BUILDING LEBRETON FLATS

Transportation Impact Assessment

Ottawa, Ontario

May 10, 2023

Presented to:

National Capital Commission
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Ottawa, ON
K1P 1C7

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FINAL REPORT

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Transportation Impact Assessment

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Certification Form for TIA Study PM

TIA Plan Reports

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

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

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

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- ☑ 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;
- ☑ 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[1] or registered[2] professional in good standing, whose field of expertise
  - ☑ is either transportation engineering
  - ☑ or transportation planning .

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

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1. PLANNING RATIONALE EXECUTIVE SUMMARY

Ottawa's new Official Plan and updated Transportation Master Plan will guide Ottawa to become the most liveable mid-sized city in North America. The City's Official Plan vision for walkable 15-minute neighbourhoods can be realized at LeBreton Flats though implementation of the LeBreton Flats Master Concept Plan (MCP).

Key to the MCP's success is the prioritization of active modes by creating a safe, segregated and direct pedestrian and cycling network that offers the most convenient and direct routes to people who use transit and active modes. At the same time, the success of this vision relies on the discouragement of fast and facilitated automobile movement through the plan area and instead prioritizes a connected grid of local streets, made possible by avoiding the grade differences the Preston Street Extension would introduce. The embedded incentives and disincentives in this filtered permeability approach are key to enable the outcomes envisioned in the MCP and the OP.

However, the outdated intent to divide LeBreton Flats with an expensive new arterial roadway and bridge, the Preston Street Extension, would create a grade-separation issue that would severely compromise the success of the redevelopment of LeBreton Flats. The bridge required for the Preston Street Extension would be nearly twice as long as the Booth Street Bridge (between Albert and Wellington Streets) and, similarly, would repeat the undesirable conditions and impacts created by the Booth Street bridge on active transportation, local access, the area of parks and open space, developability, noise, air pollution, and sustainability. Instead, the MCP proposes to make the best use of the O-Train LRT system by focusing on active mobility and places for people by providing an active-mobility only bridge in the Preston corridor to cross the Confederation Line tracks and the aqueducts, linking two at-grade local streets that can connect to a local street network.

The construction of the Preston Street Extension as an arterial road bridge would dramatically impact the developability of adjoining parcels, reducing the ability of LeBreton Flats to achieve density goals and requirements as a designated Hub (500 persons and jobs per hectare) and transit-oriented development area in the new Official Plan. The MCP vision for LeBreton Flats is of a tight-knit dense urban district, where streets are prioritized for active modes users. Fundamentally, the Preston Street Extension would impact the overall character, reduce developability and therefore overall densities, and limit the development and design potential of the area.

The NCC's application to amend the Official Plan to remove the proposed Preston Street Extension in favour of an active-modes bridge supports provincial objectives and City of Ottawa planning policies and priorities as detailed in the following policy documents:

- Ontario Planning Act (1990)
- Ontario Provincial Policy Statement (2020)
- City of Ottawa Official Plan (2013), including Central Area Secondary Plan
- City of Ottawa Official Plan (2021), including the West Downtown Core Secondary Plan
- City of Ottawa Transportation Master Plan (2013)
- City of Ottawa Transportation Master Plan Part 1 – Policy (2023)

Approval of the requested amendment represents good planning and is essential to:

- Make bold and progressive infrastructure decisions that help the City achieve its stated policy objectives;
- Support the sustainable transportation infrastructure investments of the City within the area;
- Increase the share of trips by sustainable modes of transportation to meet the City's climate change goals;
- Create a healthier, more equitable and inclusive city, where anyone can get to work, school and daily activities without needing a private vehicle;
- Build a truly visionary and inspiring new community at LeBreton Flats;
- Capitalize on the vast park space and recreational potential of LeBreton Flats; and
- Make decisions today that align with the trajectory of urban development and support the future of Ottawa.

Urban planning has evolved significantly since the Preston Street Extension was originally conceived in the 1970s and incorporated into the previous plan for LeBreton Flats in 1997. In line with the City's new Official Plan's Five Big Moves and the recently approved policies of the new Transportation Master Plan, the LeBreton Flats MCP proposes a new community that is unlike any other in Ottawa (or Canada) today, and one which will become a leader for Canadian urbanism. The MCP is a blueprint for a new type of community, built on principles of sustainability, accessibility, and community wellbeing. Through the MCP, LeBreton Flats is poised to deliver on the ambitions the City has articulated in its OP. Both the OP and the MCP posit a new approach to urban planning in Ottawa, one which reflects the global best practice of prioritizing space and investment in places for people rather than ceding precious urban space to automobiles.

2. TIA EXECUTIVE SUMMARY

LeBreton Flats is a large and unique site in the heart of the Nation's Capital. In many respects, the site is truly a one-of-a-kind gem. The site is located just 1.5 kilometres west of the Capital's Parliamentary Precinct and central business district, and is anchored by two LRT stations, along with aqueduct water features and access to the Ottawa River. The future community of LeBreton Flats has the potential to be a showcase for urban development in Canada.

A complete understanding of the transportation needs and implications of the site is necessary to guide and inform the movement from vision to reality. The Transportation Impact Assessment (TIA) has been prepared in accordance with the City of Ottawa's 2017 TIA Guidelines, as required by the City of Ottawa in support of an application to amend the Official Plan. Many high-level assumptions and findings are documented within the report. The TIA report aims to provide the necessary analysis and insight at this stage of the planning process but will not be the last transportation analysis. Detailed TIA studies will be prepared for each future development phase within the LeBreton Flats Master Concept Plan area, including the potential major events centre, as details and specifics of such developments become known during implementation.

The foundation of the TIA is an analysis of the trips expected to be generated from the developments proposed in the Master Concept Plan. The Master Concept Plan provides a vision for a future community, with a likely range of development yield scenarios. To help decision makers assess the potential traffic impacts of the Master Concept Plan, four land use scenarios were reviewed, and **Scenario 4 was selected for evaluation**, as it is the most ambitious development scenario, with the highest predicted trip generation. The City's TRANS Trip Generation Manual was used to calculate residential trips, with the ITE Trip Generation Manual used for all other trips. The LeBreton Flats development is expected to generate approximately **4,800 person trips in the weekday morning peak hour, and 8,100 person trips in the weekday afternoon peak hour**. Aggressive mode share splits are targeted, with **15% auto driver, 5% auto passenger, 60% transit and 20% walking and cycling**. These mode share targets are comparable with similar Transit Oriented Developments in Ottawa, such as 900 Albert Street, the Zibi development, and Wateridge Village.

The LeBreton Flats Master Concept Plan proposes the elimination of the planned vehicular connection of Preston Street between Albert Street and the Sir John A. Macdonald Parkway. This connecting roadway has been part of previous versions of the City of Ottawa Official Plan and Transportation Master Plan, but there has been no plans or studies to date initiating this as a future City project. Modelling and analysis in the TIA shows that **the drawbacks of the Preston extension far outweigh the benefits**.

- Constructing the Preston extension would divert additional traffic to the area, worsening traffic conditions around LeBreton Flats. The Preston extension would draw traffic away from roads that are well beyond the influence area of LeBreton Flats and result in an increase in traffic in both directions on Preston Street, Rochester Street and Booth Street.
- The removal of the Preston extension avoids the need to designate Wellington Street as a Truck Route, which is consistent with the prohibition of heavy vehicles on the SJAMP,
- The removal of the Preston extension increases pedestrian and cyclist accessibility to the LRT stations to ensure achievement of the high transit mode share targets set as part of the development.
- **For these reasons, the deletion of the Preston vehicular extension from the City's Official Plan is recommended.**

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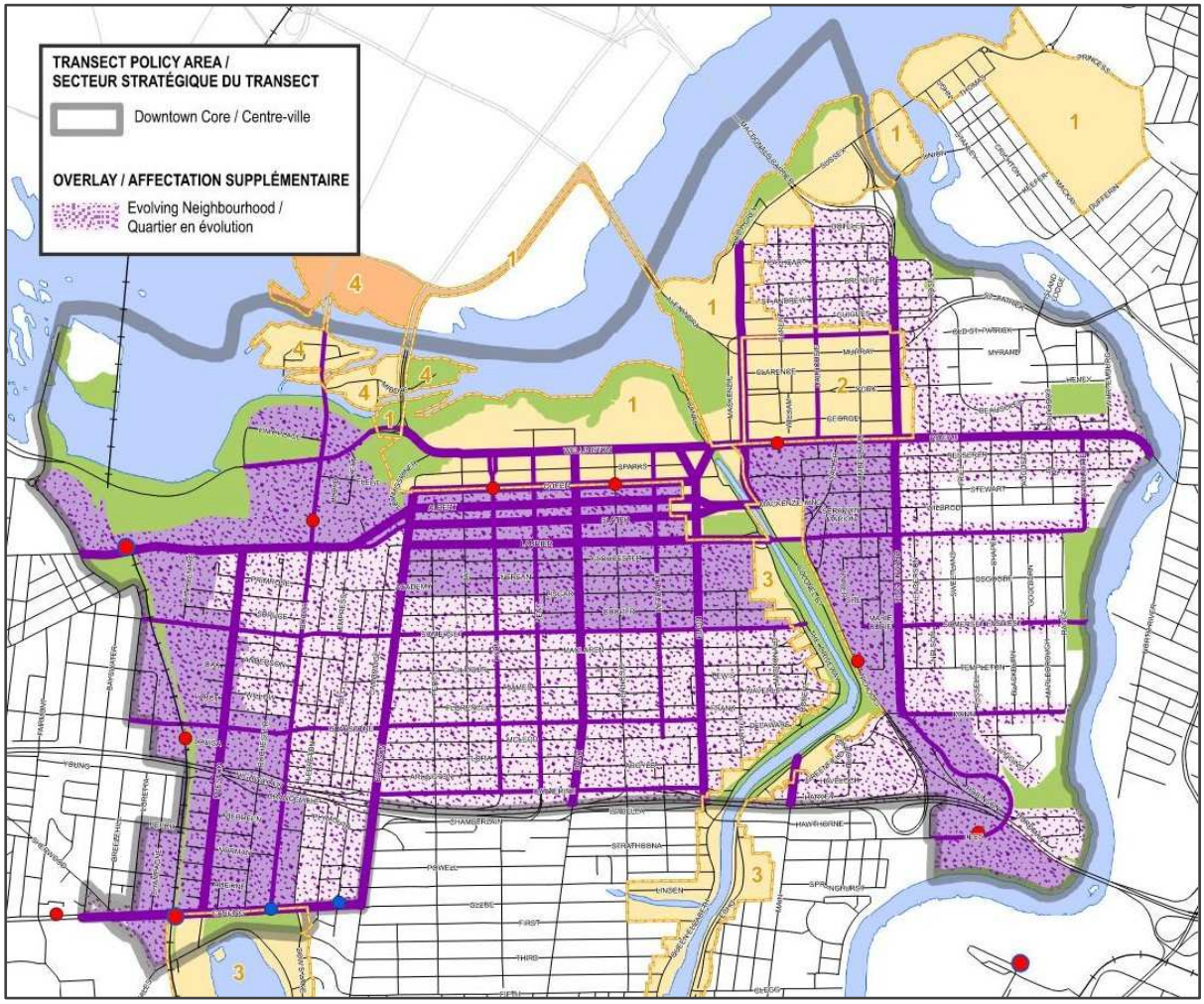
1. INTRODUCTION

LeBreton Flats is a large and unique site in the heart of the Nation's Capital. In many respects, the site is truly a rare one-of-a-kind gem. The site is approximately 29 hectares in size and is located just 1.5 kilometres west of the Capital's Parliamentary Precinct and central business district. The site is anchored by two LRT stations at Pimisi and Bayview, aqueduct water features, and Nepean Inlet, with access to the Ottawa River. The future community of LeBreton Flats has the potential to be a showcase for future urban development in Canada. As with any urban development of this caliber, along with its enormous potential comes significant challenges. Understanding the value of the site as well as the nature and significance of the challenges facing its development is necessary. Failure to do so may unreasonably deem some challenges as development constraints and, in doing so, sadly miss the opportunity to undertake proper trade-offs analysis and unnecessarily compromise the full potential of the site.

A complete understanding of the transportation needs and implications of the site is necessary to guide and inform the movement from vision to reality. This report aims to provide the necessary analysis and insight, but certainly will not be the last. Our world continues to change and preparing this report during the pandemic highlights the fact that we could very well be embarking on a new era in transportation, which will require us to revisit our past assumptions about travel needs and expectations. Regardless, as required by the City's TIA guidelines, this report uses past experience to predict future outcomes. There are many high-level assumptions and findings, which are documented within the report, as are the details that are important to transportation professionals.

The immediate surrounding roadway network, consisting of Albert Street, Booth Street, and Wellington Street exhibit varying degrees of congestion today. Expanding the capacity of these roadways is not foreseen, as LeBreton Flats and the roads that surrounds it fall within the City's Downtown Core (refer to **Figure 1**). The City of Ottawa Transportation Master Plan and New Official Plan do not support roadway expansion in this constrained urban area of the City. Therefore, additional roadway capacity has not been proposed as part of this development, other than new local roads provided as part of the development access/egress. Providing a supportive environment for pedestrians and cyclists will improve the capacity of the active transportation network and help to improve active mode share.

Figure 1: Downtown Core Transect Policy Area (Source: City of Ottawa Official Plan 2021)



This report has been prepared in accordance with the City of Ottawa's 2017 Transportation Impact Assessment Guidelines, as required by the City of Ottawa in support of the Master Concept Planning process. Additionally, it is acknowledged that detailed TIA studies will be prepared in the future for each individual development phase associated with the LeBreton Flats lands, as details and specifics of such developments become more known closer to implementation time.

In addition to the above, the following should also be noted:

- **Baseline Conditions:** Study area intersections and roadways surrounding LeBreton Flats have been influenced by the LRT construction activities (e.g., transitway detours, the construction of Booth Street over the LRT corridor, etc.). With respect to the timelines associated with the Master Concept Planning process, City Staff agreed to using historical traffic count data from the year 2014, as this is a time that likely best represents normal travel patterns and volumes. It should be noted that LRT opening delays and the COVID-19 pandemic during the spring of 2020 further complicated any potential efforts to collect more recent traffic data that could be viewed as being representative of "typical" conditions.
- **Network Modifications:** The LeBreton Flats Master Concept Plan proposes the elimination of the planned vehicular connection of Preston Street between Albert Street and the Sir John A. Macdonald Parkway. This connecting roadway has been part of previous versions of the City

of Ottawa Official Plan and Transportation Master Plan but has not been scheduled to be built. The Planning Rationale supporting the removal of the Preston Street extension is submitted under separate cover. The implications of the removal of the Preston Street extension from the future road network are explored in ***Section 4.4*** of this report. This was informed by regional level modelling using the City's EMME/3 Travel Demand Model and an assessment of operational impacts on the surrounding road network.

- **Mode Share Targets:** LeBreton Flats currently has exceptional active transportation facilities, and the Master Concept Plan will build on this by creating world-class facilities to support active transportation and transit modes. Future residents and businesses that will call LeBreton Flats home, will be exceptionally well located geographically and supported by the existing transportation system to easily access Ottawa and Gatineau's downtown cores, and some of the other great amenities the Nation's Capital has to offer. As such, and as detailed in this report, it is reasonable to expect an aggressive reduction in the degree to which private vehicles are relied upon. The mode share targets set in this TIS are comparable to those of similar Transit Oriented Developments, including 900 Albert Street, the Zibi development, and Wateridge Village.
- **Trip Generation:** The foundation of the analysis in this report is the trip generation expected to be realized from the developments proposed in the Master Concept Plan. The Master Concept Plan provides a vision for a future community, with a likely range of development yield scenarios. To help decision makers assess the potential traffic impacts of the Master Concept Plan, the scenario that results in the highest predicted trip generation has been evaluated. It is likely that the proposed development will evolve over time, at which point, updated traffic studies will be completed with more precise predictions.
- **Preston Street Extension:** Given that the Preston extension from Albert Street to Wellington Street has been part of the City's Transportation Master Plan and Official Plan for many years, additional analysis was undertaken to justify its proposed removal from the future road network. The removal of the Preston extension from the Official Plan has many benefits, explored in Section 4.4, including maximizing the accessibility to the LRT stations by minimizing walking distances; this ensures that the high transit mode share target set for the development is in fact achieved.
- **Future Opportunities for City Input:** This TIA is focused on the Master Concept Plan for LeBreton Flats, and is the first step in the ultimate development of LeBreton Flats. In addition to the comments received on this TIA, City staff will have additional opportunities for input on the development as part of future Plans of Subdivision, Site Plan Applications, and Transportation Impact Assessments are submitted for each development parcel, including the potential major events centre.

2. STEP 1 – SCREENING FORM

As required by the City of Ottawa's 2017 Transportation Impact Assessment (TIA) Guidelines, a Screening Form was completed for the proposed development (described below in ***Section 3.1***). The Screening Form triggered the trip generation, location and safety criteria outlined in the City's TIA Step 1 – Screening Form. Since all triggers were met, a formal TIA (i.e., TIA encompassing Steps 1 through 5) is required to accompany the development application. The Screening Form is provided in **Appendix A**.

3. STEP 2 – SCOPING

3.1 Existing and Planned Conditions

3.1.1 Description of Proposed Development

The subject development lands (i.e., LeBreton Flats) are generally situated within the area bound by Booth Street to the east, Wellington Street / Ottawa River Parkway to the north, Albert Street to the south and the Trillium Pathway to the west. Several development scenarios were provided, and the scenario that is likely to result in the highest trip generation has been evaluated.

Based on the information provided, the proposed redevelopment of LeBreton Flats is planned to include a mix of high-density residential, office and retail type land uses, as well as approximately 12.7 hectares of parks and open spaces. It should also be noted that the Master Concept Plan includes an option to host a new major event centre. Given the size of LeBreton Flats, market demand will ultimately dictate the rate of development.

The Master Concept Plan depicts thirteen access points, including six access points to Albert Street, five access points to Wellington Street, and two access points to Booth Street. All new internal streets within LeBreton Flats are intended to be designed to be slow speed and relatively narrow shared spaces (e.g., no raised curbs). Almost all parking will be provided in underground lots with access/egress located near the edge of the Flats.

Internal multi-use pathways will be provided to support active mobility, which will enhance access to parks, provide connectivity between on-site facilities, and will be fully integrated with the Capital Pathway network and the City's extensive pedestrian/cycling network. This active network will also include two new multi-use pathway structures over Ottawa's LRT Confederation Line that will provide convenient and direct access to the highest order public transit via existing LRT stations at Pimisi and Bayview, as well as regular OC Transpo bus service provided along Booth Street and Albert Street.

The local context of the subject site is provided in **Figure 2**, the proposed Master Concept Plan is provided in **Figure 3**, and the proposed development phasing is provided in **Figure 4**.

Figure 2: Local Context

Figure 3: Proposed Master Concept Plan

Figure 4: Development Parcels & Phasing

3.1.2 Existing Conditions

The transportation network surrounding LeBreton Flats has undergone significant changes over the past several years, mainly because of LRT construction that required temporary detouring of transitway bus traffic onto study area roadways. With respect to the City's TIA Guidelines, the following describes the study area network as it is in its current capacity.

Area Road Network

Wellington Street is a four-lane Arterial roadway (i.e., a two-lane per direction) with sidewalks on both sides, that extends from Sussex Drive in the east to Vimy Place in the west. Beyond Sussex Drive and Vimy Place, Wellington Street continues as Rideau Street and the Sir John A. Macdonald Parkway, respectively. Within the vicinity of the subject site, the speed limit is 60 km/h and on-street parking is provided along both sides of the roadway between Booth Street and Vimy Place.

Bay Street is a two-lane, one-way northbound Local roadway with a bike lane and sidewalks on both sides, located within the vicinity of the subject development. It extends from Catherine Street in the south to Wellington Street in the north. The cycling facility on Bay Street was recently upgraded to provide uni-directional northbound and southbound cycle tracks between Laurier Avenue and Wellington Street. Within the vicinity of the subject site, the posted speed limit is 50 km/h and on-street parking is permitted on the west side of the roadway between Catherine Street and Laurier Avenue.

Lyon Street North is a three-lane, one-way southbound Arterial roadway with sidewalks on both sides, located within the vicinity of the subject development. It extends from Highway 417 in the south to Wellington Street in the north. South of Somerset Street, this roadway is reduced to two lanes. Within the vicinity of the subject site, the posted speed limit is 50 km/h and on-street parking is permitted on the west side of the roadway between Slater Street and Catherine Street. There is a southbound bike lane on the segment south of Albert Street.

Albert Street is a five-lane Arterial roadway (i.e., two eastbound lanes and three westbound travel lanes, with east and westbound shoulder lanes reserved for transit only) along the southern frontage of the subject site. This roadway continues as Mackenzie King Bridge east of Elgin Street and as Scott Street west of Bayview Station Road. East of Empress Avenue, two-way traffic on Albert Street is split into two one-way roadways (i.e., eastbound, Albert Street continues one-way as Slater Street, between Bronson Avenue and Elgin Street; and westbound, Albert Street operates as one-way between Bronson Avenue and Elgin Street). There is a bidirectional multi-use pathway on the north side of Albert Street from Commissioner Street in the east to Bayview Station. Within the vicinity of the subject site, the posted speed limit is 50 km/h and Albert Street is designated as a Full Loads truck route with respect to the City's Urban Truck Routes network.

Slater Street is a three-lane, one-way Arterial roadway within the vicinity of the subject site. It develops/merges with Albert Street and the Mackenzie King Bridge at Empress Avenue in the west and Elgin Street in the east, respectively. Within the vicinity of the subject site, the posted speed limit is 50 km/h, and on street parking is permitted on both sides of the roadway during nonpeak periods and weekends (with the exception of along the southern frontage of the subject site, parking is prohibited), and Slater Street is designated as a Full Loads truck route with respect to the City's Urban Truck Routes network.

Bronson Avenue is a four-lane Arterial roadway (i.e., two travel lanes per direction) with sidewalks on both sides, located within the vicinity of the subject development. It extends from Sparks Street in the north and continues as the Airport Parkway, south of the Rideau River. Within the vicinity of the subject site, the posted speed limit is 50 km/h and it is designated as a Full Loads truck route south of Albert Street with respect to the City's Urban Truck Routes network.

Booth Street is a four-lane Arterial roadway (i.e., two travel lanes per direction), which passes through the subject development site. It extends from Carling Avenue in the south, crossing the Confederation Line LRT tracks as a bridge within the subject site, and continues north into Gatineau, where it becomes Eddy Street. Booth Street is designated as a Restricted Loads truck route with respect to the City's Urban Truck Routes network. Within the vicinity of the subject site, the posted speed limit is 50 km/h. There are raised cycle tracks and sidewalks on both sides of the roadway within the subject site area. However, south of Albert Street, Booth Street is reduced to a two-lane Major Collector Road with a posted speed limit of 40 km/h. Booth Street, south of Albert Street, supports residential land uses on both sides, sidewalks on both sides, with a narrow set-back and on-street parking on the west side of the roadway. This section of Booth Street is not part of the City's Urban Truck Routes network, and significant efforts have been undertaken to preserve the residential nature of this section of the road, including turning restrictions, speed humps and other traffic calming measures (refer to ***Section 3.1.2*** for more details).

Sir John A. Macdonald Parkway is a four-lane federally owned divided Parkway (i.e., two travel lanes per direction) within the vicinity of the subject development. It extends from Vimy Place in the east and continues west where it merges into Carling Avenue (near the Lincoln Fields transit station). Within the vicinity of the subject site, the posted speed limit is 60 km/h and on-street parking is not permitted. A multi-use pathway runs along the Ottawa River parallel to the Parkway.

Scott Street is a four-lane Arterial roadway (i.e., two travel lanes per direction) within the vicinity of the subject development. It extends from Churchill Avenue in the west and continues as Albert Street, east of Bayview Station Road. Within the vicinity of the subject site, the posted speed limit is 50 km/h and it is designated as a Full Loads truck route with respect to the City's Urban Truck Routes network. It features a multi-use pathway along its north side, from Bayview Station Road to Churchill Avenue, with a sidewalk and bike lane along its south side.

Bayview Station Road is a two-lane Collector roadway (i.e., one travel lane per direction) with sidewalks within the vicinity of the development. It extends between Albert Street in the south and Burnside Avenue in the north. The posted speed limit is 50 km/h and on-street parking is permitted on both sides of the roadway.

Slidell Street is a two-lane Collector roadway (i.e., one travel lane per direction) with one discontinuous sidewalk within the vicinity of the subject development. It extends between Burnside Avenue in the south and the Sir John A. Macdonald Parkway in the north, where it continues north as Onigam Street. The posted speed limit is 40 km/h and on-street parking is prohibited.

Preston Street is two-lane Arterial roadway (i.e., one travel lane per direction) within the vicinity of the subject development. It extends between Albert Street in the north and Queen Elizabeth Driveway in the south. Within the vicinity of the subject site, there are sidewalks on both sides, the posted speed limit is 50 km/h and on-street parking is permitted on the east side of the roadway only, and it is designated as a Full Loads truck route with respect to the City's Urban Truck Routes network.

City Centre Avenue is two-lane Local roadway (i.e., one travel lane per direction) with partial sidewalks within the vicinity of the subject development. It extends between Albert Street in the north and Somerset Street in the south. Within the vicinity of the subject site, the posted speed limit is 50 km/h and on-street parking is permitted on both sides of the roadway.

Parkdale Avenue is a two-lane Arterial roadway (i.e., one travel lanes per direction) within the vicinity of the subject development. It extends between Carling Avenue in the south and the Sir John A. Macdonald Parkway in the north. The posted speed limit is 50 km/h within the vicinity of the subject site and there are sidewalks on both sides.

Vimy Place is a private two-lane Local roadway (i.e., one travel lanes per direction). It extends between the Sir John A. Macdonald Parkway and Booth Street. The posted speed limit is 40km/h and on-street parking is permitted on the south side of the roadway, along the Canadian War Museum frontage.

Study Area Intersections

Wellington/Portage Bridge - The Wellington/Portage Bridge intersection is a signalized, three-legged intersection. The north approach (Portage Bridge) consists of three left turn lanes (including one bus/taxi/HOV lane) and one channelized right-turn lane. The west approach (Wellington Street) consists of three right-turn lanes, and two left turn lanes. The east approach (Wellington Street) consists of two left-turn lanes, and three right-turn lanes (including one transit exclusive lane).

There are no prohibited vehicular movements at this intersection. There is a separate active-modes network at a lower level below the road network.

Booth/Chaudière - The Booth/Chaudière intersection is a signalized, three-legged intersection. The west approach (Chaudière) consists of one shared left-right turn lane exiting from privately-owned Zibi development lands. The north approach (Booth Street) consists of one shared through-right lane and one exclusive through lane. The south approach (Booth Street) consists of one left-turn lane and two through lanes.

There are no prohibited movements at this intersection. As part of the Zibi development project, this intersection is being reconstructed to accommodate a shared through-right lane and a short left-turn lane on all approaches.

Booth/War Museum - The Booth/War Museum intersection is a signalized three-legged intersection. The south approach (Booth Street) consists of one left turn lane and two through lanes. The north approach (Booth Street) consists of two shared lanes for all movements. The west approach (War Museum) consists of one shared lane for all movements. The primary function of this intersection is to provide signalized crossing for users of the Ottawa River Pathway MUP.

Booth/Wellington - The Booth/Wellington intersection is a signalized four-legged intersection. The south approach (Booth Street) consists of one shared right turn-through lane and one through lane. The north approach (Booth Street) consists of two through lanes, one left turn lane, and one right turn lane. The east approach (Wellington Street) consists of one right turn lane and two through lanes. The west approach (Wellington Street) consists of two through lanes. This intersection was recently reconstructed as a protected intersection with cycling lanes separated from vehicular traffic.

Left and right turns are prohibited at the west approach. Left turns are prohibited at the east approach except on Sundays from 7am-1pm in order to facilitate Sunday closures of the SJAM. Left turns are prohibited at the south approach.

Albert/Booth - The Albert/Booth intersection is a signalized four-legged intersection. The north approach (Booth Street) consists of one through lane, one left turn and one right turn lane. The south approach (Booth Street) consists of one shared left-through lane and one shared through-right lane. The east approach (Albert Street) consists of one left turn lane, one right turn lane and three through lanes, including one transit exclusive lane. The west approach (Albert Street) consists of one left turn lane, one through lane and one transit exclusive through lane, which acts as a right turn lane for non-transit vehicles.

Left turns are prohibited at the east approach during 7-9AM and 3:30 - 5:30PM on weekdays. Right-Turn-On-Red movements are prohibited from 7AM-9PM on weekdays for the north and east approaches. Through traffic is prohibited from 11PM to 6AM on the north approach.

Trucks are directed to turn left or right on the north approach. Signage indicates that trucks and buses are prohibited from traveling southbound on Booth Street from the Booth/Albert intersection.

Albert/Preston - The Albert/Preston intersection is a signalized, three-legged intersection. The south approach (Preston Street) consists of one left turn, and one right turn lane. The west approach (Albert Street) consists of one through lane and one transit exclusive through lane, which acts as a right turn lane for non-transit vehicles. The east approach (Albert Street) consists of three through lanes, including one transit exclusive lane, and one left turn lane.

There are no prohibited movements at this intersection.

Wellington/Vimy - The Wellington/Vimy intersection is a signalized, three-legged intersection. The north approach (Vimy Pl) consists of one shared lane for all movements. The west approach (Sir John A. Macdonald Parkway) consists of two through lanes, and one left turn lane. The east approach (Wellington Street) consists of one through lane and one shared through-right lane.

There are no prohibited movements at this intersection.

Sir John A. Macdonald/Slidell - The Sir John A. Macdonald/Slidell intersection is a signalized, four-legged, intersection. The north approach (Onigam Street) consists of one shared through-right lane. The south approach (Slidell Street) consists of one through lane. The west and east approaches (Sir John A. Macdonald Parkway) each consists of one shared left-through lane and one shared through-right lane.

Left turns and right turns are prohibited at the west and east approaches from 7-9AM and 4-6PM. Left turns are prohibited at the north approach. Additionally, both left and right turns are prohibited at the south approach.

Sir John A. Macdonald/Parkdale - The Sir John A. Macdonald/Parkdale is an unsignalized interchange connecting Sir John A. Macdonald Parkway and Parkdale Avenue. Two through lanes are maintained in each direction on Sir John A. Macdonald Parkway through the interchange. There are no ramp terminal intersections since all possible movements are accommodated through free-flowing merge and diverge ramps.

Albert/City Centre - The Albert/City Centre intersection is a signalized four-legged intersection. The south approach (City Centre Avenue) consists of one left turn lane and one shared through-right lane. The north approach (OC Transpo Access) consists of one shared lane for all bus movements. The east approach (Albert Street) consists of one left turn lane, two through lanes (including one transit exclusive lane), and a transit exclusive right turn lane. The west approach (Albert Street) consists of one transit exclusive left turn lane and two through lanes (including one transit exclusive lane that facilitates right-turn movements for non-transit vehicles).

Non-transit vehicles are prohibited from entering the north approach of the intersection.

Albert/Bayview Station - The Albert/Bayview Station intersection is a signalized four-legged intersection. The south approach (Bayview Station Road) consists of one through lane, one left turn lane, and one channelized right turn lane. The north approach (Bayview Station Road) consists of one shared through-right lane and one left turn lane. The east approach (Albert Street) consists of one left turn lane, one through lane, and one transit exclusive through lane that facilitates right-turn movements for non-transit vehicles. The west approach (Scott Street) consists of one shared left turn-through lane and one transit exclusive through lane that facilitates right-turn movements for non-transit vehicles.

There are no prohibited movements at this intersection.

Scott/Parkdale - The Scott/Parkdale intersection is a signalized four-legged intersection. The north approach (Parkdale Avenue) consists of one shared right turn-through lane, and one left turn lane. The south approach (Parkdale Avenue) consists of one shared right turn-through lane, and one left turn lane. The east approach (Scott Street) consists of two through lanes (including one transit exclusive lane that facilitates right-turn movements for non-transit vehicles), and one left turn lane. The west approach (Scott Street) consists of two through lanes (including one transit exclusive lane that facilitates right-turn movements for non-transit vehicles), and one left turn lane.

There are no prohibited movements at this intersection.

Existing Driveways to Adjacent Developments

There are 19 driveways that fall within a 200m boundary of the site. These exclude driveways that only serve a single private dwelling.

- 12 driveways are located near the south perimeter of the site
    - 1 driveway on Empress Avenue that is 40m south of Albert Street, connecting to a seniors' centre and spiritual centre parking lot.
    - 3 driveways on Booth Street. Two of which are approximately 50m south of Albert Street, connecting to office buildings and a townhouse complex. The third driveway is approximately 90m south of Albert Street, connecting to a separate townhouse complex.
    - 3 driveways on Rochester Street, all located at the cul-de-sac at the north end of the street, connecting to townhouse complexes.
    - 3 driveways on Primrose Avenue. Two are located 40m east of the intersection while the remaining driveway is located 100m west of the intersection. All driveways provide connections to separate townhouse complexes; and,
    - 2 driveways on City Centre Avenue, located approximately 50m and 150m south of Albert Street. Both driveways provide connections to an office and retail complex.
- 6 driveways are located near the east perimeter of the site
    - 4 driveways on Lett Street, ranging from approximately 70m south of Wellington Street to approximately 220m south of Wellington Street. All four driveways connect to apartment complexes.
    - 1 driveway is located on Fleet Street, approximately 50m east of Booth Street, providing connection to an apartment show room/office, and
    - 1 driveway is located on Lloyd Street, approximately 90m south of Fleet Street. This driveway provides connection to a surface parking lot.
- 1 driveway is located near the north perimeter of the site
    - This driveway is located on Vimy Place, approximately 260m west of Booth Street, serving the parking lot of the Canadian War Museum.

Pedestrian/Cycling Network

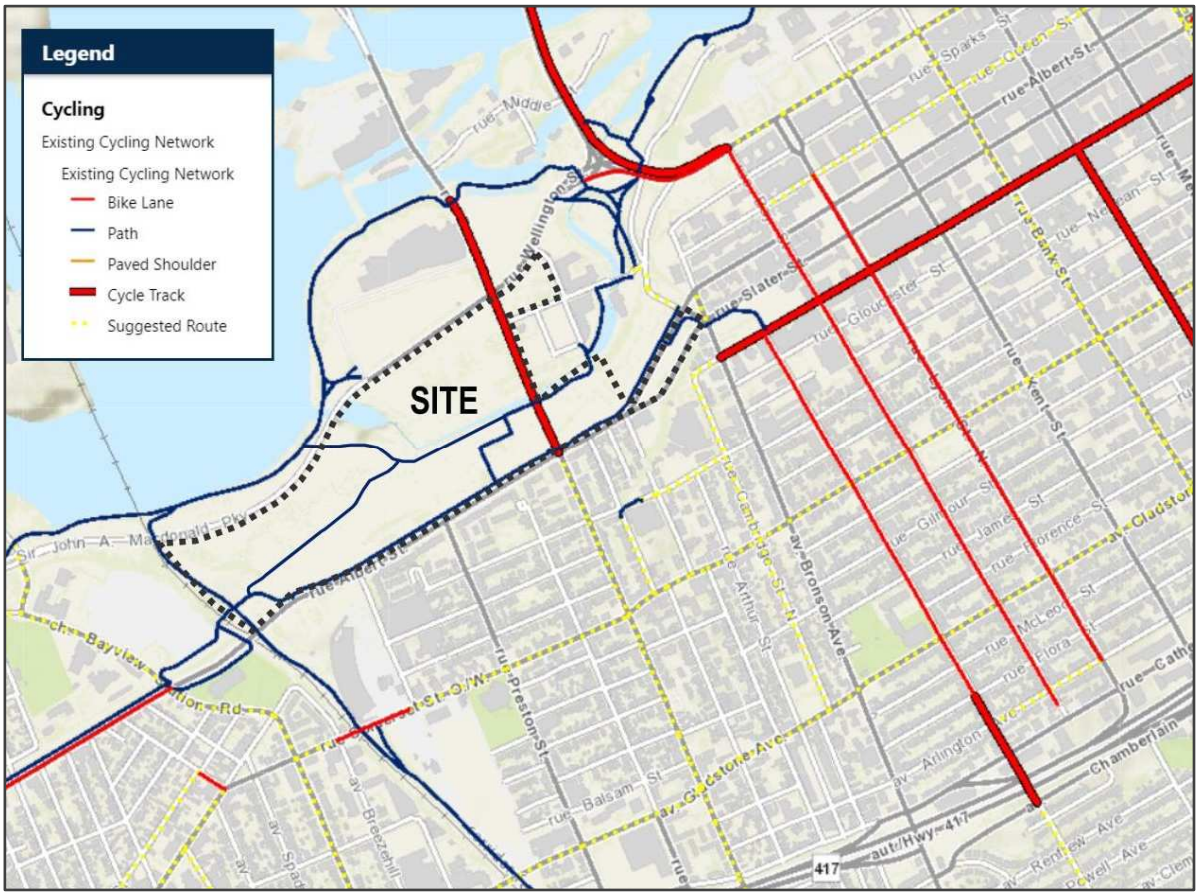
The pedestrian network in the vicinity of the site is well developed and offers a number of convenient and scenic routes, such as the expansive Capital Pathway and Trans Canada Trail (along the Ottawa River), the Trillium Pathway (along the Trillium LRT line), and the aforementioned multi-use pathway along the north side of Albert Street / Scott Street, all of which are in close proximity to LeBreton Flats and will have direct connectivity to the development.

Sidewalks are also provided along both sides of study area roadways, in most cases. Exceptions can be found on select local streets accommodating low vehicle speeds, where sidewalks are either

reduced to one side only or terminate midblock, such as City Centre Avenue. It should also be noted that Sir John A. Macdonald Parkway and portions of Slater Street do not have sidewalks (e.g., currently, Slater Street between Empress Street and Bronson Avenue has little to no sidewalks available for pedestrians).

With regard to cycling facilities, the study area is bisected by two cycling spine routes (Albert Street and Booth Street) as defined by the Ottawa Cycling Plan 2013; additional spine routes in the area include Wellington Street from the Portage Bridge to Vimy Place, and Slater Street east of the split with Albert Street. Additionally, the study area is surrounded by various pathway networks (NCC Capital Pathway, Trillium Pathway, and Albert Street multi-use pathway). The existing multi-use path/cycling network within the vicinity of the subject site, as sourced from GeoOttawa, is shown in the following **Figure 5**.

Figure 5: Existing Multi-Use Path/Cycling Network



As shown in Figure 5, there are currently multi-use pathways directly adjacent to LeBreton Flats along Albert Street, which feed directly into bike lanes on Scott Street to the west, and dedicated cycle tracks on Laurier Avenue to the east. Based on field observations and local area knowledge, cycling activity is considered to be high within the vicinity of the subject development lands.

Transit Network

OC Transpo currently provides the highest order transit service through the heart of LeBreton Flats. The site will benefit from direct access to both of OC Transpo's O-Train Lines: Confederation Line and Trillium Line. The Bayview LRT Station is located along the western limit of LeBreton Flats, which serves as a transfer station between the east-west Confederation Line (Line 1) and north-south Trillium Line (Line 2). The Pimisi LRT Station is located closer to the eastern limit of LeBreton Flats and provides service for the east-west Confederation Line (Line 1).

Additionally, 11 OC Transpo bus stops are located within walking distance to/from LeBreton Flats. The following **Table 1** summarizes existing stops, their associated routes and direction of travel. In addition to OC Transpo, STO also provides service between downtown Ottawa and Hull. STO provides service through the study area via Portage Bridge and Wellington Street; however, there are currently no stops within a reasonable walking distance to/from the subject development site.

Table 1: Transit Information

Stop #	Location	Route Identifier	Direction
#0433	120m north of Booth/Wellington	61, 63, 66, 75, 85	Southbound
#1877	Immediately south of Booth/Wellington	61, 63, 66, 75, 85	Southbound
#1876	Immediately south of Booth/Wellington	61, 63, 66, 75, 85	Northbound
#2371	Immediately south of Preston/Albert	85	Southbound
#2392	Immediately east of Albert/Empress	16,57,61,75	Westbound
#2396	Immediately east of Albert/Empress	16,57,61,75	Eastbound
#3010	Pimisi LRT Station	Confederation Line	East/Westbound
#3010A	Pimisi Station, Upper Level	61, 63, 66, 75, 85	Northbound
#3010B	Pimisi Station, Upper Level	61, 63, 66, 75, 85	Southbound
#3010C	Immediately west of Booth/Albert	16,57,61,75	Westbound
#3010D	Immediately east of Booth/Albert	16,57,61,75	Eastbound
#3060	Bayview LRT Station	Confederation & Trillium Line	East/Westbound & Southbound
#3060A	150m west of City Centre/Albert	16,57,61,63,66,75	Westbound
#5684	100m east of Preston/Albert	16,57,61,75,85	Eastbound
#5722	120m north of Booth/Wellington	61, 63, 66, 75, 85	Northbound
#6659	70m west of Preston/Albert	16,57,61,75	Westbound
#8005	Immediately south of Preston/Albert	85	Northbound
#8048	Immediately east of City Centre/Albert	16,57,61,75	Eastbound

The following **Figure 6** depicts the OC Transpo routes within the vicinity of the LeBreton Flats, and **Table 2** provides additional information with respect OC Transpo service identified in Table 1.

Figure 6: Transit Routes Within Study Area *(Source: OC Transpo System Map)*

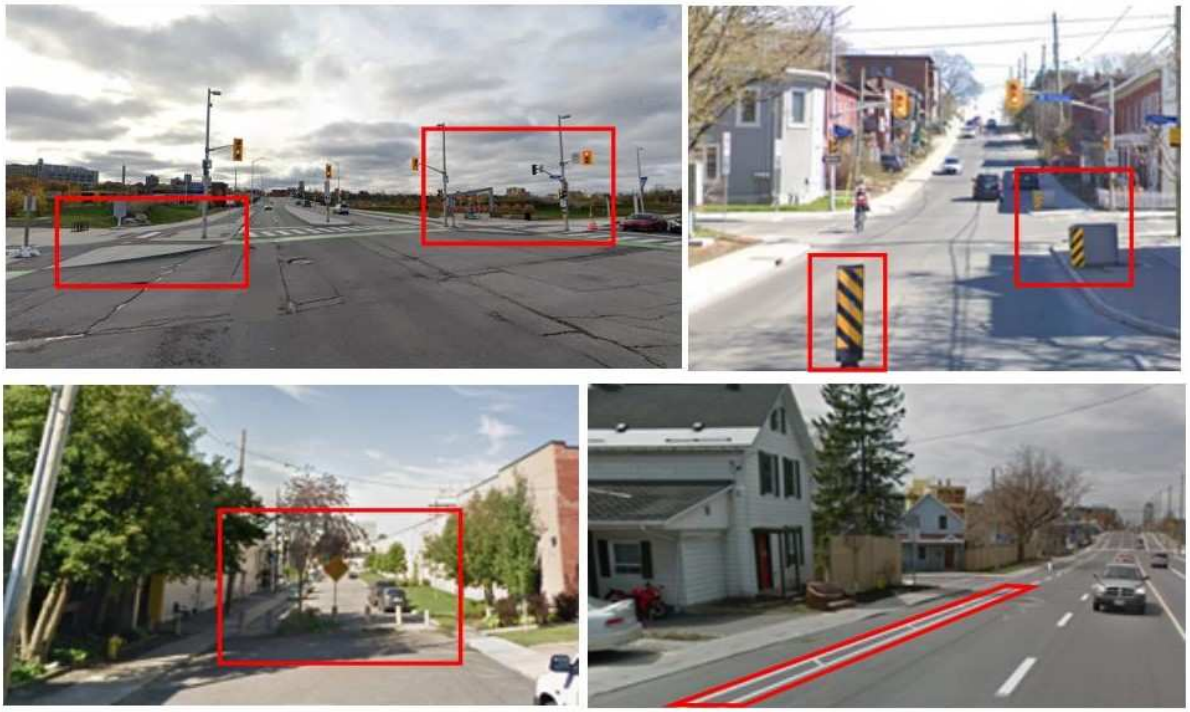
Table 2: OC Transpo Route Information

Route	Origin/Destination	Service Type	Peak Hour Headway
1	Confederation Line (Tunney's Pasture ↔ Blair)	LRT	5 min
2	Trillium Line (Bayview ↔ Greenboro)	LRT	12 min
16	Tunney's Pasture/Westboro ↔ Main Street	Local	30 min
57	Tunney's Pasture ↔ Bells Corners	Rapid & Night Route	15 min *(20 -30 min on Night Route)*
61	Tunney's Pasture/Gatineau ↔ Stittsville	Rapid & Night Route	5 min, *(30 min on Night Route)*
63	Briarbrook ↔ Tunney's Pasture	Rapid	15 min
66	Gatineau ↔ Kanata-Solandt	Limited Local	15 min, AM-out/PM-inbound only
75	Barrhaven Centre ↔ Tunney's Pasture/Gatineau	Rapid & Night Route	10 min, *(20 -30 min on Night Route)*
85	Gatineau ↔ Bayshore	Frequent	15 min

Area Traffic Management Measures

The following **Figure 7** highlights the various area traffic management measures implemented within the vicinity of LeBreton Flats. The top left corner of the figure shows bulb-outs, deflectors, and turning restrictions on Wellington/Booth. The top right corner of the figure shows bulb-outs, planter, and vertical centreline treatments on Booth Street, south of the Booth/Albert intersection. It should also be noted that there are speed humps on Booth between Albert Street and Primrose Avenue. The bottom left corner shows on-street plazas/vehicle access closure on Elm St. W (vehicle access closures are also present on Spruce St. W). The bottom right corner shows road dieting measures on Scott Street in the form of a bike lane with buffer.

Figure 7: Area Traffic Management



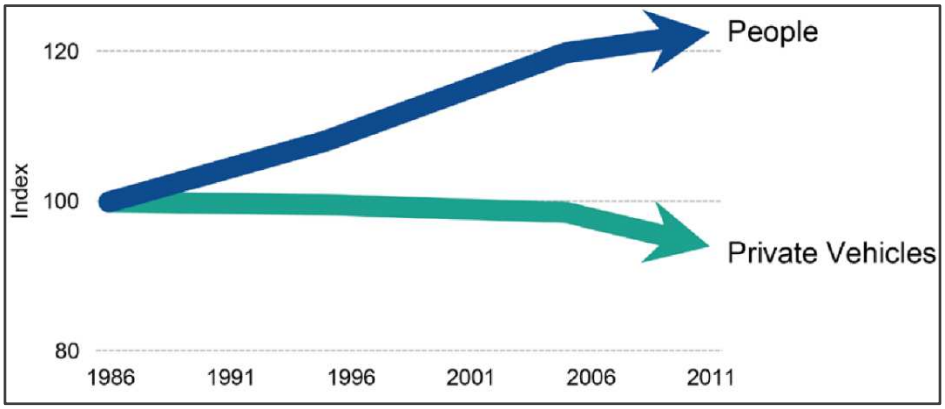
Peak Hour Travel Demands

For the purpose of this assessment and based on the initial study, the following study area intersections have been identified for intersection capacity analysis (traffic count date included in parentheses):

- Portage Bridge/Wellington (June 2014)
- Booth/Chaudière
- Booth/Wellington (May 2013)
- Booth/Albert (April 2014)
- Booth/War Museum (July 2013)
- Albert/Preston (April 2014)
- Vimy/Wellington (January 2020)
- Slidell/Sir John A. Macdonald Parkway (April 2017)
- Albert-Scott/Bayview Station (April 2014)
- Albert/City Centre (April 2014)
- Parkdale/Sir John A. Macdonald Parkway (February 2020)
- Parkdale/Scott (April 2014)

It is noted in the City's 2013 TMP that reliance on vehicles to enter and exit the downtown has been diminishing for some time now. **Figure 8** below, from the TMP, illustrates this graphically. The exhibit makes it clear that between 1986 and 2011, the number of vehicles arriving downtown in the morning peak period has decreased while the number of people arriving downtown has increased. An Origin-Destination Travel Survey that was planned for 2021 has been delayed due to the COVID-19 pandemic, but the trend is expected to have continued from 2011 onwards due to the increased residential development in the downtown, improved transit service, and limited roadway capacity to enter the downtown.

Figure 8: Trips Entering the Downtown Core, Morning Peak Period, 1986 – 2011



According to the City of Ottawa's New Official Plan (2021), LeBreton Flats falls within the Downtown Core Transect (formerly known as Ottawa's Central Area in older versions of the Official Plan), which encompasses a large portion of the downtown area. Therefore, for the purposes of this study, no background traffic growth (i.e., background traffic growth of 0%) was assumed.

In addition to the lack of growth in background traffic, the study area roadways have been impacted by LRT related construction activities for a considerable time (2015-2020) which reduced the attractiveness of relying on private vehicles and prompted some to change their trip time, forego their trips, or change routes/destinations in an effort to avoid congestion. Additionally, the COVID-19 crisis that started in March 2020 further impacted travel patterns, making more recent traffic counts post LRT implementation not beneficial or representative of "typical" conditions. Therefore, and as agreed to by City Staff, historical traffic count data from the year 2014 (where available) was used for analysis purposes. It should be noted that due to certain data gaps (i.e., not every study area intersection was counted during the year 2014), a volume balancing exercise was conducted (i.e., traffic volumes were appropriately adjusted to minimize large volume imbalances between study area intersections).

The following **Figure 9** depicts observed weekday morning and afternoon peak hour vehicle volumes at the study area intersections and **Figure 10** illustrates pedestrian and cyclist volumes over the same peak hour periods. It should be noted that two of the counts were taken during winter, and six of the counts were taken in early spring, which may result in artificially lower cycling volumes due to poor cycling conditions. Additionally, City staff indicate that cycling volumes have greatly increased since 2014, which means cycling volumes below may be underreported for current conditions. Detailed traffic count data is included in **Appendix B**.

Existing Road Safety Conditions

Available collision data for the years 2015 – 2019 was obtained from the City of Ottawa's Open Data Catalogue and provided in **Appendix C**. The collision data includes all collisions occurring at the intersections and the roadway segments within the area surrounding the subject development site, including intersections and segments along Albert Street, Booth Street, Parkdale Avenue, Scott Street, Wellington Street and Sir John A. Macdonald Parkway.

Based on the most recent available historical collision data, the 5-year total number of recorded collisions within the study area is 552. Most collisions within the study area (441 incidents or 80%) resulted in property damage only, and the remaining collisions result in either personal injuries (109 incidents or 20%) or fatalities (2 incidents or <1%). Both fatalities occurred outside the development area, at the intersection of Sir John A Macdonald Parkway (SJAMP) with Slidell. The most frequent types of collisions, as cited by police, were rear ends (217 incidents or 39%) and sideswipes (100 incidents or 18%).

It is noteworthy that within the five years of recorded collision data, there were 10 collisions involving pedestrians. Fortunately, all the reported collisions involving pedestrians were non-fatal; however, personal injuries were reported.

There were 20 collisions involving cyclists within the five years of recorded data, 19 of which were at intersections and 1 which was on a roadway segment. It is notable that 4 of the 20 collisions occurred at the intersection of Albert Street and Booth Street.

Figure 9: Turning Movement Counts, AM Peak (PM Peak)

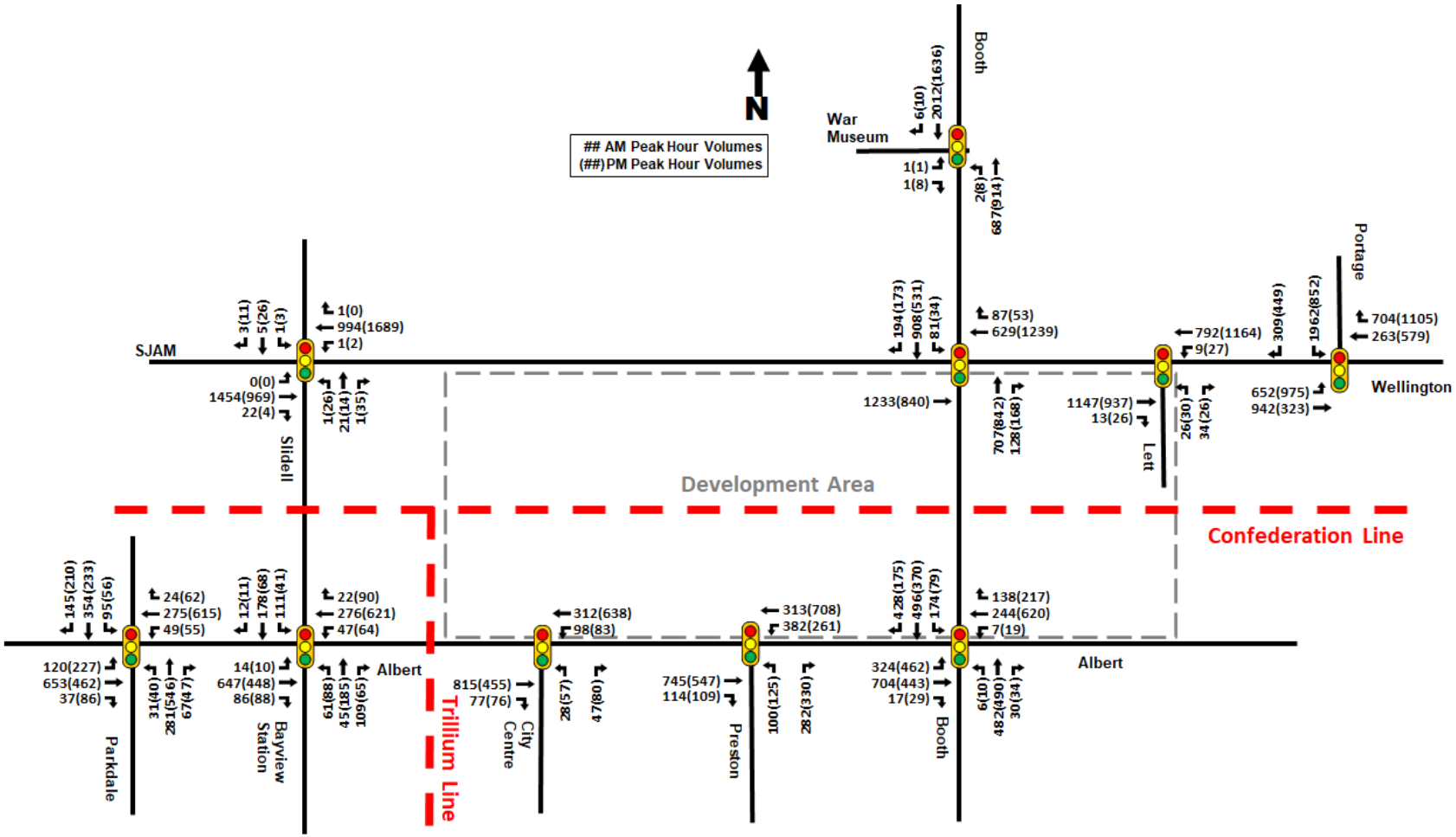
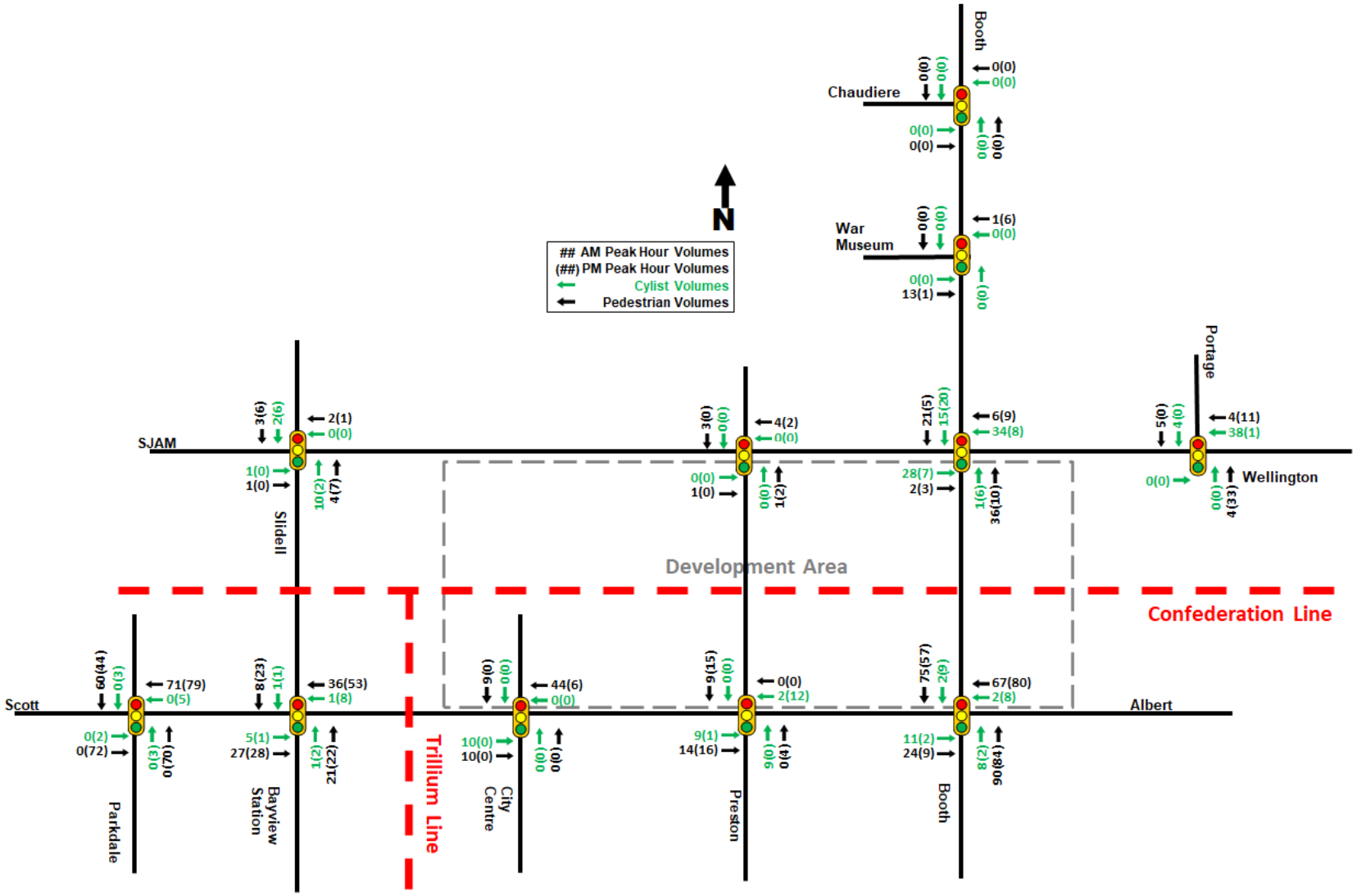


Figure 10: Existing Pedestrian and Cyclist Volumes, AM Peak (PM Peak)



3.1.3 Planned Conditions

Active Transportation Projects

Cycling projects underway or planned in the area include:

- Approximately one kilometer of multi-use pathway was recently built in LeBreton Flats. This pathway links existing multi-use pathways at Pimisi LRT Station with the Trillium Pathway and the Ottawa River Pathway.
- Uni-directional cycle tracks on Bay Street, from Wellington Street to Laurier Avenue, were completed in 2021, providing connectivity between Wellington Street and the Laurier Avenue bike lanes.
- Uni-directional cycle tracks on Booth Street north of Wellington Street, providing connectivity between Wellington Street and the Ottawa River Pathway. These cycle tracks will connect to the cycling facilities being provided across the Chaudière Crossing as part of the Zibi development, which in turn will connect to Gatineau and NCC cycling facilities on the Quebec side of the Ottawa River.
- A segregated bike facility on Wellington Street providing connectivity between Portage Bridge and Mackenzie Avenue.
- Eastbound cycle tracks along Albert Street through the study area, from City Centre Avenue in the west to Empress Avenue in the east, as part of the Albert Street Cycling / Pedestrian Modifications project. As part of this project some sections of the existing multi-use pathway on the north side of Albert Street will be maintained, while others will be converted to uni-directional westbound cycle tracks. Protected intersections at City Centre Avenue, Preston Street and Booth Street will also be implemented as part of this project.
- Uni-directional cycle tracks along Albert Street east of the study area as part of various improvement projects along Albert Street and Slater Street[1], extending from Empress Avenue in the west to the Mackenzie King Bridge in the east.
- Uni-directional cycle tracks intermittently along Scott Street, extending from Holland Avenue to Bayview Station Road and includes protected intersections at Parkdale Avenue, Carruthers Avenue, and Bayview Station Road. The cross-section will be reduced to two through lanes (i.e., one in each direction), with auxiliary turn lanes at select intersections.
- A multi-use pathway across the Chief William Commanda Bridge (formerly the Prince of Wales Bridge), as part of the Chief William Commanda Bridge rehabilitation project.

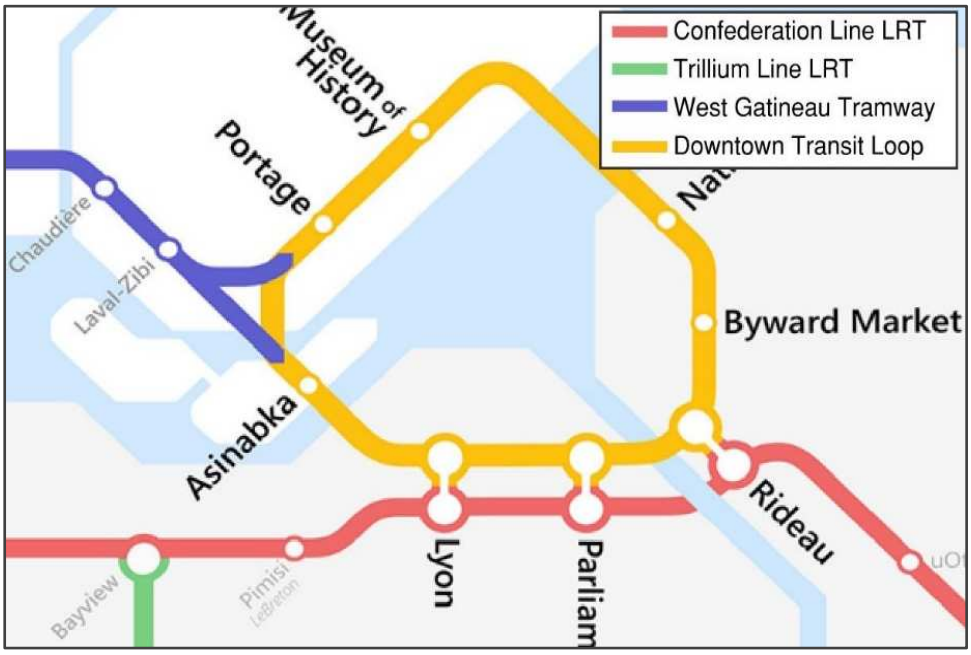
[1] Reconstruction Of Albert Street, Queen Street, Slater Street And Bronson Avenue - Draft Design Roll Plan, January, 2021

Transit Projects

With the completion of Ottawa's Confederation LRT line in 2019, there are no proposed or ongoing transit projects within the vicinity of the site identified in the City of Ottawa's Transportation Master Plan (TMP). Construction work for the Stage 2 LRT extension of the Confederation Line is ongoing at the time of this study; while no construction on Stage 2 is located within the study area, the extension of the line will increase the usage of the Confederation Line, which bisects the LeBreton Flats site. In the coming years, the transit only lanes along Albert and Slater Streets will be removed as part of the various upgrades to pedestrian and cycling facilities, identified in the section above.

The City of Gatineau has recently released plans for a tramway connecting the growing area of Aylmer to downtown Ottawa, including potential connections to the Confederation Line. The system would traverse the Portage Bridge into Ottawa, likely replacing the existing bus-only lanes on the Portage Bridge. The tramway would terminate near Elgin Street, with an alignment either along Wellington Street or a tunnel under Sparks Street. The City of Ottawa has shown a preference for the Sparks Street alignment, while the NCC has shown a preference for the Wellington Street alignment. The closest the West Gatineau Tramway would be to LeBreton Flats is at the intersection of Wellington/Portage Bridge, which is approximately 270m from the northeast corner of the development site. There are currently no projections for OC Transpo and STO ridership changes, although it can be expected that there may be fewer trips on bus routes crossing into Gatineau on Booth Street, such as OC Transpo Route 85. Additionally, the NCC has indicated an interest in pursuing a "Downtown Transit Loop" dating back to 2020, connecting the downtowns of Ottawa and Gatineau[2]. **Figure 11** below shows all existing and proposed rapid transit networks in the downtown area.

Figure 11: Proposed Downtown Rapid Transit Network



[2] https://ncc-ccn.gc.ca/news/national-capital-region-loop-the-idea-whose-time-has-come

Road Projects

Referencing the City of Ottawa's Construction and Infrastructure Projects website, construction is anticipated to impact the following roadways within the study area. These construction projects may relate to road resurfacing, watermains, sewers, multi-use pathways, and bike facilities, which are all opportunities to change roadway characteristics/functionality:

- This year (2023-2024)
  - Re-alignment of Albert Street and Slater Street, between Empress Avenue to Bay Street, as well as construction on Queen Street.
  - Albert Street Cycling / Pedestrian Modifications project, between City Centre Avenue and Empress Avenue.
  - Scott Street Protected Intersections project, between Holland Avenue and Bayview Station Road.
  - Wellington Street resurfacing, from Booth to O'Connor.
- 2-5 years
  - Scott Street streetscaping, from Parkdale Avenue to Bayview Station Road.
  - Road, sewer and water on City Centre Avenue, and Elm Street between Albert and Preston.
- 5+ years (or construction start yet to be determined)
  - Albert Street and Slater Street, Bay Street to Elgin Street.

