8	3.7	26.2	18.3
		SB	L / Th / R	A	A	0.36	0.21	6.7	3.9	34.5	16.6
		<b>Overall Intersection</b>		<b>B</b>	<b>A</b>	<b>0.67</b>	<b>0.50</b>	<b>11.5</b>	<b>8.3</b>	<b>--</b>	<b>--</b>
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	0.38	0.29	5.5	4.4	32.3	23.2
		SB	L / Th / R	A	A	0.33	0.21	3.2	2.9	16.2	11.9
				<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.56</b>	<b>0.48</b>	<b>7.1</b>	<b>6.5</b>
Bank St & Exhibition Way	Signalized	WB	L	A	B	0.50	0.64	38.3	39.9	30.1	42.7
			Right	A	A	0.35	0.57	11.6	10.4	10.7	16.4
		NB	L / Th / R	A	A	0.33	0.17	4.8	4.7	27.3	12.6
		SB	L	A	A	0.38	0.26	9.3	8.9	25.1	18.7
			Th	A	A	0.20	0.14	4.8	6.4	20.6	15.4
				<b>Overall Intersection</b>		<b>A</b>	<b>B</b>	<b>0.50</b>	<b>0.64</b>	<b>8.3</b>	<b>12.6</b>
Bank St & Wilton Cr	Minor Stop	EB	R	E	B	0.89	0.33	62.1	19.4	93.9	13.3
		NB	L	B	B	0.23	0.07	12.0	10.4	7.4	1.8
			Th	A	A	--	--	2.5	0.6	7.4	1.8
				<b>Overall Intersection</b>		<b>B</b>	<b>A</b>	<b>0.89</b>	<b>0.33</b>	<b>12.7</b>	<b>3.2</b>
Bank St & Echo Dr	Minor Stop	EB	R	B	B	0.11	0.01	16.3	10.4	5.4	0.7
				<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.11</b>	<b>0.01</b>	<b>0.4</b>	<b>0.2</b>

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	36.7	27.2	26.6	4.4
		NB	L / Th	A	A	0.40	0.09	5.4	4.6	23.8	6.6
		SB	Th / R	A	A	0.34	0.11	6.5	5.3	29.5	9.7
		<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.40</b>	<b>0.11</b>	<b>7.7</b>	<b>5.3</b>	--	--
Bank St & Sunnyside Ave	Signalized	EB	L / Th / R	C	A	0.71	0.52	49.5	509.0	#44.5	21.4
		WB	L / Th / R	C	A	0.76	0.33	33.3	22.0	#53.8	13.0
		NB	L / Th / R	A	A	0.32	0.12	8.5	3.5	32.7	11.6
		SB	L / Th / R	A	A	0.56	0.26	8.2	2.6	59.8	12.4
		<b>Overall Intersection</b>		<b>C</b>	<b>A</b>	<b>0.76</b>	<b>0.52</b>	<b>15.6</b>	<b>7.1</b>	--	--
QED & Princess Patricia Way	Minor Stop	NB	L / Th	A	A	0.14	0.01	9.5	7.7	4.6	2.2
		EB	L / R	C	B	0.51	0.65	29.3	17.9	29.8	37.1
		<b>Overall Intersection</b>		<b>A</b>	<b>B</b>	<b>0.51</b>	<b>0.65</b>	<b>4.8</b>	<b>11.8</b>	--	--
Queen Elizabeth Dr & Fifth Ave	Signalized	EB	L / R	A	A	0.51	0.46	33.4	31.8	31.3	27.5
		NB	L / Th	A	A	0.36	0.33	23.0	14.6	65.8	53.2
		SB	Th / R	B	A	0.61	0.18	26.1	11.8	#148.1	28.9
		<b>Overall Intersection</b>		<b>B</b>	<b>A</b>	<b>0.61</b>	<b>0.46</b>	<b>26.0</b>	<b>16.3</b>	--	--
Bank St & Marche Way	Minor Stop	WB	L / R	B	B	0.11	0.28	13.0	14.0	3.0	9.9
		<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.11</b>	<b>0.28</b>	<b>0.6</b>	<b>2.2</b>	--	--
Fifth Ave & O'Connor St	All-Way Stop	EB	L / Th	A	A	0.16	0.07	8.7	7.7	--	--
		WB	R	A	A	0.17	0.07	7.9	7.1	--	--
		NB	L / Th / R	A	A	0.19	0.08	8.7	7.3	--	--
		SB	R	A	A	0.10	0.11	7.7	7.1	--	--
		<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.19</b>	<b>0.11</b>	<b>8.3</b>	<b>7.3</b>	--	--

Intersection	Intersection Control	Approach / Movement		LOS		V/C		Total		Queue	
				Ingress	Egress	Ingress	Egress	Delay (s)		95th (m)	
								Ingress	Egress	Ingress	Egress
Exhibition Way and Service Roadway	All-Way Stop	EB	L / Th	B	B	0.46	0.30	11.4	10.1	--	7.8
		WB	Th / R	A	A	0.00	0.00	7.8	8.1	--	0.0
		SB	L / R	A	A	0.24	0.44	8.6	10.0	--	13.8
		<b>Overall Intersection</b>		<b>B</b>	<b>A</b>	<b>0.46</b>	<b>0.44</b>	<b>10.4</b>	<b>10.0</b>	<b>--</b>	<b>--</b>
Marché Way and Service Roadway	All-Way Stop	EB	L / Th	A	A	0.03	0.04	8.3	7.9	--	0.6
		WB	L / Th	B	A	0.34	0.24	10.4	9.1	--	0.5
		NB	L / R	B	A	0.42	0.26	10.4	8.7	--	6.0
		<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.42</b>	<b>0.26</b>	<b>7.2</b>	<b>8.8</b>	<b>--</b>	<b>--</b>
Marché Way and Exhibition Way	All-Way Stop	EB	Th / R	A	A	0.16	0.11	8.0	7.6	--	2.4
		WB	L / Th	A	A	0.28	0.21	8.6	8.1	--	4.8
		NB	L / R	A	A	0.00	0.00	7.8	7.5	--	0.0
		<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.28</b>	<b>0.21</b>	<b>8.4</b>	<b>7.9</b>	<b>--</b>	<b>--</b>
Garage Access at Princess Patricia Way	Two-Way Stop	EB	L	A	A	0.10	0.00	8.6	7.4	0.0	0.0
			Th	A	A	--	--	0.0	0.0	--	--
		SB	L / R	B	B	0.38	0.63	16.1	16.1	13.2	27.0
		<b>Overall Intersection</b>		<b>A</b>	<b>B</b>	<b>0.38</b>	<b>0.63</b>	<b>5.3</b>	<b>12.2</b>	<b>--</b>	<b>--</b>

L - Left, Th - Through, R - Right

### 2028 Future Major Event (Stadium)

**Table 4.15** summarizes intersection performance during ingress and egress for a Major Event held at Lansdowne under 2028 future background conditions. As illustrated below, all study area intersections are projected to continue to operate with overall acceptable levels of service during Major Events held at the Stadium at TD Place.

The eastbound approach at intersection of Bank Street and Wilton Crescent is projected to continue 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.

In addition, the eastbound approach of the Queen Elizabeth Drive and Princess Patricia Way intersection is shown to operate with an LOS rating of E for the Ingress period. Although the analysis indicates that the movements are operating with delays, the performance of this intersection is 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 4.15: 2028 Future Major Event (Stadium) LOS Summary

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	C	C	0.72	0.80	40.7	54.6	36.1	#36.9
		WB	L	A	A	0.57	0.23	38.2	25.9	25.6	12.8
			Th / R	A	A	0.48	0.59	17.6	19.7	22.7	28.6
		NB	L / Th / R	A	A	0.32	0.23	6.9	5.2	30.7	16.5
		SB	L / Th / R	A	A	0.46	0.25	7.9	6.2	43.5	21.8
		<b>Overall Intersection</b>		<b>C</b>	<b>C</b>	<b>0.72</b>	<b>0.80</b>	<b>13.5</b>	<b>14.6</b>	<b>--</b>	<b>--</b>
Bank St & Holmwood Ave	Signalized	EB	L / Th / R	B	A	0.63	0.55	38.8	32.4	34.8	32.9
		NB	L / Th / R	A	A	0.49	0.28	7.4	7.0	39.3	20.4
		SB	L / Th / R	A	A	0.43	0.26	4.5	4.1	19.6	9.6
				<b>Overall Intersection</b>		<b>B</b>	<b>A</b>	<b>0.63</b>	<b>0.55</b>	<b>9.1</b>	<b>10.00</b>
Bank St & Exhibition Way	Signalized	WB	L	<i>Movements Temporarily Restricted During Major Events</i>							
			Right								
		NB	L / Th / R	A	A	0.24	0.13	0.2	0.1	0	0
		SB	L	<i>Movements Temporarily Restricted During Major Events</i>							
			Th								
		<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.24</b>	<b>0.13</b>	<b>0.20</b>	<b>0.10</b>	<b>--</b>	<b>--</b>
Bank St & Wilton Cr	Minor Stop	EB	R	F	B	1.03	0.01	99.4	13.4	67.8	0.0
		NB	L	B	A	0.20	-	12.4	0	4.2	0
			Th	A	A	-	-	2.4	-	-	-
				<b>Overall Intersection</b>		<b>B</b>	<b>A</b>	<b>1.03</b>	<b>0.01</b>	<b>17.70</b>	<b>0.10</b>
Bank St & Echo Dr	Minor Stop	EB	R	B	B	0.24	0.05	18.6	10.4	5.4	1.2
				<b>Overall Intersection</b>		<b>B</b>	<b>B</b>	<b>0.24</b>	<b>0.05</b>	<b>18.60</b>	<b>10.40</b>

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	0.52	0.17	38.6	23.9	34.7	11.7
		NB	L / Th	A	A	0.42	0.20	5.6	4.9	25.3	13.7
		SB	Th / R	A	A	0.45	0.18	8.2	5.5	49.4	15.0
		<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.52</b>	<b>0.20</b>	<b>9.1</b>	<b>6.1</b>	-	-
Bank St & Sunnyside Ave	Signalized	EB	L / Th / R	B	A	0.68	0.59	43.40	50.8	#55.5	28.0
		WB	L / Th / R	C	A	0.74	0.49	34.40	30.9	#66.7	22.9
		NB	L / Th / R	A	A	0.39	0.15	9.90	4.1	38.20	14.6
		SB	L / Th / R	C	A	0.75	0.18	12.30	1.3	89.00	3.5
		<b>Overall Intersection</b>		<b>C</b>	<b>A</b>	<b>0.75</b>	<b>0.59</b>	<b>17.4</b>	<b>10.5</b>	-	-
QED & Princess Patricia Way	Minor Stop	NB	L / Th	A	A	0.14	0.05	3.78	8.20	4.20	0.6
		EB	L / R	E	D	0.77	0.89	68.81	43.20	108.60	62.4
		<b>Overall Intersection</b>		<b>D</b>	<b>A</b>	<b>0.77</b>	<b>0.89</b>	<b>52.5</b>		-	-
Queen Elizabeth Dr & Fifth Ave	Signalized	EB	L / R	B	B	0.62	0.68	35.4	39.20	54.70	49.8
		NB	L / Th	A	A	0.50	0.40	189.3	9.70	#103.7	51
		SB	Th / R	C	A	0.76	0.38	31.8	9.40	#210.7	51
		<b>Overall Intersection</b>		<b>C</b>	<b>B</b>	<b>0.76</b>	<b>0.68</b>	<b>76.0</b>	<b>16.20</b>	-	-
Bank St & Marche Way	Minor Stop	WB	L / R	<i>Movements Temporarily Restricted During Major Events</i>							
		<b>Overall Intersection</b>									
Fifth Ave & O'Connor St	All-Way Stop	EB	L / Th	A	A	0.20	0.13	9.6	9.0	4.8	2.4
		WB	R	A	A	0.27	0.16	9.1	8.4	6.6	3.6
		NB	L / Th / R	A	B	0.31	0.49	9.9	11.4	8.4	16.2
		SB	R	A	A	0.18	0.08	8.5	7.7	4.2	1.2
		<b>Overall Intersection</b>		<b>A</b>	<b>B</b>	<b>0.31</b>	<b>0.49</b>	<b>9.30</b>	<b>10.20</b>	-	-

## 2033 Future Background Conditions

Intersection operational analysis under 2033 Future Background Conditions is summarized in this section. This horizon year represents future roadway operations without the addition of Lansdowne 2.0 transportation demands.

Under this scenario, assumed traffic growth is exclusively attributed to other nearby developments, or general background growth.

### 2033 Future Background Weekday AM and PM Peak

**Table 4.16** summarizes intersection performance under 2033 Future Background Weekday AM and PM peak hour conditions. As shown in the table below, all study area intersections are projected to operate with overall acceptable levels of service under the Weekday AM and PM peak hour conditions.

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

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 4.16: 2033 Future Background Weekday AM and PM Peak LOS Summary

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	0.38	0.67	22.5	35.9	28.9	33.2
		WB	L	A	A	0.20	0.41	23.2	33.0	14.8	17.9
			Th / R	A	A	0.22	0.30	15.9	17.2	16.8	14.6
		NB	L / Th / R	A	A	0.41	0.31	6.5	5.5	16.4	24.5
		SB	L / Th / R	A	A	0.35	0.40	8.7	6.9	27.7	39.5
<b>Overall Intersection</b>		<b>A</b>	<b>B</b>	<b>0.41</b>	<b>0.67</b>	<b>10.00</b>	<b>11.00</b>	--	--		
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	4.4	5.1	26.7	29.4
		SB	L / Th / R	A	A	0.22	0.35	3.2	3.2	14.5	16.3
		<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.48</b>	<b>0.56</b>	<b>6.40</b>	<b>6.80</b>	--	--
Bank St & Exhibition Way	Signalized	WB	L	A	A	0.22	0.56	23.0	39.0	14.0	34.3
			Right	A	A	0.16	0.30	9.8	10.9	6.3	9.9
		NB	L / Th / R	A	A	0.32	0.37	4.8	6.2	25.8	32.2
		SB	L	A	A	0.18	0.35	6.4	9.6	9.0	20.7
			Th	A	A	0.17	0.27	4.3	6.0	14.2	27.0
<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.32</b>	<b>0.56</b>	<b>5.80</b>	<b>9.50</b>	--	--		
Bank St & Wilton Cr	Minor Stop	EB	R	C	E	0.54	0.93	24.4	76.7	18.6	52.8
		NB	L	B	B	0.21	0.40	11.0	14.8	4.8	11.4
			Th	A	A	-	-	2.0	4.1	-	-
		<b>Overall Intersection</b>		<b>A</b>	<b>B</b>	<b>0.54</b>	<b>0.54</b>	<b>5.50</b>	<b>14.50</b>	-	-
Bank St & Echo Dr	Minor Stop	EB	R	B	C	0.06	0.1	13	20.5	1.2	1.8
		<b>Overall Intersection</b>		<b>B</b>	<b>C</b>	<b>0.06</b>	<b>0.10</b>	<b>13.00</b>	<b>20.50</b>	-	-

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	0.39	0.38	34.1	31.60	22.40	24.50
		NB	L / Th	A	A	0.36	0.42	5.2	4.80	m42.7	m21.2
		SB	Th / R	A	A	0.29	0.49	3.7	8.10	22.80	49.80
		<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.39</b>	<b>0.49</b>	<b>6.10</b>	<b>7.80</b>	--	--
Bank St & Sunnyside Ave	Signalized	EB	L / Th / R	B	C	0.65	0.72	38.3	47.9	37.40	#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	15.1	9.4	89.00	30.00
		SB	L / Th / R	F	E	1.20dl	0.95	31.8	30.2	#84.0	#148.4
		<b>Overall Intersection</b>		<b>D</b>	<b>E</b>	<b>0.88</b>	<b>0.98</b>	<b>24.60</b>	<b>32.80</b>	--	--
QED & Princess Patricia Way	Minor Stop	NB	L / Th	A	A	0.06	0.06	8.3	9.0	1.2	1.2
		EB	L / R	B	C	0.11	0.36	13.6	21.5	1.8	9.6
		<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.11</b>	<b>0.36</b>	<b>1.60</b>	<b>2.80</b>	-	-
Queen Elizabeth Dr & Fifth Ave	Signalized	EB	L / R	A	A	0.23	0.38	17.8	36.8	13.4	22.8
		NB	L / Th	A	A	0.34	0.26	7.9	5.2	23.2	23.3
		SB	Th / R	A	A	0.44	0.56	8.9	8.2	32.7	73.1
		<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.44</b>	<b>0.56</b>	<b>9.40</b>	<b>9.70</b>	--	--
Bank St & Marche Way	Minor Stop	WB	L / R	B	B	0.08	0.17	12.9	13.7	1.8	3.6
		<b>Overall Intersection</b>		<b>B</b>	<b>A</b>	<b>0.08</b>	<b>0.17</b>	<b>12.90</b>	<b>0.90</b>	--	--
Fifth Ave & O'Connor St	All-Way Stop	EB	L / Th	A	A	0.16	0.17	8.5	8.6	1.8	0.6
		WB	R	A	A	0.09	0.13	7.3	7.6	3.6	0.4
		NB	L / Th / R	A	A	0.11	0.14	7.9	8.2	1.8	0.5
		SB	R	A	A	0.13	0.12	7.5	7.6	3.0	0.4
		<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.16</b>	--	<b>7.8</b>	<b>8.0</b>	--	--

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	Th/L	A	A	0.01	0.01	8.2	8.4	0.0	0.0
		NB	L / R	B	B	0.06	0.14	13.1	15.8	1.2	3.0
		<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.06</b>	<b>0.14</b>	<b>1.3</b>	<b>1.8</b>	<b>--</b>	<b>--</b>
Exhibition Way and Service Roadway	All-Way Stop	EB	L / Th	A	A	0.14	0.17	7.7	7.9	3.0	3.6
		WB	Th / R	A	A	0.09	0.19	7.4	8.0	1.8	4.2
		SB	L / R	A	A	0.01	0.01	7.2	7.5	0.0	0.0
		<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.14</b>	<b>0.19</b>	<b>7.6</b>	<b>7.9</b>	<b>--</b>	<b>--</b>
Marché Way and Service Roadway	All-Way Stop	EB	L / Th	A	A	0.01	0.01	6.7	6.6	<b>0.0</b>	<b>0.0</b>
		WB	L / Th	A	A	0.16	0.01	7.7	7.1	<b>0.0</b>	<b>0.0</b>
		NB	L / R	A	A	0.01	0.01	7.1	6.8	<b>3.6</b>	<b>0.0</b>
		<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.16</b>	<b>0.01</b>	<b>7.6</b>	<b>6.9</b>	<b>-</b>	<b>-</b>
Marché Way and Exhibition Way	All-Way Stop	EB	Th / R	A	A	0.01	0.01	7.0	7.1	0.0	0.0
		WB	L / Th	A	A	0.17	0.2	8.2	8.6	3.6	4.8
		NB	L / R	A	A	0.15	0.15	7.9	7.5	3.0	3.0
		<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.17</b>	<b>0.2</b>	<b>8.0</b>	<b>8.1</b>	<b>-</b>	<b>-</b>
Garage Access at Princess Patricia Way	Two-Way Stop	EB	L	A	A	--	--	7.5	7.5	--	--
			Th	A	A	--	--	0.0	0.0	--	--
		SB	L / R	A	A	0.01	0.01	9.4	9.6	0	1.2
		<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.01</b>	<b>0.01</b>	<b>0.6</b>	<b>2.5</b>	<b>--</b>	<b>--</b>

L - Left, Th - Through, R - Right

### 2033 Future Background Saturday Peak Hour

**Table 4.17** summarizes intersection performance under 2033 Future Background Saturday Peak Hour conditions.

As illustrated below, 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.

No mitigation measures are recommended to improve intersection operations.

Table 4.17: 2033 Future Background Saturday Peak Hour LOS Summary

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	35.0	29.3
		WB	L	A	0.48	37.0	20.2
			Th / R	A	0.40	18.0	17.3
		NB	L / Th / R	A	0.31	4.9	23.4
		SB	L / Th / R	A	0.34	5.9	31.8
<b>Overall Intersection</b>				<b>B</b>	<b>0.65</b>	<b>10.5</b>	<b>--</b>
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	9.0
		SB	L / Th / R	A	0.34	3.4	17.2
		<b>Overall Intersection</b>				<b>A</b>	<b>0.56</b>
Bank St & Exhibition Way	Signalized	WB	L	A	0.43	34.6	25.1
			Right	A	0.34	11.6	10.5
		NB	L / Th / R	A	0.31	4.9	26.1
		SB	L	A	0.32	5.7	9.5
			Th	A	0.23	3.4	13.4
<b>Overall Intersection</b>				<b>A</b>	<b>0.43</b>	<b>6.7</b>	<b>--</b>
Bank St & Wilton Cr	Minor Stop	EB	R	D	0.65	36.1	25.8
		NB	L	A	--	2.1	--
			Th	B	0.21	12.1	4.8
<b>Overall Intersection</b>				<b>A</b>	<b>0.65</b>	<b>6.4</b>	<b>--</b>
Bank St & Echo Dr	Minor Stop	EB	R	B	0.09	15.2	1.8
		<b>Overall Intersection</b>				<b>A</b>	<b>0.09</b>
Bank St & Aylmer Ave	Signalized	EB	L / R	A	0.24	30.0	17.3
		NB	L / Th	A	0.40	5.2	26.2
		SB	Th / R	A	0.43	7.5	42.3
		<b>Overall Intersection</b>				<b>A</b>	<b>0.43</b>

Intersection	Intersection Control	Approach / Movement		LOS	V/C	Total Delay (s)	Queue 95th (m)
Bank St & Sunnyside Ave	Signalized	EB	L / Th / R	B	0.62	45.3	#43.9
		WB	L / Th / R	B	0.65	33.3	#45.9
		NB	L / Th / R	A	0.35	7.4	30.5
		SB	L / Th / R	A	0.50	6.9	21.6
		<b>Overall Intersection</b>		<b>B</b>	<b>0.65</b>	<b>13.2</b>	<b>--</b>
QED & Princess Patricia Way	Minor Stop	NB	L / Th	A	0.06	8.4	1.2
		EB	L / R	B	0.31	16.1	7.8
		<b>Overall Intersection</b>		<b>A</b>	<b>0.31</b>	<b>3.2</b>	<b>--</b>
Queen Elizabeth Dr & Fifth Ave	Signalized	EB	L / R	A	0.43	37.5	26.1
		NB	L / Th	A	0.30	5.7	29.9
		SB	Th / R	A	0.39	6.3	44.1
		<b>Overall Intersection</b>		<b>A</b>	<b>0.43</b>	<b>9.5</b>	<b>--</b>
Bank St & Marche Way	Minor Stop	WB	L / R	B	0.16	13.4	3.6
		<b>Overall Intersection</b>		<b>A</b>	<b>0.16</b>	<b>0.9</b>	<b>--</b>
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	3.0
		<b>Overall Intersection</b>		<b>A</b>	<b>0.19</b>	<b>8.1</b>	<b>--</b>
Garage Access at Exhibition Way	Two-Way Stop	WB	Th / L	A	0.01	8.4	0.0
		NB	L / R	B	0.20	15.8	4.8
		<b>Overall Intersection</b>		<b>A</b>	<b>0.20</b>	<b>3.0</b>	<b>--</b>
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	0.0
		<b>Overall Intersection</b>		<b>A</b>	<b>0.12</b>	<b>7.7</b>	<b>--</b>
Marché Way and Service Roadway	All-Way Stop	EB	L / Th	A	0.03	7.0	0.6
		WB	L / Th	A	0.10	7.4	3.6
		NB	L / R	A	0.01	7.0	0.0
		<b>Overall Intersection</b>		<b>A</b>	<b>0.10</b>	<b>7.3</b>	<b>--</b>
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
		<b>Overall Intersection</b>		<b>A</b>	<b>0.17</b>	<b>8.1</b>	<b>--</b>
Garage Access at Princess Patricia Way	Two-Way Stop	EB	L	A	0.00	7.7	0.0
			Th	A	--	0.0	--
		SB	L / R	B	0.14	10.3	3.0
		<b>Overall Intersection</b>		<b>A</b>	<b>0.14</b>	<b>3.3</b>	<b>--</b>

### 2033 Future Background Sunday Peak Hour

**Table 4.18** summarizes intersection performance under 2033 Future Background Sunday Peak Hour conditions.

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

Table 4.18: 2033 Future Background Sunday Peak Hour LOS Summary

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	8.0	54.0
		SB	L / Th / R	A	0.36	6.9	33.6
<b>Overall Intersection</b>				<b>B</b>	<b>0.67</b>	<b>13.3</b>	<b>--</b>
Bank St & Holmwood Ave	Signalized	EB	L / Th / R	A	0.55	38.6	27.3
		NB	L / Th / R	A	0.37	7.5	54.2
		SB	L / Th / R	A	0.33	8.9	48.9
		<b>Overall Intersection</b>				<b>A</b>	<b>0.55</b>
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	15.0	29.1
			Th	A	0.22	5.9	28.5
<b>Overall Intersection</b>				<b>A</b>	<b>0.56</b>	<b>12.6</b>	<b>--</b>
Bank St & Wilton Cr	Minor Stop	EB	R	C	0.54	29.0	18.6
		NB	L	A	--	1.9	--
			Th	B	0.19	11.8	4.2
		<b>Overall Intersection</b>				<b>A</b>	<b>0.54</b>
Bank St & Echo Dr	Minor Stop	EB	R	B	0.24	19.1	5.4
		<b>Overall Intersection</b>				<b>A</b>	<b>0.24</b>
Bank St & Aylmer Ave	Signalized	EB	L / R	A	0.43	35.9	23.2
		NB	L / Th	A	0.29	8.5	60.4
		SB	Th / R	A	0.33	3.7	29.5
		<b>Overall Intersection</b>				<b>A</b>	<b>0.43</b>

Intersection	Intersection Control	Approach / Movement		LOS	V/C	Total Delay (s)	Queue 95th (m)
Bank St & Sunnyside Ave	Signalized	EB	L / Th / R	C	0.78	66.7	35.2
		WB	L / Th / R	C	0.71	33.7	37.4
		NB	L / Th / R	A	0.40	17.2	50.4
		SB	L / Th / R	A	0.53	14.0	68.7
		<b>Overall Intersection</b>		<b>C</b>	<b>0.78</b>	<b>21.1</b>	<b>--</b>
QED & Princess Patricia Way	Minor Stop	NB	L / Th	A	0.06	7.6	1.2
		EB	L / R	B	0.34	12.2	9.0
		<b>Overall Intersection</b>		<b>A</b>	<b>0.34</b>	<b>5.9</b>	<b>--</b>
Queen Elizabeth Dr & Fifth Ave	Signalized	EB	L / R	A	0.60	36.9	36.0
		NB	L / Th	A	0.31	7.9	29.8
		SB	Th / R	A	0.04	5.9	6.0
		<b>Overall Intersection</b>		<b>A</b>	<b>0.60</b>	<b>18.2</b>	<b>--</b>
Bank St & Marche Way	Minor Stop	WB	L / R	B	0.35	15.4	9.0
		<b>Overall Intersection</b>		<b>A</b>	<b>0.35</b>	<b>2.1</b>	<b>--</b>
Fifth Ave & O'Connor St	All-Way Stop	EB	L / Th	B	0.25	10.2	6.0
		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
		<b>Overall Intersection</b>		<b>A</b>	<b>0.36</b>	<b>10.0</b>	<b>--</b>
Garage Access at Exhibition Way	Two-Way Stop	WB	Th / L	A	0.01	8.6	0.0
		NB	L / R	B	0.27	17.7	6.6
		<b>Overall Intersection</b>		<b>A</b>	<b>0.27</b>	<b>3.3</b>	<b>--</b>
Exhibition Way and Service Roadway	All-Way Stop	EB	L / Th	A	0.19	8.0	4.2
		WB	Th / R	A	0.14	7.7	3.0
		SB	L / R	A	0.01	7.4	0.0
		<b>Overall Intersection</b>		<b>A</b>	<b>0.19</b>	<b>7.9</b>	<b>--</b>
Marché Way and Service Roadway	All-Way Stop	EB	L / Th	A	0.02	7.1	0.6
		WB	L / Th	A	0.21	8.0	4.8
		NB	L / R	A	0.01	7.2	0.0
		<b>Overall Intersection</b>		<b>A</b>	<b>0.21</b>	<b>7.9</b>	<b>--</b>
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
		<b>Overall Intersection</b>		<b>A</b>	<b>0.20</b>	<b>8.1</b>	<b>--</b>
Garage Access at Princess Patricia Way	Two-Way Stop	EB	L	A	0.00	7.5	0.0
			Th	A	--	0.0	--
		SB	L / R	B	0.24	10.8	6.0
		<b>Overall Intersection</b>		<b>A</b>	<b>0.24</b>	<b>5.4</b>	<b>--</b>

### 2033 Future Background Minor Event (Event Centre)

**Table 4.19** summarizes intersection performance during ingress and egress for a Minor Event held at Lansdowne under 2033 future background conditions. As summarized in the table below, all study area intersections are projected to operate with overall acceptable levels of service during the ingress and egress period for minor events held at the new Event Centre.

The eastbound approach at intersection of Bank Street and Wilton Crescent is expected to continue to operate with a LOS E during the ingress period. 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 4.19: 2033 Future Background Minor Event (Event Centre) LOS Summary

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	37.4	32.1	33.9	19.6
		WB	L	A	A	0.44	0.36	33.2	35.0	19.6	16.3
			Th / R	A	A	0.39	0.31	16.1	19.3	17.8	12.9
		NB	L / Th / R	A	A	0.32	0.24	5.8	3.6	26.6	19.0
		SB	L / Th / R	A	A	0.37	0.21	6.8	3.7	36.3	16.6
		<b>Overall Intersection</b>		<b>B</b>	<b>A</b>	<b>0.67</b>	<b>0.52</b>	<b>11.3</b>	<b>8.0</b>	<b>--</b>	<b>--</b>
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	5.4	4.3	32.7	23.4
		SB	L / Th / R	A	A	0.33	0.21	3.1	2.8	15.8	11.7
				<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.55</b>	<b>0.48</b>	<b>6.9</b>	<b>6.4</b>
Bank St & Exhibition Way	Signalized	WB	L	A	B	0.52	0.66	38.3	39.7	32.8	46.3
			Right	A	A	0.38	0.59	11.3	10.2	11.7	17.1
		NB	L / Th / R	A	A	0.36	0.17	5.3	4.8	28.2	12.9
		SB	L	A	A	0.46	0.25	11.2	8.9	30.1	18.6
			Th	A	A	0.22	0.15	5.4	6.5	21.4	15.9
		<b>Overall Intersection</b>		<b>A</b>	<b>B</b>	<b>0.52</b>	<b>0.66</b>	<b>9.1</b>	<b>13.0</b>	<b>--</b>	<b>--</b>
Bank St & Wilton Cr	Minor Stop	EB	R	E	B	0.92	0.34	67.5	19.5	55.2	9.0
		NB	L	B	B	0.24	0.08	12.1	10.4	5.4	1.2
			Th	A	A	--	--	2.5	0.6	--	--
				<b>Overall Intersection</b>		<b>B</b>	<b>A</b>	<b>0.92</b>	<b>0.34</b>	<b>13.7</b>	<b>3.2</b>
Bank St & Echo Dr	Minor Stop	EB	R	B	B	0.12	0.02	16.5	10.4	2.4	0.6
				<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.12</b>	<b>0.02</b>	<b>0.4</b>	<b>0.2</b>

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	36.7	27.2	27.1	4.4
		NB	L / Th	A	A	0.40	0.09	5.3	4.6	24.0	6.6
		SB	Th / R	A	A	0.34	0.10	6.5	5.2	29.9	9.7
		<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.40</b>	<b>0.10</b>	<b>7.7</b>	<b>5.3</b>	--	--
Bank St & Sunnyside Ave	Signalized	EB	L / Th / R	B	A	0.69	0.51	47.4	50.3	#45.4	21.5
		WB	L / Th / R	C	A	0.76	0.34	32.9	22.0	#59.8	13.1
		NB	L / Th / R	A	A	0.32	0.13	8.8	3.5	33.1	11.8
		SB	L / Th / R	A	A	0.58	0.26	8.6	2.6	61.5	12.7
		<b>Overall Intersection</b>		<b>C</b>	<b>A</b>	<b>0.76</b>	<b>0.51</b>	<b>15.6</b>	<b>7.2</b>	--	--
QED & Princess Patricia Way	Minor Stop	NB	L / Th	A	A	0.13	0.01	9.3	7.7	2.4	0.0
		EB	L / R	C	B	0.38	0.60	22.9	16.4	10.2	24.6
		<b>Overall Intersection</b>		<b>A</b>	<b>B</b>	<b>0.38</b>	<b>0.60</b>	<b>3.5</b>	<b>10.4</b>	--	--
Queen Elizabeth Dr & Fifth Ave	Signalized	EB	L / R	A	A	0.45	0.46	37.8	37.8	27.0	28.0
		NB	L / Th	A	A	0.33	0.30	6.1	5.7	30.5	31.1
		SB	Th / R	A	A	0.60	0.19	9.3	5.0	85.2	19.2
		<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.60</b>	<b>0.46</b>	<b>11.0</b>	<b>10.7</b>	--	--
Bank St & Marche Way	Minor Stop	WB	L / R	B	B	0.11	0.27	12.5	13.5	2.4	6.6
		<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.11</b>	<b>0.27</b>	<b>0.6</b>	<b>2.1</b>	--	--
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	8.0	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
		<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.20</b>	<b>0.11</b>	<b>8.4</b>	<b>7.3</b>	--	--

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	Th / L	A	C	0.01	--	8.8	24.7	0.0	12.2
		NB	L / R	B	A	0.30	0.44	19.8	0.0	7.2	0.0
		<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.30</b>	<b>0.44</b>	<b>3.3</b>	<b>5.2</b>	<b>--</b>	<b>--</b>
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	0.0
		SB	L / R	A	A	0.15	0.34	7.6	8.9	3.0	9.0
		<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.31</b>	<b>0.34</b>	<b>8.8</b>	<b>9.2</b>	<b>--</b>	<b>--</b>
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	9.0	8.1	5.4	2.4
		NB	L / R	A	A	0.30	0.24	9.0	8.3	7.2	5.4
		<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.30</b>	<b>0.24</b>	<b>8.9</b>	<b>8.2</b>	<b>--</b>	<b>--</b>
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	0.0
		<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.20</b>	<b>0.10</b>	<b>7.8</b>	<b>7.4</b>	<b>--</b>	<b>--</b>
Garage Access at Princess Patricia Way	Two-Way Stop	EB	L	A	A	0.01	0.00	8.1	7.4	0.0	0.0
			Th	A	A	--	--	0.0	0.0	--	--
		SB	L / R	B	B	0.15	0.47	11.3	13.2	3.0	15.6
		<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.15</b>	<b>0.47</b>	<b>2.2</b>	<b>9.3</b>	<b>--</b>	<b>--</b>

L - Left, Th - Through, R - Right

### 2033 Future Background Major Event (Stadium)

**Table 4.20** summarizes intersection performance during ingress and egress for a Major Event held at Lansdowne under 2033 future background conditions. As illustrated below, all study area intersections are projected to continue to operate with overall acceptable levels of service during Major Events held at the Stadium at Lansdowne.

The eastbound approach at intersection of Bank Street and Wilton Crescent is projected to continue to operate at or close to capacity 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.

In addition, the eastbound approach of the Queen Elizabeth Drive and Princess Patricia Way intersection is shown to operate with an LOS rating of E for the Ingress period. Although the analysis indicates that the movements are operating with delays, the performance of this intersection is 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 4.20: 2033 Future Background Major Event (Stadium) LOS Summary

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	D	0.70	0.81	38.7	54.3	36.2	39.5
		WB	L	A	A	0.45	0.22	32.9	25.5	20.9	12.7
			Th / R	A	A	0.42	0.58	18.4	19.7	21.3	29.4
		NB	L / Th / R	A	A	0.33	0.23	7.3	5.2	34.9	16.9
		SB	L / Th / R	A	A	0.44	0.25	7.7	6.3	44.5	22.3
		<b>Overall Intersection</b>		<b>B</b>	<b>D</b>	<b>0.70</b>	<b>0.81</b>	<b>12.5</b>	<b>14.6</b>	<b>-</b>	<b>-</b>
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	7.7	5.3	43.1	19
		SB	L / Th / R	A	A	0.44	0.24	4.3	3.2	17.9	9.2
				<b>Overall Intersection</b>		<b>B</b>	<b>B</b>	<b>0.62</b>	<b>0.62</b>	<b>9</b>	<b>9.5</b>
Bank St & Exhibition Way	Signalized	WB	L	<i>Movements Temporarily Restricted During Major Events</i>							
			Right								
		NB	L / Th / R	A	A	0.33	0.14	4.4	1.3	28.7	13.1
		SB	L	<i>Movements Temporarily Restricted During Major Events</i>							
			Th	A	A	0.27	0.13	4.2	1.3	23.4	12.6
		<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.33</b>	<b>0.14</b>	<b>5.6</b>	<b>1.4</b>	<b>-</b>	<b>-</b>
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	A	--	--	2.5	--	--	--
				<b>Overall Intersection</b>		<b>B</b>	<b>A</b>	<b>1.07</b>	<b>0.01</b>	<b>19.6</b>	<b>0.1</b>
Bank St & Echo Dr	Minor Stop	EB	R	B	B	0.25	0.05	19	10.4	6	1.2
				<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.25</b>	<b>0.05</b>	<b>0.9</b>	<b>0.5</b>

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	0.52	0.17	38.8	23.5	35.4	11.9
		NB	L / Th	A	A	0.43	0.20	5.6	4.9	25.8	13.8
		SB	Th / R	A	A	0.45	0.18	8.2	5.5	50.5	15.3
		<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.52</b>	<b>0.20</b>	<b>9.1</b>	<b>6.1</b>	-	-
Bank St & Sunnyside Ave	Signalized	EB	L / Th / R	B	A	0.66	0.60	42	51.2	57.3	28.9
		WB	L / Th / R	C	A	0.75	0.51	35.6	31.5	71.9	23.7
		NB	L / Th / R	A	A	0.40	0.15	10.3	4.2	39.1	15.2
		SB	L / Th / R	C	A	0.79	0.19	14.3	1.4	94.7	3.6
		<b>Overall Intersection</b>		<b>C</b>	<b>A</b>	<b>0.79</b>	<b>0.60</b>	<b>18.5</b>	<b>10.7</b>	-	-
QED & Princess Patricia Way	Minor Stop	NB	L / Th	A	A	0.14	0.05	10	8.2	3	0.6
		EB	L / R	E	D	0.81	0.89	58.8	43	37.8	61.8
		<b>Overall Intersection</b>		<b>A</b>	<b>C</b>	<b>0.81</b>	<b>0.89</b>	<b>9.7</b>	<b>20.4</b>	--	--
Queen Elizabeth Dr & Fifth Ave	Signalized	EB	L / R	B	B	0.67	0.68	40	39.1	46.2	49.9
		NB	L / Th	B	A	0.61	0.40	14.9	9.7	69.2	50.7
		SB	Th / R	D	A	0.82	0.39	20.6	9.5	191.7	52.4
		<b>Overall Intersection</b>		<b>D</b>	<b>B</b>	<b>0.82</b>	<b>0.68</b>	<b>21.8</b>	<b>16.2</b>	-	-
Bank St & Marche Way	Minor Stop	WB	L / R	<i>Movements Temporarily Restricted During Major Events</i>							
		<b>Overall Intersection</b>									
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
		<b>Overall Intersection</b>		<b>A</b>	<b>B</b>	<b>0.31</b>	<b>0.48</b>	<b>9.3</b>	<b>10.1</b>	--	--

## 2033 Total Future Conditions

Intersection operational analysis under 2033 Total Future Conditions is summarized in this section.

This horizon year represents the full build-out of Lansdowne 2.0, whereby the new event centre is complete and open, the new north stadium stands are completed (Phase 2), and the podium retail and two residential towers are completed (Phase 3).

### 2033 Total Future Weekday AM and PM Peak

**Table 4.21** summarizes intersection performance under 2033 Total Future Weekday AM and PM peak hour conditions. As shown in the table below, all study area intersections are projected to operate with overall acceptable levels of service under the Weekday AM and PM peak hour conditions.

Access intersections to Lansdowne at Bank Street and Queen Elizabeth Driveway are projected to continue to operate with acceptable levels of service.

In addition, projected 95<sup>th</sup> percentile vehicle queues are shown to be accommodated within the storage capacity of auxiliary turning lanes at site access intersections, including the southbound left-turn and westbound turning lanes at the intersection of Bank Street and Exhibition Way.

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

The 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 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 at this time. Close monitoring of

Table 4.21: 2033 Total Future Weekday AM and PM Peak LOS Summary

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	0.38	0.67	22.5	35.8	28.9	33.2
		WB	L	A	A	0.20	0.41	23.2	33	14.8	17.9
			Th / R	A	A	0.24	0.31	14.9	16.7	17.3	14.9
		NB	L / Th / R	A	A	0.43	0.31	6.6	5.6	17.1	25.2
		SB	L / Th / R	A	A	0.35	0.42	8.8	7.1	28.4	41.5
<b>Overall Intersection</b>		<b>A</b>	<b>B</b>	<b>0.43</b>	<b>0.67</b>	<b>10</b>	<b>11</b>				
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	4.5	5.2	28.8	30.5
		SB	L / Th / R	A	A	0.23	0.37	3.2	3.2	15.2	16.5
		<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.48</b>	<b>0.56</b>	<b>6.4</b>	<b>6.8</b>		
Bank St & Exhibition Way	Signalized	WB	L	A	A	0.35	0.59	24.2	39.3	19.8	36.9
			Right	A	A	0.22	0.32	8.7	10.3	7.4	10.1
		NB	L / Th / R	A	A	0.37	0.39	6.3	6.6	30	35.3
		SB	L	A	A	0.23	0.43	8.3	12	11.6	28.1
			Th	A	A	0.19	0.27	5.6	6.4	16.2	28.2
<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.37</b>	<b>0.59</b>	<b>7.7</b>	<b>10.2</b>				
Bank St & Wilton Cr	Minor Stop	EB	R	C	F	0.57	0.95	26.7	82.1	3.4	9.2
		NB	L	B	B	0.22	0.41	11.3	15.1	0.8	2
			Th	A	A	--	--	2.2	4.3	--	--
		<b>Overall Intersection</b>		<b>A</b>	<b>B</b>	<b>0.58</b>	<b>0.95</b>	<b>5.7</b>	<b>15.1</b>	<b>--</b>	<b>--</b>
Bank St & Echo Dr	Minor Stop	EB	R	B	C	0.07	0.11	13.5	20.9	2.4	3.5
		<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.07</b>	<b>0.11</b>	<b>0.3</b>	<b>0.3</b>	<b>--</b>	<b>--</b>

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	0.39	0.38	34.1	31.6	22.4	24.5
		NB	L / Th	A	A	0.37	0.44	5.2	5	m43.3	m22.2
		SB	Th / R	A	A	0.30	0.50	3.7	8.2	24.5	51
		<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.39</b>	<b>0.50</b>	<b>6</b>	<b>7.9</b>		
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	0.69	0.33	15.4	9.5	91	32
		SB	L / Th / R	F	E	1.22dl	0.97	34.4	34.6	#91.1	#153.3
		<b>Overall Intersection</b>		<b>D</b>	<b>E</b>	<b>0.88</b>	<b>0.98</b>	<b>25.5</b>	<b>34.8</b>		
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	B	C	0.21	0.43	15	24.3	5.7	16.2
		<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.21</b>	<b>0.43</b>	<b>2.4</b>	<b>3.5</b>	--	--
Queen Elizabeth Dr & Fifth Ave	Signalized	EB	L / R	A	A	0.25	0.40	18.1	37	14.9	23.8
		NB	L / Th	A	A	0.36	0.27	8.2	5.3	25.7	24.2
		SB	Th / R	A	A	0.45	0.58	9.1	8.5	33.9	76.6
		<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.45</b>	<b>0.58</b>	<b>9.7</b>	<b>9.9</b>		
Bank St & Marche Way	Minor Stop	WB	L / R	B	B	0.12	0.19	13.5	14.1	2.1	5.4
		<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.12</b>	<b>0.19</b>	<b>0.7</b>	<b>1</b>	--	--
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	--	--
		<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.16</b>	<b>0.17</b>	<b>7.9</b>	<b>8</b>	--	--

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	Th/L	A	A	0.01	0.01	8.2	8.6	0	0
		NB	L / R	B	B	0.21	0.21	14.9	17.2	4.8	4.8
		<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.21</b>	<b>0.21</b>	<b>3.8</b>	<b>2.4</b>	<b>--</b>	<b>--</b>
Exhibition Way and Service Roadway	All-Way Stop	EB	L / Th	A	A	0.16	0.18	7.8	8	<b>3.6</b>	<b>3.6</b>
		WB	Th / R	A	A	0.09	0.19	7.5	8	<b>1.8</b>	<b>4.2</b>
		SB	L / R	A	A	0.01	0.01	7.3	7.5	<b>0</b>	<b>0</b>
		<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.16</b>	<b>0.19</b>	<b>7.7</b>	<b>8</b>	<b>--</b>	<b>--</b>
Marché Way and Service Roadway	All-Way Stop	EB	L / Th	A	A	0.01	0.01	6.8	6.7	<b>0</b>	<b>0</b>
		WB	L / Th	A	A	0.18	0.02	7.8	7.1	<b>3.6</b>	<b>0.6</b>
		NB	L / R	A	A	0.02	0.02	7.3	6.9	<b>0.6</b>	<b>0.6</b>
		<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.18</b>	<b>0.02</b>	<b>7.7</b>	<b>6.9</b>	<b>--</b>	<b>--</b>
Marché Way and Exhibition Way	All-Way Stop	EB	Th / R	A	A	0.01	0.01	7.1	7.2	<b>0</b>	<b>0</b>
		WB	L / Th	A	A	0.18	0.21	8.3	8.6	<b>3.6</b>	<b>4.8</b>
		NB	L / R	A	A	0.16	0.16	8	7.5	<b>3.6</b>	<b>3.6</b>
		<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.18</b>	<b>0.21</b>	<b>8.1</b>	<b>8.1</b>	<b>--</b>	<b>--</b>
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
		<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.07</b>	<b>0.09</b>	<b>2.2</b>	<b>2.5</b>	<b>--</b>	<b>--</b>

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

**2033 Total Future Saturday Peak Hour**

**Table 4.22** summarizes intersection performance under 2033 Total Future Saturday Peak Hour conditions.

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

Access intersections to Lansdowne at Bank Street and Queen Elizabeth Driveway are projected to continue to operate with acceptable levels of service.

In addition, projected 95<sup>th</sup> percentile vehicle queues are shown to be accommodated within the storage capacity of auxiliary turning lanes at site access intersections, including the southbound left-turn and westbound turning lanes at the intersection of Bank Street and Exhibition Way.

No mitigation measures are required.

*Table 4.22: 2033 Total Future Saturday Peak Hour LOS Summary*

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	35.1	29.3
		WB	L	A	0.48	37	20.2
			Th / R	A	0.42	17.7	17.7
		NB	L / Th / R	A	0.32	5	24.4
		SB	L / Th / R	A	0.36	6	33.9
		<b>Overall Intersection</b>		<b>B</b>	<b>0.65</b>	<b>10.5</b>	<b>--</b>
Bank St & Holmwood Ave	Signalized	EB	L / Th / R	A	0.56	38.9	27.7
		NB	L / Th / R	A	0.34	2.2	10.2
		SB	L / Th / R	A	0.36	3.4	17.5
		<b>Overall Intersection</b>		<b>A</b>	<b>0.56</b>	<b>5.6</b>	<b>--</b>
Bank St & Exhibition Way	Signalized	WB	L	A	0.49	35.2	28.8
			Right	A	0.36	10.8	10.8
		NB	L / Th / R	A	0.34	5.3	29.2
		SB	L	A	0.40	7.4	13.2
			Th	A	0.24	3.6	13.6
		<b>Overall Intersection</b>		<b>A</b>	<b>0.49</b>	<b>7.5</b>	<b>--</b>
Bank St & Wilton Cr	Minor Stop	EB	R	D	0.67	38.4	27
		NB	L	B	0.21	12.3	4.8
			Th	A	--	2.3	--
		<b>Overall Intersection</b>		<b>A</b>	<b>0.67</b>	<b>6.6</b>	<b>--</b>

Intersection	Intersection Control	Approach / Movement		LOS	V/C	Total Delay (s)	Queue 95th (m)
Bank St & Echo Dr	Minor Stop	EB	R	B	0.10	15.5	1.8
		<b>Overall Intersection</b>		<b>A</b>	<b>0.10</b>	<b>0.4</b>	<b>--</b>
Bank St & Aylmer Ave	Signalized	EB	L / R	A	0.24	30	17.3
		NB	L / Th	A	0.42	5.2	26.5
		SB	Th / R	A	0.44	7.6	43.6
		<b>Overall Intersection</b>		<b>A</b>	<b>0.44</b>	<b>7.2</b>	<b>--</b>
Bank St & Sunnyside Ave	Signalized	EB	L / Th / R	B	0.62	45.3	#43.9
		WB	L / Th / R	B	0.65	33.3	#45.9
		NB	L / Th / R	A	0.37	7.6	32.6
		SB	L / Th / R	A	0.52	7.1	22.2
		<b>Overall Intersection</b>		<b>B</b>	<b>0.65</b>	<b>13.1</b>	<b>--</b>
QED & Princess Patricia Way	Minor Stop	NB	L / Th	A	0.07	8.4	1.2
		EB	L / R	B	0.37	17.8	10.2
		<b>Overall Intersection</b>		<b>A</b>	<b>0.37</b>	<b>3.9</b>	<b>--</b>
Queen Elizabeth Dr & Fifth Ave	Signalized	EB	L / R	A	0.45	37.7	27.3
		NB	L / Th	A	0.32	5.9	31.9
		SB	Th / R	A	0.41	6.6	46.6
		<b>Overall Intersection</b>		<b>A</b>	<b>0.45</b>	<b>9.8</b>	<b>--</b>
Bank St & Marche Way	Minor Stop	WB	L / R	B	0.18	13.8	4.2
		<b>Overall Intersection</b>		<b>A</b>	<b>0.18</b>	<b>1</b>	<b>--</b>
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
		<b>Overall Intersection</b>		<b>A</b>	<b>0.37</b>	<b>9</b>	<b>--</b>
Garage Access at Exhibition Way	Two-Way Stop	WB	Th / L	A	0.01	8.4	0
		NB	L / R	B	0.20	15.8	4.8
		<b>Overall Intersection</b>		<b>A</b>	<b>0.20</b>	<b>3</b>	<b>--</b>
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
		<b>Overall Intersection</b>		<b>A</b>	<b>0.17</b>	<b>7.8</b>	<b>--</b>
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
		<b>Overall Intersection</b>		<b>A</b>	<b>0.11</b>	<b>7.4</b>	<b>--</b>

Intersection	Intersection Control	Approach / Movement		LOS	V/C	Total Delay (s)	Queue 95th (m)
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
		<b>Overall Intersection</b>		<b>A</b>	<b>0.18</b>	<b>8.1</b>	<b>--</b>
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
		<b>Overall Intersection</b>		<b>A</b>	<b>0.14</b>	<b>3.3</b>	<b>--</b>

L - Left, Th - Through, R - Right

### 2033 Total Future Sunday Peak Hour

**Table 4.23** summarizes intersection performance under 2033 Total Future Sunday Peak Hour conditions.

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

Access intersections to Lansdowne at Bank Street and Queen Elizabeth Driveway are projected to continue to operate with acceptable levels of service.

In addition, projected 95<sup>th</sup> percentile vehicle queues are shown to be accommodated within the storage capacity of auxiliary turning lanes at site access intersections, including the southbound left-turn and westbound turning lanes at the intersection of Bank Street and Exhibition Way.

No mitigation measures are required.

*Table 4.23: 2033 Total Future Sunday Peak Hour LOS Summary*

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	30.8	27.5
		WB	L	B	0.67	43.3	32.3
			Th / R	A	0.42	19.5	22.0
		NB	L / Th / R	A	0.34	8.5	55.8
		SB	L / Th / R	A	0.38	7.2	36.9
		<b>Overall Intersection</b>				<b>B</b>	<b>0.67</b>
Bank St & Holmwood Ave	Signalized	EB	L / Th / R	A	0.55	38.6	27.3
		NB	L / Th / R	A	0.39	7.0	57.0
		SB	L / Th / R	A	0.36	9.6	54.6
		<b>Overall Intersection</b>				<b>A</b>	<b>0.55</b>
Bank St & Exhibition Way	Signalized	WB	L	B	0.61	37.0	36.6
			Right	A	0.30	9.1	9.6
		NB	L / Th / R	A	0.48	14.3	47.0
		SB	L	B	0.65	23.6	#43.7
			Th	A	0.25	7.6	30.5
		<b>Overall Intersection</b>				<b>B</b>	<b>0.65</b>
Bank St & Wilton Cr	Minor Stop	EB	R	C	0.56	30.7	3.2
		NB	L	B	0.19	12.0	0.7
			Th	A	--	2.0	--
		<b>Overall Intersection</b>				<b>A</b>	<b>0.56</b>
Bank St & Echo Dr	Minor Stop	EB	R	B	0.25	19.8	0.9
		<b>Overall Intersection</b>				<b>A</b>	<b>0.25</b>

Intersection	Intersection Control	Approach / Movement		LOS	V/C	Total Delay (s)	Queue 95th (m)
Bank St & Aylmer Ave	Signalized	EB	L / R	A	0.43	35.9	23.2
		NB	L / Th	A	0.31	8.8	65.1
		SB	Th / R	A	0.34	3.7	30.8
		<b>Overall Intersection</b>		<b>A</b>	<b>0.43</b>	<b>7.6</b>	<b>--</b>
Bank St & Sunnyside Ave	Signalized	EB	L / Th / R	C	0.78	66.7	35.2
		WB	L / Th / R	C	0.71	33.7	37.4
		NB	L / Th / R	A	0.43	17.7	54.0
		SB	L / Th / R	A	0.55	14.4	71.8
		<b>Overall Intersection</b>		<b>C</b>	<b>0.78</b>	<b>21.3</b>	<b>--</b>
QED & Princess Patricia Way	Minor Stop	NB	L / Th	A	0.07	7.6	0.2
		EB	L / R	B	0.39	13.1	1.8
		<b>Overall Intersection</b>		<b>A</b>	<b>0.39</b>	<b>6.6</b>	<b>--</b>
Queen Elizabeth Dr & Fifth Ave	Signalized	EB	L / R	A	0.60	36.9	36.0
		NB	L / Th	A	0.33	8.1	31.8
		SB	Th / R	A	0.04	5.9	6.0
		<b>Overall Intersection</b>		<b>A</b>	<b>0.60</b>	<b>18.0</b>	<b>--</b>
Bank St & Marche Way	Minor Stop	WB	L / R	B	0.39	16.3	1.8
		<b>Overall Intersection</b>		<b>A</b>	<b>0.39</b>	<b>2.3</b>	<b>--</b>
Fifth Ave & O'Connor St	All-Way Stop	EB	L / Th	B	0.26	10.3	1.0
		WB	R	B	0.35	10.2	1.6
		NB	L / Th / R	B	0.39	11.4	1.8
		SB	R	A	0.16	8.8	0.6
		<b>Overall Intersection</b>		<b>B</b>	<b>0.39</b>	<b>10.4</b>	<b>--</b>
Garage Access at Exhibition Way	Two-Way Stop	WB	Th / L	A	0.01	8.8	0.0
		NB	L / R	C	0.39	20.7	1.8
		<b>Overall Intersection</b>		<b>A</b>	<b>0.39</b>	<b>4.5</b>	<b>--</b>
Exhibition Way and Service Roadway	All-Way Stop	EB	L / Th	A	0.22	8.2	0.8
		WB	Th / R	A	0.14	7.8	0.5
		SB	L / R	A	0.01	7.5	0.0
		<b>Overall Intersection</b>		<b>A</b>	<b>0.22</b>	<b>8.0</b>	<b>--</b>
Marché Way and Service Roadway	All-Way Stop	EB	L / Th	A	0.03	7.2	0.1
		WB	L / Th	A	0.22	8.2	0.8
		NB	L / R	A	0.03	7.4	0.1
		<b>Overall Intersection</b>		<b>A</b>	<b>0.22</b>	<b>8.0</b>	<b>--</b>
Marché Way and Exhibition Way	All-Way Stop	EB	Th / R	A	0.04	7.5	0.1
		WB	L / Th	A	0.09	8.0	0.3
		NB	L / R	A	0.21	8.3	0.8
		<b>Overall Intersection</b>		<b>A</b>	<b>0.21</b>	<b>8.1</b>	<b>--</b>

Intersection	Intersection Control	Approach / Movement		LOS	V/C	Total Delay (s)	Queue 95th (m)
Garage Access at Princess Patricia Way	Two-Way Stop	EB	L	A	0.00	7.5	0.0
			Th	A	--	0.0	--
		SB	L / R	B	0.27	11.2	1.1
		<b>Overall Intersection</b>		<b>A</b>	<b>0.27</b>	<b>5.5</b>	<b>--</b>

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

### 2033 Total Future Minor Event (Event Centre)

**Table 4.24** summarizes intersection performance during ingress and egress for a Minor Event held at Lansdowne under 2033 total future conditions.

As summarized in the table below, all study area intersections are projected to operate with overall acceptable levels of service during the ingress and egress period for minor events held at the new Event Centre.

Access intersections to Lansdowne at Bank Street and Queen Elizabeth Driveway are projected to continue to operate with acceptable levels of service.

In addition, projected 95<sup>th</sup> percentile vehicle queues are shown to be accommodated within the storage capacity of auxiliary turning lanes at site access intersections, including the southbound left-turn and westbound turning lanes at the intersection of Bank Street and Exhibition Way. It is worth noting that westbound queues during egress are typically managed on-site with parking and security staff to ensure.

The eastbound approach at intersection of Bank Street and Wilton Crescent is expected to continue to operate with a LOS E during the ingress period. 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 4.24: 2033 Total Future Minor Event (Event Centre) LOS Summary

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	37.3	32.1	33.9	19.6
		WB	L	A	A	0.43	0.36	33.0	35.0	19.6	16.3
			Th / R	A	A	0.40	0.31	15.8	19.3	18.1	12.9
		NB	L / Th / R	A	A	0.33	0.24	6.0	3.6	28.4	19.0
		SB	L / Th / R	A	A	0.38	0.21	6.9	3.7	38.4	16.6
		<b>Overall Intersection</b>		<b>B</b>	<b>A</b>	<b>0.67</b>	<b>0.52</b>	<b>11.3</b>	<b>8.0</b>	<b>-</b>	<b>-</b>
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	0.29	5.5	4.3	34.2	23.4
		SB	L / Th / R	A	A	0.35	0.21	3.1	2.8	16.1	11.7
				<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.55</b>	<b>0.48</b>	<b>6.9</b>	<b>6.4</b>
Bank St & Exhibition Way	Signalized	WB	L	A	B	0.56	0.66	38.6	39.7	35.8	46.3
			Right	A	A	0.39	0.59	10.7	10.2	11.9	17.1
		NB	L / Th / R	A	A	0.38	0.17	5.6	4.8	30.8	12.9
		SB	L	A	A	0.54	0.25	14.1	8.9	40.0	18.6
			Th	A	A	0.23	0.15	5.7	6.5	22.5	15.9
		<b>Overall Intersection</b>		<b>A</b>	<b>B</b>	<b>0.56</b>	<b>0.66</b>	<b>10.0</b>	<b>13.2</b>	<b>-</b>	<b>-</b>
Bank St & Wilton Cr	Minor Stop	EB	R	E	B	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
				<b>Overall Intersection</b>		<b>B</b>	<b>A</b>	<b>0.94</b>	<b>0.34</b>	<b>14.3</b>	<b>3.2</b>
Bank St & Echo Dr	Minor Stop	EB	R	B	B	0.12	0.02	16.8	10.5	5.7	0.7
				<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.12</b>	<b>0.02</b>	<b>0.4</b>	<b>0.2</b>

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	36.7	27.2	27.1	4.4
		NB	L / Th	A	A	0.42	0.09	5.4	4.6	25.3	6.6
		SB	Th / R	A	A	0.34	0.10	6.6	5.2	31.0	9.7
		<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.42</b>	<b>0.10</b>	<b>7.7</b>	<b>5.3</b>	-	-
Bank St & Sunnyside Ave	Signalized	EB	L / Th / R	B	A	0.69	0.51	47.4	50.3	45.4	21.5
		WB	L / Th / R	C	A	0.76	0.34	32.9	22.0	59.8	13.1
		NB	L / Th / R	A	A	0.34	0.13	8.9	3.5	35.2	11.8
		SB	L / Th / R	A	A	0.60	0.26	8.8	2.6	63.9	12.7
		<b>Overall Intersection</b>		<b>C</b>	<b>A</b>	<b>0.76</b>	<b>0.51</b>	<b>15.6</b>	<b>7.2</b>	-	-
QED & Princess Patricia Way	Minor Stop	NB	L / Th	A	A	0.14	0.02	9.5	7.7	4.0	0.5
		EB	L / R	C	B	0.46	0.63	26.3	17.4	17.5	33.7
		<b>Overall Intersection</b>		<b>A</b>	<b>B</b>	<b>0.46</b>	<b>--</b>	<b>4.2</b>	<b>10.9</b>	<b>--</b>	<b>--</b>
Queen Elizabeth Dr & Fifth Ave	Signalized	EB	L / R	A	A	0.46	0.46	37.9	37.8	27.8	28.0
		NB	L / Th	A	A	0.34	0.30	6.3	5.7	32.0	31.1
		SB	Th / R	B	A	0.61	0.19	9.7	5.0	89.7	19.2
		<b>Overall Intersection</b>		<b>B</b>	<b>A</b>	<b>0.61</b>	<b>0.46</b>	<b>11.3</b>	<b>10.7</b>	-	-
Bank St & Marche Way	Minor Stop	WB	L / R	B	B	0.13	0.29	12.7	13.6	3.3	1.2
		<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.13</b>	<b>0.29</b>	<b>0.7</b>	<b>2.1</b>	<b>--</b>	<b>--</b>
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	8.0	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	--	--
		<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.21</b>	<b>--</b>	<b>8.4</b>	<b>7.3</b>	<b>--</b>	<b>--</b>

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	Th / L	A	A	0.01	--	8.9	0.0	0.0	0.0
		NB	L / R	C	C	0.38	0.53	22.3	29.1	10.2	17.4
		<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.38</b>	<b>0.53</b>	<b>4.0</b>	<b>6.4</b>	<b>--</b>	<b>--</b>
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	0.0
		SB	L / R	A	A	0.15	0.34	7.7	8.9	3.0	9.0
		<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.32</b>	<b>0.34</b>	<b>8.9</b>	<b>9.3</b>	<b>--</b>	<b>--</b>
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	6.0
		<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.31</b>	<b>0.25</b>	<b>9.0</b>	<b>8.3</b>	<b>--</b>	<b>--</b>
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	8.0	7.5	4.8	1.8
		NB	L / R	A	A	0.00	0.00	7.4	7.3	0.0	0.0
		<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.20</b>	<b>0.10</b>	<b>7.9</b>	<b>7.5</b>	<b>--</b>	<b>--</b>
Garage Access at Princess Patricia Way	Two-Way Stop	EB	L	A	A	0.01	0.00	8.2	7.4	0.0	0.0
			Th	A	A	-	--	0.0	0.0	--	--
		SB	L / R	B	B	0.17	0.50	11.6	13.9	3.6	16.8
		<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.17</b>	<b>0.50</b>	<b>2.3</b>	<b>9.3</b>	<b>--</b>	<b>--</b>

L - Left, Th - Through, R - Right

### 2033 Total Future Major Event (Stadium)

**Table 4.25** summarizes intersection performance during ingress and egress for a Major Event held at Lansdowne under 2033 total future conditions. As illustrated below, all study area intersections are projected to continue to operate with overall acceptable levels of service during Major Events held at the Stadium at Lansdowne.

The eastbound approach at intersection of Bank Street and Wilton Crescent is projected to continue to operate at or close to capacity 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.

In addition, the eastbound approach of the Queen Elizabeth Drive and Princess Patricia Way intersection is shown to operate with an LOS rating of F for the Ingress period. Although the analysis indicates that the movements are operating with delays, the performance of this intersection is 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 4.25: 2033 Total Future Major Event (Stadium) LOS Summary

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	0.70	0.80	38.9	54.1	36.3	39.7
		WB	L	A	A	0.45	0.22	32.9	25.5	20.9	12.7
			Th / R	A	A	0.43	0.59	18.3	19.6	21.8	29.6
		NB	L / Th / R	A	A	0.34	0.23	7.5	5.3	36.9	17.4
		SB	L / Th / R	A	A	0.46	0.26	7.8	6.4	46.8	23.3
<b>Overall Intersection</b>		<b>B</b>	<b>C</b>	<b>0.70</b>	<b>0.80</b>	<b>12.6</b>	<b>14.4</b>	<b>-</b>	<b>-</b>		
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	7.9	5.4	45.4	19.7
		SB	L / Th / R	A	A	0.47	0.25	4.3	3.2	18.2	9.4
		<b>Overall Intersection</b>		<b>B</b>	<b>B</b>	<b>0.62</b>	<b>0.62</b>	<b>9.0</b>	<b>9.4</b>	<b>-</b>	<b>-</b>
Bank St & Exhibition Way	Signalized	WB	L	<i>Movements Temporarily Restricted During Major Events</i>							
			Right								
		NB	L / Th / R	A	A	0.35	0.15	4.7	2.2	32.1	13.6
		SB	L	<i>Movements Temporarily Restricted During Major Events</i>							
			Th								
<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.35</b>	<b>0.15</b>	<b>6.1</b>	<b>2.7</b>	<b>-</b>	<b>-</b>		
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	0.00	12.6	0	6.4	0
			Th	A	A	--	--	2.6	0	6.4	0
		<b>Overall Intersection</b>		<b>C</b>	<b>A</b>	<b>1.09</b>	<b>0.01</b>	<b>20.5</b>	<b>0.1</b>	<b>--</b>	<b>--</b>
Bank St & Echo Dr	Minor Stop	EB	R	B	B	0.25	0.06	19.4	10.5	13.2	1.8
		<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.25</b>	<b>0.06</b>	<b>0.9</b>	<b>0.5</b>	<b>--</b>	<b>--</b>

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	0.52	0.17	38.8	23.5	35.4	11.9
		NB	L / Th	A	A	0.44	0.21	5.7	4.9	27	14.6
		SB	Th / R	A	A	0.46	0.18	8.2	5.6	51.7	15.7
		<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.52</b>	<b>0.21</b>	<b>9.2</b>	<b>6.1</b>	-	-
Bank St & Sunnyside Ave	Signalized	EB	L / Th / R	B	A	0.66	0.60	42	51.2	57.3	28.9
		WB	L / Th / R	C	A	0.75	0.51	35.6	31.5	71.9	23.7
		NB	L / Th / R	A	A	0.42	0.16	10.5	4.2	41.2	15.8
		SB	L / Th / R	D	A	0.81	0.19	15.3	1.4	98.7	3.6
		<b>Overall Intersection</b>		<b>D</b>	<b>A</b>	<b>0.81</b>	<b>0.60</b>	<b>18.9</b>	<b>10.5</b>	-	-
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	D	0.93	0.93	82.4	50	75.2	86.8
		<b>Overall Intersection</b>		<b>B</b>	<b>C</b>	<b>0.93</b>	<b>0.93</b>	<b>14</b>	<b>23.5</b>	--	--
Queen Elizabeth Dr & Fifth Ave	Signalized	EB	L / R	B	B	0.67	0.68	39.8	39	47	50.1
		NB	L / Th	B	A	0.64	0.40	16.7	9.8	77.5	51.9
		SB	Th / R	D	A	0.83	0.40	21.9	9.6	197.1	53.5
		<b>Overall Intersection</b>		<b>D</b>	<b>B</b>	<b>0.83</b>	<b>0.68</b>	<b>23.1</b>	<b>16.3</b>	-	-
Bank St & Marche Way	Minor Stop	WB	L / R	<i>Movements Temporarily Restricted During Major Events</i>							
		<b>Overall Intersection</b>									
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	--	--
		<b>Overall Intersection</b>		<b>A</b>	<b>A</b>	<b>0.28</b>	<b>0.49</b>	<b>9.5</b>	<b>8.8</b>	--	--

## 5. SUMMARY AND CONCLUSIONS

This Transportation Impact Assessment (TIA) was prepared in support of a Site Plan Application (SPA) for the proposed multi-purpose Event Centre at Lansdowne Park located in the Glebe community of Ottawa, Ontario.

The proposed multi-purpose Event Centre represents Phase 1 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 ft<sup>2</sup> of commercial retail and box office annex to the Stadium on Exhibition Way with 49,635 ft<sup>2</sup> of new podium-level commercial retail space. This represents a net increase of 8,635 ft<sup>2</sup> 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 internal circulation and access within Lansdowne will be altered in an interim operating condition in 2028 during the construction of subsequent phases of Lansdowne 2.0.

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 interim 2028 Future Conditions (i.e. the completion of the new event centre and construction of subsequent phases of Lansdowne 2.0, as well as the 2033 Future Conditions (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 1 of Lansdowne 2.0 will result in minimal impact to the overall traffic operations in the area. From a transportation standpoint, the proposed multi-purpose Event Centre can be accommodated by the future transportation network with the continued adoption of the existing comprehensive Transportation Demand Management strategy.

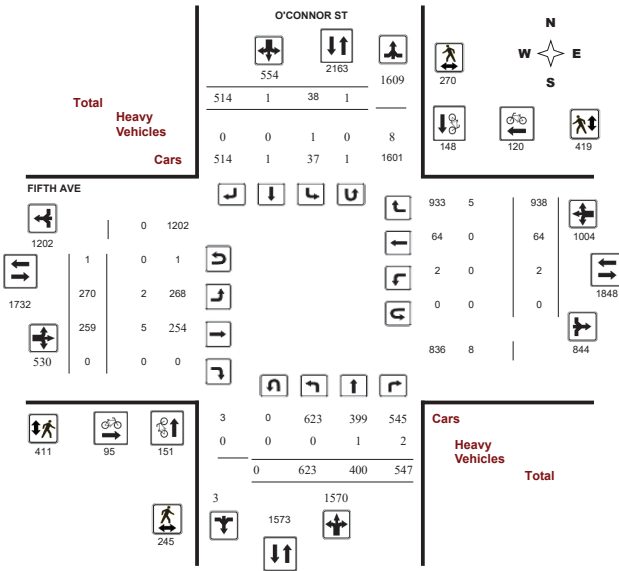
# APPENDIX A – TURNING MOVEMENT COUNT DATA

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

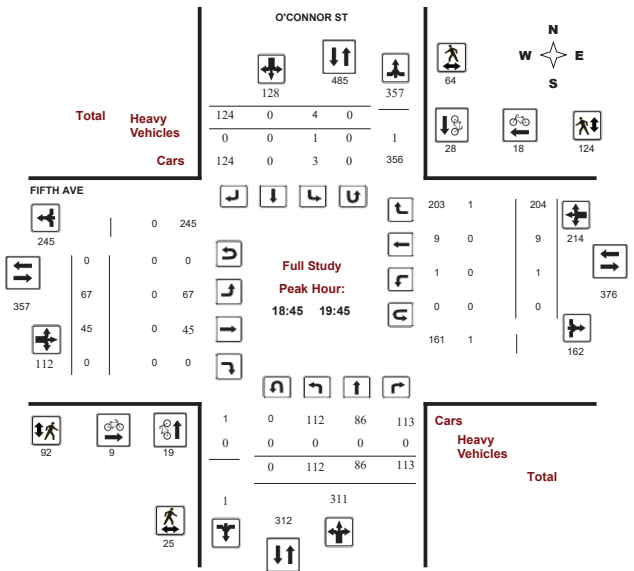


Turning Movement Count - Study Results  
FIFTH AVE @ O'CONNOR ST

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

WO No: 40983  
Device: Miovision

Full Study Peak Hour Diagram



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.

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 with columns for Time Period, Northbound, Southbound, Street Total, Eastbound, Westbound, Street Total, and Grand Total. Rows represent 15-minute intervals 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

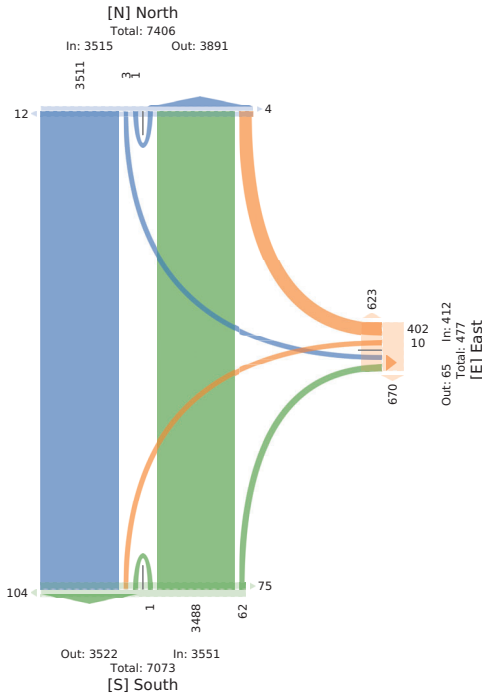


Provided by: City of Ottawa
100 Constellation Dr,
Nepean, ON, K2G 5J9, CA

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

\*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



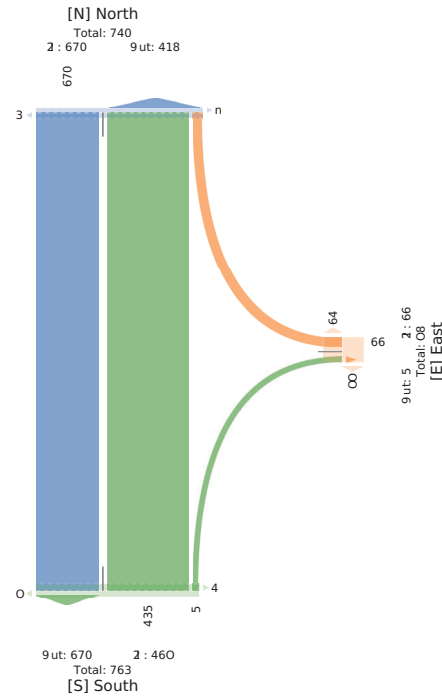
5566814 - COVID - BANK ST @ MARCHE WAY - MAY... - TMC  
 Tue May 3, 2022  
 Full Length (6:30 AM-9:30 AM, 11:30 AM-2 PM, 3:30 PM-6 PM)  
 All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)  
 All Movements  
 ID: 947989, Location: 45.399403, -75.68617



9eP kReQs	0d0 EduQ_dusi				Ja-C Se-Cdusi				EduQ 0d0_dusi				kC			
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g14FM	52	0	0	52	0	0	0	0	24	2	540	0	54	1	212	
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054FM	gD	0	0	gD	2	D	0	0	D	56	2	505	0	503	5	56D
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* 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	0	0
* v kryre-ds Ad-Ral:	h	h	h	h	0*	h	h	h	h	45*	h	h	h	h	0*	h

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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
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180LM	11m	0	0	11m	0	15	0	0	15	3	3	12D	0	130	1	257
1h7LM	11	0	0	11	0	13	0	0	13	1m	1	10m	0	110	m	230
T1GA	155	0	0	155	0	7m	1	0	50	142	12	151	0	115	1m	1002
* NN1ao	100*	0*	0*	h	h	m8*	18*	0*	h	h	29*	m3*	0*	h	h	h
* T1GA	158*	0*	0*	158*	h	78*	08*	0*	58*	h	18*	158*	0*	118*	h	h
Lr %	0882	(	(	0882	(	0854	0870	(	0842	(	0870	0882	(	0882	(	0843
1P)Gasi Mi Gdya09	121	0	0	121	h	72	t	0	73	h	11	13t	0	112	h	m11
* 1P)Gasi Mi Gdya09	m8*	0*	0*	m8*	h	448*	100*	0*	448*	h	m8*	m8*	0*	m8*	h	m8*
r eacy	3t	0	0	3t	h	D	0	0	D	h	0	20	0	20	h	74
* r eacy	58*	0*	0*	58*	h	118*	0*	0*	118*	h	0*	18*	0*	18*	h	78*
Hbyo09is vial	1t	0	0	1t	h	0	0	0	0	h	t	13	0	11	h	27
* Hbyo09is vial	28*	0*	0*	28*	h	0*	0*	0*	0*	h	48*	28*	0*	28*	h	28*
1eie-Gds:	h	h	h	h	0	h	h	h	h	14	h	h	h	h	h	h
* 1eie-Gds:	h	h	h	h	0	h	h	h	h	m8*	h	h	h	h	100*	h
Hbyo09is-d98Aa	h	h	h	h	0	h	h	h	h	1	h	h	h	h	0	0
* Hbyo09is-d98Aa	h	h	h	h	0*	h	h	h	h	08*	h	h	h	h	0*	h

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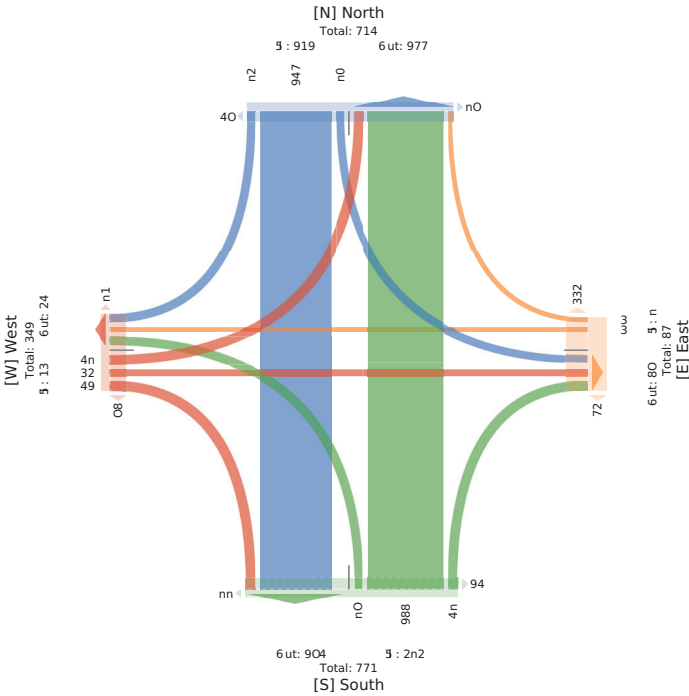




5566814 - COVID - BANK ST @ HOLMWOOD AVE - M... - TMC  
 Tue May 3, 2022  
 M/Pay kea( 8-2-30 km 9: -30 kM)  
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 s oLLRr(C)  
 l CMldHewentL  
 n - D47ID2, i drat@n- 45.3ID6DI, 975.161513



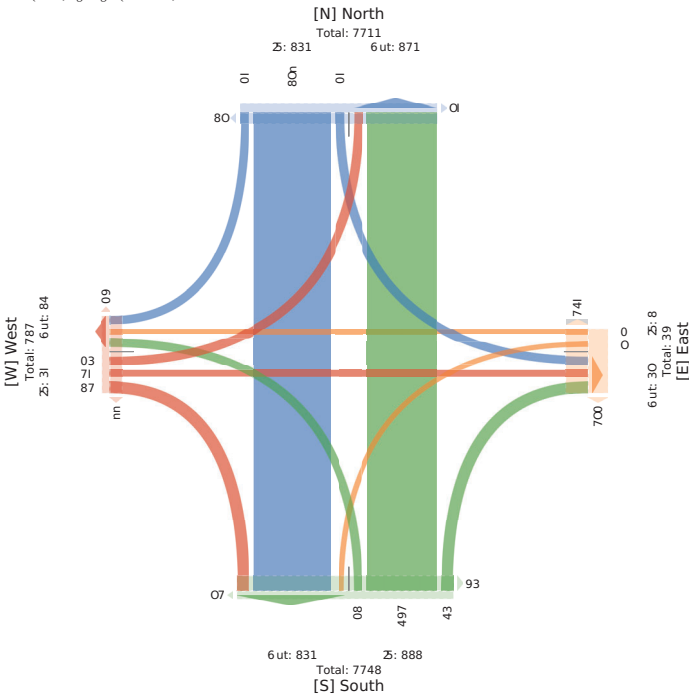
5566814 - COVID - BANK ST @ HOLMWOOD AVE - M... - TMC  
 Tue May 3, 2022  
 FM Feal lng h FM ( hg h FM6 : Ae-a9Feal 1 Pu-  
 ) 9C-Sass l dr c aM MP-P-B)Bs, 1 eaAy, FevesedhH, RdyBhs PhwPw, RdyBhs PH  
 C-Pssk a9 B  
 ) 9MP-PeMehE  
 IDg467442, 1 PkBrPjnhB4454. , (7h8 5. h 3



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 lcl c h avBMgHsRyRen, i eaCy, AeLbenkAvn, wdyRen gv mgarB wdyRen gv  
 t sgml aIP)  
 h llMgGcDevitA  
 47 85(, 552, dgRahgv8(- 65515b, 9 - 6b1b-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



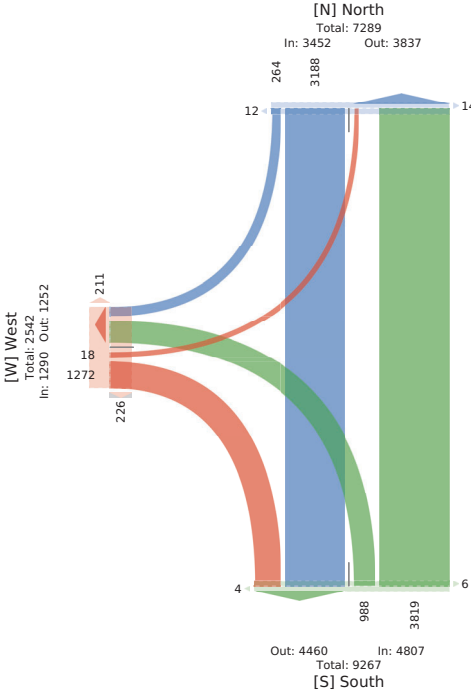
Time	Northbound					Southbound					Westbound					Eastbound										
	h	t	i	w	nn	h	t	i	w	nn	h	t	i	w	nn	h	t	i	w	nn	h	t	i	w	nn	
2022-08-03 06:00AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00AM	1	237	0	288	3	30	101	0	487	0	112	1	0	113	20	..	6									
9:00AM	8	1	0	172	2	284	89	0	313	4	66	3	0	69	17	864										
11:00AM	20	207	0	227	2	236	48	0	271	0	6	1	0	67	28	8..										
12:00PM	36	410	0	446	6	467	104	0	8.2	2	181	2	0	183	60	11.1										
1:00PM	36	430	0	466	4	496	92	0	877	1	14	3	0	180	69	1204										
3:00PM	31	272	0	313	3	267	9	0	34.	1	77	0	0	77	39	.47										
4:00PM	43	83	0	870	1	889	209	0	67	0	231	3	0	234	66	1872										
8:00PM	47	814	0	862	2	846	146	0	692	2	17.	3	0	190	78	1444										
<b>Total</b>	264	3177	0	3482	26	3719	977	0	470.	10	12.2	17	0	1290	43.	9849										
<b>% Approach</b>	5%	92%	0%	-	-	94%	20%	0%	80%	-	97%	15%	0%	-	-	-										
<b>% Total</b>	25%	33%	0%	36%	-	40%	10%	0%	80%	-	13%	0%	0%	13%	-	-										
<b>Lights and Motorcycles</b>	282	2929	0	3171	-	3813	988	0	4467	-	1226	17	0	1244	-	7793										
<b>% Lights and Motorcycles</b>	96%	91%	0%	92%	-	92%	96%	0%	92%	-	96%	100%	0%	96%	-	93%										
<b>Heavy</b>	8	18	0	162	-	166	11	0	1..	-	4	0	0	4	-	343										
<b>% Heavy</b>	3%	45%	0%	45%	-	45%	13%	0%	35%	-	0%	0%	0%	0%	-	38%										
<b>Bicycles on Road</b>	-	102	0	109	-	140	22	0	162	-	42	0	0	42	-	313										
<b>% Bicycles on Road</b>	25%	32%	0%	32%	-	35%	22%	0%	35%	-	35%	0%	0%	35%	-	35%										
<b>% Pedestrians</b>	-	-	-	-	21	-	-	-	-	10	-	-	-	-	420	-										
<b>% Pedestrians</b>	-	-	-	-	70%	-	-	-	-	100%	-	-	-	-	96%	-										
<b>Bicycles on Crosswalk</b>	-	-	-	-	8	-	-	-	-	0	-	-	-	-	1.	-										
<b>% Bicycles on Crosswalk</b>	-	-	-	-	19%	-	-	-	-	0%	-	-	-	-	35%	-										

<sup>1</sup>Pedestrians and Bicycles on Crosswalk: L: Left, R: Right, T: Thru, U: U-Turn

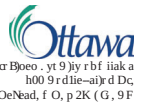
5566814 - COVID - BANK ST @ WILTON CRES - MA... - TMC  
 Tue May 3, 2022  
 Full Length (6:30 AM-9:30 AM, 11:30 AM-2 PM, 3:30 PM-6 PM)  
 All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)  
 All Movements  
 ID: 947024, Location: 4859... 2, -, 8578408



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 rHHe1, v eaBy, l eoe1clad1, R)HHe1 rd wrao, R)HHe1 rd  
 9 r 1lk a-LA  
 F - Mr Bmedil  
 ID: 4g024, Pr Hih) dr 4( 7: 8882, 8B( 75g( 40(



1 r B)oo - vt 9 j) y r b f h)k a  
 r00 9 r d)ie -al) r d Dc  
 OeNad, f O, p 2K ( G, 9 F

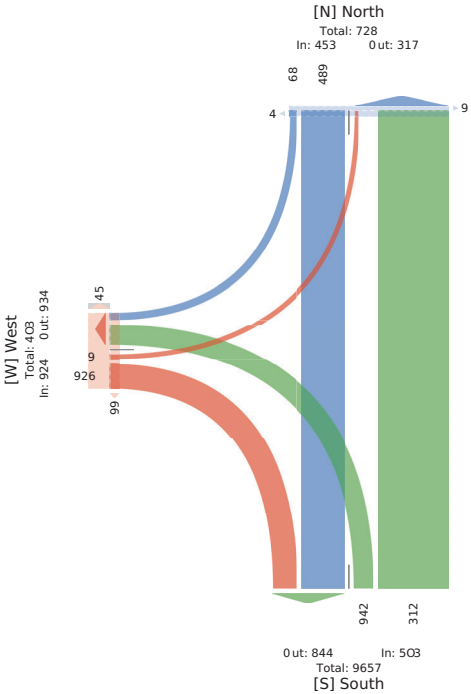
Pec. DyeHrd	Ords Jruis. rudo					Jruis Ords. rudo					E ell Sall. rudo				
	w	T	W	FNN	l eol.	T	P	W	FNN	l eol.	w	P	W	FNN	l eol.
20220403 gth FM	8	5	0	82	0	b23	2	0	h2	0	4h	0	0	4h	h3
g30F M	h0	h	0	g	2	h(	34	0	hg	0	h	0	0	h	hg
g4F M	(	h0	0	h4	0	hg	38	0	222	0	4	0	0	4	h
g05F M	3	h0	0	h04	2	h4	38	0	hg3	0	35	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*	4	h37*	07*	0*	h47*
lv%	072	078.5	6	0785	6	6	0788	07852	6	0782	4	07824	02(0	6	0782
P)Csi1 ado Mr r rHHe1	24	330	0	3(4	6	6	3h	h2:	0	550	6	h88	h	0	h8g
* P)Csi1 ado Mr r rHHe1	:50*	:47*	0*	:47*	6	6	g89*	:37*	0*	gg4*	6	:87*	h00*	0*	:87*
* v ealy	h	h8	0*	hg	6	6	4h	2	0	43	6	h	0	0	h
* v ealy	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*	h7*	0*	h7*	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) Pe1, wt w)Csi, Tr Tscu, W WGTud

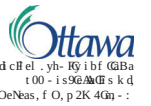
5566814 - COVID - BANK ST @ WILTON CRES - MA... - TMC  
 Tue May 3, 2022  
 AM Peak (8: -9 AM) 1: -9 AM  
 Ass Lsai1e (gt nd aor Mcd:Hvysel, Bealy, Per eid)hoi, whyysel co mcar, whyysel co  
 LHiii askC  
 Ass McReDeod  
 47: 158025, gcvadro: 59.316662, j69.189509



PH) r r r: L)h ci Od)h 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 2)80 LM ( t 180 LM6  
 : Av -A9e9 gl IP)Qasl Mi G d)yoA9, r eacy, Lel e9)as1, H)yoA9)is vial, H)yoA9)is  
 - d 9)BaA6  
 : AMi ceRes0  
 vk hmi D21, l i oaE sh1 478n8882, (845D4104



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

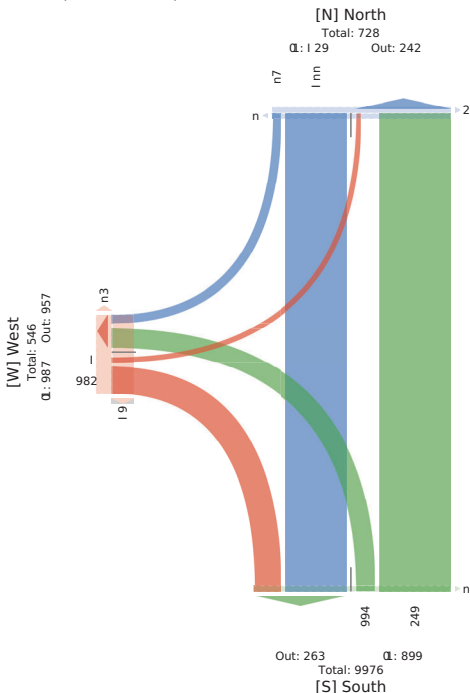
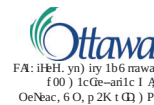
lep k)hoE)s	O) d)					Jruo)					E e9C				
	v	T	W	NN	LeL	T	l	W	NN	LeL	v	l	W	NN	LeL
20220403 t2)80LM	D	n2	0	t00	0	t22	34	0	t48	2	34	2	0	38	18
t2)80LM	D	t12	0	t20	4	t23	28	0	t40	0	15	0	0	15	36.5
t)80LM	4	t14	0	t20	1	t35	23	0	t4m	0	40	1	0	4	14
th4LM	D	t03	0	t11	1	t20	24	0	t14	0	3l	1	0	34	20
T)GA	2m	122	0	14	8	40	t10	0	5t1	2	154	1	0	t5m	5l
* : NN)ao	57*	n85*	0*	(	(	127*	t10*	0*	(	(	n85*	21*	0*	(	(
* T)GA	27*	3l2*	0*	355*	(	107*	D)h*	0*	1n8*	(	131*	07*	0*	137*	(
Lr %	0705	0708	(	0780	(	0701	0715	(	0764	(	0711	0700	(	0718	(
1P)Qasl Mi G d)yoA9	2D	3D4	0	t13	(	151	t10	0	481	(	156	1	0	t54	(
* 1P)Qasl Mi G d)yoA9	n85*	m2*	0*	m5*	(	n85*	t00*	0*	n87*	(	n85*	t00*	0*	n85*	(
r eacy	t	24	0	25	(	21	0	0	21	(	t	0	0	t	4
* r eacy	31*	47*	0*	47*	(	17*	0*	0*	37*	(	05*	0*	0*	05*	(
H)yoA9)is vial	0	t2	0	t2	(	13	0	0	t3	(	3	0	0	3	(
* H)yoA9)is vial	0*	21*	0*	28*	(	25*	0*	0*	21*	(	t7*	0*	0*	t7*	(
* Lel e9)Ba9	(	(	(	(	5	(	(	(	2	(	(	(	(	(	58
* Lel e9)Ba9	(	(	(	(	4	D)h*	(	(	100*	(	(	(	(	(	m8*
H)yoA9)is - d 9)BaA6	(	(	(	(	1	(	(	(	0	(	(	(	(	(	1
* H)yoA9)is - d 9)BaA6	(	(	(	(	175*	(	(	(	0*	(	(	(	(	(	7*

l eoe1clad1 ado R)HHe1 rd 9 r 1lk a-L7P) Pe1, 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  
 n - D47024, i drat@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  
 n nĤg402g, s lvanl cngt 3D882, Ĥt 754 g0t



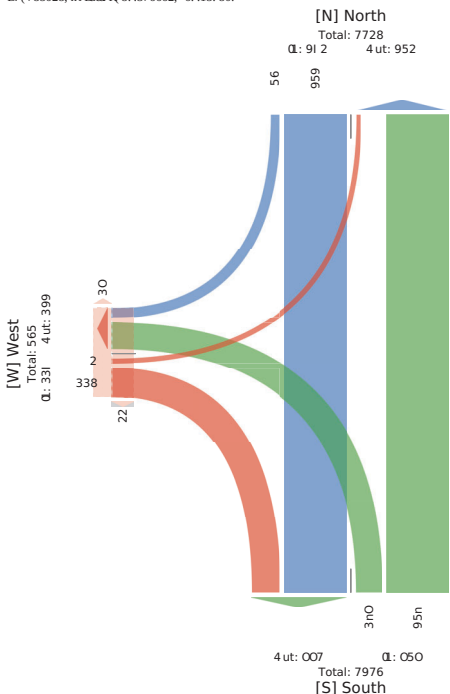
Leg Direction	Northbound					Eastbound					Southbound					Westbound				
	R	T	L	U	App	R	T	L	U	App	R	T	L	U	App	R	T	L	U	App
2022-05-03 6:00AM	0	118	0	0	118	0	1	0	0	1	0	140	0	0	140	0	1	0	0	1
7:00AM	0	494	2	0	496	0	9	0	0	9	0	694	0	0	694	0	17	0	0	17
9:00AM	0	242	4	0	246	0	4	0	1	5	0	311	1	4	316	0	4	0	0	4
11:00AM	0	267	4	0	271	0	8	0	0	8	0	291	0	7	300	0	7	0	0	7
12:00PM	0	880	7	0	887	0	9	1	9	19	0	1382	1	0	1383	0	16	0	1	17
1:00PM	0	8	2	10	20	0	28	0	1	29	0	26	0	0	26	0	14	0	0	14
3:00PM	1	3	1	2	7	0	9	0	1	10	0	333	0	0	333	0	11	0	0	11
4:00PM	2	70	6	0	78	0	17	0	4	21	0	177	0	23	200	0	23	0	0	23
8:00PM	2	690	6	1	699	0	13	0	4	17	0	694	1	32	727	0	3	0	0	3
<b>Total</b>	<b>8</b>	<b>4422</b>	<b>43</b>	<b>1</b>	<b>4441</b>	<b>101</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>106</b>	<b>96</b>	<b>4408</b>	<b>1</b>	<b>0</b>	<b>4409</b>	<b>141</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>144</b>
% Approach	0%	97%	1%	0%	98%	0%	0%	0%	0%	0%	0%	97%	0%	0%	97%	0%	0%	0%	0%	0%
% Total	0%	46%	0%	0%	46%	1%	0%	0%	0%	1%	1%	46%	0%	0%	47%	1%	0%	0%	0%	1%
% Lights and Motorcycles	1	4137	40	1	4178	0	0	26	2	28	67	4319	0	0	4444	138	0	1	2	141
% Heavy	0%	16%	0	0	16%	0%	0%	0%	0%	0%	0%	16%	0%	0%	16%	0%	0%	0%	0%	0%
% Bicycles on Road	4	122	3	0	129	30	1	1	0	32	2	146	0	0	148	8	0	0	0	8
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

FeĤGAcCacHBivvyeC1c) A(CGva-l 7s ns eĤr, RnRidor, TnToAn, 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 sš h sattet lndr a aĤV Mi G ĤBet, L ea l y, AevetGāH, RĤBet i Hwi av, RĤBet i H  
 h GttmasP9  
 g s Mi l eĤ eĤt  
 Ĥ ( 785028, ni Bnd H 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, - 85/74334



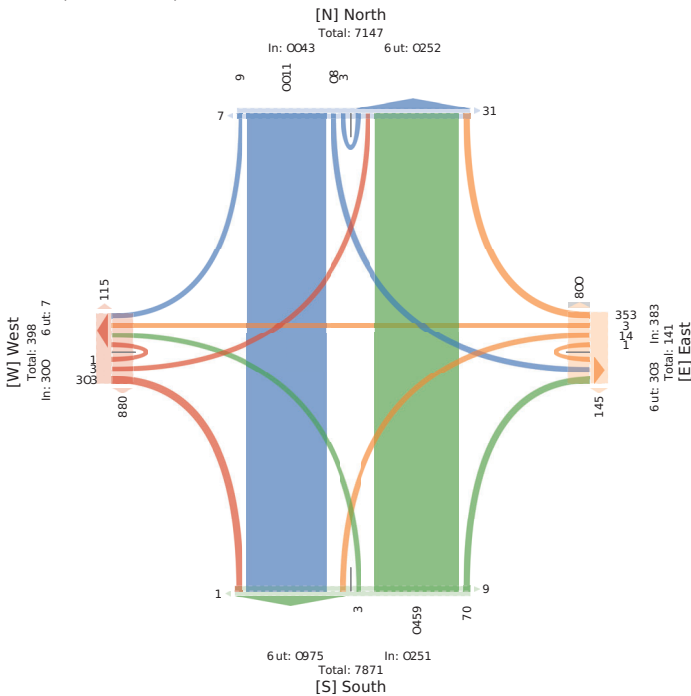
Leg Direction	Northbound					Eastbound					Southbound					Westbound				
	R	T	L	U	App	R	T	L	U	App	R	T	L	U	App	R	T	L	U	App
2022-05-03 6:00AM	0	118	0	0	118	0	1	0	0	1	0	140	0	0	140	0	1	0	0	1
7:00AM	0	494	2	0	496	0	9	0	0	9	0	694	0	0	694	0	17	0	0	17
9:00AM	0	242	4	0	246	0	4	0	1	5	0	311	1	4	316	0	4	0	0	4
11:00AM	0	267	4	0	271	0	8	0	0	8	0	291	0	7	300	0	7	0	0	7
12:00PM	0	880	7	0	887	0	9	1	9	19	0	1382	1	0	1383	0	16	0	1	17
1:00PM	0	8	2	10	20	0	28	0	1	29	0	26	0	0	26	0	14	0	0	14
3:00PM	1	3	1	2	7	0	9	0	1	10	0	333	0	0	333	0	11	0	0	11
4:00PM	2	70	6	0	78	0	17	0	4	21	0	177	0	23	200	0	23	0	0	23
8:00PM	2	690	6	1	699	0	13	0	4	17	0	694	1	32	727	0	3	0	0	3
<b>Total</b>	<b>8</b>	<b>4422</b>	<b>43</b>	<b>1</b>	<b>4441</b>	<b>101</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>106</b>	<b>96</b>	<b>4408</b>	<b>1</b>	<b>0</b>	<b>4409</b>	<b>141</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>144</b>
% Approach	0%	97%	1%	0%	98%	0%	0%	0%	0%	0%	0%	97%	0%	0%	97%	0%	0%	0%	0%	0%
% Total	0%	46%	0%	0%	46%	1%	0%	0%	0%	1%	1%	46%	0%	0%	47%	1%	0%	0%	0%	1%
% Lights and Motorcycles	1	4137	40	1	4178	0	0	26	2	28	67	4319	0	0	4444	138	0	1	2	141
% Heavy	0%	16%	0	0	16%	0%	0%	0%	0%	0%	0%	16%	0%	0%	16%	0%	0%	0%	0%	0%
% Bicycles on Road	4	122	3	0	129	30	1	1	0	32	2	146	0	0	148	8	0	0	0	8
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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

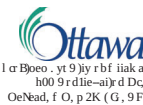
5566814 - COVID - BANK ST @ ECHO DR - MAY 03... - TMC  
 Tue May 3, 2022  
 Full Length (6:30 AM-9:30 AM, 11:30 AM-2 PM, 3:30 PM-6 PM)  
 All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)  
 All Movements  
 ID: 947081, Location: 485987.9, - 8574334



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  
 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

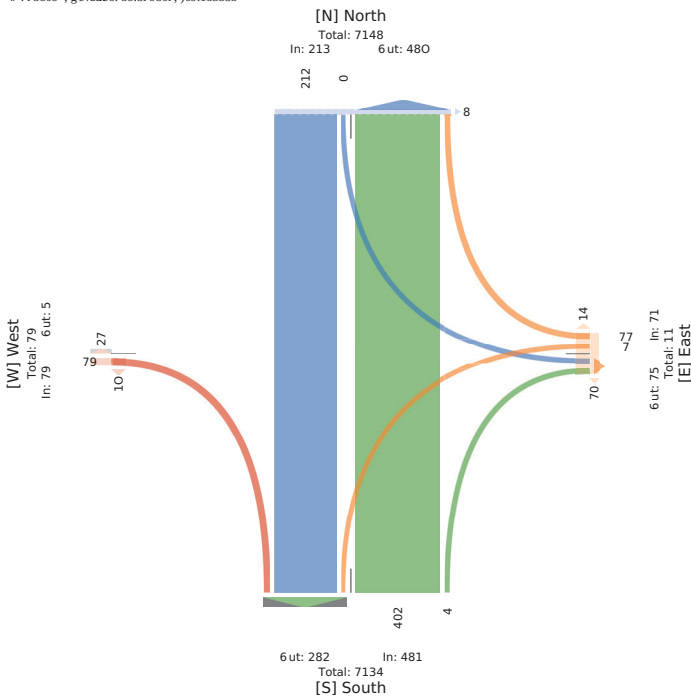
Pec	Ords					Jali					Erus					S eli															
	Time	w	T	P	W	FNN	l	col	w	T	P	W	FNN	l	col	w	T	P	W	FNN	l	col	w	T	P	W	FNN	l	col		
20220(03)gh(FM)	0	h04	0	0	h04	h	4	0	0	0	4	h2	2	h4	0	0	h5	0	4	0	0	4	2	25g							
g30FM	0	h20	h	0	h2h	3	4	0	0	0	4	h0	3	h4	0	0	h8	0	4	0	0	4	2	30g							
g4FM	0	h1	0	0	h1	0	0	0	0	0	0	h	2h	0	0	h25	0	8	0	0	0	8	h3								
g0FM	0	h42	2	0	h44	0	3	0	h	0	4	h	h2	0	0	h3	0	2	0	0	0	2	h3								
Tra	0	(2	3	0	(2g	4	h	0	h	0	h2	40	0	h2	0	0	h42	0	h	0	0	h	h3								
* FNra	0	2	0	0	0	6	4	h2	0	0	0	6	0	2	0	0	6	h00	0	0	0	6	6								
* Tra	0	40	0	0	40	6	0	0	0	0	0	6	0	51	0	0	h7	0	0	0	h7	6	6								
1 v %	6	0	2	h4	0	2	h	0	6	0	2	h	0	2	h	0	6	0	2	h	0	6	0	2	h	0	6	0	2	h	
PK11 ado Mir r H e l	0	00	3	0	03	6	2	0	h	0	3	6	h	55	0	0	52	6	h	0	0	h	6	h2							
* PK11 ado Mir r H e l	0	(	2	h	0	0	(	2	h	0	0	(	2	h	0	0	(	2	h	0	0	(	2	h	0	0	0	0	0	0	0
v ealy	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 a o	0	8	0	0	8	6	0	0	0	0	0	6	0	5	h	0	0	38	6	0	0	0	6	4							
* R H e l r d w a o	0	h3	0	0	h3	6	h3	0	0	0	h3	6	h3	0	0	0	h3	6	h3	0	0	h3	6	h3							
* l e o l i a d l	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	
* R H e l r d 9 r l k a L	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	
* R H e l r d 9 r l k a L	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	

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

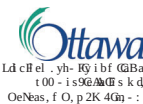
5566814 - COVID - BANK ST @ ECHO DR - MAY 03... - TMC  
 Tue May 3, 2022  
 AM Peak (8-9 AM) 1:9 AMC  
 Ass Lsaii e (gt nd aor Mcd Hysvei, Bealy, Per eid hoi, whyysei co mcar, whyysei co LHiii askC  
 Ass McReDeod  
 47: 15809-, gcvadro: 59.319861, )69.185335



PH r r e r by: L h i c i O d h i a  
 - 00 L c o i s s a d o 7 H  
 Nepean, ON, K2G 9J1, LA



5566814 - COVID - BANK ST @ ECHO DR - MAY 03... - TMC  
 Tue May 3, 2022  
 MB Lyan g L280 LM ( t H80 LM6  
 : Av A9e9 gl IP) @asl Mi G d yo A9, r eacy, Lel e9 d i s 9, H i y o A9 i s v i a l , H i y o A9 i s  
 - d 99 B a h 6  
 : A M i c e R e s 0  
 w k h m l D 4 t , l i o a e s h l 4 3 m l D B m ( 8 4 5 0 3 3 1



L d e l e l y h - R y r b f G a B a  
 t 00 - i s 9 0 A 0 e s k d  
 OeNas, f O, p 2K 4Gm - :

l e P	O i d					J a o C					E u d					S e 0 C														
	Time	v	T	1	W	NN	LeL	v	T	1	W	NN	LeL	v	T	1	W	NN	LeL	v	T	1	W	NN	LeL	w	C			
202204031280LM	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	320						
1300LM	0	150	4	0	153	0	4	0	1	0	m	25	D	118	0	0	144	0	2	0	0	2	11	30m						
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						
Ti G A	0	40	10	0	4m	0	1m	1	5	0	25	m	22	40	0	0	500	3	12	0	0	12	8	1233						
* N d a o	0	n3	1	0	0	0	(	h31	3	2	2	0	0	(	3	h	n3	0	0	0	0	(	1	0	0	0	0	0	0	
* Ti G A	0	16	1	0	1	0	(	1	2	0	1	0	0	(	1	2	15	h	0	0	0	1	0	0	0	0	0	0	0	
L r %	0	(	0	2	0	2000	(	0	2	0	2	0	0	(	0	2	0	2000	(	0	2	0	2	0	0	0	0	0	0	0
1 P y @ a s l M i G d y o A 9	0	41	1	0	44	0	1	8	0	5	0	23	1	18	43m	0	0	445	1	12	0	0	12	1	114					
* 1 P y @ a s l M i G d y o A 9	0	n8	1	0	0	n8	1	h	0	0	0	1	h	0	0	0	0	1	h	0	0	0	1	h	0	0	0	0	0	
* e a c y	0	28	0	0	28	0	0	0	0	0	0	0	0	0	23	0	0	23	0	0	0	0	0	0	0	0	0	0	0	
* H i y o A 9 i s v i a l	0	11	0	0	11	0	2	1	0	0	3	1	4	15	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	
* H i y o A 9 i s v i a l	0	21	0	0	21	0	1	0	2	0	1	1	2	2	0	0	3	2	0	0	0	0	0	0	0	0	0	0	0	
L e l e 9 d i s 9	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	
* H i y o A 9 i s - d 9 8 a 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	0	0	0	
* H i y o A 9 i s - d 9 8 a 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	0	0	0	

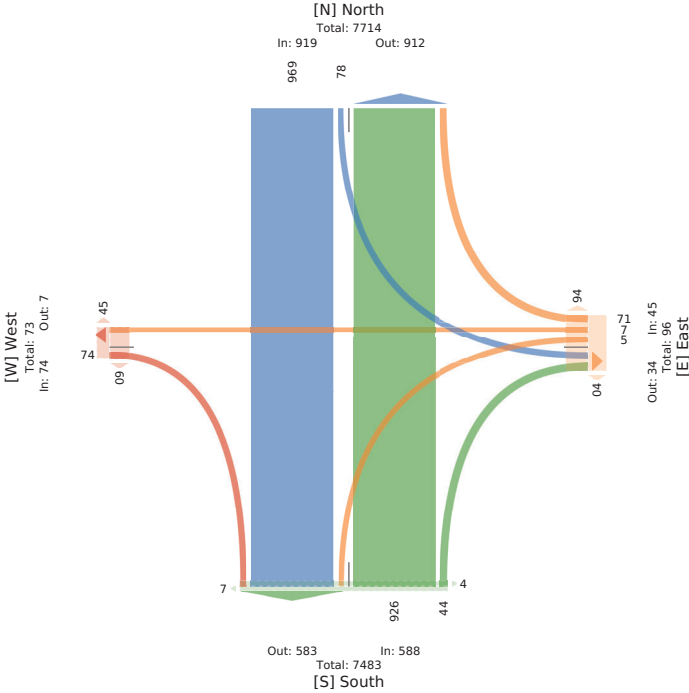
L e l e 9 d i s 9 a s l H i y o A 9 i s - d 9 8 a h 7 1 h e C v h v P C h T T d i , W h W T u d

5566814 - COVID - BANK ST @ ECHO DR - MAY 03... - TMC

Tue May 3, 2022  
 M: Pay kea ( 8.2-30 km 9: -30 km)  
 l (S GilleB ghtLanP Mtdr r@L, c eaHy, kePelroAn, v Ay r@Ldn BdaP, v Ay r@Ldn  
 s allLRa(C)  
 i (CML) emech  
 ID47( 50: ., i dratAn- 45.3D576D 955.174334

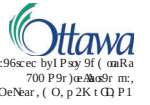


kaHReP by s Ay dI OnaRa  
 00 s dnleGatAn 1 q  
 Nepean, ON, K2G 5J1 S 1



5566814 - COVID - BANK ST @ ECHO DR - MAY 03... - TMC

Tue May 3, 2022  
 FM Feal In FM gt FMhg( 6eaMFeal - 9u:  
 1 (AP A))e lCsd d q arc M9d:Hy(H), - ea6y, Fece)osar), v sHy(H) 9r B9ac, v sHy(H) 9r  
 P:9))RaAh  
 1 AM96ewer d  
 kmI Dn40t 7, C9Haa9r lnt BDD 45D g5t 8 4n33n



P:96:ec byl Poy 9i ( mRa  
 700 P9))eAa9r m:  
 OeNar, ( O, p 2K t CD) P 1

Cat ms eHdr	O9:ad EhauBdur c					J ajo S ejdDur c					Ehual O9:auBdur c					S ejo J ajoDur c					
	B	T	C	W	1 NN	B	T	C	W	1 NN	B	T	C	W	1 NN	B	T	C	W	1 NN	
2022gh g03 n00FM	0	755	t	0	742	0	n	0	7	0	34	2	74n	0	0	0	0	0	0	0	
n07FM	0	713	0	0	701	7	5	0	7	0	4	32	3	202	0	0	20	0	0	0	
n08FM	7	204	0	0	200	0	2	0	0	0	2	3n	755	0	0	743	0	0	0	0	
n09FM	7	71D	7	0	207	0	1	0	2	0	5	23	5	712	0	0	71D	0	0	0	
T9aa	2	540	.	0	544	7	74	0	n	0	22	724	74	541	0	0	553	0	23	0	
* 1 NN9aH	08*	113*	08*	0*	0*	g	478*	0*	748*	0*	g	28*	135*	0*	0*	g	700*	0*	0*	0*	
* T9aa	08*	u43*	08*	0*	n07*	g	72*	0*	02*	0*	g	78*	0*	a50*	0*	0*	n49*	g	79*	0*	
F-%	g	08D2	08t0	g	00D4	g	08t0	g	0800	g	0604	g	08t0	08E7	g	00E2	g	083D	g	g	083D
Ci d q arc M9d:Hy(H)	0	530	t	0	53t	g	73	0	n	0	75	g	7t	57.	0	0	537	g	23	0	
* Ci d q arc M9d:Hy(H)	0*	138*	438*	0*	138*	g	52*	0*	700*	0*	g	538*	g	438*	138*	0*	0*	138*	g	700*	0*
* ea6y	0	7.	0	0	7.	g	0	0	0	0	0	g	0	75	0	0	0	0	0	0	
* ea6y	0*	28*	0*	0*	28*	g	0*	0*	0*	0*	g	0*	28*	0*	0*	g	0*	0*	0*	0*	
v sHy(H) 9r B9ac	2	3n	7	0	35	g	1	0	0	0	1	g	3	22	0	0	2t	g	0	0	
* v sHy(H) 9r B9ac	700*	n4*	7.8*	0*	n4*	g	258*	0*	0*	0*	g	228*	g	7.8*	28*	0*	0*	0*	0*		
Fece)osar)	g	g	g	g	g	7	g	g	g	g	72t	g	g	g	g	g	g	g	g	12	
* Fece)osar)	g	g	g	g	g700*	g	g	g	g	g156*	g	g	g	g	g	g	g	g	g	g429*	
v sHy(H) 9r P:9))RaA	g	g	g	g	g	0	g	g	g	g	3	g	g	g	g	0	g	g	g	g	
* v sHy(H) 9r P:9))RaA	g	g	g	g	g	0*	g	g	g	g	28*	g	g	g	g	g	g	g	g	g750*	

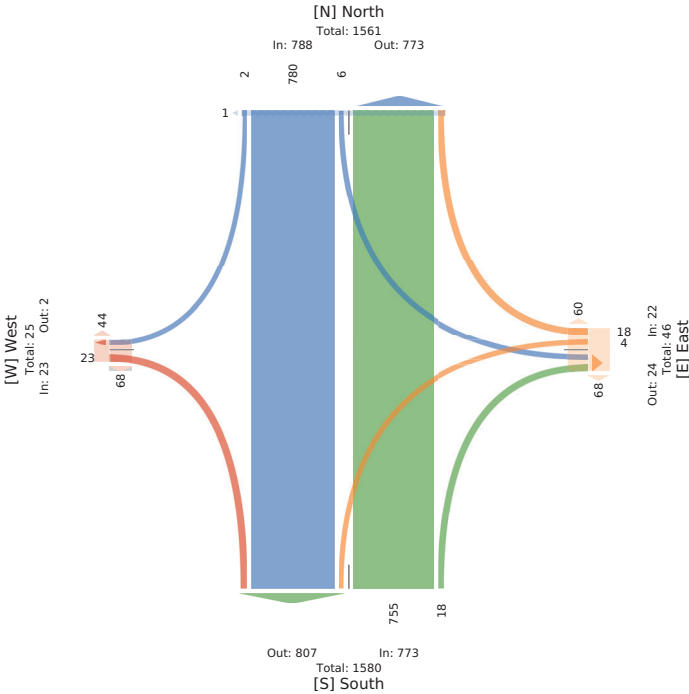
Fece)osar) arc v sHy(H) 9r P:9))RaA8Ci Cefq BI Bsi dq TI Tdu, W WgFur

5566814 - COVID - BANK ST @ ECHO DR - MAY 03... - TMC

Tue May 3, 2022  
 AM AeaP ( AM 8: AM- 89) elacAeaP s Lul  
 i (Cg Gihheh k nioth acHMLLl vvyv@s ea y), Aehhrlmch, Bayyveh Lc RLah Bayyveh Lc  
 g lLhwaP-  
 i (CML) emech  
 ID47( 50: ., i LvantC4: 67: 517, 8t: 65( 33)



AlD rhhH y4y g L00 mava  
 00 g LcheGatn C DL,  
 Nepean, 9 N, K2G : J7, gi



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



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

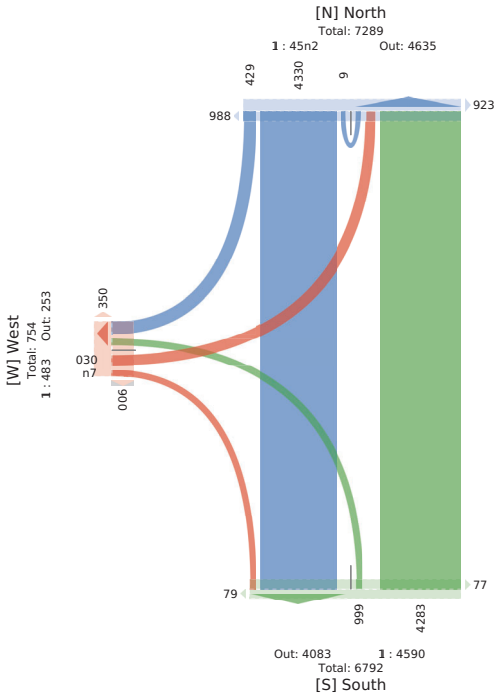
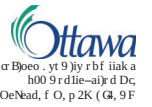
Leg Direction	North Southbound					South Northbound					West Eastbound				
	R	T	U	App	Ped*	T	L	U	App	Ped*	R	L	U	App	Ped*
2022-08-03 6:00AM	15	211	1	229	16	238	2	0	235	8	0	10	0	10	17
5:00AM	42	476	0	827	24	689	18	0	654	21	5	89	0	66	57
7:00AM	84	409	0	463	18	815	5	0	824	9	4	35	0	41	39
9:00AM	21	218	0	236	6	242	5	0	249	5	8	10	0	18	20
11:00AM	38	262	0	295	13	277	7	0	296	6	1	12	0	13	39
12:00PM	80	830	0	870	29	827	15	0	848	22	10	44	0	84	73
1:00PM	49	882	0	601	30	811	9	0	820	35	13	32	0	48	65
3:00PM	80	367	0	417	21	384	10	0	364	10	13	23	0	36	84
4:00PM	65	662	0	529	48	626	18	0	641	27	12	83	0	68	100
8:00PM	66	827	0	894	83	842	21	0	863	48	14	43	0	85	103
<b>Total</b>	481	4223	1	4658	282	4802	111	0	4613	190	59	323	0	402	601
% Approach	9.6%	90.3%	0%	-	-	95.6%	2.4%	0%	-	-	19.5%	70.3%	0%	-	-
% Total	4.5%	43.6%	0%	47.2%	-	46.8%	1.1%	0%	45.6%	-	0.7%	3.3%	0%	4.1%	-
Lights and Motorcycles	343	4046	0	4379	-	4226	105	0	4333	-	52	274	0	386	-
% Lights and Motorcycles	56.1%	98.7%	0%	93.9%	-	83.9%	96.4%	0%	93.9%	-	91.1%	75.9%	0%	77.0%	-
Heavy	15	139	1	165	-	149	4	0	183	-	8	15	0	22	-
% Heavy	3.7%	3.3%	100%	3.4%	-	3.3%	3.6%	0%	3.3%	-	6.3%	8.3%	0%	8.8%	-
Bicycles on Road	91	37	0	129	-	125	0	0	125	-	2	22	0	24	-
% Bicycles on Road	20.2%	0.9%	0%	2.7%	-	2.7%	0%	0%	2.7%	-	2.8%	6.7%	0%	6.0%	-
Pedestrians	-	-	-	230	-	-	-	-	169	-	-	-	-	473	-
% Pedestrians	-	-	-	91.3%	-	-	-	-	77.9%	-	-	-	-	70.4%	-
Bicycles on Crosswalk	-	-	-	22	-	-	-	-	21	-	-	-	-	117	-
% Bicycles on Crosswalk	-	-	-	7.5%	-	-	-	-	11.1%	-	-	-	-	19.6%	-

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

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  
 FM 1 eolcjd1 do R)H)He1 rd wrao, R)H)He1 rd  
 F - 9 a1le1 rP)C)il ado Mr ir d)H)el, v eaBy, l eoe1cjd1, R)H)He1 rd wrao, R)H)He1 rd  
 9 r 1lk a-LA  
 F - Mr B)emid1  
 IDt 47: 0( g, Pr H)h)dt 7( 8)4 ( 5, 6) ( 5: 7)h)5



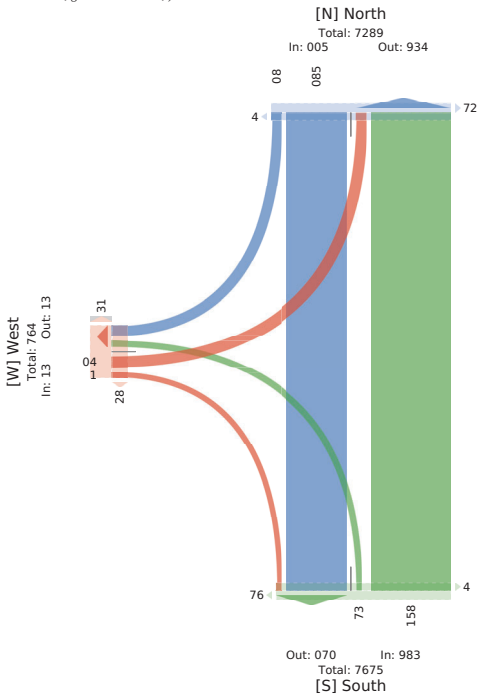
Time	Ords Jruis. rudo				l eol	Jruis Ords. rudo				l eol	E eil Salil. rudo				l eol		
	w	T	W	FNN		T	P	W	FNN		w	P	W	FNN			
20220403 g)h)F M	4	h)X	0	h)7	h)3	h)74	2	0	h)4	5	7	h)g	0	h)4	h)g	3)5	
g)3)F M	h)0	h)33	0	h)73	3	h)40	(	0	h)4	h)	2	h)g	0	h)4	h)g	3)6	
g)7)F M	h)7	h)2	0	h)5	3	h)40	g	0	h)4	h)h)	0	h)3	0	h)3	h)	3)5	
h)0)F M	h)g	h)4	0	h)5	2	h)5h	0	0	h)5	2	0	h)h	0	h)h	h)0	3)6	
T)ia	(	04	0	(	4	2h	540	h)7	0	g)7	20	5	(	0	57	g)3	
* FNN)al)H	38*	4h)8*	0*	6	6	4)8*	28*	0*	6	4	48*	408*	0*	6	6	6	
* T)ia	38*	3)8*	0*	72h*	6	(	28*	h)8*	0*	(	38*	4	08*	78*	0*	6	
l v)%	0)6)2	0)8	3:	6	0)8	7)g	6	0)8	43	0)8	0)0	6	0)8	g)4	4	0)8	g)5
P)C)il ado Mr ir d)H)el	7h	743	0	(	37	6	52	h)3	0	53:	6	5	7:	0	(	7	
* P)C)il ado Mr ir d)H)el	:28*	458*	0*	4)8*	6	6	408*	428*	0*	405*	6	h)00*	:28*	0*	:78*	6	
v ea)ly	2	h)3	0	h)	6	35	h	0	3)g	6	0	(	0	(	6	6	
* v ea)ly	78*	28*	0*	2)8*	6	(	8*	g)8*	0*	(	8*	0*	:8*	0*	g)8*	6	
R)H)He1 rd wrao	g	3	0	h)0	6	24	0	0	24	6	0	(	0	(	6	77	
* R)H)He1 rd wrao	h)78*	0)8*	0*	h)8*	6	78*	0*	0*	78*	6	0*	:8*	0*	g)8*	6	38*	
l eoe1cjd1	6	6	6	6	h)4	6	6	6	6	20	6	6	6	6	6	4)	
* l eoe1cjd1	6	6	6	6	40)8*	6	6	6	6	h)00*	6	6	6	6	6	g)8)8*	
R)H)He1 rd 9 r 1lk a-L	6	6	6	6	2	6	6	6	6	0	6	6	6	6	6	h)g	
* R)H)He1 rd 9 r 1lk a-L	6	6	6	6	4)8*	6	6	6	6	0*	6	6	6	6	6	22)9*	

l eoe1cjd1 ado R)H)He1 rd 9 r 1lk a-L)P)C)il Pe)h, wt w)C)il, T) Ts)u, W) W)G)T)ud

5566814 - COVID - BANK ST @ AYLMER AVE - MAY... - TMC  
 Tue May 3, 2022  
 AM Peak (8: -9 AM) 1: -9 AM  
 Ass L)ai)k (g)h)nd aor Mcd)H)ys)ei, Be)aly, Per eid)h)oi, why)ss)ei co m)car, why)ss)ei co L)H)ii askC  
 Ass M)C)Re)De)od  
 47: 5.1098, g)cv)adro: .9)6)5)91, )8)9)61. -81



5566814 - COVID - BANK ST @ AYLMER AVE - MAY... - TMC  
 Tue May 3, 2022  
 M)B)l)ay L)an g)t)l)8)0 ( M)G)t)2)8)0 LM:  
 ( A) v) A)9)9)g)l)P)O)as)l M)l)G)dy)oa)9) r)ea)cy, L)el e)9)G)as)9, H)l)yo)a)9)l) s) v)ial, H)l)yo)a)9)l) s)  
 - d) 9)8)A)h):  
 ( A)M)l)l) ce)Re)S)  
 vk)h)ml) D)47, l)l)oa)E)sh)l)4)8)ml)5, 6)74)5)D)l)7)5



TR e	O)id) J)u)G)l)us)l				L)el)l	J)u)G)l)us)l				L)el)l	E)e)C)S)al)C)l)us)l				L)el)l	w)C
	v	T	W	( NN		T	l	W	( NN		v	l	W	( NN		
20220403 t)l)8)0) M	14	114	0	130	ml	111	3	0	111	3	0	7	0	7	21	2)h
t)l)8)4) M	20	117	0	157	1	117	4	0	142	3	1	4	0	5	113	3)24
t)2)h)4) LM	14	112	0	147	3	11m	2	0	14	5	2	m	0	11	1m	3)8)m
t)2)h)4) LM	11	132	0	115	1)2	133	3	0	135	1	2	1	0	12	27	2)h
T)l)G)A	51	435	0	500	2)D	470	13	0	4)D	15	4	3	0	35	1)8	1)2)m
* ( NN)l)ao	108*	D)8*	0*	6	6	9)78*	28*	0*	6	6	138*	D)8*	0*	6	6	6
* T)l)G)A	48*	118*	0*	1)82*	6	158*	18*	0*	178*	6	0)8*	28*	0*	38*	6	6
l r)%	0)8)0	0)8)03	6	0)8)h)l	6	0)8)44	0)8)40	6	0)8)h)D	6	0)8)24	0)8)00	6	0)8)D)D	6	0)8)8)3
l P)C)il)as)l M)l)G)dy)oa)9)	13	40m	0	442	6	435	13	0	41m	6	4	24	0	30	6	1)1)3
* l P)C)il)as)l M)l)G)dy)oa)9)	572*	m)8)0*	0*	m)8)0*	6	ml)8*	100*	0*	ml)8*	6	100*	D)8)0*	0*	D)8)0*	6	m)8)7
r)ea)cy	4	22	0	27	6	22	0	0	22	6	0	3	0	3	6	4)2
* r)ea)cy	78*	18*	0*	1)8*	6	38*	0*	0*	3)8*	6	0*	m)8)0*	0*	D)8)0*	6	1)8*
H)l)yo)a)9)l) s) v)ial	15	4	0	21	6	12	0	0	12	6	0	3	0	3	6	3)5
* H)l)yo)a)9)l) s) v)ial	248*	0)8)7	0*	3)8*	6	28*	0*	0*	28*	6	0*	m)8)0*	0*	D)8)0*	6	3)8*
l)el) e)9)G)as)9	6	6	6	6	27	6	6	6	6	15	6	6	6	6	6	7)2
* l)el) e)9)G)as)9	6	6	6	6	m)8)8*	6	6	6	6	100*	6	6	6	6	6	D)8)7*
H)l)yo)a)9)l) s) - d) 9)8)A)h)	6	6	6	6	1	6	6	6	6	0	6	6	6	6	6	1)3
* H)l)yo)a)9)l) s) - d) 9)8)A)h)	6	6	6	6	4)8*	6	6	6	6	0*	6	6	6	6	6	1)8*

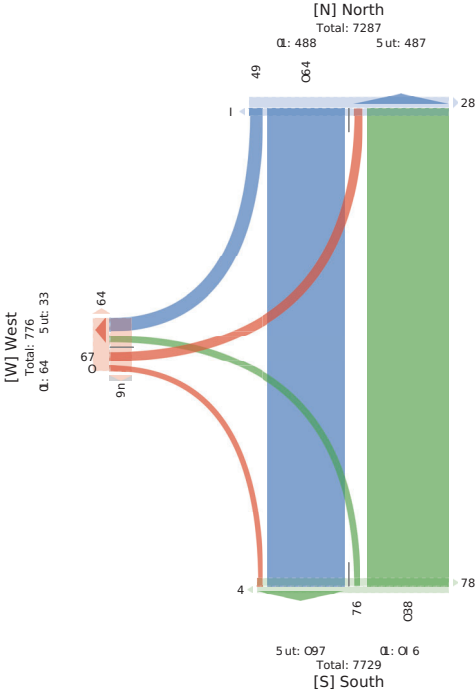
l)el) e)9)G)as)9)as)l) H)l)yo)a)9)l) s) - d) 9)8)A)h)l)h)l) e)C)v)h)w)P)C)l)H)T)l)di, W) W)G)T)ud

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

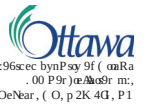


City of Ottawa  
 Nepean, ON, K2G 5J1 S 9



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, C9H09rnt 481 45, g/45D . 75



City of Ottawa  
 Nepean, ON, K2G 4G, P 1

Time	[N] North				[S] South				[W] West								
	B	T	W	1 NN	FecL	T	C	W	1 NN	FecL	B	C	W	1 NN	FecL	ro	
2022-04-03 3:00 PM	32	15	0	22D	2	7	1	0	74	3	2	1	0	..	30	1	1
3:45 PM	10	72	0	10	1	13	5	0	11	7	..	1	0	24	21	10	10
4:00 PM	4	58	0	71	1	7	5	0	77	3	7	7	0	21	24	30	30
4:15 PM	22	110	0	22	2	10	..	0	15	10	..	2	0	3	24	355	355
<b>Total</b>	<b>17</b>	<b>722</b>	<b>0</b>	<b>101</b>	<b>10</b>	<b>554</b>	<b>7</b>	<b>0</b>	<b>512</b>	<b>23</b>	<b>2</b>	<b>42</b>	<b>0</b>	<b>73</b>	<b>0</b>	<b>454</b>	<b>454</b>
* 1 NN S(H)	08*	132*	0*	48*	8	178*	28*	0*	8	4	213*	7.8*	0*	8	8	8	8
* 2 NN S(H)	48*	158*	0*	48*	8	128*	8*	0*	138*	8	8*	38*	0*	18*	8	8	8
F- %	0824	08.1	g	0815	g	082D	080D	g	0820	g	082D	0840	g	082D	g	0837	g
Cs d0 arc M90: H(H)	41	515	0	744	g	532	7	0	51	g	1	17	0	55	8	170	170
* Cs d0 arc M90: H(H)	570*	158*	0*	138*	g	1480*	00*	0*	148*	g	108*	108*	0*	108*	g	1180*	1180*
- ea6y	..	7	0	..	g	0	0	0	0	g	0	0	0	..	8	21	21
- ea6y	..	8*	28*	0*	28*	g	8*	0*	0*	8*	0*	8*	0*	8*	g	8*	8*
v s(H) 9r B9ac	27	1	0	35	g	23	0	0	23	g	2	1	0	5	8	54	54
* v s(H) 9r B9ac	3.0*	0*	0*	18*	g	38*	0*	0*	38*	g	18*	70*	0*	18*	g	18*	18*
Fecel0sar)	8	8	8	8	8	12	8	8	8	8	8	8	8	8	8	77	77
* Fecel0sar)	8	8	8	8	8	130*	8	8	8	8	8	8	8	8	8	7180*	7180*
v s(H) 9r P:9)RaA	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	27	27
* v s(H) 9r P:9)RaA	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	2580*	2580*

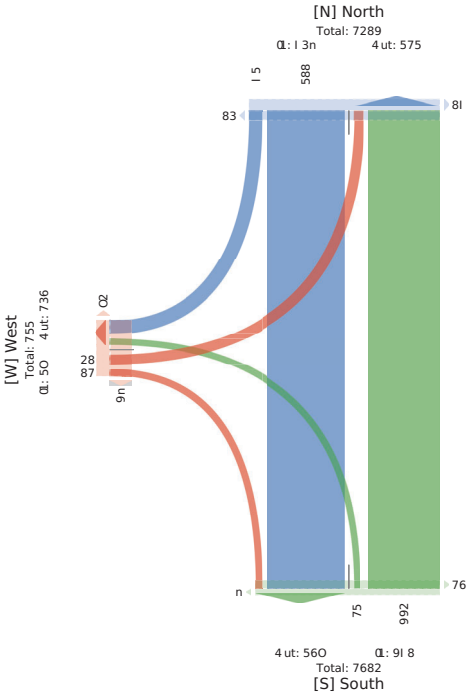
Fecel0sar) arc v s(H) 9r P:9)RaA8CnCefq BnBs d0 TnTdu, WnWgtur

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 G(h)h k nloth acHMLL v(y)h s ea)y, Aeh(h)hach, Bayy6h Lc RLah Bayy6h Lc  
 g LHhwaP-  
 i (LML) emech  
 ID(4: 705, t LvantLc( : 56451, 8 567: b. 1



City of Ottawa  
 Nepean, 9 N, K2G 5J4, gi



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

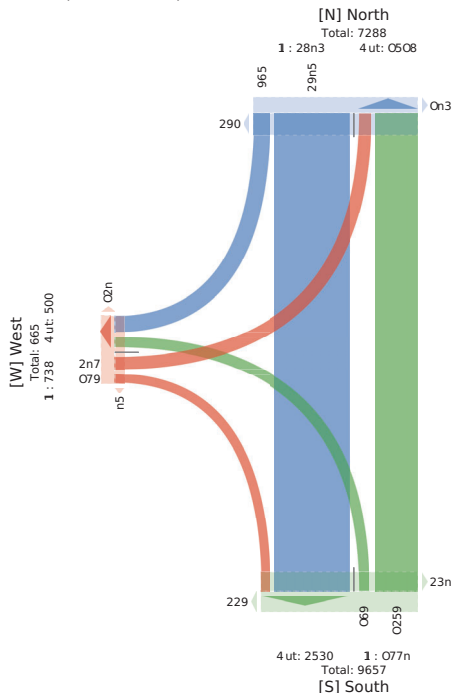
Tue May 3, 2022  
 Full Length (6:30 AM-9:30 AM, 11:30 AM-2 PM, 3:30 PM-6 PM)  
 All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on  
 Crosswalk)  
 All Movements  
 ID: 947066, Location: 48303921, -. 83719. 4



City of Ottawa  
 Nepean, ON, K2G 8J9, CA

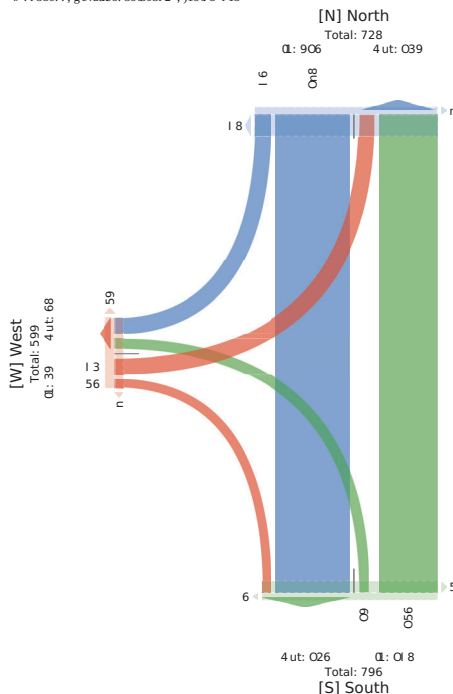
Leg Direction	North					South					West					
	Eouthbound					Northbound					Westbound					
Time	R	T	U	App	Ped*	T	L	U	App	Ped*	R	L	U	App	Ped*	Int
2022-08-03 6:00 AM	8	42	0	4	13	32	1	0	33	11	3	4	0	..	..	7
7:00 AM	23	1.4	0	19	22	141	..	0	147	2	8	1	0	22	13	36
8:00 AM	44	2.1	0	318	4	212	21	0	233	2	18	46	0	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	80	8	16	36	0	203	66	32	39	0	1	23	744
8:00 PM	69	408	0	4	4	71	191	34	0	228	100	22	4	0	69	39
<b>Total</b>	<b>398</b>	<b>2368</b>	<b>0</b>	<b>2.60</b>	<b>397</b>	<b>1283</b>	<b>193</b>	<b>0</b>	<b>1446</b>	<b>429</b>	<b>143</b>	<b>264</b>	<b>0</b>	<b>40</b>	<b>191</b>	<b>4613</b>
% 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%	-	9.30%
Heavy	9	18	0	24	-	10	0	0	10	-	2	4	0	6	-	40
% Heavy	2%	0%	0%	0%	-	0%	0%	0%	0%	-	1%	1%	0%	1%	-	0%
Bicycles on Road	19	21	0	40	-	21	0	0	21	-	3	6	0	9	-	0
% Bicycles on Road	45%	0%	0%	15%	-	15%	0%	0%	15%	-	2%	2%	0%	2%	-	1%
Pedestrians	..	..	..	..	290	..	..	..	..	369	..	..	..	..	174	..
% Pedestrians	..	..	..	..	23%	..	..	..	..	763%	..	..	..	..	963%	..
Bicycles on Crosswalk	..	..	..	..	107	..	..	..	..	60	..	..	..	..	..	..
% Bicycles on Crosswalk	..	..	..	..	2.5%	..	..	..	..	143%	..	..	..	..	35%	..