Other Area Development

Planned developments within the study area have been identified using the City's Development Application Search Tool. The following **Table 3** below summarizes planned and active developments within the vicinity of the subject development lands.

Table 3: Area Development

Location	Description	Size	Type
3-4 Booth	Zibi Project, Chaudière and Albert Islands Redevelopment	(Ottawa Sector) - 1,202 condo units - 51,954 ft^2 retail - 184,045 ft^2 office - 160 suite hotel	Mixed-use community
133 Booth	East LeBreton Flats Redevelopment	- 592 residential units - 5,190 ft^2 daycare - 3,265 ft^2 ground floor commercial	Mixed-use community
900 Albert	Three high-rise residential buildings with commercial	- 1,232 condo units - 150 suite hotel - 128,370 ft^2 retail - 197,324 ft^2 office	Mixed-use residential buildings

It should be noted that the projected impact of the developments summarized in Table 3 are included in the subsequent analysis.

3.2 Study Area and Time Periods

3.2.1 Study Area

The following study area intersections were agreed to be assessed through discussions with City staff:

- Portage Bridge/Wellington
- Booth/Chaudière
- Booth/Wellington
- Booth/Albert
- Booth/War Museum
- Albert/Preston
- Vimy/Wellington
- Slidell/ Sir John A. Macdonald Parkway
- Bayview Station/Albert
- Albert/City Centre
- Parkdale/Scott

The defined study area is considered to be relatively large and should capture the majority of the projected traffic generated by the proposed development lands. Traffic impacts outside the defined study area should be relatively small. However, shifts in demand may occur outside of the study area due to the currently saturated road network. Such changes in travel behaviour may be captured by the City's regional macroscopic transportation demand model, which is currently being updated to help assess future infrastructure needs.

3.2.2 Time Periods

Given the surrounding road network (e.g., Albert Street, Wellington Street) typically experience the heaviest traffic volumes during the weekday morning and afternoon peak hours, this assessment considered weekday morning and afternoon peak hours for analysis purposes only.

3.2.3 Horizon Years

As noted in the TIA Guidelines, when a development will proceed in phases, TIA analysis must be completed for each development phase. Due to the scope of the development, it is difficult to select an exact year for full build-out of each phase, however through discussions with the NCC and O2 Planning + Design (consultants of the Master Concept Plan), the following horizons were agreed to for assessment.

- 2030: Phase 1 build-out
- 2040: Phase 2 build-out
- 2050: Phase 3 build-out

It is noted in the TIA Guidelines that a "build-out plus five years horizon" is also required. It is also noted that the City may waive the need to analyze a "build-out plus five years horizon". It is proposed here that due to the numerous stages to this development along with the lack of background traffic growth, that no "build-out plus five years horizon" be required.

3.3 Exemptions Review

Given the size and nature of the proposed development lands, and following discussion with City Staff, the following TIA analysis modules have been exempted from this TIA analysis: Modules 4.1, 4.2, 4.3 and 4.4. It is our understanding that the City will request that these modules be included in future development applications for individual parcels of land. The following **Table 4** summarizes the modules that were considered for exemption.

Table 4: Module Exemption Review

Module	Element	Exemption Criteria	Exemption Status
Design Review			
4.1 Development Design	4.1.2 Circulation and Access	Required for Site Plans	**Exempt**
	4.1.3 New Street Network	Required for Plans of Subdivision	**Exempt**
4.2 Parking	4.2.1 Parking Supply	Required for Site Plans	**Exempt**
	4.2.2 Spillover Parking	Required for Site Plans where parking supply will be 15% below unconstrained demand	**Exempt**
4.3 Boundary Streets	Mobility	Exempt through discussions with City has noted above.	**Exempt**
	Road Safety		
	Neighbourhood Traffic Management		
4.4 Access Intersections	4.4.1 Location and Design of Access		**Exempt**
	4.4.2 Intersection Control		
	4.4.3 Intersection Design		
Network Impact			
4.5 Transportation Demand Management	All Elements	Not required for non-residential Site Plans expected to have fewer than 60 employees and/or students on location at any given time	**Not Exempt**
4.6 Neighbourhood Traffic Management	All Elements	Required when the development relies on local or collector streets for access and total volumes exceed ATM capacity thresholds	**Not Exempt**
4.8 Network Concept	All Elements	Required when development is projected to generate more than 200 person-trips during the peak hour, in excess of the equivalent volume permitted by the established zoning	**Not Exempt**

4. STEP 3 – FORECASTING

4.1 Development-Generated Travel Demand

4.1.1 Land Use Scenarios

As previously described, the Master Concept Plan of LeBreton Flats is planned to include a mix of high-density residential, office, retail and hotel type land uses, as well as approximately 12.7 hectares of parks and open spaces. It should also be noted that the current Master Concept Plan includes an option to host a major event centre. Based on a land use planning exercise by O2 Planning + Design, four potential development scenarios were envisioned for LeBreton Flats – all of which are summarized in **Table 5** below.

Table 5: Potential Development Scenarios

Scenario	Description	Townhome (units)	Mid-Rise (units)	High-Rise (units)	Retail (ft^2)	Office (ft^2)	Hotel (ft^2)
1	Major Event Centre & Mixed-use	379	1,076	2,626	195,382	523,126	216,418
2	Mixed-use Only	473	1,242	2,735	183,617	535,483	85,638
3	Major Event Centre & Predominantly Office	95	1,174	3,069	194,866	949,378	230,950
4	**Major Event Centre & Highest Density**	301	1397	2419	261,035	508,734	154,419

Of the four scenarios listed above, Scenario 4 has the highest density and therefore, is considered to exhibit the highest potential trip generation. As such, the **subsequent analysis will only consider Scenario 4, as it reflects the "worst case scenario" from a trip generation perspective**. That being said, Scenario 4 is considered to be the most ambitious development scenario.

For analysis purposes, the Master Concept Plan has been assumed to be built-out in the following phases:

Phase 1: Early Stages (approximately 2023-2030)

Land Sales + Development

- Albert District (east of Booth Street, North of Albert Street) {parcels A9, A10}
- Flats North (+associated new streets/lanes) {parcels F1, F2, F3, F8}
- Albert District West: Major events centre development (major event centre site) {parcels A1, A2, A3, A4}
    - If no major event centre is developed (or other special uses): NCC will proceed with Alternate Site option (+associated streets)

Infrastructure & Open Space Investments

- Cave Creek Sewer
- Urban Playground
- Inlet area
- Ph1. City Park (East)
- Preston (between Albert & LRT)
- Preston Pedestrian/Bike Bridge
- Connecting pathway to Bayview station
- Potential for limited improvements for interim uses in the Aqueduct District

Phase 2: Middle Stages (2030-2040)

Land Sales + Development

- Flats South (+associated streets) {F4, F9, F10, F11, F12}
- Albert District West, between Preston and Broad (+associated streets) {A5, A6}

Infrastructure & Open Space Investments

- Covered Aqueduct enhancements
- Aqueduct District Open Spaces
- Ph2. City Park (west)
- Capital Park
- City Centre Pedestrian/Bike Bridge

Phase 3: Later Stages (2040+)

Land Sales + Development

- Aqueduct District {AD1, AD2, AD3, AD4, AD5}
- Albert District East (south of Albert Street) {A11, A12}
- Albert District West, between Broad and Booth (+associated streets) {A7, A8}
- Flats (Pindigen Park Site) {F5, F6, F7}

The following **Table 6** summarizes the size and type of land uses for each development block per planned phase of development for Scenario 4.

Table 6: Scenario 4 Land Use Build-out by Block/Phase

Block	Land Use					
	Low-Rise Housing (units)	Mid-Rise Housing (units)	High-Rise Housing (units)	Shopping Center (ft^2)	General Office (ft^2)	Hotel (ft^2)
Phase 1 (2023-2030)						
A1	-	120	364	14,951	-	-
A2-4 (Major Event Centre)	-	-	257	25,510	-	101,719 (201 rooms)
A9	-	59	128	10,333	-	-
A10	-	114	256	20,333	-	-
F1	74	-	-	-	-	-
F2	56	-	-	-	-	-
F3	76	-	-	-	-	-
F8	-	86	-	9,515	-	52,700 (104 rooms)
Phase 1 Total	*206*	*379*	*1005*	*80,643*	-	*154,419 (305 rooms)*
Phase 2 (2030-2040)						
A5	10	132	81	-	-	-
A6	10	145	122	9,020	-	-
A11	0	178	61	11,259	-	-
A12	0	60	41	6,458	-	-
F9	14	81	94	5,533	-	-
F10	14	86	135	5,877	-	-
Phase 2 Total	*48*	*682*	*534*	*38,147*	-	-
Phase 3 (2040+)						
A7	-	-	150	21,905	144,139	-
A8	-	-	230	30,257	117,563	-
F4	47	-	-	-	-	-
F5	-	56	95	-	-	-
F6	-	49	68	-	-	-
F7	-	55	-	-	-	-
F11	-	110	175	30,785	-	-
F12	-	66	162	19,289	-	-
AD1-5	-	-	-	40,009	247,032	-
Phase 3 Total	*47*	*336*	*880*	*142,245*	*508,734*	-
Total	**301**	**1397**	**2419**	**261,035**	**508,734**	**154,419 (305 rooms)**

4.1.2 Trip Generation

For the purpose of this assessment, projected residential site-generated traffic was estimated using the City of Ottawa TRANS Trip Generation Manual (2020). Projected retail, office and hotel traffic was estimated using the trip generation rates from the 10th Edition of the Institute of Transportation Engineers (ITE) Trip Generation Manual. This method of predicting trip generation is considered industry best practice, is the method required as part of a formal Traffic Impact Assessment Study for the City of Ottawa, and is the method agreed to specifically for this project through discussions with the City of Ottawa.

Based on the foregoing and the information provided, the following **Table 7** summarizes appropriate vehicle trip generation rates for estimating projected site-generated traffic by land use. It should be noted that the first listed equation is an average person trip generation rate, and the second equation is a "line of best fit" equation that more accurately represents the trend of person trip generation based on land use size. Typical industry practice is to use the "line of best fit" equation for site-generated traffic projections, if available.

Table 7: Trip Generation Rates

Land Use	Land Use Code (TRANS / ITE)	AM Peak Hour	PM Peak Hour
Low-Rise Multi-family Housing *(X = Units)*	TRANS Multi-Unit (Low-Rise)	T = 0.68(X)	T = 0.70(X)
Mid-Rise Multi-family Housing *(X = Dwelling Units)*	TRANS Multi-Unit (High-Rise)	T = 0.4(X)	T = 0.4(X)
High-Rise Multi-family Housing *(X = Dwelling Units)*	TRANS Multi-Unit (High-Rise)		
Shopping Center *(X = 1,000 ft² GFA)*	ITE 820 General Urban/Suburban	T = 5.03(X); or Ln(T) = 0.86(X) + 2.53	T = 7.49(X); or Ln(T) = 0.66(X) + 4.04
General Office Building *(X = 1,000 ft² GFA)*	ITE 710 General Urban/Suburban	T = 1.25(X); or T = 1.23(X) + 6.01	T = 1.35(X); or T = 1.32(X) + 6.07
Hotel *(X = Rooms)*	ITE 310 General Urban/Suburban	T = 0.47(X); or T = 0.5(X) – 5.34	T = 0.60(X); or T = 0.75(X) - 26.02

Note: T = Average Person Trip Ends

With respect to TRANS residential trip generation rates, the TRANS Trip Generation Manual provides a person trip rate for the AM and PM peak periods. Adjustment factors are also provided in the TRANS Trip Generation Manual to convert the person peak period trip rates into vehicular, transit, cycling and walking peak hour trip rates.

With respect to ITE Trip Generation rates, the data used to develop these rates in the 10th Edition of the Trip Generation Manual provides person trips for certain development types, including Shopping Center (ITE Land Use Code 820) and General Office Building (ITE Land Use Code 710). These person trips were calculated for each land use, and then broken down into trips for different modes (vehicle, transit, cycling and walking) by using the mode split agreed upon with the City for this development (refer to Travel Mode Shares below).

The Hotel Land Use Code (ITE Code 310) only includes vehicular trip generation, with the data collection surveys used to develop the trip generation typically conducted in highly suburban locations with limited access to transit and dedicated non-motorized facilities (e.g., sidewalks, bike lanes, etc. are generally limited). To properly consider the multi-modal trips generated by the Hotel land use, projected site-generated traffic (estimated using ITE trip generation rates) is converted to projected site-generated person trips. To convert projected ITE vehicle trips to person trips, an auto occupancy factor and non-auto trip factor is applied to the ITE trip generation rates. According to the City's TIA Guidelines, and based on available American Census data, the typical modal share of non-auto person

trips is approximately 10% and the typical auto occupancy is 1.15. When combined/solving for "person trips" (i.e., Persons = 1.15xAutos + 0.10xPersons), a factor of 1.28 is used to convert vehicle trips to person trips. These person trips are then broken down into trips for different modes (vehicle, transit, cycling and walking) by using the mode split agreed upon with the City for this development (refer to Travel Mode Shares below).

The following **Table 8** and **Table 9** summarizes the resulting projected two-way person site trip generation for each phase of development, by development block and by land use type, respectively.

Table 8: Projected Site Person Trip Generation by Block / Parcel

Block	AM Peak Hour			PM Peak Hour		
	In	Out	Total	In	Out	Total
Phase 1 (2023-2030)						
A1	130	193	323	282	250	532
A2-4 (Major Event Centre)	214	214	428	394	350	744
A9	74	95	169	176	164	340
A10	136	179	315	293	269	562
F1	15	35	50	29	22	51
F2	11	27	38	22	17	39
F3	15	36	51	30	23	53
F8	93	88	181	185	167	352
Phase 1 Total	*688*	*867*	*1555*	*1411*	*1262*	*2673*
Phase 2 (2030-2040)						
A5	28	64	92	53	38	91
A6	80	117	197	187	169	356
A11	84	112	196	196	180	376
A12	45	57	102	121	115	236
F9	55	79	134	134	121	255
F10	62	93	155	149	132	281
Phase 2 Total	*354*	*522*	*876*	*840*	*755*	*1595*
Phase 3 (2040+)						
A7	299	155	454	297	422	719
A8	310	199	509	362	464	826
F4	10	22	32	18	15	33
F5	19	41	60	35	25	60
F6	14	33	47	27	19	46
F7	7	15	22	13	9	22
F11	165	188	353	339	320	659
F12	114	137	251	253	239	492
AD1-5	460	191	651	392	595	987
Phase 3 Total	*1398*	*981*	*2379*	*1736*	*2108*	*3844*
Total Person Trips	**2440**	**2370**	**4810**	**3987**	**4125**	**8112**

Table 9: Projected Site Person Trip Generation by Land Use Type

Block	AM Peak Hour			PM Peak Hour		
	In	Out	Total	In	Out	Total
Phase 1 (2023-2030)						
Residential	213	480	693	400	291	691
Retail	368	312	680	878	878	1756
Office	0	0	0	0	0	0
Hotel	107	75	182	133	93	226
Phase 1 Total	*688*	*867*	*1555*	*1411*	*1262*	*2673*
Phase 2 (2030-2040)						
Residential	160	357	517	299	214	513
Retail	194	165	359	541	541	1082
Office	0	0	0	0	0	0
Hotel	0	0	0	0	0	0
Phase 2 Total	*354*	*522*	*876*	*840*	*755*	*1595*
Phase 3 (2040+)						
Residential	162	356	518	298	216	514
Retail	600	513	1113	1287	1287	2574
Office	636	112	748	151	605	756
Hotel	0	0	0	0	0	0
Phase 3 Total	*1398*	*981*	*2379*	*1736*	*2108*	*3844*
Total Person Trips	**2440**	**2370**	**4810**	**3987**	**4125**	**8112**

As shown in Tables 8 and 9, the full build-out of LeBreton Flats is ultimately projected to generate an approximate two-way total of 4,810 and 8,110 person trips per hour during weekday morning and afternoon peak hours, respectively.

It should be noted that a percentage of projected site-generated trips can be attributed to 'pass-by' traffic (i.e., a quick stopover at LeBreton Flats on someone's normal daily commute), which does not impact overall network capacity, as a 'pass-by' trip is traffic already using the adjacent transportation network. Additionally, a percentage of projected site-generated trips could theoretically be further reduced, as a certain percentage of trips will be 'internal' trips (i.e., originate from and be destined to LeBreton Flats, such as individuals who live, work and shop all within LeBreton Flats). A high-level estimate of internal trip capture rate was calculated using the methodology outlined in the *National Cooperative Highway Research Program (NCHRP) Report 684 – Enhancing Internal Trip Capture Estimate for Mixed-Use Developments*. The calculation showed that a person trip reduction for LeBreton Flats due to internal capture could range from 5% to 13% (approximately 260 to 1060 trips in the peak hours).

Given that these potential reductions to projected site-generated trips will largely impact walking/cycling trips (because these are the likely mode choices for internal trips at LeBreton Flats), these reductions were not considered in the subsequent analysis, in order to provide a conservative estimate in this higher-level study. Future TIAs for individual parcels of land should take into account internal trip generation for their site-specific studies.

4.1.3 Travel Mode Shares

In order to determine the number of person trips arriving/departing by travel mode, total projected person trips are subdivided by mode share values, derived from the 2011 TRANS National Capital Region (NCR) Origin-Destination (OD) survey data, the nature/context of the proposed development and local area knowledge. Key factors that are taken into consideration, beyond NCR OD survey data, include: proximity and quality of transit, pedestrian and cycling facilities, purpose of trips, etc.

Based on discussions with City Staff and remaining consistent with assumptions used for TIA studies prepared for other area development sites, such as 900 Albert Street (25-30% driver, 5-10% passenger, 45-55% transit, 15% active), the Zibi development (25-30% driver, 5% passenger, 45-55% transit, 20% active), and Wateridge Village (45-55% driver, 10% passenger, 30-35% transit, 20% active). LeBreton Flats is considered to be a Transit Oriented Development (TOD) site, given its proximity/connectivity to the highest order transit service. The TRANS Trip Generation Manual identifies this area (i.e., in close proximity to Pimisi and Bayview Stations) as up to 70% of trips being sustainable modes. As such, the following summarizes the projected modal split of site-generated traffic for the subject development:

- **15%** **Auto Driver**
- **5%** **Auto Passenger**
- **60%** **Transit**
- **20%** **Walking and Cycling**

Based on the foregoing, the resulting projected vehicle, transit, and active transportation trips generated by the proposed development are summarized in **Table 10**, **Table 11,** and **Table 12**, respectively. It is worth noting that the actual transit mode share will differ by parcel, depending on the distance from the LRT station. However, for simplicity a blended mode share was carried for the entire site.

Table 10: Projected Site Vehicle Trip Generation

Block	AM Peak Hour			PM Peak Hour		
	In	Out	Total	In	Out	Total
Phase 1 (2023-2030)						
A1	20	29	48	43	38	80
A2-4 (Major Event Centre)	33	32	64	59	52	111
A9	11	14	25	26	25	51
A10	21	27	47	44	40	84
F1	2	5	7	4	3	7
F2	2	4	6	3	3	6
F3	2	5	7	5	3	8
F8	14	13	27	28	25	53
Phase 1 Total	*105*	*129*	*231*	*212*	*189*	*400*
Phase 2 (2030-2040)						
A5	4	10	14	8	6	14
A6	12	18	29	28	25	54
A11	12	17	29	29	27	56
A12	7	8	15	18	18	35
F9	9	12	20	20	18	38
F10	10	14	24	23	20	43
Phase 2 Total	*54*	*79*	*131*	*126*	*114*	*240*
Phase 3 (2040+)						
A7	45	23	69	45	64	108
A8	46	29	75	55	70	124
F4	2	3	5	3	2	5
F5	3	6	9	5	4	9
F6	2	5	7	4	3	7
F7	1	2	3	2	1	3
F11	24	29	53	51	48	99
F12	17	20	37	38	36	74
AD1-5	69	29	98	59	89	148
Phase 3 Total	209	146	356	262	317	577
Total 'New' Vehicle Trips	**368**	**354**	**718**	**600**	**620**	**1217**

As shown in Table 10, the full build-out of LeBreton Flats is projected to generate approximate two-way vehicle volumes of 720 veh/h and 1,220 veh/h during weekday morning and afternoon peak hours, respectively.

Table 11: Projected Site Transit Trip Generation

Block	AM Peak Hour			PM Peak Hour		
	In	Out	Total	In	Out	Total
Phase 1 (2023-2030)						
A1	78	115	193	169	150	319
A2-4 (Major Event Centre)	128	129	257	229	218	446
A9	45	57	101	106	99	205
A10	82	107	189	176	162	338
F1	9	21	30	17	13	30
F2	7	16	23	13	10	23
F3	9	22	31	18	14	32
F8	56	53	109	108	104	211
Phase 1 Total	*414*	*520*	*933*	*836*	*770*	*1604*
Phase 2 (2030-2040)						
A5	17	38	55	32	23	55
A6	48	70	118	112	101	213
A11	50	68	118	118	108	225
A12	27	34	61	73	69	142
F9	33	47	80	81	73	154
F10	38	56	94	89	79	168
Phase 2 Total	*213*	*313*	*526*	*505*	*453*	*957*
Phase 3 (2040+)						
A7	179	93	272	178	254	432
A8	185	119	305	217	279	496
F4	6	13	19	11	9	20
F5	11	25	36	21	15	36
F6	8	20	28	16	11	27
F7	4	9	13	8	5	13
F11	99	113	212	204	192	396
F12	69	82	151	152	144	295
AD1-5	276	115	391	235	357	592
Phase 3 Total	837	589	1427	1042	1266	2307
Total 'New' Transit Trips	**1464**	**1422**	**2886**	**2383**	**2489**	**4868**

As shown in Table 11, the full build-out of LeBreton Flats is projected to generate approximate two-way transit trip volumes of 2,890 trips/h and 4,870 trips/h during weekday morning and afternoon peak hours, respectively.

Table 12: Projected Site Active Trip Generation

Block	AM Peak Hour			PM Peak Hour		
	In	Out	Total	In	Out	Total
Phase 1 (2023-2030)						
A1	27	39	66	58	51	109
A2-4 (Major Event Centre)	45	43	88	76	73	149
A9	16	19	35	36	34	70
A10	29	37	66	59	54	113
F1	3	7	10	6	5	11
F2	3	6	9	5	4	9
F3	3	7	10	7	5	12
F8	19	18	37	36	35	71
Phase 1 Total	*145*	*176*	*321*	*283*	*261*	*544*
Phase 2 (2030-2040)						
A5	6	14	20	11	8	19
A6	16	24	40	38	34	72
A11	17	23	40	39	36	75
A12	10	11	21	25	24	49
F9	13	16	29	27	24	51
F10	14	19	33	31	27	58
Phase 2 Total	*76*	*107*	*183*	*171*	*153*	*324*
Phase 3 (2040+)						
A7	60	32	92	60	86	146
A8	62	39	101	74	94	168
F4	3	5	8	4	3	7
F5	4	9	13	7	6	13
F6	3	7	10	6	4	10
F7	2	3	5	3	2	5
F11	32	39	71	69	65	134
F12	23	28	51	51	48	99
AD1-5	92	39	131	78	118	196
Phase 3 Total	281	201	482	352	426	778
Total 'New' Active Trips	**502**	**484**	**986**	**806**	**840**	**1646**

As shown in Table 12, the full build-out of LeBreton Flats is projected to generate approximate two-way active trip volumes of 990 trips/h and 1,650 trips/h during weekday morning and afternoon peak hours, respectively.

It should be noted that given most transit trips begin or end as an active mode, it can be expected that approximately 3,880 trips/h and 6,520 trips/h will be made to/from/within LeBreton Flats as an active mode during weekday morning and afternoon peak hours, respectively. Given this relatively high projected volume of site-generated trips made by active modes, special consideration should be given to sidewalk/pathway capacity during design. Additional discussion on proposed roadway cross sections is provided in the subsequent **Step 4 - Analysis** section.

4.1.4 Trip Distribution and Assignment

The projected distribution of site-generated vehicular traffic was derived based on existing travel patterns, the site's connections to/from the surrounding road network, and local area knowledge. (e.g., the location and proximity of other employment areas, residential communities, entertainment, etc.). For analysis purposes, the following approximate distribution of projected site-generated traffic was assumed, which is consistent with data from the most recent 2011 TRANS Origin-Destination (OD) travel survey (i.e., "existing travel patterns"), consistent with the assumptions used for TIA studies prepared for other area development sites (e.g., Zibi, 900 Albert, etc.), and has been agreed to with the City of Ottawa for use in this study.

Departure

- 60% to the east via Wellington Street and Albert Street
- 15% to the west via Sir John A. Macdonald Parkway and Albert Street
- 5% to the north via Chaudière Crossing and Portage Bridge
- 20% to the south via Booth Street, Preston Street, Parkdale Avenue and Lyon Street.

Arrival

- 40% from the east via Wellington Street and Albert Street
- 15% from the west via Sir John A. Macdonald Parkway and Albert Street
- 10% from the north via Chaudière Crossing and Portage Bridge
- 35% from the south via Booth Street, Preston Street, Parkdale Avenue and Bay Street.

Based on the above assumed distribution, projected site-generated traffic was assigned to the study area network, which is depicted as the following **Figure 12** to **Figure 15**. Site traffic was assigned individually according to each development parcel; this was done to account for the unique situation for parcels north of the Confederation Line (i.e., Flats District), where the turning restrictions at Booth Street make access to these parcels difficult.

It should be noted that given size of the study area network and the number of study area intersections, each phase of site-generated traffic is subsequently depicted as two separate figures. The first figure for each phase depicts the assignment of site-generated traffic to the greater study area network, and the second figure for each phase depicts the assignment of site-generated traffic to site driveway connections and the immediate road network surrounding the subject development lands.

Figure 12: Projected Site-Generated Traffic – Phase 1

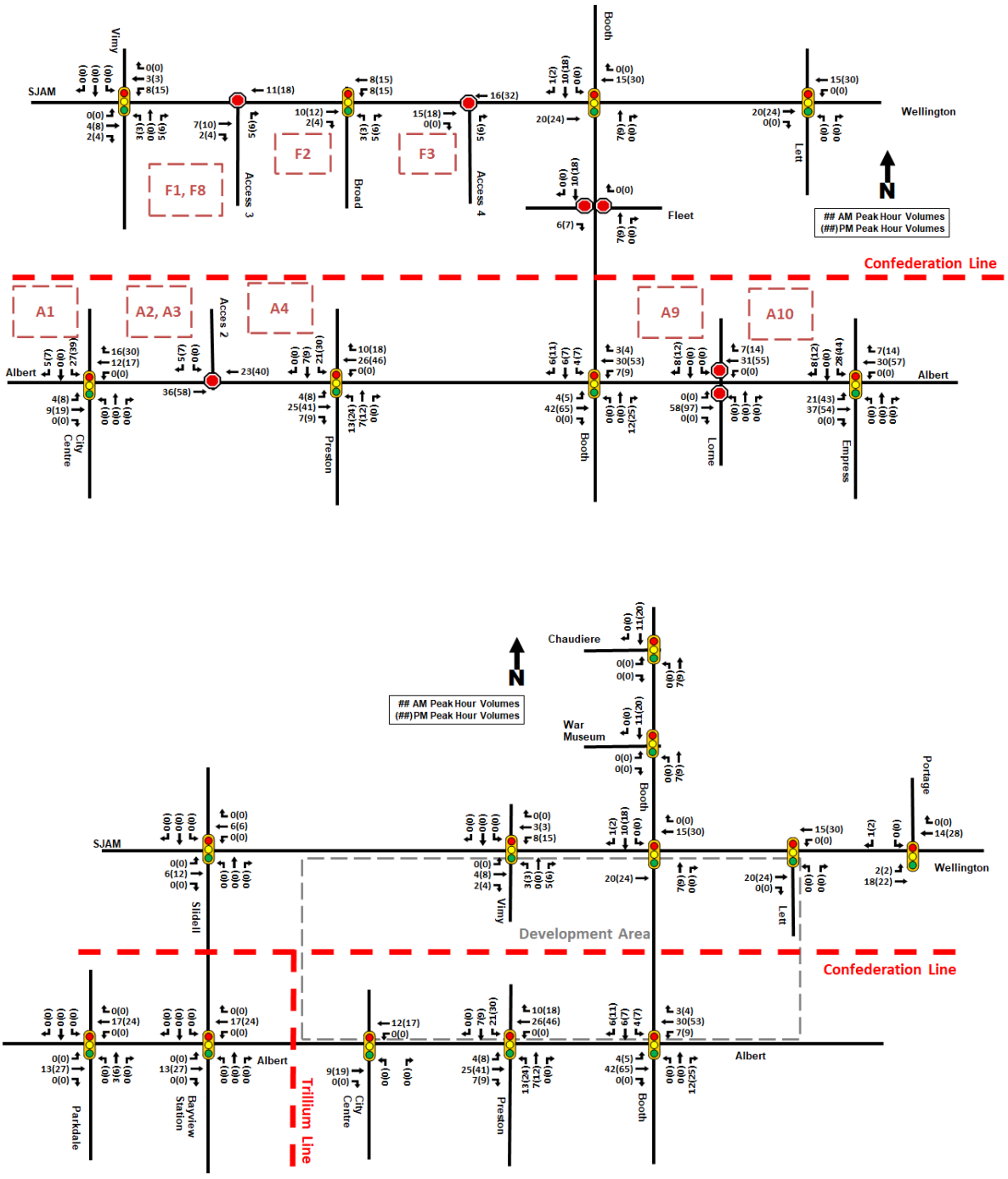


Figure 13: Projected Site-Generated Traffic – Phase 2

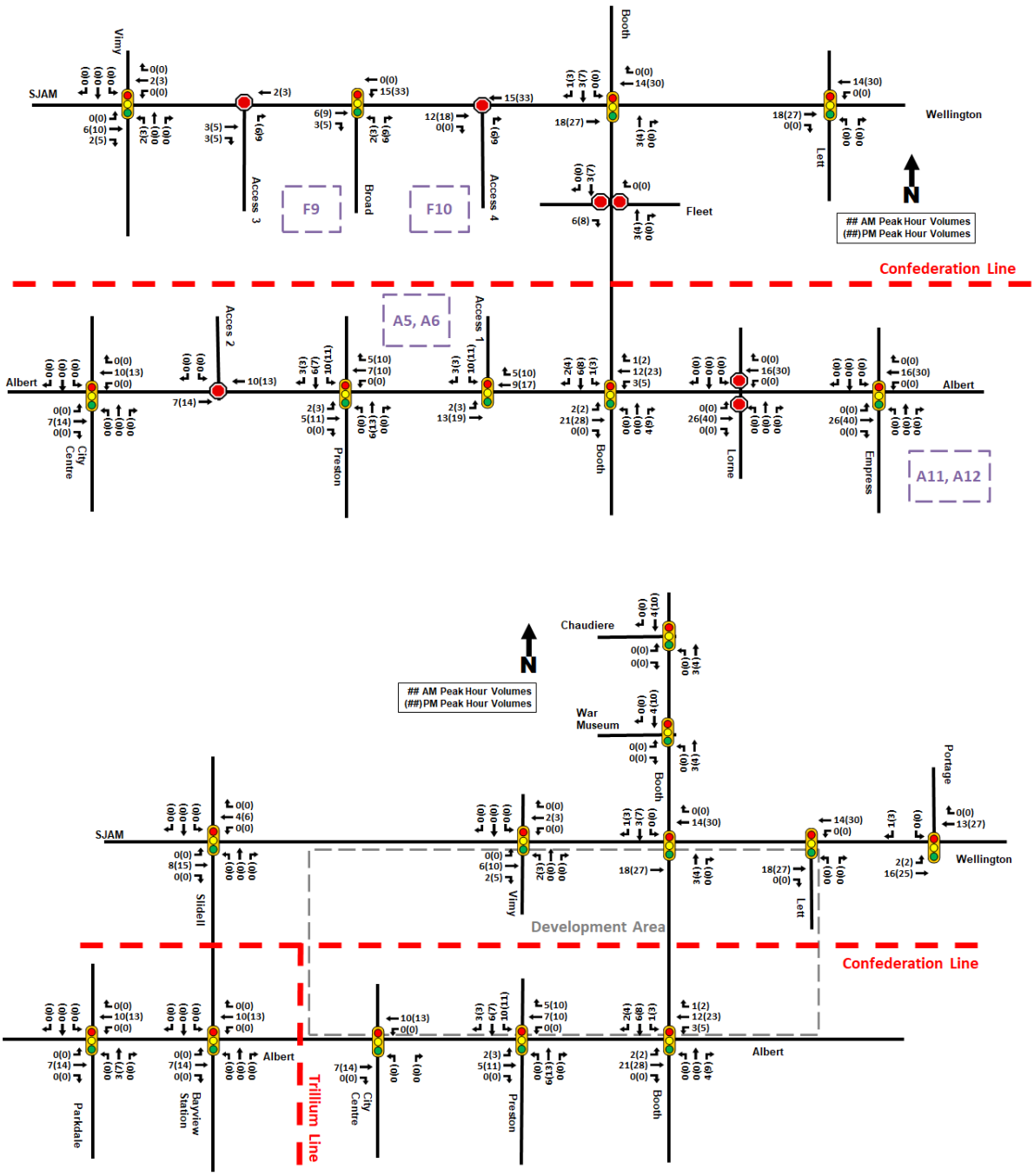


Figure 14: Projected Site-Generated Traffic – Phase 3

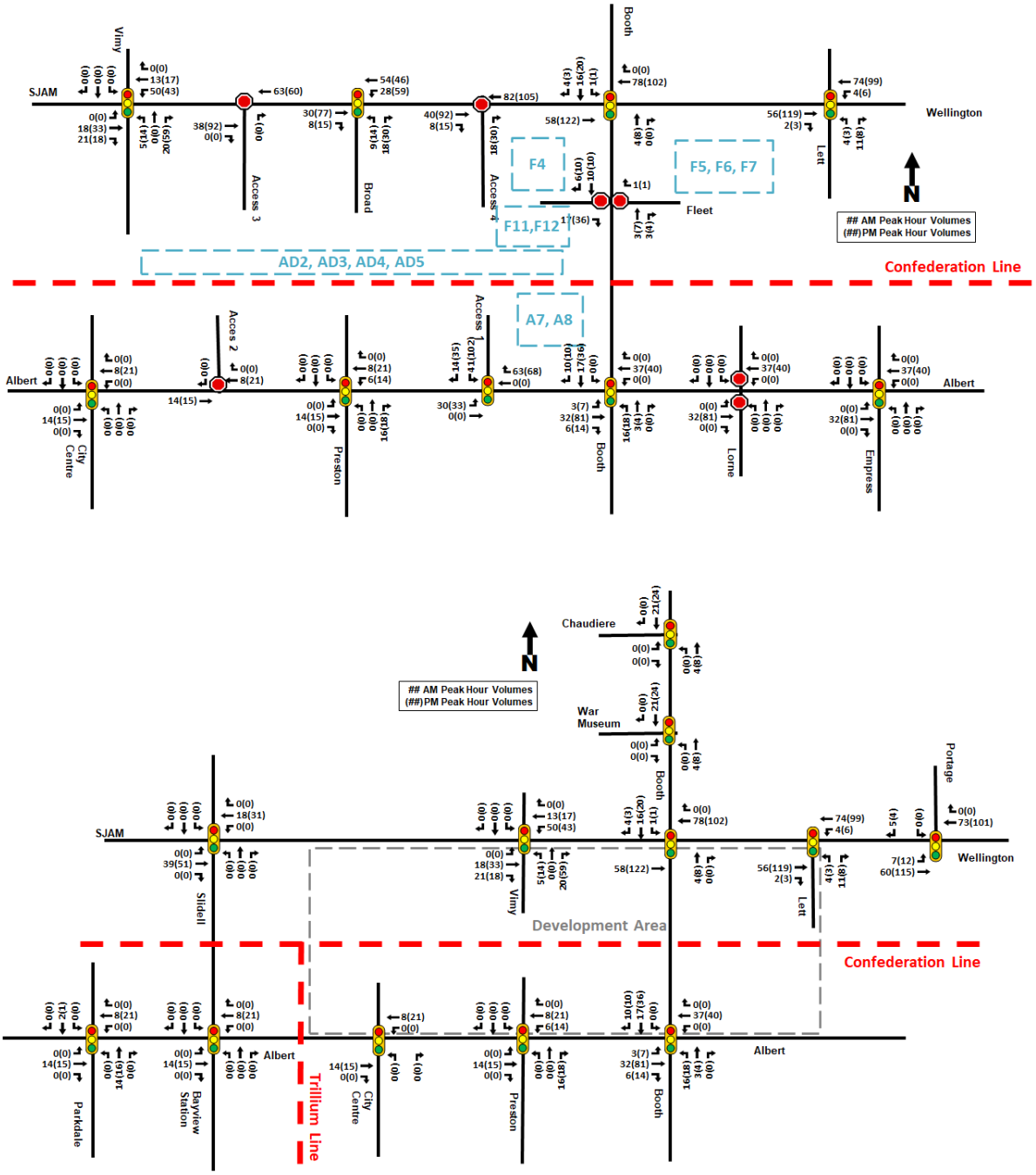
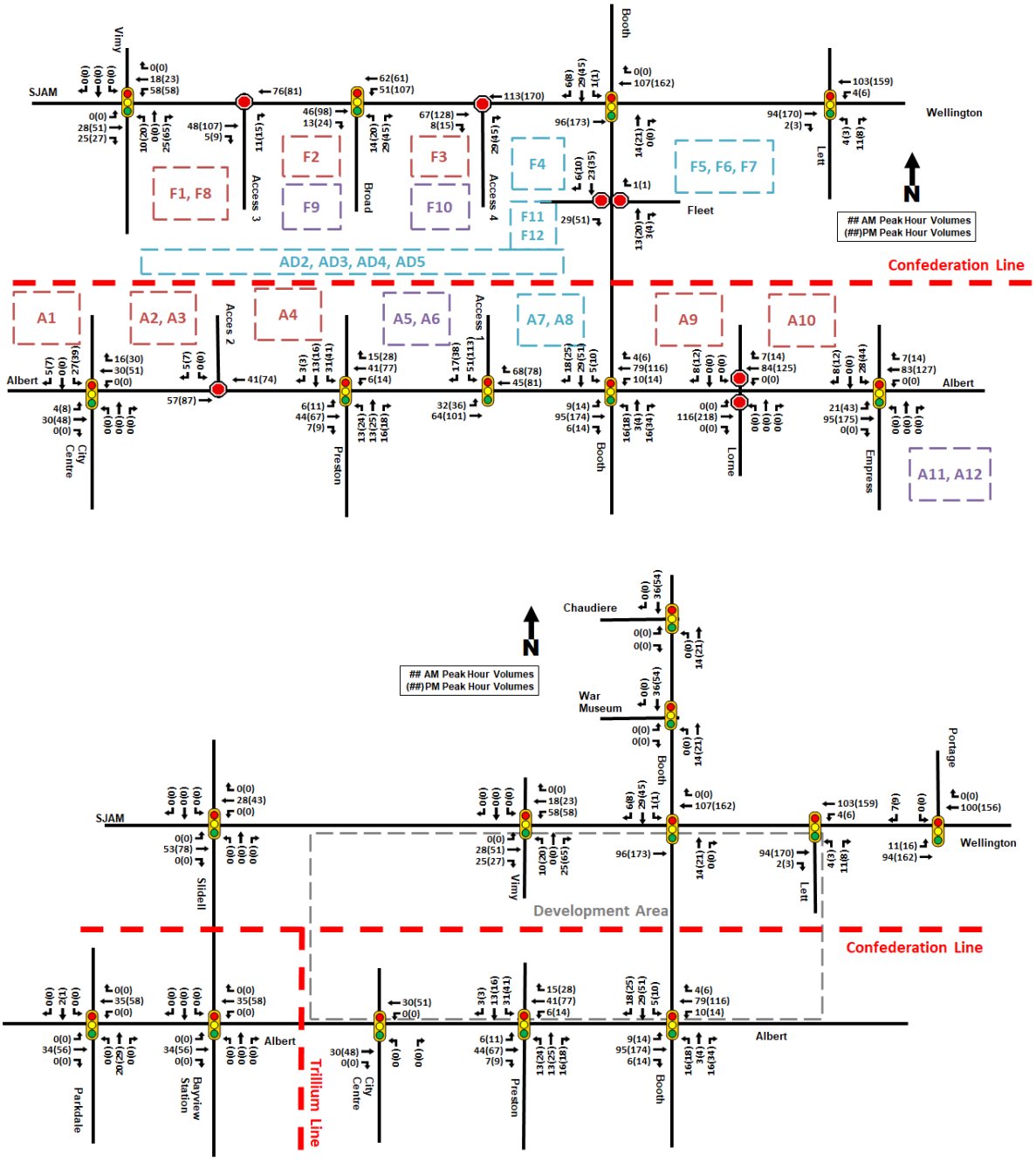


Figure 15: Projected Site-Generated Traffic – Full Build-Out



4.1.5 Major Events Centre

For the purposes of this TIA analysis, it is worth noting that Table 6 above reflects the uncertainty surrounding the potential of a major events centre being constructed at the LeBreton Flats site, specifically on parcels A2-4. At the commencement of this TIA study, the previous plan to develop an events centre had been cancelled and was only brought back on the table late in the study (i.e., spring 2022). Therefore, for the bulk of this TIA report it is assumed that parcels A2-4 consist of high-rise residential units and commercial space, as the details regarding the events centre were not detailed enough to provide analysis, and the scenario with residential and commercial space will provide a more conservative analysis of the potential daily transportation impacts of the LeBreton Flats development. It is acknowledged that if an events centre is constructed on site, transportation impacts at the time of any events (e.g., concert, sporting event, etc.) will likely be higher than during the average daily commuting hours, however the goal of this TIA is to analyze the worst-case scenario for average weekday conditions. It is understood by the NCC, and agreed to with the City, that if a development application is submitted for the construction of a major event centre (or any other type of development) within LeBreton Flats, a formal TIA will be prepared, which will include a TDM plan that will outline commitments to strategies that will reduce the reliance on the private automobile, as well as provide trip generation calculations for trips related to the events centre, including trips generated by pre-event activities nearby. The following section seeks to provide a high-level overview of what can be expected in any aforementioned TIA or TDM studies for the events centre.

Trip Generation Estimate

The National Capital Region's Special Generator Survey (SGS) in 2016 undertook detailed survey of numerous event centres in the National Capital Region (NCR), including the Canadian Tire Centre, TD Place Stadium and Ottawa Convention Centre in Ottawa, and the Centre Robert-Guertin and Casino du Lac-Leamy in Gatineau. The subsequent discussion draws heavily on the results of the survey for two of these venues: the Canadian Tire Centre (CTC) and TD Place Stadium (TD Place). The CTC is key to the analysis as the proposed events centre would likely be replacing many of the major events that currently take place at the CTC, including Ottawa Senators hockey games and large concerts. TD Place is key to the analysis given its urban context in central Ottawa, with better access to the site via transit, walking and cycling, which are not as appealing at the CTC given its location in western Kanata along Highway 417. The following tables summarize key data provided in the SGS.

Table 13: Special Generators Survey – Canadian Tire Centre and TD Place Information

Venue	Survey Dates	Event Start Times	Capacity	Average Weekday Attendance	Average Capacity Percentage
CTC	November – December 2013	6:00 – 7:30 PM	19,153	14,673	77%
TD Place	September – October 2014	6:30 – 7:30 PM	24,000	21,717	90%

It is notable that both locations have events that generally start outside of the PM peak period when spare network capacity is available, although this does not preclude attendees from arriving at the events earlier. TD Place has the higher capacity and higher average capacity percentage when compared to the CTC. This may be attributed to numerous factors, including: its more central location; the lower frequency of major events as there are only 9 home games for the Ottawa Redblacks every year compared to 41 home games for the Ottawa Senators; or, the fact that all events took place on Friday nights as opposed to the CTC where events took place on all weekdays.

It should be noted that the average capacity percentage for Ottawa Senators games for the most recent pre-COVID season in 2018-2019 was 76%, whereas the average for the entire NHL was 95%.

Table 14: Special Generators Survey – Estimated Arrival Time[3]

Venue	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM
CTC	1%	1%	1%	1%	2%	14%	47%	34%	1%
TD Place	0%	0%	0%	1%	2%	29%	53%	14%	0%

While events at TD Place tend to start later than those at CTC, it has a higher percentage of trips arriving during the PM peak period. This is likely due to the on-site amenities around TD Place, which has the potential to draw trips to the site prior to the event begins.

Table 15: Special Generators Survey – Arrival Mode of Transportation[4]

Venue	Driver	Passenger	Transit	Shuttle	Walk	Intercity Transit	Taxi	Bike	Other
CTC	49%	33%	11%	0%	0%	4%	1%	0%	2%
TD Place	15%	12%	26%	23%	14%	2%	4%	4%	0%

As expected, the CTC sees a high percentage of trips arriving via personal vehicle, where as TD Place sees a spread of trips across various modes of transportation, including approximately 51% of trips taken by some form of transit (e.g., OC Transpo, park and ride shuttles, intercity or private buses, etc.). It is notable that the driver, transit (when considering the various forms of transit) and active transportation modes are comparable to the mode shares assumed for the entire LeBreton Flats site as part of this TIA.

A high-level estimate of trip generation for the potential major events centre at LeBreton Flats was undertaken based on the Special Generators Survey, with some conservative assumptions:

- The capacity of the major events centre could be 16,500, as noted in a National Post article from September 2022[5]. The most recent information as of March 2023 is that the major events centre is likely to have a capacity of 17,000.
- The average capacity of a weekday event will be comparable to the average capacity percentage between the CTC and TD Place: 84%, or approximately 14,300 attendees. This is to account for the more central location of the major events centre, while still considering the frequency and days of the week that events would be held when compared to TD Place.
    - Notwithstanding the above, direction from the City was provided that 100% capacity should be assumed at this point in time, therefore it is assumed that 17,000 attendees will be present for any given event at the major events centre.
- Transportation mode share for arrival to a LeBreton Flats events centre may be comparable to the mode share observed at TD Place, given its more central location compared to the CTC.

[3] It should be noted that the arrival time data is presented in graphs in the SGS, therefore the percentages presented here are an estimate based off of said graphs.

[4] It should be noted that while different surveys were undertaken for arrival and departure transportation modes, the results were largely the same. Only the arrival mode is presented here, as that is the more concerning time given its proximity to the PM peak.

[5] https://nationalpost.com/sports/hockey/nhl/ottawa-senators/snapshots-lots-of-work-happening-behind-the-scenes-to-build-at-lebreton

- This is likely a conservative estimate on the low side given that the proposed major events centre would be located in close proximity to both the Confederation Line LRT and Trillium Line LRT (extended to Moodie, Trim and Limebank Stations), whereas TD Place relies mainly on OC Transpo bus service and park-and-ride shuttles run by Ottawa Sports and Entertainment Group (OSEG).

- Arrival times will be comparable to the average arrival time between CTC and TD Place. This provides a balance between the earlier arrivals observed at TD Place due to on-site amenities (which would also be present at the events centre), while also accounting for the later arrival times observed at the CTC.

Table 16 summarizes the estimated trips by different modes of transportation to a potential major events centre at LeBreton Flats. For simplicity, the various forms of transit were combined into a single transit mode share (i.e., municipal transit, shuttle bus and intercity transit). The taxi mode share was left separate from drivers, as it was unclear the average number of passengers in a single taxi, and the drop-off location for attendees who took a taxi. While there is a designated taxi drop-off zone for Capital Taxi in the Lansdowne site, some users may have been dropped off further from the site to avoid traffic.

Table 16: Estimated Trips by Different Modes at Potential Major Events Centre

	Driver	Passenger	Transit[6]	Walk	Taxi	Bike
Percentage	15%	12%	51%	14%	4%	4%
Trips	2550	2040	8670	2380	680	680

Table 17 summarizes the estimated vehicular trips made for different hours of the day, starting at 12:00 PM and continuing until 8:00 PM. It should be noted that a given hour includes all trips arriving during that hour (i.e., 12:00 PM encompasses all vehicles arriving between 12:00 PM and 12:59 PM).

Table 17: Estimated Vehicular Trips by Arrival Time

	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM
Percentage	0%	0%	0%	1%	2%	21%	50%	24%	1%
Trips	9	9	9	24	52	540	1278	616	15

The results of the trip generation estimate for the potential major events centre show that the highest volume hour during the PM peak period is expected to be 5:00 – 6:00 PM, when approximately 540 vehicular trips will be made to events. The highest volume hour for vehicles accessing the site is expected to be 6:00 – 7:00 PM, with approximately 1280 vehicular trips being made. Not necessarily all these trips will be arriving directly at the LeBreton Flats site, as some may be parking on nearby streets where parking is available, similar to attendees at TD Place who park on residential streets due to the parking garage being closed for Ottawa Redblacks games. It is our understanding as of March 2023 that the anticipated entrance to and from any potential parking garage at the major events centre is likely to be accessed via the Albert Street / City Centre Avenue intersection. It is still unclear at this point how much parking will be provided at the major events centre, and who would be allowed access during events. This will be confirmed as part of the TIA for the major events centre.

[6] As noted above, transit trips are combined to include trips on municipal transit (i.e., OC Transpo and STO) as well as shuttle buses for the event (e.g., from park and rides) and intercity buses (e.g., from fans of visiting sports teams)

It is worth noting that existing events at LeBreton Flats regularly see higher attendance than the estimated attendance at the major events centre, such as RBC Bluesfest which has shows starting at 6:00 PM on weekdays. Estimated daily attendance at the 2022 Bluesfest was 20,000 people per day, with peak days being estimated at 30,000 attendees[7]. There is no parking provided on-site for Bluesfest, as most attendees take transit, walk, cycle or park on nearby streets where available. During Bluesfest, vehicular access is restricted on a number of streets in the area, including Booth Street between Albert Street and Wellington Street, as well as parts of the Sir John A Macdonald Parkway and Wellington Street[8].

Transportation Demand Management

Similar to TD Place, existing events at LeBreton Flats such as RBC Bluesfest, and downtown major event centres in other cities, it is anticipated that an aggressive Transportation Demand Management plan will be implemented for any special event scheduled at the potential major events centre at LeBreton Flats, which will mitigate the reliance on the private automobile. Some examples of TDM that are already in use at TD Place and LeBreton Flats today are outlined below. It is assumed that similar measures to those identified below will be in place and will be further developed at the appropriate time in coordination with the City of Ottawa, OC Transpo and other stakeholders.

TD Place:

- Free public transit on all OC Transpo routes servicing TD Place, starting three hours before the event and ending three hours after the event.
- Free OC Transpo service from 15 park-and-shuttle locations across the NCR, including five in Gatineau and ten in Ottawa.
    - Six of the park-and-shuttle locations in use today for TD Place are located at stations along the Stage 2 Confederation and Trillium Lines: Trim Station, Place d'Orleans Station, Greenboro Station, Mooney's Bay Station (Canada Post), Baseline Station and Confederation Station (City Hall).
    - Four of the park-and-shuttle locations are located at stations along the potential Kanata and Barrhaven LRT alignments: Terry Fox Station, March/Eagleson Station, Fallowfield Station and Strandherd Station.
    - These locations, in addition to other parking locations along the LRT (e.g., RCGT Park, St. Laurent Station, Blair Station, South Keys Station, Leitrim Station, Bowesville Station, Lincoln Fields Station, Bayshore Station) are prime candidates to be used for a major events centre at LeBreton Flats and would likely see increased usage given that the LRT would not be required to travel in mixed traffic like the existing shuttle buses to TD Place.
- Free OSEG Shuttle Bus from specific park-and-shuttle locations for events over 15,000 people from City Hall on Laurier Avenue and the Canada Post complex on Riverside Drive.
- A list of parking lots on the TD Place website that are within a 20-minute walk of the venue.
    - Existing and proposed parking lots or structures that are within a 20-minute walk of the proposed events centre site include: Canadian War Museum, Ottawa Public Library and Library and Archives Canada Joint Facility, Tunney's Pasture and numerous parking lots in the downtown core, Chinatown and Little Italy.

[7] https://ottawacitizen.com/entertainment/bluesfest-wraps-up-after-successful-run-of-great-weather-crowds-and-music
[8] https://ottawa.ca/en/city-hall/city-news/newsroom/rbc-bluesfest-back-plan-ahead-traffic-impacts-and-take-transit-festival

- Secure bike parking on-site, as well as complimentary bike valet service and standard bike racks.
- Para Transpo service directly to a designated Accessible Support Entrance location at Gate 1 of TD Place.

RBC Bluesfest:

- Free public transit on all OC Transpo routes, starting three hours before the event and three hours after the event.
- Secure bike parking on-site in addition to standard bike racks in the area.
- Para Transpo service drop-off location on Booth Street next to the War Museum.
- Street closure of Sir John A Macdonald Parkway westbound between Booth Street and Slidell Street, and eastbound between Parkdale Avenue and Booth Street.
- Street closure of Booth Street between Wellington Street and Albert Street.

4.2 Background Network Travel Demands

4.2.1 Transportation Network Plans

As previously mentioned in Section 3.1.3, the current transit-only lanes along Albert Street will be decommissioned and returned to general traffic use and/or active modes, as part of various projects between Holland Avenue in the west and Mackenzie King Bridge in the east. The roadway cross-section from Holland Avenue to Bayview Station Road will have a single through lane in each direction, while the cross-section from City Centre Avenue to Empress Avenue will have two through lanes in each direction.

As part of the Zibi development, the vehicular capacity of the Booth-Eddy Street corridor has been reduced and has been rededicated to cycling/pedestrian facilities. This has resulted in a single vehicular travel lane in each direction across the Chaudière Crossing.

As part of the LeBreton Flats Master Concept Plan, it is proposed that a bridge dedicated to serving pedestrians and cyclists only be extended over the Confederation Line in the Preston Street corridor between Albert Street and the SJAM/Wellington Street. Although this link currently does not exist, it has been identified in the City's current and previous Transportation Master Plans as a new arterial roadway link to serve all travel modes.

As noted in Section 3.1.3, the City of Gatineau has released plans for a tramway connecting the growing area of Aylmer to downtown Ottawa, via the Portage Bridge. The closest the West Gatineau Tramway would be to LeBreton Flats is at the intersection of Wellington/Portage Bridge, which is approximately 270m from the northeast corner of the development site. Although there are currently no projections for OC Transpo and STO ridership changes, it can be expected that there may be fewer trips on bus routes crossing into Gatineau on Booth Street, such as OC Transpo Route 85.

With the exception of a new interprovincial bridge between Ottawa and Gatineau, these future transportation network plans have been included/assumed in the subsequent analysis.

4.2.2 Background Growth and Traffic Volume Balancing

Due to certain data gaps (i.e., not every study area intersection was counted during the year 2014), a volume balancing exercise was conducted, which resulted in the following modifications to peak hour vehicular volumes at study area intersections (note, the following negative values indicate veh/h that were removed, and positive values indicate veh/h that were added):

- Booth/War Museum[9]: SB [-730(AM), -810(PM)]
- Booth/Wellington: NB [-10(AM)]
- Albert/Booth: SB [-90(AM)]; WB [+70(PM)]
- Albert/Preston: EB (-20(PM)]
- Albert/City Centre: WB [+10(PM)]
- SJAM/Slidell: WB [-50(AM), -30(PM)]
- Wellington/Vimy: EB [+20(AM)]; WB [-40(PM)]
- Wellington/Lett: EB [+180(AM)]; WB [-130(AM), -70(PM)]
- Wellington/Portage: EB [-140 (AM), -240(PM)]

[9] It is noted that the turning movement count at Booth Street / War Museum on July 18, 2013, was flagged as an anomaly in the Zibi development 2014 TIS. Because of this, the Booth Street corridor was balanced according to the counts at its intersections with Wellington Street and Albert Street. The discrepancy between Booth Street / Wellington Street and Booth Street / War Museum was fully addressed in the adjustments at the Booth Street / War Museum intersection

Based on the foregoing volume balancing assumptions, **Figure 16** on the following page depicts the resulting baseline existing conditions.

As previously mentioned in Section 3.1.2, Ottawa's downtown arterial network is generally accepted to operate at capacity during peak hours; additionally, the City's TMP notes that the number of cars arriving downtown in the morning peak period has been decreasing since 1986. Therefore, background traffic volumes have exhibited negligible growth.

In addition to negligible background traffic growth, study area roadways have been impacted by the extended LRT related construction which have prompted some travelers to forego tips altogether, make different mode choices, take different travel routes, or change trip times to avoid increased congestion brought by detours. Therefore, and as agreed to by City Staff, historical traffic count data from the year 2014 (where available) was used for analysis purposes and zero background growth (i.e., background growth rate of 0%) was applied.

4.2.3 Current and Anticipated Area Developments

Using the City's online Development Application Tool, planned developments including 900 Albert, East Flats and Zibi were identified to have impacts on the study area. As such, the projected site-generated traffic from these developments was included in the subsequent analysis. Excerpts from the TIA study reports for 900 Albert, LeBreton East Flats and Zibi are included as **Appendix D**, depicting projected site-generated traffic for these developments. Trips generated by these developments were carried through all study area intersections for this report, regardless of where the study area terminated for each individual development.

Given that the TIA studies prepared for the identified area developments did not include some of the intersections located within the LeBreton study area, projected site-generated traffic from such area developments was appropriately distributed/assigned throughout the LeBreton study area as described in Step 2 - Scoping. The resulting assignment of projected site-generated traffic from other area developments is depicted in **Figure 17**, while **Figure 18** depicts the total background traffic volumes for this analysis, including existing conditions, background growth (0%) and traffic volumes from other area developments.

Figure 16: Existing Volumes, AM Peak (PM Peak)

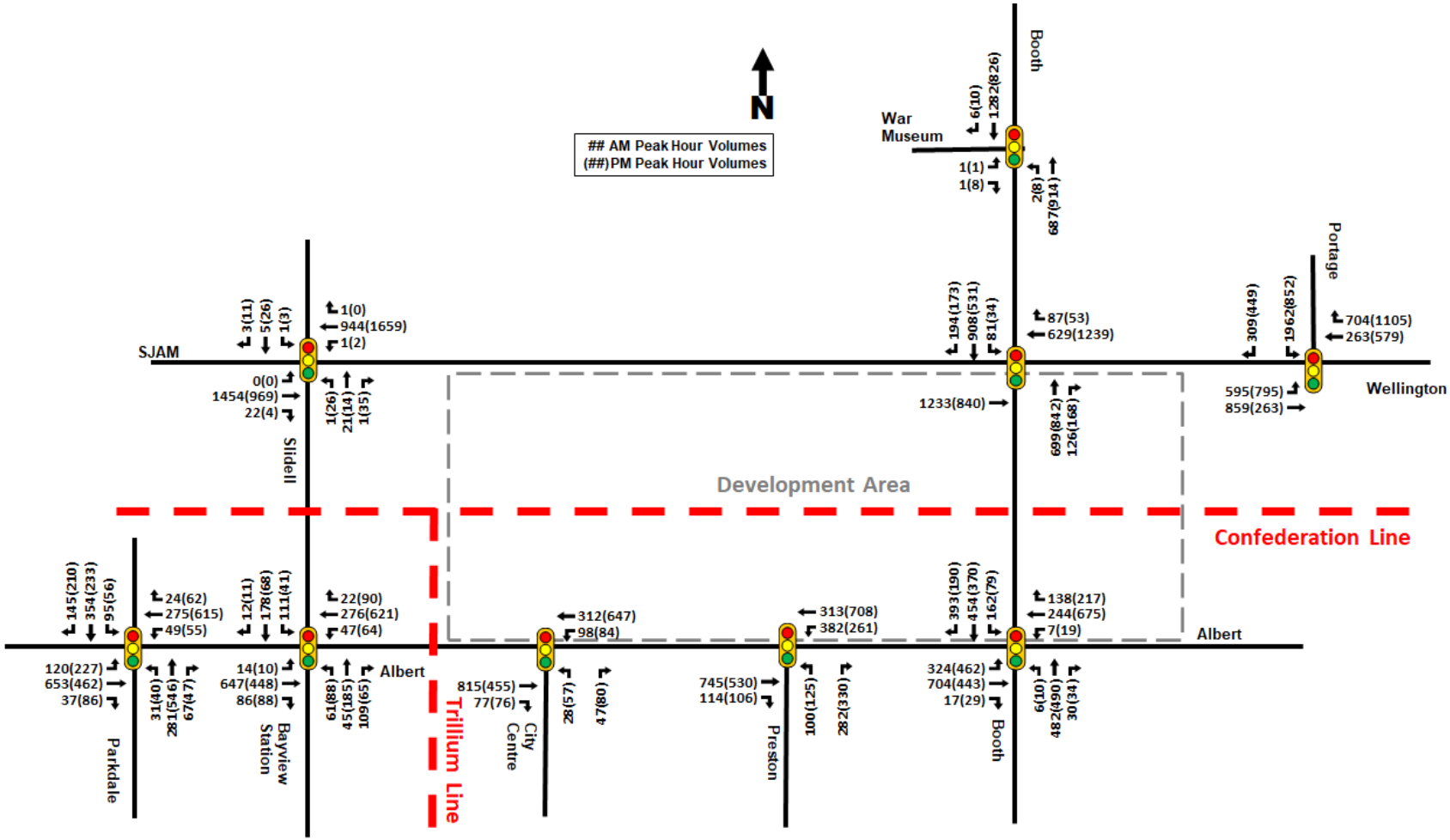


Figure 17: Trips Generated by Area Developments, AM Peak (PM Peak)

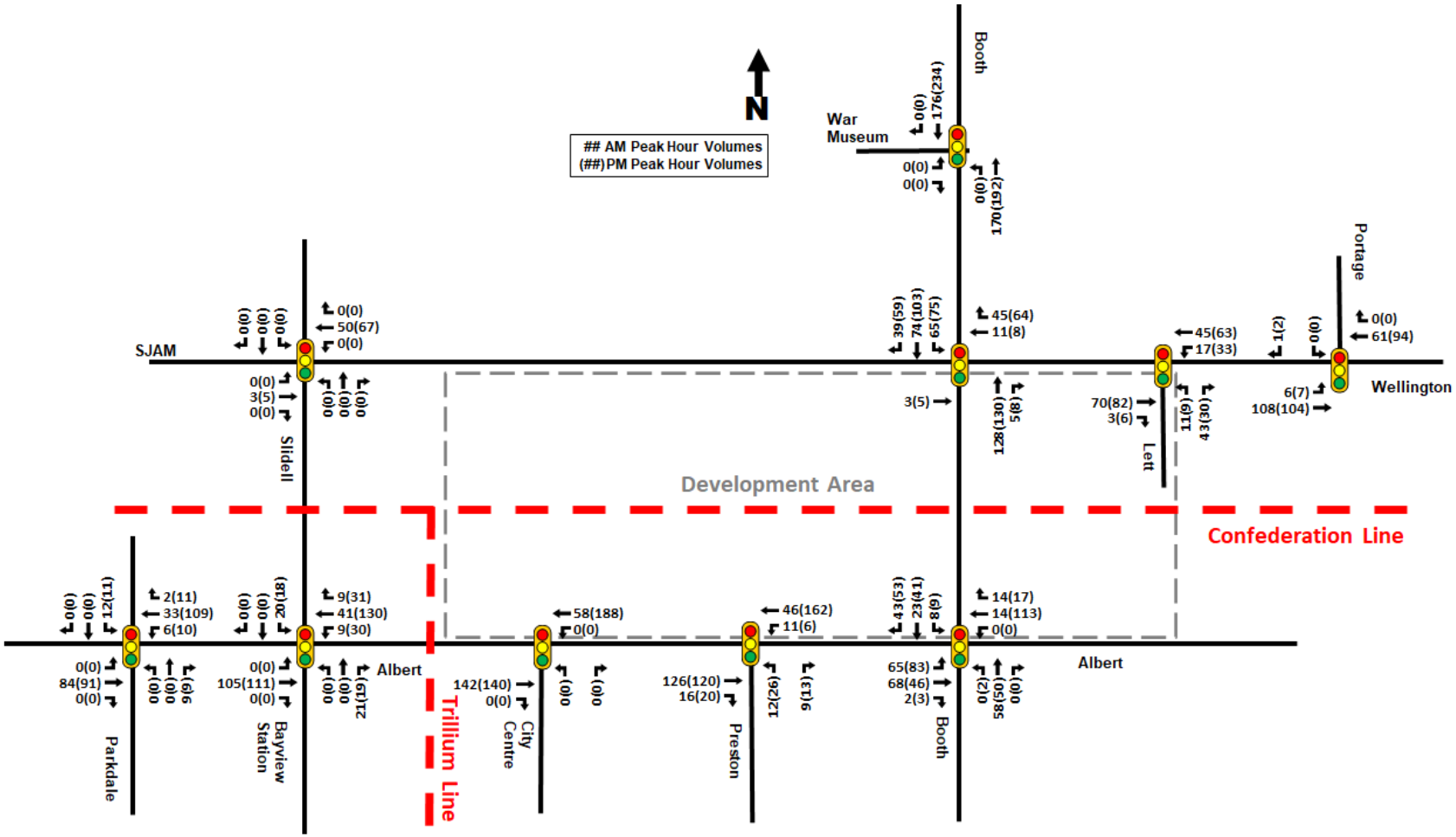
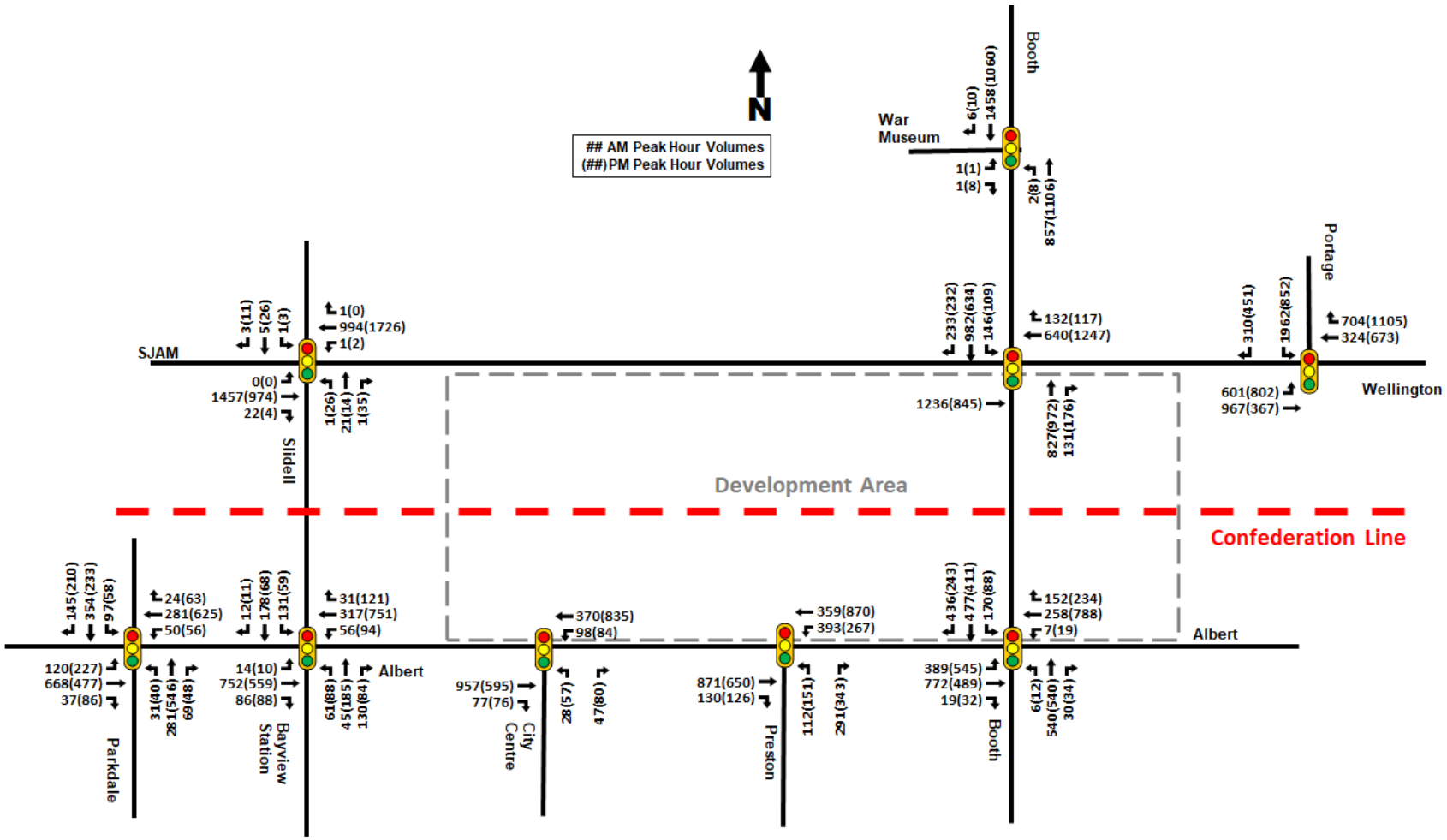


Figure 18: Future Background Turning Movement Volumes, AM Peak (PM Peak)



4.3 Demand Rationalization

The following section summarizes the study area intersection capacity analysis for Existing, Future Background and Future Total Volume scenarios. For analysis purposes, the Existing Conditions scenario is considered to be 2022, the Future Background scenario is considered to be 2030 and the Future Total Volume scenario is 2030 for Phase 1, 2040 for Phase 2 and 2050 for Phase 3.

Using the intersection capacity analysis software Synchro (v11), study area intersections were assessed in terms of vehicle delay, volume-to-capacity ratio (v/c) and the corresponding Level of Service (LOS). It should be noted that the overall performance of a signalized intersection is calculated as a weighted v/c ratio and assigned a corresponding LOS, with critical movements assigned a LOS based on their respective v/c ratio. The overall performance of an unsignalized intersection is a LOS output from Synchro, which is based on an Intersection Capacity Utilization (ICU) method, and critical movements are assigned a LOS based on delay. **Table 18** shows the vehicular level of service that corresponds to each v/c ratio.

Table 18: Level of Service vs. V/C Ratio

Level of Service	Volume to Capacity Ratio
A	0 to 0.60
B	0.61 to 0.70
C	0.71 to 0.80
D	0.81 to 0.90
E	0.91 to 1.00
F	> 1.00

Given the number of study area intersections, the general proximity between intersections/driveways within the study area, the level of existing network saturation, and the level of variability with respect to developing a Master Concept Plan for a large area such as LeBreton Flats, estimated 95th percentile queues at study area intersections were not explicitly assessed as part of this TIA study report. For the purpose of this assessment, study area intersections with a LOS at, or over capacity (i.e., LOS ‘E’ or ‘F’) and long delays (i.e., delays greater than 35s), it is reasonable to conclude that 95th percentile queues are also problematic (e.g. problematic queues spill back and block driveways and/or adjacent intersections, extend beyond provided turn lane storage, etc.) and therefore, provide limited to no additional value for analysis/decision purposes.

The City of Ottawa follows a Multi-Modal Level of Service (MMLOS) policy, which evaluates all modes of transportation, including pedestrians, cyclists, transit, trucks, and vehicles. The MMLOS analysis allows for trade-offs between the different modes of transportation, prioritizing different modes depending on the location within the City. The City’s MMLOS Guidelines define the LOS targets for each mode of transportation based on the Official Plan Designation / Policy Area, as well as roadway classification, cycling facilities, transit priority and truck route status. These targets are presented in **Table 19** for each major roadway within the study area.

Table 19: Minimum Desirable MMLOS Targets by Official Plan Policy/Designation & Road Classification (Source: City of Ottawa MMLOS Guidelines)

OP Designation (Roadway Characteristics)	Street	Pedestrian LOS	Bike LOS	Transit LOS	Truck LOS	Auto LOS
within 600m of Rapid Transit Station (Arterial, Cross-Town Bikeway, Truck Route)	Albert/Scott	A	A	D	D	E
within 600m of Rapid Transit Station (Arterial, Spine Route, Truck Route)	Booth	A	C	D	D	E
Central Area (Arterial, Spine Route, No Trucks)	Wellington	A	C	D	E	E

Due to the central location of the study area, all roadways and intersections within the study area have a Pedestrian LOS (PLOS) target of LOS 'A', and an Auto LOS target of LOS 'E', indicating the focus on pedestrians. The cross-town bikeway along Albert Street and Scott Street requires that that corridor meet the Bike LOS (BLOS) target of LOS 'A', while Booth Street and Wellington Street both have BLOS targets of LOS 'C'. There are no plans for transit priority above and beyond isolated measures, therefore the Transit LOS (TLOS) target is LOS 'D' for all intersections. Wellington Street is the only major roadway not designated as a truck route; therefore, its Truck LOS (TrLOS) target is LOS 'E', with the rest of the study area targeting LOS 'D'.

4.3.1 Existing and Future Background Conditions

Based on existing volumes depicted in Figure 16 and existing signal timing plans provided by the City, the following **Table 20** summarizes the existing performance of study area intersections. Detailed Synchro output data for Existing and Future Background Conditions are provided in **Appendix E**.

Table 20: Study Area Intersection Operations - Existing Conditions

Intersections	Overall			Critical Movement			
	Delay (s)	v/c Ratio	v/c LOS	Mvmt	Delay (s)	v/c Ratio	v/c LOS
Booth & Chaudière	2 (1)	0.75 (0.54)	C (A)	SBTR	3 (1)	0.75 (0.49)	C (A)
Booth & War Museum	4 (5)	0.44 (0.31)	A (A)	SBTR	7 (5)	0.44 (0.29)	A (A)
Booth & Wellington	33 (31)	0.86 (0.85)	D (D)	EBT	34 (27)	0.90 (0.61)	D (B)
Booth & Albert	37 (40)	0.83 (0.80)	D (C)	EBL	28 (60)	0.66 (0.98)	B (E)
Albert & Empress	4 (4)	0.25 (0.33)	A (A)	WBLT	2 (2)	0.13 (0.33)	A (A)
Albert & Preston	29 (14)	0.86 (0.57)	D (A)	EBT	41 (15)	0.93 (0.51)	E (A)
Albert & City Centre	8 (9)	0.53 (0.49)	A (A)	EBT	8 (5)	0.58 (0.34)	A (A)
Albert/Scott & Bayview	16 (19)	0.61 (0.53)	B (A)	EBTR	8 (19)	0.65 (0.48)	B (A)
Scott & Parkdale	29 (56)	0.79 (0.95)	C (E)	WBT	15 (126)	0.33 (1.18)	A (F)
SJAMP & Slidell	3 (7)	0.50 (0.69)	A (B)	WBT	3 (8)	0.34 (0.69)	A (B)
Wellington/SJAMP & Vimy	2 (3)	0.46 (0.51)	A (A)	WBT	2 (4)	0.30 (0.52)	A (A)
Wellington & Lett	15 (4)	0.52 (0.40)	A (A)	EBTR	20 (2)	0.54 (0.36)	A (A)
Wellington & Portage	111 (39)	1.21 (0.83)	F (D)	SBL	230 (53)	1.44 (0.88)	F (D)

As shown in Table 20, the intersection of Wellington Street at Portage Bridge is operating over capacity in the weekday morning peak hour, with a LOS 'F'. This is mainly driven by the southbound left turn volume, which has a v/c ratio of 1.44. It should be noted that the southbound left turn has three lanes, one of which is a bus/taxi/HOV lane. However, since HOV vehicle data was not available at this intersection, the southbound left turn approach was modelled with only two lanes, therefore this analysis can be considered conservative. This assumption will be carried forward to future analyses as well. All other movements at this intersection operate with acceptable LOS. There is minimal opportunity for improvement in LOS for the southbound left turn movement, as reassigning green time from other conflicting movements is not possible as it either violates the minimum green time (i.e., pedestrian crossing time) or it results in further deterioration in overall intersection operations. When the future West Gatineau Tramway is in place across the Portage Bridge it may encourage a shift in mode of transportation to transit, reducing the volume of vehicles crossing the bridge from Gatineau and improving the LOS of the intersection.

The intersection of Scott Street at Parkdale Avenue is approaching capacity (LOS 'E') in the weekday afternoon peak hour. The westbound through movement has a v/c ratio of 1.18 in the PM peak hour. Changes along Scott Street to provide transit priority in curbside lanes has resulted in a single through lane in each direction at this intersection, increasing the v/c ratio for this movement. Optimization of the signal timing at this intersection would reduce the v/c ratio of the westbound through movement to 1.01, at the expense of the northbound through movement, which would increase in v/c ratio from 0.95 to 1.08.

The following **Table 21** summarizes the projected study area intersection performance based on Future Background volumes, assuming no significant changes to existing signal timing plans (i.e., slight tweaks to optimize phases, but not cycle lengths). One exception is in the Albert Street corridor, where signal timing had to be adjusted to provide fully protected left and right turn phases depending on volumes, as required by the City of Ottawa's Protected Intersection Design Guidelines (PIDG). Future Background volumes were derived by summing together existing traffic volumes and projected site-generated traffic from the other area developments (i.e., summing volumes together from Figure 16 and Figure 17, resulting in Figure 18). Given an annual background traffic growth rate was assumed to be zero and assuming other area development will be fully built-out by the year 2030, Table 21 summarizes the study area intersection performance for all the Future Background scenario.

Table 21: Study Area Intersection Operations – Future Background Conditions

Intersections	Overall			Critical Movement			
	Delay (s)	v/c Ratio	v/c LOS	Mvmt	Delay (s)	v/c Ratio	v/c LOS
Booth & Chaudière	13 (12)	0.91 (0.76)	E (C)	SBTR	18 (12)	0.93 (0.74)	E (C)
Booth & War Museum	5 (6)	0.50 (0.38)	A (A)	SBTR	8 (6)	0.50 (0.37)	A (A)
Booth & Wellington	46 (38)	0.93 (0.95)	E (E)	NBTR	87 (50)	0.98 (1.01)	E (F)
Booth & Albert	97 (109)	1.06 (1.21)	F (F)	EBL	126 (278)	1.15 (1.53)	F (F)
Albert & Empress	1 (4)	0.31 (0.35)	A (A)	WBT	2 (3)	0.13 (0.35)	A (A)
Albert & Preston	36 (24)	0.78 (0.66)	C (B)	WBL	35 (23)	0.87 (0.52)	D (A)
Albert & City Centre	15 (12)	0.50 (0.35)	A (A)	EBTR	15 (11)	0.52 (0.34)	A (A)
Albert/Scott & Bayview	19 (18)	0.68 (0.61)	B (B)	EBTR	15 (16)	0.74 (0.57)	C (A)

Intersections	Overall			Critical Movement			
	Delay (s)	v/c Ratio	v/c LOS	Mvmt	Delay (s)	v/c Ratio	v/c LOS
Scott & Parkdale	35 (60)	0.83 (1.02)	D (F)	WBT	28 (123)	0.51 (1.17)	A (F)
SJAMP & Slidell	3 (8)	0.50 (0.72)	A (C)	WBT	3 (9)	0.36 (0.72)	A (C)
Wellington/SJAMP & Vimy	2 (3)	0.46 (0.54)	A (A)	WBT	2 (4)	0.32 (0.55)	A (A)
Wellington & Lett	21 (5)	0.59 (0.46)	A (A)	EBTR	28 (3)	0.61 (0.42)	B (A)
Wellington & Portage	109 (40)	1.21 (0.87)	F (D)	SBL	232 (53)	1.45 (0.88)	F (D)

As expected, delays and v/c ratios increase within the study area due to an increase in future background traffic. The intersection of Wellington Street at Portage Bridge, which was over capacity in the morning peak hour for Existing Conditions, continues to be over capacity in the Future Background Conditions.

The implementation of protected intersections and cycle tracks on Scott Street and Albert Street, along with the decommissioning of bus-only lanes into general traffic lanes will have an impact on traffic operations at many intersections:

- The intersection of Scott Street and Parkdale Avenue is over capacity in the PM peak hour, as the eastbound left turn movement is fully protected due to the westbound crossride. This results in less green time for the westbound through movement. As identified in the Existing Conditions, it is possible to optimize the signal timing at this intersection to improve the westbound through at the expense of the northbound through, however that optimization has not been undertaken here.
- The intersection of Albert Street and City Centre Avenue will have improved operations, as there will be two eastbound and two westbound through lanes. The westbound left turn movement is now fully protected due to the eastbound cycling movements.
- The intersection of Albert Street and Preston Street will have improved operations, as there will be two eastbound and two westbound through lanes. The westbound left turn movement will be fully protected due to the eastbound crossride. In addition, the northbound right turn movement can be on an overlap phase with the westbound left turn, with No Right Turn on Red (RTOR) restrictions in place, as per the PIDG.
- There will be a significant impact to traffic operations at Booth Street and Albert Street, as the protected intersection requires the eastbound left turn and southbound left turn be fully protected, and the southbound right turn to operate on an overlap phase with the eastbound left turn and No RTOR. The result will be long delays, and v/c ratios over 1.0 for both peak hours, with the eastbound left turn operating very poorly. Other over capacity movements at this intersection include the westbound through/right in the PM peak hour, the northbound through/right in both peak hours, and the southbound left and right in the AM peak hour. Mitigation measures are explored on subsequent pages.

Two intersections that operated acceptably in the Existing Conditions are approaching capacity in the Future Background Conditions: Booth Street at Chaudière (AM peak), and Booth Street at Wellington Street (AM and PM peaks).

- The southbound through movement at Booth Street and Chaudière is the heaviest movement in the AM peak hour, approaching capacity with a v/c ratio of 0.93. With single lanes on each

approach there are minimal opportunities to improve the operations of the southbound through movement at this intersection.

- The northbound through/right movement is the heaviest movement at Booth Street and Wellington Street in both peak hours: it is approaching capacity in the AM peak hour (v/c ratio of 0.98) and over capacity in the PM peak hour (v/c ratio of 1.01). The southbound left turn movement is also approaching capacity in the PM peak hour, with a v/c ratio of 0.99. Similar to the intersection of Scott Street at Parkdale Avenue, it is possible to optimize the signal timing to improve intersection operations, however it increases the delay on the heaviest volume movements (eastbound through in AM peak, westbound through in PM peak). Therefore, the optimization has not been included in this assessment, but it is recommended that this intersection be monitored moving forward.

Potential Mitigation Measures

Notwithstanding the exemplary existing and planned measures to accommodate and promote active/sustainable modes of transportation within the study area, the following are potential measures to improve the performance of study area intersections operating at, or over capacity from a vehicular operations perspective only. In some cases, these potential mitigation measures may contradict with policy direction, decisions or investments in infrastructure, and should not be considered requirements as conditions of development approval unless otherwise stipulated by the City. Therefore, mitigation measures have been separated into two groups – a primary group of preferred measures that supports the City's TMP by improving conditions for all modes of transportations, and a secondary group of alternatives that improves operating conditions for vehicles only, with potential negative impacts on other modes of transportation.

It should be noted that although the network modifications listed below are all technically possible, they may not be feasible due to physical/economical constraints and/or they may not satisfy or support policy/political/planning objectives. Therefore, the possible measures to improve the performance of study area intersections are only provided for information/decision making purposes only. If any of these possible measures are deemed to be desirable, further analysis may be required to support their justification.

Group A – Preferred Mitigation Measures

The following mitigation measures are the most preferred due to their prioritization for all modes of transportation, not just motorized modes. Further improvements to vehicular LOS may be observed as trips are shifted to alternative modes of transportation or alternative corridors as major projects within the National Capital Region are completed.

Transit Projects

- When the future West Gatineau Tramway is in place across the Portage Bridge in 2028, trips across the Portage Bridge may be shifted away from the vehicular mode and towards the transit mode. It is recommended that the City monitor traffic volumes at the intersection of Wellington Street and Portage Bridge and respond to a reduction in vehicular traffic accordingly.
- Confederation Line Stage 2 LRT (with improved reliability extension drawing additional trips when open in 2026)

Active Mobility Projects

Projects that may reduce the vehicular demand in the study area include:

- Improvements to cycling facilities throughout LeBreton Flats and along Albert Street into downtown (mode shift to cycling)
- The Chief William Commanda multi-use pathway interprovincial bridge (mode shift to cycling and walking)
- These measures would improve operations at most intersections in the study area, with a specific benefit to Booth Street at Albert Street, Albert Street at Preston Street and Parkdale Avenue at Scott Street.

Group B – Alternative Mitigation Measures

The following mitigation measures are less preferred due to their prioritization for vehicular modes only, and not benefitting active transportation and transit modes.

Ottawa River Sixth Crossing

- The NCC recently completed a Long-Term Integrated Crossings Plan; a potential future additional crossing of the Ottawa River may result in a vehicular shift to alternative corridors.

Wellington Street at Portage Bridge

- Re-designate southbound through and westbound through HOV lanes for general purpose traffic. This would prioritize single occupancy vehicles over high occupancy vehicles, including buses and carpool vehicles, running contrary to the City's stated goals for reducing vehicular traffic.
- Widen both the Portage Bridge and Wellington Street to accommodate additional southbound and westbound through lanes. The cost would likely make this measure unfeasible, would potentially induce demand resulting in a shift from active modes to vehicles, and would restrict the ability to provide the West Gatineau Tramway connection across the Portage Bridge in the future.

Booth Street at Albert Street

- Redesign the proposed Albert Street plans to accommodate dual eastbound left-turn lanes at Booth Street by converting an eastbound through lane to an eastbound left turn lane. The updated signal timing for the protected intersection already requires the eastbound left turn be a fully protected movement, which is consistent with what would be required if it were a double eastbound left turn. **Table 22** outlines the intersection operations of Booth Street at Albert Street with a single eastbound left and with a double eastbound left.

Table 22: Booth at Albert – Double Eastbound Left Turn Analysis, AM Peak (PM Peak)

Scenario	Mvmt	Volume (vph)	Delay (s)	v/c Ratio	v/c LOS	95th Queue (m)
Single EBL	EBL	390 (545)	126 (278)	1.15 (1.53)	F (F)	#180 (#267)
	EBTR	770 (490)	9 (19)	0.50 (0.31)	A (A)	41 (66)
	Overall	-	97 (109)	1.06 (1.21)	F (F)	-
Double EBL	EBL	390 (545)	39 (73)	0.57 (1.02)	A (F)	52 (#112)
	EBTR	770 (490)	32 (33)	0.95 (0.62)	E (B)	#291 (180)
	Overall	-	90 (68)	1.10 (1.03)	F (F)	-

- It is clear that the implementation of a double eastbound left would provide a significant improvement on eastbound left turn operations, which comes with the tradeoff of worse eastbound through operations.
- The overall intersection with a double eastbound left turn operates better in the PM peak hour and worse in the AM peak hour, therefore it is difficult to draw a conclusion on which option is preferred. Given this, **it is recommended that a single eastbound left turn lane be maintained in the Albert Street proposed design, however the intersection should be designed to accommodate a double eastbound left turn movement**. Given that the turning movement counts for this analysis come from 2014, prior to the opening of the Confederation Line LRT (which runs parallel to Albert Street), it is possible that eastbound through traffic on Albert Street is lower than it was in 2014. Therefore, when turning movement counts are updated in the future, it may ~~indicate that~~ support implementation of a double eastbound left ~~is preferred over~~ as a single eastbound ~~left~~ through lane will not be over capacity.

Parkdale Avenue at Scott Street

- Widen Scott Street from two to four lanes (i.e., two travel lanes per direction for general purpose traffic). This would increase the footprint of the intersection, forcing pedestrians and cyclists to cross a wider intersection and reducing their respective LOS.

4.3.2 Total Projected Conditions

The following section summarizes the study area intersection capacity analysis for total projected volume scenarios for the 2030, 2040 and 2050 horizon years. Total projected volumes depicted in **Figure 19**, **Figure 20** and **Figure 21** were derived by superimposing LeBreton Flats site-generated traffic volumes onto projected background traffic volumes. It should be noted that given the size of the study area network and the number of study area intersections, each horizon year is subsequently depicted as two separate figures. The first figure for each horizon year depicts the total projected traffic volumes for site driveway connections / immediate road network surrounding the subject development lands and the second figure depicts the total projected traffic volumes for the greater study area network.

Figure 19: Total Projected Traffic Volumes – 2030 (Phase One), AM Peak (PM Peak)

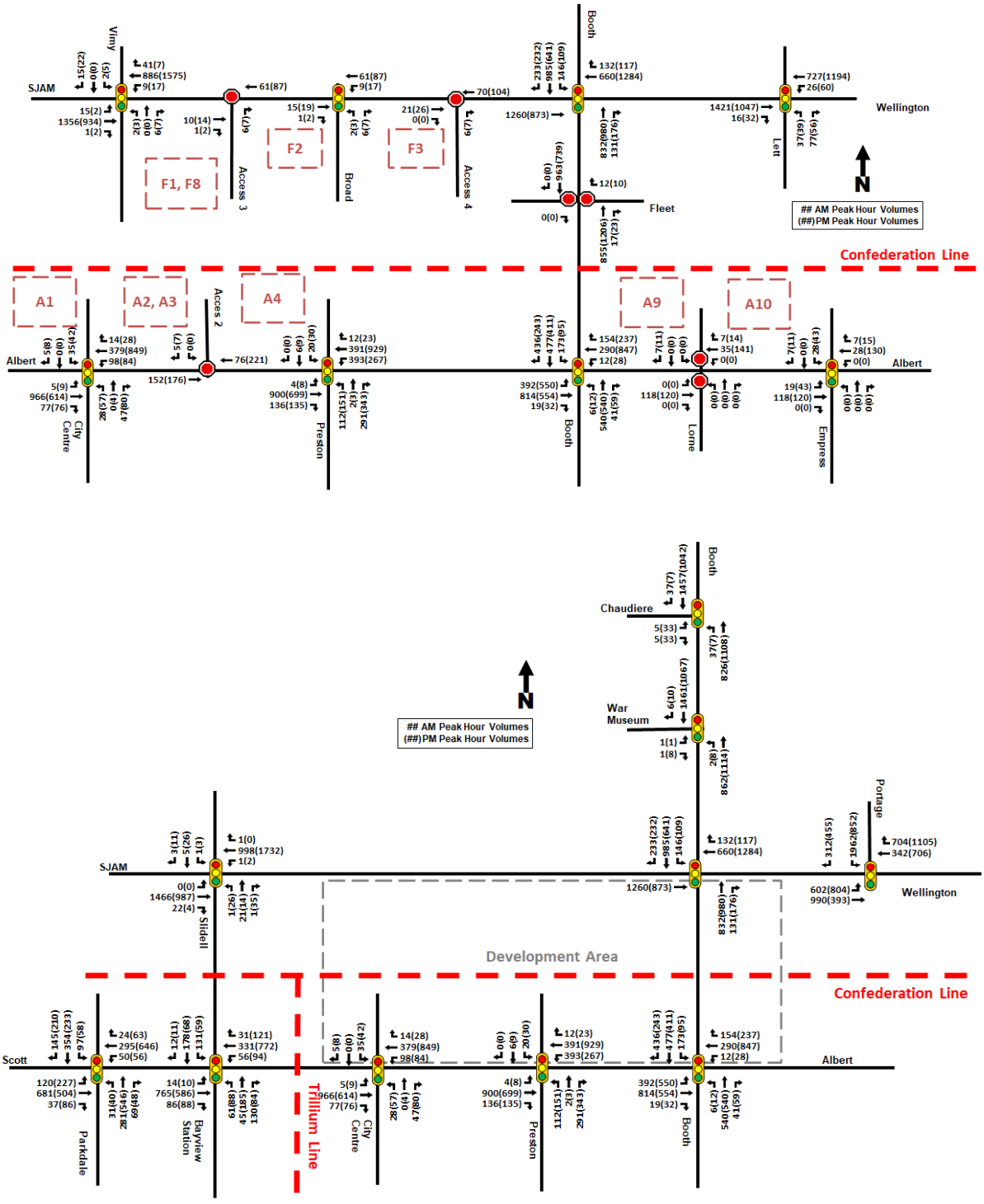


Figure 20: Total Projected Traffic Volumes – 2040 (Phase One & Two), AM Peak (PM Peak)

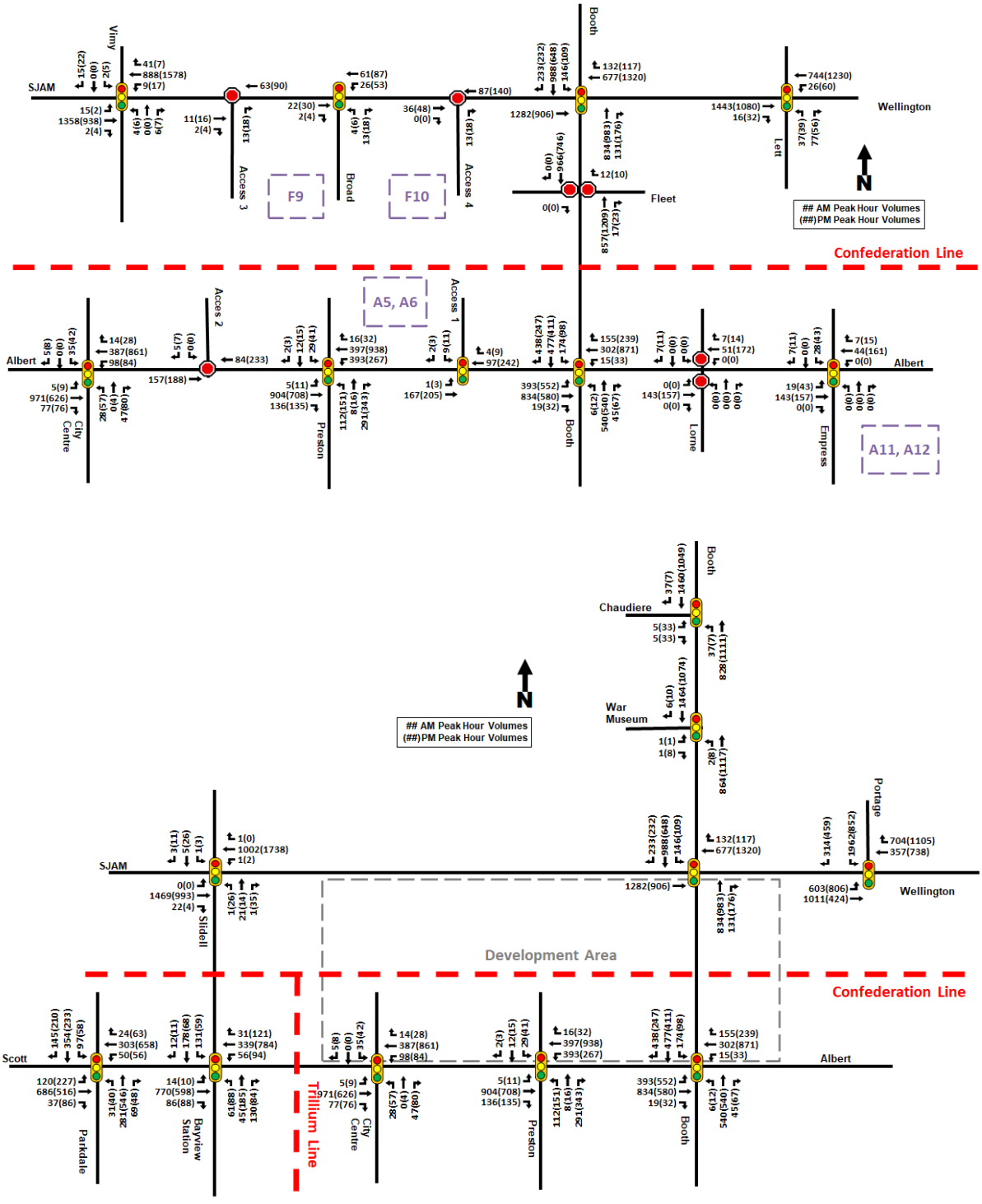
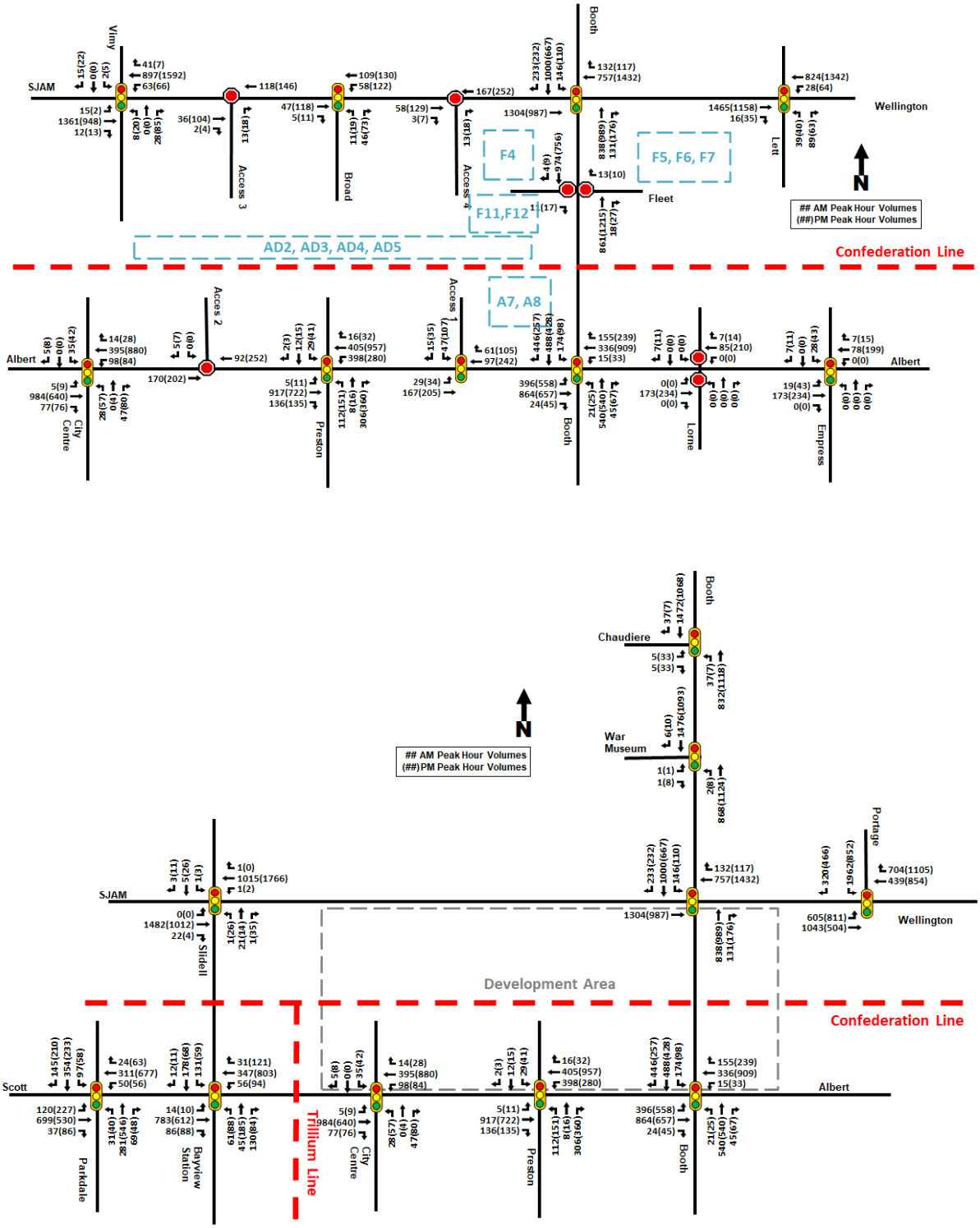


Figure 21: Total Projected Traffic Volumes – 2050 (Phase One, Two & Three), AM Peak (PM Peak)



Similar to existing baseline and background conditions, total projected conditions were assessed using the intersection capacity analysis software Synchro (v11) and using the same metrics such as v/c and delay. The following network modifications were included in the analysis (i.e., existing signal timing plans were not modified, unless otherwise specified below) for the three horizon scenarios, based on the changes to the road network shown in the Master Concept Plan:

Network Modifications from Master Concept Plan

Preston Street at Albert Street

- Modified to include eastbound left-turn lane with 30m of storage and southbound left turn lane with 15m of storage.

Albert Street at Lorne Avenue

- Modified to include north leg with stop control on the minor approach, permitting right-in/right-out movements only.

Albert Street at Empress Avenue

- Modified to include north leg and eastbound left-turn lane, actuated-coordinated signal control with a 120s signal cycle.

Booth Street at Fleet Street

- Modified to include west leg with stop control on the minor approach, permitting right-in/right-out movements only.

Wellington Street at Broad Street

- Modified existing traffic signal which currently serves major pedestrian pathway to Canadian War Museum (east of Vimy Place, west of Booth Street) to include a south leg, actuated-coordinated signal control with a 95s AM, 120s PM signal cycles and a fully protected westbound left-turn phase.

New Intersections from Master Concept Plan

Albert Street at Access 1

- Actuated-coordinated signal control with a 120s signal cycle during AM and PM peaks.
- It is noted that this proposed signal is located approximately 150m away from both the Albert Street / Booth Street traffic signal and the Albert Street / Preston Street traffic signal. Ideally signalized crossings and/or intersections would be located further apart, however the location of this signal is shown in the *City of Ottawa's Official Plan Schedule P – Pimisi Station and LeBreton Flats District – Mobility Network*. The location of this signal helps to prioritize active modes by enabling pedestrians and cyclists to cross Albert Street (in particular, to reach Pimisi O-Train Station) without travelling ~300m upstream or downstream to adjacent signals, as well as distribute vehicular trips to/from the development across numerous intersections. There is precedence elsewhere in the City in urbanized areas for traffic signals to be spaced closer than 150m apart (e.g., Elgin Street, Bank Street, Somerset Street, etc.). Additional details are provided in Table 26 below.

Albert Street at Access 2

- Right-in/right-out with stop control on the minor approach only.

Wellington Street at Access 3

- Right-in/right-out with stop control on the minor approach only.

Wellington Street at Access 4

- Right-in/right-out with stop control on the minor approach only.

Operational analysis for all key intersections was conducted based on total projected volumes depicted in Figures 19 to 21, existing signal timing plans and the previously described network modifications. **Tables 23 - 25** summarizes the projected performance of study area intersections for the 2030, 2040

and 2050 horizon years. Detailed Synchro output data for total projected conditions is provided as **Appendix F.**

Table 23: Study Area Intersection Operations - 2030 Phase 1 Total Projected Conditions

Intersections	Overall			Critical Movement			
	Delay (s)	v/c Ratio	v/c LOS	Mvmt	Delay (s)	v/c Ratio	v/c LOS
Booth & Chaudière	13 (13)	0.92 (0.77)	E (C)	SBTR	19 (12)	0.94 (0.76)	E (C)
Booth & War Museum	1 (2)	0.47 (0.36)	A (A)	SBTR	2 (2)	0.47 (0.35)	A (A)
Booth & Wellington	49 (39)	0.95 (0.95)	E (E)	NBTR	97 (61)	1.01 (1.03)	F (F)
Booth & Albert	103 (121)	1.08 (1.26)	F (F)	EBL	141 (290)	1.16 (1.55)	F (F)
Albert & Empress	3 (4)	0.34 (0.38)	A (A)	WBTR	3 (4)	0.15 (0.40)	A (A)
Albert & Preston	42 (28)	0.85 (0.66)	D (B)	WBL	52 (66)	0.88 (0.80)	D (C)
Albert & City Centre	14 (12)	0.51 (0.36)	A (A)	EBTR	15 (12)	0.53 (0.35)	A (A)
Albert/Scott & Bayview Station	19 (18)	0.69 (0.63)	B (B)	EBTR	14 (15)	0.75 (0.60)	C (A)
Scott & Parkdale	40 (89)	0.89 (1.15)	D (F)	WBT	30 (218)	0.59 (1.40)	A (F)
SJAMP & Slidell	3 (8)	0.49 (0.72)	A (C)	WBT	2 (9)	0.36 (0.72)	A (C)
Wellington/SJAMP & Vimy	2 (4)	0.45 (0.54)	A (A)	WBTR	3 (5)	0.32 (0.55)	A (A)
Wellington & Lett	20 (5)	0.60 (0.47)	A (A)	EBTR	27 (3)	0.62 (0.43)	B (A)
Wellington & Portage	110 (40)	1.21 (0.88)	F (D)	SBL	234 (53)	1.45 (0.88)	F (D)
Wellington & Broad	4 (3)	0.42 (0.48)	A (A)	WBT	3 (4)	0.29 (0.48)	A (A)

As shown in Table 23, the Booth Street at Albert Street, Wellington Street at Portage Bridge and Scott Street at Parkdale Avenue intersections are projected to continue operating over capacity during weekday morning or afternoon peak hours.

The only other noticeable change to intersection operations is the northbound through movement at the intersection of Booth Street at Wellington Street, which increases from a v/c ratio of 0.98 to 1.01 due to growth from the LeBreton Flats development. All other study area intersections are projected to continue operating similar to future background conditions, with only minor increases in volumes and delays.

Table 24: Study Area Intersection Operations - 2040 Phase 2 Total Projected Conditions

Intersections	Overall			Critical Movement			
	Delay (s)	v/c Ratio	v/c LOS	Mvmt	Delay (s)	v/c Ratio	v/c LOS
Booth & Chaudière	13 (13)	0.92 (0.77)	E (C)	SBTR	19 (13)	0.94 (0.76)	E (C)
Booth & War Museum	1 (2)	0.48 (0.36)	A (A)	SBTR	2 (2)	0.48 (0.36)	A (A)
Booth & Wellington	51 (55)	0.96 (0.97)	E (E)	NBTR	97 (62)	1.02 (1.04)	F (F)
Booth & Albert	104 (126)	1.09 (1.27)	F (F)	EBL	137 (320)	1.17 (1.61)	F (F)
Albert & Empress	4 (6)	0.36 (0.43)	A (A)	WBTR	3 (8)	0.17 (0.45)	A (A)
Albert & Preston	42 (29)	0.88 (0.69)	D (B)	NBL	116 (92)	0.94 (0.89)	E (D)
Albert & City Centre	14 (12)	0.51 (0.37)	A (A)	EBTR	15 (12)	0.53 (0.36)	A (A)
Albert/Scott & Bayview Station	19 (18)	0.69 (0.64)	B (B)	EBTR	14 (16)	0.76 (0.61)	C (B)
Scott & Parkdale	41 (93)	0.90 (1.17)	D (F)	WBT	30 (229)	0.61 (1.43)	B (F)
SJAMP & Slidell	3 (8)	0.50 (0.72)	A (C)	WBT	3 (9)	0.36 (0.72)	A (C)
Wellington/SJAMP & Vimy	3 (3)	0.45 (0.54)	A (A)	WBTR	4 (4)	0.32 (0.55)	A (A)
Wellington & Lett	22 (9)	0.61 (0.47)	B (A)	EBTR	30 (10)	0.63 (0.49)	B (A)
Wellington & Portage	139 (46)	1.30 (0.86)	F (D)	SBL	309 (64)	1.62 (0.93)	F (E)
Wellington & Broad	6 (5)	0.45 (0.50)	A (A)	WBT	5 (6)	0.30 (0.50)	A (A)
Albert & Access 1	8 (5)	0.43 (0.40)	A (A)	EBT	6 (6)	0.43 (0.39)	A (A)

As shown in Table 24, study area intersections are projected to continue operating similar in the year 2040 when compared to the projected conditions for the 2030 horizon year. With the exception of previously identified problematic intersections, all study area intersections are projected to operate acceptably, at LOS ‘E’ or better.

Table 25: Study Area Intersection Operations - 2050 Phase 3 Total Projected Conditions

Intersections	Overall			Critical Movement			
	Delay (s)	v/c Ratio	v/c LOS	Mvmt	Delay (s)	v/c Ratio	v/c LOS
Booth & Chaudière	14 (13)	0.93 (0.78)	E (C)	SBTR	21 (13)	0.95 (0.78)	E (C)
Booth & War Museum	1 (2)	0.48 (0.36)	A (A)	SBTR	2 (2)	0.48 (0.36)	A (A)
Booth & Wellington	63 (58)	1.00 (1.00)	E (E)	NBTR	95 (65)	1.09 (1.04)	F (F)
Booth & Albert	111 (132)	1.13 (1.31)	F (F)	EBL	156 (390)	1.22 (1.77)	F (F)
Albert & Empress	4 (6)	0.32 (0.44)	A (A)	WBTR	3 (8)	0.18 (0.47)	A (A)
Albert & Preston	53 (30)	0.90 (0.71)	D (C)	EBTR	90 (42)	1.03 (0.64)	F (B)
Albert & City Centre	14 (11)	0.51 (0.37)	A (A)	EBTR	15 (12)	0.53 (0.36)	A (A)
Albert/Scott & Bayview Station	19 (18)	0.70 (0.65)	B (B)	EBTR	14 (15)	0.77 (0.62)	C (B)
Scott & Parkdale	41 (70)	0.90 (1.10)	D (F)	NBTR	31 (111)	0.62 (1.13)	B (F)
SJAMP & Slidell	3 (8)	0.51 (0.73)	A (C)	WBT	3 (9)	0.37 (0.73)	A (C)
Wellington/SJAMP & Vimy	7 (6)	0.58 (0.59)	A (A)	EBTR	10 (8)	0.61 (0.43)	B (A)
Wellington & Lett	29 (11)	0.64 (0.52)	B (A)	EBTR	42 (13)	0.66 (0.54)	B (A)
Wellington & Portage	135 (51)	1.29 (0.91)	F (E)	SBL	304 (64)	1.60 (0.93)	F (E)
Wellington & Broad	9 (9)	0.52 (0.55)	A (A)	EBTR	12 (6)	0.54 (0.42)	A (A)
Albert & Access 1	22 (32)	0.84 (0.85)	D (D)	EBT	34 (52)	0.87 (0.88)	D (D)

As shown in Table 25, operational conditions at key study area intersections in the year 2050 are expected to be slightly worse than those in the 2040 horizon year. The following intersections operated acceptably in the 2040 horizon year and will continue to operate acceptably in the 2050 horizon year:

- Booth Street and Chaudière
- Booth Street and War Museum
- Booth Street and Wellington
- Albert Street and Empress Avenue
- Albert Street and City Centre Avenue
- Albert Street / Scott Street and Bayview Station Road
- Sir John A. Macdonald Parkway and Slidell Street
- Wellington Street / Sir John A. Macdonald Parkway and Vimy Place
- Wellington Street and Lett Street
- Wellington Street and Broad Street
- Albert Street and Access 1

The following intersections were over capacity in at least one peak hour in the 2040 horizon year, and continue to be over capacity in at least one peak hour in the 2050 horizon year, with minimal increase to the v/c ratio:

- Albert Street and Booth Street (both peak hours)

- Scott Street and Parkdale Avenue (PM peak hour)
- Wellington Street and Portage Bridge (AM peak hour)

As previously noted, due to the implementation of a protected intersection at Booth Street and Albert Street as part of the Albert Street Cycling / Pedestrian Modifications, the intersection is projected to be over capacity in the Future Background Conditions in 2030. As noted in Section 4.3.1, one mitigation measure worth considering in the proposed design for Albert Street is the implementation of a double eastbound left turn in order to provide relief to one of the heaviest volume movements at the intersection, while still maintain the principles of a protected intersection. The intersection operations at Booth Street and Albert Street for the 2050 Phase 3 Horizon are shown in **Table 26** for a single eastbound left and a double eastbound left. It should be noted that since this mitigation measure is recommended in the Future Background Conditions as part of the Albert Street Cycling / Pedestrian Modifications, not the LeBreton Flats development, it is not expected that the cost of this upgrade be attributed to the LeBreton Flats development.

Table 26: Booth at Albert – 2050 Phase 3 Horizon Double EBL, AM Peak (PM Peak)

Scenario	Mvmt	Volume (vph)	Delay (s)	v/c Ratio	v/c LOS	95th Queue (m)
Single EBL	EBL	400 (560)	156 (390)	1.22 (1.77)	F (F)	#189 (#294)
	EBTR	870 (660)	19 (19)	0.56 (0.43)	A (A)	147 (63)
	Overall	-	111 (133)	1.13 (1.31)	F (F)	-
Double EBL	EBL	390 (545)	39 (138)	0.63 (1.16)	B (F)	54 (#127)
	EBTR	770 (490)	19 (20)	0.56 (0.45)	A (A)	147 (59)
	Overall	-	98 (90)	0.96 (1.12)	E (F)	-

As previously noted, the proposed signalized intersection of Albert Street at Access 1 is located approximately 150m away from the busy traffic signals of Albert Street at Booth Street and Albert Street at Preston Street. While ideally signalized crossings and/or intersections would be located further apart, the location of this signal helps to prioritize active modes by enabling pedestrians and cyclists to cross Albert Street to access Pimisi O-Train station, pathways and future amenities within LeBreton without travelling ~300m upstream or downstream to adjacent signals. There is precedence elsewhere in the City for intersections located on pedestrianized streets to be closer than 150m apart. Notwithstanding the above, an alternative intersection operations analysis was undertaken to determine the impacts of converting Access 1 at Albert Street to a right-in, right-out stop-control access, with all left turn movements reallocated to the intersection of Albert Street at Preston Street. The results of this analysis are shown in **Table 27**.

Table 27: 2050 Phase 3 Intersection Operations – Access 1 Right-In, Right-Out

Intersections	Overall			Critical Movement			
	Delay (s)	v/c Ratio	v/c LOS	Mvmt	Delay (s)	v/c Ratio	v/c LOS
Booth & Albert	107 (139)	1.13 (1.33)	F (F)	EBL	151 (385)	1.22 (1.77)	F (F)
Albert & Preston	60 (33)	0.93 (0.77)	E (C)	SBL	173 (82)	1.06 (0.81)	F (D)
Albert & City Centre	14 (11)	0.51 (0.37)	A (A)	EBTR	15 (12)	0.53 (0.36)	A (A)

When modeled without a traffic signal at Albert Street and Access 1, operations at the intersection of Albert Street and Preston Street would deteriorate in the AM peak hour, with the LOS decreasing from LOS 'D' to LOS 'E'. The most significant change is that the southbound left turn decreases from LOS 'A' in the AM and PM peak hours, to LOS 'F' and LOS 'D', respectively. Due to the impact to traffic operations at Albert Street and Preston Street, the reduction in connectivity for pedestrians and cyclists to cross Albert Street, as well as the fact that this signal is included in the *City of Ottawa's Official Plan Schedule P – Pimisi Station and LeBreton Flats District – Mobility Network,* **the removal of the traffic signal at Access 1 is not recommended**.

4.3.3 Adjustments to Travel Demand

Adjusting modal splits away from projected auto trips further is difficult to justify, as certain individuals will ultimately be required to travel by vehicle for one reason or another (e.g., distance between origin/destination is too great, travel is a requirement for employment, physical disabilities limit travel options, etc.). Additionally, adjusting the auto modal share for site-generated traffic much lower will have a negligible effect on the performance of study area network.

With the opening of the Confederation LRT line and the coming expansion of both the Confederation LRT line and the Trillium LRT line, it is anticipated that there will be an increased number of transit users, which is likely to alleviate the vehicular demand on study area intersections. As noted above, there is also the future West Gatineau Tramway and downtown transit loops project that has the potential to reduce interprovincial vehicular travel, including along the Booth Street corridor. Furthermore, with the planned improvements to active transportation facilities as identified in Section 3.1.3 and as proposed active transportation facilities as part of the Master Concept Plan, there may be a shift to more active modes in the study area in the future. In addition to a shift to alternative modes, peak network demand may also be further spread beyond peak hours with individuals able to modify their working hours (e.g., individuals choosing to leave for work earlier or later to avoid the most congested network conditions) or working remotely (or telecommuting) from their homes.

Telecommuting has become a more common trend since the start of the COVID-19 pandemic in March 2020. A Statistics Canada report[10] indicates that as of May 2020 almost one-third (32.6%) of businesses had 10% or more of their workforce telecommuting. This is a significant increase over the numbers from February 2020 that indicated only 16.6% of businesses had 10% or more of their workforce telecommuting. The report also indicates that close to one quarter (22.5%) of businesses expect that 10% or more of their workforce will continue to telecommute once the COVID-19 pandemic is over. Rapid technological advancement in network security, accessibility and remote monitoring holds much promise in addressing long standing concerns with telecommuting. A paper presented at the Transportation Association of Canada (TAC) conference in 2004 titled Development of Modal Share Targets for Ottawa's Transportation Master Plan estimated that 5% of Ottawa workers telecommute. The same paper estimated that in the future this number could grow from 5% to 8%.

Based on the foregoing, no adjustments to background or site-generated network demand were considered for the purposes of this TIA study. However, it should be noted that new traffic data will be collected for each development application related to LeBreton Flats to feed into TIA studies for each application. The updated data collected with each study should more accurately reflect the benefits of Ottawa's new LRT service, which may potentially alleviate vehicular demand on study area intersections.

[10] https://www150.statcan.gc.ca/n1/pub/36-28-0001/2021010/article/00001-eng.htm

4.4 Preston Street Extension

The LeBreton Flats Master Concept Plan proposes a shift in function of the planned Preston Street extension and bridge between Albert Street and the SJAMP/Wellington Street from a vehicular focus to an active transportation focus more in line with the City's new Transportation Master Plan. The Preston Street arterial extension has been previously identified in the City of Ottawa's Official Plan and Transportation Master Plan. The Master Concept Plan proposes to replace this planned roadway, including a vehicular bridge, with an active transportation bridge. This is addressed in the Planning Rationale, detailing the policy alignment and qualitative considerations for an active-modes Preston extension to support this change.

Through discussions with the City, it was agreed that an analysis of the removal of the Preston extension and bridge should be included in this TIA, as there are potential regional implications of its removal.

A list of high-level concerns from the City regarding the potential removal of the Preston Street extension are provided below. The balance of the following sections aims to address the stated concerns from the City of Ottawa with the removal of the Preston extension. This has been informed and grounded using various methodologies including: a network assessment using the City's EMME Travel Demand Model; a screenline analysis; intersection operations analysis; and a review of impacts to pedestrians, cyclists, heavy vehicles, transit, and emergency vehicles.

4.4.1 EMME Models

Through discussions with City of Ottawa staff, a number of modelling scenarios were developed and tested. All scenarios for the EMME models:

- Are based on the City's 2013 Transportation Master Plan, which assumes a higher mode share for car trips than the current EMME model in development at the City for the new TMP. This will result in a more conservative analysis, as a greater number of trips will be assigned to the vehicular mode.
- Assumed full build-out of the LeBreton Flats lands even though the full buildout is not expected to occur until the year 2050.
- Assumed that the Tunney's Pasture Complex will be redeveloped to add 3,718 persons and increase employment from 11,440 jobs to 13,091. The redevelopment of the Tunney's Pasture Complex, a federal government office complex located approximately 2.0 km to the west, is the largest planned adjacent development that does not yet have a TIA completed (as previously mentioned, 900 Albert Street and Zibi have TIAs already completed). It is expected that at its ultimate completion, the redevelopment will employee somewhere between 22,000 and 25,000[11] people.

It should be noted that there are some slight differences between the AM peak and PM peak EMME models: the AM peak model uses the City's 2031 Network Concept Plan per the City's 2013 Transportation Master Plan, while the PM peak model uses the City's 2031 Affordable Network Plan. Therefore, the AM peak model includes the Barrhaven and Kanata LRT projects, as well as the West Gatineau Tramway, but the PM peak model does not include these projects. A description of each scenario along with associated assumptions is presented below.

[11] https://www.tpsgc-pwgsc.gc.ca/biens-property/construction/tunneyspasture-eng.html

- **Scenario 1 (Baseline Scenario, No Preston extension)** – 2013 TMP Network Concept model (for AM peak), 2013 TMP Affordable Network (for PM peak) without Preston extension, with the following changes made to the network[12]:
    - Barrhaven LRT (AM peak only)
    - Kanata LRT (AM peak only)
    - Baseline BRT
    - Blackburn Hamlet Bypass (AM peak only)
    - New Gatineau Road Network
    - New STO Routes
    - West Gatineau Tramway (AM peak only)
    - Discussions were held regarding the potential inclusion of a sixth crossing of the Ottawa River between Ottawa and Gatineau, however the City staff maintained that the analysis of the Preston extension should be based on currently planned projects. With no specific timeline, location or budget, the sixth crossing does not fall into this category.
- **Scenario 2A** - Baseline scenario (no Preston Street extension), with all turning movements permitted at the intersection of Booth Street / Wellington Street (i.e., northbound left, eastbound left, eastbound right and westbound left turns permitted).
- **Scenario 2B** - Baseline scenario (no Preston Street extension), with northbound left turns permitted at the intersection of Booth Street / Wellington Street.
- **Scenario 3 (Preston extension)** - Baseline scenario, Preston Street extension in place, current turning movement restrictions in place at Booth Street / Wellington Street.

The full EMME models for the Preston extension analysis are included in **Appendix G**, with snapshots provided below from each scenario, including an image showing the volume of traffic diverted to Preston Street from other corridors when the extension is in place.

4.4.2 Local Impacts

Figures 22 and **23** on the subsequent page show the volume to capacity ratio (v/c ratio) for Scenario 1 (No Preston extension) and Scenario 3 (Preston extension) projected by the EMME model. An acceptable v/c ratio is shown in green, approaching capacity is shown in orange, and over capacity is shown in red. Some takeaways from these figures are noted below:

- It is notable that the volume relief in the model for the westbound SJAMP in the AM peak hour is for a section already operating well (i.e., west of Preston Street).
- The addition of the Preston extension **appears to further deteriorate operations on Wellington Street** east of Preston Street (i.e., between Preston Street and Booth Street).
- The Preston extension **does not appear to relieve Booth Street south of Albert Street**.
- The model shows that **the Preston extension seems to draw traffic away from roads that are well beyond the influence area of LeBreton Flats**. This exhibits the potential for the Preston extension to create induced demand, by providing a more attractive vehicular facility and attracting trips away from other modes of transportation such as transit and active modes, which runs contrary to the City's new Transportation Master Plan.

[12] It should be noted that the City of Ottawa's Transportation Master Plan is currently being revised. While the exact list of projects noted here may not be completed by the 2050 timeframe, it can be expected that an equivalent list of network improvements (as prioritized by the new TMP) will be completed by that time.

Figure 22: AM Peak Hour EMME Model v/c Ratio

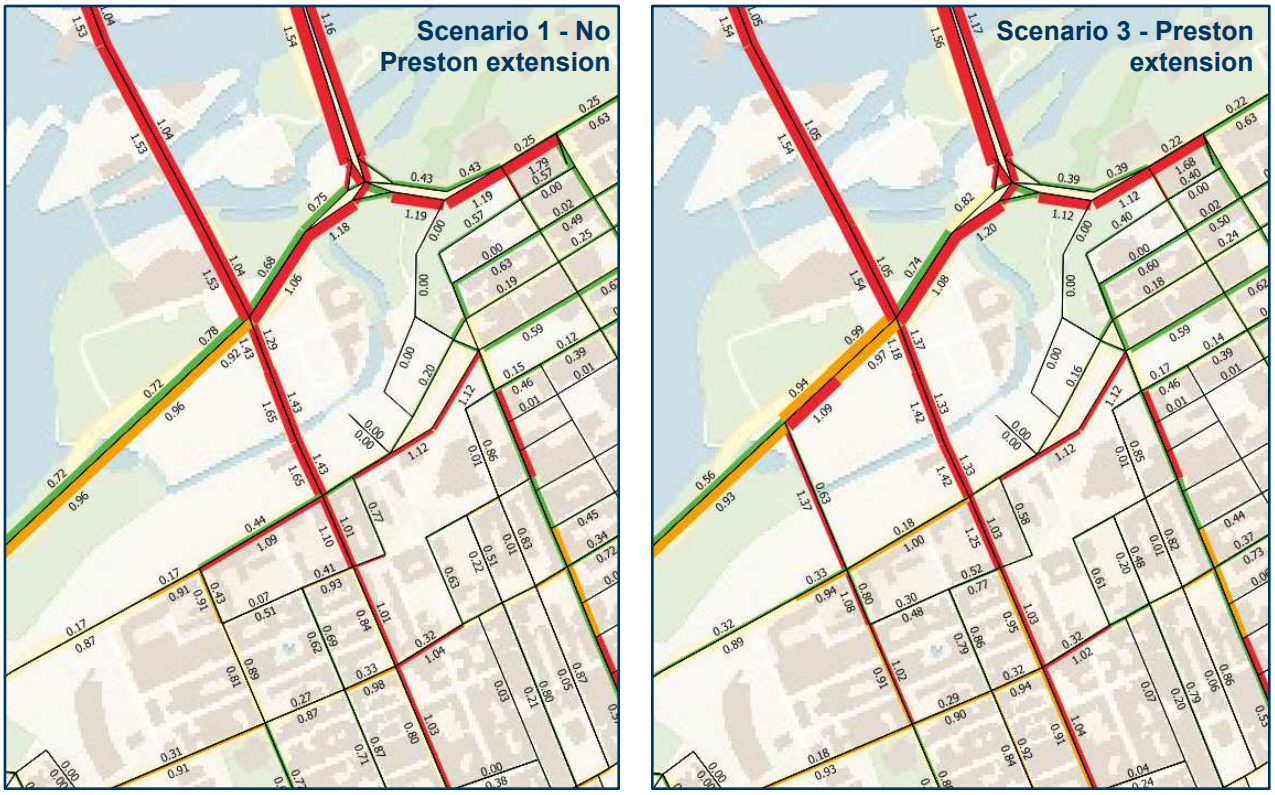
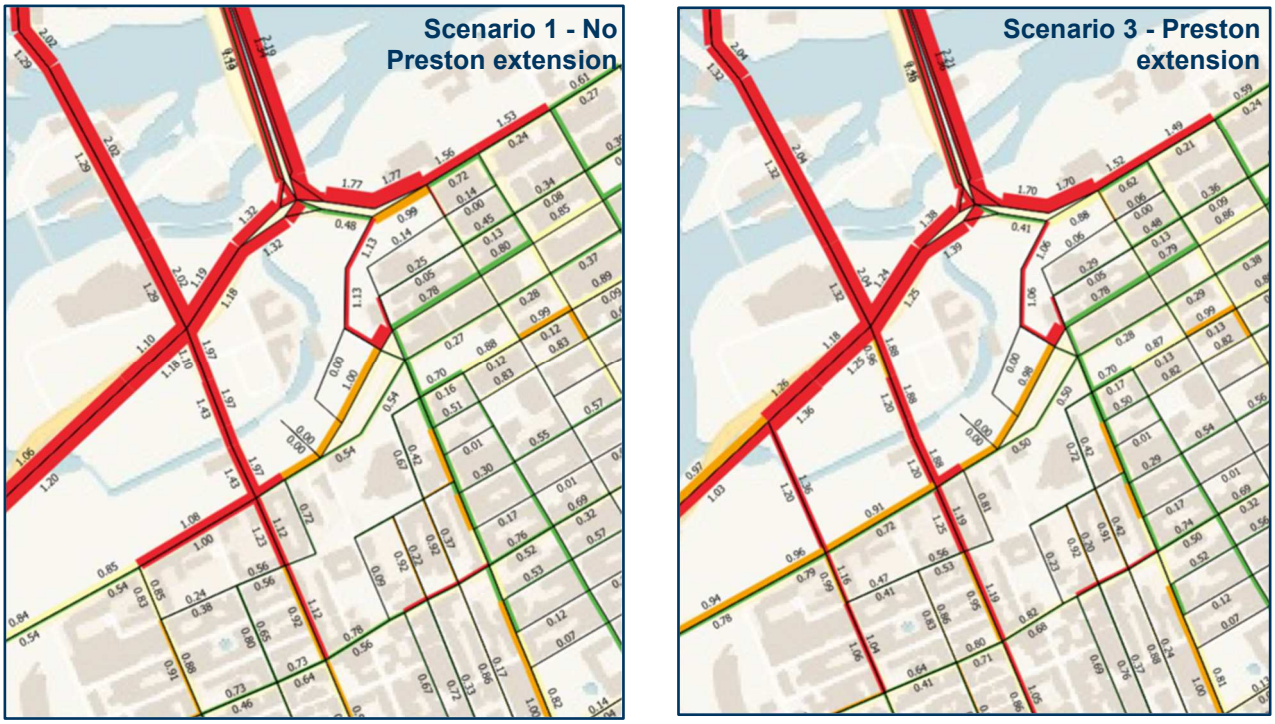


Figure 23: PM Peak Hour EMME Model v/c Ratio



4.4.3 Traffic Diversion

Figures 24 through **27** display the volume of diverted traffic from the EMME model when the Preston extension is in place. An increase in volume is shown in red, while a decrease in volume is shown in green. Figures 24 and 25 show the AM peak hour, while Figures 26 and 27[13] show the PM peak hour. Figures 24 and 26 focus on the area around LeBreton Flats, while Figures 25 and 27 show the larger road network. Some takeaways from the modelling demonstrated in these figures are noted below:

- A significant reduction in volumes to/from the SJAMP west of Preston Street is observed in the modelling with the introduction of the Preston extension. This reduction in volumes appears to extend further west than originally anticipated, as there are vehicle reductions as far west as Pinecrest Road and Richmond Road.
- There are **minimal changes in downtown traffic volumes** (i.e., east of Bronson Avenue) from the introduction of Preston Street into the model.
- The **traffic increase shown in the model on Preston Street is well in excess of the traffic reduction observed on Booth Street**, resulting in an overall net increase in traffic within the study area.
- The increase of traffic shown in the model in both directions on Preston Street, Rochester Street and Booth Street **would impact local residents living in the Centretown West neighbourhood**. This modelled increase in traffic is likely due to an increase in commuters connecting between Gatineau and Highway 417.
- The model shows that vehicles to/from the Tunney's Pasture complex (i.e., westbound in AM peak, eastbound in PM peak) shift from the SJAMP to Albert Street with the Preston extension in place.
- Between Carling Avenue and Baseline Road, the model shows that the Preston extension reduces traffic on Fisher Avenue and increases traffic on Prince of Wales Drive.
- The model shows that the Preston extension reduces traffic on SJAMP and increases traffic on Highway 417 between Rochester Street and Pinecrest Road.

[13] It should be noted that the large differences shown within the vicinity of the Preston / Wellington intersection is due to the need to create a new intersection for the Preston extension, resulting in new links between the two scenarios and a much larger difference in volumes.