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



Time	Ords Jruis. rudo				Jruis Ords. rudo				E ell Sali. rudo				Total			
	w	T	W	FNN	leol	T	P	W	FNN	leol	w	P		W	FNN	leol
20220(403 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	h5g
g44 F M	g	g3	0	1h	h7	15	(	0	72	5	g	h	0	23	4	h57
:00F M	hh	(2	0	72	h0	dh	:	0	(0	(	3	h2	0	h	(	h2g
T)ia	45	2g0	0	325	4g	2h5	23	0	240	23	h5	47	0	73	2h	730
* FNR aH	h48*	g(9*	0*	6	g	:08*	:8*	0*	6	g	258*	538*	0*	6	g	g
* T)ia	5*	448*	0*	(h8*	g	348*	38*	0*	3g8*	g	28*	58*	0*	h00*	g	g
1 v %	08hg	08dg	6	08g	g	08g	083:	6	08g4	g	083h	08(0	6	0854	g	08g4
P)Cil1 ado Mr ir cHHe1	40	25g	0	3hg	g	2h(	23	0	23g	g	h5	4(	0	72	g	7hg
* P)Cil1 ado Mr ir cHHe1	g( h*	: :8*	0*	:52*	g	: :8*	h00*	0*	: :8*	g	h00*	:58*	0*	:g8*	g	:g8*
v eaBy	2	0	0	2	g	2	0	0	2	g	0	0	0	0	g	4
* v eaBy	48*	0*	0*	08*	g	08*	0*	0*	08*	g	0*	0*	0*	0*	g	08*
R)HHe1 rd wrao	(	2	0	5	g	0	0	0	0	g	0	h	0	h	g	8
* R)HHe1 rd wrao	h08*	08*	0*	28*	g	0*	0*	0*	0*	g	0*	28*	0*	h0*	g	h0*
* l eoe1clad1	6	6	6	6	33	6	6	6	6	hg	6	6	6	6	20	g
* l eoe1clad1	6	6	6	6	78g*	6	6	6	6	5g0*	6	6	6	6	(8*	g
R)HHe1 rd 9 r 1lk a-L	6	6	6	6	h	6	6	6	6	(	6	6	6	6	h	g
* R)HHe1 rd 9 r 1lk a-L	6	6	6	6	3h8*	6	6	6	6	2h8*	6	6	6	6	48*	g

l eoe1clad1 ado R)HHe1 rd 9 r 1lk a-LBPt Pelt, wt w)Cs1, Tr Tscu, W WGIud



Time	Os)jP Jsu)P.suCl				Jsu)P Os)jP.suCl				E e-) Sa-) suCl				Total			
	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	2h	7	t2	0	t5	3	t20
12h 7LM	t3	47	0	5D	h	2m	7	0	3h	2h	4	7	0	tt	tt	t23
12h0LM	tt	47	0	5m	tt	37	4	0	11	17	t	D	0	m	7	t2m
12h 7LM	t0	44	0	54	tt	13	m	0	72	17	1	10	0	tt	5	t12
T)ia	74	274	0	3h2	72	132	25	0	17m	52	14	37	0	7h	24	722
* 6NNsuD	t58*	128*	0*	h	h	180*	158*	0*	h	h	3h8*	428*	0*	h	h	h
* T)ia	t08*	108*	0*	7mD*	h	278*	78*	0*	308*	h	38*	48*	0*	mD*	h	h
Lo %	0835	08h	h	08D	h	08D	0870	h	0857	h	0845	08D	h	0827	h	08h27
9)P) aC Ms)jyde-	74	272	0	30D	h	t2D	25	0	t77	h	t4	32	0	1D	h	7tt
* 9)P) aC Ms)jyde-	t00*	mD*	0*	mD*	h	mD*	t00*	0*	mD*	h	t00*	mD*	0*	mD*	h	mD*
o eary	0	3	0	3	h	3	0	0	3	h	0	t	0	t	h	5
* o eary	0*	t8*	0*	t8*	h	28*	0*	0*	t8*	h	0*	28*	0*	28*	h	t8*
c R)Hde- sCHsal	0	t	0	t	h	t	0	0	t	h	0	2	0	2	h	1
* c R)Hde- sCHsal	0*	08*	0*	08*	h	08*	0*	0*	08*	h	0*	78*	0*	38*	h	08*
* Lel e-)H)C	h	h	h	h	12	h	h	h	h	45	h	h	h	h	24	h
* Lel e-)H)C	h	h	h	h	58g*	h	h	h	h	m8*	h	h	h	h	100*	h
c R)Hde- sCAis--v a(n	h	h	h	h	tt	h	h	h	h	7	h	h	h	h	0	h
* c R)Hde- sCAis--v a(n	h	h	h	h	h	20D*	h	h	h	48*	h	h	h	h	0*	h

l eoe1clad1 ado R)HHe1 rd 9 r 1lk a-LBPt Pelt, wt w)Cs1, Tr Tscu, W WGIud

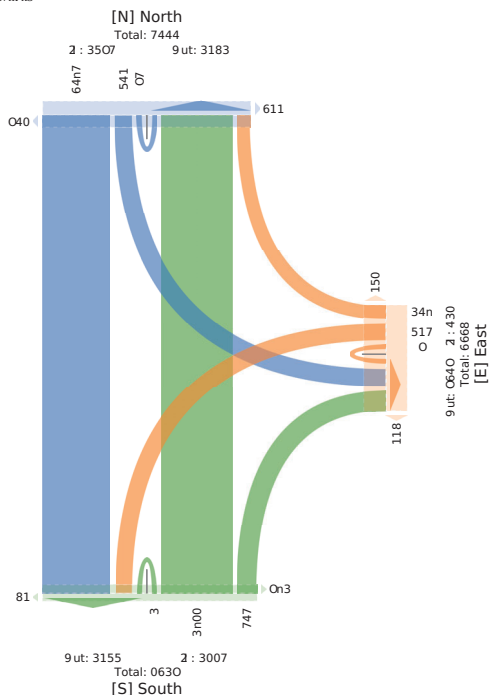


5566814 - COVID - BANK ST @ EXHIBITION WAY -... - TMC

Tue May 3, 2022  
 Full Length (6  
 : ll Ala--e- (Lght-anl MPP)GDe-, s eal y, del-e)9n-, o9GDe- Ph r Pa l, o9GDe- Ph  
 A)P--c allB  
 : ll MPi ev ent-  
 Bkwnll 2m L.PCat9PnwDn6k718D 5 m87n7k3



d)Pi 9.e l. 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 l eal.rgh( FM 6: th( F MA  
 F - 9 -a ll e r P)Cs il ado Mr ir r d)He l, v eaBy, l eoelcjad l R)H)He l rd wrao, R)H)He l rd  
 9 r llk a-L A  
 F - Mr Bemedi  
 IDt : ( 042(, Pr H)j)dt 7(8: g457, 64( 65g( g: 3



l r Bjoo- vt 9 jy r bf l iak a  
 r00 9 r d i e- a)k' d Dc  
 OeNad, f O, p 2K ( G, 9 F

PrC	DyeHrd	Ords	Eruls.rudo	Jail	S ell.rudo	Eruls	Ords.rudo									
Time	T	P	W	FNN	l eol	w	P	W	FNN	l eol	w	T	W	FNN	l eol	td
20220103 03 ghr f M	52	20	0	g2		h0	h0	0	20	2h	3h	:h	0	k22	4	227
g30F M	45	h7	0	:0	(	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	:(	5	2	h0	0	h2	h3	2h	h23	0	h7	:	2h
Tlta	332	57	0	3:5	27	32	h	0	g3	57	h00	7:	0	:(	22	h07
* FNRzH	g3g*	h5g*	0*	6	6	3g6*	5h8*	0*	6	6	h5g*	g3g*	0*	6	6	6
* Tlta	308*	58*	0*	358*	6	38*	78*	0*	48*	6	4:	8*	75h*	0*	(	8*
1 v %	084h	0824	6	0857	6	084h	08:7	6	087h	6	0830	080h	6	0877	6	082h
P)Cs il ado Mr ir r d)He l	3h5	50	0	345	6	3h	74	0	4g	6	g4	77h	0	(2g	6	g2
* P)Cs il ado Mr ir r d)He l	:(8*	:3g*	0*	:78*	6	:58*	:28*	0*	:78*	6	g44*	g:8*	0*	gg8*	6	h8*
v eaBy	h7	7	0	hg	6	h	3	0	7	6	5	33	0	3:	6	5h
* v eaBy	78*	58*	0*	78*	6	3h*	(8*	0*	78*	6	58*	58*	0*	58*	6	(8*
R)H)He l rd wrao	2	0	0	2	6	0	h	0	h	6	4	2h	0	2g	6	3h
* R)H)He l rd wrao	08*	0*	0*	08*	6	0*	20*	0*	h8*	6	44*	78*	0*	78*	6	28*
l eoelcjad l	6	6	6	6	27	6	6	6	6	50	6	6	6	6	6	2h
* l eoelcjad l	6	6	6	6	00*	6	6	6	6	38*	6	6	6	6	6	(8*
R)H)He l rd 9 r llk a-L	6	6	6	6	0	6	6	6	6	7	6	6	6	6	h	6
* R)H)He l rd 9 r llk a-L	6	6	6	6	0*	6	6	6	6	58*	6	6	6	6	7*	6

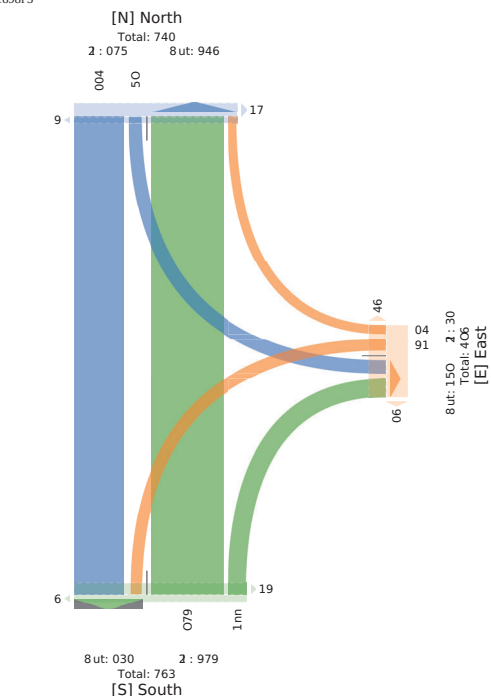
l eoelcjad l ado R)H)He l rd 9 r llk a-L)Pt Peh, wt w)Cs i, Tr Tscu, W WGTud

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

Tue May 3, 2022  
 AM Peak (8-9 AM) 1:-9 AMC  
 Ass Lsaiie (ght nd aor Mcd)Hvysei, BealBy, Per eid)hoi, whyysei co mcar, whyysei co  
 LHiii askC  
 Ass McReDeod  
 47: 190529, gcvadro: .96l 851., )59Q 89813

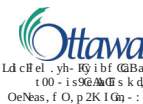


PH)er r by: Lh) cf Odh) a  
 -00 Lcoi)ssado to 7 H  
 Nepean, ON, K2G 9Jl, LA



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

Tue May 3, 2022  
 MB l ay Lean g 2h0 LM ( t h0 LM6  
 : Av A99:9 gl IP)Qasl Mi G d)yoA9, r eacy, Lel e9G)as 9, H)yoA9)is vial, H)yoA9)is  
 - d 99Ba)6  
 : AM)l ceRes9  
 wk hml 0E2, l iiaE sh4l 7n8)D4, (1) 758)8n8



Ld e)l e- y)h- R) i bf G)Ba  
 t00 - is 9)A)E)S k d  
 OeNad, f O, p 2K l G) - :

l eP	l k)k)E)S	Ol d)	El uG. i us l	J a)C	S e)C i us l	El uG	Ol d) i us l									
TR e	T	l	W	: NN	Le l U	v	l	W	: NN	Le l U	v	T	W	: NN	Le l U	wC
20220103 03:260LM	8l	tm	0	t04	n	t2	t1	0	2D	2h	23	t02	0	t21	l3	215
t26)LM	00m	l8	t	l28	t1	2h	l0	0	3h	3h	23	mD	0	t20	l4	2h
t100LM	l05	l1	0	l21	h3	lD	l3	0	30	34	2h	l10	0	l3k	l3	282
t111LM	h8	23	0	l15	l1	l5	23	0	3m	35	l8	mD	0	l11	9	210
Tl)A	3h8	D	t	45m	l1	55	5h	0	t2D	l35	8l	405	0	4m	42	l000
* : N)A)9	83h*	l50*	02*	(	129*	497*	0*	(	l139*	827*	0*	(	(	(	(	(
* Tl)A	352*	57h*	02*	432*	(	51*	l75*	0*	l17*	(	l88*	3l9*	0*	4l2*	(	(
Lz %	07m5	07h1	07l0	07h0	(	0733	07m0	(	07h0	(	07h0	07h4	(	07h8	(	07h8
l P)Qasl Mi G d)yoA9	nt 1*	m85*	l00*	m 1*	(	m87h*	m87*	0*	m21*	(	m05*	m81*	0*	m27*	(	m21*
r eacy	25	l	0	3k	(	t	t	0	2	(	4	tm	0	23	(	l5
* r eacy	55*	53*	0*	55*	(	l7*	l75*	0*	l75*	(	43*	43*	0*	43*	(	l2*
H)yoA9)is vial	m	0	0	m	(	l	3	0	8	(	4	m	0	l3	(	30
* H)yoA9)is vial	23*	0*	0*	t7h*	(	lD5*	47h*	0*	58*	(	41*	27*	0*	25*	(	28*
l eoelcjad l	(	(	(	(	l3	(	(	(	l34	(	(	(	(	(	(	4h
* l eoelcjad l	(	(	(	(	m87*	(	(	(	m87*	(	(	(	(	(	(	m85*
H)yoA9)is - d 99Ba)6	(	(	(	(	2	(	(	(	2	(	(	(	(	(	(	l
* H)yoA9)is - d 99Ba)6	(	(	(	(	37*	(	(	(	l7*	(	(	(	(	(	(	27*

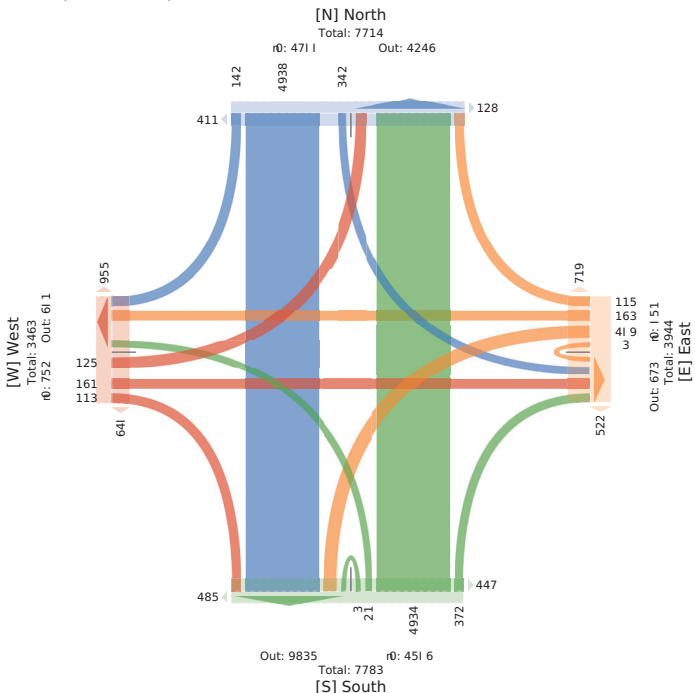
l Lel e9G)as 9asl H)yoA9)is - d 99Ba)6)7 h l e)C v h v)P)C)T)H) di, W)W)T)ud



5566814 - COVID - BANK ST @ FIFTH AVE - MAY ... - TMC  
 Wed May 11, 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: 951387, Location: 45.40167, -75.68758



5566814 - COVID - BANK ST @ FIFTH AVE - MAY ... - TMC  
 T ue May 3, 2022  
 F M I ual.ng3h F M ( 60h F M:  
 F A: A9A9 n3 h F M ai e MsdoryA9, c uafy, l ue9a9i 9 v PyyA9 d Bdae, v PyyA9 d  
 - o99RAA:  
 F ABAHwau 9  
 km 6h31gD l dras9i ( 4h7038Q ( Dh7gDhg



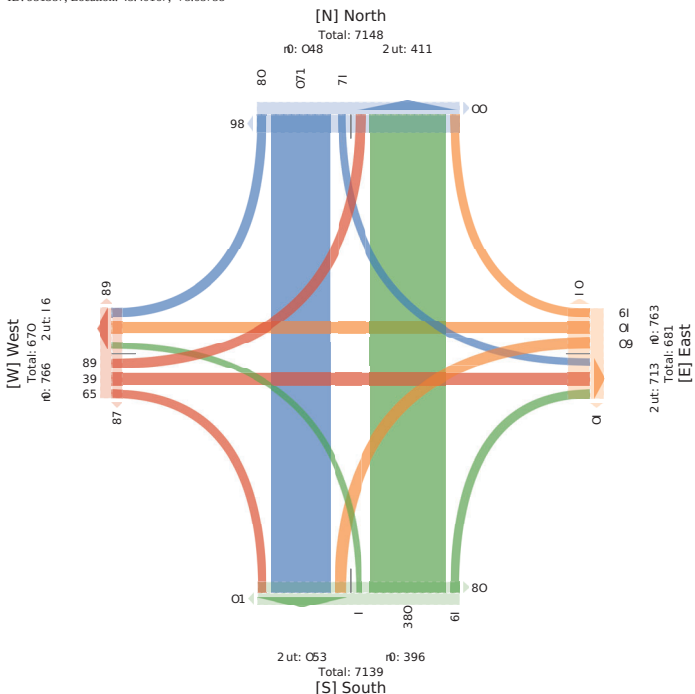
[t]	f ddc				[c]	f ddc				[t]	f ddc				[c]													
	B	S	W	FCD		B	S	W	FCD		B	S	W	FCD														
20220503g3hF M	8	6g	1	0	300	30	D	3l	32	0	12	14	D	3l	2	0	343	313	I	8	g	0	30	21	260			
g10F M	h	gd	h	0	60	1g	D	20	30	0	1D	14	4	34b	4	0	36l	30	1	33	32	0	28	34	134			
gdhF M	33	330	g	0	326	11	D	20	30	0	1D	14	31	340	3	0	364	24	32	23	g	0	43	36	183			
600F M	32	33b	1	0	310	2b	1	1	32	0	3g	43	b	31D	2	0	324	30	30	36	6	0	1g	32	130			
Solu	14	430	36	0	481	33g	26	46	40	0	32b	34l	26	b4	6	0	60P	104	2g	hD	1D	0	322	5g	32g			
* F00hC	D3*	ggR*	43*	0*	183*	1	(	212*	162*	118*	0*	(	(	h7*	612*	37*	0*	(	(	212*	482*	101*	0*	(	(	(		
* SbaA	23*	12*	33*	0*	183*	1	(	21*	1g*	13*	0*	63*	1	(	21*	432*	03*	0*	44*	1	(	22*	42*	25*	0*	63*	1	(
l e %	07Dg	03DD	0764	(	07g3	1	(	0704	0763	0704	(	070D	1	(	0781	0732	0781	(	07E1	1	(	0781	0718	0710	(	0710	1	(
1B G8 a e MsdoryA9	13	1D	36	0	423	1	(	28	2b	4b	0	68	1	(	2h	461	6	0	k2D	1	(	2D	4D	1b	0	306	1	(
* 13 G8 a e MsdoryA9	632*	604*	300*	0*	607*	1	(	g5D*	h3D*	6hD*	0*	D3*	1	(	g82*	621*	300*	0*	623*	1	(	682*	g23*	647*	0*	g51*	1	(
* c uafy	1	26	0	0	12	1	(	1	3	2	0	8	1	(	2	2b	0	0	2D	1	(	0	3	3	0	2	1	(
* v PyyA9 d Bdae	0*	30	0	0	30	1	(	0	21	0	0	21	1	(	2	38	0	0	3g	1	(	3	6	3	0	33	1	(
* v PyyA9 d - o99RAA:	0*	22*	0*	0*	22*	1	(	0*	482*	0*	0*	3g2*	1	(	07*	110*	0*	0*	13*	1	(	13*	3h3*	22*	0*	63*	1	(
l ue9a9i 9	(	(	(	(	(	332	(	(	(	(	(	343	(	(	(	(	(	(	(	(	(	(	(	(	83	(	(	
* l ue9a9i 9	(	(	(	(	(	6hD*	(	(	(	(	(	6g9*	(	(	(	(	(	(	(	(	(	(	(	(	6h5*	(	(	
v PyyA9 d - o99RAA:	(	(	(	(	h	(	(	(	(	(	(	2	(	(	(	(	(	1	(	(	(	(	(	(	3	(	(	
* v PyyA9 d - o99RAA:	(	(	(	(	42*	(	(	(	(	(	(	3*	(	(	(	(	(	47*	(	(	(	(	(	(	3h*	(	(	

l ue9a9i 9 a e v PyyA9 d l - o99RAA 71 t l u.s. Bt B9 Gs St SG E, W l WSE i

5566814 - COVID - BANK ST @ FIFTH AVE - MAY ... - TMC  
 Wed May 11, 2022  
 AM Peak (8:15 AM - 9:15 AM)  
 All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)  
 All Movements  
 ID: 951387, Location: 45.40167, -75.68758



5566814 - COVID - BANK ST @ FIFTH AVE - MAY ... - TMC  
 T ue May 3, 2022  
 MReay l ual. n3g 0 h M ( 32g 0 l M6  
 h: Aa--u--R9P) aCe Ms)idydu-, o uary, l ueu-9iB6C, c Rlydu- s CHsae, c Rlydu- s C  
 Ais--v aL6  
 h: Msr uB6C  
 RgknRt l l 9s da) B6 G4 n9038Q ( DhRl Dh



[t]	f sIP				[c]	f sIP				[t]	f sIP				[c]													
	H	S	W	h CD		H	S	W	h CD		H	S	W	h CD														
20220511g33g M	8	333	D	0	324	3m	k	8	20	0	tm	4m	1	334	2	0	324	22	k	4	3m	0	21	t1	133			
33g9m M	32	33k	4	0	36	m 13	D	k	30	0	28	84	4	30k	4	0	30D	2m	32	m	k	0	28	42	104			
33g9M	8	301	m	0	33k	10	D	1	33	0	28	11	m	324	8	0	3m	12	D	m	33	0	2h	44	10k			
32g84 M	33	331	4	0	3h	2m	33	30	34	0	tm	m8	1	333	m	0	324	20	1	D	8	0	23	40	13k			
Ss)k	1m	4m	20	0	m33	303	14	11	m	0	322	24l	2m	4m	3D	0	m0	5k	18	23	43	0	k1	310	323			
* h Ch)uP	81*	11k*	12*	0*	(	210k*	230*	4m3*	0*	(	(	m0*	k3*	12*	0*	(	(	60D*	23k*	43*	0*	(	(	(				
* Ss)k	23*	1D*	33*	0*	433*	1	(	23*	23*	43*	0*	k2*	1	(	22*	1D*	33*	0*	402*	1	(	2k*	3D*	12*	0*	1D*	1	(
l e %	07Dk	074k	07k2	(	0748	1	(	0746	0746	0744	(	0723	1	(	0746	0733	0741	(	0732	1	(	0741	071k	0734	(	0714	1	(
* 9BPy aCe Ms)idydu-	14	424	3l	0	408	1	(	13	21D	m	0	30l	1	(	21	43D	38	0	4m	1	(	14	3l	40	0	k2	1	(
* 9BPy aCe Ms)idydu-	k1D*	k17*	k0D*	0*	k12*	1	(	k12*	131*	k0k*	0*	112*	1	(	k27*	k37*	k47*	0*	k32*	1	(	k42*	m1D*	k0D*	0*	k12*	1	(
o uary	3	20	3	0	22	1	(	2	1	2	0	D	1	(	3	13	3	0	tt	1	(	0	3	0	0	3	1	(
* o uary	2k*	42*	m0*	0*	41*	1	(	m4*	k3*	12*	0*	m1D*	1	(	4D*	81*	m4*	0*	8B*	1	(	0*	42*	0*	0*	3D*	1	(
* c Rlydu- s CHsae	0*	32	3	0	3k	1	(	3	1	1	0	D	1	(	3	30	0	0	32	1	(	2	2	3	0	m	1	(
* c Rlydu- s CHsae	0*	28*	m0*	0*	22*	1	(	2k*	k3*	m4*	0*	m1D*	1	(	47*	22*	0*	0*	22*	1	(	m8*	k3*	22*	0*	m3*	1	(
l ue9a9i 9	(	(	(	(	k3	(	(	(	(	(	(	24	(	(	(	(	(	k13	(	(	(	(	(	(	38k	(	(	
* l ue9a9i 9	(	(	(	(	k8D*	(	(	(	(	(	(	k17*	(	(	(	(	(	k17*	(	(	(	(	(	(	k1k2*	(	(	
c Rlydu- s CAis--v aL6	(	(	(	(	4	(	(	(	(	(	(	m	(	(	(	(	(	2	(	(	(	(	(	(	3	(	(	
* c Rlydu- s CAis--v aL6	(	(	(	(	49*	(	(	(	(	(	(	28*	(	(	(	(	(	22*	(	(	(	(	(	(	08*	(	(	

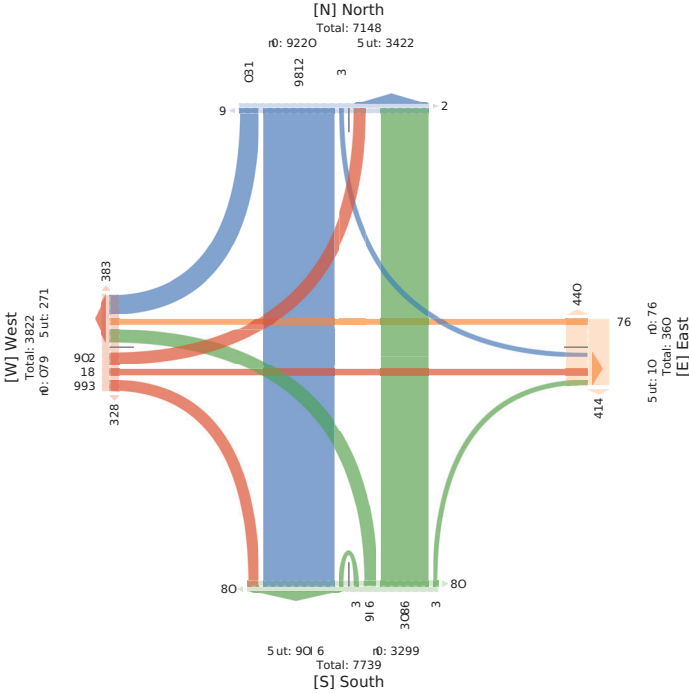
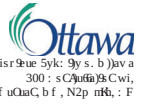
l ue9a9i 9 aCe c Rlydu- s CAis--v aL6 9g u.) HgHRP) SgSPHE, W l WSE i



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 9Hydu/As CHsae, c 9Hydu/As C  
 : is Av a f L  
 F 6Ms r u BuQA  
 Rckhml 33, - s da)B Ck l mD0341, t4nDg084g



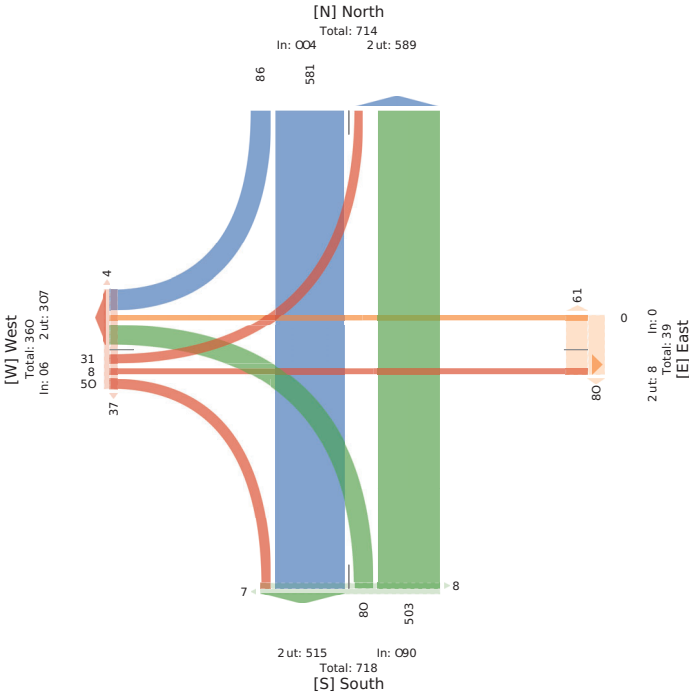
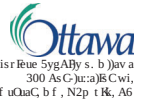
wBuD9C	f s i P					G a /					j s E P					F u a /					
	H	S	W	FOD	u e L	H	S	W	FOD	u e L	H	S	W	FOD	u e L	H	S	W	FOD	u e L	
20220r033 g00F M	30	70	0	0	40	0	3	0	0	3	11	0	m	32	0	7g	8	3	1	0	g
g00F M	3g	m	0	0	4g	0	3	0	0	3	18	0	m	37	0	42	1	1	8	1	0
g00F M	28	78	0	0	g7	0	2	0	0	2	1m	0	dh	20	0	1h	2	38	3	7	0
g00F 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*	0D*	0*	81h*	hD*	0*	18h*	1	8h*	21h*	0*	7h*	
1 o %	008h	0081	1	1	004m	1	1	1	1	1	1	0078	00gg	1	007g	1	0028	1	00h2	1	
- 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*	hgB*	0*	0*	hgB*	0*	0*	0*	0*	1	0*	h4h*	300*	0*	hgD*	1	hnd3*	0*	300*	0*	
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	30r	0h*	0*	0*	0D*	1	0*	0*	0*	0*	1	0*	0*	0*	0*	1	0*	0*	0*	0*	
c 9Hydu/As CHsae	0	2	0	0	2	1	0	1	0	0	1	1	0	0	7	1	3	7	0	0	
* c 9Hydu/As CHsae	0*	0h*	0*	0*	0D*	0*	300*	0*	0*	300*	0*	21h*	0*	0*	2D*	1	1h*	300*	0*	31D*	
1 ueu/9hCA	1	1	1	1	0	1	1	1	1	0	1	1	1	1	71	1	1	1	1	33	
* 1 ueu/9hCA	1	1	1	1	1	1	1	1	1	1	1	1	1	1	112D*	1	1	1	1	1300*	
c 9Hydu/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	
* c 9Hydu/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/9hCAc c 9Hydu/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 Ba3-  
 9B Mt ce Rehj  
 ml 5D311, Cr oage hl 3D90143, :4DX 80648

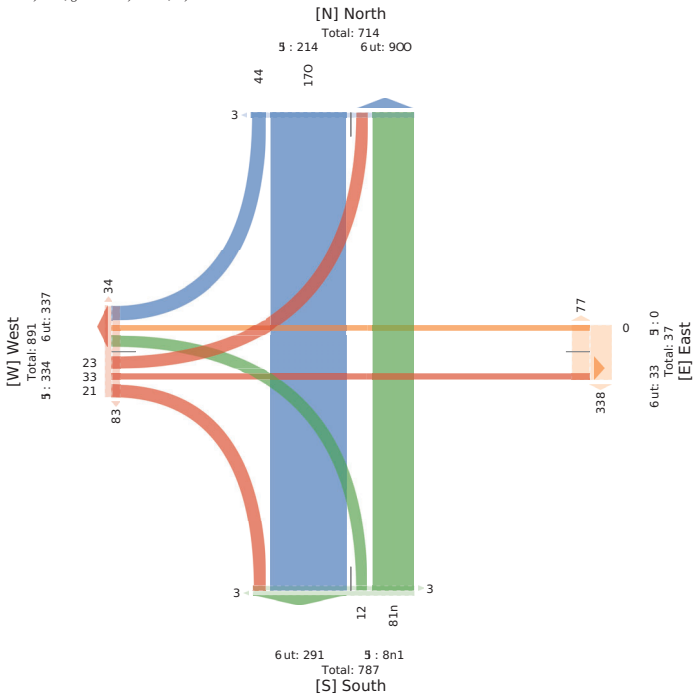
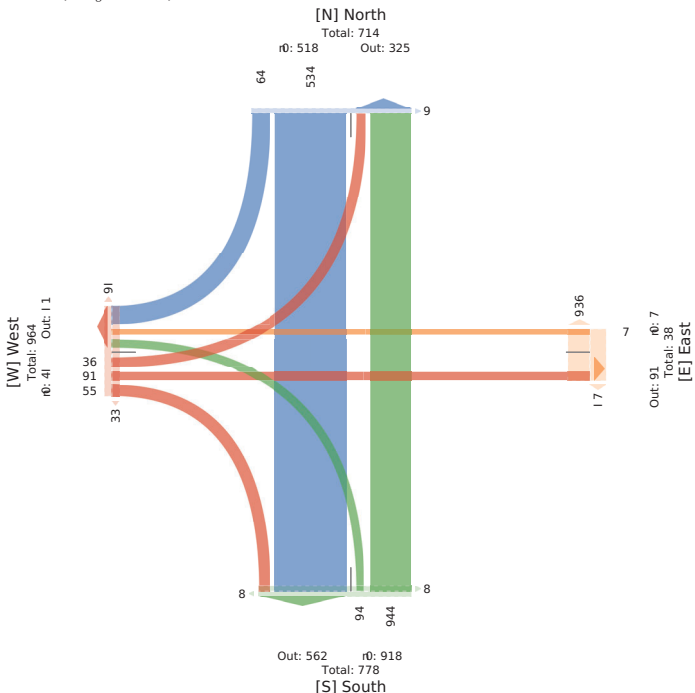


5566814 - COVID - QUEEN ELIZABETH DRWY @ PRI... - TMC  
 T ue May 33, 2022  
 MReay l ual. r32gt l M h3gt l M(  
 6 : Aa- u- t9P) aGc Ms j s idydu- o u ar y, l ueu-)lG C, c 9Hydu- s CHsae, c 9Hydu- s C  
 Ais- v a f L  
 6 : Ms r u BuQ-  
 Rwgkt 3n83, 9s da)B Cgm l nD3Dm hD l4708D7



wBuD9C	f s i P					G a /					j 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
32g0 M	3	k4	0	0	333	0	3	0	0	3	44	0	13	1	0	14	h	D	8	4	
32g1 M	3D	77	0	0	30k	3	0	2	0	0	18	8	0	14	0	4	8	D	0	34	
3g00 M	3k	4	0	0	70	0	3	0	0	3	13	0	m	3	D	32	7	0	2D	33	
Sj3e	4D	82D	0	0	8km	3	0	1	0	1	233	0	3DD	3D	0	3km	7	88	3k	24	
* 6ODsAP	30D*	n7D*	0*	0*	h	1	0*	300*	0*	0*	h	1	0*	k3e*	7D*	0*	h	h2B*	20r	88B*	
* Sj3e	30D*	n7D*	0*	0*	17E*	1	0*	0E*	0*	0E*	1	0*	24h*	2h*	0*	27k*	h	mE*	21r*	8k*	
1 o %	0f787	0f7D	h	h	0k0m	h	h	h	h	h	h	0f33	0D07	h	0f7m	h	048r	h	0f7D	h	
9P) aGc Ms j s idydu-	4t	837	0	0	878	1	0	0	0	0	1	0	3D0	3D	0	37D	h	83	0	2m	
* 9P) aGc Ms j s idydu-	kD*	kD*	0*	0*	kD*	0*	0*	0*	0*	1	0*	k4D*	300*	0*	k4h*	1	h8B*	0*	k2B*	0*	
o u ar y	2	2	0	0	m	1	0	0	0	0	1	0	2	0	0	2	h	2	0	0	
* o u ar y	80*	0h*	0*	0*	30*	1	0*	0*	0*	0*	1	0*	3D*	0*	3D*	1	4E*	0*	0*	21*	
c 9Hydu- s CHsae	0	D	0	0	D	1	0	1	0	0	1	0	1	0	1	1	0	3k	2	0	
* c 9Hydu- s CHsae	0*	2D*	0*	0*	3D*	1	0*	300*	0*	300*	1	0*	2D*	0*	21*	1	0*	300*	D*	24k*	
1 ueu-)lG C	h	h	h	h	3	h	h	h	h	7m	h	h	h	h	7	h	h	h	h	88	
* 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 9Hydu- s CAis--v a f L	h	h	h	h	0	h	h	h	h	h32D	h	h	h	h	0	h	h	h	h	hD	
* c 9Hydu- s CAis--v a f L	h	h	h	h	0*	h	h	h	h	h40E*	h	h	h	h	0*	h	h	h	h	h3Dk*	

1 ueu-)lG C aGc c 9Hydu- s CAis--v a f L l9g9 u.), HgHHP), SgSPe, WkWS6C



dur	DoruBv	OP-M					JaiH					EPJ4					T u H												
		w	s	d	w	CNN	Fact	w	s	d	w	CNN	Fact	w	s	d	w	CNN	Fact	vh									
20220h33 ng hFM		34	32h	0	0	3r1	0	0	3	0	0	3	1h	0	h4	38	0	85	3	3h	3	34	0	nh	1	265			
1g0FM		4	32t	0	0	3am	3	0	1	0	0	1	h3	0	50	0	5	0	32	h	32	0	24	3	2m				
1g0FM		20	322	0	0	3r2	0	0	2	0	0	2	h0	0	58	30	0	88	0	33	2	4	0	22	32	2m			
1g0FM		3	304	0	0	328	0	0	0	0	0	0	h0	0	5n	30	0	8n	3	35	n	33	0	n0	3h	2m			
* SF94		55	1	0	0	h5	3	0	8	0	0	8	200	0	2	4	1h	0	24	2	h	33	h3	0	335	nh	45m		
* CNNPah		327*	82*	0*	0*			0*	300*	0*	0*			0*	12*	302*	0*			155*	32*	117*	0*						
* SF94		52*	142*	0*	0*	h5*		0*	02*	0*	0*	02*		0*	2h*	12*	0*	n0*		h5*	32*	h3*	0*	327*					
F1 %		07.2h	09.5h			( 07h2)							( 07h3)	05.		( 07h4)				07.2.		07.5h.		( 07h8)			09h3		
dor ch ave MPPI-BY-Bhi		5h	18n	0	0	hn.		0	0	0	0	0		0	21n	12	0	2.h		h2	0	h0	0	302			42h		
* dor ch ave MPPI-BY-Bhi		4.3*	4.3*	0*	0*	4.3*		0*	0*	0*	0*		0*	48.5*	4h3*	0*	45.7*			45h*	0*	4.7*	0*	.87*			45.7*		
* 1 ualy		3h*	02*	0*	0*	02*		0*	0*	0*	0*		0*	02*	12*	0*	31*			32h*	0*	0*	0*	327*				02*	
RdYBhi P v wPae		0	h	0	0	h		0	8	0	0	8		0	t	3	0	h		3	33	3	0	3n				n0	
* RdYBhi P v wPae		0*	37*	0*	0*	02*		0*	300*	0*	0*	300*		0*	35*	22*	0*	32*		32h*	30*	27*	0*	32*				n5*	
Fueui Havi																													
RdYBhi P v s -Piik a d																													
* RdYBhi P v s -Piik a d																													

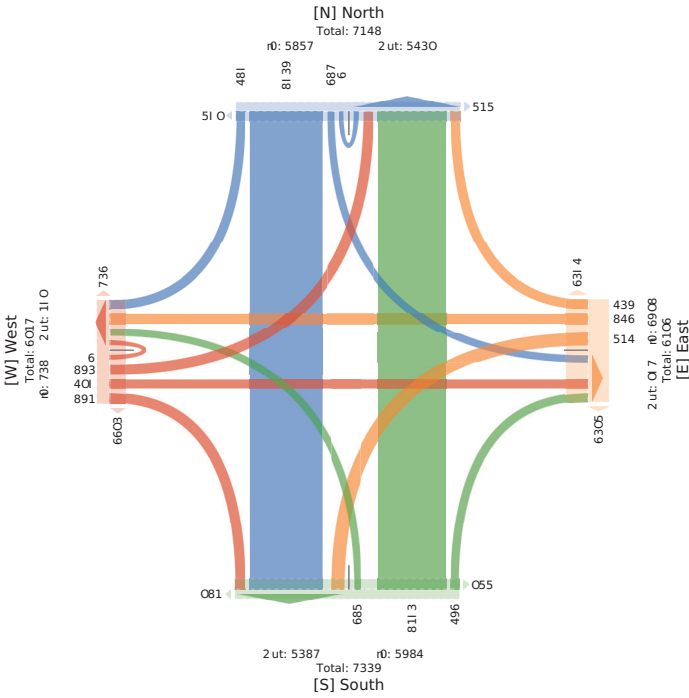
Fueui Havi ave RdYBhi P v s -Piik a d 7d gduffwgwa chS9Sc-), Wg(W)S-v

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 l lan g h ( 6 : gW92 1 M PA -921 M:
1 ) J Cusstl s g (lloes ur F Mcc:Hav)ls3B LuR3l LFIselHr s3wAv)ls cr k cuf3wAv)ls cr
Chfsmnj)
1 ) McREI Ires
ID: -474AB, 3i cvastr - 7852A y3B85 by8b



1 HRFLP fa - Cln COnum
A22 Ccrsd)uDr 6 13
(IPlar3N( 3h , K 8G3C1

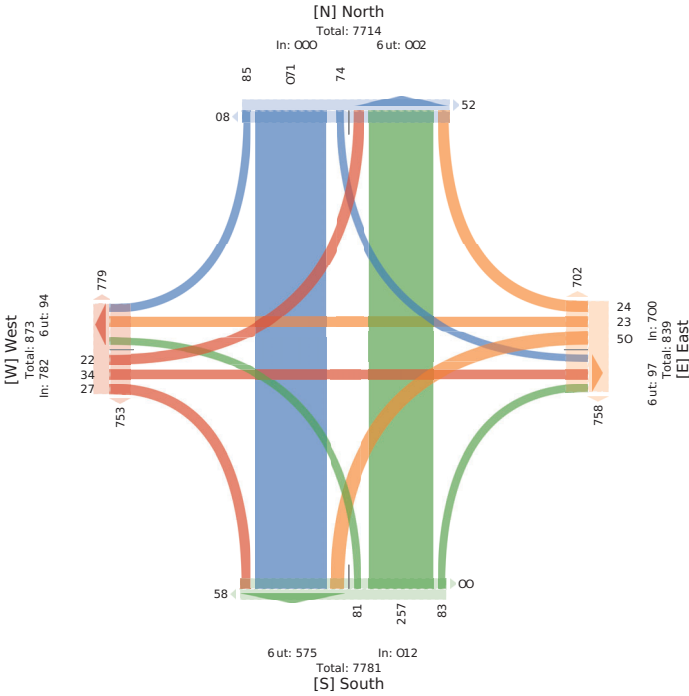
Table with columns for signal phases (S, W, E, N), vehicle counts, and timing parameters. Includes a legend at the bottom: 1) LFIselHr s ur FwAv)ls cr Chfsmnj) - 1 LGk - k(lloes - SolH3W - WSEH

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

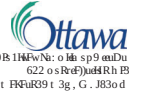


Provided by: City of Ottawa
100 Constellation Dr,
Nepean, ON, K2G 5J9, CA



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

Tue/May y3, 2,
0M Oful In g t h (16:A2 0M - , :A2 0M(- 9 1FR))Oful Csi P
d ) o rrrr Ic H Hx urMw sBak)F3C Fula30FvrfHr 3m)k)F s RI s w3m)k)F r s
O B rrrr Duj) (
d ) J Ms 1H4 F3R
In: 8586, 3c skudR 5, l626f y3-y, fOy, O



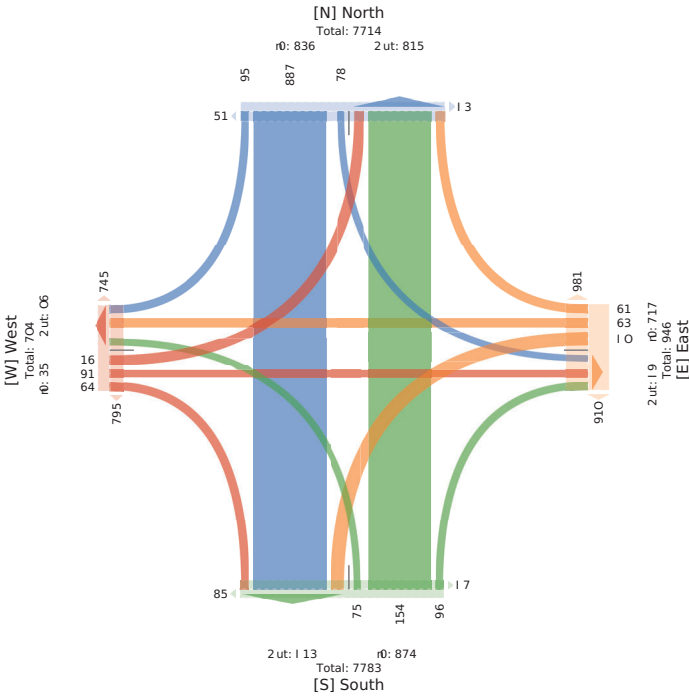
0B 1H4Fw: o ldi sp9 onDu
622 s Rcf)uH Rb B3
f FkUr3R 3g , G . J83o d

Table with columns for signal phases (S, W, E, N), vehicle counts, and timing parameters. Includes a legend at the bottom: 1) FvrfHr urMw sBak)F s Ro BrrrDuj) bc: c fpe1 : 1 HNB3S: SBR 3W, WSI IR

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 dh (62:A2 - M91:A2 PM)  
 - II Clusss (Lit hes ugd Moeacrls3Hnuv3Pndnsrings3Bicacrls and Road3Bicacrls and Crosswalk)  
 - II Movmngs  
 ID: 4746113, Location: 78526y73y8Q. 2Ay.



Provided by: City of Ottawa  
 622 Cassiniasog D33  
 Nnpng3ON3K, G 8J43C-

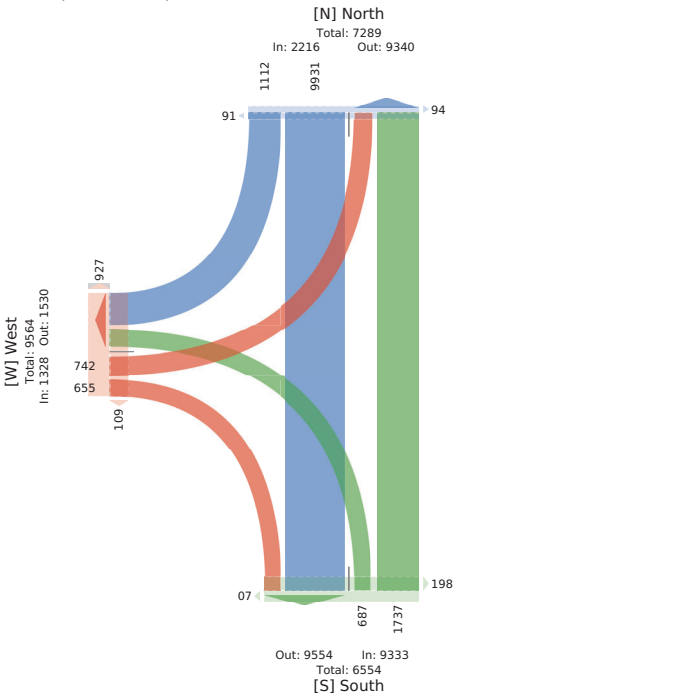
Lst Dirctog	North Totrbhofgd					Tothh Northhofgd					E nse Susohofgd					lge
	R	W	U	- pp	Prd*	W	L	U	- pp	Prd*	R	L	U	- pp	Prd*	
.., 988by 6:22-M	A7	62A	2	64y	2	y.	6A	2	46	62	..	67	2	At	68	..17
6:22-M	47	..4	2	A A	..	68A	81	2	..24	4	82	A2	2	..2	7y	16.
6:22PM	6.1	..17	2	A2	7	691	17	2	..72	6.	77	88	2	44	48	y.4
6:22PM	4.	..16	2	BA	8	..64	AA	2	..8	..1	71	14	2	668	72	y.1
..22PM	668	A2	2	7, 8	..	648	11	2	..16	..7	81	12	2	661	88	..2
A:22PM	676	A A	2	717	..	..6	17	2	..y1	86	..1	62	2	6.	..7	4.
7:22PM	674	A2	2	774	..2	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	71	4.4
1:22PM	664	677	2	..1A	6	4.	A	2	6A2	..1	..4	84	2	..	64	7.6
<b>Wval</b>	666A	..26	2	A67	7.	6828	748	2	..222	..67	711	8yA	2	62A4	76y	1BA
<b>% pproach</b>	A93%	115%	2%	9	9	y85%	..75%	2%	9	9	775%	883%	2%	9	9	9
<b>% Wval</b>	6y3%	A73%	2%	8.5%	9	..A5%	y5%	2%	A63%	9	y9%	42%	2%	615%	9	9
<b>Lit hes ugd Monocacrls</b>	6244	..67y	2	A,71	9	6771	747	2	6472	9	788	817	2	6264	9	1,28
<b>% Lit hes ugd Monocacrls</b>	4.3%	4y8%	2%	4y5%	9	413%	445%	2%	4y5%	9	4y3%	4.5%	2%	4.9%	9	4y3%
<b>Hnuv</b>	y	A	2	62	9	..	6	2	..4	9	..	..	2	62	9	..4
<b>% Hnuv</b>	23%	28%	2%	29%	9	28%	25%	2%	28%	9	63%	29%	2%	62%	9	28%
<b>Bicacrls and Road</b>	y	86	2	R	9	86	2	2	86	4	A	y	2	62	9	664
<b>% Bicacrls and Road</b>	23%	5%	2%	65%	9	A7%	2%	2%	9%	9	23%	65%	2%	62%	9	69%
<b>Pndnsrings</b>	9	9	9	9	7y	9	9	9	9	..28	9	9	9	9	9	A y
<b>% Pndnsrings</b>	9	9	9	9	4y5%	9	9	9	9	485%	9	9	9	9	9	y.5%
<b>Bicacrls and Crosswalk</b>	9	9	9	9	6	9	9	9	9	4	9	9	9	9	9	42
<b>% Bicacrls and Crosswalk</b>	9	9	9	9	..3%	9	9	9	9	75%	9	9	9	9	9	..6%

\*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



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 100 Constellation Dr,  
 Nepean, ON, K2G 5J9, CA



5566814 - COVID - QUEEN ELIZABETH DRWY @ PRI... - TMC  
 Tue/May y3, 2, ,  
 MCFnuv l un g h ( 6 : gA -921 M 1A921 M:  
 P ) CjssLS g Qloes ur F McrcHavyls3BLuR3l LFLsdflr3wQvyls cr kcuF3wQvyls cr  
 CHssmujn:  
 P ) McrRLJ Lrs  
 lB - 474A883l cvudlrr - 75.72Ay73ly5.8b29yb



14 HRFLL fa- Cln cQnnum  
 A22 Ccrsd)udlrr 6 B  
 ( 1Plur 3N( 3h, K 5G3CP

Lst 6Hvstr	( chio Tclmfclrf					Tclno chhofclrf					L lse Eustclrf					De
	k	S	W	Ppp	lLFU	S	i	W	Ppp	lLFU	k	i	W	Ppp	lLFU	
.., 1251y A-921 M	94	55	2	47	..	78	..2	2	88	7	A	A2	2	..	AD	..AB.
A-75H M	92	b2	2	A62	2	5.	A6	2	8y	b	Ay	A8	2	99	b	..A2
A22 M	..5	5A	2	y8	..	7y	AA	2	5b	80	A7	..	2	98	80	Ay2
Ay6l M	92	54	2	b4	2	54	b	2	8y	9	AA	AA	2	92	AD	..A8
<b>ScuQ</b>	A 7	..75	2	984	7	..27	57	2	..5b	9A	57	8y	2	9 A	7A	y7b
<b>* Pppllns</b>	99.8*	88.7*	2*	..	1	y4A*	..24*	2*	..	1	77.8*	55.7*	2*	..	1	..
<b>* ScuQ</b>	AB.8*	9.3*	2*	74.9*	..	y.9*	y..*	2*	97.5*	..	y..*	4.2*	2*	..AB.*	..	1
<b>1 B%</b>	2ybb	2y84	1	2b7A	1	2b5.	2.8y5	1	2.45A	1	2y47	2y8.	1	2b79	1	2b47
<b>1 Qloes ur F McrcHavyls</b>	A.	..9y	2	954	1	..22	57	2	..57	1	59	87	2	Ay	1	y92
<b>* 1 Qloes ur F McrcHavyls</b>	4b.7*	48.y*	2*	4y9*	1	4b.2*	A22*	2*	4b.7*	1	4b.A*	45.5*	2*	48.y*	1	4y8*
<b>BLuB</b>	A	2	2	A	1	A	2	2	A	1	A	2	2	A	1	9
<b>* BLuB</b>	2.b*	2*	2*	2.9*	1	2.5*	2*	2*	2.7*	1	A4*	2*	2*	2.b*	1	2.7*
<b>wQvyls cr kcuF</b>	A	b	2	4	1	9	2	2	9	1	2	9	2	9	1	..6
<b>* wQvyls cr kcuF</b>	2.b*	9.9*	2*	..7*	1	A5*	2*	2*	A..*	1	2*	7.5*	2*	..5*	1	..2*
<b>1 LFLsdflr</b>	1	1	1	1	7	1	1	1	1	4	1	1	1	1	1	98
<b>* 1 LFLsdflr</b>	1	1	1	1	A22*	1	1	1	1	49.5*	1	1	1	1	1	byb*
<b>wQvyls cr CHssmujn</b>	1	1	1	1	2	1	1	1	1	..	1	1	1	1	1	..5
<b>* wQvyls cr CHssmujn</b>	1	1	1	1	2*	1	1	1	1	8.5*	1	1	1	1	1	A..*

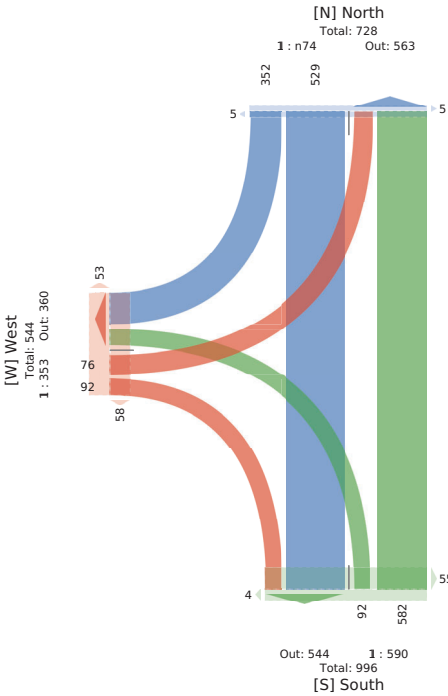
4) LFLsdflr ur F wQvyls cr CHssmujn. i - i LQ8k - k QloesS - SoH3W - WSLJH

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

Sat May 7, 2022  
 Midday Peak (WKND) (12:30 PM A1:30 PM)  
 - II Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)  
 - II Movements  
 ID: 949155, Location: 4. 60174, N. 680378

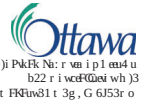


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 100 Constellation Dr,  
 Nepean, ON, K2G . J9, C-



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

Tue/May y3, 2, .  
 0M 0Ful In g t h (IG:A2 0M - 9:A2 0M(- 1 PP)u(CD)Ful s i d)  
 o Cr Gccfc IHFRc usk Mi d )nandfcs FuPa30RfCvuv31 vandfrc i wDi uk31 vandfrc i w  
 r ji cc4 uDf  
 o CMi PF7 Pvc  
 th : 5. 5b993H msel w . 6f. 2by. 3-y69CZyo



Provided by: City of Ottawa  
 622 Cogswallatog Dr3  
 Nnpng30N3K, G 7143C-

hB	h w	f i dR	Ti dR	Ti dR	h Fe	EacN dsk											
Sv F	D	S	W	o KK	O RL	S	H	W	o KK	O RL	D	H	W	o KK	O RL	he	
, 2, -26-2y 6:A20M	9,	96	2	b, y	2	, 9	, 6	2	y b	bb	5	, 2	2	, 5	b.	, , y	
6: 60M	9,	99	2	bA	.	, 9	, .	2	90	bA	bA	, .	2	A6	9	, A	
9:230M	66	60	2	bA	b	, y	b6	2	9	bA	b6	, A	2	AD	bb	, bA	
9:360M	9,	09	2	b62	2	, 6	, A	2	90	4	b.	A9	2	62	O	, 90	
Start	, .	6	y6	2	6, 2	A	bQ	06	2	, 95	62	6b	b3b	2	b6,	AS	5, b
* o BQ ub	, yb*	6, 6*	2*	-	-	-	9CL*	AbD*	2*	-	-	AN*	99L*	2*	-	-	-
* Start	, 92*	, 5L*	2*	669*	-	-	b59*	50*	2*	, 09*	-	6L*	b2b*	2*	b6*	-	-
os %	266y	2y5b	-	2B,	-	-	2690	2K62	-	266,	-	2K62	2y,	O	-	2yCb	-
HFRc usk Mi d vandfrc	, .	6	, y,	2	6by	-	bQ	06	2	, 9y	-	6b	55	2	b62	-	5A
* HFRc usk Mi d vandfrc	b22*	505*	2*	55L*	-	-	505*	b22*	2*	550*	-	b22*	502*	2*	50y*	-	550*
s RfPs	2	2	2	2	2	-	2	2	2	2	-	2	2	2	2	-	2
* s RfPs	2*	2*	2*	2*	-	-	2*	2*	2*	2*	-	2*	2*	2*	2*	-	2*
I vandfrc i wDi uk	2	A	2	A	-	-	-	2	2	-	-	2	-	2	-	-	y
* I vandfrc i wDi uk	2*	bb*	2*	2B*	-	-	bb*	2*	2*	2y*	-	2*	2*	2*	b0*	-	2y*
O RfPs	-	-	-	-	-	-	-	-	-	-	9	-	-	-	-	-	9b
* O RfPs	-	-	-	-	99b*	-	-	-	-	-	5, 0*	-	-	-	-	-	y9b*
I vandfrc i wr ji cc4 uDf	-	-	-	-	b	-	-	-	-	-	-	-	-	-	-	-	O
* I vandfrc i wr ji cc4 uDf	-	-	-	-	AN*	-	-	-	-	-	00*	-	-	-	-	-	, 2B*

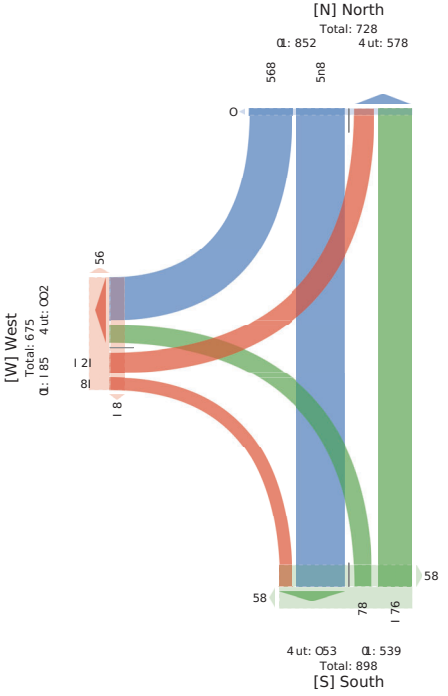
HFRc usk Mi d vandfrc i wr ji cc4 uDf HFRc usk Mi d vandfrc i wr ji cc4 uDf HFRc usk Mi d vandfrc i wr ji cc4 uDf

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

Sat May 7, 2022  
 PM Peak (WKND) (1:30 PM - 03:00 PM) - v r el a H Peak o u l  
 CH H H L L L (i g h n t L a d c M u t u l B y B H L, o e a r y, P e c e l i g d, R g y B H L u d w a c, R g y B H L u d  
 s l u L l m a l k)  
 CH M u r e l e d t L  
 ID: 454. 0Q i u B a t g d: 5160. 75, -71680378



Provided by: City of Ottawa  
 00 s u l t e H i g d D L,  
 Nepean, v N, K2G L14, S C



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

Tue/May y3, 2, .  
 0Fl Lngt h (62:A2 - M9L:A2 PM)  
 - II Clussns (Lit he ug d Moora c h n s 3H n u a v 3 P n d n s r i n g s 3 B i c a c h n s o r R o a d 3 B i c a c h n s o r  
 C r o s s w a l k )  
 - II Movmnges  
 ID: 476A883Locuog: 875W7139y75L 86y1



Provided by: City of Ottawa  
 622 Cogswallatog Dr3  
 Nnpng30N3K, G 7143C-

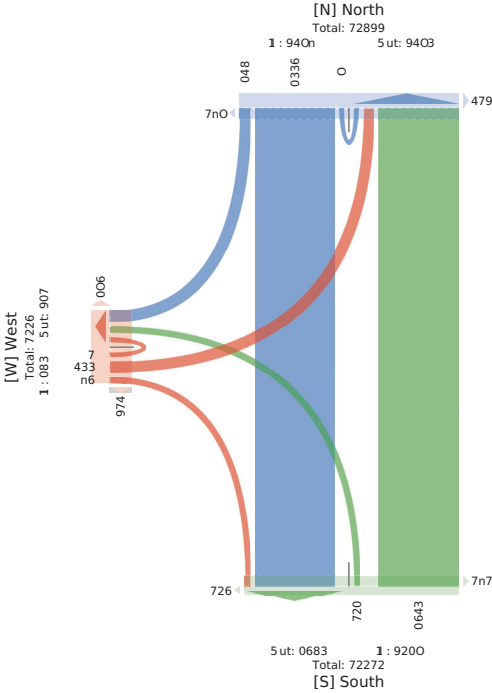
Lne	Dirnctog	North	Tofah	E nse												
Winn	R	W	U	- pp	Pnd*	W	L	U	- pp	Pnd*	R	L	U	- pp	Pnd*	lge
, 2, 2y 62:22- M	, 7	, 4A	2	A6	62	A21	y	2	A6A	62	, .	1	2	, .	84	174
66:23- M	8y	162	2	17y	8y	7, 8	6,	2	12,	, 7	6A	81	2	74	6, 6	68,
6: 22PM	7y	1A	2	142	11	746	-	2	744	A	-	82	2	8,	667	6A,
6:22PM	78	1, 4	2	y8A	y3	1, A	67	2	1A	8,	4	A1	2	87	672	68, 1
, :22PM	11	14,	, .	y12	-	18y	68	2	116	12	4	7,	2	1y	688	68,
A22PM	14	177	2	y, 8	74	11,	6y	2	1, 7	A8	62	16	6	y,	6, 2	68, 6
8:22PM	76	7y2	2	1, 6	4A	114	6y	2	1, 1	82	6,	12	2	y,	62	6A, 4
7:22PM	76	761	2	71y	A*	7, 1	8	2	742	, 8	6A	8y	2	12	4,	6, 6y
1:22PM	61	, 6	2	, 8y	67	, 18	8	2	, 1,	y	A	68	2	6y	8A	7A,
<b>Weal</b>	8A1	8,	4	, 7A	8, y	84A	628	2	728,	, 2	y4	A,	6	81,	48,	62, A,
<b>% p p r o u c h</b>	, 5%	465%	2%	9	9	4y5%	, 3%	2%	9	9	615%	, 5%	25%	9	9	9
<b>% Weal</b>	82%	873%	2%	845%	9	873%	63%	2%	815%	9	2%	A1%	2%	89%	9	9
<b>Lit he ug d Moora c h n s</b>	A2	812A	2	844A	9	81A8	622	2	8yA8	9	y8	A86	6	861	9	6268A
<b>% Lit he ug d Moora c h n s</b>	43%	485%	2%	4A5%	9	46%	415%	2%	4A6%	9	4A3%	y9%	622%	, 5%	9	4A3%
<b>H n a v a</b>	4y	2	44	9	4,	6	2	44	9	-	6	2	A	9	20	9
<b>% H n a v a</b>	29%	, 5%	2%	66%	9	, 5%	65%	2%	, 2%	9	, 5%	25%	2%	22%	9	68%
<b>B i c a c h n s o r R o a d</b>	88	6, 4	2	, 07	9	, 21	A	2	, 2A	9	A	81	2	84	9	84A
<b>% B i c a c h n s o r R o a d</b>	62%	A6%	622%	83%	9	85%	, 5%	2%	83%	9	A5%	665%	2%	625%	9	87%
<b>P n d n s r i n g s</b>	9	9	9	9	886	9	9	9	9	, 8,	9	9	9	9	9	, 1,
<b>% P n d n s r i n g s</b>	9	9	9	9	42%	9	9	9	9	, 3%	9	9	9	9	9	4, 5%
<b>B i c a c h n s o r C r o s s w a l k</b>	9	9	9	9	81	9	9	9	9	A,	9	9	9	9	9	y8
<b>% B i c a c h n s o r C r o s s w a l k</b>	9	9	9	9	43%	9	9	9	9	663%	9	9	9	9	9	y9%

Pndnsrings ug d B i c a c h n s o r C r o s s w a l k 5 L: L n f e 3 R: R i t h e 3 W W h r F 3 U: U 9 W P g

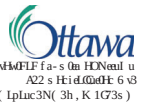
5566814 - COVID - BANK ST @ AYLMER AVE - MAY... - TMC  
 Sat May 7, 2022  
 Full Length (10:30 AM-6:30 PM)  
 All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)  
 All Movements  
 ID: 941355, Location: 54.3946, -74.685176



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



5566814 - COVID - BANK ST @ AYLMER AVE - MAY... - TMC  
 Tue/May 3, 2, 2,  
 M/F/Wa i Lun g: h ( 6 : gA -911 M PA911 M:  
 ) (Cs GiiLi gl0r e ucF MHfHbBLI 3R Luwa3l LFI uoici 3k BBLI H mHfE3k BbBLI H s vH11 uo:  
 ) (CMHdLdLca  
 46 - 71A993d HhHhH- 91371. 3By15 b9Ay.



1 vH11F1a-s (b) HCNmli u  
 A22 s H e i d d o a t H e 6 v 9  
 ( 1pluc3N( 3h, K 1G7s )

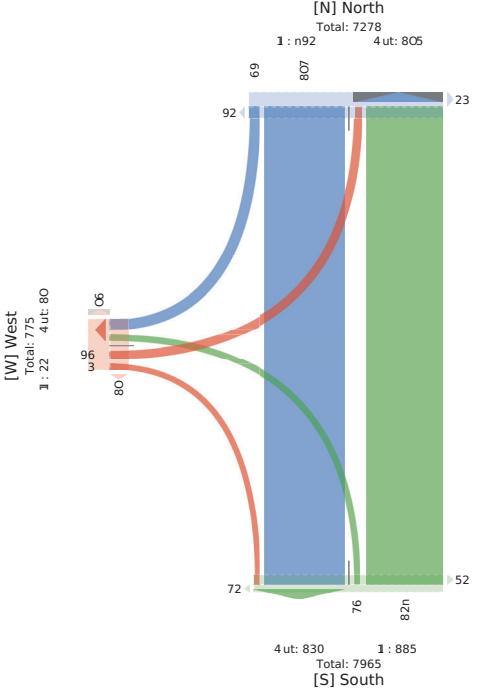
dlu	(Har	TEP	Lie
60UBdt	TEP	(Har	Eal
	m S W ) pp	S d W ) pp	m d W ) pp
SDL			
, 2, , 121By A -911 M	A A, 2 A9	A B , 2 A 1	A 8 y 2 A2
A22 M	A A, 2 A,	A , 9 2 A2	A , 9 2 , 81
A41 M	A A, 9 2 A,	A A A 8 2 A19	A b 2 7 81
A62 M	A A, 7 2 A,	A A y , 2 A9	7 8 A 2 A2
S1ac	10 .ba 2 y69	ba .9y Al 2 ...	ba 7 81 2 90
* ) pp14b	35* 7, 3* 2* P	7, 3* .9* 2* P	23* y78* 2* P
* S1ac	83* 9, 3* 2* 1A2*	995* A2* 2* 9 2*	25* 9* 2* 85*
1R%	291b 25y. P 29b2	25y. 25, 1 P 29, 7	25. y 29Ab P 29yb
d0r e u c F M H H b B L I	9. .8. 2 .yb	.28 Al 2 .Ab	b , 7 2 By
* d0r e u c F M H H b B L I	b. 3* 7, 3* 2* 7, 3*	785* A2* 2* 785*	bb5* b, 5* 2* b59*
R1na	2 A 2 A	A P A0 2 2 A0	H 2 2 2 2
* R1na	2* Ab* 2* A6*	P , 5* 2* 2* , 5*	H 2* 2* 2* 2*
k B b L I H e m H F	y 8y 2 99	P 82 2 2 82	H A , 2 y H bA
* k B b L I H e m H F	A5* 19* 2* , 2*	P 95* 2* 2* 99*	H A0* A, 5* 2* A15*
1111e0ci	P P P P 729*	P P P P 729*	P P P P 7, 3*
k B b L I H e s s H 11 u0	P P P P P	P P P P P	P P P P P
* k B b L I H e s s H 11 u0	P P P P P 75*	P P P P P 85*	P P P P P 95*

4) LFI uoici ucF k B b L I H e s s H 11 u0 5d-d L Q B m-m b r e S-Sr v d 3W-W S J w c

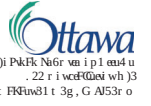
5566814 - COVID - BANK ST @ AYLMER AVE - MAY... - TMC  
 Sat May 7, 2022  
 Midday Peak (WKND) (12:30PM - 1:30PM)  
 l (Cs GiiLeL (gihntLaod Mr tr y H e L , v eaBy, Pedeltiaol, RiH y H e L r o wrad, RiH y H e L r o s r l l m a k)  
 l (CMr B e i eotL  
 9D: 4A1533, gr H t i r o: 3A54A6, -7A683176



Por Bded by: s i y r i O t t a m a  
 100 s r o l e e G a t r o D c  
 Nepean, ON, K2G A4, s 1



5566814 - COVID - BANK ST @ AYLMER 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 C r G c c F c I H E R e u n k M i d ) n a n t F c s Fu Pa 30 F c F y u v c 3 l v n a n t f c i w D i u k 3 l v n a n t f c i w  
 r j i c e 4 u t  
 o (CMr P P F w c:  
 65A 9 : 3 H i n e s i w 6 : A 9 5 A f 3 - y A f O . y f



0) j P k i F, N b r v a i p 1 m s t u  
 22 r i v e c F G d e i w h j 3  
 r F k i u 3 l t 3 g, G A i 5 3 r o

HFB	(1) dR	(1) dR	(1) dR
b v H u n d w	(1) d R N d u k	(1) d R N d u k	(1) d R E u c N d u k
S v F	D S W o NK 0RLU	S H W o NK 0RLU	D H W o NK 0RLU
, 2, , -2A2y, 6 A0M	.y .fy 2 .O , G	.y: 2 2 .y: y	9 . . 2 . A 19
9620M	.O .yO 2 .5f 5	.A5 : 2 .f9 y	. 2 2 . , 9A
96 A0M	. .A 2 .f9 .2	.f2 A 2 .fA . .	. , 9 2 . , y 12
9820M	. .f. 2 .O .f	.O . . 2 .O . .	. . . 2 . 9 .f
S1ac	fO fAO 2 y, f y9	fYA . . 2 fG	. . . N 2 fy . . .
* o H Q i u b	5b* 52h* 2* .	5Ch* .H* 2* .	.f, b* O H * 2* .
* S1ac	.H* : :b* 2* : 5b* .	.:A* 2b* 2* :f, b* .	. 2b* 91C* 2* :b* .
0s %	26. , 26, f - 26, :	. 262y 2bA2 - 26. ,	. 2H CO 2bQy - 2H2, -
H E R e u n k M i d j u n a n t f c	f. .f99 2 f5: .	.f. , . 2 2 f9, .	. . . A 2 fA .
* H E R e u n k M i d j u n a n t f c	Chy* 5fh* 2* 5Ae*	. 5, b* 526* 2* 5, b* .	. . 22* 5fh* 2* 5yR*
s FuPa	. .A 2 .f .	. .9 . 2 .:	. 2 2 2 2
* s FuPa	.b* .9* 2* ., b* .	. .b* 5b* 2* ., b* .	. 2* 2* 2* 2*
I v n a n t f c i w D i u k	f . 2 2 .f .	. :2 2 2 :2	. 2 . 2 .
* I v n a n t f c i w D i u k	C1Q* .b* 2* ., b* .	. A6* 2* 2* A0*	. 2* 9H* 2* 98*
0HkRyone	. . . . fA	. . . .	. . . .
* 0HkRyone	. . . . C32*	. . . . 5, 9*	. . . . C38*
I v n a n t f c i w j i c e 4 u t	. . . . O	. . . .	. . . .
* I v n a n t f c i w j i c e 4 u t	. . . . .b*	. . . . .9*	. . . . .f, b*

4) F R c F y u v c u n k I v n a n t f c i w r j i c e 4 u t b H E H P b D S D H E R e S 6 S f 9 d 3 W G W S d j w

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

Sat May 7, 2022  
PM Peak (WKND) (21:30 PM - 23:30 PM) - v r r e l a t a P e a k o u a l  
C H S H i l l e L e ( i g h t L a d c M u t u l B y B i l e o e a r y P e c e l t i g d c R g y B i L u d w a c R g y B i L u d  
s l u L i m a l t  
C H M u r e d t l  
9 D 1 4 3 5 Q ; i u f a t g d l : 3.0436, -73.68: 576



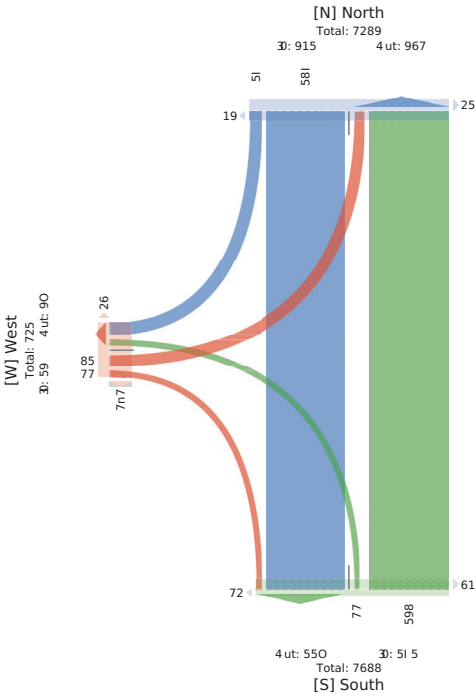
Plur g e c b y l s b y u l v t a m a  
500 s u l t i e H i g u d D L  
N e a p e d, v N, K 2 G 3 1 4, S C

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

Tue/May 3, 2,  
O P I L n g h t ( 6 2 : A 2 - M 9 : A 2 P M )  
- I I C l a s s e s ( L i t h s 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 u 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 )  
- I I M o v e m e n t s  
I D : 7 6 A 9 8 5 3 L o c a t i o n : 8 7 A 7 5 y 4 3 9 7 1 5 8 A 9 8



Provided by: City of Ottawa  
622 Cogswell/303K, G 7143-C



Dir	Disctng	North ToRth/Fgd									East S. nstb/Fgd									ToRth Nordth/Fgd									S. nstb East/Fgd								
		R	W	L	U	-pp	Prd*	R	W	L	U	-pp	Prd*	R	W	L	U	-pp	Prd*	R	W	L	U	-pp	Prd*												
2	2	58	7	2	54	6	4	2	8	2	6A	82	y	A2A	6	2	66	2	2	2	11	6	A2	2	2	2	2	67	14	1,5							
6:22P	M	2	1,6	62	2	1A6	5	68	2	1,2	2	1088	66	176	2	2	11	6	A2	2	2	2	2	2	2	2	A2	622	60A								
6:22PM		6	1A	6A	2	18y	8	2	2	8	2	8	8	5	182	2	2	185	2	A6	2	2	2	2	2	2	AA	6	2	60V							
6:22PM		6	18y	67	2	11A	A	65	6	1	2	7	656	66	1	2	2	1A	8	AA	2	2	2	2	2	2	A6	6	6	607							
:22PM		y	6	67	2	y,4	y	65	-	1	2	1	61	68	177	2	2	11A	7	A6	2	6	2	2	2	2	A6	6	6	611A							
A22PM		2	y,2	1	2	y,1	8	2	2	2	2	7	A27	6y	154	2	2	y21	2	AI	6	6	2	2	2	A6	6	6	677	6847							
8:22PM		1	154	68	2	y24	8	7	2	1	2	A6	y6	6	y,8	2	2	yA2	4	AA	2	2	2	2	2	A7	6	6	6	6766							
7:22PM		1	744	6	2	16y	5	6A	2	8	2	6y	821	6	y65	2	2	yA2	A	y	2	6	2	2	2	2	2	2	2	6,4	6A1						
1:22PM		2	,44	A	2	A2	2	1	2	A	2	4	661	1	AA	2	2	A6	2	4	2	6	2	2	2	62	2	2	11A								

\* Pn dr s r i u g s 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 V 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: 54894.79, -7486.5335



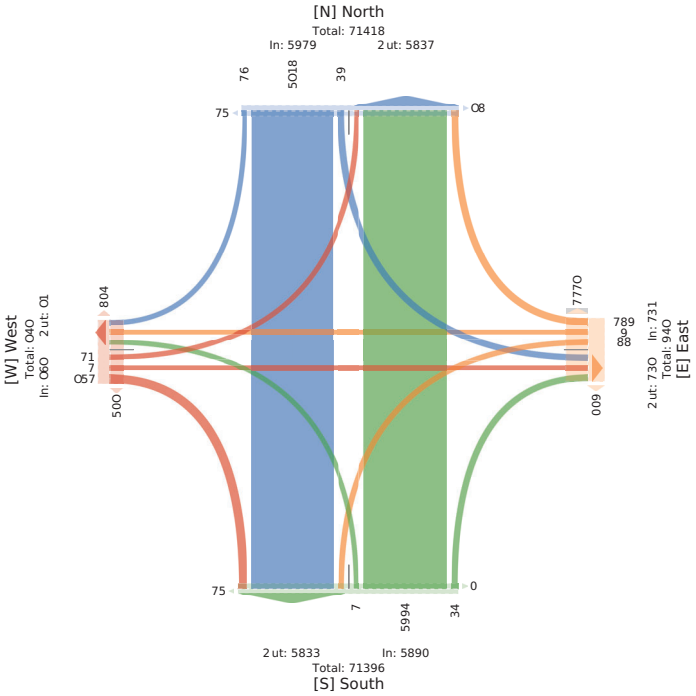
Provided by: City of Ottawa  
100 Constellation Dr,  
Nepean, ON, K2G 4J9, CA

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

Tue/May 3, 2,  
M C F M a 1 m g h ( 6 : g A A 9 2 1 M P A - 9 2 1 M :  
1 ) C H S s l s g ( I t o s u r F M c e H a v s L s B L u R 3 L L f s d f r s 3 w v a v l s c r k c u c f 3 w a v l s c r  
C H S s m u n )  
1 ) M c R I I L r e s  
I D - 4 7 A 9 8 5 3 i c v u d r - 8 7 9 4 7 5 y 4 3 9 7 1 5 8 8 9 9 8

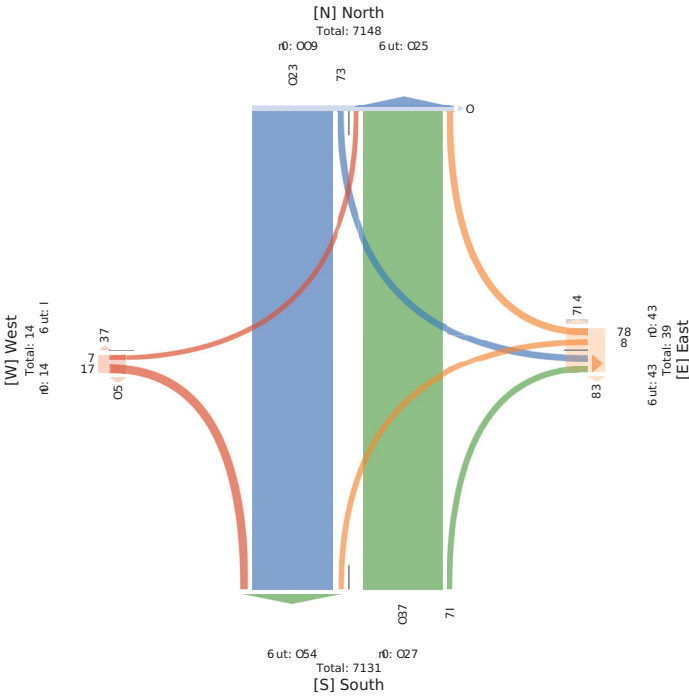


1 H R F I F F a C i n c o n N a u n e  
A 2 2 C e r s r d l a d r 6 F B  
( 1 P L u r 3 N 3 h, K 7 G 3 C 1



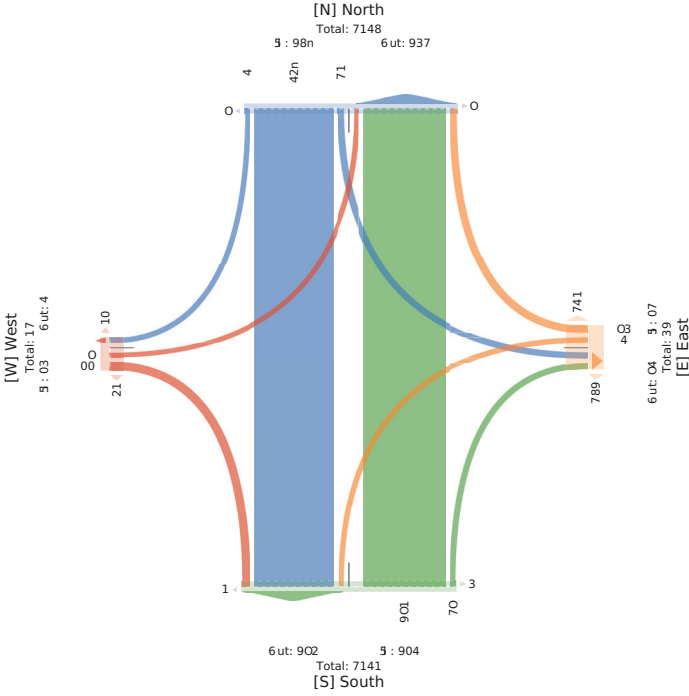
I d	O l v s t r	T c E a f c b r F									I u s e I a s t c b r F									I c E a c h o f c b r F									I s e J u s t c b r F								
		k	S	I	W	1	pp	1	LFU	k	S	I	W	1	pp	1	LFU	k	S	I	W	1	pp	1	LFU	k	S	I	W	1	pp	1	LFU				
2	2	58	7	2	54	6	4	2	8	2	6A	82	y	A2A	6	2	66	2	2	2	11	6	A2	2	2	2	2	67	14	1,5							
:22P	M	2	1,6	62	2	1A6	5	68	2	1,2	2	1088	66	176	2	2	11	6	A2	2	2	2	2	2	2	2	A2	622	60A								
6:22PM		6	1A	6A	2	18y	8	2	2	8	2	8	8	5	182	2	2	185	2	A6	2	2	2	2	2	2	AA	6	2	60V							
6:22PM		6	18y	67	2	11A	A	65	6	1	2	7	656	66	1	2	2	1A	8	AA	2	2	2	2	2	2	A6	6	6	607							
:22PM		y	6	67	2	y,4	y	65	-	1	2	1	61	68	177	2	2	11A	7	A6	2	6	2	2	2	2	A6	6	6	611A							
A22PM		2	y,2	1	2	y,1	8	2	2	2	2	7	A27	6y	154	2	2	y21	2	AI	6	6	2	2	2	2	A6	6	6	677	6847						
8:22PM		1	154	68	2	y24	8	7	2	1	2	A6	y6	6	y,8	2	2	yA2	4	AA	2	2	2	2	2	2	A7	6	6	6	6766						
7:22PM		1	744	6	2	16y	5	6A	2	8	2	6y	821	6	y65	2	2	yA2	A	y	2	6	2	2	2	2	2	2	2	2	6,4	6A1					
1:22PM		2	,44	A	2	A2	2	1	2	A	2	4	661	1	AA	2	2	A6	2	4	2	6	2	2	2	2	62	2	2	11A							

\* I L F I s d f r s u r F w a v l s c r C H S s m u n. i - i L o B k - k I t o e S - S o E 3 W - W S E H



Dir	Dir	Dir	Dir	Dir	Dir	Dir	Dir	Dir	Dir
...	...	...	...	...	...	...	...	...	...

0FRfoelab3k oavFo CB d iCod uif r 7r Fpbn7mHv875v3W7W5s IB



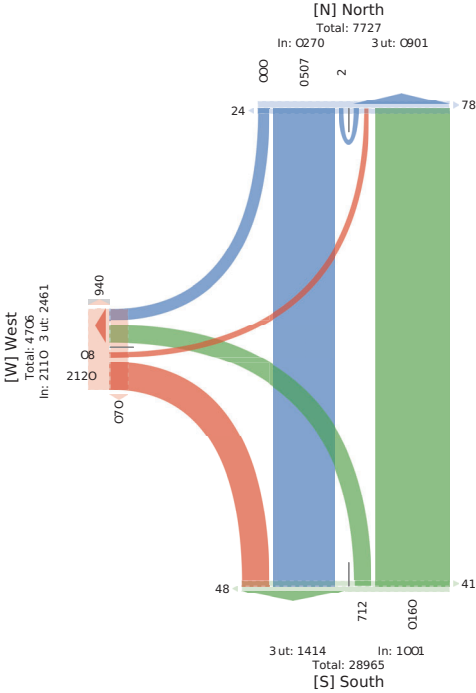
Dir	Dir	Dir	Dir	Dir	Dir	Dir	Dir	Dir	Dir
...	...	...	...	...	...	...	...	...	...

Pndnsrings ugd Bicaclns and Crosswalk5L: Lnfe3R: Rit he3W Wrf3U: U9Wfng

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 ) CjssLs g lloes ur F Mce: HavjLs3B LuRa3l LFLsd#r s3w0avjLs cr kcuF3w0avjLs cr  
 CHssm:n  
 1 ) McRLL Lrs  
 IB - 47A9783i cvud#tr - 57.94yyy, 3y7.8b7527



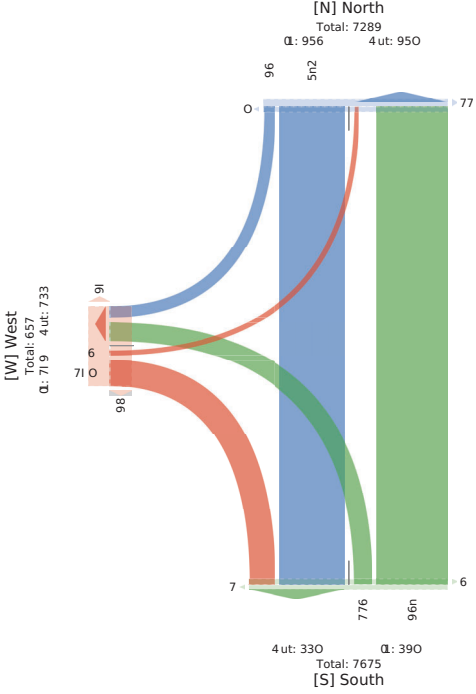
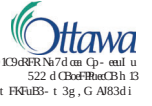
Lid 6Hd#tr	Cld Tcl of cJrF					Tclm ( cld of cJrF					Lse Eust cJrF				
	k	S	W	1 pp	1 LFL	S	i	W	1 pp	1 LFL	k	i	W	1 pp	1 LFL
AA	ABA	2	AB	5	AB	95	2	AB	2	72	A	2	7A	.	A
AA571 M	Av	A24	2	A 8	2	AB	.	b 2	AB	A	52	2	2	52	99
A 22 M	Av	A 9	2	Av	.	AA	92	2	AA	9	94	.	2	5A	9y
A 37 M	AA	A 3	2	AB	.	AA	.	A 2	AB	2	59	2	2	59	5
Scaj	79	542	2	759	AB	794	A9	2	87	5	Av	9	2	Av7	Av7
* 1 ppHaw	4b*	42.*	2*	P	P	b.y*	Av9*	2*	P	P	4b9*	Av9*	2*	P	P
* Scaj	9.4*	97.8*	2*	94.8*	P	94.9*	b.*	2*	9y.8*	P	A.8*	2.*	2*	A.8*	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 lloes ur F Mce:HavjLs	58	57y	2	729	P	54b	AAA	2	824	P	AB5	9	2	Avy	P
* 1 lloes ur F Mce:HavjLs	b8.b*	49.9*	2*	4.8*	P	4.5*	4b.*	2*	49.5*	P	47.9*	A22*	2*	47.5*	P
BLab	2	Av	2	Av	P	Av	.	2	A4	P	2	2	2	2	P
* BLab	2*	9.7*	2*	9.A*	P	9.*	Ab*	2*	.4*	P	2*	2*	2*	2*	P
w0avjLs cr kcuF	y	AB	2	.9	P	.	5	2	2	.5	b	2	2	b	P
* w0avjLs cr kcuF	Ab.*	9.9*	2*	5.*	P	5.7*	2*	2*	9y.*	P	5y*	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*	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) LFLsd#r s ur F w0avjLs cr CHssm:n. i - i LQBk - k lloes - 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 lPd lloes ur F Mce: HavjLs3B LuRa3l LFLsd#r s3w0avjLs cr kcuF3w0avjLs cr  
 CHssm:n  
 1 ) McRLL Lrs  
 IB - 47A9783i cvud#tr - 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	5BO	5	66	2	2	66
65:AM	.	5.	2	5AA	5	5Ab	.	O	2	5OB	2	.O	.	2	65
67:20M	52	5.5	2	5.5	8	5Ab	.	5	2	5Q	.	Ab	6	2	AD
65:AM	5.	558	2	5.	.	5Q	.	b	2	.2b	.	6y	2	2	6y
Scaj	bb	AS8	2	AOA	5.	b.6	55b	2	y62	y	5O	y	2	582	5y
* 1 RKClav	55*	OOy*	2*	.	.	OK*	5Ay*	2*	.	.	8b.*	.6y*	2*	.	.
* Scaj	66*	.66*	2*	.OB*	.	65.*	y6*	2*	600*	.	5.6*	2A*	2*	5.6*	.
0) %	2bA	2f86	2	200y	.	2f8b.	2b.y	2	2f86	.	2825	286.	O	2f8A	.
r dloes ur MCG:ChavFo	b2	6CA	2	ASA	.	AvA	556	2	bOB	.	5y.	y	2	5y8	.
* r dloes ur MCG:ChavFo	82B*	8.8y*	2*	8.E*	.	8.8y*	8CE*	2*	8.6y*	.	862*	522*	2*	866*	.
) Rfda	2	5.	2	5.	.	55	5	2	5.	.	5	2	2	5	.
*) Rfda	2*	.E*	2*	.E*	.	5KP*	2B*	2*	5b*	.	2fA*	2*	2*	2fA*	.
k0avFo CBmCulR	b	.	2	.O	.	.O	5	2	.8	.	52	2	2	52	.
* k0avFo CBmCulR	8E*	6L*	2*	6OP*	.	bE*	2B*	2*	AL*	.	AL*	2*	2*	AL*	.
0HFOstulb	.	.	.	.	55	.	.	.	.	y	.	.	.	.	56
* 0HFOstulb	.	.	.	.	85y*	.	.	.	.	52*	.	.	.	.	85E*
k0avFo CBd Kcol ul	.	.	.	.	5	.	.	.	.	2	.	.	.	.	56
* k0avFo CBd Kcol ul	.	.	.	.	OL*	.	.	.	.	2*	.	.	.	.	OB*

4) FFLsd#r s ur F w0avjLs cr CHssm:n. i - i LQBk - k lloes - SoH3W - WSJH

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

Sat May 7, 2022  
 PM Peak (WKND) (1 PM : 3 PM) : - Qvar Peak 1 Hov  
 u r AnGRC(s L i gtCah MHHdydreC l eaQy, PeneGvahC c ldydreCH BfHn, c ldydreCH  
 AvHCRark)  
 u r MHDwehC  
 nDI 93453, s s HatHhI 13697772, :736 83103



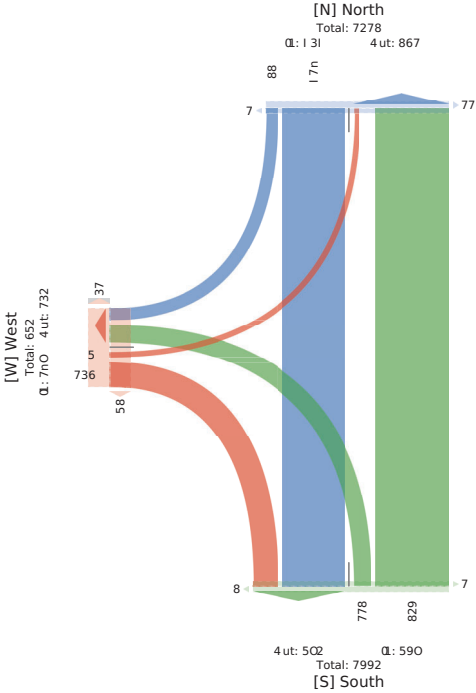
PHHonen byl Alty H - traKa  
 400 AHDematH Dc  
 Nepean, - N, K2G 3J9, Au

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

Tue Maa y3, 2, ,  
 OFH Lngt h (62:A2 - M9I:A2 PM)  
 - II Clluss (Lit hsg ugd Moeacrcs3Hnuva3Pdndrsrugs3Bicacns og Roud3Bicacns og  
 Crosswalk)  
 - II Movmngs  
 ID: 476A743, Location: 875M482A39/79. 16y



Providnd ba: Cta of Ottawa  
 622 Cogsenllusog Dr3  
 Nnpng3ON3K, G 7143C



Dir/Seg	Northbound						East						Southbound						S use					
	R	W	L	U	-pp	Prst	R	W	L	U	-pp	Prst	R	W	L	U	-pp	Prst						
2, :287By 62:22-M	6	.71	2	2	.7y	6	AA	2	6	2	.AB	47	.	A	2	2	.82	1	2	2	2	2	81	7.96
66:22-M	.	7.6	.	2	.7,7	A	1,	2	.	2	18	.y7	68	72y	2	2	.7,6	62	2	2	2	2	2	66.62
6, :22PM	.	7.7y	6	2	.782	2	46	2	y	2	.4,	87A	.	812	2	2	.8,	67	2	2	2	2	2	66.2
6:22PM	.	7.6	.	2	.7,2	6	48	2	8	2	.4,	847	6A	8, y	2	2	.882	68	2	2	2	2	6	41.6274
:22PM	6	7A	6	2	.748	2	47	2	8	2	.4	76A	6,	728	2	2	.761	6y	2	2	2	2	6AA	6, 24
A:22PM	8	741	6	2	.126	2	667	2	8	2	.664	1,.	A	8, y	2	2	.7,6	.	6	2	2	2	6	68y
8:22PM	.	7y8	2	2	.7y1	A	6,6	6	6	2	.688	18,	AA	761	6	2	.772	61	2	2	2	2	68,	6, 2y
7:22PM	6	7Ay	6	2	.7A4	A	6, 2	2	2	2	.6,	y8,	A	847	2	2	.76,	.	2	2	2	2	67y	66y4
1:22PM	2	.17	1	2	.y6	8	y,	2	6	2	.y4	.4y	6,	.y	2	2	.87	1	6	2	2	2	6	7y4
<b>West</b>	67	8.841	6,	2	.88, A	6,	64	6	Ay	2	.7y	8881	6y7	A, 77	6,	2	.82AA	622	.	6	2	2	A	41,
<b>% approach</b>	238%	448%	238%	2%	8y2%	9	473%	28%	83%	2%	9	4	828%	473%	2%	2%	9	113%	46%	2%	2%	9	4	
<b>% Lit hsg ugd</b>	62	867,	7	2	.86yA	9	yy2	2	AI	2	.21	9	616	A22	6,	2	.Ay18	9	.	2	2	2	9	y87
<b>% Lit hsg ugd Motorcacs</b>	11.5%	483%	86.5%	2%	483%	9	4832%	2%	4y9%	2%	4832%	9	4, 52%	448%	622%	622%	4.48%	9	622%	2%	2%	2%	115%	448%
<b>% Haava</b>	2	621	.	2	.62	9	1	2	2	2	1	4	6	622	2	2	.636	4	2	2	2	2	2	67
<b>% Haava</b>	2%	.8%	61.5%	2%	.8%	9	25%	2%	2%	2%	25%	9	23%	.8%	2%	2%	.5%	9	2%	2%	2%	2%	9	5%
<b>Bicacns og Road</b>	7	6A	7	2	.68,	9	8A	6	6	2	.87	9	6A	677	2	2	.61,	9	2	2	2	2	6	9 Ay1
<b>% Bicacns og Road</b>	1.6%	42%	86.5%	2%	45%	9	75%	62.2%	.5%	2%	75%	9	y3%	85%	2%	2%	.65%	9	2%	62.2%	2%	2%	1.6%	9, 6%
<b>Prndrsrugs</b>	9	9	9	9	9	9	66	9	9	9	9	9	8627	9	9	9	9	9	622	9	9	9	9	4A
<b>% Prndrsrugs</b>	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	5	
<b>Bicacns og Crosswalk</b>	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	
<b>% Bicacns og Crosswalk</b>	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	

Prndrsrugs ugd Bicacns og Crosswalk: LntfR: Rtt h8W WtrF9U: U9AFg

5566814 - COVID - BANK ST @ MARCHE WAY - 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: 941349, Location: 54.399503, -74.68617



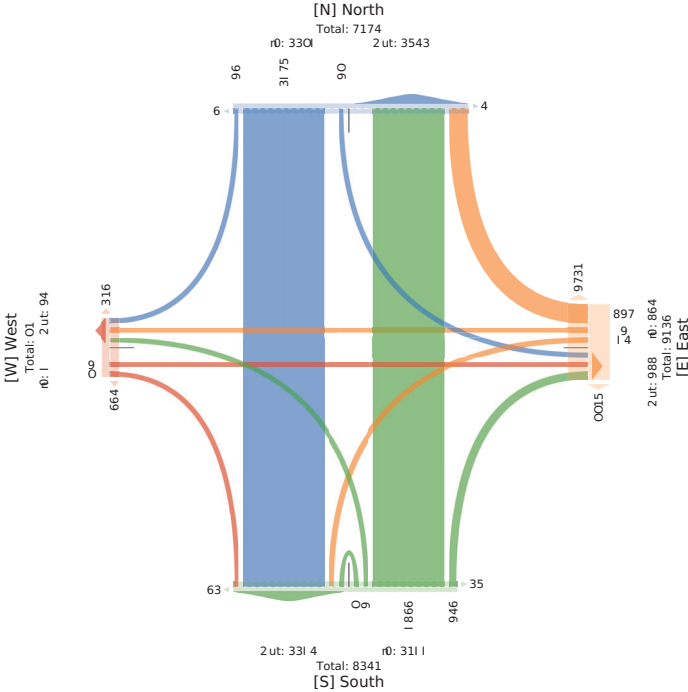
Provided by: City of Ottawa  
 100 Constellation Dr,  
 Nepean, ON, K2G 4J9, CA

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

Tue Maa y3, 2, ,  
 MCFua 1 Lun g h ( 6 : gA92 1 M PA -92 1 M:  
 1 ) CAssLS g lloos ur F McceHavyls3BLuRa3L LFLsdtr s3wkvls cr kcuF3wkvls cr  
 CHssmnj  
 1 ) McrRLJ Lrs  
 IB - 47A97431 cvudtR - 875448293B/75 b. Ay

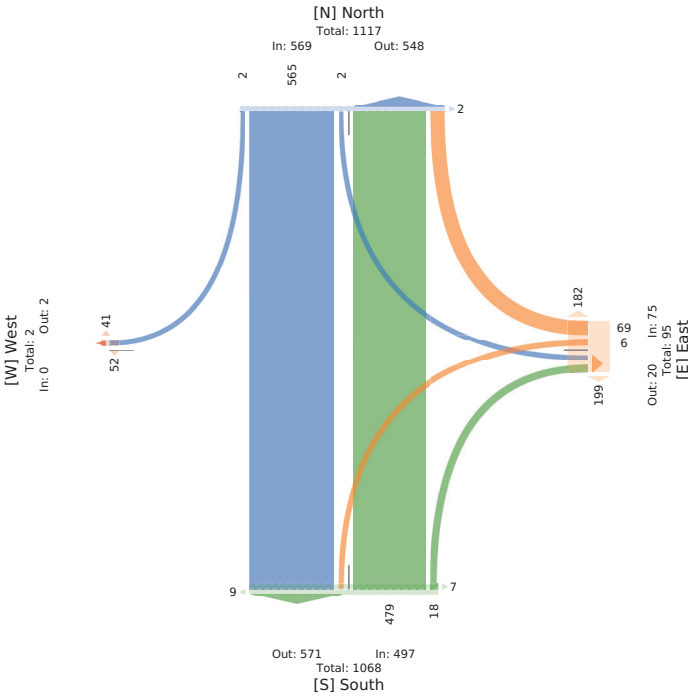


14 HRFIF fa- Cta cNnmu  
 A22 Cers4)ndtr 6 IB  
 ( LPlur 3N( 3h, K 7G3C1



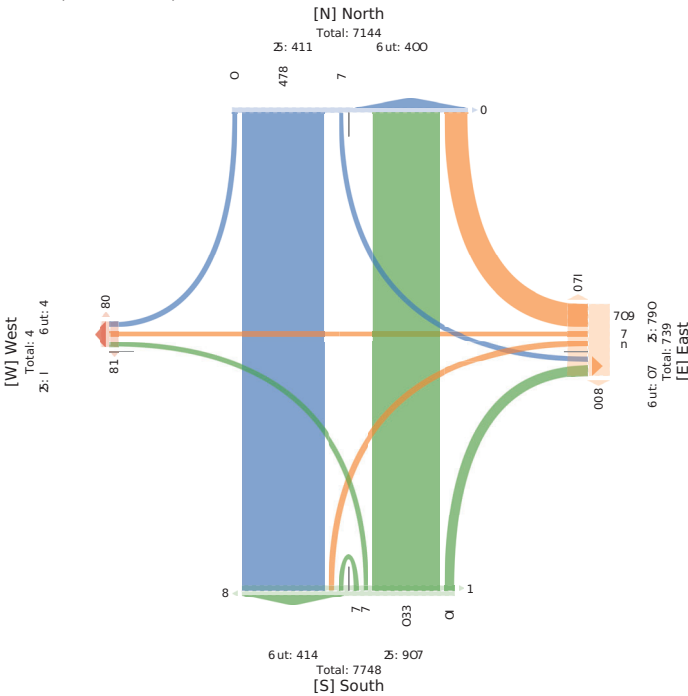
Ld	chb						use						Tc bio						T use					
	k	S	I	W	1 pp	1 LU	k	S	I	W	1 pp	1 LU	k	S	I	W	1 pp	1 LU	k	S	I	W	1 pp	1 LU
SO L	A	AB4	.	2	.A7,	.	AB	2	2	2	.AB	y8	9	AB9	2	2	.AB	.	2	2	2	2	92	92
AAB71 M	2	A b	2	2	.A b	2	AB	2	A	2	.A7	y4	9	A B	2	2	.A y	7	2	2	2	2	.AB	.y2
A :22 M	2	AB2	2	2	.AB2	2	.7	2	.	2	.y	47	A2	AA7	2	2	.A7	9	2	2	2	2	.9A	.4,
A :47 M	A	AB8	2	2	.AB4	2	2	A	2	2	.AB	A,4	ADy	2	2	.A24	.	2	2	2	2	.AB	.y3	
<b>Scuo</b>	.	7,7	.	2	.7,4	.	.4	2	2	2	.y7	8bA	8b	8y4	2	2	.84y	A	2	2	2	2	.48	ABBA
<b>* 1 ppHacs</b>	28*	448*	28*	2*	.28*	P	14, 52*	2*	152*	2*	2*	P	195*	4, 38*	2*	2*	.P	P	2*	2*	2*	2*	.P	P
<b>* Scuo</b>	25*	849*	25*	2*	.849*	P	.52*	2*	25%	2*	.5*	P	165*	8, 52*	2*	2*	.895*	P	2*	2*	2*	2*	.2*	P
<b>1 B%</b>	2922	2986	25	2	.P 25k,.	P	252b	P2922	P 29A	P2B72	2987	P P 2984	P	P	P	P	P	P	P	P	P	P	P	P
<b>1 lloos ur F McceHavyls</b>	.	7y,	2	2	.798	P	.b	2	.	2	.y8	P	88y	2	2	.8,7	P	2	2	2	2	.2	AY9	
<b>* 1 lloos ur F McceHavyls</b>	A22*	485*	2*	2*	.495*	P	148.5*	2*	A22*	2*	.485*	P	A22*	493*	2*	2*	.495*	P	2*	2*	2*	2*	.P	485*
<b>* Blabls</b>	2*	A,	.	2	.AB	P	2	2	2	2	.2	P	2	Ay	2	2	.Ay	P	2	2	2	2	.2	P
<b>* Blabls</b>	2*	.3*	A22*	2*	.95*	P	2*	2*	2*	2*	.2*	P	2*	95*	2*	2*	.95*	P	2*	2*	2*	2*	.P	95*
<b>wkvls cr kcuF</b>	2*	Ay	2	2	.Ay	P	A	2	2	2	.A	P	2	A7	2	2	.A7	P	2	2	2	2	.2	P
<b>* wkvls cr kcuF</b>	2*	92*	2*	2*	.92*	P	AB*	2*	2*	2*	.AB*	P	2*	95*	2*	2*	.92*	P	2*	2*	2*	2*	.P	92*
<b>1 LFsdtr</b>	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
<b>* 1 LFsdtr</b>	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
<b>wkvls cr CHssmnj</b>	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
<b>* wkvls cr CHssmnj</b>	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P

1) LFsdtr s ur F wkvls cr CHssmnjSi - i L08K-k l08eS- SoHE3W-MSHEH



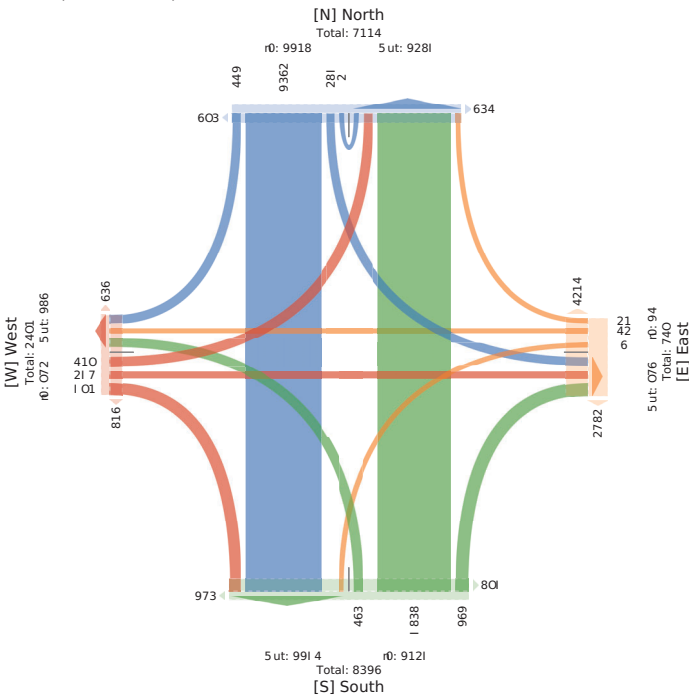
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North	Left	1	0	1	1	100%	South	Through	1	0	1	1	100%
North	Through	1	0	1	1	100%	South	Left	1	0	1	1	100%
North	Right	1	0	1	1	100%	South	Through	1	0	1	1	100%
North	Left	1	0	1	1	100%	South	Left	1	0	1	1	100%
North	Through	1	0	1	1	100%	South	Through	1	0	1	1	100%
North	Right	1	0	1	1	100%	South	Right	1	0	1	1	100%

0FvFrHRR uRwMs e kRkP3C Fula30FvFrHRR3mllkRkFr sR1 suv3mllkRkFr sR o RrrDul bc : c FpB1 : 1 HRRS: SRR 3W WSI RR

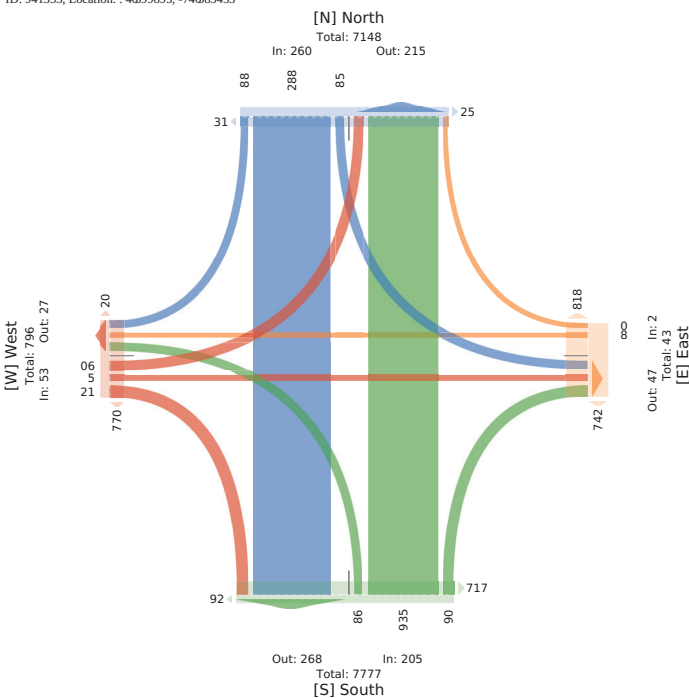


Dir	Phase	Time	Start	End	Count	Rate	Dir	Phase	Time	Start	End	Count	Rate
North	Left	1	0	1	1	100%	South	Through	1	0	1	1	100%
North	Through	1	0	1	1	100%	South	Left	1	0	1	1	100%
North	Right	1	0	1	1	100%	South	Through	1	0	1	1	100%
North	Left	1	0	1	1	100%	South	Left	1	0	1	1	100%
North	Through	1	0	1	1	100%	South	Through	1	0	1	1	100%
North	Right	1	0	1	1	100%	South	Right	1	0	1	1	100%

Pndrsrings og Bicacns og CrosswalkSL: LnfFr: Rit hW WrrF3U: U9WFr

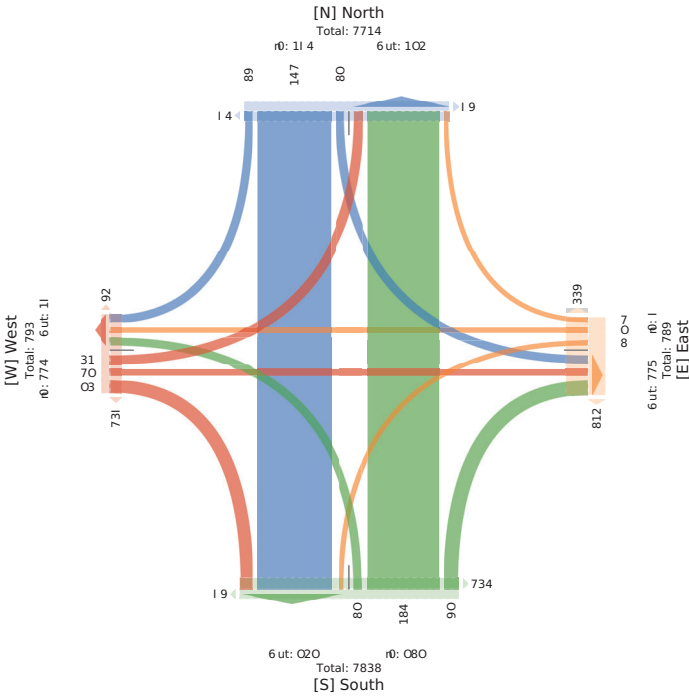


Id	Ch	Use	Time	Use	Time	Use	Time
50 L	k s i w 1 pp 11FL	k s i w 1 pp 11FL	k s i w 1 pp 11FL	k s i w 1 pp 11FL	k s i w 1 pp 11FL	k s i w 1 pp 11FL	k s i w 1 pp 11FL
2, 2, R7By A921 M	5 A0b b 2 A2 ,7	A 2 2 2 A 84	A A 2 b 2 A2 ,4	A 6 7 AA 2 92 7A	9, A		
A671 M	5 A b 4 2 A6A ,5	2 2 2 2 2 A09	y A0' b 2 A02 9b	b 2 4 2 Ay 97	bb		
A-22 M	4 A6 , 2 A 4 55	2 2 2 2 2 A06	A' A 7 8 2 A68 95	A 5 4 2 ,7 55	922		
A-81 M	7 A0b A2 2 A09 ,8	, , 2 2 5 44	4 A24 7 2 A 9 57	A0 2 b 2 5 59	925		
Scn	... 7, , 4 2 7y9 AA	9 , 2 2 7 9b	59 584 , y 2 794 A0	72 4 9y 2 48 A0	A, A0		
* 1 pp10e	93* A4P 7A* 2* P	182* 52* 2* 2* P	12* by2* 72* 2* P	7, A* 45* 9b7* 2* P	1 8		
* Scn	A6* 592* , 5* 2* 5y, *	1 2* , 2* 2* 2* 25*	9 97* 9b3* , , 2* 555*	1 5, A* 23* 9, 2* y4*	1 8		
1 BNA	2.8AA 2.459 2y, 7 P 2.495	P P P P P	2yA* 2.492 2.055 P 2.406	1.2075 2.572 2hA P 2y0b	1.2474		
i lous ur F Mce:Hay)LS	... 54b , b 2 75b	1 2 2 2 2 2	1 5, 59y , y 2 728	1 94 4 98 2 b5	1 A6b		
* i lous ur F Mce:Hay)LS	A2* 47,5* 46,8* 2* 47,8*	1 2* 2* 2* 2* 2*	4y3* 48, , A2* 2* 48,4*	1 yb2* A2* 4y,9* 2* by,2*	1 45b		
Bl1b	2 A' A 2 A' A	1 2 2 2 2 2	1 A A' 2 2 A'	1 2 2 2 ,	1 98		
* Bl1b	2* , 4* 9,5* 2* , b*	1 2* 2* 2* 2* 2*	1 ,9* 9,8* 2* 2* 9,9*	1 5,2* 2* 2* 2* , A*	1 9,2*		
w0av)LS cr k cuF	2 4 2 2 2 4	1 9 , 2 2 7	1 2 A' 2 2 A'	1 4 2 A 2 A2	1 94		
* w0av)LS cr k cuF	2* A3* 2* 2* A8*	1 A2* A2* 2* A2*	1 2* ,9* 2* 2* , b*	1 A, 2* 2* , y* 2* A2,5*	1 9, *		
1 LFIsd0ur3	P P P P P P A6	P P P P P P 9y4	P P P P P P A0	P P P P P P A0A	P		
* 1 LFIsd0ur3	P P P P P 47,6*	P P P P P 4y,4*	P P P P P 449,6*	P P P P P 4y,2*	P		
w0av)LS cr CHSSmJ	P P P P P P 2	P P P P P P 1b	P P P P P P 4d	P P P P P P 7	1 6y		
* w0av)LS cr CHSSmJ	P P P P P P 5, *	P P P P P P , A*	P P P P P P 8, *	P P P P P P 9, 2*	1 8		



Id	Ch	Use	Time	Use	Time	Use	Time
50 F	D S H W o KK 01FL	D S H W o KK 01FL	D S H W o KK 01FL	D S H W o KK 01FL	D S H W o KK 01FL	D S H W o KK 01FL	D S H W o KK 01FL
2, 2, 5b-5y 6A 0M	y , 6- , 2 2 , , b6	, , 2 , 2 , , y6	, 2 6A O 2 , b, ,	, 5 y A 2 62 A6	6, 6		
A28M	, , , 6 2 , -5 , 0	2 A 2 2 A , A	, O , 6 y 2 A0 b,	, O , 5 2 , 5 -16	6, 0		
A- 0M	b 6A b 2 A' A	2 , , 2 2 , , 0	, 6 6y O 2 A0 b,	, , 6 , 6 2 6, ,	6y		
A650M	5 , , , y 2 , 6y , 1	2 2 2 2 , , , 1	, , 62 6 2 A0 A	, A 5 2 , A , ,	6, 2		
Si u(	y -A , b 2 -5A 5, ,	b , 2 5 -13	yb -A , b 2 b, b, 6,	b6 , b 6- 2 , A , 25	6, 0		
* o 100 ur uk	A6+ 5, E+ A' A' 2* 9	9 , E+ b6b* , E+ 2* 9	9 , E+ 00b* A, E+ 2* 9	9 , b6* A2* 62b* 2* 9	9 9		
* Si u(	O* A0B* , 6* 2* A6 , *	9 2L* 20* 2L* 2* 2y*	9 , b* 652* 65* 2* A6b*	9 A6* , E* , b* 2* CE*	9 9		
0s 9y2y-2 2K3y 2b-2 9 2E6b	9 9 9 2L-2 9 2L-2	9 2E6b 2E- 20y 9 2E5A	9 2K3b 2b- 28y6 9 2K35	9 2E5y			
1 HNErC uk M i a) juaRfC3s	, y , , , b 2 -b0	9 2 2 2 , 2 , , 9	b' A2 , A 2 -y5	1 5 2 6 2 , 2A5	1 8 , , ,		
* 1 HNErC uk M i a) juaRfC3s	22* 5, E+ , 22* 2* 5, b*	9 2* 2* 202* 2* , E*	9 0, 6* 56b* 5, 8b* 2* 5, 6*	9 56b* b, b* , 22* 2* 5, E*	9 56, *		
s FuPa	2 , b 2 2 , b	9 2 2 2 2 2	9 2 , , , 2 2 , ,	9 2 2 2 2 2	9 , 0		
* s FuPa	2* 62* 2* 2* , b*	9 2* 2* 2* 2* 2*	9 2* , 8* 2* 2* , E*	9 2* 2* 2* 2* 2*	9 , E*		
1 vancfE i w d i uk	2 , 2 2 2 , 2	9 b 2 2	9 O , , , 2 6-	9 A , b 2 2 , 2	9 , E*		
* 1 vancfE i w d i uk	2* 8y 2* 2* , b*	9 22* 22* 202* 2* CE*	9 A* , A* , yb* 2* -b*	9 86b* 6y* , 2* 2* CE*	9 8y*		
01RfCjunc31	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		
* 01RfCjunc31	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 9 9 9 9 9	9 9 9 9 9 9 9 9		
1 vancfE i w r j) c04 u(	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		
* 1 vancfE i w r j) c04 u(	9 9 9 9 9 9 -K*	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		

5566814 - COVID - BANK ST @ HOLMWOOD AVE - M... - TMC  
 Sat May 7, 2022  
 PM Peak (WKND) (1:30 - 3:00 PM) Overlapping Peak  
 CHS Hillside (Light, Adult, Mutual, Bicycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)  
 CHM (Mutual, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)  
 ID: 941367, Location: 3-614484, 0-688-1

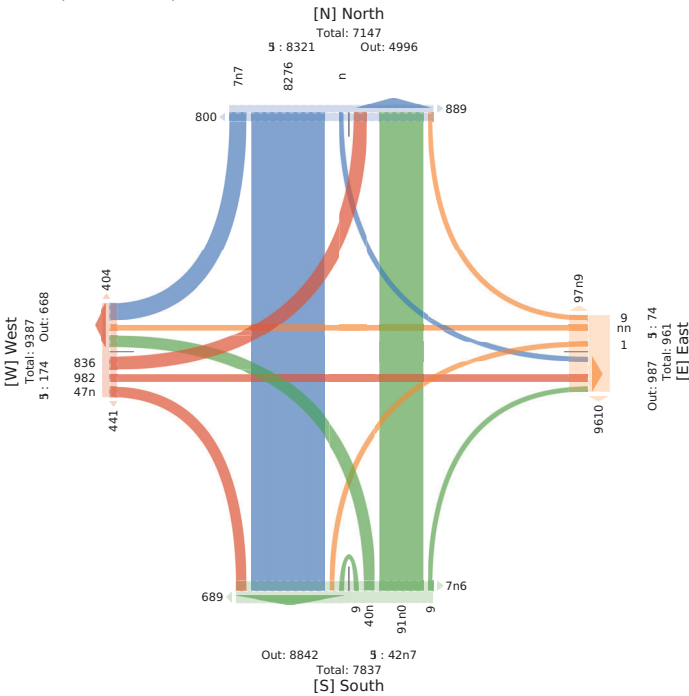


5566814 - COVID - QUEEN ELIZABETH DRWY @ FIF... - TMC  
 Tue/May 3, 2, 2  
 0 Full Length (6:2A - 6:59A) PM  
 All Classes (Lit bus, Light, Adult, Mutual, Bicycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)  
 All Movements  
 ID: 476153, Location: 873244, 639/73, 64y8



Lit	North					East					South					West								
	R	W	L	U	pp	R	W	L	U	pp	R	W	L	U	pp	R	W	L	U	pp				
2, 9278y 62-22 M	2	6	1	2	2	681	80	2	2	2	6	68y	2	y6	2	2	46	62	8	6A	2	y	6y	17
6:22PM	1A	A2	2	2	2	6	6	6	2	688	2	6	1	1	6	6A	66	61	62	86	2	y	6y	164
6:22PM	78	A1	6	2	2	6	6	6	6	61	2	68	2	68	2	6	6	77	2	48	8	y	6y	171
6:22PM	78	A	2	6	2	6	6	6	6	67	2	6	2	6	67A	4	6	84	2	44	1	y	6y	172
6:22PM	y2	A	4	6	2	6	6	6	6	684	6	2	6	2	6	6	6	6	6	6	y	6y	174	
6:22PM	14	8A	6	2	2	6	6	6	6	684	2	6	2	6	684	2	6	6	6	6	6	y	6y	176
6:22PM	y	82A	6	2	2	6	6	6	6	688	2	6	6	6	688	6	6	6	6	6	6	y	6y	178
7:22PM	1	816	2	2	2	6	6	6	6	678	2	6	6	6	678	6	6	6	6	6	6	y	6y	180
1:22PM	8	7	2	2	2	6	6	6	6	672	2	6	6	6	672	6	6	6	6	6	6	y	6y	182
<b>Total</b>	<b>787</b>	<b>A27</b>	<b>8</b>	<b>2</b>	<b>2</b>	<b>688</b>	<b>80</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>6</b>	<b>684</b>	<b>48</b>	<b>6</b>	<b>287</b>	<b>63A</b>	<b>62</b>	<b>8</b>	<b>6A</b>	<b>2</b>	<b>y7</b>	<b>754</b>		
% approach	67%	85%	28%	2%	9	69%	83%	60%	2%	9	9	75%	68%	2%	9	65%	69%	8%	2%	9	9	9		
% Lit bus	3%	6%	2%	2%	77%	9	2%	2%	2%	25%	9	2%	9%	83%	2%	63%	9	6%	7%	2%	66%	3		
Lit bus ugd Motorcycles	7A2	44	6	2	2	9	2	2	2	2	9	2	6y27	4A	6	6444	9	8A	6	A78	2	74		
% Lit bus ugd Motorcycles	45%	45%	72%	2%	45%	9	2%	2%	2%	2%	9	2%	4y7%	44%	62%	4y5%	9	47%	25%	41%	2%	47%		
% Lit bus	66	66	2	2	2	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6		
% Lit bus	23%	28%	2%	2%	2%	69%	9	2%	2%	2%	9	2%	25%	22%	2%	23%	9	25%	25%	68%	2%	22%		
Bicycles and Road	66	77	A	2	14	9	6	8A	y	2	76	9	6	AI	2	2	6y	4	6	62	2	68y		
% Bicycles and Road	2%	45%	97%	2%	62%	62%	4y%	62%	2%	4	8%	62%	8%	2%	2%	65%	9	47%	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		
% Pedestrians	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		
% 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		

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  
 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



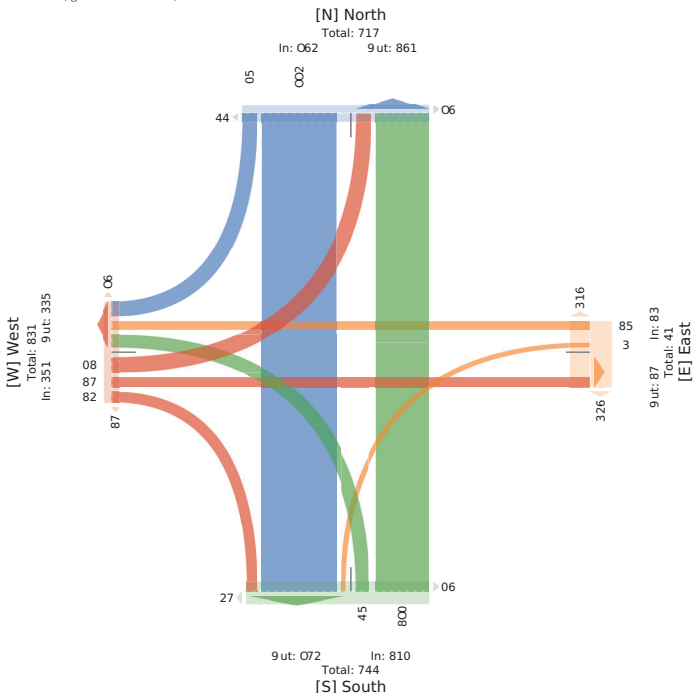
Lit	North					East					South					West							
	R	W	L	U	pp	R	W	L	U	pp	R	W	L	U	pp	R	W	L	U	pp			
2, 9278y 62-22 M	2	6	1	2	2	681	80	2	2	2	6	68y	2	y6	2	2	46	62	8	6A	2	y	6y
6:22PM	1A	A2	2	2	2	6	6	6	2	688	2	6	1	1	6	6A	66	61	62	86	2	y	6y
6:22PM	78	A1	6	2	2	6	6	6	6	61	2	68	2	68	2	6	6	77	2	48	8	y	6y
6:22PM	78	A	2	6	2	6	6	6	6	67	2	6	2	6	67A	4	6	84	2	44	1	y	6y
6:22PM	y2	A	4	6	2	6	6	6	6	684	6	2	6	2	6	6	6	6	6	6	y	6y	
6:22PM	14	8A	6	2	2	6	6	6	6	684	2	6	2	6	684	2	6	6	6	6	6	y	6y
6:22PM	y	82A	6	2	2	6	6	6	6	688	2	6	6	6	688	6	6	6	6	6	6	y	6y
7:22PM	1	816	2	2	2	6	6	6	6	678	2	6	6	6	678	6	6	6	6	6	6	y	6y
1:22PM	8	7	2	2	2	6	6	6	6	672	2	6	6	6	672	6	6	6	6	6	6	y	6y
<b>Total</b>	<b>787</b>	<b>A27</b>	<b>8</b>	<b>2</b>	<b>2</b>	<b>688</b>	<b>80</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>6</b>	<b>684</b>	<b>48</b>	<b>6</b>	<b>287</b>	<b>63A</b>	<b>62</b>	<b>8</b>	<b>6A</b>	<b>2</b>	<b>y7</b>	<b>754</b>	
% approach	67%	85%	28%	2%	9	69%	83%	60%	2%	9	9	75%	68%	2%	9	65%	69%	8%	2%	9	9	9	
% Lit bus	3%	6%	2%	2%	77%	9	2%	2%	2%	25%	9	2%	9%	83%	2%	63%	9	6%	7%	2%	66%	3	
Lit bus ugd Motorcycles	7A2	44	6	2	2	9	2	2	2	2	9	2	6y27	4A	6	6444	9	8A	6	A78	2	74	
% Lit bus ugd Motorcycles	45%	45%	72%	2%	45%	9	2%	2%	2%	2%	9	2%	4y7%	44%	62%	4y5%	9	47%	25%	41%	2%	47%	
% Lit bus	66	66	2	2	2	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	
% Lit bus	23%	28%	2%	2%	2%	69%	9	2%	2%	2%	9	2%	25%	22%	2%	23%	9	25%	25%	68%	2%	22%	
Bicycles and Road	66	77	A	2	14	9	6	8A	y	2	76	9	6	AI	2	2	6y	4	6	62	2	68y	
% Bicycles and Road	2%	45%	97%	2%	62%	62%	4y%	62%	2%	4	8%	62%	8%	2%	2%	65%	9	47%	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	
% Pedestrians	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	
% 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	



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



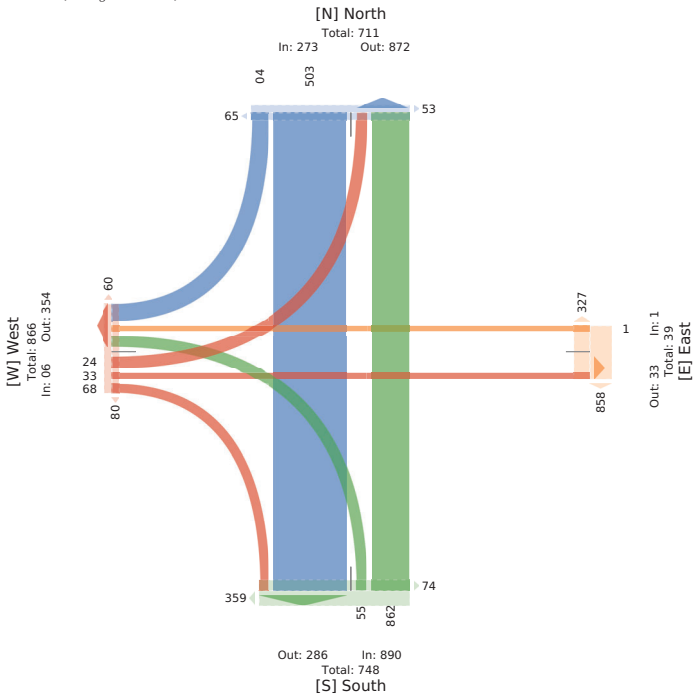
O j P k R N: v a n F e c i w i p 1 m a u  
 . 22 r i w e H G e i w h 3  
 t F R k u w l i 3 g, G 6 J 5 3 r o



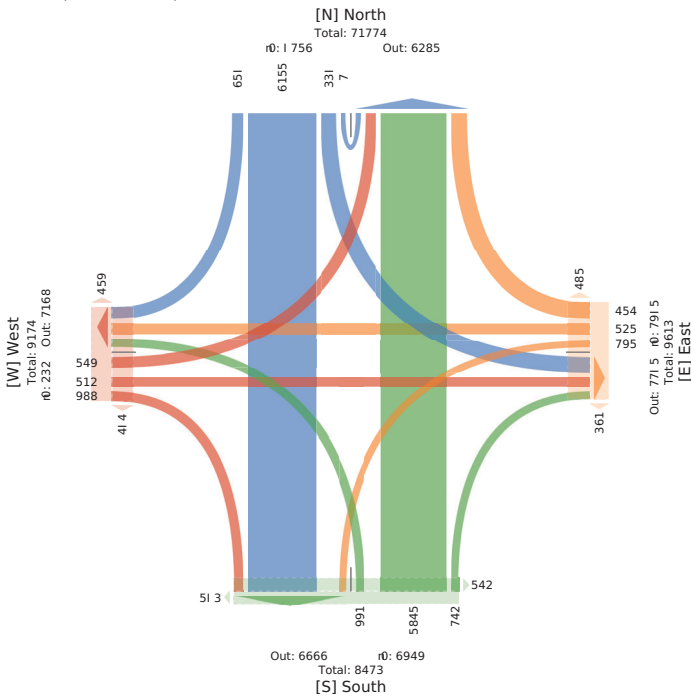
Plur g e c d y: s g y u l v t r a m a  
 500 s u l t e H i g d D L  
 Nepean, v N, K2G 1J4, s C



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

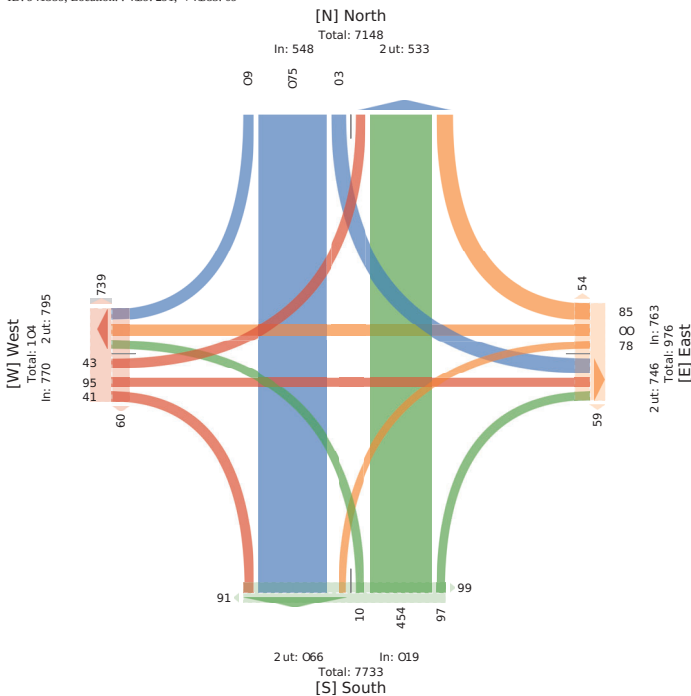


Lat Direction	North To/FrbhoFgd				East S madoFgd				To/Fn NorthhoFgd				S me EudoFgd				Age														
	R	W	L	U	-pp	Prst	R	W	L	U	-pp	Prst	R	W	L	U		-pp	Prst												
2, . 9278y 62-22 M	7	68	8A	2	...	9	A	61	6A	2	3y	12	66	76	66	2	7A	11	67	4	1	2	y2	y7	3y						
60-22 M	81	844	y6	2	161	9	4A	8	1	2	61A	622	7	8	1	2	74A	94	8	8	AA	2	6A	616	68A						
6: 22PM	72	84y	7	2	1A	9	44	7A	2	2	6y	6, 4	A2	874	7	2	768	4	82	6	8A	2	668	6	68A						
6:22PM	y2	846	y1	6	1A	9	62y	yA	6	2	64	6v	...	88y	1	2	847	1v	88	76	4y	2	666	6	68A						
6:22PM	7A	777	47	2	y2A	9	4	77	2	2	677	41	64	8y	7	2	7A	6, 7	76	4	4	2	644	6v	68.4						
A22PM	84	7y1	4	2	y68	9	4	76	6	2	616	41	8	8	1	2	78y	6, 3	7y	8	78	2	644	6v	6716						
8:22PM	88	7, 1	44	2	114	9	4y	86	6	2	672	64	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	787	42	72	...	78	2	666	6	6868						
1:22PM	A	6	7	2	7	9	AA	6y	7	2	77	34	4	AA	61	2	1A	6	67	67	A2	2	12	2	11A						
<b>W e a l</b>	8A	82AA	117	6	7606	9	yA	AA	6, A	2	6, 7A	68, A	6y4	A, yA	1	2	8, y	yA	...	A24	7y	2	414	68	681						
<b>% approach</b>	5%	3%	6A2%	2%	9	9	7, 5%	A63%	45%	2%	9	9	85%	42%	73%	2%	9	9	45%	A69%	A	3%	2%	9	9						
<b>% W e a l</b>	75%	75%	2%	885%	9	9	15%	A8%	63%	2%	625%	9	65%	A6%	65%	2%	A5%	9	5%	3%	A5%	2%	9%	9	9						
<b>L i t h e u g d M o o r c a c h n s</b>	A	1	A	21	178	6	8, 8y	9	y	...	A	6, A	2	6, y	9	6y7	A177	64	2	8284	9	...	A	4y	A1	2	481	9	66214		
<b>% L i t h e u g d M o o r c a c h n s</b>	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%
<b>% H a n o a</b>	8	1	...	2	621	9	A	8	2	2	y	9	2	4y	6	2	4	9	...	A	2	2	7	7	9	61					
<b>% B i c a c h n s o u d</b>	45%	65%	25%	2%	3%	9	23%	62%	2%	2%	23%	9	2%	2%	25%	2%	9%	9	25%	62%	2%	2%	25%	9	63%						
<b>% B i c a c h n s o u d</b>	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	AA					
<b>% B i c a c h n s o u d</b>	63%	83%	63%	2%	47%	9	63%	65%	2%	2%	65%	9	5	8	A8%	2%	2%	3%	9	62%	3%	63%	2%	63%	9	5%					
<b>% P n d s r i n g s</b>	9	9	9	9	9	2	9	9	9	9	9	6A	9	9	9	9	9	9	9	9	9	9	9	9	9	68, 1					
<b>% P n d s r i n g s</b>	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>% B i c a c h n s o u d</b>	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>% B i c a c h n s o u d</b>	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					



Flt 6:0L:otr	Clas TcInf cB F	Flas Lsd cB F	TClas cHaf cB F	Flas Jout cB F
S0 L	k s i w 1 pp 1LFU	k s i w 1 pp 1LFU	k s i w 1 pp 1LFU	k s i w 1 pp 1LFU
2, 2, 2R7By AM92 M	A7 A65 A 2 A7A	7 A7 5 2 55 9	y A 8 4 2 A6, Ay	A0 A 4 2 95 79
AM57 M	A0 A4 8 2 A7A	5 A2 5 2 9b 9A	5 A07 b 2 A y A7	A0 A 4 2 95 79
A-22 M	A2 A0 9 2 A6B	7 A4 8 2 72 97	4 A04 y 2 A07 A5	A 7 A6 2 9A 9b
A-32 M	A7 A5 A4 2 A7A	AA 7 2 9b 9b	AA A25 5 2 A4A	ay A2 b 2 7 5A
S0cl	79 740 b2 2 854	48 77 A4 2 A72 A3	9A 585 b 2 7, 9 17	5, 98 52 2 A6, 9A
* 1 Lpplaso	b,* 42* A9* 2* P	787* 9,5* AA,* 2* P	74* bb,* 75* 2* P	978* 92* 99,4* 2* P
* S0cl	9,8* 97* 7,7* 2* 55,7*	8,8* 9,8* A9* 2* AAB*	,* 9A 9Ab* A4* 2* 97,b*	,* 4* ,7* ,y* 2* h,*
1 B%	2,h69 2,h47 2,y84 P 2,4AA	2,482 2,y, 5 2,y4, P 2,b72	2,28, 2,44A 2,y3b P 2,4Ab	2,2b2 2,y9 2,8y4 P 2,M85
i tloes ur F Mca: Havls	5y 542 b2 2 8A7	47 77 A4 2 A64	92 55A ,b 2 544	5, 99 9b 2 A6
* 1 tloes ur F Mca: Havls	bb,y* 47,2* A22* 2* 47,*	844,2* A22* 2* 44,5*	848,b* 47,2* A22* 2* 47,5*	8 A22* 4A,* 47,2* 2* 47,b*
B LuBa	8 AA 2 2 2 Ay	A 2 2 2 2 A	B 2 A7 2 2 2 A7	8 A 2 2 2 A
* B LuBa	AA9* ,A* 2* 2* ,8*	A2* 2* 2* 2* 2,8*	2* 9,* 2* 2* ,4*	2* ,b* 2* 2* 2,b*
w(ov)ls cr k cuF	2 A7 2 2 2 A7	2 2 2 2 2 2	A b 2 2 2 4	2 , , 2 5
* w(ov)ls cr k cuF	2* ,4* 2* 2* ,9*	2* 2* 2* 2* 2*	9,* Ay* 2* 2* Ay*	2* 7,8* 7,2* 2* 9,5*
1 LFsd tlr s	P P P P P 2	P P P P P A	P P P P P 7b	P P P P P A0
* 1 LFsd tlr s	P P P P P P	P P P P P P	P P P P P P	P P P P P P
w(ov)ls cr CkSsmujh	P P P P P 2	P P P P P P	P P P P P y	P P P P P A
* w(ov)ls cr CkSsmujh	P P P P P P	P P P P P P	P P P P P P	P P P P P P

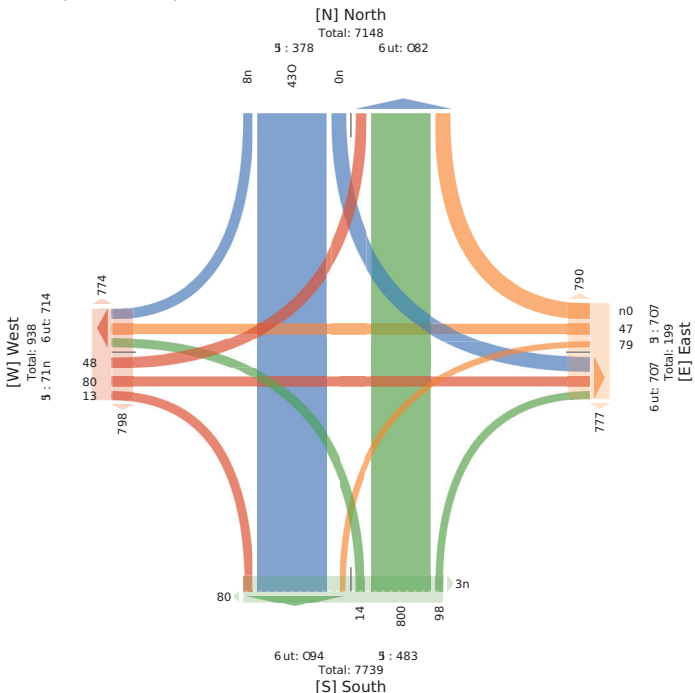
1) LFsd tlr s ur F w(ov)ls cr CkSsmujh. l - i LGbk - k tloes - SoHE3W - WBS EB