Figure 24: Preston Extension Traffic Diversion – LeBreton Flats Area, AM Peak Hour

Figure 25: Preston Extension Traffic Diversion – Road Network, AM Peak Hour

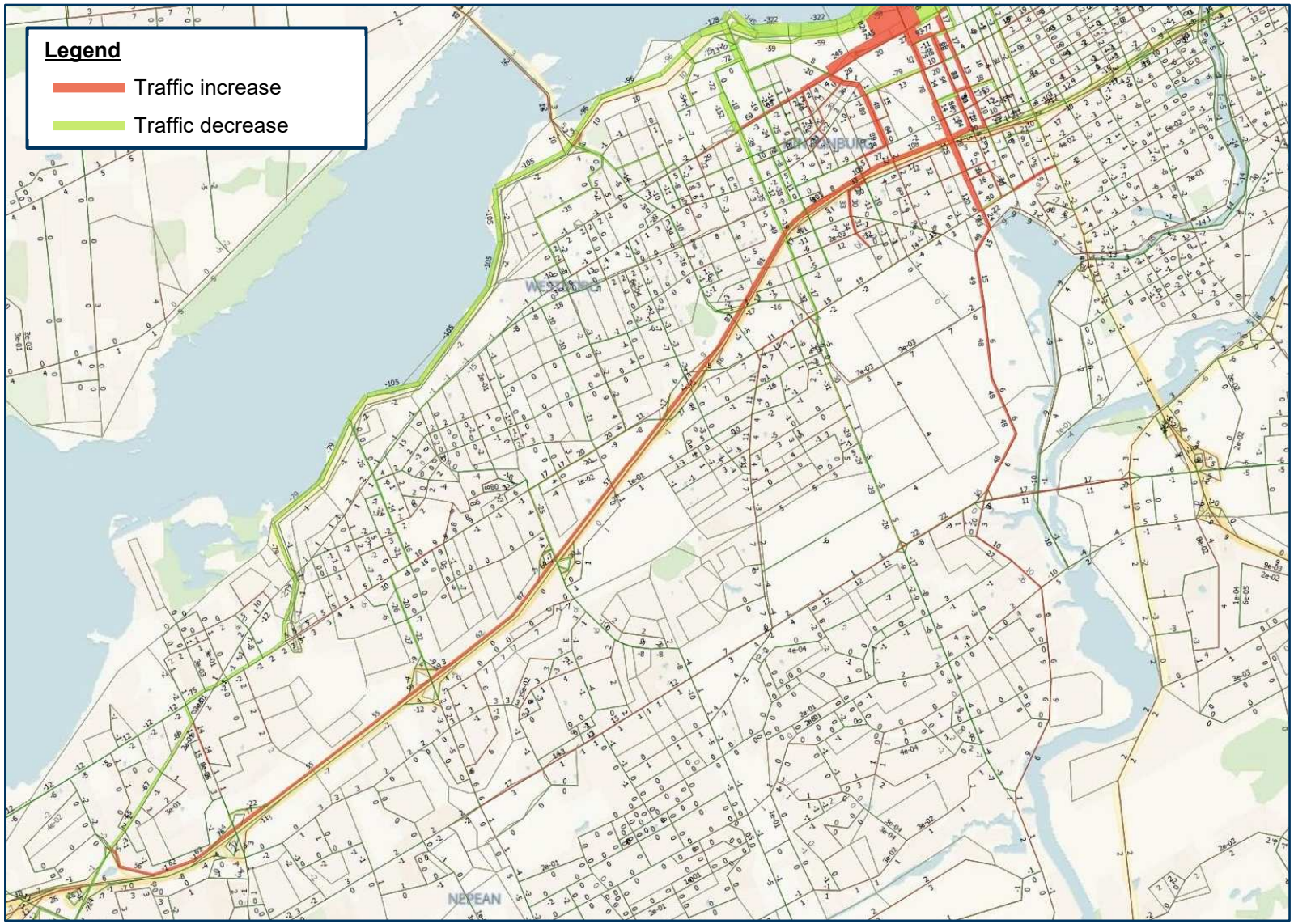


Figure 26: Preston Extension Traffic Diversion – LeBreton Flats Area, PM Peak Hour

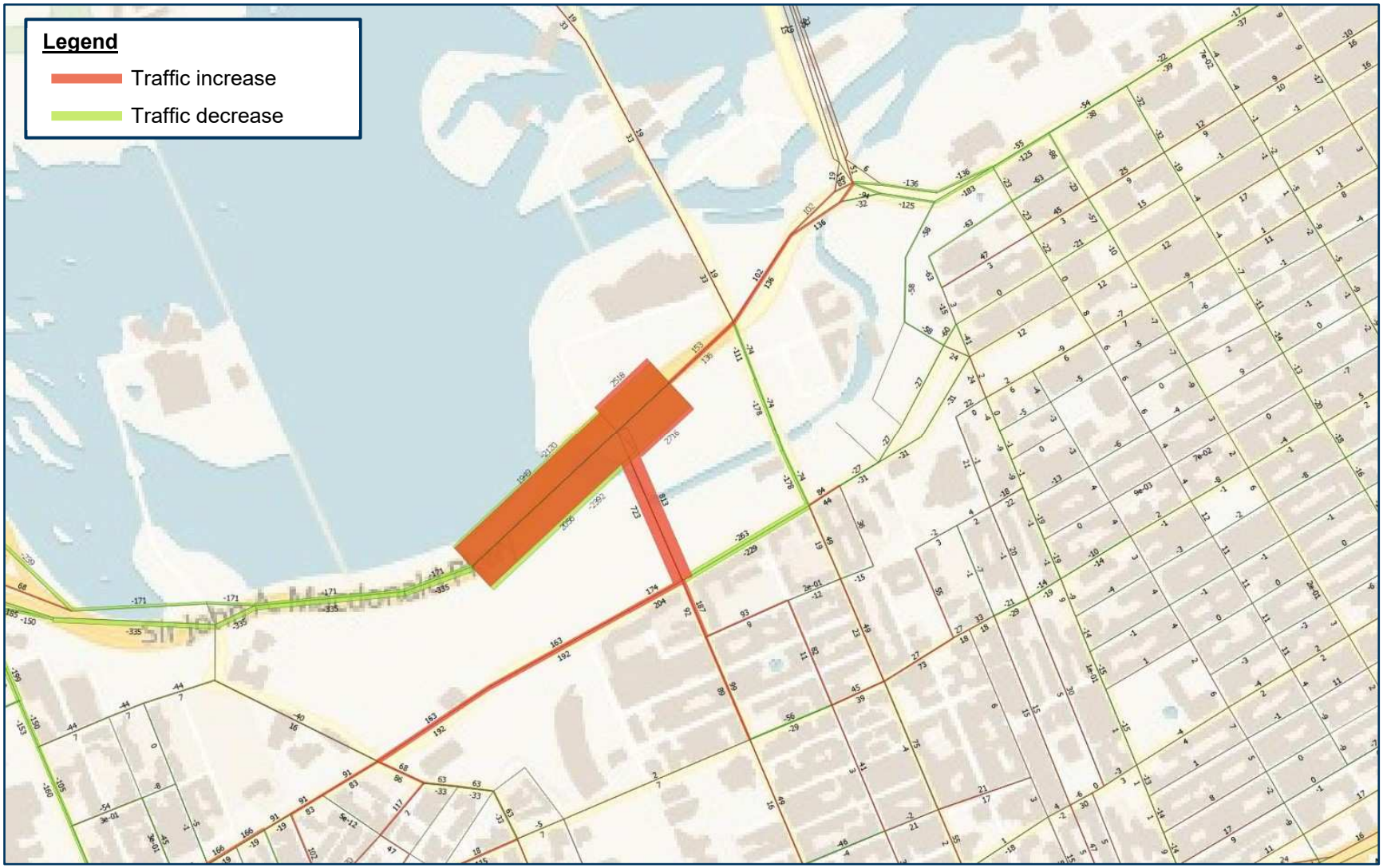
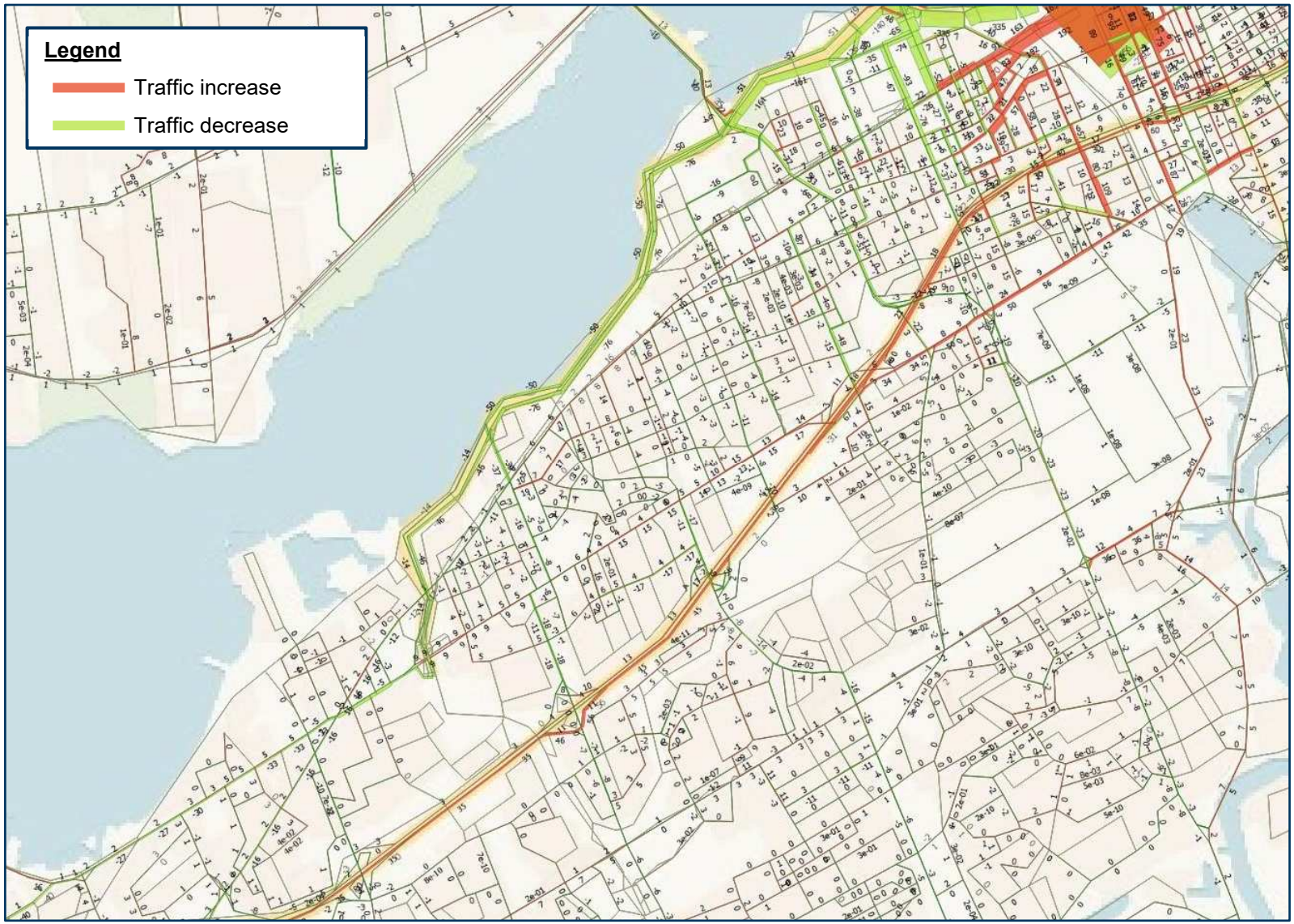


Figure 27: Preston Extension Traffic Diversion – Road Network, PM Peak Hour



4.4.4 Screenline Analysis

It is notable that the model appears to show an overall increase in traffic volumes in and around LeBreton Flats with the Preston extension in place. This would indicate that **the implementation of the Preston extension diverts traffic away from other corridors by drawing additional traffic from outside of the study area that was not previously in the area**. This can be confirmed by the use of a Screenline Analysis, as shown in **Table 28** below. For this analysis, the selected screenline is the general alignment of the Confederation Line LRT, just north of Albert Street.

Table 28: Confederation Line Screenline Analysis (No Preston vs Preston)

Street	Section	AM		PM	
		Northbound	Southbound	Northbound	Southbound
SJAMP	Transitway	-20	-61	-76	-50
Island Park	SJAMP - Scott	-6	-16	-37	-15
Tunney's Pasture	Yarrow - Scott	-27	-135	-93	-67
Parkdale	Lyndale - Scott	-72	-225	-139	-161
Bayview Station	Burnside - Scott	+1	0	-41	+16
Preston	SJAMP – Albert	+409	+908	+813	+723
Booth	Fleet – Albert	-57	-176	-74	-178
Bronson	Queen – Albert	-20	-142	+3	-15
Bay	Queen – Albert	+12	-	-22	-
Lyon	Queen – Albert	-	-11	-	-57
Kent	Queen – Albert	-57	-	-18	-
Bank	Queen – Albert	0	-12	-1	+1
Total	**-**	**+163**	**+130**	**+315**	**+197**

While the model shows an obvious increase in traffic volumes on Preston Street, one of the general ideas for the extension is to divert vehicles off of Booth Street, spreading traffic across both roadways. As shown in the City's EMME model this is not the case, as **the reduction in vehicles on Booth Street and other parallel corridors would not balance out the increase in traffic on Preston Street caused by the Preston extension**. This indicates that the Preston extension would draw in additional traffic that was not previously in the area, increasing the amount of traffic in the area, especially in the existing neighbourhood south of LeBreton Flats. This can be further confirmed by using a screenline further south, just north of Somerset Street aligning with Spruce Street, as shown in **Table 29**.

Table 29: Spruce Street Screenline Analysis (No Preston vs Preston)

Street	Section	AM		PM	
		Northbound	Southbound	Northbound	Southbound
Bayview Station	Scott - Somerset	-23	+89	+63	-33
Preston	Primrose - Somerset	+73	+78	+99	+89
Rochester	Primrose - Somerset	+79	+85	+83	+11
Booth	Primrose - Somerset	+20	+125	+49	+23
Bronson	Cooper - Somerset	-10	-114	-19	-1
Total	**-**	**+139**	**+263**	**+275**	**+89**

It is worth noting that for this screenline, the model shows that north-south traffic would increase on Preston Street, Rochester Street and Booth Street. This further confirms that while the implementation of the Preston extension would divert some traffic away from Booth Street between Wellington Street and Albert Street, **it would attract additional traffic to Booth Street between Albert Street and Somerset Street, as well as Preston Street, Rochester Street and Bayview Station Road**. This section of Booth Street already features traffic calming measures to address the heavy traffic volumes and speeds, and drawing additional traffic to the neighbourhood would likely not be welcomed by the surrounding residential neighbourhood.

The final screenline to be used is the Ottawa River in order to confirm the change in volumes on the bridges between Ottawa and Gatineau. The results of this screenline analysis are shown in **Table 30**.

Table 30: Ottawa River Screenline Analysis (No Preston vs Preston)

Section	AM		PM	
	Northbound	Southbound	Northbound	Southbound
Portage Bridge	+21	+25	+32	+19
Chaudiere Bridge	-9	+18	+19	+33
Champlain Bridge	+2	-3	+13	-10
Total	**+14**	**+40**	**+64**	**+42**

It should be noted that the EMME plots provided don't include the Alexandra Bridge or the Macdonald-Cartier Bridge. Notwithstanding, the screenline shows that the implementation of the Preston extension would see a general increase in traffic across the bridges within the vicinity of the study area.

4.4.5 Flats District Access

City of Ottawa comment: *The Flats District that is north of the Confederation Line and west of Booth Street makes up approximately 33% of all the site's peak hour trip generation and as currently proposed cannot be accessed from the south via Booth Street. This access issue may cause deliveries, taxis, and other necessary motor vehicle trips to use Parkdale Avenue (~2 km west) or Bay Street (~1 km east) to reach the development. The Preston extension would alleviate this concern.*

The Flats District is the area of LeBreton Flats west of Booth Street and north of the Confederation Line. Booth Street would not be able to be used for vehicles to access the Flats District from the south due to the northbound left turn restriction in place at Booth Street and Wellington Street, unless the turn restriction was removed/changed. As noted by the City, with the Preston extension in place, vehicles from the south would be able to use Preston Street to access Wellington Street and enter the Flats District; however, it is important to note that due to the site grades and the type of bridge infrastructure that would be required in order to provide the Preston extension, it would not be possible for vehicles to directly access future local streets within the Flats District from Preston Street.

The City's concern that 33% of all vehicular trips generated by the LeBreton Flats development would not be able to enter and exit the Flats District is somewhat misguided; this figure assumes that all vehicular trips into and out of the Flats District would not be able to connect with the Flats District. However, access and egress to the Flats District would be possible for all vehicular trips from the north, east and west – only inbound vehicular trips from the south would be unable to access the Flats District, due to the existing northbound left turn restriction at Booth Street and Wellington Street. **These trips (i.e., inbound trips from the south) amount to only 14% of all inbound vehicular trips (3% of all person trips) to LeBreton Flats**, approximately 50 vph in the AM peak hour and 80 vph in the PM peak hour. Additionally, if this access remains a concern, there is potential for the removal of the northbound left turn restriction at the intersection of Booth Street and Wellington Street.

The diverted traffic volumes in the AM peak hour shown above in Figure 24 provide some insight on access routes into the Flats District for vehicles from the south without the Preston extension in place. It appears that the model shows the routes of choice to access the Flats District from the south would be:

- Via Parkdale Avenue / SJAMP (approximately 40%)
- Via Kent Street / Bank Street / Wellington Street (approximately 30%)
- Via Bay Street / Bronson Avenue / Wellington Street (approximately 30%)

Kent Street would be a strong contender for accessing the Flats District from the south as it is a northbound street with an off-ramp access from Highway 417 and has some connectivity further south via Bank Street. Bay Street would be another contender for access from the south, due to its connection to Bronson Avenue, which has access to Highway 417 and further south of the highway.

Bayswater Avenue / Bayview Station Road / Slidell Street could be a contender for access to the Flats District if the northbound right turn restrictions at the intersection of Slidell Street and SJAMP were removed. This scenario was modelled in EMME to review the potential upstream impacts from this change. The results of the model show the following changes to traffic volumes in the area:

- Increase of 50 vph northbound on Bayswater Avenue between Carling Avenue and Gladstone Avenue. This section of Bayswater Avenue is classified as a Local Street.
- Increase of 70 vph northbound on Bayswater Avenue / Bayview Station Road between Gladstone Avenue and Albert Street / Scott Street. This section of Bayswater Avenue / Bayview Station Road is classified as a Collector Street.
- Increase of 140 vph northbound on Bayview Station Road north of Albert Street / Scott Street. This section of Bayview Station Road is classified as a Collector Street.
- Increase of 110 vph northbound through Mechanicsville neighbourhood; all streets classified as Local Streets.
- Decrease of 200 vph on Parkdale Avenue north of Scott Street. Parkdale Avenue is classified as an Arterial Street on this section.

Given that the impacts this change would present in terms of an increase in traffic volumes on lower order facilities, specifically south of Somerset Street where there are already traffic calming measures in place, **the removal of the northbound right turn restriction from Slidell Street onto the SJAMP is not recommended**. However, it is worth noting that this movement could be permitted for other traffic, such as transit or emergency vehicles, if desired.

Without the Preston extension, 97% of all person trips would have direct access to the Flats District, with only 3% of person trips (and 14% of vehicular trips) requiring the use of an alternative corridor such as Parkdale Avenue, Kent Street or Bay Street. Given the strong connection provided to the Flats District for all non-vehicular modes, access to the Flats District is not felt to be a strong concern with the removal of the Preston extension.

4.4.6 Intersection Operations

City of Ottawa comment: *The increase in network capacity from the addition of 400 m of roadway in the Preston Street corridor would be nominal and would be limited by area bottle necks (e.g., Chaudière interprovincial crossing is and will continue to operate at capacity).*

The City's EMME models identified in Section 4.4.1 were used as the basis for developing turning movement volumes for the Preston extension 2050 Full Build-Out that are used in the Synchro analysis in **Table 31**. The changes in traffic volume on each corridor were manually adjusted since the EMME model tends to overrepresent traffic volumes when compared against turning movement counts (this is consistent across both the existing EMME models and the future EMME models). Once the adjustment was made, traffic was diverted as outlined in Figures 24 and 26, with adjustments made to the turning movement volumes using the percentage of diverted traffic along each corridor. **Figure 28** below shows the adjustments made to the No Preston extension 2050 Full Build-Out turning movement volumes (i.e., those shown in Figure 21), while **Figure 29** shows the turning movement volumes to be used in the Preston extension 2050 Full Build-Out analysis.

Figure 28: Changes to 2050 Full Build-Out Volumes from No Preston Extension Scenario

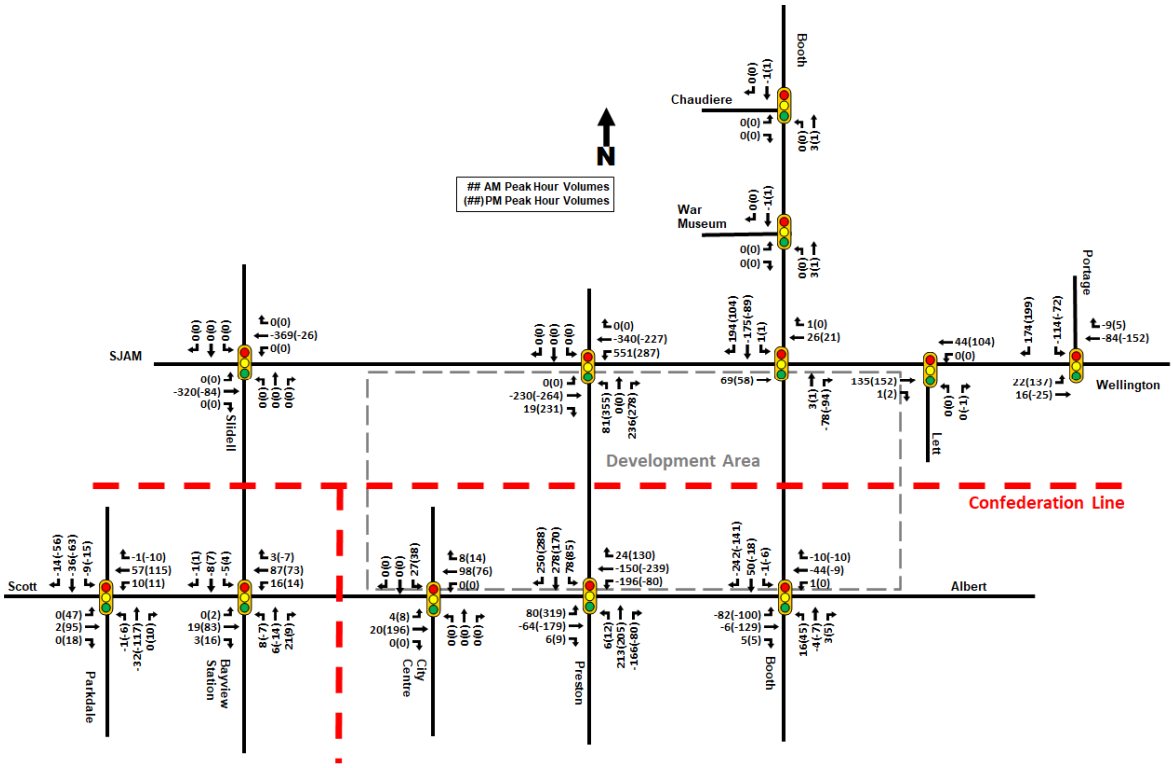
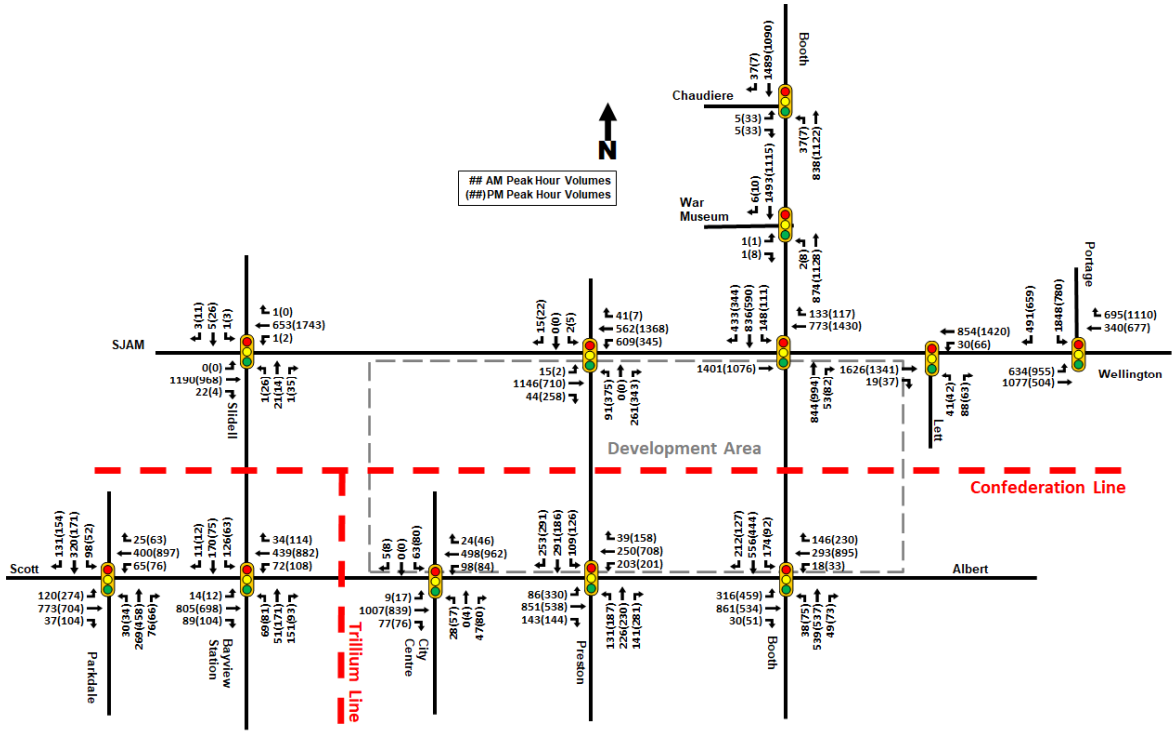


Figure 29: Preston Extension –Turning Movement Volumes, AM Peak (PM Peak)



The following Table 31 summarizes the projected study area intersection performance based on the Preston extension 2050 Full Build-Out Scenario, assuming no significant changes to signal timing plans from the No Preston extension 2050 Full Build-Out Scenario (i.e., slight tweaks to optimize phases, but not cycle lengths).

Table 31: Study Area Intersection Operations – Preston Extension, AM Peak (PM Peak)

Intersections	Overall			Critical Movement			
	Delay (s)	v/c Ratio	v/c LOS	Mvmt	Delay (s)	v/c Ratio	v/c LOS
Booth & Chaudière	14 (13)	0.93 (0.78)	E (C)	SBTR	21 (13)	0.95 (0.78)	E (C)
Booth & War Museum	1 (2)	0.48 (0.36)	A (A)	SBTR	2 (2)	0.48 (0.36)	A (A)
Booth & Wellington	66 (59)	1.00 (0.97)	E (E)	WBT	31 (98)	0.57 (0.99)	A (E)
Booth & Albert	70 (108)	0.99 (1.22)	E (F)	EBL	138 (212)	1.16 (1.34)	F (F)
Albert & Empress	4 (6)	0.37 (0.45)	A (A)	WBTR	3 (8)	0.18 (0.47)	A (A)
Albert & Preston	69 (65)	0.91 (0.96)	E (E)	NBTR	81 (73)	0.96 (0.99)	E (E)
Albert & City Centre	15 (12)	0.52 (0.45)	A (A)	EBTR	15 (14)	0.54 (0.46)	A (A)
Albert/Scott & Bayview Station	18 (19)	0.71 (0.69)	C (B)	EBTR	15 (15)	0.78 (0.70)	C (B)
Scott & Parkdale	41 (75)	0.88 (1.10)	D (F)	WBT	33 (144)	0.73 (1.24)	C (F)
SJAMP & Slidell	4 (8)	0.41 (0.72)	A (C)	WBT	5 (9)	0.23 (0.72)	A (C)

Intersections	Overall			Critical Movement			
	Delay (s)	v/c Ratio	v/c LOS	Mvmt	Delay (s)	v/c Ratio	v/c LOS
Wellington/SJAMP & Vimy/Preston	59 (51)	1.03 (0.98)	F (E)	EBTR	90 (67)	1.10 (0.99)	F (E)
Wellington & Lett	49 (16)	0.70 (0.58)	B (A)	EBTR	72 (18)	0.72 (0.61)	C (B)
Wellington & Portage	111 (50)	1.20 (0.92)	F (E)	SBL	256 (55)	1.49 (0.85)	F (D)
Wellington & Broad	21 (11)	0.57 (0.58)	A (A)	NBLR	120 (50)	0.35 (0.61)	A (B)
Albert & Access 1	21 (34)	0.83 (0.86)	D (D)	EBT	33 (53)	0.86 (0.88)	D (D)

The intersections of Booth Street at Albert Street, Albert Street at Preston Street, Scott Street at Parkdale Avenue and Wellington Street at Portage Bridge continue to operate poorly in at least one peak hour with the Preston extension in place, consistent with all other analysis. There is a deterioration in LOS from LOS 'B' to LOS 'C' at the intersections of Albert Street at City Centre Avenue and Albert Street / Scott Street at Bayview Station Road.

The removal of the Preston extension does not noticeably impact the level of service of any intersections outside of the four key intersections identified below. The following section focuses on the intersections that are most impacted by the Preston extension: Booth Street at Wellington Street, Booth Street at Albert Street, Preston Street at Sir John A. Macdonald Parkway and Preston Street at Albert Street. The benefits and impacts of each scenario are summarized after each Synchro summary table.

Booth Street at Wellington Street

Table 32: Booth Street at Wellington Street – No Preston Extension vs Preston Extension

Intersections	Movements	Delay (s)	v/c Ratio	v/c LOS
Scenario 1 – No Preston Extension	EBT	91 (26)	0.95 (0.71)	E (C)
	WBT	29 (97)	0.54 (0.98)	A (E)
	WBR	23 (23)	0.21 (0.17)	A (A)
	NBTR	95 (54)	1.09 (1.04)	F (F)
	SBL	141 (87)	0.89 (0.91)	D (E)
	SBT	27 (26)	0.77 (0.51)	C (A)
	SBR	12 (19)	0.36 (0.35)	A (A)
	Overall	**63 (55)**	**1.00 (1.00)**	**E (E)**
Scenario 3 – Preston Extension	EBT	101 (22)	1.02 (0.75)	F (C)
	WBT	31 (98)	0.57 (0.99)	A (E)
	WBR	23 (22)	0.22 (0.17)	A (A)
	NBTR	97 (74)	0.97 (0.95)	E (E)
	SBL	152 (116)	0.92 (0.92)	E (E)
	SBT	23 (25)	0.63 (0.44)	B (A)
	SBR	21 (23)	0.64 (0.50)	B (A)
	Overall	**66 (59)**	**1.00 (0.97)**	**E (E)**

The overall intersection of Booth Street at Wellington Street operates comparably in both scenarios, with a LOS 'E' in both peak hours and similar overall intersection delays. The northbound approach is over capacity in both peak hours without the Preston extension, while with the Preston extension the northbound approach is almost at capacity. With the Preston extension the eastbound through movement is over capacity, while it is approaching capacity without Preston extension. Overall, this intersection operates very similarly between the two scenarios.

Booth Street at Albert Street

Table 33: Booth Street at Albert Street – No Preston Extension vs Preston Extension

Intersections	Movements	Delay (s)	v/c Ratio	v/c LOS
Scenario 1 – No Preston Extension	EBL	156 (390)	1.22 (1.77)	F (F)
	EBTR	19 (18)	0.56 (0.43)	A (A)
	WBL	43 (34)	0.12 (0.18)	A (A)
	WBTR	48 (118)	0.66 (1.16)	B (F)
	NBL	38 (38)	0.16 (0.20)	A (A)
	NBTR	154 (163)	1.22 (1.25)	F (F)
	SBL	226 (60)	1.31 (0.78)	F (C)
	SBT	42 (38)	0.77 (0.74)	C (C)
	SBR	306 (106)	1.57 (0.94)	F (E)
	Overall	**111 (132)**	**1.13 (1.31)**	**F (F)**
Scenario 3 – Preston Extension	EBL	138 (212)	1.16 (1.34)	F (F)
	EBTR	22 (12)	0.60 (0.35)	A (A)
	WBL	43 (35)	0.13 (0.16)	A (A)
	WBTR	46 (123)	0.59 (1.17)	A (F)
	NBL	40 (49)	0.26 (0.48)	A (A)
	NBTR	128 (176)	1.15 (1.28)	F (F)
	SBL	156 (56)	1.12 (0.74)	F (C)
	SBT	39 (38)	0.78 (0.72)	C (C)
	SBR	82 (69)	0.88 (0.47)	D (A)
	Overall	**70 (108)**	**0.99 (1.22)**	**E (F)**

The intersection of Booth Street at Albert Street is projected to operate with a LOS 'F' in both peak hours without the Preston extension. With the Preston extension, it is projected to operate with a LOS 'E' in the AM peak hour and a LOS 'F' in the PM peak hour. In both scenarios, the eastbound left turn (both peak hours), northbound through/right (both peak hours), and southbound left turn (AM peak hour) movements are over capacity. Without the Preston extension, the southbound right turn is also projected to be over capacity, as the Preston extension spreads this turning movement volume across Booth Street and Preston Street. Overall, the intersection of Booth Street at Albert Street is expected to operate better in the scenario with the Preston extension, however there are numerous over capacity movements in both scenarios.

Preston Street at Albert Street

The intersection of Preston Street at Albert Street is within 600m of the Pimisi LRT station, and is included in the Albert Street Cycling / Pedestrian Modifications project to improve pedestrian and cycling facilities on Albert Street. Therefore, for the Preston extension scenario, the only improvement assumed for this intersection to accommodate additional traffic volumes is a separate southbound right turn lane. This allows the southbound right turn movement to operate on an overlap phase with the eastbound left turn movement, separating the 250+ southbound right turning vehicles in each peak hour from pedestrians and cyclists crossing the west leg of the intersection.

Table 34: Preston Street at Albert Street – No Preston Extension vs Preston Extension

Intersections	Movements	Delay (s)	v/c Ratio	v/c LOS
Scenario 1 – No Preston Extension	EBL	42 (50)	0.07 (0.13)	A (A)
	EBTR	90 (42)	1.03 (0.64)	F (B)
	WBL	27 (71)	0.69 (0.81)	B (D)
	WBTR	5 (3)	0.19 (0.47)	A (A)
	NBL	78 (67)	0.75 (0.73)	C (C)
	NBTR	19 (20)	0.76 (0.80)	C (C)
	SBL	71 (80)	0.41 (0.53)	A (A)
	SBTR	44 (44)	0.10 (0.12)	A (A)
	Overall	**53 (30)**	**0.90 (0.71)**	**D (C)**
Scenario 3 – Preston Extension	EBL	33 (91)	0.27 (0.97)	A (E)
	EBTR	74 (54)	0.94 (0.75)	E (C)
	WBL	79 (69)	0.88 (0.83)	D (D)
	WBTR	25 (49)	0.34 (0.95)	A (E)
	NBL	104 (90)	0.90 (0.90)	D (D)
	NBTR	81 (73)	0.96 (0.99)	E (E)
	SBL	85 (81)	0.77 (0.94)	C (E)
	SBT	58 (71)	0.77 (0.52)	C (A)
	SBR	76 (67)	0.88 (0.96)	D (E)
	Overall	**69 (65)**	**0.91 (0.96)**	**E (E)**

Both scenarios operate comparably in the AM peak hour, with the Preston extension scenario having a higher delay and comparable v/c ratio. The difference in v/c ratio between the two scenarios results in a LOS 'E' in the AM peak hour with the Preston extension in place. The scenario without the Preston extension is projected to have the eastbound through/right movement over capacity in the AM peak hour, however no other movements operate worse than a LOS 'C'. In the scenario with the Preston extension, no movements are over capacity in the AM peak hour, but the eastbound through/right and northbound through/right movements are approaching capacity.

In the PM peak hour, the scenario with the Preston extension operates significantly worse than the scenario without the Preston extension. The Preston extension scenario has an overall LOS of LOS 'E', 35 seconds more of delay, and five individual movements approaching capacity (eastbound left, westbound through/right, northbound left, northbound through/right, southbound left, southbound right). The scenario without the Preston extension has no movement operating worse than LOS 'D'. Overall,

the scenario with no Preston extension in place is better from a traffic operations perspective at Preston Street and Albert Street, especially in the PM peak hour.

Preston Street at Wellington Street

The intersection of Preston Street at Wellington Street is within 600m of the Pimisi LRT station, therefore for the Preston extension scenario, the only improvement assumed for this intersection to accommodate additional traffic volumes is a separate northbound right turn lane. This allows the northbound right turn movement to operate on an overlap phase with the westbound left turn movement, separating the 250+ northbound right turning vehicles in each peak hour from pedestrians and cyclists crossing the east leg of the intersection.

Table 35: Preston Street at Wellington Street – No Preston Extension vs Preston Extension

Intersections	Movements	Delay (s)	v/c Ratio	v/c LOS
Scenario 1 – No Preston Extension	EBL	6 (6)	0.04 (0.01)	A (A)
	EBTR	10 (8)	0.61 (0.43)	B (A)
	WBL	54 (2)	0.37 (0.15)	A (A)
	WBTR	2 (5)	0.34 (0.61)	A (B)
	NBLTR	2 (21)	0.15 (0.45)	A (A)
	SBLTR	1 (2)	0.07 (0.14)	A (A)
	Overall	**7 (6)**	**0.58 (0.59)**	**A (A)**
Scenario 3 – Preston Extension	EBL	24 (29)	0.07 (0.02)	A (A)
	EBTR	90 (67)	1.10 (0.99)	F (E)
	WBL	68 (62)	1.00 (0.91)	E (E)
	WBTR	9 (28)	0.24 (0.71)	A (C)
	NBL	49 (59)	0.53 (1.00)	A (E)
	NBR	29 (84)	0.48 (1.01)	A (F)
	SBLTR	1 (1)	0.06 (0.07)	A (A)
	Overall	**59 (51)**	**1.03 (0.98)**	**F (E)**

While the intersection of Preston Street at Wellington Street operates with a LOS ‘A’ without the Preston extension, it is over capacity in the AM peak hour with the Preston extension in place and approaching capacity in the PM peak hour. The heavy westbound left turn movement that has to be accommodated due to the Preston extension opposes the eastbound through movement, resulting in the eastbound through movement being LOS ‘F’ and the westbound left turn being LOS ‘E’ in the AM peak hour and the eastbound through and westbound left being LOS ‘E’ in the PM peak hour. Additionally, the northbound left and northbound right operate with LOS ‘E’ and LOS ‘F’, respectively. The scenario without the Preston extension in place is much better from a traffic operations perspective at this intersection.

From the intersection operations analysis we can see that **the Preston extension causes a deterioration in intersection operations on the Preston Street corridor that are not offset by an improvement in intersection operations along Booth Street corridor**.

4.4.7 Network Modifications

Due to the limited number of north-south connections between Wellington Street / SJAMP and Albert Street, there appear to be limited opportunities for network modifications that would improve vehicular capacity while still prioritizing non-vehicular modes of transportation. An example of this is the aforementioned potential for permitting northbound right turns at the intersection of Slidell Street at SJAMP, which would result in an increase of cut-through traffic through the residential section of Bayswater Avenue. Bayswater Avenue is classified as a local street from Carling Avenue to Gladstone Street. Furthermore, due to requests from residents, speed humps and flex posts were implemented in recent years as traffic calming measures. These two factors show that while allowing the northbound right turn at Slidell Street / SJAMP may improve traffic operations in the study area, there are other reasons that it wouldn't be an acceptable network modification solution.

The only modification that has merit at this time is allowing the northbound left turn movement at the Booth Street and Wellington Street intersection, making it accessible to all traffic. This movement was previously allowed for transit only, but with the recent reconstruction of the intersection to provide protected intersection elements, it has been removed. The City provided an EMME model for the scenario with the northbound left turn being implemented at the intersection of Booth Street and Wellington Street, which indicated that 112 vehicles would make a northbound left turn movement during the AM peak hour. This has been modelled in Synchro software (assumed to operate with protected phasing due to crossing the southbound cycle track, and minimum green time). This option is compared against the default Scenario 1 (No Preston Extension) in the table below.

Table 36: Booth Street at Wellington Street – Permitted Northbound Left Turn, Scenario 1

Scenario	Movements	Delay (s)	v/c Ratio	v/c LOS
No Northbound Left Turn	EBT	91 (26)	0.95 (0.71)	E (C)
	WBT	29 (97)	0.54 (0.98)	A (E)
	WBR	23 (23)	0.21 (0.17)	A (A)
	NBTR	95 (65)	1.09 (1.04)	F (F)
	SBL	141 (87)	0.89 (0.91)	D (E)
	SBT	27 (26)	0.77 (0.51)	C (A)
	SBR	12 (19)	0.36 (0.35)	A (A)
	Overall	**63 (58)**	**1.00 (1.00)**	**E (E)**
Northbound Left Turn Permitted	EBT	91 (26)	0.95 (0.71)	E (C)
	WBT	29 (97)	0.54 (0.98)	A (E)
	WBR	23 (23)	0.21 (0.17)	A (A)
	NBL	192 (140)	1.19 (1.16)	F (F)
	NBTR	95 (65)	1.09 (1.04)	F (F)
	SBL	135 (90)	0.89 (0.92)	D (E)
	SBT	96 (37)	1.11 (0.65)	F (B)
	SBR	16 (20)	0.47 (0.41)	A (A)
	Overall	**81 (61)**	**1.03 (1.00)**	**F (E)**

While implementing a northbound left turn movement at the intersection of Booth Street at Wellington Street doesn't impact the overall v/c ratio or LOS, it increases the delay for the intersection during the AM peak hour. Specifically, the delay for the southbound through movement increases by approximately 70 seconds, and the v/c ratio increases from 0.77 to 1.11. In addition to operational concerns, implementing the northbound left turn would require a reconstruction of the recently built protected intersection to provide space for the additional lane. This indicates that **a northbound left**

turn movement is not recommended at the intersection of Booth Street and Wellington Street and should only be considered if the City continues to be concerned with the lack of vehicular access to the Flats District from the south.

The other potential mitigation measure is the provision of a sixth crossing of the Ottawa River. The NCC recently completed a Long-Term Integrated Crossings Plan; some key items that may benefit the transportation network around LeBreton Flats are highlighted below:

- There are limited opportunities to enhance vehicular capacity of existing crossings in the central core, however increasing people-moving capacity through sustainable transportation initiatives is possible.
- A new eastern crossing shows a higher potential to divert truck traffic away from the downtown crossings than a western one (15% diversion vs 8% diversion).
- A truck tunnel from Highway 417 to Macdonald-Cartier Bridge diverts the greatest volume of trucks from the downtown crossings (35%).
- The planned West Gatineau Tramway and downtown transit loop (shown previously in Figure 11) has significant potential to meet the needs of interprovincial travel. It is worth noting that the EMME model used in this analysis includes only the West Gatineau Tramway, and not the downtown transit loop. The West Gatineau Tramway is assumed to not lead to a reduction in vehicle lanes, as it would be accommodated through the addition of a new bridge crossing or replacement of the bus lanes currently on the Portage Bridge.

4.4.8 Pedestrian and Cycling Safety

City of Ottawa comment: *The intersection of Booth/Albert has a lot of responsibilities to transit, pedestrians and cyclists due to its proximity to OC Transpo's LRT Pimisi Station. The ability to shift freight transport away from the Albert Street / Booth Street intersection will reduce the number of turning trucks at both the Albert Street / Booth Street and Preston Street / Albert Street intersections, which would improve the pedestrian experience and more importantly, pedestrian safety at these two intersections. Truck turning would still be required at the Preston Street / Wellington Street and Wellington Street / Booth Street intersections; however, the Wellington Street corridor does not have the physical constraints, nor the pedestrian volumes that the Albert Street corridor does and would. Conflicts between pedestrians and turning trucks (as currently seen on the northern leg of the Albert Street / Booth Street intersection) are typically unwelcomed from a road safety perspective, and should be considered carefully, with the understanding that both corridors are not without their risks.*

Concerns with the mixing of heavy left turn movements (including heavy trucks) and pedestrians/cyclists at the intersection of Albert Street and Booth Street are justified. It is worth noting that diverting traffic and heavy trucks to the Preston extension helps alleviate safety issues in the Booth Street corridor, however it shifts the problem to the Preston Street corridor.

Figure 30: Existing Cycling Facilities at Booth Street / Albert Street

The Master Concept Plan proposes multi-use pathways on both sides of the aqueduct (i.e., north of the Confederation Line) as shown in **Figure 31**, which will permit pedestrians and cyclists to avoid using Albert Street if desired. The proposed MUPs will be attractive to trips originating or destined to LeBreton Flats, as well as cut through trips, such as active transportation users along the Ottawa River Pathway, or to and from downtown. At the time of this report, the multi-use pathway on the north side of the Confederation Line (south of the aqueduct) has been recently built between Pimisi and Bayview LRT stations with a connection to the Ottawa River Pathway and since its opening in December 2021, it has received more than 12,000 trips by pedestrians and cyclists. This will reduce the reliance of active transportation users on the Albert Street corridor, reducing vehicular conflicts with pedestrians and cyclists. Pedestrians and cyclists travelling north-south will still need to cross the Albert Street corridor (i.e., to/from Gatineau via the Chaudière Crossing). Further improvements to pedestrian and cyclist safety at the intersection of Albert Street/Booth Street will be observed with the implementation of a protected intersection as part of the Albert Street Cycling / Pedestrian Modifications project. This will require a fully protected eastbound left turn phase, which will minimize vehicular-pedestrian/cyclist conflicts on the north leg.

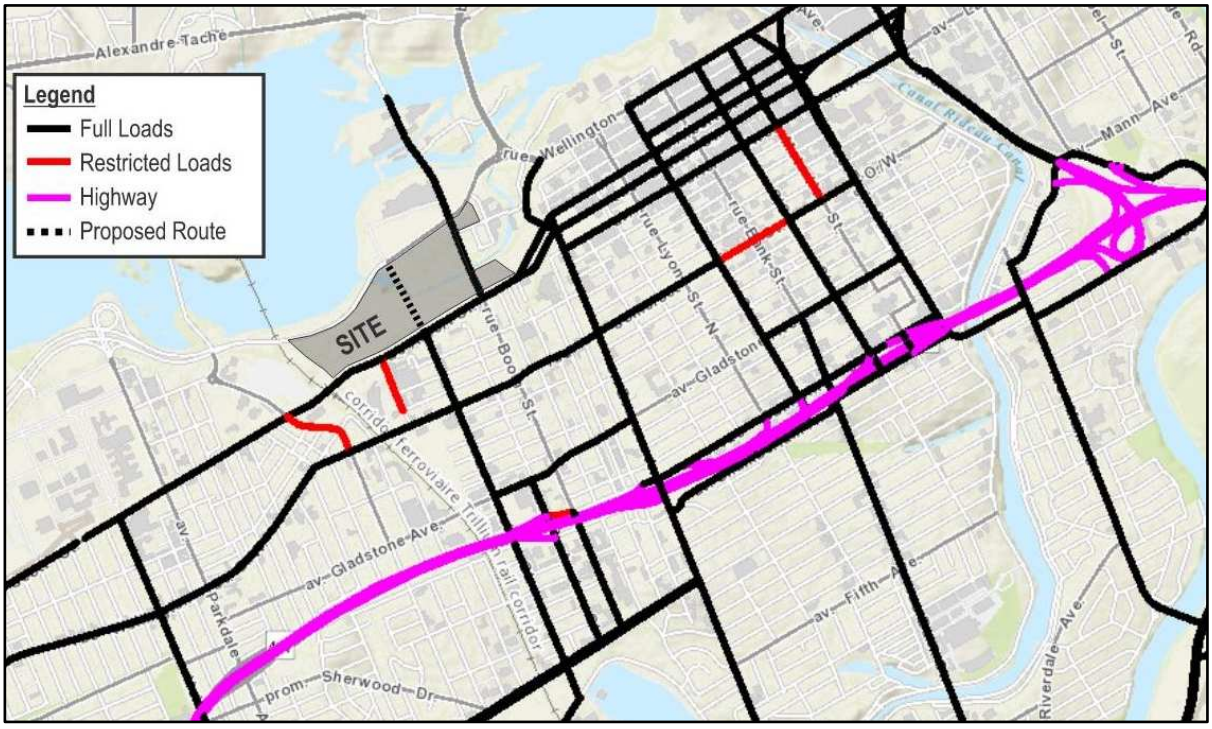
Figure 31: Proposed Multi-Use Pathways

4.4.9 Freight Movements

City of Ottawa comment: *Preston Street is a designated truck route, which provides freight transportation (e.g., between Highway 417 and Quebec). There are only two Interprovincial freight crossings in the region, and neither can support the addition of the other's load. At a future date, if freight can be relocated to another crossing location, this issue may be significantly mitigated. Note that the cities of Ottawa and Gatineau and the NCC recognize the less-than-ideal freight crossing routes and have been actively planning alternatives.*

The utility of designating Preston extension as a Truck Route is compromised by the fact that **Wellington Street is not currently designated as a Truck Route between Preston Street and Booth Street** in the City of Ottawa's Truck Route Network. This is reflected in **Figure 32**, showing the current and planned truck route network. Additionally, utilizing the Preston extension to connect freight to the Chaudière Crossing **would require the reconstruction of the intersection of Booth Street and Wellington Street to provide an eastbound left turn lane** that would accommodate heavy vehicles– a movement which is currently prohibited.

Figure 32: City of Ottawa Truck Route Network



It is worth noting that the NCC's study for the *Long-Term Integrated Interprovincial Crossings Plan for Canada's Capital Region* indicates that a new crossing of the Ottawa River east of downtown has the potential to divert 15% of truck traffic away from the downtown core, while a new crossing west of downtown has the potential to divert 8% of truck traffic away. A truck tunnel connecting Highway 417 to Macdonald-Cartier Bridge has the highest potential for diverting trucks away from downtown, at 35% diversion. The merit of making a significant and potentially contentious change to the truck route network to capitalize on the Preston extension is questionable if there is going to be fewer trucks in the Core Area in the future.

4.4.10 Transit Services

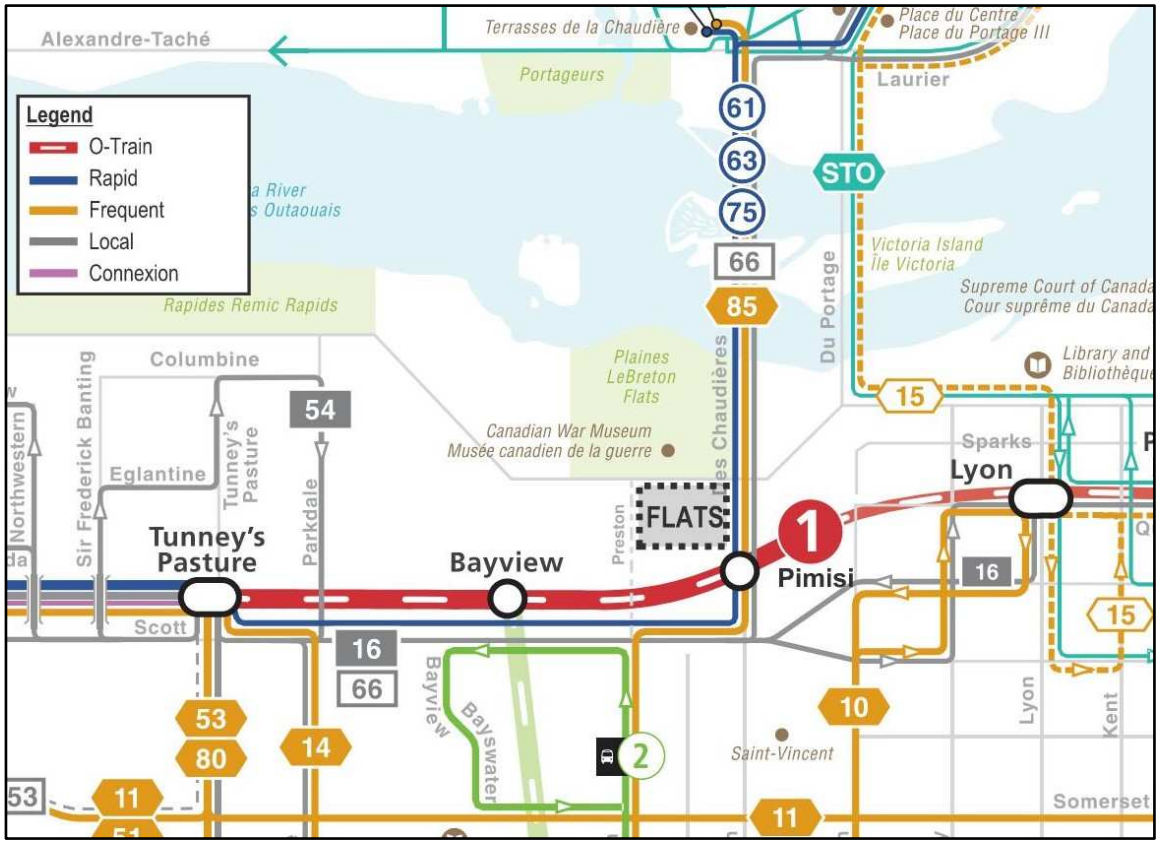
City of Ottawa comment: *The Preston extension would allow for more flexible routing and staging of transit routes, such as looping around Preston-Wellington-Booth to end a bus route at LeBreton Flats without having to cross to Gatineau. This routing may also help with staging for large events such as Bluesfest or for other events at the potential events centre.*

The Preston extension is not a preferred alternative to Booth Street for fixed (i.e., standard day to day) transit routing. The potential benefits of transit routing onto Preston extension cannot be realized for the following reasons:

- There is no connectivity to Pimisi or Bayview LRT Stations, and connectivity from any Preston extension to LRT stations would be difficult due to the structure required to cross the aqueduct and the Confederation Line.
- There are no transit priority facilities on Wellington Street in the study area.
- There are no eastbound right or left turn lanes onto Booth Street from Wellington Street eastbound to allow buses to continue along the Booth Street corridor.

It is worth noting that the Preston extension would provide value for operational flexibility and redundancy during temporary transit routing (i.e., event or incident driven routing changes), but this redundancy could be replicated by allowing transit to use Slidell Street and the SJAMP during major events or incidents, or exempting transit from the turn restrictions at the Booth Street / Wellington Street intersection.

Figure 33: OC Transpo Route Network

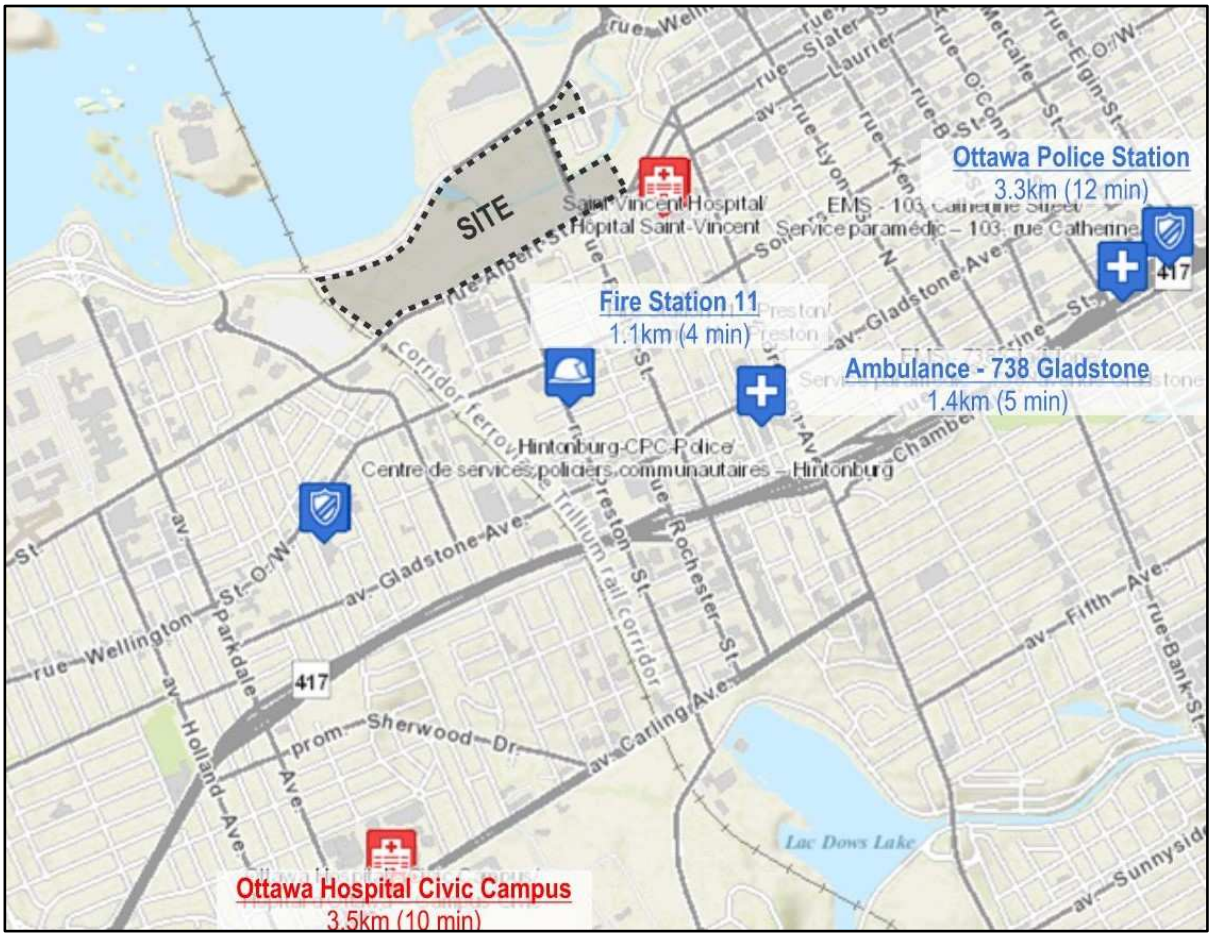


4.4.11 Emergency Services

City of Ottawa comment: *The City has mandated response time requirements. If adequate response times cannot be met, additional resources would be required.*

A high-level review of nearby emergency services, as shown in **Figure 34**, indicates that all emergency services are less than 15 minutes away. If additional access for emergency vehicles to LeBreton Flats, or more specifically the Flats District, is a concern then it should be noted that **emergency vehicles would not have to abide by turning restrictions at intersections**, such as those at Booth Street, Wellington Street and Slidell Street. Additionally, **the City could choose to provide emergency services on-site at LeBreton Flats**.

Figure 34: Emergency Services



4.4.12 Additional City Concerns with Removal of Preston Extension

The following are a list of additional concerns regarding the potential removal of the proposed Preston extension provided by City of Ottawa staff (in italics).

***Past Commitments**: The City has made past commitments to stakeholders, including those involved in the East Flats development, regarding the proposed extension of Preston Street.*

It is felt by the study team that the analysis contained within this TIA study indicate that there will be minimal impacts on adjacent stakeholders due to the removal of the Preston extension from the OP and TMP, and that **there are more benefits to stakeholders with the removal of the proposed Preston extension than there are negative impacts**.

***Network Resilience** - The arterial road network is a critical component within a transportation system. An arterial network not only supports travel to/from the development area, but it also supports through traffic unrelated to the development. Due to the specific geographical constraints of LeBreton Flats, as well as the existing surrounding arterial network, Booth Street is currently the only arterial connecting Wellington Street and Albert Street. If Booth Street becomes disabled, in either the existing or future conditions, for reasons such as a collision, construction, or general maintenance, traffic accessing Wellington Street would need to detour through downtown or to Parkdale Avenue, adding 2 to 5 km of additional travel on routes that already experience at, or near capacity conditions. This would not only have an impact on daily commuters, but would potentially also impact emergency response time, supply chain efficiency and construction vehicles that require access to/from and through LeBreton Flats. The proposed Preston extension is intended to provide network redundancy within this area, which allows for some added network resilience.*

It is important to note that the above scenario regarding potential impacts due to Booth Street becoming disabled is an existing condition, as there hasn't previously been an alternative corridor to provide network resiliency for Booth Street. **The LeBreton Flats development will be maintaining the status quo and will not be removing network resiliency**.

***Greenhouse Gases** - Any potential increase in pollution due to the addition of approximately 400 m of roadway, including construction of a structure over the Confederation Line and aqueduct, may be nullified by the additional travel distance required to use alternate routes.*

It is felt by the study team that the analysis contained within this TIA study indicate that the removal of the proposed Preston extension will not require alternate routes for the majority of vehicles accessing the development, with the exception of 3% of all person trips, as identified in Section 4.4.5. Furthermore, the active transportation connections proposed as part of the Master Concept Plan in lieu of the Preston extension provide improved facilities for users of active modes of transportation.

4.4.13 Additional Benefits of the Removal of the Preston Extension

The following are high-level concerns that the LeBreton Flats study team have identified with the proposed Preston extension, which need to be taken into consideration and discussed alongside the concerns identified by the City.

Construction Cost - Previous plans for the proposed Preston extension did not detail how the sectional and grading complexities could be accommodated, from either a design or financial perspective. Due to the position of the Confederation Line, a Preston Street arterial bridge would have to be over 150 metres in length, which would be twice the length of the Booth Street bridge. The cost to the City of constructing such a large arterial bridge would be significant (estimated somewhere in the order of $35 million in 2020 dollars by O2 Planning + Design), which is a significant increase compared to the $14.2 million cost estimated for the Preston extension carried in the City's Development Charge Background Study.

Connectivity within LeBreton Flats - A Preston Street arterial bridge would reduce road and pathway connectivity within LeBreton Flats. Due to the elevated nature of the bridge, new internal roads and paths within LeBreton Flats could not be sloped to connect with the bridge (refer to Section 4 of the Planning Rationale for further details). The construction of a Preston extension could cause the open aqueduct to be isolated behind a retaining wall or steep embankment. Designing the bridge structure in a way that maintains maintenance vehicle access to this essential infrastructure would likely require a longer bridge span with higher clearance than previously anticipated. This reality would impose significant additional infrastructure costs and cause significant detrimental impacts to the public realm and desirability of the neighbourhood adjacent to this critical infrastructure, as a large vehicle access route would have to snake through the area, compromising the ability to achieve a pleasant, safe, and human-scaled urban condition.

While pathways would still be able to get beneath a bridge, they would be constricted to the opening beneath the bridge. There would be no connections between the west end of the Flats and the City's municipal park, making the space between the inlet and the Preston extension very isolated. Retaining walls would separate the municipal park from the Flats and Aqueduct Districts, reducing the internal connectivity of the Flats since the Preston extension would not be able to connect to the internal roads. The road network would have to be redesigned to allow for adequate access to the Waterworks facility, the municipal park and LeBreton Place.

Reduction in Greenspace - Additional roads in the development would be required to create vehicle access to the Parks District and LeBreton Place for maintenance and accessible parking, reducing the amount of greenspace provided in LeBreton Flats.

Reduction in Density - It is expected that the bridge would require extensive retaining walls along lands slated as part of the LeBreton Flats development area. This would significantly reduce development potential (by approximately 2,000 m^2 of land) and compromise the ability of the district to meet the density targets outlined in the new Official Plan.

Filtered Permeability - The inclusion of a pedestrian and cycling bridge in place of the potential Preston Street bridge is a prime example of the principle of filtered permeability in action in a local context, benefitting users who choose active transportation modes over those who choose the vehicular mode.

Public Realm Design – The additional space provided by the removal of the vehicular bridge will contribute to more appealing public spaces in LeBreton Flats. This will allow for an improved design of the public realm, including safety improvements such as Crime Prevention Through Environmental Design (CPTED) and better lighting, which support the City's 2021 Woman and Gender Equity Strategy. Additional details on design of the public realm are available in the Planning Rationale.

4.4.14 Preston Street Extension Conclusions

Modelling and analysis show that the drawbacks of the Preston extension far outweigh the benefits. Constructing the Preston extension would divert and potentially induce additional traffic to the area, worsening traffic conditions around LeBreton Flats. The Preston extension would draw traffic away from roads that are well beyond the influence area of LeBreton Flats (i.e., as far west as Pinecrest Road), but would not relieve traffic on Booth Street south of Albert Street. It would also result in an increase in traffic in both directions on Preston Street, Rochester Street and Booth Street and cause a deterioration in intersection operations on the Preston Street corridor (including one intersection operating with a LOS 'E' and one with a LOS 'F') that are more significant than the marginal improvement in intersection operations along the Booth Street corridor. In addition, the removal of the Preston extension avoids the need to designate Wellington Street as a Truck Route, which is consistent with the prohibition of heavy vehicles on the SJAMP, and increases accessibility to the LRT stations to ensure the achievement of the high transit mode share targets set as part of the development. For these reasons, the deletion of the Preston vehicular extension from the City's Official Plan is recommended.

4.5 Step 3 Findings

The main objectives of Step 3 are to estimate projected site-generated trips based on the proposed development; identify potential impacts site-generated trips will impose on the surrounding transportation network; and to identify any potential modifications that would be required to achieve an acceptable Level of Service (LOS) for the surrounding transportation network. Based on the foregoing, the following findings are offered:

- A total of four potential development scenarios were envisioned for LeBreton Flats and based on an analysis of projected site trip generation, the ultimate build-out of Scenario 4 was projected to generate the most site-generated traffic, with an estimated two-way total of 4,810 and 8,112 person trips/h during weekday morning and afternoon peak hours, respectively.
- Based on discussions with City staff and to remain consistent with assumptions used for TIA studies prepared for other area development sites, the projected modal split of site-generated traffic for the subject development was assumed to be 15% auto driver; 5% auto passenger; 60% transit; and 20% walk/cycling.
- The resulting projected site-generated two-way vehicle volumes is approximately 718 veh/h during the AM and 1,211 veh/h during the PM.
- The resulting projected site-generated two-way transit trip volumes is approximately 2,886 trips/h during the AM and 4,868 trips/h during the PM.
- The resulting projected site-generated two-way trip volumes by active mode is approximately 986 trips/h during the AM and 1,646 trips/h during the PM.
- Given most transit trips begin or end as an active mode, it can be expected that approximately 3,872 trips/h and 6,514 trips/h will be made to/from/within LeBreton Flats as an active mode during weekday morning and afternoon peak hours, respectively.
    - The concept design for the site has maximized the width of pedestrian and cycling facilities wherever possible in order to accommodate the high volume of active trips. Additionally, Synchro analysis for the intersections has assumed that pedestrian phases are called every cycle at all intersections around the study area. ***Section 5.6*** below addresses additional improvements that can be made to City of Ottawa facilities

to improve the pedestrian and cycling LOS, such as leading pedestrian intervals and No Right Turn on Red at signalized intersections.

- Background traffic volumes have exhibited limited growth, as Ottawa's downtown arterial road network generally operates at capacity during peak hours. However, projected site-generated traffic from planned area developments were explicitly accounted for in the analysis of future conditions.
- Historical traffic count data from the year 2014 was used for analysis purposes, given recent network impacts related to LRT construction and travel pattern impacts due to COVID-19.
- A study area intersection performance assessment revealed that the Wellington Street / Portage Bridge intersection is currently operating over capacity during weekday morning peak hours. The Scott Street / Parkdale Avenue intersection is approaching capacity in the afternoon peak hour.
- Possible measures to improve the performance of study area intersections while prioritizing active modes include the construction of the West Gatineau Tramway, re-designating bus lanes as general traffic lanes, Stage 2 LRT extension and improvements to cycling facilities on Albert Street / Scott Street.

The Preston extension results in an increase in traffic in both directions on Preston Street, Rochester Street and Booth Street and causes a deterioration in intersection operations on the Preston Street corridor that do not justify the marginal improvement in intersection operations along Booth Street corridor. The potential impacts associated with the removal of the Preston extension are acceptable.

The results of this analysis indicate that there will be traffic challenges at some study area intersections, including Booth Street at Chaudière Crossing, Booth Street at Wellington Street, Booth Street at Albert Street, Scott Street at Parkdale Avenue and Wellington Street at Portage Bridge. Of these intersections, Booth Street at Albert Street, Scott Street at Parkdale Avenue and Wellington Street at Portage Bridge are over capacity, the others are approaching capacity. It will ultimately be up to the City of Ottawa to determine if the projected incremental changes in the performance of the road network will be acceptable, especially when considering that Booth Street at Albert Street, Scott Street at Parkdale Avenue, and Wellington Street at Portage Bridge are projected to be over capacity in the Future Background Conditions, and the intersections of Booth Street at Chaudière Crossing and Booth Street at Wellington Street are approaching capacity in the Future Background Conditions.

It is important to note that not all decisions need to be made at this time due to the size of the LeBreton Flats development (e.g., the City could consider development applications for phases within LeBreton Flats regardless of the status of the Preston extension in the Official Plan), as there will be ample opportunities for refinement to the transportation analysis as each parcel of land is developed and undergoes its own TIA process, including submission for approval. It should also be noted that given the significant timelines for the ultimate build-out of this project, it is important to recognize that travel patterns will change as projects like the Stage 2 Confederation Line LRT extension, West Gatineau Tramway, downtown transit loop and Ottawa River Sixth Crossing are designed and constructed, as well as City of Ottawa guidelines and targets.

5. STEP 4 – ANALYSIS

5.1 Exempted Modules

As noted in Section 3.3, the following modules have been exempted from this TIA after discussions with the City: 4.1 Development Design, 4.2 Parking, 4.3 Boundary Streets, 4.4 Access Intersections. These modules will be submitted in the future as part of the TIA analysis for individual development parcels.

5.2 Transportation Demand Management

5.2.1 Context for TDM

The proposed mode share of the development, as outlined in Section 4.1.1, is 15% auto driver, 5% auto passenger, 60% transit, and 20% walking and cycling. Comparatively, the mode share in the City's EMME model for TAZ 300 which is mostly made up of the LeBreton Flats development, is 42% auto driver, 10% auto passenger, 39% transit, and 9% walking and cycling. Through discussions with the City, it was agreed that the model is underrepresenting the potential level of transit usage in TAZ 300, especially for trips arriving to TAZ 300, which are shown as only 28% transit in the model.

With the LeBreton Flats location just west of downtown, it falls under the "Central Area" definition of the Official Plan, but with two LRT stations located within the site, it can also be considered a transit-oriented development (TOD). This allows the development to place a greater emphasis on non-auto modes, as there are no minimum parking requirements for the development. The ultimate decision for providing parking is up to each individual developer, however the Planning Rationale makes numerous mentions of a desire for minimal parking, and where required, implementing shared parking between land uses.

5.2.2 Need and Opportunity

It is clear that to meet the above noted mode share targets that an aggressive TDM program is required. The following are three key points to consider for the development of the TDM program for LeBreton Flats.

1. Other similar Transit-Oriented Developments in the City have had similar targets to what is being proposed for LeBreton Flats. Those developments are listed below along with a high-level summary of the proposed TDM measures for each development:
    - 900 Albert Street – 25 to 30% auto driver, 5 to 10% auto passenger, 45 to 55% transit, 15% active.
        - Enhanced sidewalks and lighting, ride-sharing programs, carpool incentives, preferential parking for hybrid/electric vehicles, on-site transit information booth, subsidized transit passes; additional shelter area for transit users; on-site change rooms/shower facilities.
    - Zibi – 25 to 30% auto driver, 5% auto passenger, 45 to 55% transit, 20% active.
        - Small development blocks with frequent intersections, pedestrian streets and woonerfs, secure bicycle parking, parking minimums with shared parking between buildings/land uses, car sharing programs/facilities, provide information/material to future residents and employees to educate them on sustainability objectives.

- CFB Wateridge Development – 45 to 50% auto driver, 10% auto passenger, 30 to 35% transit, 20% active.
    - Ride-sharing programs, carpool incentives, preferential parking for hybrid vehicles, on-site transit information booth, on-site change rooms/shower facilities

2. The City's continuous monitoring and interest of these types of developments as they are built confirms that the mode share targets are quite favorable compared to the rest of the City, but do fall short of the TOD targets.
3. Committing to an aggressive TDM program is necessary and prudent, with the recognition and understanding that some TDM measures will be attractive and effective from the outset, while others will become more attractive as the development progresses and nears completion.

The main opportunity for the LeBreton Flats lands is that the NCC is a willing and committed landowner, willing to put forth an attractive and aggressive TDM plan that will help to create the vision for LeBreton Flats being presented in this and other reports. Other opportunities to be considered as part of the LeBreton Flats development are:

- The NCC is **committed to working with OC Transpo** to pursue strategies that boost transit mode share to and from LeBreton flats, including methods to encourage/incentivize developers and future residents to use transit. This would provide a great jump-start to encourage transit usage and could be supported by transit fare incentives for non-residential developments at LeBreton Flats.
- According to Section 101 of the City's Zoning By-law, **no off-street motor vehicle parking is required** to be provided on the entire site, given the proximity of the development to LRT stations.
    - According to Section 103 of the City's Zoning By-law, there is a maximum number of motor vehicle parking permitted at the LeBreton Flats site, due to its proximity to LRT stations. These numbers equivalent to 1.5 parking spaces per dwelling unit and 1.0 per 100m^2 of GFA for office land uses and retail stores. This would translate to a **maximum allowable number of parking spaces on-site of approximately 7,000**.
    - This is significantly higher than the number of vehicular trips expected to be generated by the site (approximately 1930 entering and exiting during the AM and PM peak hours) indicating that it is important that **maximum parking provisions on-site be more stringent than those outlined in the City's Zoning By-law**.
- The minimum number of bicycle parking spaces as required by Section 111 of the City's Zoning By-law are 0.5 per dwelling unit and 1 per 250m2 GFA for an office or retail store. This would result in **approximately 2,400 bike parking spaces** on-site.
    - Given that 15% of trips are expected to be made by auto drivers, and 20% of trips are expected to be made by active modes, it would be worthwhile to **provide an equivalent or greater number of bicycle parking spaces on-site when compared to vehicular parking spaces**.

5.2.3 TDM Program

According to the City's TIA Guidelines, an analysis of Transportation Demand Management (TDM) measures is required when a proposed development is projected to have more than 60 employees on-site at any given time. It is understood that the City generally prefers a post-occupancy TDM program be in place ahead of site plan approval; however, with different parcels of land likely to have different owners or developers, it is difficult to project which TDM measures will be used by each owner. The proposed design of the LeBreton Flats site encourages active modes of transportation as much as possible, as outlined in detail in this TIA, by using measures such as filtered permeability, numerous multi-use pathways and sidewalks, and woonerf or slow streets design.

It is expected that a TDM strategy will be established for each individual development application at the time of development approval. Given that this TIA is for the entire site, and that individual TIAs will be required for each individual development, it is recommended that the City take a closer review of TDM programs at that stage of the planning process. Many of the TDM programs are specifically related to operations of a specific company or developer, such as offering discounted transit passes or flexible working hours, which cannot be captured in this TIA. That being said, some potential TDM-supportive measures that can be considered for LeBreton Flats are listed below:

- **Travel Surveys** – The NCC could commission travel surveys / monitoring programs to be undertaken at intervals throughout the development of LeBreton Flats in order to gauge the mode share and make adjustments to requirements accordingly. For example, such surveys could be undertaken at 20% completion intervals (i.e., a 20-year development would be undertaken every 4 years).
- **Enhanced Public Transit Service** – Given the existing presence of OC Transpo routes on Booth Street, Albert Street and Preston Street, as well as the Confederation and Trillium Lines, it is expected that OC Transpo will be monitoring transit usage in and around LeBreton Flats throughout the development process. ***Section 5.4*** of this TIA provides additional discussion on transit capacity in and around LeBreton Flats.
- **On-Site Amenities** – The mixed-use nature of the LeBreton Flats development suggests that a variety of amenities and services will be available on-site, which will reduce need for and dependency on personal vehicles.
- **Parking-Related Strategies** – The following are some TDM measures specifically related to vehicular parking management.
    - A **maximum limit** on parking supply (either a per unit rate or maximum stalls per development) more aggressive than the City's Zoning By-law.
    - **Charge for all parking** (i.e., short-term, and long-term parking), with short-term parking being charged at a higher parking rate.
    - Provide **carpool and carshare vehicles with discounts** on parking costs and/or provide more of them with more convenient parking locations.
    - **Unbundle parking cost** from commercial/office lease rates, residential purchase prices and monthly rent. Alternatively, the NCC (or another entity, such as a private company) could maintain control of all parking on-site.
- In addition to the above, there are numerous TDM measures that can be included as a requirement for each individual development as part of the procurement process. These measures tend to be physical measures that would have to be constructed / installed as part of each development. They include:

- **Displaying local area maps** with walking/cycling access routes, key destinations, transit schedules and route maps at major entrances.
- Provide **real-time transit arrival information** display at entrances to buildings in LeBreton Flats.
- **Install on-site bikeshare stations** for use by commuters and visitors.
- Generous provisions for **secure bike parking.**
- Minimum **sidewalk widths above and beyond** City standards.
- **Curb management accommodation** (e.g., percentage of curb space dedicated to pick-up/drop-off activity).
- **Minimum bicycle parking provisions** that are higher than the City standard (e.g., 2+ bike parking stalls per residential unit)
- Mandating **bicycle maintenance and repair facilities and end-of-trip amenities** (e.g., showers and change rooms).

The formal TDM Checklist, provided by the City, has been attached as **Appendix H** and is filled out for measures that may be applicable to the LeBreton Flats site. It is worth reiterating that it is difficult to project which specific measures will be utilized by individual developments.

5.3 Neighbourhood Traffic Management

With respect to the City's TIA guidelines, this module reviews significant access routes to the development and identifies any required neighbourhood traffic management (NTM) measures to mitigate impacts on collector and local roads.

5.3.1 Adjacent Neighbourhoods

Given projected traffic volume on Wellington Street, Booth Street, Albert Street and SJAMP are currently, and are anticipated to continue to exceed the major arterial capacity thresholds (i.e. 600 veh/h per lane during peak hours), the City's TIA Guidelines requires a review of potential neighbourhood traffic management strategies for the adjacent neighbourhoods, including West Centretown (generally bounded by Albert Street to the north, Carling Avenue to the south, Bronson Avenue to the east and the Trillium Line to the west), Centretown (generally bounded by the Ottawa River to the north, Highway 417 to the south, the Rideau Canal to the east and Bronson Avenue to the west) and Hintonburg (generally bounded by the Ottawa River to the north, Highway 417 to the south, the Trillium Line to the east and Parkdale Avenue to the west).

The Master Concept Plan carefully and deliberately minimizes the need for neighbourhood traffic management strategies within the LeBreton Flats site. The residential neighbourhoods south of the development site will feel some additional pressure from the additional traffic generated by vehicles to/from LeBreton Flats, especially if the Preston extension is implemented. These neighbourhoods already experience streets with long queues of traffic during peak hours and have existing area traffic management measures in place to reduce the potential for cut-through traffic. There is the potential for peak period spreading, which means that the queues of traffic will start earlier and/or finish later in the day, albeit with less pronounced peaks in traffic. Surrounding residential streets are for the most part already protected against cut-through traffic issues as outlined in Section 3.1.2.

The arterial roads surrounding the development site are the most likely to experience off peak speeding due to their alignment and width. Currently, the primary function of these roads is mobility, and therefore, the design elements prioritize the efficient movement of motor vehicles. For example, intersections need to facilitate truck turning, which can result in wider crossing distances for pedestrians. Some intersections require vehicle turning lanes, which increase the crossing distances

for pedestrians. That being said, there are many strategies that can be employed to promote the comfort and security of other road users. Albert Street is expected to undergo significant design changes that will include segregated facilities for pedestrians and cyclists.

5.4 Transit

With respect to the City's TIA Guidelines, this module reviews the potential impacts on existing and planned transit networks and service to ensure that level of service is not unacceptably impacted.

5.4.1 Route Capacity

The transit routes that serve the subject site were previously summarized in Table 2. It is expected that 60 percent of the trips generated by the site will be accommodated by transit, and that the majority of transit usage for people accessing the development site will be completed by LRT (either Confederation Line or Trillium Line). It is expected that Bayview Station on the western edge of the development site will service the Park District and the western portion of the Albert District, including the major event centre (if constructed). The Flats District and Aqueduct District will be well served by Pimisi Station on Booth Street.

Based upon the analysis provided in Step 3, and summarized in the table below, it is expected that the number of transit trips generated during each of the three phases of the LeBreton Flats development will range from 1,500 to 3,700 additional transit trips in both peak hours. This will result in an approximate total of 7,750 additional transit passengers generated by the LeBreton Flats development during the peak hours.

Table 37: Peak Hour Transit Trips by Development Phase

Block	AM Peak Hour			PM Peak Hour			Total Peak Hour
	In	Out	Total	In	Out	Total	
Phase 1 Total	414	520	933	836	770	1604	2537
Phase 2 Total	213	313	526	505	453	957	1483
Phase 3 Total	837	589	1427	1042	1266	2307	3734
Total 'New' Transit Trips	**1464**	**1422**	**2886**	**2383**	**2489**	**4868**	**7754**

Using information from the City of Ottawa's EMME model, the following breakdown was calculated for transit users around the study area in order to assume a distribution to various LRT or bus routes. It should be noted that the numbers in **Table 38** include all transit users, not just those from LeBreton Flats.

Table 38: EMME 2031 Transit Trip Distribution – AM Peak Hour

Transit Mode	Eastbound		Westbound	
	Volume	Percentage	Volume	Percentage
LRT	28,146	97%	9557	95%
Bus	930	3%	543	5%
Total	**29,076**	**100%**	**10,100**	**100%**

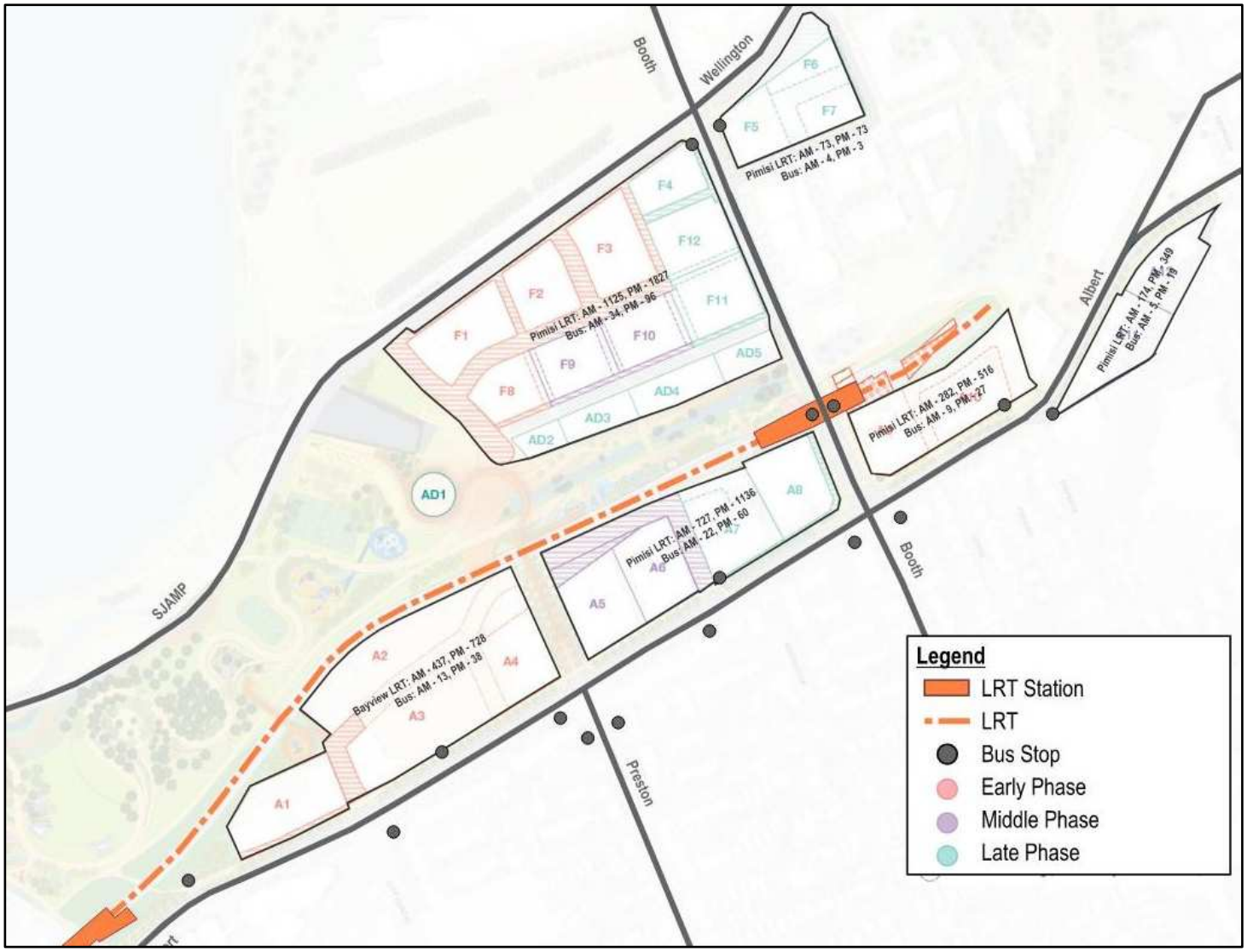
The data provided in Table 38 indicates that of all eastbound transit trips in the AM peak hour, 97% are made by LRT and 3% are made by bus. 95% of all westbound transit trips are made by LRT and 5% are made by bus. Of all LRT trips, 67% are headed eastbound and 33% are headed westbound, while bus trips see 65% of trips headed eastbound and 35% of trips headed westbound. This information allows for the assignment of transit trips to stations and bus stops in the area as shown in **Table 39** and **Figure 35** below.

Table 39: Projected LeBreton Flats Transit Trip Distribution – Full Buildout

Block	AM Peak Hour						PM Peak Hour					
	In			Out			In			Out		
	Total	EB	WB	Total	EB	WB	Total	EB	WB	Total	EB	WB
A1-4 (Major Events Centre)	206	138	68	244	163	81	398	132	266	368	122	246
LRT (Bayview)	200	134	66	237	159	78	378	125	253	350	115	235
Bus	6	4	2	7	4	3	20	7	13	18	7	11
A9-10	127	85	42	164	110	52	282	93	189	261	87	174
LRT (Pimisi)	123	82	41	159	107	52	268	88	180	248	82	166
Bus	4	3	1	5	3	2	14	5	9	13	5	8
Flats District (F1-4, 8-12, AD 1-5)	605	404	201	538	360	178	928	308	620	995	330	665
LRT (Pimisi)	587	393	194	522	350	172	882	291	591	945	312	633
Bus	18	11	7	16	10	6	46	17	29	50	18	32
A5-6	**65**	**43**	**22**	**108**	**72**	**36**	**144**	**48**	**96**	**124**	**41**	**83**
LRT (Pimisi)	63	42	21	105	70	35	137	45	92	118	39	79
Bus	2	1	1	3	2	1	7	3	4	6	2	4
A11-12	77	51	26	102	68	34	191	64	127	177	58	119
LRT (Pimisi)	75	50	25	99	66	33	181	60	121	168	55	113
Bus	2	1	1	3	2	1	10	4	6	9	3	6
A7-8	**364**	**244**	**120**	**212**	**142**	**70**	**395**	**131**	**264**	**533**	**177**	**356**
LRT (Pimisi)	353	237	116	206	138	68	375	124	251	506	167	339
Bus	11	7	4	6	4	2	20	7	13	27	10	17
F5-7	23	16	7	54	36	18	45	15	30	31	11	20
LRT (Pimisi)	22	15	7	51	34	17	44	15	29	29	10	19
Bus	1	1	0	3	2	1	1	0	1	2	1	1
LRT	**1300**	**871**	**429**	**1379**	**924**	**455**	**2265**	**748**	**1517**	**2364**	**780**	**1584**
Bus	**41**	**25**	**16**	**43**	**27**	**16**	**118**	**43**	**75**	**125**	**46**	**79**

Based on the City's EMME model, it is estimated that 12% of the eastbound LRT trips originate from the Trillium Line, and 12% of the westbound LRT trips are destined to the Trillium Line, transferring at Bayview Station. Based on the trips in the above table, 105 trips would arrive from and 55 trips would depart to the Trillium Line in the AM peak hour, while in the PM peak hour 90 trips would arrive from and 190 trips would depart to the Trillium Line.

Figure 35: Projected LeBreton Flats Transit Trip Distribution – Full Buildout



The full build-out of the LeBreton Flats development is expected to generate approximately 2,680 LRT trips in the AM peak hour and 4,630 trips in the PM peak hour. These trips are weighted slightly more towards trips leaving LeBreton Flats than trips entering LeBreton Flats. It is important to note that not all new riders will be on the Confederation Line LRT at the same time. For example, in the morning peak hour at LeBreton Flats there will be 871 new eastbound riders boarding the LRT, and 924 new eastbound riders departing the LRT. Therefore, the net increase in LRT riders is not 1,785 riders, it is somewhere between 871 and 924 riders depending which section of the LRT is reviewed. With the current Confederation Line capacity of 10,700 passengers per hour one way, the trips generated by LeBreton Flats would represent approximately 9% of eastbound and 4% of westbound capacity in the morning, and 7% of eastbound and 15% of westbound capacity in the afternoon. It is worth noting the City is expecting an increase in planned capacity of the Confederation Line to 36,000 passengers per hour by 2031, and 48,000 passengers per hour at ultimate build out[14], and that at the time of the development of the Confederation Line Environmental Assessment the LeBreton Flats redevelopment was a known entity and our understanding is that it was included in the development of the planned future Confederation Line capacity. The City's 2031 EMME model projects 28,146 eastbound passengers on the Confederation Line in the morning peak hour, which includes riders from LeBreton Flats. With a capacity of 36,000 passengers per hour, 28,146 passengers would be at 78% capacity, indicating the Confederation Line can comfortably accommodate the increases in passengers from the full build-out of the LeBreton Flats development.

The full build-out of the LeBreton Flats development is expected to generate approximately 105 northbound and 55 southbound Trillium Line trips in the AM peak hour, and 90 northbound and 190 southbound trips in the PM peak hour. With an estimated capacity of 2,100 passengers per hour per direction, the trips generated by LeBreton Flats would represent approximately 5% of northbound capacity and 3% of southbound capacity in the morning, and 4% of northbound capacity and 9% of southbound capacity in the afternoon.

The full build-out of the LeBreton Flats development is expected to generate approximately 80 bus trips in the AM peak hour and 240 in the PM peak hour. These trips are split between trips into LeBreton Flats and trips out of LeBreton Flats. Assuming a similar transit plan and bus routings to the existing plan shown in Table 2, it can be expected that the additional trips to buses will be distributed as follows:

- Eastbound AM (includes buses to Gatineau): 32 buses per hour = 1 new rider per bus.
- Westbound AM (includes buses from Gatineau): 47 buses per hour = 1 new rider per 3 buses.
- Eastbound PM: 47 buses per hour = 1 new rider per bus.
- Westbound PM: 32 buses per hour = 2 new riders per bus.

5.4.2 Transit Priority

Given that the fully grade separated Confederation Line bisects the LeBreton Flats development lands transit travel times should be unimpeded. Additionally, both the Trillium Line and the proposed West Gatineau Tramway are approximately a 10-minute walk from the centre of the LeBreton Flats development lands. Therefore, additional bus transit priority measures are not required as part of this study.

[14] https://www.octranspo.com/en/ready-for-rail/o_train_confederation_line_system_faqs

5.5 Review of Network Concept

With respect to the City's TIA Guidelines, this module determines if changes to the Transportation Master Plan (TMP) concepts for auto or transit networks are required to accommodate the development-generated travel demands.

The purpose of this section of the TIA is to outline any changes to the existing or planned transportation network that are required due to added traffic from a new development. It is important to recognize that the existing arterial road network, serving the area of LeBreton Flats, is generally approaching or over capacity during the peak periods. The LeBreton Master Concept Plan proposes a plan that will rely heavily on active modes and the transit network to service the community's transportation needs. Nonetheless, there will be an additional automotive burden placed on the surrounding arterial network as a result of the proposed development.

Creating additional roadway capacity within the central area of Ottawa is not considered a priority for the Transportation Master Plan, nor is it practical in a constrained urban environment such as in the vicinity of LeBreton Flats. Therefore, the assumption is that additional roadway capacity will not be provided as part of this development. That being said, the addition of a vibrant central urban community as proposed in the Master Concept Plan will increase the City's active and transit mode share statistics, helping to achieve TMP mode share objectives. Further, the Master Concept Plan supports the City's objectives of increasing the number of roadways that can be defined as "Complete Streets". Providing a supportive environment for pedestrians and cyclists will improve the capacity of the active transportation network and help to improve active mode share.

The Master Concept Plan does deviate from the TMP in that it has eliminated the proposed Preston Street extension between Albert Street and Wellington Street for auto modes. The link is proposed to remain for active modes only. This deviation is described in detail in the Planning Rationale (prepared by O2 Planning + Design and submitted under separate cover). From a transportation perspective, the elimination of this link has several implications which are explored in Section 4.4.

5.6 Intersection Design

This module determines the design elements of study area intersections required to accommodate the proposed development, consistent with the City's Complete Streets philosophy and MMLOS practices.

5.6.1 Intersection Control

All study area intersections are currently traffic signal controlled and are more or less fully built out. Based on the City's policies, goals and objectives, additional road widenings or intersection control is not supported. However, several area intersections will continue to operate over capacity. The following are some possible measures, previously identified in Section 4.3.2. that may provide a reduction in vehicular demand at these intersections, without requiring additional roadway infrastructure:

Potential Mitigation Measures that Prioritize all Modes of Transportation

Transit Projects

- When the future West Gatineau Tramway is in place across the Portage Bridge in 2028, trips across the Portage Bridge may be shifted away from the vehicular mode and towards the transit mode. It is recommended that the City monitor traffic volumes at the intersection of **Wellington Street and Portage Bridge** and respond to a reduction in vehicular traffic accordingly.
- Confederation Line Stage 2 LRT (with improved reliability extension drawing additional trips when open in 2026)

Active Mobility Projects

Further improvements to vehicular LOS may be observed as trips are shifted to alternative modes of transportation or alternative corridors as major projects within the National Capital Region are completed. Projects that may reduce the vehicular demand in the study area include:

- Improvements to cycling facilities within LeBreton Flats and along Albert Street into downtown (mode shift to cycling).This would improve operations at most intersections in the study area, with a specific benefit to **Booth Street at Albert Street, Albert Street at Preston Street and Parkdale Avenue at Scott Street**.
- Construction of the **Chief William Commanda multi-use pathway interprovincial bridge** (mode shift to walking and cycling), which will provide an attractive alternative route for pedestrians and cyclists to travel between Ottawa and Gatineau.

5.6.2 Intersection Design

Intersection details are typically not part of master concept plans; however, it is expected that connections to the boundary road network will be designed to the latest standards/guidelines (e.g., adequate turning radii will be provided for trucks, sufficiently long driveway clear throat lengths will be provided, etc.). Intersections are shown to be located at appropriate distances from existing intersections, and signalization is suggested at a minimal number of locations to provide for protected movements to/from the LeBreton Flats development. The approximate location and design of new driveway connections will be refined during the development application process. Nevertheless, the following is a MMLOS analysis for the planned signalized access intersections to/from LeBreton Flats.

Intersection MMLOS Summary

A Multi-Modal Level of Service (MMLOS) assessment was conducted for the subject site's boundary intersections, to gauge the extent of risk, comfort and stress for active modes and gauge the extent of impedance, delay and reliability for trucks/buses. **Table 40** provides an MMLOS summary for existing conditions for all modes, including Pedestrian (PLOS), Bike (BLOS), Transit (TLOS) and Truck (TrLOS) at signalized intersections. Target MMLOS values were identified in Table 19 and are identified at the bottom of each street in the table. **Table 41** summarizes the projected background intersection MMLOS with planned network improvements, as outlined in Section 3.1.3. **Table 42** summarizes the intersection MMLOS with the full build-out of the LeBreton Flats development. This includes minimal changes to the roadway cross-sections, however it does involve the addition of new approaches to intersections on the north side of Albert Street and south side of Wellington Street. The detailed assessment is included as **Appendix I**.

One important note regarding the PLOS and BLOS is that this review focuses on existing city streets, and planned improvements, such as the Albert Street Cycling / Pedestrian Modifications. Therefore, it does not accurately reflect the robust segregated pathway network that is included as part of the Master Concept Plan, as shown in Figure 31. This pathway network will allow active transportation users to avoid travelling on busy vehicular corridors such as Wellington Street and Booth Street, **providing them with a level of risk, comfort and stress that would be comparable to a LOS 'A'**.

Table 40: Intersection MMLOS – Existing LOS

Major Street	Cross Street	PLOS	BLOS	TLOS	TkLOS	AutoLOS
Wellington	Vimy Place	D	F	-	-	A
	Booth	D	A	F	D	D
	Lett	F	F	-	-	A
	Target	*A*	*C*	*D*	*D*	*E*

Albert	Booth	F	F	F	F	E
	Preston	E	F	E	F	E
	City Centre	F	F	B	E	A
	Target	*A*	*A*	*C*	*D*	*E*

Table 41: Intersection MMLOS – Background LOS

Major Street	Cross Street	PLOS	BLOS	TLOS	TkLOS	AutoLOS
Wellington	Vimy Place	D	F	-	-	A
	Booth	F	A	F	D	F
	Lett	F	F	-	-	B
	Target	*A*	*C*	*D*	*D*	*E*
Albert	Booth	E	D	F	F	F
	Preston	E	D	F	D	D
	City Centre	E	B	C	E	A
	Target	*A*	*A*	*C*	*D*	*E*

Table 42: Intersection MMLOS – Future LOS

Major Street	Cross Street	PLOS	BLOS	TLOS	TkLOS	AutoLOS
Wellington	Vimy Place	D	F	-	-	B
	Broad	E	F	-	-	A
	Booth	F	A	F	D	F
	Lett	F	F	-	-	B
	Target	*A*	*C*	*D*	*D*	*E*
Albert	Booth	E	D	F	F	F
	Access 1	E	B	D	-	D
	Preston	E	D	F	D	F
	City Centre	E	B	C	E	A
	Target	*A*	*A*	*C*	*D*	*E*

As shown in Table 40, outside of AutoLOS, study area intersections currently do not meet LOS targets with a few exceptions. Table 41 shows the projected background intersection MMLOS, including the Albert Street Cycling / Pedestrian Modifications project. Takeaways regarding the Intersection MMLOS are noted below.

Pedestrian LOS

- The reconstruction of Albert Street reduces the crossing distance for pedestrians, improving the overall PLOS at Albert Street and Booth Street, and Albert Street and City Centre Avenue.
    - The removal of the existing parking lanes on Wellington Street between Vimy Place and Portage Bridge would also benefit pedestrians as it reduces their crossing distance.
- The only existing intersections without zebra stripe hi-visibility markings are Wellington Street at Vimy Place and Wellington Street at Broad Street. It is recommended that this be rectified once Vimy Place and Broad Street are extended to the south side of Wellington Street as part of the development.
- Any new intersections, such as Albert Street at Access 1, should implement zebra stripe hi-vis markings.
- The implementation of leading pedestrian intervals (LPIs) at intersections that operate well is recommended, such as at Booth Street at Chaudière, Wellington Street at Vimy Place, Albert

Street / Scott Street at Bayview Station Road, Albert Street at City Centre Avenue and Wellington Street at Lett Street.

- The implementation of No Right-Turn-on-Red provisions at intersection that operate well is also recommended.
- As an example, if all the above recommendations (i.e., remove parking lanes, zebra stripe markings, leading pedestrian intervals and no RTOR) are implemented at the intersection of Wellington Street / Lett Street, the PLOS will improve from LOS 'F' to LOS 'D'.
- As noted above, a robust network of multi-use pathways is proposed as part of the Master Concept Plan, including a recently-built east-west pathway along the north side of the Confederation Line. This pathway provides pedestrians with a more comfortable, safer route through the area, and will ultimately connect to facilities further east on Wellington Street and Albert Street.

Bicycle LOS

- The reconstruction of Albert Street improves the BLOS from LOS 'F' to LOS 'D'. Although this will not meet the target LOS 'A', this is a significant improvement over the existing conditions. This also reflects the limitations of the MMLOS scoring, as protected intersections are proposed along Albert Street, and do not score higher than LOS 'D' by the current scoring.
- Although not scored in the MMLOS, where protected intersections are provided, and intersection operations allow for it, leading bike intervals should be provided alongside the LPIs.
- As noted above, a robust network of multi-use pathways is proposed as part of the Master Concept Plan, including a recently built east-west pathway along the north side of the Confederation Line. This pathway provides cyclists with a more comfortable, safer route through the area, and will ultimately connect to facilities further east on Wellington Street and Albert Street.

Transit LOS

- Transit LOS is projected to worsen due to the removal of temporary dedicated transit facilities along Albert Street. However, LRT access along this corridor should help supersede the need for improvements to increase transit LOS targets.
- Low TLOS is mainly attributed to vehicle movements experiencing long delays, which impact bus travel time/reliability.

Truck LOS

- Truck LOS is generally guided by corner radii and the number of receiving lanes.
- As corner radii increases - truck LOS improves; however, this negatively impacts the pedestrian LOS. As the pedestrian target LOS is higher for this study area the pedestrian LOS should take precedence in this case, unless compromising the accommodation for trucks will result in a reduction in safety for pedestrians.
- Long-term improvements to this Truck LOS in this area may be possible with the implementation of a sixth crossing of the Ottawa River, allowing the full removal of truck routing across Booth Street and the Chaudière Crossing.

6. CONCLUSION AND RECOMMENDATION

The future community of LeBreton Flats has the potential to be a showcase for future urban development in Canada. As with any urban development of this caliber, there is both enormous potential and significant challenges. It is important to understand the value of the site, as failure to do so may unreasonably deem some elements as challenges and miss the opportunity to undertake proper trade-off analysis, therefore unnecessarily compromising the full potential of the site.

This Transportation Impact Assessment followed the City of Ottawa TIA Guidelines to assess and evaluate the potential benefits and impacts that are anticipated to City of Ottawa roadways as part of the LeBreton Flats development. The full development is anticipated to generate approximately 4,800 person trips in the weekday morning peak hour, and 8,100 person trips in the weekday afternoon peak hour. The development is targeting aggressive modal splits for site generated traffic, including 15% auto driver trips, 5% auto passenger, 60% transit trips and 20% active transportation trips. This results in an expected increase in peak hour vehicle traffic onto adjacent roadways in the order of 700 vehicles per hour in the morning and 1200 vehicles per hour in the afternoon.

Potential measures that may improve the performance of study area intersections while prioritizing active modes include the construction of the West Gatineau Tramway, completion of the Stage 2 LRT extension and improvements to cycling facilities on Albert Street / Scott Street. The proposed Preston Street extension from the City's Transportation Master Plan is expected to result in an increase in traffic in both directions on Preston Street, Rochester Street and Booth Street and causes a deterioration in intersection operations on the Preston Street corridor that do not justify the marginal improvement in intersection operations along Booth Street corridor. The drawbacks of the Preston extension far outweigh the benefits, therefore the deletion of the Preston vehicular extension from the City's Official Plan is recommended.

A high-level trip generation estimate for the potential major events centre at LeBreton Flats was undertaken using conservative assumptions: A full analysis of the major events centre will be undertaken as part of the site-specific TIA. The results of the trip generation estimate for the potential major events centre show that the highest volume hour during the PM peak period is expected to be 5:00 – 6:00 PM, when approximately 540 vehicular trips will be made to events. Not necessarily all these trips will be arriving directly at the LeBreton Flats site, as some may be parking on nearby streets where parking is available, similar to attendees at TD Place who park on residential streets due to the parking garage being closed for Ottawa Redblacks games.

It is important to note that not all decisions related to this development need to be made at this time due to the size of the LeBreton Flats development (e.g., "conditional approval" can be offered), as there will be ample opportunities for refinement to the transportation analysis as each parcel of land is developed and undergoes its own TIA process, including submission for approval. It should also be noted that given the significant timelines for the ultimate build-out of this project, it is important to recognize that travel patterns will change as projects like the Stage 2 Confederation Line LRT extension, West Gatineau Tramway and the downtown transit loop (and potentially other projects, such as a sixth crossing of the Ottawa River) are designed and constructed.

While it is difficult to provide a detailed TDM Implementation Program at this time given that this TIA is for the entire site, it is recommended that specific TDM initiatives be given further consideration as each development phase or site move forward. That being said, potential TDM measures that can be implemented across LeBreton Flats have been identified in Section 5.2 and are recommended for consideration, which includes some physical measures, travel surveys, and monitoring programs.

APPENDIX A: City of Ottawa TIA – Screening Form

City of Ottawa 2017 TIA Guidelines Screening Form

1. Description of Proposed Development

Municipal Address	
Description of Location	LeBreton Flats
Land Use Classification	Residential, commercial, office, hotel
Development Size (units)	4117 residential units
Development Size (m^2)	24,250m^2 commercial, 47,265m^2 office, 14,345m^2 hotel
Number of Accesses and Locations	10 new roadway accesses
Phase of Development	Phases 1 - 3
Buildout Year	2030 (Phase 1), 2040 (Phase 2), 2050 (Phase 3)

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

2. Trip Generation Trigger

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

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

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

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

3. Location Triggers

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

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

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

4. Safety Triggers

	Yes	No
Are posted speed limits on a boundary street are 80 km/hr or greater?		X
Are there any horizontal/vertical curvatures on a boundary street limits sight lines at a proposed driveway?	X	
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)?	X	
Is the proposed driveway within auxiliary lanes of an intersection?	X	
Does the proposed driveway make use of an existing median break that serves an existing site?	X	
Is there is a documented history of traffic operations or safety concerns on the boundary streets within 500 m of the development?	X	
Does the development include a drive-thru facility?		X

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

5. Summary

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

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

APPENDIX B: City of Ottawa - Traffic Count and Signal Timing Data

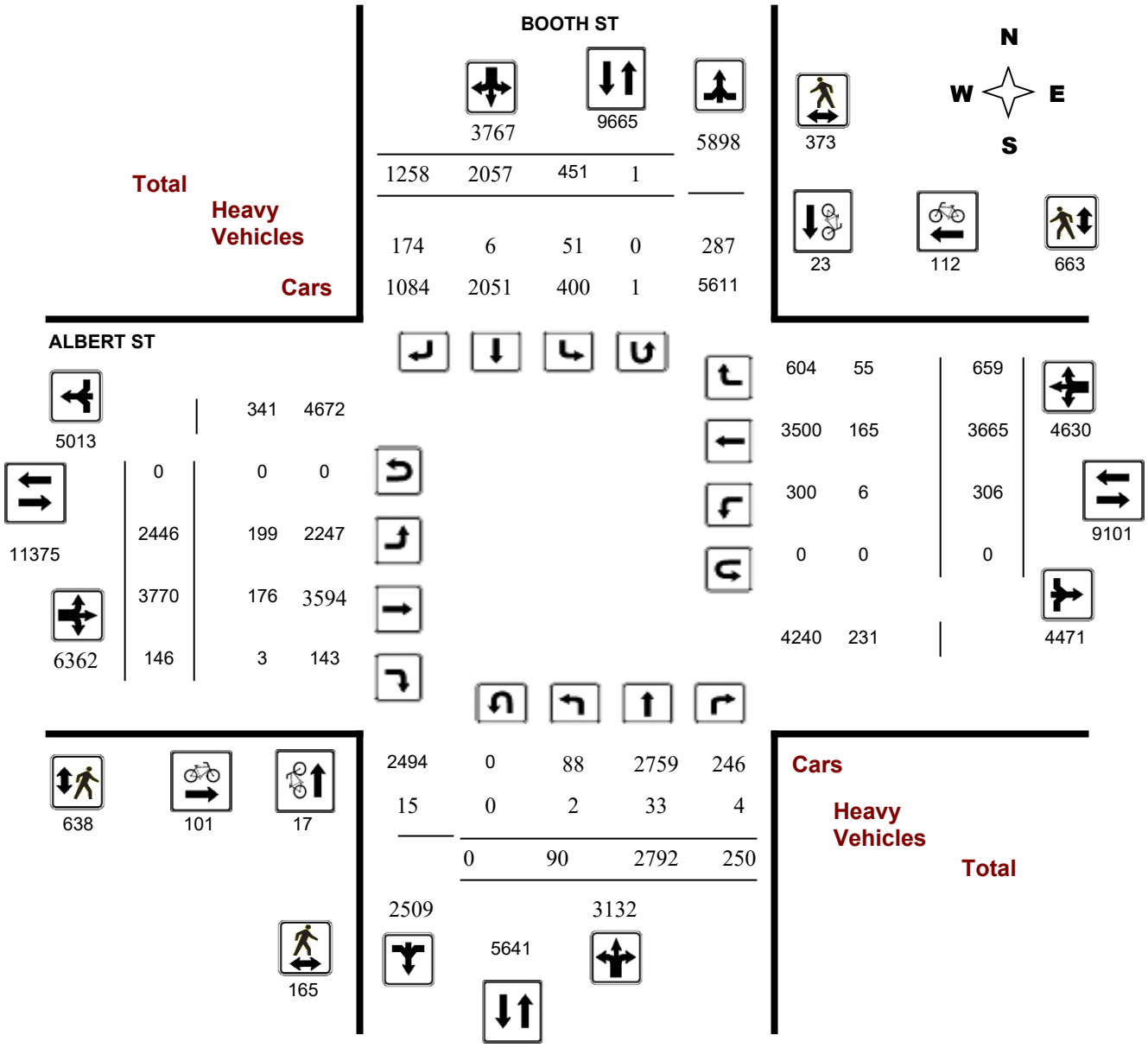
Transportation Services - Traffic Services

Turning Movement Count - Study Results

ALBERT ST @ BOOTH ST

Survey Date: Thursday, December 05, 2019
Start Time: 07:00
WO No: 39199
Device: Miovision

Full Study Diagram



Transportation Services - Traffic Services

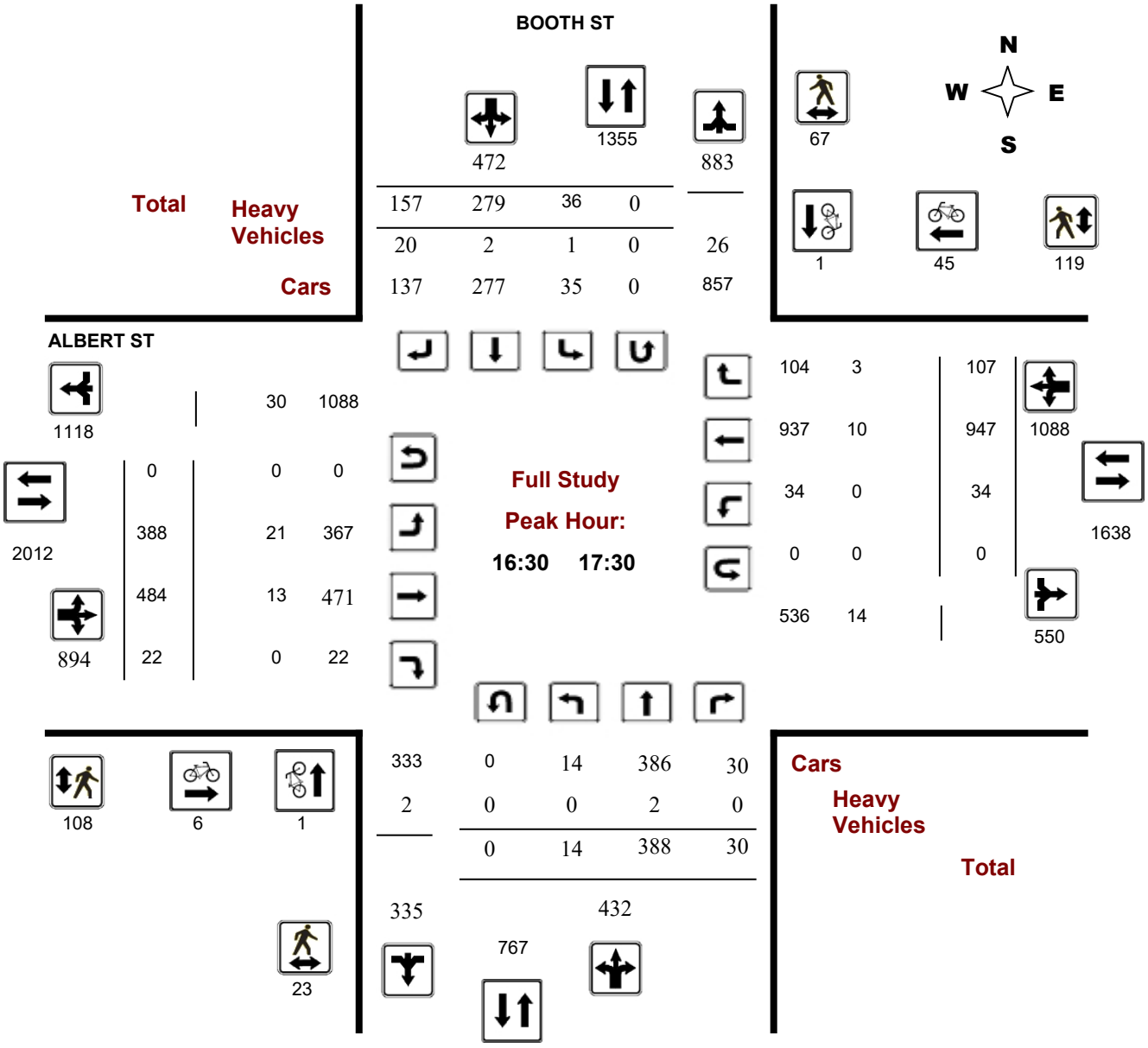
Turning Movement Count - Study Results

ALBERT ST @ BOOTH ST

Survey Date: Thursday, December 05, 2019 **WO No:** 39199

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

Full Study Peak Hour Diagram



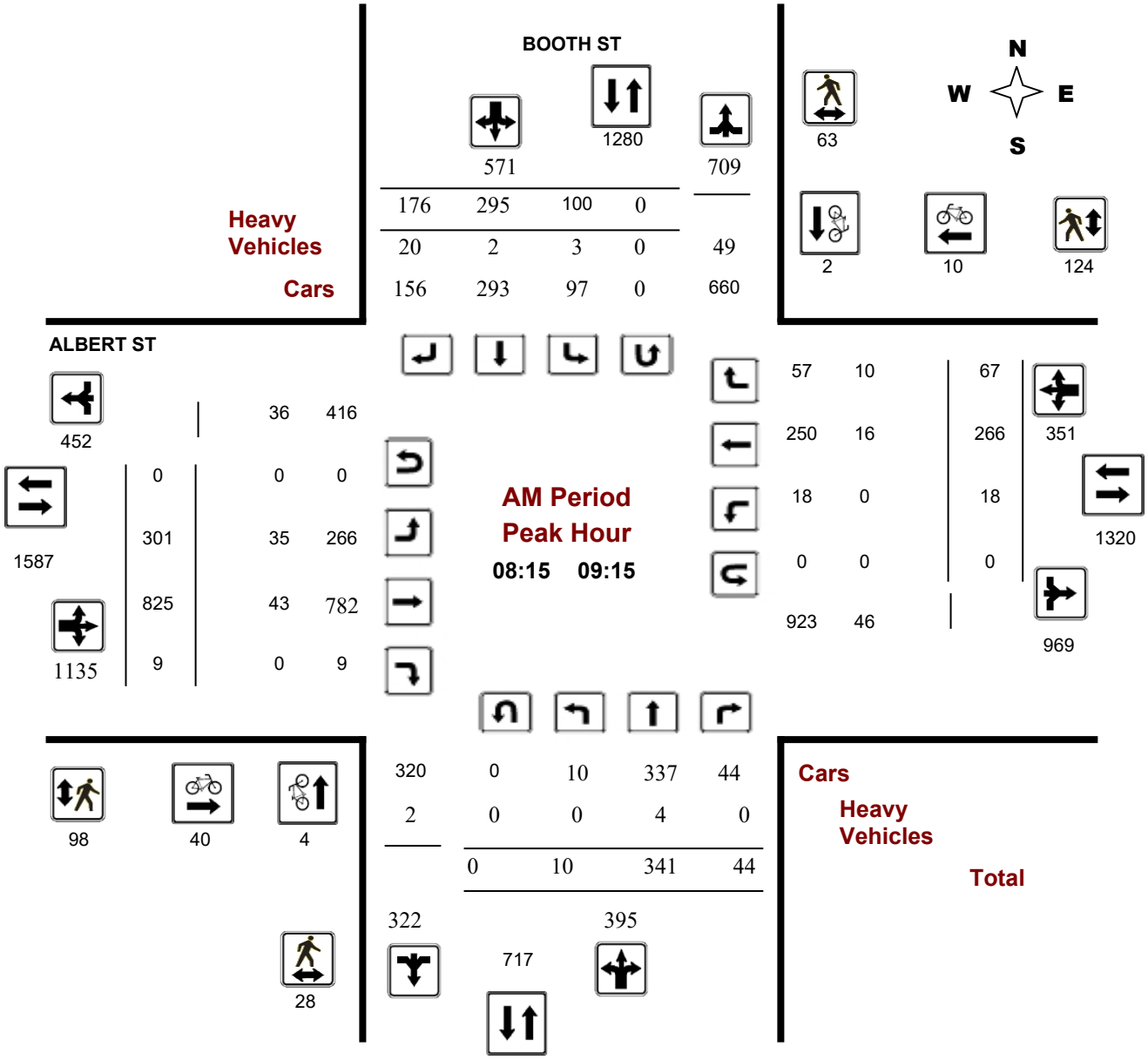
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

ALBERT ST @ BOOTH ST

Survey Date: Thursday, December 05, 2019 **WO No:** 39199

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



Comments

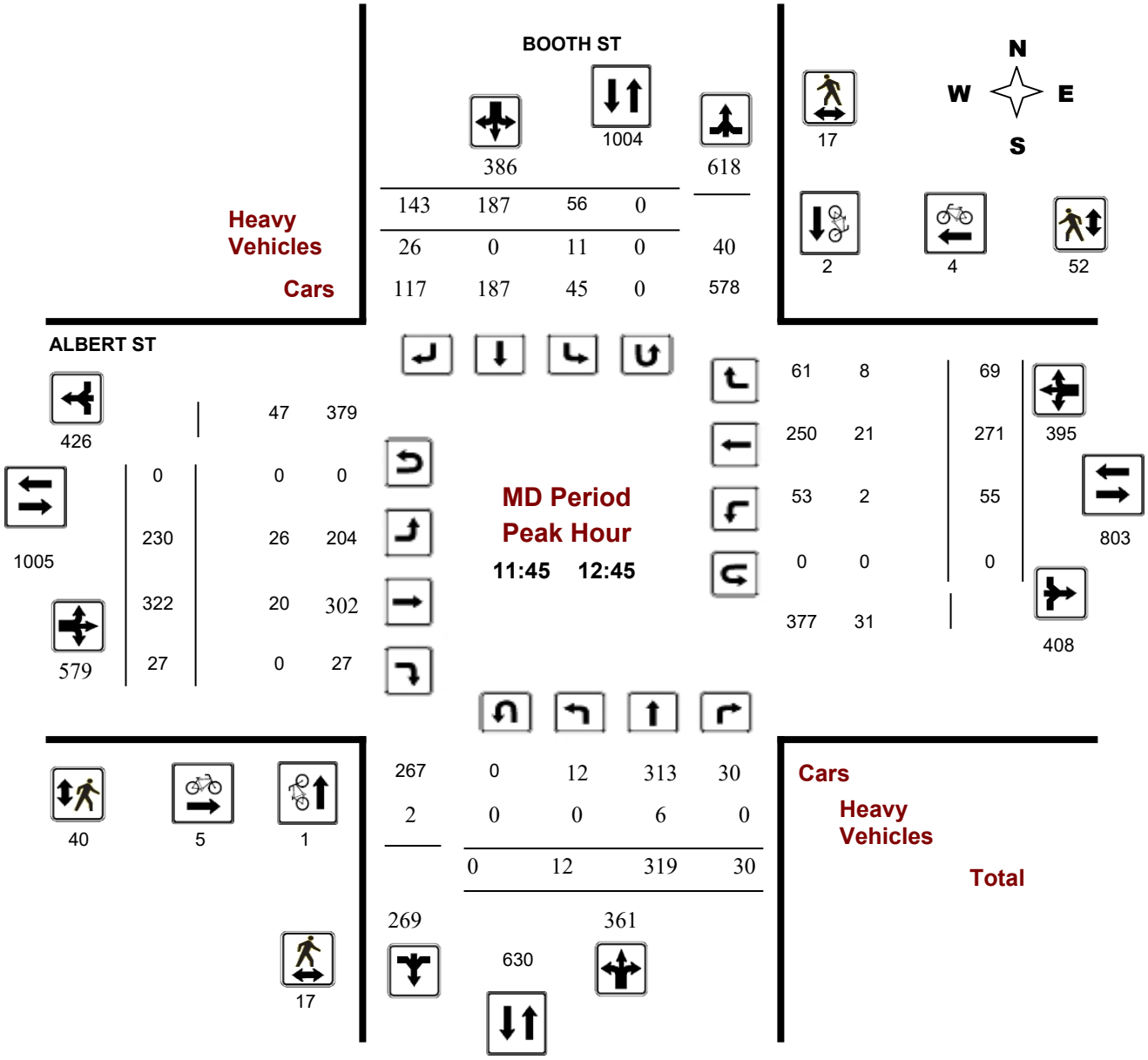
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

ALBERT ST @ BOOTH ST

Survey Date: Thursday, December 05, 2019 **WO No:** 39199

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



Comments

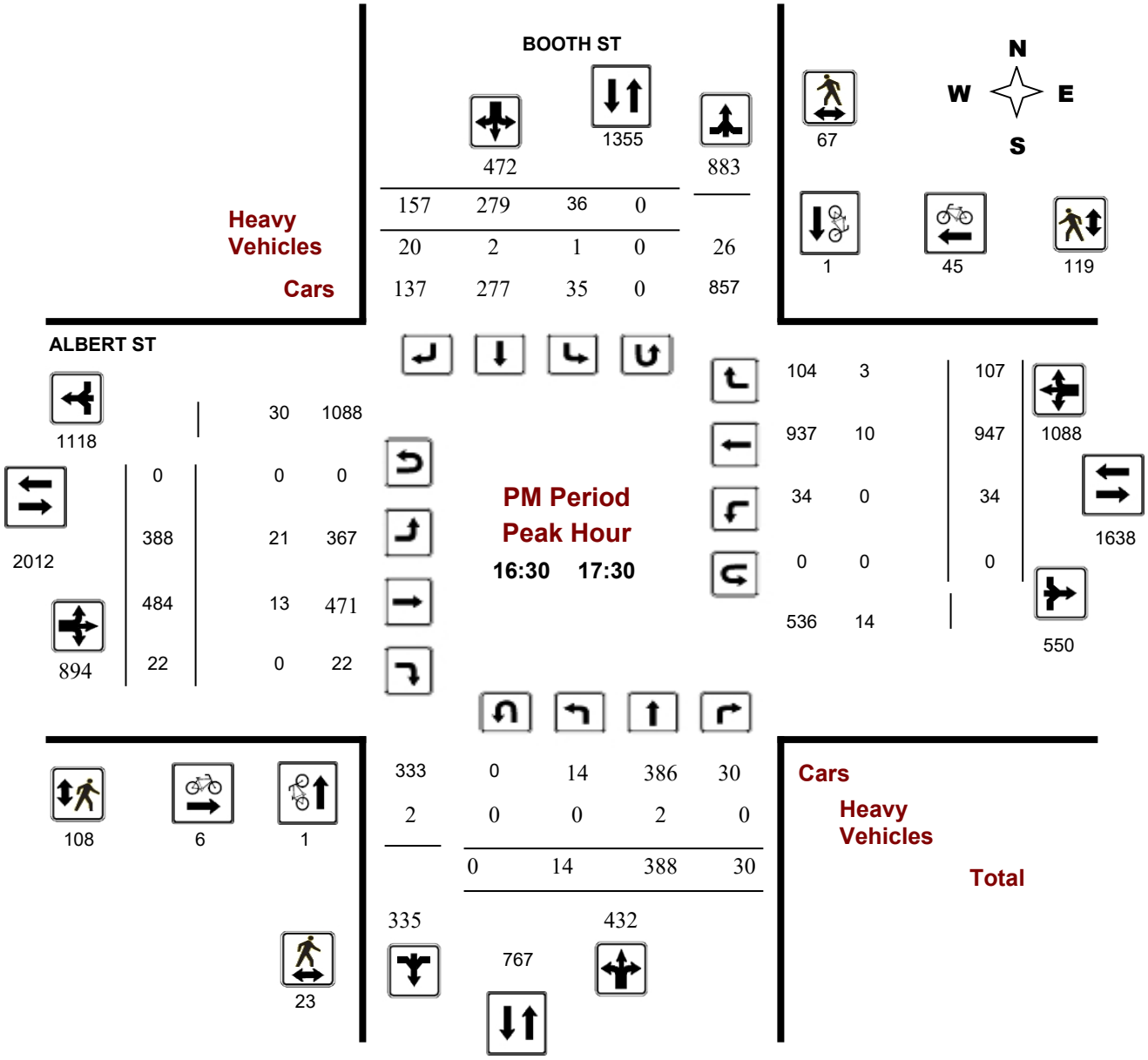
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

ALBERT ST @ BOOTH ST

Survey Date: Thursday, December 05, 2019 **WO No:** 39199

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



Comments

Transportation Services - Traffic Services

Turning Movement Count - Study Results

ALBERT ST @ BOOTH ST

Survey Date: Thursday, December 05, 2019 **WO No:** 39199

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

Full Study Summary (8 HR Standard)

Survey Date: Thursday, December 05, 2019

Total Observed U-Turns

Northbound: 0 Southbound: 1

Eastbound: 0 Westbound: 0

AADT Factor

1.00

	BOOTH ST									ALBERT ST									
	Northbound				Southbound					Eastbound				Westbound					
Period	LT	ST	RT	**NB TOT**	LT	ST	RT	**SB TOT**	**STR TOT**	LT	ST	RT	**EB TOT**	LT	ST	RT	**WB TOT**	**STR TOT**	**Grand Total**
07:00 08:00	9	323	24	**356**	71	334	173	**578**	**934**	234	484	6	**724**	6	213	51	**270**	**994**	**1928**
08:00 09:00	9	343	42	**394**	92	311	167	**570**	**964**	296	814	10	**1120**	16	265	53	**334**	**1454**	**2418**
09:00 10:00	7	284	48	**339**	75	277	176	**528**	**867**	268	653	15	**936**	31	233	60	**324**	**1260**	**2127**
11:30 12:30	10	311	27	**348**	46	182	154	**382**	**730**	229	315	26	**570**	58	290	67	**415**	**985**	**1715**
12:30 13:30	12	323	39	**374**	47	167	123	**337**	**711**	230	268	23	**521**	49	219	77	**345**	**866**	**1577**
15:00 16:00	12	447	16	**475**	37	240	160	**437**	**912**	421	355	18	**794**	67	704	129	**900**	**1694**	**2606**
16:00 17:00	15	367	31	**413**	44	282	143	**469**	**882**	381	409	27	**817**	44	949	121	**1114**	**1931**	**2813**
17:00 18:00	16	394	23	**433**	39	264	162	**465**	**898**	387	472	21	**880**	35	792	101	**928**	**1808**	**2706**
Sub Total	90	2792	250	**3132**	451	2057	1258	**3766**	**6898**	2446	3770	146	**6362**	306	3665	659	**4630**	**10992**	**17890**
U Turns				**0**				**1**	**1**				**0**				**0**	**0**	**1**
Total	90	2792	250	**3132**	451	2057	1258	**3767**	**6899**	2446	3770	146	**6362**	306	3665	659	**4630**	**10992**	**17891**
EQ 12Hr	125	3881	348	**4353**	627	2859	1749	**5236**	**9590**	3400	5240	203	**8843**	425	5094	916	**6436**	**15279**	**24868**
Note: These values are calculated by multiplying the totals by the appropriate expansion factor.														**1.39**					
AVG 12Hr	118	3658	328	**4103**	591	2695	1648	**4935**	**9590**	3204	4939	191	**8334**	401	4801	863	**6065**	**15279**	**24868**
Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor.														**1**					
AVG 24Hr	154	4791	429	**5375**	774	3530	2159	**6465**	**11840**	4198	6470	251	**10918**	525	6290	1131	**7946**	**18864**	**30704**
Note: These volumes are calculated by multiplying the Average Daily 12 hr. totals by 12 to 24 expansion factor.														**1.31**					

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

Transportation Services - Traffic Services

Turning Movement Count - Study Results

ALBERT ST @ BOOTH ST

Survey Date: Thursday, December 05, 2019 **WO No:** 39199

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

Full Study 15 Minute Increments

		BOOTH ST									ALBERT ST									
		Northbound				Southbound					Eastbound				Westbound					
Time Period		LT	ST	RT	N TOT	LT	ST	RT	S TOT	STR TOT	LT	ST	RT	E TOT	LT	ST	RT	W TOT	STR TOT	Grand Total
07:00	07:15	3	79	5	87	13	92	57	162	8	58	78	2	138	3	43	10	56	8	443
07:15	07:30	1	73	5	79	17	79	38	134	11	54	106	2	162	2	53	13	68	11	443
07:30	07:45	4	93	6	103	20	91	39	150	8	55	119	0	174	0	50	11	61	8	488
07:45	08:00	1	78	8	87	21	72	39	132	7	67	181	2	250	1	67	17	85	7	554
08:00	08:15	1	86	11	98	15	88	38	141	6	69	187	1	257	4	54	11	69	6	565
08:15	08:30	2	69	9	80	28	81	46	155	4	71	218	3	292	5	60	12	77	4	604
08:30	08:45	5	103	12	120	25	68	45	138	7	80	206	3	289	3	73	13	89	7	636
08:45	09:00	1	85	10	96	24	74	38	136	9	76	203	3	282	4	78	17	99	9	613
09:00	09:15	2	84	13	99	23	72	47	142	9	74	198	0	272	6	55	25	86	9	599
09:15	09:30	2	75	13	90	18	67	39	124	13	49	166	1	216	8	58	14	80	13	510
09:30	09:45	1	74	9	84	16	72	49	138	13	65	147	7	219	10	68	11	89	13	530
09:45	10:00	2	51	13	66	18	66	41	125	13	80	142	7	229	7	52	10	69	13	489
11:30	11:45	0	89	8	97	8	42	39	89	7	60	69	5	134	11	68	18	97	7	417
11:45	12:00	4	64	7	75	17	51	46	114	12	50	81	12	143	13	88	15	116	12	448
12:00	12:15	4	85	5	94	15	46	35	96	15	64	83	8	155	11	67	14	92	15	437
12:15	12:30	2	73	7	82	6	43	34	83	8	55	82	1	138	23	67	20	110	8	413
12:30	12:45	2	97	11	110	18	47	28	93	8	61	76	6	143	8	49	20	77	8	423
12:45	13:00	3	79	8	90	8	42	28	78	7	58	64	6	128	13	51	20	84	7	380
13:00	13:15	5	81	8	94	11	36	34	81	9	58	63	6	127	15	71	21	107	9	409
13:15	13:30	2	66	12	80	10	42	33	85	9	53	65	5	123	13	48	16	77	9	365
15:00	15:15	6	117	3	126	10	52	39	101	10	108	68	4	180	31	127	31	189	10	596
15:15	15:30	4	108	5	117	7	56	38	101	12	112	85	3	200	11	161	31	203	12	621
15:30	15:45	0	110	4	114	10	79	43	132	8	96	106	6	208	15	198	37	250	8	704
15:45	16:00	2	112	4	118	10	53	40	103	11	105	96	5	206	10	218	30	258	11	685
16:00	16:15	6	96	4	106	11	75	40	126	10	89	93	7	189	10	207	32	249	10	670
16:15	16:30	5	88	3	96	10	70	23	103	4	99	101	8	208	16	247	33	296	4	703
16:30	16:45	3	90	14	107	13	76	41	130	6	91	98	5	194	6	249	27	282	6	713
16:45	17:00	1	93	10	104	10	61	39	110	10	102	117	7	226	12	246	29	287	10	727
17:00	17:15	4	105	2	111	7	77	38	122	5	92	136	6	234	11	225	21	257	5	724
17:15	17:30	6	100	4	110	6	65	39	110	4	103	133	4	240	5	227	30	262	4	722
17:30	17:45	1	102	6	109	13	65	45	123	4	92	90	6	188	10	177	24	211	4	631
17:45	18:00	5	87	11	103	13	57	40	110	3	100	113	5	218	9	163	26	198	3	629
Total:		90	2792	250	3132	451	2057	1258	3767	270	2446	3770	146	6362	306	3665	659	4630	270	17,891

Note: U-Turns are included in Totals.