Flt 6:0L:otr	Clas TcInf cB F	Flas Lsd cB F	TClas cHaf cB F	Flas Jout cB F
S0 L	m s r w 1 KK 01RL	m s r w 1 KK 01RL	m s r w 1 KK 01RL	m s r w 1 KK 01RL
2, 2, 25,2y 6720M	.. Ay .. 2 ,y8	.. ,6 y 2 A A	.. ,6 A 2 ,6y 65	.. 2 .. 2 6A h
67 50M	.. ,56 .. 2 ,Cy	.. ,8 ,b . 2 Ab 0	.. y .. A .. 2 ,66 A	.. 8 ,6 2 66 h
6763M	.. A .. ,8 .. 2 ,bA	.. ,5 B .. 2 65 5A	0 .. ,6 y 2 ,60 ..	0 ,5 ,A 2 6y hb
6769M	.. Ay .. ,5 2 ,CA	.. ,6 ,6 6 2 68 hb	y .. 2 .. 2 ,68 ..	0 .. 5 2 65 hb
S0cl	80 51b 0 2 y, A	80 5, .. 2 h, 10	A X0 65 2 5A, ..	6y A0 5A 2 68 ,8b
* 1 HRRFlas	bb* CB,* ,E,* 2* :	b2b* 6, b* yE* 2* :	AA* 0L* bA* 2* :	b8* 6A5* 60P* 2* :
* S0cl	6L* 68b* 5b* 2* A6y*	b8* 68* 28P* 2* 28*	,E* 6, 8* ,E* 2* 652*	,E* 6L* 65* 2* 0B*
0) N	28y5 28A6 2803E : 285y	280B 28y5 28A 8 : 280D	28yCb 28L y 2b, 8 : 28Byb	28y5 28E2 28E2 28L b, 28y5
r d tloes ur F Mca: Havls	AA 5A6 CA 2 by,	85 A0 .. 2 ,5b	.. ,6A 65 2 5, ..	65 Ay 5A 2 6b
* r d tloes ur F Mca: Havls	B8P* B8P* BAA* 2* BAA*	B8b* B8L* 22* 2* B8B*	B, b* B8E2* 22* 2* B8E4*	BAB* ByB* 22* 2* ByB*
) Fdls	5 0 .. 2 ,A	2 2 2 2 2	2 .. 2 2 ..	2 .. 2 2 ..
* ) Fdls	2L* ,A* ,L* 2* ,E*	2* 2* 2* 2* 2*	2* ,E* 2* 2* ,E*	2* ,E* 2* 2* 2b*
k oen r CkSsmujh	2 ,5 A 2 ,B	6 .. 2 2 5	.. 2 2 ,A	.. 2 2 2 ..
* k oen r CkSsmujh	2* A0* A5* 2* A,*	6L* 68* 2* 2* 6L*	0B* A5* 2* 2* A6*	5A* 2* 2* 2* 6*
0FFFdls	:	:	:	:
* 0FFFdls	:	:	:	:
k oen r CkSsmujh	:	:	:	:
* k oen r CkSsmujh	:	:	:	:

0) FRFdls ur F Mca: Havls 3B LuRa 3l LFlsd tlr s3w(ov)ls cr k cuF3w(ov)ls cr CkSsmujh

5566814 - COVID - BANK ST @ SUNNYSIDE AVE - ... - TMC  
 Sat May 7, 2022  
 PM Peak (WKND) (1 PM : 3 PM) : - Qvar Peak 1 Hbv  
 u r AnGrc(s LigtCahn MHFHydreC1 eaQy, PeneCvahC c ldyreCH BFhn, c ldyreCH  
 AvHCRark)  
 u r MHdwehtC  
 nDI 9451.9, s HattHl 34993295, :746 81309



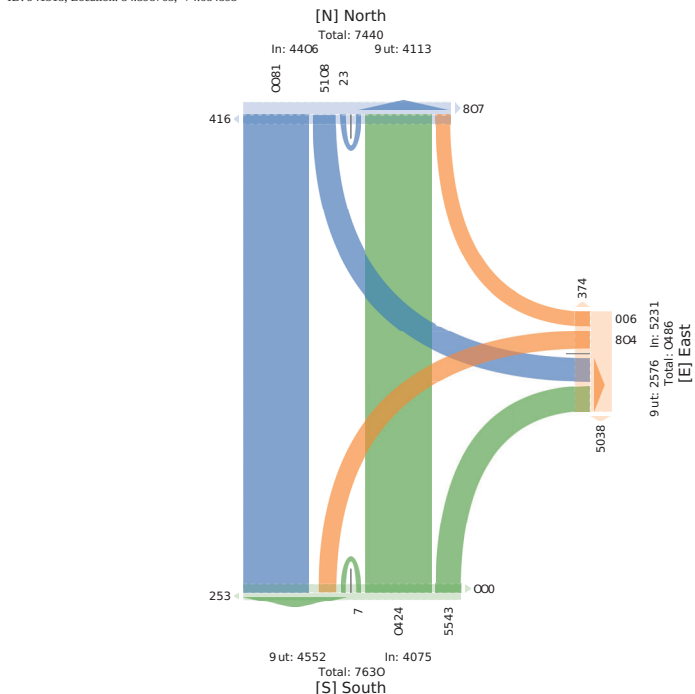
5566814 - COVID - BANK ST @ EXHIBITION WAY - ... - TMC  
 Tue/Mua y3, 2, ,  
 0Fl Lngt dh (62:A2 - M9I:A2 PM)  
 - II Clusss (Lit he ugđ Moorcaclns3Hnuv3Pndnsrings3Bicacchs and Road3Bicacchs and  
 Crosswalk)  
 - II Movmmnges  
 ID: 4768683Locuog: 875W, y1839/73, 7. 4A



Lst Dirncdog	North Tofthofgd					Euse S rsohofgd					ToFth Northofgd					lge
	W	L	U	- pp	Psd*	R	L	U	- pp	Psd*	R	W	U	- pp	Psd*	
Winn	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
66:22- M	8,4	46	6	7,6	74	17	2	68y	6,1	88	84	876	6	776	8	6,64
6:22PM	824	64	76y	627	1y	2	677	648	646	824	2	782	8	6,8	6,616	
6:22PM	868	4y	76A	6	72	34	2	6,4	1,4	661	824	2	764	11	6616	
6:22PM	87	68A	A	128	616	1	2	672	1y	6, A	8, 8	2	78y	17	606	
A:22PM	888	681	A	74A	6,7	2	62A	2	6, A	A68	678	846	2	7,7	17	606
8:22PM	8A4	672	7	748	67	4A	6, 8	2	6y	872	6, A	888	1, 4	62	6882	
7:22PM	A 1	6A	y	746	66	4	7	2	6y8	17y	24	8A2	2	1A4	y1	6888
1:22PM	6	1	7	74	18	4	77	2	8	8A	7	28	8	4A	A	171
<b>% West</b>	4y2	62Ap	4	88A	6688	771	y8	2	6,42	7,6	6684	A6,8	87,6	778	62Ay	
<b>% pproach</b>	y15%	AB%	25%	9	9	8,8%	715%	2%	9	9	7,3%	y8%	25%	9	9	
<b>% West</b>	A 3%	623%	22%	8,82%	9	73%	y3%	2%	6,5%	9	666%	AG 6%	23%	883%	9	9
<b>Lit he ugđ Moorcaclns</b>	A61y	626	8,2y	9	764	1,2	2	6644	9	62AI	AG 4	8, AI	9	418	9	49%
<b>% Lit he ugđ Moorcaclns</b>	485%	4y3%	413%	485%	9	4,6%	4,9%	2%	4,5%	9	4,23%	4,6%	622%	4,5%	9	4,6%
<b>% Hiana</b>	47	62	2	627	9	7	2	y	9	622	2	62	9	1,68	9	8%
<b>% Hiana</b>	5%	62%	2%	3%	9	28%	29%	2%	25%	9	25%	3%	2%	5%	9	8%
<b>Bicacchs and Road</b>	62	67	6	6,8	9	A7	84	2	8	9	62	6A7	2	8A	9	876
<b>% Bicacchs and Road</b>	A5%	63%	AB%	5%	9	15%	15%	2%	15%	9	43%	AG%	2%	75%	9	83%
<b>Pndnsrings</b>	9	9	9	9	66,y	9	9	9	9	764	9	9	9	9	9	768
<b>% Pndnsrings</b>	9	9	9	9	4,5%	9	9	9	9	4,9%	9	9	9	9	9	4,5%
<b>Bicacchs and Crosswalk</b>	9	9	9	9	6y	9	9	9	9	1	9	9	9	9	9	82
<b>% Bicacchs and Crosswalk</b>	9	9	9	9	62%	9	9	9	9	38%	9	9	9	9	9	y5%

\*Pndnsrings ugđ Bicacchs and Crosswalk5L: Lnfe8R: Rit he3W WhrF3U: U9WFrq

5566814 - COVID - BANK ST @ EXHIBITION WAY - ... - 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: 941515, Location: 54.398765, -74.684893



5566814 - COVID - BANK ST @ EXHIBITION WAY - ... - TMC  
 Tue/Mua y3, 2, ,  
 MCFua 1 Lun g h ( 6 : gA92 1 M PA -92 1 M:  
 1 ) CjssLs g lloes u F Mcc:HayJls3BLuR3l LFLsdth s3w0vJls cr kcuF3w0vJls cr  
 CHssmuj):  
 1 ) McRLL Lrs  
 IB - 47A8A3i cvudtr - 8754, yb83y/73, 7. 49

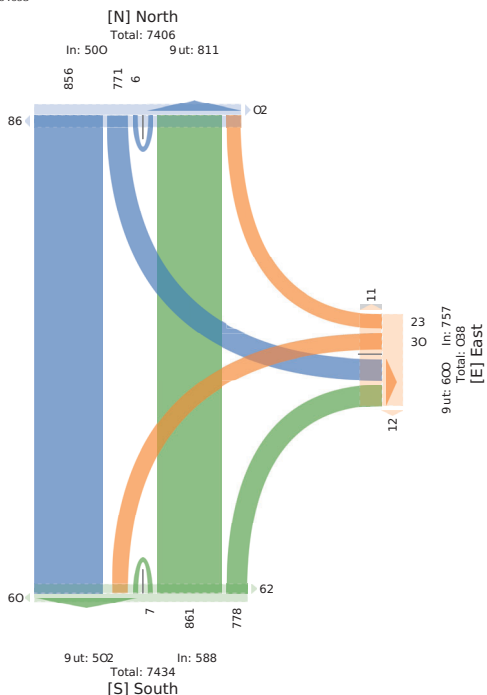


Lst Dirncdog	North Tofthofgd					Euse S rsohofgd					ToFth Northofgd					lge
	W	L	U	- pp	Psd*	R	L	U	- pp	Psd*	R	W	U	- pp	Psd*	
Winn	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
66:22- M	8,4	46	6	7,6	74	17	2	68y	6,1	88	84	876	6	776	8	6,64
6:22PM	824	64	76y	627	1y	2	677	648	646	824	2	782	8	6,8	6,616	
6:22PM	868	4y	76A	6	72	34	2	6,4	1,4	661	824	2	764	11	6616	
6:22PM	87	68A	A	128	616	1	2	672	1y	6, A	8, 8	2	78y	17	606	
A:22PM	888	681	A	74A	6,7	2	62A	2	6, A	A68	678	846	2	7,7	17	606
8:22PM	8A4	672	7	748	67	4A	6, 8	2	6y	872	6, A	888	1, 4	62	6882	
7:22PM	A 1	6A	y	746	66	4	7	2	6y8	17y	24	8A2	2	1A4	y1	6888
1:22PM	6	1	7	74	18	4	77	2	8	8A	7	28	8	4A	A	171
<b>% West</b>	4y2	62Ap	4	88A	6688	771	y8	2	6,42	7,6	6684	A6,8	87,6	778	62Ay	
<b>% pproach</b>	y15%	AB%	25%	9	9	8,8%	715%	2%	9	9	7,3%	y8%	25%	9	9	
<b>% West</b>	A 3%	623%	22%	8,82%	9	73%	y3%	2%	6,5%	9	666%	AG 6%	23%	883%	9	9
<b>Lit he ugđ Moorcaclns</b>	A61y	626	8,2y	9	764	1,2	2	6644	9	62AI	AG 4	8, AI	9	418	9	49%
<b>% Lit he ugđ Moorcaclns</b>	485%	4y3%	413%	485%	9	4,6%	4,9%	2%	4,5%	9	4,23%	4,6%	622%	4,5%	9	4,6%
<b>% Hiana</b>	47	62	2	627	9	7	2	y	9	622	2	62	9	1,68	9	8%
<b>% Hiana</b>	5%	62%	2%	3%	9	28%	29%	2%	25%	9	25%	3%	2%	5%	9	8%
<b>Bicacchs and Road</b>	62	67	6	6,8	9	A7	84	2	8	9	62	6A7	2	8A	9	876
<b>% Bicacchs and Road</b>	A5%	63%	AB%	5%	9	15%	15%	2%	15%	9	43%	AG%	2%	75%	9	83%
<b>Pndnsrings</b>	9	9	9	9	66,y	9	9	9	9	764	9	9	9	9	9	768
<b>% Pndnsrings</b>	9	9	9	9	4,5%	9	9	9	9	4,9%	9	9	9	9	9	4,5%
<b>Bicacchs and Crosswalk</b>	9	9	9	9	6y	9	9	9	9	1	9	9	9	9	9	82
<b>% Bicacchs and Crosswalk</b>	9	9	9	9	62%	9	9	9	9	38%	9	9	9	9	9	y5%

4) LFLsdth s u F w0vJls cr CHssmuj)5i - i L08k - k lloesS - SoF3W - W5EH



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



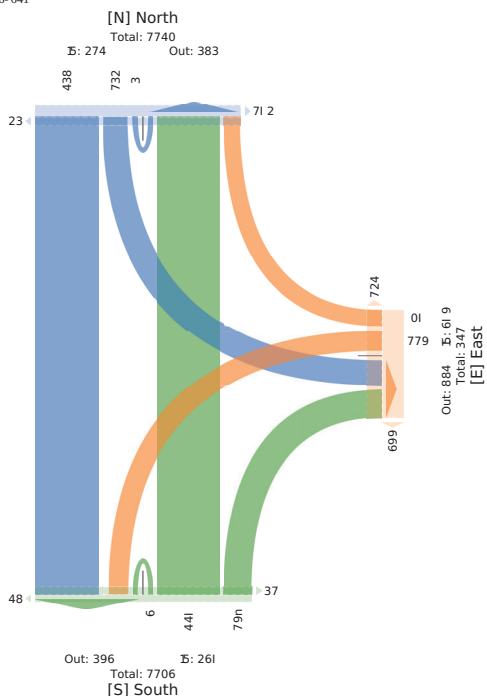
0) j PkRk Nbi : v 1) j 1 m1s u  
 22 r i ucaRQdsv wh j3  
 r HfKvS1 t 3g, G - J53r o

hB h v f u e w	i j R Ti d d r N d u k					E u c e n F o n d u k					T i d d r i j R N d u k					a e		
	S	H	W	o	o	D	H	W	o	o	D	S	W	o	o			
2, ., 9- 9y 6:A 0M	..	2	6-	.	.00	0k	.f	.A	2	A	.22	A	.2	2	Oy	.f	6-	
AZ20M	..	5	A6	.	.f2	6,	.0	66	2	A6	.22	A	50	.	.6f	.y	6y	
A - 0M	..	6	.	.	.7y	7h	.y	60	2	05	..	Ay	..	.	.06	.A	6y6	
A620M	..	2	A2	.	.A	6.	.5	A	2	+6	..	A6	.25	2	..	.	6y0	
* S i a c	A	6	.	.	.	0 A	.	52	.	.2y	AA	.yf	A0	.	.02	.5A	.AA	
* o i k j u s h	y6H*	..	.0*	2H*	.	9	.	A6b*	..	.0*	2*	9	.	fH*	y.12*	2H*	9	
* S i a c	6 .A*	2H*	2H*	A 10*	.	9	.	0h*	fH*	2*	A6*	.	.0*	62b*	2b*	A62*	9	
o s %	2Hf-	2yf-	2Hf-	2Hf-	2Hf-	9	.	2H2O	2Hf-	9	2H66	.	9	2H5	2H5	2H22	2H5	
HfRc uk Mi d ) nandfcs	A -	..	.	.	.	f,	9	fO	.6	2	.55	9	.	f-f	A 6	.	.y6	
* HfRc uk Mi d ) nandfcs	56H*	5y0H*	.22*	5A1*	.	9	.	5-10*	500P	2*	50b*	.	9	f f H*	566H*	.22*	5 .0*	
s FuPa	.A	.	.	.	.	.	9	.	2	2	.	9	.	2	2	2	2	9
* s FuPa	6b*	2H0*	2*	.0*	.	9	.	b*	2*	2*	2b*	.	9	2*	.16*	2*	.10*	
i vnanfrc i w Di uk	.	.	.	.	.	y	9	.	6	A	2	y	9	.	2	y	2	6y
* i vnanfrc i w Di uk	6b*	.16*	2*	.0*	.	9	.	6b*	6b*	2*	6b*	.	9	.b*	6b*	2*	6y	
o i k j u s h	.	.	.	.	.	y2	9	.	9	9	9	9	A f	9	9	9	9	5
* o i k j u s h	9	9	9	9	530*	.	9	9	9	9	5yb*	.	9	9	9	9	5H*	
i vnanfrc i w j) cc4 utL	9	9	9	9	9	.	9	9	9	9	9	.	9	9	9	9	9	
* i vnanfrc i w j) cc4 utL	9	9	9	9	20*	.	9	9	9	9	16*	.	9	9	9	9	9	

h R f c y w v u k i v n a n f r c i w r j i c c 4 u t b f H f p e D : D h R e S : S t Q d 3 W W S d j w



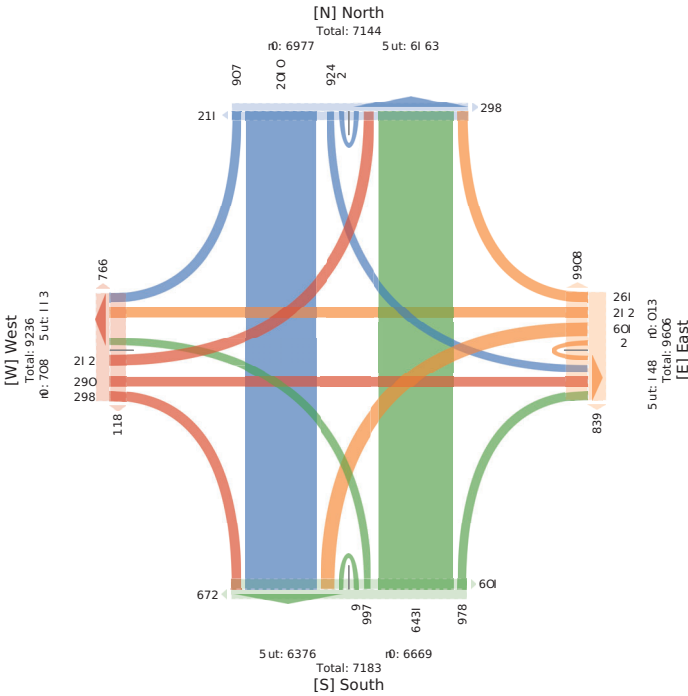
Plur g e c : s g y u f i t r a s  
 500 s u l t e H g u d L  
 Nepean, v N, K2G - J4, s C



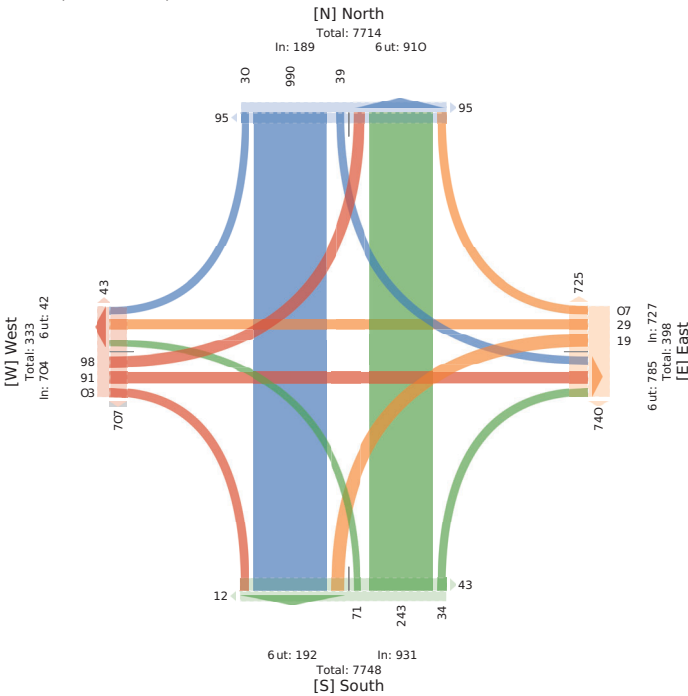
122 C u e s t l l M u e 1 d 0 n M 3 f O 3 p , K D 3 C P

L i n g i n t e r s e	D a t h E u f i h u f e d					U M e S m s t u f e d					E u f i h D a t h u f e d					S m s t 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-	.	.00	0k	.f	.A	2	A	.22	A	.2	2	Oy	.f	6-			
AZ20M	..	5	A6	.	.f2	6,	.0	66	2	A6	.22	A	50	.	.6f	.y	6y			
A - 0M	..	6	.	.	.7y	7h	.y	60	2	05	..	Ay	..	.	.06	.A	6y6			
A620M	..	2	A2	.	.A	6.	.5	A	2	+6	..	A6	.25	2	..	.	6y0			
* S i a c	A	6	.	.	.	0 A	.	52	.	.2y	AA	.yf	A0	.	.02	.5A	.AA			
* o i k j u s h	y6H*	..	.0*	2H*	.	9	.	A6b*	..	.0*	2*	9	.	fH*	y.12*	2H*	9			
* S i a c	6 .A*	2H*	2H*	A 10*	.	9	.	0h*	fH*	2*	A6*	.	.0*	62b*	2b*	A62*	9			
o s %	2Hf-	2yf-	2Hf-	2Hf-	2Hf-	9	.	2H2O	2Hf-	9	2H66	.	9	2H5	2H5	2H22	2H5			
HfRc uk Mi d ) nandfcs	A -	..	.	.	.	f,	9	fO	.6	2	.55	9	.	f-f	A 6	.	.y6			
* HfRc uk Mi d ) nandfcs	56H*	5y0H*	.22*	5A1*	.	9	.	5-10*	500P	2*	50b*	.	9	f f H*	566H*	.22*	5 .0*			
s FuPa	.A	.	.	.	.	.	9	.	2	2	.	9	.	2	2	2	2	9		
* s FuPa	6b*	2H0*	2*	.0*	.	9	.	b*	2*	2*	2b*	.	9	2*	.16*	2*	.10*			
i vnanfrc i w Di uk	.	.	.	.	.	y	9	.	6	A	2	y	9	.	2	y	2	6y		
* i vnanfrc i w Di uk	6b*	.16*	2*	.0*	.	9	.	6b*	6b*	2*	6b*	.	9	.b*	6b*	2*	6y			
o i k j u s h	.	.	.	.	.	y2	9	.	9	9	9	A f	9	9	9	9	9	5		
* o i k j u s h	9	9	9	9	530*	.	9	9	9	9	5yb*	.	9	9	9	9	5H*			
i vnanfrc i w j) cc4 utL	9	9	9	9	9	.	9	9	9	9	9	.	9	9	9	9	9			
* i vnanfrc i w j) cc4 utL	9	9	9	9	20*	.	9	9	9	9	16*	.	9	9	9	9	9			

- n d n s t a M s M e d v i r a r i n s u e C a s s R M v L : L n h 3 B : B i g h t 3 W W h e f 3 U : U 9 M f e



Dir	Phase	Color	Duration	Offset	Priority	Phase	Color	Duration	Offset	Priority	Phase	Color	Duration	Offset	Priority
North	1	Red	42	0	0	2	Yellow	3	0	0	3	Green	42	0	0
South	1	Red	42	0	0	2	Yellow	3	0	0	3	Green	42	0	0
West	1	Red	42	0	0	2	Yellow	3	0	0	3	Green	42	0	0
East	1	Red	42	0	0	2	Yellow	3	0	0	3	Green	42	0	0



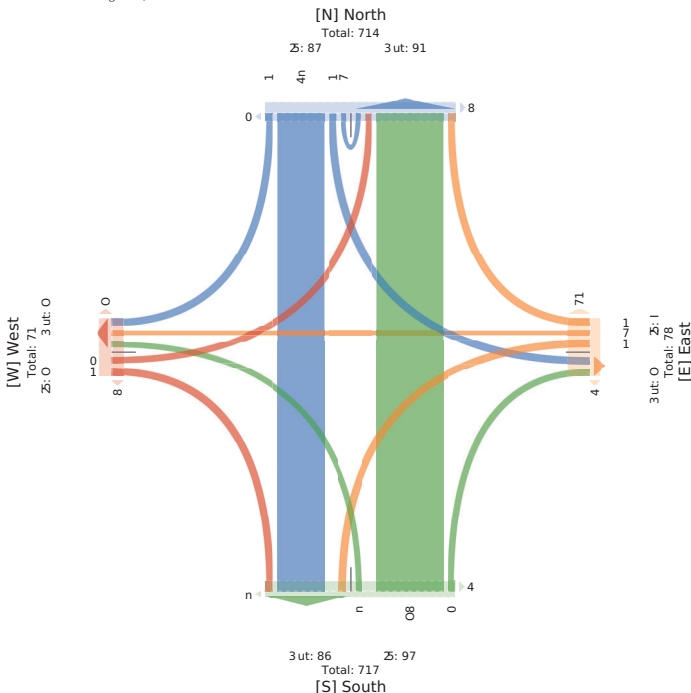
Dir	Phase	Color	Duration	Offset	Priority	Dir	Phase	Color	Duration	Offset	Priority
North	1	Red	42	0	0	South	1	Red	42	0	0
West	1	Red	42	0	0	East	1	Red	42	0	0
North	2	Yellow	3	0	0	South	2	Yellow	3	0	0
West	2	Yellow	3	0	0	East	2	Yellow	3	0	0
North	3	Green	42	0	0	South	3	Green	42	0	0
West	3	Green	42	0	0	East	3	Green	42	0	0

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 6L) agh Mt it ndy-e)2o ear y2Pehe)in4g)2c @d-e) t g Ht ah2c @d-e) t g  
9it )v a-k:  
A--Mt r eBegi)  
Bwni D 34721 r dai@gmD3 3. 628645 1641



Pr r d'eh bynD Gy 1 f Oliav a  
3, , 9t g)ie-aif g wn2  
Nepeag2ON2K0G 4Jl 29 A



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

Tue May 3, 20, 00  
081 Length (6:42 - T 9L :A2 P T )  
Pll ClmGms (Lights Md T utuarInS3c nMh3- ndnstoM3v ir arInS ue BuM3v ir arInS ue  
CusswM 6)  
Pll T uHh k nets  
rh : y6y1DE3Lur Mue: 647621D63D47852AD5



-a)HHL: aGta ub f nM M  
122 CuesfMue 1-3  
OnNm3f O3p, K 4G3CP

Lag	Interd	South	North	West	East	West	North	East	West	North	East					
Wk n		B	W	U	PNN	-nd*	W	L	U	PNN	-nd*	B	L	U	PNN	-nd*
2	5E45y 6:22-T	88	15	2	45		124	2	1	1		4	1	2	4	
4:22-T	115	1	1	1	6A		18A	15	1	8		5	5A	1	15	
8:22-T	116	18y	2	5A	4		165	8D	2	14		51	y4		115	
5:22-T	8y	18D	1	AD	6		121	2	2	1,1		6	8A	2	5D	
y:22-T	85	1A	2	1y1	A		44	y	2	56		16	8D	2	121	
12:22-T	DA	1,5	2	21	2		6y	1D	2	88		142	11	2	181	
11:22-T	Al	4y	2	y2	2		1	D	2	5		8A	125	2	1D	
2	9A9L1,2ZPT	1	8	2	15		6	1	2	4		5	8	2	A6	
WnM	y1A	1A	8		61		58D	A8	1	1,66		4A	DA		1,8y	
% PNNuMh	62%	4y%	2%	27%	9		8y%	A2%	27%	27%		61%	4D%	27%	9	
% WnM	1y2%	4D%	2%	60%	9		15%	D%	2%	87%		11%	14%	2%	82%	
Lights Md T utuarInS	y12	1A25			2		562	A8	1	1,1D		4	1	D	5	
% C uMh	1		2	A	9			2	2			2	1	2	1	
% C uMh	27%	27%	2%	27%	9		27%	2%	2%	27%		2%	27%	2%	27%	
v ir arInS ue BuM	18	2	15	9			4	2	2	4		11	8	2	1D	
% v ir arInS ue BuM	27%	17%	2%	25%	9		3%	2%	2%	2%		3%	25%	2%	17%	
- ndnstoM3s	9	9	9	9	8		9	9	9	9		9	9	9	9	
% - ndnstoM3s	9	9	9	9	12%		9	9	9	9		9	9	9	9	
v ir arInS ue CusswM	9	9	9	9	2		9	9	9	9		9	9	9	9	
% v ir arInS ue CusswM	9	9	9	9	2%		9	9	9	9		9	9	9	9	

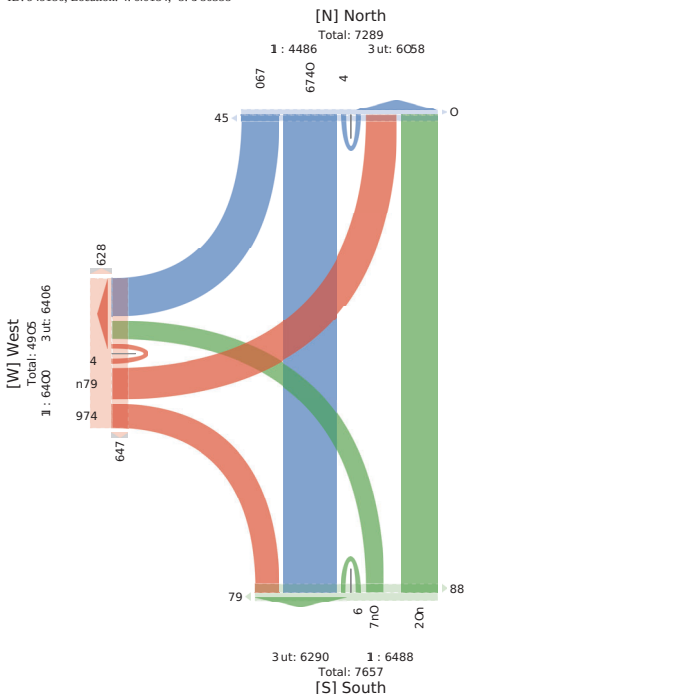
\* - ndnstoM3s Md v ir arInS ue CusswM: Lnh3B: Bigh3W Whd3U: U9M3e

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. 60154, -5. 6780358



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



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

Tue May 3, 20, 00  
0T OFM IT M 2y , 2 , , ng n0T h ( g n 0T 6h: AF-M010FM 1 uP-  
) 9Cm3s li drs n MHT uau-vav3s31 FMa30HfscdM3Bdav3s ue RuMBBdav3s ue  
C-usswM 6  
) 9T uAfk Fees  
rh gyDt 423i uvMhagDnT2r 4D84n7 82548



0-u)HHL: agCda ub: nM M  
122 CuesfMue 1-3  
f fCM3f: f 3N, p n3y3C)

Id	Interd	South	North	West	East	West	North	East	West	North	East					
Skt	F	R	S	W	) OD	OHL	S	i	W	) OD	OHL	R	i	W	) OD	OHL
2	5E45y 6:22-T	88	15	2	45		124	2	1	1		4	1	2	4	
ng20T	D	45	2	11n	t		D		2	D		8	1n	2	5	
ng20T	((	4D	2	12n	n		ny	5n	2	y2		15	15	2	4	
(g20T	y8	(2	2	1n8	2		Dn	5	2	44		1	18	2	5D	
* SuMh	Dn	5n	2	n4	8		11	112	2	5		n	n8	2	112	
* C0uMh	D3*	n5*	2*	h	h		(n3*	5D5*	2*	h		Dn5*	n2*	2*	h	
* SuMh	D3*	5n3*	2*	n4*	h		125*	123*	2*	5D*		n2*	n2*	2*	123*	
01%	27	n	2n5	h	2884		2844	28ny	h	28(4		28n4	28	D	h	28
1 d'ere MHT uau-vav3s	Dn	52n	2	n2	h		2t	112	2	5t		Dy	n2	2	12n	
* 1 d'ere MHT uau-vav3s	t22*	y(h)*	2*	y82*	h		yn5*	t22*	2*	y(h)*		ylR*	y(h)*	2*	yn2*	
1 PMu	2	2	2	2	h		t	2	2	t		2	2	2	2	
* 1 PMu	2*	2*	2*	2*	h		2h*	2*	2*	25*		2*	2*	2*	2*	
Bdav3s ue RuM	2	1t	2	1t	h		y	2	2	y		5	2	2	n	
* Bdav3s ue RuM	2*	5n*	2*	2*	h		D5*	2*	2*	2*		n8*	5D*	2*	D5*	
OHLfscdM	h	h	h	h	8		h	h	h	h		15	h	h	h	
OHLfscdM	h	h	h	h	122*		h	h	h	h		R3*	h	h	h	
Bdav3s ue CusswM	h	h	h	h	2		h	h	h	h		h	h	h	h	
* Bdav3s ue CusswM	h	h	h	h	2*		h	h	h	h		15*	h	h	h	

4)HfscdM3s MhBdav3s ue C-usswM 7i gi R3RgRdrcS5gSr -P3WgWMS-Pe

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

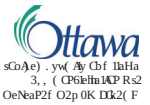
Mon May 9, 2022
PM Peak (May 09 2022 5:45PM) O65 PMv) r l eia uPeak AoCH
s uLuniei (glt ddi anBMoonRyRei, Aea ly, Pebeidnini, wlyRei on moaB wlyRei on
LHii i auv
: s uMol eDend
: 4 - 919630, goRdon- 15.10631, )35.070837



City of Ottawa
Ph: 833-822-6100
600 Lonsdale Rd N
Nepean, ON K2G 5J9, Canada

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

Tue May 3, 20 00
F M 1 ea nMay 3, 0, 00 30F M g3 F M t
F h( h666 r t A96 aP) MCC3 i yi 62 eao y2l e) e6kAP6 r Ayi h6 CP c Ca) 2r Ayi h6 CP
( sCGH aL4
F h hM Coev eP6
R w n k 31, 2: G a 1 CP v n D h 31 n z g D F 8, 518



City of Ottawa
1 sCGA 3e - yw Ay G f l h h a
3, ( CG6 k h 1 a P R 3
O e N a P 2 f O p 0 K D X 2 ( F

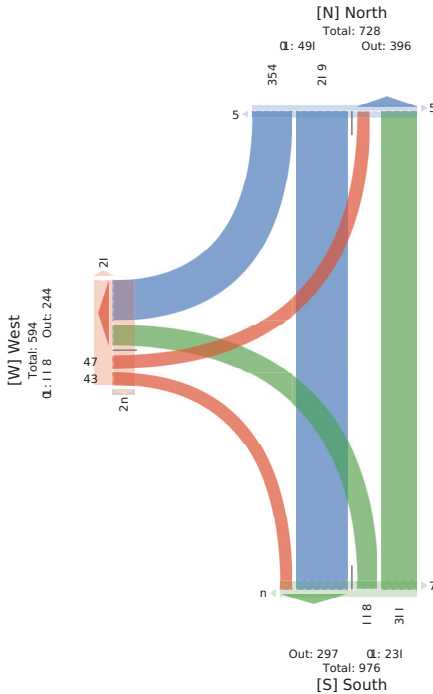


Table with columns: Direction, Day, Hour, Volume, etc. for various traffic scenarios.

(1) e) e6kAP6 aP) r Ayi h6 CP ( sCGH aL4: w eb 2c w c A9J2 T w l 9 u 2 W w M g l u s 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 M t it ndy-e) 2o ear y2Pehe) i n f g) 2c @y-d-e) t g H t ah 2c @y-d-e) t g
9 i t )) v a-k:
A-- M t r eB eG)
R w n f D 34, 2l r dai i @ g n D F 3) 34 D 8475 6, 146



City of Ottawa
P r t r @ eh b y n B G y 1 f O l i a v a
3, , 9 t g i e - a l f g w n 2
N e p e a g 2 0 N 2 K 0 G 7 J 1 2 9 A

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

Tue M y 3, 2, .
O f l i L e n g t h ( 6 : A 2 - T 9 L : A 2 P T )
P l i C l i M s n s ( L i g h t s M d T u n a r i n s 3 c n M h 3 - n d n s t a M s 3 v i r a r l n s u e B u M 3 v i r a r l n s u e
C o u s s R M W )
P l i t u h k n e t s
r h : y D I A 6 4 3 L u r M u e : 6 D D y D B 3 9 4 D B 5 6 1 4 8



City of Ottawa
- a n h d n d : a C i t a u b f n R M
1 2 2 C u e s t n l M u e 1 G 8
O n N a M 3 f O 3 p, K D 3 J 3 C P

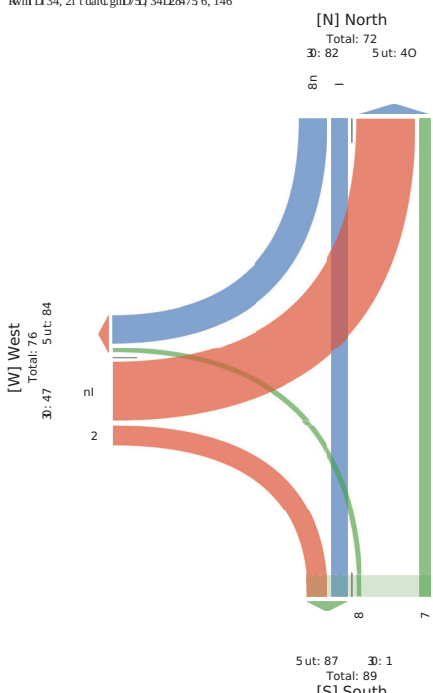


Table with columns: Lane, Direction, Volume, etc. for various traffic scenarios.

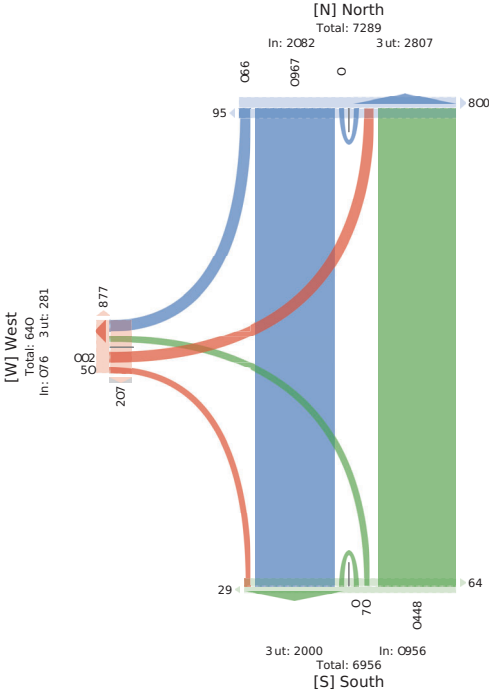
\* - n d n s t a M s M d v i r a r l n s u e C o u s s R M W L : L n h 3 B : B i g h t 3 W W h f 3 U : U 9 W f e

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

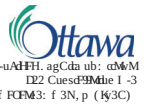


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 Nepean, ON, K2G 5J9, CA



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

Tue May 3, 20, 00  
 00 00M 12 M 2y, 2, ng 20T h (g 2 0T 6h: AF-MB0FM 1 uP-)  
 9)C6M6S li dr s MHT uu-vaV531 FMa30H5e043Bdav5S ue RuMBBdav5S ue C-usswM 6  
 ) 9T uAK Fees  
 n gy( D n43i uvMhgn 7 y( 83h( 75nD48



0-uAHH, agGda ul: uMm  
 F22 CuesE3Mte 1-3  
 f FCM3: f 3N, p (H3C)

Sd F	f u-r				f u-r				f u-r				f u-r				
	R	S	W	CO	R	S	W	CO	R	S	W	CO	R	S	W	CO	
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	
(g 20T	D	2	Dy	D	2	Dy	D	2	Dy	D	2	Dy	D	2	Dy	D	
(g 20T	, 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	h
* 1 drcs MHT uu-vaV5S	8D	y	(	2	2	y2	h	y	(	2	2	y	(	2	2	y	2
1 FMa	2	D	2	D	h	4	2	2	4	h	2	2	2	2	h	2	
* 1 FMa	2	2	2	2	D	h	D	2	2	2	D	h	2	2	2	h	
Bdav5S ue RuM	t	y	2	2	(	n	h	5	2	2	2	5	h	2	8	2	8
* Bdav5S ue RuM	(	5	2	2	4	h	n	2	2	2	2	5	h	2	4	2	8
0H5e043	h	h	h	h	h	h	h	h	h	h	h	h	h	h	h	h	
* 0H5e043	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	

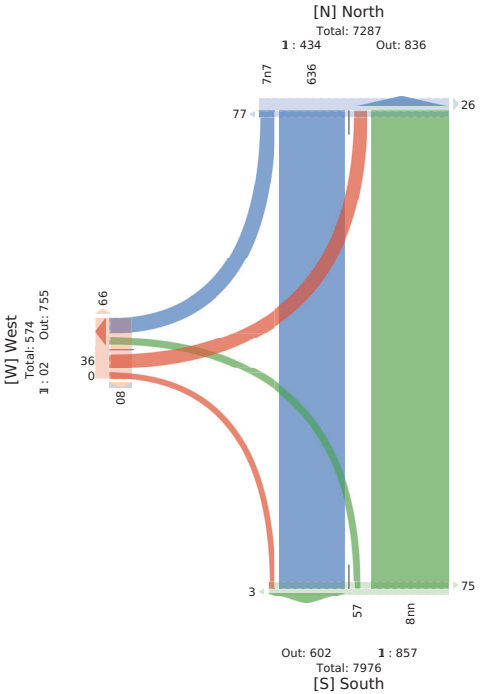
hH5e043 MHBdav5S ue C-usswM 7i gi h3RgRdrC5SGr-P3W6W6P-e

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

Mon May 9, 2022  
 PM Peak (May 09 2022 5-60PM) 060 PMv) r l ehuPeak AoCh  
 s uLuniei (gt ddi anBMoonRyRei, Aea y, Pekeidn, wRyRei on moaB wRyRei on  
 LHii auk  
 : s uMol eDend  
 : 4- 901653, goRdn- 5069CF, )30785137

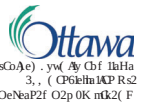


PHo hBBy- Lty of r and a  
 100 Lontusdn 4 H  
 Nepean, r N, K2G 0P9, Ls



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

Tue May 3, 20, 00  
 FM 1 eaLrMay 3, 0, 00 30F M g3 F Mt  
 Fh( h66e6 tr A96aP) MCC3iyi le62 eaoy2l e) e6kAP2r Ayi le6 CP c G) 2r Ayi le6 CP  
 ( sCGHHL  
 FhM CDev eP6  
 RkwnB D42: G a1CPvDnrl kn82gm85D348



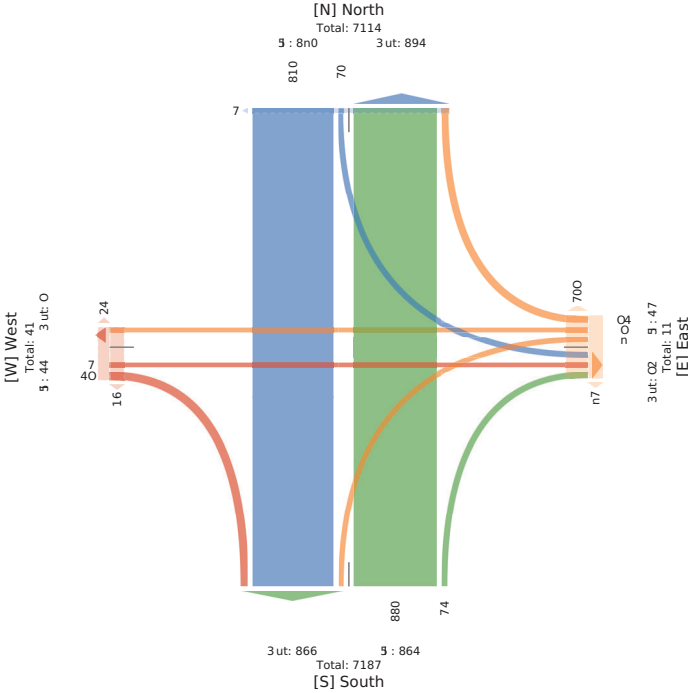
1 sG) e) yw Ay Cbf ltaH  
 3, ( CP6kHAP R P s2  
 OeNaP2 O2P 0K nK2( F

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	34	3	38	34	34	3	38	34	34
30ntrM	3	31	31	31	3	31	31	31	3	31	31	31
TCh	3	0k	1,	1,	3k	3,	3,	3k	3,	3,	3,	3
* FNCu9	13	167*	8	8	3,	3,	3,	8	3,	3,	3,	8
* TCh	02	062*	8, 2*	8	152*	3,	3,	152*	3,	3,	3,	02*
1 d %	3m	115	g	208	g	23m	g	23m	g	23m	g	208
: A96aP) MCC3iyi le6	3	08	04	04	34	34	34	34	3	3	3	04
* : A96aP) MCC3iyi le6	3,	5k2*	k, 2*	8	5k2*	3,	3,	5k2*	3,	3,	3,	k, 2*
d eaoy	0	0	0	0	0	0	0	0	0	0	0	0
* d eaoy	8k*	8k*	8k*	8k*	3, 3*	3,	3,	3, 3*	3,	3,	3,	8k*
r Ayi le6 CP c G)	3	3	3	3	3	3	3	3	3	3	3	3
* r Ayi le6 CP c G)	3	3	3	3	3	3	3	3	3	3	3	3
1 e) e6kAP6	g	g	g	g	g	g	g	g	g	g	g	g
* 1 e) e6kAP6	g	g	g	g	g	g	g	g	g	g	g	g
r Ayi le6 CP ( sCGHHL	g	g	g	g	g	g	g	g	g	g	g	g
* r Ayi le6 CP ( sCGHHL	g	g	g	g	g	g	g	g	g	g	g	g

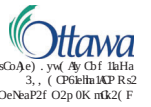
h) e) e6kAP6) r Ayi le6 CP ( sCGHHL): w eB2c w A92Twt9s2WwWJtusp



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



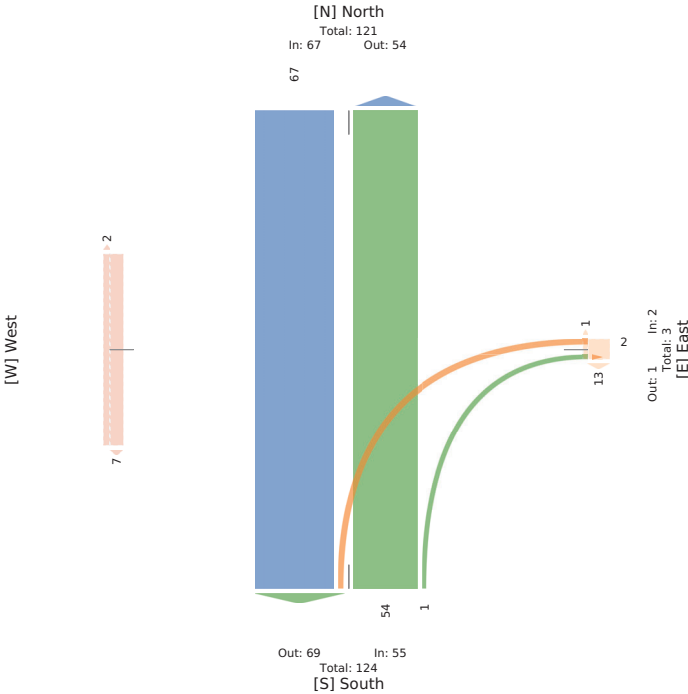
5566814 - COVID - BANK ST @ ECHO DR - MAY 09... - TMC  
 Tue May 3, 20, 00  
 FM Peak (May 3, 0, 00 30FM g3 FMt  
 Fh( h666r A96aP) MCCSi yi62id eaoy2l e)e6kAP2r Ayi h6 CP c Ca) 2r Ayi h6 CP  
 ( sCGHalL  
 FhMCoev eP6  
 Rkwmbf Dk2: G a1CPvDml kn78k2gim67D1D



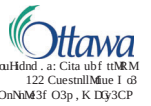
Lag	OCB				Jua				EQu				S e6t				BPI	
	R	T	W	FNN	S	L	U	PNN	S	L	U	PNN	S	L	U	PNN		
0,00g ng3, 30w, FM	07	07	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	5
30aaf M	1k	1k	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	5
TCah	58	58	0	0	3D	3	nd	mm										300
* FNCAI9	3,*	3,*	3,*	3,*	g	g	34*	34*	g	g	34*	34*	g	g	34*	34*	g	g
* TCah	m4*	m4*	34*	34*	g	g	4*	4*	g	g	4*	4*	g	g	4*	4*	g	g
14*	g	438	g	g	438	g	g	4u	g	4u	g	4u	g	4u	g	4u	g	430
* A96aP) MCCSi yi h6	50	50	0	0	g	g	3	nd	mm									338
* A96aP) MCCSi yi h6	k04*	k04*	3,*	3,*	g	g	3,*	3,*	g	g	3,*	3,*	g	g	3,*	3,*	g	337
d eaoy	1	1	0	0	g	g	0	0	g	g	0	0	g	g	0	0	g	mm
* d eaoy	Dtr	Dtr	14*	14*	g	g	14*	14*	g	g	14*	14*	g	g	14*	14*	g	D1*
r Ayi h6 CP c Ca)	0	0	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g	0
* r Ayi h6 CP c Ca)	14*	14*	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g	34*
1 e) e6kAP	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g
* 1 e) e6kAP	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g
r Ayi h6 CP c CGHalL	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g
* r Ayi h6 CP c CGHalL	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g

1) e) e6kAP aP) r Ayi h6 CP ( sCGHalL: w eb2c wc A9J2T w19su2WwWgTusP

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)irfag)2c @y-d-e) t g Ht ah2c @y-d-e) t g  
 9 it )v a-k:  
 A--Mt r eBegi)  
 Rwnf D347121 r daii@gn7D4H D 61 286DR : 7447



5566814 - COVID - BANK ST @ WILTON CRES - MA... - TMC  
 Tue May 3, 20, 00  
 OFH Length (6:42 - T 9L :A2 P T )  
 P11 C1M5ns (Lights Md T utuararlns3c nmh3- ndnstaM3v irarlns ue BuM3v irarlns ue  
 CausrRMw)  
 P11 T ufhk nets  
 rh : yD1AD3Lur Mue: 6D7y888, 3B54D32D



Lag	Outh				Jufth				E nst				mt				
	Jufth	ufed	ufed	ufed	W	L	U	PNN	B	L	U	PNN					
Wk n	B	W	U	PNN	W	L	U	PNN	B	L	U	PNN	mt				
,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	1Ay	2	888	,	,52	D	2	,5D	168	1061	
8:22-T	Dk	A6,	1	Ay8	16	862	116	2	826	5	14y	4	2	1y8	159	1A64	
4:22-T	Dk	A6,	2	618	16	688	y,	2	Dy	1,	18D	8	1	14A	1A	115y	
y22-T	,	,88	2	,yy	D	A6D	65	2	Ay1	6	8y	6	2	4A	D	88A	
12:22-T	Dy	A01	2	612	A6	A12	6A	2	ADA	1,	y4	,	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	Dk	A	1	Dk	2	5	A	2	y	8	1A6	
% VmM	A4	,58y	1	A211	88	A	4y	528	1	Ay8	6D	12y1	A8	1	11,y	86D	42A6
% PNNmM	112%	4y2%	2%	9	9	466%	1D6%	2%	9	9	y57%	A76%	27%	9	9	9	9
% VmM	67%	AAP6	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%	y46%	122%	y66%	9	y62%	BA2%	122%	yA6%	9	yA6%
c nMh	1	8D	2	85	9	DA	A	2	D5	9	,	1	2	A	9	1A8	
% c nMh	28%	,8%	2%	,D3	9	17%	D3%	2%	12%	9	22%	,8%	2%	226%	9	12%	
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	,78%	6D3%	2%	67%	9	69%	12%	2%	62%	9	D%	,67%	2%	5D3%	9	67%	
- ndnstaM3	9	9	9	9	88	9	9	9	9	61	9	9	9	9	8,1	9	
% - ndnstaM3	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	

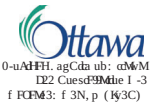
\* - ndnstaM3 Md v irarlns ue CausrRMw/L: LnH3B: Bigh3W Whd3U: U9Nf6e

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

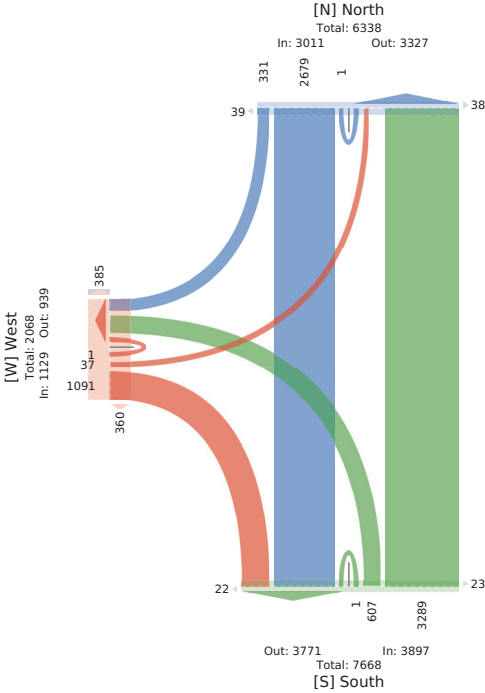


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 100 Constellation Dr,  
 Nepean, ON, K2G 5J9, CA

5566814 - COVID - BANK ST @ WILTON CRES - MA... - TMC  
 Tue May 3, 20, 00  
 0T 0FM 1T M 2y, 2, ng 20T h (g 2 0T 6h: AF-MB0FM 1 uP-)  
 9) 9C6M6S li drs MHT uau-vav9S31 FMa30H5e0M4S3Bdav9S ue RuMBBdav9S ue C-usswM 6  
 ) 9)T uAfk Fees  
 n) gy ( D ( 43i uvM4egni 7y888, 316( 75d n2(



0-uAHFH agCda ul: nMWM  
 F22 Cues93Mte 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	..	..	..	..		
* ) O4uM	D	2*	4y2*	2*	..	h	847*	D	2*	..	h	y42*	D	2*	..	h	..	..	..	
* ) SuM	1*	2*	12*	2*	t	2*	h	1y2*	D	2*	..	h	y42*	D	2*	..	h	..	..	..
01%	2*	n	278n	h	27y	h	245(	2782	h	2755	h	278D	27	h	274t	h	275	h		
i drs MHT uau-vav9S	(5	m	2	ny5	h	(5	D	2	8t	h	..	12	1	2	..	..	..	..	..	
* i drs MHT uau-vav9S	y55*	y23*	2*	y2*	h	yD	2*	y2*	h	..	..	..	..	..	..	..	..	..	..	
* i FMa	2	D	2	D	h	y	D	2	D	h	2	2	2	2	h	..	..	..		
* i FMa	2*	1*	2*	t	2*	h	D	2*	2*	h	2*	2*	2*	h	..	..	..			
Bdav9S ue RuM	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..		
* Bdav9S ue RuM	1*	2*	2*	(2*	h	5*	D	2*	(5*	h	87*	2*	2*	D	h	..	..	..		
* Bdav9S ue RuM	h	h	h	h	2	h	h	h	h	h	h	h	h	h	h	..	..	..		
* Bdav9S ue C-usswM	h	h	h	h	2	h	h	h	h	h	h	h	h	h	h	..	..	..		
* Bdav9S ue C-usswM	h	h	h	h	2	h	h	h	h	h	h	h	h	h	h	..	..	..		

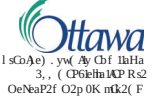
4) H5e0M4S3Bdav9S ue C-usswM 7i gi H3RgRdrC5SgSr-P3W6P6e

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, Pekeidnii, wlyRei on moaB wlyRei on  
 LHii i auk  
 : s uMol eDend  
 : 4-9016CB, goRdn- 50697772, 7083C500

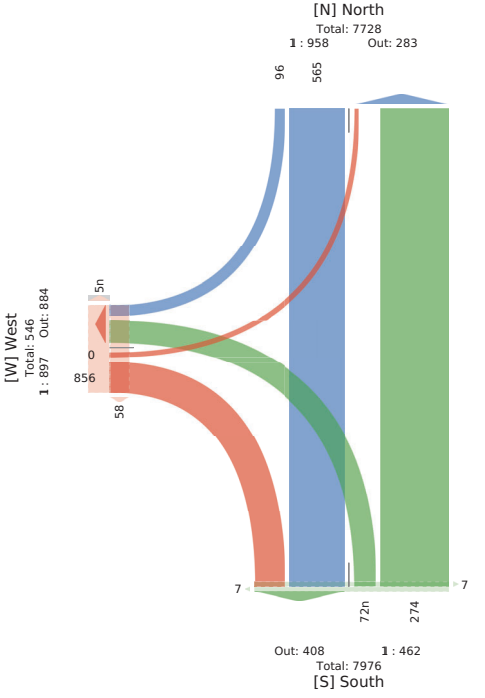


PHo HsBBy- Lty of r and a  
 100 Lontesudon 4 H  
 Nepean, r N, K2G 09, LS

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) MCC3i yi h62 eaoy2l e)e6kAP2r Ayi h6 CP c Ca) 2r Ayi h6 CP  
 ( sCGHhL  
 F hM CDev eP6  
 Rkwmknl n2E: G a1CPw4nll k88802gim5Dn4, m



1 sGdA e) yw Ay Cbf h4hA  
 3, ( CP6kth IAP R2  
 OeNa2P O2p OK nK2( F



TAX e	OGB				GUB				E est					
	c	T	W	FNN	T	W	FNN	c	W	FNN	le	le		
0, 00g ng5, 30w, F M	4	0	1	0	1	m	1	3	1	k	..	..	..	
30anF M	0	1	D	..	4	5	3k	..	..	..	..	..		
TCh	5	53	..	58	5	..	..	..	..	..	..	..		
* F NGA9	k2*	k3*	..	..	g	k2*	..	..	..	..	..	..		
* TCh	4tr	4tr	..	..	..	4.1*	00*	..	..	..	..	..		
14%	..	..	..	..	..	..	..	..	..	..	..	..		
* A916aP) MCC3i yi h6	5	m	..	50	g	n	1	3	mm	g	5	3	..	..
* : A916aP) MCC3i yi h6	3	..	..	..	..	k42*	3	..	..	..	..	..		
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	g	
* e)e6kAP6	g	g	g	g	3	..	..	..	..	..	..	..		
r Ayi h6 CP ( sCGHhL	g	g	g	g	..	g	g	g	g	g	g	g	g	
* r Ayi h6 CP ( sCGHhL	g	g	g	g	..	g	g	g	g	g	g	g	g	

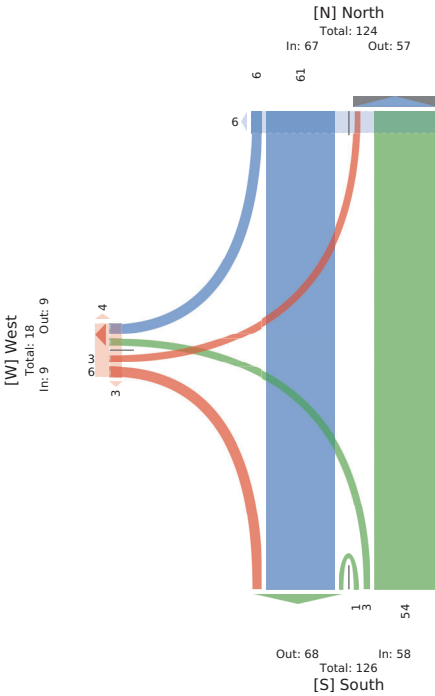
4) e)e6kAP6 aP) r Ayi h6 CP ( sCGHhL: we eB2c wc A912Twt9su2WwWjTusP

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(ā)2c (yde-e) t g Ht ah2c (yde-e) t g  
9rt )v a-k:  
A-Mt r eBegi)  
Reni D34D72l t dai( gn5D4l 666028D17D5, D



Pr r dēh bynB Qy Tf Oliav a  
3, , 9t g)ie-aif g wri  
Nepeag2ON2K0G DJI 29 A



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

Tue May 3, 20, 00  
0FH Length (6:42 - T 9L :A2 P T )  
Pll CllMghs (Lights Md T utuarlns3c nMh3- ndnstōM3svirarlns ue BuM3virarlns ue  
CusswMl6)  
Pll T uHh nets  
rh : yDlA113Lur Mue: 6D7y62A3BDR5418



- auHhdid: a Cita ub f nM3M  
122 Cuesnll Mue 1 6B  
OnNm3f O3p, K D3y3CP

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	AW	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%	6A2%	9	y83%	.2%	27%	9	9	D3%	y63%	27%	6	9	8A2A
% vMh	6A2%	278%	2%	6A2%	9	1A2%	278%	2%	1A2%	9	.3%	627%	2%	6	9	9
Lights Md T utuarlns	A2, y	4	2	A2D	9	y5.	.2	1	122A	9	182	.844	1	yA8	9	4y8D
% Lights Md T utuarlns	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	.78%	2%	2%	.78%	9	23%	2%	2%	23%	9	2%	.2%	2%	13%	9	13%
virarlns ue BuM	y2	D	2	yD	9	18	2	2	18	9	6	1,4	1	1A1	9	.6A
% virarlns ue BuM	.25%	6D3%	2%	A2%	9	13%	2%	2%	13%	9	.2%	67%	DE2%	62%	9	A2%
% ndnstōM3	9	9	9	14	9	9	9	9	AQ2	9	9	9	9	9	9	88
% ndnstōM3	9	9	9	9	9	9	9	9	yD3%	9	9	9	9	9	9	122%
virarlns ue CusswMl	9	9	9	9	9	9	9	9	1y	9	9	9	9	9	9	2
% virarlns ue CusswMl	9	9	9	9	9	9	9	9	2D3%	9	9	9	9	9	9	2%

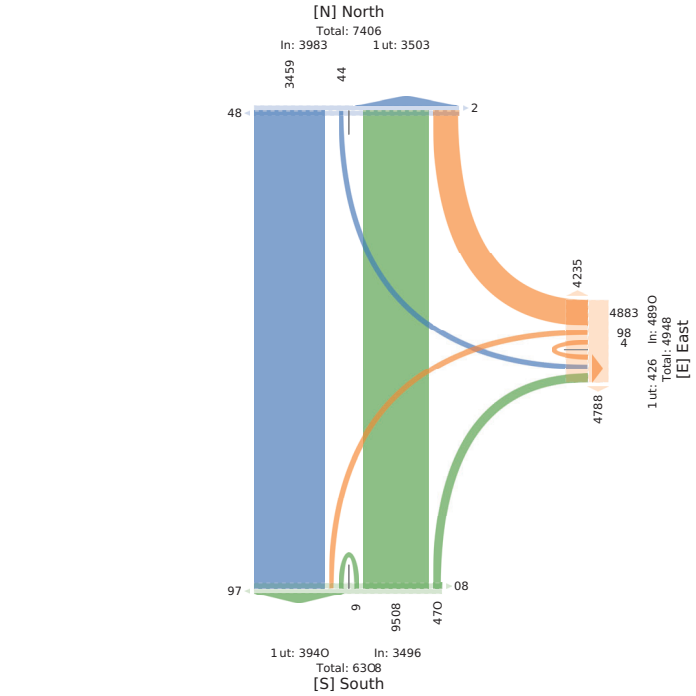
\* ndnstōM3 Md virarlns ue CusswMl7L: Lnh3B: Bigh3W WhdF3U: U9Mfœ

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

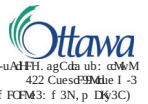


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Nepean, ON, K2G 5J9, CA



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

Tue M y3, 2.,  
0T 0FM IT M 2y, 2., ng 20T (g 2 0T 6h: AF-MB0FM 1 uP-  
9)C2M3s li dr s MHT uau-vaV3S1 FMa30FHScM3Bdavs ue RuMBBdavs ue  
C-usswMl 6)  
9)T uAk Fees  
rh gyDit n43i uvMtheg7Dl yy72t 3f ( Dh5n4(

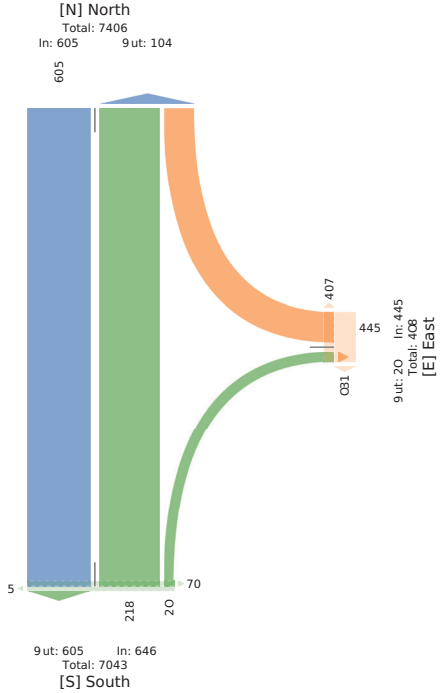


0-uAHFH agCda ub: nM3M  
422 Cuesnll Mue 1-3  
f FC3M3: f 3N, p D3y3C)

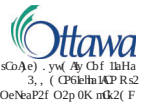
I fo Id fVnde	F u-a FuPr. uPeH				CMc E Fic. uPeH				F u-a F u-a. uPeH				mc				
	S	i	W	)	OD	OHU	R	i	W	)	OD	OHU					
.2, hDdy ng 20T	472	2	2	472	2	D	2	2	D	4	4	4, 2	2	4.	1	t, D	
ngDT	444	2	2	444	2	D	2	2	D	14	4	4,	2	477	1	147	
(g)DT	447	2	2	447	2	D	2	2	D	14	4	4,	2	4D	5	12	
(g)DT	445	2	2	445	2	D	2	2	D	40y	42	427	2	447	4	142	
SuMl	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
* SuMl	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	h	28y2	h	28y7	h	28(4	
i dr s MHT uau-vaV3	754	2	2	754	2	.4	2	2	.4	h	7D	7D	2	7yD	h	44(	
* i dr s MHT uau-vaV3	yDh*	2*	2*	yDh*	2*	h	h	h	yy8h*	2*	2*	yy8h*	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 RuMl	4	2	2	4	2	2	2	2	2	h	4	.2	2	4	h	1D	
* Bdavs ue RuMl	.8*	2*	2*	.8*	2*	h	h	h	28*	2*	2*	h	h	78*	2*	78*	
01FscM3	h	h	h	h	2	h	h	h	h	55a	h	h	h	h	h	4	
01FscM3	h	h	h	h	2	h	h	h	h	yy8*	h	h	h	h	h	422*	
Bdavs ue CusswMl	h	h	h	h	2	h	h	h	h	D	h	h	h	h	h	2	
* Bdavs ue CusswMl	h	h	h	h	2	h	h	h	h	28*	h	h	h	h	h	2*	

4)HFscM3 MHBdavs ue C-usswMl 8i gi R3RgRdr cSgSr-P3WgMS 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 anBMoofRyRei, AeaLy, PeReidnini, wRyRei on moaB wRyRei on  
 LHii1 aukv  
 s uMol eDend  
 :4 - 913653, goRdon- . 1799. 06, )OI58530



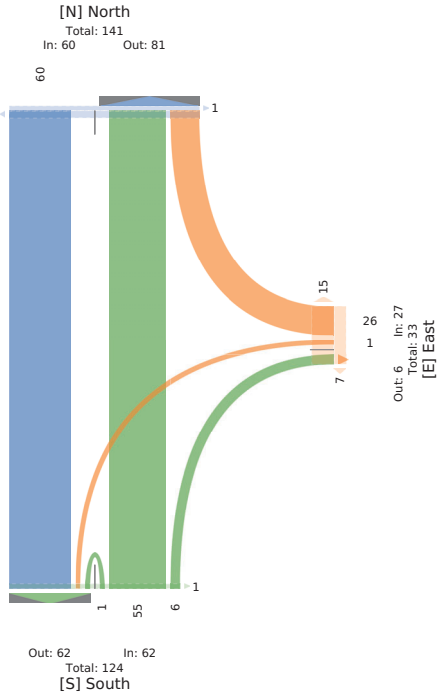
5566814 - COVID - BANK ST @ MARCHE WAY - MAY... - TMC  
 Tue May 3, 20, 00  
 FM Peak (May 3, 0, 00 30F M g3 FMt  
 Fh( h666tr A9B aP) MCCSi yi h62d eaoy2l e) e6kAPG2r Ayi h6CP c Ca) 2r Ayi h6CP  
 ( sCGHalL  
 FihMCoev eP6E  
 RkwnBf D2: G a1CPw4mfl k4, 12gimL5D38



[-e- RAei MCP	OCaB EGaB, CuP)	JaeI S e6i CuP)	ECaB OCaB, CuP)		
TA e	T : W FNN l e)U	c : W FNN l e)U	c T W FNN l e)U	P1	
0, 00g ngB, 30w, FM	11 , , , 11 3	35 , , , 35 3l	4 18 3 40 3	kl	
30aof M	08 , , , 08 1	5 3 , , k 3l	0 35 , , 0, ,	nd	
TChk	Q , , , Q 4	0D 3 , , 08 00	D nm 3 DD 3	34k	
* FNNCaI9	3, , * , * g	kD+ 1B+ , * g	kB+ 55B+ 3D+ g	g	
* TChk	4, 1+ , * , * 4, 1+	303+ , 3+ , * 35D+	42+ 118+ , 3+ 43D+	g	
14%	, 2D3 g g , 2D3	, 2D3 , 20g , 18m	, 18m , 15D g , 25m	, 253	
* A9EaP) MCCSi yi h6	nd , , , nd	0D 3 , , 08	D 45 , , nd	g 398	
* : A9EaP) MCCSi yi h6	kl 1+ , * , * kl 1+	3, , * 3, , * 3, , *	3, , * 581+ , * 583+	g k33*	
d eaoy	1 , , , 1	g , , , g	1 , , , 1	I g D	
* d eaoy	nd+ , * , * nd+	g , * , * , * g	, * nd+ , * 45+	g 42+	
r Ayi h6CP c Ca)	3 , , , 3	g , , , g	4 3 , , m	g D	
* r Ayi h6CP c Ca)	3B+ , * , * 3B+	g , * , * , * g	, * 81+ 3, , * 5B+	g 47+	
1 e) e6kAPG	g g g g 4	g g g g 00	g g g g 3	g	
1 e) e6kAPG	g g g g 3, *	g g g g 3, *	g g g g 3, *	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 A92Twt9su2WwWgtusP

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 ut )v a-k:  
 A-- Mt r eBegi)  
 Rwnf D347321 t dai@gn5D4115, 4286D71736



5566814 - COVID - BANK ST @ HOLMWOOD AVE - M... - TMC  
 Tue T M y3, 2, .  
 OFH Length (6:A2 - T 9L - aT PT )  
 P11 CIMoss (Lights Md T utuarlns3c nM3- ndnstaM3v irarlns ue BuM3v irarlns ue CassRMBu)  
 P11 T uHk nets  
 r h : yDI A463Lur Mue: 6D7y8y435fD84D4A



Lang I nterline	Quoth EuFh, ufed	J Mo S mt, ufed	EuFh Quoth, ufed	S no J Mo, ufed
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, 908y622-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
1222-T	AA 18A , 6 2 422 138	1 , , , 2 D 611	54 688 DE 2 416 142	6A , D AB 2 12, , 2, 1A 1
422-T	6 61y AB 2 655 AA	, 6 2 2 4 50R	128 13y 6A 1 441 12	46 A, A2 2 1,4 , 61, 1,52
522-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
822-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
y22-T	, A , yA , 8 2 A66 65	2 1 2 2 2 1 , A	AA A62 , , 2 A7D 44	AI 12 14 2 DE 54 595
1222-T	AB AA , 4 2 62, 118	2 , , 2 2 , 803	, y 6, A 65 2 6yy 12	AB y AB 2 58 , , 1, 981
1122-T	11 15y 5 1 198 , y	2 2 2 2 2 2 5A	D 13y , 6 2 188 , y	y D , , 2 A 81 82
, 2, 908y21, 229P-T	, DD , 2 Dy y	2 2 2 2 2 2 , 2	, SA D , , B ,	A 2 A 2 4 4 165
WkM	15y , 8Dy 182 6 A 6, 8ED	D 12 , 2 15 A10	6/A A55 , 81 A A7D 1103	AA 1AA 1yD 2 40R 1,42 581
% PNNMts	47% 887% 13% 23%	9 9 y87% DE8% 113% 2%	9 117% 812% 51% 23%	9 9DE% , 27% , y2% 2%
% WkM	13% A78% , 38% 23% 612%	9 23% 23% 2% 2%	9 130% 625% A9% 2% 6y3%	9 62% 15% , 13% 2% 80%
Lights Md T utuarlns	158 , 521 158 6 A55	9 2 2 2 2 2	612 A64 , 55 A A6M	9 A8B 11A 1y1 2 4, , 564E
% Lights Md T utuarlns	y53% y63% y87% 122% y63%	9 2% 2% 2% 2%	9 y63% y13% y87% 122% y13%	9 y40% 812% y53% y63% y13%
c nM3	2 5D 2 2 2 5D	9 1 2 2 2 1 9	2 DD 1 2 DE 9	, 2 , 2 6 9 1M
% c nM3	2% , 2% 2% 2% 2%	9 2,2% 2% 2% 2%	9 2% 15% 28% 2% 13%	9 23% , 2% 12% 2% 2%
% 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% , 3%	9 822% 122% 122% 2% y63%	9 DD% , 30% 17% 2% , 2%	9 82% 112% 12% 2% 63%
% ndnstaM3	9 9 9 9 9 86A	9 9 9 9 9 A8B	9 9 9 9 9 11AC	9 9 9 9 9 1, 6
% ndnstaM3	9 9 9 9 9 y32%	9 9 9 9 9 y3y2%	9 9 9 9 9 y87%	9 9 9 9 9 y87%
% v irarlns ue CassRMBu	9 9 9 9 9 1, 9 9 9 9 9 4	9 9 9 9 9 9 4	9 9 9 9 9 11	9 9 9 9 9 11
% v irarlns ue CassRMBu	9 9 9 9 9 13%	9 9 9 9 9 27%	9 9 9 9 9 13%	9 9 9 9 9 13%

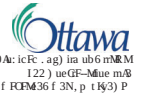
\* - ndnstaM3 v irarlns ue CassRMBu: Lht3B: Bight3W VhtF3U: U9WFe

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: 4569979., -856 7.5 3

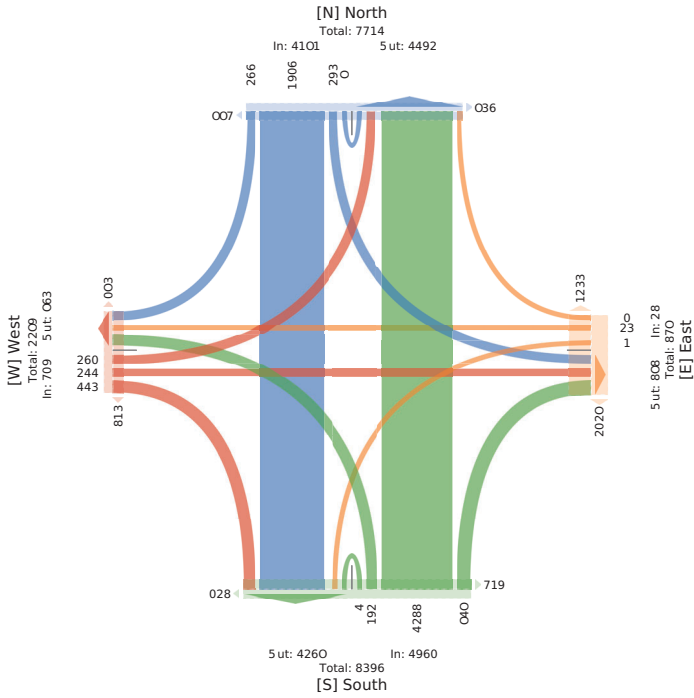


Provided by: City of Ottawa  
 100 Constellation Dr,  
 Nepean, ON, K2G 5J9, CA

5566814 - COVID - BANK ST @ HOLMWOD AVE - M... - TMC  
 Tue May 3, 2022  
 OT 08M LT M 2y, 2., , ngnt OT ht gnt OT (h6: F4M 0RM 9 u1A  
 P - ) - MFCIS idotCMc T unuAhhFC9 FMa30rFGAMGvIHfHCue BuM3vIHfHCue  
 ) AuCRM (C  
 P - T u: PwFcC  
 lngyT Dnhs utMuegnt 7yBy436t 784t 4D



0A: icR: ag) la ub6 mRM  
 3. ( CP6kH IAP R-2  
 122 ueCF-Mue m/B  
 f RFP36 f 3N, p t 63) P



Ph	Seq	Phase	Sec	Ph	Seq	Phase	Sec	Ph	Seq	Phase	Sec	Ph	Seq	Phase	Sec
SW	1	Thru	20	SW	2	Thru	20	SW	3	Thru	20	SW	4	Thru	20
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

5566814 - COVID - BANK ST @ HOLMWOD AVE - M... - TMC  
 Mon May 9, 2022  
 PM Peak (May 09 2022 5-56PM) 6-56 PMO) r r e l a H Peak u o a l  
 CHs HllL (i ght d anc Mod B y B4L u ear y, Pec el d g n, R g B4L on woac, R g B4L on  
 s lo L m a l k O  
 400 s on l k H g n : 1,  
 CHM o r e l e n d.  
 D - 964135, i o B d g n- 56.199793, J86.373631

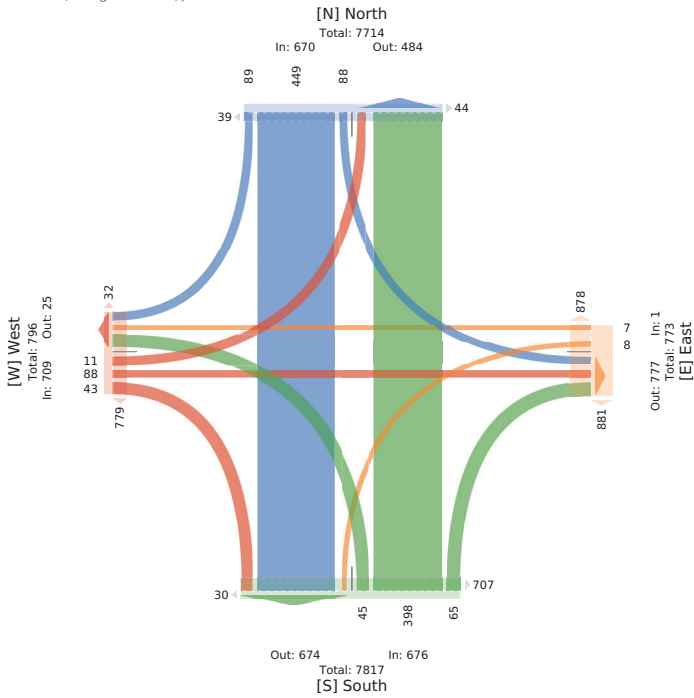


Plor g ec by s g y o l v d m a s  
 400 s on l k H g n : 1,  
 Nepean, v N, K2G 6J9, S C

5566814 - COVID - BANK ST @ HOLMWOD AVE - M... - TMC  
 Tue May 3, 20, 20  
 FM 1 e a h r M ay 3, 0, 00 30F M g 3 F Mt  
 Fh ( h 6 6 6 r A 9 6 a p) M C C 3 i y i 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  
 F h M C D e v e P 6  
 I R w k n B D 2: G a l C P w n l k k 8 k D 5 m D B D D

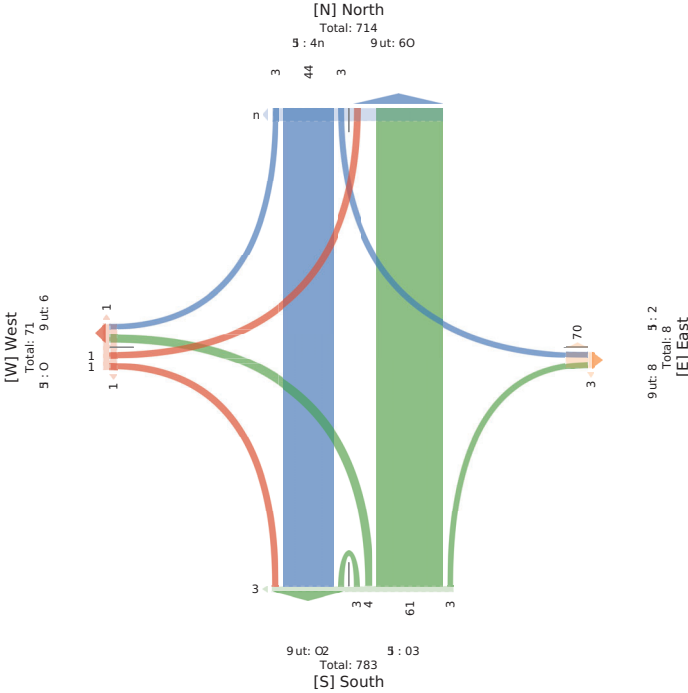


l s C a) e) y w A y C b f H a H a  
 3. ( CP 6 k H I A P R-2  
 O e N a P 2 O 2 K o r k 2 ( F



Ph	Seq	Phase	Sec	Ph	Seq	Phase	Sec	Ph	Seq	Phase	Sec	Ph	Seq	Phase	Sec
S	1	Thru	20	S	2	Thru	20	S	3	Thru	20	S	4	Thru	20
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

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) (l 6L) agh Mt it ndy-e) 2o ear y2Pehe) in fag) 2c @y-d-e) t g Ht ah 2c @y-d-e) t g  
 9t )v a-k:  
 A--Mt reBegi)  
 Bwni D347521 r dai@g.n5D41 I 61 728 D767 D74



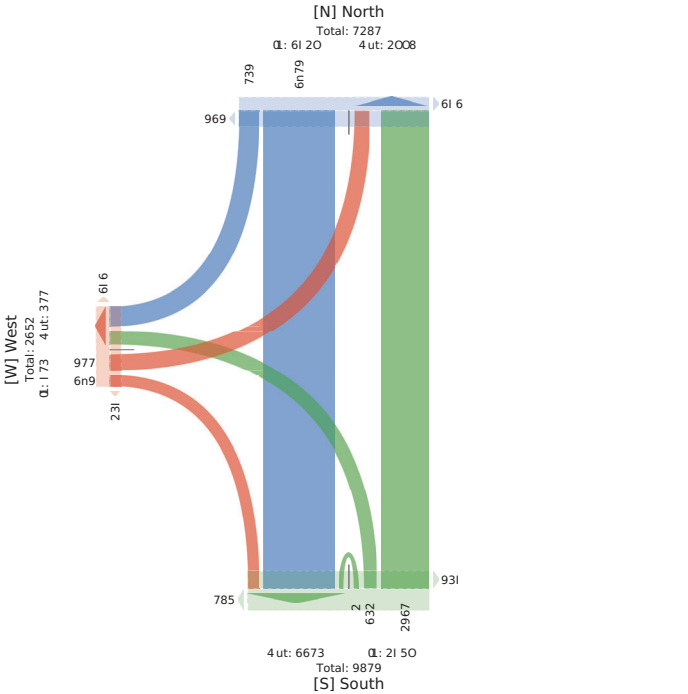
5566814 - COVID - QUEEN ELIZABETH DRWY @ FIF... - TMC  
 T ue T M y3, 2,  
 OFH Lengh (6:A2 - T 9L ;A2 P T )  
 Pll Clnghts (Lghts Md T utuarl ns 3c nMh3- ndnstoM3svr ar lns ue BuM3v ir ar lns ue  
 CussR M3)  
 Pll T ufhk nets  
 nh : yDl A473Lur Mue: 6D62Ay, 1355D871y56



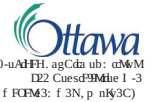
Lgt	I nter s ue	Outh Ju fth. uFed				Ju fth Outh. uFed				E nst S M. uFed								
		B	W	U	PNN	-nd*	W	L	U	PNN	-nd*	B	L	U	PNN	-nd*		
2	, 2, , 92Dy 6:22-T	A	A	2	, 47	DA	y2	, 4	2	114	55	1D	, 2	2	AD	, 4	61y	
	D:22-T	yA	D:4	2	Dy	D	, 14	41	2	, 55	152	, 5	64	2	5A	5D	y6y	
	4:22-T	1, 4	6, 5	2	D	DA	1y	D	2	, 25	AD	DA	2	y6	y4	7y7		
	5:22-T	117	, 15	2	AD	11y	1y4	DA	2	, 5y	15A	64	56	2	1, 2	7y	525	
	7:22-T	A	, 1y	2	, DA	4y	164	14	2	14	58	1y	A	2	6y	D	646	
	y:22-T	, 7	145	2	1yD	A	121	, 1	2	L	D	, 6	, 7	2	D	, 1	ADy	
	12:22-T	AD	152	2	, 2D	D	, A	, y	2	, Dy	yD	, 4	D	2	7	, 4D	D4	
	11:22-T	7	71	2	7y	y	11y	12	1	1A	1A	7	A	2	62	A	, Dy	
	, 2, , 92D 2.1, 2:2P T	1	17	2	1y	2	, 5	A	2	A	2	2	, 2	, 2	, 2	, 2	D	
	WuM	65A	, 26A	2	, D4	D	1A	6	, 51	1	1Dy4	746	, 2A	A66	2	D5	6, 5	64Dy
	% P N uMh	178%	718%	2%		9	7A2%	158%	28%		9	9	A68%	4, 8%	2%		9	9
	% WuM	128%	6, 8%	2%	D62%		9	, 78%	D7%	2%	A69%		68%	58%	2%	118%		9
	Lghts Md T utuarl ns	612	, 21y	2	, 6, y	9	1A	D	, 45	1	D6A	9	1y7	Ay	2	D6	9	6Dy
	% C uMh	6	D	2	y	9	1	, 2	A	5	1	6	2	D	9	15		
	% Lghts Md T utuarl ns	748%	y78%	2%	y4D%		9	y78%	y78%	122%	y78%	9	y5D%	y78%	2%	y78%	9	y58%
	% C uMh	28%	28%	2%	28%		9	28%	28%	2%	28%	9	28%	18%	2%	28%	9	28%
	% v ir ar lns ue BuM	D	1y	2	57	9	17	, 2	2	9	6	1	2	D	9	D2A		
	% v ir ar lns ue BuM	1, 4%	28%	2%	A%		9	18%	28%	2%	18%	9	, 8%	28%	2%	28%	9	8%
	- ndnstoMs	9	9	9	642		9	9	9	9	564	9	9	9	9	622		
	% ndnstoMs	9	9	9	728%		9	9	9	9	748%	9	9	9	9	y45%	9	
	% v ir ar lns ue CussR M3	9	9	9	11D		9	9	9	9	117	9	9	9	9	, 5	9	
	% v ir ar lns ue CussR M3	9	9	9	9	28%	9	9	9	9	1A6%	9	9	9	9	48%	9	

\* - ndnstoMs Md v ir ar lns ue CussR M3: Lnh3B; Bgh3W Whd3U; U9Mfce

5566814 - COVID - QUEEN ELIZABETH DRWY @ FIF... - TMC  
 Mon May 9, 2022  
 Full Lengh (4:30 PM-12:30 AM)  
 All Classes (Lghts and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on  
 Crosswalk)  
 All Movements  
 ID: 9513. 6, Location: 457403921, -857 61984

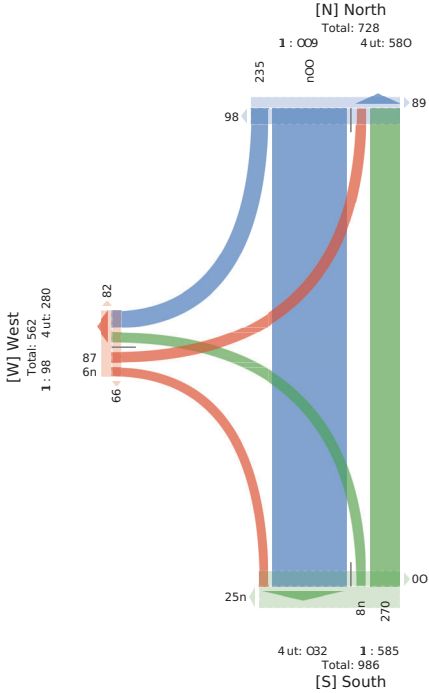


5566814 - COVID - QUEEN ELIZABETH DRWY @ FIF... - TMC  
 T ue T M y3, 2,  
 OT OFM IT M 2y, 2, , ng 20T h ( g 2 OT 6h: AF-MB0FM 1 uP-  
 ) 9C uM3s li dr s MHT uai-va v s31 F M30 F HscM3Bd av s ue RuMBBd av s ue  
 C-usswM 6  
 ) 9T uAfk Fees  
 nh gynD ( 43i uvMthg7n8'2t y, D B5n8' 4Dy57



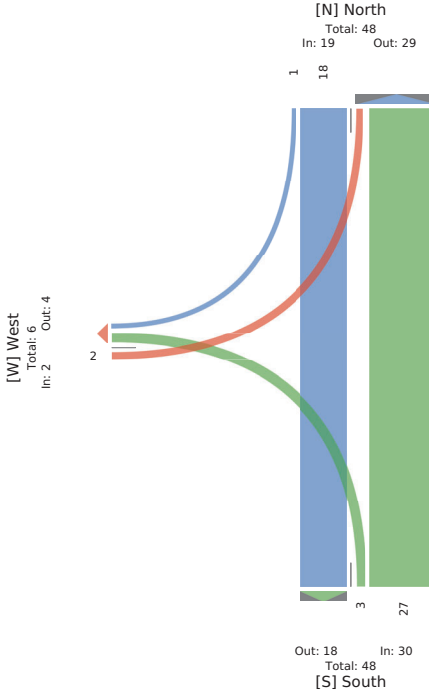
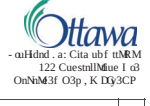
I fo l d F v a s e	F u- a G u P r. uP e H				G u P r. uP e H				J f s c E M c. uP e H													
	R	S	W	CO	OHL	S	i	W	CO	OHL	R	i	W	CO	OHL	mc						
2	, , hnhly ng 20T	D	D	2	Dy	, 7	7D	D	2	nt	74	y	D	2	, ,	D	, D					
	ng 20T	D	D	2	Dy	7	nt	D	2	(y	nt	D	D	2	, 2	, ,	, C					
	(g 20T	D	D	2	D	, y	nt	y	2	(	7	D	D	2	, 4	, 2	, nt					
	(g 20T	15	D	2	, 2	(	75	D	2	nt	12	n	y	2	D	, 2	, 3D					
	SuM	D	nt	(	(	4	D	, 5	7n	2	, 7,	, 21	1n	7y	2	47	57	y7				
	* ) DuM	D	8*	475*	2*	h	h	4D7*	D	8*	2*	h	h	7D5*	n	48*	2*	h	h			
	% SuM	D	8*	nt	8*	2*	(58*	h	h	D	8*	78*	2*	, 78*	h	t	8*	78*	2*	48*	h	
	i dr s MHT uai-va v s	57	m	5	2	(	D	h	D	2	7n	2	, t	n	h	74	2	4t	h	h	y7y	
	* i dr s MHT uai-va v s	5, 8*	y	48*	2*	y	78*	h	y	8*	D	2*	y	D	2*	y	48*	2*	y	48*	h	nt8*
	i P M s	2	t	2	t	h	h	2	2	2	2	h	2	D	2	D	D	h	h	7		
	* i P M s	2*	28*	2*	28*	h	h	2*	2*	2*	2*	h	2*	, 8*	2*	D	8*	h	h	28*		
	Bd av s ue RuM	, 4	(	2	17	h	h	5	2	2	5	h	2	2	2	2	h	h	7D			
	* Bd av s ue RuM	, 58*	D	7*	nt	7*	h	t	8*	2*	2*	, 8*	h	2*	2*	2*	h	h	78*			
	% OFH s c M s	h	h	h	h	5,	8*	h	h	h	h	h	D	2	h	h	h	h	5,			
	% OFH s c M s	h	h	h	h	478*	h	h	h	h	h	h	478*	h	h	h	h	h	y	58*	h	
	Bd av s ue C-usswM	h	h	h	h	t	h	h	h	h	h	h	t	h	h	h	h	h	h			
	% Bd av s ue C-usswM	h	h	h	h	, 58*	h	h	h	h	h	h	D	8*	h	h	h	h	h	, 8*	h	

4) OFH s c M s M H B d av s ue C-usswM 8i gi R 3Rg R d r c Sg S r - P3w g W S P e



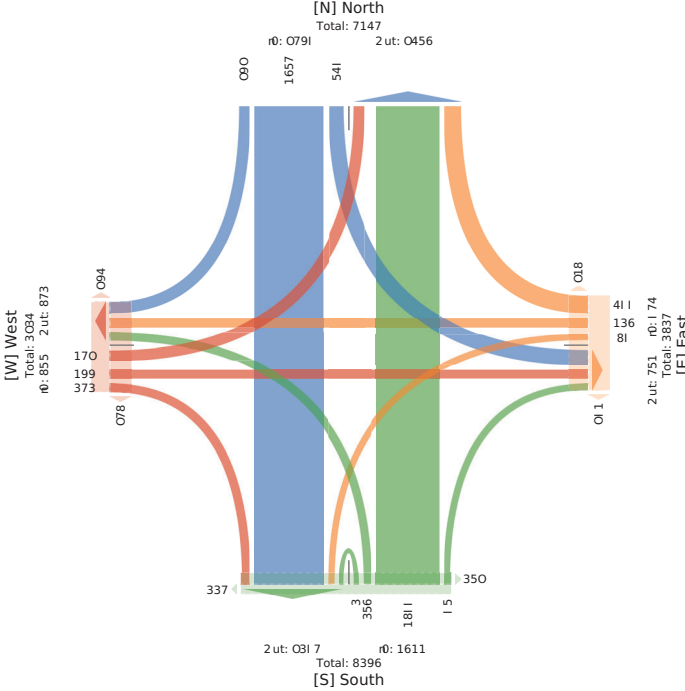
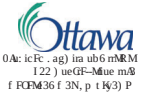
E- e6l SaeL CuP	OC3B J Cu B. CuP				J Cu B OC3B. CuP				E- e6l SaeL CuP				
	c	T	W	FNN	e)U	T	W	FNN	e)U	c	W	FNN	e)U
TA e	0, 00g, 30w, FM	33	33	33	33	35	0	33	33	0	0	0	0
30mFM	3	5	4	4	3	3	3	3	3	0	0	0	0
TCah	3	34	3k	3k	05	1	1	1	1	0	0	0	0
* FNMO9	ni*	k75*	*	g	k, 9*	3, 9*	*	g	g	*	3, *	*	g
* TCah	08*	1n8*	*	158*	n8k*	n8k*	*	n8k*	g	*	1k*	*	1k*
1d%	80m	87, k	g	870	8K5	8, 5m	g	8 km	g	8, 800	g	8, 800	g
* A96aP) MCCSi yi h6	3	34	3k	3k	05	1	1	1	1	0	0	0	0
* A96aP) MCCSi yi h6	3, *	3, *	*	3, *	3, *	3, *	*	3, *	3, *	*	3, *	*	3, *
d eaoy													
r Ayi h6CP c Ca)													
* r Ayi h6CP c Ca)													
e) e6kAPG	g	g	g	g	g	g	g	g	g	g	g	g	g
r Ayi h6CP c CGHHLR	g	g	g	g	g	g	g	g	g	g	g	g	g
* r Ayi h6CP c CGHHLR	g	g	g	g	g	g	g	g	g	g	g	g	g

\*) e6kAPG aP) r Ayi h6CP ( sCGHHLR: w: eh2c w: A912Wt9su2WwWgtUsP

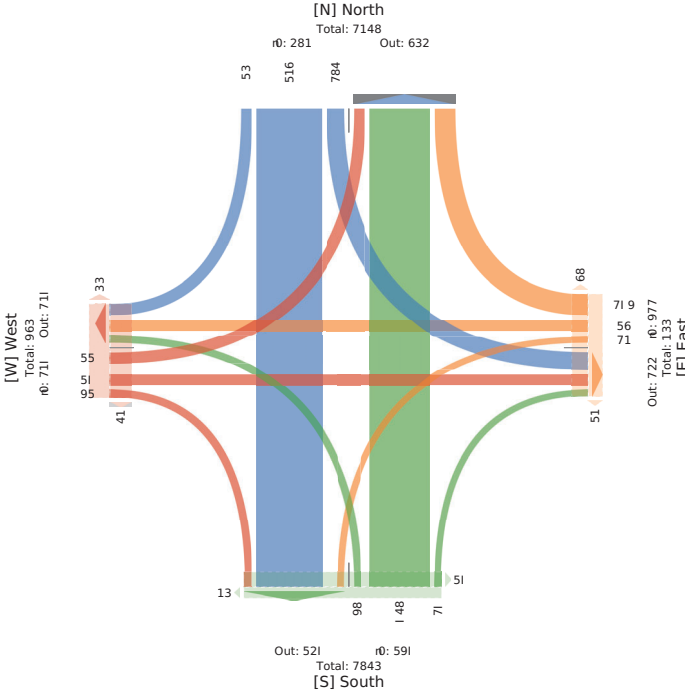
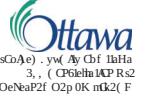


Log I nter time	Dwh				J M6				EaFth				S nst												
	B	W	L	U	PNN	B	W	L	U	PNN	B	W	L	U	PNN	B	W	L	U	PNN					
6:22-T	A	41	81	2	A0D	g	45	6	A	2	12D	A6	5	16	12	2	4	A6	12	A	D	2	D5	4A	
8:22-T	86	11	5	12A	2	8yD	g	105	14	14	2	A	1, 8	14	684	1y	2	12A	A6	8	D	12D	2	141	153
10:22-T	DA	8y	54	2	DA	g	1A8	DE	y	2	1y	1, 4	15	DE	y	2	12y	62	A	A	D	2	118	101	
12:22-T	A6	61D	42	2	11	g	45	AD	16	2	1, 4	1A8	1	A61	D	2	615	A6	y	y	A6	2	5D	15	
14:22-T	5	A84	66	2	6y	g	66	16	12	2	85	51	11	A4	8	2	A66	y	A6	A6	D	2	y	84	
16:22-T	A	58	A6	2	A0B	g	61	2	D	2	88	A3	y	A2A	14	1	A02	110	1A	15	A4	2	85	10	
18:22-T	A4	A46	5	2	6y	g	AD	1D	D	2	DD	1A6	8	1y	16	2	4y	2	A	12	A4	2	86	10	
20:22-T	1	D8	1	2	A22	g	15	A	D	2	8	61	A	116	8	2	164	2	D	5	11	2	6	11	
22:22-T	5	D8	8	2	41	g	A	1	2	2	6	4	2	64	A	2	DE	2	1	A	2	8	1A6		
WtM	A2A	y64	616	2	A05	g	185	1y	85	2	54D	425	56	855	16y	1	y	102	141	22	4A	2	866	851	
% FNtMh	51%	4y2%	1, 26%	2%	9	841%	102%	45%	2%	9	3%	y, 2%	18%	2%	9	3, 88%	A13%	6, 26%	2%	9	8	9	9	9	
% WtMh	68%	A6%	18%	2%	6D3%	g	41%	26%	25%	2%	122%	g	12%	A02%	15%	2%	A03%	g	7%	13%	A0%	2%	43%	g	
Lights Mid T unararIn	84	44	616	2	A6yA	g	18D	18	88	2	584	g	4y	D12	168	1	468	g	182	1yA	BD	2	815	8	
% Lights Mid T unararIn	553%	y63%	yy3%	2%	y62%	g	yy3%	y58%	y43%	2%	yy3%	g	y62%	yA5%	y52%	122%	y62%	g	yA8%	y13%	y43%	2%	y62%	g	
% c nMh	D	DE	1	2	48	g	2	2	2	2	g	2	DE	2	62	g	1	2	D	9	1	2	D	9	
% v irarIn ue BtM	111	1, D	A	2	1Ay	g	1	A	2	8	g	D	112	1	2	118	g	y	D	4	2	1	8	15	
% v irarIn ue BtM	A0%	61%	22%	2%	A0%	g	23%	12%	3%	2%	22%	g	82%	63%	29%	2%	62%	g	10%	13%	2%	A0%	g	A0%	
% v irarIn ue CaussR M8	9	9	9	9	9	2	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	
% v irarIn ue CaussR M8	9	9	9	9	9	2	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	
% v irarIn ue CaussR M8	9	9	9	9	9	2	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	

- ndnstaMs Md v irarIn ue CaussR M8: Lnh3B: Bight3W WhF3U: U9Wf9

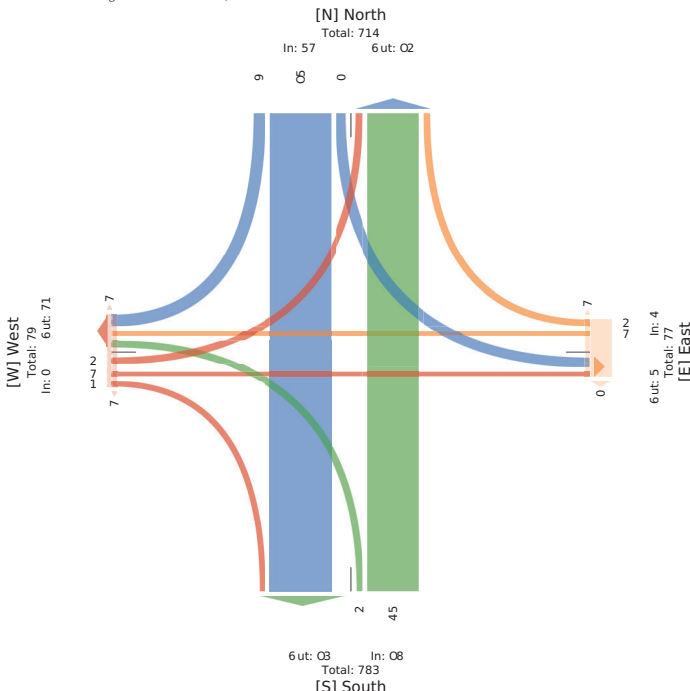


dir	u	m	e	g	t	u	m	e	g	t	u	m	e	g	t
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1



dir	u	m	e	g	t	u	m	e	g	t	u	m	e	g	t
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

5566814 - COVID - BANK ST @ SUNNYSIDE AVE - ... - 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  
 9 rt )v a-k:  
 A-Mt r eBegi)  
 Rwnl D34732l r dai@gm5D41 501 3287D6145, 1



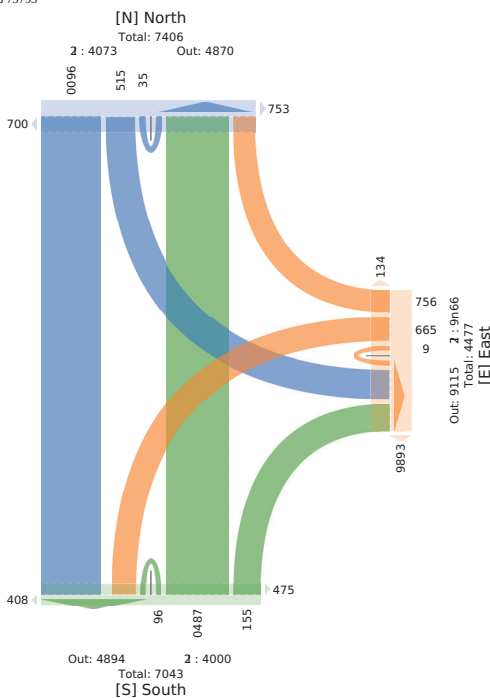
5566814 - COVID - BANK ST @ EXHIBITION WAY - ... - TMC  
 Tue May 3, 20, 00  
 AM Peak (May 3, 0, 00 30AM 83 AM:  
 A-9-a)e) (l 6L) agh Mt it ndy-e)2o ear y2Pehe)in(ig)2c (y-d)e) t g Ht ah2c (y-d)e) t g  
 9 rt )v a-k:  
 A-Mt r eBegi)  
 Rwnl D34732l r dai@gm5D41 501 3287D6145, 1



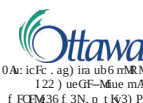
Lag I Intrdue	Outh Eufh. ufed					JMt S st. uFed					Eufh Outh. ufed				
	W	L	U	PNN	-nd*	B	L	U	PNN	-nd*	B	W	U	PNN	-nd*
2, ., 9D3y 6:22-T	.25	84	.	.yD	5,	Ag	41	2	122	113	y2	.18	1	42A	y8
D22-T	611	14D	y	BD	151	84	118	2	26	Av	184	61D	.	42A	y8
4:22-T	AD	11D	1,	8,	55	81	81	2	14	66	186	6,6	4	416	168
5:22-T	A,8	11D	12	8y4	4,	58	84	2	146	AD	1,1	AA	A	685	176
8:22-T	.y4	1A5	A	6A4	44	42	5D	2	1AD	142	8A	8,	2	AD	68
y22-T	.d	y8	5	AO2	4,	41	52	2	1A1	56	84	68	1	AO	8
12:22-T	.41	125	11	Ag	6,	15A	168	2	A 1	..A	y6	.26	6	AO	14
11:22-T	1AA	4D	.	.22	A	12A	11D	2	.18	AA	62	116	2	1De	5
2, ., 9D3y 6:22-T	61	18	A	4,	A	14	.D	1	6,	11	1D	AO	2	DA	A
% PNN	45%	A2%	17%	9	9	65%	11	23%	9	9	53%	51%	21%	9	9
% VNM	58%	1,7%	27%	612%	9	83%	y8%	2%	181%	9	117%	.y2%	27%	622%	9
Lights Md T unarIn	.251	y5D	Dy	A2D	9	4y2	5A1	1	16,5	9	88,	.y6	15	AyA	9
% c rMh	52	A	2	5A	9	A	6	2	5	9	4	12	2	D	9
% c rMh	A2%	28%	2%	2%	9	23%	23%	2%	23%	9	25%	.1%	2%	15%	9
% v irarIn us BuM	54	11	2	85	9	6	Ag	2	6A	9	11	4,	2	5A	9
% v irarIn us BuM	A2%	17%	2%	2%	9	24%	12%	2%	3%	9	17%	.5%	2%	76%	9
% v irarIn us CussR M	9	9	9	9	1y8	9	9	9	9	18A	9	9	9	9	45A
% v irarIn us CussR M	9	9	9	9	1y	9	9	9	9	9	9	9	9	9	1A
% v irarIn us CussR M	9	9	9	9	1E%	9	9	9	9	2%	9	9	9	9	13%

\* -ndstM s Md v irarIn us CussR M/7L: Lnh3B: Bigh3W WdF3U: U9MfC

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

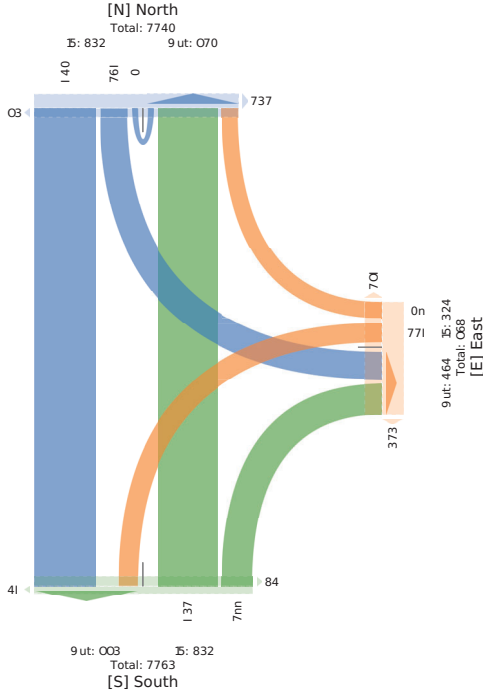


5566814 - COVID - BANK ST @ EXHIBITION WAY - ... - TMC  
 Tue May 3, 20, 00  
 AM Peak (May 3, 0, 00 30AM 83 AM:  
 A-9-a)e) (l 6L) agh Mt it ndy-e)2o ear y2Pehe)in(ig)2c (y-d)e) t g Ht ah2c (y-d)e) t g  
 9 rt )v a-k:  
 A-Mt r eBegi)  
 Rwnl D34732l r dai@gm5D41 501 3287D6145, 1



s f m A/Hue	f uko Julno. ulec					C/M E FG. ulec					Julno f uko. ulec				
	S	s	W	POD	ORU	B	s	W	POD	ORU	B	S	W	POD	ORU
2, ., 9D3y 6:22-T	117	ny	1	11P	n2	.7	.y	2	t,	8y	t7	12D	2	1y	1,
t g2OT	1,1	.8	2	1ny	7%	.h	71	2	t1	85	ny	12n	2	11P	1,
t g1OT	8	nl	.	1,8	60	.8	72	2	t8	11y	h,	12n	2	1AD	12
t g2OT	11y	tD	1	182	11	ln	.n	2	78	5,	11	125	2	1D	71
% PNN	52%	.84*	14*	h	h	n74*	tD*	2*	h	h	7,4*	D34*	2*	h	h
% VNM	72a*	1,4*	24*	n72*	h	D*	54*	2*	1nd*	h	174*	.y4*	2*	n74*	h
% c rMh	24y5	245,	2402	240P	h	24yt	2471	h	24Dh	h	24yl	2411	h	2478	h
% v irarIn us BuM	7y2	157	8	t5l	h	8y	125	2	1yD	h	1yD	7m	2	ty2	h
% v irarIn us BuM	8y4*	yy4*	122*	y,4*	h	122*	y74*	2*	yDyP	h	y84*	y74P	2*	yt4*	h
% v irarIn us CussR M	1y	2	2	1y	h	2	1	2	1	h	2	12	2	12	h
% v irarIn us CussR M	n4*	2*	2*	74*	h	2*	24*	2*	24*	h	2*	.4*	2*	14P	h
% v irarIn us CussR M	.y	1	2	72	h	2	D	2	D	h	7	15	2	.2	h
% v irarIn us CussR M	DyP	24P	2*	n6*	h	2*	t4P	2*	74*	h	14*	n4*	2*	74*	h
% v irarIn us CussR M	h	h	h	h	1D	h	h	h	h	7,	h	h	h	h	y,
% v irarIn us CussR M	h	h	h	h	y4*	h	h	h	h	yD*	h	h	h	h	yy4*
% v irarIn us CussR M	h	h	h	h	8	h	h	h	h	1n	h	h	h	h	t
% v irarIn us CussR M	h	h	h	h	n4*	h	h	h	h	74*	h	h	h	h	t4*

h)FRCM C/M v iHHCue ) ACRM 4s gs Fr3BgBidar3SgsA3WMS1A



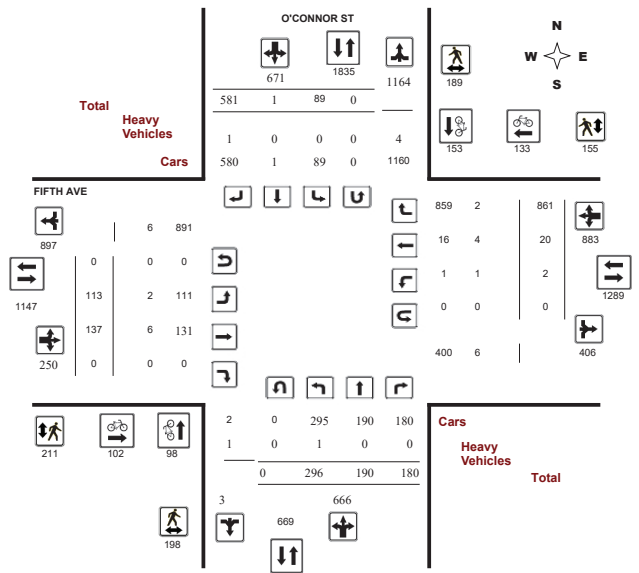
Transportation Services - Traffic Services

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





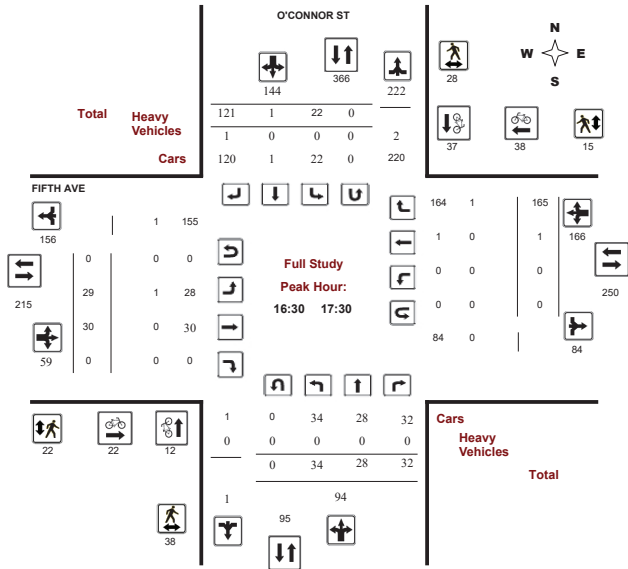
Transportation Services - Traffic Services

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
TILNgbh( G AF-9 133AF-9 P
) ILCSlgi 6nd(yi st d 9 oyur algi 2c gsH2- gdi yst i 2v arn algi of Bos d 2v arn algi of
Cuii RslwP
) IL 9 of h k g y
) A3FF0B42naosyot A, 78 47521 78D 3, 52bagg CodgA, F53, 3F:



City of Ottawa
- u Hdgil Fr A Coy OCMysRS
3FF Cot igllystot 1 u2
Ngp2t 2MN2K 7042JC)

Large data table with multiple columns for vehicle types and counts. Includes summary rows for % vrn algi of Cuii Rslw and % vrn algi of Bos d.

Summary table with columns for Northbound, Southbound, Eastbound, Westbound, and Total. Includes a row for % vrn algi of Cuii Rslw.

\* - gdi yst i st d v arn algi of Cuii i Rslw n Ang g B/ABdh( y2)WAV u 2U AUJW u



Sat M7, 20FuFF  
SI Length: 1 3 u A 6, 3 u A P  
) ILCSiigi le th (2 sgd - o'bay yni 0c nsH 0Andni 2sgi 0v tyr yni og Bosd0v tyr yni og  
Caoi i RslwP  
) IL - ofhk ng7  
ni 3, uuFTI 90e oys 7og 3245. 4DB: 0643BD2: : 20btrh Codn32u8, : ; u:



AoHtdid Fr 3CCT oMOMyRS  
uu Cogi Tills 7og 1 d0  
NpnsrgOMNOKFG 41. 0C)

Tue M7, 20FuFF  
1 L 1 ngr h (3 L : 636 1 L A: M-nug9l ngr 1 P)u  
C9Sg 9i ni h e'rg y gCHL PpPava9ni 21 ng-v2l n'hi yugci 2Bava9ni Pc RPhdEBava9ni Pc  
s p'i wng 3  
C9L P-nk nc y  
ni ( 3FFOD42d PagePC(, 67856D52:467 D 88, 2bgs s PHH(, F. 383F8



1 up-dHhV s oq POMOyRS  
3FF Cot i ylglyst 1 u2  
Npnsrg 2MN2KOG 6J52 C

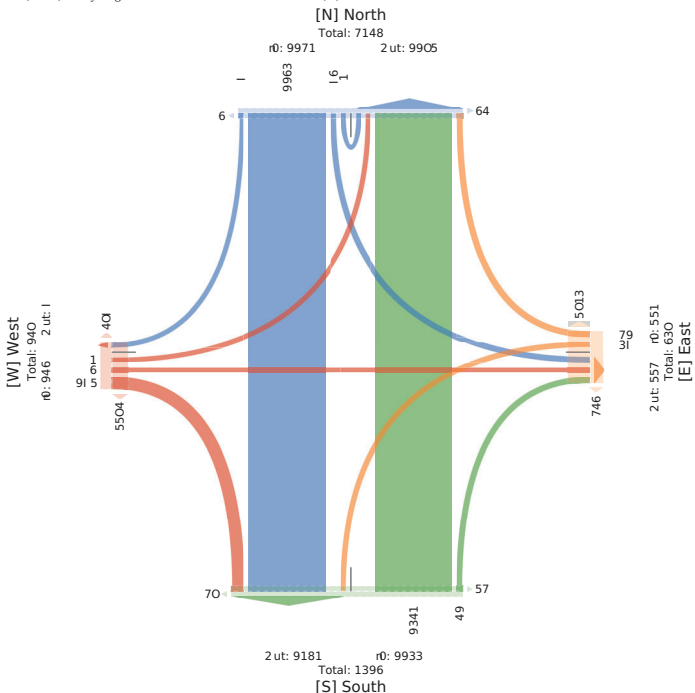


Table with columns: Day, Direction, Signal, Vehicle Count, Percentage, etc. Includes data for various directions and percentages.

1 n'hi yugci gCHBava9ni Pc s p'i wng 7d (dnQR) Rmrg 2W W u 2U (U:W)u

Sat M7, 20FuFF  
1 L 1 eng h2( 1 1 L : 1 L 1 1 L 3: M'ean-1 eng 6 P) a  
C--s-ni ei htdr 2 nchL P'Pavy-06 en'a/0l e'hi 2nci 0Byy-yei Pc RPhdEByy-yei Pc  
s p'i wng 3  
C--L P'ack ec7  
ni ( , uuFTI 90d Pyn7Pc (21-6. 1DB: 0:914E25520btr'e s PHH(2u8, 5, u5



1 aP'AhHhV s oq POMOyRS  
uu s Pci 2-n7Pc 1 d0  
NpnsrgOMNOKFG 11. 0s C

Tue M7, 20FuFF  
1 L 1 eng h2( G AF - 9 133AF - 9 P  
) ILCSiigi 6nd th (2 sgd - o'bay yni 0c nsH 0Andni 2sgi 0v tyr yni og Bosd2v nrg algi ot  
Caoi i RslwP  
) IL 9 ofhk ng7  
ni A3FFOD3: 2noas ynt A 472DB, : 21542 DHD: 2bgs CodgA F. 353F:



1 up-dHhV s oq POMOyRS  
3FF Cot i ylglyst 1 u2  
Npnsrg 2MN2KOG 4182C)

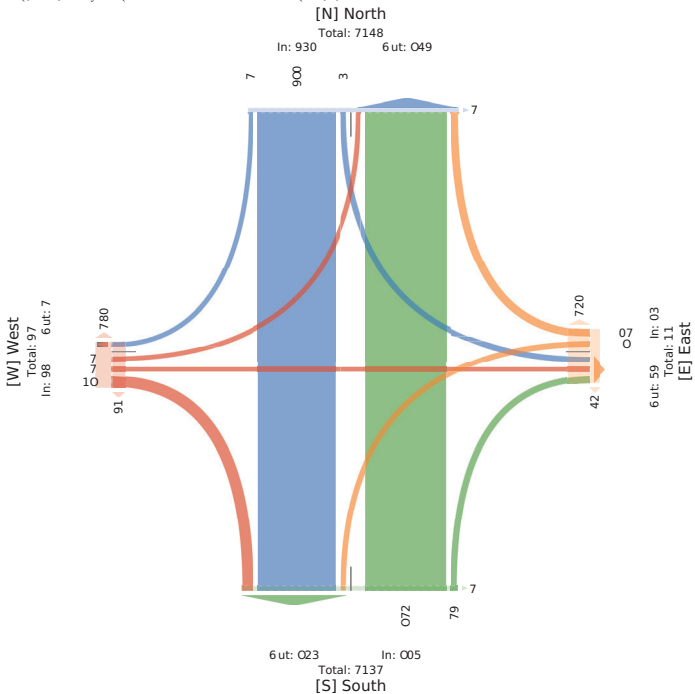
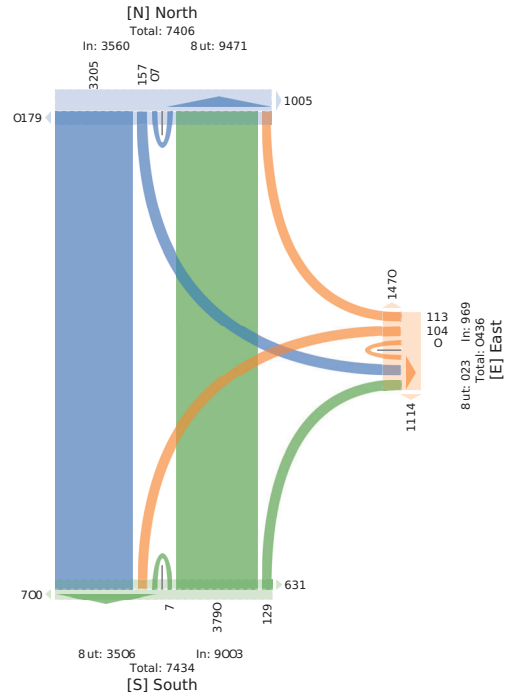


Table with columns: Day, Direction, Signal, Vehicle Count, Percentage, etc. Includes data for various directions and percentages.