Transportation Services - Traffic Services

Turning Movement Count - Study Results

ALBERT ST @ BOOTH ST

Survey Date: Thursday, December 05, 2019 **WO No:** 39199

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

Full Study Cyclist Volume

Time Period		BOOTH ST			ALBERT ST			
		Northbound	Southbound	Street Total	Eastbound	Westbound	Street Total	Grand Total
07:00	07:15	0	0	0	0	1	1	1
07:15	07:30	1	0	1	2	0	2	3
07:30	07:45	1	3	4	13	2	15	19
07:45	08:00	3	3	6	6	0	6	12
08:00	08:15	1	0	1	10	0	10	11
08:15	08:30	1	0	1	10	2	12	13
08:30	08:45	2	1	3	10	3	13	16
08:45	09:00	0	0	0	8	3	11	11
09:00	09:15	1	1	2	12	2	14	16
09:15	09:30	0	1	1	4	0	4	5
09:30	09:45	1	1	2	2	2	4	6
09:45	10:00	0	0	0	1	0	1	1
11:30	11:45	0	0	0	0	0	0	0
11:45	12:00	0	0	0	1	0	1	1
12:00	12:15	0	0	0	1	1	2	2
12:15	12:30	0	2	2	2	1	3	5
12:30	12:45	1	0	1	1	2	3	4
12:45	13:00	0	0	0	0	2	2	2
13:00	13:15	1	1	2	1	1	2	4
13:15	13:30	0	0	0	1	2	3	3
15:00	15:15	0	3	3	0	2	2	5
15:15	15:30	0	0	0	0	6	6	6
15:30	15:45	0	0	0	2	4	6	6
15:45	16:00	0	2	2	2	3	5	7
16:00	16:15	1	0	1	4	6	10	11
16:15	16:30	2	3	5	1	8	9	14
16:30	16:45	0	0	0	4	5	9	9
16:45	17:00	1	0	1	1	13	14	15
17:00	17:15	0	0	0	0	12	12	12
17:15	17:30	0	1	1	1	15	16	17
17:30	17:45	0	1	1	0	10	10	11
17:45	18:00	0	0	0	1	4	5	5
Total		17	23	**40**	101	112	213	253

Transportation Services - Traffic Services

Turning Movement Count - Study Results

ALBERT ST @ BOOTH ST

Survey Date: Thursday, December 05, 2019 **WO No:** 39199

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

Full Study Pedestrian Volume

	BOOTH ST			ALBERT ST			
Time Period	NB Approach (E or W Crossing)	SB Approach (E or W Crossing)	**Total**	EB Approach (N or S Crossing)	WB Approach (N or S Crossing)	**Total**	**Grand Total**
07:00 07:15	1	6	**7**	12	12	**24**	**31**
07:15 07:30	3	8	**11**	13	17	**30**	**41**
07:30 07:45	8	13	**21**	27	21	**48**	**69**
07:45 08:00	9	15	**24**	23	28	**51**	**75**
08:00 08:15	6	19	**25**	28	35	**63**	**88**
08:15 08:30	13	21	**34**	28	32	**60**	**94**
08:30 08:45	6	15	**21**	27	32	**59**	**80**
08:45 09:00	5	17	**22**	27	38	**65**	**87**
09:00 09:15	4	10	**14**	16	22	**38**	**52**
09:15 09:30	7	6	**13**	14	12	**26**	**39**
09:30 09:45	6	3	**9**	12	17	**29**	**38**
09:45 10:00	4	8	**12**	15	11	**26**	**38**
11:30 11:45	4	3	**7**	7	6	**13**	**20**
11:45 12:00	6	2	**8**	10	13	**23**	**31**
12:00 12:15	4	1	**5**	9	11	**20**	**25**
12:15 12:30	4	8	**12**	8	18	**26**	**38**
12:30 12:45	3	6	**9**	13	10	**23**	**32**
12:45 13:00	2	6	**8**	9	9	**18**	**26**
13:00 13:15	6	7	**13**	25	9	**34**	**47**
13:15 13:30	2	4	**6**	7	11	**18**	**24**
15:00 15:15	6	10	**16**	20	17	**37**	**53**
15:15 15:30	5	15	**20**	25	15	**40**	**60**
15:30 15:45	5	7	**12**	18	26	**44**	**56**
15:45 16:00	8	14	**22**	23	20	**43**	**65**
16:00 16:15	4	20	**24**	33	25	**58**	**82**
16:15 16:30	4	27	**31**	27	26	**53**	**84**
16:30 16:45	2	16	**18**	26	30	**56**	**74**
16:45 17:00	2	16	**18**	18	34	**52**	**70**
17:00 17:15	12	14	**26**	40	22	**62**	**88**
17:15 17:30	7	21	**28**	24	33	**57**	**85**
17:30 17:45	4	17	**21**	30	34	**64**	**85**
17:45 18:00	3	18	**21**	24	17	**41**	**62**
Total	165	373	**538**	638	663	**1301**	**1839**

Transportation Services - Traffic Services

Turning Movement Count - Study Results

ALBERT ST @ BOOTH ST

Survey Date: Thursday, December 05, 2019 **WO No:** 39199

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

Full Study Heavy Vehicles

		BOOTH ST									ALBERT ST									
		Northbound				Southbound					Eastbound				Westbound					
Time Period		LT	ST	RT	N TOT	LT	ST	RT	S TOT	STR TOT	LT	ST	RT	E TOT	LT	ST	RT	W TOT	STR TOT	Grand Total
07:00	07:15	0	2	0	**2**	1	0	5	**6**	**8**	6	5	0	**11**	0	4	1	**5**	**16**	**24**
07:15	07:30	0	1	0	**1**	4	0	6	**10**	**11**	5	7	0	**12**	0	6	1	**7**	**19**	**30**
07:30	07:45	0	0	0	**0**	5	0	3	**8**	**8**	5	7	0	**12**	0	5	3	**8**	**20**	**28**
07:45	08:00	0	0	0	**0**	2	0	5	**7**	**7**	8	6	0	**14**	0	5	3	**8**	**22**	**29**
08:00	08:15	1	0	0	**1**	2	0	3	**5**	**6**	4	11	0	**15**	0	3	2	**5**	**20**	**26**
08:15	08:30	0	1	0	**1**	0	1	2	**3**	**4**	7	7	0	**14**	0	4	1	**5**	**19**	**23**
08:30	08:45	0	1	0	**1**	2	0	4	**6**	**7**	4	22	0	**26**	0	4	1	**5**	**31**	**38**
08:45	09:00	0	1	0	**1**	0	1	7	**8**	**9**	11	6	0	**17**	0	5	4	**9**	**26**	**35**
09:00	09:15	0	1	0	**1**	1	0	7	**8**	**9**	13	8	0	**21**	0	3	4	**7**	**28**	**37**
09:15	09:30	0	3	0	**3**	3	0	7	**10**	**13**	11	7	1	**19**	0	6	3	**9**	**28**	**41**
09:30	09:45	0	2	0	**2**	0	0	11	**11**	**13**	8	5	0	**13**	0	7	1	**8**	**21**	**34**
09:45	10:00	0	3	1	**4**	3	0	6	**9**	**13**	9	7	0	**16**	0	5	1	**6**	**22**	**35**
11:30	11:45	0	1	0	**1**	1	0	5	**6**	**7**	10	4	1	**15**	0	5	4	**9**	**24**	**31**
11:45	12:00	0	1	0	**1**	5	0	6	**11**	**12**	7	6	0	**13**	0	11	1	**12**	**25**	**37**
12:00	12:15	0	1	0	**1**	4	0	10	**14**	**15**	8	3	0	**11**	1	4	3	**8**	**19**	**34**
12:15	12:30	0	1	0	**1**	0	0	7	**7**	**8**	6	6	0	**12**	1	1	2	**4**	**16**	**24**
12:30	12:45	0	3	0	**3**	2	0	3	**5**	**8**	5	5	0	**10**	0	5	2	**7**	**17**	**25**
12:45	13:00	0	0	0	**0**	1	1	5	**7**	**7**	5	5	1	**11**	0	10	5	**15**	**26**	**33**
13:00	13:15	0	0	1	**1**	5	0	3	**8**	**9**	5	6	0	**11**	0	4	1	**5**	**16**	**25**
13:15	13:30	0	0	1	**1**	2	0	6	**8**	**9**	1	6	0	**7**	1	4	3	**8**	**15**	**24**
15:00	15:15	0	1	0	**1**	1	0	8	**9**	**10**	3	6	0	**9**	0	9	1	**10**	**19**	**29**
15:15	15:30	1	4	0	**5**	1	0	6	**7**	**12**	4	2	0	**6**	0	5	3	**8**	**14**	**26**
15:30	15:45	0	1	0	**1**	1	0	6	**7**	**8**	5	3	0	**8**	1	13	1	**15**	**23**	**31**
15:45	16:00	0	1	1	**2**	2	0	7	**9**	**11**	9	5	0	**14**	1	8	0	**9**	**23**	**34**
16:00	16:15	0	1	0	**1**	1	0	8	**9**	**10**	6	2	0	**8**	0	8	0	**8**	**16**	**26**
16:15	16:30	0	0	0	**0**	0	0	4	**4**	**4**	5	1	0	**6**	1	6	0	**7**	**13**	**17**
16:30	16:45	0	0	0	**0**	1	1	4	**6**	**6**	5	1	0	**6**	0	4	1	**5**	**11**	**17**
16:45	17:00	0	1	0	**1**	0	1	8	**9**	**10**	6	5	0	**11**	0	2	1	**3**	**14**	**24**
17:00	17:15	0	1	0	**1**	0	0	4	**4**	**5**	5	4	0	**9**	0	2	1	**3**	**12**	**17**
17:15	17:30	0	0	0	**0**	0	0	4	**4**	**4**	5	3	0	**8**	0	2	0	**2**	**10**	**14**
17:30	17:45	0	1	0	**1**	1	0	2	**3**	**4**	4	3	0	**7**	0	2	0	**2**	**9**	**13**
17:45	18:00	0	0	0	**0**	0	1	2	**3**	**3**	4	2	0	**6**	0	3	1	**4**	**10**	**13**
Total:	None	2	33	4	**39**	51	6	174	**231**	**270**	199	176	3	**378**	6	165	55	**226**	**604**	**874**

Transportation Services - Traffic Services

Turning Movement Count - Study Results

ALBERT ST @ BOOTH ST

Survey Date: Thursday, December 05, 2019 **WO No:** 39199

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

Full Study 15 Minute U-Turn Total

Time Period		BOOTH ST Northbound U-Turn Total	BOOTH ST Southbound U-Turn Total	ALBERT ST Eastbound U-Turn Total	ALBERT ST Westbound U-Turn Total	Total
07:00	07:15	0	0	0	0	0
07:15	07:30	0	0	0	0	0
07:30	07:45	0	0	0	0	0
07:45	08:00	0	0	0	0	0
08:00	08:15	0	0	0	0	0
08:15	08:30	0	0	0	0	0
08:30	08:45	0	0	0	0	0
08:45	09:00	0	0	0	0	0
09:00	09:15	0	0	0	0	0
09:15	09:30	0	0	0	0	0
09:30	09:45	0	1	0	0	1
09:45	10:00	0	0	0	0	0
11:30	11:45	0	0	0	0	0
11:45	12:00	0	0	0	0	0
12:00	12:15	0	0	0	0	0
12:15	12:30	0	0	0	0	0
12:30	12:45	0	0	0	0	0
12:45	13:00	0	0	0	0	0
13:00	13:15	0	0	0	0	0
13:15	13:30	0	0	0	0	0
15:00	15:15	0	0	0	0	0
15:15	15:30	0	0	0	0	0
15:30	15:45	0	0	0	0	0
15:45	16:00	0	0	0	0	0
16:00	16:15	0	0	0	0	0
16:15	16:30	0	0	0	0	0
16:30	16:45	0	0	0	0	0
16:45	17:00	0	0	0	0	0
17:00	17:15	0	0	0	0	0
17:15	17:30	0	0	0	0	0
17:30	17:45	0	0	0	0	0
17:45	18:00	0	0	0	0	0
Total		0	1	0	0	1

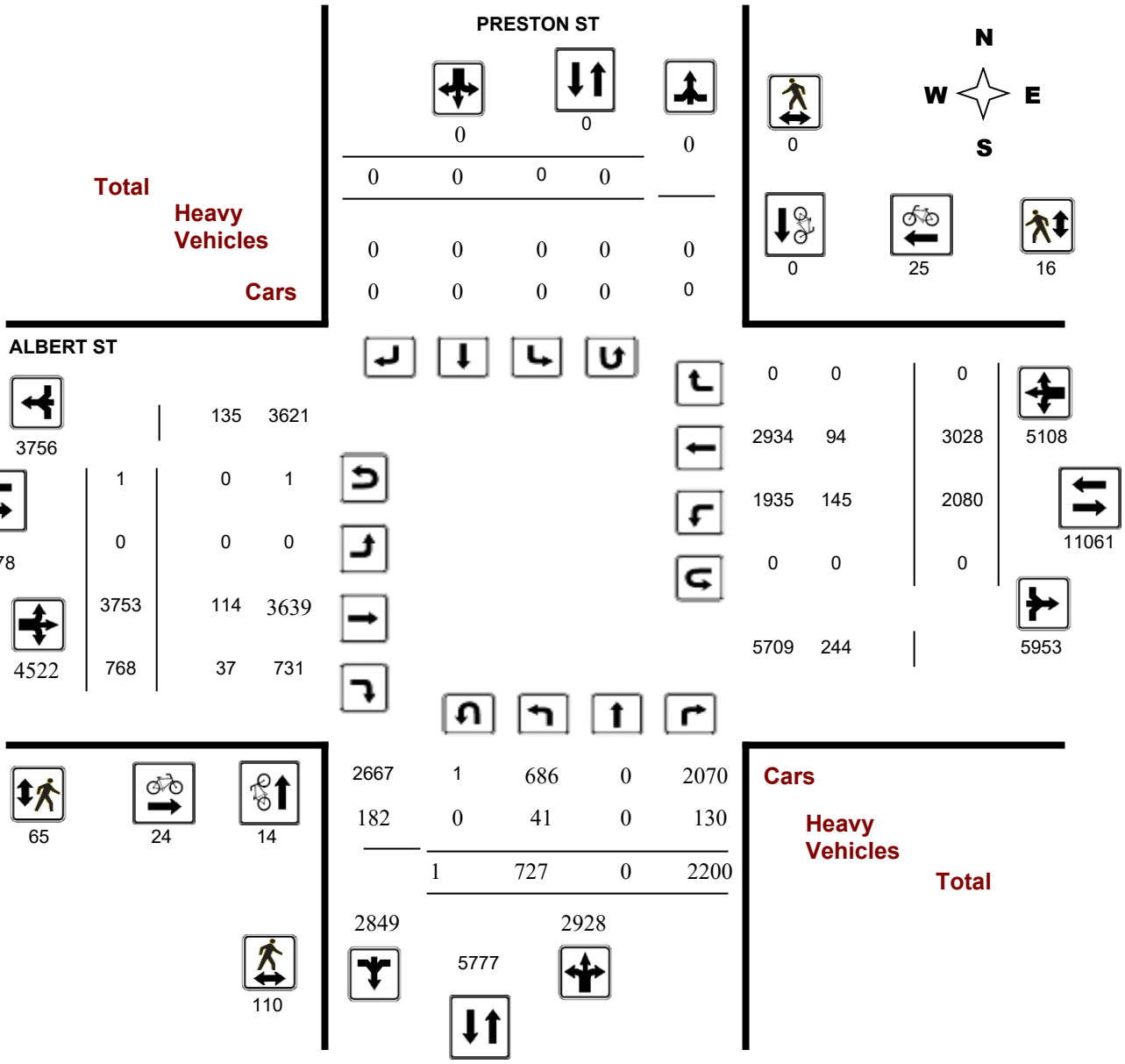
Transportation Services - Traffic Services

Turning Movement Count - Study Results

ALBERT ST @ PRESTON ST

Survey Date: Wednesday, April 02, 2014
Start Time: 07:00
WO No: 29661
Device: Miovision

Full Study Diagram



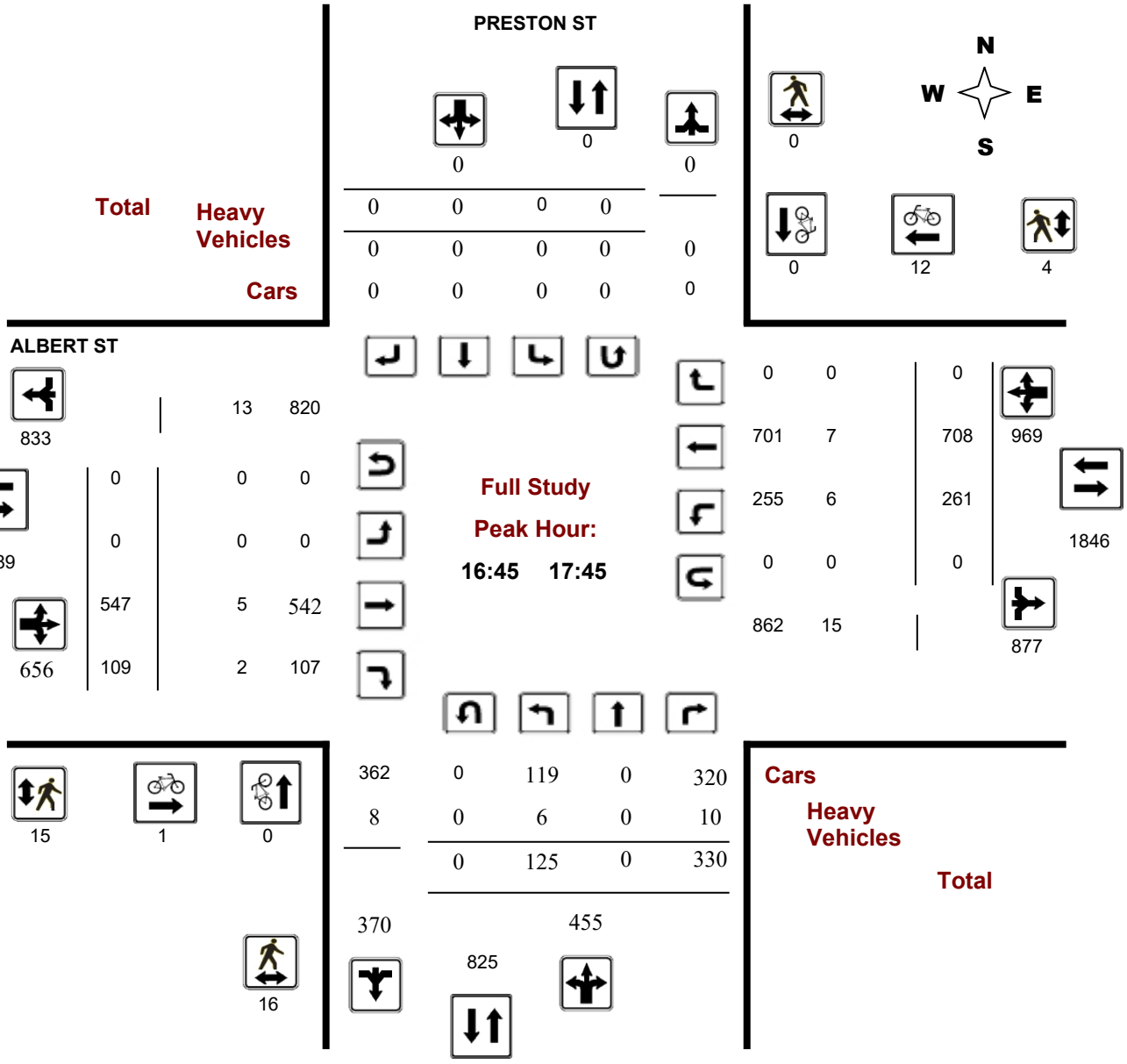
Transportation Services - Traffic Services

Turning Movement Count - Study Results

ALBERT ST @ PRESTON ST

Survey Date: Wednesday, April 02, 2014
Start Time: 07:00
WO No: 29661
Device: Miovision

Full Study Peak Hour Diagram



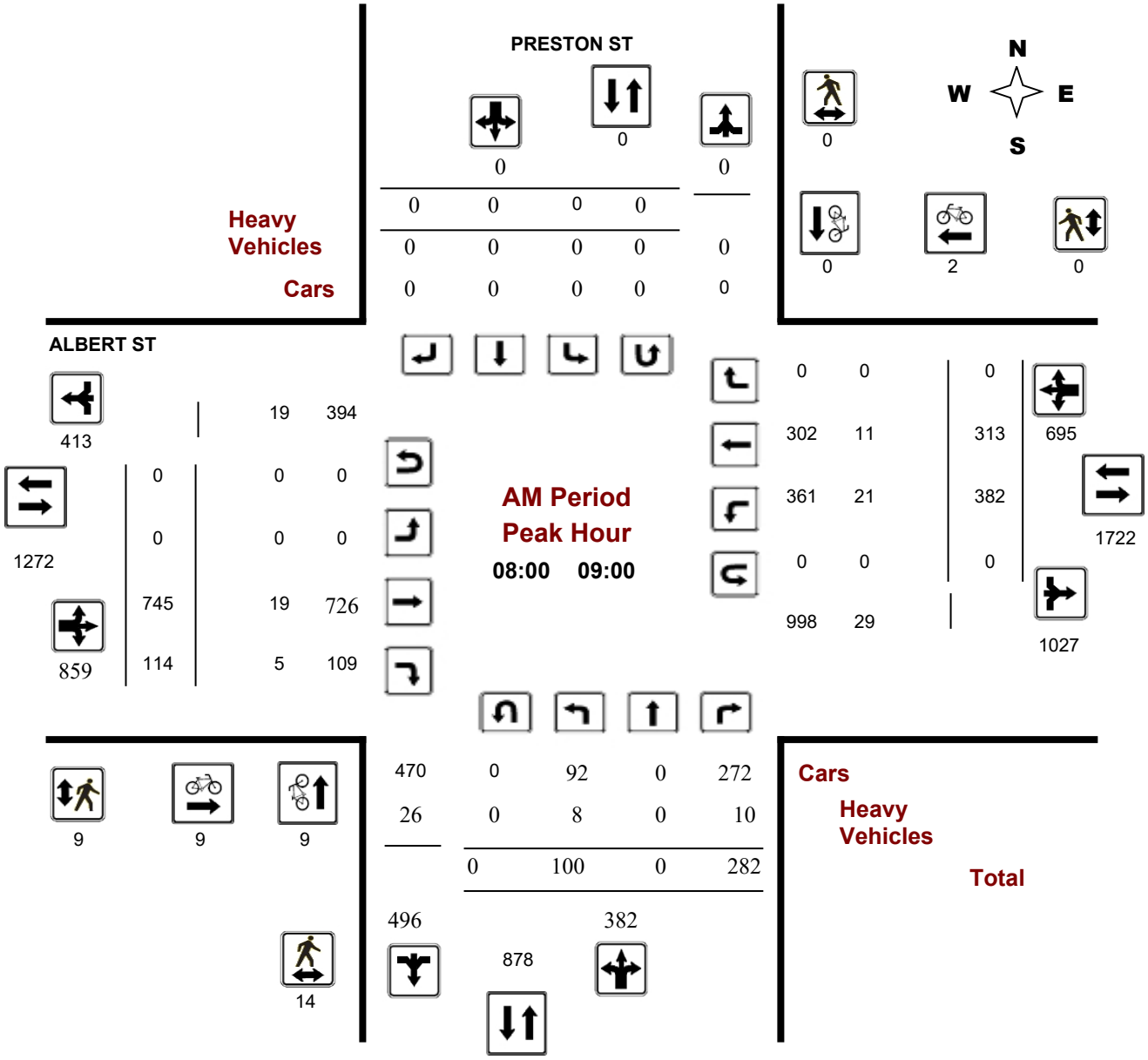
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

ALBERT ST @ PRESTON ST

Survey Date: Wednesday, April 02, 2014 **WO No:** 29661

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



Comments

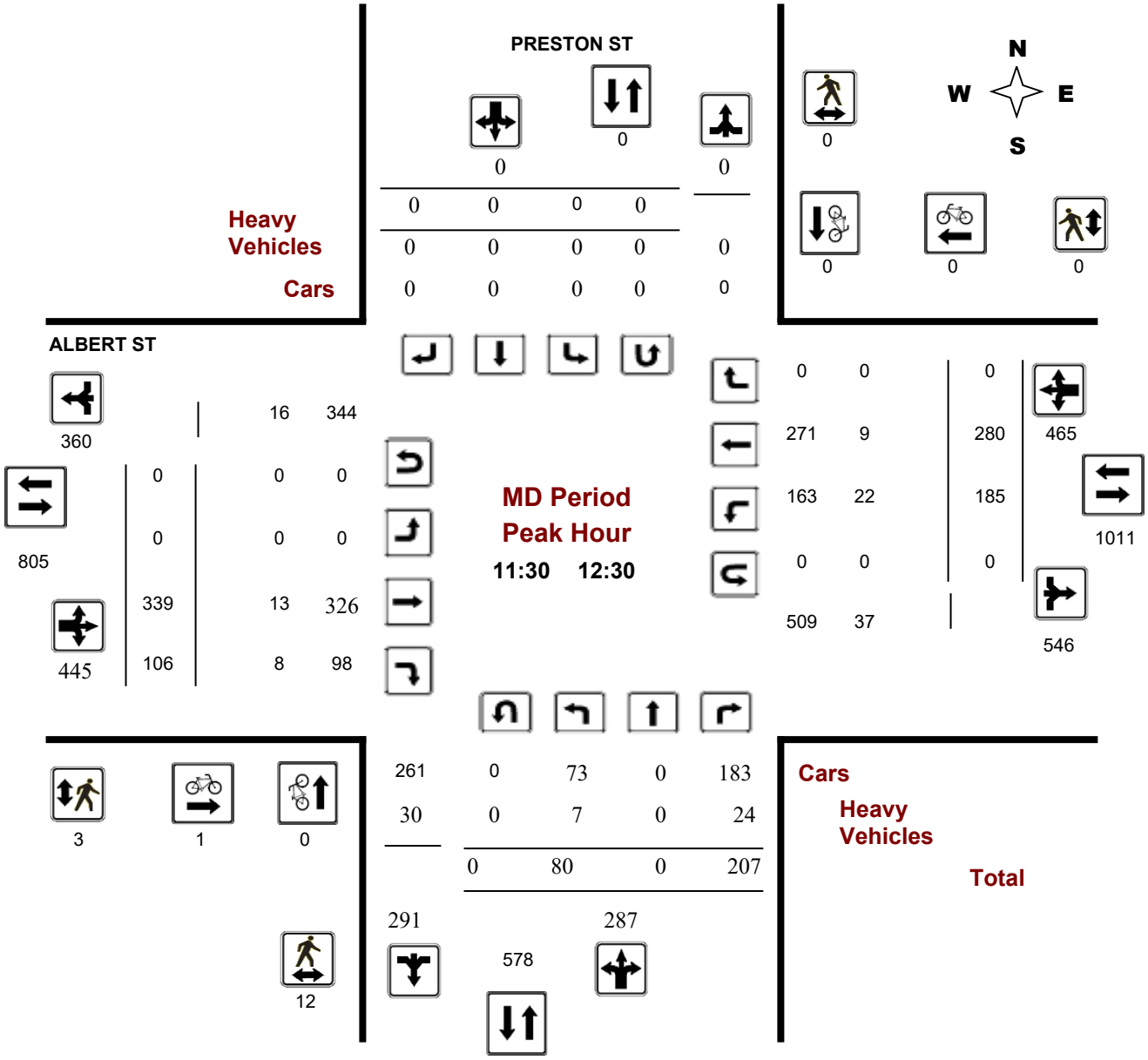
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

ALBERT ST @ PRESTON ST

Survey Date: Wednesday, April 02, 2014 **WO No:** 29661

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



Comments

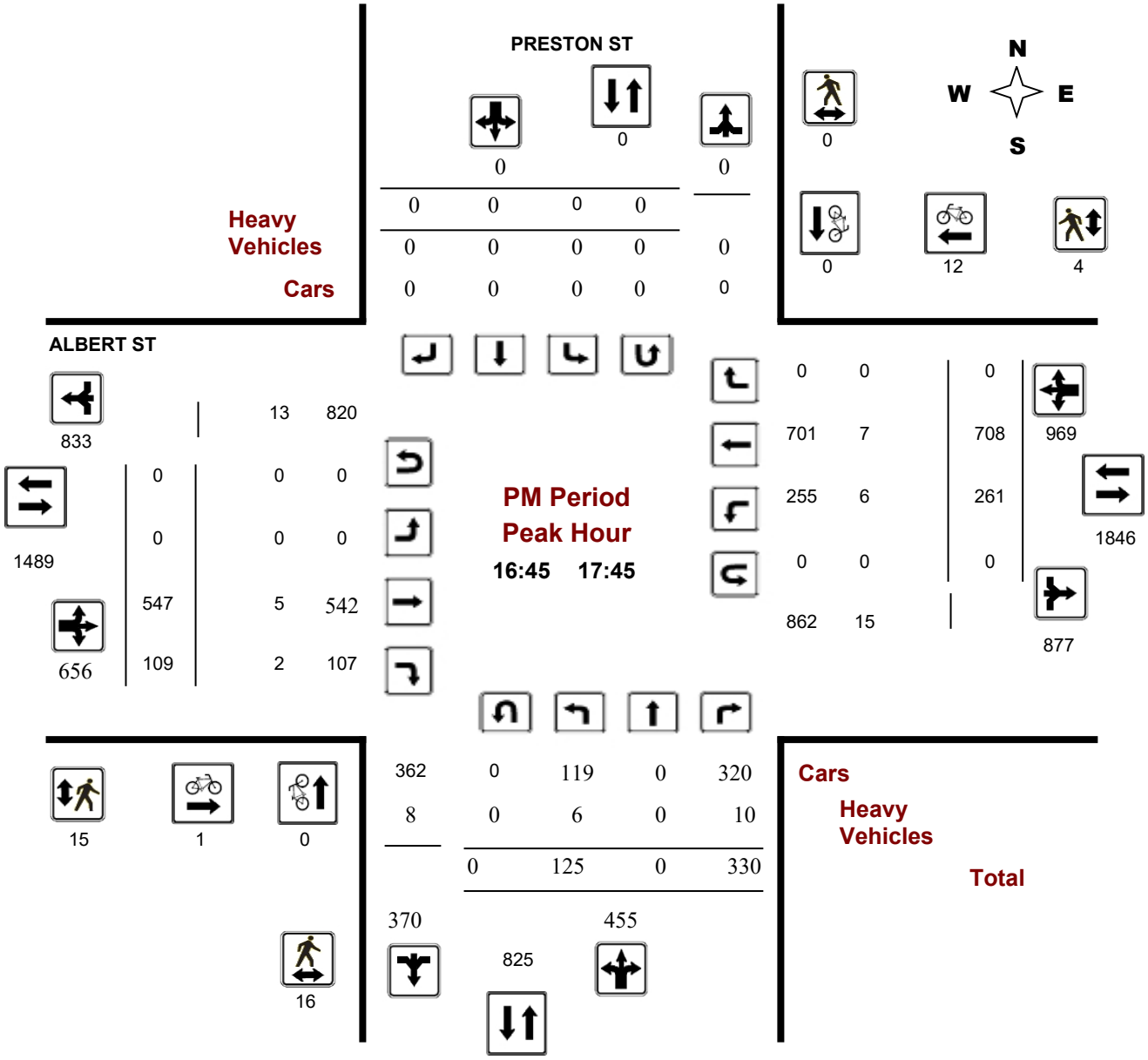
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

ALBERT ST @ PRESTON ST

Survey Date: Wednesday, April 02, 2014 **WO No:** 29661

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



Comments

Transportation Services - Traffic Services

Turning Movement Count - Study Results

ALBERT ST @ PRESTON ST

Survey Date: Wednesday, April 02, 2014 **WO No:** 29661

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

Full Study Summary (8 HR Standard)

Survey Date: Wednesday, April 02, 2014

Total Observed U-Turns

Northbound: 1 Southbound: 0

Eastbound: 1 Westbound: 0

AADT Factor

.90

	PRESTON ST								ALBERT ST									
	Northbound				Southbound				Eastbound				Westbound					
Period	LT	ST	RT	**NB TOT**	LT	ST	RT	**SB TOT**	**STR TOT**	LT	ST	RT	**EB TOT**	LT	ST	RT	**WB TOT**	**STR TOT**	**Grand Total**
07:00 08:00	54	0	245	**299**	0	0	0	**0**	**299**	0	450	69	**519**	390	277	0	**667**	**1186**	**1485**
08:00 09:00	100	0	282	**382**	0	0	0	**0**	**382**	0	745	114	**859**	382	313	0	**695**	**1554**	**1936**
09:00 10:00	82	0	198	**280**	0	0	0	**0**	**280**	0	416	81	**497**	228	263	0	**491**	**988**	**1268**
11:30 12:30	80	0	207	**287**	0	0	0	**0**	**287**	0	339	106	**445**	185	280	0	**465**	**910**	**1197**
12:30 13:30	72	0	190	**262**	0	0	0	**0**	**262**	0	317	82	**399**	166	239	0	**405**	**804**	**1066**
15:00 16:00	113	0	377	**490**	0	0	0	**0**	**490**	0	458	97	**555**	223	406	0	**629**	**1184**	**1674**
16:00 17:00	112	0	370	**482**	0	0	0	**0**	**482**	0	548	104	**652**	247	639	0	**886**	**1538**	**2020**
17:00 18:00	114	0	331	**445**	0	0	0	**0**	**445**	0	480	115	**595**	259	611	0	**870**	**1465**	**1910**
Sub Total	727	0	2200	**2927**	0	0	0	**0**	**2927**	0	3753	768	**4521**	2080	3028	0	**5108**	**9629**	**12556**
U Turns				**1**				**0**	**1**				**1**				**0**	**1**	**2**
Total	727	0	2200	**2928**	0	0	0	**0**	**2928**	0	3753	768	**4522**	2080	3028	0	**5108**	**9630**	**12558**
EQ 12Hr	1011	0	3058	**4070**	0	0	0	**0**	**4070**	0	5217	1068	**6286**	2891	4209	0	**7100**	**13386**	**17456**
Note: These values are calculated by multiplying the totals by the appropriate expansion factor.														**1.39**					
AVG 12Hr	857	0	2594	**3452**	0	0	0	**0**	**3663**	0	4425	905	**5331**	2452	3570	0	**6022**	**12047**	**15710**
Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor.														**0.9**					
AVG 24Hr	1123	0	3398	**4522**	0	0	0	**0**	**4522**	0	5796	1186	**6984**	3213	4677	0	**7889**	**14873**	**19395**
Note: These volumes are calculated by multiplying the Average Daily 12 hr. totals by 12 to 24 expansion factor.														**1.31**					

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

Transportation Services - Traffic Services

Turning Movement Count - Study Results

ALBERT ST @ PRESTON ST

Survey Date: Wednesday, April 02, 2014 **WO No:** 29661

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

Full Study 15 Minute Increments

		PRESTON ST									ALBERT ST									
		Northbound				Southbound					Eastbound				Westbound					
Time Period		LT	ST	RT	N TOT	LT	ST	RT	S TOT	STR TOT	LT	ST	RT	E TOT	LT	ST	RT	W TOT	STR TOT	Grand Total
07:00	07:15	15	0	56	71	0	0	0	0	5	0	69	15	84	90	51	0	141	5	296
07:15	07:30	12	0	48	60	0	0	0	0	3	0	88	13	101	113	67	0	180	3	341
07:30	07:45	12	0	78	90	0	0	0	0	7	0	137	15	152	100	88	0	188	7	430
07:45	08:00	15	0	63	78	0	0	0	0	5	0	156	26	182	87	71	0	158	5	418
08:00	08:15	26	0	76	102	0	0	0	0	2	0	176	20	196	111	78	0	189	2	487
08:15	08:30	20	0	68	88	0	0	0	0	6	0	218	28	246	101	64	0	165	6	499
08:30	08:45	30	0	74	104	0	0	0	0	6	0	177	30	207	94	73	0	167	6	478
08:45	09:00	24	0	64	88	0	0	0	0	4	0	174	36	210	76	98	0	174	4	472
09:00	09:15	27	0	52	79	0	0	0	0	4	0	129	18	147	80	82	0	162	4	388
09:15	09:30	24	0	58	82	0	0	0	0	2	0	120	29	149	57	70	0	127	2	358
09:30	09:45	13	0	45	58	0	0	0	0	6	0	91	18	109	48	58	0	106	6	273
09:45	10:00	18	0	43	61	0	0	0	0	4	0	76	16	92	43	53	0	96	4	249
11:30	11:45	28	0	50	78	0	0	0	0	11	0	94	19	113	40	76	0	116	11	307
11:45	12:00	18	0	64	82	0	0	0	0	10	0	74	39	113	53	64	0	117	10	312
12:00	12:15	18	0	47	65	0	0	0	0	3	0	88	27	115	39	69	0	108	3	288
12:15	12:30	16	0	46	62	0	0	0	0	7	0	83	21	104	53	71	0	124	7	290
12:30	12:45	19	0	42	61	0	0	0	0	10	0	70	23	93	37	64	0	101	10	255
12:45	13:00	21	0	49	71	0	0	0	0	4	0	66	21	87	49	63	0	112	4	270
13:00	13:15	15	0	58	73	0	0	0	0	5	0	84	19	103	42	54	0	96	5	272
13:15	13:30	17	0	41	58	0	0	0	0	6	0	97	19	116	38	58	0	96	6	270
15:00	15:15	27	0	99	126	0	0	0	0	8	0	97	21	118	52	95	0	147	8	391
15:15	15:30	20	0	96	116	0	0	0	0	8	0	102	25	128	51	100	0	151	8	395
15:30	15:45	22	0	93	115	0	0	0	0	3	0	129	18	147	50	103	0	153	3	415
15:45	16:00	44	0	89	133	0	0	0	0	7	0	130	33	163	70	108	0	178	7	474
16:00	16:15	29	0	89	118	0	0	0	0	5	0	134	33	167	57	133	0	190	5	475
16:15	16:30	22	0	117	139	0	0	0	0	7	0	137	30	167	71	157	0	228	7	534
16:30	16:45	33	0	89	122	0	0	0	0	4	0	117	23	140	56	162	0	218	4	480
16:45	17:00	28	0	75	103	0	0	0	0	4	0	160	18	178	63	187	0	250	4	531
17:00	17:15	37	0	96	133	0	0	0	0	4	0	134	41	175	66	155	0	221	4	529
17:15	17:30	34	0	72	106	0	0	0	0	5	0	129	22	151	71	190	0	261	5	518
17:30	17:45	26	0	87	113	0	0	0	0	3	0	124	28	152	61	176	0	237	3	502
17:45	18:00	17	0	76	93	0	0	0	0	3	0	93	24	117	61	90	0	151	3	361
Total:		727	0	2200	2928	0	0	0	0	171	0	3753	768	4522	2080	3028	0	5108	171	12,558

Note: U-Turns are included in Totals.

Transportation Services - Traffic Services

Turning Movement Count - Study Results

ALBERT ST @ PRESTON ST

Survey Date: Wednesday, April 02, 2014 **WO No:** 29661

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

Full Study Cyclist Volume

Time Period		PRESTON ST			ALBERT ST			
		Northbound	Southbound	Street Total	Eastbound	Westbound	Street Total	Grand Total
07:00	07:15	0	0	0	0	1	1	1
07:15	07:30	1	0	1	0	0	0	1
07:30	07:45	0	0	0	2	0	2	2
07:45	08:00	1	0	1	3	0	3	4
08:00	08:15	4	0	4	5	0	5	9
08:15	08:30	1	0	1	2	1	3	4
08:30	08:45	2	0	2	1	1	2	4
08:45	09:00	2	0	2	1	0	1	3
09:00	09:15	0	0	0	2	0	2	2
09:15	09:30	0	0	0	2	0	2	2
09:30	09:45	1	0	1	1	0	1	2
09:45	10:00	0	0	0	1	0	1	1
11:30	11:45	0	0	0	1	0	1	1
11:45	12:00	0	0	0	0	0	0	0
12:00	12:15	0	0	0	0	0	0	0
12:15	12:30	0	0	0	0	0	0	0
12:30	12:45	0	0	0	0	0	0	0
12:45	13:00	0	0	0	0	1	1	1
13:00	13:15	0	0	0	0	0	0	0
13:15	13:30	0	0	0	0	0	0	0
15:00	15:15	0	0	0	0	0	0	0
15:15	15:30	0	0	0	0	1	1	1
15:30	15:45	0	0	0	0	1	1	1
15:45	16:00	1	0	1	1	0	1	2
16:00	16:15	0	0	0	0	1	1	1
16:15	16:30	0	0	0	1	0	1	1
16:30	16:45	1	0	1	0	3	3	4
16:45	17:00	0	0	0	0	2	2	2
17:00	17:15	0	0	0	1	1	2	2
17:15	17:30	0	0	0	0	8	8	8
17:30	17:45	0	0	0	0	1	1	1
17:45	18:00	0	0	0	0	3	3	3
Total		14	0	**14**	24	25	49	63

Transportation Services - Traffic Services

Turning Movement Count - Study Results

ALBERT ST @ PRESTON ST

Survey Date: Wednesday, April 02, 2014 **WO No:** 29661

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

Full Study Pedestrian Volume

	PRESTON ST			ALBERT ST			
Time Period	NB Approach (E or W Crossing)	SB Approach (E or W Crossing)	**Total**	EB Approach (N or S Crossing)	WB Approach (N or S Crossing)	**Total**	**Grand Total**
07:00 07:15	1	0	**1**	1	0	**1**	**2**
07:15 07:30	3	0	**3**	4	0	**4**	**7**
07:30 07:45	3	0	**3**	5	0	**5**	**8**
07:45 08:00	3	0	**3**	1	0	**1**	**4**
08:00 08:15	4	0	**4**	2	0	**2**	**6**
08:15 08:30	3	0	**3**	3	0	**3**	**6**
08:30 08:45	5	0	**5**	4	0	**4**	**9**
08:45 09:00	2	0	**2**	0	0	**0**	**2**
09:00 09:15	7	0	**7**	0	0	**0**	**7**
09:15 09:30	4	0	**4**	1	0	**1**	**5**
09:30 09:45	3	0	**3**	2	0	**2**	**5**
09:45 10:00	5	0	**5**	2	0	**2**	**7**
11:30 11:45	5	0	**5**	0	0	**0**	**5**
11:45 12:00	3	0	**3**	1	0	**1**	**4**
12:00 12:15	2	0	**2**	2	0	**2**	**4**
12:15 12:30	2	0	**2**	0	0	**0**	**2**
12:30 12:45	2	0	**2**	0	0	**0**	**2**
12:45 13:00	2	0	**2**	5	0	**5**	**7**
13:00 13:15	2	0	**2**	1	2	**3**	**5**
13:15 13:30	0	0	**0**	0	2	**2**	**2**
15:00 15:15	4	0	**4**	2	0	**2**	**6**
15:15 15:30	3	0	**3**	5	0	**5**	**8**
15:30 15:45	3	0	**3**	2	1	**3**	**6**
15:45 16:00	0	0	**0**	4	1	**5**	**5**
16:00 16:15	3	0	**3**	0	2	**2**	**5**
16:15 16:30	12	0	**12**	0	3	**3**	**15**
16:30 16:45	6	0	**6**	0	1	**1**	**7**
16:45 17:00	8	0	**8**	0	1	**1**	**9**
17:00 17:15	3	0	**3**	6	0	**6**	**9**
17:15 17:30	3	0	**3**	2	1	**3**	**6**
17:30 17:45	2	0	**2**	7	2	**9**	**11**
17:45 18:00	2	0	**2**	3	0	**3**	**5**
Total	110	0	**110**	65	16	**81**	**191**

Transportation Services - Traffic Services

Turning Movement Count - Study Results

ALBERT ST @ PRESTON ST

Survey Date: Wednesday, April 02, 2014 **WO No:** 29661

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

Full Study Heavy Vehicles

		PRESTON ST									ALBERT ST									
		Northbound				Southbound					Eastbound				Westbound					
Time Period		LT	ST	RT	N TOT	LT	ST	RT	S TOT	STR TOT	LT	ST	RT	E TOT	LT	ST	RT	W TOT	STR TOT	Grand Total
07:00	07:15	2	0	3	**5**	0	0	0	**0**	**5**	0	2	0	**2**	2	2	0	**4**	**6**	**11**
07:15	07:30	0	0	3	**3**	0	0	0	**0**	**3**	0	1	2	**3**	7	2	0	**9**	**12**	**15**
07:30	07:45	2	0	5	**7**	0	0	0	**0**	**7**	0	6	0	**6**	4	6	0	**10**	**16**	**23**
07:45	08:00	1	0	4	**5**	0	0	0	**0**	**5**	0	9	2	**11**	5	3	0	**8**	**19**	**24**
08:00	08:15	1	0	1	**2**	0	0	0	**0**	**2**	0	6	0	**6**	5	3	0	**8**	**14**	**16**
08:15	08:30	1	0	5	**6**	0	0	0	**0**	**6**	0	3	3	**6**	6	2	0	**8**	**14**	**20**
08:30	08:45	5	0	1	**6**	0	0	0	**0**	**6**	0	3	0	**3**	6	2	0	**8**	**11**	**17**
08:45	09:00	1	0	3	**4**	0	0	0	**0**	**4**	0	7	2	**9**	4	4	0	**8**	**17**	**21**
09:00	09:15	1	0	3	**4**	0	0	0	**0**	**4**	0	6	3	**9**	8	3	0	**11**	**20**	**24**
09:15	09:30	0	0	2	**2**	0	0	0	**0**	**2**	0	9	3	**12**	7	7	0	**14**	**26**	**28**
09:30	09:45	1	0	5	**6**	0	0	0	**0**	**6**	0	2	1	**3**	7	3	0	**10**	**13**	**19**
09:45	10:00	0	0	4	**4**	0	0	0	**0**	**4**	0	5	0	**5**	3	6	0	**9**	**14**	**18**
11:30	11:45	2	0	9	**11**	0	0	0	**0**	**11**	0	3	1	**4**	5	1	0	**6**	**10**	**21**
11:45	12:00	2	0	8	**10**	0	0	0	**0**	**10**	0	1	4	**5**	6	5	0	**11**	**16**	**26**
12:00	12:15	2	0	1	**3**	0	0	0	**0**	**3**	0	5	1	**6**	4	1	0	**5**	**11**	**14**
12:15	12:30	1	0	6	**7**	0	0	0	**0**	**7**	0	4	2	**6**	7	2	0	**9**	**15**	**22**
12:30	12:45	4	0	6	**10**	0	0	0	**0**	**10**	0	3	2	**5**	5	3	0	**8**	**13**	**23**
12:45	13:00	0	0	4	**4**	0	0	0	**0**	**4**	0	2	1	**3**	9	4	0	**13**	**16**	**20**
13:00	13:15	0	0	5	**5**	0	0	0	**0**	**5**	0	2	3	**5**	8	4	0	**12**	**17**	**22**
13:15	13:30	0	0	6	**6**	0	0	0	**0**	**6**	0	7	1	**8**	4	3	0	**7**	**15**	**21**
15:00	15:15	2	0	6	**8**	0	0	0	**0**	**8**	0	2	0	**2**	2	3	0	**5**	**7**	**15**
15:15	15:30	2	0	6	**8**	0	0	0	**0**	**8**	0	5	0	**5**	4	2	0	**6**	**11**	**19**
15:30	15:45	1	0	2	**3**	0	0	0	**0**	**3**	0	3	0	**3**	3	5	0	**8**	**11**	**14**
15:45	16:00	3	0	4	**7**	0	0	0	**0**	**7**	0	5	0	**5**	6	4	0	**10**	**15**	**22**
16:00	16:15	0	0	5	**5**	0	0	0	**0**	**5**	0	2	0	**2**	4	0	0	**4**	**6**	**11**
16:15	16:30	0	0	7	**7**	0	0	0	**0**	**7**	0	2	2	**4**	5	4	0	**9**	**13**	**20**
16:30	16:45	1	0	3	**4**	0	0	0	**0**	**4**	0	1	2	**3**	1	2	0	**3**	**6**	**10**
16:45	17:00	3	0	1	**4**	0	0	0	**0**	**4**	0	2	1	**3**	2	3	0	**5**	**8**	**12**
17:00	17:15	1	0	3	**4**	0	0	0	**0**	**4**	0	1	1	**2**	2	2	0	**4**	**6**	**10**
17:15	17:30	1	0	4	**5**	0	0	0	**0**	**5**	0	1	0	**1**	1	1	0	**2**	**3**	**8**
17:30	17:45	1	0	2	**3**	0	0	0	**0**	**3**	0	1	0	**1**	1	1	0	**2**	**3**	**6**
17:45	18:00	0	0	3	**3**	0	0	0	**0**	**3**	0	3	0	**3**	2	1	0	**3**	**6**	**9**
Total:	None	41	0	130	**171**	0	0	0	**0**	**171**	0	114	37	**151**	145	94	0	**239**	**390**	**561**

Transportation Services - Traffic Services

Turning Movement Count - Study Results

ALBERT ST @ PRESTON ST

Survey Date: Wednesday, April 02, 2014 **WO No:** 29661

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

Full Study 15 Minute U-Turn Total

Time Period		PRESTON ST Northbound U-Turn Total	PRESTON ST Southbound U-Turn Total	ALBERT ST Eastbound U-Turn Total	ALBERT ST Westbound U-Turn Total	Total
07:00	07:15	0	0	0	0	0
07:15	07:30	0	0	0	0	0
07:30	07:45	0	0	0	0	0
07:45	08:00	0	0	0	0	0
08:00	08:15	0	0	0	0	0
08:15	08:30	0	0	0	0	0
08:30	08:45	0	0	0	0	0
08:45	09:00	0	0	0	0	0
09:00	09:15	0	0	0	0	0
09:15	09:30	0	0	0	0	0
09:30	09:45	0	0	0	0	0
09:45	10:00	0	0	0	0	0
11:30	11:45	0	0	0	0	0
11:45	12:00	0	0	0	0	0
12:00	12:15	0	0	0	0	0
12:15	12:30	0	0	0	0	0
12:30	12:45	0	0	0	0	0
12:45	13:00	1	0	0	0	1
13:00	13:15	0	0	0	0	0
13:15	13:30	0	0	0	0	0
15:00	15:15	0	0	0	0	0
15:15	15:30	0	0	1	0	1
15:30	15:45	0	0	0	0	0
15:45	16:00	0	0	0	0	0
16:00	16:15	0	0	0	0	0
16:15	16:30	0	0	0	0	0
16:30	16:45	0	0	0	0	0
16:45	17:00	0	0	0	0	0
17:00	17:15	0	0	0	0	0
17:15	17:30	0	0	0	0	0
17:30	17:45	0	0	0	0	0
17:45	18:00	0	0	0	0	0
Total		1	0	1	0	2

Transportation Services - Traffic Services

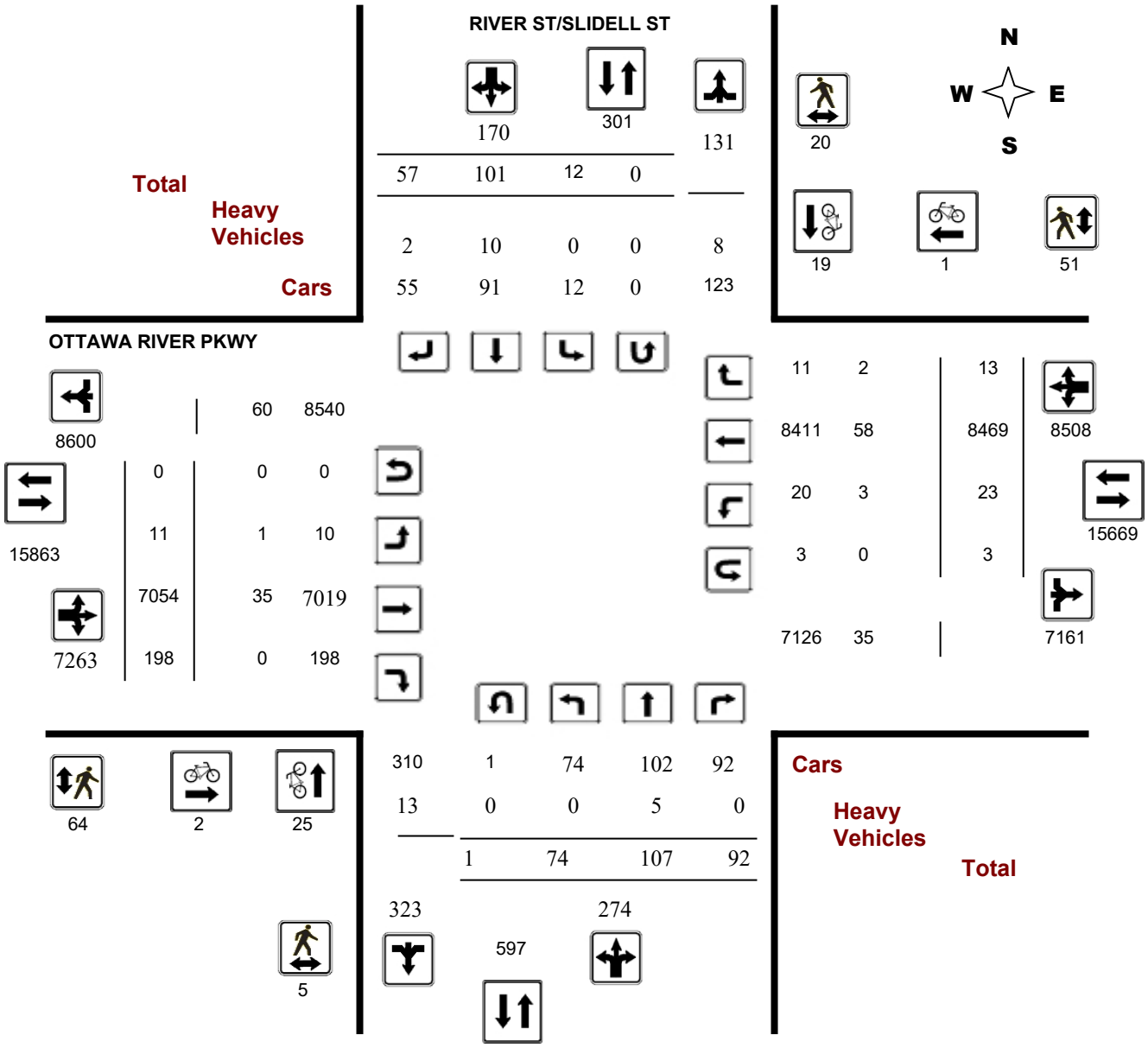
Turning Movement Count - Study Results

OTTAWA RIVER PKWY @ RIVER ST/SLIDELL ST

Survey Date: Tuesday, April 25, 2017
Start Time: 07:00

WO No: 36950
Device: Miovision

Full Study Diagram



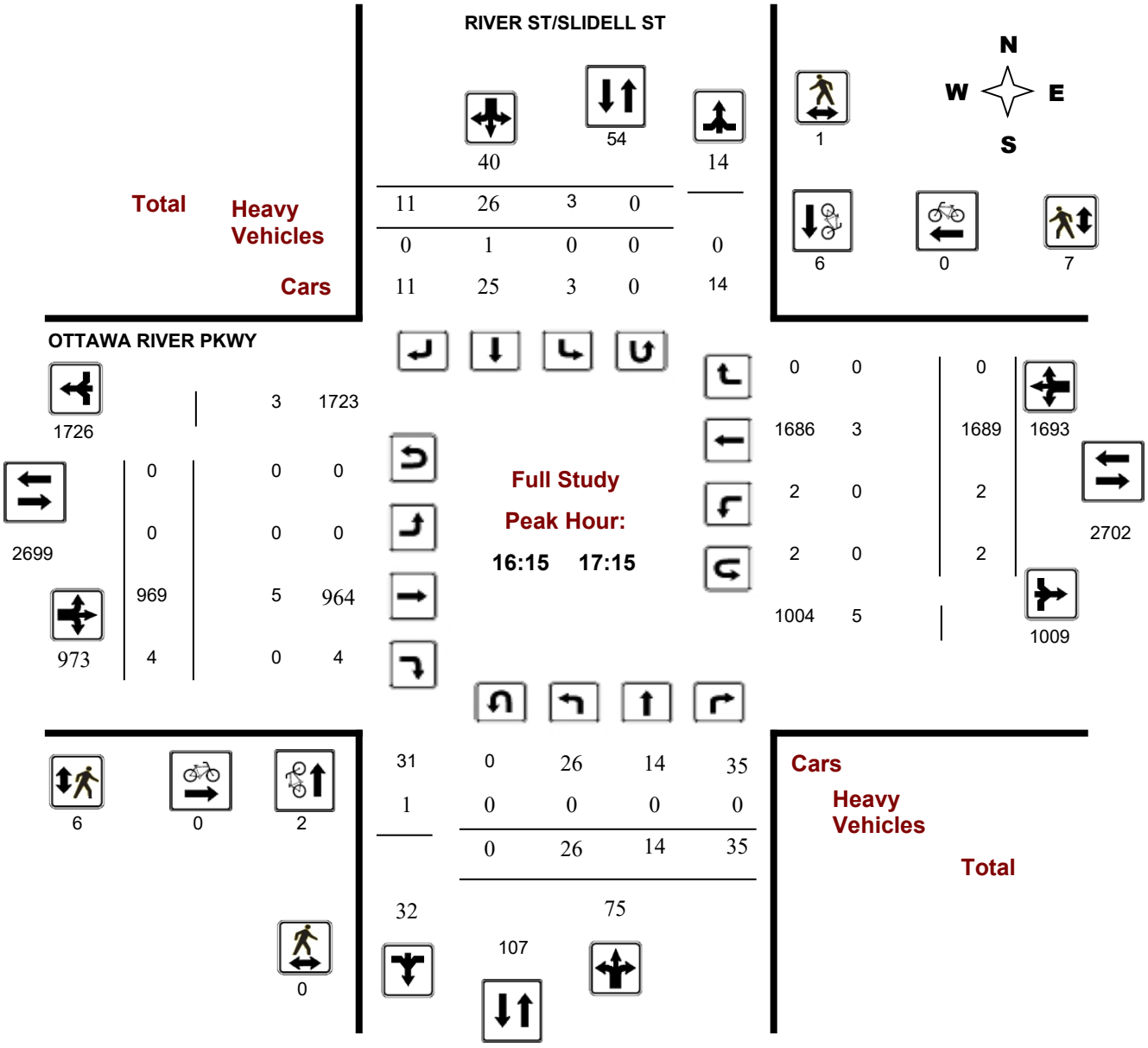
Transportation Services - Traffic Services

Turning Movement Count - Study Results

OTTAWA RIVER PKWY @ RIVER ST/SLIDELL ST

Survey Date: Tuesday, April 25, 2017
Start Time: 07:00
WO No: 36950
Device: Miovision

Full Study Peak Hour Diagram



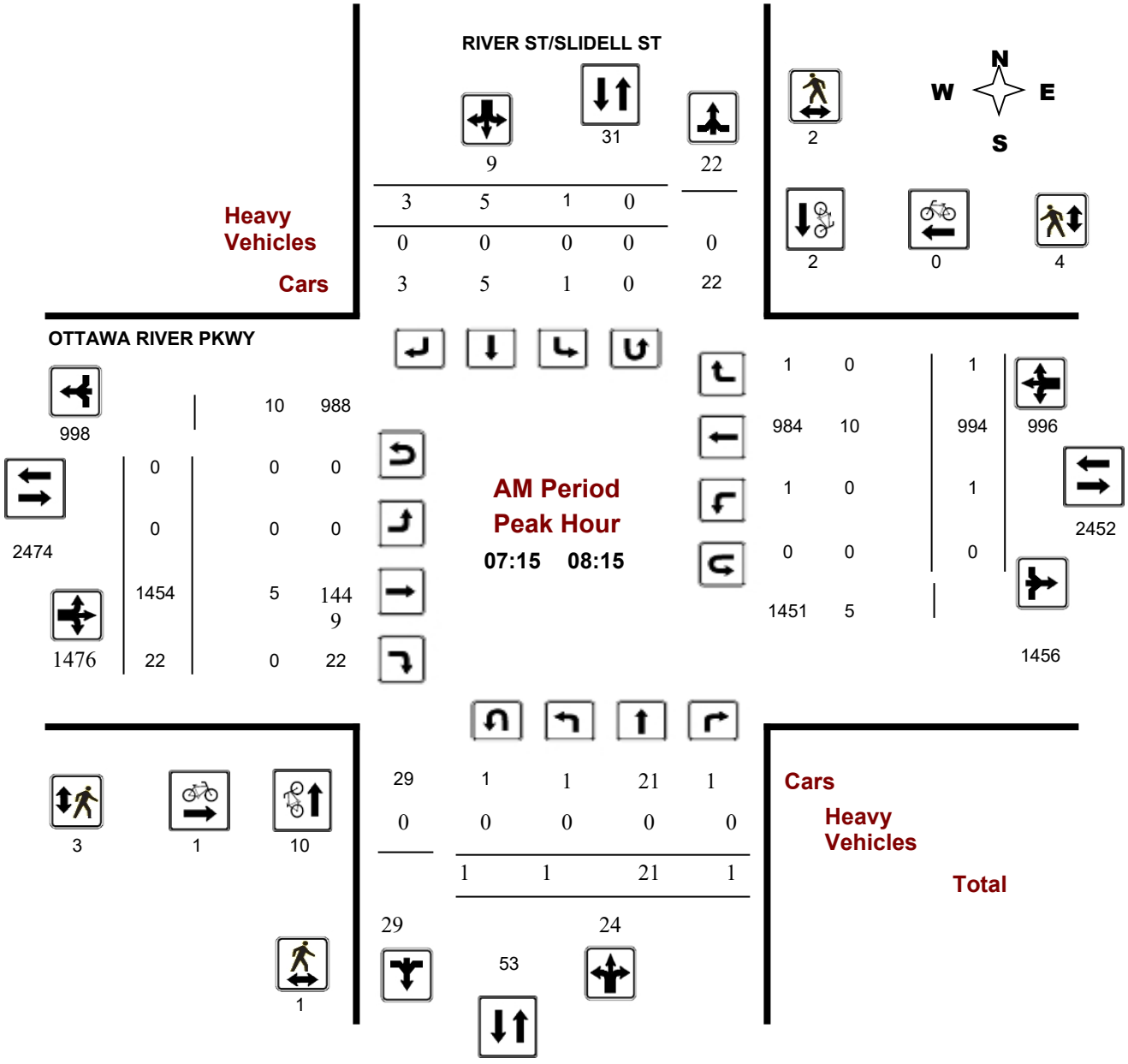
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

OTTAWA RIVER PKWY @ RIVER ST/SLIDELL ST

Survey Date: Tuesday, April 25, 2017
Start Time: 07:00

WO No: 36950
Device: Miovision



Comments

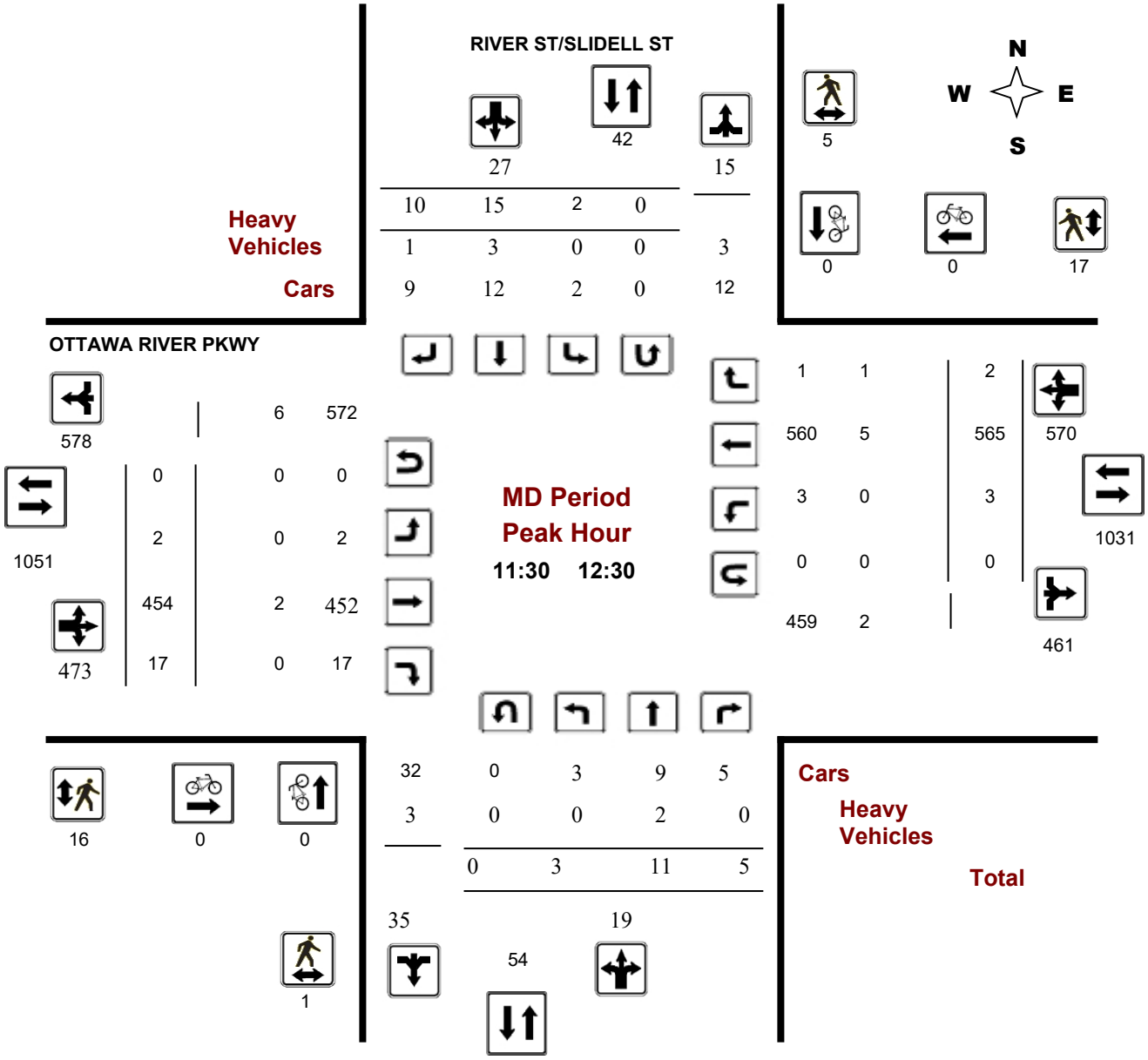
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