Ingh l agwot	Noof bol g f o l t d				Esty S g f o l t d				bol Noof f o l t d					
	W	n	U	) pp - g1*	B	n	U	) pp - g1*	B	W	U	) pp - g1*	ay	
% v aralgi ot Cuii Rslw	1	1	1	1	F7%	1	1	1	1	F7%	1	1	1	37%

\* - gdgi yst i st d v aralgi ot Cuii Rslw n Ang@2BABdhi(2)VAVW d 2U AUWU t

5589707 - BANK ST @ EXHIBITION WAY - OCT 14 ... - TMC  
 Sat My7, 20FuFF  
 S l L eng h 7 l : 3 u A - 6 , 3 u A - P  
 ) LL C l s i h 7 l e th ( 2 sgd - o b a y y l a i 0 c n s H 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 w P  
 ) L - o f h k n g 7  
 n h 3 , u u f T : o e o y s 7 o g 3 2 9 4 5 D 8 2 0 6 9 4 D 9 D E : 0 b 7 n C o d n 3 2 u 8 , . . u



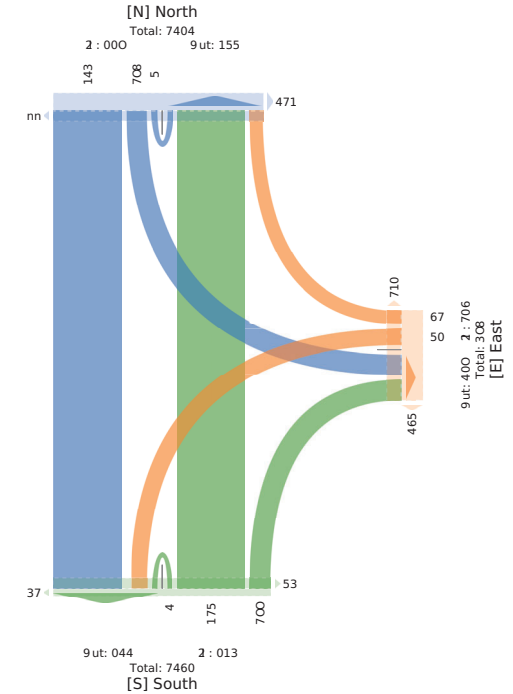
5589707 - BANK ST @ EXHIBITION WAY - OCT 14 ... - TMC  
 Tue My3, 20Fu0  
 L L 1 n g r h ( 3 6 1 1 L A M - n g 5 B l n g t 1 P u )  
 C 9 s 9 i n i h d e o r y i g c H L P p u a v a 9 i 2 1 n g - v 2 l n H i y u g i 2 B a v a 9 i P c R P g F B a v a 9 i P c  
 s u P i w g 9 A  
 C 9 L P - n k n c y  
 n h ( 3 F F 0 D B 4 2 d P a g y P c ( , 6 7 8 D E , 2 : 5 6 7 D 6 D B 4 2 b e n s P H h ( , F . 3 5 3 F 4



Ingh l agwot	NPar bP fP cH				Egy S n fP cH				bP y NPar fP cH							
	W	d	U	Cpp	R	d	U	Cpp	R	W	U	Cpp	l n f P y			
0F00:3E:3, (06)L	335	,4	3	3.3	63	3D	03	F	48	DE	45	340	F	3.8	05	4.8
(,6F)L	33	,4	3	3.F	,,	3	0D	F	,,	84	4D	33D	F	365	05	4.3
(,6L)L	340	44	6	35F	D8	38	0,	F	4	3,F	4,	33D	F	360	46	4.6
6(F)L	368	33	0	350	3H,	3D	04	F	3	335	0,	363	F	3	35	4.0
% VNg	60,	34F	8	,,4	4F4	53	8,	F	3.5	,,46	344	638	0	,6,	346	3.4
% Cpp	587%	382%	32%	,,	,,	076%	657%	P%	,,	,,	072%	587%	F7%	,,	,,	,,
% VNg	463%	D8,	F2%	,,5%	,,	,,3%	,,2%	P%	339%	,,	87%	463%	F2%	,,2%	,,	,,
11T	F83F	F56F	F26F	F86F	,,	F843	F1D	:	F8,0	,,	F1D	F1Q	F6FF	F835	,,	F8,0
deor y g c H L P p u a v a 9 i	,86	308	8	,44	,,	,5	8,	F	3.3	,,	30D	,8,	0	,0,	,,	3,3D
% deor y g c H L P p u a v a 9 i	8,2%	887%	3F%	867%	,,	8,2%	858%	P%	8.7%	,,	8,2%	867%	3F%	867%	,,	867%
1 n g - v	35	F	F	35	,,	F	3	F	3	,,	4	33	F	3,	,,	40
% 1 n g - v	47%	P%	P%	07%	,,	P%	33%	P%	F2%	,,	07%	07%	P%	07%	,,	07%
Bava9i P c R P g H	30	3	F	34	,,	,,	3	F	6	,,	0	3,	F	3,	,,	4,
% Bava9i P c R P g H	07%	F1%	P%	07%	,,	67%	33%	P%	43%	,,	33%	07%	P%	07%	,,	07%
1 n h i y u g i	,,	,,	,,	,,	41%	,,	,,	,,	,,	,,	,,	,,	,,	,,	,,	30%
% 1 n h i y u g i	,,	,,	,,	,,	887%	,,	,,	,,	887%	,,	,,	,,	,,	,,	,,	807%
Bava9i P c s u P i w g 9	,,	,,	,,	,,	4	,,	,,	,,	4	,,	,,	,,	,,	,,	,,	3F
% Bava9i P c s u P i w g 9	,,	,,	,,	,,	33%	,,	,,	,,	F5%	,,	,,	,,	,,	,,	,,	57%

\* 1 n H i y u g i g c H B a v a 9 i P c s u P i w g 9 7 d ( d n 9 2 R R e o r 2 W W u j 2 U ( U : W j u e

5589707 - BANK ST @ EXHIBITION WAY - OCT 14 ... - TMC  
 Sat My7, 20FuFF  
 L L 1 e n g h 2 ( 1 1 L : 1 ( , 1 1 L 3 : M e a n - 1 e n g 6 P ) a  
 C - s - n i i e i h d 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 y v y - e i P c R P h F B 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 7 e s P H h ( 2 u 8 , . . u 9





5589707 - BANK ST @ HOLMWOOD AVE - OCT 14 20.. - TMC

Tue May 3, 20F0U  
Tl Lng h y 6 A.F - 9 B3AF - 9 P  
J LClii tgi gndh y s t d 9 oyaralgi 2 gsh 2- ggi yust i2v naralgi ot Bosd 2 varalgi ot Cuii rshw p  
J L9 o h g g y  
n 3 BFH0D02nassant A 47 88R1S2L 4E1D54S; 2bg CodgA F53F3F



u-vndhdgi fr A Coy oMKGvS  
3FF Cot i gylsvnt i u Ngppsg 2MN2K0G 4182C

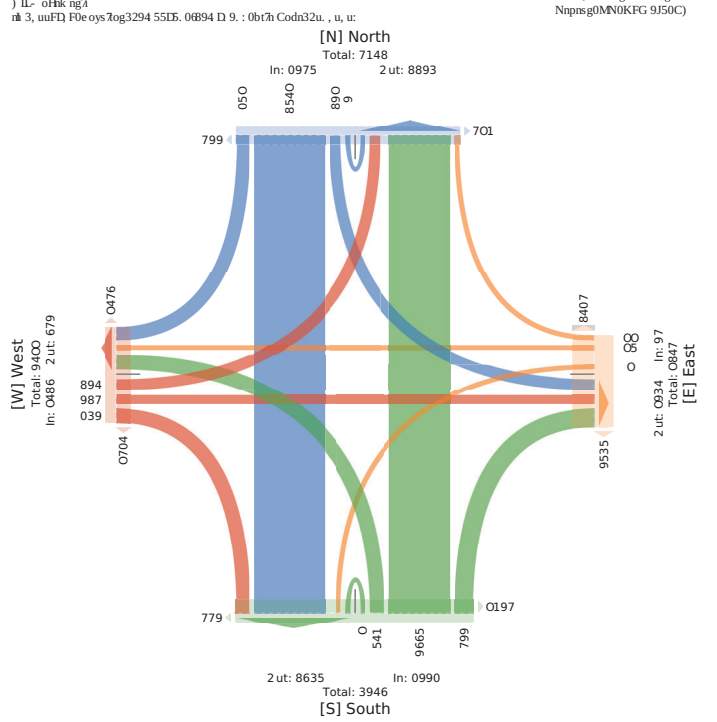
Veg	Hgt	E aspect	Nwp				Egy				S w y										
			B	W	U	pp	B	W	U	pp	B	W	U	pp							
0F00	3.0	...	5	F	34	...	3	F	F	3	...	3	3	...	3	3	...	5	...	5	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

5589707 - BANK ST @ HOLMWOOD AVE - OCT 14 20.. - TMC

Sat M7, 20F0U  
S l Lng h7 l 3 u A - 6, 3 u A - P  
J LClii ni le th ( 2 sg d - o bzar ylni 0c nsF h 0Andri 7esgi 0v yr ylni ot Bosd 0v yr ylni  
Cuii rshw p  
u Cog i Tlls Zog I d 0  
J L - o h h g g y  
n 3, u i n T) F0esys 7og 329 55D5. 0699A D 9. : 0b7r h Codn32u. u, u



u-vndhdgi fr A Coy oMKGvS  
3FF Cot i gylsvnt i u Ngppsg 2MN2K0G 4182C



5589707 - BANK ST @ HOLMWOOD AVE - OCT 14 20.. - TMC

Tue May 3, 20F0U  
I L lng h 06 L L : 6G3 L L A: M-nug9l ngr 1 P u  
C9s Sgi ni h d r y gchL Ppvaavañi 21 ng-v2l n h i yugci 2 Bavañi Pc RphE Bavañi Pc  
s uPi i w g A  
C9H Pc-nk ncj  
n ( 3FFH0D02nassant P, 6488R1S2L; 64E66572bg s PhH, F53F3F



u-vndhdgi fr A Coy oMKGvS  
3FF s Pc i yugci 1 u  
Nngppsg 2MN2K0G 6182C

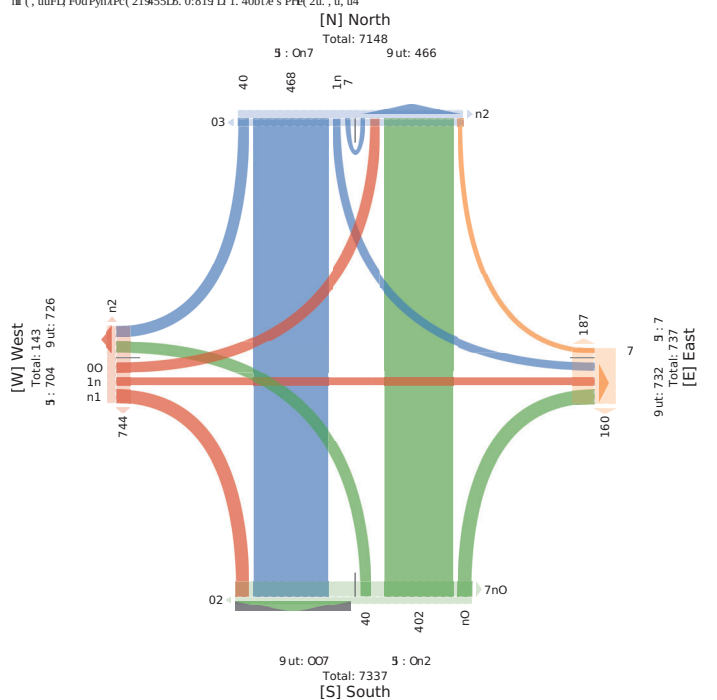
Veg	Hgt	E aspect	Nwp				Egy				S w y										
			B	W	U	pp	B	W	U	pp	B	W	U	pp							
0F00	3.0	...	5	F	36	...	3	F	F	3	...	3	3	...	3	3	...	5	...	5	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

5589707 - BANK ST @ HOLMWOOD AVE - OCT 14 20.. - TMC

Sat M7, 20F0U  
I L lng h 2, I 1 L : ( 1, I 1 L 3: M ean- l eng 6 P a  
C - s - ni i e h d r 2 nChL P P y a v i 06 enAv 0l e h b i 7 a n c i 0 B v y v e i P c P h F d B v y v e i P c  
s uPi i w n g 3  
C - L P A e k ec 7  
n ( , u i n T) F0d P y n7Pc ( 21955D5. 0: 819 D 1. 40b7r s PhH ( 2u. u, u 4



u-vndhdgi fr A Coy oMKGvS  
3FF s Pc i yugci 1 u  
Nngppsg 2MN2K0G 6182C





5589707 - BANK ST @ WILTON CRES - OCT 14 2022 - TMC  
 Tue May 3, 20F00  
 TL Lng h ( 6 AF - 9 P  
 ) IL Csi i n h ( y s t d 9 o y u a r l g i 2 c g s H 2 - g d g j y s t i 2 v a r a l g i o t B o s d 2 v a r a l g i o t C u i i R s l w P  
 ) IL 9 o h k g y  
 n h 3 F F 0 B 4 2 n o a s y o t A 4 7 8 5 5 5 0 2 1 5 4 7 D 1, F 4 2 b e g C o d g A, F 3 0 3 F



ngh l agayst Wk g	Nouq bol y f o l t d				bol y Nouq f o l t d				E g y Saj f o l t d									
	B	W	U	J	pp	- g d *	W	n	U	J	pp	- g d *	B	n	U	J	pp	- g d *
% v a r a l g i o t C u i i R s l w																		
1 1 1 1 1 F 2 % 1 1 1 1 1 F 2 % 1 1 1 1 1 3 2 % 1																		

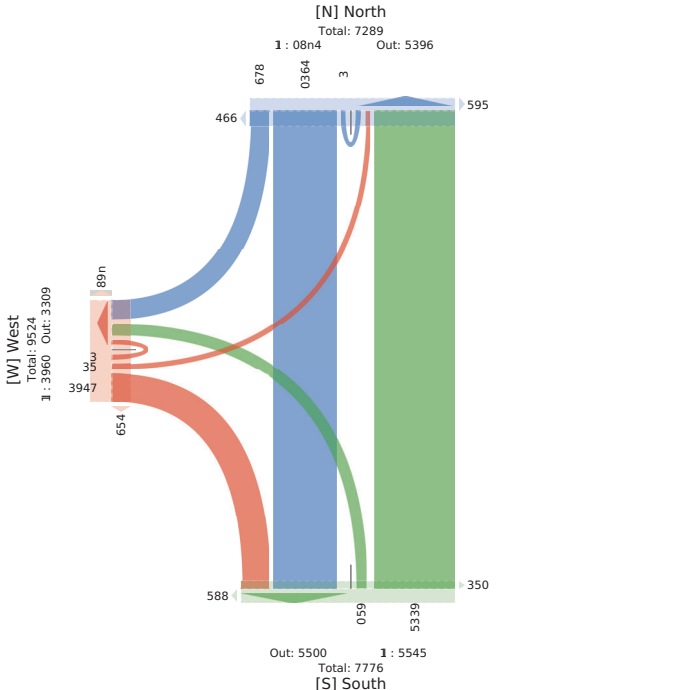
\* - g d g j y s t i s t d v a r a l g i o t C u i i R s l w n A n g @ 2 B A B d h i y 2 W A V i d 2 U A U I W t

ngh l agayst Wk g	Nouq bol y f o l t d				bol y Nouq f o l t d				E g y Saj f o l t d									
	B	W	U	J	pp	- g d *	W	n	U	J	pp	- g d *	B	n	U	J	pp	- g d *
0F00B3F3 : AF-9																		
3F 30: F 3: 3 30: :4 F 3.3 F :3 4 4 F 38F F 4D 3 F 48 :8 :58																		
c o l u t e W s l 03 0:0 F 303 0 033 0F F 343 F 338 : F F 304 04 5:8																		
AF-9 34 3:8 F 34 : 3:4 :3 F 35. F :4. F F 4. : : D 1																		
84-9 D 3:F F 3:D 3 3:8 :F F 000 F :F 3 F 3 : :8 :02																		
AF-9 3. :3:0 F 3. : 3 3:D : F 380 F 5. F F 5. :F :F 4																		
84-9 0F 3:4 F 344 : 3:F : F 38. F 4. F F 4. :8 :F 4																		
c o l u t e W s l 45 4.: F 48: 34 :30 358 F 583 F 0.: 3 F 0.4 353 3.08																		
4AF-9 :F 34. F 30 F 35. :5 F 003 F :4 4 F 5F 4. :54																		
84-9 05 333 3 3:8 3F 30F 00 F 0F0 F 50 F F 50 :3 :3:																		
4AF-9 0. 33D F 3.: 4 30D 3 F 30D 4 5. F F 5. : : F.																		
4A-9 0. 333 F 3.4 3: 343 F F 343 F 44 F F 44 :8 : :3																		
c o l u t e W s l 395 :8. 3 :F0 003 :8: 5F F 5.: 4 0.4 4 F 05F 0:F 3:4																		
D8F-9 4F 38F F 340 303 35. F F 35. 3 :F 3 F 3 : : : 15. 2																		
84-9 :D 3F4 F 3.: : 350 F F 350 30 : : F F : : D3 2.D																		
AF-9 4: D F F 3: : 50 3:8 0 F 353 31: 40 F F F 40 30. :4.																		
84-9 43 8. F 3.5 D: 3:3 3 F 3:0 38 :D F F :D 30: :05																		
c o l u t e W s l 380 :8F F 40D 003 : : : F :.8 4F 35: 3 F 35. :F 3:4																		
5AF-9 :F 33. F 34. 54 30F F F 30F 0. : : F F : : D :5D																		
84-9 :5 335 F 34. :4 34F F F 34F 3. 40 F F 40 :3 :4.																		
5AF-9 :0 388 F 3.3 003 3:F F F 3.F 8 : : F F : : 03 :05																		
5A-9 :3 38F F 3:3 3. 304 F F 304 38 43 F F 43 :3 :F5																		
c o l u t e W s l 3:F :F F 40F 340 484 F F 484 5F 38: F F 38: 0F: 3:1																		
D8F-9 :0 D: F 303 D 33: F F 30: D 0D F F 0D 38 050																		
D84-9 0. 80 F 33D 03 33: F F 33: 0 : : F F : : :0 05																		
D8F-9 0D D: F 33: 3 33: F F 33: 4. :F F F :F : :3 0.5																		
D84-9 0F : : F D : 3 8. F F 8. 0 0D F F 0D 04 0F0																		
c o l u t e W s l 3F. : : F F : : : 3D : : : F F : : : 35 3:8 F F 3:8 3F5 3F03																		
8AF-9 0: 50 F 84 35 3F: F F 3F: 3F :3 F F : :3 :8 0:0																		
84-9 38 D F 88 3. 3F4 F F 3F4 0 0 F F 0 03 0F.																		
8AF-9 3. 55 F 83 00 D F F D 08 F F F F : : F 355																		
8A-9 00 :D F 8F 43 83 F F 83 43 3 F F 3 : : D 30D																		
c o l u t e W s l 5D 085 F :54 3F: :D D F F :D D 80 : : F F : : 303 585																		
3AF-9 3F :D F 4D 1F 5F F F 5F :4. : F F F : : 302 3:0																		
3F84-9 3. :5 F D 303 30F F F 30F 12 : F F F : : F : : 300																		
3FAF-9 0F 85 F 335 0: D F F D D 13 F F F 3 3 : : 0FF																		
3F84-9 0F 58 F 88 : 5D F F 5D : : :D F F :D 05 034																		
c o l u t e W s l : : 083 F :44 :5 : :F F F : :F :F 4 :0 F 3 : : 08F 50D																		
33AF-9 3: 80 F 3F4 0 :4 0 F :5 0 0D F F 0D 35 0FF																		
3384-9 33 : : F 5. 30 : : D F 5. 3 03 3 F 00 05 35F																		
c o l u t e W s l 0. 344 F 358 3. 3:3 3F F 3.3 : : :8 3 F 4F : : :5F																		
W s l 5D :354 3 :8.4 3F3 :330 :0 F :.4. : : :0 304D 3. 3 305: 3.53 8.00																		
% p p u s a t 382% D 3% P % 1 802% 57% P % 1 80D% 37% F 2% 1 1																		
% W s l D3% :D3% P % :F 2% : : :02% :7% P % :2% : 3:7% F 2% P % 3:2% 1 1																		
n h ( y s t d 9 o y u a r l g i 558 08:5 3 :535 :D54 :08 F :0F: 1 3000 8 3 30:0 1 834:																		
% n h ( y s t d 9 o y u a r l g i 805% 802% 3F3% 8:2% : 8:20% 8:20% P % 8:2% : 852% :2% 3F3% 8:2% 1 8:2%																		
c g s h : : : F 3:F : : 3:D 0 F 3:F : : : 3 F 5 : : 005																		
% c g s h F 2% :2% P % :2% : : :7% F 2% P % :2% : F 2% 52% P % F 2% : : 2%																		
v a r a l g i o t B o s d 3F0 F 3FD : 88 33 F 33F : :F : : F : : 1 040																		
% v a r a l g i o t B o s d F 2% :20% P % 07% : 07% :70% P % 07% : 07% 0E% P % 07% 1 07%																		
- g d g j y s t i 1 1 1 1 1 88D 1 1 1 1 1 : : F 1 1 1 1 1 3 : : :																		
% - g d g j y s t i 1 1 1 1 1 885% 1 1 1 1 1 885% 1 1 1 1 1 1 88% 1																		
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 0 1 1 1 1 1 05																		

5589707 - BANK ST @ WILTON CRES - OCT 14 2022 - TMC  
 Sat May 7, 20FuF  
 SL Lng h ( 1 3 u A - 6 : 3 u A - P  
 ) IL Csi i n h ( e t h ( 2 s g d - o z b a r y n i 0 c n s H 0 A n d n i 2 s g i 0 v t y r y n i o t B o s d 0 v t y r y n i o t C u i i R s l w P  
 ) IL - o h k g n g  
 n h 3, u u F 1 9 0 e o y s 7 o g 3 2 9 5 4 . . . F 0 6 9 4 D 2 u 9 0 b t h C o d n 3 2 u 8, F, u :



5589707 - BANK ST @ WILTON CRES - OCT 14 2022 - TMC  
 Tue May 3, 20F00  
 L L 1 n g h ( 3 6 1 L : 6 3 6 1 L A M - n g 9 1 n g t 1 P u  
 ) C 9 s 9 g i n h d o r y g e H L P p u a v a h i 2 1 n g - v 2 1 n h i y u g c i 2 B a v a h i P c R p g h 2 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 6 2 d P a g y P c ( : 6 F 8 5 5 0 2 : 5 6 4 D 5, F 6 2 b e n s P H i ( : F 3 0 3 F 7

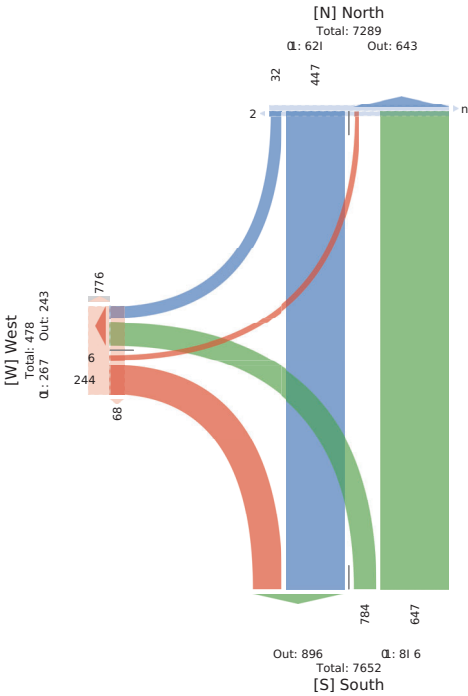
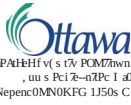


dno l anayst Wk n	N D a r b P y f P c h				b P y r N P a r f P c h				E n i y S a j f P c h						
	R	W	U	C p p	l n F	W	d	U	C p p	l n F	R	d	U	C p p	l n F
0F00:3E3 : (6) L															
D 37F F 37D 5 3.8 .F F 008 F :F 3 F 3 : :8 :0D															
(7) L 3. 370 F 3.: 3 3:D : : F 380 F 5. F F 5. 7F :30															
(4) L 0F 376 F 366 7 3:F 7. F 38. 3 6. F F 6. :8 :16															
6(7) L 7F 36. F 3D 1 35. :5 F 003 1 6 6 F 5F 6. :56															
W p g 50 663 F :07 30 :63 30 F D: 1 066 : : F 0.3 30 350F															
% C a p a r 334% D 4% P % : : 554% 004% P % : : 854% 04% P % : : :															
% W p g :47% 704% P % 7:40% : : 754% 3F4% P % D:4 : : 3:4% F4% P % 364% : : :															
I 1 T F4 F F 48F: : F487 : : F488 F45: : F487 : : F41D F4FF : : F488 : : F48:															
d e n y g r H L P u a v a h i 53 63D F 6D8 : : :3. 358 F 587 : : 0.7 : : F 0.8 : : 3:73															
% d e n y g r H L P u a v a h i 8D4% 8:4% P % 8:4% : : 8:4% 8:4% P % 8:4% : : 864% 3F3% P % 864% : : 8:4%															
1 n g - v 3 35 F 3D : : 36 3 F 3. : : 0 F F 0 : : 7. :															
% 1 n g - v 34% 74% P % 04% : : 04% F4% P % 34% : : F4% P % F % F4% : : 04%															
B a v a h i P c R p g h F 3. F 3. : : 00 6 F F 05 : : 3F F F 3F : : 67															
% B a v a h i P c R p g h P % 04% P % 04% : : 74% 04% P % 74% : : 74% P % P % 74% : : 74%															
1 n h i y u g c i : : : : : 3F : : : : : F : : : : : 3D :															
% 1 n h i y u g c i : : : : : 8F4% : : : : : : : : : : : 8D% : : 1															
B a v a h i P c s u P i w g 9 : : : : : 3 : : : : : F : : : : : 7. :															
% B a v a h i P c s u P i w g 9 : : : : : 84% : : : : : : : : : : : 34% : : 1															

\* 1 n h i y u g c i g e H B a v a h i P c s u P i w g 9 4 d ( d n 0 2 R ( R e a r 2 W W u 2 U ( U : W ) t

5589707 - BANK ST @ WILTON CRES - OCT 14 2022 - TMC

Sat M7, 20FuFF  
 1 L eng h2(, 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/a/0l ehki 7nci0Btyvy-ei Pc P'PhfDBtyvy-ei Pc  
 s aPi wng3  
 C--L P'ek ec7  
 n(, uuFT) 10d Pyn7P( 21945... FD: 19DI2u10br'e s P'F( 2u8, F, u4  
 Nepenc0MN0KFG 1J50s C



5589707 - QUEEN ELIZABETH DRWY @ FIFTH AVE ... - TMC

Tue M7, 20FD0  
 TI Lng h2( G AF - 9 133AF - 9 P  
 ) ILCSiigi 6ndh( y st d 9 opuar algi 2c gsH2-gdgi yst i2vnr algi ot Bosd2vnr algi ot  
 Cuii RslwP  
 ) IL- oHk ng7  
 n( A3FF0D 32noasyot A 47 F: 8032I542 I2B85, 2bng CodgA F: 333F:



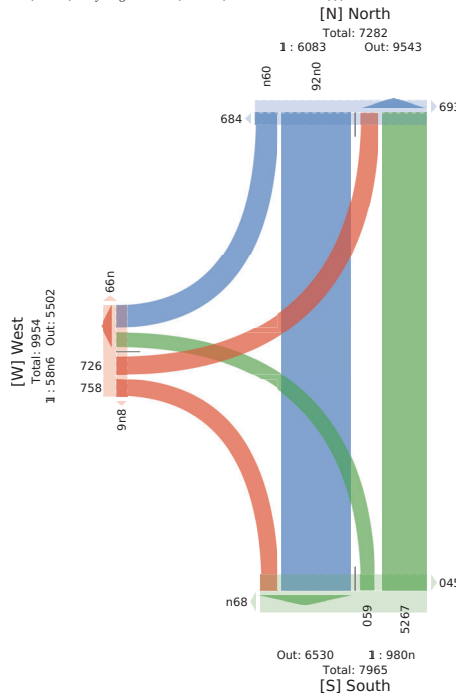
Ingh l apayot	Noag bol y fol t d				bol y Noag fol t d				E gyl Sai y ol t d							
	B	W	U	) pp -gd*	W	n	U	) pp -gd*	B	n	U	) pp -gd*				
0F0013FB ; AF-9	0D	34F	F	35D	05	44	30	F	5	01	5	8	F	3	8	0.3
col ut WeyL	5	054	F	300	3	334	05	F	3	0	4	34	38	F	5	0
AF-9	34	3.0	F	355	3	4	3F	F	3	3	5	38	F	0	13	0.1
AF-9	0	3FD	F	30	38	0	35	F	58	1	30	35	F	08	310	0. F
AF-9	0D	3. D	F	38	0	33	F	54	4	5	34	F	00	0F	08	08
AF-9	34D	F	0F3	0	4	3D	F	5	10	3F	35	F	05	0	10	10
col ut WeyL	33F	48	F	5E	18	0.4	4	F	083	3.5	1	1	D	F	3F	50
4F-9	0	3	F	3D	1	35	F	D	1	03	3F	F	3	0	3	085
4F-9	08	354	F	0E	38	45	3	F	5F	1	05	3	F	1	30	3
4F-9	0D	3	F	3	13	5	03	F	85	15	08	00	F	43	310	30
4F-9	15	F	F	55	05	15	3	F	4	15	04	00	F	15	05	355
col ut WeyL	335	433	F	0D	303	0	5	F	3E	301	300	15	F	3.8	18	33F
AF-9	11	F	F	8	0	4F	00	F	50	0	0	00	F	4	1	03F
AF-9	1F	0	F	50	18	8	5	F	4	85	0	38	F	0	13	35F
AF-9	00	4	F	5	13	40	33	F	1	18	3	3D	F	1	1	3.1
AF-9	05	F	F	5	1	1	D	0D	F	1	1	04	3F	1.4	1	35
col ut WeyL	330	38	F	14	3:8	3D8	D	F	045	1:1	15	8	F	34	343	53D
5AF-9	4	F	3F	3F	4F	0	F	5	0	0	0	F	5	0	0	00
5AF-9	3	5F	F	3F3	30	33	F	45	1	0	35	F	1	34	0F3	0F3
5AF-9	05	16	F	33	1	1	D	F	43	1	15	04	F	0	1	005
5AF-9	08	5	F	30	34	0D	38	F	5	04	34	00	F	5	8	3D
col ut WeyL	3	0D	F	35	1	3.5	1	F	0.3	35	300	16	F	308	4	1D5
D4F-9	0	3	F	15	3	26	3	F	15	34	30	3	F	04	4	348
D4F-9	3	45	F	5	3	08	5	F	1	33	34	35	F	0	3F	3.3
D4F-9	3F	1	F	4	30	0	33	F	15	34	D	D	F	3	3	3F
D4F-9	D	4	F	3	33	08	F	14	0F	3F	4	F	34	1	333	333
col ut WeyL	1	F	03	F	05	4F	33D	15	F	344	19	4	1	F	1D	10
8AF-9	3	F	F	5	4	0	33	F	1	00	38	3	F	1	3	3.1
8AF-9	35	D	F	D	3D	15	3	F	43	05	33	3F	F	03	3	345
8AF-9	0	D	F	80	D	8	1	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	04F
col ut WeyL	55	085	F	15	18	3D0	4F	F	0	18	4	F	F	33	45	500
3AF-9	3D	1	F	D	03	48	30	F	53	11	33	0D	F	18	43	380
3FA-9	24	15	F	D	1	1	D	F	8E	3	35	3	F	4D	1	0F
3FA-9	3	43	F	4	0F	D	1	F	D	00	38	0	F	3	3	03F
3FA-9	33	D	F	8	30	8	4	F	5	5	3	0	F	18	0	3.0
col ut WeyL	4D	00F	F	05D	3FF	08	04	F	138	31D	1	3	F	385	308	58
33AF-9	3F	1	F	4F	1	5F	3	F	D	1	33	F	34	1	3.8	3.8
33AF-9	3F	1	F	4	D	08	F	1	4	F	4	F	4	1	0	0
col ut WeyL	0F	D	F	3E	33	88	3D	F	335	8	3	F	0F	5	0.3	0.3
WeyL	5	0.5	F	1	FD	15	3.4	30	F	0F.5	3003	43F	4	F	3F5	15
% ppana	032%	510%	F%	1	1	587%	0F7%	F%	1	1	57%	407%	F%	1	1	1
% WeyL	337%	33%	F%	407%	1	047%	7%	F%	37%	1	52%	1%	F%	37%	1	1
n d h y st d 9 opuar algi	53F	0	F	1	3	345F	15	F	3855	1	493	444	F	3F4	1	1
% n d h y st d 9 opuar algi	8.5%	852%	F%	857%	1	8.7%	810%	F%	8.2%	1	800%	80%	F%	80%	1	850%
% c g h	2	40	F	44	1	44	F	4D	1	1	1	F	5	1	30F	30F
% c g h	F2%	37%	F%	37%	1	17%	F2%	F%	02%	1	F1%	F2%	F%	F2%	1	31%
vnr algi ot Bosd	03	38	F	F	1	3F	0	F	30	1	4	4	F	3F	1	0
% vnr algi ot Bosd	07%	F5%	F%	37%	1	F7%	F4%	F%	F2%	1	33%	F8%	F%	F2%	1	F8%
-gdgi yst i	1	1	1	1	4D	1	1	1	1	3300	1	1	1	1	4D4	1
% -gdgi yst i	1	1	1	1	837%	1	1	1	1	837%	1	1	1	1	8.7%	1
vnr algi ot Cuii Rslw	1	1	1	1	4	1	1	1	1	88	1	1	1	1	00	1

Ingh l apayot	Noag bol y fol t d	bol y Noag fol t d	E gyl Sai y ol t d
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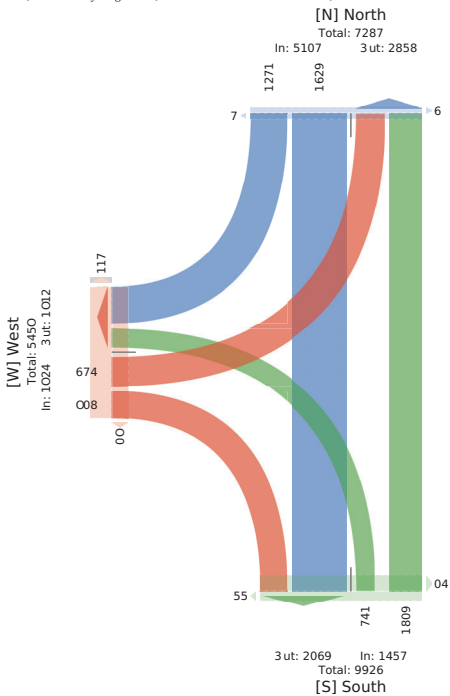




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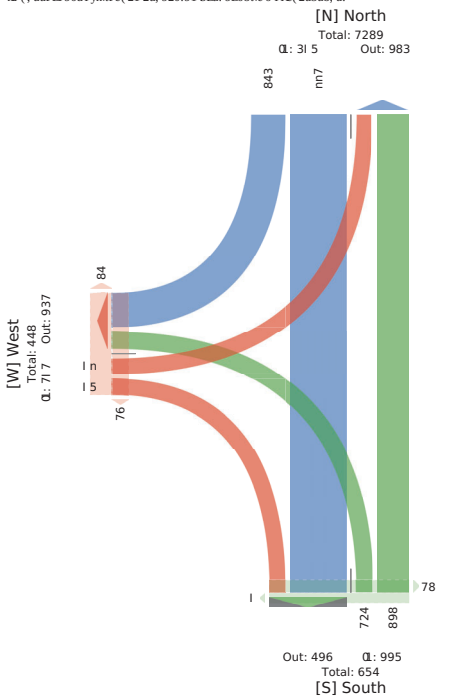
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5589707 - QUEEN ELIZABETH DRWY @ PRINCESS PA... - TMC  
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# APPENDIX B – INTERSECTION COLLISION DATA



# Transportation Services - Traffic Services

## Collision Details Report - Public Version

From: January 1, 2018 To: December 31, 2022

**Location:** AYLMER AVE @ BANK ST

**Traffic Control:** Traffic signal

**Total Collisions:** 11

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
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	
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	
2022-Jan-31, Mon,15:26	Clear	Rear end	P.D. only	Ice	South	Going ahead	Automobile, station wagon	Skidding/sliding	0
					South	Stopped	Pick-up truck	Other motor vehicle	
2022-Feb-03, Thu,07:39	Snow	Turning movement	Non-fatal injury	Slush	North	Turning left	Pick-up truck	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2022-Sep-16, Fri,18:00	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	
2022-Nov-16, Wed,17:23	Clear	SMV other	Non-fatal injury	Wet	North	Turning left	Automobile, station wagon	Pedestrian	1



# Transportation Services - Traffic Services

## Collision Details Report - Public Version

From: January 1, 2018 To: December 31, 2022

**Location:** BANK ST @ ECHO DR

**Traffic Control:** Stop sign

**Total Collisions:** 3

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
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:** 6

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
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	
2022-Aug-01, Mon,16:30	Clear	Rear end	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Slowing or stopping	Pick-up truck	Other motor vehicle	

**Location:** BANK ST @ FIFTH AVE

**Traffic Control:** Traffic signal

**Total Collisions:** 18

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
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# Transportation Services - Traffic Services

## Collision Details Report - Public Version

From: January 1, 2018 To: December 31, 2022

**Location:** BANK ST @ FIFTH AVE

**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
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, 2018 To: December 31, 2022

**Location:** BANK ST @ FIFTH AVE

**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
2022-Feb-18, Fri,10:30	Clear	Rear end	P.D. only	Ice	East	Slowing or stopping	Pick-up truck	Other motor vehicle	0
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2022-Feb-19, Sat,22:23	Clear	Rear end	P.D. only	Ice	East	Slowing or stopping	Pick-up truck	Other motor vehicle	0
					East	Stopped	Pick-up truck	Other motor vehicle	
2022-May-10, Tue,07:50	Clear	Turning movement	P.D. only	Dry	South	Turning right	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Municipal transit bus	Other motor vehicle	
2022-May-17, Tue,14:06	Clear	Angle	Non-fatal injury	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2022-Oct-02, Sun,11:43	Clear	Rear end	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2022-Nov-11, Fri,23:00	Rain	Angle	P.D. only	Wet	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Unknown	Other motor vehicle	

**Location:** BANK ST @ HOLMWOOD AVE

**Traffic Control:** Traffic signal

**Total Collisions:** 15

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
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	
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	



# Transportation Services - Traffic Services

## Collision Details Report - Public Version

**From:** January 1, 2018    **To:** December 31, 2022

**Location:** BANK ST @ HOLMWOOD AVE

**Traffic Control:** Traffic signal

**Total Collisions:** 15

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
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	
2022-Feb-04, Fri,08:00	Snow	Angle	P.D. only	Loose snow	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Turning left	Pick-up truck	Other motor vehicle	
2022-Feb-11, Fri,12:49	Clear	Sideswipe	P.D. only	Slush	North	Changing lanes	Delivery van	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2022-Apr-02, Sat,14:45	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	
2022-Sep-17, Sat,16:45	Clear	Sideswipe	P.D. only	Dry	North	Going ahead	Municipal transit bus	Other motor vehicle	0
					North	Stopped	Pick-up truck	Other motor vehicle	



# Transportation Services - Traffic Services

## Collision Details Report - Public Version

From: January 1, 2018 To: December 31, 2022

**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
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:** 19

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
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	
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	



# Transportation Services - Traffic Services

## Collision Details Report - Public Version

From: January 1, 2018 To: December 31, 2022

**Location:** BANK ST @ SUNNYSIDE AVE

**Traffic Control:** Traffic signal

**Total Collisions:** 19

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
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	
2022-Jan-28, Fri,18:09	Clear	Turning movement	P.D. only	Dry	South	Turning left	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2022-Apr-07, Thu,16:31	Clear	Rear end	P.D. only	Wet	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Slowing or stopping	Pick-up truck	Other motor vehicle	
2022-Jul-01, Fri,22:12	Clear	Turning movement	Non-fatal injury	Dry	South	Turning left	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Motorcycle	Other motor vehicle	
2022-Sep-27, Tue,11:15	Clear	Rear end	P.D. only	Dry	West	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					West	Stopped	Pick-up truck	Other motor vehicle	
2022-Nov-14, Mon,17:20	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	
2022-Dec-06, Tue,16:50	Rain	Sideswipe	P.D. only	Wet	South	Changing lanes	Pick-up truck	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2022-Dec-07, Wed,20:23	Clear	Rear end	Non-fatal injury	Dry	South	Going ahead	Pick-up truck	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
					South	Stopped	Automobile, station wagon	Other motor vehicle	



# Transportation Services - Traffic Services

## Collision Details Report - Public Version

From: January 1, 2018 To: December 31, 2022

**Location:** BANK ST @ WILTON CRES

**Traffic Control:** Stop sign

**Total Collisions:** 11

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
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	
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	

# Transportation Services - Traffic Services

## Collision Details Report - Public Version

From: January 1, 2018 To: December 31, 2022

**Location:** BANK ST @ WILTON CRES

**Traffic Control:** Stop sign

**Total Collisions:** 11

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
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	

**Location:** BANK ST btwn ECHO DR & AYLMEER AVE

**Traffic Control:** No control

**Total Collisions:** 1

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2022-Sep-12, Mon,08:18	Clear	Other	P.D. only	Dry	South	Reversing	Construction equipment	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	

**Location:** BANK ST btwn EXHIBITION WAY & WILTON CRES

**Traffic Control:** No control

**Total Collisions:** 3

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2019-Oct-04, Fri,20:54	Clear	Other	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Fence/noice barrier	0
					East	Turning left	Unknown	Fence/noice barrier	
2020-Oct-19, Mon,08:05	Rain	Sideswipe	P.D. only	Wet	North	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Pick-up truck	Other motor vehicle	
2022-Feb-03, Thu,08:30	Snow	Sideswipe	P.D. only	Slush	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Delivery van	Other motor vehicle	

**Location:** BANK ST btwn HOLMWOOD AVE & MARCHE WAY

**Traffic Control:** No control

**Total Collisions:** 2

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2018-Oct-22, Mon,17:02	Clear	Sideswipe	P.D. only	Dry	South	Overtaking	Automobile, station wagon	Cyclist	0
					South	Going ahead	Bicycle	Other motor vehicle	
2021-Mar-23, Tue,11:10	Clear	Rear end	P.D. only	Dry	South	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					South	Unknown	Unknown	Other motor vehicle	

# Transportation Services - Traffic Services

## Collision Details Report - Public Version

From: January 1, 2018 To: December 31, 2022

**Location:** BANK ST btwn MARCHE WAY & EXHIBITION WAY

**Traffic Control:** No control

**Total Collisions:** 4

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2020-Nov-01, Sun,05:28	Clear	SMV other	P.D. only	Dry	North	Going ahead	Delivery van	Ran off road	0
2022-Mar-11, Fri,15:15	Snow	Sideswipe	P.D. only	Wet	North	Changing lanes	Municipal transit bus	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2022-Sep-29, Thu,10:01	Clear	Rear end	P.D. only	Dry	North	Changing lanes	Pick-up truck	Other motor vehicle	0
					North	Stopped	Municipal transit bus	Other motor vehicle	
2022-Oct-11, Tue,20:02	Clear	Sideswipe	P.D. only	Dry	North	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Motorcycle	Other motor vehicle	

**Location:** BANK ST btwn WILTON CRES & ECHO DR

**Traffic Control:** No control

**Total Collisions:** 4

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2018-Jan-22, Mon,15:56	Snow	Rear end	P.D. only	Loose snow	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					North	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Mar-16, Sat,10:20	Clear	Rear end	Non-fatal injury	Dry	South	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2020-Nov-07, Sat,02:53	Clear	Approaching	P.D. only	Wet	South	Going ahead	Pick-up truck	Other motor vehicle	0
					North	Going ahead	Pick-up truck	Other motor vehicle	
2022-Aug-30, Tue,16:00	Rain	Rear end	P.D. only	Wet	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					North	Stopped	Automobile, station wagon	Other motor vehicle	

**Location:** FIFTH AVE @ QUEEN ELIZABETH DRWY

**Traffic Control:** Traffic signal

**Total Collisions:** 2

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
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	



# Transportation Services - Traffic Services

## Collision Details Report - Public Version

From: January 1, 2018 To: December 31, 2022

**Location:** FIFTH AVE @ QUEEN ELIZABETH DRWY

**Traffic Control:** Traffic signal

**Total Collisions:** 2

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2022-Feb-25, Fri,00:01	Clear	SMV other	Non-fatal injury	Wet	North	Going ahead	Automobile, station wagon	Other	0

**Location:** HOLMWOOD AVE btwn ADELAIDE ST & O'CONNOR ST

**Traffic Control:** No control

**Total Collisions:** 1

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2022-Feb-25, Fri,20:44	Clear	SMV other	P.D. only	Loose snow	East	Going ahead	Automobile, station wagon	Pole (sign, parking meter)	0

**Location:** HOLMWOOD AVE btwn BANK ST & ADELAIDE ST

**Traffic Control:** No control

**Total Collisions:** 4

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2018-Jan-22, Mon,00:00	Clear	SMV unattended vehicle	P.D. only	Wet	East	Unknown	Unknown	Unattended vehicle	0
2018-Apr-02, Mon,20:00	Clear	SMV unattended vehicle	P.D. only	Dry	East	Unknown	Unknown	Unattended vehicle	0
2021-Sep-18, Sat,15:00	Clear	SMV unattended vehicle	P.D. only	Dry	East	Reversing	Passenger van	Unattended vehicle	0
2022-May-28, Sat,00:00	Clear	SMV unattended vehicle	P.D. only	Dry	North	Unknown	Pick-up truck	Unattended vehicle	0

**Location:** PRINCESS PATRICIA WAY @ QUEEN ELIZABETH DRWY

**Traffic Control:** Stop sign

**Total Collisions:** 5

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
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	



# Transportation Services - Traffic Services

## Collision Details Report - Public Version

From: January 1, 2018 To: December 31, 2022

**Location:** PRINCESS PATRICIA WAY @ QUEEN ELIZABETH DRWY

**Traffic Control:** Stop sign

**Total Collisions:** 5

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
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	

**Location:** QUEEN ELIZABETH DRWY btwn QUEEN ELIZABETH PL & PRINCESS PATRICIA WAY

**Traffic Control:** No control

**Total Collisions:** 5

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2018-Sep-25, Tue,17:15	Rain	Rear end	P.D. only	Wet	South	Going ahead	Automobile, station wagon	Skidding/sliding	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2018-Nov-16, Fri,00:03	Snow	SMV other	Non-fatal injury	Packed snow	West	Going ahead	Automobile, station wagon	Curb	0
2019-Dec-31, Tue,22:50	Snow	Approaching	P.D. only	Wet	North	Going ahead	Pick-up truck	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2020-Feb-21, Fri,16:39	Clear	Rear end	P.D. only	Dry	South	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Pick-up truck	Other motor vehicle	
2022-Dec-14, Wed,04:35	Clear	Approaching	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	

# **APPENDIX C – NCHRP 684 INTERNAL TRIP CAPTURE ESTIMATION WORKSHEETS**

NCHRP 684 Internal Trip Capture Estimation Tool			
Project Name:	Lansdowne 2.0 - Phase 1 (Event Centre)	Organization:	Momentum
Project Location:	Ottawa, Ontario	Performed By:	
Scenario Description:	Lansdowne 2.0 Full Build-Out	Date:	13-Jan-25
Analysis Year:	2033	Checked By:	
Analysis Period:	AM Street Peak Hour	Date:	

Table 1-A: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)						
Land Use	Development Data (For Information Only)			Estimated Vehicle-Trips <sup>3</sup>		
	ITE LUCs <sup>1</sup>	Quantity	Units	Total	Entering	Exiting
Office	710	51	1000-sqft	77	68	9
Retail	820	114	1000-sqft	95	59	36
Restaurant	930	158	1000-sqft	226	113	113
Cinema/Entertainment	445	60	1000-sqft	10	5	5
Residential	222	1,050	dwelling units	284	74	210
Hotel	-	-	-	0		
All Other Land Uses <sup>2</sup>	-	-	-	0		
				692	319	373

Table 2-A: Mode Split and Vehicle Occupancy Estimates						
Land Use	Entering Trips			Exiting Trips		
	Veh. Occ. <sup>4</sup>	% Transit	% Non-Motorized	Veh. Occ. <sup>4</sup>	% Transit	% Non-Motorized
Office	1.26	25%	39%	1.26	25%	39%
Retail	1.26	25%	39%	1.26	25%	39%
Restaurant	1.26	25%	39%	1.26	25%	39%
Cinema/Entertainment	1.26	25%	39%	1.26	25%	39%
Residential	1.26	25%	39%	1.26	25%	39%
Hotel	1.26	25%	39%	1.26	25%	39%
All Other Land Uses <sup>2</sup>	1.26	25%	39%	1.26	25%	39%

Table 3-A: Average Land Use Interchange Distances (Feet Walking Distance)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-A: Internal Person-Trip Origin-Destination Matrix*						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail	3		6	0	2	0
Restaurant	12	6		0	5	0
Cinema/Entertainment	0	0	0		0	0
Residential	3	3	28	0		0
Hotel	0	0	0	0	0	

Table 5-A: Computations Summary			
	Total	Entering	Exiting
All Person-Trips	870	401	469
Internal Capture Percentage	18%	19%	17%
External Vehicle-Trips <sup>5</sup>	204	91	113
External Transit-Trips <sup>6</sup>	181	82	99
External Non-Motorized Trips <sup>6</sup>	277	126	151

Table 6-A: Internal Trip Capture Percentages by Land Use		
Land Use	Entering Trips	Exiting Trips
Office	21%	91%
Retail	16%	24%
Restaurant	29%	16%
Cinema/Entertainment	0%	0%
Residential	8%	13%
Hotel	N/A	N/A

<sup>1</sup>Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

<sup>2</sup>Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

<sup>3</sup>Enter trips assuming no transit or non-motorized trips (as assumed in ITE *Trip Generation Manual*).

<sup>4</sup>Enter vehicle occupancy assumed in Table 1-A vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be made to Tables 5-A, 9-A (O and D). Enter transit, non-motorized percentages that will result with proposed mixed-use project complete.

<sup>5</sup>Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A.

<sup>6</sup>Person-Trips

\*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas A&M Transportation Institute - Version 2013.1

<b>Project Name:</b>	Lansdowne 2.0 - Phase 1 (Event Centre)
<b>Analysis Period:</b>	AM Street Peak Hour

Land Use	Table 7-A (D): Entering Trips			Table 7-A (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.26	68	86	1.26	9	11
Retail	1.26	59	74	1.26	36	45
Restaurant	1.26	113	142	1.26	113	142
Cinema/Entertainment	1.26	5	6	1.26	5	6
Residential	1.26	74	93	1.26	210	265
Hotel	1.26	0	0	1.26	0	0

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		3	7	0	0	0
Retail	13		6	0	6	0
Restaurant	44	20		0	6	4
Cinema/Entertainment	0	0	0		0	0
Residential	5	3	53	0		0
Hotel	0	0	0	0	0	

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		24	33	0	0	0
Retail	3		71	0	2	0
Restaurant	12	6		0	5	0
Cinema/Entertainment	0	0	0		0	0
Residential	3	13	28	0		0
Hotel	3	3	9	0	0	

Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles <sup>1</sup>	Transit <sup>2</sup>	Non-Motorized <sup>2</sup>
Office	18	68	86	19	17	27
Retail	12	62	74	17	16	24
Restaurant	41	101	142	29	25	39
Cinema/Entertainment	0	6	6	2	2	2
Residential	7	86	93	24	22	34
Hotel	0	0	0	0	0	0
All Other Land Uses <sup>3</sup>	0	0	0	0	0	0

Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles <sup>1</sup>	Transit <sup>2</sup>	Non-Motorized <sup>2</sup>
Office	10	1	11	1	0	0
Retail	11	34	45	10	9	13
Restaurant	23	119	142	34	30	46
Cinema/Entertainment	0	6	6	2	2	2
Residential	34	231	265	66	58	90
Hotel	0	0	0	0	0	0
All Other Land Uses <sup>3</sup>	0	0	0	0	0	0

<sup>1</sup>Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A  
<sup>2</sup>Person-Trips  
<sup>3</sup>Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator  
\*Indicates computation that has been rounded to the nearest whole number.

NCHRP 684 Internal Trip Capture Estimation Tool			
Project Name:		Organization:	Momentum
Project Location:	Ottawa, Ontario	Performed By:	
Scenario Description:	Lansdowne 2.0 Full Build-Out	Date:	13-Jan-25
Analysis Year:	2033	Checked By:	
Analysis Period:	PM Street Peak Hour	Date:	

Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)						
Land Use	Development Data (For Information Only)			Estimated Vehicle-Trips <sup>3</sup>		
	ITE LUCs <sup>1</sup>	Quantity	Units	Total	Entering	Exiting
Office	710	51	1000-sqft	82	21	61
Retail	820	114	1000-sqft	387	186	201
Restaurant	930	158	1000-sqft	1,982	1,090	892
Cinema/Entertainment	445	60	1000-sqft	372	350	22
Residential	222	1,050	dwelling units	336	208	128
Hotel	-	-	-	0		
All Other Land Uses <sup>2</sup>	-	-	-	0		
				3,159	1,855	1,304

Table 2-P: Mode Split and Vehicle Occupancy Estimates						
Land Use	Entering Trips			Exiting Trips		
	Veh. Occ. <sup>4</sup>	% Transit	% Non-Motorized	Veh. Occ. <sup>4</sup>	% Transit	% Non-Motorized
Office	1.26	25%	39%	1.26	25%	39%
Retail	1.26	25%	39%	1.26	25%	39%
Restaurant	1.26	25%	39%	1.26	25%	39%
Cinema/Entertainment	1.26	25%	39%	1.26	25%	39%
Residential	1.26	25%	39%	1.26	25%	39%
Hotel	1.26	25%	39%	1.26	25%	39%
All Other Land Uses <sup>2</sup>	1.26	25%	39%	1.26	25%	39%

Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-P: Internal Person-Trip Origin-Destination Matrix*						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		15	3	0	2	0
Retail	5		73	10	66	0
Restaurant	8	117		90	42	0
Cinema/Entertainment	1	6	9		2	0
Residential	6	23	34	0		0
Hotel	0	0	0	0	0	

Table 5-P: Computations Summary			
	Total	Entering	Exiting
All Person-Trips	3,979	2,336	1,643
Internal Capture Percentage	26%	22%	31%
External Vehicle-Trips <sup>5</sup>	844	521	323
External Transit-Trips <sup>6</sup>	741	457	284
External Non-Motorized Trips <sup>6</sup>	1,152	711	441

Table 6-P: Internal Trip Capture Percentages by Land Use		
Land Use	Entering Trips	Exiting Trips
Office	77%	26%
Retail	69%	61%
Restaurant	9%	23%
Cinema/Entertainment	23%	64%
Residential	43%	39%
Hotel	N/A	N/A

<sup>1</sup>Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

<sup>2</sup>Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

<sup>3</sup>Enter trips assuming no transit or non-motorized trips (as assumed in ITE *Trip Generation Manual*).

<sup>4</sup>Enter vehicle occupancy assumed in Table 1-P vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be made.

<sup>5</sup>Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P.

<sup>6</sup>Person-Trips

\*Indicates computation that has been rounded to the nearest whole number.

<b>Project Name:</b>	0
<b>Analysis Period:</b>	PM Street Peak Hour

Table 7-P: Conversion of Vehicle-Trip Ends to Person-Trip Ends						
Land Use	Table 7-P (D): Entering Trips			Table 7-P (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.26	21	26	1.26	61	77
Retail	1.26	186	234	1.26	201	253
Restaurant	1.26	1090	1373	1.26	892	1124
Cinema/Entertainment	1.26	350	441	1.26	22	28
Residential	1.26	208	262	1.26	128	161
Hotel	1.26	0	0	1.26	0	0

Table 8-P (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		15	3	0	2	0
Retail	5		73	10	66	13
Restaurant	34	461		90	202	79
Cinema/Entertainment	1	6	9		2	1
Residential	6	68	34	0		5
Hotel	0	0	0	0	0	

Table 8-P (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		19	27	4	10	0
Retail	8		398	115	121	0
Restaurant	8	117		141	42	0
Cinema/Entertainment	2	9	41		10	0
Residential	15	23	192	0		0
Hotel	0	5	69	0	0	

Table 9-P (D): Internal and External Trips Summary (Entering Trips)						
Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles <sup>1</sup>	Transit <sup>2</sup>	Non-Motorized <sup>2</sup>
Office	20	6	26	2	2	2
Retail	161	73	234	21	18	28
Restaurant	119	1254	1373	358	314	489
Cinema/Entertainment	100	341	441	98	85	133
Residential	112	150	262	42	38	59
Hotel	0	0	0	0	0	0
All Other Land Uses <sup>3</sup>	0	0	0	0	0	0

Table 9-P (O): Internal and External Trips Summary (Exiting Trips)						
Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles <sup>1</sup>	Transit <sup>2</sup>	Non-Motorized <sup>2</sup>
Office	20	57	77	17	14	22
Retail	154	99	253	28	25	39
Restaurant	257	867	1124	248	217	338
Cinema/Entertainment	18	10	28	2	3	4
Residential	63	98	161	28	25	38
Hotel	0	0	0	0	0	0
All Other Land Uses <sup>3</sup>	0	0	0	0	0	0

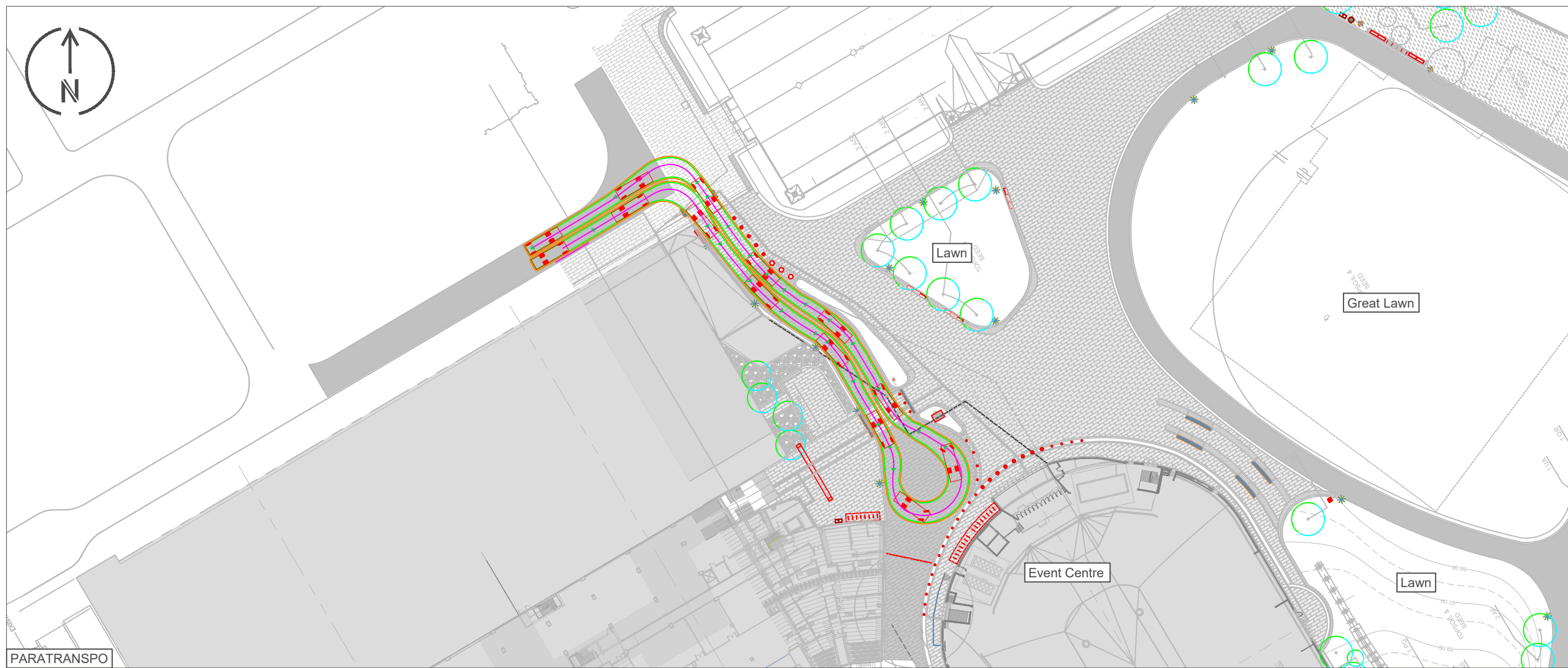
<sup>1</sup>Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

<sup>2</sup>Person-Trips

<sup>3</sup>Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator

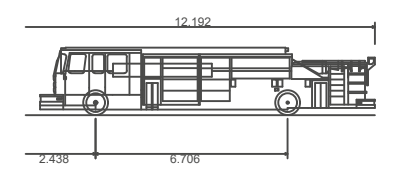
\*Indicates computation that has been rounded to the nearest whole number.

# APPENDIX D – VEHICLE SWEEP PATH ANALYSIS

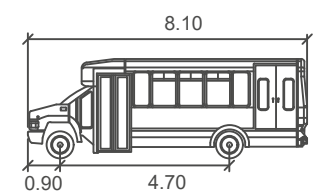


NOTES

1. Do not scale from this drawing, work to figured dimensions only.
2. Dimensions are in metres unless stated otherwise.
3. This drawing is based on CSW drawing 1766-12 Lansdowne Event Centre(Landscape), revision 10, dated 2015-01-17.
4. Swept path analysis is based on the following vehicles traveling at 8 km/h in forward gear, and 4 km/h in reverse gear.

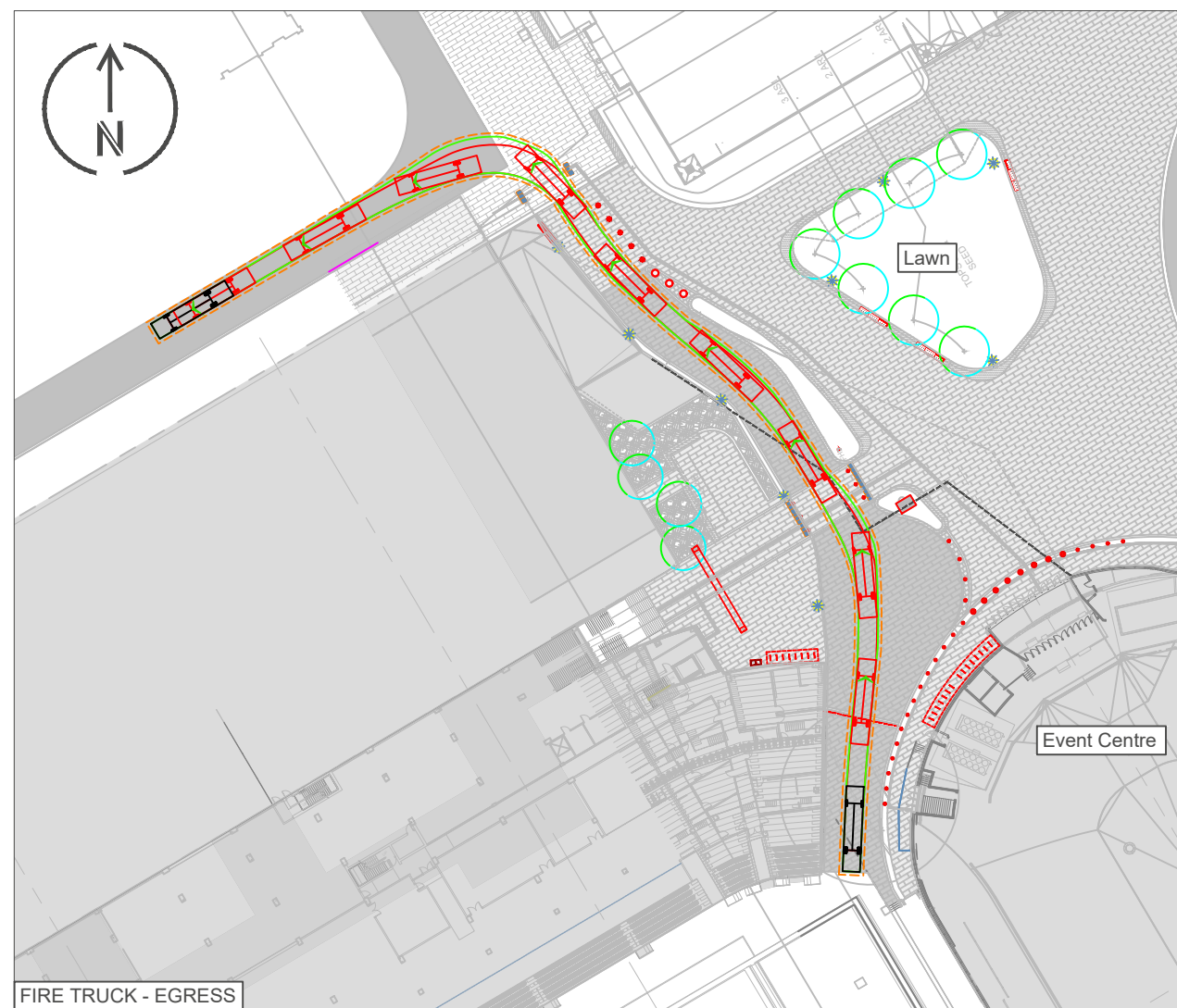
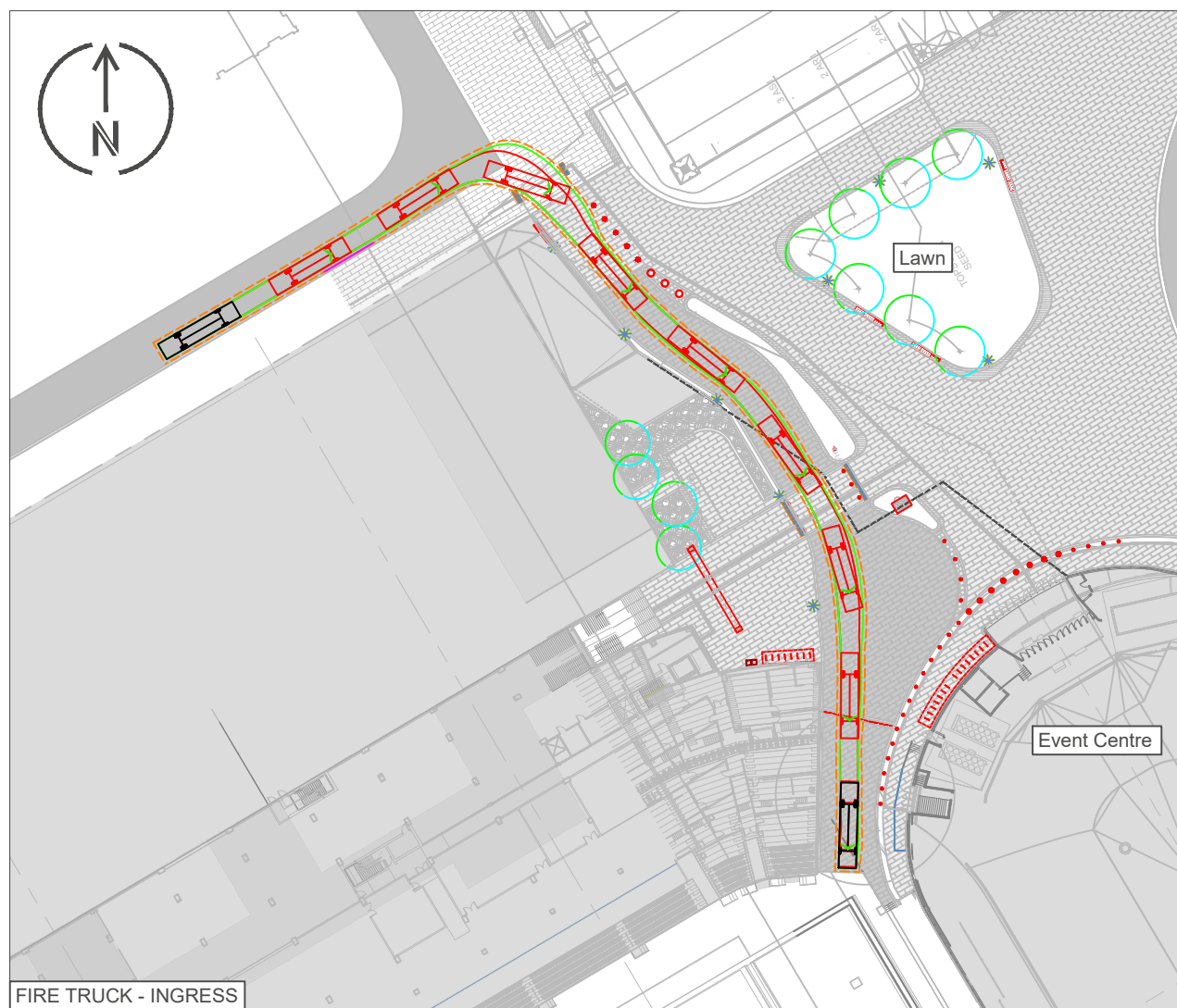
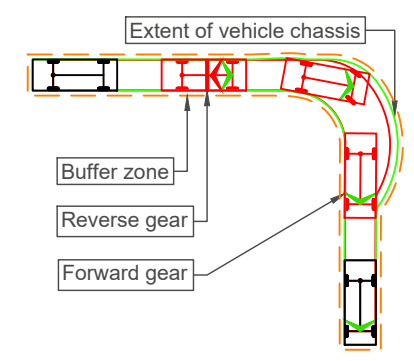


Pumper Fire Truck	
Overall Length	12.192m
Overall Width	2.489m
Overall Body Height	2.361m
Min Body Ground Clearance	0.200m
Track Width	2.489m
Lock to lock time	5.00s
Max Wheel Angle	45.00°



HandyDART	metres
Width	: 2.40
Track	: 2.40
Lock to Lock Time	: 6.0
Steering Angle	: 35.5

KEY



A	04/03/25	First Issue	JH	LT	HM
REV	DATE	REVISION DESCRIPTION / DETAILS	DRN BY	CHKD BY	APRVD BY



CLIENT:  
 CITY OF OTTAWA  
 OTTAWA SPORTS AND ENTERTAINMENT GROUP

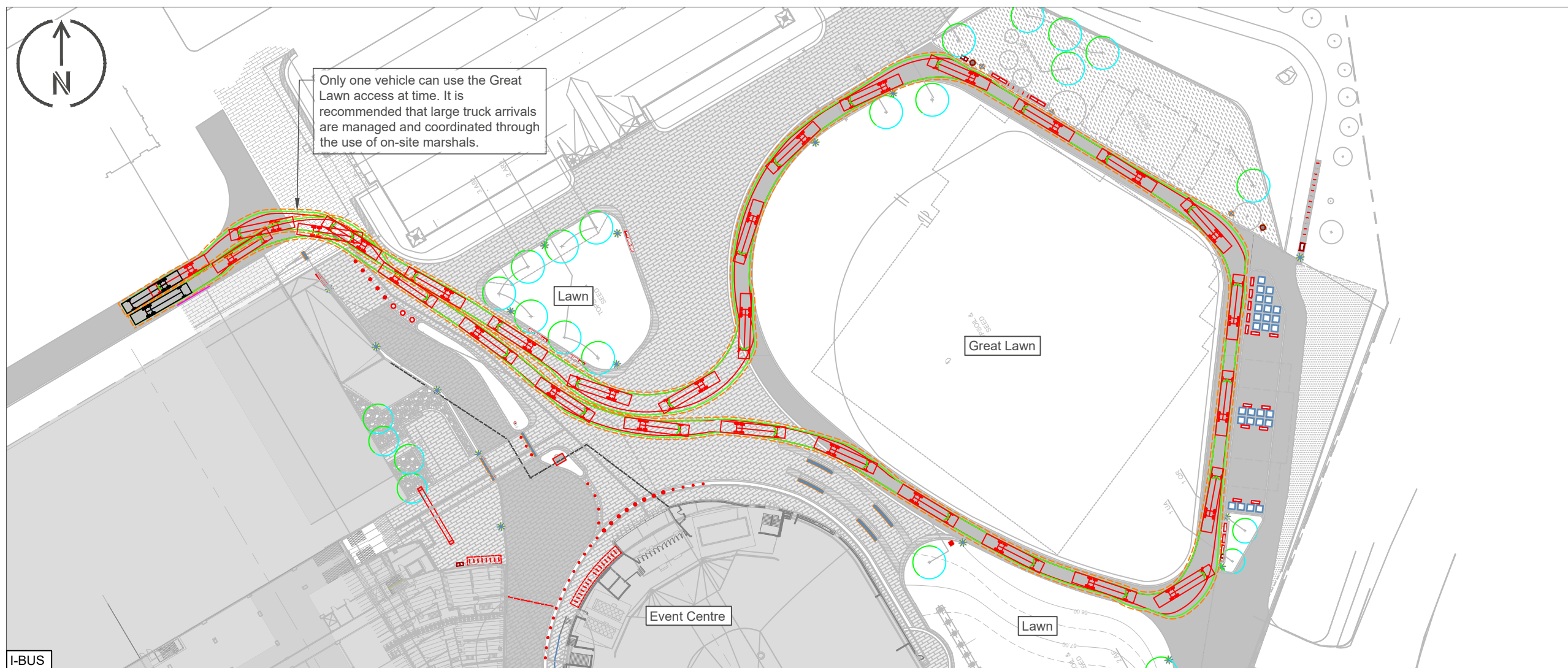
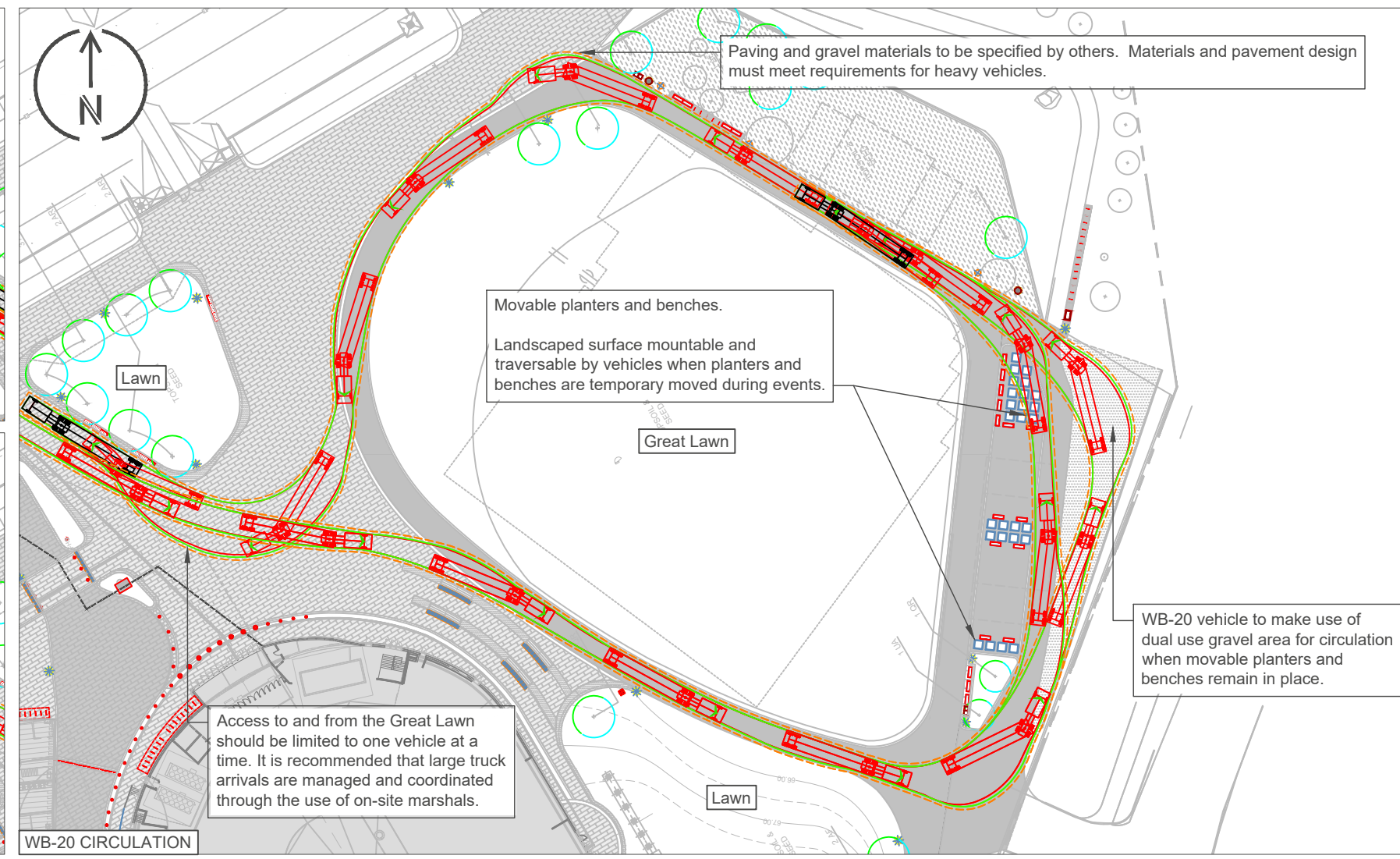
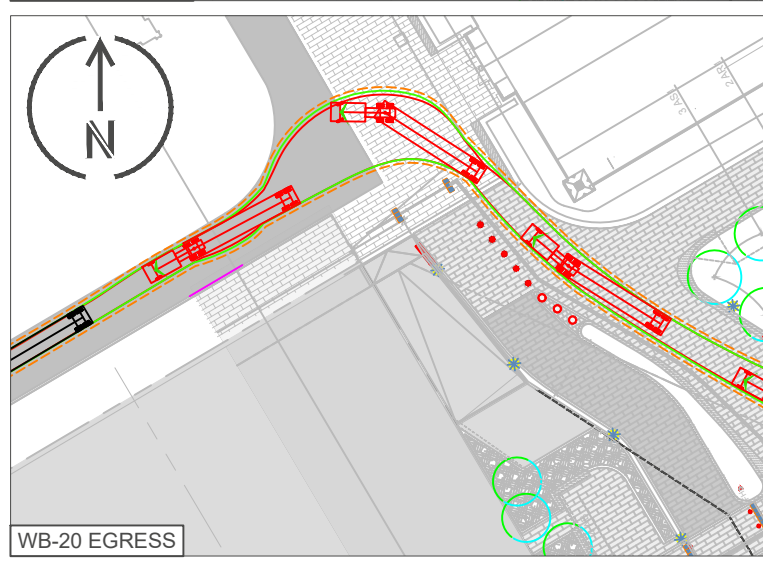
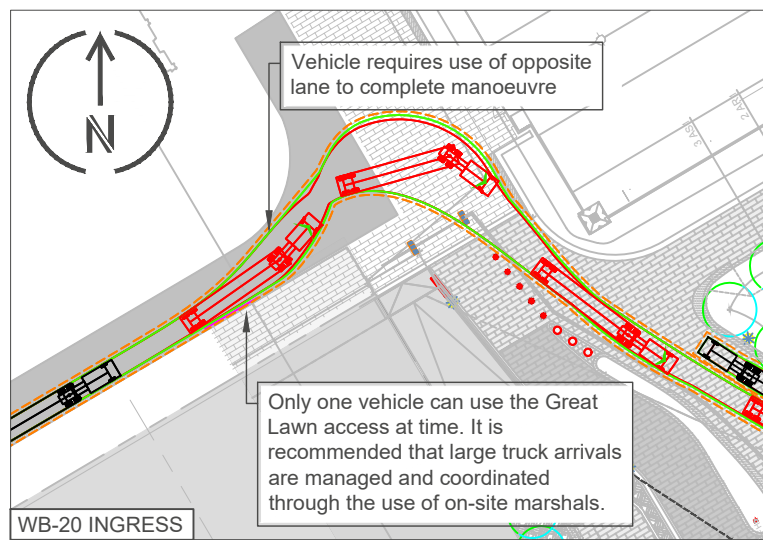
JOB TITLE:  
 LANSDOWNE 2.0

DRAWING TITLE:  
 LANSDOWNE 2.0 SWEEP PATH ANALYSIS -  
 EVENT CENTRE DROP-OFF ZONE

STATUS:  
 FOR INFORMATION

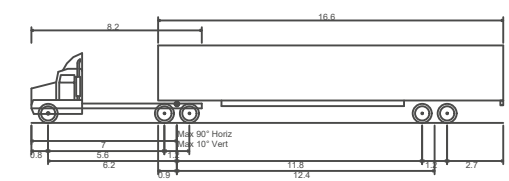
DRAWING NO:	REV:	SCALE AT A3:
C000219-1-1-TR-001	A	1:1000

ISO FULL BLEED A3 420 X 297 MM

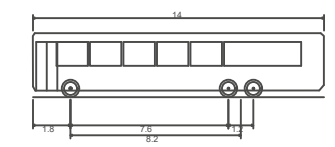


NOTES

- Do not scale from this drawing, work to figured dimensions only.
- Dimensions are in metres unless stated otherwise.
- This drawing is based on CSW drawing 1766-12 Lansdowne Event Centre(Landscape), revision 10, dated 2015-01-17.
- Swept path analysis is based on the following vehicles traveling at 8 km/h in forward gear, and 4 km/h in reverse gear.

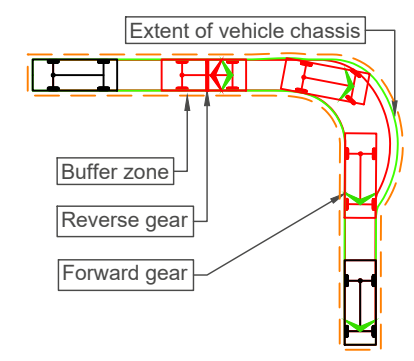


WB-20-180 - Tractor & Semi-Trailer  
 Overall Length 22.700m  
 Overall Width 2.600m  
 Overall Body Height 3.730m  
 Min Body Ground Clearance 0.435m  
 Track Width 2.600m  
 Lock to lock time 4.00s  
 Curb to Curb Turning Radius 14.300m



I-BUS - Intercity Bus  
 Overall Length 14.000m  
 Overall Width 2.400m  
 Overall Body Height 3.084m  
 Min Body Ground Clearance 0.319m  
 Track Width 2.400m  
 Lock to lock time 4.00s  
 Curb to Curb Turning Radius 13.900m

KEY



A	04/03/25	First Issue	JH	LT	HM
REV	DATE	REVISION DESCRIPTION / DETAILS	DRN BY	CHKD BY	APRVD BY



CLIENT:  
 CITY OF OTTAWA  
 OTTAWA SPORTS AND ENTERTAINMENT GROUP

JOB TITLE:  
 LANSDOWNE 2.0

DRAWING TITLE:  
 LANSDOWNE 2.0 SWEEP PATH ANALYSIS -  
 GREAT LAWN ACCESS AND CIRCULATION

STATUS:  
 FOR INFORMATION

DRAWING NO: C000219-1-1-TR-002	REV: A	SCALE AT A3: 1:1000
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The way the world moves. By design.

# APPENDIX E – MMLOS ANALYSIS DATA

### Multi-Modal Level of Service - Segments Form

Consultant	Momentum
Scenario	Existing / 2033 Total Future
Segment	Segment 1 - Bank Street

Project	Lansdowne 2.0 - EC
Date	June 2025

SEGMENTS	Bank St	Segment 1A	Segment 1A	Segment 1B	Segment 1B	
		(SB) Holmwood - Wilton	(NB) Holmwood - Wilton	(NB) Wilton - Aylmer	(SB) Wilton - Aylmer	
Pedestrian	C	Sidewalk Width	≥ 2 m	≥ 2 m	≥ 2 m	≥ 2 m
		Boulevard Width	> 2 m	> 2 m	0.5 - 2 m	0.5 - 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
		<b>B</b>	<b>B</b>	<b>C</b>	<b>C</b>	
		<b>B</b>	<b>B</b>	<b>C</b>	<b>C</b>	
Bicycle	E	Type of Cycling Facility	Mixed Traffic	Curbside Bike Lane	Physically Separated	Physically Separated
		Number of Travel Lanes	4-5 lanes total	2 ea. dir. (no median)		
		Operating Speed	>40 to <50 km/h	≤ 50 km/h		
		# of Lanes & Operating Speed LoS	<b>E</b>	<b>B</b>	-	-
		Bike Lane (+ Parking Lane) Width		≥ 1.2 to <1.5 m		
		Bike Lane Width LoS	-	<b>C</b>	-	-
		Bike Lane Blockages		Rare		
		Blockage LoS	-	<b>A</b>	-	-
		<b>E</b>	<b>C</b>	<b>A</b>	<b>A</b>	
Transit	F	Facility Type	Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic
		Friction or Ratio Transit:Posted Speed	Vt/Vp ≤ 0.4	Vt/Vp ≤ 0.4	Vt/Vp ≤ 0.6	Vt/Vp ≥ 0.8
		Level of Service	<b>F</b>	<b>F</b>	<b>E</b>	<b>D</b>
Truck	C	Truck Lane Width	≤ 3.5 m	≤ 3.3 m	≤ 3.5 m	≤ 3.5 m
		Travel Lanes per Direction	> 1	> 1	1	> 1
		Level of Service	<b>A</b>	<b>C</b>	<b>C</b>	<b>A</b>

# Multi-Modal Level of Service - Segments Form

Consultant	Momentum
Scenario	Existing / 2033 Total Future
Segment	Segment 2: Holmwood Ave

Project	Lansdowne 2.0 - EC
Date	June 2025

SEGMENTS		Holmwood Ave	Segment 2 Bank - O'Connor (WB)	Segment 2 Bank - O'Connor (EB)
<b>Pedestrian</b>	Sidewalk Width	<b>B</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 On-Street Parking		> 30 to 50 km/h no	> 30 to 50 km/h yes
	<b>Exposure to Traffic PLoS</b>		<b>B</b>	<b>B</b>
	<b>Level of Service</b>	<b>B</b>	<b>B</b>	
<b>Bicycle</b>	Type of Cycling Facility	<b>C</b>	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
	<b># of Lanes &amp; Operating Speed LoS</b>		<b>A</b>	<b>B</b>
	Bike Lane (+ Parking Lane) Width		≥ 1.2 to <1.5 m	
	<b>Bike Lane Width LoS</b>		<b>C</b>	-
	Bike Lane Blockages		Rare	
	<b>Blockage LoS</b>		<b>A</b>	-
	<b>Level of Service</b>	<b>C</b>	<b>B</b>	
<b>Transit</b>	Facility Type	<b>-</b>		
	Friction or Ratio Transit:Posted Speed			
	<b>Level of Service</b>		<b>-</b>	<b>-</b>
<b>Truck</b>	Truck Lane Width	<b>-</b>		
	Travel Lanes per Direction			
	<b>Level of Service</b>		<b>-</b>	<b>-</b>

# Multi-Modal Level of Service - Segments Form

Consultant	Momentum
Scenario	Existing / 2033 Total Future
Segment	Queen Elizabeth Driveway (QED)

Project	Lansdowne 2.0 - EC
Date	June 2025

SEGMENTS		QED	Section 3	Section 3
			South of Princess Patricia Way (SB)	South of Princess Patricia Way (NB)
Pedestrian	Sidewalk Width	<b>B</b>	≥ 2 m	≥ 2 m
	Boulevard Width		> 2 m	> 2 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	no
	<b>Exposure to Traffic PLoS</b>	<b>B</b>	<b>B</b>	
	<b>Level of Service</b>	<b>B</b>	<b>B</b>	
Bicycle	Type of Cycling Facility	<b>A</b>	Physically Separated	Physically Separated
	Number of Travel Lanes			
	Operating Speed			
	<b># of Lanes &amp; Operating Speed LoS</b>		-	-
	Bike Lane (+ Parking Lane) Width			
	<b>Bike Lane Width LoS</b>		-	-
	Bike Lane Blockages			
	<b>Blockage LoS</b>		-	-
	<b>Level of Service</b>	<b>A</b>	<b>A</b>	
Transit	Facility Type	-		
	Friction or Ratio Transit:Posted Speed			
	<b>Level of Service</b>		-	-
Truck	Truck Lane Width	-		
	Travel Lanes per Direction			
	<b>Level of Service</b>		-	-
Auto	<b>Level of Service</b>	<b>Not Applicable</b>		

# Multi-Modal Level of Service - Intersections Form

Consultant	Momentum
Scenario	Existing / Future
Intersection	Bank Street / Holmwood Avenue

Project	Lansdowne 2.0 - EC
Date	June 2025

INTERSECTION		Bank Street & Holmwood Avenue				
Crossing Side		NORTH	SOUTH	EAST	WEST	
Pedestrian	Road width	12	15	7	7.3	
	Total travel lanes crossed	3	4	2	2	
	Lanes	3	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	Zebra stripe hi-vis	Zebra stripe hi-vis	Zebra stripe hi-vis markings	
	<b>PETSI Score</b>		<b>77</b>	<b>71</b>	<b>90</b>	<b>90</b>
	<b>Ped. Exposure to Traffic LoS</b>		<b>B</b>	<b>C</b>	<b>A</b>	<b>A</b>
	Cycle Length		<b>75</b>	<b>75</b>	<b>75</b>	<b>75</b>
	Effective Walk Time		<b>7</b>	<b>7</b>	<b>37</b>	<b>37</b>
	<b>Average Pedestrian Delay</b>		<b>31</b>	<b>31</b>	<b>10</b>	<b>10</b>
	<b>Pedestrian Delay LoS</b>		<b>41</b>	<b>41</b>	<b>10</b>	<b>10</b>
<b>Level of Service</b>		<b>D</b>	<b>D</b>	<b>B</b>	<b>B</b>	
		<b>D</b>				
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	Mixed Traffic	Mixed Traffic	Mixed Traffic	
	Dedicated Right Turning Speed	>25 km/h	>25 km/h	>25 km/h	>25 km/h	
	<b>Cyclist Through Movement</b>					
	<b>Separated or Mixed Traffic</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
	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	
	<b>Left Turning Cyclist</b>		<b>B</b>	<b>D</b>	<b>B</b>	<b>B</b>
<b>Level of Service</b>		<b>B</b>	<b>D</b>	<b>B</b>	<b>B</b>	
		<b>D</b>				
Transit	Average Signal Delay	≤ 10 sec	≤ 10 sec		≤ 40 sec	
	<b>Level of Service</b>		<b>B</b>	<b>B</b>	<b>-</b>	<b>E</b>
		<b>E</b>				
Truck	Effective Corner Radius	< 10 m	< 10 m		< 10 m	
	Number of Receiving Lanes on Departure from Intersection	1	1		1	
<b>Level of Service</b>		<b>F</b>	<b>F</b>	<b>-</b>	<b>F</b>	
		<b>F</b>				
Auto	Volume to Capacity Ratio	0.0 - 0.60				
	<b>Level of Service</b>		<b>A</b>			

# Multi-Modal Level of Service - Intersections Form

Consultant	Momentum	Project	Lansdowne 2.0 - EC
Scenario	Existing / Future	Date	June 2025
Intersection	Bank Street / Exhibition Way		

INTERSECTIONS		Bank Street & Exhibition Way			
Crossing Side		NORTH	SOUTH	EAST	WEST
	Road width	20	21	17	
	Total travel lanes crossed	6	6	5	
Pedestrian	Lanes	6	6	5	
	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	
	<b>PETSI Score</b>	<b>30</b>	<b>40</b>	<b>37</b>	
	<b>Ped. Exposure to Traffic LoS</b>	<b>E</b>	<b>E</b>	<b>E</b>	-
	Cycle Length	<b>75</b>	<b>75</b>	<b>75</b>	
	Effective Walk Time	<b>10</b>	<b>10</b>	<b>19</b>	
	<b>Average Pedestrian Delay</b>	<b>28</b>	<b>28</b>	<b>21</b>	
<b>Pedestrian Delay LoS</b>	<b>C</b>	<b>C</b>	<b>C</b>	-	
<b>Level of Service</b>	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	
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	
	<b>Cyclist Through Movement</b>			<b>E</b>	-
	<b>Separated or Mixed Traffic</b>	<b>Mixed Traffic</b>	<b>Mixed Traffic</b>	<b>Mixed Traffic</b>	-
	Left Turn Approach	≥ 2 lanes crossed		One lane crossed	
	Operating Speed	> 40 to ≤ 50 km/h		≤ 40 km/h	
<b>Left Turning Cyclist</b>	<b>E</b>	-	<b>B</b>	-	
<b>Level of Service</b>	<b>E</b>	-	<b>E</b>	-	
		<b>E</b>			
Transit	Average Signal Delay	≤ 10 sec	≤ 10 sec	≤ 30 sec	
	<b>Level of Service</b>	<b>B</b>	<b>B</b>	<b>D</b>	-
		<b>D</b>			
Truck	Effective Corner Radius		10 - 15 m	10 - 15 m	
	Number of Receiving Lanes on Departure from Intersection		≥ 2	≥ 2	
<b>Level of Service</b>	-	<b>B</b>	<b>B</b>	-	
		<b>B</b>			
Auto	Volume to Capacity Ratio	0.0 - 0.60			
	<b>Level of Service</b>	<b>A</b>			

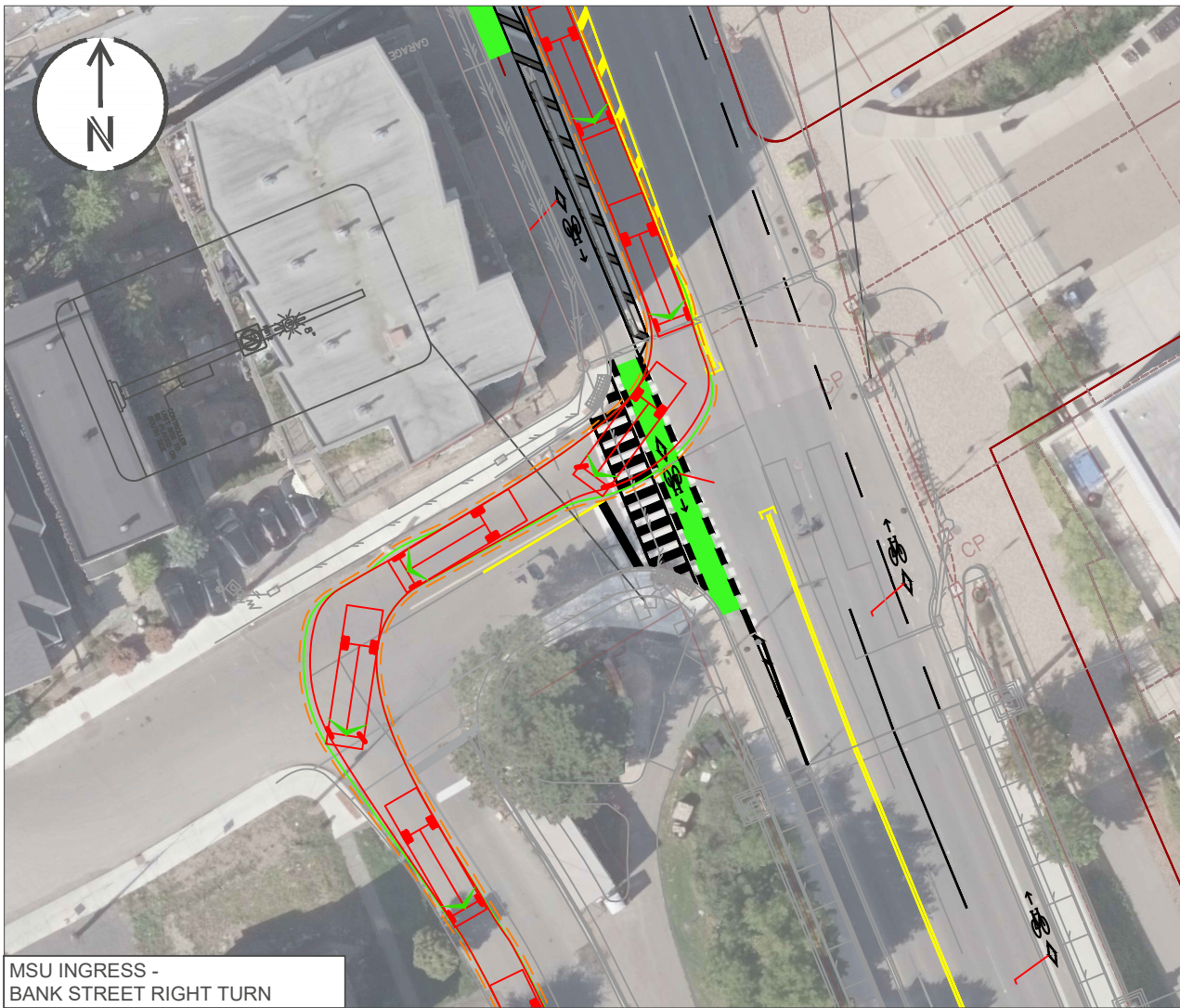
# Multi-Modal Level of Service - Intersections Form

Consultant	Momentum
Scenario	Existing / Future
Intersection	Queen Elizabeth Drive / Fifth Avenue

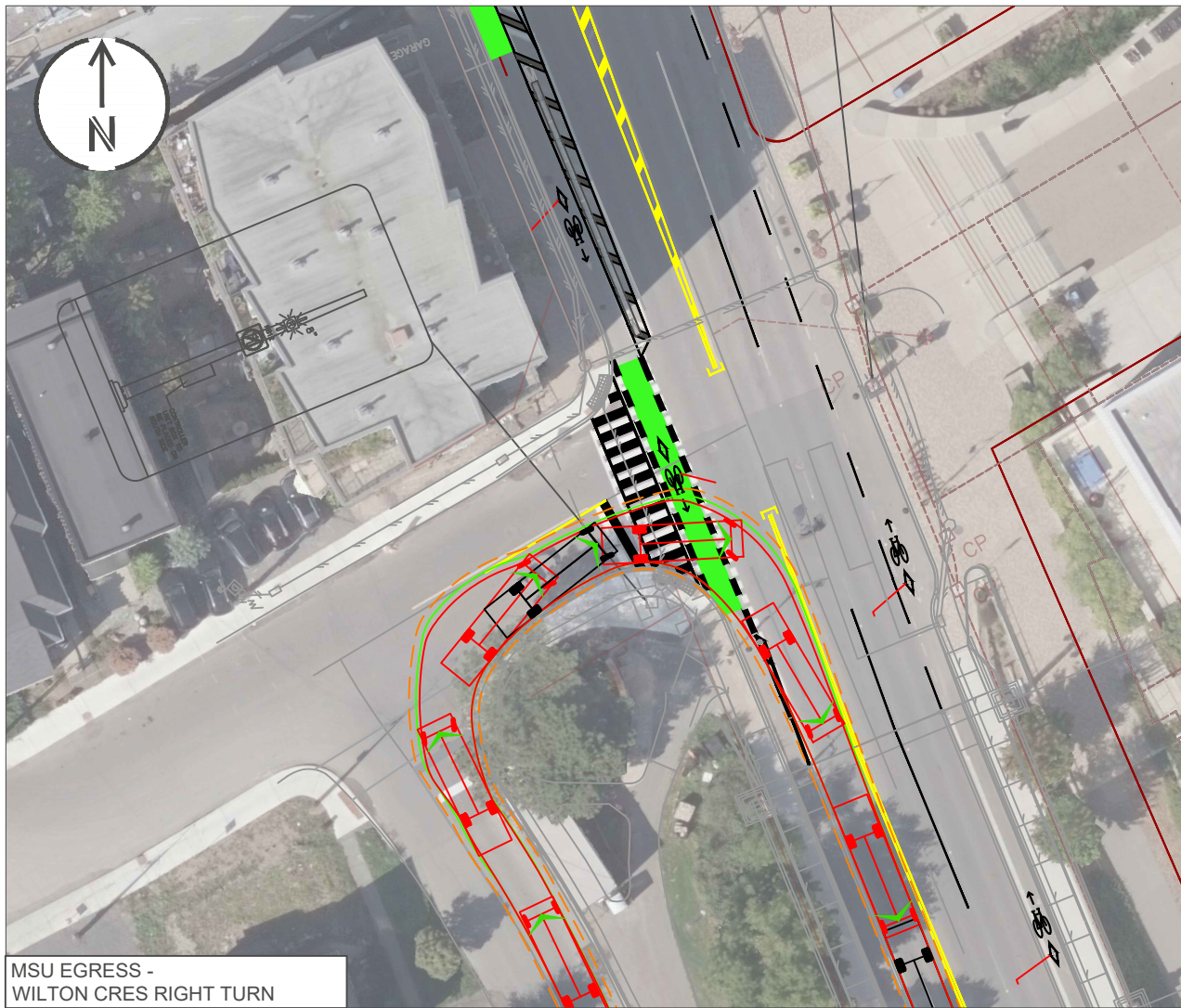
Project	Lansdowne 2.0 - EC
Date	June 2025

INTERSECTION		Queen Elizabeth Drive & Fifth Avenue				
Crossing Side		NORTH	SOUTH	EAST	WEST	
	Road width	7.3	7		8.2	
	Total travel lanes crossed	2	2		2	
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	
		<b>PETSI Score</b>	<b>108</b>	<b>100</b>		<b>94</b>
		<b>Ped. Exposure to Traffic LoS</b>	<b>A</b>	<b>A</b>	<b>-</b>	<b>A</b>
		Cycle Length	<b>80</b>	<b>80</b>	<b>0</b>	<b>80</b>
		Effective Walk Time	<b>18</b>	<b>18</b>	<b>0</b>	<b>35</b>
		<b>Average Pedestrian Delay</b>	<b>24</b>	<b>24</b>		<b>13</b>
	<b>Pedestrian Delay LoS</b>	<b>C</b>	<b>C</b>	<b>-</b>	<b>B</b>	
	<b>Level of Service</b>	<b>C</b>	<b>C</b>	<b>-</b>	<b>B</b>	
		<b>C</b>				
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, Cycletrack or Not Applicable		Curb Bike Lane, Cycletrack or Not Applicable	
	Dedicated Right Turning Speed	>25 km/h	Not Applicable			
	<b>Cyclist Through Movement</b>		<b>Not Applicable</b>	<b>-</b>	<b>Not Applicable</b>	
	<b>Separated or Mixed Traffic</b>	<b>Mixed Traffic</b>	<b>Separated</b>	<b>-</b>	<b>Separated</b>	
	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	
	<b>Left Turning Cyclist</b>	<b>B</b>	<b>B</b>	<b>-</b>	<b>B</b>	
	<b>Level of Service</b>	<b>B</b>	<b>B</b>	<b>-</b>	<b>B</b>	
		<b>B</b>				
Transit	Average Signal Delay					
	<b>Level of Service</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	
Truck	Effective Corner Radius Number of Receiving Lanes on Departure from Intersection					
	<b>Level of Service</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	
Auto	Volume to Capacity Ratio	0.0 - 0.60				
	<b>Level of Service</b>	<b>A</b>				

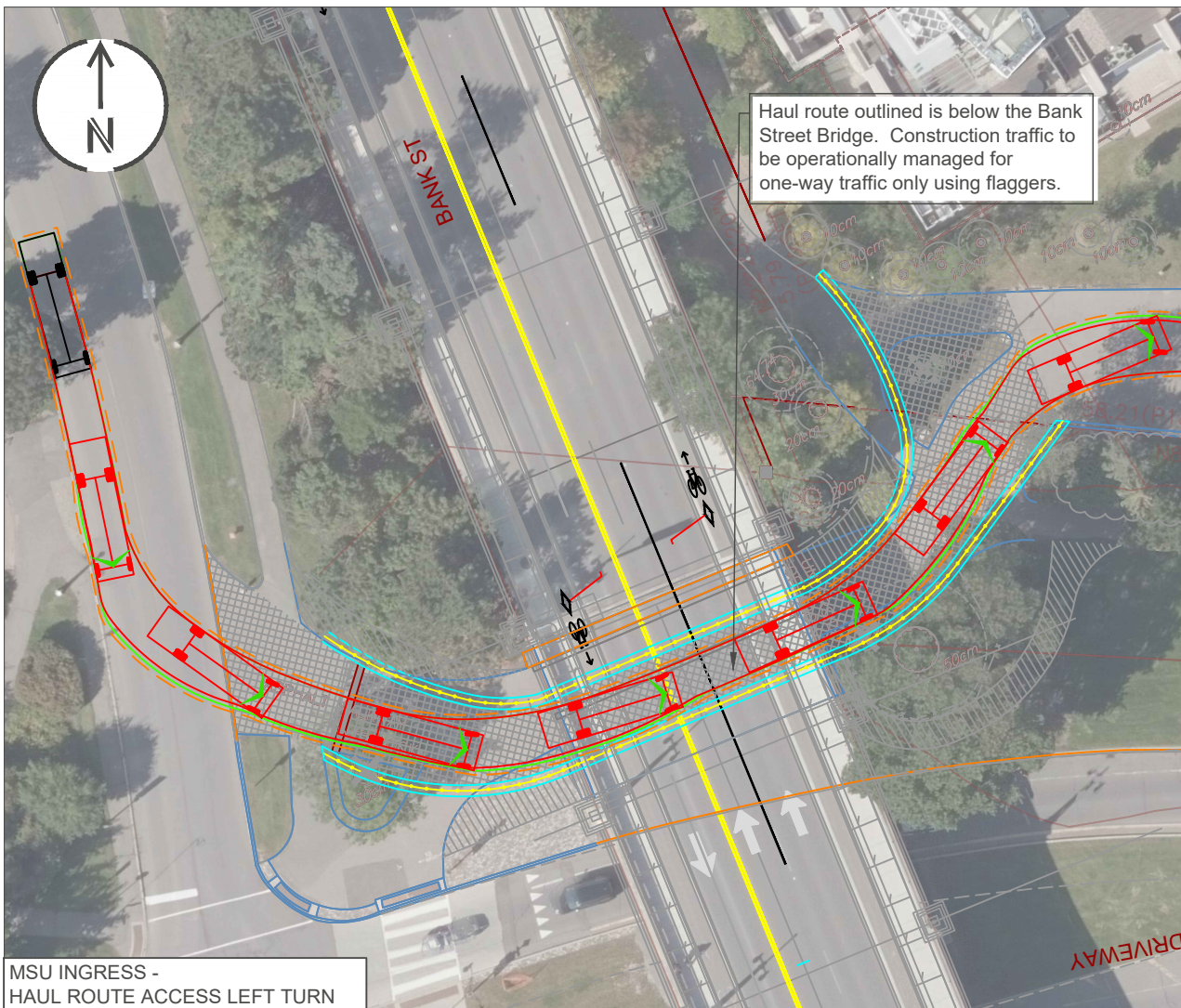
# APPENDIX F – CONSTRUCTION ACCESS



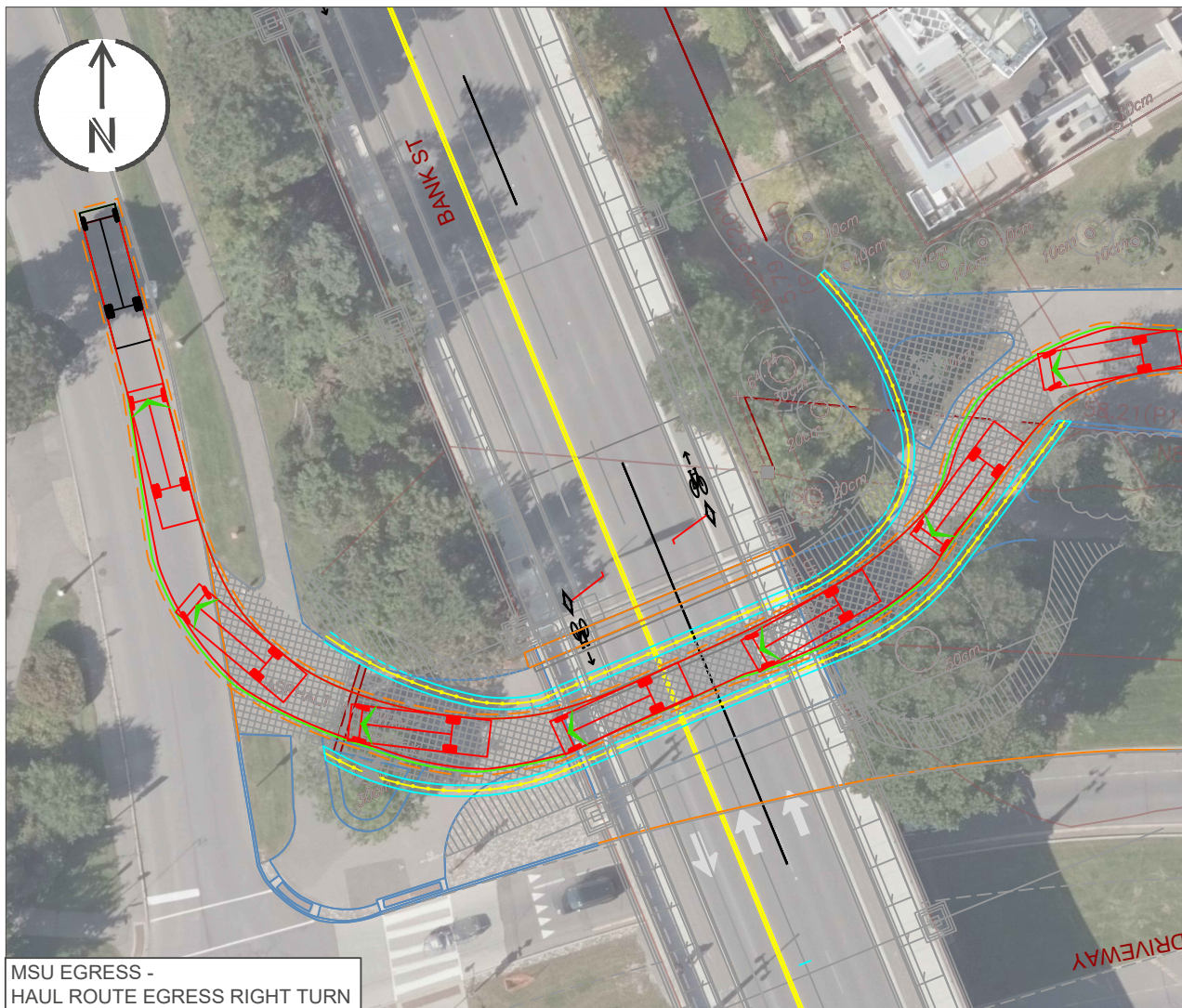
MSU INGRESS - BANK STREET RIGHT TURN



MSU EGRESS - WILTON CRES RIGHT TURN



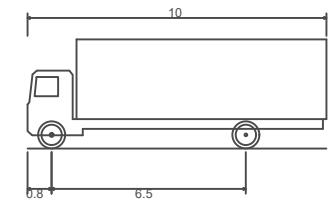
MSU INGRESS - HAUL ROUTE ACCESS LEFT TURN



MSU EGRESS - HAUL ROUTE EGRESS RIGHT TURN

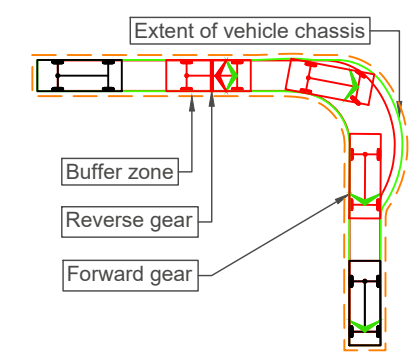
NOTES

1. Do not scale from this drawing, work to figured dimensions only.
2. Dimensions are in metres unless stated otherwise.
3. This drawing is based on aerial mapping received from Ottawa on 2025-01-27.
4. Swept path analysis is based on the following vehicle traveling at 8 km/h in forward gear, and 4 km/h in reverse gear.



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
Curb to Curb Turning Radius	11.100m

KEY



A	04/03/25	First Issue	JH	LT	HM
REV	DATE	REVISION DESCRIPTION / DETAILS	DRN BY	CHKD BY	APRVD BY



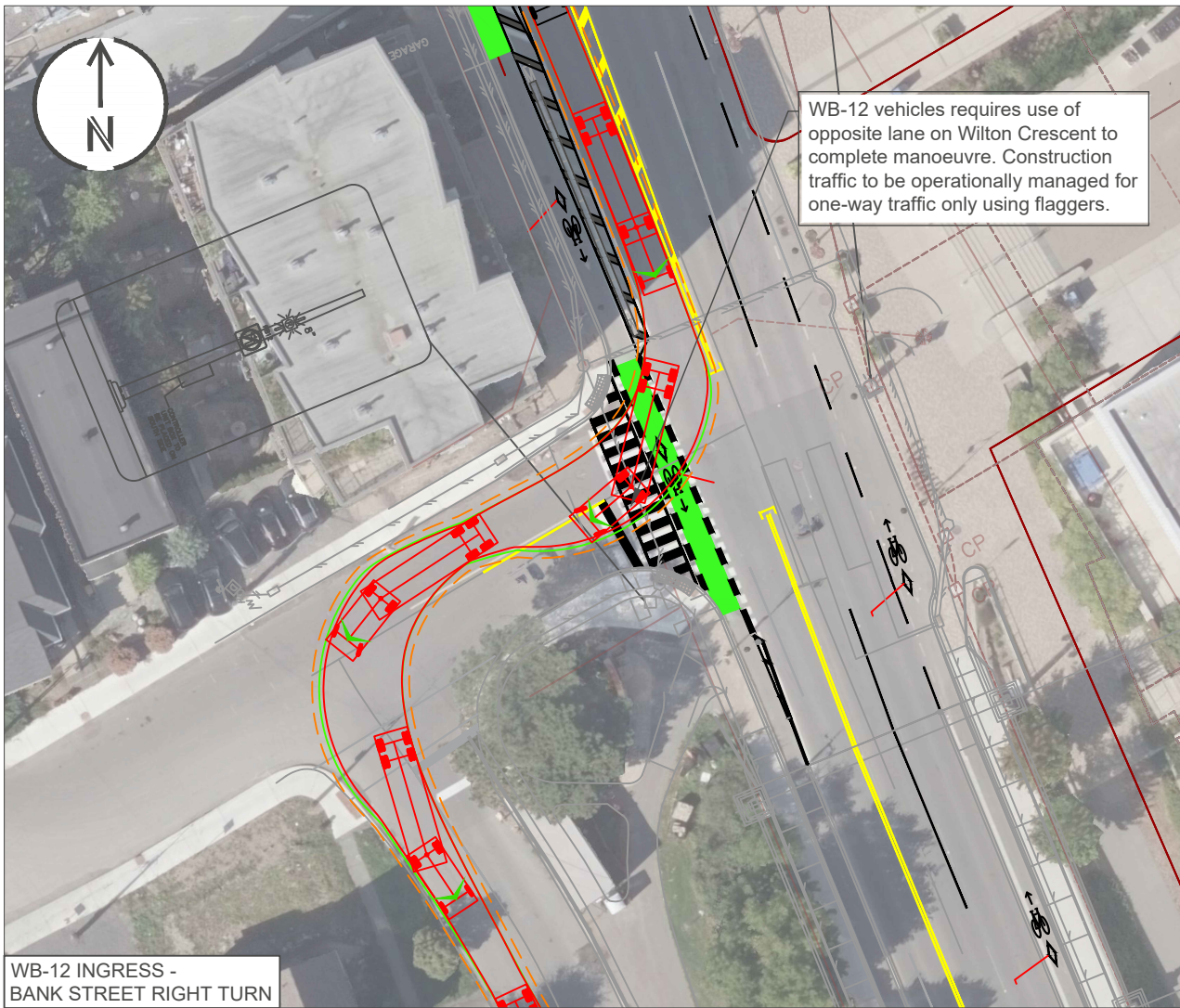
CLIENT:  
CITY OF OTTAWA  
OTTAWA SPORTS AND ENTERTAINMENT GROUP

JOB TITLE:  
LANSDOWNE 2.0

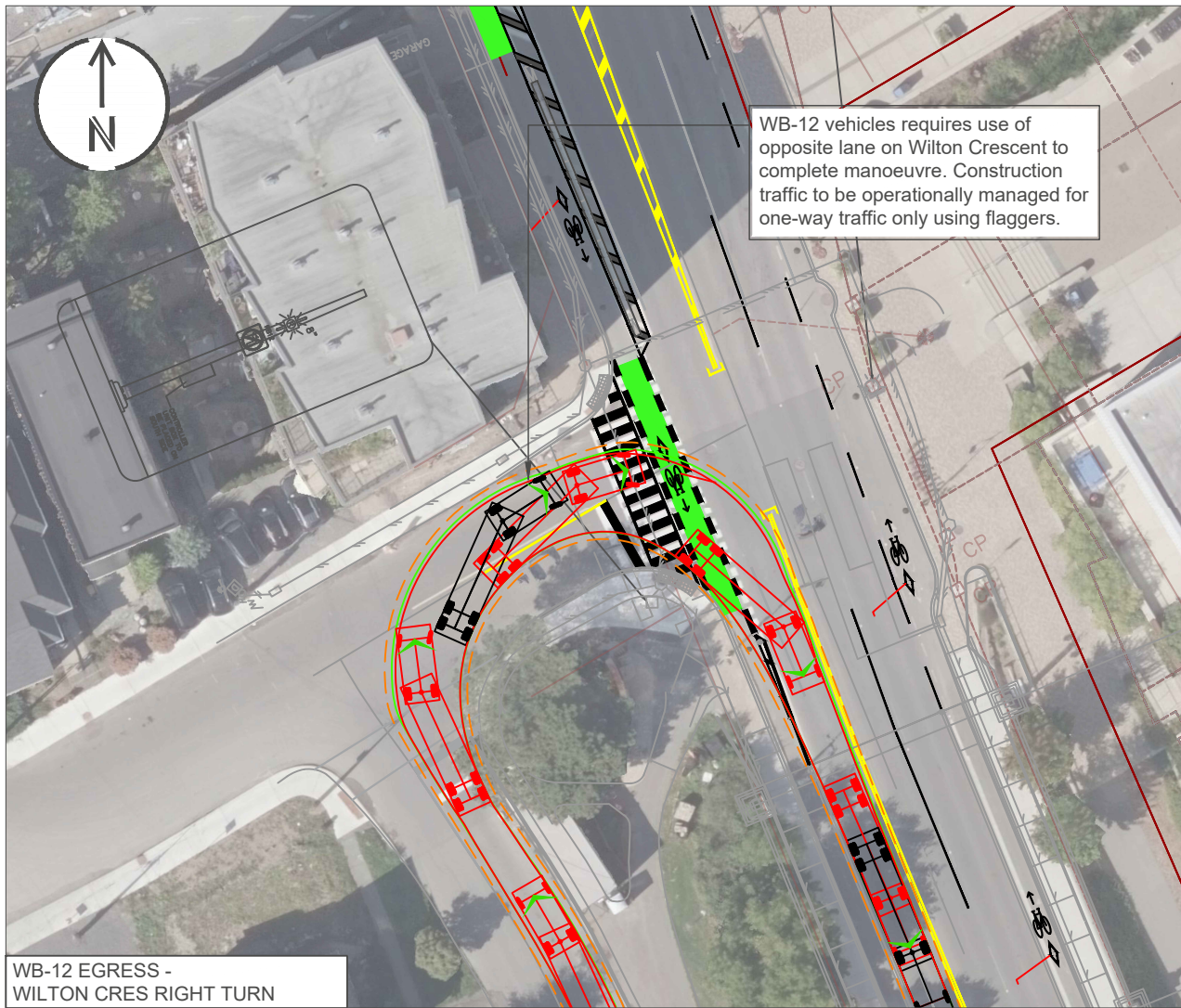
DRAWING TITLE:  
LANSDOWNE 2.0 SWEEP PATH ANALYSIS -  
TEMPORARY HAUL ROUTE ACCESS  
(SHEET 1 OF 2)

STATUS:  
FOR INFORMATION

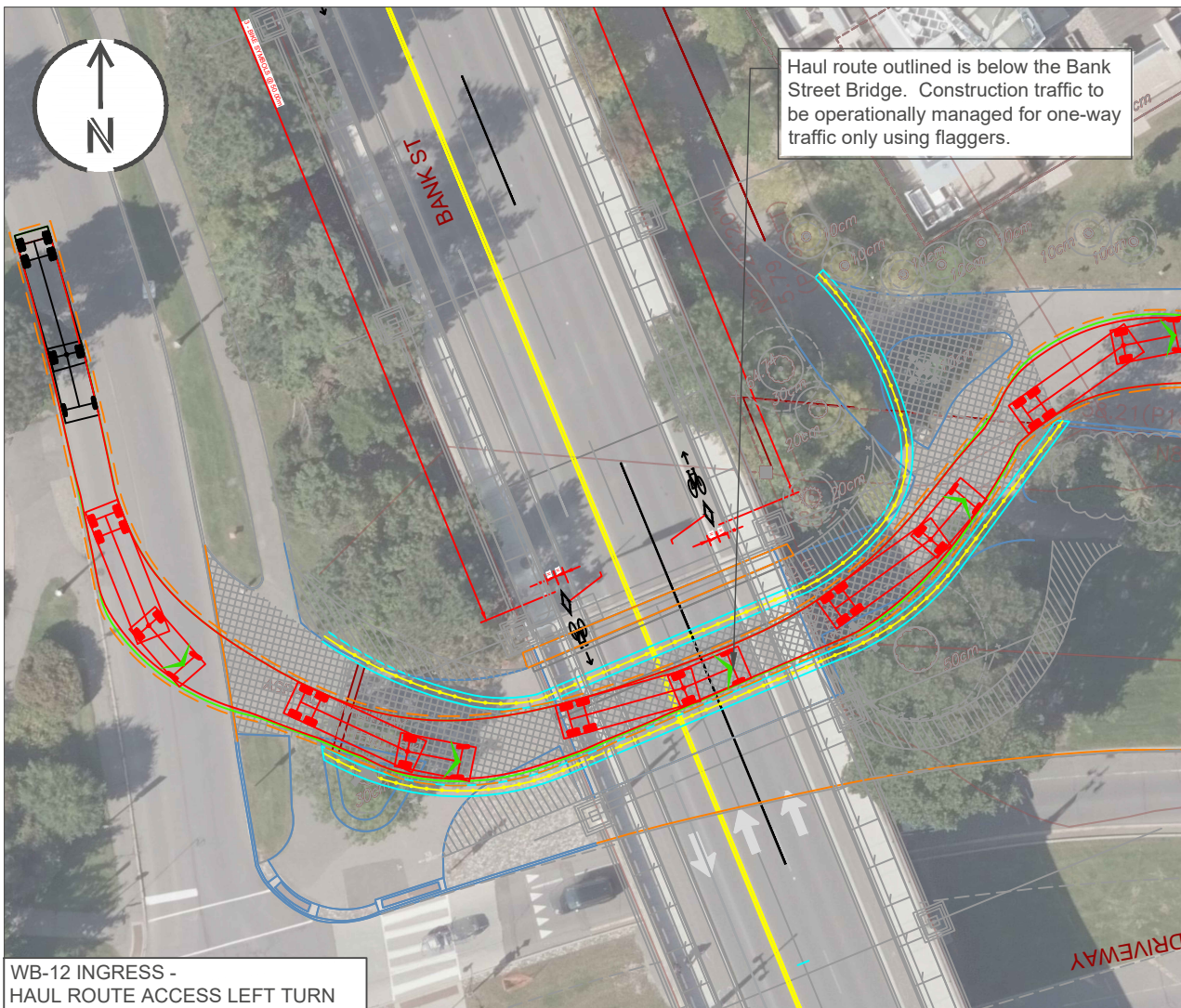
DRAWING NO: C000219-1-1-TR-003	REV: A	SCALE AT A3: 1:500
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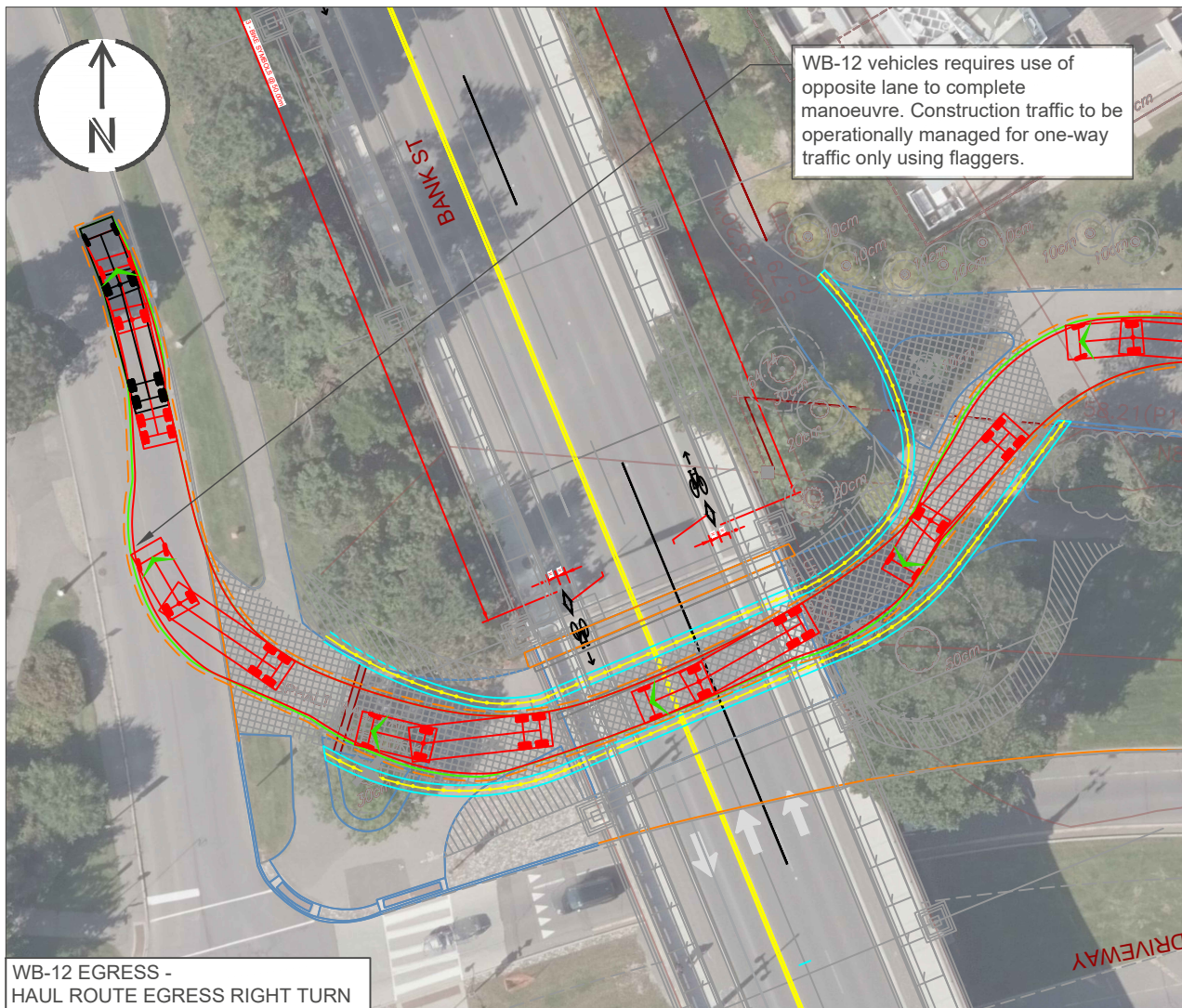
WB-12 INGRESS - BANK STREET RIGHT TURN



WB-12 EGRESS - WILTON CRES RIGHT TURN



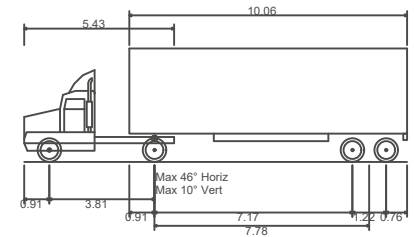
WB-12 INGRESS - HAUL ROUTE ACCESS LEFT TURN



WB-12 EGRESS - HAUL ROUTE EGRESS RIGHT TURN

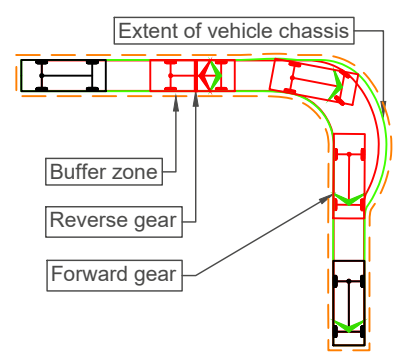
NOTES

1. Do not scale from this drawing, work to figured dimensions only.
2. Dimensions are in metres unless stated otherwise.
3. This drawing is based on aerial mapping received from Ottawa on 2025-01-27.
4. Swept path analysis is based on the following vehicle traveling at 8 km/h in forward gear, and 4 km/h in reverse gear.



WB-12 - Intermediate Semi-Trailer	13.870m
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°

KEY



A	04/03/25	First Issue	JH	LT	HM
REV	DATE	REVISION DESCRIPTION / DETAILS	DRN BY	CHKD BY	APRVD BY



CLIENT:  
CITY OF OTTAWA  
OTTAWA SPORTS AND ENTERTAINMENT GROUP

JOB TITLE:  
LANSDOWNE 2.0

DRAWING TITLE:  
LANSDOWNE 2.0 SWEEP PATH ANALYSIS -  
TEMPORARY HAUL ROUTE ACCESS  
(SHEET 2 OF 2)

STATUS:  
FOR INFORMATION

DRAWING NO: C000219-1-1-TR-004	REV: A	SCALE AT AS: 1:500
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# APPENDIX G – TDM SUMMARY & CHECK LISTS



# LANSDOWNE 2.0 TRANSPORTATION DEMAND MANAGEMENT MEASURES OVERVIEW

<b>Project</b>	Lansdowne 2.0 – Phase 1 (Event Centre)
<b>Report Title</b>	Transportation Demand Management Measures Overview
<b>Date</b>	11/07/2025
<b>Prepared by</b>	Momentum
<b>Prepared for</b>	City of Ottawa / Ottawa Sports and Entertainment Group (OSEG)

## Introduction

The Transportation Demand Management (TDM) program implemented in 2014 to support special events at Lansdowne Park and TD Place has been largely effective in diverting automobile trips from traveling directly to Lansdowne for special events.

A key hallmark of the TDM program and a large contributor to its success for the Lansdowne Revitalization project is the provision of free transit service to all ticketed events at no cost to event goers. Maintaining and enhancing this provision will be critical in maintaining the success of the program as part of the Lansdowne 2.0 redevelopment project.

The initial TDM plan for the Lansdowne Revitalization identified varying levels of enhanced transit and shuttle services needed to support following event sizes:

- 7,000 – 10,000 attendees, representative of average and sold-out arena events.
- 13,000 attendees, representative of smaller stadium events with attendance levels ranging between 10,000 - 15,000.
- 18,000 - 25,000 attendees, representative of average and sold-out stadium events including CFL Ottawa Redblacks football games.
- 40,000 attendees, representative of jewel 'mega events'. These events are infrequent and require temporary expanded stadium seating capacity, and/or the concurrent use of venues at Lansdowne.

The above attendance level scenarios were developed based on the capacities of the Stadium at TD Place (assumed to be 25,000) and the Arena at TD Place (9,800).

As part of the Lansdowne 2.0 project, the existing 9,800 seat indoor TD Place Arena will be replaced with a new standalone 5,500 seat (6,500 spectator) multi-purpose event centre that will be the new home to the OHL's Ottawa 67's, the CEBL's Ottawa BlackJacks, PWHL Ottawa hockey, and other indoor ticketed events. This change will effectively cap indoor arena events to 6,500 attendees, down from the previous 9,800 maximum capacity level that was previously identified for sold-out arena events.

The current spectator capacity for the Stadium at TD Place is 24,000. Under Lansdowne 2.0 project, the existing north stadium stands will be reconstructed with a seated capacity of 11,200 spectators (12,100 total spectators), representing a decrease from the current capacity of 14,028 spectators for the existing north stadium stands. This represents a total capacity of 22,000 spectators for the new stadium (2,000 less seats than what is provided today).

Based on the Lansdowne 2.0 Transportation Demand Management Strategy Report (June 30, 2023 – Stantec) event, varying levels of event sizes have been refined to reflect the new event centre and stadium capacities. Consistent with the original TDM Plan, events at Lansdowne are categorized as either Minor Events or Major Events.

Minor Events constitute events and programming at Lansdowne with total attendance levels of 10,000 or less, typically representative of indoor events or those that do not require the provision of substantial Park & Shuttle service (i.e. OC Transpo 450-Series service). Major Events are those with attendance levels of 10,000 or more and are typically outdoor stadium events that require enhanced transit service and the provision of Park & Shuttle service.

## Annual Modal Share Analysis

Modal share surveys for major and minor events are conducted by OSEG on an annual basis to gauge the effectiveness of the TDM program. This annual assessment helps to track progress and identify any adjustments that might be required to continue to meet TDM targets.

On-line surveys are sent shortly after each event held at TD Place to obtain feedback on transportation services and travel modes used to travel to events. The on-line surveys provide a better understanding of travel behaviours for modes that are not easily quantified through passive on-site counts, these include drop-offs near the venue, use of taxis, and ridesharing services such as Uber and Lyft.

The tables below summarize average modal share averages achieved in 2033 for events held at Lansdowne.

**Table 1 – 2023 REDBLACKS Average Modal Share Summary**

Travel Model	Major Events Modal Share Targets	2023 Ottawa REDBLACKS Average Modal Share		
Transit & Shuttle	50-55%	47.10%		
On-Site Parking	3-6%	3.80%		
Cycling	1-3%	1.50%		
Walking	8-10%	8.20%		
On-Street Parking	26%	29.60%		
Other Modes	5-10%	9.70%	Drop-Off Near Venue	3.00%
			Ridesharing	2.70%
			3rd Party Group Bus/Other	1.30%
			Taxi	0.30%
			Other	2.50%
<b>Total</b>	<b>100%</b>	<b>100%</b>		



**Table 2 – 2023 Ottawa 67’s Average Modal Share Summary**

Travel Model	Minor Events Modal Share Targets	2023 Ottawa 67’s Average Modal Share		
Transit	10-20%	24.50%	Transit	12.00%
			Shuttle Service (Carleton)	12.50%
Active Modes	5-10%	8.90%	Walking	8.00%
(Walking and Cycling)			Cycling	0.90%
Auto Modes	55-75%	58.40%	On-Street Parking	23.90%
(On-Site/Street Parking)			On-Site Parking	34.50%
Other Modes	5-20%	8.10%	Drop-Off Near Venue	3.90%
			Ridesharing	2.30%
			3rd Party Group Bus	0.10%
			Taxi	0.50%
			Other	1.30%
<b>Total</b>	<b>100%</b>	<b>100%</b>		

**Table 3 – 2023 Minor Events Average Modal Share Summary**

Travel Model	Minor Events Modal Share Targets	2023 TD Place Events Average Modal Share		
Transit	10-20%	13.60%	Transit	13.60%
			Shuttle Service	NA
Active Modes	5-10%	9.30%	Walking	8.60%
(Walking and Cycling)			Cycling	0.70%
Auto Modes	55-75%	61.10%	On-Street Parking	26.30%
(On-Site/Street Parking)			On-Site Parking	34.80%
Other Modes	5-20%	15.90%	Drop-Off Near Venue	5.70%
			Ridesharing	6.90%
			3rd Party Group Bus	0.30%
			Taxi	1.90%
			Other	1.20%
<b>Total</b>	<b>100%</b>	<b>100%</b>		

**Table 4 – 2023 Tenant Team (BlackJacks / Athletico) Average Modal Share Summary**

Travel Model	Minor Events Modal Share Targets	2022 Blackjacks Average Modal		
Transit	10-20%	8.20%	Transit	8.20%
			Shuttle Service	0.00%
Active Modes	5-10%	17.20%	Walking	13.50%
(Walking and Cycling)			Cycling	3.70%
Auto Modes	55-75%	66.20%	On-Street Parking	32.50%
(On-Site/Street Parking)			On-Site Parking	33.70%
Other Modes	5-20%	8.40%	Drop-Off Near Venue	4.20%
			Ridesharing	2.40%
			3rd Party Group Bus	0.00%
			Taxi	0.90%
			Other	0.80%
<b>Total</b>	<b>100%</b>		<b>100%</b>	

Based on 2023 modal share data, the TDM modal shares for events held at Lansdowne continue to be within set targets with a high adoption of transit, shuttle, and active modes as the primary travel options to travel to Lansdowne for events.

For major events (attendance levels of 10,000 or more), the transit and shuttle modal share continues to show improvement and signs of recovery since the COVID-19 pandemic. Transit and shuttle modal shares increased from 42.2% in 2022 to 47.1% in 2023. It is anticipated modal shares will continue to improve over time as transit ridership levels continue to recover. Modal shares for on-site parking (3.8%), cycling (1.5%), and walking (8.2%) continue to fall within modal share targets for major events.

For minor events (attendance levels that are less than 10,000), transit modal shares continue to meet and exceed set targets for transit and active modes. For Ottawa 67's games, the transit modal shares in 2023 was 24.5%, exceeding the 10-20% target. This success is attributed to excellent communication of travel options to ticket holders, and the provision of shuttle service from Carleton University for Ottawa 67's games held at Lansdowne.

Modal shares for other minor events, such as concerts and shows, continue to meet TDM targets for transit (13.6%) and active modes (9.3%).

Modal shares for Ottawa BlackJacks and Ottawa Athletico matches for 2023 were also met. While the transit mode share average was 8.2%, slightly below the 10% target, the walking and cycling mode share was 17.2%, far exceeding the 5-10% target for active modes. It is worth noting that the auto mode share for Ottawa BlackJacks and Ottawa Athletico matches was also within the set targets with 66.2% in 2023.



## Lansdowne 2.0 Attendance Levels

The Lansdowne 2.0 concept was adjusted since the submission of the Lansdowne 2.0 Transportation Demand Management Strategy Report in 2023. This included the reduction of the proposed density from three residential towers with 1,200 units to two towers with 700 units. Other changes include the removal of a proposed 1,500 seat music hall from the podium level retail that is proposed to be attached to the new north stadium stands.

Attendance level thresholds were adjusted to reflect the new concept plan:

### Minor Events

- 3,000 attendees or less, representative of smaller indoor events at the new Event Centre, and other public events held at Lansdowne.
- 3,000 - 6,500 attendees, representative of average and maximum sold-out indoor events at the new Event Centre.
- Between 6,500 and 10,000 attendees, representative of concurrent sold-out indoor events at the new Event Centre with other events occurring at Lansdowne such as the Ottawa's Farmer Market, BluesFest, or other outdoor festivals held on site.

### Major Events

- 13,000 attendees, representative of events between 10,000 and 15,000 attendees including smaller stadium events.
- 18,000 - 22,000 attendees, representative of average and sold-out stadium events.
- 29,000 attendees, representative of concurrently held sold-out indoor events at the new Event Centre, and a sold-out event at the Stadium. It is noted that while the overlapping of two sold-out events is unlikely, this scenario is accounted for as
- 40,000 representing a large 'Mega Event' with expanded Stadium seating capacity, or concurrent large events.

Based on information received from the Ottawa Sports and Entertainment Group, smaller events with attendance levels of 5,000 attendees or less represent the majority of ticketed events at Lansdowne. Over the next five years, an average of 78% of the events (132 out of 169 per year) are expected to have under 5,000 attendees.

## Lansdowne 2.0 Modal Share Targets

The Lansdowne 2.0 Transportation Demand Management Strategy (Stantec – July 2023), provided modal share targets for Major Events and Minor Events for Lansdowne 2.0.

Table 5 summarizes revised modal share targets for Lansdowne 2.0, including those for the new Event Centre (Minor Events). Targets have been revised to reduce auto targets to a maximum of existing mode shares.

Table 6 documents the corresponding person trips forecasted for events at Lansdowne 2.0 under various event sizes. Consistent with the initial TDM plan, the auto mode which accounts for both on-site and on-street parking, is assumed to be maximized at 8,225 person trips based

on a limited on-street parking supply of 2,175 spaces within the vicinity of Lansdowne, and 600 on-site parking spaces.

**Table 5: Lansdowne 2.0 Modal Share Targets for Varying Attendance Levels**

Attendance Level	Mega Event: Expanded Stadium Seating + Event Centre							
	Concurrent Sold-Out Stadium + Event Centre							
	Sold-Out Stadium Event							
	Average Stadium Event							
	Small Stadium Event							
	Event Centre + LP Events*							
	Event Centre							
	3,000	6,500		10,000		13,000	18,000	22,000
	<b>Transit / Park &amp; Shuttle</b>	15%	15%	15%	52%	52%	52%	52%
<b>Walking &amp; Cycling</b>	10%	10%	10%	11%	11%	11%	11%	13%
<b>Drive &amp; Park</b>	65%	65%	65%	32%	32%	32%	30%	21%
<b>Other**</b>	10%	10%	10%	5%	5%	5%	7%	7%

**Table 6: Lansdowne 2.0 Person Trips Per Mode for Varying Attendance Levels**

Attendance Level	Mega Event: Expanded Stadium Seating + Event Centre							
	Concurrent Sold-Out Stadium + Event Centre							
	Sold-Out Stadium Event							
	Average Stadium Event							
	Small Stadium Event							
	Event Centre + LP Events*							
	Event Centre							
	3,000	6,500		10,000		13,000	18,000	22,000
	<b>Transit / Park &amp; Shuttle</b>	450	975	1500	6760	9360	11440	15080
<b>Walking &amp; Cycling</b>	300	650	1000	1430	1980	2420	3190	5200
<b>Drive &amp; Park</b>	1950	4225	6500	4160	5760	7040	8700	8400
<b>Other**</b>	300	650	1000	650	900	1100	2030	2800

\* LP Events – Lansdowne Park Events and Festivals

\*\* Other – represents other modes such as RideShare (Uber/Lyft), Taxis, Drop-offs, Private Shuttle buses



## Special Events Transportation Services

### **MINOR EVENTS (LESS THAN 15,000 ATTENDEES)**

#### **Free Transit Service:**

The basic elements of the TDM Plan to accommodate Minor Events at Lansdowne do not change as part of the Lansdowne 2.0 project. A key hallmark of the service delivery is the continued provision of free transit to all ticketed events at Lansdowne, irrespective of event size, starting two hours prior to the start of events, and up to two hours after the end of events.

Depending on the anticipated attendance levels, enhancements on OC Transpo Routes 6 and 7 through additional trips are arranged by OC Transpo as needed to ensure adequate transit capacity is provided.

The cost of additional transit service enhancement is provided at no additional cost to event goers and is borne by OSEG.

#### **Walking and Cycling:**

Information promoting walking and cycling as a convenient way to travel to TD Place is featured throughout TD Place communications. Walking and cycling to Lansdowne is promoted through the use of the scenic multi-use pathway along the Rideau Canal and the use of the 285 bike rings provided on-site. Additional information on walking and cycling connections is provided on the City of Ottawa Lansdowne Park website.

#### **On-Site Parking Management:**

On-site parking at TD Place is available for use during special events. As on-site parking is limited and shared with other visitors to Lansdowne, event attendees are encouraged to pre-purchase on-site parking to reserve a space and to limit increased drive-up demand. This messaging is provided for minor events held at Lansdowne including concerts, events, Ottawa 67's, Atletico, BlackJacks, and PWHL games.

#### **Alternative Off-Site Parking:**

To limit drive-up parking at Lansdowne for minor events, OSEG is currently identifying nearby off-street parking near Lansdowne as an alternative to on-site parking, particularly for use during minor events when Park & Shuttle service is not provided.

Intercepting inbound auto travelers for Minor Events at alternative parking facilities that are typically underutilized on weekday evenings and weekends has the potential to reduce direct auto travel to Lansdowne. Alternative parking information is currently provided on the TD Place website and provides information on nearby lots that are within a 20, 30, and 40-minute walk to Lansdowne. In addition, parking facilities with access to Routes 6 and 7 are identified for convenience to address First / Last Mile connectivity through free transit service on Bank Street for ticket holders.

OSEG is currently exploring options to aggregate the availability of off-site alternative parking, and the ability to pre-purchase or reserve alternative nearby off-street parking, through third party parking service providers.

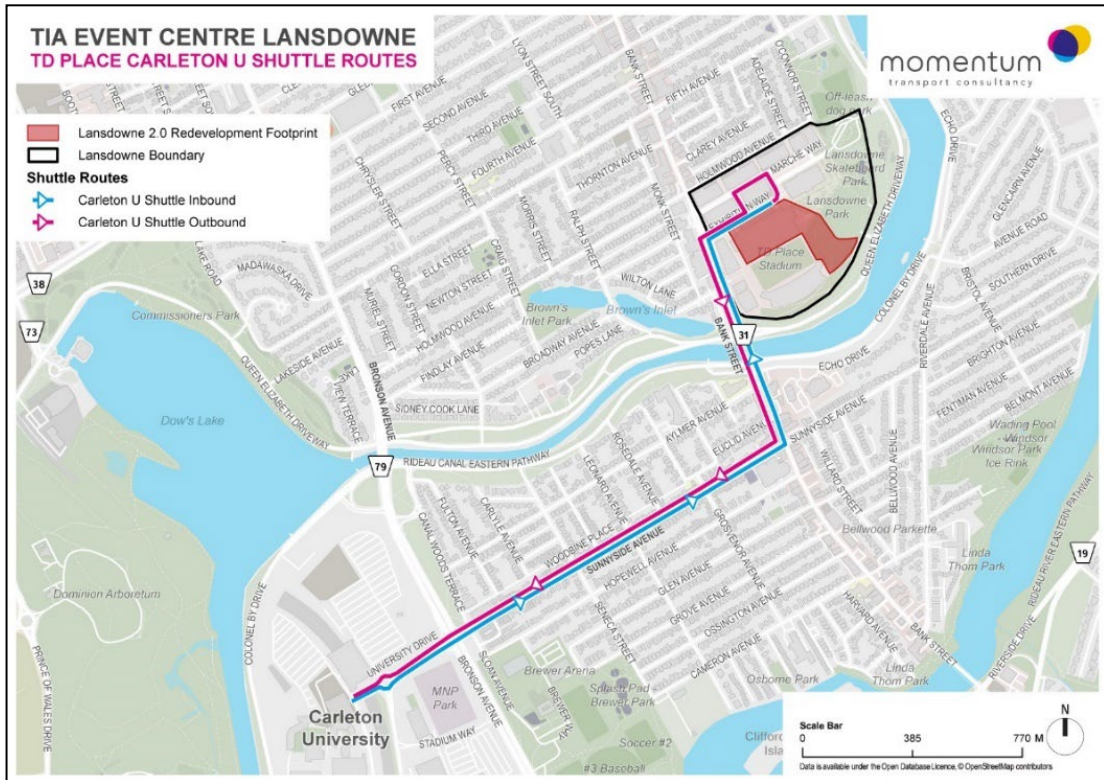
#### **Carleton U Shuttle:**

For Ottawa 67's and PWHL 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 PWHL 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.

While the Carleton U shuttle is currently used to support Ottawa 67's and PHWL Ottawa events, it can also be used to supplement enhanced transit coverage for concurrent special events at Lansdowne with total on-site attendance levels exceeding the 10,000 threshold but less than 15,000 attendees where further transportation services are required to support major events.

Figure 1: Carleton U Shuttle





## MAJOR EVENTS (MORE THAN 15,000 ATTENDEES)

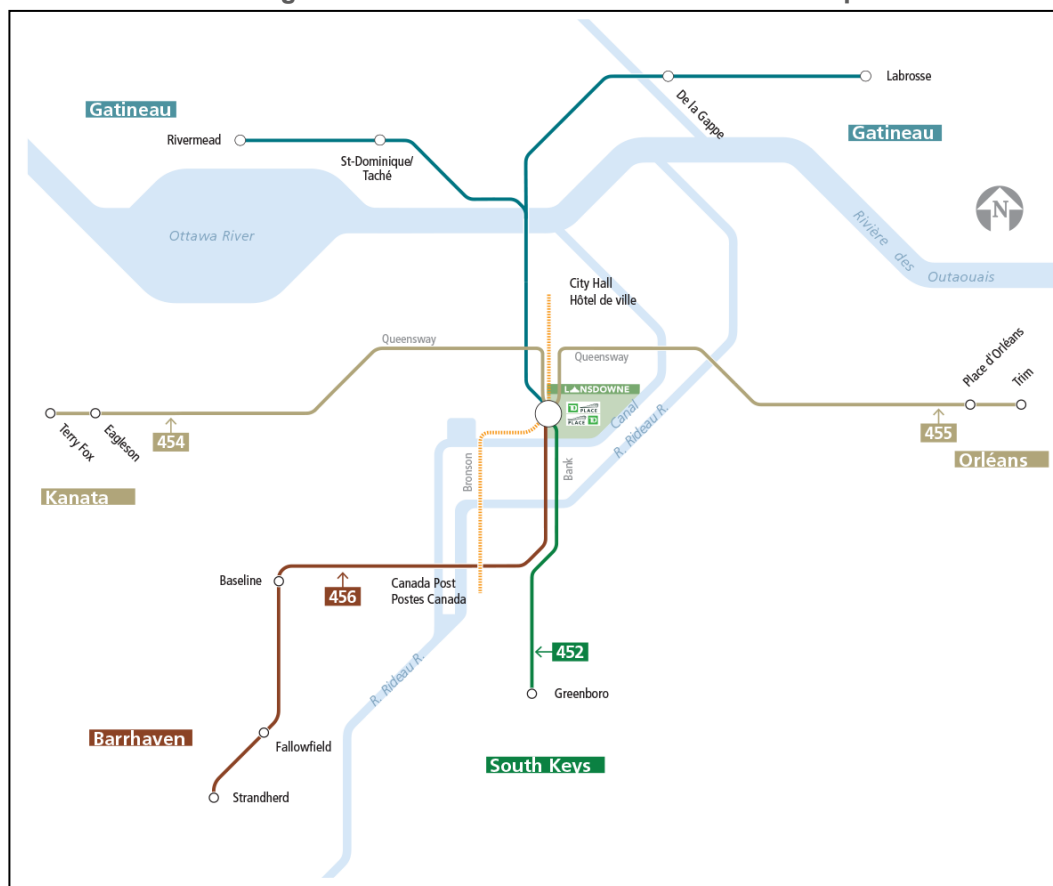
No significant changes are anticipated to the provision of transportation services to support major events with attendance levels of 15,000 or more. Transportation services provided for outdoor stadium events will continue to be provided in their current format.

This includes the provision of free, direct parking and shuttle service from satellite locations that are operated by OC Transpo, the Société de Transport de l'Outaouais (STO), and OSEG.

### Enhanced Transit / Park & Shuttle:

For major events with attendance levels between 15,000 – 22,000 (stadium events), enhanced transit service and 450-series shuttles provided by OC Transpo and the STO will continue to provide service on Bank Street.

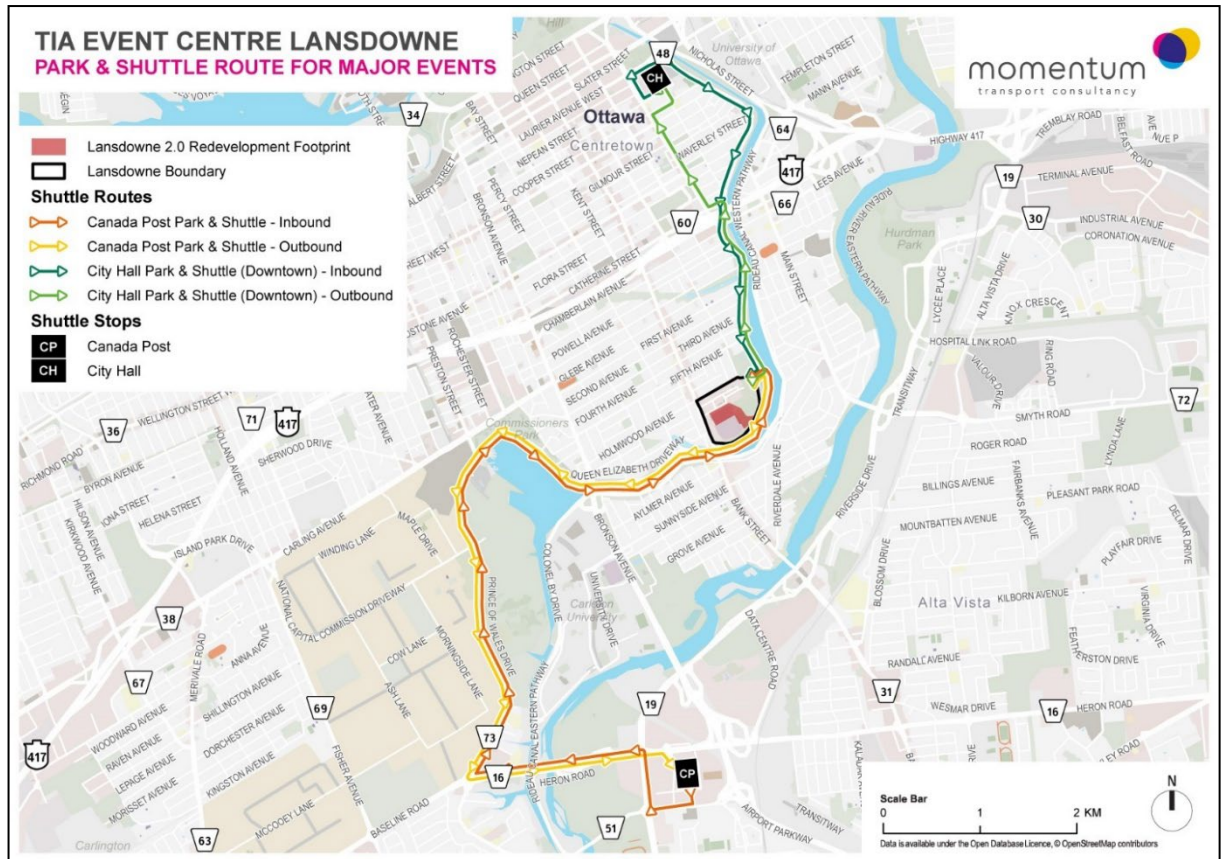
Figure 2: TD Place Park & Shuttle Network Map



Under Lansdowne 2.0, the use of nearby satellite parking and shuttle service from City Hall and Canada Post is expected to continue to be provided by OSEG for major events with attendance levels of 15,000 or more.

TD Place Park & Shuttle service from Canada Post and City Hall provide service to the Shuttle Loop on the east side of Lansdowne and require access on Queen Elizabeth Driveway.

**Figure 3: TD Place Park & Shuttle Routes Operated by OSEG for Major Events**



Continued cooperation and coordination with key stakeholders including the City of Ottawa and the National Capital Commission (NCC) will be required to successfully deliver Major Events at Lansdowne. QED will continue to play a significant role in supporting multimodal access to Lansdowne. In addition to supporting active mode trip access through the multi-use pathway system, QED plays a critical role in supporting vehicular access to the site during Major Events for both residents and retail patrons. The access is also used as the primary drop-off area for RideShare service providers such as Uber and Lyft, as well as Park & Shuttle services from Canada Post and City Hall.

The timing of closures on QED should be coordinated closely by the NCC, the City of Ottawa, and OSEG for Major Events. While the majority of access to Lansdowne is facilitated on the 450-series service on Bank Street, the QED will primarily accommodate parking garage access during event Ingress and Egress time periods when access on Bank Street is fully restricted to vehicular traffic due to pedestrian demands.

Opportunities to streamline and adjust Park & Shuttle services from Canada Post and City Hall should continue to be explored and changes to provided services should be informed through



consultations with key stakeholders including OC Transpo, City of Ottawa, and the NCC. This includes a period evaluation of the number of satellite parking facilities needed to match service demands.

### **Walking and Cycling:**

Information promoting walking and cycling as a convenient way to travel to TD Place is featured throughout TD Place communications. Walking and cycling to Lansdowne is promoted through the use of the scenic multi-use pathway along the Rideau Canal and the use of the 285 bike rings provided on-site. Additional information on walking and cycling connections is provided on the City of Ottawa Lansdowne Park website.

A total of 76 bicycle racks providing 152 bicycle parking spaces are to be provided as part of the proposed site plan application for the Event Centre (Phase 1). 47 bicycle racks providing 94 spaces are to be provided on the eastern side of the North Side Stands. The bicycle racks would be enclosed by trees and close to NSS surveillance providing security. 29 bicycle racks providing 58 spaces are to be provided around the great lawn, ensuring even distribution.

For major events with attendance levels of 15,000 or more, additional bike parking is provided and promoted for free valet bike parking is provided near TD Place Gate 4 south of the Aberdeen Pavilion.

**Figure 4: TD Place Bike & Park Valet Service for Major Events (2015)**



### **On-Site Parking Management:**

For major events at Lansdowne, primarily Ottawa Redblacks CFL Football games, no on-site parking is provided for purchase and drive-up is discouraged through regular messaging and trip planning information featured on-line. A limited number of parking passes are provided to club and suite ticket holders with access. Major event attendees are strongly encouraged to utilize the free Park & Shuttle service, cycling or walk to travel to Lansdowne for major events.

### **Alternative Off-Site Parking:**

Similar to minor events, information on nearby off-street parking near Lansdowne is provided as an alternative to on-site parking.

## MEGA EVENTS (ATTENDANCE LEVELS OF 29,000 OR MORE)

Mega Events scenarios are infrequent events representative of expanded capacity or concurrently running events with attendance levels that exceed typical sold-out events at the stadium. These scenarios require additional transportation services and traffic management measures.

Under the initial Lansdowne Revitalization Plan, Mega Events were identified to accommodate expanded seating stadium events with attendance levels reaching 40,000 including large concerts, or once-in-a-lifetime jewel events such as the CFL Grey Cup.