OTTAWA RIVER PKWY @ RIVER ST/SLIDELL ST

Survey Date: Tuesday, April 25, 2017
Start Time: 07:00

WO No: 36950
Device: Miovision



Comments

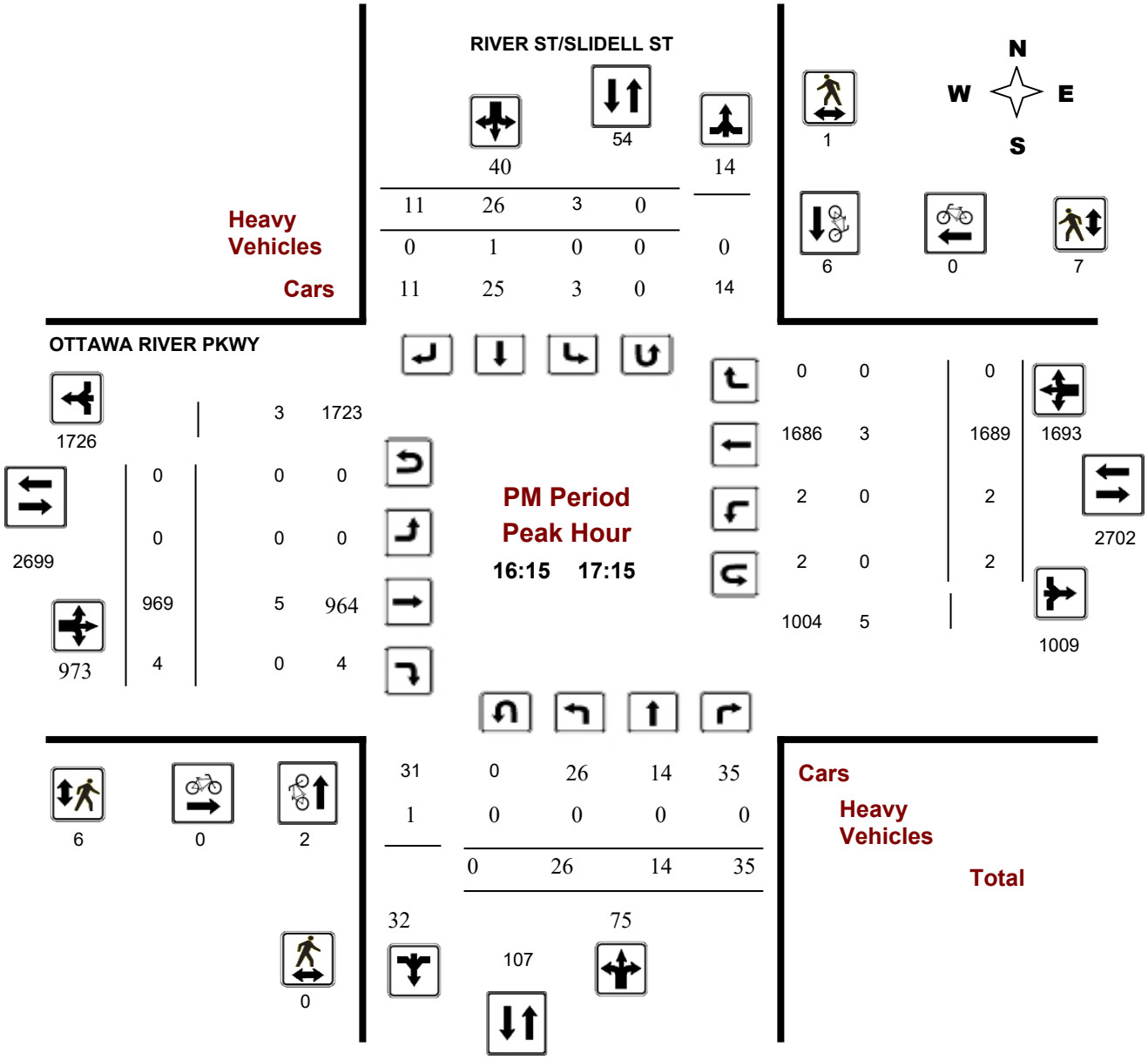
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

OTTAWA RIVER PKWY @ RIVER ST/SLIDELL ST

Survey Date: Tuesday, April 25, 2017
Start Time: 07:00

WO No: 36950
Device: Miovision



Comments

Transportation Services - Traffic Services

Turning Movement Count - Study Results

OTTAWA RIVER PKWY @ RIVER ST/SLIDELL ST

Survey Date: Tuesday, April 25, 2017 **WO No:** 36950

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

Full Study Summary (8 HR Standard)

Survey Date: Tuesday, April 25, 2017

Total Observed U-Turns

Northbound: 1 Southbound: 0

Eastbound: 0 Westbound: 3

AADT Factor

.90

	RIVER ST/SLIDELL ST									OTTAWA RIVER PKWY									
	Northbound				Southbound					Eastbound				Westbound					
Period	LT	ST	RT	**NB TOT**	LT	ST	RT	**SB TOT**	**STR TOT**	LT	ST	RT	**EB TOT**	LT	ST	RT	**WB TOT**	**STR TOT**	**Grand Total**
07:00 08:00	1	22	0	**23**	1	4	2	**7**	**30**	0	1315	21	**1336**	0	986	1	**987**	**2323**	**2353**
08:00 09:00	0	28	4	**32**	0	8	4	**12**	**44**	1	1401	39	**1441**	1	909	1	**911**	**2352**	**2396**
09:00 10:00	2	15	2	**19**	0	14	5	**19**	**38**	2	698	80	**780**	3	693	5	**701**	**1481**	**1519**
11:30 12:30	3	11	5	**19**	2	15	10	**27**	**46**	2	454	17	**473**	3	565	2	**570**	**1043**	**1089**
12:30 13:30	4	7	7	**18**	3	11	6	**20**	**38**	6	418	20	**444**	10	529	1	**540**	**984**	**1022**
15:00 16:00	10	2	22	**34**	3	9	10	**22**	**56**	0	993	12	**1005**	2	1502	0	**1504**	**2509**	**2565**
16:00 17:00	27	15	38	**80**	3	24	11	**38**	**118**	0	954	3	**957**	0	1684	0	**1684**	**2641**	**2759**
17:00 18:00	27	7	14	**48**	0	16	9	**25**	**73**	0	821	6	**827**	4	1601	3	**1608**	**2435**	**2508**
Sub Total	74	107	92	**273**	12	101	57	**170**	**443**	11	7054	198	**7263**	23	8469	13	**8505**	**15768**	**16211**
U Turns				**1**				**0**	**1**				**0**				**3**	**3**	**4**
Total	74	107	92	**274**	12	101	57	**170**	**444**	11	7054	198	**7263**	23	8469	13	**8508**	**15771**	**16215**
EQ 12Hr	103	149	128	**381**	17	140	79	**236**	**617**	15	9805	275	**10096**	32	11772	18	**11826**	**21922**	**22539**
Note: These values are calculated by multiplying the totals by the appropriate expansion factor.														**1.39**					
AVG 12Hr	87	126	108	**323**	14	119	67	**200**	**555**	13	8317	233	**8563**	27	9985	15	**10031**	**19730**	**20285**
Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor.														**0.9**					
AVG 24Hr	114	165	142	**423**	19	156	88	**263**	**686**	17	10895	306	**11218**	36	13080	20	**13141**	**24359**	**25045**
Note: These volumes are calculated by multiplying the Average Daily 12 hr. totals by 12 to 24 expansion factor.														**1.31**					

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

Transportation Services - Traffic Services

Turning Movement Count - Study Results

OTTAWA RIVER PKWY @ RIVER ST/SLIDELL ST

Survey Date: Tuesday, April 25, 2017 **WO No:** 36950

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

Full Study 15 Minute Increments

		RIVER ST/SLIDELL ST										OTTAWA RIVER PKWY								
		Northbound				Southbound					Eastbound				Westbound					
Time Period		LT	ST	RT	N TOT	LT	ST	RT	S TOT	STR TOT	LT	ST	RT	E TOT	LT	ST	RT	W TOT	STR TOT	Grand Total
07:00	07:15	0	10	0	10	0	0	0	0	1	0	268	8	276	0	246	0	246	1	532
07:15	07:30	1	2	0	3	1	0	1	2	0	0	360	3	363	0	234	1	235	0	603
07:30	07:45	0	2	0	3	0	1	1	2	0	0	312	8	320	0	271	0	271	0	596
07:45	08:00	0	8	0	8	0	3	0	3	0	0	375	2	377	0	235	0	235	0	623
08:00	08:15	0	9	1	10	0	1	1	2	0	0	407	9	416	1	254	0	255	0	683
08:15	08:30	0	11	1	12	0	3	1	4	0	0	338	8	346	0	221	0	221	0	583
08:30	08:45	0	2	0	2	0	2	2	4	0	0	351	9	360	0	193	0	193	0	559
08:45	09:00	0	6	2	8	0	2	0	2	2	1	305	13	319	0	241	1	242	2	571
09:00	09:15	1	3	1	5	0	4	2	6	0	0	249	27	276	1	241	1	243	0	530
09:15	09:30	0	5	0	5	0	2	1	3	1	0	170	24	194	2	171	2	175	1	377
09:30	09:45	0	4	1	5	0	4	1	5	0	1	154	17	172	0	135	0	135	0	317
09:45	10:00	1	3	0	4	0	4	1	5	2	1	125	12	138	0	146	2	148	2	295
11:30	11:45	1	4	2	7	0	4	3	7	1	0	120	5	125	1	126	0	127	1	266
11:45	12:00	0	0	0	0	0	3	5	8	0	2	117	3	122	0	138	0	138	0	268
12:00	12:15	1	4	1	6	0	6	1	7	4	0	121	5	126	2	149	2	153	4	292
12:15	12:30	1	3	2	6	2	2	1	5	1	0	96	4	100	0	152	0	152	1	263
12:30	12:45	1	0	2	3	1	1	1	3	1	2	112	7	121	3	132	0	135	1	262
12:45	13:00	1	1	0	2	1	8	3	12	1	2	92	6	100	2	130	0	132	1	246
13:00	13:15	1	3	2	6	1	2	0	3	0	1	100	4	105	1	137	0	138	0	252
13:15	13:30	1	3	3	7	0	0	2	2	0	1	114	3	118	4	130	1	136	0	263
15:00	15:15	1	1	4	6	3	3	2	8	1	0	262	5	267	1	309	0	310	1	591
15:15	15:30	1	0	8	9	0	5	3	8	1	0	235	1	236	0	424	0	424	1	677
15:30	15:45	4	0	6	10	0	1	1	2	0	0	241	3	244	0	370	0	370	0	626
15:45	16:00	4	1	4	9	0	0	4	4	0	0	255	3	258	1	399	0	400	0	671
16:00	16:15	9	5	9	23	0	1	2	3	0	0	213	0	213	0	450	0	450	0	689
16:15	16:30	6	3	9	18	3	6	4	13	1	0	255	2	257	0	412	0	412	1	700
16:30	16:45	6	4	13	23	0	12	5	17	0	0	245	0	245	0	432	0	432	0	717
16:45	17:00	6	3	7	16	0	5	0	5	0	0	241	1	242	0	390	0	391	0	654
17:00	17:15	8	4	6	18	0	3	2	5	0	0	228	1	229	2	455	0	458	0	710
17:15	17:30	11	1	4	16	0	8	2	10	0	0	221	4	225	1	388	1	390	0	641
17:30	17:45	4	0	1	5	0	4	4	8	0	0	209	0	209	0	420	1	421	0	643
17:45	18:00	4	2	3	9	0	1	1	2	0	0	163	1	164	1	338	1	340	0	515
Total:		74	107	92	274	12	101	57	170	17	11	7054	198	7263	23	8469	13	8508	17	16,215

Note: U-Turns are included in Totals.

Transportation Services - Traffic Services

Turning Movement Count - Study Results

OTTAWA RIVER PKWY @ RIVER ST/SLIDELL ST

Survey Date: Tuesday, April 25, 2017 **WO No:** 36950

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

Full Study Cyclist Volume

Time Period		RIVER ST/SLIDELL ST			OTTAWA RIVER PKWY			
		Northbound	Southbound	Street Total	Eastbound	Westbound	Street Total	Grand Total
07:00	07:15	0	1	1	0	0	0	1
07:15	07:30	1	1	2	0	0	0	2
07:30	07:45	2	1	3	1	0	1	4
07:45	08:00	3	0	3	0	0	0	3
08:00	08:15	4	0	4	0	0	0	4
08:15	08:30	1	0	1	0	0	0	1
08:30	08:45	1	0	1	0	0	0	1
08:45	09:00	1	0	1	0	0	0	1
09:00	09:15	0	0	0	0	0	0	0
09:15	09:30	2	0	2	0	0	0	2
09:30	09:45	2	0	2	0	0	0	2
09:45	10:00	0	0	0	0	0	0	0
11:30	11:45	0	0	0	0	0	0	0
11:45	12:00	0	0	0	0	0	0	0
12:00	12:15	0	0	0	0	0	0	0
12:15	12:30	0	0	0	0	0	0	0
12:30	12:45	0	0	0	0	0	0	0
12:45	13:00	0	0	0	1	0	1	1
13:00	13:15	0	0	0	0	0	0	0
13:15	13:30	0	0	0	0	0	0	0
15:00	15:15	0	2	2	0	0	0	2
15:15	15:30	1	0	1	0	0	0	1
15:30	15:45	0	1	1	0	1	1	2
15:45	16:00	0	0	0	0	0	0	0
16:00	16:15	1	3	4	0	0	0	4
16:15	16:30	0	0	0	0	0	0	0
16:30	16:45	0	2	2	0	0	0	2
16:45	17:00	1	3	4	0	0	0	4
17:00	17:15	1	1	2	0	0	0	2
17:15	17:30	1	0	1	0	0	0	1
17:30	17:45	1	1	2	0	0	0	2
17:45	18:00	2	3	5	0	0	0	5
Total		25	19	**44**	2	1	3	47

Transportation Services - Traffic Services

Turning Movement Count - Study Results

OTTAWA RIVER PKWY @ RIVER ST/SLIDELL ST

Survey Date: Tuesday, April 25, 2017 **WO No:** 36950

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

Full Study Pedestrian Volume

	RIVER ST/SLIDELL ST			OTTAWA RIVER PKWY			
Time Period	NB Approach (E or W Crossing)	SB Approach (E or W Crossing)	**Total**	EB Approach (N or S Crossing)	WB Approach (N or S Crossing)	**Total**	**Grand Total**
07:00 07:15	0	0	**0**	2	0	**2**	**2**
07:15 07:30	0	0	**0**	0	2	**2**	**2**
07:30 07:45	0	2	**2**	2	0	**2**	**4**
07:45 08:00	1	0	**1**	1	2	**3**	**4**
08:00 08:15	0	0	**0**	0	0	**0**	**0**
08:15 08:30	0	1	**1**	2	1	**3**	**4**
08:30 08:45	0	0	**0**	3	3	**6**	**6**
08:45 09:00	0	0	**0**	1	0	**1**	**1**
09:00 09:15	2	0	**2**	0	2	**2**	**4**
09:15 09:30	0	0	**0**	0	0	**0**	**0**
09:30 09:45	0	0	**0**	1	1	**2**	**2**
09:45 10:00	0	0	**0**	0	3	**3**	**3**
11:30 11:45	0	0	**0**	1	3	**4**	**4**
11:45 12:00	0	2	**2**	3	4	**7**	**9**
12:00 12:15	1	2	**3**	3	6	**9**	**12**
12:15 12:30	0	1	**1**	9	4	**13**	**14**
12:30 12:45	0	4	**4**	7	4	**11**	**15**
12:45 13:00	0	3	**3**	9	0	**9**	**12**
13:00 13:15	0	2	**2**	4	1	**5**	**7**
13:15 13:30	0	1	**1**	3	0	**3**	**4**
15:00 15:15	0	0	**0**	0	0	**0**	**0**
15:15 15:30	0	0	**0**	0	2	**2**	**2**
15:30 15:45	0	0	**0**	2	1	**3**	**3**
15:45 16:00	0	0	**0**	0	1	**1**	**1**
16:00 16:15	0	1	**1**	1	0	**1**	**2**
16:15 16:30	0	0	**0**	2	2	**4**	**4**
16:30 16:45	0	1	**1**	1	2	**3**	**4**
16:45 17:00	0	0	**0**	0	1	**1**	**1**
17:00 17:15	0	0	**0**	3	2	**5**	**5**
17:15 17:30	0	0	**0**	2	0	**2**	**2**
17:30 17:45	1	0	**1**	1	1	**2**	**3**
17:45 18:00	0	0	**0**	1	3	**4**	**4**
Total	5	20	**25**	64	51	**115**	**140**

Transportation Services - Traffic Services

Turning Movement Count - Study Results

OTTAWA RIVER PKWY @ RIVER ST/SLIDELL ST

Survey Date: Tuesday, April 25, 2017 **WO No:** 36950

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

Full Study Heavy Vehicles

		RIVER ST/SLIDELL ST									OTTAWA RIVER PKWY									
		Northbound				Southbound					Eastbound				Westbound					
Time Period		LT	ST	RT	N TOT	LT	ST	RT	S TOT	STR TOT	LT	ST	RT	E TOT	LT	ST	RT	W TOT	STR TOT	Grand Total
07:00	07:15	0	1	0	**1**	0	0	0	**0**	**1**	0	0	0	**0**	0	3	0	**3**	**3**	**4**
07:15	07:30	0	0	0	**0**	0	0	0	**0**	**0**	0	3	0	**3**	0	2	0	**2**	**5**	**5**
07:30	07:45	0	0	0	**0**	0	0	0	**0**	**0**	0	1	0	**1**	0	1	0	**1**	**2**	**2**
07:45	08:00	0	0	0	**0**	0	0	0	**0**	**0**	0	0	0	**0**	0	3	0	**3**	**3**	**3**
08:00	08:15	0	0	0	**0**	0	0	0	**0**	**0**	0	1	0	**1**	0	4	0	**4**	**5**	**5**
08:15	08:30	0	0	0	**0**	0	0	0	**0**	**0**	0	2	0	**2**	0	3	0	**3**	**5**	**5**
08:30	08:45	0	0	0	**0**	0	0	0	**0**	**0**	0	1	0	**1**	0	0	0	**0**	**1**	**1**
08:45	09:00	0	1	0	**1**	0	1	0	**1**	**2**	1	3	0	**4**	0	4	0	**4**	**8**	**10**
09:00	09:15	0	0	0	**0**	0	0	0	**0**	**0**	0	3	0	**3**	0	4	0	**4**	**7**	**7**
09:15	09:30	0	1	0	**1**	0	0	0	**0**	**1**	0	2	0	**2**	1	2	0	**3**	**5**	**6**
09:30	09:45	0	0	0	**0**	0	0	0	**0**	**0**	0	5	0	**5**	0	3	0	**3**	**8**	**8**
09:45	10:00	0	0	0	**0**	0	1	1	**2**	**2**	0	0	0	**0**	0	6	1	**7**	**7**	**9**
11:30	11:45	0	0	0	**0**	0	1	0	**1**	**1**	0	0	0	**0**	0	1	0	**1**	**1**	**2**
11:45	12:00	0	0	0	**0**	0	0	0	**0**	**0**	0	2	0	**2**	0	2	0	**2**	**4**	**4**
12:00	12:15	0	2	0	**2**	0	2	0	**2**	**4**	0	0	0	**0**	0	2	1	**3**	**3**	**7**
12:15	12:30	0	0	0	**0**	0	0	1	**1**	**1**	0	0	0	**0**	0	0	0	**0**	**0**	**1**
12:30	12:45	0	0	0	**0**	0	1	0	**1**	**1**	0	1	0	**1**	1	2	0	**3**	**4**	**5**
12:45	13:00	0	0	0	**0**	0	1	0	**1**	**1**	0	1	0	**1**	0	0	0	**0**	**1**	**2**
13:00	13:15	0	0	0	**0**	0	0	0	**0**	**0**	0	0	0	**0**	0	1	0	**1**	**1**	**1**
13:15	13:30	0	0	0	**0**	0	0	0	**0**	**0**	0	0	0	**0**	0	0	0	**0**	**0**	**0**
15:00	15:15	0	0	0	**0**	0	1	0	**1**	**1**	0	0	0	**0**	0	1	0	**1**	**1**	**2**
15:15	15:30	0	0	0	**0**	0	1	0	**1**	**1**	0	0	0	**0**	0	1	0	**1**	**1**	**2**
15:30	15:45	0	0	0	**0**	0	0	0	**0**	**0**	0	2	0	**2**	0	4	0	**4**	**6**	**6**
15:45	16:00	0	0	0	**0**	0	0	0	**0**	**0**	0	2	0	**2**	0	4	0	**4**	**6**	**6**
16:00	16:15	0	0	0	**0**	0	0	0	**0**	**0**	0	0	0	**0**	0	1	0	**1**	**1**	**1**
16:15	16:30	0	0	0	**0**	0	1	0	**1**	**1**	0	1	0	**1**	0	0	0	**0**	**1**	**2**
16:30	16:45	0	0	0	**0**	0	0	0	**0**	**0**	0	1	0	**1**	0	0	0	**0**	**1**	**1**
16:45	17:00	0	0	0	**0**	0	0	0	**0**	**0**	0	2	0	**2**	0	1	0	**1**	**3**	**3**
17:00	17:15	0	0	0	**0**	0	0	0	**0**	**0**	0	1	0	**1**	0	2	0	**2**	**3**	**3**
17:15	17:30	0	0	0	**0**	0	0	0	**0**	**0**	0	1	0	**1**	0	0	0	**0**	**1**	**1**
17:30	17:45	0	0	0	**0**	0	0	0	**0**	**0**	0	0	0	**0**	0	0	0	**0**	**0**	**0**
17:45	18:00	0	0	0	**0**	0	0	0	**0**	**0**	0	0	0	**0**	1	1	0	**2**	**2**	**2**
Total:	None	0	5	0	**5**	0	10	2	**12**	**17**	1	35	0	**36**	3	58	2	**63**	**99**	**116**

Transportation Services - Traffic Services

Turning Movement Count - Study Results

OTTAWA RIVER PKWY @ RIVER ST/SLIDELL ST

Survey Date: Tuesday, April 25, 2017 **WO No:** 36950

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

Full Study 15 Minute U-Turn Total

Time Period		RIVER ST/SLIDELL ST		OTTAWA RIVER PKWY		
		Northbound U-Turn Total	Southbound U-Turn Total	Eastbound U-Turn Total	Westbound U-Turn Total	Total
07:00	07:15	0	0	0	0	0
07:15	07:30	0	0	0	0	0
07:30	07:45	1	0	0	0	1
07:45	08:00	0	0	0	0	0
08:00	08:15	0	0	0	0	0
08:15	08:30	0	0	0	0	0
08:30	08:45	0	0	0	0	0
08:45	09:00	0	0	0	0	0
09:00	09:15	0	0	0	0	0
09:15	09:30	0	0	0	0	0
09:30	09:45	0	0	0	0	0
09:45	10:00	0	0	0	0	0
11:30	11:45	0	0	0	0	0
11:45	12:00	0	0	0	0	0
12:00	12:15	0	0	0	0	0
12:15	12:30	0	0	0	0	0
12:30	12:45	0	0	0	0	0
12:45	13:00	0	0	0	0	0
13:00	13:15	0	0	0	0	0
13:15	13:30	0	0	0	1	1
15:00	15:15	0	0	0	0	0
15:15	15:30	0	0	0	0	0
15:30	15:45	0	0	0	0	0
15:45	16:00	0	0	0	0	0
16:00	16:15	0	0	0	0	0
16:15	16:30	0	0	0	0	0
16:30	16:45	0	0	0	0	0
16:45	17:00	0	0	0	1	1
17:00	17:15	0	0	0	1	1
17:15	17:30	0	0	0	0	0
17:30	17:45	0	0	0	0	0
17:45	18:00	0	0	0	0	0
Total		1	0	0	3	4

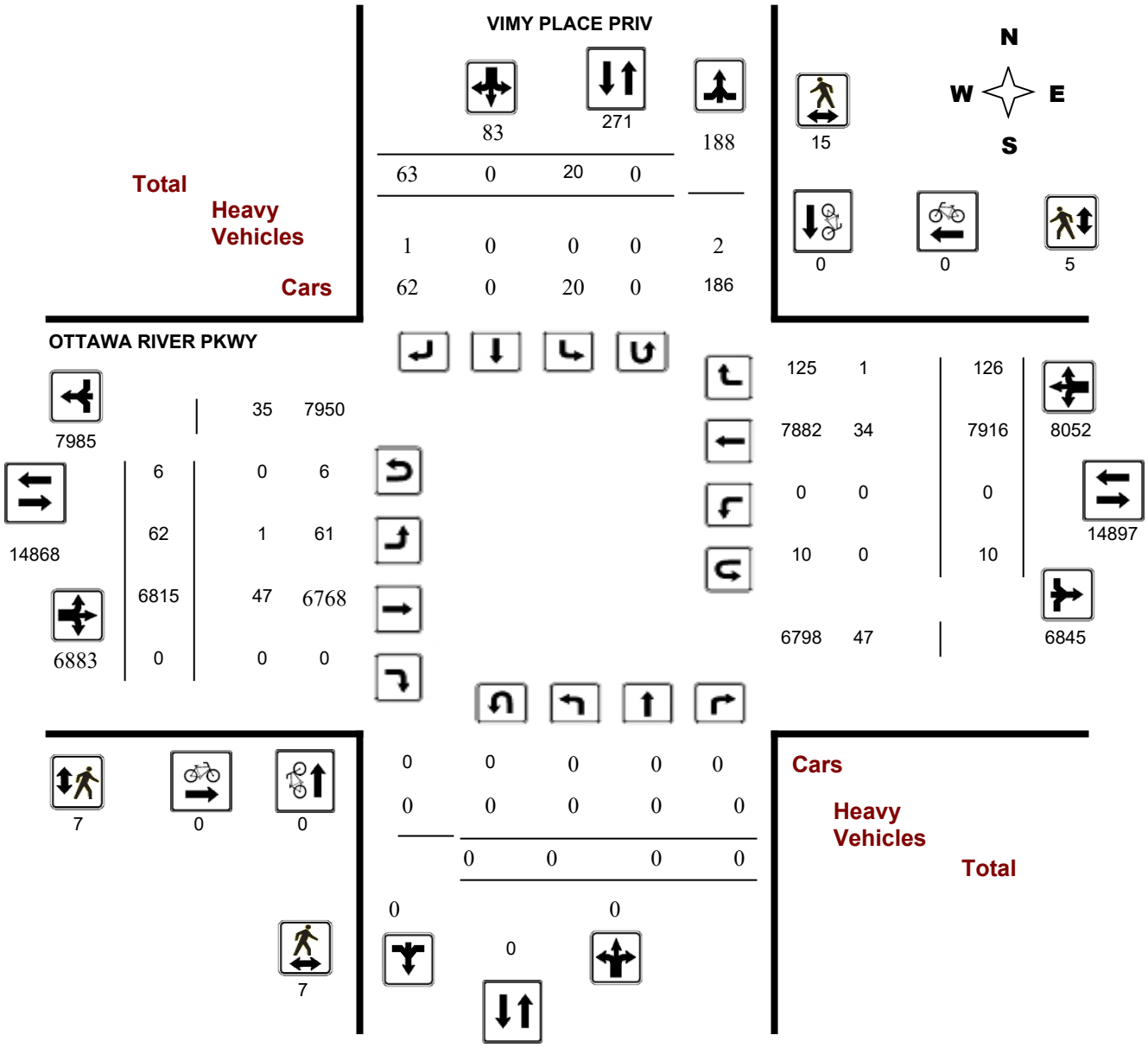
Transportation Services - Traffic Services

Turning Movement Count - Study Results

OTTAWA RIVER PKWY @ VIMY PLACE PRIV

Survey Date: Thursday, January 23, 2020
Start Time: 07:00
WO No: 39382
Device: Miovision

Full Study Diagram



5472221 - THU JAN 23, 2020 - 8HRS - LORETTA

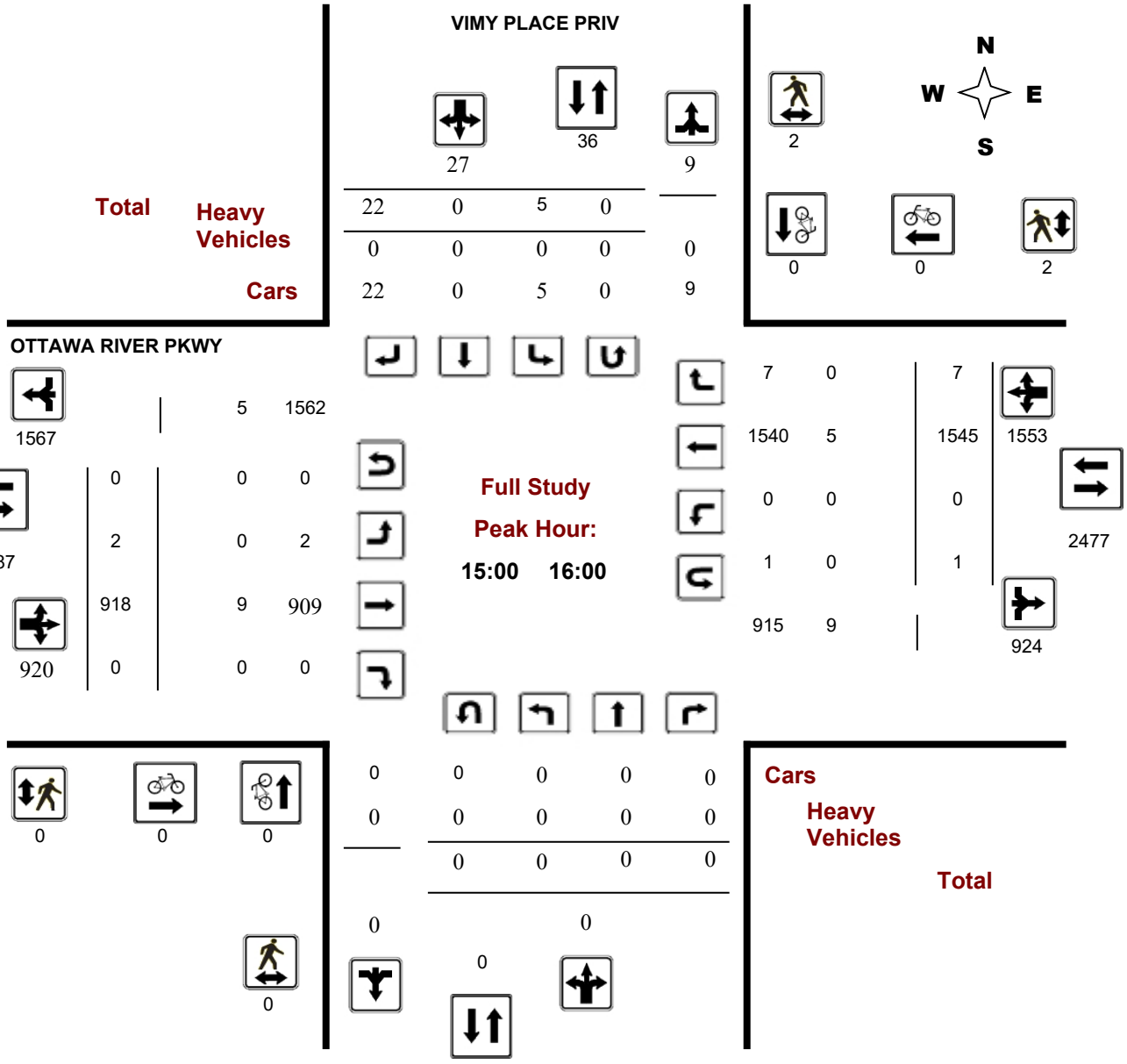
Transportation Services - Traffic Services

Turning Movement Count - Study Results

OTTAWA RIVER PKWY @ VIMY PLACE PRIV

Survey Date: Thursday, January 23, 2020
Start Time: 07:00
WO No: 39382
Device: Miovision

Full Study Peak Hour Diagram



5472221 - THU JAN 23, 2020 - 8HRS - LORETTA

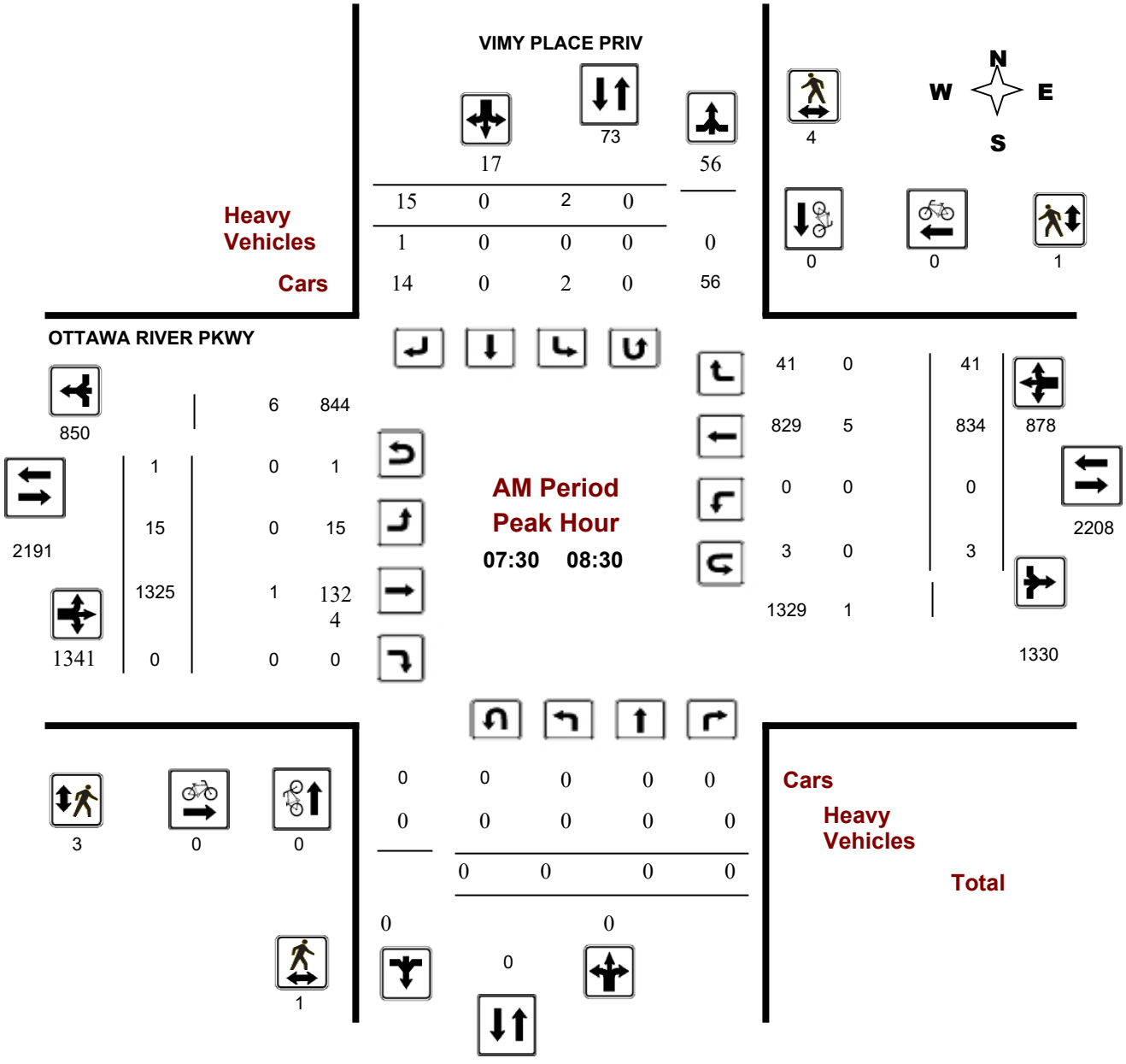
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

OTTAWA RIVER PKWY @ VIMY PLACE PRIV

Survey Date: Thursday, January 23, 2020 **WO No:** 39382

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



Comments 5472221 - THU JAN 23, 2020 - 8HRS - LORETTA

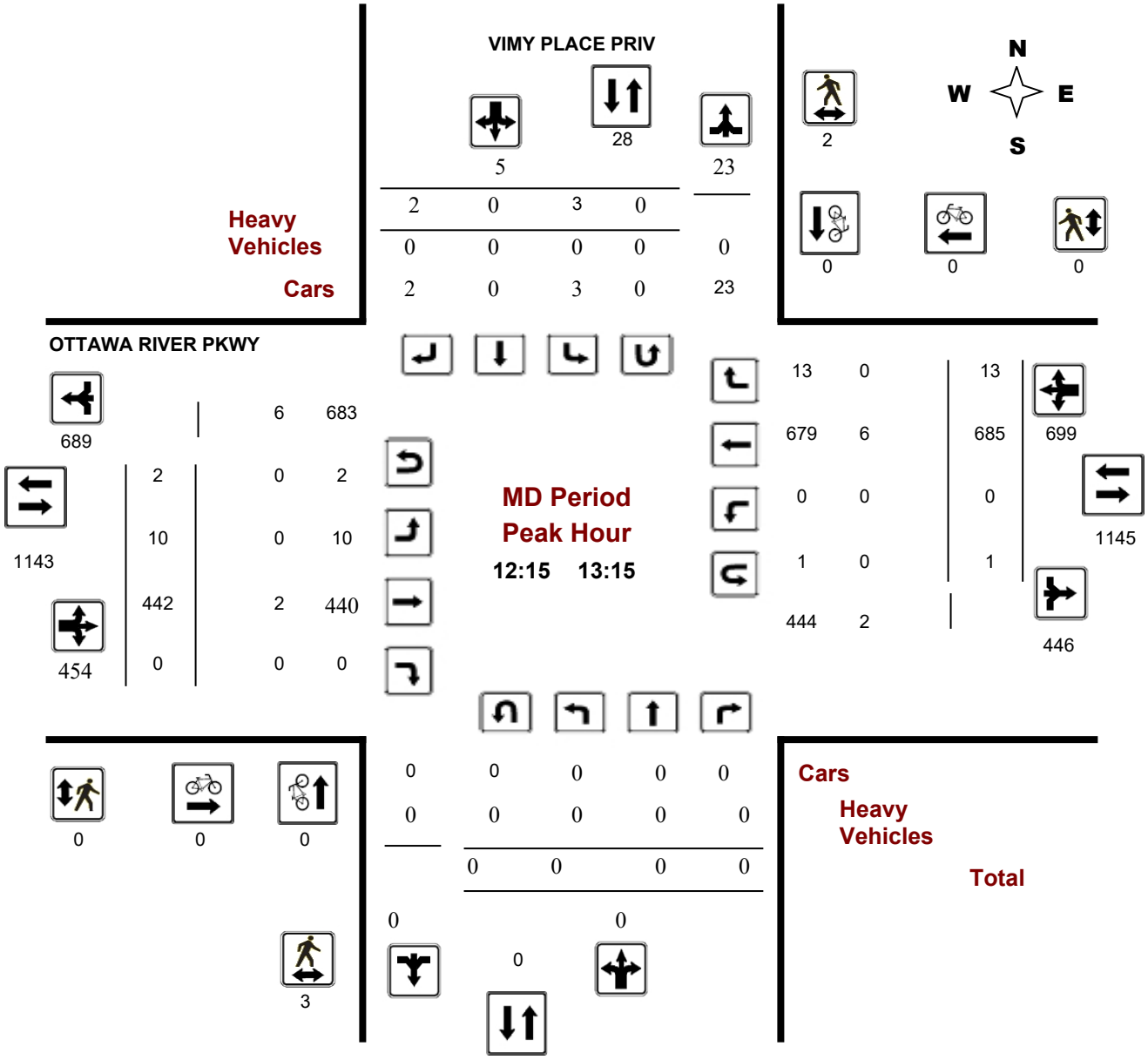
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

OTTAWA RIVER PKWY @ VIMY PLACE PRIV

Survey Date: Thursday, January 23, 2020 **WO No:** 39382

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



Comments 5472221 - THU JAN 23, 2020 - 8HRS - LORETTA

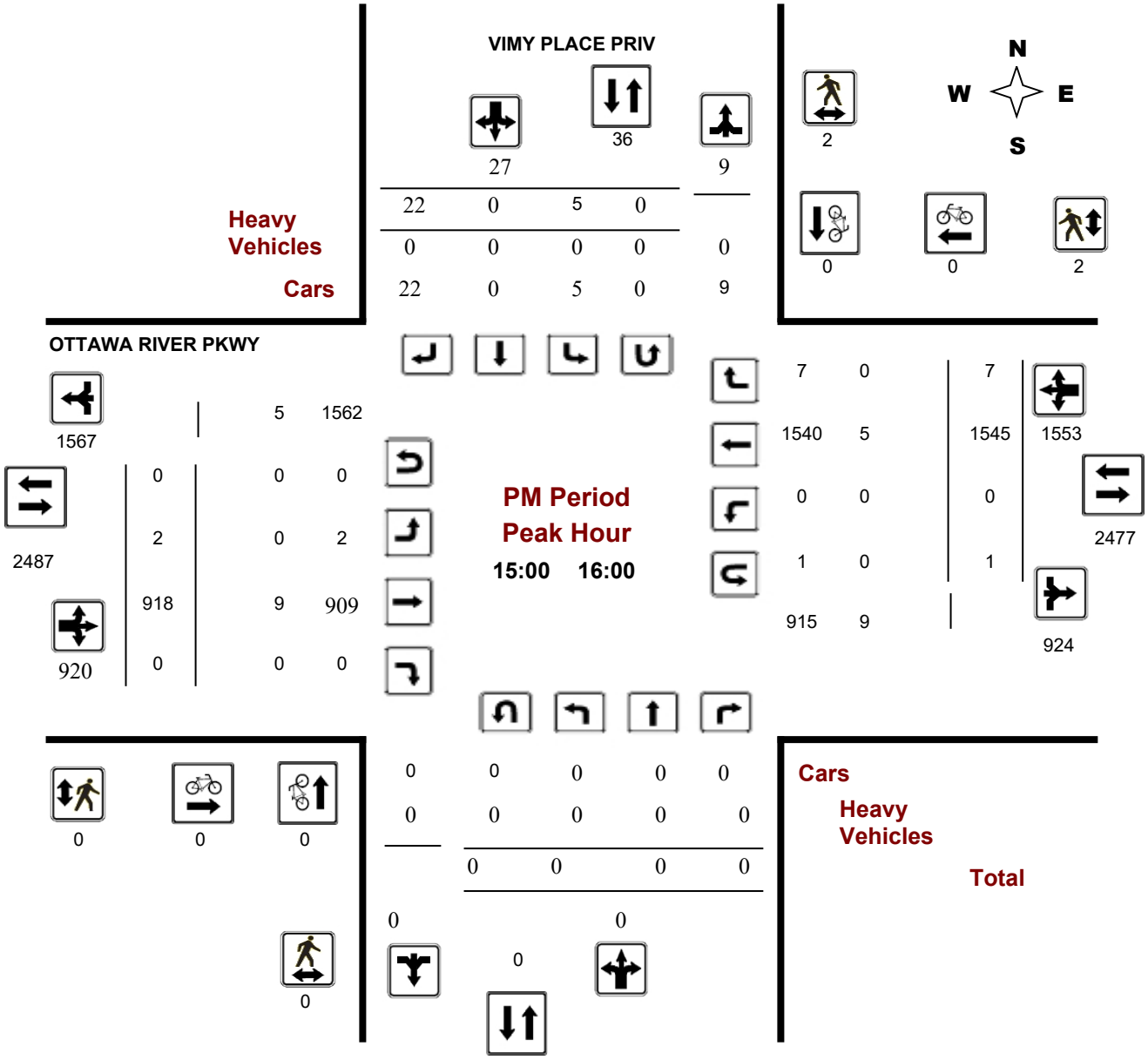
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

OTTAWA RIVER PKWY @ VIMY PLACE PRIV

Survey Date: Thursday, January 23, 2020 **WO No:** 39382

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



Comments 5472221 - THU JAN 23, 2020 - 8HRS - LORETTA

Transportation Services - Traffic Services

Turning Movement Count - Study Results

OTTAWA RIVER PKWY @ VIMY PLACE PRIV

Survey Date: Thursday, January 23, 2020 **WO No:** 39382

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

Full Study Summary (8 HR Standard)

Survey Date: Thursday, January 23, 2020

Total Observed U-Turns

Northbound: 0 Southbound: 0

Eastbound: 6 Westbound: 10

AADT Factor

1.00

	VIMY PLACE PRIV									OTTAWA RIVER PKWY									
	Northbound				Southbound					Eastbound				Westbound					
Period	LT	ST	RT	NB TOT	LT	ST	RT	SB TOT	STR TOT	LT	ST	RT	EB TOT	LT	ST	RT	WB TOT	STR TOT	Grand Total
07:00 08:00	0	0	0	**0**	3	0	12	**15**	**15**	11	1280	0	**1291**	0	830	26	**856**	**2147**	**2162**
08:00 09:00	0	0	0	**0**	0	0	7	**7**	**7**	21	1338	0	**1359**	0	780	38	**818**	**2177**	**2184**
09:00 10:00	0	0	0	**0**	0	0	4	**4**	**4**	6	904	0	**910**	0	523	11	**534**	**1444**	**1448**
11:30 12:30	0	0	0	**0**	4	0	2	**6**	**6**	3	403	0	**406**	0	613	4	**617**	**1023**	**1029**
12:30 13:30	0	0	0	**0**	1	0	2	**3**	**3**	12	414	0	**426**	0	660	15	**675**	**1101**	**1104**
15:00 16:00	0	0	0	**0**	5	0	22	**27**	**27**	2	918	0	**920**	0	1545	7	**1552**	**2472**	**2499**
16:00 17:00	0	0	0	**0**	5	0	7	**12**	**12**	3	823	0	**826**	0	1637	6	**1643**	**2469**	**2481**
17:00 18:00	0	0	0	**0**	2	0	7	**9**	**9**	4	735	0	**739**	0	1328	19	**1347**	**2086**	**2095**
Sub Total	0	0	0	**0**	20	0	63	**83**	**83**	62	6815	0	**6877**	0	7916	126	**8042**	**14919**	**15002**
U Turns				**0**				**0**	**0**				**6**				**10**	**16**	**16**
Total	0	0	0	**0**	20	0	63	**83**	**83**	62	6815	0	**6883**	0	7916	126	**8052**	**14935**	**15018**
EQ 12Hr	0	0	0	**0**	28	0	88	**115**	**115**	86	9473	0	**9567**	0	11003	175	**11192**	**20760**	**20875**
Note: These values are calculated by multiplying the totals by the appropriate expansion factor.														**1.39**					
AVG 12Hr	0	0	0	**0**	26	0	83	**109**	**115**	81	8928	0	**9017**	0	10370	165	**10548**	**20760**	**20875**
Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor.														**1**					
AVG 24Hr	0	0	0	**0**	34	0	108	**142**	**142**	106	11695	0	**11812**	0	13585	216	**13818**	**25630**	**25772**
Note: These volumes are calculated by multiplying the Average Daily 12 hr. totals by 12 to 24 expansion factor.														**1.31**					

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

Transportation Services - Traffic Services

Turning Movement Count - Study Results

OTTAWA RIVER PKWY @ VIMY PLACE PRIV

Survey Date: Thursday, January 23, 2020 **WO No:** 39382

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

Full Study 15 Minute Increments

		VIMY PLACE PRIV									OTTAWA RIVER PKWY								
		Northbound				Southbound					Eastbound				Westbound				
Time Period		LT	ST	RT	N TOT	LT	ST	RT	S TOT	STR TOT	LT	ST	RT	E TOT	LT	ST	RT	W TOT	STR TOT	Grand Total
07:00	07:15	0	0	0	0	0	0	0	0	0	0	308	0	308	0	194	5	199	0	507
07:15	07:30	0	0	0	0	1	0	1	2	0	3	321	0	325	0	215	5	221	0	548
07:30	07:45	0	0	0	0	1	0	4	5	1	4	330	0	334	0	216	9	226	1	565
07:45	08:00	0	0	0	0	1	0	7	8	0	4	321	0	326	0	205	7	212	0	546
08:00	08:15	0	0	0	0	0	0	4	4	0	2	337	0	339	0	214	11	226	0	569
08:15	08:30	0	0	0	0	0	0	0	0	0	5	337	0	342	0	199	14	214	0	556
08:30	08:45	0	0	0	0	0	0	1	1	0	8	348	0	356	0	195	8	203	0	560
08:45	09:00	0	0	0	0	0	0	2	2	0	6	316	0	322	0	172	5	177	0	501
09:00	09:15	0	0	0	0	0	0	2	2	0	3	291	0	294	0	142	4	146	0	442
09:15	09:30	0	0	0	0	0	0	1	1	0	1	258	0	259	0	117	2	120	0	380
09:30	09:45	0	0	0	0	0	0	0	0	0	0	178	0	178	0	150	3	154	0	332
09:45	10:00	0	0	0	0	0	0	1	1	0	2	177	0	179	0	114	2	117	0	297
11:30	11:45	0	0	0	0	1	0	1	2	0	1	94	0	95	0	123	0	123	0	220
11:45	12:00	0	0	0	0	0	0	0	0	0	0	107	0	108	0	150	1	152	0	260
12:00	12:15	0	0	0	0	1	0	1	2	0	1	96	0	97	0	148	3	151	0	250
12:15	12:30	0	0	0	0	2	0	0	2	0	1	106	0	107	0	192	0	192	0	301
12:30	12:45	0	0	0	0	0	0	1	1	0	5	119	0	125	0	152	1	153	0	279
12:45	13:00	0	0	0	0	1	0	1	2	0	2	103	0	106	0	145	2	147	0	255
13:00	13:15	0	0	0	0	0	0	0	0	0	2	114	0	116	0	196	10	207	0	323
13:15	13:30	0	0	0	0	0	0	0	0	0	3	78	0	81	0	167	2	169	0	250
15:00	15:15	0	0	0	0	2	0	5	7	0	0	250	0	250	0	392	2	395	0	652
15:15	15:30	0	0	0	0	3	0	9	12	0	1	221	0	222	0	459	1	460	0	694
15:30	15:45	0	0	0	0	0	0	6	6	0	1	222	0	223	0	318	1	319	0	548
15:45	16:00	0	0	0	0	0	0	2	2	0	0	225	0	225	0	376	3	379	0	606
16:00	16:15	0	0	0	0	1	0	0	1	0	0	191	0	192	0	399	2	401	0	594
16:15	16:30	0	0	0	0	3	0	4	7	0	0	212	0	212	0	438	2	440	0	659
16:30	16:45	0	0	0	0	1	0	2	3	0	0	193	0	193	0	400	1	401	0	597
16:45	17:00	0	0	0	0	0	0	1	1	0	3	227	0	230	0	400	1	401	0	632
17:00	17:15	0	0	0	0	1	0	4	5	0	1	209	0	210	0	389	7	396	0	611
17:15	17:30	0	0	0	0	1	0	1	2	0	1	195	0	196	0	361	6	367	0	565
17:30	17:45	0	0	0	0	0	0	1	1	0	1	169	0	170	0	324	3	327	0	498
17:45	18:00	0	0	0	0	0	0	1	1	0	1	162	0	163	0	254	3	257	0	421
Total:		0	0	0	0	20	0	63	83	1	62	6815	0	6883	0	7916	126	8052	1	15,018

Note: U-Turns are included in Totals.

Transportation Services - Traffic Services

Turning Movement Count - Study Results

OTTAWA RIVER PKWY @ VIMY PLACE PRIV

Survey Date: Thursday, January 23, 2020 **WO No:** 39382

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

Full Study Cyclist Volume

Time Period		VIMY PLACE PRIV			OTTAWA RIVER PKWY			
		Northbound	Southbound	Street Total	Eastbound	Westbound	Street Total	Grand Total
07:00	07:15	0	0	0	0	0	0	0
07:15	07:30	0	0	0	0	0	0	0
07:30	07:45	0	0	0	0	0	0	0
07:45	08:00	0	0	0	0	0	0	0
08:00	08:15	0	0	0	0	0	0	0
08:15	08:30	0	0	0	0	0	0	0
08:30	08:45	0	0	0	0	0	0	0
08:45	09:00	0	0	0	0	0	0	0
09:00	09:15	0	0	0	0	0	0	0
09:15	09:30	0	0	0	0	0	0	0
09:30	09:45	0	0	0	0	0	0	0
09:45	10:00	0	0	0	0	0	0	0
11:30	11:45	0	0	0	0	0	0	0
11:45	12:00	0	0	0	0	0	0	0
12:00	12:15	0	0	0	0	0	0	0
12:15	12:30	0	0	0	0	0	0	0
12:30	12:45	0	0	0	0	0	0	0
12:45	13:00	0	0	0	0	0	0	0
13:00	13:15	0	0	0	0	0	0	0
13:15	13:30	0	0	0	0	0	0	0
15:00	15:15	0	0	0	0	0	0	0
15:15	15:30	0	0	0	0	0	0	0
15:30	15:45	0	0	0	0	0	0	0
15:45	16:00	0	0	0	0	0	0	0
16:00	16:15	0	0	0	0	0	0	0
16:15	16:30	0	0	0	0	0	0	0
16:30	16:45	0	0	0	0	0	0	0
16:45	17:00	0	0	0	0	0	0	0
17:00	17:15	0	0	0	0	0	0	0
17:15	17:30	0	0	0	0	0	0	0
17:30	17:45	0	0	0	0	0	0	0
17:45	18:00	0	0	0	0	0	0	0
Total		0	0	**0**	0	0	0	0

Transportation Services - Traffic Services

Turning Movement Count - Study Results

OTTAWA RIVER PKWY @ VIMY PLACE PRIV

Survey Date: Thursday, January 23, 2020 **WO No:** 39382

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

Full Study Pedestrian Volume

	VIMY PLACE PRIV			OTTAWA RIVER PKWY			
Time Period	NB Approach (E or W Crossing)	SB Approach (E or W Crossing)	**Total**	EB Approach (N or S Crossing)	WB Approach (N or S Crossing)	**Total**	**Grand Total**
07:00 07:15	0	0	**0**	0	0	**0**	**0**
07:15 07:30	0	0	**0**	0	0	**0**	**0**
07:30 07:45	0	0	**0**	0	0	**0**	**0**
07:45 08:00	0	0	**0**	0	0	**0**	**0**
08:00 08:15	1	3	**4**	3	1	**4**	**8**
08:15 08:30	0	1	**1**	0	0	**0**	**1**
08:30 08:45	0	2	**2**	0	0	**0**	**2**
08:45 09:00	0	1	**1**	0	0	**0**	**1**
09:00 09:15	0	0	**0**	0	0	**0**	**0**
09:15 09:30	0	1	**1**	0	0	**0**	**1**
09:30 09:45	0	0	**0**	0	0	**0**	**0**
09:45 10:00	0	0	**0**	0	0	**0**	**0**
11:30 11:45	0	0	**0**	0	0	**0**	**0**
11:45 12:00	0	0	**0**	0	1	**1**	**1**
12:00 12:15	2	2	**4**	2	0	**2**	**6**
12:15 12:30	0	1	**1**	0	0	**0**	**1**
12:30 12:45	0	0	**0**	0	0	**0**	**0**
12:45 13:00	2	0	**2**	0	0	**0**	**2**
13:00 13:15	1	1	**2**	0	0	**0**	**2**
13:15 13:30	0	0	**0**	1	1	**2**	**2**
15:00 15:15	0	1	**1**	0	0	**0**	**1**
15:15 15:30	0	1	**1**	0	2	**2**	**3**
15:30 15:45	0	0	**0**	0	0	**0**	**0**
15:45 16:00	0	0	**0**	0	0	**0**	**0**
16:00 16:15	0	0	**0**	0	0	**0**	**0**
16:15 16:30	0	0	**0**	0	0	**0**	**0**
16:30 16:45	0	0	**0**	0	0	**0**	**0**
16:45 17:00	0	0	**0**	0	0	**0**	**0**
17:00 17:15	0	0	**0**	0	0	**0**	**0**
17:15 17:30	1	0	**1**	1	0	**1**	**2**
17:30 17:45	0	1	**1**	0	0	**0**	**1**
17:45 18:00	0	0	**0**	0	0	**0**	**0**
Total	7	15	**22**	7	5	**12**	**34**

5472221 - THU JAN 23, 2020 - 8HRS - LORETTA

Transportation Services - Traffic Services

Turning Movement Count - Study Results

OTTAWA RIVER PKWY @ VIMY PLACE PRIV

Survey Date: Thursday, January 23, 2020 **WO No:** 39382

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

Full Study Heavy Vehicles

		VIMY PLACE PRIV									OTTAWA RIVER PKWY									
		Northbound				Southbound					Eastbound				Westbound					
Time Period		LT	ST	RT	N TOT	LT	ST	RT	S TOT	STR TOT	LT	ST	RT	E TOT	LT	ST	RT	W TOT	STR TOT	Grand Total
07:00	07:15	0	0	0	**0**	0	0	0	**0**	**0**	0	1	0	**1**	0	0	0	**0**	**1**	**1**
07:15	07:30	0	0	0	**0**	0	0	0	**0**	**0**	0	1	0	**1**	0	2	0	**2**	**3**	**3**
07:30	07:45	0	0	0	**0**	0	0	1	**1**	**1**	0	0	0	**0**	0	3	0	**3**	**3**	**4**
07:45	08:00	0	0	0	**0**	0	0	0	**0**	**0**	0	1	0	**1**	0	1	0	**1**	**2**	**2**
08:00	08:15	0	0	0	**0**	0	0	0	**0**	**0**	0	0	0	**0**	0	1	0	**1**	**1**	**1**
08:15	08:30	0	0	0	**0**	0	0	0	**0**	**0**	0	0	0	**0**	0	0	0	**0**	**0**	**0**
08:30	08:45	0	0	0	**0**	0	0	0	**0**	**0**	0	0	0	**0**	0	1	1	**2**	**2**	**2**
08:45	09:00	0	0	0	**0**	0	0	0	**0**	**0**	0	3	0	**3**	0	2	0	**2**	**5**	**5**
09:00	09:15	0	0	0	**0**	0	0	0	**0**	**0**	0	0	0	**0**	0	0	0	**0**	**0**	**0**
09:15	09:30	0	0	0	**0**	0	0	0	**0**	**0**	0	5	0	**5**	0	0	0	**0**	**5**	**5**
09:30	09:45	0	0	0	**0**	0	0	0	**0**	**0**	0	3	0	**3**	0	0	0	**0**	**3**	**3**
09:45	10:00	0	0	0	**0**	0	0	0	**0**	**0**	0	3	0	**3**	0	1	0	**1**	**4**	**4**
11:30	11:45	0	0	0	**0**	0	0	0	**0**	**0**	0	0	0	**0**	0	1	0	**1**	**1**	**1**
11:45	12:00	0	0	0	**0**	0	0	0	**0**	**0**	0	2	0	**2**	0	0	0	**0**	**2**	**2**
12:00	12:15	0	0	0	**0**	0	0	0	**0**	**0**	1	0	0	**1**	0	2	0	**2**	**3**	**3**
12:15	12:30	0	0	0	**0**	0	0	0	**0**	**0**	0	0	0	**0**	0	2	0	**2**	**2**	**2**
12:30	12:45	0	0	0	**0**	0	0	0	**0**	**0**	0	0	0	**0**	0	3	0	**3**	**3**	**3**
12:45	13:00	0	0	0	**0**	0	0	0	**0**	**0**	0	1	0	**1**	0	0	0	**0**	**1**	**1**
13:00	13:15	0	0	0	**0**	0	0	0	**0**	**0**	0	1	0	**1**	0	1	0	**1**	**2**	**2**
13:15	13:30	0	0	0	**0**	0	0	0	**0**	**0**	0	1	0	**1**	0	0	0	**0**	**1**	**1**
15:00	15:15	0	0	0	**0**	0	0	0	**0**	**0**	0	2	0	**2**	0	0	0	**0**	**2**	**2**
15:15	15:30	0	0	0	**0**	0	0	0	**0**	**0**	0	2	0	**2**	0	1	0	**1**	**3**	**3**
15:30	15:45	0	0	0	**0**	0	0	0	**0**	**0**	0	3	0	**3**	0	2	0	**2**	**5**	**5**
15:45	16:00	0	0	0	**0**	0	0	0	**0**	**0**	0	2	0	**2**	0	2	0	**2**	**4**	**4**
16:00	16:15	0	0	0	**0**	0	0	0	**0**	**0**	0	3	0	**3**	0	2	0	**2**	**5**	**5**
16:15	16:30	0	0	0	**0**	0	0	0	**0**	**0**	0	3	0	**3**	0	1	0	**1**	**4**	**4**
16:30	16:45	0	0	0	**0**	0	0	0	**0**	**0**	0	1	0	**1**	0	1	0	**1**	**2**	**2**
16:45	17:00	0	0	0	**0**	0	0	0	**0**	**0**	0	3	0	**3**	0	3	0	**3**	**6**	**6**
17:00	17:15	0	0	0	**0**	0	0	0	**0**	**0**	0	3	0	**3**	0	1	0	**1**	**4**	**4**
17:15	17:30	0	0	0	**0**	0	0	0	**0**	**0**	0	0	0	**0**	0	0	0	**0**	**0**	**0**
17:30	17:45	0	0	0	**0**	0	0	0	**0**	**0**	0	1	0	**1**	0	1	0	**1**	**2**	**2**
17:45	18:00	0	0	0	**0**	0	0	0	**0**	**0**	0	2	0	**2**	0	0	0	**0**	**2**	**2**
Total:	None	0	0	0	**0**	0	0	1	**1**	**1**	1	47	0	**48**	0	34	1	**35**	**83**	**84**

Transportation Services - Traffic Services

Turning Movement Count - Study Results

OTTAWA RIVER PKWY @ VIMY PLACE PRIV

Survey Date: Thursday, January 23, 2020 **WO No:** 39382

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

Full Study 15 Minute U-Turn Total

Time Period		VIMY PLACE PRIV		OTTAWA RIVER PKWY		
		Northbound U-Turn Total	Southbound U-Turn Total	Eastbound U-Turn Total	Westbound U-Turn Total	Total
07:00	07:15	0	0	0	0	0
07:15	07:30	0	0	1	1	2
07:30	07:45	0	0	0	1	1
07:45	08:00	0	0	1	0	1
08:00	08:15	0	0	0	1	1
08:15	08:30	0	0	0	1	1
08:30	08:45	0	0	0	0	0
08:45	09:00	0	0	0	0	0
09:00	09:15	0	0	0	0	0
09:15	09:30	0	0	0	1	1
09:30	09:45	0	0	0	1	1
09:45	10:00	0	0	0	1	1
11:30	11:45	0	0	0	0	0
11:45	12:00	0	0	1	1	2
12:00	12:15	0	0	0	0	0
12:15	12:30	0	0	0	0	0
12:30	12:45	0	0	1	0	1
12:45	13:00	0	0	1	0	1
13:00	13:15	0	0	0	1	1
13:15	13:30	0	0	0	0	0
15:00	15:15	0	0	0	1	1
15:15	15:30	0	0	0	0	0
15:30	15:45	0	0	0	0	0
15:45	16:00	0	0	0	0	0
16:00	16:15	0	0	1	0	1
16:15	16:30	0	0	0	0	0
16:30	16:45	0	0	0	0	0
16:45	17:00	0	0	0	0	0
17:00	17:15	0	0	0	0	0
17:15	17:30	0	0	0	0	0
17:30	17:45	0	0	0	0	0
17:45	18:00	0	0	0	0	0
Total		0	0	6	10	16