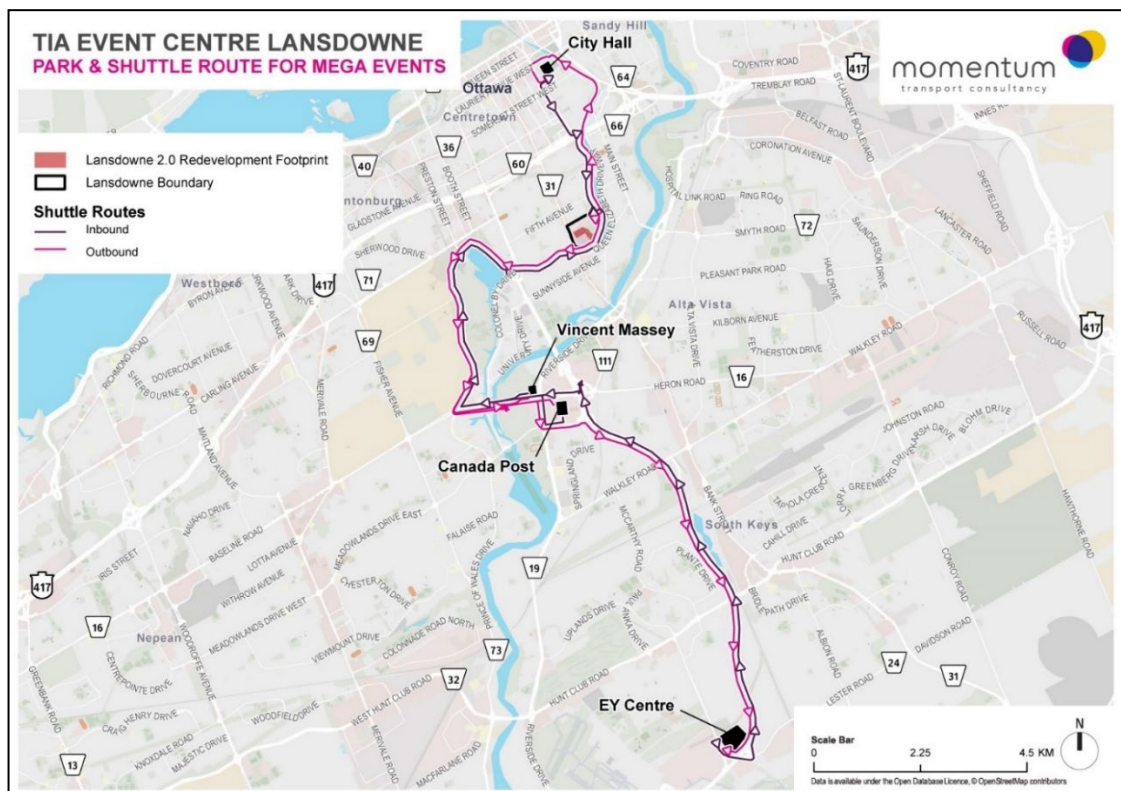
Under Lansdowne 2.0, the definition of Mega Events has been revised to include concurrent sold-out event centre and stadium events held at Lansdowne with a combined attendance level of 29,000.

Further enhancements to 450-series service will be required to support special events with attendance levels of 29,000 or more. It is anticipated that a total of 30 to 35 additional transit trips are required across the 450-series service to meet transit demands for 40,000 person mega events.

In addition to the provision of 450-series service and TD Place Park & Shuttle service from City Hall and Canada Post, additional off-site satellite Park & Shuttle service may be required to support demands, particularly for mega events at the 40,000 person attendance level. For a 40,000 attendance mega events, additional Park & Shuttle facilities should be secured at Vincent Massey Park and/or the EY Centre depending on the attendance level and level of service requirements.

For 40,000 attendance Mega Events, restricted access on QED may be required to support enhanced Park & Shuttle operations from satellite parking locations.

**Figure 5: TD Place Park & Shuttle Routes Operated by OSEG for Mega Events**





**Table 7: Lansdowne 2.0 Transportation Services Required for Varying Event Sizes**

Event Size / Classification	Mega Event: Expanded Stadium Seating + Event Centre							
	Concurrent Sold-Out Stadium + Event Centre							
	Sold-Out Stadium Event							
	Average Stadium Event							
	Small Stadium Event							
	Event Centre + LP Events*							
	Event Centre							
	Transportation Services Provided	3,000	5,000	10,000	15,000	18,000	22,000	29,000
-		-	-	-	-	-	-	
	5,000	10,000	15,000	18,000	22,000	29,000	40,000	
	Minor Events		Major Events			Mega Events		
<b>Enhanced Transit Service</b>	<i>Not Required</i>	Increased transit service on Bank Street Route 6 and Route 7 (as required)						
<b>Valet Bike Parking</b>	<i>Not Required</i>	Free, Secure Valet Bike Parking						
<b>Park &amp; Shuttle</b>	<i>Not Required</i>	As Required (Carleton U Shuttle)	Enhanced Transit 450-Series shuttle service from OC Transpo / STO					
			Satellite Park & Shuttle Service from City Hall and Canada Post					
<b>Additional Park &amp; Shuttle Service</b>	<i>Not Required</i>					Additional Service from Vincent Massey and/or EY Centre (As Required)		

## Additional TDM Opportunities

The July 2023 TDM Strategy Report developed for Lansdowne 2.0 recognizes the challenges associated with Minor Events at Lansdowne, particularly on busy weekend periods with overlapping programming, and the challenges associated with traffic delays experienced by all road users on Bank Street. These challenges are especially pronounced when there are programming closures on QED to support community programming such as Winterlude, the Ottawa Race Weekend events, and the most recent closures of QED on weekends as part of a pilot project to support active modes on the scenic parkway. These closures result in a significant diversion of traffic onto Bank Street which increases delays and cut through traffic on local neighborhood streets. The report identified future opportunities to further enhance the TDM program for special events at Lansdowne.

### **Transit Priority Improvements**

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. These improvements to service reliability and passenger comfort on Bank Street will help to promote transit service to Lansdowne as a viable and attractive option for day-to-day travel, as well as for Minor Events.

### **Fare Free Zone Pilot**

Opportunities to promote transit use, particularly on busy weekends, could potentially include exploring the feasibility of introducing a "Fare Free" zone on Bank Street to support local businesses, including Lansdowne, and reduce the reliance on auto travel.

This initiative can support programming at Lansdowne during busy weekend periods that include the Ottawa Farmer's Market or 613Flea, as well as merchants along Bank Street between downtown Ottawa and the Glebe. The "Fare Free" zone can be provided on Route 6 and/or 7 during certain hours and specific days of the week. For example, service delivery could potentially include providing "Fare Free" service on Route 7, between Carleton University and downtown Ottawa (Rideau Station), on Saturdays and Sundays between the hours of 9:00 AM and 3:00 PM.

The feasibility and challenges of providing "Fare Free" service on Bank Street will need to be studied and evaluated. This type of service should be considered as part of the traffic management strategy to support alternative modes of transportation and to reduce traffic impacts associated with events such as Winterlude, Ottawa Race Weekend, etc.



### Project & Document Details

Project Name	Lansdowne 2.0 – Phase 1 (Event Centre)
Project Number	C000218
Document Title	Transportation Demand Management Measures Overview

### Document History

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Issue	Date	Author	Contributors	Authorisation	
				Name	Signature
1.0	08/2024	AD	HM	Hassan Madhoun	
2.0	01/2025	AD	HM	Hassan Madhoun	
3.0	07/2025	CA	HM, AD	Hassan Madhoun	



# TDM MEASURES CHECKLIST NON-RESIDENTIAL DEVELOPMENTS (OFFICE, INSTITUTIONAL OR INDUSTRIAL)

<b>Project</b>	Lansdowne 2.0 – Event Center (Phase 1)
<b>Report Title</b>	TDM Measures Checklist (Non-residential Developments)
<b>Date</b>	22/01/2025
<b>Prepared by</b>	Momentum
<b>Prepared for</b>	City of Ottawa / Ottawa Sports and Entertainment Group

## 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

- ✓ 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 new Event Center staff.

## **2.3 Valet bike parking**

### ***Visitor Travel***

2.3.1. Offer secure valet bike parking during public 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 near Gate 4 at 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 due to the location of a large number of employees, including seasonal part-time staff.

3.2.2. Subsidize or reimburse monthly transit pass purchases by employees

- ✓ Not applicable due to the location of a large number of employees, including seasonal part-time staff.

#### ***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 event organizers.



### 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.

#### *Commuter travel*

5.1.2. Provide discounts on parking costs for registered carpools

- ✓ Not Applicable

### 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 Event Center is 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.

### 7.3 Promotions

#### *Commuter travel*

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 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 the 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 (Phase 1)
Project Number	C000218
Document Title	TDM Measures Checklist- Non-Residential Developments

### Document History

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1.0	Completed	Addressing city of Ottawa comments	City of Ottawa / OSEG

### Issue Control

Issue	Date	Author	Contributors	Authorisation	
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1.0	22/01/25	AD	KP	HM	



# TDM-SUPPORTIVE DEVELOPMENT DESIGN AND INFRASTRUCTURE CHECKLIST (OFFICE, INSTITUTIONAL OR INDUSTRIAL)

<b>Project</b>	Lansdowne 2.0 – Event Centre (Phase 1)
<b>Report Title</b>	TDM Measures Checklist Non-residential Developments
<b>Date</b>	22/01/2025
<b>Prepared by</b>	Momentum
<b>Prepared for</b>	City of Ottawa / Ottawa Sports and Entertainment Group

## 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

- ✓ No on-street parking is provided between building entrance public realm areas. 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 Event Centre entrances are located a short distance from Bank Street via pedestrian links and are connected to the Multi-use pathway (MUP) that runs along the Rideau Canal.

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 Event Centre 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. Bus stops with shelters are located on Bank Street.

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 provided on-site around the Event Centre as shown in the attached Site Plan.

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 links are provided around the Event Centre as shown in Figure 1 above. Use of landscaping treatment and TWSIs used to delineate pedestrian pathways from limited use vehicle pathways.

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 are wide and the Event Centre is accessible via gradual ramps.

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 at Exhibition Way 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)

- ✓ Currently, Lansdowne feature a total of 285 surface level bike racks. As part of the Lansdowne 2.0 Phase 1 site plan, a total of 47 bicycle racks providing are to be provided as part of the proposed site plan application for the Event Centre (Phase 1).

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)

N/A - no internal cycle parking spaces are provided as part of Phase 1 – Event Centre 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

- ✓ 47 bicycle racks are proposed site plan application for the Event Centre (Phase 1).
- ✓ 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)

- ✓ 47 bicycle racks are proposed as part of the site plan application for the Event Centre (Phase 1). Lansdowne currently has approximately 285 surface level bike racks throughout the park. In addition, secure bicycle parking spaces are provided in the garage that are accessible by Lansdowne employees, including stadium and arena staff.

2.2.2. Provide secure bicycle parking spaces equivalent to the expected number of commuter cyclists (assuming the cycling mode share target is met).

- ✓ 47 bike racks are to be provided as part of the proposed site plan application for the Event Centre (Phase 1). The cycle parking is located in a well-lit area. Lansdowne also has 24/7 security and CCTV surveillance coverage which will ensure secure cycle parking is provided for Event Centre visitors.

## **2.3 Shower & change facilities**

2.3.1. Provide shower and change facilities for the use of active commuters

- ✓ No additional shower and change facilities are proposed as part of the proposed site plan application for the new Event Centre (Phase 1) but showers are currently provided for the wider site at the office building on Bank Street 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 new event centre (Phase 1) 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 for the Event Centre as it is not directly facing transit stops. Interior Waiting areas exist within the Whole Foods Market public lobby.

## 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 for Phase 1 - 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 for Phase 1 - 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 additional parking spaces are provided as part of Phase 1 of Lansdowne 2.0. The Event Centre will continue to use the 1,000 underground parking spaces provided at Lansdowne.

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 additional parking spaces are provided as part of Phase 1 of Lansdowne 2.0. The Event Centre will continue to use the 1,000 underground parking spaces provided at Lansdowne.

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

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

### 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)

- ✓ Access controls are provided at all underground parking garage entrances. Barriers and nested zones are located within the underground parking garage accessible. 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.




### Project & Document Details

Project Name	Lansdowne 2.0 – TIA Event Centre (Phase 1)
Project Number	C000218
Document Title	TDM-Supportive Development Design and Infrastructure Checklist

### Document History

Issue	Status	Reason for Issue	Issued to
1.0	Completed	Addressing city of Ottawa comments	City of Ottawa / OSEG

### Issue Control

Issue	Date	Author	Contributors	Authorisation	
				Name	Signature
1.0	22/01/2025	AD	KP	HM	

# APPENDIX H – SYNCHRO SUMMARY SHEETS

# **SYNCHRO SUMMARY SHEETS – EXISTING**

## **EXISTING – WEEKDAY AM**

Existing Weekday AM Peak Hour  
01/10/2025

12: Exhibition & Paul Askin

Intersection	
Intersection Delay, s/veh	7,6
Intersection LOS	A

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↓	↓
Traffic Vol, veh/h	5	104	65	5	5	5
Future Vol, veh/h	5	104	65	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			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)	0,133	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-ile Q	0,5	0,3	0

Existing Weekday AM Peak Hour  
01/10/2025

13: Paul Askin & Marche

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	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	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	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)	3,965	3,827	3,868
Convergence, Y/N	Yes	Yes	Yes
Cap	890	985	908
Service Time	2,045	1,656	1,072
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-ile Q	0	0	0,5

Existing Weekday AM Peak Hour  
01/10/2025

14: Exhibition & Marche

Intersection	
Intersection Delay, s/veh	7,9
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↓		↑	↑	↓	↓
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	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	6,9	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)	4,065	3,822	4,262
Convergence, Y/N	Yes	Yes	Yes
Cap	866	920	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-ile Q	0,5	0	0,6

Existing Weekday AM Peak Hour  
01/10/2025

37: O' Connor & Fifth

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	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	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	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	832
Service Time	2,356	2,562	1,885	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-ile Q	0,3	0,5	0,3	0,4



Existing Weekday AM Peak Hour  
01/10/2025

7: Bank & Sunnyside

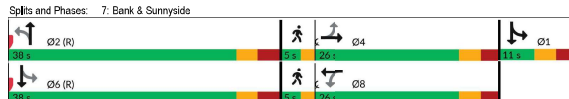
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	Ø3	Ø6	Ø7
Lane Configurations	↔		↔		↔		↔				
Traffic Volume (vph)	56	58	18	58	22	945	183	374			
Future Volume (vph)	56	58	18	58	22	945	183	374			
Lane Group Flow (vph)	0	139	0	380	0	1088	0	666			
Turn Type	Perm	NA	Perm	NA	Perm	NA	custom	NA			
Protected Phases	4	4	8	8	2	2	1	1	6	3	6
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)	26,0	26,0	26,0	26,0	38,0	38,0	11,0		5,0	49,0	5,0
Total Split (s)	26,0	26,0	26,0	26,0	38,0	38,0	11,0		5,0	38,0	5,0
Total Split (%)	32,5%	32,5%	32,5%	32,5%	47,5%	47,5%	13,8%		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)	2,8	2,8	2,8	2,8	3,0	3,0	2,9		0,0	3,0	0,0
Last Time Adjust (s)	0,0	0,0	0,0	0,0	0,0	0,0	0,0				
Total Lost Time (s)	5,8	5,8	5,8	5,8	6,0	6,0	6,0				
Lead/Lag	Lag	Lag	Lag	Lag	Lag	Lag	Lag		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		None	C-Max	None
Act Effect Green (s)	20,2	20,2	20,2	20,2	34,4	34,4	42,4				
Actuated g/C Ratio	0,25	0,25	0,25	0,25	0,43	0,43	0,53				
w/c Ratio	0,89	0,87	0,87	0,87	0,86	0,87	0,87				
Control Delay (s/veh)	43,0	43,0	32,4	32,4	30,6	30,6	14,8				
Queue Delay (s/veh)	0,0	0,0	0,0	0,0	0,0	0,0	0,0				
Total Delay (s/veh)	43,0	43,0	32,4	32,4	30,6	30,6	14,8				
LOS	D	D	C	C	C	C	B				
Approach Delay (s/veh)	43,0	43,0	32,4	32,4	30,6	30,6	14,8				
Approach LOS	D	D	C	C	C	C	B				
Queue Length 50th (m)	16,1	16,1	23,2	23,2	30,4	30,4	26,2				
Queue Length 95th (m)	35,5	35,5	#63,0	#63,0	#122,0	#122,0	#66,0				
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)	231	231	469	469	1265	1265	990				
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 w/c Ratio	0,80	0,80	0,81	0,81	0,86	0,86	0,87				

**Intersection Summary**

Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 79 (99%), Referenced to phase 2:NBL and 6:SBTL Start of Green  
 Natural Cycle: 95  
 Control Type: Actuated-Coordinated  
 Maximum w/c Ratio: 0,87  
 Intersection Signal Delay (s/veh): 27,0  
 Intersection Capacity Utilization: 92,2%  
 Analysis Period (min): 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Existing Weekday AM Peak Hour  
01/10/2025

7: Bank & Sunnyside



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
Storage Length	-	0	-	-	-	-
Vel 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	360	28

**Major/Minor**

Conflicting Flow All	Minor2	Major1	Major2
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	3,5475	3,3475	2,2475
Flt Cap-1 Maneuver	180	505	951
Stage 1	550	-	-
Stage 2	479	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	90	410	780
Mov Cap-2 Maneuver	90	-	-
Stage 1	399	-	-
Stage 2	389	-	-

**Approach**

HCM Ctrl Dly, s/v	EB	NB	SB
HCM LOS	22,04	3,44	0

**Minor Lane/Mejor Mvmt**

Capacity (veh/h)	NBL	NBT	EBL	SBT	SBR
HCM Lane V/C Ratio	0,197	-	0,493	-	-
HCM Ctrl Dly (s/v)	10,7	1,8	22	-	-
HCM Lane LOS	B	A	C	-	-
HCM 95th %ile Q(veh)	0,7	-	2,7	-	-

Existing Weekday AM Peak Hour  
01/10/2025

9: Queen Elizabeth Drive & Fifth

Lane Group	EBL	NBL	NBT	SBT	Ø4
Lane Configurations	↔		↔		
Traffic Volume (vph)	46	23	217	280	
Future Volume (vph)	46	23	217	280	
Lane Group Flow (vph)	70	0	287	383	
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
Last 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?					
Recall Mode	Min	None	None	Max	None
Act Effect Green (s)	10,0		25,2	25,2	
Actuated g/C Ratio	0,21		0,53	0,53	
w/c Ratio	0,21		0,32	0,42	
Control Delay (s/veh)	17,6		7,7	8,6	
Queue Delay (s/veh)	0,0		0,0	0,0	
Total Delay (s/veh)	17,6		7,7	8,6	
LOS	B		A	A	
Approach Delay (s/veh)	17,6		7,7	8,6	
Approach LOS	B		A	A	
Queue Length 50th (m)	4,9		11,2	16,2	
Queue Length 95th (m)	12,9		21,9	30,5	
Internal Link Dist (m)	57,2		0,1	5,9	
Turn Bay Length (m)					
Base Capacity (vph)	535		841	873	
Starvation Cap Reductn	0		0	0	
Spillback Cap Reductn	0		0	0	
Storage Cap Reductn	0		0	0	
Reduced w/c Ratio	0,13		0,32	0,42	

**Intersection Summary**

Cycle Length: 70  
 Actuated Cycle Length: 47,7  
 Natural Cycle: 70  
 Control Type: Semi Act-Uncoord  
 Maximum w/c Ratio: 0,42  
 Intersection Signal Delay (s/veh): 9,2  
 Intersection Capacity Utilization: 51,0%  
 Analysis Period (min): 15



Existing Weekday AM Peak Hour  
01/10/2025

4: Bank & Wilton

**Intersection**

Int Delay, s/veh	5,1					
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
Storage Length	-	0	-	-	-	-
Vel 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	360	28

**Approach**

HCM Ctrl Dly, s/v	EB	NB	SB
HCM LOS	22,04	3,44	0

Existing Weekday AM Peak Hour  
01/10/2025

5: Bank & Echo

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						
Conflicting Flow All	Minor2	Major1	Major2			
Stage 1	- 561	-	-	-	-	-
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	-	-	0
Stage 1	0	-	0	-	-	0
Stage 2	0	-	0	-	-	0
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	- 506	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach						
EB	NB	SB				
HCM Ctrl Dly, s/v	12,55	0	0			
HCM LOS	B					
Minor Lane/Major Mvmt						
Capacity (veh/h)	-	506	-			
HCM Lane V/C Ratio	-	0,057	-			
HCM Ctrl Dly (s/v)	-	12,5	-			
HCM Lane LOS	-	B	-			
HCM 95th %ile Q(veh)	-	0,2	-			

Existing Weekday AM Peak Hour  
01/10/2025

8: Queen Elizabeth Driveway /Queen Elizabeth Driveway & Princess Patricia Way

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						
Conflicting Flow All	Minor2	Major1	Major2			
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	676	-	-	-	-	-
Stage 2	676	-	-	-	-	-
Approach						
EB	NB	SB				
HCM Ctrl Dly, s/v	13,69	1,7	0			
HCM LOS	B					
Minor Lane/Major Mvmt						
Capacity (veh/h)	373	-	492	-	-	-
HCM Lane V/C Ratio	0,259	-	0,095	-	-	-
HCM Ctrl Dly (s/v)	8,2	0	13,1	-	-	-
HCM Lane LOS	A	A	B	-	-	-
HCM 95th %ile Q(veh)	0,2	-	0,3	-	-	-

Existing Weekday AM Peak Hour  
01/10/2025

10: Bank & Marche

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	388
Future Vol. veh/h	0	33	527	7	0	388
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	37	586	8	0	442
Major/Minor						
Conflicting Flow All	Minor1	Major1	Major2			
Stage 1	- 397	-	-	-	-	-
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	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	- 507	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach						
WB	NB	SB				
HCM Ctrl Dly, s/v	12,65	0	0			
HCM LOS	B					
Minor Lane/Major Mvmt						
Capacity (veh/h)	-	507	-			
HCM Lane V/C Ratio	-	0,072	-			
HCM Ctrl Dly (s/v)	-	12,6	-			
HCM Lane LOS	-	B	-			
HCM 95th %ile Q(veh)	-	0,2	-			

Existing Weekday AM Peak Hour  
01/10/2025

11: Garage & Exhibition

Intersection						
Int Delay, s/veh	1,3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑ ↓ ↑ ↓					
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						
Conflicting Flow All	Major1	Major2	Minor1			
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	-	-	2,216	-	3,518	3,318
Pot Cap-1 Maneuver	-	-	1280	-	560	594
Stage 1	-	-	-	-	763	-
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 Ctrl Dly, s/v	0	0,58	12,93			
HCM LOS	B					
Minor Lane/Major Mvmt						
Capacity (veh/h)	479	-	-	129	-	-
HCM Lane V/C Ratio	0,253	-	-	0,005	-	-
HCM Ctrl Dly (s/v)	12,9	-	-	8,2	-	-
HCM Lane LOS	B	-	-	A	-	-
HCM 95th %ile Q(veh)	0,2	-	-	0	-	-

Existing Weekday AM Peak Hour

17: Princess Patricia/Princess Patricia Way & Garage 01/10/2025

Intersection						
Int Delay, s/veh	0,7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	4	1	1	1	4	1
Traffic Vol, veh/h	5	37	115	15	5	4
Future Vol, veh/h	5	37	115	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
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	123	17	6	4
<b>Major/Minor</b>						
	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	-	-	798	911	
Mov Cap-2 Maneuver	-	-	-	798	-	
Stage 1	-	-	-	886	-	
Stage 2	-	-	-	970	-	
<b>Approach</b>						
	EB	WB	SB			
HCM Chd Dly, s/v	0,89	0	9,32			
HCM LOS	A		A			
<b>Minor Lane/Major Mvmt</b>						
	EBL	EBT	WBT	WBR	SBL	SBR
Capacity (veh/h)	214	-	-	-	344	-
HCM Lane V/C Ratio	0,004	-	-	-	0,012	-
HCM Chd Dly (s/v)	7,5	0	-	-	9,3	-
HCM Lane LOS	A	A	-	-	A	-
HCM 95th %ile Q(veh)	0	-	-	-	0	-

## **EXISTING – WEEKDAY PM**

12: Exhibition & Paul Askin Existing Weekday PM Peak Hour 01/10/2025

Intersection	
Intersection Delay s/veh	7,9
Intersection LOS	A

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↓		↓	↑
Traffic Vol. veh/h	5	118	136	5	5	5
Future Vol. veh/h	5	118	136	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	131	151	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	7,9	7,4			
HCM LOS	A	A	A			

Lane	EBLn1	WBLn1	SBLn1
Vol Left, %	4%	0%	50%
Vol Thru, %	96%	96%	0%
Vol Right, %	0%	4%	50%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	123	141	10
LT Vol	5	0	5
Through Vol	118	136	0
RT Vol	0	5	5
Lane Flow Rate	137	157	11
Geometry Grp	1	1	1
Degree of Util (X)	0,155	0,178	0,013
Departure Headway (Hd)	4,079	4,034	4,361
Convergence, Y/N	Yes	Yes	Yes
Cap	877	887	826
Service Time	2,115	2,088	2,361
HCM Lane V/C Ratio	0,156	0,177	0,013
HCM Control Delay, s/veh	7,9	7,9	7,4
HCM Lane LOS	A	A	A
HCM 95th-ile Q	0,5	0,6	0

13: Paul Askin & Marche Existing Weekday PM Peak Hour 01/10/2025

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%	36%	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)	3,768	3,567	4,06
Convergence, Y/N	Yes	Yes	Yes
Cap	953	1002	886
Service Time	1,777	1,593	2,085
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-ile Q	0	0	0

14: Exhibition & Marche Existing Weekday PM Peak Hour 01/10/2025

Intersection	
Intersection Delay s/veh	8
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↓		↑	↓	↓	↑
Traffic Vol. veh/h	3	5	136	5	5	118
Future Vol. veh/h	3	5	136	5	5	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	3	6	151	6	6	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	8,5	7,4			
HCM LOS	A	A	A			

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	4%	0%	96%
Vol Thru, %	0%	38%	4%
Vol Right, %	96%	63%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	123	8	141
LT Vol	5	0	136
Through Vol	0	3	5
RT Vol	118	5	0
Lane Flow Rate	137	9	157
Geometry Grp	1	1	1
Degree of Util (X)	0,143	0,01	0,19
Departure Headway (Hd)	3,754	3,619	4,373
Convergence, Y/N	Yes	Yes	Yes
Cap	961	898	816
Service Time	1,754	2,009	2,419
HCM Lane V/C Ratio	0,143	0,01	0,192
HCM Control Delay, s/veh	7,4	7	8,5
HCM Lane LOS	A	A	A
HCM 95th-ile Q	0,5	0	0,7

37: O' Connor & Fifth Existing Weekday PM Peak Hour 01/10/2025

Intersection	
Intersection Delay s/veh	7,9
Intersection LOS	A

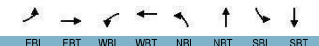
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑			↓		↓		↑		↓	↑
Traffic Vol. veh/h	72	38	0	0	0	100	39	26	29	0	0	90
Future Vol. veh/h	72	38	0	0	0	100	39	26	29	0	0	90
Peak Hour Factor	0,90	0,90	0,90	0,90	0,90	0,90	0,90	0,90	0,90	0,90	0,90	0,90
Heavy Vehicles. %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	80	42	0	0	0	111	43	29	32	0	0	100
Number of Lanes	0	1	0	0	0	1	0	1	0	0	0	1
Approach		EB	WB	NB			SB					
Opposing Approach	WB	EB					NB					SB
Opposing Lanes	1	1	0				1					1
Conflicting Approach Left	SB			NB	EB							WB
Conflicting Lanes Left	1			1	1							1
Conflicting Approach Right			NB		WB							EB
Conflicting Lanes Right	1		1		1							1
HCM Control Delay, s/veh	8,5			7,5	8,1							7,5
HCM LOS	A			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	94	110	100	90
LT Vol	39	72	0	0
Through Vol	26	38	0	0
RT Vol	29	0	100	90
Lane Flow Rate	104	122	111	100
Geometry Grp	1	1	1	1
Degree of Util (X)	0,129	0,157	0,121	0,11
Departure Headway (Hd)	4,451	4,82	3,919	3,668
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	807	777	916	894
Service Time	2,47	2,639	1,939	1,888
HCM Lane V/C Ratio	0,129	0,157	0,121	0,111
HCM Control Delay, s/veh	8,1	8,5	7,5	7,5
HCM Lane LOS	A	A	A	A
HCM 95th-ile Q	0,4	0,6	0,4	0,4



Existing Weekday PM Peak Hour  
01/10/2025

7: Bank & Sunnyside




Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	Ø3	Ø6	Ø7
Lane Configurations	↔		↕		↔		↕				
Traffic Volume (vph)	50	78	16	80	14	409	200	717			
Future Volume (vph)	50	78	16	80	14	409	200	717			
Lane Group Flow (vph)	0	175	0	374	0	492	0	1119			
Turn Type	Perm	NA	Perm	NA	Perm	NA	custom	NA			
Protected Phases	4		8		8		2	1	1	6	3
Permitted Phases	4		8		8		2	1	1	6	3
Detector Phase	4		8		8		2	1	1	6	3
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	60,0	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)	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	Lag	Lead	Lead	Lead	Lead
Lead-Lag Optimize?			Yes	Yes						Yes	Yes
Recall Mode	None	None	None	None	C-Max	C-Max	None		None	C-Max	None
Act Effect Green (s)	24,4		24,4		37,0		48,2				
Actuated g/C Ratio	0,27		0,27		0,41		0,54				
w/C Ratio	0,65		0,93		0,43		0,91				
Control Delay (s/veh)	42,2		53,1		20,2		23,4				
Queue Delay (s/veh)	0,0		0,0		0,0		0,0				
Total Delay (s/veh)	42,2		53,1		20,2		23,4				
LOS	D		D		C		C				
Approach Delay (s/veh)	42,2		53,1		20,2		23,4				
Approach LOS	D		D		C		C				
Queue Length 50th (m)	26,7		43,7		30,7		61,3				
Queue Length 95th (m)	#63,0		#63,0		43,9		#65,6				
Internal Link Dist (m)	75,1		136,0		63,1		79,0				
Turn Bay Length (m)											
Base Capacity (vph)	269		403		1146		1236				
Starvation Cap Reductn	0		0		0		0				
Spillback Cap Reductn	0		0		0		0				
Storage Cap Reductn	0		0		0		0				
Reduced w/C Ratio	0,65		0,93		0,43		0,91				

**Intersection Summary**

Cycle Length: 90  
 Actuated Cycle Length: 90  
 Offset: 9 (7%), Referenced to phase 2 NBL and 6 SBL, Start of Green  
 Natural Cycle: 110  
 Control Type: Actuated-Coordinated  
 Maximum w/C Ratio: 0,93  
 Intersection Signal Delay (s/veh): 29,3  
 Intersection Capacity Utilization 92,7%  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Existing Weekday PM Peak Hour  
01/10/2025

7: Bank & Sunnyside




**Splits and Phases:** 7: Bank & Sunnyside

Phase	Ø2 (R)	Ø4	Ø1	Ø6 (R)	Ø8
43 s	↔		↕	↔	
43 s	↕		↔	↕	

Existing Weekday PM Peak Hour  
01/10/2025

9: Queen Elizabeth Drive & 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	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
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?					
Recall Mode	Min	None	None	C-Max	None
Act Effect Green (s)	10,7		56,8	56,8	
Actuated g/C Ratio	0,13		0,71	0,71	
w/C Ratio	0,37		0,24	0,53	
Control Delay (s/veh)	36,6		5,0	7,7	
Queue Delay (s/veh)	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	65,0	
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 w/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 w/C Ratio: 0,53  
 Intersection Signal Delay (s/veh): 9,2  
 Intersection Capacity Utilization 62,8%  
 Analysis Period (min) 15

**Splits and Phases:** 9: Queen Elizabeth Drive & Fifth



Existing Weekday PM Peak Hour  
01/10/2025

4: Bank & Winton

**Intersection**

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. #/h	0	0	178	0	0	107
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Vel 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**

Conflicting Flow All	Minor2	Major1	Major2
Stage 1	810	-	-
Stage 2	760	-	-
Critical Hwy	6,63	6,23	4,13
Critical Hwy Stg 1	5,43	-	-
Critical Hwy Stg 2	5,63	-	-
Follow-up Hwy	3,519	3,319	2,219
Flt 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**

HCM Ctrl Dly, s/v	EB	NB	SB
HCM LOS	F		

**Minor Lane/Major Mvmt**

Capacity (veh/h)	NBL	NBT	EBLn1	SBT	SBR
HCM Lane V/C Ratio	0,356	-	0,817	-	-
HCM Ctrl Dly (s/v)	13,6	3,3	52,9	-	-
HCM Lane LOS	B	A	F	-	-
HCM 95th %ile Q(veh)	1,8	-	6,8	-	-

Existing Weekday PM Peak Hour  
01/10/2025

5: Bank & Echo

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
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	838	867	2
Major/Minor						
Conflicting Flow All						
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 Ctrl Dly, s/v	18,9	0	0			
HCM LOS	C					
Minor Lane/Major Mvmt						
Capacity (veh/h)						
HCM Lane V/C Ratio	-	0,09	-	-	-	-
HCM Ctrl Dly (s/v)	-	18,9	-	-	-	-
HCM Lane LOS	-	C	-	-	-	-
HCM 95th %ile Q(veh)	-	0,3	-	-	-	-

Existing Weekday PM Peak Hour  
01/10/2025

8: Queen Elizabeth Driveway /Queen Elizabeth Driveway & Princess Patricia Way

Intersection						
Int Delay, s/veh						
2,6						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↑		↑		↑	
Traffic Vol. veh/h	51	54	45	249	480	66
Future Vol. veh/h	51	54	45	249	480	66
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	57	60	50	277	533	73
Major/Minor						
Conflicting Flow All						
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	668	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	275	525	981	-	-	-
Mov Cap-2 Maneuver	275	-	-	-	-	-
Stage 1	535	-	-	-	-	-
Stage 2	668	-	-	-	-	-
Approach						
EB NB SB						
HCM Ctrl Dly, s/v	19,49	1,36	0			
HCM LOS	C					
Minor Lane/Major Mvmt						
Capacity (veh/h)						
HCM Lane V/C Ratio	-	0,275	-	0,284	-	-
HCM Ctrl Dly (s/v)	-	19,5	0	18,5	-	-
HCM Lane LOS	-	A	A	C	-	-
HCM 95th %ile Q(veh)	-	0,2	-	1,4	-	-

Existing Weekday PM Peak Hour  
01/10/2025

10: Bank & Marche

Intersection						
Int Delay, s/veh						
0,8						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↑		↑		↑↑	
Traffic Vol. veh/h	5	72	522	7	1	567
Future Vol. veh/h	5	72	522	7	1	567
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	3	2	0	0	3
Mvmt Flow	6	80	580	8	1	852
Major/Minor						
Conflicting Flow All						
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	488	-	-	-	-	-
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 Ctrl Dly, s/v	12,85	0	0,02			
HCM LOS	B					
Minor Lane/Major Mvmt						
Capacity (veh/h)						
HCM Lane V/C Ratio	-	-	0,59	0,19	-	-
HCM Ctrl Dly (s/v)	-	-	0,149	0,031	-	-
HCM Lane LOS	-	-	B	A	-	-
HCM 95th %ile Q(veh)	-	-	0,5	0	-	-

Existing Weekday PM Peak Hour  
01/10/2025

11: Garage & Exhibition

Intersection						
Int Delay, s/veh						
1,8						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑		↑		↑	
Traffic Vol. veh/h	118	122	5	136	43	5
Future Vol. veh/h	118	122	5	136	43	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	131	136	6	151	48	6
Major/Minor						
Conflicting Flow All						
Stage 1	-	-	-	-	269	-
Stage 2	-	-	-	-	262	-
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	-	-	1192	-	489	951
Stage 1	-	-	-	-	752	-
Stage 2	-	-	-	-	782	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1066	-	389	520
Mov Cap-2 Maneuver	-	-	-	-	389	-
Stage 1	-	-	-	-	673	-
Stage 2	-	-	-	-	665	-
Approach						
EB WB NB						
HCM Ctrl Dly, s/v	0	0,3	15,41			
HCM LOS			C			
Minor Lane/Major Mvmt						
Capacity (veh/h)						
HCM Lane V/C Ratio	-	0,134	-	0,005	-	-
HCM Ctrl Dly (s/v)	-	15,4	-	8,4	0	-
HCM Lane LOS	-	C	-	A	A	-
HCM 95th %ile Q(veh)	-	0,5	-	0	-	-

Existing Weekday PM Peak Hour

17: Princess Patricia/Princess Patricia Way & Garage 01/10/2025

Intersection						
Int Delay, s/veh	2,4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	4	1	1	1	1	1
Traffic Vol, veh/h	5	56	23	88	49	5
Future Vol, veh/h	5	56	23	88	49	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	62	25	98	54	6
Major/Minor						
	Major1	Major2	Minor2			
Conflicting Flow All	123	0	0	148	74	
Stage 1	-	-	-	74	-	
Stage 2	-	-	-	73	-	
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	
Platoon blocked, %	-	-	-	-	-	
Mov Cap-1 Maneuver	1464	-	-	841	987	
Stage 1	-	-	-	841	-	
Stage 2	-	-	-	987	-	
Approach						
	EB	WB	SB			
HCM Chd Dly, s/v	0,81	0	9,54			
HCM LOS	A					
Minor Lane/Major Mvmt						
	EBL	EBT	WBT	WBR	SBL	SBR
Capacity (veh/h)	148	-	-	-	-	853
HCM Lane V/C Ratio	0,004	-	-	-	-	0,07
HCM Chd Dly (s/v)	7,5	0	-	-	-	8,5
HCM Lane LOS	A	A	-	-	-	A
HCM 95th %ile Q(veh)	0	-	-	-	-	0,2

**EXISTING – SATURDAY**

Existing Saturday PM Peak Hour  
01/10/2025

12: Exhibition & Paul Askin

Intersection	
Intersection Delay, s/veh	7,7
Intersection LOS	A

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↓		↑	↓
Traffic Vol, veh/h	5	118	83	5	5	5
Future Vol, veh/h	5	118	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	129	92	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	7,5	7,3			
HCM LOS	A	A	A			

Lane	EBLn1	WBLn1	SBLn1
Vol Left, %	4%	0%	50%
Vol Thru, %	96%	94%	0%
Vol Right, %	0%	6%	50%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	121	88	10
LT Vol	5	0	5
Through Vol	116	83	0
RT Vol	0	5	5
Lane Flow Rate	134	98	11
Geometry Grp	1	1	1
Degree of III (I)	0,151	0,109	0,013
Departure Headway (Hd)	4,035	4,02	4,151
Convergence, IN	ies	ies	ies
Cap	883	890	851
Service Time	2,059	2,052	2,23
HCM Lane V/C Ratio	0,151	0,11	0,013
HCM Control Delay, s/veh	7,8	7,5	7,3
HCM Lane LOS	A	A	A
HCM 95th-ile Q	0,5	0,4	0

Existing Saturday PM Peak Hour  
01/10/2025

13: Paul Askin & Marche

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	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 III (I)	0,012	0,024	0,092
Departure Headway (Hd)	3,816	3,866	3,864
Convergence, IN	ies	ies	ies
Cap	909	927	903
Service Time	1,959	1,885	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-ile Q	0	0,1	0,3

Existing Saturday PM Peak Hour  
01/10/2025

14: Exhibition & Marche

Intersection	
Intersection Delay, s/veh	8
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↓		↑	↓	↑	↓
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 III (I)	0,157	0,026	0,119
Departure Headway (Hd)	4,21	4,2	4,378
Convergence, IN	ies	ies	ies
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-ile Q	0,6	0,1	0,4

Existing Saturday PM Peak Hour  
01/10/2025

37: O' Connor & Fifth

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	39	46	0	0	0	90	58	38	35	0	0	101
Future Vol, veh/h	39	46	0	0	0	90	58	38	35	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	43	51	0	0	0	100	62	42	39	0	0	112
Number of Lanes	0	1	0	0	0	1	0	1	0	0	0	1
Approach		EB	WB	NB			EB	WB	NB			
Opposing Approach	WB	EB					WB	EB				NB
Opposing Lanes	1	1	0				1	1	0			1
Conflicting Approach Left	SB		NB	EB			1	1				WB
Conflicting Lanes Left	1	0	1	1			1	1				1
Conflicting Approach Right	NB		WB				SB	WB				EB
Conflicting Lanes Right	1	0	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	58	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 III (I)	0,175	0,123	0,111	0,122
Departure Headway (Hd)	4,403	4,684	3,989	3,626
Convergence, IN	ies	ies	ies	ies
Cap	816	767	897	913
Service Time	2,423	2,703	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-ile Q	0,6	0,4	0,4	0,4



Existing Saturday PM Peak Hour  
01/10/2025

7: Bank & Sunnyside

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	Ø3	Ø6	Ø7
Lane Configurations	4	3	19	55	28	464	80	516			
Traffic Volume (vph)	40	36	19	55	28	464	80	516			
Future Volume (vph)	40	36	19	55	28	464	80	516			
Lane Group Flow (vph)	0	131	0	189	0	581	0	721			
Turn Type	Perm	NA	Perm	NA	Perm	NA	custom	NA			
Protected Phases	4	4	8	8	2	2	1	1	6	3	6
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)	20.0	20.0	20.0	20.0	54.0	54.0	11.0		5.0	54.0	5.0
Total Split (s)	20.0	20.0	20.0	20.0	54.0	54.0	11.0		5.0	54.0	5.0
Total Split (%)	22.2%	22.2%	22.2%	22.2%	60.0%	60.0%	12.2%		6%	60%	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
Total Lost Time (s)	5.6	5.6			6.0						
Lead/Lag	Lag	Lag	Lag	Lag	Lag	Lag	Lead	Lead			
Lead-Lag Optimize?	Yes	Yes							Yes		Yes
Recall Mode	None	None	None	None	C-Max	C-Max	None		None	C-Max	None
Act Effect Green (s)	18.0	18.0			48.2	48.2	54.6				
Actuated g/C Ratio	0.20	0.20			0.54	0.54	0.61				
v/c Ratio	0.63	0.66			0.40	0.40	0.48				
Control Delay (s/veh)	46.7	33.4			13.2	13.2	6.3				
Queue Delay (s/veh)	0.0	0.0			0.0	0.0	0.0				
Total Delay (s/veh)	46.7	33.4			13.2	13.2	6.3				
LOS	D	C			B	B	A				
Approach Delay (s/veh)	46.7	33.4			13.2	13.2	6.3				
Approach LOS	D	C			B	B	A				
Queue Length 50th (m)	20.4	18.7			28.9	28.9	15.8				
Queue Length 95th (m)	38.1	42.1			40.7	40.7	19.5				
Internal Link Dist (m)	75.1	136.0			63.1	63.1	79.0				
Turn Bay Length (m)											
Base Capacity (vph)	211	290			1451	1504					
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	0.62	0.65			0.40	0.48					



Existing Saturday PM Peak Hour  
01/10/2025

4: Bank & Wilton

Intersection	EBL	EBr	NBL	NBT	SBT	SBR
Int Delay, s/veh	5.5					
Movement	EBL	EBr	NBL	NBT	SBT	SBR
Lane Configurations	4	4	4	4	4	4
Traffic Vol, vph	3	172	113	536	490	53
Future Vol, vph	3	172	113	536	490	53
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	- 0	- 0	- 0	- 0	- 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	161	126	569	544	59

Minor Lane/Major Mvmt	NBL	NBT	EBL	SBT	SBR
Capacity (veh/h)	561	-	331	-	-
HCM Lane V/C Ratio	0.167	-	0.578	-	-
HCM Ctrl Delay (s/v)	11.6	-	29.6	-	-
HCM Lane LOS	B	-	A	-	-
HCM 95th %ile Q(veh)	0.7	-	3.4	-	-

Existing Saturday PM Peak Hour  
01/10/2025

9: Queen Elizabeth Drive & Fifth

Lane Group	EBL	NBL	NBT	SBT	Ø4
Lane Configurations	4	4	4	4	4
Traffic Volume (vph)	52	40	235	339	
Future Volume (vph)	52	40	235	339	
Lane Group Flow (vph)	90	0	305	433	
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 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	0.0
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?					
Recall Mode	Min	None	None	C-Max	None
Act Effect Green (s)	11.1		56.4	56.4	
Actuated g/C Ratio	0.14		0.71	0.71	
v/c Ratio	0.42		0.29	0.37	
Control Delay (s/veh)	37.3		5.4	6.1	
Queue Delay (s/veh)	0.0		0.0	0.0	
Total Delay (s/veh)	37.3		5.4	6.1	
LOS	D		A	A	
Approach Delay (s/veh)	37.3		5.4	6.1	
Approach LOS	D		A	A	
Queue Length 50th (m)	12.9		13.3	24.4	
Queue Length 95th (m)	25.2		27.5	40.5	
Internal Link Dist (m)	57.2		0.1	5.9	
Turn Bay Length (m)					
Base Capacity (vph)	297		1070	1168	
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	0.37	



Existing Saturday PM Peak Hour  
01/10/2025

5: Bank & Echo

Intersection	EBL	EBr	NBL	NBT	SBT	SBR
Int Delay, s/veh	0.3					
Movement	EBL	EBr	NBL	NBT	SBT	SBR
Lane Configurations	4	4	4	4	4	4
Traffic Vol, vph	1	31	0	641	654	0
Future Vol, vph	1	31	0	641	654	0
Conflicting Peds, #/hr	0	0	0	0	0	85
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	-	-
Grade, %	0	-	0	0	-	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	1	34	0	712	727	0

Minor Lane/Major Mvmt	NBL	NBT	EBL	SBT	SBR
Capacity (veh/h)	-	421	-	-	-
HCM Lane V/C Ratio	-	0.682	-	-	-
HCM Ctrl Delay (s/v)	-	14.3	-	-	-
HCM Lane LOS	-	B	-	-	-
HCM 95th %ile Q(veh)	-	0.3	-	-	-

Existing Saturday PM Peak Hour

8: Queen Elizabeth Driveway /Queen Elizabeth Driveway & Princess Patricia Way 09/10/2025

Intersection						
Int Delay, s/veh	3					
Movement	EBL	EBR	NBL	NBR	SBT	SBR
Lane Configurations	↑	↑	↑	↑	↑	↑
Traffic Vol, veh/h	87	54	54	204	245	124
Future Vol, veh/h	67	54	54	204	245	124
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	74	60	60	227	272	138
Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	688	341	410	0	-	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 Ctrl Dly, s/v	15,16	1,73	0			
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBL	EBT	SBT	SBR
Capacity (veh/h)	377	-	486	-	-	-
HCM Lane V/C Ratio	0,052	-	0,276	-	-	-
HCM Ctrl Dly (s/v)	8,3	0	15,2	-	-	-
HCM Lane LOS	A	A	C	-	-	-
HCM 95th %ile Q(veh)	0,2	-	1,1	-	-	-

Existing Saturday PM Peak Hour

10: Bank & Marche 01/10/2025

Intersection						
Int Delay, s/veh	0,8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↑	↑	↑	↑	↑	↑
Traffic Vol, veh/h	6	69	478	18	2	365
Future Vol, veh/h	6	69	478	18	2	365
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	7	77	532	20	2	628
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	961	376	0	0	652	0
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	481	-	-	-	-	-
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 Ctrl Dly, s/v	12,43	0	0,03			
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBR	WBL	WBR	SBL	SBT
Capacity (veh/h)	-	-	591	832	-	-
HCM Lane V/C Ratio	-	-	0,137	0,003	-	-
HCM Ctrl Dly (s/v)	-	-	12,4	9,3	-	-
HCM Lane LOS	-	-	B	A	-	-
HCM 95th %ile Q(veh)	-	-	0,5	0	-	-

Existing Saturday PM Peak Hour

11: Garage & Exhibition 01/10/2025

Intersection						
Int Delay, s/veh	2,9					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↑	↑	↑	↑	↑
Traffic Vol, veh/h	116	117	5	83	68	5
Future Vol, veh/h	116	117	5	83	68	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	129	130	6	92	76	6
Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	359	0	497	394
Stage 1	-	-	-	-	294	-
Stage 2	-	-	-	-	203	-
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	-	-	1200	-	632	956
Stage 1	-	-	-	-	756	-
Stage 2	-	-	-	-	831	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1073	-	423	524
Mov Cap-2 Maneuver	-	-	-	-	423	-
Stage 1	-	-	-	-	676	-
Stage 2	-	-	-	-	739	-
Approach	EB	WB	NB			
HCM Ctrl Dly, s/v	0	0,48	15,34			
HCM LOS			C			
Minor Lane/Major Mvmt	NBL	NBT	EBT	EBR	WBL	WBT
Capacity (veh/h)	429	-	-	102	-	-
HCM Lane V/C Ratio	0,169	-	-	0,005	-	-
HCM Ctrl Dly (s/v)	15,3	-	-	8,4	0	-
HCM Lane LOS	C	-	-	A	A	-
HCM 95th %ile Q(veh)	0,7	-	-	0	-	-

Existing Saturday PM Peak Hour

17: Princess Patricia/Princess Patricia Way & Garage 01/10/2025

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
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	Major1	Major2	Minor2			
Conflicting Flow All	169	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 Ctrl Dly, s/v	1,09	0	10,13			
HCM LOS			B			
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBL	SBR
Capacity (veh/h)	257	-	-	-	908	-
HCM Lane V/C Ratio	0,094	-	-	-	0,132	-
HCM Ctrl Dly (s/v)	7,6	0	-	-	10,1	-
HCM Lane LOS	A	A	-	-	B	-
HCM 95th %ile Q(veh)	0	-	-	-	0,5	-

**EXISTING – SUNDAY**

Existing Sunday PM Peak Hour  
01/10/2025

12: Exhibition & Paul Askin

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			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	145	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)	4,043	4,046	4,328
Convergence, Y/N	Yes	Yes	Yes
Cap	883	883	832
Service Time	2,078	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 95thile Q	0,7	0,5	0

Existing Sunday PM Peak Hour  
01/10/2025

13: Paul Askin & Marche

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	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%	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)	4,063	3,93	3,976
Convergence, Y/N	Yes	Yes	Yes
Cap	864	907	906
Service Time	2,168	1,989	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 95thile Q	0	0,1	0,7

Existing Sunday PM Peak Hour  
01/10/2025

14: Exhibition & Marche

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	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		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	145	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)	4,143	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 95thile Q	0,7	0,1	0,3

Existing Sunday PM Peak Hour  
01/10/2025

37: O' Connor & Fifth

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	NB	SB							
Opposing Approach	WB	EB										
Opposing Lanes	1	1										
Conflicting Approach Left	SB			NB	EB							WB
Conflicting Lanes Left	1			1	1							1
Conflicting Approach Right			NB		WB							EB
Conflicting Lanes Right			1		1							1
HCM Control Delay, s/veh	9,9					9,4	10,8					8,5
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	87	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	685	805	765
Service Time	3,028	3,272	2,496	2,717
HCM Lane V/C Ratio	0,343	0,238	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 95thile Q	1,5	0,9	1,3	0,5



Existing Sunday PM Peak Hour  
01/10/2025

7: Bank & Sunnyside

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	4	8	8	2	2	1	1	6	3	6
Permitted Phases	4	4	8	8	2	2	1	1	6	3	6
Detector Phase	4	4	8	8	2	2	1	1	6	3	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)	2.8	2.8	2.8	2.8	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)	5.8	5.8	5.8	5.8	6.0	6.0	6.0		6.8	6.8	6.8
Lead/Lag	Lag	Lag	Lag	Lag	Lag	Lag	Lag		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		None	C-Max	None
Act Effect Green (s)	14.6	14.6	14.6	14.6	44.6	44.6	58.0		13.5	49.0	49.0
Actuated g/C Ratio	0.18	0.18	0.18	0.18	0.37	0.37	0.49		0.18	0.85	0.85
w/c Ratio	0.78	0.78	0.78	0.78	0.37	0.37	0.49		0.59	0.30	0.04
Control Delay (s/veh)	67.8	67.8	67.8	67.8	16.5	16.5	4.7		36.8	7.6	5.7
Queue Delay (s/veh)	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay (s/veh)	67.8	67.8	67.8	67.8	16.5	16.5	4.7		36.8	7.6	5.7
LOS	E	E	C	C	B	B	A		D	A	A
Approach Delay (s/veh)	67.8	67.8	32.8	32.8	16.5	16.5	4.7		36.8	7.6	5.7
Approach LOS	E	E	C	C	B	B	A		D	A	A
Queue Length 50th (m)	19.1	19.1	16.5	16.5	29.7	29.7	8.6		20.3	11.9	1.7
Queue Length 95th (m)	34.5	34.5	35.5	35.5	47.5	47.5	11.3		34.8	27.6	5.7
Internal Link Dist (m)	75.1	75.1	136.0	136.0	63.1	63.1	79.0		57.2	0.1	5.9
Turn Bay Length (m)											
Base Capacity (vph)	199	199	333	333	1417	1417	1547		327	782	997
Starvation Cap Reductn	0	0	0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0		0	0	0
Reduced w/c Ratio	0.57	0.57	0.56	0.56	0.37	0.37	0.49		0.47	0.30	0.04
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: 90											
Control Type: Actuated-Coordinated											
Maximum w/c Ratio: 0.78											
Intersection Signal Delay (s/veh): 16.5											
Intersection LOS: B											
Intersection Capacity Utilization 72.1%											
ICU Level of Service C											
Analysis Period (min) 15											

Splits and Phases: 7: Bank & Sunnyside



Existing Sunday PM Peak Hour  
01/10/2025

4: Bank & Wilton

Intersection				
Int Delay, s/veh				
4.6				
Movement				
EBL	EBr	NBL	NBT	SBR
Lane Configurations				
Traffic Vol v/veh/h				
Future Vol v/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				
Conflicting Flow All				
Stage 1				
Stage 2				
Critical Hdwy				
Critical Hdwy Stg 1				
Critical Hdwy Stg 2				
Follow-up Hdwy				
Fot 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 Ctrl Dly, s/v				
HCM LOS				
Minor Lane/Major Mvmt				
Capacity (veh/h)				
HCM Lane V/C Ratio				
HCM Ctrl Dly (s/v)				
HCM Lane LOS				
HCM 95th %ile Q(veh)				

Existing Sunday PM Peak Hour  
01/10/2025

9: Queen Elizabeth Drive & Fifth

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	2	6	3
Permitted Phases	4	2	2	6	3
Detector Phase	4	2	2	6	3
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%	56.0%	56.0%	56.0%	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	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.7	6.8	6.8	6.8	6.8
Lead/Lag	Lag	Lag	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes
Recall Mode	Min	None	None	C-Max	None
Act Effect Green (s)	13.5	49.0	49.0	49.0	49.0
Actuated g/C Ratio	0.18	0.85	0.85	0.85	0.85
w/c Ratio	0.59	0.30	0.04	0.04	0.04
Control Delay (s/veh)	36.8	7.6	5.7	5.7	5.7
Queue Delay (s/veh)	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	36.8	7.6	5.7	5.7	5.7
LOS	D	A	A	A	A
Approach Delay (s/veh)	36.8	7.6	5.7	5.7	5.7
Approach LOS	D	A	A	A	A
Queue Length 50th (m)	20.3	11.9	1.7	1.7	1.7
Queue Length 95th (m)	34.8	27.6	5.7	5.7	5.7
Internal Link Dist (m)	57.2	0.1	5.9	5.9	5.9
Turn Bay Length (m)					
Base Capacity (vph)	327	782	997	997	997
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 w/c Ratio	0.47	0.30	0.04	0.04	0.04
Intersection Summary					
Cycle Length: 75					
Actuated Cycle Length: 75					
Offset: 0 (0%), Referenced to phase 6:SBT, Start of Green					
Natural Cycle: 75					
Control Type: Actuated-Coordinated					
Maximum w/c Ratio: 0.59					
Intersection Signal Delay (s/veh): 17.9					
Intersection LOS: B					
Intersection Capacity Utilization 38.3%					
ICU Level of Service A					
Analysis Period (min) 15					

Splits and Phases: 9: Queen Elizabeth Drive & Fifth



Existing Sunday PM Peak Hour  
01/10/2025

5: Bank & Echo

Intersection				
Int Delay, s/veh				
1				
Movement				
EBL	EBr	NBL	NBT	SBR
Lane Configurations				
Traffic Vol v/veh/h				
Future Vol v/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				
Conflicting Flow All				
Stage 1				
Stage 2				
Critical Hdwy				
Critical Hdwy Stg 1				
Critical Hdwy Stg 2				
Follow-up Hdwy				
Fot 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 Ctrl Dly, s/v				
HCM LOS				
Minor Lane/Major Mvmt				
Capacity (veh/h)				
HCM Lane V/C Ratio				
HCM Ctrl Dly (s/v)				
HCM Lane LOS				
HCM 95th %ile Q(veh)				

Existing Sunday PM Peak Hour  
8: Queen Elizabeth Driveway /Queen Elizabeth Driveway & Princess Patricia Way 09/10/2025

Intersection							
Int Delay, s/veh	5,8						
Movement	EBL	EBR	NBL	NDT	SDT	SBR	
Lane Configurations	↑	↑	↑	↑	↑	↑	↑
Traffic Vol, veh/h	84	132	69	125	85	57	
Future Vol, veh/h	84	132	69	125	85	57	
Conflicting Peds, #/hr	0	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	138	72	63	

Major/Minor	Minor2	Major1	Major2	
Conflicting Flow All	396	104	138	0 - 0
Stage 1	104	-	-	-
Stage 2	292	-	-	-
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	613	956	1461	- - -
Stage 1	925	-	-	- - -
Stage 2	762	-	-	- - -
Platoon blocked, %	-	-	-	- - -
Mov Cap-1 Maneuver	578	956	1461	- - -
Mov Cap-2 Maneuver	578	-	-	- - -
Stage 1	873	-	-	- - -
Stage 2	762	-	-	- - -

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	11,88	2,7	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBL	EBT	SBL	SBR
Capacity (veh/h)	640	-	762	-	-	-
HCM Lane V/C Ratio	0,052	-	0,315	-	-	-
HCM Ctrl Dly (s/v)	7,6	0	11,9	-	-	-
HCM Lane LOS	A	A	B	-	-	-
HCM 95th %ile Q(veh)	0,2	-	1,4	-	-	-

Existing Sunday PM Peak Hour  
10: Bank & Marche 01/10/2025

Intersection							
Int Delay, s/veh	1,9						
Movement	WBL	WBR	NBT	NBR	SBL	SBT	
Lane Configurations	↑	↑	↑	↑	↑	↑	↑
Traffic Vol, veh/h	7	156	452	19	0	573	
Future Vol, veh/h	7	156	452	19	0	573	
Conflicting Peds, #/hr	0	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	0	2	0	2	2	
Mvmt Flow	8	173	502	21	0	642	

Major/Minor	Minor1	Major1	Major2	
Conflicting Flow All	934	362	0	0 - 0 - -
Stage 1	613	-	-	- - -
Stage 2	321	-	-	- - -
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	268	641	-	0 - 0 - -
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 Ctrl Dly, s/v	13,98	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBL	WBR	SBL	SBR
Capacity (veh/h)	-	-	573	-	-	-
HCM Lane V/C Ratio	-	-	0,302	-	-	-
HCM Ctrl Dly (s/v)	-	-	14	-	-	-
HCM Lane LOS	-	-	B	-	-	-
HCM 95th %ile Q(veh)	-	-	1,3	-	-	-

Existing Sunday PM Peak Hour  
11: Garage & Exhibition 01/10/2025

Intersection							
Int Delay, s/veh	3,2						
Movement	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	↑	↑	↑	↑	↑	↑	↑
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	
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	157	161	6	111	92	6	

Major/Minor	Major1	Major2	Minor1	
Conflicting Flow All	0	0	419	0 559 437
Stage 1	-	-	-	337 -
Stage 2	-	-	-	222 -
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	-	-	1141	- 490 619
Stage 1	-	-	-	- 723 -
Stage 2	-	-	-	- 815 -
Platoon blocked, %	-	-	-	- - -
Mov Cap-1 Maneuver	-	-	1020	- 389 495
Mov Cap-2 Maneuver	-	-	-	- 389 -
Stage 1	-	-	-	- 646 -
Stage 2	-	-	-	- 724 -

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0,41	17,12
HCM LOS			C

Minor Lane/Major Mvmt	NBL	NBT	EBL	EBT	WBL	WBT
Capacity (veh/h)	394	-	-	96	-	-
HCM Lane V/C Ratio	0,249	-	-	0,05	-	-
HCM Ctrl Dly (s/v)	17,1	-	-	8,5	0	-
HCM Lane LOS	C	-	-	A	A	-
HCM 95th %ile Q(veh)	1	-	-	0	-	-

Existing Sunday PM Peak Hour  
17: Princess Patricia/Princess Patricia Way & Garage 01/10/2025

Intersection							
Int Delay, s/veh	5,3						
Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations	↑	↑	↑	↑	↑	↑	↑
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	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	56	58	82	164	6	

Major/Minor	Major1	Major2	Minor2	
Conflicting Flow All	140	0	-	0 166 99
Stage 1	-	-	-	- 89 -
Stage 2	-	-	-	- 67 -
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	1443	-	-	- 925 957
Stage 1	-	-	-	- 925 -
Stage 2	-	-	-	- 956 -
Platoon blocked, %	-	-	-	- - -
Mov Cap-1 Maneuver	1443	-	-	- 822 957
Mov Cap-2 Maneuver	-	-	-	- 822 -
Stage 1	-	-	-	- 921 -
Stage 2	-	-	-	- 956 -

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0,68	0	10,66
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBL	SBR
Capacity (veh/h)	164	-	-	-	822	-
HCM Lane V/C Ratio	0,094	-	-	-	0,23	-
HCM Ctrl Dly (s/v)	7,5	0	-	-	10,7	-
HCM Lane LOS	A	A	-	-	B	-
HCM 95th %ile Q(veh)	0	-	-	-	0,3	-

## **EXISTING – MINOR EVENT INGRESS**

Existing Minor Event Ingress Peak Hour  
01/10/2025

12: Exhibition & Paul Askin

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	4,356			
Convergence, Y/N	Yes	Yes	Yes			
Cap	883	865	790			
Service Time	2,095	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 95thile Q	1,2	0,5	0			

Existing Minor Event Ingress Peak Hour  
01/10/2025

13: Paul Askin & Marche

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	16	6	6	53	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	7,3		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	10	21	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)	3,076	3,854	3,99			
Convergence, Y/N	Yes	Yes	Yes			
Cap	921	931	902			
Service Time	1,908	1,869	1,997			
HCM Lane V/C Ratio	0,012	0,025	0,065			
HCM Control Delay, s/veh	7	7	7,3			
HCM Lane LOS	A	A	A			
HCM 95thile Q	0	0,1	0,2			

Existing Minor Event Ingress Peak Hour  
01/10/2025

14: Exhibition & Marche

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				
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	4,82	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 95thile Q	1,4	0,1	0,9			

Existing Minor Event Ingress Peak Hour  
01/10/2025

37: O' Connor & Fifth

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				1
Conflicting Approach Left	SB						NB		EB				WB
Conflicting Lanes Left	1	1					1		1				1
Conflicting Approach Right	NB						SB		WB				EB
Conflicting Lanes Right	1	1					1		1				1
HCM Control Delay, s/veh	8,7	7,9					8,7		8,7				7,6
HCM LOS	A	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	136	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)	4,555	4,743	4,024	4,114									
Convergence, Y/N	Yes	Yes	Yes	Yes									
Cap	787	756	891	868									
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 95thile Q	0,7	0,6	0,6	0,3									



Existing Minor Event Ingress Peak Hour  
01/10/2025

7: Bank & Sunnyside

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	Ø3	Ø7
Lane Configurations										
Traffic Volume (vph)	55	50	17	57	19	467	103	528		
Future Volume (vph)	55	50	17	57	19	467	103	528		
Lane Group Flow (vph)	0	148	0	258	0	559	0	772		
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	43.0	5.0	5.0
Total Split (%)	27.8%	27.8%	27.8%	27.8%	47.8%	47.8%	18.9%	47.8%	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	2.5	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				
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	C-Max	None	None
Act Effect Green (s)	20.1	20.1	20.1	20.1	58.3	58.3				
Actuated g/C Ratio	0.22	0.22	0.22	0.22	0.65	0.65				
v/c Ratio	0.73	0.73	0.76	0.76	0.30	0.54				
Control Delay (s/veh)	52.2	52.2	32.6	32.6	8.1	7.5				
Queue Delay (s/veh)	0.0	0.0	0.0	0.0	0.0	0.0				
Total Delay (s/veh)	52.2	52.2	32.6	32.6	8.1	7.5				
LOS	D	D	C	C	A	A				
Approach Delay (s/veh)	52.2	52.2	32.6	32.6	8.1	7.5				
Approach LOS	D	D	C	C	A	A				
Queue Length 50th (m)	22.9	22.9	23.5	23.5	20.9	37.0				
Queue Length 95th (m)	42.5	42.5	48.7	48.7	32.2	57.3				
Internal Link Dist (m)	75.1	75.1	136.0	136.0	63.1	79.0				
Turn Bay Length (m)										
Base Capacity (vph)	219	219	361	361	1839	1440				
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	0.67	0.67	0.71	0.71	0.30	0.54				

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 6 (7%), Referenced to phase 2 NBL and 6 SBL, Start of Green

Natural Cycle: 110

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.76

Intersection Signal Delay (s/veh): 15.2

Intersection Capacity Utilization 79.7%

Analysis Period (min) 15

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Existing Minor Event Ingress Peak Hour  
01/10/2025

7: Bank & Sunnyside

Existing Minor Event Ingress Peak Hour  
01/10/2025

9: Queen Elizabeth Drive & Fifth

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	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 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	C-Max	None
Act Effect Green (s)	11.4	56.1	56.1		
Actuated g/C Ratio	0.14	0.70	0.70		
v/c Ratio	0.44	0.31	0.58		
Control Delay (s/veh)	37.6	5.9	8.8		
Queue Delay (s/veh)	0.0	0.0	0.0		
Total Delay (s/veh)	37.6	5.9	8.8		
LOS	D	A	A		
Approach Delay (s/veh)	37.6	5.9	8.8		
Approach LOS	D	A	A		
Queue Length 50th (m)	13.9	13.4	40.1		
Queue Length 95th (m)	26.4	28.5	79.6		
Internal Link Dist (m)	57.2	0.1	5.9		
Turn Bay Length (m)					
Base Capacity (vph)	295	961	1160		
Starvation Cap Reductn	0	0	0		
Spillback Cap Reductn	0	0	0		
Storage Cap Reductn	0	0	0		
Reduced v/c Ratio	0.33	0.31	0.58		

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: 0.58

Intersection Signal Delay (s/veh): 10.6

Intersection Capacity Utilization 73.6%

Analysis Period (min) 15

Splits and Phases: 9: Queen Elizabeth Drive & Fifth

Existing Minor Event Ingress Peak Hour  
01/10/2025

4: Bank & Wilton

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol (veh/h)	5	269	139	638	466	53
Future Vol (veh/h)	5	269	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	-
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

Conflicting Flow All	Minor2	Major1	Major2
Stage 1	725	-	-
Stage 2	663	-	-
Critical Hdwy	6,645	6,245	4,145
Critical Hdwy Stg 1	5,445	-	-
Critical Hdwy Stg 2	5,845	-	-
Follow-up Hdwy	3,5285	3,3285	2,2285
For Cap-1 Maneuver	144	422	648
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

HCM Ctrl Dly, s/v	EB	NB	SB
HCM LOS	52.66	3.98	0
	F		

Minor Lane/Mejor Mvmt

Capacity (veh/h)	NBL	NBT	EBL1	SBT	SBR
HCM Lane V/C Ratio	0.224	-	0.844	-	-
HCM Ctrl Dly (s/v)	11.7	2.3	52.7	-	-
HCM Lane LOS	B	A	F	-	-
HCM 95th %ile Q(veh)	0.9	-	7.8	-	-

Existing Minor Event Ingress Peak Hour  
01/10/2025

5: Bank & Echo

Intersection						
Int Delay, s/veh	0,4					
Movement	EBL	EBR	NBL	NBR	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	- 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	40	0	847	816	0
Major/Minor						
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	5,845	-	-	-	-	-
Follow-up Hdwy	3,5285	3,3265	-	-	-	-
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 Chd Dly, s/v	15,77	0	0	0	0	
HCM LOS	C	-	-	-	-	
Minor Lane/Major Mvmt						
NBL	NBR	EBL	EBR	SBT	SBR	
Capacity (veh/h)	-	374	-	-	-	
HCM Lane V/C Ratio	-	0,107	-	-	-	
HCM Chd Dly (s/v)	-	15,8	-	-	-	
HCM Lane LOS	-	C	-	-	-	
HCM 95th %ile Q(veh)	-	0,4	-	-	-	

Existing Minor Event Ingress Peak Hour  
01/10/2025

8: Queen Elizabeth Driveway /Queen Elizabeth Driveway & Princess Patricia Way

Intersection						
Int Delay, s/veh	3,4					
Movement	EBL	EBR	NBL	NBR	SBT	SBR
Lane Configurations	↑		↑		↑	
Traffic Vol. veh/h	58	52	110	211	316	245
Future Vol. veh/h	58	52	110	211	316	245
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	64	58	122	234	351	272
Major/Minor						
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 Chd Dly, s/v	21,71	3,17	0	0	0	
HCM LOS	C	-	-	-	-	
Minor Lane/Major Mvmt						
NBL	NBR	EBL	EBR	SBT	SBR	
Capacity (veh/h)	517	-	336	-	-	
HCM Lane V/C Ratio	0,128	-	0,284	-	-	
HCM Chd Dly (s/v)	9,3	0	21,7	-	-	
HCM Lane LOS	A	A	C	-	-	
HCM 95th %ile Q(veh)	0,4	-	1,6	-	-	

Existing Minor Event Ingress Peak Hour  
01/10/2025

10: Bank & Marche

Intersection						
Int Delay, s/veh	0,6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↑		↑		↑↑	
Traffic Vol. veh/h	0	53	19	2	560	0
Future Vol. veh/h	0	53	19	2	560	0
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
Major/Minor						
Conflicting Flow All	-	369	0	0	678	0
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 Chd Dly, s/v	12,32	0	0,03	0	0	
HCM LOS	B	-	-	-	-	
Minor Lane/Major Mvmt						
NBT	NBR	WBL	WBR	SBL	SBT	
Capacity (veh/h)	-	-	550	814	-	
HCM Lane V/C Ratio	-	-	0,107	0,033	-	
HCM Chd Dly (s/v)	-	-	12,3	8,4	-	
HCM Lane LOS	-	-	B	A	-	
HCM 95th %ile Q(veh)	-	-	0,4	0	-	

Existing Minor Event Ingress Peak Hour  
01/10/2025

11: Garage & Exhibition

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	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
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	357
Stage 1	-	-	-	-	664	-
Stage 2	-	-	-	-	769	-
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 Chd Dly, s/v	0	0,36	19,79	0	0	
HCM LOS	-	-	C	-	-	
Minor Lane/Major Mvmt						
NBL	NBR	EBT	EBR	WBL	WBT	
Capacity (veh/h)	345	-	-	74	-	
HCM Lane V/C Ratio	0,297	-	-	0,006	-	
HCM Chd Dly (s/v)	18,8	-	-	8,8	0	
HCM Lane LOS	C	-	-	A	A	
HCM 95th %ile Q(veh)	1,2	-	-	0	-	

Existing Minor Event Ingress Peak Hour

17: Princess Patricia/Princess Patricia Way & Garage 01/10/2025

Intersection						
Int Delay, s/veh	2,2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	4	1	1	1	1	1
Traffic Vol, veh/h	5	27	155	199	83	5
Future Vol, veh/h	5	27	155	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
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
<b>Major/Minor</b>						
	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	1184	-	-	699	755	
Stage 1	-	-	-	764	-	
Stage 2	-	-	-	881	-	
Platoon blocked, %	-	-	-	-	-	
Mov Cap-1 Maneuver	1184	-	-	666	755	
Mov Cap-2 Maneuver	-	-	-	666	-	
Stage 1	-	-	-	761	-	
Stage 2	-	-	-	881	-	
<b>Approach</b>						
	EB	WB	SB			
HCM Chl Dly, s/v	1,27	0	11,29			
HCM LOS			B			
<b>Minor Lane/Major Mvmt</b>						
	EBL	EBT	WBT	WBR	SBL	SBR
Capacity (veh/h)	261	-	-	-	-	370
HCM Lane V/C Ratio	0,005	-	-	-	-	0,148
HCM Chl Dly (s/v)	8,1	0	-	-	-	11,3
HCM Lane LOS	A	A	-	-	-	B
HCM 95th %ile Q(veh)	0	-	-	-	-	0,5

## **EXISTING – MINOR EVENT EGRESS**

Existing Minor Event Egress Peak Hour  
01/10/2025

12: Exhibition & Paul Askin

Intersection						
Intersection Delay, s/veh	9,1					
Intersection LOS	A					
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		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	0,335	0,015			
Departure Headway (Hd)	4,191	4,105	4,857			
Convergence, Y/N	Yes	Yes	Yes			
Cap	847	868	741			
Service Time	2,267	2,184	2,857			
HCM Lane V/C Ratio	0,255	0,358	0,015			
HCM Control Delay, s/veh	8,7	9,4	7,9			
HCM Lane LOS	A	A	A			
HCM 95th-ile Q	1	1,6	0			

Existing Minor Event Egress Peak Hour  
01/10/2025

13: Paul Askin & Marche

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	5	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		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	0,038	0,183			
Departure Headway (Hd)	4,074	3,913	3,895			
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	0,038	0,184			
HCM Control Delay, s/veh	7,2	7,2	7,9			
HCM Lane LOS	A	A	A			
HCM 95th-ile Q	0	0,1	0,7			

Existing Minor Event Egress Peak Hour  
01/10/2025

14: Exhibition & Marche

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		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, %	68%	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	4,841			
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-ile Q	1	0,1	0,4			

Existing Minor Event Egress Peak Hour  
01/10/2025

37: O' Connor & Fifth

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	64	10	10	49	0	0	94
Future Vol, veh/h	10	43	0	0	0	64	10	10	49	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	11	48	0	0	0	71	11	11	54	0	0	104
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		WB								
Conflicting Lanes Right	1	1		1								
HCM Control Delay, s/veh	7,7	7,7		7,3								
HCM LOS	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	89	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	3,891	3,616								
Convergence, Y/N	Yes	Yes	Yes	Yes								
Cap	922	819	959	879								
Service Time	1,909	2,4	1,758	1,885								
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-ile Q	0,3	0,2	0,2	0,4								





Existing Minor Event Egress Peak Hour

8: Queen Elizabeth Driveway /Queen Elizabeth Driveway & Princess Patricia Way 01/10/2025

Intersection						
Int Delay, s/veh	10,4					
Movement	EBL	EBR	NBL	NBR	SBT	SBR
Lane Configurations	↑	↑	↑	↑	↑	↑
Traffic Vol, veh/h	251	166	17	44	121	61
Future Vol, veh/h	251	166	17	44	121	61
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	279	164	19	48	134	68
Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	255	168	202	0	-	0
Stage 1	168	-	-	-	-	-
Stage 2	87	-	-	-	-	-
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	738	861	1382	-	-	-
Stage 1	866	-	-	-	-	-
Stage 2	942	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	728	861	1382	-	-	-
Mov Cap-2 Maneuver	728	-	-	-	-	-
Stage 1	854	-	-	-	-	-
Stage 2	942	-	-	-	-	-
Approach	EB	NB	SB			
HCM Chd Dly, s/v	16,07	2,13	0			
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBR	EBL	EBR	SBT	SBR
Capacity (veh/h)	502	-	782	-	-	-
HCM Lane V/C Ratio	0,014	-	0,593	-	-	-
HCM Chd Dly (s/v)	7,6	0	18,1	-	-	-
HCM Lane LOS	A	A	C	-	-	-
HCM 95th %ile Q(veh)	0	-	4	-	-	-

Existing Minor Event Egress Peak Hour

10: Bank & Marche 01/10/2025

Intersection						
Int Delay, s/veh	2,1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↑	↑	↑	↑	↑	↑
Traffic Vol, veh/h	5	144	409	29	0	355
Future Vol, veh/h	5	144	409	29	0	355
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	6	160	454	32	0	396
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	768	343	0	0	-	-
Stage 1	571	-	-	-	-	-
Stage 2	188	-	-	-	-	-
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	342	658	-	0	-	-
Stage 1	534	-	-	0	-	-
Stage 2	822	-	-	0	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	306	589	-	-	-	-
Mov Cap-2 Maneuver	306	-	-	-	-	-
Stage 1	478	-	-	-	-	-
Stage 2	822	-	-	-	-	-
Approach	WB	NB	SB			
HCM Chd Dly, s/v	13,38	0	0			
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBR	WBL	WBR	SBL	SBT
Capacity (veh/h)	-	-	599	-	-	-
HCM Lane V/C Ratio	-	-	0,272	-	-	-
HCM Chd Dly (s/v)	-	-	13,4	-	-	-
HCM Lane LOS	-	-	B	-	-	-
HCM 95th %ile Q(veh)	-	-	1,1	-	-	-

Existing Minor Event Egress Peak Hour

11: Garage & Exhibition 01/10/2025

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	- 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	-	-	2,219	-	3,518	3,318
Pot Cap-1 Maneuver	-	-	1249	-	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 Chd Dly, s/v	0	0	24,88			
HCM LOS			C			
Minor Lane/Major Mvmt	NBL	NBR	EBT	EBR	WBL	WBT
Capacity (veh/h)	319	-	-	-	1116	-
HCM Lane V/C Ratio	0,435	-	-	-	-	-
HCM Chd Dly (s/v)	24,7	-	-	-	0	-
HCM Lane LOS	C	-	-	-	A	-
HCM 95th %ile Q(veh)	2,1	-	-	-	0	-

Existing Minor Event Egress Peak Hour

17: Princess Patricia/Princess Patricia Way & Garage 01/10/2025

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	366	6
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	87	0	-	0	164	84
Stage 1	-	-	-	-	64	-
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	-	-	-	327	373
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 Chd Dly, s/v	0,1	0	13,18			
HCM LOS			B			
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBL	SBR
Capacity (veh/h)	25	-	-	-	923	-
HCM Lane V/C Ratio	0,001	-	-	-	0,472	-
HCM Chd Dly (s/v)	7,4	0	-	-	13,2	-
HCM Lane LOS	A	A	-	-	B	-
HCM 95th %ile Q(veh)	0	-	-	-	2,6	-

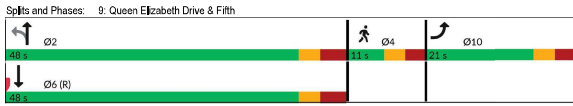
## **EXISTING – MAJOR EVENT INGRESS**





Existing Major Event Ingress Peak Hour  
01/10/2025

9: Queen Elizabeth Drive & Fifth



4: Bank & Wilton

Existing Major Event Ingress Peak Hour  
01/10/2025

Intersection						
Int Delay, s/veh	14,6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T T T T T T					
Traffic Vol, veh/h	5	266	104	702	518	103
Future Vol, veh/h	5	266	104	702	518	103
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	296	116	780	576	114
Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1432	811	868	0	-	0
Stage 1	811	-	-	-	-	-
Stage 2	621	-	-	-	-	-
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	-	-	-
Foot Cap-1 Maneuver	135	377	769	-	-	-
Stage 1	434	-	-	-	-	-
Stage 2	497	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	68	306	624	-	-	-
Mov Cap-2 Maneuver	68	-	-	-	-	-
Stage 1	269	-	-	-	-	-
Stage 2	403	-	-	-	-	-
Approach	EB	NB	SB			
HCM Ctrl Dly, s/v	81,31	3,46	0			
HCM LOS	F					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	495	-	306	-	-	-
HCM Lane V/C Ratio	0,185	-	0,997	-	-	-
HCM Ctrl Dly (s/v)	12,1	2,2	81,3	-	-	-
HCM Lane LOS	B	A	F	-	-	-
HCM 95th %ile Q(veh)	0,7	-	9,9	-	-	-

Existing Major Event Ingress Peak Hour  
01/10/2025

5: Bank & Echo

Intersection						
Int Delay, s/veh	0,8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T T T T T T					
Traffic Vol, veh/h	1	72	0	784	757	0
Future Vol, veh/h	1	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	1	80	0	871	841	0
Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1277	841	-	0	-	0
Stage 1	841	-	-	-	-	-
Stage 2	436	-	-	-	-	-
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	-	-	-	-
Foot Cap-1 Maneuver	189	362	-	-	0	0
Stage 1	420	-	-	-	-	0
Stage 2	618	-	-	-	-	0
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	189	362	-	-	-	-
Mov Cap-2 Maneuver	189	-	-	-	-	-
Stage 1	420	-	-	-	-	-
Stage 2	618	-	-	-	-	-
Approach	EB	NB	SB			
HCM Ctrl Dly, s/v	17,76	0	0			
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	-	362	-	-	-	-
HCM Lane V/C Ratio	-	0,221	-	-	-	-
HCM Ctrl Dly (s/v)	-	17,8	-	-	-	-
HCM Lane LOS	-	C	-	-	-	-
HCM 95th %ile Q(veh)	-	0,8	-	-	-	-

Existing Major Event Ingress Peak Hour  
01/10/2025

8: Queen Elizabeth Driveway /Queen Elizabeth Driveway & Princess Patricia Way

Intersection						
Int Delay, s/veh	8,7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T T T T T T					
Traffic Vol, veh/h	94	97	105	232	441	256
Future Vol, veh/h	94	97	105	232	441	256
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	104	108	117	258	490	284
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	-	-	-
Foot 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 Ctrl Dly, s/v	50,28	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 Ctrl Dly (s/v)	9,9	0	50,3	-	-	-
HCM Lane LOS	A	A	F	-	-	-
HCM 95th %ile Q(veh)	0,5	-	5,7	-	-	-

Existing Major Event Ingress Peak Hour

10: Bank & Marche

01/10/2025

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↑	↑↑	↑↑	↑↑	↑↑	↑↑
Traffic Vol, veh/h	0	0	557	0	0	508
Future Vol, veh/h	0	0	557	0	0	508
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	730	0	0	676
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	-	465	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Followup Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	550	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	491	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	WB	NB	SB			
HCM Chl Dly, s/v	0	0	0			
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT			
Capacity (veh/h)	-	-	-			
HCM Lane V/C Ratio	-	-	-			
HCM Chl Dly (s/v)	-	-	0			
HCM Lane LOS	-	-	A			
HCM 95th %ile Q(veh)	-	-	-			

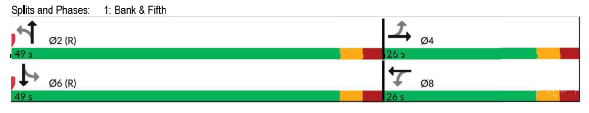
## **EXISTING – MAJOR EVENT EGRESS**

37: O' Connor & Fifth  
Existing Major Event Egress Peak Hour  
01/10/2025

Intersection												
Intersection Delay, s/veh	10											
Intersection LOS	A											
Movement												
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	4	4		4	4		4	4		4	4	4
Traffic Vol. veh/h	24	51	0	0	0	0	109	114	97	141	0	0
Future Vol. veh/h	24	51	0	0	0	0	109	114	97	141	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	27	57	0	0	0	0	121	127	108	157	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	8.9		8.3	11.1								
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	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 Uln (X)	0.468	0.119	0.15	0.07								
Departure Headway (HD)	4,307	5,145	4,444	4,248								
Convergence, Y/N	Yes	Yes	Yes	Yes								
Cap	837	694	803	839								
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 95thile Q	2.5	0.4	0.5	0.2								

1: Bank & Fifth  
Existing Major Event Egress Peak Hour  
01/10/2025

Intersection												
Intersection Delay, s/veh	12.2											
Intersection LOS	B											
Movement												
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	4	4		4	4		4	4		4	4	4
Traffic Volume (vph)	74	32	39	68	21	308	19	340				
Future Volume (vph)	74	32	39	68	21	308	19	340				
Peak Hour Factor	0	147	43	143	0	392	0	441				
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	26.5	26.5				
Total Split (s)	26.0	26.0	26.0	26.0	49.0	49.0	26.5	26.5				
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)	14.0	14.0	14.0	50.0	50.0	50.0	50.0	50.0				
Actuated g/C Ratio	0.19	0.19	0.19	0.67	0.67	0.67	0.67	0.67				
w/c Ratio	0.67	0.22	0.46	0.21	0.24	0.24	0.24	0.24				
Control Delay (s/veh)	39.2	26.3	20.1	4.9	5.8	5.8	5.8	5.8				
Queue Delay (s/veh)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Total Delay (s/veh)	39.2	26.3	20.1	4.9	5.8	5.8	5.8	5.8				
LOS	D	C	C	A	A	A	A	A				
Approach Delay (s/veh)	39.2	21.5	4.9	5.8	5.8	5.8	5.8	5.8				
Approach LOS	D	C	A	A	A	A	A	A				
Queue Length 50th (m)	17.3	5.2	10.5	7.8	10.3	10.3	10.3	10.3				
Queue Length 95th (m)	31.8	12.1	23.1	16.0	21.1	21.1	21.1	21.1				
Internal Link Dist (m)	49.7	112.4	195.6	190.0								
Turn Bay Length (m)		45.0										
Base Capacity (vph)	315	287	432	1847	1856	1856	1856	1856				
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 w/c Ratio	0.47	0.15	0.33	0.21	0.24	0.24	0.24	0.24				
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 w/c Ratio: 0.67												
Intersection Signal Delay (s/veh): 12.2	Intersection LOS: B											
Intersection Capacity Utilization 71.9%	ICU Level of Service C											
Analysis Period (min) 15												



2: Bank & Holmwood  
Existing Major Event Egress Peak Hour  
01/10/2025

Intersection												
Intersection Delay, s/veh	9.3											
Intersection LOS	A											
Movement												
	EBL	EBT	EBR	NBL	NBT	NBR	SBL	SBT	Ø3			
Lane Configurations	4	4		4	4		4	4				
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	6	3						
Permitted Phases	4	2	2	6	6	3						
Detector Phase	4	2	2	6	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	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							
Lead/Lag						Lead						
Lead-Lag Optimize?						Yes						
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	0.88	0.88	0.68	0.68							
w/c Ratio	0.61	0.25	0.25	0.23	0.23							
Control Delay (s/veh)	39.7	5.0	5.0	3.1	3.1							
Queue Delay (s/veh)	0.0	0.0	0.0	0.0	0.0							
Total Delay (s/veh)	39.7	5.0	5.0	3.1	3.1							
LOS	D	A	A	A	A							
Approach Delay (s/veh)	39.7	5.0	5.0	3.1	3.1							
Approach LOS	D	A	A	A	A							
Queue Length 50th (m)	18.9	8.4	8.4	6.4	6.4							
Queue Length 95th (m)	32.8	17.4	17.4	9.2	9.2							
Internal Link Dist (m)	39.8	31.5	155.8									
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 w/c Ratio	0.47	0.25	0.23	0.23	0.23							
Intersection Summary												
Cycle Length: 75												
Actuated Cycle Length: 75												
Offset: 60 (80%) Referenced to phase 2:NBL and 6:SBTL, Start of Green												
Natural Cycle: 75												
Control Type: Actuated-Coordinated												
Maximum w/c Ratio: 0.61												
Intersection Signal Delay (s/veh): 9.3												

Existing Major Event Egress Peak Hour  
01/10/2025

6: Bank & Aylmer

Lane Group	EBL	NBL	NBT	SBT	Ø3
Lane Configurations	↖	↖	↖	↖	
Traffic Volume (vph)	18	18	323	288	
Future Volume (vph)	18	18	323	288	
Lane Group Flow (vph)	37	0	377	344	
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	0.0
Total Lost Time (s)	5.5	5.2	5.2		
Lead/Lag	Lag	Lag	Lead	Lead	
Lead-Lag Optimize?			Yes	Yes	
Recall Mode	Ped	C-Max	C-Max	C-Max	Max
Act Effect Green (s)	14.0		60.3	60.3	
Actuated g/C Ratio	0.19		0.87	0.87	
w/c Ratio	0.17		0.19	0.17	
Control Delay (s/veh)	23.5		4.9	5.5	
Queue Delay (s/veh)	0.0		0.0	0.0	
Total Delay (s/veh)	23.5		4.9	5.5	
LOS	C		A	A	
Approach Delay (s/veh)	23.5		4.9	5.5	
Approach LOS	C		A	A	
Queue Length 50th (m)	3.0		8.4	8.6	
Queue Length 95th (m)	11.4		13.4	14.4	
Internal Link Dist (m)	78.7		28.1	18.1	
Turn Bay Length (m)					
Base Capacity (vph)	261		1971	2055	
Starvation Cap Reductn	0		0	0	
Spillback Cap Reductn	0		0	0	
Storage Cap Reductn	0		0	0	
Reduced w/c Ratio	0.14		0.19	0.17	
<b>Intersection Summary</b>					
Cycle Length:	90				
Actuated Cycle Length:	90				
Offset:	60 (67%), Referenced to phase 2:NBL and 6:SBT, Start of Green				
Natural Cycle:	90				
Control Type:	Actuated-Coordinated				
Maximum w/c Ratio:	0.19				
Intersection Signal Delay (s/veh):	6.0		Intersection LOS: A		
Intersection Capacity Utilization:	45.8%		ICU Level of Service A		
Analysis Period (min):	15				

Splits and Phases: 6: Bank & Aylmer



Existing Major Event Egress Peak Hour  
01/10/2025

7: Bank & Sunnyside

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	Ø3	Ø7	
Lane Configurations	↖	↖	↖	↖	↖	↖	↖	↖			
Traffic Volume (vph)	30	27	16	34	19	263	14	295			
Future Volume (vph)	30	27	16	34	19	263	14	295			
Lane Group Flow (vph)	0	87	0	96	0	321	0	376			
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	43.0	5.0	5.0	
Total Split (%)	27.8%	27.8%	27.8%	27.8%	47.8%	47.8%	18.9%	47.8%	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)	2.8	2.8	2.8	2.8	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			
Lead/Lag	Lag	Lag	Lag	Lag	Lead	Lead		Lead			
Lead-Lag Optimize?			Yes	Yes				Yes			
Recall Mode	None	None	None	None	C-Max	C-Max	None	C-Max	None	None	
Act Effect Green (s)	12.1		11.9		69.9		69.9				
Actuated g/C Ratio	0.13		0.13		0.78		0.78				
w/c Ratio	0.57		0.50		0.15		0.17				
Control Delay (s/veh)	50.3		31.5		4.0		1.2				
Queue Delay (s/veh)	0.0		0.0		0.0		0.0				
Total Delay (s/veh)	50.3		31.5		4.0		1.2				
LOS	D		C		A		A				
Approach Delay (s/veh)	50.3		31.5		4.0		1.2				
Approach LOS	D		C		A		A				
Queue Length 50th (m)	14.2		8.6		7.0		1.7				
Queue Length 95th (m)	27.2		22.7		14.0		3.4				
Internal Link Dist (m)	75.1		136.0		63.1		79.0				
Turn Bay Length (m)											
Base Capacity (vph)	244		293		2200		2158				
Starvation Cap Reductn	0		0		0		0				
Spillback Cap Reductn	0		0		0		0				
Storage Cap Reductn	0		0		0		0				
Reduced w/c Ratio	0.36		0.33		0.15		0.17				
<b>Intersection Summary</b>											
Cycle Length:	90										
Actuated Cycle Length:	90										
Offset:	6 (7%), Referenced to phase 2:NBL and 6:SBT, Start of Green										
Natural Cycle:	110										
Control Type:	Actuated-Coordinated										
Maximum w/c Ratio:	0.57										
Intersection Signal Delay (s/veh):	10.4				Intersection LOS: B						
Intersection Capacity Utilization:	44.7%				ICU Level of Service A						
Analysis Period (min):	15										

Splits and Phases: 7: Bank & Sunnyside



Existing Major Event Egress Peak Hour  
01/10/2025

9: Queen Elizabeth Drive & Fifth

Lane Group	EBL	NBL	NBT	SBT	Ø4
Lane Configurations	↖	↖	↖	↖	
Traffic Volume (vph)	132	42	298	283	
Future Volume (vph)	132	42	298	283	
Lane Group Flow (vph)	214	0	378	388	
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 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?					
Recall Mode	Min	None	None	C-Max	None
Act Effect Green (s)	16.3		51.2	51.2	
Actuated g/C Ratio	0.20		0.84	0.84	
w/c Ratio	0.67		0.38	0.37	
Control Delay (s/veh)	39.6		9.1	8.9	
Queue Delay (s/veh)	0.0		0.0	0.0	
Total Delay (s/veh)	39.6		9.1	8.9	
LOS	D		A	A	
Approach Delay (s/veh)	39.6		9.1	8.9	
Approach LOS	D		A	A	
Queue Length 50th (m)	30.1		24.3	24.7	
Queue Length 95th (m)	47.8		48.6	48.6	
Internal Link Dist (m)	57.2		0.1	5.9	
Turn Bay Length (m)					
Base Capacity (vph)	342		989	1051	
Starvation Cap Reductn	0		0	0	
Spillback Cap Reductn	0		0	0	
Storage Cap Reductn	0		0	0	
Reduced w/c Ratio	0.63		0.38	0.37	
<b>Intersection Summary</b>					
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 w/c Ratio:	0.67				
Intersection Signal Delay (s/veh):	15.7		Intersection LOS: B		
Intersection Capacity Utilization:	66.7%		ICU Level of Service C		
Analysis Period (min):	15				

Splits and Phases: 9: Queen Elizabeth Drive & Fifth



Existing Major Event Egress Peak Hour  
01/10/2025

4: Bank & Wilton

Int Delay	s/veh		
Int Delay	0.1		
<b>Movement</b>			
Lane Configurations	↖ ↖ ↖ ↖		
Traffic Vol veh/h	0 5 0 350 260 66		
Future Vol veh/h	0 5 0 350 260 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 - -		
Grades, %	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		
<b>Minor Lane/Minor</b>			
Conflicting Flow All	- 528 562 0 - 0		
Stage 1	- - - - - -		
Stage 2	- - - - - -		
Critical Hdwy	- 6,245 4,145 - - -		
Critical Hdwy Stg 1	- - - - - -		
Critical Hdwy Stg 2	- - - - - -		
Follow-up Hdwy	- 3,326 2,226 - - -		
Flt 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	- - - - - -		
<b>Approach</b>			
EB	NB	SB	
HCM Ctrl Dly, s/v	13,19	0	0
HCM LOS	B		
<b>Minor Lane/Minor Mvmt</b>			
Capacity (veh/h)	812	- 445	- -
HCM Lane V/C Ratio	0	- 0,012	- -
HCM Ctrl Dly (s/v)	0	- 13.2	- -
HCM Lane LOS	A	- B	- -
HCM 95th %ile Q(veh)	0	- 0	- -

Existing Major Event Egress Peak Hour  
01/10/2025

5: Bank & Echo

Intersection						
Int Delay, s/veh	0,5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↑	↑↑	↑↑	↑	
Traffic Vol, veh/h	0	32	0	350	290	0
Future Vol, veh/h	0	32	0	350	290	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	36	0	388	322	0
Major/Minor						
Conflicting Flow All	Minor2	Major1	Major2			
Stage 1	-	322	-	0	-	0
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6,245	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Followup Hdwy	-	3,3265	-	-	-	-
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 Cntl Dly, s/v	10,3	0	0			
HCM LOS	B					
Minor Lane/Major Mvmt						
Capacity (veh/h)	-	715	-	-	-	-
HCM Lane V/C Ratio	-	0,05	-	-	-	-
HCM Cntl Dly (s/v)	-	10,3	-	-	-	-
HCM Lane LOS	-	B	-	-	-	-
HCM 95th %ile Q(veh)	-	0,2	-	-	-	-

Existing Major Event Egress Peak Hour  
01/10/2025

8: Queen Elizabeth Driveway /Queen Elizabeth Driveway & Princess Patricia Way

Intersection						
Int Delay, s/veh	19					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↑	↑	↑	↑	↑	↑
Traffic Vol, veh/h	238	210	50	108	215	127
Future Vol, veh/h	238	210	50	108	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	-
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						
Conflicting Flow All	Minor2	Major1	Major2			
Stage 1	308	-	-	-	-	-
Stage 2	232	-	-	-	-	-
Critical Hdwy	6,4	6,2	4,1	-	-	-
Critical Hdwy Stg 1	5,4	-	-	-	-	-
Critical Hdwy Stg 2	5,4	-	-	-	-	-
Followup 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 Cntl Dly, s/v	38,4	2,57	0			
HCM LOS	E					
Minor Lane/Major Mvmt						
Capacity (veh/h)	508	-	573	-	-	-
HCM Lane V/C Ratio	0,247	-	0,868	-	-	-
HCM Cntl Dly (s/v)	8,2	0	38,4	-	-	-
HCM Lane LOS	A	A	E	-	-	-
HCM 95th %ile Q(veh)	0,1	-	9,7	-	-	-

Existing Major Event Egress Peak Hour  
01/10/2025

10: Bank & Marche

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	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						
Conflicting Flow All	Minor1	Major1	Major2			
Stage 1	-	264	0	0	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6,9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Followup 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 Cntl Dly, s/v	0	0	0			
HCM LOS	A					
Minor Lane/Major Mvmt						
Capacity (veh/h)	-	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-
HCM Cntl Dly (s/v)	-	-	0	-	-	-
HCM Lane LOS	-	-	A	-	-	-
HCM 95th %ile Q(veh)	-	-	-	-	-	-

# **SYNCHRO SUMMARY SHEETS – 2028**

**2028 – WEEKDAY AM**

12: Exhibition & Paul Askin

Intersection	
Intersection Delay, s/veh	7,9
Intersection LOS	A

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	↕
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	SB		
Opposing Approach	WB	EB				
Opposing Lanes	1	1		0		
Conflicting Approach Left	SB			WB		
Conflicting Lanes Left	1			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	SBLn1
Vol Left, %	3%	0%	50%
Vol Thru, %	97%	94%	0%
Vol Right, %	0%	6%	50%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	153	83	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	2,081	2,318
HCM Lane V/C Ratio	0,198	0,111	0,013
HCM Control Delay, s/veh	8,1		7,6
HCM Lane LOS	A		A
HCM 95th-ile Q	0,7		0,4

13: Paul Askin & Marche

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	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	128
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)	3,952	3,93	3,967
Convergence, Y/N	Yes	Yes	Yes
Cap	888	984	909
Service Time	2,055	1,86	1,972
HCM Lane V/C Ratio	0,012	0,008	0,156
HCM Control Delay, s/veh	7,1		6,7
HCM Lane LOS	A		A
HCM 95th-ile Q	0		0,6

14: Exhibition & Marche

Intersection	
Intersection Delay, s/veh	8,3
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↕			↕	↕	↕
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	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
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	87
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)	3,965	4,08	4,368
Convergence, Y/N	Yes	Yes	Yes
Cap	885	882	807
Service Time	2,073	2,08	2,473
HCM Lane V/C Ratio	0,213	0,009	0,171
HCM Control Delay, s/veh	8,2		7,1
HCM Lane LOS	A		A
HCM 95th-ile Q	0,3		0,6

37: O' Connor Street & Fifth Avenue

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	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	WB	NB			EB	WB	NB			SB
Opposing Approach	WB	EB					WB	EB				NB
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		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

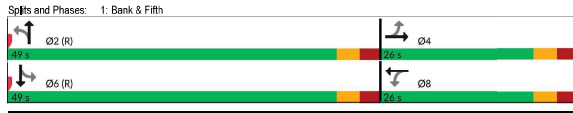
Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	25%	62%	0%	0%
Vol Thru, %	43%	38%	0%	0%
Vol Right, %	32%	0%	100%	100%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	75	108	72	108
LT Vol	19	87	0	0
Through Vol	32	41	0	0
RT Vol	24	0	72	108
Lane Flow Rate	83	120	80	120
Geometry Grp	1	1	1	1
Degree of Util (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	787	920	828
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

2028 Weekday Interim AM Peak Hour  
01/10/2025

1: Bank & Fifth

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	←		←		↑		↑	
Traffic Volume (vph)	38	59	50	50	9	551	20	420
Future Volume (vph)	38	59	50	50	9	551	20	420
Lane Group Flow (vph)	0	140	56	89	0	661	0	528
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	
Lead-Lag Optimize?							Yes	
Recall Mode	None		C-Max		C-Max		None	
Act Effect Green (s)	10.5	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	0.37	0.20	0.21		0.40		0.33	
Control Delay (s/veh)	22.2	23.1	15.9		6.4		8.6	
Queue Delay (s/veh)	0.0	0.0	0.0		0.0		0.0	
Total Delay (s/veh)	22.2	23.1	15.9		6.4		8.6	
LOS	C	C	B		A		A	
Approach Delay (s/veh)	22.2		18.7		6.4		8.6	
Approach LOS	C		B		A		A	
Queue Length 50th (m)	13.5	6.1	6.0		12.3		17.7	
Queue Length 95th (m)	28.4	14.8	16.4		16.0		26.4	
Internal Link Dist (m)	49.7		112.4		195.6		190.0	
Turn Bay Length (m)			45.0					
Base Capacity (vph)	376	287	419		1647		1589	
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	0.20	0.21		0.40		0.33	

Intersection Summary		
Cycle Length: 75		
Actuated Cycle Length: 75		
Offset: 33 (44%), Referenced to phase 2/NBTL and 6/SBTL, Start of Green		
Natural Cycle: 75		
Control Type: Pre-timed		
Maximum v/c Ratio: 0.40		
Intersection Signal Delay (s/veh): 6.9	Intersection LOS: A	
Intersection Capacity Utilization 54.7%	ICU Level of Service A	
Analysis Period (min): 15		

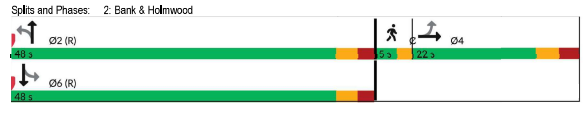


2028 Weekday Interim AM Peak Hour  
01/10/2025

2: Bank & Holmwood

Lane Group	EBT	NBL	NBT	SBL	SBT	Ø3
Lane Configurations	←		←		↑	
Traffic Volume (vph)	22	16	542	11	376	
Future Volume (vph)	22	16	542	11	376	
Lane Group Flow (vph)	88	0	651	0	456	
Turn Type	NA	Perm	NA	Perm	NA	
Protected Phases	4		2		6	
Permitted Phases	4		2		6	
Minimum Split (s)	4.4	10.0	10.0	4.0	4.0	1.0
Minimum Split (%)	22.0	49.0	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)	2.0	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)	5.8	5.2	5.2	5.2	5.2	0.0
Lead/Lag					Lead	
Lead-Lag Optimize?					Yes	
Recall Mode	None		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	0.21	0.21	0.21	
Control Delay (s/veh)	37.8	4.3	3.1	3.1	3.1	
Queue Delay (s/veh)	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	37.8	4.3	3.1	3.1	3.1	
LOS	D	A	A	A	A	
Approach Delay (s/veh)	37.8		4.3		3.1	
Approach LOS	D		A		A	
Queue Length 50th (m)	11.7	13.7	7.2	7.2	7.2	
Queue Length 95th (m)	23.3	25.6	13.6	13.6	13.6	
Internal Link Dist (m)	38.8	31.5	195.6			
Turn Bay Length (m)						
Base Capacity (vph)	298	2138	2147			
Starvation Cap Reductn	0	0	0			
Spillback Cap Reductn	0	0	0			
Storage Cap Reductn	0	0	0			
Reduced v/c Ratio	0.30	0.30	0.21			

Intersection Summary		
Cycle Length: 75		
Actuated Cycle Length: 75		
Offset: 28 (37%), Referenced to phase 2/NBTL and 6/SBTL, Start of Green		
Natural Cycle: 75		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.48		
Intersection Signal Delay (s/veh): 6.3	Intersection LOS: A	
Intersection Capacity Utilization 52.2%	ICU Level of Service A	
Analysis Period (min): 15		

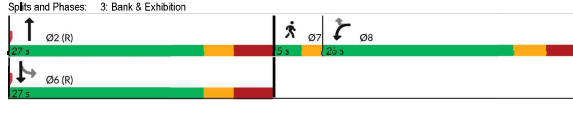


2028 Weekday Interim AM Peak Hour  
01/10/2025

3: Bank & Exhibition

Lane Group	WBL	WBR	NBT	SBL	SBT	Ø7	Ø8	
Lane Configurations	←		←		↑		↑	
Traffic Volume (vph)	49	30	514	56	349			
Future Volume (vph)	49	30	514	56	349			
Lane Group Flow (vph)	54	33	674	62	388			
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	8		2		6		7	
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	3.0		
Minimum Split (s)	26.0	26.0	27.0	27.0	27.0	5.0		
Total Split (s)	26.0	26.0	27.0	27.0	27.0	5.0		
Total Split (%)	44.8%	44.8%	46.6%	46.6%	46.6%	9%		
Yellow Time (s)	3.3	3.3	3.0	3.0	3.0	2.0		
All-Red Time (s)	3.0	3.0	3.9	3.9	3.9	0.0		
Lost 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	0.0		
Lead/Lag	Lag		Lag		Lead		Lead	
Lead-Lag Optimize?					Yes		Yes	
Recall Mode	None		C-Max		C-Max		None	
Act Effect Green (s)	10.0	10.0	44.1	44.1	44.1			
Actuated g/C Ratio	0.17	0.17	0.76	0.76	0.76			
v/c Ratio	0.20	0.14	0.31	0.14	0.16			
Control Delay (s/veh)	22.9	10.3	4.7	5.9	4.2			
Queue Delay (s/veh)	0.0	0.0	0.0	0.0	0.0			
Total Delay (s/veh)	22.9	10.3	4.7	5.9	4.2			
LOS	C	B	A	A	A			
Approach Delay (s/veh)	18.1		4.7		4.5			
Approach LOS	B		A		A			
Queue Length 50th (m)	5.0	0.0	15.5	2.5	8.4			
Queue Length 95th (m)	13.0	5.9	24.0	7.2	13.6			
Internal Link Dist (m)	39.6		33.7		44.8			
Turn Bay Length (m)				40.0				
Base Capacity (vph)	523	419	2194	445	2388			
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	0.10	0.09	0.31	0.14	0.16			

Intersection Summary		
Cycle Length: 58		
Actuated Cycle Length: 58		
Offset: 25 (43%), Referenced to phase 2/NBT and 6/SBTL, Start of Green		
Natural Cycle: 60		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.31		
Intersection Signal Delay (s/veh): 5.6	Intersection LOS: A	
Intersection Capacity Utilization 60.1%	ICU Level of Service B	
Analysis Period (min): 15		



2028 Weekday Interim AM Peak Hour  
01/10/2025

6: Bank & Aylmer

Lane Group	EBL	NBL	NBT	SBT	Ø3	
Lane Configurations	←		←		↑	
Traffic Volume (vph)	64	15	711	529		
Future Volume (vph)	64	15	711	529		
Lane Group Flow (vph)	81	0	807	648		
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	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	0.0	
Lost 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	0.0	
Lead/Lag	Lag		Lead		Lead	
Lead-Lag Optimize?					Yes	
Recall Mode	None		C-Max		None	
Act Effect Green (s)	10.8	62.7	62.7	62.7		
Actuated g/C Ratio	0.14	0.78	0.78	0.78		
v/c Ratio	0.38	0.35	0.28	0.28		
Control Delay (s/veh)	34.1	5.3	3.6	3.6		
Queue Delay (s/veh)	0.0	0.0	0.0	0.0		
Total Delay (s/veh)	34.1	5.3	3.6	3.6		
LOS	C	A	A	A		
Approach Delay (s/veh)	34.1		5.3	3.6		
Approach LOS	C		A	A		
Queue Length 50th (m)	10.4	27.4	12.8	12.8		
Queue Length 95th (m)	22.1	42.3	22.1	22.1		
Internal Link Dist (m)	76.7	28.1	10.1			
Turn Bay Length (m)						
Base Capacity (vph)	280	2300	2330			
Starvation Cap Reductn	0	0	0			
Spillback Cap Reductn	0	0	0			
Storage Cap Reductn	0	0	0			
Reduced v/c Ratio	0.29	0.35	0.28			

Intersection Summary		
Cycle Length: 80		
Actuated Cycle Length: 80		
Offset: 4 (5%), Referenced to phase 2/NBTL and 6/SBT, Start of Green		
Natural Cycle: 80		
Control Type: Actuated-Coordinated		
Maximum v		

2028 Weekday Interim AM Peak Hour  
01/10/2025

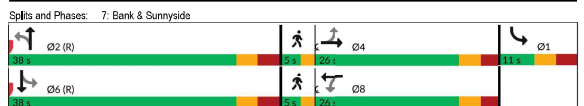
7: Bank & Sunnyside

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	Ø3	Ø7
Lane Configurations	↔		↔		↔		↔			
Traffic Volume (vph)	58	60	19	60	23	975	189	393		
Future Volume (vph)	58	60	19	60	23	975	189	393		
Lane Group Flow (vph)	0 144		0 392		0 1123		0 695			
Turn Type	Perm	NA	Perm	NA	Perm	NA	pm+pt	NA		
Protected Phases	4		4		8		2 1 6 3 7			
Permitted Phases	4		8		2		6			
Detector Phase	4		4		8		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	48,0	5,0	5,0
Total Split (s)	26,0	26,0	26,0	26,0	38,0	38,0	11,0	38,0	5,0	5,0
Total Split (%)	32,5%	32,5%	32,5%	32,5%	47,5%	47,5%	13,8%	47,5%	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-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)	21,3		21,3		47,1		47,1			
Actuated g/C Ratio	0,27		0,27		0,59		0,59			
v/c Ratio	0,65		0,67		0,65		1,104			
Control Delay (s/veh)	38,1		33,5		14,4		26,6			
Queue Delay (s/veh)	0,0		0,0		0,0		0,0			
Total Delay (s/veh)	38,1		33,5		14,4		26,6			
LOS	D		C		B		C			
Approach Delay (s/veh)	38,1		33,5		14,4		26,6			
Approach LOS	D		C		B		C			
Queue Length 50th (m)	17,9		25,0		62,5		51,9			
Queue Length 95th (m)	36,3		473,1		85,4		478,7			
Internal Link Dist (m)	75,1		136,0		63,1		79,0			
Turn Bay Length (m)										
Base Capacity (vph)	243		473		1727		922			
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		0,63		0,65		0,75			

**Intersection Summary**  
 Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 60 (75%), Referenced to phase 2/NBTL and 6/SBTL, Start of Green  
 Natural Cycle: 95  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0,87  
 Intersection Signal Delay (s/veh): 23,6  
 Intersection Capacity Utilization 94,7%  
 ICU Level of Service F  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.  
 d Defacto Left Lane, Recode with 1 through lane as a left lane.

2028 Weekday Interim AM Peak Hour  
01/10/2025

7: Bank & Sunnyside



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 Channelled	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Velh in Median Storage, l	-	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**  
 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: 5,875 - - - - -  
 Follow-up Hdwy: 3,5475 3,3475 2,2475 - - -  
 Prot 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**  
 HCM Ctrl Dly, s/v: 23,63 3,58 0  
 HCM LOS: C

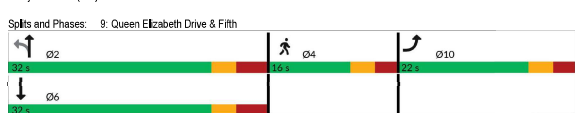
**Minor Lane/Major Mvmt**  
 Capacity (veh/h): 517 - 399 - - -  
 HCM Lane V/C Ratio: 0,209 - 0,524 - - -  
 HCM Ctrl Dly (s/v): 10,9 1,9 23,5 - - -  
 HCM Lane LOS: B A C - - -  
 HCM 95th %ile Q(veh): 0,8 - 2,9 - - -

2028 Weekday Interim AM Peak Hour  
01/10/2025

9: Queen Elizabeth Drive & Fifth

Lane Group	EBL	NBL	NBT	SBT	Ø4
Lane Configurations	↔		↔		↔
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		6		
Detector Phase	10		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		
Total Lost Time (s)	5,7		6,8		
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	Min	None	None	Max	None
Act Effct Green (s)	10,0		25,2	25,2	
Actuated g/C Ratio	0,21		0,53	0,53	
v/c Ratio	0,25		0,34	0,43	
Control Delay (s/veh)	18,1		7,9	8,9	
Queue Delay (s/veh)	0,0		0,0	0,0	
Total Delay (s/veh)	18,1		7,9	8,9	
LOS	B		A	A	
Approach Delay (s/veh)	18,1		7,9	8,9	
Approach LOS	B		A	A	
Queue Length 50th (m)	5,8		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)	530		832	872	
Starvation Cap Reductn	0		0	0	
Spillback Cap Reductn	0		0	0	
Storage Cap Reductn	0		0	0	
Reduced v/c Ratio	0,15		0,34	0,43	

**Intersection Summary**  
 Cycle Length: 70  
 Actuated Cycle Length: 47,7  
 Natural Cycle: 70  
 Control Type: Semi Act/Uncoord  
 Maximum v/c Ratio: 0,43  
 Intersection Signal Delay (s/veh): 9,5  
 Intersection Capacity Utilization 55,1%  
 ICU Level of Service B  
 Analysis Period (min) 15



2028 Weekday Interim AM Peak Hour  
01/10/2025

4: Bank & Wilton

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 Channelled	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Velh in Median Storage, l	-	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**  
 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: 5,875 - - - - -  
 Follow-up Hdwy: 3,5475 3,3475 2,2475 - - -  
 Prot 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**  
 HCM Ctrl Dly, s/v: 23,63 3,58 0  
 HCM LOS: C

**Minor Lane/Major Mvmt**  
 Capacity (veh/h): 517 - 399 - - -  
 HCM Lane V/C Ratio: 0,209 - 0,524 - - -  
 HCM Ctrl Dly (s/v): 10,9 1,9 23,5 - - -  
 HCM Lane LOS: B A C - - -  
 HCM 95th %ile Q(veh): 0,8 - 2,9 - - -

5: Bank & Echo

Intersection						
Int Delay, s/veh	0,3					
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	0	86
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, l	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						
Conflicting Flow All	Minor2	Major1	Major2			
Stage 1	-	607	-	0	-	0
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 Chd Dly, s/v	12,85	0	0			
HCM LOS	B					
Minor Lane/Major Mvmt						
Capacity (veh/h)	NBL	EBL1	SBT			
HCM Lane V/C Ratio	-	0,081	-			
HCM Chd Dly (s/v)	-	12,8	-			
HCM Lane LOS	-	B	-			
HCM 95th %ile Q(veh)	-	0,2	-			

8: Queen Elizabeth Driveway /Queen Elizabeth Driveway & Princess Patricia Way

Intersection						
Int Delay, s/veh	1,8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↑		↑		↑	
Traffic Vol. veh/h	25	25	70	248	277	85
Future Vol. veh/h	25	25	70	248	277	85
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, l	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	28	28	78	276	308	94
Major/Minor						
Conflicting Flow All	Minor2	Major1	Major2			
Stage 1	786	355	402	0	-	0
Stage 2	431	-	-	-	-	-
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	364	893	1167	-	-	-
Stage 1	714	-	-	-	-	-
Stage 2	660	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	335	893	1167	-	-	-
Mov Cap-2 Maneuver	335	-	-	-	-	-
Stage 1	658	-	-	-	-	-
Stage 2	660	-	-	-	-	-
Approach						
EB	NB	SB				
HCM Chd Dly, s/v	14,08	1,83	0			
HCM LOS	B					
Minor Lane/Major Mvmt						
Capacity (veh/h)	NBL	NBT	EBL1	SBT	SBR	
HCM Lane V/C Ratio	0,287	-	0,123	-	-	-
HCM Chd Dly (s/v)	8,3	0	14,1	-	-	-
HCM Lane LOS	A	A	B	-	-	-
HCM 95th %ile Q(veh)	0,2	-	0,4	-	-	-

10: Bank & Marche

Intersection						
Int Delay, s/veh	0,4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↑		↑		↑	
Traffic Vol. veh/h	0	34	548	7	0	409
Future Vol. veh/h	0	34	548	7	0	409
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, l	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	609	8	0	454
Major/Minor						
Conflicting Flow All	Minor1	Major1	Major2			
Stage 1	-	408	0	0	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7,2	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3,45	-	-	-	-
Pot Cap-1 Maneuver	0	557	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	498	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach						
WB	NB	SB				
HCM Chd Dly, s/v	12,82	0	0			
HCM LOS	B					
Minor Lane/Major Mvmt						
Capacity (veh/h)	NBT	NBR	WBL1	SBT		
HCM Lane V/C Ratio	-	-	0,076	-		
HCM Chd Dly (s/v)	-	-	12,8	-		
HCM Lane LOS	-	-	B	-		
HCM 95th %ile Q(veh)	-	-	0,2	-		

11: Garage & Exhibition

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
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	170	0	0	92	0	0
Major/Minor						
Conflicting Flow All	Minor1	Major2	Minor1			
Stage 1	0	0	270	0	462	370
Stage 2	-	-	-	-	270	-
Critical Hdwy	-	-	4,12	-	8,42	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	378
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 Chd Dly, s/v	0	0	0			
HCM LOS				A		
Minor Lane/Major Mvmt						
Capacity (veh/h)	NBL1	EBT	EBR	WBL	WBT	
HCM Lane V/C Ratio	-	-	-	1157	-	-
HCM Chd Dly (s/v)	0	-	-	0	-	-
HCM Lane LOS	A	-	-	A	-	-
HCM 95th %ile Q(veh)	-	-	-	0	-	-

Intersection						
Int Delay, s/veh	2,2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	4	1	1	1	4	1
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
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	38	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	2,218	-	-	3,518	3,318	
Platoon blocked, %	-	-	-	-	-	
Mov Cap-1 Maneuver	1405	-	-	894	893	
Stage 1	-	-	-	875	-	
Stage 2	-	-	-	873	-	
Mov Cap-2 Maneuver	-	-	-	656	893	
Stage 1	-	-	-	656	-	
Stage 2	-	-	-	839	-	
Approach	EB	WB	SB			
HCM Chl Dly, s/v	4,4	0	8,8			
HCM LOS	A		A			
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBL	SBR
Capacity (veh/h)	1031	-	-	-	-	789
HCM Lane V/C Ratio	0,04	-	-	-	-	0,028
HCM Chl Dly (s/v)	7,7	0	-	-	-	8,8
HCM Lane LOS	A	A	-	-	-	A
HCM 95th %ile Q(veh)	0,1	-	-	-	-	0,1

**2028 – WEEKDAY PM**

Intersection	
Intersection Delay, s/veh	8,5
Intersection LOS	A

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↓	↓
Traffic Vol, veh/h	5	210	174	5	5	5
Future Vol, veh/h	5	210	174	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	233	193	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	8,4	7,7			
HCM LOS	A	A	A			

Lane	EBLn1	WBLn1	SBLn1
Vol Left, %	2%	0%	50%
Vol Thru, %	98%	97%	0%
Vol Right, %	0%	3%	50%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	215	179	10
LT Vol	5	0	5
Through Vol	210	174	0
RT Vol	0	5	5
Lane Flow Rate	239	199	11
Geometry Grp	1	1	1
Degree of Util (X)	0,273	0,227	0,014
Departure Headway (Hd)	4,107	4,114	4,667
Convergence, Y/N	Yes	Yes	Yes
Cap	870	865	772
Service Time	2,157	2,174	2,667
HCM Lane V/C Ratio	0,275	0,23	0,014
HCM Control Delay, s/veh	8,7	8,4	7,7
HCM Lane LOS	A	A	A
HCM 95th-ile Q	1,1	0,9	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			
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%	36%	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)	3,768	3,567	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-ile Q	0	0	0

Intersection	
Intersection Delay, s/veh	8,7
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↓		↑	↑	↓	↓
Traffic Vol, veh/h	3	5	140	5	39	210
Future Vol, veh/h	3	5	140	5	39	210
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	43	233
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	9	8,5			
HCM LOS	A	A	A			

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	16%	0%	97%
Vol Thru, %	0%	38%	3%
Vol Right, %	84%	63%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	249	8	145
LT Vol	39	0	140
Through Vol	0	3	5
RT Vol	210	5	0
Lane Flow Rate	277	9	161
Geometry Grp	1	1	1
Degree of Util (X)	0,289	0,011	0,212
Departure Headway (Hd)	3,89	4,322	4,727
Convergence, Y/N	Yes	Yes	Yes
Cap	930	828	764
Service Time	1,892	2,347	2,727
HCM Lane V/C Ratio	0,289	0,011	0,212
HCM Control Delay, s/veh	8,5	7,4	9
HCM Lane LOS	A	A	A
HCM 95th-ile Q	1,3	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	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	NB	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	129	114	103
Geometry Grp	1	1	1	1
Degree of Util (X)	0,134	0,162	0,125	0,115
Departure Headway (Hd)	4,771	4,641	3,942	3,691
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	803	773	910	899
Service Time	2,491	2,683	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-ile Q	0,5	0,6	0,4	0,4

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1: Bank & Fifth

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	←	↑	←	↑	←	↑	←	↑
Traffic Volume (vph)	46	54	63	38	16	443	29	565
Future Volume (vph)	46	54	63	38	16	443	29	565
Lane Group Flow (vph)	0	162	70	81	0	554	0	701
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 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
w/C Ratio	0.67	0.43	0.29	0.29	0.30	0.38	0.38	0.38
Control Delay (s/veh)	35.8	33.9	17.4	17.4	5.4	6.6	6.6	6.6
Queue Delay (s/veh)	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	17.4	5.4	6.6	6.6	6.6
LOS	D	C	B	B	A	A	A	A
Approach Delay (s/veh)	35.8	33.9	17.4	17.4	5.4	6.6	6.6	6.6
Approach LOS	D	C	B	B	A	A	A	A
Queue Length 50th (m)	17.5	8.9	5.1	5.1	12.4	18.5	18.5	18.5
Queue Length 95th (m)	32.4	18.5	14.6	14.6	23.8	36.2	36.2	36.2
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	256	409	409	1857	1859	1859	1859
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 w/C Ratio	0.45	0.27	0.20	0.20	0.30	0.38	0.38	0.38

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 w/C Ratio: 0.67		
Intersection Signal Delay (s/veh): 10.9		Intersection LOS: B
Intersection Capacity Utilization 67.1%		
Analysis Period (min) 15		

Splits and Phases: 1: Bank & Fifth



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3: Bank & Exhibition

Lane Group	WBL	WBR	NBL	NBR	SBL	SBR	Ø1	Ø7
Lane Configurations	←	←	←	←	←	←	←	←
Traffic Volume (vph)	114	55	469	97	498			
Future Volume (vph)	114	55	469	97	498			
Lane Group Flow (vph)	127	62	645	108	553			
Turn Type	Perm	Perm	NA	Perm	NA			
Protected Phases	8	8	2	6	6	1	7	
Permitted Phases	8	8	2	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	44.0	44.0	44.0	5.0	5.0	
Total Split (s)	26.0	26.0	44.0	44.0	44.0	5.0	5.0	
Total Split (%)	32.5%	32.5%	55.0%	55.0%	55.0%	6%	6%	
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			
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)	12.9	12.9	58.5	58.5	58.5			
Actuated g/C Ratio	0.16	0.16	0.73	0.73	0.73			
w/C Ratio	0.55	0.27	0.32	0.25	0.24			
Control Delay (s/veh)	39.5	11.0	5.5	7.9	5.4			
Queue Delay (s/veh)	0.0	0.0	0.0	0.0	0.0			
Total Delay (s/veh)	39.5	11.0	5.5	7.9	5.4			
LOS	D	B	A	A	A			
Approach Delay (s/veh)	30.1		5.5		5.8			
Approach LOS	C		A		A			
Queue Length 50th (m)	18.1	0.0	16.5	5.5	14.5			
Queue Length 95th (m)	32.0	8.2	30.5	16.1	29.2			
Internal Link Dist (m)	39.6		33.7		44.8			
Turn Bay Length (m)			40.0					
Base Capacity (vph)	351	313	2045	425	2297			
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 w/C Ratio	0.36	0.20	0.32	0.25	0.24			

Intersection Summary		
Cycle Length: 80		
Actuated Cycle Length: 80		
Offset: 0 (0%), Referenced to phase 2/NBT and 6/SBTL, Start of Green		
Natural Cycle: 80		
Control Type: Actuated-Coordinated		
Maximum w/C Ratio: 0.55		
Intersection Signal Delay (s/veh): 8.8		Intersection LOS: A
Intersection Capacity Utilization 59.7%		
Analysis Period (min) 15		

Splits and Phases: 3: Bank & Exhibition



2028 Weekday Interim PM Peak Hour  
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2: Bank & Holmwood

Lane Group	EBL	NBL	NBT	SBL	SBT	Ø3
Lane Configurations	←	←	←	←	←	←
Traffic Volume (vph)	18	26	500	28	545	
Future Volume (vph)	18	26	500	28	545	
Lane Group Flow (vph)	112	0	641	0	668	
Turn Type	NA	Perm	NA	Perm	NA	
Protected Phases	4	2	2	6	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)	2.8	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)	5.8	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)	11.6	56.0	56.0	56.0	56.0	
Actuated g/C Ratio	0.15	0.75	0.75	0.75	0.75	
w/C Ratio	0.55	0.33	0.33	0.33	0.33	
Control Delay (s/veh)	38.8	5.0	3.2	3.2	3.2	
Queue Delay (s/veh)	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	38.8	5.0	3.2	3.2	3.2	
LOS	D	A	A	A	A	
Approach Delay (s/veh)	38.8	5.0	3.2	3.2	3.2	
Approach LOS	D	A	A	A	A	
Queue Length 50th (m)	14.8	14.7	12.2	12.2	12.2	
Queue Length 95th (m)	27.6	28.5	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)	287	1970	2033	2033	2033	
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 w/C Ratio	0.39	0.33	0.33	0.33	0.33	

Intersection Summary		
Cycle Length: 75		
Actuated Cycle Length: 75		
Offset: 60 (80%), Referenced to phase 2/NBTL and 6/SBTL, Start of Green		
Natural Cycle: 75		
Control Type: Actuated-Coordinated		
Maximum w/C Ratio: 0.55		
Intersection Signal Delay (s/veh): 6.9		Intersection LOS: A
Intersection Capacity Utilization 64.3%		
Analysis Period (min) 15		

Splits and Phases: 2: Bank & Holmwood



2028 Weekday Interim PM Peak Hour  
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6: Bank & Aylmer

Lane Group	EBL	NBL	NBT	SBL	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	936		
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	1.0	
Lost 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		
Lead/Lag	Lag				Lead	
Lead-Lag Optimize?						
Recall Mode	Ped	C-Max	C-Max	C-Max	Max	
Act Effect Green (s)	14.1	60.2	60.2	60.2		
Actuated g/C Ratio	0.16	0.67	0.67	0.67		
w/C Ratio	0.37	0.41	0.48	0.48		
Control Delay (s/veh)	31.5	9.1	8.0	8.0		
Queue Delay (s/veh)	0.0	0.0	0.0	0.0		
Total Delay (s/veh)	31.5					

2028 Weekday Interim PM Peak Hour  
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7: Bank & Sunnyside

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	Ø3	Ø6	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	custom	NA			
Protected Phases	4		8		8		2	1	1	6	3
Permitted Phases	4		8		2		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	60.0	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	Yes	
Recall Mode	None	None	None	None	C-Max	C-Max	None		None	C-Max	None
Act Effect Green (s)	24.4		24.4		37.0		48.2				
Actuated g/C Ratio	0.27		0.27		0.41		0.54				
v/c Ratio	0.69		0.95		0.45		0.94				
Control Delay (s/veh)	45.2		57.6		20.4		28.5				
Queue Delay (s/veh)	0.0		0.0		0.0		0.0				
Total Delay (s/veh)	45.2		57.6		20.4		28.5				
LOS	D		E		C		C				
Approach Delay (s/veh)	45.2		57.6		20.4		28.5				
Approach LOS	D		E		C		C				
Queue Length 50th (m)	27.3		45.8		32.2		65.3				
Queue Length 95th (m)	#57.1		#101.8		45.7		#106.6				
Internal Link Dist (m)	75.1		136.0		63.1		79.0				
Turn Bay Length (m)											
Base Capacity (vph)	261		403		1145		1228				
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		0.45		0.94				
<b>Intersection Summary</b>											
Cycle Length: 90											
Actuated Cycle Length: 90											
Offset: 6 (7%), Referenced to phase 2 NBL and 6 SBL, Start of Green											
Natural Cycle: 110											
Control Type: Actuated-Coordinated											
Maximum v/c Ratio: 0.95											
Intersection Signal Delay (s/veh): 33.0											
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.											

2028 Weekday Interim PM Peak Hour  
01/10/2025  
7: Bank & Sunnyside



2028 Weekday Interim PM Peak Hour  
01/10/2025  
9: Queen Elizabeth Drive & Fifth

Lane Group	EBL	NBL	NBT	SBT	Ø4
Lane Configurations	↔		↔		↔
Traffic Volume (vph)	35	45	198	527	
Future Volume (vph)	35	45	198	527	
Lane Group Flow (vph)	98	0	270	658	
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	0.0
Total Lost Time (s)	5.7		6.8	6.8	
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	Min	None	None	C-Max	None
Act Effect Green (s)	11.5		56.0	56.0	
Actuated g/C Ratio	0.14		0.70	0.70	
v/c Ratio	0.45		0.28	0.57	
Control Delay (s/veh)	37.9		5.6	8.7	
Queue Delay (s/veh)	0.0		0.0	0.0	
Total Delay (s/veh)	37.9		5.6	8.7	
LOS	D		A	A	
Approach Delay (s/veh)	37.9		5.6	8.7	
Approach LOS	D		A	A	
Queue Length 50th (m)	14.1		12.0	38.0	
Queue Length 95th (m)	26.6		25.7	77.5	
Internal Link Dist (m)	57.2		0.1	5.9	
Turn Bay Length (m)					
Base Capacity (vph)	290		977	1163	
Starvation Cap Reductn	0		0	0	
Spillback Cap Reductn	0		0	0	
Storage Cap Reductn	0		0	0	
Reduced v/c Ratio	0.34		0.28	0.57	
<b>Intersection Summary</b>					
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: 0.57					
Intersection Signal Delay (s/veh): 10.7					
Intersection Capacity Utilization 70.6%					
ICU Level of Service C					
Analysis Period (min) 15					
<b>Splits and Phases: 9: Queen Elizabeth Drive &amp; Fifth</b>					



2028 Weekday Interim PM Peak Hour  
01/10/2025  
4: Bank & Wilton

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 Channelled	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Vel in Median Storage, l	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
<b>Major/Minor</b>						
Conflicting Flow All	1622	839	666	0	-	0
Stage 1	838	-	-	-	-	-
Stage 2	783	-	-	-	-	-
Critical Hwy	6,675	6,275	4,175	-	-	-
Critical Hwy Stg 1	5,475	-	-	-	-	-
Critical Hwy Stg 2	5,875	-	-	-	-	-
Follow-up Hwy	3,5475	3,3475	2,2475	-	-	-
Flt Cap-1 Maneuver	100	359	760	-	-	-
Stage 1	417	-	-	-	-	-
Stage 2	408	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	36	281	617	-	-	-
Mov Cap-2 Maneuver	36	-	-	-	-	-
Stage 1	181	-	-	-	-	-
Stage 2	329	-	-	-	-	-
<b>Approach</b>						
HCM Ctrl Dly, s/v	68.86		6.73		0	
HCM LOS	F					
<b>Minor Lane/Major Mvmt</b>						
Capacity (veh/h)	NBL	NBT	EBL	N1	SBT	SBR
	510	-	291	-	-	-
HCM Lane V/C Ratio	0.384	-	0.688	-	-	-
HCM Ctrl Dly (s/v)	14.4	3.8	66.6	-	-	-
HCM Lane LOS	B	A	F	-	-	-
HCM 95th %ile Q(veh)	1.8	-	8	-	-	-

5: Bank & Echo

Intersection						
Int Delay, s/veh						
	EBL	EBR	NBL	NBT	SBL	SBR
Int Delay, s/veh	0,3					
Movement						
Lane Configurations	↑ ↑ ↑ ↑					
Traffic Vol, veh/h	0	24	0	780	812	2
Future Vol, veh/h	0	24	0	780	812	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, l	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	867	902	2
Major/Minor						
Conflicting Flow All	Minor2	Major1	Major2			
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 Ctrl Dly, s/v	20	0	0			
HCM LOS	C					
Minor Lane/Major Mvmt						
NBL	NBT	EBL	NBL	SBL	SBR	
Capacity (veh/h)	-	267	-	-	-	-
HCM Lane V/C Ratio	-	0,1	-	-	-	-
HCM Ctrl Dly (s/v)	-	20	-	-	-	-
HCM Lane LOS	-	C	-	-	-	-
HCM 95th %ile Q(veh)	-	0,3	-	-	-	-

8: Queen Elizabeth Driveway /Queen Elizabeth Driveway & Princess Patricia Way

Intersection						
Int Delay, s/veh						
	EBL	EBR	NBL	NBT	SBL	SBR
Int Delay, s/veh	3,3					
Movement						
Lane Configurations	↑ ↓ ↑ ↓					
Traffic Vol, veh/h	63	59	56	257	465	97
Future Vol, veh/h	63	59	56	257	465	97
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, l	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	70	66	62	286	550	108
Major/Minor						
Conflicting Flow All	Minor2	Major1	Major2			
Stage 1	604	-	-	-	-	-
Stage 2	410	-	-	-	-	-
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	267	502	940	-	-	-
Stage 1	550	-	-	-	-	-
Stage 2	674	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	246	502	940	-	-	-
Mov Cap-2 Maneuver	246	-	-	-	-	-
Stage 1	506	-	-	-	-	-
Stage 2	674	-	-	-	-	-
Approach						
EB	NB	SB				
HCM Ctrl Dly, s/v	23,65	1,63	0			
HCM LOS	C					
Minor Lane/Major Mvmt						
NBL	NBT	EBL	NBL	SBL	SBR	
Capacity (veh/h)	322	-	326	-	-	-
HCM Lane V/C Ratio	0,265	-	0,415	-	-	-
HCM Ctrl Dly (s/v)	8,1	0	23,7	-	-	-
HCM Lane LOS	A	A	C	-	-	-
HCM 95th %ile Q(veh)	0,2	-	2	-	-	-

10: Bank & Marche

Intersection						
Int Delay, s/veh						
	WBL	WBR	NBT	NBR	SBL	SBT
Int Delay, s/veh	0,9					
Movement						
Lane Configurations	↑ ↑ ↓ ↓					
Traffic Vol, veh/h	5	74	542	7	1	597
Future Vol, veh/h	5	74	542	7	1	597
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, l	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	82	802	8	1	863
Major/Minor						
Conflicting Flow All	Minor1	Major1	Major2			
Stage 1	1040	405	0	0	710	0
Stage 2	706	-	-	-	-	-
Stage 3	334	-	-	-	-	-
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	229	560	-	-	899	-
Stage 1	456	-	-	-	-	-
Stage 2	703	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	205	501	-	-	803	-
Mov Cap-2 Maneuver	205	-	-	-	-	-
Stage 1	408	-	-	-	-	-
Stage 2	792	-	-	-	-	-
Approach						
WB	NB	SB				
HCM Ctrl Dly, s/v	13,59	0	0,02			
HCM LOS	B					
Minor Lane/Major Mvmt						
NBT	NBR	WBL	NBL	SBL	SBT	
Capacity (veh/h)	-	-	501	803	-	-
HCM Lane V/C Ratio	-	-	0,164	0,001	-	-
HCM Ctrl Dly (s/v)	-	-	13,6	9,5	-	-
HCM Lane LOS	-	-	B	A	-	-
HCM 95th %ile Q(veh)	-	-	0,8	0	-	-

11: Garage & Exhibition

Intersection						
Int Delay, s/veh						
	EBT	EBR	WBL	WBT	NBL	NBR
Int Delay, s/veh	0					
Movement						
Lane Configurations	↑ ↓ ↓ ↓					
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	- 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						
Conflicting Flow All	Major1	Major2	Minor1			
Stage 1	0	0	333	0	627	433
Stage 2	-	-	-	-	333	-
Stage 3	-	-	-	-	263	-
Critical Hdwy	-	-	4,12	-	6,42	6,22
Critical Hdwy Stg 1	-	-	-	-	5,42	-
Critical Hdwy Stg 2	-	-	-	-	5,42	-
Follow-up Hdwy	-	-	2,216	-	3,518	3,318
Pot Cap-1 Maneuver	-	-	1226	-	448	322
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 Ctrl Dly, s/v	0	0	0			
HCM LOS	A					
Minor Lane/Major Mvmt						
NBL	NBT	EBL	EBR	WBL	WBT	
Capacity (veh/h)	-	-	-	1096	-	-
HCM Lane V/C Ratio	-	-	-	0,415	-	-
HCM Ctrl Dly (s/v)	-	-	-	0	-	-
HCM Lane LOS	-	-	-	A	-	-
HCM 95th %ile Q(veh)	-	-	-	0	-	-

**Intersection**

Int Delay, s/veh	4.7					
<b>Movement</b>	<b>EBL</b>	<b>EBT</b>	<b>WBT</b>	<b>WBR</b>	<b>SBL</b>	<b>SBR</b>
Lane Configurations		4	1		4	1
Traffic Vol, veh/h	94	58	24	129	85	39
Future Vol, veh/h	94	58	24	129	85	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	-	-	-	-	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	104	64	27	143	72	43

<b>Major/Minor</b>	<b>Major1</b>	<b>Major2</b>	<b>Minor2</b>
Conflicting Flow All	170	0	0
Stage 1	-	-	98
Stage 2	-	-	273
Critical Hdwy	4,12	-	6,42
Critical Hdwy Stg 1	-	-	5,42
Critical Hdwy Stg 2	-	-	5,42
Followup Hdwy	2,218	-	3,518
Platoon Blocked, %	-	-	-
Mov Cap-1 Maneuver	1407	-	829
Stage 1	-	-	926
Stage 2	-	-	773
Mov Cap-2 Maneuver	-	-	581
Stage 1	-	-	854
Stage 2	-	-	773

<b>Approach</b>	<b>EB</b>	<b>WB</b>	<b>SB</b>
HCM Chl Dly, s/v	4,8	0	11,36
HCM LOS			B

<b>Minor Lane/Major Mvmt</b>	<b>EBL</b>	<b>EBT</b>	<b>WBT</b>	<b>WBR</b>	<b>SBL</b>	<b>SBR</b>
Capacity (veh/h)	1,113	-	-	-	-	581
HCM Lane V/C Ratio	0,074	-	-	-	-	0,17
HCM Chl Dly (s/v)	7,8	0	-	-	-	11,4
HCM Lane LOS	A	A	-	-	-	B
HCM 95th %ile Q(veh)	0,2	-	-	-	-	0,8

**2028 – SATURDAY**

11: O' Connor & Fifth

Intersection													
Intersection Delay s/veh												8	
Intersection LOS													A
Movement													
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		4					4					4	
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, %	28%	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)	4,125	4,704	4,022	3,948
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	811	763	891	908
Service Time	2,445	2,729	2,047	1,97
HCM Lane V/C Ratio	0,182	0,128	0,116	0,128
HCM Control Delay, s/veh	8,4	8,4	7,6	7,5
HCM Lane LOS	A	A	A	A
HCM 95thile Q	0,7	0,4	0,4	0,4

12: Exhibition & Paul Askin

Intersection							
Intersection Delay s/veh						8,4	
Intersection LOS							A
Movement							
	EBL	EBT	WBL	WBR	SBL	SBR	
Lane Configurations		4	4		4	4	
Traffic Vol. veh/h	5	205	137	5	5	5	
Future Vol. veh/h	5	205	137	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	228	152	6	6	6	
Number of Lanes	0	1	1	0	1	0	
Approach		EB	WB	SB			
Opposing Approach	WB		EB		NB		
Opposing Lanes	1		1		0		
Conflicting Approach Left	SB		NB		WB		
Conflicting Lanes Left	1		0		1		
Conflicting Approach Right	NB		SB		EB		
Conflicting Lanes Right	0		1		1		
HCM Control Delay, s/veh	8,6		8,1		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	210	142	10
LT Vol	5	0	5
Through Vol	205	137	0
RT Vol	0	5	5
Lane Flow Rate	233	158	11
Geometry Grp	1	1	1
Degree of Util (X)	0,264	0,18	0,014
Departure Headway (Hd)	4,076	4,105	4,568
Convergence, Y/N	Yes	Yes	Yes
Cap	877	868	788
Service Time	2,117	2,162	2,588
HCM Lane V/C Ratio	0,266	0,182	0,014
HCM Control Delay, s/veh	8,6	8,1	7,6
HCM Lane LOS	A	A	A
HCM 95thile Q	1,1	0,7	0

13: Paul Askin & Marche

Intersection							
Intersection Delay s/veh						7,3	
Intersection LOS							A
Movement							
	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	4		4	4			
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		NB		
Opposing Lanes	1		1		0		
Conflicting Approach Left	NB		EB		WB		
Conflicting Lanes Left	0		1		1		
Conflicting Approach Right	NB		WB		EB		
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)	3,82	3,887	3,963
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 95thile Q	0	0,1	0,3

14: Exhibition & Marche

Intersection							
Intersection Delay s/veh						9	
Intersection LOS							A
Movement							
	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	4		4	4			
Traffic Vol. veh/h	15	5	86	5	155	106	
Future Vol. veh/h	15	5	86	5	155	106	
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	172	118	
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		WB		
Conflicting Lanes Left	0		1		1		
Conflicting Approach Right	NB		WB		EB		
Conflicting Lanes Right	1		0		1		
HCM Control Delay, s/veh	7,7		8,6		9,2		
HCM LOS	A		A		A		

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	59%	0%	95%
Vol Thru, %	0%	75%	5%
Vol Right, %	41%	25%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	261	20	91
LT Vol	155	0	86
Through Vol	0	15	5
RT Vol	106	5	0
Lane Flow Rate	290	22	101
Geometry Grp	1	1	1
Degree of Util (X)	0,332	0,028	0,135
Departure Headway (Hd)	4,125	4,549	4,719
Convergence, Y/N	Yes	Yes	Yes
Cap	876	788	750
Service Time	2,125	2,569	2,607
HCM Lane V/C Ratio	0,331	0,028	0,135
HCM Control Delay, s/veh	9,2	7,7	8,6
HCM Lane LOS	A	A	A
HCM 95thile Q	1,5	0,1	0,5

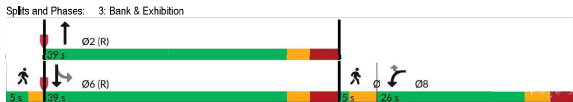
**2028 Saturday Interim PM Peak Hour**  
**1: Bank & Fifth** 01/10/2025

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	←		←		←		←	
Traffic Volume (vph)	45	40	72	44	21	466	20	515
Future Volume (vph)	45	40	72	44	21	466	20	515
Lane Group Flow (vph)	0	141	80	105	0	578	0	624
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	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)	12.0	12.0	12.0	12.0	52.0	52.0	52.0	52.0
Actuated g/C Ratio	0.15	0.15	0.15	0.15	0.69	0.69	0.69	0.69
v/c Ratio	0.64	0.50	0.40	0.40	0.30	0.32	0.32	0.32
Control Delay (s/veh)	34.7	38.2	18.3	18.3	4.8	5.6	5.6	5.6
Queue Delay (s/veh)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	34.7	38.2	18.3	18.3	4.8	5.6	5.6	5.6
LOS	C	D	B	B	A	A	A	A
Approach Delay (s/veh)	34.7	38.2	26.9	26.9	4.8	5.6	5.6	5.6
Approach LOS	C	D	C	C	A	A	A	A
Queue Length 50th (m)	14.3	10.5	6.1	6.1	12.2	14.7	14.7	14.7
Queue Length 95th (m)	28.5	21.0	11.3	11.3	22.4	28.2	28.2	28.2
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)	354	272	414	414	1902	1943	1943	1943
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	0.40	0.29	0.25	0.25	0.30	0.32	0.32	0.32
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: 0.64								
Intersection Signal Delay (s/veh): 10.6					Intersection LOS: B			
Intersection Capacity Utilization: 56.9%	ICU Level of Service B							
Analysis Period (min): 15								



**2028 Saturday Interim PM Peak Hour**  
**3: Bank & Exhibition** 01/10/2025

Lane Group	WBL	WBR	NBL	NBT	SBL	SBT	Ø1	Ø7
Lane Configurations	←		←		←		←	←
Traffic Volume (vph)	75	59	444	104	474	474		
Future Volume (vph)	75	59	444	104	474	474		
Lane Group Flow (vph)	83	68	603	116	527	527		
Turn Type	Prot	Perm	NA	Perm	NA	NA		
Protected Phases	8		2		6		1	7
Permitted Phases	8		8		6			
Detector Phase	8		8		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	39.0	39.0	5.0	5.0	
Total Split (s)	26.0	26.0	39.0	39.0	39.0	5.0	5.0	
Total Split (%)	34.7%	34.7%	52.0%	52.0%	52.0%	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	3.0	
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			
Lead/Lag	Lag	Lag						Lead
Lead-Lag Optimize?								
Recall Mode	None	None	C-Max	C-Max	C-Max	None	None	
Act Effect Green (s)	10.8	10.8	55.6	55.6	55.6			
Actuated g/C Ratio	0.14	0.14	0.74	0.74	0.74			
v/c Ratio	0.37	0.31	0.29	0.26	0.23			
Control Delay (s/veh)	33.9	12.0	4.6	4.8	3.2			
Queue Delay (s/veh)	0.0	0.0	0.0	0.0	0.0			
Total Delay (s/veh)	33.9	12.0	4.6	4.8	3.2			
LOS	C	B	A	A	A			
Approach Delay (s/veh)	24.2	4.6	3.5	3.5	3.5			
Approach LOS	C	A	A	A	A			
Queue Length 50th (m)	10.9	0.0	13.3	3.8	8.8			
Queue Length 95th (m)	22.2	9.7	23.3	7.5	13.0			
Internal Link Dist (m)	39.6	33.7	44.8	44.8	44.8			
Turn Bay Length (m)	40.0							
Base Capacity (vph)	405	338	2092	448	2330			
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	0.20	0.20	0.29	0.26	0.23			
Intersection Summary								
Cycle Length: 75								
Actuated Cycle Length: 75								
Offset: 60 (80%), Referenced to phase 2/NBTL and 6/SBTL, Start of Green								
Natural Cycle: 75								
Control Type: Actuated-Coordinated								
Maximum v/c Ratio: 0.37								
Intersection Signal Delay (s/veh): 6.2					Intersection LOS: A			
Intersection Capacity Utilization: 58.5%	ICU Level of Service B							
Analysis Period (min): 15								



**2028 Saturday Interim PM Peak Hour**  
**2: Bank & Holmwood** 01/10/2025

Lane Group	EBL	NBL	NBT	SBL	SBT	Ø3
Lane Configurations	←		←		←	
Traffic Volume (vph)	9	28	483	30	533	
Future Volume (vph)	9	28	483	30	533	
Lane Group Flow (vph)	110	0	617	0	651	
Turn Type	NA	Perm	NA	Perm	NA	
Protected Phases	4		2		6	
Permitted Phases	4	2	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	49.0	48.0	48.0	48.0	5.0
Total Split (s)	22.0	49.0	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)	2.0	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	
Lead/Lag	Lag	Lag	Lead	Lead		
Lead-Lag Optimize?						
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	None
Act Effect 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	0.31	0.31	0.32	0.32	
Control Delay (s/veh)	38.8	2.3	3.4	3.4	3.4	
Queue Delay (s/veh)	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	38.8	2.3	3.4	3.4	3.4	
LOS	D	A	A	A	A	
Approach Delay (s/veh)	38.8	2.3	3.4	3.4	3.4	
Approach LOS	D	A	A	A	A	
Queue Length 50th (m)	14.6	3.3	12.9	12.9	12.9	
Queue Length 95th (m)	27.2	8.3	17.2	17.2	17.2	
Internal Link Dist (m)	39.8	31.5	195.6	195.6	195.6	
Turn Bay Length (m)	284					
Base Capacity (vph)	284	1968	2031	2031	2031	
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	0.31	0.32	0.32	0.32	
Intersection Summary						
Cycle Length: 75						
Actuated Cycle Length: 75						
Offset: 60 (80%), 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): 5.7				Intersection LOS: A		
Intersection Capacity Utilization: 63.9%	ICU Level of Service B					
Analysis Period (min): 15						



**2028 Saturday Interim PM Peak Hour**  
**6: Bank & Aylmer** 01/10/2025

Lane Group	EBL	NBL	NBT	SBT	Ø3
Lane Configurations	←		←		←
Traffic Volume (vph)	38	18	667	705	
Future Volume (vph)	38	18	667	705	
Lane Group Flow (vph)	54	0	761	850	
Turn Type	Prot	Perm	NA	NA	
Protected Phases	4		2		6
Permitted Phases	4	2	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)	19.5	35.2	35.2	35.2	4.0
Total Split (s)	20.0	65.0	65.0	65.0	5.0
Total Split (%)	22.2%	72.2%	72.2%	72.2%	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	0.0
Total Lost Time (s)	5.5	5.2	5.2	5.2	
Lead/Lag	Lag	Lag	Lead	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	0.67	
v/c Ratio	0.23	0.39	0.42	0.42	
Control Delay (s/veh)	30.2	5.2	7.4	7.4	
Queue Delay (s/veh)	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	30.2	5.2	7.4	7.4	
LOS	C	A	A	A	
Approach Delay (s/veh)	30.2	5.2	7.4	7.4	
Approach LOS	C	A	A	A	
Queue Length 50th (m)	6.4	19.7	30.3	30.3	
Queue Length 95th (m)	16.7	25.4	41.0	41.0	
Internal Link Dist (m)	76.7	28.1	10.1	10.1	
Turn Bay Length (m)	244				
Base Capacity (vph)	244	1934	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	0.22	0.39	0.42	0.42	
Intersection Summary					
Cycle Length: 90					
Actuated Cycle Length: 90					
Offset: 28 (31%), Referenced to phase 2/NBTL and 6/SBT, Start of Green					
Natural Cycle: 60					
Control Type: Actuated-Coordinated	</				

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7: Bank & Sunnyside

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	Ø3	Ø7
Lane Configurations	↔		↔		↔		↔			
Traffic Volume (vph)	41	37	20	57	29	481	82	537		
Future Volume (vph)	41	37	20	57	29	481	82	537		
Lane Group Flow (vph)	0	135	0	195	0	602	0	749		
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)	20.0	20.0	20.0	20.0	54.0	54.0	11.0	54.0	5.0	5.0
Total Split (s)	20.0	20.0	20.0	20.0	54.0	54.0	11.0	54.0	5.0	5.0
Total Split (%)	22.2%	22.2%	22.2%	22.2%	60.0%	60.0%	12.2%	60.0%	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	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	Lag	Lag	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)	18.3	18.3	18.3	18.3	59.6	59.6	59.6	59.6		
Actuated g/C Ratio	0.21	0.21	0.66	0.66	0.34	0.48	0.34	0.48		
v/c Ratio	0.62	0.62	0.34	0.34	0.34	0.48	0.34	0.48		
Control Delay (s/veh)	45.7	45.7	33.4	33.4	7.2	6.6	7.2	6.6		
Queue Delay (s/veh)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Total Delay (s/veh)	45.7	45.7	33.4	33.4	7.2	6.6	7.2	6.6		
LOS	D	D	C	C	A	A	A	A		
Approach Delay (s/veh)	45.7	45.7	33.4	33.4	7.2	6.6	7.2	6.6		
Approach LOS	D	D	C	C	A	A	A	A		
Queue Length 50th (m)	21.1	21.1	25.8	25.8	21.0	16.7	21.0	16.7		
Queue Length 95th (m)	#41.1	#41.1	#44.0	#44.0	29.4	21.1	29.4	21.1		
Internal Link Dist (m)	75.1	75.1	136.0	136.0	63.1	79.0	63.1	79.0		
Turn Bay Length (m)										
Base Capacity (vph)	218	218	297	297	1790	1545	1790	1545		
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	0.62	0.62	0.66	0.66	0.34	0.48	0.34	0.48		
<b>Intersection Summary</b>										
Cycle Length: 90										
Actuated Cycle Length: 90										
Offset: 33 (37%), Referenced to phase 2/NBTL and 6/SBTL, Start of Green										
Natural Cycle: 90										
Control Type: Actuated-Coordinated										
Maximum v/c Ratio: 0.66										
Intersection Signal Delay (s/veh): 13.1										
Intersection LOS: B										
Intersection Capacity Utilization 71.0%										
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.										

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7: Bank & Sunnyside



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9: Queen Elizabeth Drive & Fifth

Lane Group	EBL	NBL	NBT	SBT	Ø4
Lane Configurations	↔		↔		↔
Traffic Volume (vph)	54	52	248	398	
Future Volume (vph)	54	52	248	398	
Lane Group Flow (vph)	113	0	334	456	
Turn Type	Prot	Perm	NA	NA	
Protected Phases	10	2	2	6	4
Permitted Phases		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 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	0.0
Lost Time Adjust (s)	0.0	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)	12.0	55.5	55.5	55.5	
Actuated g/C Ratio	0.15	0.89	0.89	0.89	
v/c Ratio	0.49	0.33	0.40	0.40	
Control Delay (s/veh)	38.3	6.3	6.8	6.8	
Queue Delay (s/veh)	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	38.3	6.3	6.8	6.8	
LOS	D	A	A	A	
Approach Delay (s/veh)	38.3	6.3	6.8	6.8	
Approach LOS	D	A	A	A	
Queue Length 50th (m)	16.2	16.1	23.3	23.3	
Queue Length 95th (m)	29.4	33.7	46.9	46.9	
Internal Link Dist (m)	57.2	0.1	5.9	5.9	
Turn Bay Length (m)					
Base Capacity (vph)	296	1016	1150	1150	
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	0.38	0.33	0.40	0.40	
<b>Intersection Summary</b>					
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: 0.49					
Intersection Signal Delay (s/veh): 10.5					
Intersection LOS: B					
Intersection Capacity Utilization 64.4%					
ICU Level of Service C					
Analysis Period (min) 15					
<b>Splits and Phases: 9: Queen Elizabeth Drive &amp; Fifth</b>					

2028 Saturday Interim PM Peak Hour  
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4: Bank & Wiltou

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔		↔		↔	
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	107
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Vel 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	197	129	619	570	61
<b>Major/Minor</b>						
Conflicting Flow All	1346	779	809	0	-	0
Stage 1	779	-	-	-	-	-
Stage 2	567	-	-	-	-	-
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	-	-	-
Flt Cap-1 Maneuver	151	389	796	-	-	-
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	-	-	-	-	-
<b>Approach</b>						
HCM Ctrl Dly, s/v	33.61	NB	3.73	0		
HCM LOS	D					
<b>Minor Lane/Mejor Mvmt</b>						
Capacity (veh/h)	537	-	316	-	-	-
HCM Lane V/C Ratio	0.199	-	0.323	-	-	-
HCM Ctrl Dly (s/v)	11.9	2	33.5	-	-	-
HCM Lane LOS	B	A	D	-	-	-
HCM 95th %ile Q(veh)	0.7	-	3.9	-	-	-

5: Bank & Echo

Intersection						
Int Delay, s/veh	0,4					
Movement	EBL	EBR	NBL	NBR	SBT	SBR
Lane Configurations	↑	↑	↑↑	↑↑	↑	↑
Traffic Vol. veh/h	1	32	0	662	882	0
Future Vol. veh/h	1	32	0	662	882	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	36	0	736	758	0
Major/Minor						
Conflicting Flow All	Minor2	Major1	Major2			
Stage 1	1126	758	-	-	-	0
Stage 2	758	-	-	-	-	-
Critical Hdwy	368	-	-	-	-	-
Critical Hdwy Stg 1	6,675	6,275	-	-	-	-
Critical Hdwy Stg 2	5,475	-	-	-	-	-
Follow-up Hdwy	3,5475	3,3475	-	-	-	-
Pot Cap-1 Maneuver	208	400	0	-	-	0
Stage 1	455	-	0	-	-	0
Stage 2	664	-	0	-	-	0
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	208	400	-	-	-	-
Mov Cap-2 Maneuver	208	-	-	-	-	-
Stage 1	455	-	-	-	-	-
Stage 2	664	-	-	-	-	-
Approach						
EB	NB	SB				
HCM Ctrl Dly, s/v	14,86	0	0			
HCM LOS	B					
Minor Lane/Major Mvmt						
Capacity (veh/h)	-	403	-	-	-	-
HCM Lane V/C Ratio	-	0,089	-	-	-	-
HCM Ctrl Dly (s/v)	-	14,9	-	-	-	-
HCM Lane LOS	-	B	-	-	-	-
HCM 95th %ile Q(veh)	-	0,3	-	-	-	-

8: Queen Elizabeth Driveway /Queen Elizabeth Driveway & Princess Patricia Way

Intersection						
Int Delay, s/veh	3,8					
Movement	EBL	EBR	NBL	NBR	SBT	SBR
Lane Configurations	↑	↑	↑	↑	↑	↑
Traffic Vol. veh/h	85	61	65	210	252	155
Future Vol. veh/h	85	61	65	210	252	155
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	94	68	72	233	280	172
Major/Minor						
Conflicting Flow All	Minor2	Major1	Major2			
Stage 1	744	366	452	0	-	0
Stage 2	366	-	-	-	-	-
Critical Hdwy	378	-	-	-	-	-
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	385	684	1119	-	-	-
Stage 1	706	-	-	-	-	-
Stage 2	697	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	356	684	1119	-	-	-
Mov Cap-2 Maneuver	356	-	-	-	-	-
Stage 1	654	-	-	-	-	-
Stage 2	697	-	-	-	-	-
Approach						
EB	NB	SB				
HCM Ctrl Dly, s/v	17,63	1,99	0			
HCM LOS	C					
Minor Lane/Major Mvmt						
Capacity (veh/h)	-	425	-	446	-	-
HCM Lane V/C Ratio	-	0,065	-	0,284	-	-
HCM Ctrl Dly (s/v)	-	8,4	0	17,6	-	-
HCM Lane LOS	-	A	A	C	-	-
HCM 95th %ile Q(veh)	-	0,2	-	1,6	-	-

10: Bank & Marche

Intersection						
Int Delay, s/veh	0,9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↑	↑	↑	↑	↑	↑
Traffic Vol. veh/h	6	71	494	19	2	577
Future Vol. veh/h	6	71	494	19	2	577
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	79	549	21	2	641
Major/Minor						
Conflicting Flow All	Minor1	Major1	Major2			
Stage 1	984	365	0	0	670	0
Stage 2	659	-	-	-	-	-
Critical Hdwy	325	-	-	-	-	-
Critical Hdwy Stg 1	6,8	7,2	-	-	4,1	-
Critical Hdwy Stg 2	5,8	-	-	-	-	-
Follow-up Hdwy	3,5	3,45	-	-	2,2	-
Pot Cap-1 Maneuver	249	578	-	-	830	-
Stage 1	482	-	-	-	-	-
Stage 2	711	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	222	517	-	-	831	-
Mov Cap-2 Maneuver	222	-	-	-	-	-
Stage 1	431	-	-	-	-	-
Stage 2	708	-	-	-	-	-
Approach						
WB	NB	SB				
HCM Ctrl Dly, s/v	13,22	0	0,03			
HCM LOS	B					
Minor Lane/Major Mvmt						
Capacity (veh/h)	-	-	517	831	-	-
HCM Lane V/C Ratio	-	-	0,153	0,003	-	-
HCM Ctrl Dly (s/v)	-	-	13,2	9,3	-	-
HCM Lane LOS	-	-	B	A	-	-
HCM 95th %ile Q(veh)	-	-	0,5	0	-	-

15: Garage & Exhibition

Intersection						
Int Delay, s/veh	0					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↑	↑	↑	↑	↑
Traffic Vol. veh/h	205	0	0	137	0	0
Future Vol. veh/h	205	0	0	137	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	228	0	0	152	0	0
Major/Minor						
Conflicting Flow All	Minor1	Major2	Minor1			
Stage 1	0	0	328	0	580	428
Stage 2	-	-	-	-	328	-
Critical Hdwy	-	-	-	-	252	-
Critical Hdwy Stg 1	-	-	4,12	-	6,42	6,22
Critical Hdwy Stg 2	-	-	-	-	5,42	-
Follow-up Hdwy	-	-	2,216	-	3,518	3,318
Pot Cap-1 Maneuver	-	-	1232	-	477	927
Stage 1	-	-	-	-	730	-
Stage 2	-	-	-	-	760	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1101	-	381	501
Mov Cap-2 Maneuver	-	-	-	-	381	-
Stage 1	-	-	-	-	653	-
Stage 2	-	-	-	-	766	-
Approach						
EB	WB	NB				
HCM Ctrl Dly, s/v	0	0	0			
HCM LOS	A					
Minor Lane/Major Mvmt						
Capacity (veh/h)	-	-	-	1101	-	-
HCM Lane V/C Ratio	-	-	-	0	-	-
HCM Ctrl Dly (s/v)	-	-	-	0	-	-
HCM Lane LOS	-	-	-	A	-	-
HCM 95th %ile Q(veh)	-	-	-	0	-	-

Intersection						
Int Delay, s/veh	6,2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		4	4			
Traffic Vol, veh/h	91	31	74	146	123	72
Future Vol, veh/h	91	31	74	146	123	72
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	101	34	82	162	137	80
<b>Major/Minor</b>						
	Major1	Major2	Minor2			
Conflicting Flow All	244	0	0	400	163	
Stage 1	-	-	-	163	-	
Stage 2	-	-	-	237	-	
Critical Hdwy	4,12	-	-	6,42	6,22	
Critical Hdwy Stg 1	-	-	-	5,42	-	
Critical Hdwy Stg 2	-	-	-	5,42	-	
Followup Hdwy	2,218	-	-	3,518	3,318	
Pot Cap-1 Maneuver	1322	-	-	606	881	
Stage 1	-	-	-	866	-	
Stage 2	-	-	-	803	-	
Platoon blocked, %	-	-	-	-	-	
Mov Cap-1 Maneuver	1322	-	-	559	881	
Mov Cap-2 Maneuver	-	-	-	559	-	
Stage 1	-	-	-	798	-	
Stage 2	-	-	-	603	-	
<b>Approach</b>						
	EB	WB	SB			
HCM Chd Dly, s/v	5,83	0	13,36			
HCM LOS			B			
<b>Minor Lane/Major Mvmt</b>						
	EBL	EBT	WBT	WBR	SBL	SBR
Capacity (veh/h)	1296	-	-	-	-	646
HCM Lane V/C Ratio	0,076	-	-	-	-	0,335
HCM Chd Dly (s/v)	7,9	0	-	-	-	13,4
HCM Lane LOS	A	A	-	-	-	B
HCM 95th %ile Q(veh)	0,2	-	-	-	-	1,5

**2028 – SUNDAY**

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12: Exhibition & Paul Askin

Intersection	
Intersection Delay, s/veh	8,8
Intersection LOS	A

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↓	↓
Traffic Vol, veh/h	5	250	164	5	5	5
Future Vol, veh/h	5	250	164	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	275	182	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	9,1	8,4	7,8			
HCM LOS	A	A	A			

Lane	EBLn1	WBLn1	SBLn1
Vol Left, %	2%	0%	50%
Vol Thru, %	98%	97%	0%
Vol Right, %	0%	3%	50%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	255	169	10
LT Vol	5	0	5
Through Vol	250	164	0
RT Vol	0	5	5
Lane Flow Rate	283	188	11
Geometry Grp	1	1	1
Degree of Util (X)	0,322	0,216	0,015
Departure Headway (Hd)	4,097	4,147	4,736
Convergence, Y/N	Yes	Yes	Yes
Cap	873	856	760
Service Time	2,149	2,216	2,736
HCM Lane V/C Ratio	0,324	0,22	0,014
HCM Control Delay, s/veh	8,1	8,4	7,8
HCM Lane LOS	A	A	A
HCM 95thile Q	1,4	0,8	0

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13: Paul Askin & Marche

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	161	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%	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	3,876
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	8,8
HCM Lane LOS	A	A	A
HCM 95thile Q	0	0,1	0,8

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14: Exhibition & Marche

Intersection	
Intersection Delay, s/veh	9,3
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations		↓		↑	↓	↓
Traffic Vol, veh/h	14	5	56	3	188	130
Future Vol, veh/h	14	5	56	3	188	130
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	209	144
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	8,4	9,6			
HCM LOS	A	A	A			

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	59%	0%	95%
Vol Thru, %	0%	74%	5%
Vol Right, %	41%	26%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	315	19	59
LT Vol	188	0	56
Through Vol	0	14	3
RT Vol	130	5	0
Lane Flow Rate	353	21	66
Geometry Grp	1	1	1
Degree of Util (X)	0,388	0,027	0,09
Departure Headway (Hd)	3,955	4,627	4,917
Convergence, Y/N	Yes	Yes	Yes
Cap	897	778	733
Service Time	2,034	2,63	2,918
HCM Lane V/C Ratio	0,394	0,027	0,09
HCM Control Delay, s/veh	9,5	7,8	8,4
HCM Lane LOS	A	A	A
HCM 95thile Q	1,9	0,1	0,3

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37: O' Connor & Fifth

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	88	81	0	0	0	227	99	66	61	0	0	103
Future Vol, veh/h	88	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	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	10	10,7	9,6	10,7								
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	226	149	227	103
LT Vol	88	88	0	0
Through Vol	66	81	0	0
RT Vol	61	0	227	103
Lane Flow Rate	251	169	252	114
Geometry Grp	1	1	1	1
Degree of Util (X)	0,346	0,24	0,311	0,151
Departure Headway (Hd)	4,957	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 95thile Q	1,5	0,9	1,3	0,5

2028 Sunday Interim PM Peak Hour

1: Bank & Fifth

01/10/2025

Table with 8 columns (EBL, EBT, WBL, WBT, NBL, NBT, SBL, SBT) and various traffic metrics like Lane Configurations, Traffic Volume, and Delay. Includes an intersection diagram at the top.

Splits and Phases: 1: Bank & Fifth



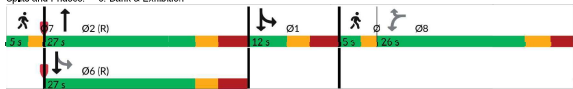
3: Bank & Exhibition

2028 Sunday Interim PM Peak Hour

01/10/2025

Table with 8 columns (WBL, WBR, NBT, SBL, SBT, 03, 06, 07) and various traffic metrics like Lane Configurations, Traffic Volume, and Delay. Includes an intersection diagram at the top.

Splits and Phases: 3: Bank & Exhibition



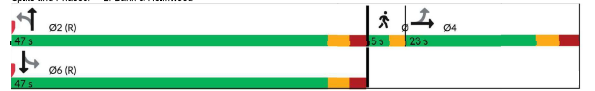
2028 Sunday Interim PM Peak Hour

2: Bank & Holmwood

01/10/2025

Table with 7 columns (EBT, WBT, NBL, NBT, SBL, SBT, 03) and various traffic metrics like Lane Configurations, Traffic Volume, and Delay. Includes an intersection diagram at the top.

Splits and Phases: 2: Bank & Holmwood



6: Bank & Aymer

2028 Sunday Interim PM Peak Hour

01/10/2025

Table with 5 columns (EBL, NBL, NBT, SBT, 03) and various traffic metrics like Lane Configurations, Traffic Volume, and Delay. Includes an intersection diagram at the top.

Splits and Phases: 6: Bank & Aymer



2028 Sunday Interim PM Peak Hour  
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7: Bank & Sunnyside

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	Ø3	Ø6	Ø7
Lane Configurations	↔		↔		↔		↔				
Traffic Volume (vph)	42	33	15	50	18	460	115	497			
Future Volume (vph)	42	33	15	50	18	460	115	497			
Lane Group Flow (vph)	0 117		0 190		0 543		0 771				
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)	2,8	2,5	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)	5,8	5,8	5,8	5,8	6,0	6,0	6,0		6,8	6,8	6,8
Lead/Lag	Lag	Lag	Lag	Lag	Lag	Lag	Lag		Lead	Lead	Lead
Lead-Lag Optimize?			Yes	Yes					Yes	Yes	Yes
Recall Mode	None	None	None	None	C-Max	C-Max	None		None	C-Max	None
Act Effect Green (s)	15,0	15,0	15,0	15,0	44,1	44,1	57,6				
Actuated g/C Ratio	0,17	0,17	0,17	0,17	0,49	0,49	0,64				
v/c Ratio	0,78	0,78	0,70	0,70	0,39	0,39	0,51				
Control Delay (s/veh)	66,7	66,7	33,0	33,0	16,9	16,9	13,4				
Queue Delay (s/veh)	0,0	0,0	0,0	0,0	0,0	0,0	0,0				
Total Delay (s/veh)	66,7	66,7	33,0	33,0	16,9	16,9	13,4				
LOS	E	E	C	C	B	B	B				
Approach Delay (s/veh)	66,7	66,7	33,0	33,0	16,9	16,9	13,4				
Approach LOS	E	E	C	C	B	B	B				
Queue Length 50th (m)	15,5	15,5	17,4	17,4	30,2	30,2	41,3				
Queue Length 95th (m)	35,1	35,1	30,5	30,5	48,7	48,7	65,8				
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)	200	200	335	335	1403	1403	1528				
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	0,59	0,59	0,57	0,57	0,39	0,39	0,50				
<b>Intersection Summary</b>											
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: 0,78											
Intersection Signal Delay (s/veh): 20,7											
Intersection Capacity Utilization 73,3%											
Analysis Period (min) 15											
Intersection LOS: C											

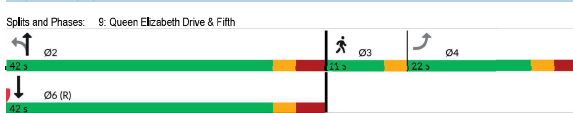


2028 Sunday Interim PM Peak Hour  
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4: Bank & Wiltton

Int Delay, s/veh	4,8
<b>Movement</b>	EBL EBR NBL NBT SBT SBR
Lane Configurations	↔ ↔ ↔ ↔
Traffic Vol vveh/h	5 152 107 540 491 60
Future Vol vveh/h	5 152 107 540 491 60
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	6 169 119 600 546 67
<b>Minor Lane/Major Mvmt</b>	Minor2 Major1 Major2
Conflicting Flow All	1295 757 790 0 - 0
Stage 1	757 - - - - -
Stage 2	538 - - - - -
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 - - -
Rot Cap-1 Maneuver	183 400 812 - - -
Stage 1	455 - - - - -
Stage 2	544 - - - - -
Platoon blocked, %	- - - - -
Mov Cap-1 Maneuver	84 325 859 - - -
Mov Cap-2 Maneuver	84 - - - - -
Stage 1	290 - - - - -
Stage 2	441 - - - - -
<b>Approach</b>	EB NB SB
HCM Ctrl Dly, s/v	27,46 3,44 0
HCM LOS	D - -
<b>Minor Lane/Major Mvmt</b>	NBL NBT EBLN1 SBT SBR
Capacity (veh/h)	549 - - 325 - -
HCM Lane V/C Ratio	0,18 - - 0,52 - -
HCM Ctrl Dly (s/v)	11,7 1,8 27,5 - -
HCM Lane LOS	B A D - -
HCM 95th %ile Q(veh)	0,7 - - 2,8 - -

2028 Sunday Interim PM Peak Hour  
01/10/2025  
9: Queen Elizabeth Drive & Fifth

Lane Group	EBL	NBL	NBT	SBT	Ø3
Lane Configurations	↔		↔		
Traffic Volume (vph)	12	215	19	22	
Future Volume (vph)	12	215	19	22	
Lane Group Flow (vph)	182	0	260	53	
Turn Type	Perm	Perm	NA	NA	
Protected Phases			2	6	3
Permitted Phases	4	2	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%	56,0%	56,0%	56,0%	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	0,0
Lost Time Adjust (s)	0,0	0,0	0,0	0,0	0,0
Total Lost Time (s)	5,7	6,8	6,8	6,8	
Lead/Lag	Lag	Lag	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes
Recall Mode	Min	None	None	C-Max	None
Act Effect Green (s)	14,6	47,9	47,9		
Actuated g/C Ratio	0,19	0,64	0,64		
v/c Ratio	0,64	0,34	0,05		
Control Delay (s/veh)	37,4	8,7	6,4		
Queue Delay (s/veh)	0,0	0,0	0,0		
Total Delay (s/veh)	37,4	8,7	6,4		
LOS	D	A	A		
Approach Delay (s/veh)	37,4	8,7	6,4		
Approach LOS	D	A	A		
Queue Length 50th (m)	24,0	14,7	2,4		
Queue Length 95th (m)	38,4	33,7	7,4		
Internal Link Dist (m)	57,2	0,1	5,9		
Turn Bay Length (m)					
Base Capacity (vph)	335	759	996		
Starvation Cap Reductn	0	0	0		
Spillback Cap Reductn	0	0	0		
Storage Cap Reductn	0	0	0		
Reduced v/c Ratio	0,54	0,34	0,05		
<b>Intersection Summary</b>					
Cycle Length: 75					
Actuated Cycle Length: 75					
Offset: 0 (0%), Referenced to phase 6:SBT, Start of Green					
Natural Cycle: 75					
Control Type: Actuated-Coordinated					
Maximum v/c Ratio: 0,64					
Intersection Signal Delay (s/veh): 19,0					
Intersection Capacity Utilization 41,3%					
Analysis Period (min) 15					
Intersection LOS: B					



2028 Sunday Interim PM Peak Hour  
01/10/2025  
5: Bank & Echo

Int Delay, s/veh	1
<b>Movement</b>	EBL EBR NBL NBT SBT SBR
Lane Configurations	↔ ↔ ↔ ↔
Traffic Vol vveh/h	2 89 0 621 647 1
Future Vol vveh/h	2 89 0 621 647 1
Conflicting Peds, #/hr	0 0 0 0 0 88
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 77 0 690 719 1
<b>Minor Lane/Major Mvmt</b>	Minor2 Major1 Major2
Conflicting Flow All	1150 805 - 0 - 0
Stage 1	805 - - - - -
Stage 2	345 - - - - -
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 - - - -
Rot Cap-1 Maneuver	201 375 0 - - -
Stage 1	432 - 0 - - - -
Stage 2	682 - 0 - - - -
Platoon blocked, %	- - - - -
Mov Cap-1 Maneuver	166 341 - - - -
Mov Cap-2 Maneuver	166 - - - - -
Stage 1	363 - - - - -
Stage 2	620 - - - - -
<b>Approach</b>	EB NB SB
HCM Ctrl Dly, s/v	18,59 0 0
HCM LOS	C - -
<b>Minor Lane/Major Mvmt</b>	NBL NBT EBLN1 SBT SBR
Capacity (veh/h)	- 341 - - -
HCM Lane V/C Ratio	- 0,225 - - -
HCM Ctrl Dly (s/v)	- 18,6 - - -
HCM Lane LOS	- C - - -
HCM 95th %ile Q(veh)	- 0,8 - - -

Intersection						
Int Delay, s/veh						
	EBL	EBR	NBL	NDT	SDT	SBR
Int Delay, s/veh	6,4					
Movement						
Lane Configurations	↑		↑	↑	↑	↑
Traffic Vol, veh/h	106	141	82	128	86	92
Future Vol, veh/h	106	141	82	128	86	92
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	118	157	91	142	73	102
Major/Minor						
Conflicting Flow All	Minor2	Major1	Major2			
Stage 1	449	124	176	0	-	0
Stage 2	324	-	-	-	-	-
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	571	932	1413	-	-	-
Stage 1	906	-	-	-	-	-
Stage 2	737	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	531	932	1413	-	-	-
Mov Cap-2 Maneuver	531	-	-	-	-	-
Stage 1	843	-	-	-	-	-
Stage 2	737	-	-	-	-	-
Approach						
	EB	NB	SB			
HCM Chd Dly, s/v	13,34	3,02	0			
HCM LOS	B					
Minor Lane/Major Mvmt						
	NBL	NBT	EBL	EBT	SBL	SBR
Capacity (veh/h)	793	-	704	-	-	-
HCM Lane V/C Ratio	0,084	-	0,36	-	-	-
HCM Chd Dly (s/v)	7,7	0	13,3	-	-	-
HCM Lane LOS	A	A	B	-	-	-
HCM 95th %ile Q(veh)	0,2	-	1,8	-	-	-

Intersection						
Int Delay, s/veh						
	WBL	WBR	NDT	NBR	SBL	SDT
Int Delay, s/veh	2					
Movement						
Lane Configurations	↑	↑	↑	↑	↑	↑
Traffic Vol, veh/h	7	159	461	19	0	582
Future Vol, veh/h	7	159	461	19	0	582
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	177	512	21	0	647
Major/Minor						
Conflicting Flow All	Minor1	Major1	Major2			
Stage 1	946	367	0	0	-	-
Stage 2	623	-	-	-	-	-
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	263	594	-	0	-	-
Stage 1	503	-	-	0	-	-
Stage 2	712	-	-	0	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	236	531	-	-	-	-
Mov Cap-2 Maneuver	236	-	-	-	-	-
Stage 1	450	-	-	-	-	-
Stage 2	712	-	-	-	-	-
Approach						
	WB	NB	SB			
HCM Chd Dly, s/v	15,11	0	0			
HCM LOS	C					
Minor Lane/Major Mvmt						
	NBT	NBR	WBL	WBR	SBL	SBR
Capacity (veh/h)	-	-	531	-	-	-
HCM Lane V/C Ratio	-	-	0,332	-	-	-
HCM Chd Dly (s/v)	-	-	15,1	-	-	-
HCM Lane LOS	-	-	C	-	-	-
HCM 95th %ile Q(veh)	-	-	1,4	-	-	-

Intersection						
Int Delay, s/veh						
	EBT	EBR	WBL	WBT	NBL	NBR
Int Delay, s/veh	0					
Movement						
Lane Configurations	↑		↑	↑	↑	↑
Traffic Vol, veh/h	250	0	0	164	0	0
Future Vol, veh/h	250	0	0	164	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	278	0	0	182	0	0
Major/Minor						
Conflicting Flow All	Minor1	Major2	Minor1			
Stage 1	0	0	378	0	660	478
Stage 2	-	-	-	-	378	-
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	-	-	1181	-	428	586
Stage 1	-	-	-	-	693	-
Stage 2	-	-	-	-	766	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1056	-	342	470
Mov Cap-2 Maneuver	-	-	-	-	342	-
Stage 1	-	-	-	-	620	-
Stage 2	-	-	-	-	695	-
Approach						
	EB	WB	NB			
HCM Chd Dly, s/v	0	0	0			
HCM LOS			A			
Minor Lane/Major Mvmt						
	NBL	NBT	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	-	1056	-
HCM Lane V/C Ratio	-	-	-	-	-	-
HCM Chd Dly (s/v)	0	-	-	-	0	-
HCM Lane LOS	A	-	-	-	A	-
HCM 95th %ile Q(veh)	-	-	-	-	0	-

Intersection						
Int Delay, s/veh						
	EBT	EBR	WBT	WBR	SBL	SBR
Int Delay, s/veh	8,9					
Movement						
Lane Configurations	↑	↑	↑	↑	↑	↑
Traffic Vol, veh/h	110	51	54	121	188	67
Future Vol, veh/h	110	51	54	121	188	67
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	122	57	60	134	220	74
Major/Minor						
Conflicting Flow All	Minor1	Major2	Minor2			
Stage 1	164	0	-	0	428	127
Stage 2	-	-	-	-	127	-
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	1379	-	-	-	853	923
Stage 1	-	-	-	-	859	-
Stage 2	-	-	-	-	751	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	1379	-	-	-	530	923
Mov Cap-2 Maneuver	-	-	-	-	530	-
Stage 1	-	-	-	-	816	-
Stage 2	-	-	-	-	751	-
Approach						
	EB	WB	NB			
HCM Chd Dly, s/v	5,37	0	16,87			
HCM LOS			C			
Minor Lane/Major Mvmt						
	EBL	EBT	WBT	WBR	SBL	SBR
Capacity (veh/h)	1230	-	-	-	594	-
HCM Lane V/C Ratio	0,089	-	-	-	0,498	-
HCM Chd Dly (s/v)	7,9	0	-	-	16,9	-
HCM Lane LOS	A	A	-	-	C	-
HCM 95th %ile Q(veh)	0,3	-	-	-	2,7	-

## **2028 – MINOR EVENT INGRESS**

2028 Minor Event Ingress  
01/10/2025

12: Exhibition & Paul Askin

Intersection						
Intersection Delay s/veh	10,4					
Intersection LOS	B					
Movement						
	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↓		↑	↓
Traffic Vol. veh/h	321	0	0	0	0	186
Future Vol. veh/h	321	0	0	0	0	186
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	357	0	0	0	0	207
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	11,4	0		8,6		
HCM LOS	B	-		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	321	0	186			
LT Vol	321	0	0			
Through Vol	0	0	0			
RT Vol	0	0	186			
Lane Flow Rate	357	0	207			
Geometry Grp	1	1	1			
Degree of Util (X)	0,457	0	0,241			
Departure Headway (Hd)	4,909	4,786	4,204			
Convergence, Y/N	Yes	Yes	Yes			
Cap	785	0	854			
Service Time	2,809	2,837	2,228			
HCM Lane V/C Ratio	0,455	0	0,242			
HCM Control Delay, s/veh	11,4	7,8	8,6			
HCM Lane LOS	B	N	A			
HCM 95thile Q	2,4	0	0,8			

2028 Minor Event Ingress  
01/10/2025

13: Paul Askin & Marche

Intersection						
Intersection Delay s/veh	10,3					
Intersection LOS	B					
Movement						
	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations		↓		↑	↓	↑
Traffic Vol. veh/h	21	0	145	81	114	197
Future Vol. veh/h	21	0	145	81	114	197
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	0	161	90	127	219
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	8,3	10,4		10,4		
HCM LOS	A	B		B		
Lane						
	NBLn1	EBLn1	WBLn1			
Vol Left, %	37%	0%	64%			
Vol Thru, %	0%	100%	30%			
Vol Right, %	63%	0%	0%			
Sign Control	Stop	Stop	Stop			
Traffic Vol by Lane	311	21	226			
LT Vol	114	0	145			
Through Vol	0	21	81			
RT Vol	197	0	0			
Lane Flow Rate	346	23	251			
Geometry Grp	1	1	1			
Degree of Util (X)	0,414	0,033	0,34			
Departure Headway (Hd)	4,316	5,039	4,672			
Convergence, Y/N	Yes	Yes	Yes			
Cap	633	707	736			
Service Time	2,346	3,094	2,913			
HCM Lane V/C Ratio	0,415	0,033	0,341			
HCM Control Delay, s/veh	10,4	8,3	10,4			
HCM Lane LOS	B	A	B			
HCM 95thile Q	2,1	0,1	1,5			

2028 Minor Event Ingress  
01/10/2025

14: Exhibition & Marche

Intersection						
Intersection Delay s/veh	8,4					
Intersection LOS	A					
Movement						
	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations		↓		↑	↓	↑
Traffic Vol. veh/h	126	0	0	225	0	0
Future Vol. veh/h	126	0	0	225	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	140	0	0	250	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	8	8,6		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	126	225			
LT Vol	0	0	0			
Through Vol	0	126	225			
RT Vol	0	0	0			
Lane Flow Rate	0	140	250			
Geometry Grp	1	1	1			
Degree of Util (X)	0	0,16	0,28			
Departure Headway (Hd)	4,763	4,119	4,037			
Convergence, Y/N	Yes	Yes	Yes			
Cap	0	867	890			
Service Time	2,763	2,167	2,067			
HCM Lane V/C Ratio	0	0,161	0,281			
HCM Control Delay, s/veh	7,8	8	8,6			
HCM Lane LOS	N	A	A			
HCM 95thile Q	0	0,6	1,2			

2028 Minor Event Ingress  
01/10/2025

37: O' Connor & Fifth

Intersection						
Intersection Delay s/veh	8,3					
Intersection LOS	A					
Movement						
	EBL	EBT	EBR	WBL	WBT	WBR
Lane Configurations		↑	↓		↑	↓
Traffic Vol. veh/h	61	51	0	0	0	139
Future Vol. veh/h	61	51	0	0	0	139
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	68	57	0	0	0	154
Number of Lanes	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
Conflicting Lanes Left	1	1		1		1
Conflicting Approach Right		NB		WB		EB
Conflicting Lanes Right	1	0		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	782	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 95thile Q	0,7	0,6	0,6	0,4		

2028 Minor Event Ingress  
01/10/2025

1: Bank & Fifth

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	52	58	74	46	16	479	28	548
Future Volume (vph)	52	58	74	46	16	479	28	548
Lane Group Flow (vph)	0	159	82	119	0	593	0	665
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)	13.6	13.6	13.6		50.4		50.4	
Actuated g/C Ratio	0.19	0.18	0.18		0.67		0.67	
w/c Ratio	0.67	0.47	0.40		0.32		0.36	
Control Delay (s/veh)	37.6	34.7	16.0		5.8		6.7	
Queue Delay (s/veh)	0.0	0.0	0.0		0.0		0.0	
Total Delay (s/veh)	37.6	34.7	16.0		5.8		6.7	
LOS	D	C	B		A		A	
Approach Delay (s/veh)	37.6		23.6		5.8		6.7	
Approach LOS	D		C		A		A	
Queue Length 50th (m)	16.4	10.5	6.2		13.8		17.8	
Queue Length 95th (m)	33.3	20.9	11.6		28.2		34.5	
Internal Link Dist (m)	49.7		112.4		195.6		190.0	
Turn Bay Length (m)			45.0					
Base Capacity (vph)	349	263	418		1852		1660	
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 w/c Ratio	0.46	0.31	0.26		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 w/c Ratio: 0.67	
Intersection Signal Delay (s/veh): 11.5	Intersection LOS: B
Intersection Capacity Utilization: 62.8%	ICU Level of Service: B
Analysis Period (min): 15	

Splits and Phases: 1: Bank & Fifth



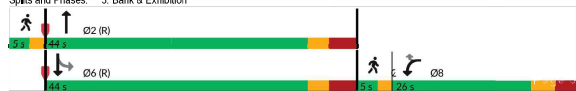
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3: Bank & Exhibition

Lane Group	WBL	WBR	NBL	SBL	SBT	01	07
Lane Configurations							
Traffic Volume (vph)	104	72	425	145	423		
Future Volume (vph)	104	72	425	145	423		
Lane Group Flow (vph)	116	80	656	161	470		
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	44.0	44.0	44.0	5.0	5.0
Total Split (s)	26.0	26.0	44.0	44.0	44.0	5.0	5.0
Total Split (%)	32.5%	32.5%	55.0%	55.0%	55.0%	6%	6%
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		
Total Lost Time (s)	6.3	6.3	6.9	6.9	6.9		
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	None	None	C-Max	C-Max	C-Max	None	None
Act Effct Green (s)	12.1	12.1	59.3	59.3	59.3		
Actuated g/C Ratio	0.15	0.15	0.74	0.74	0.74		
w/c Ratio	0.50	0.35	0.33	0.36	0.20		
Control Delay (s/veh)	38.3	11.6	4.8	9.3	4.8		
Queue Delay (s/veh)	0.0	0.0	0.0	0.0	0.0		
Total Delay (s/veh)	38.3	11.6	4.8	9.3	4.8		
LOS	D	B	A	A	A		
Approach Delay (s/veh)	27.4		4.8		6.0		
Approach LOS	C		A		A		
Queue Length 50th (m)	16.6	0.0	14.5	8.8	11.4		
Queue Length 95th (m)	30.1	10.7	27.3	25.1	20.6		
Internal Link Dist (m)	39.6		33.7		44.8		
Turn Bay Length (m)				40.0			
Base Capacity (vph)	379	326	1996	427	2330		
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 w/c Ratio	0.31	0.25	0.33	0.38	0.20		

Intersection Summary	
Cycle Length: 80	Actuated Cycle Length: 80
Offset: 0 (0%), Referenced to phase 2/NBT and 6/SBTL, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum w/c Ratio: 0.50	
Intersection Signal Delay (s/veh): 8.3	Intersection LOS: A
Intersection Capacity Utilization: 61.1%	ICU Level of Service: B
Analysis Period (min): 15	

Splits and Phases: 3: Bank & Exhibition



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2: Bank & Holmwood

Lane Group	EBL	NBL	NBT	SBL	SBT	03
Lane Configurations						
Traffic Volume (vph)	26	52	490	24	544	
Future Volume (vph)	26	52	490	24	544	
Lane Group Flow (vph)	117	0	688	0	669	
Turn Type	NA	Perm	NA	Perm	NA	
Protected Phases	4		2		6	3
Permitted Phases	4	2		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)	2.0	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)	5.8	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 Effct Green (s)	11.7	56.0		56.0		
Actuated g/C Ratio	0.16	0.75		0.75		
w/c Ratio	0.56	0.38		0.33		
Control Delay (s/veh)	38.5	5.5		3.2		
Queue Delay (s/veh)	0.0	0.0		0.0		
Total Delay (s/veh)	38.5	5.5		3.2		
LOS	D	A		A		
Approach Delay (s/veh)	38.5	5.5		3.2		
Approach LOS	D	A		A		
Queue Length 50th (m)	15.5	16.4		12.4		
Queue Length 95th (m)	28.3	32.3		16.2		
Internal Link Dist (m)	38.8	31.5		195.6		
Turn Bay Length (m)						
Base Capacity (vph)	296	1787		2036		
Starvation Cap Reductn	0	0		0		
Spillback Cap Reductn	0	0		0		
Storage Cap Reductn	0	0		0		
Reduced w/c Ratio	0.40	0.38		0.33		

Intersection Summary	
Cycle Length: 75	Actuated Cycle Length: 75
Offset: 60 (80%), Referenced to phase 2/NBTL and 6/SBTL, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum w/c Ratio: 0.56	
Intersection Signal Delay (s/veh): 7.1	Intersection LOS: A
Intersection Capacity Utilization: 66.5%	ICU Level of Service: C
Analysis Period (min): 15	

Splits and Phases: 2: Bank & Holmwood



2028 Minor Event Ingress  
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6: Bank & Aylmer

Lane Group	EBL	NBL	NBT	SBL	SBT	03
Lane Configurations						
Traffic Volume (vph)	72	19	687	511		
Future Volume (vph)	72	19	687	511		
Lane Group Flow (vph)	88	0	784	651		
Turn Type	Prot	Perm	NA	NA		
Protected Phases	4		2		6	3
Permitted Phases	4	2			6	
Detector Phase	4	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						
Lead-Lag Optimize?						
Recall Mode	Ped	C-Max	C-Max	C-Max	C-Max	Max
Act Effct Green (s)	14.1	60.2		60.2		
Actuated g/C Ratio	0.16	0.67		0.67		
w/c Ratio	0.39	0.40		0.34		
Control Delay (s/veh)	36.7	5.4		6.5		
Queue Delay (s/veh)	0.0	0.0		0.0		
Total Delay (s/veh)	36.7	5.4		6.5		
LOS	D	A		A		
Approach Delay (s/veh)	36.7	5.4		6.5		
Approach LOS	D	A		A		
Queue Length 50th (m)	13.0	20.0		20.6		
Queue Length 95th (m)	26.0	23.8		28.5		
Internal Link Dist (m)	76.7	28.1		10.1		
Turn Bay Length (m)						
Base Capacity (vph)	283	1944		1940		
Starvation Cap Reductn	0	0		0		
Spillback Cap Reductn	0	0		0		
Storage Cap Reductn	0	0</				

2028 Minor Event Ingress  
01/10/2025

7: Bank & Sunnyside

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	Ø3	Ø7
Lane Configurations	↔		↔		↔		↔			
Traffic Volume (vph)	57	52	18	59	20	473	108	540		
Future Volume (vph)	57	52	18	59	20	473	108	540		
Lane Group Flow (vph)	0	151	0	287	0	568	0	791		
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	43.0	5.0	5.0
Total Split (%)	27.8%	27.8%	27.8%	27.8%	47.8%	47.8%	18.9%	47.8%	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)	2.8	2.5	2.8	2.8	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)	5.8	5.8	5.8	5.8	6.0	6.0				
Lead/Lag	Lag	Lag	Lag	Lag	Lag	Lag	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 Effect Green (s)	21.1	21.1	21.1	21.1	57.3	57.3		57.3		
Actuated g/C Ratio	0.23	0.23	0.23	0.23	0.64	0.64		0.64		
v/c Ratio	0.71	0.71	0.76	0.76	0.32	0.32		0.56		
Control Delay (s/veh)	49.5	49.5	33.3	33.3	8.5	8.5		8.2		
Queue Delay (s/veh)	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		8.2		
LOS	D	D	C	C	A	A		A		
Approach Delay (s/veh)	49.5	49.5	33.3	33.3	8.5	8.5		8.2		
Approach LOS	D	D	C	C	A	A		A		
Queue Length 50th (m)	23.1	23.1	24.8	24.8	22.7	22.7		40.8		
Queue Length 95th (m)	#44.5	#44.5	#53.8	#53.8	32.7	32.7		58.8		
Internal Link Dist (m)	75.1	75.1	138.0	138.0	63.1	63.1		79.0		
Turn Bay Length (m)										
Base Capacity (vph)	225	225	384	384	1799	1799		1405		
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	0.67	0.67	0.73	0.73	0.32	0.32		0.56		

2028 Minor Event Ingress  
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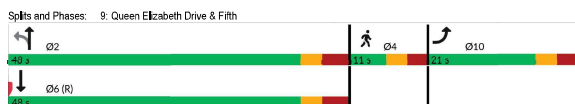
7: Bank & Sunnyside

Splits and Phases	7: Bank & Sunnyside
Ø2 (R)	43 s
Ø4	26 s
Ø6 (R)	43 s
Ø8	26 s
Ø1	37 s

2028 Minor Event Ingress  
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9: Queen Elizabeth Drive & Fifth

Lane Group	EBL	NBL	NBT	SBT	Ø4
Lane Configurations	↔		↔		↔
Traffic Volume (vph)	51	66	227	537	
Future Volume (vph)	51	66	227	537	
Lane Group Flow (vph)	120	0	325	694	
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 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?	Yes	Yes	Yes	Yes	Yes
Recall Mode	Min	None	None	C-Max	None
Act Effect Green (s)	12.2	55.3	55.3		
Actuated g/C Ratio	0.15	0.89	0.89		
v/c Ratio	0.51	0.36	0.61		
Control Delay (s/veh)	38.6	7.0	10.0		
Queue Delay (s/veh)	0.0	0.0	0.0		
Total Delay (s/veh)	38.6	7.0	10.0		
LOS	D	A	B		
Approach Delay (s/veh)	38.6	7.0	10.0		
Approach LOS	D	A	B		
Queue Length 50th (m)	17.2	16.5	45.5		
Queue Length 95th (m)	30.9	35.8	91.7		
Internal Link Dist (m)	57.2	0.1	5.9		
Turn Bay Length (m)					
Base Capacity (vph)	296	894	1142		
Starvation Cap Reductn	0	0	0		
Spillback Cap Reductn	0	0	0		
Storage Cap Reductn	0	0	0		
Reduced v/c Ratio	0.41	0.36	0.61		



2028 Minor Event Ingress  
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4: Bank & Wilton

Intersection		EBL	EBR	NBL	NBT	SBT	SBR
Int Delay, s/veh	12.7						
Lane Configurations		↔		↔		↔	
Traffic Vol, veh/h	5	288	143	648	477	55	
Future Vol, veh/h	5	288	143	648	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	-	-	-	-	
Vel 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	0	-	0	
Stage 1	738	-	-	-	-	-	
Stage 2	678	-	-	-	-	-	
Critical Hwy	6,675	6,275	4,175	-	-	-	
Critical Hwy Stg 1	5,475	-	-	-	-	-	
Critical Hwy Stg 2	5,875	-	-	-	-	-	
Follow-up Hwy	3,5475	3,3475	2,2475	-	-	-	
Flt 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 Ctrl Dly, s/v	62.12	4.2	0				
HCM LOS	F						
Minor Lane/Mejor Mvmt	NBL	NBT	EBLn1	SBT	SBR		
Capacity (veh/h)	537	-	333	-	-		
HCM Lane V/C Ratio	0.237	-	0.894	-	-		
HCM Ctrl Dly (s/v)	12	2.5	62.1	-	-		
HCM Lane LOS	B	A	F	-	-		
HCM 95th %ile Q(veh)	0.9	-	8.8	-	-		

2028 Minor Event Ingress  
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5: Bank & Echo

Intersection						
Int Delay, s/veh	0,4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↑	↑↑	↑↑	↑	
Traffic Vol. veh/h	4	37	0	777	753	0
Future Vol. veh/h	4	37	0	777	753	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	4	41	0	863	837	0
Major/Minor						
Conflicting Flow All	Minor2	Major1	Major2			
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	3,5473	3,3475	-	-	-	-
Pot Cap-1 Maneuver	189	360	0	-	-	0
Stage 1	417	-	0	-	-	0
Stage 2	616	-	0	-	-	0
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	189	360	-	-	-	-
Mov Cap-2 Maneuver	189	-	-	-	-	-
Stage 1	417	-	-	-	-	-
Stage 2	616	-	-	-	-	-
Approach						
EB	NB	SB				
HCM Chd Dly, s/v	16,29	0	0			
HCM LOS	C					
Minor Lane/Major Mvmt						
Capacity (veh/h)	NBL	EBL1	SBT			
HCM Lane V/C Ratio	- 0,114	-	-			
HCM Chd Dly (s/v)	- 18,3	-	-			
HCM Lane LOS	- C	-	-			
HCM 95th %ile Q(veh)	- 0,4	-	-			

2028 Minor Event Ingress  
01/10/2025

8: Queen Elizabeth Driveway /Queen Elizabeth Driveway & Princess Patricia Way

Intersection						
Int Delay, s/veh	4,8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↑	↑	↑	↑	↑	↑
Traffic Vol. veh/h	79	59	120	217	326	275
Future Vol. veh/h	79	59	120	217	326	275
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	88	66	133	241	362	308
Major/Minor						
Conflicting Flow All	Minor2	Major1	Major2			
Stage 1	515	-	-	-	-	-
Stage 2	508	-	-	-	-	-
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	263	564	832	-	-	-
Stage 1	604	-	-	-	-	-
Stage 2	608	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	220	564	832	-	-	-
Mov Cap-2 Maneuver	220	-	-	-	-	-
Stage 1	504	-	-	-	-	-
Stage 2	608	-	-	-	-	-
Approach						
EB	NB	SB				
HCM Chd Dly, s/v	29,29	3,39	0			
HCM LOS	D					
Minor Lane/Major Mvmt						
Capacity (veh/h)	NBL	NBT	EBL1	SBT	SBR	
HCM Lane V/C Ratio	0,143	-	0,296	-	-	-
HCM Chd Dly (s/v)	8,5	0	29,3	-	-	-
HCM Lane LOS	A	A	D	-	-	-
HCM 95th %ile Q(veh)	0,5	-	2,8	-	-	-

2028 Minor Event Ingress  
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10: Bank & Marche

Intersection						
Int Delay, s/veh	0,6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↑	↑	↑	↑	↑	↑
Traffic Vol. veh/h	0	53	508	19	2	559
Future Vol. veh/h	0	53	508	19	2	559
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	564	21	2	621
Major/Minor						
Conflicting Flow All	Minor1	Major1	Major2			
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	571	-	917	-	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	- 510	-	-	820	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach						
WB	NB	SB				
HCM Chd Dly, s/v	12,97	0	0,03			
HCM LOS	B					
Minor Lane/Major Mvmt						
Capacity (veh/h)	NBL	NBR	WBL1	SBL	SBT	
HCM Lane V/C Ratio	-	-	0,115	0,003	-	-
HCM Chd Dly (s/v)	-	-	13	8,4	-	-
HCM Lane LOS	-	-	B	A	-	-
HCM 95th %ile Q(veh)	-	-	0,4	0	-	-

2028 Minor Event Ingress  
01/10/2025

11: Garage & Exhibition

Intersection						
Int Delay, s/veh	0					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↑	↑	↑	↑	↑
Traffic Vol. veh/h	316	0	0	176	0	0
Future Vol. veh/h	316	0	0	176	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	-	-	-	-	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	351	0	0	196	0	0
Major/Minor						
Conflicting Flow All	Major1	Major2	Minor1			
Stage 1	-	-	-	-	451	-
Stage 2	-	-	-	-	266	-
Critical Hdwy	-	-	4,12	-	8,42	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	-	-	1109	-	381	334
Stage 1	-	-	-	-	642	-
Stage 2	-	-	-	-	755	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	992	-	304	427
Mov Cap-2 Maneuver	-	-	-	-	304	-
Stage 1	-	-	-	-	574	-
Stage 2	-	-	-	-	675	-
Approach						
EB	WB	NB				
HCM Chd Dly, s/v	0	0	0			
HCM LOS						
Minor Lane/Major Mvmt						
Capacity (veh/h)	NBL1	EBT	EBR	WBL	WBT	
HCM Lane V/C Ratio	-	-	-	-	-	-
HCM Chd Dly (s/v)	0	-	-	0	-	-
HCM Lane LOS	A	-	-	A	-	-
HCM 95th %ile Q(veh)	-	-	-	0	-	-

2028 Minor Event Ingress

17: Princess Patricia/Princess Patricia Way & Garage

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Intersection						
Int Delay, s/veh	5,3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	4	1	1	1	4	1
Traffic Vol, veh/h	99	27	155	236	111	69
Future Vol, veh/h	99	27	155	236	111	69
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	110	30	173	266	123	77
Major/Minor						
	Major1	Major2	Minor2			
Conflicting Flow All	439	0	0	556	306	
Stage 1	-	-	-	306	-	
Stage 2	-	-	-	250	-	
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	1121	-	-	492	734	
Stage 1	-	-	-	747	-	
Stage 2	-	-	-	792	-	
Platoon blocked, %	-	-	-	-	-	
Mov Cap-1 Maneuver	1121	-	-	443	734	
Mov Cap-2 Maneuver	-	-	-	443	-	
Stage 1	-	-	-	672	-	
Stage 2	-	-	-	792	-	
Approach						
	EB	WB	SB			
HCM Chl Dly, s/v	6,73	0	16,11			
HCM LOS			C			
Minor Lane/Major Mvmt						
	EBL	EBT	WBT	WBR	SBL	SBR
Capacity (veh/h)	1102	-	-	-	522	-
HCM Lane V/C Ratio	0,099	-	-	-	0,383	-
HCM Chl Dly (s/v)	8,6	0	-	-	16,1	-
HCM Lane LOS	A	A	-	-	C	-
HCM 95th %ile Q(veh)	0,3	-	-	-	1,8	-

## **2028 – MINOR EVENT EGRESS**

12: Exhibition & Paul Askin

Intersection	
Intersection Delay, s/veh	10
Intersection LOS	A

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↓		↓	↑
Traffic Vol, veh/h	196	0	0	0	0	368
Future Vol, veh/h	196	0	0	0	0	368
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	216	0	0	0	0	409
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	10,1	0	10			
HCM LOS	B	-	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	196	0	368
LT Vol	196	0	0
Through Vol	0	0	0
RT Vol	0	0	368
Lane Flow Rate	216	0	409
Geometry Grp	1	1	1
Degree of Util (X)	0,3	0	0,444
Departure Headway (Hd)	4,963	5,063	3,907
Convergence, Y/N	Yes	Yes	Yes
Cap	723	0	924
Service Time	3,009	3,117	1,921
HCM Lane V/C Ratio	0,302	0	0,443
HCM Control Delay, s/veh	10,1	8,1	10
HCM Lane LOS	B	N	A
HCM 95th-ile Q	1,3	0	2,3

13: Paul Askin & Marche

Intersection	
Intersection Delay, s/veh	8,8
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations		↓		↑	↓	↑
Traffic Vol, veh/h	29	0	127	39	98	98
Future Vol, veh/h	29	0	127	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	32	0	141	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	7,9	9,1	8,7			
HCM LOS	A	A	A			

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	50%	0%	77%
Vol Thru, %	0%	100%	23%
Vol Right, %	50%	0%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	196	29	166
LT Vol	98	0	127
Through Vol	0	29	39
RT Vol	98	0	0
Lane Flow Rate	218	32	184
Geometry Grp	1	1	1
Degree of Util (X)	0,257	0,042	0,236
Departure Headway (Hd)	4,254	4,639	4,615
Convergence, Y/N	Yes	Yes	Yes
Cap	847	772	780
Service Time	2,269	2,683	2,634
HCM Lane V/C Ratio	0,257	0,041	0,236
HCM Control Delay, s/veh	8,7	7,9	8,1
HCM Lane LOS	A	A	A
HCM 95th-ile Q	1	0,1	0,9

14: Exhibition & Marche

Intersection	
Intersection Delay, s/veh	7,9
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations		↓		↑	↓	↑
Traffic Vol, veh/h	86	0	0	166	0	0
Future Vol, veh/h	86	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	96	0	0	164	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	7,6	8,1	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	86	166
LT Vol	0	0	0
Through Vol	0	86	166
RT Vol	0	0	0
Lane Flow Rate	0	96	164
Geometry Grp	1	1	1
Degree of Util (X)	0	0,108	0,205
Departure Headway (Hd)	4,53	4,011	4,005
Convergence, Y/N	Yes	Yes	Yes
Cap	0	878	898
Service Time	2,53	2,105	2,024
HCM Lane V/C Ratio	0	0,109	0,205
HCM Control Delay, s/veh	7,5	7,6	8,1
HCM Lane LOS	N	A	A
HCM 95th-ile Q	0	0,4	0,8

37: O' Connor & Fifth

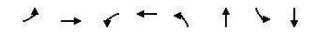
Intersection	
Intersection Delay, s/veh	7,3
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↓		↑	↓		↑	↓		↑	↓
Traffic Vol, veh/h	10	44	0	0	0	66	10	10	49	0	0	97
Future Vol, veh/h	10	44	0	0	0	66	10	10	49	0	0	97
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	49	0	0	0	73	11	11	54	0	0	108
Number of Lanes	0	1	0	0	0	1	0	1	0	0	0	1
Approach		EB	WB	NB			EB	WB	NB			SB
Opposing Approach	WB	EB	SB				WB	EB	SB			NB
Opposing Lanes	1	1	1				1	1	1			1
Conflicting Approach Left	SB		NB	EB			SB		NB	EB		WB
Conflicting Lanes Left	1		1	1			1		1	1		1
Conflicting Approach Right		NB	WB	EB				WB	EB			SB
Conflicting Lanes Right	1		1	1			1		1	1		1
HCM Control Delay, s/veh	7,7			7,1			7,3			7,1		7,1
HCM LOS	A			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	89	54	66	97
LT Vol	10	10	0	0
Through Vol	10	44	0	0
RT Vol	49	0	66	97
Lane Flow Rate	77	60	73	108
Geometry Grp	1	1	1	1
Degree of Util (X)	0,082	0,072	0,075	0,108
Departure Headway (Hd)	3,85	4,347	3,897	3,622
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	920	818	957	878
Service Time	1,917	2,407	1,765	1,69
HCM Lane V/C Ratio	0,084	0,073	0,076	0,11
HCM Control Delay, s/veh	7,3	7,7	7,1	7,1
HCM Lane LOS	A	A	A	A
HCM 95th-ile Q	0,3	0,2	0,2	0,4

2028 Minor Event Egress  
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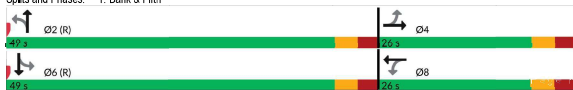
1: Bank & Fifth



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↔		↔		↔		↔	
Traffic Volume (vph)	42	9	58	25	16	441	21	350
Future Volume (vph)	42	9	58	25	16	441	21	350
Lane Group Flow (vph)	0		86		64		520	
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		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?	-		-		-		-	
Recall Mode	None		None		C-Max		C-Max	
Act Effect Green (s)	10.0		10.0		57.3		57.3	
Actuated g/C Ratio	0.13		0.13		0.76		0.76	
v/c Ratio	0.50		0.40		0.24		0.21	
Control Delay (s/veh)	30.7		35.9		18.8		3.7	
Queue Delay (s/veh)	0.0		0.0		0.0		0.0	
Total Delay (s/veh)	30.7		35.9		18.8		3.7	
LOS	C		D		B		A	
Approach Delay (s/veh)	30.7		27.4		3.7		3.9	
Approach LOS	C		C		A		A	
Queue Length 50th (m)	7.5		8.5		3.6		9.4	
Queue Length 95th (m)	19.1		18.1		12.9		18.3	
Internal Link Dist (m)	49.7		112.4		195.6		190.0	
Turn Bay Length (m)			45.0					
Base Capacity (vph)	324		330		396		2183	
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	0.27		0.19		0.16		0.24	


**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: 0.50  
 Intersection Signal Delay (s/veh): 8.3  
 Intersection Capacity Utilization 52.9%  
 Analysis Period (min) 15  
 Intersection LOS: A  
 ICU Level of Service A

Splits and Phases: 1: Bank & Fifth



2028 Minor Event Egress  
01/10/2025

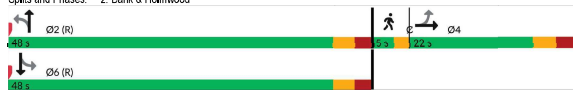
2: Bank & Holmwood



Lane Group	EBT	NBL	NBT	SBL	SBT	Ø3
Lane Configurations	↔		↔		↔	
Traffic Volume (vph)	7	54	439	22	321	
Future Volume (vph)	7	54	439	22	321	
Lane Group Flow (vph)	86	0	575	0	421	
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		49.0		48.0	
Total Split (s)	22.0		49.0		48.0	
Total Split (%)	29.3%		64.0%		64.0%	
Yellow Time (s)	3.0		3.0		3.0	
All-Red Time (s)	2.8		2.2		2.2	
Lost Time Adjust (s)	0.0		0.0		0.0	
Total Lost Time (s)	5.8		5.2		5.2	
Lead/Lag	-		-		-	
Lead-Lag Optimize?	-		-		-	
Recall Mode	None		C-Max		C-Max	
Act Effect Green (s)	10.2		57.3		57.3	
Actuated g/C Ratio	0.14		0.76		0.76	
v/c Ratio	0.48		0.29		0.21	
Control Delay (s/veh)	38.1		4.4		2.9	
Queue Delay (s/veh)	0.0		0.0		0.0	
Total Delay (s/veh)	38.1		4.4		2.9	
LOS	D		A		A	
Approach Delay (s/veh)	38.1		4.4		2.9	
Approach LOS	D		A		A	
Queue Length 50th (m)	11.4		12.0		8.1	
Queue Length 95th (m)	22.9		23.2		11.9	
Internal Link Dist (m)	39.8		31.5		195.6	
Turn Bay Length (m)			287		1953	
Base Capacity (vph)	287		1953		2036	
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		0.21	


**Intersection Summary**  
 Cycle Length: 75  
 Actuated Cycle Length: 75  
 Offset: 60 (80%), Referenced to phase 2/NBTL and 6/SBTL, Start of Green  
 Natural Cycle: 75  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.48  
 Intersection Signal Delay (s/veh): 6.5  
 Intersection Capacity Utilization 57.3%  
 Analysis Period (min) 15  
 Intersection LOS: A  
 ICU Level of Service B

Splits and Phases: 2: Bank & Holmwood



2028 Minor Event Egress  
01/10/2025

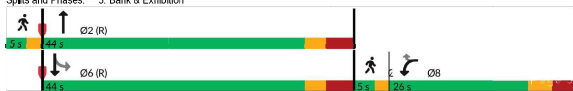
3: Bank & Exhibition



Lane Group	WBL	WBR	NBT	SBL	SBT	Ø1	Ø7
Lane Configurations	↔		↔		↔		
Traffic Volume (vph)	188	194	191	111	261		
Future Volume (vph)	188	194	191	111	261		
Lane Group Flow (vph)	187	218	301	123	290		
Turn Type	Prot	Perm	NA	Perm	NA		
Protected Phases	8		2		6		
Permitted Phases	8		2		6		
Detector Phase	8		2		6		
Switch Phase	8		2		6		
Minimum Initial (s)	10.0		10.0		10.0		
Minimum Split (s)	26.0		44.0		44.0		
Total Split (s)	26.0		44.0		44.0		
Total Split (%)	32.5%		55.0%		55.0%		
Yellow Time (s)	3.3		3.0		3.0		
All-Red Time (s)	3.0		3.9		3.9		
Lost Time Adjust (s)	0.0		0.0		0.0		
Total Lost Time (s)	6.3		6.3		6.3		
Lead/Lag	-		-		-		
Lead-Lag Optimize?	-		-		-		
Recall Mode	None		C-Max		C-Max		
Act Effect Green (s)	15.1		51.7		51.7		
Actuated g/C Ratio	0.19		0.85		0.85		
v/c Ratio	0.64		0.57		0.14		
Control Delay (s/veh)	39.9		10.4		8.9		
Queue Delay (s/veh)	0.0		0.0		0.0		
Total Delay (s/veh)	39.9		10.4		8.9		
LOS	D		B		A		
Approach Delay (s/veh)	24.1		4.7		7.1		
Approach LOS	C		A		A		
Queue Length 50th (m)	26.6		0.0		5.8		
Queue Length 95th (m)	42.7		16.4		12.8		
Internal Link Dist (m)	39.6		33.7		44.8		
Turn Bay Length (m)			40.0				
Base Capacity (vph)	383		431		1737		
Starvation Cap Reductn	0		0		0		
Spillback Cap Reductn	0		0		0		
Storage Cap Reductn	0		0		0		
Reduced v/c Ratio	0.49		0.50		0.17		


**Intersection Summary**  
 Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 0 (0%), 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): 12.6  
 Intersection Capacity Utilization 57.8%  
 Analysis Period (min) 15  
 Intersection LOS: B  
 ICU Level of Service B

Splits and Phases: 3: Bank & Exhibition



2028 Minor Event Egress  
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6: Bank & Aylmer



Lane Group	EBL	NBL	NBT	SBT	Ø3	
Lane Configurations	↔		↔			
Traffic Volume (vph)	4	1	158	182		
Future Volume (vph)	4	1	158	182		
Lane Group Flow (vph)	7	0	174	220		
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	
Lost Time Adjust (s)	0.0		0.0		0.0	
Total Lost Time (s)	5.5		5.2		5.2	
Lead/Lag	-		-		-	
Lead-Lag Optimize?	-		-		-	
Recall Mode	Ped		C-Max		C-Max	
Act Effect Green (s)	14.0		60.3		60.3	
Actuated g/C Ratio	0.16		0.87		0.87	
v/c Ratio	0.03		0.09		0.11	
Control Delay (s/veh)	27.2		4.6		5.3	
Queue Delay (s/veh)	0.0		0.0		0.0	
Total Delay (s/veh)	27.2		4.6		5.3	
LOS	C		A		A	
Approach Delay (s/veh)	27.2		4.6		5.3	
Approach LOS	C		A		A	
Queue Length 50th (m)	0.6		4.2		6.0	
Queue Length 95th (m)	4.4		6.5		8.7	
Internal Link Dist (m)	76.7		28.1		10.1	
Turn Bay Length (m)			248		2063	
Base Capacity (vph)	248		2063		2063	
Starvation Cap Reductn	0		0		0	
Spillback Cap Reductn	0		0		0	
Storage Cap Reductn	0		0		0	
Reduced v/c Ratio	0.03		0.09		0.11	

**Intersection Summary**  
 Cycle Length: 90  
 Actuated Cycle Length: 90  
 Offset: 60 (67%), Referenced to phase 2/NBTL and 6/SBT, Start of Green  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.11  
 Intersection Signal Delay (s/veh): 5.3  
 Intersection Capacity Utilization 45.6%  
 Analysis Period (min) 15  
 Intersection LOS: A  
 ICU Level of Service A

Splits and Phases: 6: Bank & Aylmer



2028 Minor Event Egress  
01/10/2025

7: Bank & Sunnyside

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	Ø3	Ø7
Lane Configurations	↔		↔		↔		↔			
Traffic Volume (vph)	29	7	5	12	12	239	34	418		
Future Volume (vph)	29	7	5	12	12	239	34	418		
Lane Group Flow (vph)	0	62	0	56	0	285	0	550		
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	43.0	5.0	5.0
Total Split (%)	27.8%	27.8%	27.8%	27.8%	47.8%	47.8%	18.9%	47.8%	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-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 Effect Green (s)	11.0	10.8	10.8	10.8	71.0	71.0	71.0	71.0		
Actuated g/C Ratio	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12		
v/c Ratio	0.52	0.33	0.33	0.33	0.12	0.26	0.26	0.26		
Control Delay (s/veh)	50.9	22.0	22.0	22.0	3.5	2.6	2.6	2.6		
Queue Delay (s/veh)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Total Delay (s/veh)	50.9	22.0	22.0	22.0	3.5	2.6	2.6	2.6		
LOS	D	C	C	C	A	A	A	A		
Approach Delay (s/veh)	50.9	22.0	22.0	22.0	3.5	2.6	2.6	2.6		
Approach LOS	D	C	C	C	A	A	A	A		
Queue Length 50th (m)	10.2	3.0	3.0	3.0	5.7	6.8	6.8	6.8		
Queue Length 95th (m)	21.4	13.0	13.0	13.0	11.6	12.4	12.4	12.4		
Internal Link Dist (m)	75.1	136.0	136.0	136.0	63.1	79.0	79.0	79.0		
Turn Bay Length (m)										
Base Capacity (vph)	212	273	273	273	2285	2114	2114	2114		
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	0.29	0.21	0.21	0.21	0.12	0.26	0.26	0.26		

Splits and Phases: 7: Bank & Sunnyside



2028 Minor Event Egress  
01/10/2025

9: Queen Elizabeth Drive & Fifth

Lane Group	EBL	NBL	NBT	SBT	Ø4
Lane Configurations	↔		↔		
Traffic Volume (vph)	84	51	274	155	
Future Volume (vph)	84	51	274	155	
Lane Group Flow (vph)	103	0	361	210	
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 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	3.6	3.6	3.6	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	6.8	
Lead/Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes
Recall Mode	Min	None	None	C-Max	None
Act Effect Green (s)	11.5	56.0	56.0	56.0	56.0
Actuated g/C Ratio	0.14	0.70	0.70	0.70	0.70
v/c Ratio	0.46	0.33	0.18	0.18	0.18
Control Delay (s/veh)	37.8	6.0	4.9	4.9	4.9
Queue Delay (s/veh)	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	37.8	6.0	4.9	4.9	4.9
LOS	D	A	A	A	A
Approach Delay (s/veh)	37.8	6.0	4.9	4.9	4.9
Approach LOS	D	A	A	A	A
Queue Length 50th (m)	14.8	17.0	5.7	5.7	5.7
Queue Length 95th (m)	27.7	34.6	13.8	13.8	13.8
Internal Link Dist (m)	57.2	0.1	5.9	5.9	5.9
Turn Bay Length (m)					
Base Capacity (vph)	298	1089	1151	1151	1151
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	0.35	0.33	0.18	0.18	0.18

Splits and Phases: 9: Queen Elizabeth Drive & Fifth



2028 Minor Event Egress  
01/10/2025

4: Bank & Wilton

Intersection	EBL	EBR	NBL	NBT	SBT	SBR
Int Delay, s/veh	3.2					
Movement	↔	↔	↔	↔	↔	↔
Lane Configurations	↔		↔		↔	
Traffic Vol, veh/h	2	111	47	280	395	67
Future Vol, veh/h	2	111	47	280	395	67
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	- 0	- 0	- 0	- 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	2	123	52	311	439	74
Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	914	654	891	0	0	0
Stage 1	654	-	-	-	-	-
Stage 2	260	-	-	-	-	-
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	-	-	-
Rot Cap-1 Maneuver	283	459	885	-	-	-
Stage 1	509	-	-	-	-	-
Stage 2	753	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	171	373	718	-	-	-
Mov Cap-2 Maneuver	171	-	-	-	-	-
Stage 1	380	-	-	-	-	-
Stage 2	611	-	-	-	-	-
Approach	EB	NB	SB			
HCM Ctrl Dly, s/v	19.37	2.03	0			
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT EBLn1	SBT	SBR		
Capacity (veh/h)	517	-	373	-	-	-
HCM Lane V/C Ratio	0.075	-	0.331	-	-	-
HCM Ctrl Dly (s/v)	10.4	0.5	19.4	-	-	-
HCM Lane LOS	B	A	C	-	-	-
HCM 95th %ile Q(veh)	0.2	-	1.4	-	-	-

2028 Minor Event Egress  
01/10/2025

5: Bank & Echo

Intersection	EBL	EBR	NBL	NBT	SBT	SBR
Int Delay, s/veh	0.2					
Movement	↔	↔	↔	↔	↔	↔
Lane Configurations	↔		↔		↔	
Traffic Vol, veh/h	2	111	0	360	325	0
Future Vol, veh/h	2	111	0	360	325	0
Conflicting Peds, #/hr	0	0	0	0	0	85
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	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	2	12	0	400	361	0
Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	561	361	-	0	0	0
Stage 1	361	-	-	-	-	-
Stage 2	200	-	-	-	-	-
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	-	-	-	-
Rot Cap-1 Maneuver	467	575	0	-	0	0
Stage 1	656	-	0	-	0	0
Stage 2	807	-	0	-	0	0
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	467	575	-	-	-	-
Mov Cap-2 Maneuver	467	-	-	-	-	-
Stage 1	696	-	-	-	-	-
Stage 2	907	-	-	-	-	-
Approach	EB	NB	SB			
HCM Ctrl Dly, s/v	10.43	0	0			
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBT EBLn1	SBT	SBR		
Capacity (veh/h)	-	875	-	-	-	-
HCM Lane V/C Ratio	-	0.018	-	-	-	-
HCM Ctrl Dly (s/v)	-	10.4	-	-	-	-
HCM Lane LOS	-	B	-	-	-	-
HCM 95th %ile Q(veh)	-	0.1	-	-	-	-

2028 Minor Event Egress

8: Queen Elizabeth Driveway /Queen Elizabeth Driveway & Princess Patricia Way 09/10/2025

Intersection						
Int Delay, s/veh	11,8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↑	↑	↑	↑	↑	↑
Traffic Vol. veh/h	279	175	17	45	125	61
Future Vol. veh/h	279	175	17	45	125	61
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	310	194	19	50	139	68
Major/Minor						
Conflicting Flow All	261	173	207	0	-	0
Stage 1	173	-	-	-	-	-
Stage 2	88	-	-	-	-	-
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	733	876	1377	-	-	-
Stage 1	862	-	-	-	-	-
Stage 2	941	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	722	876	1377	-	-	-
Mov Cap-2 Maneuver	722	-	-	-	-	-
Stage 1	850	-	-	-	-	-
Stage 2	941	-	-	-	-	-
Approach						
EB	NB	SB				
HCM Chd Dly, s/v	17,89	2,1	0			
HCM LOS	C					
Minor Lane/Major Mvmt						
NBL	NBT	EBLn1	SBT	SBR		
Capacity (veh/h)	494	-	775	-		
HCM Lane V/C Ratio	0,014	-	0,051	-		
HCM Chd Dly (s/v)	7,7	0	17,9	-		
HCM Lane LOS	A	A	C	-		
HCM 95th %ile Q(veh)	0	-	4,8	-		

2028 Minor Event Egress

10: Bank & Marche 01/10/2025

Intersection						
Int Delay, s/veh	2,2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↑	↑	↑	↑	↑	↑
Traffic Vol. veh/h	5	144	395	29	0	373
Future Vol. veh/h	5	144	395	29	0	373
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	440	32	0	414
Major/Minor						
Conflicting Flow All	763	336	0	0	-	-
Stage 1	556	-	-	-	-	-
Stage 2	207	-	-	-	-	-
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	345	823	-	0	-	-
Stage 1	544	-	-	0	-	-
Stage 2	813	-	-	0	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	308	557	-	-	-	-
Mov Cap-2 Maneuver	308	-	-	-	-	-
Stage 1	408	-	-	-	-	-
Stage 2	813	-	-	-	-	-
Approach						
WB	NB	SB				
HCM Chd Dly, s/v	14,04	0	0			
HCM LOS	B					
Minor Lane/Major Mvmt						
NBT	NBR	WBLn1	SBT			
Capacity (veh/h)	-	-	557			
HCM Lane V/C Ratio	-	-	0,287			
HCM Chd Dly (s/v)	-	-	14			
HCM Lane LOS	-	-	B			
HCM 95th %ile Q(veh)	-	-	1,2			

2028 Minor Event Egress

11: Garage & Exhibition 01/10/2025

Intersection						
Int Delay, s/veh	0					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↑	↑	↑	↑	↑
Traffic Vol. veh/h	191	0	0	368	0	0
Future Vol. veh/h	191	0	0	368	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	212	0	0	408	0	0
Major/Minor						
Conflicting Flow All	0	0	312	0	821	412
Stage 1	-	-	-	-	312	-
Stage 2	-	-	-	-	509	-
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	-	-	1249	-	344	640
Stage 1	-	-	-	-	742	-
Stage 2	-	-	-	-	604	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1116	-	275	511
Mov Cap-2 Maneuver	-	-	-	-	275	-
Stage 1	-	-	-	-	694	-
Stage 2	-	-	-	-	540	-
Approach						
EB	WB	NB				
HCM Chd Dly, s/v	0	0	0			
HCM LOS			A			
Minor Lane/Major Mvmt						
NBLn1	EBT	EBR	WBL	WBT		
Capacity (veh/h)	-	-	-	1116		
HCM Lane V/C Ratio	-	-	-	-		
HCM Chd Dly (s/v)	0	-	-	0		
HCM Lane LOS	A	-	-	A		
HCM 95th %ile Q(veh)	-	-	-	0		

2028 Minor Event Egress

17: Princess Patricia/Princess Patricia Way & Garage 01/10/2025

Intersection						
Int Delay, s/veh	12,2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↑	↑	↑	↑	↑	↑
Traffic Vol. veh/h	2	70	73	5	385	93
Future Vol. veh/h	2	70	73	5	385	93
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	2	78	81	6	428	103
Major/Minor						
Conflicting Flow All	87	0	-	0	166	84
Stage 1	-	-	-	-	84	-
Stage 2	-	-	-	-	82	-
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	-	-	-	824	373
Stage 1	-	-	-	-	939	-
Stage 2	-	-	-	-	941	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	1509	-	-	-	823	975
Mov Cap-2 Maneuver	-	-	-	-	823	-
Stage 1	-	-	-	-	938	-
Stage 2	-	-	-	-	941	-
Approach						
EB	WB	SB				
HCM Chd Dly, s/v	0,21	0	18,05			
HCM LOS			C			
Minor Lane/Major Mvmt						
EBL	EBT	WBT	WBR	SBLn1		
Capacity (veh/h)	50	-	-	-	849	
HCM Lane V/C Ratio	0,001	-	-	-	0,329	
HCM Chd Dly (s/v)	7,4	0	-	-	15,1	
HCM Lane LOS	A	A	-	-	C	
HCM 95th %ile Q(veh)	0	-	-	-	4,5	

## **2028 – MAJOR EVENT INGRESS**

2028 Major Event Ingress  
01/10/2025

37: O' Connor & Fifth

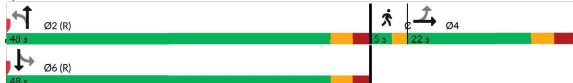
Intersection													
Intersection Delay, s/veh	9.3												
Intersection LOS	A												
Movement													
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↵			↵			↵			↵			
Traffic Vol. veh/h	68	58	0	0	0	198	57	60	93	0	0	131	
Future Vol. veh/h	68	58	0	0	0	198	57	60	93	0	0	131	
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	64	0	0	0	220	63	67	103	0	0	146	
Number of Lanes	0	1	0	0	0	1	0	1	0	0	0	1	
Approach													
	EB	WB					NB	S	SB				
Opposing Approach	WB	EB					SB	NB	WB				
Opposing Lanes	1	1					1	1	1				
Conflicting Approach Left	SB	NB					EB	WB	SB				
Conflicting Lanes Left	1	1					1	1	1				
Conflicting Approach Right	NB	SB					WB	EB	SB				
Conflicting Lanes Right	1	1					1	1	1				
HCM Control Delay, s/veh	9.6	9.1					9.9	8.5	9.6				
HCM LOS	A	A					A	A	A				
Lane													
	NBLn1	EBLn1	WBLn1	SBLn1									
Vol Left, %	27%	54%	0%	0%									
Vol Thru, %	28%	46%	0%	0%									
Vol Right, %	44%	0%	100%	100%									
Sign Control	Stop	Stop	Stop	Stop									
Traffic Vol by Lane	210	128	198	131									
LT Vol	57	68	0	0									
Through Vol	60	58	0	0									
RT Vol	93	0	198	131									
Lane Flow Rate	233	140	220	146									
Geometry Grp	1	1	1	1									
Degree of U/I (X)	0.307	0.201	0.269	0.181									
Departure Headway (HD)	4.73	5.175	4.395	4.467									
Convergence, Y/N	Yes	Yes	Yes	Yes									
Cap	754	687	810	795									
Service Time	2.802	3.257	2.467	2.546									
HCM Lane V/C Ratio	0.309	0.204	0.272	0.184									
HCM Control Delay, s/veh	9.3	9.6	8.1	8.5									
HCM Lane LOS	A	A	A	A									
HCM 95th-ile Q	1.3	0.7	1.1	0.7									

2028 Major Event Ingress  
01/10/2025

2: Bank & Holmwood

Intersection												
Intersection Delay, s/veh	9.1											
Intersection LOS	A											
Movement												
	EBT	NBL	NBT	SBL	SBT	O3						
Lane Configurations	↵		↵	↵	↵	↵						
Traffic Volume (vph)	38	69	458	53	546							
Future Volume (vph)	38	69	458	53	546							
Lane Group Flow (vph)	154	0	717	0	722							
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	0.0						
Total Lost Time (s)	5.6	5.2	5.2	5.2	5.2	0.0						
Lead/Lag	Lead											
Lead-Lag Optimize?	Yes											
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	None						
Act Effect Green (s)	13.6	50.6	50.6	50.6	50.6	50.6						
Actuated g/C Ratio	0.18	0.67	0.67	0.67	0.67	0.67						
v/c Ratio	0.63	0.49	0.43	0.43	0.43	0.43						
Control Delay (s/veh)	38.8	7.4	4.5	4.5	4.5	4.5						
Queue Delay (s/veh)	0.0	0.0	0.0	0.0	0.0	0.0						
Total Delay (s/veh)	38.8	7.4	4.5	4.5	4.5	4.5						
LOS	D	A	A	A	A	A						
Approach Delay (s/veh)	38.8	7.4	4.5	4.5	4.5	4.5						
Approach LOS	D	A	A	A	A	A						
Queue Length 50th (m)	20.3	19.6	14.8	14.8	14.8	14.8						
Queue Length 95th (m)	34.8	39.3	19.6	19.6	19.6	19.6						
Internal Link Dist (m)	39.8	31.5	155.6									
Turn Bay Length (m)												
Base Capacity (vph)	307	1472	1675									
Starvation Cap Reductn	0	0	0									
Spillback Cap Reductn	0	0	0									
Storage Cap Reductn	0	0	0									
Reduced v/c Ratio	0.50	0.49	0.43									
Intersection Summary												
Cycle Length: 75												
Actuated Cycle Length: 75												
Offset: 60 (80%), Referenced to phase 2:NBT and 6:SBTL, Start of Green												
Natural Cycle: 75												
Control Type: Actuated-Coordinated												
Maximum v/c Ratio: 0.63												
Intersection Signal Delay (s/veh): 9.1												
Intersection Capacity Utilization: 71.8%												
Analysis Period (min): 15												
Intersection LOS: A												
ICU Level of Service: C												

Splits and Phases: 2: Bank & Holmwood



2028 Major Event Ingress  
01/10/2025

1: Bank & Fifth

Intersection												
Intersection Delay, s/veh	13.5											
Intersection LOS	B											
Movement												
	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT				
Lane Configurations	↵		↵		↵		↵					
Traffic Volume (vph)	62	55	94	63	24	405	58	570				
Future Volume (vph)	62	55	94	63	24	405	58	570				
Lane Group Flow (vph)	0	171	104	157	0	547	0	764				
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA				
Protected Phases	4											
Permitted Phases	4											
Detector Phase	4											
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	None											
Lead-Lag Optimize?	None											
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max				
Act Effect 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	0.72	0.57	0.48	0.32	0.62	0.46	0.46	0.46				
Control Delay (s/veh)	40.7	38.2	17.6	6.9	7.9	7.9	7.9	7.9				
Queue Delay (s/veh)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Total Delay (s/veh)	40.7	38.2	17.6	6.9	7.9	7.9	7.9	7.9				
LOS	D	D	B	A	A	A	A	A				
Approach Delay (s/veh)	40.7	25.8	6.9	7.9	7.9	7.9	7.9	7.9				
Approach LOS	D	C	A	A	A	A	A	A				
Queue Length 50th (m)	19.9	13.4	8.1	12.4	23.2	23.2	23.2	23.2				
Queue Length 95th (m)	36.1	25.6	22.7	30.7	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)	330	260	430	1706	1669	1669	1669	1669				
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	0.52	0.40	0.37	0.32	0.46	0.46	0.46	0.46				
Intersection Summary												
Cycle Length: 75												
Actuated Cycle Length: 75												
Offset: 47 (63%), Referenced to phase 2:NBT and 6:SBTL, Start of Green												
Natural Cycle: 75												
Control Type: Actuated-Coordinated												
Maximum v/c Ratio: 0.72												
Intersection Signal Delay (s/veh): 13.5												
Intersection Capacity Utilization: 88.1%												
Analysis Period (min): 15												
Intersection LOS: B												
ICU Level of Service: E												

Splits and Phases: 1: Bank & Fifth



2028 Major Event Ingress  
01/10/2025

3: Bank & Exhibition

Intersection												
Intersection Delay, s/veh	0.2											
Intersection LOS	A											
Movement												
	NBT	SBT	O1	O7	O8							
Lane Configurations	↵		↵									
Traffic Volume (vph)	681	601										
Future Volume (vph)	681	601										
Lane Group Flow (vph)	734	668										
Turn Type	NA	NA										
Protected Phases	2	6	1	7	8							
Permitted Phases	2	6	1	7	8							
Detector Phase	2	6	1	7	8							
Switch Phase												
Minimum Initial (s)	10.0	10.0	1.0	1.0	10.0							
Minimum Split (s)	44.0	44.0	5.0	5.0	26.0							
Total Split (s)	44.0	44.0	5.0	5.0	26.0							
Total Split (%)	55.0%	55.0%	6%	6%	33%							
Yellow Time (s)	3.0	3.0	2.0	2.0	3.0							
All-Red Time (s)	3.9	3.9	0.0	0.0	3.0							
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0							
Total Lost Time (s)	6.9	6.9	0.0	0.0	3.0							
Lead/Lag	Lead											
Lead-Lag Optimize?	Yes											
Recall Mode	C-Max	C-Max	None	None	None							
Act Effect Green (s)	80.0	80.0										
Actuated g/C Ratio	1.00	1.00										
v/c Ratio	0.24	0.21										
Control Delay (s/veh)	0.2	0.2										
Queue Delay (s/veh)	0.0	0.0										
Total Delay (s/veh)	0.2	0.2										
LOS	A	A										

2028 Major Event Ingress  
01/10/2025

6: Bank & Aylmer

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	825	907	
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	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)	14.6		59.7	59.7	
Actuated g/C Ratio	0.16		0.86	0.86	
w/c Ratio	0.52		0.42	0.45	
Control Delay (s/veh)	38.6		5.6	8.2	
Queue Delay (s/veh)	0.0		0.0	0.0	
Total Delay (s/veh)	38.6		5.6	8.2	
LOS	D		A	A	
Approach Delay (s/veh)	38.6		5.6	8.2	
Approach LOS	D		A	A	
Queue Length 50th (m)	18.4		20.9	33.5	
Queue Length 95th (m)	34.7		25.3	48.4	
Internal Link Dist (m)	78.7		28.1	18.1	
Turn Bay Length (m)					
Base Capacity (vph)	278		1943	2004	
Starvation Cap Reductn	0		0	0	
Spillback Cap Reductn	0		0	0	
Storage Cap Reductn	0		0	0	
Reduced w/c Ratio	0.46		0.42	0.45	
<b>Intersection Summary</b>					
Cycle Length: 90					
Actuated Cycle Length: 90					
Offset: 60 (67%), Referenced to phase 2:NBT and 6:SBT, Start of Green					
Natural Cycle: 90					
Control Type: Actuated-Coordinated					
Maximum w/c Ratio: 0.52					
Intersection Signal Delay (s/veh): 9.1			Intersection LOS: A		
Intersection Capacity Utilization 51.8%			ICU Level of Service A		
Analysis Period (min) 15					



2028 Major Event Ingress  
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7: Bank & Sunnyside

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		2	1	6	3	7
Permitted Phases		4		8		2	6			
Detector Phase		4		8		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	43.0	5.0	5.0
Total Split (%)	27.8%	27.8%	27.8%	27.8%	47.8%	47.8%	18.9%	47.8%	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)	2.8	2.8	2.8	2.8	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	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				
Recall Mode	None	None	None	None	C-Max	C-Max	None	C-Max	None	None
Act Effect Green (s)	23.5		23.5		54.9		54.9			
Actuated g/C Ratio	0.28		0.28		0.81		0.81			
w/c Ratio	0.68		0.74		0.39		0.75			
Control Delay (s/veh)	43.4		34.4		9.9		12.3			
Queue Delay (s/veh)	0.0		0.0		0.0		0.0			
Total Delay (s/veh)	43.4		34.4		9.9		12.3			
LOS	D		C		A		B			
Approach Delay (s/veh)	43.4		34.4		9.9		12.3			
Approach LOS	D		C		A		B			
Queue Length 50th (m)	25.6		36.7		27.5		68.8			
Queue Length 95th (m)	#65.5		#63.7		38.2		86.0			
Internal Link Dist (m)	75.1		136.0		63.1		79.0			
Turn Bay Length (m)										
Base Capacity (vph)	276		376		1650		1243			
Starvation Cap Reductn	0		0		0		0			
Spillback Cap Reductn	0		0		0		0			
Storage Cap Reductn	0		0		0		0			
Reduced w/c Ratio	0.68		0.74		0.39		0.75			
<b>Intersection Summary</b>										
Cycle Length: 90										
Actuated Cycle Length: 90										
Offset: 6 (7%), Referenced to phase 2:NBT and 6:SBT, Start of Green										
Natural Cycle: 110										
Control Type: Actuated-Coordinated										
Maximum w/c Ratio: 0.75										
Intersection Signal Delay (s/veh): 17.4					Intersection LOS: B					
Intersection Capacity Utilization 90.0%					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.										

2028 Major Event Ingress  
01/10/2025

7: Bank & Sunnyside

Splits and Phases: 7: Bank & Sunnyside

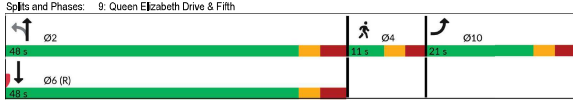
2028 Major Event Ingress  
01/10/2025

9: Queen Elizabeth Drive & Fifth

Lane Group	EBL	NBL	NBT	SBT	Ø4
Lane Configurations	↖	↗	↕	↕	
Traffic Volume (vph)	93	113	281	667	
Future Volume (vph)	93	113	281	667	
Lane Group Flow (vph)	281	0	438	882	
Turn Type	Prot	Perm	NA	NA	
Protected Phases	10		2	6	4
Permitted Phases		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 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)	6.0	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	C-Max	None
Act Effect Green (s)	20.4		47.1	47.1	
Actuated g/C Ratio	0.26		0.59	0.59	
w/c Ratio	0.67		1.33	0.81	
Control Delay (s/veh)	35.4		189.3	31.8	
Queue Delay (s/veh)	0.0		0.0	0.0	
Total Delay (s/veh)	35.4		189.3	31.8	
LOS	D		F	C	
Approach Delay (s/veh)	35.4		189.3	31.8	
Approach LOS	D		F	C	
Queue Length 50th (m)	35.4		#88.3	110.0	
Queue Length 95th (m)	54.7		#103.7	#210.7	
Internal Link Dist (m)	57.2		0.1	3.9	
Turn Bay Length (m)					
Base Capacity (vph)	390		330	970	
Starvation Cap Reductn	0		0	0	
Spillback Cap Reductn	0		0	0	
Storage Cap Reductn	0		0	0	
Reduced w/c Ratio	0.67		1.33	0.81	
<b>Intersection Summary</b>					
Cycle Length: 80					
Actuated Cycle Length: 80					
Offset: 0 (0%), Referenced to phase 6:SBT, Start of Green					
Natural Cycle: 150					
Control Type: Actuated-Coordinated					
Maximum w/c Ratio: 1.33					
Intersection Signal Delay (s/veh): 76.0			Intersection LOS: E		
Intersection Capacity Utilization 98.1%			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.					

2028 Major Event Ingress  
01/10/2025

9: Queen Elizabeth Drive & Fifth  
01/10/2025



2028 Major Event Ingress  
01/10/2025

4: Bank & Wilton

Intersection						
Int Delay, s/veh	17,7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T T T T T T					
Traffic Vol, veh/h	5	274	107	718	532	105
Future Vol, veh/h	5	274	107	718	532	105
Conflicting Peds, #/hr	0	0	0	178	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	561	118

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	1465	828	887
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	3,5475	3,3475	2,2475
Platoon blocked, %	127	364	746
Stage 1	421	-	-
Stage 2	483	-	-
Mov Cap-1 Maneuver	62	296	605
Mov Cap-2 Maneuver	62	-	-
Stage 1	256	-	-
Stage 2	392	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	98,38	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 Ctrl Dly (s/v)	12,4	2,4	98,4	-	-
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

2028 Major Event Ingress  
01/10/2025

5: Bank & Echo

Intersection						
Int Delay, s/veh	0,8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T T T T T T					
Traffic Vol, veh/h	1	74	0	802	779	0
Future Vol, veh/h	1	74	0	802	779	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	82	0	891	866	0

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	3,5475	3,3475	-
Platoon blocked, %	159	346	-
Stage 1	404	-	-
Stage 2	608	-	-
Mov Cap-1 Maneuver	159	346	-
Mov Cap-2 Maneuver	159	-	-
Stage 1	404	-	-
Stage 2	608	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	18,6	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	349	-	-	-
HCM Lane V/C Ratio	-	0,237	-	-	-
HCM Ctrl Dly (s/v)	-	18,6	-	-	-
HCM Lane LOS	-	C	-	-	-
HCM 95th %ile Q(veh)	-	0,3	-	-	-

2028 Major Event Ingress  
01/10/2025

8: Queen Elizabeth Driveway /Queen Elizabeth Driveway & Princess Patricia Way

Intersection						
Int Delay, s/veh	52,5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T T T T T T					
Traffic Vol, veh/h	157	118	131	239	454	335
Future Vol, veh/h	157	118	131	239	454	335
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	174	131	146	266	504	372

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	1247	991	877
Stage 1	661	-	-
Stage 2	567	-	-
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
Platoon blocked, %	193	448	779
Stage 1	501	-	-
Stage 2	578	-	-
Mov Cap-1 Maneuver	151	448	779
Mov Cap-2 Maneuver	151	-	-
Stage 1	361	-	-
Stage 2	578	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	268,81	3,78	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	537	-	211	-	-
HCM Lane V/C Ratio	0,187	-	1,418	-	-
HCM Ctrl Dly (s/v)	10,7	0	268,8	-	-
HCM Lane LOS	B	A	F	-	-
HCM 95th %ile Q(veh)	0,7	-	18,1	-	-

Notes  
 - Volume exceeds capacity      \$ Delay exceeds 300s  
 + Computation Not Defined      \* All major volume in platoon

10: Bank & Marche

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↑	↑↑	↑↑	↑↑	↑↑	↑↑
Traffic Vol, veh/h	0	0	537	0	0	502
Future Vol, veh/h	0	0	537	0	0	502
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	0	708	0	0	669
Major/Minor						
	Minor1	Major1	Major2			
Conflicting Flow All	-	454	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.2	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Followup Hdwy	-	3.45	-	-	-	-
Pot Cap-1 Maneuver	0	519	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	464	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach						
	WB	NB	SB			
HCM Chl Dly, s/v	0	0	0			
HCM LOS	A					
Minor Lane/Major Mvmt						
	NBT	NBRWBLn1	SBT			
Capacity (veh/h)	-	-	-			
HCM Lane V/C Ratio	-	-	-			
HCM Chl Dly (s/v)	-	-	0			
HCM Lane LOS	-	-	A			
HCM 95th %ile Q(veh)	-	-	-			

## **2028 – MAJOR EVENT EGRESS**


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	25	53	0	0	0	0	112	114	100	141	0	0
Future Vol, veh/h	25	53	0	0	0	0	112	114	100	141	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	28	59	0	0	0	0	124	127	111	157	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	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	8,3	11,2	7,7
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	355	78	112	55
LT Vol	114	25	0	0
Through Vol	100	53	0	0
RT Vol	141	0	112	55
Lane Flow Rate	394	87	124	61
Geometry Grp	1	1	1	1
Degree of UII (X)	0,474	0,124	0,154	0,073
Departure Headway (HD)	4,328	5,165	4,464	4,273
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	832	692	800	834
Service Time	2,362	3,218	2,513	2,321
HCM Lane V/C Ratio	0,474	0,126	0,155	0,073
HCM Control Delay, s/veh	11,2	9	8,3	7,7
HCM Lane LOS	B	A	A	A
HCM 95thile Q	2,5	0,4	0,5	0,2

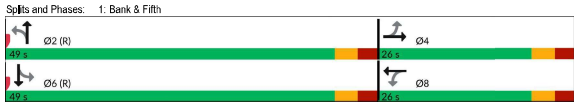



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	←		←		←		←	
Traffic Volume (vph)	76	33	41	70	22	315	20	349
Future Volume (vph)	76	33	41	70	22	315	20	349
Lane Group Flow (vph)	0	151	48	205	0	402	0	453
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases	4	4	8	8	2	2	6	6
Permitted Phases	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	48,0	48,0	49,0	49,0
Total Split (s)	26,0	26,0	26,0	26,0	48,0	48,0	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)	14,7	14,7	14,7	14,7	49,3	49,3	49,3	49,3
Actuated g/C Ratio	0,20	0,20	0,20	0,20	0,66	0,66	0,66	0,66
v/c Ratio	0,80	0,23	0,59	0,23	0,23	0,25	0,25	0,25
Control Delay (s/veh)	54,6	25,9	18,7	5,2	6,2	6,2	6,2	6,2
Queue Delay (s/veh)	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Total Delay (s/veh)	54,6	25,9	18,7	5,2	6,2	6,2	6,2	6,2
LOS	D	C	B	A	A	A	A	A
Approach Delay (s/veh)	54,6	20,8	5,2	6,2	6,2	6,2	6,2	6,2
Approach LOS	D	C	A	A	A	A	A	A
Queue Length 50th (m)	15,2	5,5	11,9	8,8	8,8	11,4	11,4	11,4
Queue Length 95th (m)	#38,9	12,3	28,6	18,5	18,5	21,8	21,8	21,8
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)	255	280	440	1780	1790	1790	1790	1790
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	0,59	0,16	0,47	0,23	0,25	0,25	0,25	0,25

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: 0,80	
Intersection Signal Delay (s/veh): 14,6	Intersection LOS: B
Intersection Capacity Utilization 73,1%	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.

Lane Group	EBL	EBT	WBL	NBL	NBT	SBL	SBT	Ø3
Lane Configurations	←		←		←		←	
Traffic Volume (vph)	46	22	3	50	266	30	279	
Future Volume (vph)	46	22	3	50	266	30	279	
Lane Group Flow (vph)	0	147	3	0	415	0	413	
Turn Type	Perm	NA	NA	Perm	NA	Perm	NA	
Protected Phases	4	8	2	2	6	6	3	
Permitted Phases	4	8	2	2	6	6	3	
Detector Phase	4	4	8	2	2	6	6	
Switch Phase								
Minimum Initial (s)	4,4	4,4	4,0	10,0	10,0	4,0	4,0	1,0
Minimum Split (s)	22,0	22,0	20,0	48,0	48,0	48,0	48,0	5,0
Total Split (s)	22,0	22,0	5,0	48,0	48,0	48,0	48,0	5,0
Total Split (%)	29,3%	29,3%	6,7%	64,0%	64,0%	64,0%	64,0%	7%
Yellow Time (s)	3,0	3,0	3,5	3,0	3,0	3,0	3,0	2,0
All-Red Time (s)	2,6	2,6	0,5	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	0,0	0,0
Total Lost Time (s)	5,6	5,6	0,5	5,2	5,2	5,2	5,2	0,0
Lead/Lag	Lag	Lag	Lag	Lag	Lag	Lag	Lag	Lead
Lead-Lag Optimize?								
Recall Mode	None	None	None	C-Max	C-Max	C-Max	C-Max	None
Act Effect Green (s)	16,7	0,0	0,0	47,5	47,5	47,5	47,5	
Actuated g/C Ratio	0,22	0,00	0,00	0,63	0,63	0,63	0,63	
v/c Ratio	0,55	no cap	no cap	0,28	0,28	0,26	0,26	
Control Delay (s/veh)	32,4	Error	Error	7,0	4,1	4,1	4,1	
Queue Delay (s/veh)	0,0	Error	Error	0,0	0,0	0,0	0,0	
Total Delay (s/veh)	32,4	Error	Error	7,0	4,1	4,1	4,1	
LOS	C	F	F	A	A	A	A	
Approach Delay (s/veh)	32,4	Error	Error	7,0	4,1	4,1	4,1	
Approach LOS	C	F	F	A	A	A	A	
Queue Length 50th (m)	16,9	0,0	0,0	12,7	6,8	6,8	6,8	
Queue Length 95th (m)	32,8	0,0	0,0	20,4	9,8	9,8	9,8	
Internal Link Dist (m)	39,8	116,3	31,5	195,8	195,8	195,8	195,8	
Turn Bay Length (m)								
Base Capacity (vph)	309	1	1	1481	1608	1608	1608	
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	0,48	3,00	0,28	0,28	0,26	0,26	0,26	

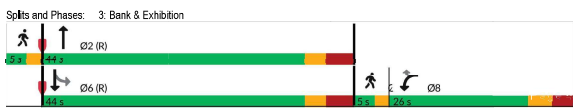
  

Intersection Summary	
Cycle Length: 75	
Actuated Cycle Length: 75	
Offset: 60 (80%), Referenced to phase 2:NBL and 6:SBTL, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: Err	
Intersection Signal Delay (s/veh): Err	Intersection LOS: F
Intersection Capacity Utilization Err%	ICU Level of Service: H
Analysis Period (min): 15	

2028 Major Event Egress  
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3: Bank & Exhibition

Lane Group	NBT	SBT	Ø1	Ø7	Ø8
Lane Configurations	↑	↓			
Traffic Volume (vph)	359	342			
Future Volume (vph)	359	342			
Lane Group Flow (vph)	399	380			
Turn Type	NA	NA			
Protected Phases	2	6	1	7	8
Permitted Phases					
Detector Phase	2	6			
Switch Phase					
Minimum Initial (s)	10.0	10.0	1.0	1.0	10.0
Minimum Split (s)	44.0	44.0	5.0	5.0	26.0
Total Split (s)	44.0	44.0	5.0	5.0	26.0
Total Split (%)	55.0%	55.0%	6%	6%	33%
Yellow Time (s)	3.0	3.0	2.0	2.0	3.0
All-Red Time (s)	3.9	3.9	0.0	0.0	3.3
Lost Time Adjust (s)	0.0	0.0			
Total Lost Time (s)	6.9	6.9			
Lead/Lag			Lead	Lag	
Lead-Lag Optimize?			Yes	Yes	
Recall Mode	C-Max	C-Max	None	None	None
Act Effect Green (s)	80.0	80.0			
Actuated g/C Ratio	1.00	1.00			
v/c Ratio	0.13	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)	3054	3142			
Starvation Cap Reductn	0	0			
Spillback Cap Reductn	0	0			
Storage Cap Reductn	0	0			
Reduced v/c Ratio	0.13	0.12			



7: Bank & Sunnyside

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	Ø3	Ø7
Lane Configurations	↓	↑	↓	↑	↓	↑	↓	↑		
Traffic Volume (vph)	31	28	16	35	20	289	14	304		
Future Volume (vph)	31	28	16	35	20	289	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		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	43.0	5.0	5.0
Total Split (%)	27.8%	27.8%	27.8%	27.8%	47.8%	47.8%	18.9%	47.8%	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-Lag Optimize?			Yes	Yes						
Recall Mode	None	None	None	None	C-Max	C-Max	None	C-Max	None	None
Act Effect Green (s)	12.4	12.2			69.7	69.7				
Actuated g/C Ratio	0.14	0.14			0.77	0.77				
v/c Ratio	0.59	0.49			0.15	0.18				
Control Delay (s/veh)	59.8	30.8			4.1	1.3				
Queue Delay	0.0	0.0			0.0	0.0				
Total Delay (s/veh)	59.8	30.8			4.1	1.3				
LOS	D	C			A	A				
Approach Delay (s/veh)	59.8	30.8			4.1	1.3				
Approach LOS	D	C			A	A				
Queue Length 50th (m)	15.0	8.7			7.3	1.8				
Queue Length 95th (m)	28.0	22.9			14.8	3.5				
Internal Link Dist (m)	75.1	136.0			63.1	79.0				
Turn Bay Length (m)										
Base Capacity (vph)	242	294			2185	2153				
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	0.33			0.15	0.18				



2028 Major Event Egress  
01/10/2025

6: Bank & Aylmer

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	388	356	
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)	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		
Actuated g/C Ratio	0.19	0.87	0.87		
v/c Ratio	0.17	0.20	0.18		
Control Delay (s/veh)	23.9	4.9	5.5		
Queue Delay	0.0	0.0	0.0		
Total Delay (s/veh)	23.9	4.9	5.5		
LOS	C	A	A		
Approach Delay (s/veh)	23.9	4.9	5.5		
Approach LOS	C	A	A		
Queue Length 50th (m)	3.2	9.7	10.0		
Queue Length 95th (m)	11.7	13.7	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		
Spillback Cap Reductn	0	0	0		
Storage Cap Reductn	0	0	0		
Reduced v/c Ratio	0.15	0.20	0.18		



2028 Major Event Egress  
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9: Queen Elizabeth Drive & Fifth

Lane Group	EBL	NBL	NBT	SBT	Ø4
Lane Configurations	↓	↑	↑	↓	
Traffic Volume (vph)	141	46	301	288	
Future Volume (vph)	141	46	301	288	
Lane Group Flow (vph)	226	0	385	397	
Turn Type	Prot	Perm	NA	NA	
Protected Phases	10	2	2	6	4
Permitted Phases	10	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 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	Lag				Lead
Lead-Lag Optimize?					
Recall Mode	Min	None	None	C-Max	None
Act Effect Green (s)	17.0	50.5	50.5		
Actuated g/C Ratio	0.21	0.63	0.63		
v/c Ratio	0.69	0.40	0.38		
Control Delay (s/veh)	38.2	9.7	8.4		
Queue Delay	0.0	0.0	0.0		
Total Delay (s/veh)	38.2	9.7	8.4		
LOS	D	A	A		
Approach Delay (s/veh)	38.2	9.7	8.4		
Approach LOS	D	A	A		
Queue Length 50th (m)	31.7	25.9	26.4		
Queue Length 95th (m)	49.8	51.0	51.0		
Internal Link Dist (m)	57.2	0.1	5.9		
Turn Bay Length (m)					
Base Capacity (vph)	350	968	1036		
Starvation Cap Reductn	0	0	0		
Spillback Cap Reductn	0	0	0		
Storage Cap Reductn	0	0	0		
Reduced v/c Ratio	0.65	0.40	0.38		



2028 Major Event Egress  
01/10/2025

4: Bank & Wilton

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 Channelled	- None	- None	- None	- None	- None	- None
Storage Length	- 0	-	-	-	-	-
Veh in Median Storage, l	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	381	320	76
Major/Minor						
Minor2	Minor1	Major2	Major1			
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	-3,3475	2,2475	-	-	-	-
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 Ctrl Dly, s/v	13,37	0	0			
HCM LOS	B					
Minor Lane/Major Mvmt						
NBL	NBT	EBLn1	SBT	SBR		
Capacity (veh/h)	795	-	436	-	-	-
HCM Lane V/C Ratio	-	-	0,13	-	-	-
HCM Ctrl Dly (s/v)	0	-	13,4	-	-	-
HCM Lane LOS	A	-	B	-	-	-
HCM 95th %ile Q(veh)	0	-	0	-	-	-

2028 Major Event Egress  
01/10/2025

5: Bank & Echo

Intersection						
Int Delay, s/veh	0,5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↑ ↑ ↑ ↑					
Traffic Vol, veh/h	0	33	0	335	269	0
Future Vol, veh/h	0	33	0	335	269	0
Conflicting Peds, /hr	0	0	0	0	0	88
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelled	- None	- None	- None	- None	- None	- None
Storage Length	- 0	-	-	-	-	-
Veh in Median Storage, l	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	Minor1	Major2	Major1			
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	-	-	0
Stage 2	0	-	0	-	-	0
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	- 701	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach						
EB	NB	SB				
HCM Ctrl Dly, s/v	10,42	0	0			
HCM LOS	B					
Minor Lane/Major Mvmt						
NBT	EBLn1	SBT				
Capacity (veh/h)	- 701	-	-	-	-	-
HCM Lane V/C Ratio	-	-	0,052	-	-	-
HCM Ctrl Dly (s/v)	-	-	10,4	-	-	-
HCM Lane LOS	-	-	B	-	-	-
HCM 95th %ile Q(veh)	-	-	0,2	-	-	-

2028 Major Event Egress  
01/10/2025

8: Queen Elizabeth Driveway /Queen Elizabeth Driveway & Princess Patricia Way

Intersection						
Int Delay, s/veh	20,7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↑ ↑ ↑ ↑					
Traffic Vol, veh/h	242	211	50	112	222	128
Future Vol, veh/h	242	211	50	112	222	128
Conflicting Peds, /hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelled	- None	- None	- None	- None	- None	- None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, l	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	234	56	124	247	142
Major/Minor						
Minor2	Minor1	Major2	Major1			
Conflicting Flow All	553	318	389	0	-	0
Stage 1	318	-	-	-	-	-
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	497	727	1181	-	-	-
Stage 1	742	-	-	-	-	-
Stage 2	808	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	472	727	1181	-	-	-
Mov Cap-2 Maneuver	472	-	-	-	-	-
Stage 1	705	-	-	-	-	-
Stage 2	698	-	-	-	-	-
Approach						
EB	NB	SB				
HCM Ctrl Dly, s/v	43,17	2,53	0			
HCM LOS	E					
Minor Lane/Major Mvmt						
NBL	NBT	EBLn1	SBT	SBR		
Capacity (veh/h)	559	-	564	-	-	-
HCM Lane V/C Ratio	0,047	-	0,892	-	-	-
HCM Ctrl Dly (s/v)	8,2	0	43,2	-	-	-
HCM Lane LOS	A	A	E	-	-	-
HCM 95th %ile Q(veh)	0,1	-	10,4	-	-	-

2028 Major Event Egress  
01/10/2025

10: Bank & Marche

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBT	SBR
Lane Configurations	↑ ↑ ↑ ↑					
Traffic Vol, veh/h	0	0	428	0	0	344
Future Vol, veh/h	0	0	428	0	0	344
Conflicting Peds, /hr	0	0	0	100	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelled	- None	- None	- None	- None	- None	- None
Storage Length	- 0	-	-	-	-	-
Veh in Median Storage, l	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	477	0	0	382
Major/Minor						
Minor2	Minor1	Major2	Major1			
Conflicting Flow All	- 338	0	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	821	-	-	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 Ctrl Dly, 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 Ctrl Dly (s/v)	-	-	0	-	-	-
HCM Lane LOS	-	-	A	-	-	-
HCM 95th %ile Q(veh)	-	-	-	-	-	-

# **SYNCHRO SUMMARY SHEETS – 2033**

## **2033 BACKGROUND – WEEKDAY AM**

12: Exhibition & Paul Askin

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			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

13: Paul Askin & Marche

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	3,933	3,967
Convergence, Y/N	Yes	Yes	Yes
Cap	887	983	908
Service Time	2,061	1,682	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

14: Exhibition & Marche

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	2,188	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-ile Q	0,5	0	0,6

37: O' Connor & Fifth

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										NB
Opposing Lanes	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							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	824
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-ile Q	0,3	0,6	0,3	0,5

2033 Weekday Background AM Peak Hour  
01/10/2025

1: Bank & Fifth

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	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	48.0	48.0
Total Split (s)	26.0	26.0	26.0	26.0	49.0	49.0	48.0	48.0
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	Max	Max	Max	Max	C-Max	C-Max	C-Max	C-Max
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	0.41	0.41	0.35	0.35
v/c Ratio	0.39	0.20	0.22	0.22	0.11	0.41	0.35	0.35
Control Delay (s/veh)	22.5	23.2	15.9	15.9	6.5	6.5	8.7	8.7
Queue Delay (s/veh)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	22.5	23.2	15.9	15.9	6.5	6.5	8.7	8.7
LOS	C	C	B	B	A	A	A	A
Approach Delay (s/veh)	22.5	23.2	15.9	15.9	6.5	6.5	8.7	8.7
Approach LOS	C	C	B	B	A	A	A	A
Queue Length 50th (m)	13.9	6.1	6.2	6.2	12.7	12.7	18.7	18.7
Queue Length 95th (m)	28.9	14.8	16.8	16.8	16.4	16.4	27.7	27.7
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)	378	285	420	420	1652	1652	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	0.39	0.20	0.22	0.22	0.41	0.41	0.35	0.35

Splits and Phases: 1: Bank & Fifth

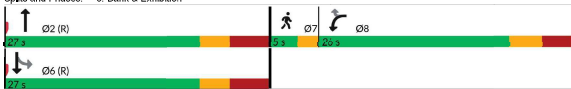


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3: Bank & Exhibition

Lane Group	WBL	WBR	NBL	NBR	SBL	SBT	Ø7
Lane Configurations	↔		↕		↕		↕
Traffic Volume (vph)	54	34	527	68	358	358	
Future Volume (vph)	54	34	527	68	358	358	
Lane Group Flow (vph)	60	38	704	76	398		
Turn Type	Prot	Perm	NA	Perm	NA	NA	
Protected Phases	8	8	2	6	6	7	
Permitted Phases	8	8	2	6	6	7	
Detector Phase	8	8	2	6	6	7	
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	3.0	
Minimum Split (s)	26.0	26.0	27.0	27.0	27.0	5.0	
Total Split (s)	26.0	26.0	27.0	27.0	27.0	5.0	
Total Split (%)	44.8%	44.8%	46.6%	46.6%	46.6%	9%	
Yellow Time (s)	3.3	3.3	3.0	3.0	3.0	2.0	
All-Red Time (s)	3.0	3.0	3.9	3.9	3.9	0.0	
Lost 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				Lead	
Lead-Lag Optimize?						Yes	
Recall Mode	None	None	C-Max	C-Max	C-Max	None	
Act Effect Green (s)	10.1	10.1	44.0	44.0	44.0		
Actuated g/C Ratio	0.17	0.17	0.76	0.76	0.76		
v/c Ratio	0.22	0.19	0.32	0.19	0.17		
Control Delay (s/veh)	23.0	9.9	4.8	6.4	4.3		
Queue Delay (s/veh)	0.0	0.0	0.0	0.0	0.0		
Total Delay (s/veh)	23.0	9.9	4.8	6.4	4.3		
LOS	C	A	A	A	A		
Approach Delay (s/veh)	17.9	4.8	4.8	4.8	4.6		
Approach LOS	B	A	A	A	A		
Queue Length 50th (m)	5.6	0.0	16.4	3.2	8.7		
Queue Length 95th (m)	14.0	6.3	25.8	6.0	14.2		
Internal Link Dist (m)	39.6	33.7	44.8				
Turn Bay Length (m)			40.0				
Base Capacity (vph)	523	422	2178	434	2383		
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	0.11	0.09	0.32	0.18	0.17		

Splits and Phases: 3: Bank & Exhibition

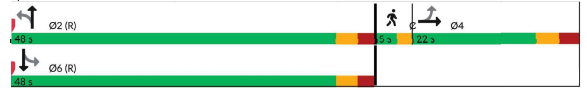


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2: Bank & Holmwood

Lane Group	EBT	NBL	NBT	SBL	SBT	Ø3
Lane Configurations	↔		↕		↕	
Traffic Volume (vph)	22	17	554	12	384	
Future Volume (vph)	22	17	554	12	384	
Lane Group Flow (vph)	90	0	667	0	477	
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	3.0	2.0
All-Red Time (s)	2.8	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)	5.8	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)	10.2	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	0.48	0.31	0.22	0.22	0.22	
Control Delay (s/veh)	37.7	4.4	4.4	3.2	3.2	
Queue Delay (s/veh)	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	37.7	4.4	4.4	3.2	3.2	
LOS	D	A	A	A	A	
Approach Delay (s/veh)	37.7	4.4	4.4	3.2	3.2	
Approach LOS	D	A	A	A	A	
Queue Length 50th (m)	12.0	14.3	14.3	7.6	7.6	
Queue Length 95th (m)	23.5	26.7	26.7	14.5	14.5	
Internal Link Dist (m)	38.8	31.5	195.6			
Turn Bay Length (m)						
Base Capacity (vph)	298	2129	2141			
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	0.22			

Splits and Phases: 2: Bank & Holmwood



2033 Weekday Background AM Peak Hour  
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6: Bank & Aylmer

Lane Group	EBL	NBL	NBT	SBT	Ø3
Lane Configurations	↔		↕		↕
Traffic Volume (vph)	65	16	729	543	
Future Volume (vph)	65	16	729	543	
Lane Group Flow (vph)	82	0	828	664	
Turn Type	Prot	Perm	NA	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)	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	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 Effect Green (s)	10.8	62.5	62.6	62.6	
Actuated g/C Ratio	0.14	0.78	0.78	0.78	
v/c Ratio	0.39	0.36	0.29	0.29	
Control Delay (s/veh)	34.1	5.2	3.7	3.7	
Queue Delay (s/veh)	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	34.1	5.2	3.7	3.7	
LOS	C	A	A	A	
Approach Delay (s/veh)	34.1	5.2	3.7	3.7	
Approach LOS	C	A	A	A	
Queue Length 50th (m)	10.5	27.4	13.3	13.3	
Queue Length 95th (m)	22.4	42.7	22.8	22.8	
Internal Link Dist (m)	76.7	28.1	10.1		
Turn Bay Length (m)					
Base Capacity (vph)	280	2284	2329		
Starvation Cap Reductn	0	0	0		
Spillback Cap Reductn	0	0	0		
Storage Cap Reductn	0	0	0		
Reduced v/c Ratio	0.29	0.36	0.29		

Splits and Phases: 6: Bank & Aylmer



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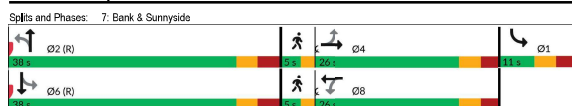
7: Bank & Sunnyside

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	Ø3	Ø7
Lane Configurations	↔		↔		↔		↔			
Traffic Volume (vph)	59	61	19	61	23	999	193	403		
Future Volume (vph)	59	61	19	61	23	999	193	403		
Lane Group Flow (vph)	0	148	0	401	0	1152	0	711		
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)	26.0	26.0	26.0	26.0	38.0	38.0	11.0	48.0	5.0	5.0
Total Split (s)	26.0	26.0	26.0	26.0	38.0	38.0	11.0	38.0	5.0	5.0
Total Split (%)	32.5%	32.5%	32.5%	32.5%	47.5%	47.5%	13.8%	47.5%	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	Lag	Lag	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 Effect Green (s)	22.0	22.0	22.0	22.0	46.4	46.4	46.4	46.4		
Actuated g/C Ratio	0.29	0.28	0.38	0.38	0.58	0.58	0.58	0.58		
v/c Ratio	0.65	0.65	0.68	0.68	0.88	0.88	1.20	1.20		
Control Delay (s/veh)	38.3	38.3	33.7	33.7	15.1	15.1	31.8	31.8		
Queue Delay (s/veh)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Total Delay (s/veh)	38.3	38.3	33.7	33.7	15.1	15.1	31.8	31.8		
LOS	D	D	C	C	B	B	C	C		
Approach Delay (s/veh)	38.3	38.3	33.7	33.7	15.1	15.1	31.8	31.8		
Approach LOS	D	D	C	C	B	B	C	C		
Queue Length 50th (m)	16.5	16.5	26.2	26.2	65.2	65.2	53.8	53.8		
Queue Length 95th (m)	37.4	37.4	476.1	476.1	89.0	89.0	84.0	84.0		
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)	246	246	476	476	1702	1702	902	902		
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	0.60	0.60	0.64	0.64	0.88	0.88	0.79	0.79		

Intersection Summary	
Cycle Length:	80
Actuated Cycle Length:	80
Offset:	60 (75%), Referenced to phase 2:NBL and 6:SBTL, Start of Green
Natural Cycle:	95
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.88
Intersection Signal Delay (s/veh):	24.6
Intersection Capacity Utilization:	66.8%
ICU Level of Service:	F
Analysis Period (min):	15
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	
d) Defacto Left Lane, Recode with 1 through lane as a left lane.	

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7: Bank & Sunnyside



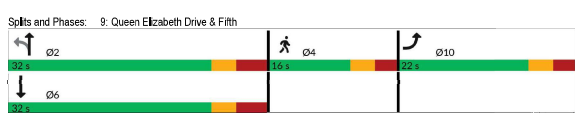
Intersection Summary	
Cycle Length:	80
Actuated Cycle Length:	80
Offset:	60 (75%), Referenced to phase 2:NBL and 6:SBTL, Start of Green
Natural Cycle:	95
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.88
Intersection Signal Delay (s/veh):	24.6
Intersection Capacity Utilization:	66.8%
ICU Level of Service:	F
Analysis Period (min):	15
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	
d) Defacto Left Lane, Recode with 1 through lane as a left lane.	

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9: Queen Elizabeth Drive & Fifth

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	10	2	6	4	
Detector Phase	10	2	6	4	
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	3.0	3.0	3.0	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	6.8	6.8
Lead/Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes
Recall Mode	Min	None	None	Max	None
Act Effect Green (s)	10.0	25.2	25.2	25.2	25.2
Actuated g/C Ratio	0.21	0.53	0.53	0.53	0.53
v/c Ratio	0.23	0.34	0.44	0.44	0.44
Control Delay (s/veh)	17.8	7.9	8.9	8.9	17.8
Queue Delay (s/veh)	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	17.8	7.9	8.9	8.9	17.8
LOS	B	A	A	A	B
Approach Delay (s/veh)	17.8	7.9	8.9	8.9	17.8
Approach LOS	B	A	A	A	B
Queue Length 50th (m)	5.2	11.9	17.5	17.5	5.2
Queue Length 95th (m)	13.4	23.2	32.7	32.7	13.4
Internal Link Dist (m)	57.2	0.1	5.9	5.9	57.2
Turn Bay Length (m)					
Base Capacity (vph)	536	838	873	873	536
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	0.14	0.34	0.44	0.44	0.14

Intersection Summary	
Cycle Length:	70
Actuated Cycle Length:	47.7
Natural Cycle:	70
Control Type:	Semi Act/Uncoord
Maximum v/c Ratio:	0.44
Intersection Signal Delay (s/veh):	9.4
Intersection Capacity Utilization:	52.6%
ICU Level of Service:	A
Analysis Period (min):	15



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4: Bank & Wilton

Intersection	
Int Delay, s/veh	5.5
Movement	EBL EBR NBL NBT SBT SBR
Lane Configurations	↔ ↔ ↔ ↔ ↔ ↔
Traffic Vol veh/h	1 192 146 646 378 26
Future Vol veh/h	1 192 146 646 378 26
Conflicting Peds, #/hr	0 0 178 0 0 107
Sign Control	Stop Stop Free Free Free Free
RT Channelized	- None - None - None - None
Storage Length	- 0 - - - - -
Vel 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	1 213 162 718 420 29
Major/Minor	Minor2 Major1 Major2
Conflicting Flow All	1266 612 627 0 - 0
Stage 1	612 - - - - -
Stage 2	683 - - - - -
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 - - -
Flt Cap-1 Maneuver	163 485 836 - - -
Stage 1	533 - - - - -
Stage 2	457 - - - - -
Platoon blocked, %	- - - - -
Mov Cap-1 Maneuver	79 394 759 - - -
Mov Cap-2 Maneuver	79 - - - - -
Stage 1	317 - - - - -
Stage 2	371 - - - - -
Approach	EB NB SB
HCM Ctrl Dly, s/v	24.46 3.68 0
HCM LOS	C
Minor Lane/Mejor Mvmt	NBL NBT EBLn1 SBT SBR
Capacity (veh/h)	908 - 394 - - -
HCM Lane V/C Ratio	0.214 - 0.542 - - -
HCM Ctrl Dly (s/v)	11 2 24.4 - - -
HCM Lane LOS	B A C - - -
HCM 95th %ile Q(veh)	0.8 - 3.1 - - -

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5: Bank & Echo

Intersection						
Int Delay, s/veh						
0,3						
Movement	EBL	EBR	NBL	NBR	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	-	-	-	-
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						
Conflicting Flow All						
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	0
Stage 1	0	-	0	-	0	0
Stage 2	0	-	0	-	0	0
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	480	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach						
HCM Ctrl Dly, s/v						
EB	13,01		NB	0	SB	0
HCM LOS B						
Minor Lane/Major Mvmt						
Capacity (veh/h)	-	480	-	-	-	-
HCM Lane V/C Ratio	-	0,063	-	-	-	-
HCM Ctrl Dly (s/v)	-	13	-	-	-	-
HCM Lane LOS	-	B	-	-	-	-
HCM 95th %ile Q(veh)	-	0,2	-	-	-	-

2033 Weekday Background AM Peak Hour  
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8: Queen Elizabeth Driveway /Queen Elizabeth Driveway & Princess Patricia Way

Intersection						
Int Delay, s/veh						
1,6						
Movement	EBL	EBR	NBL	NBR	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						
Conflicting Flow All						
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	893	1174	-	-	-
Stage 1	714	-	-	-	-	-
Stage 2	659	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	336	893	1174	-	-	-
Mov Cap-2 Maneuver	336	-	-	-	-	-
Stage 1	860	-	-	-	-	-
Stage 2	659	-	-	-	-	-
Approach						
HCM Ctrl Dly, s/v						
EB	13,61		NB	1,72	SB	0
HCM LOS B						
Minor Lane/Major Mvmt						
Capacity (veh/h)	375	-	467	-	-	-
HCM Lane V/C Ratio	0,263	-	0,105	-	-	-
HCM Ctrl Dly (s/v)	8,3	0	13,6	-	-	-
HCM Lane LOS	A	A	B	-	-	-
HCM 95th %ile Q(veh)	0,2	-	0,3	-	-	-

2033 Weekday Background AM Peak Hour  
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10: Bank & Marche

Intersection						
Int Delay, s/veh						
0,4						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↑↑		↑↑		↑↑	
Traffic Vol. veh/h	0	38	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	38	623	8	0	474
Major/Minor						
Conflicting Flow All						
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	-	0	-	0
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	493	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach						
HCM Ctrl Dly, s/v						
WB	12,93		NB	0	SB	0
HCM LOS B						
Minor Lane/Major Mvmt						
Capacity (veh/h)	-	493	-	-	-	-
HCM Lane V/C Ratio	-	0,078	-	-	-	-
HCM Ctrl Dly (s/v)	-	12,9	-	-	-	-
HCM Lane LOS	-	B	-	-	-	-
HCM 95th %ile Q(veh)	-	0,3	-	-	-	-

2033 Weekday Background AM Peak Hour  
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11: Garage & Exhibition

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						
Conflicting Flow All						
Stage 1	-	-	-	-	257	-
Stage 2	-	-	-	-	188	-
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	-	-	1269	-	571	587
Stage 1	-	-	-	-	766	-
Stage 2	-	-	-	-	844	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1135	-	454	549
Mov Cap-2 Maneuver	-	-	-	-	454	-
Stage 1	-	-	-	-	703	-
Stage 2	-	-	-	-	751	-
Approach						
HCM Ctrl Dly, s/v						
EB	0	0,55	WB	13,1	NB	0
HCM LOS B						
Minor Lane/Major Mvmt						
Capacity (veh/h)	471	-	422	-	122	-
HCM Lane V/C Ratio	0,257	-	0,005	-	0,005	-
HCM Ctrl Dly (s/v)	13,1	-	8,2	-	0	-
HCM Lane LOS	B	-	A	-	A	-
HCM 95th %ile Q(veh)	0,2	-	0	-	0	-

Intersection						
Int Delay, s/veh	0,6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	4	1	1	1	4	1
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
<b>Major/Minor</b>						
	Major1	Major2	Minor2			
Conflicting Flow All	154	0	0	200	146	
Stage 1	-	-	-	146	-	
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	1426	-	-	785	902	
Stage 1	-	-	-	882	-	
Stage 2	-	-	-	968	-	
Platoon blocked, %	-	-	-	-	-	
Mov Cap-1 Maneuver	1426	-	-	785	902	
Mov Cap-2 Maneuver	-	-	-	785	-	
Stage 1	-	-	-	878	-	
Stage 2	-	-	-	968	-	
<b>Approach</b>						
	EB	WB	SB			
HCM Chd Dly, s/v	0,86	0	9,37			
HCM LOS	A		A			
<b>Minor Lane/Major Mvmt</b>						
	EBL	EBT	WBT	WBR	SBL	SBR
Capacity (veh/h)	265	-	-	-	-	333
HCM Lane V/C Ratio	0,004	-	-	-	-	0,012
HCM Chd Dly (s/v)	7,5	0	-	-	-	9,4
HCM Lane LOS	A	A	-	-	-	A
HCM 95th %ile Q(veh)	0	-	-	-	-	0

## **2033 BACKGROUND – WEEKDAY PM**

2033 Weekday Background PM Peak Hour  
01/10/2025

12: Exhibition & Paul Askin

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
Mvmt 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	133	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 TI (I)	0,164	0,166	0,014
Departure Headway (Hd)	4,064	4,041	4,396
Convergence, IN	ies	ies	ies
Cap	875	866	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-ile Q	0,5	0,7	0

2033 Weekday Background PM Peak Hour  
01/10/2025

13: Paul Askin & Marche

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%	36%	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 TI (I)	0,012	0,009	0,013
Departure Headway (Hd)	3,769	3,567	4,06
Convergence, IN	ies	ies	ies
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-ile Q	0	0	0

2033 Weekday Background PM Peak Hour  
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14: Exhibition & Marche

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			
Conflicting Lanes Right	1	0	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 TI (I)	0,152	0,01	0,202
Departure Headway (Hd)	3,775	3,641	4,367
Convergence, IN	ies	ies	ies
Cap	955	892	815
Service Time	1,775	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-ile Q	0,5	0	0,8

2033 Weekday Background PM Peak Hour  
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37: O' Connor & Fifth

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	NB	WB	NB	SB						
Opposing Approach	WB	EB	SB	NB	WB	EB						
Opposing Lanes	1	1	1	1	1	1						
Conflicting Approach Left	SB		NB	EB		WB						
Conflicting Lanes Left	1		1	1		1						
Conflicting Approach Right	NB		WB	EB		SB						
Conflicting Lanes Right	1		1	1		1						
HCM Control Delay, s/veh	8,6			7,6		8,2						7,6
HCM LOS	A			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	96	115	106	95
LT Vol	41	73	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 TI (I)	0,136	0,167	0,129	0,117
Departure Headway (Hd)	4,493	4,653	3,553	4,007
Convergence, IN	ies	ies	ies	ies
Cap	799	772	907	865
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-ile Q	0,5	0,6	0,4	0,4

2033 Weekday Background PM Peak Hour  
01/10/2025

1: Bank & Fifth

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↔		↔		↔		↔	
Traffic Volume (vph)	48	55	61	39	17	462	30	599
Future Volume (vph)	48	55	61	39	17	462	30	599
Lane Group Flow (vph)	0	167	68	83	0	568	0	741
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 Effect Green (s)	13.4	13.4	13.4	13.4	50.6	50.6	50.6	50.6
Actuated g/C Ratio	0.19	0.18	0.18	0.18	0.31	0.40	0.40	0.40
v/c Ratio	0.67	0.41	0.30	0.30	0.31	0.40	0.40	0.40
Control Delay (s/veh)	35.9	33.0	17.2	17.2	5.5	5.5	6.9	6.9
Queue Delay (s/veh)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	35.9	33.0	17.2	17.2	5.5	5.5	6.9	6.9
LOS	D	C	B	B	A	A	A	A
Approach Delay (s/veh)	35.9	33.0	17.2	17.2	5.5	5.5	6.9	6.9
Approach LOS	D	C	B	B	A	A	A	A
Queue Length 50th (m)	16.0	8.6	5.2	5.2	13.1	13.1	20.3	20.3
Queue Length 95th (m)	33.2	17.9	14.6	14.6	24.5	24.5	36.5	36.5
Internal Link Dist (m)	49.7	112.4	195.6	195.6	195.6	195.6	190.0	190.0
Turn Bay Length (m)	45.0							
Base Capacity (vph)	364	253	409	409	1859	1859	1849	1849
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.46	0.27	0.20	0.20	0.31	0.31	0.40	0.40

Splits and Phases: 1: Bank & Fifth



2033 Weekday Background PM Peak Hour  
01/10/2025

3: Bank & Exhibition

Lane Group	WBL	WBR	NBT	SBL	SBT	Ø1	Ø7	
Lane Configurations	↔		↔		↔		↔	
Traffic Volume (vph)	125	64	481	119	511			
Future Volume (vph)	125	64	481	119	511			
Lane Group Flow (vph)	139	71	683	132	568			
Turn Type	Prot	Perm	NA	Perm	NA			
Protected Phases	8	8	2	6	6	1	7	
Permitted Phases	8	8	2	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	44.0	44.0	44.0	5.0	5.0	
Total Split (s)	26.0	26.0	44.0	44.0	44.0	5.0	5.0	
Total Split (%)	32.5%	32.5%	55.0%	55.0%	55.0%	6%	6%	
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			
Lead/Lag	Lag	Lag				Lead	Yes	
Lead-Lag Optimize?								
Recall Mode	None	None	C-Max	C-Max	C-Max	None	None	
Act Effect Green (s)	13.0	13.0	53.8	53.8	53.8			
Actuated g/C Ratio	0.16	0.18	0.67	0.67	0.67			
v/c Ratio	0.59	0.30	0.37	0.35	0.27			
Control Delay (s/veh)	39.0	19.9	6.2	3.6	6.0			
Queue Delay (s/veh)	0.0	0.0	0.0	0.0	0.0			
Total Delay (s/veh)	39.0	19.9	6.2	3.6	6.0			
LOS	D	B	A	A	A			
Approach Delay (s/veh)	29.5	16.2	6.2	6.7	6.7			
Approach LOS	C	A	A	A	A			
Queue Length 50th (m)	19.8	0.0	17.6	7.2	15.2			
Queue Length 95th (m)	34.3	8.9	32.2	20.7	27.0			
Internal Link Dist (m)	39.6	33.7	44.8					
Turn Bay Length (m)	40.0							
Base Capacity (vph)	379	320	1864	380	2113			
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	0.22	0.37	0.35	0.27			

Splits and Phases: 3: Bank & Exhibition



2033 Weekday Background PM Peak Hour  
01/10/2025

2: Bank & Holmwood

Lane Group	EBT	NBL	NBT	SBL	SBT	Ø3
Lane Configurations	↔		↔		↔	
Traffic Volume (vph)	18	26	510	29	574	
Future Volume (vph)	18	26	510	29	574	
Lane Group Flow (vph)	114	0	654	0	702	
Turn Type	NA	Perm	NA	Perm	NA	
Protected Phases	4	2	2	6	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)	2.0	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)	5.8	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)	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	0.58	0.33	0.33	0.35	0.35	
Control Delay (s/veh)	38.8	5.1	5.1	3.2	3.2	
Queue Delay (s/veh)	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	38.8	5.1	5.1	3.2	3.2	
LOS	D	A	A	A	A	
Approach Delay (s/veh)	38.8	5.1	5.1	3.2	3.2	
Approach LOS	D	A	A	A	A	
Queue Length 50th (m)	15.1	15.2	12.4			
Queue Length 95th (m)	27.8	29.4	16.3			
Internal Link Dist (m)	38.8	31.5	195.6			
Turn Bay Length (m)	288					
Base Capacity (vph)	288	1961	2029			
Starvation Cap Reductn	0	0	0			
Spillback Cap Reductn	0	0	0			
Storage Cap Reductn	0	0	0			
Reduced v/c Ratio	0.40	0.33	0.35			

Splits and Phases: 2: Bank & Holmwood



2033 Weekday Background PM Peak Hour  
01/10/2025

6: Bank & Aylmer

Lane Group	EBL	NBL	NBT	SBT	Ø3	
Lane Configurations	↔		↔		↔	
Traffic Volume (vph)	57	21	703	786		
Future Volume (vph)	57	21	703	786		
Lane Group Flow (vph)	90	0	804	959		
Turn Type	Prot	Perm	NA	NA		
Protected Phases	4	2	6	3		
Permitted Phases	4	2	6	6		
Detector Phase	4	2	6	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	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	Max	
Act Effect 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	0.42	0.49	0.49		
Control Delay (s/veh)	31.6	4.8	8.1	8.1		
Queue Delay (s/veh)	0.0	0.0	0.0	0.0		
Total Delay (s/veh)	31.6	4.8	8.1	8.1		
LOS	C	A	A	A		
Approach Delay (s/veh)	31.6	4.8	8.1	8.1		
Approach LOS	C	A	A	A		
Queue Length 50th (m)	10.7	18.1	36.2			
Queue Length 95th (m)	24.5	m21.2	45.8			
Internal Link Dist (m)	76.7	28.1	10.1			
Turn Bay Length (m)	275					
Base Capacity (vph)	275	1908	1957			
Starvation Cap Reductn	0	0	0			
Spillback Cap Reductn	0	0	0			
Storage Cap Reductn	0	0	0			
Reduced v/c Ratio	0.33	0.42	0.49			

Splits and Phases: 6: Bank & Aylmer



2033 Weekday Background PM Peak Hour  
01/10/2025

7: Bank & Sunnyside

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	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	43.0	5.0	5.0
Total Split (%)	27.8%	27.8%	27.8%	27.8%	47.8%	47.8%	18.9%	47.8%	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	Lag	Lag	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 Effect 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	0.31	0.31	0.31	0.31		
v/c Ratio	0.72	0.72	0.98	0.98	0.31	0.31	0.31	0.31		
Control Delay (s/veh)	47.9	47.9	64.6	64.6	9.4	9.4	30.2	30.2		
Queue Delay (s/veh)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Total Delay (s/veh)	47.9	47.9	64.6	64.6	9.4	9.4	30.2	30.2		
LOS	D	D	E	E	A	A	C	C		
Approach Delay (s/veh)	47.9	47.9	64.6	64.6	9.4	9.4	30.2	30.2		
Approach LOS	D	D	E	E	A	A	C	C		
Queue Length 50th (m)	26.3	26.3	48.1	48.1	21.1	21.1	95.6	95.6		
Queue Length 95th (m)	#60.1	#60.1	#107.2	#107.2	30.0	30.0	#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)	255	255	403	403	1672	1672	1247	1247		
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	0.72	0.72	0.98	0.98	0.31	0.31	0.31	0.31		

2033 Weekday Background PM Peak Hour  
01/10/2025

7: Bank & Sunnyside

Splits and Phases: 7: Bank & Sunnyside

2033 Weekday Background PM Peak Hour  
01/10/2025

9: Queen Elizabeth Drive & Fifth

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	285	663	
Turn Type	Prot	Perm	NA	NA	
Protected Phases	10	2	2	6	4
Permitted Phases		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 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	C-Max	None
Act Effect Green (s)	10.9	56.6	56.6	56.6	
Actuated g/C Ratio	0.14	0.71	0.71	0.71	
v/c Ratio	0.38	0.26	0.56	0.56	
Control Delay (s/veh)	36.8	5.2	5.2	8.2	
Queue Delay (s/veh)	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	36.8	5.2	5.2	8.2	
LOS	D	A	A	A	
Approach Delay (s/veh)	36.8	5.2	5.2	8.2	
Approach LOS	D	A	A	A	
Queue Length 50th (m)	11.3	11.3	38.6	38.6	
Queue Length 95th (m)	22.8	23.3	73.1	73.1	
Internal Link Dist (m)	57.2	0.1	5.9	5.9	
Turn Bay Length (m)					
Base Capacity (vph)	293	1017	1175	1175	
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	0.27	0.26	0.56	0.56	

Splits and Phases: 9: Queen Elizabeth Drive & Fifth

2033 Weekday Background PM Peak Hour  
01/10/2025

4: Bank & Wilton

Intersection

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔		↔		↔	
Traffic Vol veh/h	3	239	219	572	564	51
Future Vol veh/h	3	239	219	572	564	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	-	-	-	-
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	636	649	57

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	1660	855	684
Stage 1	855	-	-
Stage 2	804	-	-
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
Flt Cap-1 Maneuver	95	351	748
Stage 1	409	-	-
Stage 2	365	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	32	285	607
Mov Cap-2 Maneuver	32	-	-
Stage 1	170	-	-
Stage 2	321	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	76.67	7.07	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	500	-	285	-	-
HCM Lane V/C Ratio	0.401	-	0.522	-	-
HCM Ctrl Dly (s/v)	14.8	4.1	76.7	-	-
HCM Lane LOS	B	A	F	-	-
HCM 95th %ile Q(veh)	1.9	-	8.8	-	-

2033 Weekday Background PM Peak Hour  
01/10/2025

5: Bank & Echo

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	888	924	2
Major/Minor						
Conflicting Flow All	Minor2	Major1	Major2			
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	265	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 Chfd Dly, s/v	20,51	0	0			
HCM LOS	C					
Minor Lane/Major Mvmt						
Capacity (veh/h)	NBL	EBL	NBL	EBL	SBT	SBR
HCM Lane V/C Ratio	-	259	-	-	-	-
HCM Chfd Dly (s/v)	-	20,5	-	-	-	-
HCM Lane LOS	-	C	-	-	-	-
HCM 95th %ile Q(veh)	-	0,3	-	-	-	-

2033 Weekday Background PM Peak Hour  
01/10/2025

8: Queen Elizabeth Driveway /Queen Elizabeth Driveway & Princess Patricia Way

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						
Conflicting Flow All	Minor2	Major1	Major2			
Stage 1	602	-	-	-	-	-
Stage 2	389	-	-	-	-	-
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 Chfd Dly, s/v	21,49	1,39	0			
HCM LOS	C					
Minor Lane/Major Mvmt						
Capacity (veh/h)	NBL	EBL	NBL	EBL	SBT	SBR
HCM Lane V/C Ratio	0,266	-	340	-	-	-
HCM Chfd Dly (s/v)	9	0	21,5	-	-	-
HCM Lane LOS	A	A	C	-	-	-
HCM 95th %ile Q(veh)	0,2	-	1,6	-	-	-

2033 Weekday Background PM Peak Hour  
01/10/2025

10: Bank & Marche

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	828
Future Vol, veh/h	5	76	553	7	1	828
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	64	614	8	1	898
Major/Minor						
Conflicting Flow All	Minor1	Major1	Major2			
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 Chfd Dly, s/v	13,74	0	0,02			
HCM LOS	B					
Minor Lane/Major Mvmt						
Capacity (veh/h)	NBL	EBL	NBL	EBL	SBT	SBR
HCM Lane V/C Ratio	-	-	496	795	-	-
HCM Chfd Dly (s/v)	-	-	0,17	0,01	-	-
HCM Lane LOS	-	-	B	A	-	-
HCM 95th %ile Q(veh)	-	-	0,8	0	-	-

2033 Weekday Background PM Peak Hour  
01/10/2025

11: Garage & Exhibition

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	-
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						
Conflicting Flow All	Major1	Major2	Minor1			
Stage 1	-	-	-	-	311	-
Stage 2	-	-	-	-	271	-
Critical Hdwy	-	-	4,12	-	6,42	6,22
Critical Hdwy Stg 1	-	-	-	-	5,42	-
Critical Hdwy Stg 2	-	-	-	-	5,42	-
Follow-up Hdwy	-	-	2,216	-	3,518	3,318
Pot Cap-1 Maneuver	-	-	1176	-	475	841
Stage 1	-	-	-	-	743	-
Stage 2	-	-	-	-	774	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1052	-	378	513
Mov Cap-2 Maneuver	-	-	-	-	378	-
Stage 1	-	-	-	-	665	-
Stage 2	-	-	-	-	668	-
Approach						
EB	WB	NB				
HCM Chfd Dly, s/v	0	0,28	15,82			
HCM LOS	C					
Minor Lane/Major Mvmt						
Capacity (veh/h)	NBL	EBL	EBR	WBL	WBT	NBR
HCM Lane V/C Ratio	0,143	-	-	0,005	-	-
HCM Chfd Dly (s/v)	15,8	-	-	8,4	0	-
HCM Lane LOS	C	-	-	A	A	-
HCM 95th %ile Q(veh)	0,5	-	-	0	-	-

2033 Weekday Background PM Peak Hour

17: Princess Patricia/Princess Patricia Way & Garage 01/10/2025

Intersection						
Int Delay, s/veh	2.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	4	1	1	1	1	1
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
<b>Major/Minor</b>						
	Major1	Major2	Minor2			
Conflicting Flow All	130	0	0	155	78	
Stage 1	-	-	-	78	-	
Stage 2	-	-	-	77	-	
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	1455	-	-	836	982	
Stage 1	-	-	-	945	-	
Stage 2	-	-	-	946	-	
Platoon blocked, %	-	-	-	-	-	
Mov Cap-1 Maneuver	1455	-	-	833	982	
Mov Cap-2 Maneuver	-	-	-	833	-	
Stage 1	-	-	-	841	-	
Stage 2	-	-	-	946	-	
<b>Approach</b>						
	EB	WB	SB			
HCM Chd Dly, s/v	0,58	0	9,61			
HCM LOS	A		A			
<b>Minor Lane/Major Mvmt</b>						
	EBL	EBT	WBT	WBR	SBL	SBR
Capacity (veh/h)	141	-	-	-	-	344
HCM Lane V/C Ratio	0,004	-	-	-	-	0,075
HCM Chd Dly (s/v)	7,5	0	-	-	-	9,6
HCM Lane LOS	A	A	-	-	-	A
HCM 95th %ile Q(veh)	0	-	-	-	-	0,2

## **2033 BACKGROUND – SATURDAY**

12: Exhibition & Paul Askin

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	129	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	887	888	845
Service Time	2,065	2,081	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-ile Q	0,5	0,4	0

13: Paul Askin & Marche

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	16	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	3,816	3,864
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-ile Q	0	0,1	0,3

14: Exhibition & Marche

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	129	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-ile Q	0,5	0,1	0,4

37: O' Connor & Fifth

Intersection	
Intersection 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
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	8,5	7,6	8,5	7,6
HCM LOS	A	A	A	A

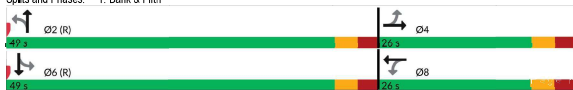
Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	44%	46%	0%	0%
Vol Thru, %	29%	54%	0%	0%
Vol Right, %	27%	0%	100%	100%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	137	90	95	107
LT Vol	60	41	0	0
Through Vol	40	49	0	0
RT Vol	37	0	95	107
Lane Flow Rate	152	100	106	119
Geometry Grp	1	1	1	1
Degree of Util (X)	0,188	0,131	0,119	0,131
Departure Headway (Hd)	4,442	4,726	4,044	3,868
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	808	759	887	894
Service Time	2,464	2,753	2,069	1,89
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-ile Q	0,7	0,4	0,4	0,5

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1: Bank & Fifth

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	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	48.0
Total Split (s)	26.0	26.0	26.0	26.0	49.0	49.0	49.0	48.0
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)	12.2	12.2	12.2	12.2	51.8	51.8	51.8	51.8
Actuated g/C Ratio	0.15	0.15	0.16	0.16	0.69	0.69	0.69	0.69
v/c Ratio	0.65	0.48	0.40	0.40	0.31	0.34	0.34	0.34
Control Delay (s/veh)	35.0	37.0	18.0	18.0	4.9	5.9	5.9	5.9
Queue Delay (s/veh)	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	18.0	4.9	5.9	5.9	5.9
LOS	C	D	B	B	A	A	A	A
Approach Delay (s/veh)	35.0	37.0	25.9	25.9	4.9	5.9	5.9	5.9
Approach LOS	C	C	A	A	A	A	A	A
Queue Length 50th (m)	14.3	10.0	5.2	5.2	12.8	16.2	16.2	16.2
Queue Length 95th (m)	28.3	20.2	11.3	11.3	23.4	31.6	31.6	31.6
Internal Link Dist (m)	49.7	112.4	195.6	195.6	195.6	195.6	195.6	195.6
Turn Bay Length (m)	45.0							
Base Capacity (vph)	354	289	415	415	1915	1915	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	0.26	0.31	0.34	0.34	0.34
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: 0.65								
Intersection Signal Delay (s/veh): 10.5					Intersection LOS: B			
Intersection Capacity Utilization 57.9%					ICU Level of Service B			
Analysis Period (min) 15								

Splits and Phases: 1: Bank & Fifth



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2: Bank & Holmwood

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	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)	2.0	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)	5.8	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)	11.7	55.9	55.9	55.9	55.9	55.9
Actuated g/C Ratio	0.16	0.75	0.75	0.75	0.75	0.75
v/c Ratio	0.56	0.32	0.34	0.34	0.34	0.34
Control Delay (s/veh)	38.9	2.3	3.4	3.4	3.4	3.4
Queue Delay (s/veh)	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	38.9	2.3	3.4	3.4	3.4	3.4
LOS	D	A	A	A	A	A
Approach Delay (s/veh)	38.9	2.3	3.4	3.4	3.4	3.4
Approach LOS	D	A	A	A	A	A
Queue Length 50th (m)	14.9	9.6	13.0	13.0	13.0	13.0
Queue Length 95th (m)	27.7	9.0	17.2	17.2	17.2	17.2
Internal Link Dist (m)	38.8	31.5	195.6	195.6	195.6	195.6
Turn Bay Length (m)	285					
Base Capacity (vph)	285	1958	2023	2023	2023	2023
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.40	0.32	0.34	0.34	0.34	0.34
Intersection Summary						
Cycle Length: 75						
Actuated Cycle Length: 75						
Offset: 60 (80%), Referenced to phase 2/NBTL and 6/SBTL, Start of Green						
Natural Cycle: 75						
Control Type: Actuated-Coordinated						
Maximum v/c Ratio: 0.56						
Intersection Signal Delay (s/veh): 5.7				Intersection LOS: A		
Intersection Capacity Utilization 65.3%				ICU Level of Service C		
Analysis Period (min) 15						

Splits and Phases: 2: Bank & Holmwood



2033 Saturday Background PM Peak Hour  
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3: Bank & Exhibition

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	80	639	140	539			
Turn Type	Prot	Perm	NA	Perm	NA			
Protected Phases	8	8	2	6	6	1	7	
Permitted Phases	8	8	2	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	39.0	39.0	5.0	5.0	
Total Split (s)	26.0	26.0	39.0	39.0	39.0	5.0	5.0	
Total Split (%)	34.7%	34.7%	52.0%	52.0%	52.0%	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	3.0	
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			
Lead/Lag	Lag	Lag				Lead	Yes	
Lead-Lag Optimize?								
Recall Mode	None	None	C-Max	C-Max	C-Max	None	None	
Act Effect 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	11.5	4.9	5.7	3.4			
Queue Delay (s/veh)	0.0	0.0	0.0	0.0	0.0			
Total Delay (s/veh)	34.6	11.5	4.9	5.7	3.4			
LOS	C	B	A	A	A			
Approach Delay (s/veh)	24.3	4.9	3.8	3.8	3.8			
Approach LOS	C	A	A	A	A			
Queue Length 50th (m)	13.0	0.0	14.1	4.8	9.2			
Queue Length 95th (m)	25.1	10.5	26.1	9.5	13.4			
Internal Link Dist (m)	39.6	33.7	144.8	144.8	144.8			
Turn Bay Length (m)	40.0							
Base Capacity (vph)	405	348	2055	433	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			
Intersection Summary								
Cycle Length: 75								
Actuated Cycle Length: 75								
Offset: 60 (80%), Referenced to phase 2/NBTL and 6/SBTL, Start of Green								
Natural Cycle: 75								
Control Type: Actuated-Coordinated								
Maximum v/c Ratio: 0.43								
Intersection Signal Delay (s/veh): 6.7				Intersection LOS: A				
Intersection Capacity Utilization 59.7%				ICU Level of Service B				
Analysis Period (min) 15								

Splits and Phases: 3: Bank & Exhibition



2033 Saturday Background PM Peak Hour  
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6: Bank & Aylmer

Lane Group	EBL	NBL	NBT	SBT	Ø3	
Lane Configurations	↔		↔		↔	
Traffic Volume (vph)	39	19	683	722		
Future Volume (vph)	39	19	683	722		
Lane Group Flow (vph)	56	0	780	870		
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)	19.5	35.2	35.2	35.2	4.0	
Total Split (s)	20.0	65.0	65.0	65.0	5.0	
Total Split (%)	22.2%	72.2%	72.2%	72.2%	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	0.0	
Total Lost Time (s)	5.5	5.2	5.2	5.2	0.0	
Lead/Lag	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	60.3	
Actuated g/C Ratio	0.16	0.67	0.67	0.67	0.67	
v/c Ratio	0.24	0.40	0.43	0.43	0.43	
Control Delay (s/veh)	30.0	5.2	7.5	7.5	7.5	
Queue Delay (s/veh)	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	30.0	5.2	7.5	7.5	7.5	
LOS	C	A	A	A	A	
Approach Delay (s/veh)	30.0	5.2	7.5	7.5	7.5	
Approach LOS	C	A	A	A	A	
Queue Length 50th (m)	6.6	20.2	31.4	31.4	31.4	
Queue Length 95th (m)	17.3	26.2	42.3	42.3	42.3	
Internal Link Dist (m)	76.7	28.1	10.1	10.1	10.1	
Turn Bay Length (m)	244					
Base Capacity (vph)	244	1930	2004	2004	2004	

2033 Saturday Background PM Peak Hour  
01/10/2025

7: Bank & Sunnyside

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	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)	20.0	20.0	20.0	20.0	54.0	54.0	11.0	54.0	5.0	5.0
Total Split (s)	20.0	20.0	20.0	20.0	54.0	54.0	11.0	54.0	5.0	5.0
Total Split (%)	22.2%	22.2%	22.2%	22.2%	60.0%	60.0%	12.2%	60.0%	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	2.5	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				
Lead/Lag	Lag	Lag	Lag	Lag	Lag	Lag	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)	18.2	18.2	18.2	18.2	59.2	59.2				
Actuated g/C Ratio	0.21	0.21	0.21	0.21	0.66	0.66				
v/c Ratio	0.62	0.62	0.65	0.65	0.35	0.50				
Control Delay (s/veh)	45.3	45.3	33.3	33.3	7.4	6.9				
Queue Delay (s/veh)	0.0	0.0	0.0	0.0	0.0	0.0				
Total Delay (s/veh)	45.3	45.3	33.3	33.3	7.4	6.9				
LOS	D	D	C	C	A	A				
Approach Delay (s/veh)	45.3	45.3	33.3	33.3	7.4	6.9				
Approach LOS	D	D	C	C	A	A				
Queue Length 50th (m)	21.7	21.7	21.3	21.3	21.7	17.3				
Queue Length 95th (m)	#43.9	#43.9	#45.9	#45.9	30.5	21.6				
Internal Link Dist (m)	75.1	75.1	136.0	136.0	63.1	79.0				
Turn Bay Length (m)										
Base Capacity (vph)	224	224	303	303	1770	1521				
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	0.62	0.62	0.65	0.65	0.35	0.50				
<b>Intersection Summary</b>										
Cycle Length: 90										
Actuated Cycle Length: 90										
Offset: 33 (37%), Referenced to phase 2/NBTL and 6/SBTL, Start of Green										
Natural Cycle: 90										
Control Type: Actuated-Coordinated										
Maximum v/c Ratio: 0.65										
Intersection Signal Delay (s/veh): 13.2										
Intersection Capacity Utilization: 72.3%										
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.										

2033 Saturday Background PM Peak Hour  
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7: Bank & Sunnyside



2033 Saturday Background PM Peak Hour  
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9: Queen Elizabeth Drive & Fifth

Lane Group	EBL	NBL	NBT	SBT	Ø4
Lane Configurations	↔		↔		↔
Traffic Volume (vph)	55	42	248	398	
Future Volume (vph)	55	42	248	398	
Lane Group Flow (vph)	95	0	323	457	
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 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	0.0
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	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 (s/veh)	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		
<b>Intersection Summary</b>					
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%					
ICU Level of Service: B					
Analysis Period (min): 15					
<b>Splits and Phases: 9: Queen Elizabeth Drive &amp; Fifth</b>					



2033 Saturday Background PM Peak Hour  
01/10/2025

4: Bank & Wilton

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Int Delay (s/veh)	6.4					
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 Channelled	-	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	564	62
<b>Major/Minor</b>						
Conflicting Flow All	1375	794	625	0	-	0
Stage 1	764	-	-	-	-	-
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	-	-	-
Flt Cap-1 Maneuver	145	381	786	-	-	-
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	-	-	-	-	-
<b>Approach</b>						
HCM Ctrl Dly, s/v	EB		NB		SB	
HCM LOS	38,13		3,86		0	
<b>Minor Lane/Major Mvmt</b>						
Capacity (veh/h)	NBL		NBT		SBT	
	527		-		309	
HCM Lane V/C Ratio	0,207		-		0,653	
HCM Ctrl Dly (s/v)	12,1		2,1		36,1	
HCM Lane LOS	B		A		E	
HCM 95th %ile Q(veh)	0,8		-		4,3	

2033 Saturday Background PM Peak Hour  
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5: Bank & Echo

Intersection						
Int Delay, s/veh	0,4					
Movement	EBL	EBR	NBL	NBR	SBT	SBR
Lane Configurations	↑	↑	↑↑	↑↑	↑	↑
Traffic Vol. veh/h	1	33	0	675	699	0
Future Vol. veh/h	1	33	0	675	699	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, I	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						
Conflicting Flow All	Minor2	Major1	Major2			
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	3,5473	3,3475	-	-	-	-
Pot Cap-1 Maneuver	200	380	0	-	-	0
Stage 1	446	-	0	-	-	0
Stage 2	657	-	0	-	-	0
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	200	380	-	-	-	-
Mov Cap-2 Maneuver	200	-	-	-	-	-
Stage 1	446	-	-	-	-	-
Stage 2	657	-	-	-	-	-
Approach						
HCM Ctrl Dly, s/v	EB	NB	SB			
HCM LOS	15,19	0	0			
HCM LOS	C					
Minor Lane/Major Mvmt						
Capacity (veh/h)	NBT	EBLn1	SBT			
HCM Lane V/C Ratio	-	390	-			
HCM Ctrl Dly (s/v)	-	0,094	-			
HCM Lane LOS	-	15,2	-			
HCM 95th %ile Q(veh)	-	C	-			
HCM 95th %ile Q(veh)	-	0,3	-			

2033 Saturday Background PM Peak Hour  
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8: Queen Elizabeth Driveway /Queen Elizabeth Driveway & Princess Patricia Way

Intersection						
Int Delay, s/veh	3,2					
Movement	EBL	EBR	NBL	NBR	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	- None	- None	- None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, I	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						
Conflicting Flow All	Minor2	Major1	Major2			
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	889	1137	-	-	-
Stage 1	710	-	-	-	-	-
Stage 2	705	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	368	889	1137	-	-	-
Mov Cap-2 Maneuver	368	-	-	-	-	-
Stage 1	664	-	-	-	-	-
Stage 2	705	-	-	-	-	-
Approach						
HCM Ctrl Dly, s/v	EB	NB	SB			
HCM LOS	16,13	1,74	0			
HCM LOS	C					
Minor Lane/Major Mvmt						
Capacity (veh/h)	NBL	NBR	EBLn1	SBT	SBR	
HCM Lane V/C Ratio	376	-	465	-	-	-
HCM Ctrl Dly (s/v)	0,266	-	0,306	-	-	-
HCM Lane LOS	8,4	0	16,1	-	-	-
HCM 95th %ile Q(veh)	A	A	C	-	-	-
HCM 95th %ile Q(veh)	0,2	-	1,3	-	-	-

2033 Saturday Background PM Peak Hour  
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10: Bank & Marche

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	- None	- None	- None
Storage Length	- 0	-	-	-	-	-
Veh in Median Storage, I	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	61	564	21	2	672
Major/Minor						
Conflicting Flow All	Minor1	Major1	Major2			
Stage 1	1016	393	0	0	686	0
Stage 2	675	-	-	-	-	-
Stage 3	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						
HCM Ctrl Dly, s/v	WB	NB	SB			
HCM LOS	13,38	0	0,03			
HCM LOS	B					
Minor Lane/Major Mvmt						
Capacity (veh/h)	NBT	NBR	WBLn1	SBL	SBT	
HCM Lane V/C Ratio	-	-	510	820	-	-
HCM Ctrl Dly (s/v)	-	-	0,156	0,003	-	-
HCM Lane LOS	-	-	13,4	8,4	-	-
HCM 95th %ile Q(veh)	-	-	B	A	-	-
HCM 95th %ile Q(veh)	-	-	0,8	0	-	-

2033 Saturday Background PM Peak Hour  
01/10/2025

11: Garage & Exhibition

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	- 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						
Conflicting Flow All	Major1	Major2	Minor1			
Stage 1	0	0	374	0	514	406
Stage 2	-	-	-	-	306	-
Stage 3	-	-	-	-	209	-
Critical Hdwy	-	-	4,12	-	6,42	6,22
Critical Hdwy Stg 1	-	-	-	-	5,42	-
Critical Hdwy Stg 2	-	-	-	-	5,42	-
Follow-up Hdwy	-	-	2,216	-	3,518	3,318
Pot Cap-1 Maneuver	-	-	1184	-	620	943
Stage 1	-	-	-	-	747	-
Stage 2	-	-	-	-	826	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1059	-	414	516
Mov Cap-2 Maneuver	-	-	-	-	414	-
Stage 1	-	-	-	-	668	-
Stage 2	-	-	-	-	735	-
Approach						
HCM Ctrl Dly, s/v	EB	WB	NB			
HCM LOS	0	0,46	15,78			
HCM LOS	C					
Minor Lane/Major Mvmt						
Capacity (veh/h)	NBLn1	EBT	EBR	WBL	WBT	
HCM Lane V/C Ratio	419	-	-	97	-	-
HCM Ctrl Dly (s/v)	0,204	-	-	0,005	-	-
HCM Lane LOS	15,8	-	-	8,4	-	-
HCM 95th %ile Q(veh)	C	-	-	A	A	-
HCM 95th %ile Q(veh)	0,8	-	-	0	-	-

2033 Saturday Background PM Peak Hour

17: Princess Patricia/Princess Patricia Way & Garage 01/10/2025

Intersection						
Int Delay, s/veh	3.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	4	1	1	1	1	1
Traffic Vol, veh/h	5	32	75	112	96	5
Future Vol, veh/h	5	32	75	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	193	147	
Stage 1	-	-	-	147	-	
Stage 2	-	-	-	47	-	
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	1382	-	-	796	900	
Stage 1	-	-	-	881	-	
Stage 2	-	-	-	976	-	
Platoon blocked, %	-	-	-	-	-	
Mov Cap-1 Maneuver	1382	-	-	792	900	
Mov Cap-2 Maneuver	-	-	-	792	-	
Stage 1	-	-	-	877	-	
Stage 2	-	-	-	976	-	
Approach						
	EB	WB	SB			
HCM Chl Dly, s/v	1,03	0	10,28			
HCM LOS			B			
Minor Lane/Major Mvmt						
	EBL	EBT	WBT	WBR	SBL	SBR
Capacity (veh/h)	243	-	-	-	-	797
HCM Lane V/C Ratio	0,004	-	-	-	-	0,141
HCM Chl Dly (s/v)	7,7	0	-	-	-	10,3
HCM Lane LOS	A	A	-	-	-	B
HCM 95th %ile Q(veh)	0	-	-	-	-	0,5

## **2033 BACKGROUND – SUNDAY**

2033 Sunday Background PM Peak Hour  
01/10/2025

12: Exhibition & Paul Askin

Intersection	
Intersection Delay, s/veh	7,9
Intersection LOS	A

Movement	EBL	EBT	WBT	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			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	888	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-ile Q	0,7	0,5	0

2033 Sunday Background PM Peak Hour  
01/10/2025

13: Paul Askin & Marche

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	163	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	0,208
Departure Headway (Hd)	4,058	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-ile Q	0	0,1	0,8

2033 Sunday Background PM Peak Hour  
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14: Exhibition & Marche

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	28
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)	0,199	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-ile Q	0,7	0,1	0,3

2033 Sunday Background PM Peak Hour  
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37: O' Connor & Fifth

Intersection	
Intersection Delay, s/veh	10
Intersection LOS	A

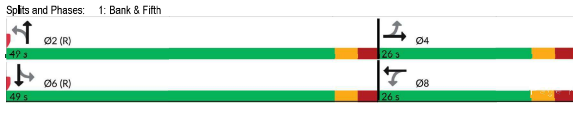
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑		↓	↓		↑	↓	↑	↓	↑	↓
Traffic Vol, veh/h	70	83	0	0	0	233	101	67	62	0	0	106
Future Vol, veh/h	70	83	0	0	0	233	101	67	62	0	0	106
Peak Hour Factor	0,90	0,90	0,90	0,90	0,90	0,90	0,90	0,90	0,90	0,90	0,90	0,90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	78	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										
Opposing Lanes	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							1
HCM Control Delay, s/veh	10,2			9,7	10,9							8,7
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	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-ile Q	1,6	1	1,4	0,6

2033 Sunday Background PM Peak Hour  
01/10/2025

1: Bank & Fifth

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	646
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 Effect 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	0.33	0.33
Control Delay (s/veh)	30.6	43.3	29.4	8.0	6.9	6.9	6.9	6.9
Queue Delay (s/veh)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	30.6	43.3	29.4	8.0	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	8.0	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	6.6	34.9	17.9	17.9	17.9	17.9
Queue Length 95th (m)	27.4	32.3	20.9	54.0	33.6	33.6	33.6	33.6
Internal Link Dist (m)	49.7	112.4	195.6	190.0				
Turn Bay Length (m)		45.0						
Base Capacity (vph)	332	288	423	1845	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	0.26	0.32	0.36	0.36	0.33	0.33



2033 Sunday Background PM Peak Hour  
01/10/2025

3: Bank & Exhibition

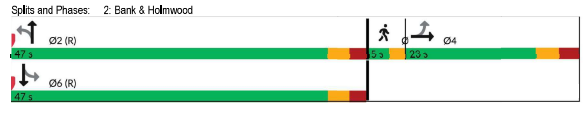
Lane Group	WBL	WBR	NBL	SBL	SBT	Ø3	Ø6	Ø7
Lane Configurations	↔		↔		↔		↔	
Traffic Volume (vph)	126	66	417	178	450			
Future Volume (vph)	126	66	417	178	450			
Lane Group Flow (vph)	140	73	597	198	500			
Turn Type	Perm	Perm	NA	custom	NA			
Protected Phases	8	8	2	1	16	3	6	7
Permitted Phases	8	8	2	1	16	3	6	7
Detector Phase	8	8	2	1	16	3	6	7
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	1.0	3.0	10.0	3.0	3.0
Minimum Split (s)	26.0	26.0	27.0	7.9	5.0	27.0	5.0	5.0
Total Split (s)	26.0	26.0	27.0	12.0	5.0	27.0	5.0	5.0
Total Split (%)	34.7%	34.7%	36.0%	16.0%	7%	36%	7%	7%
Yellow Time (s)	3.3	3.3	3.0	3.0	2.0	3.0	2.0	2.0
All-Red Time (s)	3.0	3.0	3.9	3.9	0.0	3.9	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)	6.3	6.3	6.9	6.9				
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	C-Max	None	None	C-Max	None	None
Act Effect 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	0.59	0.29	0.40	0.47	0.22			
Control Delay (s/veh)	36.6	9.8	12.2	15.0	5.9			
Queue Delay (s/veh)	0.0	0.0	0.0	0.0	0.0			
Total Delay (s/veh)	36.6	9.8	12.2	15.0	5.9			
LOS	D	A	B	B	A			
Approach Delay (s/veh)	27.4	12.2	8.5	8.5	8.5			
Approach LOS	C	B	A	A	A			
Queue Length 50th (m)	18.5	0.0	24.3	8.2	11.4			
Queue Length 95th (m)	32.4	8.3	42.2	28.1	28.5			
Internal Link Dist (m)	39.6	33.7	44.8					
Turn Bay Length (m)			40.0					
Base Capacity (vph)	377	343	1466	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			



2033 Sunday Background PM Peak Hour  
01/10/2025

2: Bank & Holmwood

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	2	6	6	3
Permitted Phases	4	2	2	6	6	3
Detector Phase	4	2	2	6	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)	2.8	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)	5.8	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)	11.6	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	0.33	0.33	0.33	
Control Delay (s/veh)	38.6	7.5	8.9	8.9	8.9	
Queue Delay (s/veh)	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	38.6	7.5	8.9	8.9	8.9	
LOS	D	A	A	A	A	
Approach Delay (s/veh)	38.6	7.5	8.9	8.9	8.9	
Approach LOS	D	A	A	A	A	
Queue Length 50th (m)	14.7	33.4	24.5	24.5	24.5	
Queue Length 95th (m)	27.3	54.2	48.9	48.9	48.9	
Internal Link Dist (m)	38.8	31.5	195.6			
Turn Bay Length (m)						
Base Capacity (vph)	304	1890	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	0.33			



2033 Sunday Background PM Peak Hour  
01/10/2025

6: Bank & Aymer

Lane Group	EBL	NBL	NBT	SBT	Ø3	
Lane Configurations	↔		↔		↔	
Traffic Volume (vph)	54	17	598	698		
Future Volume (vph)	54	17	598	698		
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	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	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	
Lost 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		
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	C-Max	C-Max	C-Max	None	
Act Effect 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	8.5	3.7	3.7		
Queue Delay (s/veh)	0.0	0.0	0.0	0.0		
Total Delay (s/veh)	35.9	8.5	3.7	3.7		
LOS	D	A	A	A		
Approach Delay (s/veh)	35.9	8.5	3.7	3.7		
Approach LOS	D	A	A	A		
Queue Length 50th (m)	10.5	42.7	17.1	17.1		
Queue Length 95th (m)	23.2	60.4	28.5	28.5		
Internal Link Dist (m)	76.7	28.1	10.1			
Turn Bay Length (m)						
Base Capacity (vph)	276	2235	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			



2033 Sunday Background PM Peak Hour  
 7: Bank & Sunnyside 01/10/2025

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	790			
Turn Type	Perm	NA	Perm	NA	Perm	NA	custom	NA			
Protected Phases	4				8		2 1 1 6		3	6	7
Permitted Phases	4				8		2 1 1 6				
Detector Phase	4 4				8 8		2 1 1 6				
Switch Phase											
Minimum Initial (s)	6.4		6.4		5.3		17.0		1.0		17.0
Minimum Split (s)	25.0		25.0		25.0		43.0		5.0		43.0
Total Split (s)	25.0		25.0		25.0		43.0		5.0		43.0
Total Split (%)	27.8%		27.8%		27.8%		47.8%		6%		48%
Yellow Time (s)	3.0		3.0		3.0		3.0		2.0		3.0
All-Red Time (s)	2.6		2.6		2.6		3.0		2.9		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						
Lead/Lag	Lag		Lag		Lag		Lag		Lead		Lead
Lead-Lag Optimize?	Yes		Yes		Yes		Yes		Yes		Yes
Recall Mode	None		None		None		C-Max		None		C-Max
Act Effct Green (s)	15.2		15.2		43.9		57.4				
Actuated g/C Ratio	0.17		0.17		0.49		0.64				
w/c Ratio	0.78		0.71		0.40		0.53				
Control Delay (s/veh)	66.7		33.7		17.2		14.0				
Queue Delay (s/veh)	0.0		0.0		0.0		0.0				
Total Delay (s/veh)	66.7		33.7		17.2		14.0				
LOS	E		C		B		B				
Approach Delay (s/veh)	66.7		33.7		17.2		14.0				
Approach LOS	E		C		B		B				
Queue Length 50th (m)	15.5		16.3		31.7		42.8				
Queue Length 95th (m)	35.2		37.4		50.4		66.7				
Internal Link Dist (m)	75.1		136.0		63.1		79.0				
Turn Bay Length (m)											
Base Capacity (vph)	199		335		1390		1508				
Starvation Cap Reductn	0		0		0		0				
Spillback Cap Reductn	0		0		0		0				
Storage Cap Reductn	0		0		0		0				
Reduced w/c Ratio	0.59		0.58		0.40		0.52				
<b>Intersection Summary</b>											
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 w/c Ratio: 0.78											
Intersection Signal Delay (s/veh): 21.1											
Intersection Capacity Utilization 73.8%											
Analysis Period (min) 15											
Intersection LOS: C											
ICU Level of Service D											



2033 Sunday Background PM Peak Hour  
 4: Bank & Wilton 01/10/2025

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 Channelled	-	None	-	None	-	None	
Storage Length	-	0	-	-	-	-	
Veh in Median Storage, I	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	173	122	614	559	69	
<b>Minor/Major</b>							
Conflicting Flow All	Minor2	Major1	Major2				
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	-	-	-	
Rot Cap-1 Maneuver	156	393	801	-	-	-	
Stage 1	448	-	-	-	-	-	
Stage 2	535	-	-	-	-	-	
Platoon blocked, %	-	-	-	-	-	-	
Mov Cap-1 Maneuver	80	319	850	-	-	-	
Mov Cap-2 Maneuver	80	-	-	-	-	-	
Stage 1	281	-	-	-	-	-	
Stage 2	434	-	-	-	-	-	
<b>Approach</b>							
EB	NB	SB					
HCM Ctrl Dly, s/v	28.97	3.55	0				
HCM LOS	D						
<b>Minor Lane/Major Mvmt</b>							
Capacity (veh/h)	NBL	NBT EBLn1	SBT	SBR			
HCM Lane V/C Ratio	0.169	-	0.544	-	-	-	
HCM Ctrl Dly (s/v)	11.8	1.9	25	-	-	-	
HCM Lane LOS	B	A	D	-	-	-	
HCM 95th %ile Q(veh)	0.7	-	3.1	-	-	-	

2033 Sunday Background PM Peak Hour  
 9: Queen Elizabeth Drive & Fifth 01/10/2025

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	4				2 2 6 3
Permitted Phases	4				2 2 6 3
Detector Phase	4				2 2 6 3
Switch Phase					
Minimum Initial (s)	10.0		4.0		4.0
Minimum Split (s)	22.0		42.0		42.0
Total Split (s)	22.0		42.0		42.0
Total Split (%)	29.3%		56.0%		56.0%
Yellow Time (s)	3.0		3.0		3.0
All-Red Time (s)	2.7		3.6		3.0
Lost Time Adjust (s)	0.0		0.0		0.0
Total Lost Time (s)	5.7		6.8		6.8
Lead/Lag	Lag		Lag		Lead
Lead-Lag Optimize?	Yes		Yes		Yes
Recall Mode	Min		None		C-Max
Act Effct Green (s)	13.8		48.7		48.7
Actuated g/C Ratio	0.18		0.85		0.85
w/c Ratio	0.60		0.31		0.04
Control Delay (s/veh)	36.9		7.9		5.9
Queue Delay (s/veh)	0.0		0.0		0.0
Total Delay (s/veh)	36.9		7.9		5.9
LOS	D		A		A
Approach Delay (s/veh)	36.9		7.9		5.9
Approach LOS	D		A		A
Queue Length 50th (m)	21.4		12.9		1.8
Queue Length 95th (m)	36.0		29.8		4.0
Internal Link Dist (m)	57.2		0.1		5.9
Turn Bay Length (m)					
Base Capacity (vph)	330		775		992
Starvation Cap Reductn	0		0		0
Spillback Cap Reductn	0		0		0
Storage Cap Reductn	0		0		0
Reduced w/c Ratio	0.49		0.31		0.04
<b>Intersection Summary</b>					
Cycle Length: 75					
Actuated Cycle Length: 75					
Offset: 0 (0%), Referenced to phase 6:SBT, Start of Green					
Natural Cycle: 75					
Control Type: Actuated-Coordinated					
Maximum w/c Ratio: 0.60					
Intersection Signal Delay (s/veh): 18.2					
Intersection Capacity Utilization 39.3%					
Analysis Period (min) 15					
Intersection LOS: B					
ICU Level of Service A					



2033 Sunday Background PM Peak Hour  
 5: Bank & Echo 01/10/2025

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	88	
Sign Control	Stop	Stop	Free	Free	Free	Free	
RT Channelled	-	None	-	None	-	None	
Storage Length	-	0	-	-	-	-	
Veh in Median Storage, I	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	79	0	708	737	1	
<b>Minor/Major</b>							
Conflicting Flow All	Minor2	Major1	Major2				
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	-	-	-	-	
Rot Cap-1 Maneuver	153	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	-	-	-	-	-	
<b>Approach</b>							
EB	NB	SB					
HCM Ctrl Dly, s/v	19.13	0	0				
HCM LOS	C						
<b>Minor Lane/Major Mvmt</b>							
Capacity (veh/h)	NBL	NBT EBLn1	SBT	SBR			
HCM Lane V/C Ratio	-	-	0.237	-	-	-	
HCM Ctrl Dly (s/v)	-	-	18.1	-	-	-	
HCM Lane LOS	-	-	C	-	-	-	
HCM 95th %ile Q(veh)	-	-	0.9	-	-	-	

2033 Sunday Background PM Peak Hour

8: Queen Elizabeth Driveway /Queen Elizabeth Driveway & Princess Patricia Way 09/10/2025

Intersection						
Int Delay, s/veh	5.9					
Movement	EBL	EBR	NBL	NDT	SDT	SBR
Lane Configurations	↑	↑	↑	↑	↑	↑
Traffic Vol, veh/h	88	138	72	131	88	60
Future Vol, veh/h	88	138	72	131	88	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, l	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	Minor2			
Conflicting Flow All	414	109	142	0	-	0
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	885	-	-	-	-	-
Stage 2	752	-	-	-	-	-
Approach	EB	NB	SB			
HCM Chd Dly, s/v	12,21	2,7	0			
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBT	EBL	SBT	SBR	
Capacity (veh/h)	638	-	746	-	-	-
HCM Lane V/C Ratio	0,055	-	0,335	-	-	-
HCM Chd Dly (s/v)	7,6	0	12,2	-	-	-
HCM Lane LOS	A	A	B	-	-	-
HCM 95th %ile Q(veh)	0,2	-	1,5	-	-	-

2033 Sunday Background PM Peak Hour

10: Bank & Marche 01/10/2025

Intersection						
Int Delay, s/veh	2.1					
Movement	WBL	WBR	NDT	NBR	SBL	SDT
Lane Configurations	↑	↑	↑	↑	↑	↑
Traffic Vol, veh/h	7	163	475	20	0	813
Future Vol, veh/h	7	163	475	20	0	813
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, l	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	881
Major/Minor	Minor1	Major1	Minor2			
Conflicting Flow All	979	375	0	0	-	-
Stage 1	638	-	-	-	-	-
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	387	-	0	-	-
Stage 1	483	-	-	-	0	-
Stage 2	668	-	-	-	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	224	525	-	-	-	-
Mov Cap-2 Maneuver	224	-	-	-	-	-
Stage 1	441	-	-	-	-	-
Stage 2	668	-	-	-	-	-
Approach	WB	NB	SB			
HCM Chd Dly, s/v	15,44	0	0			
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBR	WBL	WBR	SBL	SBT
Capacity (veh/h)	-	-	525	-	-	-
HCM Lane V/C Ratio	-	-	0,345	-	-	-
HCM Chd Dly (s/v)	-	-	15,4	-	-	-
HCM Lane LOS	-	-	C	-	-	-
HCM 95th %ile Q(veh)	-	-	1,5	-	-	-

2033 Sunday Background PM Peak Hour

11: Garage & Exhibition 01/10/2025

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	0	575	448
Stage 1	-	-	-	-	348	-
Stage 2	-	-	-	-	227	-
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	-	-	1127	-	480	610
Stage 1	-	-	-	-	715	-
Stage 2	-	-	-	-	811	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1008	-	381	488
Mov Cap-2 Maneuver	-	-	-	-	381	-
Stage 1	-	-	-	-	639	-
Stage 2	-	-	-	-	721	-
Approach	EB	WB	NB			
HCM Chd Dly, s/v	0	0,39	17,86			
HCM LOS			C			
Minor Lane/Major Mvmt	NBL	NBT	EBT	EBR	WBL	WBT
Capacity (veh/h)	369	-	-	83	-	-
HCM Lane V/C Ratio	0,265	-	-	0,096	-	-
HCM Chd Dly (s/v)	17,7	-	-	8,6	0	-
HCM Lane LOS	C	-	-	A	A	-
HCM 95th %ile Q(veh)	1,1	-	-	0	-	-

2033 Sunday Background PM Peak Hour

17: Princess Patricia/Princess Patricia Way & Garage 01/10/2025

Intersection						
Int Delay, s/veh	5.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↑	↑	↑	↑	↑	↑
Traffic Vol, veh/h	5	52	56	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	173	104
Stage 1	-	-	-	-	104	-
Stage 2	-	-	-	-	69	-
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	1435	-	-	-	817	951
Stage 1	-	-	-	-	920	-
Stage 2	-	-	-	-	954	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	1435	-	-	-	814	951
Mov Cap-2 Maneuver	-	-	-	-	814	-
Stage 1	-	-	-	-	917	-
Stage 2	-	-	-	-	954	-
Approach	EB	WB	SB			
HCM Chd Dly, s/v	0,66	0	10,82			
HCM LOS			B			
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBL	SBT
Capacity (veh/h)	159	-	-	-	817	-
HCM Lane V/C Ratio	0,094	-	-	-	0,243	-
HCM Chd Dly (s/v)	7,5	0	-	-	10,8	-
HCM Lane LOS	A	A	-	-	B	-
HCM 95th %ile Q(veh)	0	-	-	-	1	-

# **2033 BACKGROUND – MINOR EVENT INGRESS**

2033 Background Minor Event Ingress Peak Hour  
12: Exhibition & Paul Askin 01/10/2025

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)	0,305	0	0,148			
Departure Headway (Hd)	4,37	4,467	3,932			
Convergence, Y/N	Yes	Yes	Yes			
Cap	817	0	918			
Service Time	2,428	2,5	1,932			
HCM Lane V/C Ratio	0,308	0	0,148			
HCM Control Delay, s/veh	8,4	7,5	7,6			
HCM Lane LOS	A	N	A			
HCM 95thile Q	1,3	0	0,5			

2033 Background Minor Event Ingress Peak Hour  
13: Paul Askin & Marche 01/10/2025

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 95thile Q	1,2	0,1	0,9			

2033 Background Minor Event Ingress Peak Hour  
14: Exhibition & Marche 01/10/2025

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	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	4,086	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 95thile Q	0	0,1	0,7			

2033 Background Minor Event Ingress Peak Hour  
37: O' Connor Street & Fifth Avenue 01/10/2025

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								
Opposing Lanes	1	1		1								
Conflicting Approach Left	SB	NB		EB								
Conflicting Lanes Left	1	1		1								
Conflicting Approach Right	NB	WB		SB								
Conflicting Lanes Right	1	1		1								
HCM Control Delay, s/veh	8,8	8		8,8								
HCM LOS	A	A		A								
Lane												
	NBLn1	EBLn1	WBLn1	SBLn1								
Vol Left, %	43%	54%	0%	0%								
Vol Thru, %	30%	46%	0%	0%								
Vol Right, %	28%	0%	100%	100%								
Sign Control	Stop	Stop	Stop	Stop								
Traffic Vol by Lane	141	115	143	85								
LT Vol	61	62	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 95thile Q	0,7	0,6	0,6	0,4								

2033 Background Minor Event Ingress Peak Hour  
01/10/2025

1: Bank & Fifth

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	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 Effect Green (s)	13.7	13.7	13.7	13.7	50.3	50.3	50.3	50.3
Actuated g/C Ratio	0.19	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	0.33	0.33
Control Delay (s/veh)	37.4	33.2	16.1	5.8	6.8	6.8	6.8	6.8
Queue Delay (s/veh)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	37.4	33.2	16.1	5.8	6.8	6.8	6.8	6.8
LOS	D	C	B	A	A	A	A	A
Approach Delay (s/veh)	37.4	22.7	5.8	6.8				
Approach LOS	D	C	A	A				
Queue Length 50th (m)	16.9	9.8	6.4	14.4	19.0			
Queue Length 95th (m)	33.9	19.6	17.8	26.6	36.3			
Internal Link Dist (m)	49.7	112.4	195.6	190.0				
Turn Bay Length (m)		45.0						
Base Capacity (vph)	356	285	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	0.26	0.32	0.37			
<b>Intersection Summary</b>								
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: 0.67								
Intersection Signal Delay (s/veh): 11.3								
Intersection Capacity Utilization 63.8%								
ICU Level of Service B								
Analysis Period (min) 15								

Splits and Phases: 1: Bank & Fifth

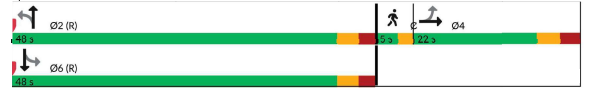


2033 Background Minor Event Ingress Peak Hour  
01/10/2025

2: Bank & Holmwood

Lane Group	EBT	NBL	NBT	SBL	SBT	Ø3
Lane Configurations	→	←	←	←	←	←
Traffic Volume (vph)	26	53	508	24	564	
Future Volume (vph)	26	53	508	24	564	
Lane Group Flow (vph)	119	0	707	0	693	
Turn Type	NA	Perm	NA	Perm	NA	
Protected Phases	4	2	2	6	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)	2.0	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)	5.8	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)	11.6	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	0.38	0.37	0.33	0.33	
Control Delay (s/veh)	38.2	5.4	5.4	5.4	5.4	
Queue Delay (s/veh)	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	38.2	5.4	5.4	5.4	5.4	
LOS	D	A	A	A	A	
Approach Delay (s/veh)	38.2	5.4	5.4	5.4	5.4	
Approach LOS	D	A	A	A	A	
Queue Length 50th (m)	15.8	17.1	17.1	12.2		
Queue Length 95th (m)	28.8	32.7	32.7	15.0		
Internal Link Dist (m)	38.8	31.5	195.6			
Turn Bay Length (m)						
Base Capacity (vph)	304	1838	2101			
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	0.38	0.33	0.33	0.33	
<b>Intersection Summary</b>						
Cycle Length: 75						
Actuated Cycle Length: 75						
Offset: 60 (80%), 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): 6.9						
Intersection Capacity Utilization 67.8%						
ICU Level of Service C						
Analysis Period (min) 15						

Splits and Phases: 2: Bank & Holmwood

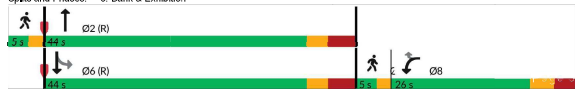


2033 Background Minor Event Ingress Peak Hour  
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3: Bank & Exhibition

Lane Group	WBL	WBR	NBT	SBL	SBT	Ø1	Ø7
Lane Configurations	←	←	←	←	←	←	←
Traffic Volume (vph)	118	85	433	165	434		
Future Volume (vph)	118	85	433	165	434		
Lane Group Flow (vph)	131	98	688	183	482		
Turn Type	Prot	Perm	NA	Perm	NA		
Protected Phases	8	8	2	6	6	1	7
Permitted Phases	8	8	2	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	44.0	44.0	44.0	5.0	5.0
Total Split (s)	26.0	26.0	44.0	44.0	44.0	5.0	5.0
Total Split (%)	32.5%	32.5%	55.0%	55.0%	55.0%	6%	6%
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		
Total Lost Time (s)	6.3	6.3	6.9	6.9	6.9		
Lead/Lag		Lag	Lag				Lead
Lead-Lag Optimize?							
Recall Mode	None	None	C-Max	C-Max	C-Max	None	None
Act Effect Green (s)	12.3	12.3	54.5	54.5	54.5		
Actuated g/C Ratio	0.15	0.15	0.68	0.68	0.68		
v/c Ratio	0.52	0.39	0.36	0.46	0.22		
Control Delay (s/veh)	38.3	11.3	5.3	11.2	5.4		
Queue Delay (s/veh)	0.0	0.0	0.0	0.0	0.0		
Total Delay (s/veh)	38.3	11.3	5.3	11.2	5.4		
LOS	D	B	A	B	A		
Approach Delay (s/veh)	26.8	5.3	7.0				
Approach LOS	C	A	A				
Queue Length 50th (m)	18.7	0.0	15.2	10.6	12.0		
Queue Length 95th (m)	32.8	11.7	26.2	30.1	21.4		
Internal Link Dist (m)	39.6	33.7	44.8				
Turn Bay Length (m)			40.0				
Base Capacity (vph)	402	344	1920	402	2160		
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	0.29	0.36	0.46	0.22		
<b>Intersection Summary</b>							
Cycle Length: 80							
Actuated Cycle Length: 80							
Offset: 0 (0%), Referenced to phase 2/NBT and 6/SBTL, Start of Green							
Natural Cycle: 80							
Control Type: Actuated-Coordinated							
Maximum v/c Ratio: 0.52							
Intersection Signal Delay (s/veh): 9.1							
Intersection Capacity Utilization 63.3%							
ICU Level of Service B							
Analysis Period (min) 15							

Splits and Phases: 3: Bank & Exhibition



2033 Background Minor Event Ingress Peak Hour  
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6: Bank & Aylmer

Lane Group	EBL	NBL	NBT	SBT	Ø3
Lane Configurations	←	←	←	←	←
Traffic Volume (vph)	74	19	697	520	
Future Volume (vph)	74	19	697	520	
Lane Group Flow (vph)	90	0	795	664	
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	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	None	Ped	C-Max	C-Max	Max
Act Effect 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	0.39	0.40	0.34	0.34	
Control Delay (s/veh)	36.7	5.3	6.5	6.5	
Queue Delay (s/veh)	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	36.7	5.3	6.5	6.5	
LOS	D	A	A	A	
Approach Delay (s/veh)	36.7	5.3	6.5	6.5	
Approach LOS	D	A	A	A	
Queue Length 50th (m)	13.3	20.2	21.0		
Queue Length 95th (m)	27.1	24.0	29.9		
Internal Link Dist (m)	76.7	28.1	10.1		
Turn Bay Length (m)					
Base Capacity (vph)	289	1980	1976		
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	0.31	0.40	0.34	0.34	
<b>Intersection Summary</b>					

2033 Background Minor Event Ingress Peak Hour

7: Bank & Sunnyside 01/10/2025

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	Ø3	Ø7
Lane Configurations	↔		↔		↔		↔			
Traffic Volume (vph)	58	53	18	60	20	477	109	551		
Future Volume (vph)	58	53	18	60	20	477	109	551		
Lane Group Flow (vph)	0	153	0	273	0	572	0	809		
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	43.0	5.0	5.0
Total Split (%)	27.8%	27.8%	27.8%	27.8%	47.8%	47.8%	18.9%	47.8%	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	2.5	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				
Lead/Lag	Lag	Lag	Lag	Lag	Lag	Lag	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 Effect Green (s)	21.7		21.7		56.7		56.7			
Actuated g/C Ratio	0.24		0.24		0.63		0.63			
v/c Ratio	0.69		0.76		0.32		0.58			
Control Delay (s/veh)	47.4		32.9		8.8		8.8			
Queue Delay (s/veh)	0.0		0.0		0.0		0.0			
Total Delay (s/veh)	47.4		32.9		8.8		8.8			
LOS	D		C		A		A			
Approach Delay (s/veh)	47.4		32.9		8.8		8.8			
Approach LOS	D		C		A		A			
Queue Length 50th (m)	23.1		25.3		23.6		43.0			
Queue Length 95th (m)	#65.4		#59.8		33.1		61.5			
Internal Link Dist (m)	75.1		136.0		63.1		79.0			
Turn Bay Length (m)										
Base Capacity (vph)	231		370		1778		1383			
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		0.74		0.32		0.58			
<b>Intersection Summary</b>										
Cycle Length: 90										
Actuated Cycle Length: 90										
Offset: 9 (7%), Referenced to phase 2 NBL and 6 SBL, Start of Green										
Natural Cycle: 110										
Control Type: Actuated-Coordinated										
Maximum v/c Ratio: 0.76										
Intersection Signal Delay (s/veh): 15.6										
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.										

2033 Background Minor Event Ingress Peak Hour

7: Bank & Sunnyside 01/10/2025



2033 Background Minor Event Ingress Peak Hour

9: Queen Elizabeth Drive & Fifth 01/10/2025

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	3.0	3.0	3.0	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	C-Max	None
Act Effect Green (s)	11.5		56.0	56.0	
Actuated g/C Ratio	0.14		0.70	0.70	
v/c Ratio	0.45		0.33	0.60	
Control Delay (s/veh)	37.8		6.1	9.3	
Queue Delay (s/veh)	0.0		0.0	0.0	
Total Delay (s/veh)	37.8		6.1	9.3	
LOS	D		A	A	
Approach Delay (s/veh)	37.8		6.1	9.3	
Approach LOS	D		A	A	
Queue Length 50th (m)	14.4		14.4	42.7	
Queue Length 95th (m)	27.0		30.5	85.2	
Internal Link Dist (m)	57.2		0.1	5.9	
Turn Bay Length (m)					
Base Capacity (vph)	295		949	1158	
Starvation Cap Reductn	0		0	0	
Spillback Cap Reductn	0		0	0	
Storage Cap Reductn	0		0	0	
Reduced v/c Ratio	0.34		0.33	0.60	
<b>Intersection Summary</b>					
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: 0.60					
Intersection Signal Delay (s/veh): 11.0					
Intersection Capacity Utilization 75.4%					
ICU Level of Service D					
Analysis Period (min) 15					
<b>Splits and Phases: 9: Queen Elizabeth Drive &amp; Fifth</b>					

2033 Background Minor Event Ingress Peak Hour

4: Bank & Wilton 01/10/2025

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔		↔		↔	
Traffic Vol v/veh/h	5	275	147	658	466	56
Future Vol v/veh/h	5	275	147	658	466	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	731	540	62
<b>Major/Minor</b>						
Conflicting Flow All	1441	749	780	0	-	0
Stage 1	749	-	-	-	-	-
Stage 2	692	-	-	-	-	-
Critical Hdwy	6,645	6,245	4,145	-	-	-
Critical Hdwy Stg 1	5,445	-	-	-	-	-
Critical Hdwy Stg 2	5,845	-	-	-	-	-
Follow-up Hdwy	3,5285	3,3285	2,2285	-	-	-
Flt Cap-1 Maneuver	133	409	629	-	-	-
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	-	-	-	-	-
<b>Approach</b>						
HCM Ctrl Dly, s/v	67.47		4.27		0	
HCM LOS	F					
<b>Minor Lane/Major Mvmt</b>						
Capacity (veh/h)	NBL	NBT	EBL1	SBT	SBR	
	597	-	332	-	-	
HCM Lane V/C Ratio	0.245	-	0.921	-	-	
HCM Ctrl Dly (s/v)	12.1	2.5	67.5	-	-	
HCM Lane LOS	B	A	F	-	-	
HCM 95th %ile Q(veh)	0.9	-	9.2	-	-	

2033 Background Minor Event Ingress Peak Hour  
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5: Bank & Echo

Intersection						
Int Delay, s/veh	0,4					
Movement	EBL	EBR	NBL	EBT	SBR	
Lane Configurations	↑ ↑ ↑ ↑					
Traffic Vol. veh/h	4	38	0	789	789	0
Future Vol. veh/h	4	38	0	789	789	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	877	854	0
Major/Minor						
Conflicting Flow All	1293	854	-	0	-	0
Stage 1	854	-	-	-	-	-
Stage 2	438	-	-	-	-	-
Critical Hdwy	6,645	6,245	-	-	-	-
Critical Hdwy Stg 1	5,445	-	-	-	-	-
Critical Hdwy Stg 2	5,845	-	-	-	-	-
Follow-up Hdwy	3,5283	3,3265	-	-	-	-
Pot Cap-1 Maneuver	186	355	0	-	-	0
Stage 1	414	-	0	-	-	0
Stage 2	618	-	0	-	-	0
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	186	355	-	-	-	-
Mov Cap-2 Maneuver	186	-	-	-	-	-
Stage 1	414	-	-	-	-	-
Stage 2	618	-	-	-	-	-
Approach						
EB	NB	SB				
HCM Chd Dly, s/v	16,49	0	0			
HCM LOS	C					
Minor Lane/Major Mvmt						
	NBL	EBL	NBL	EBL	SBT	
Capacity (veh/h)	-	355	-	-	-	-
HCM Lane V/C Ratio	-	0,119	-	-	-	-
HCM Chd Dly (s/v)	-	16,5	-	-	-	-
HCM Lane LOS	-	C	-	-	-	-
HCM 95th %ile Q(veh)	-	0,4	-	-	-	-

2033 Background Minor Event Ingress Peak Hour  
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8: Queen Elizabeth Driveway /Queen Elizabeth Driveway & Princess Patricia Way

Intersection						
Int Delay, s/veh	3,5					
Movement	EBL	EBR	NBL	EBT	SBR	
Lane Configurations	↑ ↑ ↑ ↑					
Traffic Vol. veh/h	58	52	110	223	334	245
Future Vol. veh/h	58	52	110	223	334	245
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	64	58	122	248	371	272
Major/Minor						
Conflicting Flow All	959	507	643	0	-	0
Stage 1	507	-	-	-	-	-
Stage 2	482	-	-	-	-	-
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 Chd Dly, s/v	22,88	3,08	0			
HCM LOS	C					
Minor Lane/Major Mvmt						
	NBL	EBL	NBL	EBL	SBT	SBR
Capacity (veh/h)	595	-	322	-	-	-
HCM Lane V/C Ratio	0,128	-	0,38	-	-	-
HCM Chd Dly (s/v)	9,3	0	22,9	-	-	-
HCM Lane LOS	A	A	C	-	-	-
HCM 95th %ile Q(veh)	0,4	-	1,7	-	-	-

2033 Background Minor Event Ingress Peak Hour  
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10: Bank & Marche

Intersection						
Int Delay, s/veh	0,6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↑ ↑ ↑ ↑					
Traffic Vol. veh/h	0	53	520	19	2	582
Future Vol. veh/h	0	53	520	19	2	582
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	59	578	21	2	647
Major/Minor						
Conflicting Flow All	-	369	0	0	699	0
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	606	-	-	694	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	542	-	-	799	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach						
WB	NB	SB				
HCM Chd Dly, s/v	12,45	0	0,03			
HCM LOS	B					
Minor Lane/Major Mvmt						
	NBL	NBR	WBL	NBL	SBT	
Capacity (veh/h)	-	-	542	799	-	-
HCM Lane V/C Ratio	-	-	0,108	0,033	-	-
HCM Chd Dly (s/v)	-	-	12,5	9,5	-	-
HCM Lane LOS	-	-	B	A	-	-
HCM 95th %ile Q(veh)	-	-	0,4	0	-	-

2033 Background Minor Event Ingress Peak Hour  
01/10/2025

11: Garage & Exhibition

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	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	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	357
Stage 1	-	-	-	-	664	-
Stage 2	-	-	-	-	769	-
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 Chd Dly, s/v	0	0,36	19,79			
HCM LOS			C			
Minor Lane/Major Mvmt						
	NBL	EBT	EBR	WBL	WBT	
Capacity (veh/h)	345	-	-	74	-	-
HCM Lane V/C Ratio	0,297	-	-	0,006	-	-
HCM Chd Dly (s/v)	18,8	-	-	8,8	0	-
HCM Lane LOS	C	-	-	A	A	-
HCM 95th %ile Q(veh)	1,2	-	-	0	-	-

2033 Background Minor Event Ingress Peak Hour

17: Princess Patricia/Princess Patricia Way & Garage 01/10/2025

Intersection						
Int Delay, s/veh	2,2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	4	1	1	1	4	1
Traffic Vol, veh/h	5	27	155	199	83	5
Future Vol, veh/h	5	27	155	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
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
<b>Major/Minor</b>						
	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	1184	-	-	699	755	
Stage 1	-	-	-	764	-	
Stage 2	-	-	-	881	-	
Platoon blocked, %	-	-	-	-	-	
Mov Cap-1 Maneuver	1184	-	-	666	755	
Mov Cap-2 Maneuver	-	-	-	666	-	
Stage 1	-	-	-	761	-	
Stage 2	-	-	-	881	-	
<b>Approach</b>						
	EB	WB	SB			
HCM Chd Dly, s/v	1,27	0	11,29			
HCM LOS			B			
<b>Minor Lane/Major Mvmt</b>						
	EBL	EBT	WBT	WBR	SBL	SBR
Capacity (veh/h)	261	-	-	-	-	370
HCM Lane V/C Ratio	0,005	-	-	-	-	0,148
HCM Chd Dly (s/v)	8,1	0	-	-	-	11,3
HCM Lane LOS	A	A	-	-	-	B
HCM 95th %ile Q(veh)	0	-	-	-	-	0,5

## **2033 BACKGROUND – MINOR EVENT EGRESS**

2033 Background Minor Event Egress Peak Hour  
12: Exhibition & Paul Askin  
01/10/2025

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	SB		
Opposing Approach	WB	EB				
Opposing Lanes	1	1		0		
Conflicting Approach Left	SB			WB		
Conflicting Lanes Left	1			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)	4,799	4,841	3,895
Convergence, Y/N	Yes	Yes	Yes
Cap	754	0	927
Service Time	2,799	2,879	1,899
HCM Lane V/C Ratio	0,288	0	0,335
HCM Control Delay, s/veh	8,7	7,9	8,9
HCM Lane LOS	A	N	A
HCM 95thile Q	1,2	0	1,5

2033 Background Minor Event Egress Peak Hour  
13: Paul Askin & Marche  
01/10/2025

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	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	195	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	0,11
HCM Control Delay, s/veh	8,3	7,4	8,1
HCM Lane LOS	A	A	A
HCM 95thile Q	0,9	0,1	0,4

2033 Background Minor Event Egress Peak Hour  
14: Exhibition & Marche  
01/10/2025

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	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	0	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)	4,219	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 95thile Q	0	0,3	0,3

2033 Background Minor Event Egress Peak Hour  
37: O' Connor Street & Fifth Avenue  
01/10/2025

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	78	11	12	54	0	0	110
Number of Lanes	0	1	0	0	0	1	0	1	0	0	0	1
Approach		EB	WB	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	WB								
Conflicting Lanes Right	1		1	1								
HCM Control Delay, s/veh	7,8			7,1	7,3							7,2
HCM LOS	A			A	A							A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	14%	20%	0%	0%
Vol Thru, %	18%	80%	0%	0%
Vol Right, %	70%	0%	100%	100%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	70	58	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	7,3	7,1	7,2
HCM Lane LOS	A	A	A	A
HCM 95thile Q	0,3	0,2	0,3	0,4

2033 Background Minor Event Egress Peak Hour  
1: Bank & Fifth 01/10/2025

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	43	10	50	25	17	463	21	356
Future Volume (vph)	43	10	50	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	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 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	0.24	0.21	0.21	0.21
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	3.6	3.7	3.7	3.7	3.7
Queue Delay (s/veh)	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	3.6	3.7	3.7	3.7	3.7
LOS	C	C	B	A	A	A	A	A
Approach Delay (s/veh)	32.1	35.0	19.3	3.6	3.7	3.7	3.7	3.7
Approach LOS	C	C	B	A	A	A	A	A
Queue Length 50th (m)	7.9	7.4	3.6	8.6	8.0	8.0	8.0	8.0
Queue Length 95th (m)	16.6	16.3	12.9	19.0	16.6	16.6	16.6	16.6
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)	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	0.21	0.21	0.21	0.21

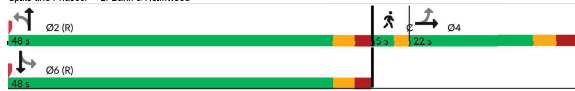
Splits and Phases: 1: Bank & Fifth



2033 Background Minor Event Egress Peak Hour  
2: Bank & Holmwood 01/10/2025

Lane Group	EBT	NBL	NBT	SBL	SBT	Ø3
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	7	55	450	22	337	
Future Volume (vph)	7	55	450	22	337	
Lane Group Flow (vph)	88	0	588	0	439	
Turn Type	NA	Perm	NA	Perm	NA	
Protected Phases	4	2	2	6	6	3
Permitted Phases	4	2	2	6	6	3
Detector Phase	4	2	2	6	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	3.0	2.0
All-Red Time (s)	2.8	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)	5.8	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)	10.2	57.3	57.3	57.3	57.3	57.3
Actuated g/C Ratio	0.14	0.76	0.76	0.76	0.76	0.76
v/c Ratio	0.48	0.29	0.29	0.21	0.21	0.21
Control Delay (s/veh)	37.9	4.3	4.3	2.8	2.8	2.8
Queue Delay (s/veh)	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	37.9	4.3	4.3	2.8	2.8	2.8
LOS	D	A	A	A	A	A
Approach Delay (s/veh)	37.9	4.3	4.3	2.8	2.8	2.8
Approach LOS	D	A	A	A	A	A
Queue Length 50th (m)	11.7	12.3	8.1	8.1	8.1	8.1
Queue Length 95th (m)	23.3	23.4	11.7	11.7	11.7	11.7
Internal Link Dist (m)	38.8	31.5	195.6	195.6	195.6	195.6
Turn Bay Length (m)						
Base Capacity (vph)	295	2006	2101	2101	2101	2101
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	0.29	0.21	0.21	0.21	0.21

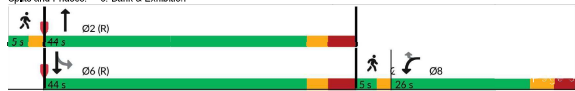
Splits and Phases: 2: Bank & Holmwood



2033 Background Minor Event Egress Peak Hour  
3: Bank & Exhibition 01/10/2025

Lane Group	WBL	WBR	NBL	SBL	SBT	Ø1	Ø7
Lane Configurations	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	187	213	195	111	267		
Future Volume (vph)	187	213	195	111	267		
Lane Group Flow (vph)	208	237	306	123	297		
Turn Type	Prot	Perm	NA	Perm	NA		
Protected Phases	8	8	2	6	6	1	7
Permitted Phases	8	8	2	6	6	1	7
Detector Phase	8	8	2	6	6	1	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	44.0	44.0	44.0	5.0	5.0
Total Split (s)	26.0	26.0	44.0	44.0	44.0	5.0	5.0
Total Split (%)	32.5%	32.5%	55.0%	55.0%	55.0%	6%	6%
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
Lead-Lag Optimize?							Yes
Recall Mode	None	None	C-Max	C-Max	C-Max	None	None
Act Effect Green (s)	15.4	15.4	51.4	51.4	51.4	51.4	51.4
Actuated g/C Ratio	0.19	0.19	0.64	0.64	0.64	0.64	0.64
v/c Ratio	0.69	0.59	0.17	0.25	0.15	0.15	0.15
Control Delay (s/veh)	39.7	19.2	4.8	8.9	6.5	6.5	6.5
Queue Delay (s/veh)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	39.7	19.2	4.8	8.9	6.5	6.5	6.5
LOS	D	B	A	A	A	A	A
Approach Delay (s/veh)	24.0	4.8	7.2	7.2	7.2	7.2	7.2
Approach LOS	C	A	A	A	A	A	A
Queue Length 50th (m)	29.5	0.0	5.9	7.0	8.2	8.2	8.2
Queue Length 95th (m)	46.3	17.1	12.9	16.6	15.9	15.9	15.9
Internal Link Dist (m)	39.6	33.7	44.8	44.8	44.8	44.8	44.8
Turn Bay Length (m)			40.0				
Base Capacity (vph)	407	453	1817	489	2038	2038	2038
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	0.51	0.52	0.17	0.25	0.15	0.15	0.15

Splits and Phases: 3: Bank & Exhibition



2033 Background Minor Event Egress Peak Hour  
6: Bank & Aylmer 01/10/2025

Lane Group	EBL	NBL	NBT	SBT	Ø3
Lane Configurations	↔	↔	↔	↔	↔
Traffic Volume (vph)	4	1	158	182	
Future Volume (vph)	4	1	158	182	
Lane Group Flow (vph)	7	0	174	220	
Turn Type	Prot	Perm	NA	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)	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	0.0
Total Lost Time (s)	5.5	5.2	5.2	5.2	0.0
Lead/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	60.3
Actuated g/C Ratio	0.16	0.67	0.67	0.67	0.67
v/c Ratio	0.03	0.09	0.10	0.10	0.10
Control Delay (s/veh)	27.2	4.6	5.2	5.2	5.2
Queue Delay (s/veh)	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	27.2	4.6	5.2	5.2	5.2
LOS	C	A	A	A	A
Approach Delay (s/veh)	27.2	4.6	5.2	5.2	5.2
Approach LOS	C	A	A	A	A
Queue Length 50th (m)	0.6	4.2	6.0	6.0	6.0
Queue Length 95th (m)	4.4	6.5	6.7	6.7	6.7
Internal Link Dist (m)	76.7	28.1	10.1	10.1	10.1
Turn Bay Length (m)					
Base Capacity (vph)	253	2043	2104	2104	2104
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	0.03	0.09	0.10	0.10	0.10

Splits and Phases: 6: Bank & Aylmer



2033 Background Minor Event Egress Peak Hour

7: Bank & Sunnyside 01/10/2025

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	Ø3	Ø7
Lane Configurations	↔		↔		↔		↔			
Traffic Volume (vph)	30	7	5	13	13	242	35	423		
Future Volume (vph)	30	7	5	13	13	242	35	423		
Lane Group Flow (vph)	0	63	0	58	0	289	0	558		
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	43.0	5.0	5.0
Total Split (%)	27.8%	27.8%	27.8%	27.8%	47.8%	47.8%	18.9%	47.8%	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)	2.8	2.8	2.8	2.8	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)	5.8	5.8	5.8	5.8	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	C-Max	None	None
Act Effect Green (s)	11.1	10.9	10.9	10.9	70.9	70.9				
Actuated g/C Ratio	0.12	0.12	0.12	0.12	0.13	0.13				
v/c Ratio	0.51	0.34	0.34	0.34	0.13	0.26				
Control Delay (s/veh)	50.3	22.0	22.0	22.0	3.5	2.6				
Queue Delay (s/veh)	0.0	0.0	0.0	0.0	0.0	0.0				
Total Delay (s/veh)	50.3	22.0	22.0	22.0	3.5	2.6				
LOS	D	C	C	C	A	A				
Approach Delay (s/veh)	50.3	22.0	22.0	22.0	3.5	2.6				
Approach LOS	D	C	C	C	A	A				
Queue Length 50th (m)	10.4	3.2	3.2	3.2	5.8	7.0				
Queue Length 95th (m)	21.5	13.1	13.1	13.1	11.8	12.7				
Internal Link Dist (m)	75.1	136.0	136.0	136.0	63.1	79.0				
Turn Bay Length (m)										
Base Capacity (vph)	215	275	275	275	2274	2109				
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	0.29	0.21	0.21	0.21	0.13	0.26				

Intersection Summary	
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	0 (7%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle:	110
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.51
Intersection Signal Delay (s/veh):	7.2
Intersection Capacity Utilization:	60.8%
ICU Level of Service:	B
Analysis Period (min):	15



2033 Background Minor Event Egress Peak Hour

4: Bank & Wilton 01/10/2025

Intersection	
Int Delay, s/veh	3.2
Movement	EBL EBR NBL NBT SBT SBR
Lane Configurations	↔ ↔ ↔
Traffic Vol, veh/h	2 114 49 284 400 69
Future Vol, veh/h	2 114 49 284 400 69
Conflicting Peds, /hr	0 0 0 178 0 0 107
Sign Control	Stop Stop Free Free Free Free
RT Channelled	- None - None - None -
Storage Length	- 0 - - - -
Veh in Median Storage, l	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	2 127 54 316 444 77

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	927 661 899 0 - 0		
Stage 1	661 - - - - -		
Stage 2	267 - - - - -		
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 3,3265 2,2265 - - -		
Rot Cap-1 Maneuver	280 459 890 - - -		
Stage 1	510 - - - - -		
Stage 2	752 - - - - -		
Platoon blocked, %	- - - - -		
Mov Cap-1 Maneuver	189 373 722 - - -		
Mov Cap-2 Maneuver	189 - - - - -		
Stage 1	380 - - - - -		
Stage 2	610 - - - - -		

Approach	
EB	NB
HCM Ctrl Dly, s/v	19.54 2.07
HCM LOS	C

Minor Lane/Major Mvmt	NBL	NBT	EBL1	SBT	SBR
Capacity (veh/h)	530	-	373	-	-
HCM Lane V/C Ratio	0.075	-	0.34	-	-
HCM Ctrl Dly (s/v)	10.4	0.5	19.5	-	-
HCM Lane LOS	B	A	C	-	-
HCM 95th %ile Q(veh)	0.2	-	1.5	-	-

2033 Background Minor Event Egress Peak Hour

9: Queen Elizabeth Drive & Fifth 01/10/2025

Lane Group	EBL	NBL	NBT	SBT	Ø4
Lane Configurations	↔		↔		
Traffic Volume (vph)	65	33	265	157	
Future Volume (vph)	65	33	265	157	
Lane Group Flow (vph)	105	0	331	213	
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 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	C-Max	None
Act Effect Green (s)	11.6	55.9	55.9		
Actuated g/C Ratio	0.15	0.70	0.70		
v/c Ratio	0.46	0.30	0.19		
Control Delay (s/veh)	37.8	5.7	5.0		
Queue Delay (s/veh)	0.0	0.0	0.0		
Total Delay (s/veh)	37.8	5.7	5.0		
LOS	D	A	A		
Approach Delay (s/veh)	37.8	5.7	5.0		
Approach LOS	D	A	A		
Queue Length 50th (m)	15.1	15.2	5.9		
Queue Length 95th (m)	28.0	31.1	18.2		
Internal Link Dist (m)	57.2	0.1	5.9		
Turn Bay Length (m)					
Base Capacity (vph)	298	1120	1148		
Starvation Cap Reductn	0	0	0		
Spillback Cap Reductn	0	0	0		
Storage Cap Reductn	0	0	0		
Reduced v/c Ratio	0.35	0.30	0.19		

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:	0.46
Intersection Signal Delay (s/veh):	10.7
Intersection Capacity Utilization:	52.0%
ICU Level of Service:	A
Analysis Period (min):	15



2033 Background Minor Event Egress Peak Hour

5: Bank & Echo 01/10/2025

Intersection	
Int Delay, s/veh	0.2
Movement	EBL EBR NBL NBT SBT SBR
Lane Configurations	↔ ↔ ↔
Traffic Vol, veh/h	2 12 0 365 328 0
Future Vol, veh/h	2 12 0 365 328 0
Conflicting Peds, /hr	0 0 0 0 0 0 85
Sign Control	Stop Stop Free Free Free Free
RT Channelled	- None - None - None -
Storage Length	- 0 - - - -
Veh in Median Storage, l	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 13 0 406 364 0

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	567 364 - 0 - 0		
Stage 1	364 - - - - -		
Stage 2	203 - - - - -		
Critical Hdwy	6,645 6,245 - - - -		
Critical Hdwy Stg 1	5,445 - - - - -		
Critical Hdwy Stg 2	5,845 - - - - -		
Follow-up Hdwy	3,5285 3,3265 - - - -		
Rot Cap-1 Maneuver	467 877 0 - - 0		
Stage 1	659 - 0 - - - 0		
Stage 2	809 - 0 - - - 0		
Platoon blocked, %	- - - - -		
Mov Cap-1 Maneuver	467 877 - - - -		
Mov Cap-2 Maneuver	467 - - - - -		
Stage 1	659 - - - - -		
Stage 2	609 - - - - -		

Approach	
EB	NB
HCM Ctrl Dly, s/v	10.42 0 0
HCM LOS	B

Minor Lane/Major Mvmt	NBL	NBT	EBL1	SBT
Capacity (veh/h)	-	877	-	-
HCM Lane V/C Ratio	-	0.02	-	-
HCM Ctrl Dly (s/v)	-	10.4	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %ile Q(veh)	-	0.1	-	-

2033 Background Minor Event Egress Peak Hour  
8: Queen Elizabeth Driveway /Queen Elizabeth Driveway & Princess Patricia Way 01/10/2025

Intersection						
Int Delay, s/veh	10,4					
Movement	EBL	EBR	NBL	NBR	SBT	SBR
Lane Configurations	↔ ↗ ↘ ↙ ↕ ↖ ↗ ↘ ↙ ↕ ↖					
Traffic Vol. veh/h	251	166	17	46	128	61
Future Vol. veh/h	251	166	17	46	128	61
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, I	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	279	164	19	51	142	68

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	285	176	210
Stage 1	176	-	-
Stage 2	89	-	-
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	728	872	1373
Stage 1	859	-	-
Stage 2	940	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	718	872	1373
Mov Cap-2 Maneuver	718	-	-
Stage 1	847	-	-
Stage 2	940	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	16,39	2,07	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBL	EBT	SBL	SBR
Capacity (veh/h)	469	-	772	-	-	-
HCM Lane V/C Ratio	0,014	-	0,6	-	-	-
HCM Ctrl Dly (s/v)	7,7	0	18,4	-	-	-
HCM Lane LOS	A	A	C	-	-	-
HCM 95th %ile Q(veh)	0	-	4,1	-	-	-

2033 Background Minor Event Egress Peak Hour  
10: Bank & Marche 01/10/2025

Intersection						
Int Delay, s/veh	2,1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔ ↗ ↘ ↙ ↕ ↖ ↗ ↘ ↙ ↕ ↖					
Traffic Vol. veh/h	5	144	419	29	0	370
Future Vol. veh/h	5	144	419	29	0	370
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, I	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	6	160	466	32	0	411

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	787	349	0
Stage 1	582	-	-
Stage 2	206	-	-
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	333	633	-
Stage 1	528	-	-
Stage 2	815	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	288	584	-
Mov Cap-2 Maneuver	288	-	-
Stage 1	472	-	-
Stage 2	815	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	13,47	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBL	WBR	SBL	SBT
Capacity (veh/h)	-	-	594	-	-	-
HCM Lane V/C Ratio	-	-	0,274	-	-	-
HCM Ctrl Dly (s/v)	-	-	13,5	-	-	-
HCM Lane LOS	-	-	B	-	-	-
HCM 95th %ile Q(veh)	-	-	1,1	-	-	-

2033 Background Minor Event Egress Peak Hour  
11: Garage & Exhibition 01/10/2025

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	- 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
Stage 1	-	-	312
Stage 2	-	-	411
Critical Hdwy	-	-	4,12
Critical Hdwy Stg 1	-	-	5,42
Critical Hdwy Stg 2	-	-	5,42
Follow-up Hdwy	-	-	2,219
Pot Cap-1 Maneuver	-	-	1249
Stage 1	-	-	742
Stage 2	-	-	699
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1116
Mov Cap-2 Maneuver	-	-	314
Stage 1	-	-	694
Stage 2	-	-	598

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0	24,88
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBL	EBT	WBL	WBT
Capacity (veh/h)	319	-	-	1116	-	-
HCM Lane V/C Ratio	0,435	-	-	0,6	-	-
HCM Ctrl Dly (s/v)	24,7	-	-	0	-	-
HCM Lane LOS	C	-	-	A	-	-
HCM 95th %ile Q(veh)	2,1	-	-	0	-	-

2033 Background Minor Event Egress Peak Hour  
17: Princess Patricia/Princess Patricia Way & Garage 01/10/2025

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	366	6

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	87	0	-
Stage 1	-	-	64
Stage 2	-	-	80
Critical Hdwy	4,12	-	-
Critical Hdwy Stg 1	-	-	5,42
Critical Hdwy Stg 2	-	-	5,42
Follow-up Hdwy	2,219	-	-
Pot Cap-1 Maneuver	1509	-	-
Stage 1	-	-	939
Stage 2	-	-	943
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1509	-	-
Mov Cap-2 Maneuver	-	-	826
Stage 1	-	-	939
Stage 2	-	-	943

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0,1	0	13,18
HCM LOS	B		

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBL	SBR
Capacity (veh/h)	25	-	-	-	923	-
HCM Lane V/C Ratio	0,001	-	-	-	0,472	-
HCM Ctrl Dly (s/v)	7,4	0	-	-	13,2	-
HCM Lane LOS	A	A	-	-	B	-
HCM 95th %ile Q(veh)	0	-	-	-	2,6	-

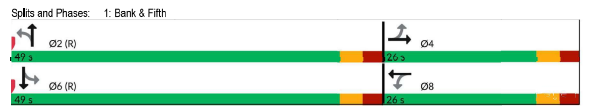
# **2033 BACKGROUND – MAJOR EVENT INGRESS**

2033 Background Major Event Ingress Peak Hour  
37: O' Connor Street & Fifth Avenue  
01/10/2025

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	61	93	0	0	127		
Future Vol. veh/h	66	56	0	0	0	192	57	61	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	68	103	0	0	141		
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	9.5						9		9.8				8.5	
HCM LOS	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	211	122	192	127										
LT Vol	57	66	0	0										
Through Vol	61	56	0	0										
RT Vol	93	0	192	127										
Lane Flow Rate	234	136	213	141										
Geometry Grp	1	1	1	1										
Degree of UI (X)	0.305	0.194	0.259	0.174										
Departure Headway (HD)	4.699	5.155	4.377	4.437										
Convergence, Y/N	Yes	Yes	Yes	Yes										
Cap	760	690	813	800										
Service Time	2.763	3.231	2.444	2.511										
HCM Lane V/C Ratio	0.308	0.197	0.262	0.176										
HCM Control Delay, s/veh	9.3	9.5	9	8.5										
HCM Lane LOS	A	A	A	A										
HCM 95thile Q	1.3	0.7	1	0.6										

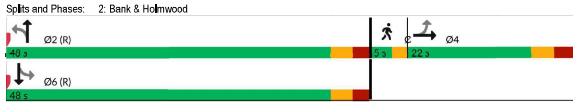
2033 Background Major Event Ingress Peak Hour  
1: Bank & Fifth  
01/10/2025

Intersection													
Intersection Delay, s/veh	12.5												
Intersection LOS	B												
Movement													
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↔			↔			↔			↔			↔
Traffic Volume (vph)	63	56	75	64	24	476	33	627					
Future Volume (vph)	63	56	75	64	24	476	33	627					
Lane Group Flow (vph)	0	174	83	134	0	598	0	802					
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA					
Protected Phases	4			8			2			6			6
Permitted Phases	4			8			2			6			6
Detector Phase	4			8			2			6			6
Switch Phase													
Minimum Initial (s)	4.0	4.0	4.0	4.0	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	26.0	26.0	26.0	26.0	49.0	49.0	
Total Split (s)	26.0	26.0	26.0	26.0	49.0	49.0	26.0	26.0	26.0	26.0	49.0	49.0	
Total Split (%)	34.7%	34.7%	34.7%	34.7%	65.3%	65.3%	34.7%	34.7%	34.7%	34.7%	65.3%	65.3%	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	
Lost Time Adjust (s)	0.0												
Total Lost Time (s)	5.5												
Lead/Lag													
Lead-Lag Optimize?													
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max	C-Max	C-Max	C-Max	
Act Effect Green (s)	14.4	14.4	14.4	14.4	49.6	49.6	14.4	14.4	14.4	14.4	49.6	49.6	
Actuated g/C Ratio	0.19	0.19	0.19	0.19	0.68	0.68	0.19	0.19	0.19	0.19	0.68	0.68	
v/c Ratio	0.70	0.45	0.42	0.42	0.33	0.33	0.70	0.45	0.42	0.42	0.33	0.33	
Control Delay (s/veh)	38.7	32.9	16.4	16.4	7.3	7.7	38.7	32.9	16.4	16.4	7.3	7.7	
Queue Delay (s/veh)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	38.7	32.9	16.4	16.4	7.3	7.7	38.7	32.9	16.4	16.4	7.3	7.7	
LOS	D	C	B	B	A	A	D	C	B	B	A	A	
Approach Delay (s/veh)	38.7			23.9			7.3			7.7			
Approach LOS	D			C			A			A			
Queue Length 50th (m)	20.2			10.4			5.1			14.4			24.0
Queue Length 95th (m)	38.2			20.9			21.3			34.9			44.5
Internal Link Dist (m)	49.7			112.4			195.6			190.0			
Turn Bay Length (m)	45.0												
Base Capacity (vph)	345			263			432			1802			1810
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			0.32			0.31			0.33			0.44
Intersection Summary													
Cycle Length: 75													
Actuated Cycle Length: 75													
Offset: 47 (63%), Referenced to phase 2:NBT and 6:SBTL, Start of Green													
Natural Cycle: 75													
Control Type: Actuated-Coordinated													
Maximum v/c Ratio: 0.70													
Intersection Signal Delay (s/veh): 12.5							Intersection LOS: B						
Intersection Capacity Utilization 89.0%							ICU Level of Service E						
Analysis Period (min) 15													



2033 Background Major Event Ingress Peak Hour  
2: Bank & Holmwood  
01/10/2025

Intersection													
Intersection Delay, s/veh	9.0												
Intersection LOS	A												
Movement													
	EBT	NBL	NBT	SBL	SBT	Ø3							
Lane Configurations	↔		↔		↔								
Traffic Volume (vph)	39	71	504	53	583								
Future Volume (vph)	39	71	504	53	583								
Lane Group Flow (vph)	157	0	770	0	785								
Turn Type	NA	Perm	NA	Perm	NA								
Protected Phases	4		2		6		3						
Permitted Phases	4		2		6		3						
Detector Phase	4		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	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												
Total Lost Time (s)	5.6												
Lead/Lag	Lag												
Lead-Lag Optimize?													
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	None							
Act Effect Green (s)	13.5	50.7	50.7	50.7	50.7								
Actuated g/C Ratio	0.18	0.62	0.62	0.62	0.62								
v/c Ratio	0.52	0.51	0.51	0.51	0.51								
Control Delay (s/veh)	38.5	7.7	7.7	7.7	7.7								
Queue Delay (s/veh)	0.0	0.0	0.0	0.0	0.0								
Total Delay (s/veh)	38.5	7.7	7.7	7.7	7.7								
LOS	D	A	A	A	A								
Approach Delay (s/veh)	38.5		7.7		7.7		4.3						
Approach LOS	D		A		A		A						
Queue Length 50th (m)	20.7		21.9		13.8		17.9						
Queue Length 95th (m)	35.3		43.1		17.9		17.9						
Internal Link Dist (m)	39.8		31.5		195.6								
Turn Bay Length (m)													
Base Capacity (vph)	316		1520		1727								
Starvation Cap Reductn	0		0		0								
Spillback Cap Reductn	0		0		0								
Storage Cap Reductn	0		0		0								
Reduced v/c Ratio	0.50		0.51		0.44								
Intersection Summary													
Cycle Length: 75													
Actuated Cycle Length: 75													
Offset: 60 (80%), Referenced to phase 2:NBT and 6:SBTL, Start of Green													
Natural Cycle: 75													
Control Type: Actuated-Coordinated													
Maximum v/c Ratio: 0.62													
Intersection Signal Delay (s/veh): 9.0							Intersection LOS: A						
Intersection Capacity Utilization 74.2%							ICU Level of Service D						
Analysis Period (min) 15													



2033 Background Major Event Ingress Peak Hour  
3: Bank & Exhibition  
01/10/2025

Intersection														
Intersection Delay, s/veh	5.6													
Intersection LOS	A													
Movement														
	WBL	WBR	NBL	SBL	SBT	Ø1	Ø7							
Lane Configurations	↔		↔		↔		↔							
Traffic Volume (vph)	47	37	648	44	595									
Future Volume (vph)	47	37	648	44	595									
Lane Group Flow (vph)	52	41	788	49	661									
Turn Type	Prot	Perm	NA	Perm	NA									
Protected Phases	8		2		6		1		7					
Permitted Phases	8		2		6		1		7					
Detector Phase	8		2		6		1		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	44.0	44.0	44.0	5.0	5.0							
Total Split (s)	26.0	26.0	44.0	44.0	44.0	5.0	5.0							
Total Split (%)	32.5%	32.5%	55.0%	55.0%	55.0%	6%	6%							
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													
Total Lost Time (s)	6.3													
Lead/Lag	Lag													
Lead-Lag Optimize?														
Recall Mode	None	None	C-Max	C-Max	C-Max	None	None							
Act Effect Green (s)	10.2	10.2	61.3	61.3	61.3									

2033 Background Major Event Ingress Peak Hour  
01/10/2025

6: Bank & Aylmer

Lane Group	EBL	NBL	NBT	SBT	Ø3
Lane Configurations	↔	↔	↕	↕	↕
Traffic Volume (vph)	93	14	744	784	
Future Volume (vph)	93	14	744	784	
Lane Group Flow (vph)	131	0	843	929	
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)	14,6		59,7	59,7	
Actuated g/C Ratio	0,16		0,86	0,86	
w/c Ratio	0,52		0,43	0,45	
Control Delay (s/veh)	39,8		5,6	8,2	
Queue Delay	0,0		0,0	0,0	
Total Delay (s/veh)	39,8		5,6	8,2	
LOS	D		A	A	
Approach Delay (s/veh)	39,8		5,6	8,2	
Approach LOS	D		A	A	
Queue Length 50th (m)	19,0		21,3	34,4	
Queue Length 95th (m)	35,4		25,8	50,5	
Internal Link Dist (m)	76,7		28,1	16,1	
Turn Bay Length (m)					
Base Capacity (vph)	283		1972	2043	
Starvation Cap Reductn	0		0	0	
Spillback Cap Reductn	0		0	0	
Storage Cap Reductn	0		0	0	
Reduced w/c Ratio	0,46		0,43	0,45	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 60 (67%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum w/c Ratio: 0,52	
Intersection Signal Delay (s/veh): 9,1	Intersection LOS: A
Intersection Capacity Utilization 52,8%	ICU Level of Service A
Analysis Period (min): 15	



2033 Background Major Event Ingress Peak Hour  
01/10/2025

7: Bank & Sunnyside

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	Ø3	Ø7
Lane Configurations	↔	↔	↔	↔	↕	↕	↕	↕		
Traffic Volume (vph)	54	80	14	86	27	528	143	636		
Future Volume (vph)	54	80	14	86	27	528	143	636		
Lane Group Flow (vph)	0	191	0	291	0	649	0	962		
Turn Type	Perm	NA	Perm	NA	Perm	NA	pm+pt	NA		
Protected Phases				8					6	3
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	43,0	5,0	5,0
Total Split (%)	27,8%	27,8%	27,8%	27,8%	47,8%	47,8%	18,9%	47,8%	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)	2,8	2,8	2,8	2,8	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			6,0	6,0				
Lead/Lag	Lag	Lag	Lag	Lag				Lead	Lead	
Lead-Lag Optimize?			Yes	Yes						
Recall Mode	None	None	None	None	C-Max	C-Max	None	C-Max	None	None
Act Effect Green (s)	24,4		24,4		54,0		54,0			
Actuated g/C Ratio	0,27		0,27		0,80		0,80			
w/c Ratio	0,66		0,75		0,40		0,79			
Control Delay (s/veh)	42,0		35,6		10,3		14,3			
Queue Delay	0,0		0,0		0,0		0,0			
Total Delay (s/veh)	42,0		35,6		10,3		14,3			
LOS	D		D		B		B			
Approach Delay (s/veh)	42,0		35,6		10,3		14,3			
Approach LOS	D		D		B		B			
Queue Length 50th (m)	29,2		33,5		28,1		64,5			
Queue Length 95th (m)	#67,3		#71,9		39,1		94,7			
Internal Link Dist (m)	75,1		136,0		63,1		79,0			
Turn Bay Length (m)										
Base Capacity (vph)	288		386		1622		1214			
Starvation Cap Reductn	0		0		0		0			
Spillback Cap Reductn	0		0		0		0			
Storage Cap Reductn	0		0		0		0			
Reduced w/c Ratio	0,66		0,75		0,40		0,79			

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 6 (7%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 110	
Control Type: Actuated-Coordinated	
Maximum w/c Ratio: 0,79	
Intersection Signal Delay (s/veh): 18,5	Intersection LOS: B
Intersection Capacity Utilization 91,0%	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.

2033 Background Major Event Ingress Peak Hour  
01/10/2025

7: Bank & Sunnyside

Splits and Phases: 7: Bank & Sunnyside	
Ø2 (R)	Ø4
Ø6 (R)	Ø8
Ø1	



2033 Background Major Event Ingress Peak Hour  
01/10/2025

9: Queen Elizabeth Drive & Fifth

Lane Group	EBL	NBL	NBT	SBT	Ø4
Lane Configurations	↔	↔	↕	↕	↕
Traffic Volume (vph)	93	73	264	650	
Future Volume (vph)	93	73	264	650	
Lane Group Flow (vph)	205	0	374	866	
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)	6,0	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	C-Max	None
Act Effect Green (s)	16,0		51,5	51,5	
Actuated g/C Ratio	0,20		0,84	0,64	
w/c Ratio	0,67		0,61	0,62	
Control Delay (s/veh)	40,0		14,9	20,6	
Queue Delay	0,0		0,0	0,0	
Total Delay (s/veh)	40,0		14,9	20,6	
LOS	D		B	C	
Approach Delay (s/veh)	40,0		14,9	20,6	
Approach LOS	D		B	C	
Queue Length 50th (m)	28,9		29,4	87,7	
Queue Length 95th (m)	46,2		69,2	#19,7	
Internal Link Dist (m)	57,2		0,1	3,9	
Turn Bay Length (m)					
Base Capacity (vph)	332		618	1061	
Starvation Cap Reductn	0		0	0	
Spillback Cap Reductn	0		0	0	
Storage Cap Reductn	0		0	0	
Reduced w/c Ratio	0,62		0,61	0,62	

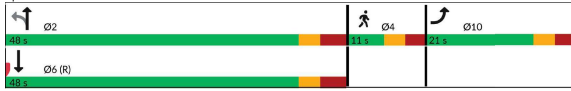
Intersection Summary	
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 0 (0%), Referenced to phase 6:SBT, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum w/c Ratio: 0,82	
Intersection Signal Delay (s/veh): 21,8	Intersection LOS: C
Intersection Capacity Utilization 90,8%	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.

2033 Background Major Event Ingress Peak Hour  
01/10/2025

9: Queen Elizabeth Drive & Fifth

Splits and Phases: 9: Queen Elizabeth Drive & Fifth



Intersection						
Int Delay, s/veh	19,6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T T T T T T					
Traffic Vol, veh/h	5	281	110	731	545	109
Future Vol, veh/h	5	281	110	731	545	109
Conflicting Peds, #/hr	0	0	0	178	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, %	3	3	3	3	3	3
Mvmt Flow	6	312	122	812	606	121
Major/Minor						
Conflicting Flow All	1495	844	905	0	-	0
Stage 1	844	-	-	-	-	-
Stage 2	651	-	-	-	-	-
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	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	60	-	292	604	-	-
Mov Cap-2 Maneuver	60	-	-	-	-	-
Stage 1	251	-	-	-	-	-
Stage 2	389	-	-	-	-	-
Approach						
HCM Ctrl Dly, s/v	110,88		3,8		0	
HCM LOS	F					
Minor Lane/Major Mvmt						
Capacity (veh/h)	468	-	292	-	-	-
HCM Lane V/C Ratio	0,202	-	1,058	-	-	-
HCM Ctrl Dly (s/v)	12,5	2,5	111	-	-	-
HCM Lane LOS	B	A	F	-	-	-
HCM 95th %ile Q(veh)	0,8	-	12,1	-	-	-
Notes						
- Volume exceeds capacity    \$ Delay exceeds 300s						
+ Computation Not Defined    *: All major volume in platoon						

2033 Background Major Event Ingress Peak Hour  
01/10/2025

4: Bank & Witon

Intersection						
Int Delay, s/veh	19,6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T T T T T T					
Traffic Vol, veh/h	5	281	110	731	545	109
Future Vol, veh/h	5	281	110	731	545	109
Conflicting Peds, #/hr	0	0	0	178	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, %	3	3	3	3	3	3
Mvmt Flow	6	312	122	812	606	121
Major/Minor						
Conflicting Flow All	1495	844	905	0	-	0
Stage 1	844	-	-	-	-	-
Stage 2	651	-	-	-	-	-
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	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	60	-	292	604	-	-
Mov Cap-2 Maneuver	60	-	-	-	-	-
Stage 1	251	-	-	-	-	-
Stage 2	389	-	-	-	-	-
Approach						
HCM Ctrl Dly, s/v	110,88		3,8		0	
HCM LOS	F					
Minor Lane/Major Mvmt						
Capacity (veh/h)	468	-	292	-	-	-
HCM Lane V/C Ratio	0,202	-	1,058	-	-	-
HCM Ctrl Dly (s/v)	12,5	2,5	111	-	-	-
HCM Lane LOS	B	A	F	-	-	-
HCM 95th %ile Q(veh)	0,8	-	12,1	-	-	-
Notes						
- Volume exceeds capacity    \$ Delay exceeds 300s						
+ Computation Not Defined    *: All major volume in platoon						

2033 Background Major Event Ingress Peak Hour  
01/10/2025

5: Bank & Echo

Intersection						
Int Delay, s/veh	0,9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T T T T T T					
Traffic Vol, veh/h	1	76	0	618	797	0
Future Vol, veh/h	1	76	0	618	797	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	1	64	0	908	886	0
Major/Minor						
Conflicting Flow All	1340	866	-	0	-	0
Stage 1	886	-	-	-	-	-
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	-	-	-	-
Platoon blocked, %	155	341	0	-	0	-
Mov Cap-1 Maneuver	155	341	-	-	-	-
Mov Cap-2 Maneuver	155	-	-	-	-	-
Stage 1	400	-	-	-	-	-
Stage 2	605	-	-	-	-	-
Approach						
HCM Ctrl Dly, s/v	19		0		0	
HCM LOS	C					
Minor Lane/Major Mvmt						
Capacity (veh/h)	-	341	-	-	-	-
HCM Lane V/C Ratio	-	0,249	-	-	-	-
HCM Ctrl Dly (s/v)	-	19	-	-	-	-
HCM Lane LOS	-	C	-	-	-	-
HCM 95th %ile Q(veh)	-	1	-	-	-	-

2033 Background Major Event Ingress Peak Hour  
01/10/2025

8: Queen Elizabeth Driveway /Queen Elizabeth Driveway & Princess Patricia Way

Intersection						
Int Delay, s/veh	9,7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T T T T T T					
Traffic Vol, veh/h	94	97	105	245	466	258
Future Vol, veh/h	94	97	105	245	466	258
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	104	108	117	272	518	284
Major/Minor						
Conflicting Flow All	1166	860	802	0	-	0
Stage 1	660	-	-	-	-	-
Stage 2	506	-	-	-	-	-
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	-	-	-
Platoon blocked, %	216	467	830	-	-	-
Mov Cap-1 Maneuver	216	467	830	-	-	-
Mov Cap-2 Maneuver	181	-	-	-	-	-
Stage 1	452	-	-	-	-	-
Stage 2	610	-	-	-	-	-
Approach						
HCM Ctrl Dly, s/v	58,51		3,01		0	
HCM LOS	F					
Minor Lane/Major Mvmt						
Capacity (veh/h)	540	-	292	-	-	-
HCM Lane V/C Ratio	0,141	-	0,939	-	-	-
HCM Ctrl Dly (s/v)	10	0	58,5	-	-	-
HCM Lane LOS	B	A	F	-	-	-
HCM 95th %ile Q(veh)	0,5	-	6,3	-	-	-

2033 Background Major Event Ingress Peak Hour

10: Bank & Marche

01/10/2025

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↑	↑↑	↑↑			↑↑
Traffic Vol, veh/h	0	0	885	0	0	840
Future Vol, veh/h	0	0	885	0	0	840
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	761	0	0	711
Major/Minor						
	Minor1	Major1	Major2			
Conflicting Flow All	- 461	0	0	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	- 6.9	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Followup Hdwy	- 3.3	-	-	-	-	-
Pot Cap-1 Maneuver	0	537	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	- 480	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach						
	WB	NB	SB			
HCM Chl Dly, s/v	0	0	0			
HCM LOS	A					
Minor Lane/Major Mvmt						
	NBT	NBRWBLn1	SBT			
Capacity (veh/h)	-	-	-			
HCM Lane V/C Ratio	-	-	-			
HCM Chl Dly (s/v)	-	-	0			
HCM Lane LOS	-	-	A			
HCM 95th %ile Q(veh)	-	-	-			

# **2033 BACKGROUND – MAJOR EVENT EGRESS**

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	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 UII (X)	0,473	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	833	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 95thile Q	2,5	0,4	0,5	0,2										

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	48	207	0	413	0	463		
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										
Minimum Initial (s)	4,0	4,0	4,0	4,0	4,0	4,0	4,0	4,0		
Minimum Split (s)	26,0	29,0	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									
Total Lost Time (s)	5,5									
Lead/Lag										
Lead-Lag Optimize?										
Recall Mode	None		None		None		C-Max		C-Max	
Act Effect Green (s)	14,9		14,9		14,9		49,1		49,1	
Actuated g/C Ratio	0,20		0,20		0,20		0,85		0,85	
v/c Ratio	0,81		0,22		0,58		0,23		0,25	
Control Delay (s/veh)	54,3		25,5		19,7		5,2		6,3	
Queue Delay (s/veh)	0,0		0,0		0,0		0,0		0,0	
Total Delay (s/veh)	54,3		25,5		19,7		5,2		6,3	
LOS	D		C		B		A		A	
Approach Delay (s/veh)	54,3		20,8		5,2		6,3			
Approach LOS	D		C		A		A			
Queue Length 50th (m)	15,7		5,4		12,4		9,0		11,8	
Queue Length 95th (m)	#39,5		12,7		26,4		16,9		22,3	
Internal Link Dist (m)	49,7		112,4		195,6		190,0			
Turn Bay Length (m)	45,0									
Base Capacity (vph)	258		285		446		1809		1817	
Starvation Cap Reductn	0									
Spillback Cap Reductn	0									
Storage Cap Reductn	0									
Reduced v/c Ratio	0,60		0,16		0,46		0,23		0,25	
Intersection Summary										
Cycle Length: 75										
Actuated Cycle Length: 75										
Offset: 47 (63%), Referenced to phase 2:NBT and 6:SBTL, Start of Green										
Natural Cycle: 75										
Control Type: Actuated-Coordinated										
Maximum v/c Ratio: 0,81										
Intersection Signal Delay (s/veh): 14,6					Intersection LOS: B					
Intersection Capacity Utilization 73,3%					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.										



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		6		3			
Detector Phase	4		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	3,0	2,0				
All-Red Time (s)	2,9	2,2	2,2	2,2	2,2	0,0				
Lost Time Adjust (s)	0,0									
Total Lost Time (s)	5,6									
Lead/Lag	Lag		Lag		Lead					
Lead-Lag Optimize?										
Recall Mode	None		C-Max		C-Max		C-Max		None	
Act Effect Green (s)	13,5		50,7		50,7		50,7			
Actuated g/C Ratio	0,18		0,68		0,68		0,68			
v/c Ratio	0,62		0,26		0,24		0,24			
Control Delay (s/veh)	38,9		5,3		3,2		3,2			
Queue Delay (s/veh)	0,0		0,0		0,0		0,0			
Total Delay (s/veh)	38,9		5,3		3,2		3,2			
LOS	D		A		A		A			
Approach Delay (s/veh)	38,9		5,3		3,2		3,2			
Approach LOS	D		A		A		A			
Queue Length 50th (m)	19,9		9,2		6,3		6,3			
Queue Length 95th (m)	34,2		19,0		9,2		9,2			
Internal Link Dist (m)	39,8		31,5		195,6		195,6			
Turn Bay Length (m)	306									
Base Capacity (vph)	306		1625		1768		1768			
Starvation Cap Reductn	0									
Spillback Cap Reductn	0									
Storage Cap Reductn	0									
Reduced v/c Ratio	0,49		0,26		0,24		0,24			
Intersection Summary										
Cycle Length: 75										
Actuated Cycle Length: 75										
Offset: 60 (80%), Referenced to phase 2:NBT and 6:SBTL, 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										

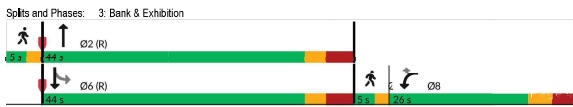


2033 Background Major Event Egress Peak Hour

3: Bank & Exhibition

01/10/2025

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			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	44.0	44.0	44.0	5.0	5.0
Total Split (s)	26.0	26.0	44.0	44.0	44.0	5.0	5.0
Total Split (%)	32.5%	32.5%	55.0%	55.0%	55.0%	6%	6%
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		
Total Lost Time (s)	6.3	6.3	6.9	6.9	6.9		
Lead/Lag	Lag	Lag				Lead	Lead
Lead-Lag Optimize?			Yes	Yes		Yes	Yes
Recall Mode	None	None	C-Max	C-Max	C-Max	None	None
Act Effect Green (s)	10.0	10.0	75.4	75.4	75.4		
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)	31.0	21.0	1.3	2.0	1.3		
Queue Delay	0.0	0.0	0.0	0.0	0.0		
Total Delay (s/veh)	31.0	21.0	1.3	2.0	1.3		
LOS	C	C	A	A	A		
Approach Delay (s/veh)	23.0		1.3		1.3		
Approach LOS	C		A		A		
Queue Length 50th (m)	0.1	0.0	0.0	0.0	0.0		
Queue Length 95th (m)	1.5	2.5	13.1	0.4	12.6		
Internal Link Dist (m)	30.6		33.7		44.8		
Turn Bay Length (m)				40.0			
Base Capacity (vph)	402	275	3018	673	2989		
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		



7: Bank & Sunnyside

01/10/2025

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	336	0	398		
Turn Type	Perm	NA	Perm	NA	Perm	NA	pm-pt	NA		
Protected Phases			4		8		2	1	6	3
Permitted Phases	4		8		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%	47.8%	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)	5.5	5.5	5.6	5.6	6.0	6.0		6.0		
Lead/Lag	Lag	Lag	Lag	Lag					Lead	Lead
Lead-Lag Optimize?			Yes	Yes					Yes	Yes
Recall Mode	None	None	None	None	C-Max	C-Max	None	C-Max	None	None
Act Effect Green (s)	12.6		12.4		69.4		69.4			
Actuated g/C Ratio	0.14		0.14		0.77		0.77			
v/c Ratio	0.69		0.51		0.15		0.19			
Control Delay (s/veh)	51.2		31.5		4.2		1.4			
Queue Delay	0.0		0.0		0.0		0.0			
Total Delay (s/veh)	51.2		31.5		4.2		1.4			
LOS	D		C		A		A			
Approach Delay (s/veh)	51.2		31.5		4.2		1.4			
Approach LOS	D		C		A		A			
Queue Length 50th (m)	15.3		10.4		7.8		2.0			
Queue Length 95th (m)	28.9		23.7		15.2		3.5			
Internal Link Dist (m)	75.1		136.0		63.1		79.0			
Turn Bay Length (m)										
Base Capacity (vph)	240		293		2180		2140			
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		0.34		0.15		0.19			



2033 Background Major Event Egress Peak Hour

6: Bank & Aylmer

01/10/2025

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	
Detector Phase	4	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?			Yes	Yes	Yes
Recall Mode	Ped	C-Max	C-Max	C-Max	Max
Act Effect Green (s)	14.0		60.3	60.3	
Actuated g/C Ratio	0.19		0.87	0.87	
v/c Ratio	0.17		0.20	0.18	
Control Delay (s/veh)	23.5		4.9	5.5	
Queue Delay	0.0		0.0	0.0	
Total Delay (s/veh)	23.5		4.9	5.5	
LOS	C		A	A	
Approach Delay (s/veh)	23.5		4.9	5.5	
Approach LOS	C		A	A	
Queue Length 50th (m)	3.2		9.9	10.2	
Queue Length 95th (m)	11.0		13.8	15.3	
Internal Link Dist (m)	76.7		28.1	10.1	
Turn Bay Length (m)					
Base Capacity (vph)	262		1968	2052	
Starvation Cap Reductn	0		0	0	
Spillback Cap Reductn	0		0	0	
Storage Cap Reductn	0		0	0	
Reduced v/c Ratio	0.15		0.20	0.18	



2033 Background Major Event Egress Peak Hour

9: Queen Elizabeth Drive & Fifth

01/10/2025

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	
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	0.0	
Total Lost Time (s)	5.7	6.3	6.3	6.3	
Lead/Lag	Lag				Lead
Lead-Lag Optimize?			Yes	Yes	Yes
Recall Mode	Min	None	None	C-Max	None
Act Effect Green (s)	17.1		50.4	50.4	
Actuated g/C Ratio	0.21		0.83	0.83	
v/c Ratio	0.69		0.40	0.39	
Control Delay (s/veh)	38.1		9.7	15.5	
Queue Delay	0.0		0.0	0.0	
Total Delay (s/veh)	38.1		9.7	15.5	
LOS	D		A	A	
Approach Delay (s/veh)	38.1		9.7	15.5	
Approach LOS	D		A	A	
Queue Length 50th (m)	31.8		25.7	26.8	
Queue Length 95th (m)	49.9		50.7	52.4	
Internal Link Dist (m)	57.2		0.1	5.9	
Turn Bay Length (m)					
Base Capacity (vph)	351		968	1035	
Starvation Cap Reductn	0		0	0	
Spillback Cap Reductn	0		0	0	
Storage Cap Reductn	0		0	0	
Reduced v/c Ratio	0.65		0.40	0.39	



2033 Background Major Event Egress Peak Hour  
01/10/2025

4: Bank & Wilton

Intersection						
Int Delay, s/veh						
	EBL	EBR	NBL	NBT	SBL	SBR
Int Delay, s/veh	0,1					
Movement						
Lane Configurations	↑		↑↑		↑	
Traffic Vol. veh/h	0	5	0	355	296	70
Future Vol. veh/h	0	5	0	355	296	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	396	329	78
Major/Minor						
Minor2	Major1		Major2			
Conflicting Flow All	- 546	- 585	- 0	- 0	- 0	- 0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	- 6,245	- 4,145	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	- 3,326	- 2,285	-	-	-	-
Pot Cap-1 Maneuver	0	534	882	-	-	-
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 Ctrl Dly, s/v	13,41	0	0	0	0	0
HCM LOS	B					
Minor Lane/Major Mvmt						
NBL	NBT	EBLn1	SBL	SBR		
Capacity (veh/h)	797	- 434	-	-	-	-
HCM Lane V/C Ratio	-	- 0,013	-	-	-	-
HCM Ctrl Dly (s/v)	0	- 13,4	-	-	-	-
HCM Lane LOS	A	- B	-	-	-	-
HCM 95th %ile Q(veh)	0	- 0	-	-	-	-

2033 Background Major Event Egress Peak Hour  
01/10/2025

5: Bank & Echo

Intersection						
Int Delay, s/veh						
	EBL	EBR	NBL	NBT	SBL	SBR
Int Delay, s/veh	0,5					
Movement						
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	88
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	380	340	0
Major/Minor						
Minor2	Major1		Major2			
Conflicting Flow All	- 340	- 0	- 0	- 0	- 0	- 0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	- 6,245	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	- 3,326	-	-	-	-	-
Pot Cap-1 Maneuver	0	899	0	-	0	-
Stage 1	0	-	0	-	0	-
Stage 2	0	-	0	-	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	- 899	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach						
EB	NB		SB			
HCM Ctrl Dly, s/v	10,45	0	0	0	0	0
HCM LOS	B					
Minor Lane/Major Mvmt						
NBL	NBT	EBLn1	SBL	SBR		
Capacity (veh/h)	-	- 899	-	-	-	-
HCM Lane V/C Ratio	-	- 0,054	-	-	-	-
HCM Ctrl Dly (s/v)	-	- 10,4	-	-	-	-
HCM Lane LOS	-	- B	-	-	-	-
HCM 95th %ile Q(veh)	-	- 0,2	-	-	-	-

2033 Background Major Event Egress Peak Hour  
01/10/2025

8: Queen Elizabeth Driveway /Queen Elizabeth Driveway & Princess Patricia Way

Intersection						
Int Delay, s/veh						
	EBL	EBR	NBL	NBT	SBL	SBR
Int Delay, s/veh	20,4					
Movement						
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	- 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	- 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	- 696	-	-	-	-	-
Approach						
EB	NB		SB			
HCM Ctrl Dly, s/v	43,05	2,49	0	0	0	0
HCM LOS	E					
Minor Lane/Major Mvmt						
NBL	NBT	EBLn1	SBL	SBR		
Capacity (veh/h)	545	- 560	-	-	-	-
HCM Lane V/C Ratio	0,047	- 0,888	-	-	-	-
HCM Ctrl Dly (s/v)	8,2	0 43	-	-	-	-
HCM Lane LOS	A	A E	-	-	-	-
HCM 95th %ile Q(veh)	0,1	- 10,3	-	-	-	-

2033 Background Major Event Egress Peak Hour  
01/10/2025

10: Bank & Marche

Intersection						
Int Delay, s/veh						
	WBL	WBR	NBL	NBR	SBL	SBR
Int Delay, s/veh	0					
Movement						
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	- 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	- 0	- 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 Ctrl Dly, s/v	0	0	0	0	0	0
HCM LOS	A					
Minor Lane/Major Mvmt						
NBL	NBR	WBLn1	SBL	SBR		
Capacity (veh/h)	-	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-
HCM Ctrl Dly (s/v)	-	-	0	-	-	-
HCM Lane LOS	-	-	A	-	-	-
HCM 95th %ile Q(veh)	-	-	-	-	-	-

**2033 TOTAL – WEEKDAY AM**

2023 Weekday Total Future AM Peak Hour  
01/10/2025

12: Exhibition & Paul Askin

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	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	7,5	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)	4,038	4,021	4,122
Convergence, Y/N	Yes	Yes	Yes
Cap	890	889	883
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 95thile Q	0,5	0,3	0

2023 Weekday Total Future AM Peak Hour  
01/10/2025

13: Paul Askin & Marche

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	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	6,8	7,8	7,3			
HCM LOS	A	A	A			

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	67%	0%	4%
Vol Thru, %	0%	36%	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	3,883
Convergence, Y/N	Yes	Yes	Yes
Cap	852	960	904
Service Time	2,226	1,751	1,984
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 95thile Q	0,1	0	0,6

2023 Weekday Total Future AM Peak Hour  
01/10/2025

14: Exhibition & Marche

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			

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	65%	0%	53%
Vol Thru, %	0%	44%	47%
Vol Right, %	35%	56%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	123	9	133
LT Vol	80	0	70
Through Vol	0	4	63
RT Vol	43	5	0
Lane Flow Rate	137	10	148
Geometry Grp	1	1	1
Degree of Util (X)	0,157	0,011	0,176
Departure Headway (Hd)	4,127	4,087	4,286
Convergence, Y/N	Yes	Yes	Yes
Cap	855	885	828
Service Time	2,218	2,087	2,399
HCM Lane V/C Ratio	0,15	0,011	0,179
HCM Control Delay, s/veh	8	7,1	8,3
HCM Lane LOS	A	A	A
HCM 95thile Q	0,5	0	0,6

2023 Weekday Total Future AM Peak Hour  
01/10/2025

37: O' Connor & Fifth

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	74	29	33	34	0	0	111
Future Vol. veh/h	69	42	0	0	0	74	29	33	34	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	32	37	38	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								
Conflicting Lanes Left	1		1	1								
Conflicting Approach Right	NB		WB	EB								
Conflicting Lanes Right	1		1	1								
HCM Control Delay, s/veh	8,5		7,4	8								
HCM LOS	A		A	A								

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	30%	62%	0%	0%
Vol Thru, %	34%	38%	0%	0%
Vol Right, %	35%	0%	100%	100%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	96	111	74	111
LT Vol	29	69	0	0
Through Vol	33	42	0	0
RT Vol	34	0	74	111
Lane Flow Rate	107	123	82	123
Geometry Grp	1	1	1	1
Degree of Util (X)	0,129	0,159	0,091	0,134
Departure Headway (Hd)	4,369	4,651	3,968	3,616
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	821	776	904	816
Service Time	2,389	2,65	1,987	1,934
HCM Lane V/C Ratio	0,13	0,159	0,091	0,134
HCM Control Delay, s/veh	8	8,5	7,4	7,5
HCM Lane LOS	A	A	A	A
HCM 95thile Q	0,4	0,5	0,3	0,5

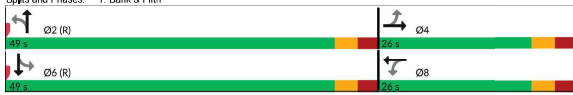
2033 Weekday Total Future AM Peak Hour  
01/10/2025

1: Bank & Fifth

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	39	60	50	52	10	604	20	452
Future Volume (vph)	39	60	50	52	10	604	20	452
Lane Group Flow (vph)	0	143	56	102	0	716	0	564
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases	4	4	8	8	2	2	6	6
Permitted Phases								
Minimum Split (s)	26.0	26.0	26.0	26.0	49.0	49.0	48.0	49.0
Total Split (s)	26.0	26.0	26.0	26.0	49.0	49.0	48.0	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	0.38	0.20	0.24	0.24	0.43	0.35	0.35	0.35
Control Delay (s/veh)	22.5	23.2	14.9	14.9	6.6	8.8	8.8	8.8
Queue Delay (s/veh)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	22.5	23.2	14.9	14.9	6.6	8.8	8.8	8.8
LOS	C	C	B	B	A	A	A	A
Approach Delay (s/veh)	22.5	17.9	6.6	6.6	8.8	8.8	8.8	8.8
Approach LOS	C	B	A	A	A	A	A	A
Queue Length 50th (m)	13.9	6.1	6.2	6.2	13.3	19.3	19.3	19.3
Queue Length 95th (m)	28.9	14.8	17.3	17.3	17.1	28.4	28.4	28.4
Internal Link Dist (m)	49.7		112.4		195.6		190.0	
Turn Bay Length (m)		45.0						
Base Capacity (vph)	375	285	419	419	1657		1590	
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	0.38	0.20	0.24	0.24	0.43	0.35	0.35	0.35

Intersection Summary	
Cycle Length: 75	
Actuated Cycle Length: 75	
Offset: 33 (44%), Referenced to phase 2/NBTL and 6/SBTL, Start of Green	
Natural Cycle: 75	
Control Type: Pretimed	
Maximum v/c Ratio: 0.43	
Intersection Signal Delay (s/veh): 10.0	Intersection LOS: A
Intersection Capacity Utilization 55.6%	ICU Level of Service B
Analysis Period (min): 15	

Splits and Phases: 1: Bank & Fifth



2033 Weekday Total Future AM Peak Hour  
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2: Bank & Holmwood

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)	90	0	709	0	490	
Turn Type	NA	Perm	NA	Perm	NA	
Protected Phases	4	2	2	6	6	3
Permitted Phases						
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)	2.0	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)	5.8	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)	10.2	57.3	57.3	57.3	57.3	
Actuated g/C Ratio	0.14	0.78	0.78	0.78	0.78	
v/c Ratio	0.48	0.33	0.23	0.23	0.23	
Control Delay (s/veh)	37.7	4.5	3.2	3.2	3.2	
Queue Delay (s/veh)	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	37.7	4.5	3.2	3.2	3.2	
LOS	D	A	A	A	A	
Approach Delay (s/veh)	37.7	4.5	3.2	3.2	3.2	
Approach LOS	D	A	A	A	A	
Queue Length 50th (m)	12.0	15.5	8.0	8.0	8.0	
Queue Length 95th (m)	23.5	28.8	15.2	15.2	15.2	
Internal Link Dist (m)	38.8	31.5	195.6			
Turn Bay Length (m)						
Base Capacity (vph)	298	2132	2125			
Starvation Cap Reductn	0	0	0			
Spillback Cap Reductn	0	0	0			
Storage Cap Reductn	0	0	0			
Reduced v/c Ratio	0.30	0.33	0.23			

Intersection Summary	
Cycle Length: 75	
Actuated Cycle Length: 75	
Offset: 28 (37%), Referenced to phase 2/NBTL and 6/SBTL, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.48	
Intersection Signal Delay (s/veh): 6.4	Intersection LOS: A
Intersection Capacity Utilization 54.6%	ICU Level of Service A
Analysis Period (min): 15	

Splits and Phases: 2: Bank & Holmwood



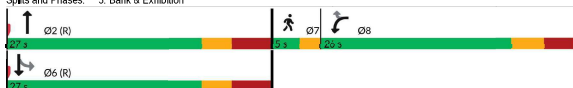
2033 Weekday Total Future AM Peak Hour  
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3: Bank & Exhibition

Lane Group	WBL	WBR	NBT	SBL	SBT	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	Perm	NA	
Protected Phases	8	2	2	6	7	
Permitted Phases						
Detector Phase	8	2	2	6	6	
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	3.0
Minimum Split (s)	26.0	26.0	27.0	27.0	27.0	5.0
Total Split (s)	26.0	26.0	27.0	27.0	27.0	5.0
Total Split (%)	44.8%	44.8%	46.6%	46.6%	46.6%	9%
Yellow Time (s)	3.3	3.3	3.0	3.0	3.0	2.0
All-Red Time (s)	3.0	3.0	3.9	3.9	3.9	0.0
Lost 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	0.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	C-Max	C-Max	C-Max	None
Act Effect Green (s)	10.7	10.7	38.8	38.8	38.8	
Actuated g/C Ratio	0.18	0.18	0.87	0.87	0.87	
v/c Ratio	0.35	0.22	0.37	0.23	0.19	
Control Delay (s/veh)	24.2	8.7	6.3	8.3	5.6	
Queue Delay (s/veh)	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	24.2	8.7	6.3	8.3	5.6	
LOS	C	A	A	A	A	
Approach Delay (s/veh)	18.6	6.3	6.1	6.1	6.1	
Approach LOS	B	A	A	A	A	
Queue Length 50th (m)	9.5	0.0	16.6	3.7	8.7	
Queue Length 95th (m)	19.8	7.4	30.0	11.6	16.2	
Internal Link Dist (m)	39.6		33.7		44.8	
Turn Bay Length (m)			40.0			
Base Capacity (vph)	523	435	1917	379	2101	
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	0.19	0.13	0.37	0.23	0.19	

Intersection Summary	
Cycle Length: 58	
Actuated Cycle Length: 58	
Offset: 25 (43%), Referenced to phase 2/NBT and 6/SBTL, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.37	
Intersection Signal Delay (s/veh): 7.7	Intersection LOS: A
Intersection Capacity Utilization 61.5%	ICU Level of Service B
Analysis Period (min): 15	

Splits and Phases: 3: Bank & Exhibition



2033 Weekday Total Future AM Peak Hour  
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6: Bank & Aylmer

Lane Group	EBL	NBL	NBT	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	2	6	3
Permitted Phases					
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 (%)	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	0.0
Lost 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	0.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	None	C-Max	C-Max	C-Max	None
Act Effect Green (s)	10.8	62.5	62.6	62.6	
Actuated g/C Ratio	0.14	0.78	0.78	0.78	
v/c Ratio	0.39	0.37	0.30	0.30	
Control Delay (s/veh)	34.1	5.2	3.7	3.7	
Queue Delay (s/veh)	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	34.1	5.2	3.7	3.7	
LOS	C	A	A	A	
Approach Delay (s/veh)	34.1	5.2	3.7	3.7	
Approach LOS	C	A	A	A	
Queue Length 50th (m)	10.5	27.7	14.3	14.3	
Queue Length 95th (m)	22.4	43.3	24.5	24.5	
Internal Link Dist (m)	76.7		18.1		
Turn Bay Length (m)					
Base Capacity (vph)	280	2294	2337		
Starvation Cap Reductn	0	0	0		
Spillback Cap Reductn	0	0	0		
Storage Cap Reductn	0	0	0		
Reduced v/c Ratio	0.29	0.37	0.30		

Intersection Summary	
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 4 (5%), Referenced to phase	

2033 Weekday Total Future AM Peak Hour  
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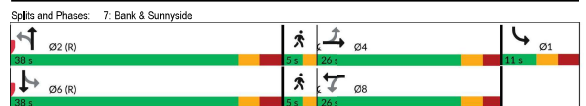
7: Bank & Sunnyside

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	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)	26.0	26.0	26.0	26.0	38.0	38.0	11.0	48.0	5.0	5.0
Total Split (s)	26.0	26.0	26.0	26.0	38.0	38.0	11.0	38.0	5.0	5.0
Total Split (%)	32.5%	32.5%	32.5%	32.5%	47.5%	47.5%	13.8%	47.5%	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	Lag	Lag	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 Effect Green (s)	22.0	22.0	22.0	22.0	46.4	46.4	46.4	46.4		
Actuated g/C Ratio	0.29	0.28	0.38	0.38	0.59	0.59	1.22	1.22		
v/c Ratio	0.65	0.65	0.38	0.38	0.59	0.59	1.22	1.22		
Control Delay (s/veh)	38.3	38.3	33.7	33.7	15.4	15.4	34.4	34.4		
Queue Delay (s/veh)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Total Delay (s/veh)	38.3	38.3	33.7	33.7	15.4	15.4	34.4	34.4		
LOS	D	D	C	C	B	B	C	C		
Approach Delay (s/veh)	38.3	38.3	33.7	33.7	15.4	15.4	34.4	34.4		
Approach LOS	D	D	C	C	B	B	C	C		
Queue Length 50th (m)	15.5	15.5	26.2	26.2	66.5	66.5	56.1	56.1		
Queue Length 95th (m)	37.4	37.4	476.1	476.1	91.0	91.0	481.1	481.1		
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)	245	245	476	476	1699	1699	907	907		
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	0.60	0.60	0.38	0.38	0.59	0.59	0.83	0.83		

**Intersection Summary**  
 Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 60 (75%), Referenced to phase 2/NBTL and 6/SBTL, Start of Green  
 Natural Cycle: 95  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.88  
 Intersection Signal Delay (s/veh): 25.5  
 Intersection Capacity Utilization: 58.2%  
 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 through lane as a left lane.

2033 Weekday Total Future AM Peak Hour  
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7: Bank & Sunnyside



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	-	-	-	-
Vel 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**  
 Conflicting Flow All: 1343 652 667 0 - 0  
 Stage 1: 652 - - - - -  
 Stage 2: 661 - - - - -  
 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 - - -  
 Fot 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**  
 HCM Ctrl Dly, s/v: 25.74 3.83 0  
 HCM LOS: D

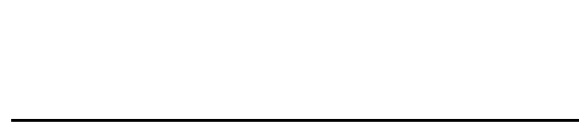
Minor Lane/Mejor Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	584	-	373	-	-
HCM Lane V/C Ratio	0.221	-	0.571	-	-
HCM Ctrl Dly (s/v)	11.3	2.2	26.7	-	-
HCM Lane LOS	B	A	D	-	-
HCM 95th %ile Q(veh)	0.8	-	3.4	-	-

4: Bank & Wilton

2033 Weekday Total Future AM Peak Hour  
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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	3.0	3.0	3.0	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?					
Recall Mode	Min	None	None	Max	None
Act Effect Green (s)	10.1	25.2	25.2		
Actuated g/C Ratio	0.21	0.53	0.53		
v/c Ratio	0.25	0.36	0.45		
Control Delay (s/veh)	18.1	8.2	8.1		
Queue Delay (s/veh)	0.0	0.0	0.0		
Total Delay (s/veh)	18.1	8.2	8.1		
LOS	B	A	A		
Approach Delay (s/veh)	18.1	8.2	8.1		
Approach LOS	B	A	A		
Queue Length 50th (m)	6.0	13.1	17.8		
Queue Length 95th (m)	14.9	25.7	33.9		
Internal Link Dist (m)	57.2	0.1	5.9		
Turn Bay Length (m)					
Base Capacity (vph)	536	841	872		
Starvation Cap Reductn	0	0	0		
Spillback Cap Reductn	0	0	0		
Storage Cap Reductn	0	0	0		
Reduced v/c Ratio	0.16	0.36	0.45		

**Intersection Summary**  
 Cycle Length: 70  
 Actuated Cycle Length: 47.8  
 Natural Cycle: 70  
 Control Type: Semi Act/Incoord  
 Maximum v/c Ratio: 0.45  
 Intersection Signal Delay (s/veh): 9.7  
 Intersection Capacity Utilization: 53.6%  
 Analysis Period (min): 15  
 Intersection LOS: A  
 ICU Level of Service A



2033 Weekday Total Future AM Peak Hour  
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5: Bank & Echo

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	- 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	- 0	- 0	- 0	- 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	455	0	-	0	0
Stage 1	0	-	0	-	0	0
Stage 2	0	-	0	-	0	0
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	- 455	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach						
EB	NB	SB				
HCM Ctrl Dly, s/v	13,47	0	0			
HCM LOS	B					
Minor Lane/Major Mvmt						
NBL	EBL	NBT	SBT			
Capacity (veh/h)	- 455	-	-			
HCM Lane V/C Ratio	- 0,089	-	-			
HCM Ctrl Dly (s/v)	- 13,5	-	-			
HCM Lane LOS	- B	-	-			
HCM 95th %ile Q(veh)	- 0,2	-	-			

2033 Weekday Total Future AM Peak Hour  
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8: Queen Elizabeth Driveway /Queen Elizabeth Driveway & Princess Patricia Way

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	- 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	0	-	0
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	890	1168	-	-	-
Stage 1	712	-	-	-	-	-
Stage 2	651	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	327	890	1168	-	-	-
Mov Cap-2 Maneuver	327	-	-	-	-	-
Stage 1	654	-	-	-	-	-
Stage 2	651	-	-	-	-	-
Approach						
EB	NB	SB				
HCM Ctrl Dly, s/v	15,03	1,83	0			
HCM LOS	C					
Minor Lane/Major Mvmt						
NBL	EBL	NBT	EBL	NBT	SBT	SBR
Capacity (veh/h)	396	-	452	-	-	-
HCM Lane V/C Ratio	0,288	-	0,291	-	-	-
HCM Ctrl Dly (s/v)	8,3	0	15	-	-	-
HCM Lane LOS	A	A	C	-	-	-
HCM 95th %ile Q(veh)	0,2	-	0,8	-	-	-

2033 Weekday Total Future AM Peak Hour  
01/10/2025

10: Bank & Marche

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	- 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	645	9	0	486
Major/Minor						
Minor1	Major1	Major2				
Conflicting Flow All	- 427	- 0	- 0	- 0	- 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	541	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	- 484	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach						
WB	NB	SB				
HCM Ctrl Dly, s/v	13,47	0	0			
HCM LOS	B					
Minor Lane/Major Mvmt						
NBT	NBR	WBL	NBL	SBT		
Capacity (veh/h)	- 484	-	-	-		
HCM Lane V/C Ratio	- 0,122	-	-	-		
HCM Ctrl Dly (s/v)	- 13,5	-	-	-		
HCM Lane LOS	- B	-	-	-		
HCM 95th %ile Q(veh)	- 0,4	-	-	-		

2033 Weekday Total Future AM Peak Hour  
01/10/2025

11: Garage & Exhibition

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	- 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	0	459	370
Stage 1	-	-	-	-	270	-
Stage 2	-	-	-	-	189	-
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	-	-	1247	-	560	378
Stage 1	-	-	-	-	775	-
Stage 2	-	-	-	-	843	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1115	-	446	540
Mov Cap-2 Maneuver	-	-	-	-	446	-
Stage 1	-	-	-	-	693	-
Stage 2	-	-	-	-	750	-
Approach						
EB	WB	NB				
HCM Ctrl Dly, s/v	0	0,55	14,89			
HCM LOS			B			
Minor Lane/Major Mvmt						
NBL	EBL	EBR	WBL	WBT		
Capacity (veh/h)	481	-	120	-		
HCM Lane V/C Ratio	0,212	-	0,005	-		
HCM Ctrl Dly (s/v)	14,9	-	8,2	-		
HCM Lane LOS	B	-	A	A		
HCM 95th %ile Q(veh)	0,8	-	0	-		

2033 Weekday Total Future AM Peak Hour

17: Princess Patricia/Princess Patricia Way & Garage 01/10/2025

Intersection						
Int Delay, s/veh	2.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	4	1	1	1	4	1
Traffic Vol, veh/h	5	42	125	24	42	8
Future Vol, veh/h	5	42	125	24	42	8
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	47	139	27	47	9
Major/Minor						
	Major1	Major2	Minor2			
Conflicting Flow All	166	0	0	210	152	
Stage 1	-	-	-	152	-	
Stage 2	-	-	-	58	-	
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	1413	-	-	778	894	
Stage 1	-	-	-	876	-	
Stage 2	-	-	-	965	-	
Platoon blocked, %	-	-	-	-	-	
Mov Cap-1 Maneuver	1413	-	-	775	884	
Mov Cap-2 Maneuver	-	-	-	775	-	
Stage 1	-	-	-	872	-	
Stage 2	-	-	-	965	-	
Approach						
	EB	WB	SB			
HCM Chl Dly, s/v	0,8	0	9,89			
HCM LOS	A		A			
Minor Lane/Major Mvmt						
	EBL	EBT	WBT	WBR	SBL	SBR
Capacity (veh/h)	191	-	-	-	792	-
HCM Lane V/C Ratio	0,004	-	-	-	0,07	-
HCM Chl Dly (s/v)	7,6	0	-	-	9,9	-
HCM Lane LOS	A	A	-	-	A	-
HCM 95th %ile Q(veh)	0	-	-	-	0,2	-

**2033 TOTAL – WEEKDAY PM**

12: Exhibition & Paul Askin

Intersection	
Intersection Delay, s/veh	8
Intersection LOS	A

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
Mvmt 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 Util (X)	0,179	0,189	0,014
Departure Headway (Hd)	4,053	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	0,175	0,19	0,014
HCM Control Delay, s/veh	8	8	7,5
HCM Lane LOS	A	A	A
HCM 95th-ile Q	0,5	0,7	0

13: Paul Askin & Marche

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	3,843	4,038
Convergence, Y/N	Yes	Yes	Yes
Cap	943	985	880
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-ile Q	0,1	0	0,1

14: Exhibition & Marche

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	4,182	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-ile Q	0,5	0	0,8

37: O' Connor & Fifth

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			EB	WB	NB			
Opposing Approach	WB	EB					WB	EB				NB
Opposing Lanes	1	1	0				1	1	0			1
Conflicting Approach Left	SB		NB	EB			1		1			WB
Conflicting Lanes Left	1		1	1			1		1			1
Conflicting Approach Right	NB		WB				SB		WB			EB
Conflicting Lanes Right	1		1	1			1		1			1
HCM Control Delay, s/veh	8,6			7,6	8,3							7,6
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	115	106	95
LT Vol	45	73	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-ile Q	0,5	0,5	0,4	0,4

2033 Weekday Total Future PM Peak Hour  
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1: Bank & Fifth

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↔		↔		↔		↔	
Traffic Volume (vph)	48	55	61	39	17	476	30	626
Future Volume (vph)	48	55	61	39	17	476	30	626
Lane Group Flow (vph)	0	167	68	87	0	584	0	771
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	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)	13.4	13.4	13.4	13.4	50.6	50.6	50.6	50.6
Actuated g/C Ratio	0.19	0.18	0.18	0.18	0.31	0.42	0.67	0.67
v/c Ratio	0.67	0.41	0.31	0.31	0.31	0.42	0.67	0.67
Control Delay (s/veh)	35.8	33.0	16.7	16.7	5.6	7.1	7.1	7.1
Queue Delay (s/veh)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	35.8	33.0	16.7	16.7	5.6	7.1	7.1	7.1
LOS	D	C	B	B	A	A	A	A
Approach Delay (s/veh)	35.8	33.0	16.7	16.7	5.6	7.1	7.1	7.1
Approach LOS	D	C	B	B	A	A	A	A
Queue Length 50th (m)	16.0	8.6	5.2	5.2	13.6	21.4	21.4	21.4
Queue Length 95th (m)	33.2	17.9	14.9	14.9	25.2	41.5	41.5	41.5
Internal Link Dist (m)	49.7	112.4	195.6	195.6	195.6	190.0	190.0	190.0
Turn Bay Length (m)	45.0							
Base Capacity (vph)	364	253	409	409	1862	1852	1852	1852
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.46	0.27	0.21	0.21	0.31	0.42	0.67	0.67

Splits and Phases: 1: Bank & Fifth

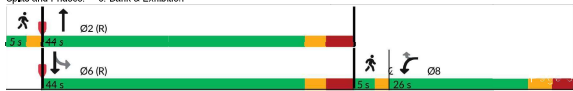


2033 Weekday Total Future PM Peak Hour  
01/10/2025

3: Bank & Exhibition

Lane Group	WBL	WBR	NBT	SBL	SBT	Ø1	Ø7	
Lane Configurations	↔		↔		↔		↔	
Traffic Volume (vph)	139	71	488	141	511			
Future Volume (vph)	139	71	488	141	511			
Lane Group Flow (vph)	154	79	714	157	568			
Turn Type	Prot	Perm	NA	Perm	NA			
Protected Phases	8		2		6		1 7	
Permitted Phases	8	8	2	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	44.0	44.0	44.0	5.0	5.0	
Total Split (s)	26.0	26.0	44.0	44.0	44.0	5.0	5.0	
Total Split (%)	32.5%	32.5%	55.0%	55.0%	55.0%	6%	6%	
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			
Lead/Lag	Lag	Lag				Lead	Yes	
Lead-Lag Optimize?								
Recall Mode	None	None	C-Max	C-Max	C-Max	None	None	
Act Effect Green (s)	13.6	13.6	53.2	53.2	53.2			
Actuated g/C Ratio	0.17	0.17	0.67	0.67	0.67			
v/c Ratio	0.59	0.32	0.39	0.43	0.27			
Control Delay (s/veh)	39.3	19.3	6.8	12.0	6.4			
Queue Delay (s/veh)	0.0	0.0	0.0	0.0	0.0			
Total Delay (s/veh)	39.3	19.3	6.8	12.0	6.4			
LOS	D	B	A	B	A			
Approach Delay (s/veh)	29.5	6.6	6.6	7.6	7.6			
Approach LOS	C	A	A	A	A			
Queue Length 50th (m)	22.0	0.0	19.1	8.5	15.7			
Queue Length 95th (m)	36.9	10.1	35.3	26.1	28.2			
Internal Link Dist (m)	39.6	33.7		44.8	44.8			
Turn Bay Length (m)	40.0							
Base Capacity (vph)	379	326	1826	385	2087			
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	0.41	0.24	0.39	0.43	0.27			

Splits and Phases: 3: Bank & Exhibition



2033 Weekday Total Future PM Peak Hour  
01/10/2025

2: Bank & Holmwood

Lane Group	EBT	NBL	NBT	SBL	SBT	Ø3
Lane Configurations	↔		↔		↔	
Traffic Volume (vph)	18	26	524	34	596	
Future Volume (vph)	18	26	524	34	596	
Lane Group Flow (vph)	114	0	675	0	732	
Turn Type	NA	Perm	NA	Perm	NA	
Protected Phases	4		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	49.0	48.0	48.0	48.0	5.0
Total Split (s)	22.0	49.0	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)	2.0	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	
Lead/Lag	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)	39.8	5.2	5.2	3.2	3.2	
Queue Delay (s/veh)	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	39.8	5.2	5.2	3.2	3.2	
LOS	D	A	A	A	A	
Approach Delay (s/veh)	39.8	5.2	5.2	3.2	3.2	
Approach LOS	D	A	A	A	A	
Queue Length 50th (m)	15.1	15.8	12.7			
Queue Length 95th (m)	27.8	30.5	16.5			
Internal Link Dist (m)	39.8	31.5	195.6			
Turn Bay Length (m)	288					
Base Capacity (vph)	288	1952	2001			
Starvation Cap Reductn	0	0	0			
Spillback Cap Reductn	0	0	0			
Storage Cap Reductn	0	0	0			
Reduced v/c Ratio	0.40	0.35	0.37			

Splits and Phases: 2: Bank & Holmwood



2033 Weekday Total Future PM Peak Hour  
01/10/2025

6: Bank & Aylmer

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	2	6	6	
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)	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	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 Effect 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	5.0	8.2	8.2		
Queue Delay (s/veh)	0.0	0.0	0.0	0.0		
Total Delay (s/veh)	31.6	5.0	8.2	8.2		
LOS	C	A	A	A		
Approach Delay (s/veh)	31.6	5.0	8.2	8.2		
Approach LOS	C	A	A	A		
Queue Length 50th (m)	10.7	19.1	37.1			
Queue Length 95th (m)	24.5	42.2	51.0			
Internal Link Dist (m)	76.7	28.1	10.1			
Turn Bay Length (m)	275					
Base Capacity (vph)	275	1910	1959			
Starvation Cap Reductn	0	0	0			
Spillback Cap Reductn	0	0	0			
Storage Cap Reductn	0	0	0			
Reduced v/c Ratio	0.33	0.44	0.50			

Splits and Phases: 6: Bank & Aylmer



2033 Weekday Total Future PM Peak Hour  
01/10/2025

7: Bank & Sunnyside

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	395	0	554	0	1203		
Turn Type	Perm	NA	Perm	NA	Perm	NA	pm+pt	NA		
Protected Phases	4		8		8		2	1	6	3
Permitted Phases	4		8		2		6			
Detector Phase	4		8		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	43.0	5.0	5.0
Total Split (%)	27.8%	27.8%	27.8%	27.8%	47.8%	47.8%	18.9%	47.8%	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-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 Effect 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	0.72	0.72	0.98	0.98	0.33	0.97				
Control Delay (s/veh)	47.9	47.9	64.6	64.6	9.5	34.6				
Queue Delay (s/veh)	0.0	0.0	0.0	0.0	0.0	0.0				
Total Delay (s/veh)	47.9	47.9	64.6	64.6	9.5	34.6				
LOS	D	D	E	E	A	A		C		
Approach Delay (s/veh)	47.9	47.9	64.6	64.6	9.5	34.6				
Approach LOS	D	D	E	E	A	A		C		
Queue Length 50th (m)	26.3	26.3	48.1	48.1	22.7	100.1				
Queue Length 95th (m)	#60.1	#60.1	#107.2	#107.2	32.0	#153.3				
Internal Link Dist (m)	75.1	75.1	136.0	136.0	63.1	79.0				
Turn Bay Length (m)										
Base Capacity (vph)	255	255	403	403	1678	1235				
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	0.72	0.72	0.98	0.98	0.33	0.97				
<b>Intersection Summary</b>										
Cycle Length: 90										
Actuated Cycle Length: 90										
Offset: 9 (7%), Referenced to phase 2 NBL and 6 SBL, Start of Green										
Natural Cycle: 120										
Control Type: Actuated-Coordinated										
Maximum v/c Ratio: 0.98										
Intersection Signal Delay (s/veh): 34.8										
Intersection Capacity Utilization 96.8%										
ICU Level of Service F										
Analysis Period (min) 15										
# 95th percentile volume exceeds capacity, queue may be longer.										
Queue shown is maximum after two cycles.										

2033 Weekday Total Future PM Peak Hour  
01/10/2025

7: Bank & Sunnyside

Splits and Phases: 7: Bank & Sunnyside

Phase	Duration (s)	Offset (s)
Ø2 (R)	43.5	5.6
Ø4	26.3	5.6
Ø6 (R)	43.5	5.6
Ø8	26.3	5.6

2033 Weekday Total Future PM Peak Hour  
01/10/2025

9: Queen Elizabeth Drive & Fifth

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		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	3.0	3.0	3.0	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	C-Max	None
Act Effect Green (s)	10.9	56.6	56.6	56.6	
Actuated g/C Ratio	0.14	0.71	0.71	0.71	
v/c Ratio	0.40	0.27	0.58	0.58	
Control Delay (s/veh)	37.0	5.3	8.5	8.5	
Queue Delay (s/veh)	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	37.0	5.3	8.5	8.5	
LOS	D	A	A	A	
Approach Delay (s/veh)	37.0	5.3	8.5	8.5	
Approach LOS	D	A	A	A	
Queue Length 50th (m)	11.9	11.7	38.8	38.8	
Queue Length 95th (m)	23.8	24.2	75.6	75.6	
Internal Link Dist (m)	57.2	0.1	5.9	5.9	
Turn Bay Length (m)					
Base Capacity (vph)	294	1016	1174	1174	
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	0.27	0.58	0.58	
<b>Intersection Summary</b>					
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: 0.58					
Intersection Signal Delay (s/veh): 9.9					
Intersection Capacity Utilization 65.4%					
ICU Level of Service C					
Analysis Period (min) 15					

Splits and Phases: 9: Queen Elizabeth Drive & Fifth

Phase	Duration (s)	Offset (s)
Ø2	43.5	5.7
Ø4	11.0	5.7
Ø10	43.5	5.7

2033 Weekday Total Future PM Peak Hour  
01/10/2025

4: Bank & Wilton

Intersection

Int Delay, s/veh 15.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔		↔		↔	
Traffic Vol veh/h	3	239	219	600	568	51
Future Vol veh/h	3	239	219	600	568	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	-	-	-	-
Vel 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	1661	871	699
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
Flt Cap-1 Maneuver	51	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 Ctrl Delay, s/v	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	0.405	-	0.551	-	-
HCM Ctrl Delay (s/v)	15.1	4.3	82.1	-	-
HCM Lane LOS	C	A	F	-	-
HCM 95th %ile Q(veh)	2	-	9.2	-	-

2033 Weekday Total Future PM Peak Hour

17: Princess Patricia/Princess Patricia Way & Garage 01/10/2025

Intersection						
Int Delay, s/veh	2,5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	4	1	1	1	1	1
Traffic Vol, veh/h	5	65	29	112	82	5
Future Vol, veh/h	5	65	29	112	82	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
<b>Major/Minor</b>						
	Major1	Major2	Minor2			
Conflicting Flow All	157	0	0	178	94	
Stage 1	-	-	-	94	-	
Stage 2	-	-	-	83	-	
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	
Platoon blocked, %	-	-	-	-	-	
Mov Cap-1 Maneuver	1423	-	-	812	962	
Stage 1	-	-	-	929	-	
Stage 2	-	-	-	940	-	
Mov Cap-2 Maneuver	-	-	-	809	962	
Stage 1	-	-	-	809	-	
Stage 2	-	-	-	925	-	
<b>Approach</b>						
	EB	WB	SB			
HCM Chd Dly, s/v	0,54	0	9,84			
HCM LOS	A		A			
<b>Minor Lane/Major Mvmt</b>						
	EBL	EBT	WBT	WBR	SBL	SBR
Capacity (veh/h)	129	-	-	-	-	319
HCM Lane V/C Ratio	0,004	-	-	-	-	0,091
HCM Chd Dly (s/v)	7,5	0	-	-	-	9,8
HCM Lane LOS	A	A	-	-	-	A
HCM 95th %ile Q(veh)	0	-	-	-	-	0,3

**2033 TOTAL – SATURDAY**

2033 Saturday Total Future PM Peak Hour  
11: O' Connor & Fifth  
01/10/2025

Intersection												
Intersection Delay s/veh												
Intersection LOS												
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 95thile Q	0.5	1.7	0.5	0

2033 Saturday Total Future PM Peak Hour  
12: Exhibition & Paul Askin  
01/10/2025

Intersection						
Intersection Delay s/veh						
Intersection LOS						
Movement						
	EBL	EBT	WBL	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	NB			
Opposing Lanes	1	1	0			
Conflicting Approach Left	SB		WB			
Conflicting Lanes Left	1	0	1			
Conflicting Approach Right	NB	SB	EB			
Conflicting Lanes Right	0	1	1			
HCM Control Delay, s/veh	7.9	7.5	7.3			
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)	4,046	4,037	4,29
Convergence, Y/N	Yes	Yes	Yes
Cap	887	885	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	7.5	7.3
HCM Lane LOS	A	A	A
HCM 95thile Q	0.6	0.4	0

2033 Saturday Total Future PM Peak Hour  
13: Paul Askin & Marche  
01/10/2025

Intersection						
Intersection Delay s/veh						
Intersection LOS						
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	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	7.5	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	3,602	3,968
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 95thile Q	0.1	0.1	0.4

2033 Saturday Total Future PM Peak Hour  
14: Exhibition & Marche  
01/10/2025

Intersection						
Intersection Delay s/veh						
Intersection LOS						
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	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	7.4	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 95thile Q	0.6	0.1	0.5

2033 Saturday Total Future PM Peak Hour  
01/10/2025

1: Bank & Fifth

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	
Detector Phase	4		8		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 Effect Green (s)	12.2	12.2	12.2	12.2	51.8	51.8	51.8	51.8
Actuated g/C Ratio	0.19	0.16	0.16	0.16	0.69	0.69	0.69	0.69
v/c Ratio	0.65	0.48	0.42	0.42	0.32	0.32	0.36	0.36
Control Delay (s/veh)	35.1	37.0	17.7	17.7	5.0	6.0	6.0	6.0
Queue Delay (s/veh)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	35.1	37.0	17.7	17.7	5.0	6.0	6.0	6.0
LOS	D	D	B	B	A	A	A	A
Approach Delay (s/veh)	35.1		25.6		5.0		6.0	
Approach LOS	D		C		A		A	
Queue Length 50th (m)	14.3	10.0	6.3	6.3	13.5	17.3	17.3	17.3
Queue Length 95th (m)	28.3	20.2	11.7	11.7	24.4	33.9	33.9	33.9
Internal Link Dist (m)	49.7		112.4		195.6		190.0	
Turn Bay Length (m)	45.0							
Base Capacity (vph)	354	289	416	416	1914	1914	1943	1943
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	0.27	0.27	0.32	0.32	0.36	0.36
<b>Intersection Summary</b>								
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: 0.65								
Intersection Signal Delay (s/veh): 10.5								
Intersection Capacity Utilization 58.8%								
Analysis Period (min) 15								
Intersection LOS: B								
ICU Level of Service B								

Splits and Phases: 1: Bank & Fifth



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3: Bank & Exhibition

Lane Group	WBL	WBR	NBL	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		1 7	
Permitted Phases	8		6		6			
Detector Phase	8		2		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	39.0	39.0	5.0	5.0	
Total Split (s)	26.0	26.0	39.0	39.0	39.0	5.0	5.0	
Total Split (%)	34.7%	34.7%	52.0%	52.0%	52.0%	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	3.0	
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			
Lead/Lag	Lag		Lag		Lag		Lead	
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	0.18	0.73	0.73	0.73			
v/c Ratio	0.49	0.39	0.34	0.40	0.24			
Control Delay (s/veh)	35.2	10.8	5.3	7.4	3.8			
Queue Delay (s/veh)	0.0	0.0	0.0	0.0	0.0			
Total Delay (s/veh)	35.2	10.8	5.3	7.4	3.8			
LOS	D	B	A	A	A			
Approach Delay (s/veh)	24.7		5.3		4.5			
Approach LOS	C		A		A			
Queue Length 50th (m)	15.8	0.0	15.8	6.0	8.8			
Queue Length 95th (m)	28.8	0.0	29.2	13.2	13.6			
Internal Link Dist (m)	39.6		33.7		44.8			
Turn Bay Length (m)	40.0							
Base Capacity (vph)	405	358	2002	416	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			
<b>Intersection Summary</b>								
Cycle Length: 75								
Actuated Cycle Length: 75								
Offset: 60 (80%), Referenced to phase 2/NBTL and 6/SBTL, Start of Green								
Natural Cycle: 75								
Control Type: Actuated-Coordinated								
Maximum v/c Ratio: 0.49								
Intersection Signal Delay (s/veh): 7.5								
Intersection Capacity Utilization 61.4%								
Analysis Period (min) 15								
Intersection LOS: A								
ICU Level of Service B								

Splits and Phases: 3: Bank & Exhibition



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2: Bank & Holmwood

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 3			
Permitted Phases	4		2		6 6			
Detector Phase	4		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)	2.8	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)	5.8	5.2	5.2	5.2	5.2			
Lead/Lag	Lag		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	0.34	0.38	0.38	0.38			
Control Delay (s/veh)	38.9	2.2	2.2	3.4	3.4			
Queue Delay (s/veh)	0.0	0.0	0.0	0.0	0.0			
Total Delay (s/veh)	38.9	2.2	2.2	3.4	3.4			
LOS	D	A	A	A	A			
Approach Delay (s/veh)	38.9		2.2		3.4			
Approach LOS	D		A		A			
Queue Length 50th (m)	14.9	4.2	4.2	13.3	13.3			
Queue Length 95th (m)	27.7	10.2	10.2	17.5	17.5			
Internal Link Dist (m)	38.8		31.5		195.6			
Turn Bay Length (m)	285							
Base Capacity (vph)	285	1946	1946	1980	1980			
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			
<b>Intersection Summary</b>								
Cycle Length: 75								
Actuated Cycle Length: 75								
Offset: 60 (80%), Referenced to phase 2/NBTL and 6/SBTL, Start of Green								
Natural Cycle: 75								
Control Type: Actuated-Coordinated								
Maximum v/c Ratio: 0.56								
Intersection Signal Delay (s/veh): 5.6								
Intersection Capacity Utilization 67.1%								
Analysis Period (min) 15								
Intersection LOS: A								
ICU Level of Service C								

Splits and Phases: 2: Bank & Holmwood



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6: Bank & Aylmer

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		6 6			
Switch Phase								
Minimum Initial (s)	10.0	30.0	30.0	30.0	1.0			
Minimum Split (s)	19.5	35.2	35.2	35.2	4.0			
Total Split (s)	20.0	65.0	65.0	65.0	5.0			
Total Split (%)	22.2%	72.2%	72.2%	72.2%	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	0.0			
Total Lost Time (s)	5.5	5.2	5.2	5.2				
Lead/Lag	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	0.67				
v/c Ratio	0.24	0.42	0.44	0.44				
Control Delay (s/veh)	30.0	5.2	7.6	7.6				
Queue Delay (s/veh)	0.0	0.0	0.0	0.0				
Total Delay (s/veh)	30.0	5.2	7.6	7.6				
LOS	C	A	A	A				
Approach Delay (s/veh)	30.0		5.2		7.6			
Approach LOS	C		A		A			
Queue Length 50th (m)	6.6	20.5	32.5	32.5				
Queue Length 95th (m)	17.3	26.5	43.6	43.6				
Internal Link Dist (m)	76.7		28.1		10.1			
Turn Bay Length (m)	244							
Base Capacity (vph)	244	1930	2008	2008				
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	0.23	0.42	0.44	0.44				
<b>Intersection Summary</b>								
Cycle Length: 90								
Actuated Cycle Length: 90								
Offset: 28 (31%), Referenced to phase 2/NBTL and 6/SBT, Start of Green								
Natural Cycle: 60								
Control Type: Actuated-Coordinated								
Maximum v/c Ratio: 0.44								
Intersection Signal Delay (s/veh): 7.2								

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7: Bank & Sunnyside

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	Ø3	Ø7
Lane Configurations	↔		↔		↔		↔			
Traffic Volume (vph)	42	38	20	58	30	524	85	570		
Future Volume (vph)	42	38	20	58	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	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)	20.0	20.0	20.0	20.0	54.0	54.0	11.0	54.0	5.0	5.0
Total Split (s)	20.0	20.0	20.0	20.0	54.0	54.0	11.0	54.0	5.0	5.0
Total Split (%)	22.2%	22.2%	22.2%	22.2%	60.0%	60.0%	12.2%	60.0%	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	2.6	2.6	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				
Lead/Lag	Lag	Lag	Lag	Lag	Lag	Lag	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)	18.2	18.2	18.2	18.2	59.2	59.2		59.2		
Actuated g/C Ratio	0.21	0.21	0.65	0.65	0.37	0.37		0.66		
v/c Ratio	0.62	0.62	0.65	0.65	0.37	0.37		0.52		
Control Delay (s/veh)	45.3	45.3	33.3	33.3	7.6	7.6		7.1		
Queue Delay (s/veh)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		
Total Delay (s/veh)	45.3	45.3	33.3	33.3	7.6	7.6		7.1		
LOS	D	D	C	C	A	A		A		
Approach Delay (s/veh)	45.3	45.3	33.3	33.3	7.6	7.6		7.1		
Approach LOS	D	D	C	C	A	A		A		
Queue Length 50th (m)	21.7	21.7	21.3	21.3	23.4	23.4		17.9		
Queue Length 95th (m)	#43.9	#43.9	#45.9	#45.9	32.6	32.6		22.2		
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)	224	224	303	303	1777	1777		1516		
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	0.62	0.62	0.65	0.65	0.37	0.37		0.52		
<b>Intersection Summary</b>										
Cycle Length: 90										
Actuated Cycle Length: 90										
Offset: 33 (37%), Referenced to phase 2/NBTL and 6/SBTL, Start of Green										
Natural Cycle: 90										
Control Type: Actuated-Coordinated										
Maximum v/c Ratio: 0.65										
Intersection Signal Delay (s/veh): 13.1										
Intersection LOS: B										
Intersection Capacity Utilization 73.8%										
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.										

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7: Bank & Sunnyside

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	Ø3	Ø7
Lane Configurations	↔		↔		↔		↔			
Traffic Volume (vph)	42	38	20	58	30	524	85	570		
Future Volume (vph)	42	38	20	58	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	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)	20.0	20.0	20.0	20.0	54.0	54.0	11.0	54.0	5.0	5.0
Total Split (s)	20.0	20.0	20.0	20.0	54.0	54.0	11.0	54.0	5.0	5.0
Total Split (%)	22.2%	22.2%	22.2%	22.2%	60.0%	60.0%	12.2%	60.0%	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	2.6	2.6	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				
Lead/Lag	Lag	Lag	Lag	Lag	Lag	Lag	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)	18.2	18.2	18.2	18.2	59.2	59.2		59.2		
Actuated g/C Ratio	0.21	0.21	0.65	0.65	0.37	0.37		0.66		
v/c Ratio	0.62	0.62	0.65	0.65	0.37	0.37		0.52		
Control Delay (s/veh)	45.3	45.3	33.3	33.3	7.6	7.6		7.1		
Queue Delay (s/veh)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		
Total Delay (s/veh)	45.3	45.3	33.3	33.3	7.6	7.6		7.1		
LOS	D	D	C	C	A	A		A		
Approach Delay (s/veh)	45.3	45.3	33.3	33.3	7.6	7.6		7.1		
Approach LOS	D	D	C	C	A	A		A		
Queue Length 50th (m)	21.7	21.7	21.3	21.3	23.4	23.4		17.9		
Queue Length 95th (m)	#43.9	#43.9	#45.9	#45.9	32.6	32.6		22.2		
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)	224	224	303	303	1777	1777		1516		
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	0.62	0.62	0.65	0.65	0.37	0.37		0.52		
<b>Intersection Summary</b>										
Cycle Length: 90										
Actuated Cycle Length: 90										
Offset: 33 (37%), Referenced to phase 2/NBTL and 6/SBTL, Start of Green										
Natural Cycle: 90										
Control Type: Actuated-Coordinated										
Maximum v/c Ratio: 0.65										
Intersection Signal Delay (s/veh): 13.1										
Intersection LOS: B										
Intersection Capacity Utilization 73.8%										
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.										

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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			
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	3.0	3.0	3.0	0.0
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	C-Max	None
Act Effct Green (s)	11.5		56.0	56.0	
Actuated g/C Ratio	0.14		0.70	0.70	
v/c Ratio	0.45		0.32	0.41	
Control Delay (s/veh)	37.7		5.9	6.6	
Queue Delay (s/veh)	0.0		0.0	0.0	
Total Delay (s/veh)	37.7		5.9	6.6	
LOS	D		A	A	
Approach Delay (s/veh)	37.7		5.9	6.6	
Approach LOS	D		A	A	
Queue Length 50th (m)	14.5		15.5	23.7	
Queue Length 95th (m)	27.3		31.9	46.6	
Internal Link Dist (m)	57.2		0.1	5.9	
Turn Bay Length (m)					
Base Capacity (vph)	298		1056	1161	
Starvation Cap Reductn	0		0	0	
Spillback Cap Reductn	0		0	0	
Storage Cap Reductn	0		0	0	
Reduced v/c Ratio	0.34		0.32	0.41	
<b>Intersection Summary</b>					
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: 0.45					
Intersection Signal Delay (s/veh): 9.8					
Intersection LOS: A					
Intersection Capacity Utilization 65.3%					
ICU Level of Service C					
Analysis Period (min) 15					
<b>Splits and Phases: 9: Queen Elizabeth Drive &amp; Fifth</b>					

2033 Saturday Total Future PM Peak Hour  
01/10/2025

4: Bank & Wilton

Lane Group	EBL	EBR	NBL	NBR	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	-	-	-	-
Vel 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	689	606	62
<b>Major/Minor</b>						
Conflicting Flw All	1414	815	846	0	-	0
Stage 1	815	-	-	-	-	-
Stage 2	599	-	-	-	-	-
Critical Hwy	6,675	6,275	4,175	-	-	-
Critical Hwy Stg 1	5,475	-	-	-	-	-
Critical Hwy Stg 2	5,875	-	-	-	-	-
Follow-up Hwy						

2033 Saturday Total Future PM Peak Hour  
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5: Bank & Echo

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	- 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	788	798	0
Major/Minor						
Minor2	Major1	Major2				
Conflicting Flow All	1192	798	-	0	-	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	-	-	0
Stage 1	436	-	0	-	-	0
Stage 2	643	-	0	-	-	0
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	189	379	-	-	-	-
Mov Cap-2 Maneuver	189	-	-	-	-	-
Stage 1	436	-	-	-	-	-
Stage 2	643	-	-	-	-	-
Approach						
EB	NB	SB				
HCM Ctrl Dly, s/v	15,51	0	0			
HCM LOS	C					
Minor Lane/Major Mvmt						
NBL	EBL	NBT	EBL	NBT	SBT	SBR
Capacity (veh/h)	-	379	-	-	-	-
HCM Lane V/C Ratio	-	0,097	-	-	-	-
HCM Ctrl Dly (s/v)	-	15,5	-	-	-	-
HCM Lane LOS	-	C	-	-	-	-
HCM 95th %ile Q(veh)	-	0,3	-	-	-	-

2033 Saturday Total Future PM Peak Hour  
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8: Queen Elizabeth Driveway /Queen Elizabeth Driveway & Princess Patricia Way

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	- 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	0	-	0
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 Ctrl Dly, s/v	17,78	2,07	0			
HCM LOS	C					
Minor Lane/Major Mvmt						
NBL	EBL	NBT	EBL	NBT	SBT	SBR
Capacity (veh/h)	441	-	446	-	-	-
HCM Lane V/C Ratio	0,289	-	0,372	-	-	-
HCM Ctrl Dly (s/v)	8,4	0	17,8	-	-	-
HCM Lane LOS	A	A	C	-	-	-
HCM 95th %ile Q(veh)	0,2	-	1,7	-	-	-

2033 Saturday Total Future PM Peak Hour  
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10: Bank & Marche

Intersection						
Int Delay, s/veh	1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↑ ↑ ↑ ↑					
Traffic Vol. veh/h	6	83	524	20	2	829
Future Vol. veh/h	6	83	524	20	2	829
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	92	582	22	2	899
Major/Minor						
Minor1	Major1	Major2				
Conflicting Flow All	1047	402	0	0	704	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	695	-	-	-	-	-
Approach						
WB	NB	SB				
HCM Ctrl Dly, s/v	13,76	0	0,03			
HCM LOS	B					
Minor Lane/Major Mvmt						
NBT	NBR	WBL	NBL	WBL	SBT	SBR
Capacity (veh/h)	-	-	503	807	-	-
HCM Lane V/C Ratio	-	-	0,183	0,003	-	-
HCM Ctrl Dly (s/v)	-	-	13,8	9,5	-	-
HCM Lane LOS	-	-	B	A	-	-
HCM 95th %ile Q(veh)	-	-	0,7	0	-	-

2033 Saturday Total Future PM Peak Hour  
01/10/2025

15: Garage & Exhibition

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	- 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	0	514	406
Stage 1	-	-	-	-	306	-
Stage 2	-	-	-	-	209	-
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	-	-	1184	-	520	943
Stage 1	-	-	-	-	747	-
Stage 2	-	-	-	-	826	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1059	-	414	519
Mov Cap-2 Maneuver	-	-	-	-	414	-
Stage 1	-	-	-	-	668	-
Stage 2	-	-	-	-	735	-
Approach						
EB	WB	NB				
HCM Ctrl Dly, s/v	0	0,46	15,78			
HCM LOS			C			
Minor Lane/Major Mvmt						
NBL	EBT	EBR	WBL	WBT	NBL	NBR
Capacity (veh/h)	419	-	-	97	-	-
HCM Lane V/C Ratio	0,204	-	-	0,005	-	-
HCM Ctrl Dly (s/v)	15,8	-	-	8,4	0	-
HCM Lane LOS	C	-	-	A	A	-
HCM 95th %ile Q(veh)	0,8	-	-	0	-	-

2033 Saturday Total Future PM Peak Hour

16: Princess Patricia/Princess Patricia Way & Garage 01/10/2025

Intersection						
Int Delay, s/veh	3.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	4	1	1	1	1	1
Traffic Vol, veh/h	5	32	75	112	96	5
Future Vol, veh/h	5	32	75	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	193	147	
Stage 1	-	-	-	147	-	
Stage 2	-	-	-	47	-	
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	1382	-	-	796	900	
Stage 1	-	-	-	881	-	
Stage 2	-	-	-	976	-	
Platoon blocked, %	-	-	-	-	-	
Mov Cap-1 Maneuver	1382	-	-	792	900	
Mov Cap-2 Maneuver	-	-	-	792	-	
Stage 1	-	-	-	877	-	
Stage 2	-	-	-	976	-	
Approach	EB	WB	SB			
HCM Chl Dly, s/v	1,03	0	10,28			
HCM LOS			B			
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBL	SBR
Capacity (veh/h)	243	-	-	-	-	797
HCM Lane V/C Ratio	0,004	-	-	-	-	0,141
HCM Chl Dly (s/v)	7,7	0	-	-	-	10,3
HCM Lane LOS	A	A	-	-	-	B
HCM 95th %ile Q(veh)	0	-	-	-	-	0,5

**2033 TOTAL – SUNDAY**

2033 Sunday Total Future PM Peak Hour  
01/10/2025

12: Exhibition & Paul Askin

<b>Intersection</b>						
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
<b>Approach</b>						
	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	8,2	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)	0,215	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	2,065	2,115	2,404
HCM Lane V/C Ratio	0,215	0,139	0,013
HCM Control Delay, s/veh	8,2	7,8	7,5
HCM Lane LOS	A	A	A
HCM 95thile Q	0,8	0,5	0

2033 Sunday Total Future PM Peak Hour  
01/10/2025

13: Paul Askin & Marche

<b>Intersection</b>						
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
<b>Approach</b>						
	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	8,2		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)	0,025	0,023	0,222
Departure Headway (Hd)	4,204	3,992	3,998
Convergence, Y/N	Yes	Yes	Yes
Cap	638	891	900
Service Time	2,298	2,042	2,014
HCM Lane V/C Ratio	0,025	0,029	0,222
HCM Control Delay, s/veh	7,4	7,2	8,2
HCM Lane LOS	A	A	A
HCM 95thile Q	0,1	0,1	0,8

2033 Sunday Total Future PM Peak Hour  
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14: Exhibition & Marche

<b>Intersection</b>						
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
<b>Approach</b>						
	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	7,5	8		8,3		
HCM LOS	A	A		A		

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	63%	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	2,599
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 95thile Q	0,8	0,1	0,3

2033 Sunday Total Future PM Peak Hour  
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37: O' Connor & Fifth

<b>Intersection</b>										
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
<b>Approach</b>												
	EB	NB		WB		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	WB		SB		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	897	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 95thile Q	1,8	1	1,6	0,6

2033 Sunday Total Future PM Peak Hour  
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1: Bank & Fifth

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↔		↔		↔		↔	
Traffic Volume (vph)	54	38	123	67	16	515	23	581
Future Volume (vph)	54	38	123	67	16	515	23	581
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		8		2		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 Effect 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	0.42	0.42	0.34	0.34	0.38	0.38
Control Delay (s/veh)	30.8	43.3	19.5	19.5	8.5	8.5	7.2	7.2
Queue Delay (s/veh)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	30.8	43.3	19.5	19.5	8.5	8.5	7.2	7.2
LOS	C	D	B	B	A	A	A	A
Approach Delay (s/veh)	30.8	31.6	8.5	7.2				
Approach LOS	C	C	A	A				
Queue Length 50th (m)	14.2	18.0	8.7	8.7	36.4	36.4	19.8	19.8
Queue Length 95th (m)	27.5	32.3	22.0	22.0	55.8	55.8	36.9	36.9
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)	329	288	424	424	1848	1848	1818	1818
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	0.40	0.48	0.31	0.31	0.34	0.34	0.38	0.38

Spills and Phases: 1: Bank & Fifth

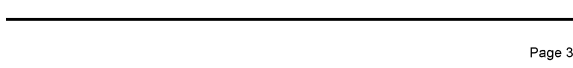


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3: Bank & Exhibition

Lane Group	WBL	WBR	NBT	SBL	SBT	Ø3	Ø6	Ø7
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	2		1	1	1	3	6	7
Permitted Phases	8	8	6					
Detector Phase	8	8	2		1	1	6	7
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%	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	Lag	Lag	Lead		Lead			
Lead-Lag Optimize?	Yes	Yes	Yes		Yes			
Recall Mode	None	None	C-Max	None	None	C-Max	None	
Act Effect Green (s)	14.2	14.2	35.6	40.7	47.6			
Actuated g/C Ratio	0.19	0.19	0.47	0.54	0.63			
v/c Ratio	0.61	0.37	0.48	0.65	0.25			
Control Delay (s/veh)	37.0	9.1	14.3	23.6	7.6			
Queue Delay (s/veh)	0.0	0.0	0.0	0.0	0.0			
Total Delay (s/veh)	37.0	9.1	14.3	23.6	7.6			
LOS	D	A	B	C	A			
Approach Delay (s/veh)	27.8	14.3	12.8					
Approach LOS	C	B	B					
Queue Length 50th (m)	21.8	0.0	26.9	10.2	11.2			
Queue Length 95th (m)	36.6	0.0	47.0	44.3	30.5			
Internal Link Dist (m)	39.6	33.7	44.8					
Turn Bay Length (m)	40.0							
Base Capacity (vph)	377	349	1317	372	1993			
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	0.44	0.23	0.48	0.65	0.25			

Spills and Phases: 3: Bank & Exhibition

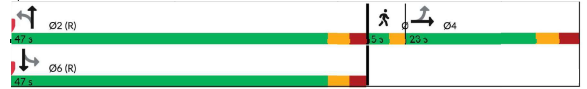


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2: Bank & Holmwood

Lane Group	EBT	NBL	NBT	SBL	SBT	Ø3
Lane Configurations	↔		↔		↔	
Traffic Volume (vph)	18	32	542	30	589	
Future Volume (vph)	18	32	542	30	589	
Lane Group Flow (vph)	111	0	738	0	727	
Turn Type	NA	Perm	NA	Perm	NA	
Protected Phases	4		2		6	
Permitted Phases	4	2	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)	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)	2.0	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)	5.8	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)	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	0.39	0.38	0.38	0.38	
Control Delay (s/veh)	38.6	7.0	9.6	9.6	9.6	
Queue Delay (s/veh)	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	38.6	7.0	9.6	9.6	9.6	
LOS	D	A	A	A	A	
Approach Delay (s/veh)	38.6	7.0	9.6			
Approach LOS	D	A	A			
Queue Length 50th (m)	14.7	34.8	29.2			
Queue Length 95th (m)	27.3	57.0	54.6			
Internal Link Dist (m)	39.8	31.5	195.6			
Turn Bay Length (m)	304					
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			

Spills and Phases: 2: Bank & Holmwood

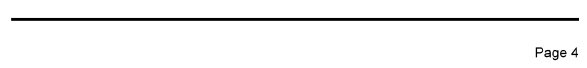


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3: Bank & Exhibition

Lane Group	WBL	WBR	NBT	SBL	SBT	Ø3	Ø6	Ø7
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	2		1	1	1	3	6	7
Permitted Phases	8	8	6					
Detector Phase	8	8	2		1	1	6	7
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%	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	Lag	Lag	Lead		Lead			
Lead-Lag Optimize?	Yes	Yes	Yes		Yes			
Recall Mode	None	None	C-Max	None	None	C-Max	None	
Act Effect Green (s)	14.2	14.2	35.6	40.7	47.6			
Actuated g/C Ratio	0.19	0.19	0.47	0.54	0.63			
v/c Ratio	0.61	0.37	0.48	0.65	0.25			
Control Delay (s/veh)	37.0	9.1	14.3	23.6	7.6			
Queue Delay (s/veh)	0.0	0.0	0.0	0.0	0.0			
Total Delay (s/veh)	37.0	9.1	14.3	23.6	7.6			
LOS	D	A	B	C	A			
Approach Delay (s/veh)	27.8	14.3	12.8					
Approach LOS	C	B	B					
Queue Length 50th (m)	21.8	0.0	26.9	10.2	11.2			
Queue Length 95th (m)	36.6	0.0	47.0	44.3	30.5			
Internal Link Dist (m)	39.6	33.7	44.8					
Turn Bay Length (m)	40.0							
Base Capacity (vph)	377	349	1317	372	1993			
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	0.44	0.23	0.48	0.65	0.25			

Spills and Phases: 3: Bank & Exhibition



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6: Bank & Aylmer

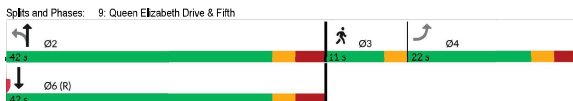
Lane Group	EBL	NBL	NBT	SBT	Ø3
Lane Configurations	↖	↖	↕	↕	↕
Traffic Volume (vph)	54	17	629	682	
Future Volume (vph)	54	17	629	682	
Lane Group Flow (vph)	83	0	718	821	
Turn Type	Prot	Perm	NA	NA	
Protected Phases	4	2	2	6	3
Permitted Phases	4	2	2	6	
Detector Phase	4	2	2	6	
Switch Phase					
Minimum Initial (s)	10.0	30.0	30.0	30.0	1.0
Minimum Split (s)	22.0	63.0	63.0	63.0	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
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	Lag	Lead	Lead	
Lead-Lag Optimize?			Yes	Yes	
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		
w/c Ratio	0.43	0.31	0.34		
Control Delay (s/veh)	35.9	8.8	3.7		
Queue Delay (s/veh)	0.0	0.0	0.0		
Total Delay (s/veh)	35.9	8.8	3.7		
LOS	D	A	A		
Approach Delay (s/veh)	35.9	8.8	3.7		
Approach LOS	D	A	A		
Queue Length 50th (m)	10.5	46.3	17.9		
Queue Length 95th (m)	23.2	65.1	30.8		
Internal Link Dist (m)	76.7	28.1	16.1		
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 w/c Ratio	0.30	0.31	0.34		



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9: Queen Elizabeth Drive & Fifth

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		2	6	3	
Permitted Phases	4	2	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%	56.0%	56.0%	56.0%	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	0.0
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	Lag	Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	
Recall Mode	Min	None	None	C-Max	None
Act Effect Green (s)	13.8	48.7	48.7		
Actuated g/C Ratio	0.18	0.85	0.85		
w/c Ratio	0.60	0.33	0.04		
Control Delay (s/veh)	36.9	6.1	3.9		
Queue Delay (s/veh)	0.0	0.0	0.0		
Total Delay (s/veh)	36.9	6.1	3.9		
LOS	D	A	A		
Approach Delay (s/veh)	36.9	6.1	3.9		
Approach LOS	D	A	A		
Queue Length 50th (m)	21.4	13.9	1.8		
Queue Length 95th (m)	36.0	31.8	6.0		
Internal Link Dist (m)	57.2	0.1	5.9		
Turn Bay Length (m)					
Base Capacity (vph)	330	774	992		
Starvation Cap Reductn	0	0	0		
Spillback Cap Reductn	0	0	0		
Storage Cap Reductn	0	0	0		
Reduced w/c Ratio	0.49	0.33	0.04		



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7: Bank & Sunnyside

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
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	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	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	5.0
Total Split (%)	27.8%	27.8%	27.8%	27.8%	47.8%	47.8%	18.9%	6%	48%	6%	48%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	2.0	3.0	2.0	2.0
All-Red Time (s)	2.8	2.8	2.8	2.8	3.0	3.0	2.9	0.0	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								
Lead/Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lead			
Lead-Lag Optimize?			Yes	Yes							
Recall Mode	None	None	None	None	C-Max	C-Max	None	None	C-Max	None	None
Act Effect Green (s)	15.2	15.2	15.2	15.2	43.6	43.6	57.4				
Actuated g/C Ratio	0.17	0.17	0.17	0.17	0.48	0.48	0.64				
w/c Ratio	0.78	0.71	0.43	0.43	0.55						
Control Delay (s/veh)	66.7	33.7	17.7	14.4							
Queue Delay (s/veh)	0.0	0.0	0.0	0.0							
Total Delay (s/veh)	66.7	33.7	17.7	14.4							
LOS	E	C	B	B							
Approach Delay (s/veh)	66.7	33.7	17.7	14.4							
Approach LOS	E	C	B	B							
Queue Length 50th (m)	19.6	16.3	24.6	44.8							
Queue Length 95th (m)	35.2	37.4	54.0	71.8							
Internal Link Dist (m)	75.1	136.0	63.1	79.0							
Turn Bay Length (m)											
Base Capacity (vph)	196	335	1385	1500							
Starvation Cap Reductn	0	0	0	0							
Spillback Cap Reductn	0	0	0	0							
Storage Cap Reductn	0	0	0	0							
Reduced w/c Ratio	0.59	0.58	0.43	0.54							



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4: Bank & Wilton

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↖	↖	↖	↖	↖	↖
Traffic Vol veh/h	5	156	110	584	526	62
Future Vol veh/h	5	156	110	584	526	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	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, %	5	5	5	5	5	5
Mvmt Flow	6	173	122	649	564	69

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	1966	797	631
Stage 1	787	-	-
Stage 2	569	-	-
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
Flt Cap-1 Maneuver	147	380	783
Stage 1	436	-	-
Stage 2	524	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	74	308	635
Mov Cap-2 Maneuver	74	-	-
Stage 1	271	-	-
Stage 2	425	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	30.71	3.63	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBL	EBT	SBL	SBR
Capacity (veh/h)	521	-	308	-	-	-
HCM Lane V/C Ratio	0.192	-	0.563	-	-	-
HCM Ctrl Dly (s/v)	12	2	30.7	-	-	-
HCM Lane LOS	B	A	D	-	-	-
HCM 95th %ile Q(veh)	0.7	-	3.2	-	-	-

2033 Sunday Total Future PM Peak Hour  
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5: Bank & Echo

Intersection						
Int Delay, s/veh	1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↑ ↑ ↑ ↑ ↑ ↑					
Traffic Vol, veh/h	2	71	0	668	686	1
Future Vol, veh/h	2	71	0	668	686	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	79	0	742	762	1
Major/Minor						
Conflicting Flow All	Minor2	Major1	Major2			
Stage 1	849	-	-	-	-	-
Stage 2	371	-	-	-	-	-
Critical Hdwy	6,675	6,275	-	-	-	-
Critical Hdwy Stg 1	5,475	-	-	-	-	-
Critical Hdwy Stg 2	5,875	-	-	-	-	-
Follow-up Hdwy	3,5473	3,3475	-	-	-	-
Pot Cap-1 Maneuver	182	354	0	-	-	-
Stage 1	412	-	0	-	-	-
Stage 2	661	-	0	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	150	322	-	-	-	-
Mov Cap-2 Maneuver	150	-	-	-	-	-
Stage 1	374	-	-	-	-	-
Stage 2	601	-	-	-	-	-
Approach						
EB	NB	SB				
HCM Chd Dly, s/v	19,77	0	0			
HCM LOS	C					
Minor Lane/Major Mvmt						
Capacity (veh/h)	NBT	EBLn1	SBT	SBR		
HCM Lane V/C Ratio	-	0,245	-	-		
HCM Chd Dly (s/v)	-	19,8	-	-		
HCM Lane LOS	-	C	-	-		
HCM 95th %ile Q(veh)	-	0,9	-	-		

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8: Queen Elizabeth Driveway /Queen Elizabeth Driveway & Princess Patricia Way

Intersection						
Int Delay, s/veh	6,6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↑ ↑ ↑ ↑ ↑ ↑					
Traffic Vol, veh/h	101	151	85	131	68	60
Future Vol, veh/h	101	151	85	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	112	168	94	146	76	67
Major/Minor						
Conflicting Flow All	Minor2	Major1	Major2			
Stage 1	109	-	-	-	-	-
Stage 2	334	-	-	-	-	-
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	576	850	1453	-	-	-
Stage 1	921	-	-	-	-	-
Stage 2	730	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	535	950	1453	-	-	-
Mov Cap-2 Maneuver	535	-	-	-	-	-
Stage 1	856	-	-	-	-	-
Stage 2	730	-	-	-	-	-
Approach						
EB	NB	SB				
HCM Chd Dly, s/v	13,66	3,01	0			
HCM LOS	B					
Minor Lane/Major Mvmt						
Capacity (veh/h)	NBL	NBT	EBLn1	SBT	SBR	
HCM Lane V/C Ratio	0,285	-	0,285	-	-	
HCM Chd Dly (s/v)	7,6	0	13,1	-	-	
HCM Lane LOS	A	A	B	-	-	
HCM 95th %ile Q(veh)	0,2	-	1,8	-	-	

2033 Sunday Total Future PM Peak Hour  
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10: Bank & Marche

Intersection						
Int Delay, s/veh	2,3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↑ ↑ ↑ ↑ ↑ ↑					
Traffic Vol, veh/h	7	180	488	23	0	850
Future Vol, veh/h	7	180	488	23	0	850
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	200	542	26	0	722
Major/Minor						
Conflicting Flow All	Minor1	Major1	Major2			
Stage 1	655	-	-	-	-	-
Stage 2	361	-	-	-	-	-
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	238	579	-	0	-	-
Stage 1	484	-	-	0	-	-
Stage 2	682	-	-	0	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	212	517	-	-	-	-
Mov Cap-2 Maneuver	212	-	-	-	-	-
Stage 1	433	-	-	-	-	-
Stage 2	682	-	-	-	-	-
Approach						
WB	NB	SB				
HCM Chd Dly, s/v	16,27	0	0			
HCM LOS	C					
Minor Lane/Major Mvmt						
Capacity (veh/h)	NBT	NBR	WBLn1	SBT	SBR	
HCM Lane V/C Ratio	-	-	0,386	-	-	
HCM Chd Dly (s/v)	-	-	18,3	-	-	
HCM Lane LOS	-	-	C	-	-	
HCM 95th %ile Q(veh)	-	-	1,8	-	-	

2033 Sunday Total Future PM Peak Hour  
01/10/2025

11: Garage & Exhibition

Intersection						
Int Delay, s/veh	4,5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑ ↑ ↑ ↑ ↑ ↑					
Traffic Vol, veh/h	158	198	5	105	116	12
Future Vol, veh/h	158	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
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	177	220	6	117	129	13
Major/Minor						
Conflicting Flow All	Major1	Major2	Minor1			
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	381
Stage 1	-	-	-	-	687	-
Stage 2	-	-	-	-	810	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	954	-	362	484
Mov Cap-2 Maneuver	-	-	-	-	362	-
Stage 1	-	-	-	-	614	-
Stage 2	-	-	-	-	720	-
Approach						
EB	WB	NB				
HCM Chd Dly, s/v	0	0,4	20,73			
HCM LOS			C			
Minor Lane/Major Mvmt						
Capacity (veh/h)	NBLn1	EBT	EBR	WBL	WBT	
HCM Lane V/C Ratio	0,365	-	-	0,006	-	
HCM Chd Dly (s/v)	20,7	-	-	8,8	0	
HCM Lane LOS	C	-	-	A	A	
HCM 95th %ile Q(veh)	1,8	-	-	0	-	

Intersection						
Int Delay, s/veh	5,5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		4	1		4	1
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
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	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 Chd Dly, s/v	0,57	0	11,2			
HCM LOS			B			
Minor Lane/Major Mvmt						
	EBL	EBT	WBT	WBR	SBL	SBR
Capacity (veh/h)	136	-	-	-	799	-
HCM Lane V/C Ratio	0,004	-	-	-	0,274	-
HCM Chd Dly (s/v)	7,5	0	-	-	11,2	-
HCM Lane LOS	A	A	-	-	B	-
HCM 95th %ile Q(veh)	0	-	-	-	1,1	-

2033 Weekday Total Future PM Peak Hour  
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5: Bank & Echo

Intersection						
Int Delay, s/veh						
	EBL	EBR	NBL	NBR	SBT	SBR
Int Delay, s/veh	0,3					
Movement						
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	819	940	2
Major/Minor						
Conflicting Flow All	Minor2	Major1	Major2			
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 Ctrl Dly, s/v	20,88	0	0			
HCM LOS	C					
Minor Lane/Major Mvmt						
Capacity (veh/h)	-	253	-	-	-	-
HCM Lane V/C Ratio	-	0,105	-	-	-	-
HCM Ctrl Dly (s/v)	-	20,8	-	-	-	-
HCM Lane LOS	-	C	-	-	-	-
HCM 95th %ile Q(veh)	-	0,3	-	-	-	-

2033 Weekday Total Future PM Peak Hour  
01/10/2025

8: Queen Elizabeth Driveway /Queen Elizabeth Driveway & Princess Patricia Way

Intersection						
Int Delay, s/veh						
	EBL	EBR	NBL	NBR	SBT	SBR
Int Delay, s/veh	3,5					
Movement						
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						
Conflicting Flow All	Minor2	Major1	Major2			
Stage 1	608	-	-	-	-	-
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	901	-	-	-	-	-
Stage 2	665	-	-	-	-	-
Approach						
EB	NB	SB				
HCM Ctrl Dly, s/v	24,27	1,67	0			
HCM LOS	C					
Minor Lane/Major Mvmt						
Capacity (veh/h)	330	-	325	-	-	-
HCM Lane V/C Ratio	0,07	-	0,434	-	-	-
HCM Ctrl Dly (s/v)	8,1	0	24,3	-	-	-
HCM Lane LOS	A	A	C	-	-	-
HCM 95th %ile Q(veh)	0,2	-	2,1	-	-	-

2033 Weekday Total Future PM Peak Hour  
01/10/2025

10: Bank & Marche

Intersection						
Int Delay, s/veh						
	WBL	WBR	NBT	NBR	SBL	SBT
Int Delay, s/veh	1					
Movement						
Lane Configurations	↑ ↑ ↑ ↑					
Traffic Vol, veh/h	5	84	565	9	1	850
Future Vol, veh/h	5	84	565	9	1	850
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	93	629	10	1	722
Major/Minor						
Conflicting Flow All	Minor1	Major1	Major2			
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 Ctrl Dly, s/v	14,07	0	0,01			
HCM LOS	B					
Minor Lane/Major Mvmt						
Capacity (veh/h)	-	-	490	784	-	-
HCM Lane V/C Ratio	-	-	0,191	0,011	-	-
HCM Ctrl Dly (s/v)	-	-	14,1	9,6	-	-
HCM Lane LOS	-	-	B	A	-	-
HCM 95th %ile Q(veh)	-	-	0,7	0	-	-

2033 Weekday Total Future PM Peak Hour  
01/10/2025

11: Garage & Exhibition

Intersection						
Int Delay, s/veh						
	EBT	EBR	WBL	WBT	NBL	NBR
Int Delay, s/veh	2,4					
Movement						
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	-
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						
Conflicting Flow All	Minor1	Major2	Minor1			
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	518
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 Ctrl Dly, s/v	0	0,28	17,24			
HCM LOS			C			
Minor Lane/Major Mvmt						
Capacity (veh/h)	371	-	-	60	-	-
HCM Lane V/C Ratio	0,209	-	-	0,005	-	-
HCM Ctrl Dly (s/v)	17,2	-	-	8,6	-	-
HCM Lane LOS	C	-	-	A	A	-
HCM 95th %ile Q(veh)	0,8	-	-	0	-	-

## **2033 TOTAL – MINOR EVENT INGRESS**

2033 Total Future Minor Event Ingress Peak Hour  
01/10/2025

12: Exhibition & Paul Askin

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔	↔		↔	↔
Traffic Volume (vph)	236	0	0	0	0	124
Future Volume (vph)	236	0	0	0	0	124
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.865					
Friction	0.950					
Friction Protected	0	1802	1686	0	1459	0
Satd. Flow (prot)	0.950					
Friction Permitted	0	1802	1686	0	1459	0
Satd. Flow (perm)	100	100	100	100	100	100
Confl. Peds. (#/hr)	0.90	0.90	0.90	0.90	0.90	0.90
Peak Hour Factor	262	0	0	0	0	138
Adj. Flow (vph)	Shared Lane Traffic (%)					
Lane Group Flow (vph)	0	262	0	0	138	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	0.0	3.2	0.0	0.0
Link Offset(m)	1.8	1.8	1.8	1.8	1.8	1.8
Crosswalk Width(m)	Two way Left Turn Lane					
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.14
Turning Speed (t/h)	24	14	24	14	24	14
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
<b>Intersection Summary</b>						
Control Type: Unsignalized						
Intersection Capacity Utilization 41.2%      ICU Level of Service A						
Analysis Period (min) 15						

2033 Total Future Minor Event Ingress Peak Hour  
01/10/2025

13: Paul Askin & Marche

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations		↔	↔	↔	↔	↔
Traffic Volume (vph)	12	11	83	83	118	118
Future Volume (vph)	12	11	83	83	118	118
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.935					
Friction	0.932					
Friction Protected	1577	0	0	1846	1534	0
Satd. Flow (prot)	0.976					
Friction Permitted	1577	0	0	1846	1534	0
Satd. Flow (perm)	100	100	100	100	100	100
Confl. Peds. (#/hr)	0.90	0.90	0.90	0.90	0.90	0.90
Peak Hour Factor	13	12	92	92	131	131
Adj. Flow (vph)	Shared Lane Traffic (%)					
Lane Group Flow (vph)	25	0	0	184	262	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	0.0	3.2	0.0	0.0
Link Offset(m)	1.6	1.6	1.6	1.6	1.6	1.6
Crosswalk Width(m)	Two way Left Turn Lane					
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.14
Turning Speed (t/h)	14	24	14	24	14	14
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
<b>Intersection Summary</b>						
Control Type: Unsignalized						
Intersection Capacity Utilization 40.3%      ICU Level of Service A						
Analysis Period (min) 15						

2033 Total Future Minor Event Ingress Peak Hour  
01/10/2025

14: Exhibition & Marche

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations		↔	↔	↔	↔	↔
Traffic Volume (vph)	36	0	0	166	0	0
Future Volume (vph)	36	0	0	166	0	0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.865					
Friction	0.879					
Friction Protected	1686	0	0	1686	1686	0
Satd. Flow (prot)	0.974					
Friction Permitted	1686	0	0	1686	1686	0
Satd. Flow (perm)	100	100	100	100	100	100
Confl. Peds. (#/hr)	0.90	0.90	0.90	0.90	0.90	0.90
Peak Hour Factor	40	0	0	184	0	0
Adj. Flow (vph)	Shared Lane Traffic (%)					
Lane Group Flow (vph)	40	0	0	184	0	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	0.0	3.2	0.0	0.0
Link Offset(m)	1.6	1.6	1.6	1.6	1.6	1.6
Crosswalk Width(m)	Two way Left Turn Lane					
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.14
Turning Speed (t/h)	14	24	14	24	14	14
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
<b>Intersection Summary</b>						
Control Type: Unsignalized						
Intersection Capacity Utilization 32.6%      ICU Level of Service A						
Analysis Period (min) 15						

2033 Total Future Minor Event Ingress Peak Hour  
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37: O' Connor Street & Fifth Avenue

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	62	53	0	0	0	143	65	43	41	0	0	85
Future Volume (vph)	62	53	0	0	0	143	65	43	41	0	0	85
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.865											
Friction	0.879											
Friction Protected	0	1842	0	0	0	1459	0	1590	0	0	0	1459
Satd. Flow (prot)	0.974											
Friction Permitted	0	1842	0	0	0	1459	0	1590	0	0	0	1459
Satd. Flow (perm)	100	100	100	100	100	100	100	100	100	100	100	100
Confl. Peds. (#/hr)	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Peak Hour Factor	69	59	0	0	0	159	72	48	46	0	0	94
Adj. Flow (vph)	Shared Lane Traffic (%)											
Lane Group Flow (vph)	0	128	0	0	0	159	0	166	0	0	0	94
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	0.0	0.0	0.0	0.0	0.0	0.0
Link Offset(m)	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
Crosswalk Width(m)	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 (t/h)	97	14	24	14	24	97	24	14	97	14	24	97
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
<b>Intersection Summary</b>												
Control Type: Unsignalized												
Intersection Capacity Utilization 34.7%      ICU Level of Service A												
Analysis Period (min) 15												

2033 Total Future Minor Event Ingress Peak Hour  
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1: Bank & Fifth

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↔		↔		↕		↕	
Traffic Volume (vph)	53	59	69	48	17	516	26	605
Future Volume (vph)	53	59	69	48	17	516	26	605
Lane Group Flow (vph)	0	163	77	125	0	625	0	728
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	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		Lead		Lag	
Lead-Lag Optimize?	None		None		C-Max		C-Max	
Recall Mode	None		None		C-Max		C-Max	
Act Effect Green (s)	13.7	13.7	13.7	13.7	50.3	50.3	50.3	50.3
Actuated g/C Ratio	0.19	0.18	0.18	0.18	0.67	0.67	0.67	0.67
v/c Ratio	0.67	0.43	0.40	0.40	0.33	0.38	0.38	0.38
Control Delay (s/veh)	37.3	33.0	15.8	15.8	6.0	6.9	6.9	6.9
Queue Delay (s/veh)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	37.3	33.0	15.8	15.8	6.0	6.9	6.9	6.9
LOS	D	C	B	B	A	A	A	A
Approach Delay (s/veh)	37.3	33.0	15.8	15.8	6.0	6.9	6.9	6.9
Approach LOS	D	C	B	B	A	A	A	A
Queue Length 50th (m)	16.9	9.8	6.4	6.4	15.1	20.2	20.2	20.2
Queue Length 95th (m)	33.9	19.6	16.1	16.1	28.4	38.4	38.4	38.4
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		45.0		190.0		190.0	
Base Capacity (vph)	355	285	427	427	1900	1898	1898	1898
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.46	0.29	0.29	0.29	0.33	0.38	0.38	0.38
<b>Intersection Summary</b>								
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: 0.67								
Intersection Signal Delay (s/veh): 11.3								
Intersection Capacity Utilization: 64.5%								
Analysis Period (min): 15								
ICU Level of Service C								

Splits and Phases: 1: Bank & Fifth

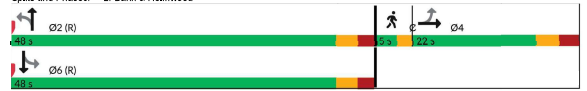


2033 Total Future Minor Event Ingress Peak Hour  
01/10/2025

2: Bank & Holmwood

Lane Group	EBT	NBL	NBT	SBL	SBT	Ø3
Lane Configurations	↔		↕		↕	
Traffic Volume (vph)	26	53	522	30	586	
Future Volume (vph)	26	53	522	30	586	
Lane Group Flow (vph)	119	0	730	0	723	
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	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)	2.0	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)	5.8	5.2	5.2	5.2	5.2	0.0
Lead/Lag	Lag		Lag		Lead	
Lead-Lag Optimize?	None		C-Max		C-Max	
Recall Mode	None		C-Max		C-Max	
Act Effect Green (s)	11.6	56.0	56.0	56.0	56.0	56.0
Actuated g/C Ratio	0.15	0.75	0.75	0.75	0.75	0.75
v/c Ratio	0.55	0.40	0.35	0.35	0.35	0.35
Control Delay (s/veh)	38.2	5.5	5.5	5.5	5.5	3.1
Queue Delay (s/veh)	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	38.2	5.5	5.5	5.5	5.5	3.1
LOS	D	A	A	A	A	A
Approach Delay (s/veh)	38.2	5.5	5.5	5.5	5.5	3.1
Approach LOS	D	A	A	A	A	A
Queue Length 50th (m)	15.8	17.8	17.8	12.5	12.5	12.5
Queue Length 95th (m)	28.8	34.2	34.2	16.1	16.1	16.1
Internal Link Dist (m)	38.8	31.5	195.6	195.6	195.6	195.6
Turn Bay Length (m)	304		1830		2073	
Base Capacity (vph)	304	1830	2073	2073	2073	2073
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	0.40	0.35	0.35	0.35	0.35
<b>Intersection Summary</b>						
Cycle Length: 75						
Actuated Cycle Length: 75						
Offset: 60 (80%), 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): 6.9						
Intersection Capacity Utilization: 69.3%						
Analysis Period (min): 15						
ICU Level of Service C						

Splits and Phases: 2: Bank & Holmwood

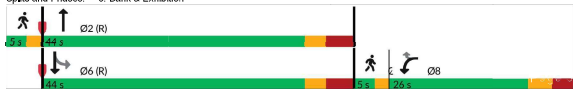


2033 Total Future Minor Event Ingress Peak Hour  
01/10/2025

3: Bank & Exhibition

Lane Group	WBL	WBR	NBT	SBL	SBT	Ø1	Ø7	
Lane Configurations	↔		↕		↕			
Traffic Volume (vph)	132	93	440	187	434			
Future Volume (vph)	132	93	440	187	434			
Lane Group Flow (vph)	147	103	719	208	482			
Turn Type	Prot	Perm	NA	Perm	NA			
Protected Phases	8		2		6		1 7	
Permitted Phases	8		2		6		1 7	
Detector Phase	8		2		6		1 7	
Switch Phase	8		2		6		1 7	
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	1.0	1.0	
Minimum Split (s)	26.0	26.0	44.0	44.0	44.0	5.0	5.0	
Total Split (s)	26.0	26.0	44.0	44.0	44.0	5.0	5.0	
Total Split (%)	32.5%	32.5%	55.0%	55.0%	55.0%	6%	6%	
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	Lag		Lag		Lag		Lead	
Lead-Lag Optimize?	None		C-Max		C-Max		None	
Recall Mode	None		C-Max		C-Max		None	
Act Effect Green (s)	12.9	12.9	53.9	53.9	53.9	5.0	5.0	
Actuated g/C Ratio	0.16	0.18	0.67	0.67	0.67	0.67	0.67	
v/c Ratio	0.59	0.39	0.38	0.54	0.23	0.23	0.23	
Control Delay (s/veh)	38.6	10.7	5.6	14.1	5.7	6.9	6.9	
Queue Delay (s/veh)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	38.6	10.7	5.6	14.1	5.7	6.9	6.9	
LOS	D	B	A	B	A	A	A	
Approach Delay (s/veh)	27.1	5.6	8.3	8.3	8.3	6.9	6.9	
Approach LOS	C	A	A	A	A	A	A	
Queue Length 50th (m)	21.0	0.0	16.4	13.5	12.4	12.4	12.4	
Queue Length 95th (m)	35.8	11.9	30.8	40.0	22.5	22.5	22.5	
Internal Link Dist (m)	39.6	33.7	44.8	44.8	44.8	44.8	44.8	
Turn Bay Length (m)	40.0		40.0		40.0		40.0	
Base Capacity (vph)	402	349	1887	388	2136	2136	2136	
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	0.37	0.30	0.38	0.54	0.23	0.23	0.23	
<b>Intersection Summary</b>								
Cycle Length: 80								
Actuated Cycle Length: 80								
Offset: 0 (0%), Referenced to phase 2/NBT and 6/SBTL, Start of Green								
Natural Cycle: 80								
Control Type: Actuated-Coordinated								
Maximum v/c Ratio: 0.56								
Intersection Signal Delay (s/veh): 10.0								
Intersection Capacity Utilization: 65.6%								
Analysis Period (min): 15								
ICU Level of Service C								

Splits and Phases: 3: Bank & Exhibition



2033 Total Future Minor Event Ingress Peak Hour  
01/10/2025

6: Bank & Aylmer

Lane Group	EBL	NBL	NBT	SBT	Ø3	
Lane Configurations	↔		↕		↕	
Traffic Volume (vph)	74	19	725	535		
Future Volume (vph)	74	19	725	535		
Lane Group Flow (vph)	90	0	827	680		
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	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	0.0	
Total Lost Time (s)	5.5	5.2	5.2	5.2	0.0	
Lead/Lag	Lag		Lag		Lead	
Lead-Lag Optimize?	Ped		C-Max		C-Max	
Recall Mode	Ped		C-Max		C-Max	
Act Effect Green (s)	14.1	60.2	60.2	60.2	60.2	
Actuated g/C Ratio	0.16	0.67	0.67	0.67	0.67	
v/c Ratio	0.39	0.42	0.34	0.34	0.34	
Control Delay (s/veh)	36.7	5.4	5.6	5.6	3.1	
Queue Delay (s/veh)	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	36.7	5.4	5.6	5.6	3.1	
LOS	D	A	A	A	A	
Approach Delay (s/veh)	36.7	5.4	5.6	5.6	3.1	
Approach LOS	D	A	A	A	A	
Queue Length 50th (m)	13.3	21.2	21.7	21.7	21.7</	

2033 Total Future Minor Event Ingress Peak Hour

7: Bank & Sunnyside

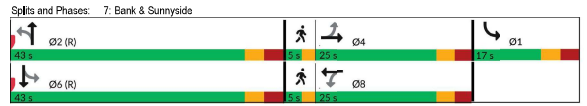
01/10/2025

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	Ø3	Ø7
Lane Configurations	↔		↔		↔		↔			
Traffic Volume (vph)	58	53	18	60	20	505	109	565		
Future Volume (vph)	58	53	18	60	20	505	109	565		
Lane Group Flow (vph)	0	153	0	273	0	603	0	825		
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	43.0	5.0	5.0
Total Split (%)	27.8%	27.8%	27.8%	27.8%	47.8%	47.8%	18.9%	47.8%	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	2.5	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	Lag	Lag	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 Effect Green (s)	21.7	21.7	21.7	21.7	56.7	56.7	56.7	56.7		
Actuated g/C Ratio	0.24	0.24	0.24	0.24	0.63	0.63	0.63	0.63		
v/c Ratio	0.69	0.69	0.76	0.76	0.34	0.34	0.60	0.60		
Control Delay (s/veh)	47.4	47.4	32.9	32.9	8.9	8.9	8.8	8.8		
Queue Delay (s/veh)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Total Delay (s/veh)	47.4	47.4	32.9	32.9	8.9	8.9	8.8	8.8		
LOS	D	D	C	C	A	A	A	A		
Approach Delay (s/veh)	47.4	47.4	32.9	32.9	8.9	8.9	8.8	8.8		
Approach LOS	D	D	C	C	A	A	A	A		
Queue Length 50th (m)	23.1	23.1	25.3	25.3	25.3	25.3	44.5	44.5		
Queue Length 95th (m)	#45.4	#45.4	#59.8	#59.8	35.2	35.2	63.9	63.9		
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)	231	231	370	370	1783	1783	1379	1379		
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	0.69	0.69	0.74	0.74	0.34	0.34	0.60	0.60		
<b>Intersection Summary</b>										
Cycle Length: 90										
Actuated Cycle Length: 90										
Offset: 9 (7%), Referenced to phase 2 NBL and 6 SBL, Start of Green										
Natural Cycle: 110										
Control Type: Actuated-Coordinated										
Maximum v/c Ratio: 0.76										
Intersection Signal Delay (s/veh): 15.6										
Intersection Capacity Utilization 82.4%										
ICU Level of Service E										
Analysis Period (min) 15										
# 95th percentile volume exceeds capacity, queue may be longer.										
Queue shown is maximum after two cycles.										

2033 Total Future Minor Event Ingress Peak Hour

7: Bank & Sunnyside

01/10/2025

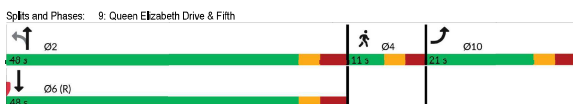


2033 Total Future Minor Event Ingress Peak Hour

9: Queen Elizabeth Drive & Fifth

01/10/2025

Lane Group	EBL	NBL	NBT	SBT	Ø4
Lane Configurations	↔		↔		↔
Traffic Volume (vph)	56	54	232	546	
Future Volume (vph)	56	54	232	546	
Lane Group Flow (vph)	104	0	318	706	
Turn Type	Prot	Perm	NA	NA	
Protected Phases	10	2	6	4	
Permitted Phases	10	2	6	4	
Detector Phase	10	2	6	4	
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	3.0	3.0	3.0	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	6.8	6.8
Lead/Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes
Recall Mode	Min	None	None	C-Max	None
Act Effect Green (s)	11.6	55.9	55.9	55.9	55.9
Actuated g/C Ratio	0.15	0.70	0.70	0.70	0.70
v/c Ratio	0.46	0.34	0.61	0.61	0.61
Control Delay (s/veh)	37.9	6.3	6.3	6.3	6.3
Queue Delay (s/veh)	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	37.9	6.3	6.3	6.3	6.3
LOS	D	A	A	A	A
Approach Delay (s/veh)	37.9	6.3	6.3	6.3	6.3
Approach LOS	D	A	A	A	A
Queue Length 50th (m)	14.9	15.1	44.8	44.8	44.8
Queue Length 95th (m)	27.8	32.0	89.7	89.7	89.7
Internal Link Dist (m)	57.2	0.1	5.9	5.9	5.9
Turn Bay Length (m)					
Base Capacity (vph)	295	947	1154	1154	1154
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	0.35	0.34	0.61	0.61	0.61
<b>Intersection Summary</b>					
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: 0.61					
Intersection Signal Delay (s/veh): 11.3					
Intersection Capacity Utilization 76.5%					
ICU Level of Service D					
Analysis Period (min) 15					



2033 Total Future Minor Event Ingress Peak Hour

4: Bank & Wilton

01/10/2025

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
<b>Major/Minor</b>						
Conflicting Flow All	1472	765	796	0	-	0
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	-	-	-
Flt Cap-1 Maneuver	127	400	618	-	-	-
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	-	-	-	-	-
<b>Approach</b>						
HCM Ctrl Dly, s/v	EB	72.41	NB	4.34	SB	0
HCM LOS	F					
<b>Minor Lane/Major Mvmt</b>						
Capacity (veh/h)	NBL	NBT	EBLn1	SBT	SBR	
	524	-	325	-	-	
HCM Lane V/C Ratio	0.246	-	0.34	-	-	
HCM Ctrl Dly (s/v)	12.2	2.7	72.4	-	-	
HCM Lane LOS	B	A	F	-	-	
HCM 95th %ile Q(veh)	1	-	9.8	-	-	

2033 Total Future Minor Event Ingress Peak Hour  
01/10/2025

5: Bank & Echo

Intersection						
Int Delay, s/veh	0,4					
Movement	EBL	EBR	NBL	NBR	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	- 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						
Conflicting Flow All	1324	870	-	0	-	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	3,5283	3,3265	-	-	-	-
Pot Cap-1 Maneuver	158	348	0	-	-	0
Stage 1	407	-	0	-	-	0
Stage 2	605	-	0	-	-	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 Chd Dly, s/v	16,77	0	0			
HCM LOS	C					
Minor Lane/Major Mvmt						
Capacity (veh/h)	-	348	-			
HCM Lane V/C Ratio	-	0,121	-			
HCM Chd Dly (s/v)	-	16,8	-			
HCM Lane LOS	-	C	-			
HCM 95th %ile Q(veh)	-	0,4	-			

2033 Total Future Minor Event Ingress Peak Hour  
01/10/2025

8: Queen Elizabeth Driveway /Queen Elizabeth Driveway & Princess Patricia Way

Intersection						
Int Delay, s/veh	4,2					
Movement	EBL	EBR	NBL	NBR	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	- 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						
Conflicting Flow All	1033	514	657	0	-	0
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	840	-	-	-
Stage 1	605	-	-	-	-	-
Stage 2	601	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	216	565	840	-	-	-
Mov Cap-2 Maneuver	216	-	-	-	-	-
Stage 1	504	-	-	-	-	-
Stage 2	601	-	-	-	-	-
Approach						
EB	NB	SB				
HCM Chd Dly, s/v	26,26	3,36	0			
HCM LOS	D					
Minor Lane/Major Mvmt						
Capacity (veh/h)	537	-	306	-	-	-
HCM Lane V/C Ratio	0,144	-	0,457	-	-	-
HCM Chd Dly (s/v)	9,5	0	26,3	-	-	-
HCM Lane LOS	A	A	D	-	-	-
HCM 95th %ile Q(veh)	0,5	-	2,3	-	-	-

2033 Total Future Minor Event Ingress Peak Hour  
01/10/2025

10: Bank & Marche

Intersection						
Int Delay, s/veh	0,7					
Movement	WBL	WBR	NBT	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	- 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						
Conflicting Flow All	-	407	0	0	714	0
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	599	-	-	882	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	536	-	-	788	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach						
WB	NB	SB				
HCM Chd Dly, s/v	12,69	0	0,03			
HCM LOS	B					
Minor Lane/Major Mvmt						
Capacity (veh/h)	-	-	536	788	-	-
HCM Lane V/C Ratio	-	-	0,127	0,003	-	-
HCM Chd Dly (s/v)	-	-	12,7	9,6	-	-
HCM Lane LOS	-	-	B	A	-	-
HCM 95th %ile Q(veh)	-	-	0,4	0	-	-

2033 Total Future Minor Event Ingress Peak Hour  
01/10/2025

11: Garage & Exhibition

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	- 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						
Conflicting Flow All	0	0	538	0	661	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	-	-	2,216	-	3,518	3,318
Pot Cap-1 Maneuver	-	-	1030	-	411	537
Stage 1	-	-	-	-	644	-
Stage 2	-	-	-	-	767	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	921	-	326	423
Mov Cap-2 Maneuver	-	-	-	-	326	-
Stage 1	-	-	-	-	576	-
Stage 2	-	-	-	-	768	-
Approach						
EB	WB	NB				
HCM Chd Dly, s/v	0	0,36	22,33			
HCM LOS			C			
Minor Lane/Major Mvmt						
Capacity (veh/h)	330	-	-	73	-	-
HCM Lane V/C Ratio	0,377	-	-	0,006	-	-
HCM Chd Dly (s/v)	22,3	-	-	8,9	0	-
HCM Lane LOS	C	-	-	A	A	-
HCM 95th %ile Q(veh)	1,7	-	-	0	-	-

2033 Total Future Minor Event Ingress Peak Hour

17: Princess Patricia/Princess Patricia Way & Garage 01/10/2025

Intersection						
Int Delay, s/veh	2,3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	4	1	1	1	1	1
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	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	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 Chl Dly, s/v	1,11	0	11,64			
HCM LOS			B			
Minor Lane/Major Mvmt						
	EBL	EBT	WBT	WBR	SBL	SBR
Capacity (veh/h)	243	-	-	-	351	-
HCM Lane V/C Ratio	0,005	-	-	-	0,167	-
HCM Chl Dly (s/v)	8,2	0	-	-	11,6	-
HCM Lane LOS	A	A	-	-	B	-
HCM 95th %ile Q(veh)	0	-	-	-	0,8	-

**2033 TOTAL – MINOR EVENT EGRESS**

1: Bank & Fifth

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		2		6	
Permitted Phases	4		8		2		6	
Detector Phase	4		8		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)	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	0.32	0.25	0.21	0.21	0.21
Control Delay (s/veh)	32.2	35.0	19.2	19.2	3.6	3.7	3.7	3.7
Queue Delay (s/veh)	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	19.2	3.6	3.7	3.7	3.7
LOS	C	C	B	B	A	A	A	A
Approach Delay (s/veh)	32.2	26.4		3.6		3.7		
Approach LOS	C	A		A		A		
Queue Length 50th (m)	7.9	7.4	3.6	3.6	9.7	8.4		
Queue Length 95th (m)	19.6	16.3	13.1	13.1	19.3	17.2		
Internal Link Dist (m)	49.7	112.4		195.6		190.0		
Turn Bay Length (m)	45.0							
Base Capacity (vph)	330	335	403		2237		2163	
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	0.27	0.17	0.16		0.25		0.21	
<b>Intersection Summary</b>								
Cycle Length: 75								
Actuated Cycle Length: 75								
Offset: 47 (63%), Referenced to phase 2:NBLT and 6:SBTL, Start of Green								
Natural Cycle: 75								
Control Type: Actuated-Coordinated								
Maximum v/c Ratio: 0.52								
Intersection Signal Delay (s/veh): 8.0								
Intersection Capacity Utilization 53.4%								
Analysis Period (min) 15								
ICU Level of Service A								
Analysis Period (min) 15								
Splits and Phases: 1: Bank & Fifth								

2: Bank & Holmwood

Lane Group	EBT	NBL	NBT	SBL	SBT	Ø3
Lane Configurations	↔		↔		↔	
Traffic Volume (vph)	7	55	458	25	349	
Future Volume (vph)	7	55	458	25	349	
Lane Group Flow (vph)	88	0	600	0	457	
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	
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	0.48	0.30	0.22	0.22	0.22	
Control Delay (s/veh)	37.9	4.4	4.4	2.8	2.8	
Queue Delay (s/veh)	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	37.9	4.4	4.4	2.8	2.8	
LOS	D	A	A	A	A	
Approach Delay (s/veh)	37.9	4.4		2.8		
Approach LOS	D	A		A		
Queue Length 50th (m)	11.7	12.6		8.3		
Queue Length 95th (m)	23.3	23.9		11.9		
Internal Link Dist (m)	38.8	31.5		195.6		
Turn Bay Length (m)	295					
Base Capacity (vph)	295	1999	2082			
Starvation Cap Reductn	0	0	0			
Spillback Cap Reductn	0	0	0			
Storage Cap Reductn	0	0	0			
Reduced v/c Ratio	0.30	0.30		0.22		
<b>Intersection Summary</b>						
Cycle Length: 75						
Actuated Cycle Length: 75						
Offset: 60 (80%), Referenced to phase 2:NBLT and 6:SBTL, Start of Green						
Natural Cycle: 75						
Control Type: Actuated-Coordinated						
Maximum v/c Ratio: 0.48						
Intersection Signal Delay (s/veh): 6.3						
Intersection Capacity Utilization 58.1%						
Analysis Period (min) 15						
ICU Level of Service B						
Analysis Period (min) 15						
Splits and Phases: 2: Bank & Holmwood						

3: Bank & Exhibition

Lane Group	WBL	WBR	NBT	SBL	SBT	Ø1	Ø7
Lane Configurations	↔		↔		↔		
Traffic Volume (vph)	195	217	198	123	267		
Future Volume (vph)	195	217	198	123	267		
Lane Group Flow (vph)	217	241	321	137	297		
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							
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	1.0	1.0
Minimum Split (s)	26.0	26.0	44.0	44.0	44.0	5.0	5.0
Total Split (s)	26.0	26.0	44.0	44.0	44.0	5.0	5.0
Total Split (%)	32.5%	32.5%	55.0%	55.0%	55.0%	6%	6%
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		
Lead/Lag	Lag		Lag				Lead
Lead-Lag Optimize?							Yes
Recall Mode	None	None	C-Max	C-Max	C-Max	None	None
Act Effct Green (s)	15.8	15.8	51.0	51.0	51.0		
Actuated g/C Ratio	0.20	0.20	0.64	0.64	0.64		
v/c Ratio	0.68	0.59	0.18	0.28	0.15		
Control Delay (s/veh)	39.8	10.0	4.9	9.6	6.7		
Queue Delay (s/veh)	0.0	0.0	0.0	0.0	0.0		
Total Delay (s/veh)	39.8	10.0	4.9	9.6	6.7		
LOS	D	A	A	A	A		
Approach Delay (s/veh)	24.1	4.9		7.6			
Approach LOS	C	A		A			
Queue Length 50th (m)	30.8	0.0	6.1	8.1	8.3		
Queue Length 95th (m)	47.9	17.1	13.4	21.2	16.2		
Internal Link Dist (m)	30.6	33.7		40.0			
Turn Bay Length (m)	409						
Base Capacity (vph)	409	457	1790	481	2024		
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	0.53	0.53	0.18	0.28	0.15		
<b>Intersection Summary</b>							
Cycle Length: 80							
Actuated Cycle Length: 80							
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green							
Natural Cycle: 80							
Control Type: Actuated-Coordinated							
Maximum v/c Ratio: 0.68							
Intersection Signal Delay (s/veh): 13.1							
Intersection Capacity Utilization 57.6%							
Analysis Period (min) 15							
ICU Level of Service B							
Analysis Period (min) 15							
Splits and Phases: 3: Bank & Exhibition							

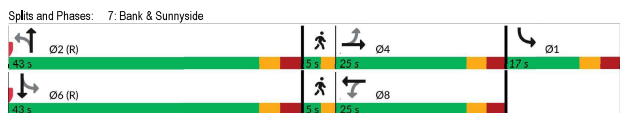
6: Bank & Aylmer

Lane Group	EBL	NBL	NBT	SBT	Ø3	
Lane Configurations	↔		↔		↔	
Traffic Volume (vph)	4	1	172	200		
Future Volume (vph)	4	1	172	200		
Lane Group Flow (vph)	7	0	192	229		
Turn Type	Prot	Perm	NA	NA		
Protected Phases	4		2		6	
Permitted Phases	4		2		6	
Detector Phase	4		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	0.0	
Total Lost Time (s)	5.5	5.2	5.2	5.2	0.0	
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	0.03	0.09	0.11	0.11		
Control Delay (s/veh)	27.2	4.6	4.6	5.3		
Queue Delay (s/veh)	0.0	0.0	0.0	0.0		
Total Delay (s/veh)	27.2	4.6	4.6	5.3		
LOS	C	A	A	A		
Approach Delay (s/veh)	27.2	4.6		5.3		
Approach LOS	C	A		A		
Queue Length 50th (m)	0.6	4.7		6.3		
Queue Length 95th (m)	4.4	7.3		10.0		
Internal Link Dist (m)	76.7	28.1		10.1		
Turn Bay Length (m)	253					
Base Capacity (vph)	253	2044	2105			
Starvation Cap Reductn	0	0	0			
Spillback Cap Reductn	0	0	0			
Storage Cap Reductn	0	0	0			
Reduced v/c Ratio	0.03	0.09		0.11		
<b>Intersection Summary</b>						
Cycle Length: 90						
Actuated Cycle Length: 90						
Offset: 60 (67%), Referenced to phase 2:NBLT and 6:SBT, Start of Green						
Natural Cycle: 90						
Control Type: Actuated-Coordinated						
Maximum v/c Ratio: 0.11						
Intersection Signal Delay (s/veh): 5.3						
Intersection Capacity Utilization 45.6%						
Analysis Period (min) 15						
ICU Level of Service A						
Analysis Period (min) 15						
Splits and Phases: 6: Bank & Aylmer						

7: Bank & Sunnyside

2033 Total Future Minor Event Egress Peak Hour

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	Ø3	Ø7
Lane Configurations	↔		↔		↔		↔			
Traffic Volume (vph)	30	7	5	13	13	257	35	431		
Future Volume (vph)	30	7	5	13	13	257	35	431		
Lane Group Flow (vph)	0	63	0	58	0	306	0	567		
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	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	43.0	5.0	5.0
Total Split (%)	27.8%	27.8%	27.8%	27.8%	47.8%	47.8%	18.9%	47.8%	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					Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes					Yes	Yes
Recall Mode	None	None	None	None	C-Max	C-Max	None	C-Max	None	None
Act Effect Green (s)	11.1	10.9	10.9	10.9	70.9	70.9		70.9		
Actuated g/C Ratio	0.12	0.12	0.12	0.12	0.79	0.79		0.79		
v/c Ratio	0.51	0.51	0.34	0.34	0.13	0.27		0.27		
Control Delay (s/veh)	50.3	50.3	22.0	22.0	3.5	2.6		2.6		
Queue Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		
Total Delay (s/veh)	50.3	50.3	22.0	22.0	3.5	2.6		2.6		
LOS	D	D	C	C	A	A		A		
Approach Delay (s/veh)	50.3	50.3	22.0	22.0	3.5	2.6		2.6		
Approach LOS	D	D	C	C	A	A		A		
Queue Length 50th (m)	10.4	10.4	3.2	3.2	6.2	7.0		7.0		
Queue Length 95th (m)	21.5	21.5	13.1	13.1	12.5	12.7		12.7		
Internal Link Dist (m)	75.1	75.1	136.0	136.0	63.1	79.0		79.0		
Turn Bay Length (m)										
Base Capacity (vph)	215	215	275	275	2280	2110		2110		
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	0.29	0.29	0.21	0.21	0.13	0.27		0.27		



12: Exhibition & Paul Askin

2033 Total Future Minor Event Egress Peak Hour

Intersection	
Intersection Delay, s/veh	9.3
Intersection LOS	A

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↔		↔		↔	
Traffic Vol, veh/h	200	0	0	0	0	281
Future Vol, veh/h	200	0	0	0	0	281
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	222	0	0	0	0	312
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	9.8	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	200	0	281
LT Vol	200	0	0
Through Vol	0	0	0
RT Vol	0	0	281
Lane Flow Rate	222	0	312
Geometry Grp	1	1	1
Degree of Util (X)	0.296	0	0.338
Departure Headway (Hd)	4.8	4,852	3,899
Convergence, Y/N	Yes	Yes	Yes
Cap	753	0	924
Service Time	2.8	2.89	1,913
HCM Lane V/C Ratio	0.295	0	0.338
HCM Control Delay, s/veh	9.8	7.9	8.9
HCM Lane LOS	A	N	A
HCM 95th-Hile Q	1.2	0	1.5

9: Queen Elizabeth Drive & Fifth

2033 Total Future Minor Event Egress Peak Hour

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	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 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	C-Max	None
Act Effect Green (s)	11.7	55.8	55.8	55.8	
Actuated g/C Ratio	0.15	0.70	0.70	0.70	
v/c Ratio	0.47	0.30	0.30	0.19	
Control Delay (s/veh)	37.9	5.8	5.8	5.0	
Queue Delay (s)	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	37.9	5.8	5.8	5.0	
LOS	D	A	A	A	
Approach Delay (s/veh)	37.9	5.8	5.8	5.0	
Approach LOS	D	A	A	A	
Queue Length 50th (m)	15.3	15.5	9.4		
Queue Length 95th (m)	28.3	31.6	20.1		
Internal Link Dist (m)	57.2	0.1	5.9		
Turn Bay Length (m)					
Base Capacity (vph)	298	1118	1148		
Starvation Cap Reductn	0	0	0		
Spillback Cap Reductn	0	0	0		
Storage Cap Reductn	0	0	0		
Reduced v/c Ratio	0.36	0.30	0.19		



13: Paul Askin & Marche

2033 Total Future Minor Event Egress Peak Hour

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	40	40	100	100
Future Vol, veh/h	15	15	40	40	100	100
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	44	44	111	111
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	200	30	80
LT Vol	100	0	40
Through Vol	0	15	40
RT Vol	100	15	0
Lane Flow Rate	222	33	89
Geometry Grp	1	1	1
Degree of Util (X)	0.244	0.039	0.11
Departure Headway (Hd)	3,945	4,217	4,453
Convergence, Y/N	Yes	Yes	Yes
Cap	898	854	792
Service Time	2,022	2,217	2,552
HCM Lane V/C Ratio	0.247	0.039	0.112
HCM Control Delay, s/veh	8.3	7.4	8.1
HCM Lane LOS	A	A	A
HCM 95th-Hile Q	1	0.1	0.4

14: Exhibition & Marche

Intersection						
Intersection Delay, s/veh	7.5					
Intersection LOS	A					
Movement						
	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔		↔		↔	
Traffic Vol, veh/h	73	0	0	81	0	0
Future Vol, veh/h	73	0	0	81	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	81	0	0	90	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	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	7.5		0		
HCM LOS	A	A		-		
Lane						
	NBLn1	EBLn1	WBLn1	SBLn1		
Vol Left, %	0%	0%	0%	0%		
Vol Thru, %	100%	100%	100%	100%		
Vol Right, %	0%	0%	0%	0%		
Sign Control	Stop	Stop	Stop	Stop		
Traffic Vol by Lane	0	73	81	0		
LT Vol	0	0	0	0		
Through Vol	0	73	81	0		
RT Vol	0	0	0	0		
Lane Flow Rate	0	81	90	0		
Geometry Grp	1	1	1	1		
Degree of Util (X)	0	0.09	0.1	0.11		
Departure Headway (Hd)	4,227	4,001	3,994	3,634		
Convergence, Y/N	Yes	Yes	Yes	Yes		
Cap	0	897	899	972		
Service Time	2,299	2,017	2,009	1,708		
HCM Lane V/C Ratio	0	0.09	0.1	0.13		
HCM Control Delay, s/veh	7.3	7.4	7.5	7.2		
HCM Lane LOS	N	A	A	A		
HCM 95th-ile Q	0	0.3	0.3	0.4		

37: O' Connor Street & Fifth Avenue

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	12	11	51	0	0	99
Future Vol, veh/h	11	45	0	0	0	68	12	11	51	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	13	12	57	0	0	110
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	7.8	7.1		7.3		7.2						
HCM LOS	A	A		A		A						
Lane												
	NBLn1	EBLn1	WBLn1	SBLn1								
Vol Left, %	16%	20%	0%	0%		0%						
Vol Thru, %	15%	80%	0%	0%		0%						
Vol Right, %	69%	0%	100%	100%		100%						
Sign Control	Stop	Stop	Stop	Stop		Stop						
Traffic Vol by Lane	74	56	68	99		0						
LT Vol	12	11	0	0		0						
Through Vol	11	45	0	0		0						
RT Vol	51	0	68	99		0						
Lane Flow Rate	82	62	76	110		0						
Geometry Grp	1	1	1	1		1						
Degree of Util (X)	0.089	0.075	0.078	0.111		0.111						
Departure Headway (Hd)	3,676	4,265	3,713	3,634		3,634						
Convergence, Y/N	Yes	Yes	Yes	Yes		Yes						
Cap	913	813	952	972		972						
Service Time	1,948	2,431	1,787	1,708		1,708						
HCM Lane V/C Ratio	0.09	0.076	0.08	0.113		0.113						
HCM Control Delay, s/veh	7.3	7.8	7.1	7.2		7.2						
HCM Lane LOS	A	A	A	A		A						
HCM 95th-ile Q	0.3	0.2	0.3	0.4		0.4						

4: Bank & Wilton

Intersection						
Int Delay, s/veh	3.2					
Movement						
	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔		↔		↔	
Traffic Vol, veh/h	2	114	49	299	408	69
Future Vol, veh/h	2	114	49	299	408	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	- 0	- 0	- 0	- 0	- 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	127	54	332	453	77
Major/Minor						
	Minor2	Major1	Major2			
Conflicting Flow All	945	670	708	0	-	0
Stage 1	670	-	-	-	-	-
Stage 2	275	-	-	-	-	-
Critical Hdwy	6,845	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	274	454	883	-	-	-
Stage 1	505	-	-	-	-	-
Stage 2	745	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	165	368	717	-	-	-
Mov Cap-2 Maneuver	165	-	-	-	-	-
Stage 1	376	-	-	-	-	-
Stage 2	604	-	-	-	-	-
Approach						
	EB	NB		SB		
HCM Ctrl Dly, s/v	19.8	2.03		0		
HCM LOS	C	C		C		
Minor Lane/Major Mvmt						
	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	507	-	368	-	-	
HCM Lane V/C Ratio	0.076	-	0.344	-	-	
HCM Ctrl Dly (s/v)	10.4	0.7	19.8	-	-	
HCM Lane LOS	B	A	C	-	-	
HCM 95th-ile Q(veh)	0.2	-	1.5	-	-	

5: Bank & Echo

Intersection						
Int Delay, s/veh	0.2					
Movement						
	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔		↔		↔	
Traffic Vol, veh/h	2	12	0	381	336	0
Future Vol, veh/h	2	12	0	381	336	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	- 0	- 0	- 0	- 0	- 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	13	0	423	373	0
Major/Minor						
	Minor2	Major1	Major2			
Conflicting Flow All	585	373	-	0	-	0
Stage 1	373	-	-	-	-	-
Stage 2	212	-	-	-	-	-
Critical Hdwy	6,845	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	455	669	0	-	-	0
Stage 1	693	-	0	-	-	0
Stage 2	801	-	0	-	-	0
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	455	669	-	-	-	-
Mov Cap-2 Maneuver	455	-	-	-	-	-
Stage 1	693	-	-	-	-	-
Stage 2	801	-	-	-	-	-
Approach						
	EB	NB		SB		
HCM Ctrl Dly, s/v	10.49	0		0		
HCM LOS	B	B		B		
Minor Lane/Major Mvmt						
	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	-	-	669	-	-	
HCM Lane V/C Ratio	-	-	0.02	-	-	
HCM Ctrl Dly (s/v)	-	-	10.5	-	-	
HCM Lane LOS	-	-	B	-	-	
HCM 95th-ile Q(veh)	-	-	0.1	-	-	

2033 Total Future Minor Event Egress Peak Hour  
8: Queen Elizabeth Driveway /Queen Elizabeth Driveway & Princess Patricia Way

Intersection						
Int Delay, s/veh	10.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Vol, veh/h	255	170	24	46	128	68
Future Vol, veh/h	255	170	24	46	128	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	283	189	27	51	142	76

Major/Minor	Minor2	Major1	Major2		
Conflicting Flow All	284	180	218	0	-
Stage 1	180	-	-	-	-
Stage 2	104	-	-	-	-
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	710	868	1364	-	-
Stage 1	856	-	-	-	-
Stage 2	925	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	696	868	1364	-	-
Mov Cap-2 Maneuver	696	-	-	-	-
Stage 1	839	-	-	-	-
Stage 2	925	-	-	-	-

Approach	EB	NB	SB
HCM Cntl Dly, s/v	17.36	2.64	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	617	-	756	-	-
HCM Lane V/C Ratio	0.02	-	0.625	-	-
HCM Cntl Dly (s/v)	7.7	0	17.4	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %ile Q(veh)	0.1	-	4.4	-	-

2033 Total Future Minor Event Egress Peak Hour  
10: Bank & Marche

Intersection						
Int Delay, s/veh	2.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Vol, veh/h	5	148	426	30	0	382
Future Vol, veh/h	5	148	426	30	0	382
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	6	164	473	33	0	424

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	802	353	0	0	-
Stage 1	590	-	-	-	-
Stage 2	212	-	-	-	-
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	326	649	-	-	0
Stage 1	522	-	-	-	0
Stage 2	809	-	-	-	0
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	291	560	-	-	-
Mov Cap-2 Maneuver	291	-	-	-	-
Stage 1	467	-	-	-	-
Stage 2	809	-	-	-	-

Approach	WB	NB	SB
HCM Cntl Dly, s/v	13.64	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	580	-
HCM Lane V/C Ratio	-	-	0.283	-
HCM Cntl Dly (s/v)	-	-	13.6	-
HCM Lane LOS	-	-	B	-
HCM 95th %ile Q(veh)	-	-	1.2	-

2033 Total Future Minor Event Egress Peak Hour  
11: Garage & Exhibition

Intersection						
Int Delay, s/veh	5.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Vol, veh/h	195	20	0	281	130	5
Future Vol, veh/h	195	20	0	281	130	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	217	22	0	312	144	6

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	339	0	740
Stage 1	-	-	-	-	328
Stage 2	-	-	-	-	412
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	-	-	1220	-	384
Stage 1	-	-	-	-	730
Stage 2	-	-	-	-	668
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1091	-	307
Mov Cap-2 Maneuver	-	-	-	-	307
Stage 1	-	-	-	-	653
Stage 2	-	-	-	-	588

Approach	EB	WB	NB
HCM Cntl Dly, s/v	0	0	26.82
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	312	-	-	1091	-
HCM Lane V/C Ratio	0.481	-	-	-	-
HCM Cntl Dly (s/v)	26.8	-	-	0	-
HCM Lane LOS	D	-	-	A	-
HCM 95th %ile Q(veh)	2.5	-	-	0	-

2033 Total Future Minor Event Egress Peak Hour  
17: Princess Patricia/Princess Patricia Way & Garage

Intersection						
Int Delay, s/veh	9.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Vol, veh/h	1	73	76	15	353	5
Future Vol, veh/h	1	73	76	15	353	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	81	84	17	392	6

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	101	0	-	0	176
Stage 1	-	-	-	-	93
Stage 2	-	-	-	-	83
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	-	-	-	814
Stage 1	-	-	-	-	931
Stage 2	-	-	-	-	940
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	1491	-	-	-	813
Mov Cap-2 Maneuver	-	-	-	-	813
Stage 1	-	-	-	-	930
Stage 2	-	-	-	-	940

Approach	EB	WB	SB
HCM Cntl Dly, s/v	0.1	0	13.56
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	24	-	-	-	815
HCM Lane V/C Ratio	0.001	-	-	-	0.488
HCM Cntl Dly (s/v)	7.4	0	-	-	13.6
HCM Lane LOS	A	-	-	-	B
HCM 95th %ile Q(veh)	0	-	-	-	2.7

## **2033 TOTAL – MAJOR EVENT INGRESS**

2033 Total Future Major Event Ingress Peak Hour  
37: O' Connor Street & Fifth Avenue  
01/10/2025

Intersection												
Intersection Delay, s/veh	9.5											
Intersection LOS	A											
Movement												
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	←			←			←			←		
Traffic Vol, veh/h	70	59	0	0	0	0	203	61	61	97	0	0
Future Vol, veh/h	70	59	0	0	0	0	203	61	61	97	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	78	65	0	0	0	0	226	68	68	108	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	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	9.7	9.2					10.1	8.6				
HCM LOS	A	A					B	A				
Lane												
	NBLn1	EBLn1	WBLn1	SBLn1								
Vol Left, %	28%	54%	0%	0%								
Vol Thru, %	28%	46%	0%	0%								
Vol Right, %	44%	0%	100%	100%								
Sign Control	Stop	Stop	Stop	Stop								
Traffic Vol by Lane	219	129	203	134								
LT Vol	61	70	0	0								
Through Vol	61	59	0	0								
RT Vol	97	0	203	134								
Lane Flow Rate	243	143	226	149								
Geometry Grp	1	1	1	1								
Degree of UI (X)	0.322	0.208	0.278	0.186								
Departure Headway (HD)	4.761	5.22	4.436	4.308								
Convergence, Y/N	Yes	Yes	Yes	Yes								
Cap	747	681	801	786								
Service Time	2.839	3.308	2.513	2.594								
HCM Lane V/C Ratio	0.325	0.21	0.282	0.19								
HCM Control Delay, s/veh	10.1	9.7	8.2	8.6								
HCM Lane LOS	B	A	A	A								
HCM 95thile Q	1.4	0.8	1.1	0.7								

2033 Total Future Major Event Ingress Peak Hour  
1: Bank & Fifth  
01/10/2025

Intersection												
Intersection Delay, s/veh	9.5											
Intersection LOS	A											
Movement												
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	←			←			←			←		
Traffic Volume (vph)	83	56	75	64	24	491	33	655				
Future Volume (vph)	83	56	75	64	24	491	33	655				
Lane Group Flow (vph)	0	174	83	139	0	615	0	833				
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 Effect Green (s)	14.4	14.4	14.4		49.6	49.6	49.6	49.6				
Actuated g/C Ratio	0.19	0.19	0.19		0.66	0.66	0.66	0.66				
v/c Ratio	0.70	0.45	0.43		0.34	0.46	0.34	0.46				
Control Delay (s/veh)	38.8	32.9	18.3		7.5	7.8	7.5	7.8				
Queue Delay (s/veh)	0.0	0.0	0.0		0.0	0.0	0.0	0.0				
Total Delay (s/veh)	38.8	32.9	18.3		7.5	7.8	7.5	7.8				
LOS	D	C	B		A	A	A	A				
Approach Delay (s/veh)	38.9	23.8	7.5		7.8	7.8	7.5	7.8				
Approach LOS	D	C	A		A	A	A	A				
Queue Length 50th (m)	20.2	10.4	5.2		15.1	25.3	15.1	25.3				
Queue Length 95th (m)	35.3	20.9	21.8		36.9	46.8	36.9	46.8				
Internal Link Dist (m)	49.7	112.4	195.6		195.6	190.0	195.6	190.0				
Turn Bay Length (m)		45.0										
Base Capacity (vph)	345	263	432		1804	1814	1804	1814				
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	0.50	0.32	0.32		0.34	0.46	0.34	0.46				
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: 0.70												
Intersection Signal Delay (s/veh): 12.6							Intersection LOS: B					
Intersection Capacity Utilization 89.8%							ICU Level of Service E					
Analysis Period (min) 15												

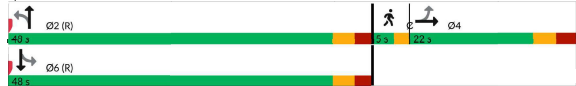
Splits and Phases: 1: Bank & Fifth



2033 Total Future Major Event Ingress Peak Hour  
2: Bank & Holmwood  
01/10/2025

Intersection												
Intersection Delay, s/veh	9.5											
Intersection LOS	A											
Movement												
	EBT	NBL	NBT	SBL	SBT	Ø3						
Lane Configurations	←		←		←							
Traffic Volume (vph)	38	71	518	59	805							
Future Volume (vph)	39	71	518	59	805							
Lane Group Flow (vph)	157	0	793	0	796							
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	6	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	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							
Lead/Lag						Lead						
Lead-Lag Optimize?						Yes						
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	None						
Act Effect Green (s)	13.5		50.7		50.7							
Actuated g/C Ratio	0.18		0.68		0.68							
v/c Ratio	0.52		0.52		0.47							
Control Delay (s/veh)	38.5		7.9		4.3							
Queue Delay (s/veh)	0.0		0.0		0.0							
Total Delay (s/veh)	38.5		7.9		4.3							
LOS	D		A		A							
Approach Delay (s/veh)	38.5		7.9		4.3							
Approach LOS	D		A		A							
Queue Length 50th (m)	20.7		22.9		14.1							
Queue Length 95th (m)	35.3		45.4		18.2							
Internal Link Dist (m)	39.8		31.5		155.6							
Turn Bay Length (m)												
Base Capacity (vph)	316		1512		1695							
Starvation Cap Reductn	0		0		0							
Spillback Cap Reductn	0		0		0							
Storage Cap Reductn	0		0		0							
Reduced v/c Ratio	0.50		0.52		0.47							
Intersection Summary												
Cycle Length: 75												
Actuated Cycle Length: 75												
Offset: 60 (80%) Referenced to phase 2:NBL and 6:SBTL, Start of Green												
Natural Cycle: 75												
Control Type: Actuated-Coordinated												
Maximum v/c Ratio: 0.62												
Intersection Signal Delay (s/veh): 9.0							Intersection LOS: A					
Intersection Capacity Utilization 75.6%							ICU Level of Service D					
Analysis Period (min) 15												

Splits and Phases: 2: Bank & Holmwood



2033 Total Future Major Event Ingress Peak Hour  
3: Bank & Exhibition  
01/10/2025

Intersection												
Intersection Delay, s/veh	9.5											
Intersection LOS	A											
Movement												
	WBL	WBR	NBL	SBL	SBT	Ø1	Ø7					
Lane Configurations	←		←		←							
Traffic Volume (vph)	61	44	655	66	595							
Future Volume (vph)	61	44	655	66	595							
Lane Group Flow (vph)	68	49	819	73	661							
Turn Type	Prot	Perm	NA	Perm	NA							
Protected Phases	8	2	6	6	1	7						
Permitted Phases	8	2	6	6	1	7						
Detector Phase	8	2	6	6	1	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	44.0	44.0	44.0	5.0	5.0					
Total Split (s)	26.0	26.0	44.0	44.0	44.0	5.0	5.0					
Total Split (%)	32.5%	32.5%	55.0%	55.0%	55.0%	6%	6%					
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	3.0	3.0	3.0	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							
Lead/Lag	Lag	Lag				Lead						

2033 Total Future Major Event Ingress Peak Hour  
01/10/2025

6: Bank & Aylmer

Lane Group	EBL	NBL	NBT	SBT	Ø3
Lane Configurations	↔	↔	↕	↕	
Traffic Volume (vph)	93	14	772	799	
Future Volume (vph)	93	14	772	799	
Lane Group Flow (vph)	131	0	874	946	
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)	14,6		59,7	59,7	
Actuated g/C Ratio	0,16		0,86	0,86	
w/c Ratio	0,52		0,44	0,46	
Control Delay (s/veh)	39,8		5,7	8,2	
Queue Delay (s/veh)	0,0		0,0	0,0	
Total Delay (s/veh)	39,8		5,7	8,2	
LOS	D		A	A	
Approach Delay (s/veh)	39,8		5,7	8,2	
Approach LOS	D		A	A	
Queue Length 50th (m)	19,0		22,3	35,3	
Queue Length 95th (m)	35,4		27,0	51,7	
Internal Link Dist (m)	76,7		26,1	10,1	
Turn Bay Length (m)					
Base Capacity (vph)	283		1973	2044	
Starvation Cap Reductn	0		0	0	
Spillback Cap Reductn	0		0	0	
Storage Cap Reductn	0		0	0	
Reduced w/c Ratio	0,46		0,44	0,46	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 60 (67%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum w/c Ratio: 0,52	
Intersection Signal Delay (s/veh): 9,2	Intersection LOS: A
Intersection Capacity Utilization 53,8%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 6: Bank & Aylmer



2033 Total Future Major Event Ingress Peak Hour  
01/10/2025

7: Bank & Sunnyside

Lane Group	EBL	NBL	NBT	SBT	Ø4	Ø1
Lane Configurations	↔	↔	↕	↕		
Traffic Volume (vph)	97	73	272	662		
Future Volume (vph)	97	73	272	662		
Lane Group Flow (vph)	210	0	383	880		
Turn Type	Prot	Perm	NA	NA		
Protected Phases	10		2	6	4	
Permitted Phases		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 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)	6,0	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	C-Max	None	
Act Effect Green (s)	16,3		51,2	51,2		
Actuated g/C Ratio	0,20		0,84	0,84		
w/c Ratio	0,67		0,84	0,83		
Control Delay (s/veh)	39,8		16,7	21,9		
Queue Delay (s/veh)	0,0		0,0	0,0		
Total Delay (s/veh)	39,8		16,7	21,9		
LOS	D		B	C		
Approach Delay (s/veh)	39,8		16,7	21,9		
Approach LOS	D		B	C		
Queue Length 50th (m)	29,6		31,6	91,7		
Queue Length 95th (m)	47,0		#17,5	#197,1		
Internal Link Dist (m)	57,2		0,1	3,9		
Turn Bay Length (m)						
Base Capacity (vph)	336		597	1055		
Starvation Cap Reductn	0		0	0		
Spillback Cap Reductn	0		0	0		
Storage Cap Reductn	0		0	0		
Reduced w/c Ratio	0,83		0,84	0,83		

Intersection Summary	
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 0 (0%), Referenced to phase 6:SBT, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum w/c Ratio: 0,83	
Intersection Signal Delay (s/veh): 23,1	Intersection LOS: C
Intersection Capacity Utilization 92,2%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 7: Bank & Sunnyside



2033 Total Future Major Event Ingress Peak Hour  
01/10/2025

7: Bank & Sunnyside

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	Ø3	Ø7
Lane Configurations	↔	↔	↔	↔	↕	↕	↕	↕		
Traffic Volume (vph)	54	80	14	86	27	555	143	651		
Future Volume (vph)	54	80	14	86	27	555	143	651		
Lane Group Flow (vph)	0	191	0	291	0	679	0	978		
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	43,0	5,0	5,0
Total Split (%)	27,8%	27,8%	27,8%	27,8%	47,8%	47,8%	18,9%	47,8%	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)	2,8	2,8	2,8	2,8	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			Lead	Lead		
Lead-Lag Optimize?			Yes	Yes						
Recall Mode	None	None	None	None	C-Max	C-Max	None	C-Max	None	None
Act Effect Green (s)	24,4		24,4		54,0		54,0			
Actuated g/C Ratio	0,27		0,27		0,80		0,80			
w/c Ratio	0,66		0,75		0,42		0,81			
Control Delay (s/veh)	42,0		35,6		10,5		15,3			
Queue Delay (s/veh)	0,0		0,0		0,0		0,0			
Total Delay (s/veh)	42,0		35,6		10,5		15,3			
LOS	D		D		B		B			
Approach Delay (s/veh)	42,0		35,6		10,5		15,3			
Approach LOS	D		D		B		B			
Queue Length 50th (m)	29,2		33,5		29,8		67,0			
Queue Length 95th (m)	#57,3		#71,9		41,2		98,7			
Internal Link Dist (m)	75,1		136,0		63,1		79,0			
Turn Bay Length (m)										
Base Capacity (vph)	288		386		1627		1204			
Starvation Cap Reductn	0		0		0		0			
Spillback Cap Reductn	0		0		0		0			
Storage Cap Reductn	0		0		0		0			
Reduced w/c Ratio	0,66		0,75		0,42		0,81			

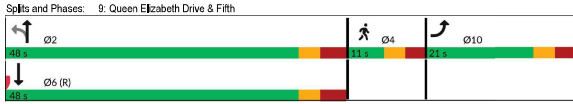
Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 6 (7%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 110	
Control Type: Actuated-Coordinated	
Maximum w/c Ratio: 0,81	
Intersection Signal Delay (s/veh): 18,9	Intersection LOS: B
Intersection Capacity Utilization 92,2%	ICU Level of Service F
Analysis Period (min) 15	

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

2033 Total Future Major Event Ingress Peak Hour

9: Queen Elizabeth Drive & Fifth

01/10/2025



Intersection						
Int Delay, s/veh						
Movement						
	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	76	0	846	811	0
Future Vol, veh/h	1	76	0	846	811	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	1	64	0	840	901	0

Major/Minor				
	Minor2	Major1	Major2	
Conflicting Flow All	1371	901	-	0
Stage 1	901	-	-	-
Stage 2	470	-	-	-
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	-	-
For Cap-1 Maneuver	148	334	0	0
Stage 1	393	-	-	-
Stage 2	594	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	148	334	-	-
Mov Cap-2 Maneuver	148	-	-	-
Stage 1	393	-	-	-
Stage 2	594	-	-	-

Approach			
	EB	NB	SB
HCM Ctrl Dly, s/v	19.39	0	0
HCM LOS	C		

Minor Lane/Major Mvmt					
	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	334	-	-	-
HCM Lane V/C Ratio	-	0.253	-	-	-
HCM Ctrl Dly (s/v)	-	19.4	-	-	-
HCM Lane LOS	-	C	-	-	-
HCM 95th %ile Q(veh)	-	1	-	-	-

2033 Total Future Major Event Ingress Peak Hour

4: Bank & Witon

01/10/2025

Intersection						
Int Delay, s/veh						
Movement						
	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	281	110	759	559	109
Future Vol, veh/h	5	281	110	759	559	109
Conflicting Peds, #/hr	0	0	0	178	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	312	122	843	621	121

Major/Minor				
	Minor2	Major1	Major2	
Conflicting Flow All	1526	860	920	0
Stage 1	860	-	-	-
Stage 2	666	-	-	-
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	-
For Cap-1 Maneuver	118	353	734	-
Stage 1	411	-	-	-
Stage 2	471	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	57	286	596	-
Mov Cap-2 Maneuver	57	-	-	-
Stage 1	244	-	-	-
Stage 2	382	-	-	-

Approach			
	EB	NB	SB
HCM Ctrl Dly, s/v	118.86	3.86	0
HCM LOS	F		

Minor Lane/Major Mvmt					
	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	456	-	236	-	-
HCM Lane V/C Ratio	0.205	-	1.199	-	-
HCM Ctrl Dly (s/v)	12.6	2.6	119	-	-
HCM Lane LOS	B	A	F	-	-
HCM 95th %ile Q(veh)	0.8	-	12.6	-	-

Notes  
 - Volume exceeds capacity      \$ Delay exceeds 300s  
 + Computation Not Defined      \* All major volume in platoon

2033 Total Future Major Event Ingress Peak Hour

5: Bank & Echo

01/10/2025

Intersection						
Int Delay, s/veh						
Movement						
	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	76	0	846	811	0
Future Vol, veh/h	1	76	0	846	811	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	1	64	0	840	901	0

Major/Minor				
	Minor2	Major1	Major2	
Conflicting Flow All	1371	901	-	0
Stage 1	901	-	-	-
Stage 2	470	-	-	-
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	-	-
For Cap-1 Maneuver	148	334	0	0
Stage 1	393	-	-	-
Stage 2	594	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	148	334	-	-
Mov Cap-2 Maneuver	148	-	-	-
Stage 1	393	-	-	-
Stage 2	594	-	-	-

Approach			
	EB	NB	SB
HCM Ctrl Dly, s/v	19.39	0	0
HCM LOS	C		

Minor Lane/Major Mvmt					
	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	334	-	-	-
HCM Lane V/C Ratio	-	0.253	-	-	-
HCM Ctrl Dly (s/v)	-	19.4	-	-	-
HCM Lane LOS	-	C	-	-	-
HCM 95th %ile Q(veh)	-	1	-	-	-

2033 Total Future Major Event Ingress Peak Hour

8: Queen Elizabeth Driveway /Queen Elizabeth Driveway & Princess Patricia Way

01/10/2025

Intersection						
Int Delay, s/veh						
Movement						
	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	102	105	117	245	466	268
Future Vol, veh/h	102	105	117	245	466	268
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	113	117	130	272	518	293

Major/Minor				
	Minor2	Major1	Major2	
Conflicting Flow All	1169	667	616	0
Stage 1	667	-	-	-
Stage 2	532	-	-	-
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	-
For Cap-1 Maneuver	207	463	621	-
Stage 1	514	-	-	-
Stage 2	563	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	168	463	621	-
Mov Cap-2 Maneuver	168	-	-	-
Stage 1	418	-	-	-
Stage 2	563	-	-	-

Approach			
	EB	NB	SB
HCM Ctrl Dly, s/v	82.59	3.3	0
HCM LOS	F		

Minor Lane/Major Mvmt					
	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	582	-	248	-	-
HCM Lane V/C Ratio	0.158	-	0.926	-	-
HCM Ctrl Dly (s/v)	10.2	0	82.4	-	-
HCM Lane LOS	B	A	F	-	-
HCM 95th %ile Q(veh)	0.8	-	8.2	-	-

2033 Total Future Major Event Ingress Peak Hour

10: Bank & Marche

01/10/2025

Intersection						
Int Delay, s/veh	0,1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↑	↑↑	↑↑	↑	↑↑	↑↑
Traffic Vol, veh/h	0	8	893	1	0	862
Future Vol, veh/h	0	8	893	1	0	862
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	9	775	1	0	736
Major/Minor						
	Minor1	Major1	Major2			
Conflicting Flow All	-	488	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6,9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Followup Hdwy	-	3,3	-	-	-	-
Pot Cap-1 Maneuver	0	531	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	475	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach						
	WB	NB	SB			
HCM Chl Dly, s/v	12,73	0	0			
HCM LOS	B					
Minor Lane/Major Mvmt						
	NBT	NBRWBLn1	SBT			
Capacity (veh/h)	-	-	475			
HCM Lane V/C Ratio	-	-	0,016			
HCM Chl Dly (s/v)	-	-	12,7			
HCM Lane LOS	-	-	B			
HCM 95th %ile Q(veh)	-	-	0,1			

**2033 TOTAL – MAJOR EVENT EGRESS**

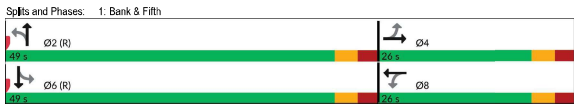
37: O' Connor & Fifth Avenue

Intersection												
Intersection Delay, s/veh	10.2											
Intersection LOS	B											
Movement												
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	←↑			←↑			←↑			←↑		
Traffic Vol, veh/h	25	54	0	0	0	0	115	116	102	143	0	0
Future Vol, veh/h	25	54	0	0	0	0	115	116	102	143	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	28	60	0	0	0	0	128	129	113	159	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			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			8.4			11.4			7.7		
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	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 UI (X)	0.484	0.127	0.159	0.074								
Departure Headway (HD)	4,342	5,119	4,468	4,294								
Convergence, Y/N	Yes	Yes	Yes	Yes								
Cap	828	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 95thile Q	2.7	0.4	0.6	0.2								

1: Bank & Fifth

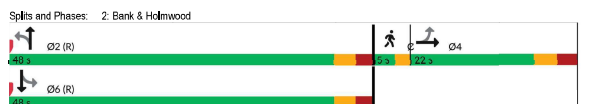
Lane Group										
	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT		
Lane Configurations	←↑		←↑		←↑		←↑			
Traffic Volume (vph)	78	34	41	72	22	333	20	373		
Future Volume (vph)	78	34	41	72	22	333	20	373		
Lane Group Flow (vph)	0 155		48 208		0 422		0 480			
Turn Type	Perm		NA		Perm		NA			
Protected Phases	4		8		2		6			
Permitted Phases	4		8		2		6			
Detector Phase	4		8		2		6			
Switch Phase										
Minimum Initial (s)	4.0		4.0		4.0		4.0			
Minimum Split (s)	26.0		26.0		26.0		49.0			
Total Split (s)	26.0		26.0		26.0		49.0			
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			
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?										
Recall Mode	None		None		None		C-Max			
Act Effect Green (s)	15.0		15.0		15.0		49.0			
Actuated g/C Ratio	0.20		0.20		0.20		0.65			
v/c Ratio	0.80		0.22		0.59		0.23			
Control Delay (s/veh)	54.1		25.5		18.6		5.3			
Queue Delay (s/veh)	0.0		0.0		0.0		0.0			
Total Delay (s/veh)	54.1		25.5		18.6		5.3			
LOS	D		C		B		A			
Approach Delay (s/veh)	54.1		20.7		5.3		6.4			
Approach LOS	D		C		A		A			
Queue Length 50th (m)	18.7		5.4		12.4		9.3			
Queue Length 95th (m)	#39.7		12.7		26.6		17.4			
Internal Link Dist (m)	49.7		112.4		195.6		190.0			
Turn Bay Length (m)	45.0									
Base Capacity (vph)	257		285		447		1809			
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	0.60		0.16		0.47		0.23			
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: 0.80										
Intersection Signal Delay (s/veh): 14.4					Intersection LOS: B					
Intersection Capacity Utilization 73.6%					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.										

1: Bank & Fifth



2: Bank & Holmwood

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					
Protected Phases	4		2		6		3			
Permitted Phases	4		2		6		3			
Detector Phase	4		2		6		3			
Switch Phase										
Minimum Initial (s)	4.4		10.0		4.0		4.0			
Minimum Split (s)	22.0		48.0		48.0		48.0			
Total Split (s)	22.0		48.0		48.0		48.0			
Total Split (%)	29.3%		64.0%		64.0%		64.0%			
Yellow Time (s)	3.0		3.0		3.0		3.0			
All-Red Time (s)	2.9		2.2		2.2		2.2			
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		Lag		Lag		Lag			
Lead-Lag Optimize?										
Recall Mode	None		C-Max		C-Max		C-Max			
Act Effect Green (s)	13.5		50.7		50.7		50.7			
Actuated g/C Ratio	0.18		0.68		0.68		0.68			
v/c Ratio	0.62		0.27		0.25		0.25			
Control Delay (s/veh)	38.9		5.4		3.2		3.2			
Queue Delay (s/veh)	0.0		0.0		0.0		0.0			
Total Delay (s/veh)	38.9		5.4		3.2		3.2			
LOS	D		A		A		A			
Approach Delay (s/veh)	38.9		5.4		3.2		3.2			
Approach LOS	D		A		A		A			
Queue Length 50th (m)	19.9		9.5		6.5		6.5			
Queue Length 95th (m)	34.2		19.7		9.4		9.4			
Internal Link Dist (m)	38.8		31.5		195.8		195.8			
Turn Bay Length (m)	306									
Base Capacity (vph)	306		1620		1755		1755			
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	0.49		0.27		0.25		0.25			
Intersection Summary										
Cycle Length: 75										
Actuated Cycle Length: 75										
Offset: 60 (80%), Referenced to phase 2:NBL and 6:SBTL, Start of Green										
Natural Cycle: 75										
Control Type: Actuated-Coordinated										
Maximum v/c Ratio: 0.62										
Intersection Signal Delay (s/veh): 9.4					Intersection LOS: A					
Intersection Capacity Utilization 59.7%					ICU Level of Service B					
Analysis Period (min) 15										



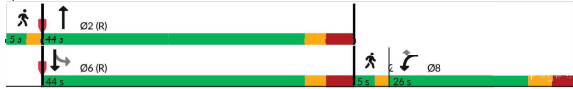
2033 Total Future Major Event Egress Peak Hour

3: Bank & Exhibition

01/10/2025

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	380		
Turn Type	Prot	Perm	NA	Perm	NA		
Protected Phases	8		2			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	44.0	44.0	44.0	5.0	5.0
Total Split (s)	26.0	26.0	44.0	44.0	44.0	5.0	5.0
Total Split (%)	32.5%	32.5%	55.0%	55.0%	55.0%	6%	6%
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		
Total Lost Time (s)	6.3	6.3	6.9	6.9	6.9		
Lead/Lag	Lag	Lag				Lead	Lead
Lead-Lag Optimize?			Yes	Yes		Yes	Yes
Recall Mode	None	None	C-Max	C-Max	C-Max	None	None
Act Effect Green (s)	10.0	10.0	70.7	70.7	70.7		
Actuated g/C Ratio	0.13	0.13	0.88	0.88	0.88		
w/c Ratio	0.05	0.05	0.15	0.02	0.14		
Control Delay (s/veh)	31.6	18.9	2.2	3.0	2.2		
Queue Delay (s/veh)	0.0	0.0	0.0	0.0	0.0		
Total Delay (s/veh)	31.6	18.9	2.2	3.0	2.2		
LOS	C	B	A	A	A		
Approach Delay (s/veh)	25.5		2.2		2.2		
Approach LOS	C		A		A		
Queue Length 50th (m)	1.4	0.0	0.0	0.0	0.0		
Queue Length 95th (m)	5.7	4.0	13.6	2.0	12.6		
Internal Link Dist (m)	30.6		33.7		44.8		
Turn Bay Length (m)				40.0			
Base Capacity (vph)	402	278	2787	626	2805		
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 w/c Ratio	0.02	0.03	0.15	0.02	0.14		
<b>Intersection Summary</b>							
Cycle Length: 80							
Actuated Cycle Length: 80							
Offset: 0 (0%), Referenced to phase 2 NBT and 6 SBT, Start of Green							
Natural Cycle: 80							
Control Type: Actuated-Coordinated							
Maximum w/c Ratio: 0.15							
Intersection Signal Delay (s/veh): 2.7				Intersection LOS: A			
Intersection Capacity Utilization 43.5%				ICU Level of Service A			
Analysis Period (min) 15							

Splits and Phases: 3: Bank & Exhibition



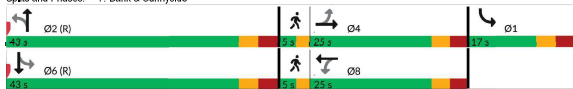
2033 Total Future Major Event Egress Peak Hour

7: Bank & Sunnyside

01/10/2025

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	Ø3	Ø7
Lane Configurations	↔	↔	↔	↔	↔	↕	↕	↕		
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	352	0	405		
Turn Type	Perm	NA	Perm	NA	Perm	NA	pm-pt	NA		
Protected Phases			4		8		2	1	6	3
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%	47.8%	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					Lead	Lead
Lead-Lag Optimize?			Yes	Yes					Yes	Yes
Recall Mode	None	None	None	None	C-Max	C-Max	None	C-Max	None	None
Act Effect Green (s)	12.6		12.4		69.4		65.4			
Actuated g/C Ratio	0.14		0.14		0.77		0.77			
w/c Ratio	0.60		0.51		0.19		0.19			
Control Delay (s/veh)	51.2		31.5		4.2		1.4			
Queue Delay (s/veh)	0.0		0.0		0.0		0.0			
Total Delay (s/veh)	51.2		31.5		4.2		1.4			
LOS	D		C		A		A			
Approach Delay (s/veh)	51.2		31.5		4.2		1.4			
Approach LOS	D		C		A		A			
Queue Length 50th (m)	15.3		10.4		8.0		1.9			
Queue Length 95th (m)	28.9		23.7		15.8		3.6			
Internal Link Dist (m)	75.1		136.0		63.1		79.0			
Turn Bay Length (m)										
Base Capacity (vph)	240		283		2189		2143			
Starvation Cap Reductn	0		0		0		0			
Spillback Cap Reductn	0		0		0		0			
Storage Cap Reductn	0		0		0		0			
Reduced w/c Ratio	0.39		0.34		0.16		0.19			
<b>Intersection Summary</b>										
Cycle Length: 90										
Actuated Cycle Length: 90										
Offset: 6 (7%), Referenced to phase 2 NBT and 6 SBT, Start of Green										
Natural Cycle: 110										
Control Type: Actuated-Coordinated										
Maximum w/c Ratio: 0.60										
Intersection Signal Delay (s/veh): 10.5					Intersection LOS: B					
Intersection Capacity Utilization 46.2%					ICU Level of Service A					
Analysis Period (min) 15										

Splits and Phases: 7: Bank & Sunnyside



2033 Total Future Major Event Egress Peak Hour

6: Bank & Aylmer

01/10/2025

Lane Group	EBL	NBL	NBT	SBT	Ø3
Lane Configurations	↔	↔	↕	↕	
Traffic Volume (vph)	19	17	353	312	
Future Volume (vph)	19	17	353	312	
Lane Group Flow (vph)	39	0	411	373	
Turn Type	Prot	Perm	NA	NA	
Protected Phases	4		2		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 Effect Green (s)	14.0		60.3	60.3	
Actuated g/C Ratio	0.19		0.87	0.87	
w/c Ratio	0.17		0.21	0.18	
Control Delay (s/veh)	23.5		4.9	5.6	
Queue Delay (s/veh)	0.0		0.0	0.0	
Total Delay (s/veh)	23.5		4.9	5.6	
LOS	C		A	A	
Approach Delay (s/veh)	23.5		4.9	5.6	
Approach LOS	C		A	A	
Queue Length 50th (m)	3.2		10.5	10.6	
Queue Length 95th (m)	11.9		14.6	15.7	
Internal Link Dist (m)	76.7		28.1	10.1	
Turn Bay Length (m)					
Base Capacity (vph)	262		191	2055	
Starvation Cap Reductn	0		0	0	
Spillback Cap Reductn	0		0	0	
Storage Cap Reductn	0		0	0	
Reduced w/c Ratio	0.15		0.21	0.18	
<b>Intersection Summary</b>					
Cycle Length: 90					
Actuated Cycle Length: 90					
Offset: 60 (67%), Referenced to phase 2 NBT and 6 SBT, Start of Green					
Natural Cycle: 90					
Control Type: Actuated-Coordinated					
Maximum w/c Ratio: 0.21					
Intersection Signal Delay (s/veh): 6.1		Intersection LOS: A			
Intersection Capacity Utilization 45.6%		ICU Level of Service A			
Analysis Period (min) 15					

Splits and Phases: 6: Bank & Aylmer



2033 Total Future Major Event Egress Peak Hour

9: Queen Elizabeth Drive & Fifth

01/10/2025

Lane Group	EBL	NBL	NBT	SBT	Ø4
Lane Configurations	↔	↔	↕	↕	
Traffic Volume (vph)	143	44	308	288	
Future Volume (vph)	143	44	308	288	
Lane Group Flow (vph)	229	0	389	410	
Turn Type	Prot	Perm	NA	NA	
Protected Phases	10		2		4
Permitted Phases	10	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 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	3.6	3.6	3.6	2.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.7	6.3	6.3	6.3	
Lead/Lag	Lag				Lead
Lead-Lag Optimize?					
Recall Mode	Min	None	None	C-Max	None
Act Effect Green (s)	17.2		50.3	50.3	
Actuated g/C Ratio	0.22		0.63	0.63	
w/c Ratio	0.68		0.40	0.40	
Control Delay (s/veh)	38.0		9.8	9.6	
Queue Delay (s/veh)	0.0		0.0	0.0	
Total Delay (s/veh)	38.0		9.8	9.6	
LOS	D		A	A	
Approach Delay (s/veh)	38.0		9.8	9.6	
Approach LOS	D		A	A	
Queue Length 50th (m)	32.0		26.4	27.7	
Queue Length 95th (m)	50.1		51.9	53.5	
Internal Link Dist (m)	57.2		0.1	5.9	
Turn Bay Length (m)					
Base Capacity (vph)	353		966	1032	

2033 Total Future Major Event Egress Peak Hour  
4: Bank & Wilton 01/10/2025

Intersection						
Int Delay, s/veh						
0,1						
Movement	EBL	EBR	NBL	NBR	SBT	SBR
Lane Configurations	T		T		T	
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	- 0	- 0	- 0	- 0	- 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						
Conflicting Flow All						
Minor2	Minor1	Major2				
-	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	- 3,3265	2,2265	-	-	-	-
Pot Cap-1 Maneuver	0	528	974	-	-	-
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 Ctrl Dly, s/v	13,5	0	0			
HCM LOS	B					
Minor Lane/Major Mvmt						
NBL	NBT	EBL1	SBT	SBR		
791	-	426	-	-		
Capacity (veh/h)	-	-	-	-		
HCM Lane V/C Ratio	-	0,13	-	-		
HCM Ctrl Dly (s/v)	0	- 13,5	-	-		
HCM Lane LOS	A	- B	-	-		
HCM 95th %ile Q (veh)	0	- 0	-	-		

2033 Total Future Major Event Egress Peak Hour  
5: Bank & Echo 01/10/2025

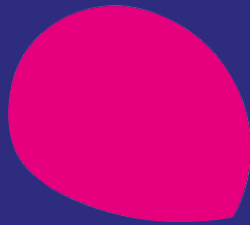
Intersection						
Int Delay, s/veh						
0,5						
Movement	EBL	EBR	NBL	NBR	SBT	SBR
Lane Configurations	T		T		T	
Traffic Vol. veh/h	0	34	0	358	314	0
Future Vol. veh/h	0	34	0	358	314	0
Conflicting Peds. #/hr	0	0	0	0	0	85
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	- None	- None	- None	- None	- None	- None
Storage Length	- 0	- 0	- 0	- 0	- 0	- 0
Veh in Median Storage, #	0	-	-	0	0	-
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	388	349	0
Major/Minor						
Conflicting Flow All						
Minor2	Minor1	Major2				
-	349	-	0	-	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	- 6,245	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	- 3,3265	-	-	-	-	-
Pot Cap-1 Maneuver	0	891	0	-	-	0
Stage 1	0	-	0	-	-	0
Stage 2	0	-	0	-	-	0
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	- 891	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach						
EB NB SB						
HCM Ctrl Dly, s/v	10,5	0	0			
HCM LOS	B					
Minor Lane/Major Mvmt						
NBL	NBT	EBL1	SBT	SBR		
-	-	891	-	-		
Capacity (veh/h)	-	-	-	-		
HCM Lane V/C Ratio	-	0,655	-	-		
HCM Ctrl Dly (s/v)	-	10,5	-	-		
HCM Lane LOS	-	B	-	-		
HCM 95th %ile Q (veh)	-	0,2	-	-		

2033 Total Future Major Event Egress Peak Hour  
8: Queen Elizabeth Driveway /Queen Elizabeth Driveway & Princess Patricia Way 01/10/2025

Intersection						
Int Delay, s/veh						
23,5						
Movement	EBL	EBR	NBL	NBR	SBT	SBR
Lane Configurations	T		T		T	
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						
Conflicting Flow All						
Minor2	Minor1	Major2				
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	1169	-	-	-
Stage 1	793	-	-	-	-	-
Stage 2	793	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	451	719	1169	-	-	-
Mov Cap-2 Maneuver	451	-	-	-	-	-
Stage 1	692	-	-	-	-	-
Stage 2	793	-	-	-	-	-
Approach						
EB NB SB						
HCM Ctrl Dly, s/v	48,9	2,7	0			
HCM LOS	E					
Minor Lane/Major Mvmt						
NBL	NBT	EBL1	SBT	SBR		
1169	-	547	-	-		
Capacity (veh/h)	0,054	- 0,926	-	-		
HCM Lane V/C Ratio	8,3	0	49,6	-		
HCM Ctrl Dly (s/v)	A	A	E	-		
HCM Lane LOS	A	A	E	-		
HCM 95th %ile Q (veh)	0,2	- 11,5	-	-		

2033 Total Future Major Event Egress Peak Hour  
10: Bank & Marche 01/10/2025

Intersection						
Int Delay, s/veh						
0,1						
Movement	WBL	WBR	NBT	NBR	SBT	SBR
Lane Configurations	T		T		T	
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	- 0	- 0	- 0	- 0	- 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	4	493	1	0	404
Major/Minor						
Conflicting Flow All						
Minor2	Minor1	Major2				
-	347	0	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	- 586	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach						
WB NB SB						
HCM Ctrl Dly, s/v	11,2	0	0			
HCM LOS	B					
Minor Lane/Major Mvmt						
NBL	NBR	WBL1	SBT	SBR		
-	-	586	-	-		
Capacity (veh/h)	-	- 0,008	-	-		
HCM Lane V/C Ratio	-	11,2	-	-		
HCM Ctrl Dly (s/v)	-	B	-	-		
HCM Lane LOS	-	B	-	-		
HCM 95th %ile Q (veh)	-	0	-	-		



11/07/2025



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