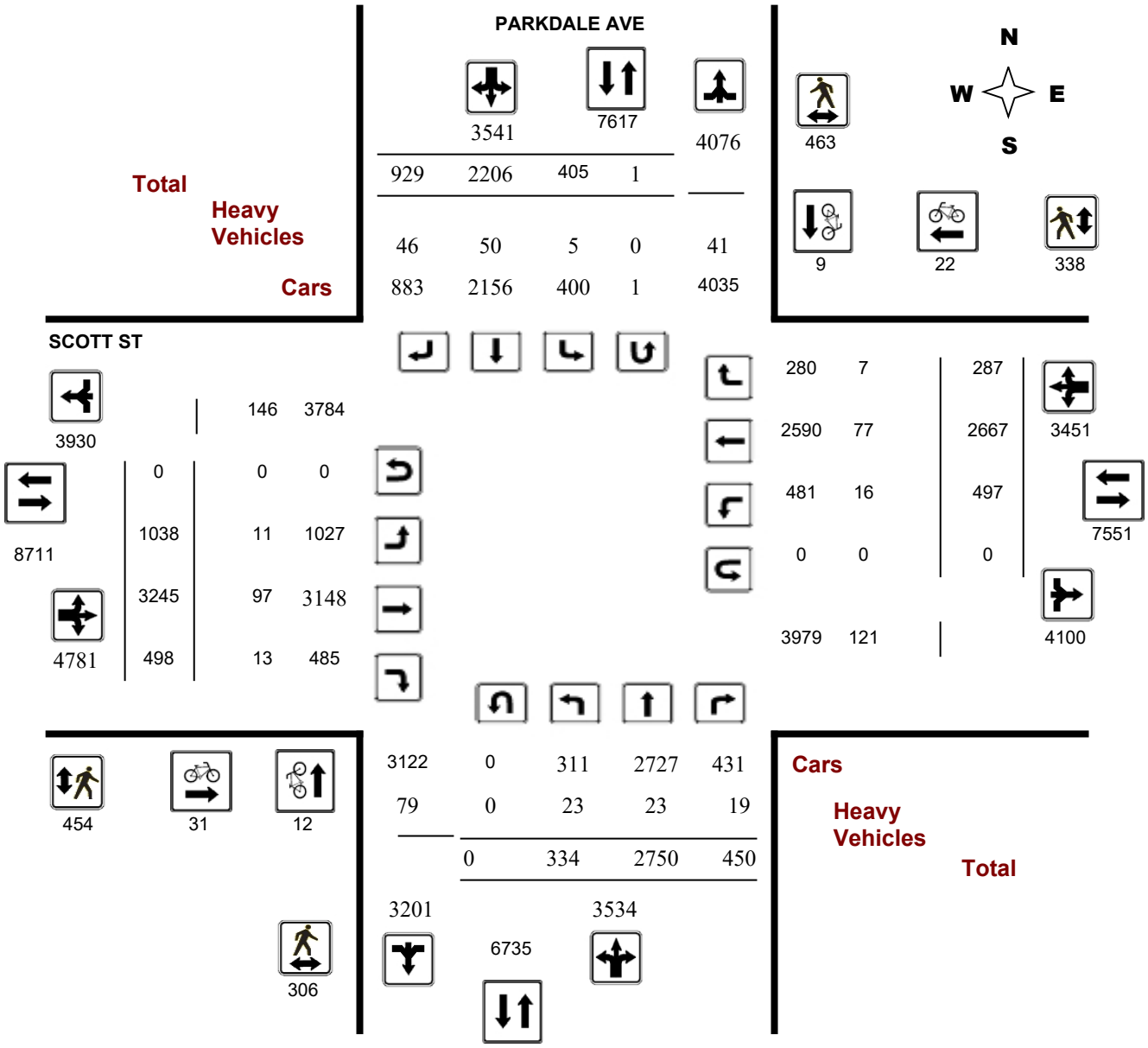
Transportation Services - Traffic Services

Turning Movement Count - Study Results

PARKDALE AVE @ SCOTT ST

Survey Date: Tuesday, April 01, 2014
Start Time: 07:00
WO No: 1288
Device: Miovision

Full Study Diagram



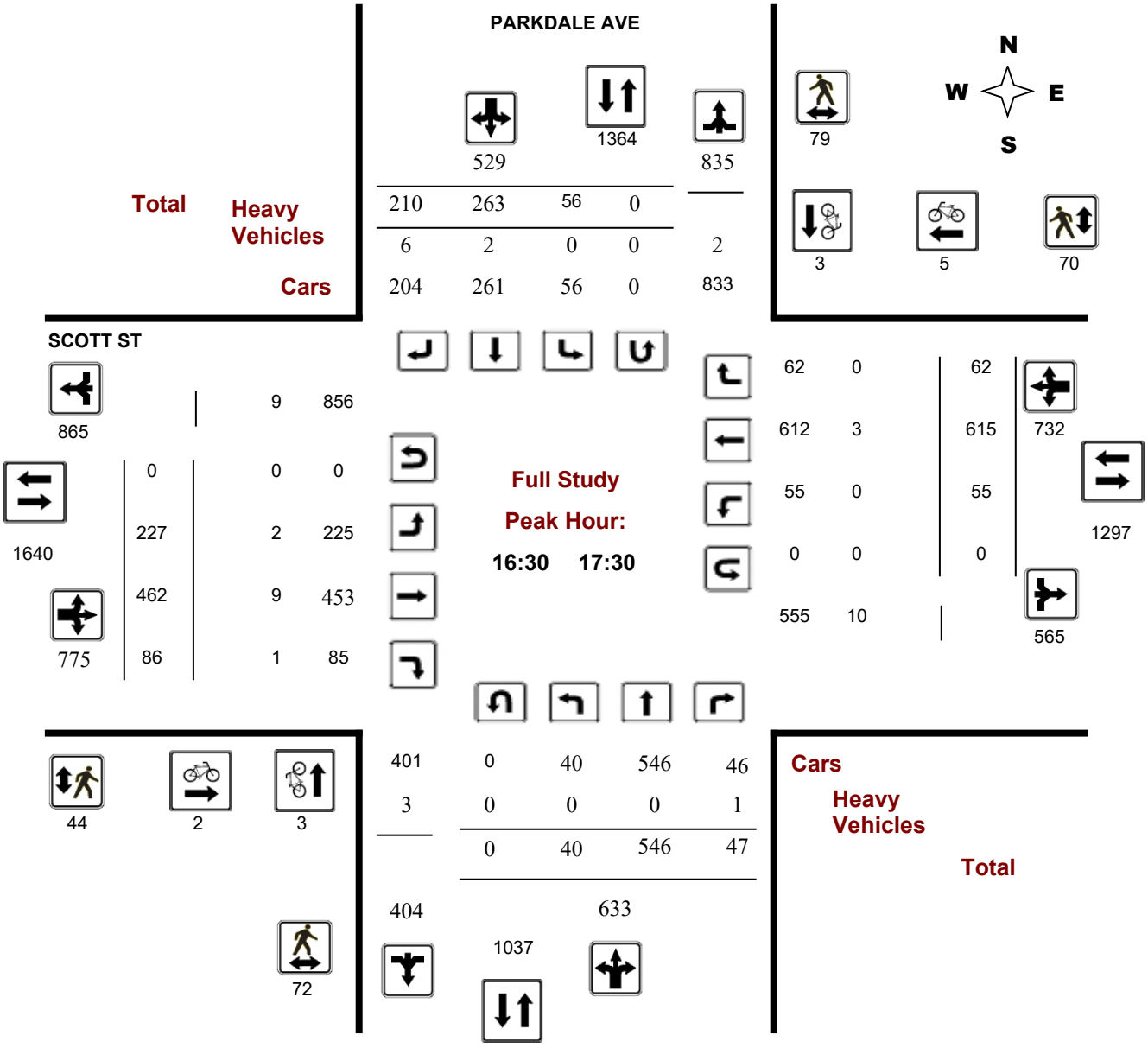
Transportation Services - Traffic Services

Turning Movement Count - Study Results

PARKDALE AVE @ SCOTT ST

Survey Date: Tuesday, April 01, 2014
Start Time: 07:00
WO No: 1288
Device: Miovision

Full Study Peak Hour Diagram



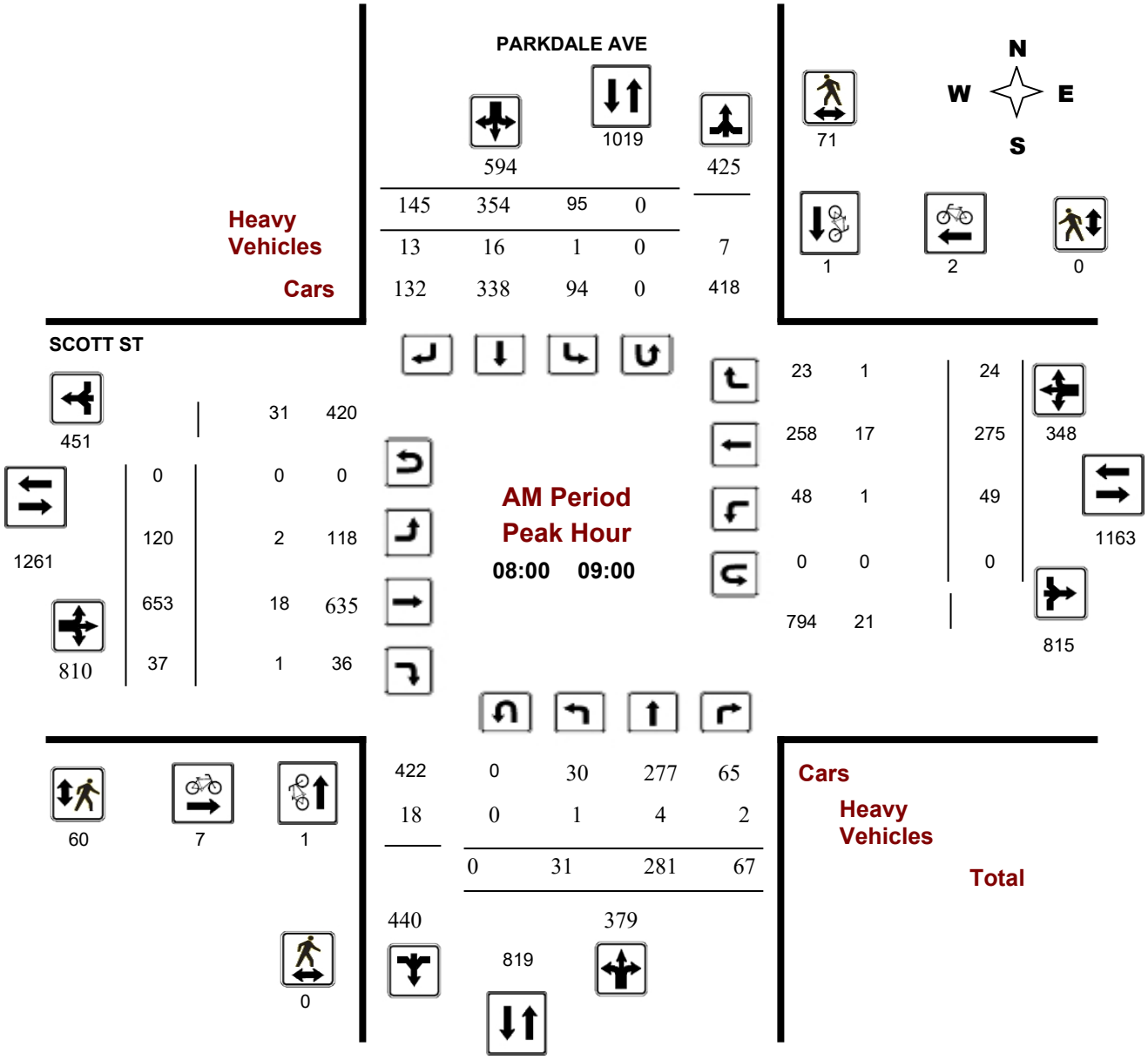
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

PARKDALE AVE @ SCOTT ST

Survey Date: Tuesday, April 01, 2014
Start Time: 07:00

WO No: 1288
Device: Miovision



Comments

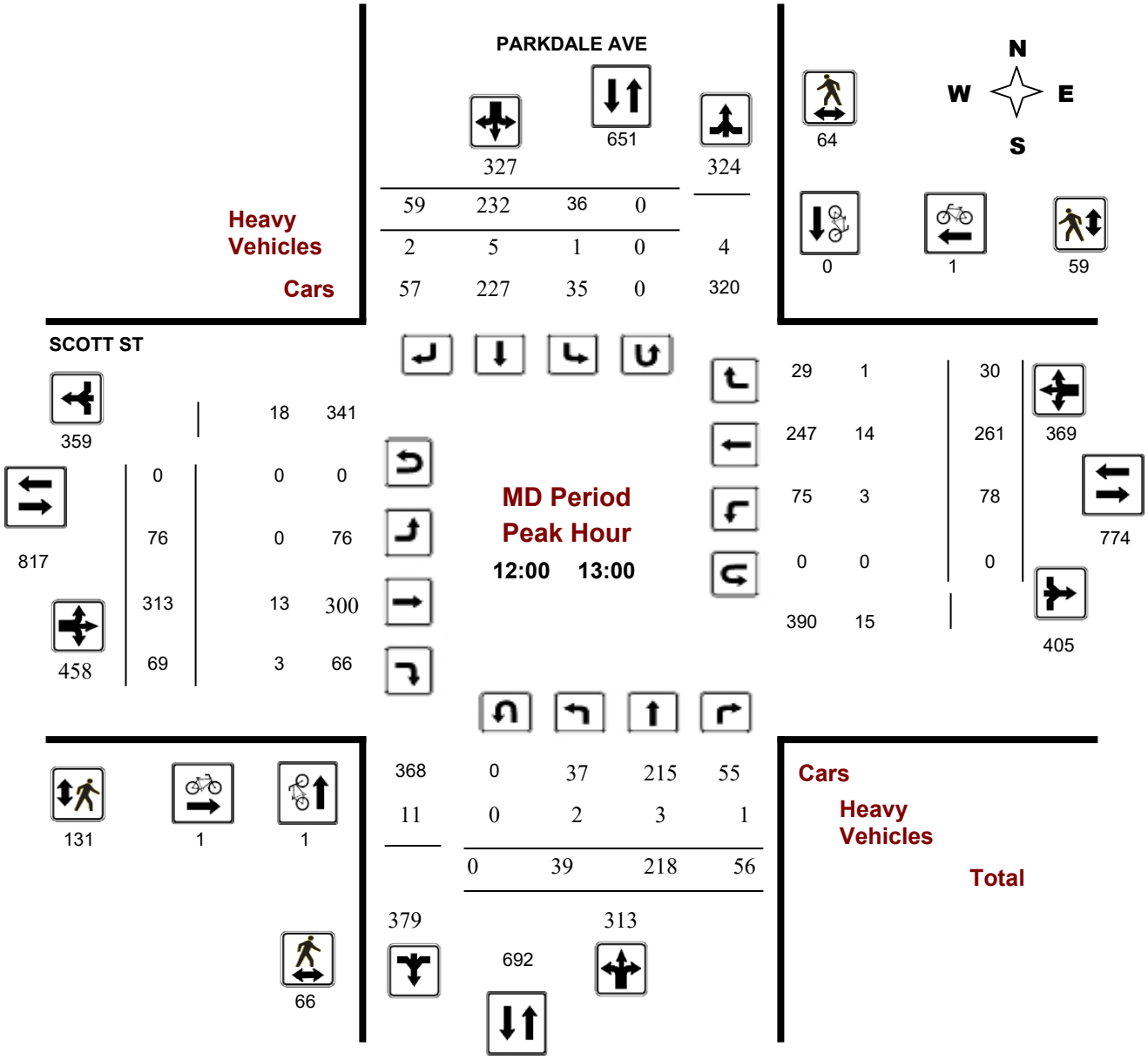
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

PARKDALE AVE @ SCOTT ST

Survey Date: Tuesday, April 01, 2014
Start Time: 07:00

WO No: 1288
Device: Miovision



Comments

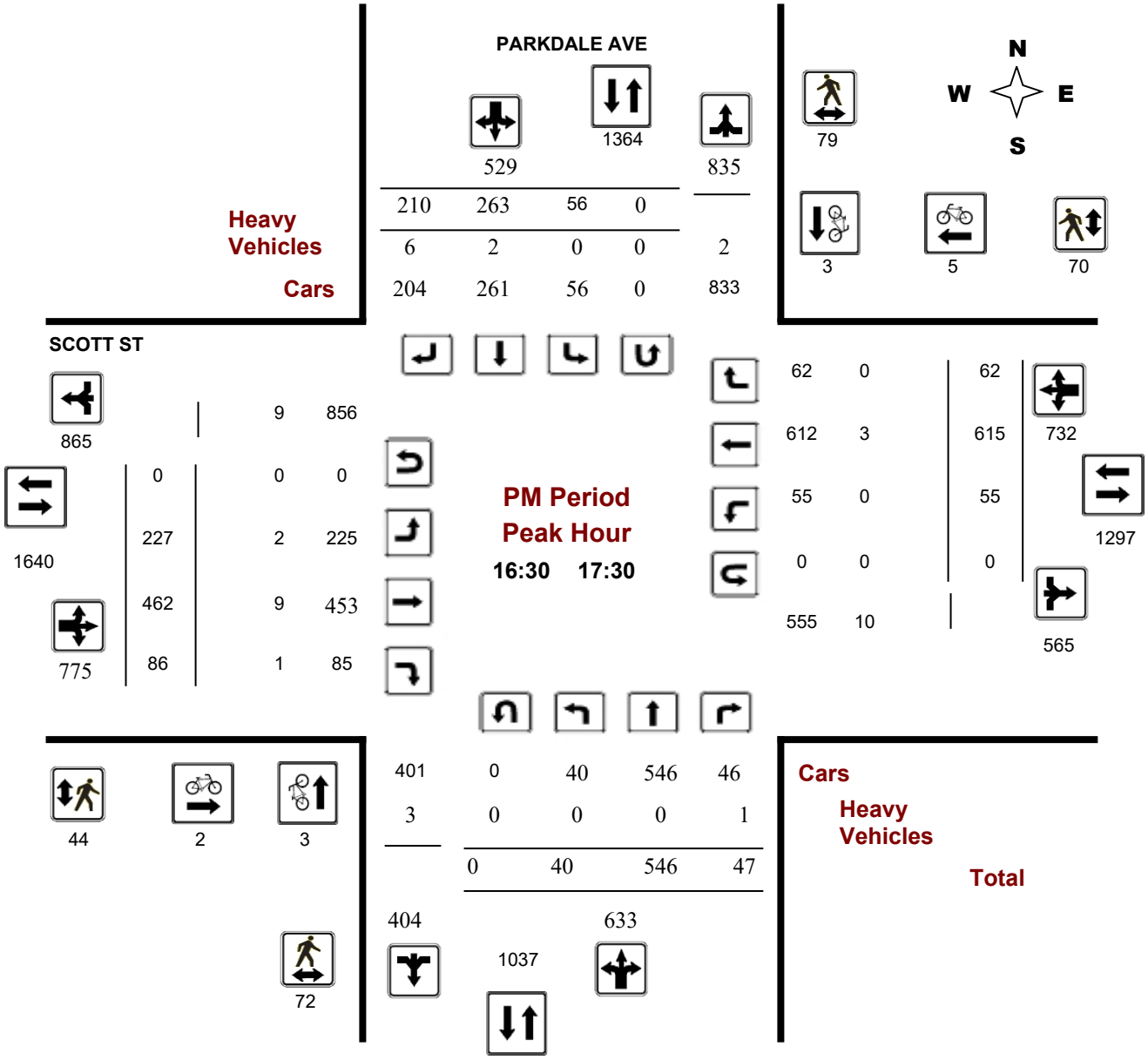
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

PARKDALE AVE @ SCOTT ST

Survey Date: Tuesday, April 01, 2014
Start Time: 07:00

WO No: 1288
Device: Miovision



Comments

Transportation Services - Traffic Services

Turning Movement Count - Study Results

PARKDALE AVE @ SCOTT ST

Survey Date: Tuesday, April 01, 2014 **WO No:** 1288

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

Full Study Summary (8 HR Standard)

Survey Date: Tuesday, April 01, 2014

Total Observed U-Turns

Northbound: 0 Southbound: 1

Eastbound: 0 Westbound: 0

AADT Factor

.90

	PARKDALE AVE									SCOTT ST									
	Northbound				Southbound					Eastbound				Westbound					
Period	LT	ST	RT	**NB TOT**	LT	ST	RT	**SB TOT**	**STR TOT**	LT	ST	RT	**EB TOT**	LT	ST	RT	**WB TOT**	**STR TOT**	**Grand Total**
07:00 08:00	30	227	47	**304**	63	381	139	**583**	**887**	79	356	44	**479**	59	198	21	**278**	**757**	**1644**
08:00 09:00	31	281	67	**379**	95	354	145	**594**	**973**	120	653	37	**810**	49	275	24	**348**	**1158**	**2131**
09:00 10:00	53	216	61	**330**	34	264	89	**387**	**717**	58	377	54	**489**	63	221	24	**308**	**797**	**1514**
11:30 12:30	41	194	60	**295**	43	240	75	**358**	**653**	66	316	68	**450**	55	240	33	**328**	**778**	**1431**
12:30 13:30	48	235	54	**337**	35	218	55	**308**	**645**	70	289	67	**426**	79	256	31	**366**	**792**	**1437**
15:00 16:00	53	508	63	**624**	34	244	106	**384**	**1008**	202	367	72	**641**	50	349	36	**435**	**1076**	**2084**
16:00 17:00	34	590	47	**671**	55	237	166	**458**	**1129**	238	461	65	**764**	52	550	65	**667**	**1431**	**2560**
17:00 18:00	44	499	51	**594**	46	268	154	**468**	**1062**	205	426	91	**722**	90	578	53	**721**	**1443**	**2505**
Sub Total	334	2750	450	**3534**	405	2206	929	**3540**	**7074**	1038	3245	498	**4781**	497	2667	287	**3451**	**8232**	**15306**
U Turns				**0**				**1**	**1**				**0**				**0**	**0**	**1**
Total	334	2750	450	**3534**	405	2206	929	**3541**	**7075**	1038	3245	498	**4781**	497	2667	287	**3451**	**8232**	**15307**
EQ 12Hr	464	3822	626	**4912**	563	3066	1291	**4922**	**9834**	1443	4511	692	**6646**	691	3707	399	**4797**	**11442**	**21277**
Note: These values are calculated by multiplying the totals by the appropriate expansion factor.														**1.39**					
AVG 12Hr	394	3242	531	**4167**	477	2601	1095	**4175**	**8851**	1224	3826	587	**5637**	586	3144	338	**4069**	**10298**	**19149**
Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor.														**0.9**					
AVG 24Hr	516	4247	695	**5458**	626	3407	1435	**5469**	**10927**	1603	5012	769	**7384**	768	4119	443	**5330**	**12714**	**23641**
Note: These volumes are calculated by multiplying the Average Daily 12 hr. totals by 12 to 24 expansion factor.														**1.31**					

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

Transportation Services - Traffic Services

Turning Movement Count - Study Results

PARKDALE AVE @ SCOTT ST

Survey Date: Tuesday, April 01, 2014 **WO No:** 1288

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

Full Study 15 Minute Increments

		PARKDALE AVE									SCOTT ST									
		Northbound				Southbound					Eastbound				Westbound					
Time Period		LT	ST	RT	N TOT	LT	ST	RT	S TOT	STR TOT	LT	ST	RT	E TOT	LT	ST	RT	W TOT	STR TOT	Grand Total
07:00	07:15	2	75	6	83	14	94	30	138	3	13	58	8	79	11	43	4	58	3	358
07:15	07:30	9	49	11	69	11	102	31	144	7	16	76	11	103	17	41	4	62	7	378
07:30	07:45	4	52	12	68	16	93	36	145	4	25	97	12	134	15	58	9	82	4	429
07:45	08:00	15	51	18	84	22	92	42	156	4	25	125	13	163	16	56	4	76	4	479
08:00	08:15	11	77	11	99	31	80	27	138	7	30	171	5	206	14	72	6	92	7	535
08:15	08:30	9	67	12	88	16	92	36	144	5	29	166	7	202	7	61	4	72	5	506
08:30	08:45	6	63	23	92	23	96	38	157	13	37	149	11	197	12	65	7	84	13	530
08:45	09:00	5	74	21	100	25	86	44	155	12	24	167	14	205	16	77	7	100	12	560
09:00	09:15	15	72	14	101	12	69	28	109	5	19	132	13	164	13	67	11	91	5	465
09:15	09:30	16	65	22	103	7	78	31	116	13	18	92	9	119	12	59	6	77	13	415
09:30	09:45	12	28	9	49	10	77	17	104	3	13	94	19	126	22	47	3	72	3	351
09:45	10:00	10	51	16	77	5	40	13	58	5	8	59	13	80	16	48	4	68	5	283
11:30	11:45	16	43	16	75	10	60	24	95	5	15	84	14	113	14	58	5	77	5	360
11:45	12:00	10	54	13	77	17	60	20	97	5	14	78	13	105	10	58	17	85	5	364
12:00	12:15	11	47	13	71	11	61	11	83	4	13	93	21	127	17	64	6	87	4	368
12:15	12:30	4	50	18	72	5	59	20	84	3	24	61	20	105	14	60	5	79	3	340
12:30	12:45	12	64	12	88	10	52	16	78	5	20	67	11	98	26	67	11	104	5	368
12:45	13:00	12	57	13	82	10	60	12	82	2	19	92	17	128	21	70	8	99	2	391
13:00	13:15	11	63	11	85	6	54	12	72	5	11	70	19	100	18	64	8	90	5	347
13:15	13:30	13	51	18	82	9	52	15	76	8	20	60	20	100	14	55	4	73	8	331
15:00	15:15	14	109	12	135	7	72	20	99	5	31	76	19	126	12	64	5	81	5	441
15:15	15:30	14	130	14	158	5	59	28	92	9	61	96	27	184	15	73	10	98	9	532
15:30	15:45	14	138	18	170	12	61	31	104	5	48	97	9	154	9	100	9	118	5	546
15:45	16:00	11	131	19	161	10	52	27	89	6	62	98	17	177	14	112	12	138	6	565
16:00	16:15	10	149	11	170	15	55	23	93	2	63	123	13	199	22	130	12	164	2	626
16:15	16:30	7	156	13	176	7	56	35	98	4	59	108	14	181	13	137	25	175	4	630
16:30	16:45	7	158	15	180	16	63	49	128	2	58	131	20	209	6	134	17	157	2	674
16:45	17:00	10	127	8	145	17	63	59	139	3	58	99	18	175	11	149	11	171	3	630
17:00	17:15	13	125	16	154	13	79	53	145	3	50	138	23	211	19	169	22	210	3	720
17:15	17:30	10	136	8	154	10	58	49	117	1	61	94	25	180	19	163	12	194	1	645
17:30	17:45	15	127	12	154	12	77	30	119	6	46	93	24	163	32	122	6	160	6	596
17:45	18:00	6	111	15	132	11	54	22	87	2	48	101	19	168	20	124	13	157	2	544
Total:		334	2750	450	3534	405	2206	929	3541	166	1038	3245	498	4781	497	2667	287	3451	166	15,307

Note: U-Turns are included in Totals.

Transportation Services - Traffic Services

Turning Movement Count - Study Results

PARKDALE AVE @ SCOTT ST

Survey Date: Tuesday, April 01, 2014 **WO No:** 1288

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

Full Study Cyclist Volume

Time Period		PARKDALE AVE			SCOTT ST			
		Northbound	Southbound	Street Total	Eastbound	Westbound	Street Total	Grand Total
07:00	07:15	0	0	0	3	0	3	3
07:15	07:30	0	0	0	1	0	1	1
07:30	07:45	2	0	2	2	1	3	5
07:45	08:00	0	0	0	2	0	2	2
08:00	08:15	0	1	1	2	1	3	4
08:15	08:30	1	0	1	2	0	2	3
08:30	08:45	0	0	0	1	0	1	1
08:45	09:00	0	0	0	2	1	3	3
09:00	09:15	0	0	0	3	0	3	3
09:15	09:30	0	0	0	0	1	1	1
09:30	09:45	0	0	0	1	0	1	1
09:45	10:00	0	0	0	0	0	0	0
11:30	11:45	0	0	0	0	0	0	0
11:45	12:00	0	0	0	0	0	0	0
12:00	12:15	1	0	1	0	0	0	1
12:15	12:30	0	0	0	0	0	0	0
12:30	12:45	0	0	0	1	1	2	2
12:45	13:00	0	0	0	0	0	0	0
13:00	13:15	1	0	1	1	0	1	2
13:15	13:30	0	0	0	0	0	0	0
15:00	15:15	0	0	0	1	0	1	1
15:15	15:30	0	1	1	1	0	1	2
15:30	15:45	0	1	1	1	0	1	2
15:45	16:00	0	1	1	0	0	0	1
16:00	16:15	2	1	3	2	0	2	5
16:15	16:30	2	1	3	2	1	3	6
16:30	16:45	2	0	2	0	2	2	4
16:45	17:00	0	0	0	0	2	2	2
17:00	17:15	0	1	1	0	1	1	2
17:15	17:30	1	2	3	2	0	2	5
17:30	17:45	0	0	0	1	2	3	3
17:45	18:00	0	0	0	0	9	9	9
Total		12	9	**21**	31	22	53	74

Transportation Services - Traffic Services

Turning Movement Count - Study Results

PARKDALE AVE @ SCOTT ST

Survey Date: Tuesday, April 01, 2014 **WO No:** 1288

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

Full Study Pedestrian Volume

		PARKDALE AVE			SCOTT ST			
Time Period		NB Approach (E or W Crossing)	SB Approach (E or W Crossing)	**Total**	EB Approach (N or S Crossing)	WB Approach (N or S Crossing)	**Total**	**Grand Total**
07:00	07:15	7	13	**20**	12	6	**18**	**38**
07:15	07:30	4	14	**18**	8	12	**20**	**38**
07:30	07:45	8	18	**26**	9	12	**21**	**47**
07:45	08:00	18	17	**35**	20	10	**30**	**65**
08:00	08:15	0	23	**23**	11	0	**11**	**34**
08:15	08:30	0	10	**10**	16	0	**16**	**26**
08:30	08:45	0	18	**18**	19	0	**19**	**37**
08:45	09:00	0	20	**20**	14	0	**14**	**34**
09:00	09:15	1	1	**2**	8	0	**8**	**10**
09:15	09:30	2	6	**8**	11	0	**11**	**19**
09:30	09:45	2	4	**6**	11	9	**20**	**26**
09:45	10:00	3	2	**5**	8	6	**14**	**19**
11:30	11:45	6	14	**20**	8	13	**21**	**41**
11:45	12:00	9	11	**20**	12	13	**25**	**45**
12:00	12:15	15	28	**43**	32	22	**54**	**97**
12:15	12:30	19	17	**36**	33	15	**48**	**84**
12:30	12:45	15	12	**27**	29	12	**41**	**68**
12:45	13:00	17	7	**24**	37	10	**47**	**71**
13:00	13:15	6	11	**17**	10	8	**18**	**35**
13:15	13:30	9	6	**15**	16	10	**26**	**41**
15:00	15:15	1	4	**5**	10	9	**19**	**24**
15:15	15:30	12	13	**25**	15	11	**26**	**51**
15:30	15:45	13	21	**34**	15	23	**38**	**72**
15:45	16:00	9	18	**27**	10	15	**25**	**52**
16:00	16:15	15	16	**31**	12	15	**27**	**58**
16:15	16:30	17	21	**38**	14	10	**24**	**62**
16:30	16:45	16	17	**33**	14	18	**32**	**65**
16:45	17:00	16	22	**38**	10	22	**32**	**70**
17:00	17:15	18	21	**39**	14	15	**29**	**68**
17:15	17:30	22	19	**41**	6	15	**21**	**62**
17:30	17:45	7	14	**21**	5	10	**15**	**36**
17:45	18:00	19	25	**44**	5	17	**22**	**66**
Total	.....	306	463	**769**	454	338	**792**	**1561**

Transportation Services - Traffic Services

Turning Movement Count - Study Results

PARKDALE AVE @ SCOTT ST

Survey Date: Tuesday, April 01, 2014 **WO No:** 1288

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

Full Study Heavy Vehicles

		PARKDALE AVE									SCOTT ST									
		Northbound				Southbound					Eastbound				Westbound					
Time Period		LT	ST	RT	N TOT	LT	ST	RT	S TOT	STR TOT	LT	ST	RT	E TOT	LT	ST	RT	W TOT	STR TOT	Grand Total
07:00	07:15	0	1	0	**1**	0	0	2	**2**	**3**	1	3	1	**5**	0	2	0	**2**	**7**	**10**
07:15	07:30	1	0	0	**1**	1	1	4	**6**	**7**	0	3	1	**4**	0	3	0	**3**	**7**	**14**
07:30	07:45	0	1	0	**1**	1	1	1	**3**	**4**	2	3	0	**5**	1	5	0	**6**	**11**	**15**
07:45	08:00	1	0	1	**2**	0	1	1	**2**	**4**	0	2	0	**2**	0	2	0	**2**	**4**	**8**
08:00	08:15	1	2	0	**3**	0	0	4	**4**	**7**	1	6	0	**7**	1	6	0	**7**	**14**	**21**
08:15	08:30	0	1	0	**1**	0	1	3	**4**	**5**	0	2	0	**2**	0	3	0	**3**	**5**	**10**
08:30	08:45	0	1	2	**3**	0	7	3	**10**	**13**	1	4	0	**5**	0	4	0	**4**	**9**	**22**
08:45	09:00	0	0	0	**0**	1	8	3	**12**	**12**	0	6	1	**7**	0	4	1	**5**	**12**	**24**
09:00	09:15	0	1	1	**2**	0	2	1	**3**	**5**	1	3	0	**4**	0	2	0	**2**	**6**	**11**
09:15	09:30	0	1	4	**5**	0	8	0	**8**	**13**	0	4	0	**4**	1	1	2	**4**	**8**	**21**
09:30	09:45	0	1	0	**1**	0	2	0	**2**	**3**	0	6	1	**7**	3	3	0	**6**	**13**	**16**
09:45	10:00	2	1	2	**5**	0	0	0	**0**	**5**	0	2	1	**3**	0	2	0	**2**	**5**	**10**
11:30	11:45	0	3	0	**3**	0	1	1	**2**	**5**	0	1	1	**2**	2	2	0	**4**	**6**	**11**
11:45	12:00	0	1	2	**3**	0	2	0	**2**	**5**	1	2	0	**3**	1	2	0	**3**	**6**	**11**
12:00	12:15	0	0	0	**0**	0	3	1	**4**	**4**	0	3	1	**4**	0	3	0	**3**	**7**	**11**
12:15	12:30	0	1	1	**2**	0	1	0	**1**	**3**	0	3	1	**4**	1	6	0	**7**	**11**	**14**
12:30	12:45	2	1	0	**3**	0	1	1	**2**	**5**	0	4	1	**5**	0	3	1	**4**	**9**	**14**
12:45	13:00	0	1	0	**1**	1	0	0	**1**	**2**	0	3	0	**3**	2	2	0	**4**	**7**	**9**
13:00	13:15	1	0	1	**2**	1	1	1	**3**	**5**	0	4	1	**5**	1	1	0	**2**	**7**	**12**
13:15	13:30	1	2	1	**4**	0	4	0	**4**	**8**	0	2	0	**2**	1	2	1	**4**	**6**	**14**
15:00	15:15	4	0	0	**4**	0	0	1	**1**	**5**	0	3	0	**3**	0	5	0	**5**	**8**	**13**
15:15	15:30	3	2	0	**5**	0	1	3	**4**	**9**	2	3	0	**5**	0	3	2	**5**	**10**	**19**
15:30	15:45	2	0	1	**3**	0	1	1	**2**	**5**	0	3	0	**3**	0	2	0	**2**	**5**	**10**
15:45	16:00	3	0	1	**4**	0	0	2	**2**	**6**	0	5	2	**7**	1	3	0	**4**	**11**	**17**
16:00	16:15	1	0	0	**1**	0	1	0	**1**	**2**	0	3	0	**3**	1	0	0	**1**	**4**	**6**
16:15	16:30	1	0	0	**1**	0	0	3	**3**	**4**	0	1	0	**1**	0	0	0	**0**	**1**	**5**
16:30	16:45	0	0	0	**0**	0	1	1	**2**	**2**	1	3	1	**5**	0	0	0	**0**	**5**	**7**
16:45	17:00	0	0	0	**0**	0	1	2	**3**	**3**	0	2	0	**2**	0	0	0	**0**	**2**	**5**
17:00	17:15	0	0	1	**1**	0	0	2	**2**	**3**	1	3	0	**4**	0	0	0	**0**	**4**	**7**
17:15	17:30	0	0	0	**0**	0	0	1	**1**	**1**	0	1	0	**1**	0	3	0	**3**	**4**	**5**
17:30	17:45	0	2	1	**3**	0	1	2	**3**	**6**	0	3	0	**3**	0	2	0	**2**	**5**	**11**
17:45	18:00	0	0	0	**0**	0	0	2	**2**	**2**	0	1	0	**1**	0	1	0	**1**	**2**	**4**
Total:	None	23	23	19	**65**	5	50	46	**101**	**166**	11	97	13	**121**	16	77	7	**100**	**221**	**387**

Transportation Services - Traffic Services

Turning Movement Count - Study Results

PARKDALE AVE @ SCOTT ST

Survey Date: Tuesday, April 01, 2014 **WO No:** 1288

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

Full Study 15 Minute U-Turn Total

		PARKDALE AVE		SCOTT ST		
Time Period		Northbound U-Turn Total	Southbound U-Turn Total	Eastbound U-Turn Total	Westbound U-Turn Total	Total
07:00	07:15	0	0	0	0	0
07:15	07:30	0	0	0	0	0
07:30	07:45	0	0	0	0	0
07:45	08:00	0	0	0	0	0
08:00	08:15	0	0	0	0	0
08:15	08:30	0	0	0	0	0
08:30	08:45	0	0	0	0	0
08:45	09:00	0	0	0	0	0
09:00	09:15	0	0	0	0	0
09:15	09:30	0	0	0	0	0
09:30	09:45	0	0	0	0	0
09:45	10:00	0	0	0	0	0
11:30	11:45	0	1	0	0	1
11:45	12:00	0	0	0	0	0
12:00	12:15	0	0	0	0	0
12:15	12:30	0	0	0	0	0
12:30	12:45	0	0	0	0	0
12:45	13:00	0	0	0	0	0
13:00	13:15	0	0	0	0	0
13:15	13:30	0	0	0	0	0
15:00	15:15	0	0	0	0	0
15:15	15:30	0	0	0	0	0
15:30	15:45	0	0	0	0	0
15:45	16:00	0	0	0	0	0
16:00	16:15	0	0	0	0	0
16:15	16:30	0	0	0	0	0
16:30	16:45	0	0	0	0	0
16:45	17:00	0	0	0	0	0
17:00	17:15	0	0	0	0	0
17:15	17:30	0	0	0	0	0
17:30	17:45	0	0	0	0	0
17:45	18:00	0	0	0	0	0
Total		0	1	0	0	1

Transportation Services - Traffic Services

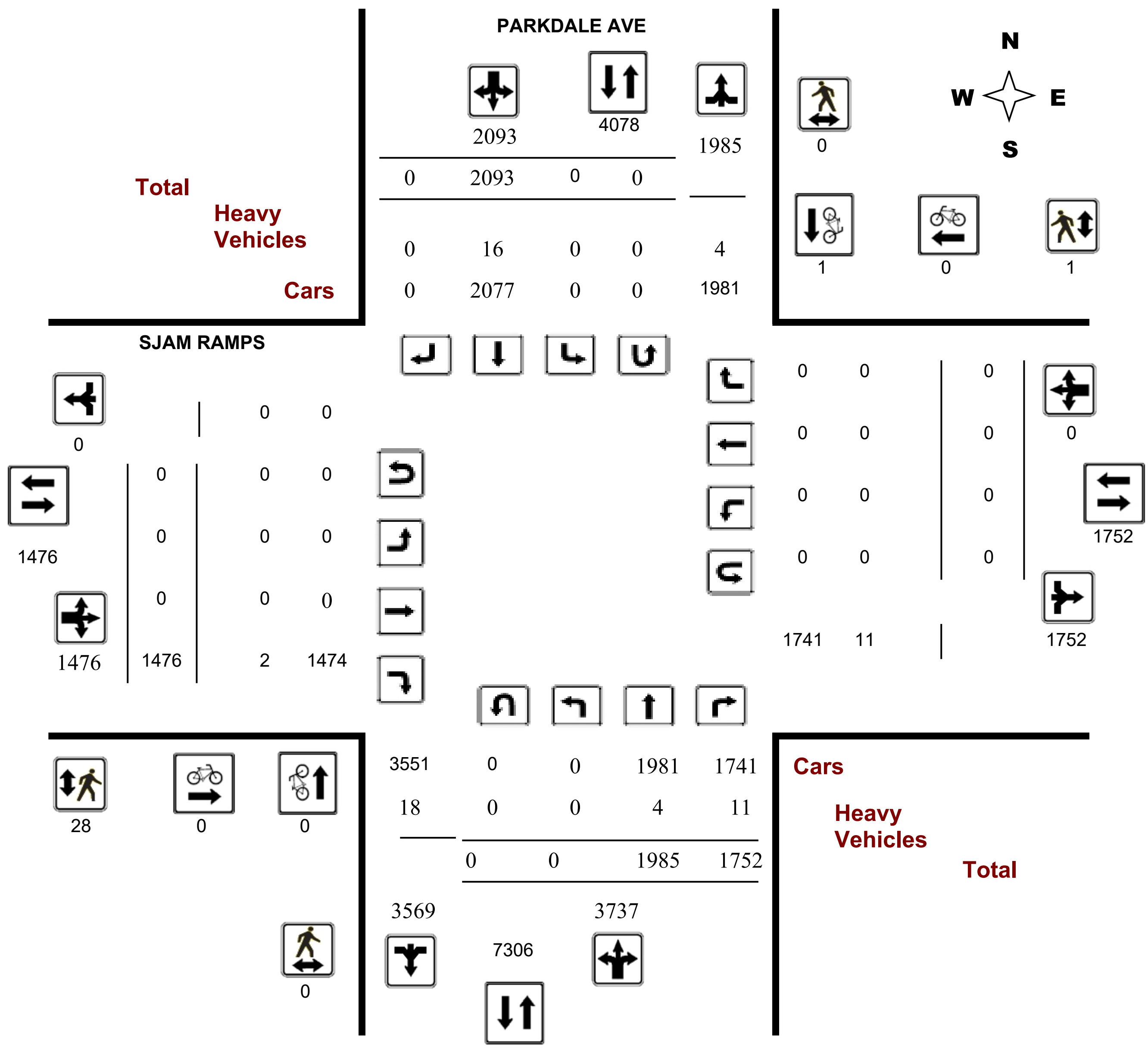
Turning Movement Count - Study Results

PARKDALE AVE @ SIR JOHN A. MACDONALD PKWY RAMPS

Survey Date: Wednesday, February 26, 2020 **WO No:** 39635

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

Full Study Diagram



PARKDALE AVE @ SJAM RAMPS - FEB 26 2020 - 8HR

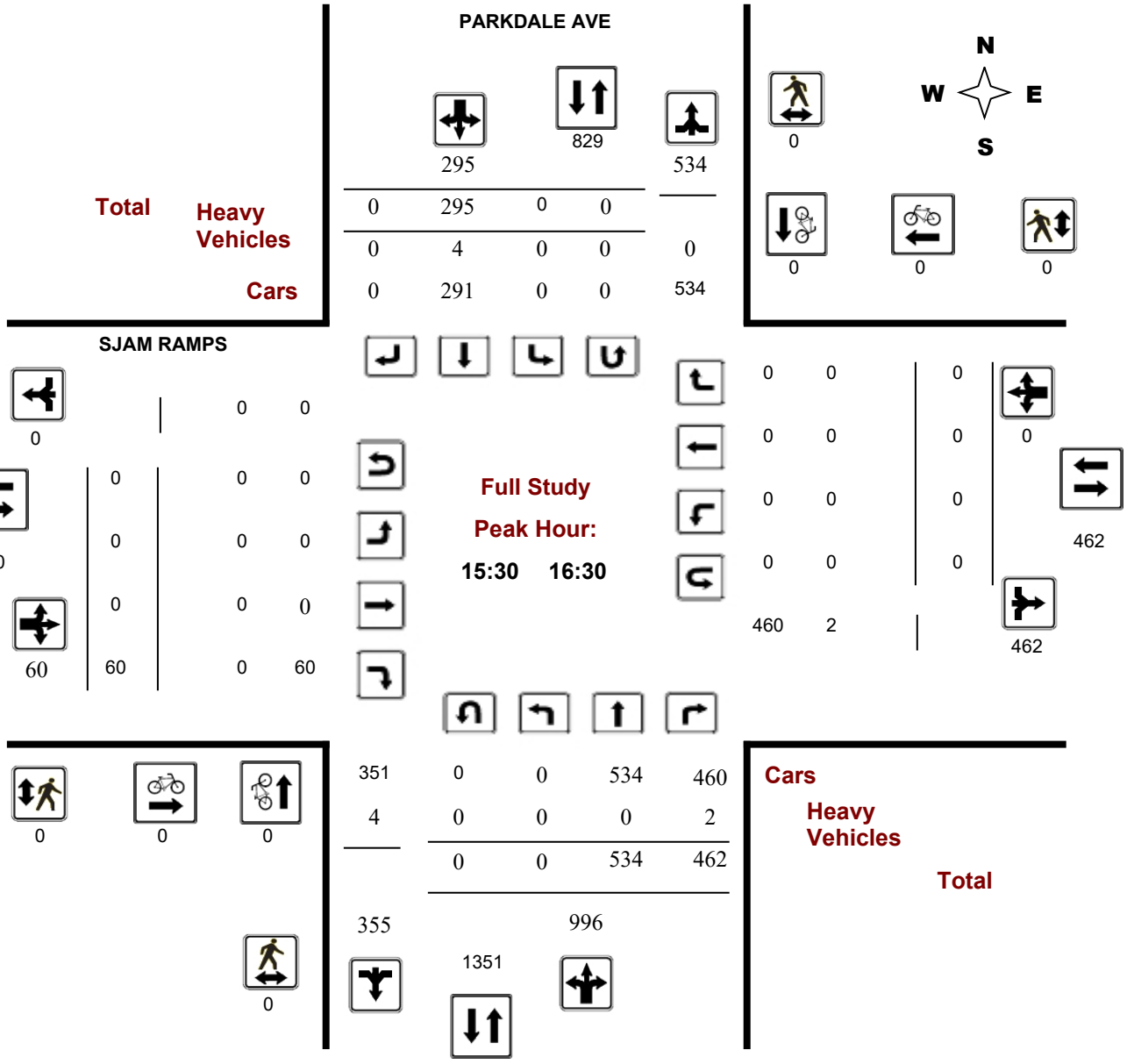
Transportation Services - Traffic Services

Turning Movement Count - Study Results

PARKDALE AVE @ SIR JOHN A. MACDONALD PKWY RAMPS

Survey Date: Wednesday, February 26, 2020
Start Time: 07:00
WO No: 39635
Device: Miovision

Full Study Peak Hour Diagram



PARKDALE AVE @ SJAM RAMPS - FEB 26 2020 - 8HR

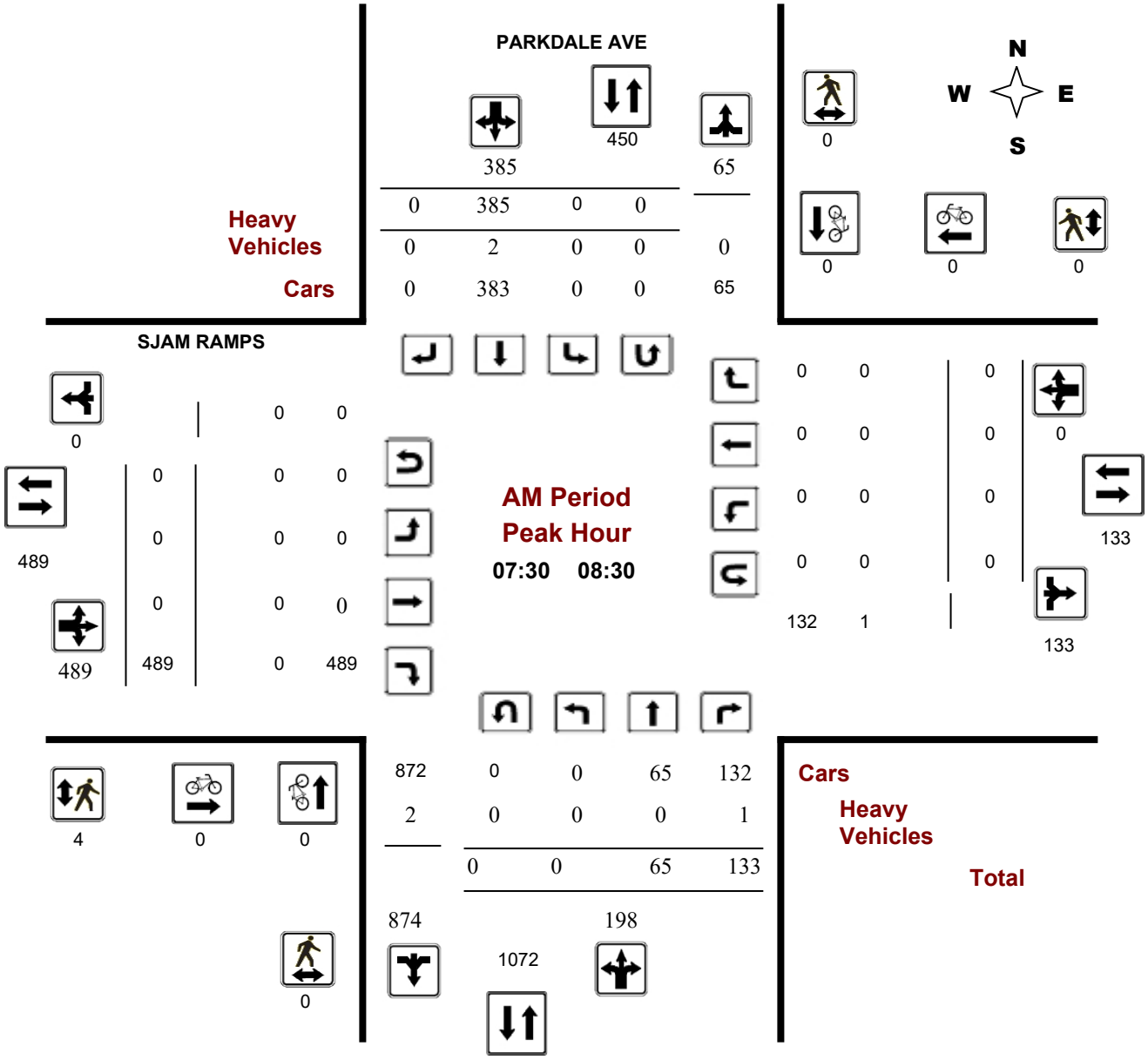
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

PARKDALE AVE @ SIR JOHN A. MACDONALD PKWY RAMPS

Survey Date: Wednesday, February 26, 2020 **WO No:** 39635

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



Comments PARKDALE AVE @ SJAM RAMPS - FEB 26 2020 - 8HR

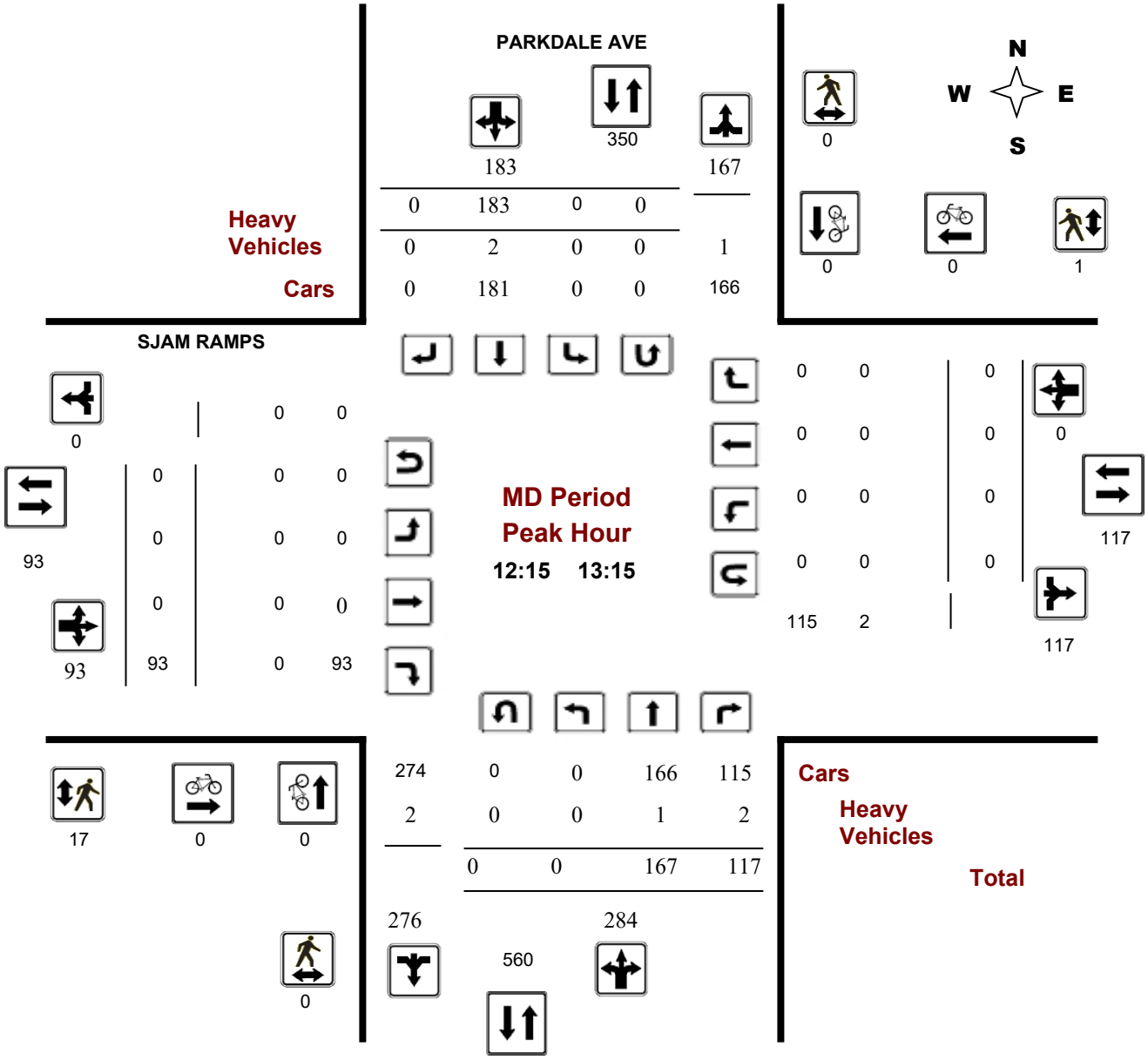
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

PARKDALE AVE @ SIR JOHN A. MACDONALD PKWY RAMPS

Survey Date: Wednesday, February 26, 2020 **WO No:** 39635

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



Comments PARKDALE AVE @ SJAM RAMPS - FEB 26 2020 - 8HR

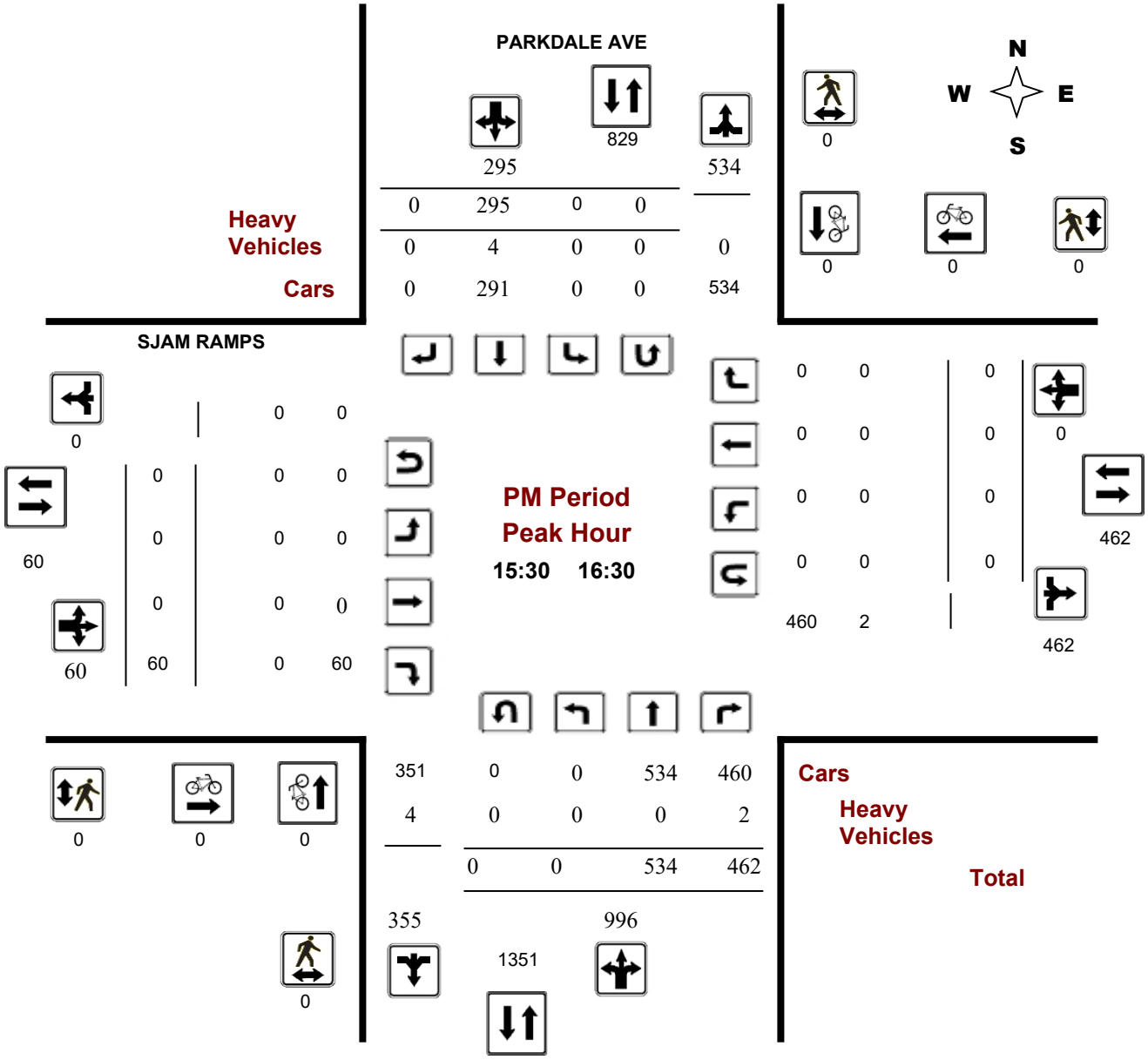
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

PARKDALE AVE @ SIR JOHN A. MACDONALD PKWY RAMPS

Survey Date: Wednesday, February 26, 2020 **WO No:** 39635

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



Comments PARKDALE AVE @ SJAM RAMPS - FEB 26 2020 - 8HR

Transportation Services - Traffic Services

Turning Movement Count - Study Results

PARKDALE AVE @ SIR JOHN A. MACDONALD PKWY RAMPS

Survey Date: Wednesday, February 26, 2020 **WO No:** 39635

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

Full Study Summary (8 HR Standard)

Survey Date: Wednesday, February 26, 2020

Total Observed U-Turns

Northbound: 0 Southbound: 0

Eastbound: 0 Westbound: 0

AADT Factor

1.00

	PARKDALE AVE								SJAM RAMPS									
	Northbound				Southbound				Eastbound				Westbound					
Period	LT	ST	RT	NB TOT	LT	ST	RT	SB TOT	STR TOT	LT	ST	RT	EB TOT	LT	ST	RT	WB TOT	STR TOT	Grand Total
07:00 08:00	0	61	109	**170**	0	369	0	**369**	**539**	0	0	484	**484**	0	0	0	**0**	**484**	**1023**
08:00 09:00	0	74	131	**205**	0	385	0	**385**	**590**	0	0	415	**415**	0	0	0	**0**	**415**	**1005**
09:00 10:00	0	65	101	**166**	0	230	0	**230**	**396**	0	0	205	**205**	0	0	0	**0**	**205**	**601**
11:30 12:30	0	130	134	**264**	0	168	0	**168**	**432**	0	0	96	**96**	0	0	0	**0**	**96**	**528**
12:30 13:30	0	177	120	**297**	0	158	0	**158**	**455**	0	0	90	**90**	0	0	0	**0**	**90**	**545**
15:00 16:00	0	582	473	**1055**	0	212	0	**212**	**1267**	0	0	54	**54**	0	0	0	**0**	**54**	**1321**
16:00 17:00	0	480	420	**900**	0	347	0	**347**	**1247**	0	0	59	**59**	0	0	0	**0**	**59**	**1306**
17:00 18:00	0	416	264	**680**	0	224	0	**224**	**904**	0	0	73	**73**	0	0	0	**0**	**73**	**977**
Sub Total	0	1985	1752	**3737**	0	2093	0	**2093**	**5830**	0	0	1476	**1476**	0	0	0	**0**	**1476**	**7306**
U Turns				**0**				**0**	**0**				**0**				**0**	**0**	**0**
Total	0	1985	1752	**3737**	0	2093	0	**2093**	**5830**	0	0	1476	**1476**	0	0	0	**0**	**1476**	**7306**
EQ 12Hr	0	2759	2435	**5194**	0	2909	0	**2909**	**8104**	0	0	2052	**2052**	0	0	0	**0**	**2052**	**10155**

Note: These values are calculated by multiplying the totals by the appropriate expansion factor. **1.39**

AVG 12Hr	0	2600	2295	**4895**	0	2742	0	**2742**	**8104**	0	0	1934	**1934**	0	0	0	**0**	**2052**	**10155**

Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor. **1**

AVG 24Hr	0	3406	3007	**6413**	0	3592	0	**3592**	**10005**	0	0	2533	**2533**	0	0	0	**0**	**2533**	**12538**

Note: These volumes are calculated by multiplying the Average Daily 12 hr. totals by 12 to 24 expansion factor. **1.31**

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

Transportation Services - Traffic Services

Turning Movement Count - Study Results

PARKDALE AVE @ SIR JOHN A. MACDONALD PKWY RAMPS

Survey Date: Wednesday, February 26, 2020 **WO No:** 39635

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

Full Study 15 Minute Increments

PARKDALE AVE **SJAM RAMPS**

Time Period		Northbound				Southbound					Eastbound				Westbound					
		LT	ST	RT	N TOT	LT	ST	RT	S TOT	STR TOT	LT	ST	RT	E TOT	LT	ST	RT	W TOT	STR TOT	Grand Total
07:00	07:15	0	16	25	41	0	105	0	105	3	0	0	118	118	0	0	0	0	3	264
07:15	07:30	0	16	15	31	0	85	0	85	1	0	0	118	118	0	0	0	0	1	234
07:30	07:45	0	16	34	50	0	99	0	99	1	0	0	130	130	0	0	0	0	1	279
07:45	08:00	0	13	35	48	0	80	0	80	0	0	0	118	118	0	0	0	0	0	246
08:00	08:15	0	24	28	52	0	102	0	102	1	0	0	123	123	0	0	0	0	1	277
08:15	08:30	0	12	36	48	0	104	0	104	1	0	0	118	118	0	0	0	0	1	270
08:30	08:45	0	15	36	51	0	96	0	96	1	0	0	93	93	0	0	0	0	1	240
08:45	09:00	0	23	31	54	0	83	0	83	2	0	0	81	81	0	0	0	0	2	218
09:00	09:15	0	9	31	40	0	62	0	62	0	0	0	60	60	0	0	0	0	0	162
09:15	09:30	0	17	25	42	0	61	0	61	0	0	0	60	60	0	0	0	0	0	163
09:30	09:45	0	20	22	42	0	60	0	60	1	0	0	42	42	0	0	0	0	1	144
09:45	10:00	0	19	23	42	0	47	0	47	1	0	0	43	43	0	0	0	0	1	132
11:30	11:45	0	24	25	49	0	37	0	37	0	0	0	29	29	0	0	0	0	0	115
11:45	12:00	0	36	38	74	0	45	0	45	0	0	0	30	30	0	0	0	0	0	149
12:00	12:15	0	34	40	74	0	38	0	38	0	0	0	19	19	0	0	0	0	0	131
12:15	12:30	0	36	31	67	0	48	0	48	1	0	0	18	18	0	0	0	0	1	133
12:30	12:45	0	43	29	72	0	52	0	52	2	0	0	20	20	0	0	0	0	2	144
12:45	13:00	0	42	30	72	0	45	0	45	1	0	0	23	23	0	0	0	0	1	140
13:00	13:15	0	46	27	73	0	38	0	38	1	0	0	32	32	0	0	0	0	1	143
13:15	13:30	0	46	34	80	0	23	0	23	0	0	0	15	15	0	0	0	0	0	118
15:00	15:15	0	169	134	303	0	31	0	31	1	0	0	11	11	0	0	0	0	1	345
15:15	15:30	0	137	96	233	0	52	0	52	1	0	0	10	10	0	0	0	0	1	295
15:30	15:45	0	134	124	258	0	72	0	72	4	0	0	14	14	0	0	0	0	4	344
15:45	16:00	0	142	119	261	0	57	0	57	1	0	0	19	19	0	0	0	0	1	337
16:00	16:15	0	138	115	253	0	79	0	79	0	0	0	11	11	0	0	0	0	0	343
16:15	16:30	0	120	104	224	0	87	0	87	1	0	0	16	16	0	0	0	0	1	327
16:30	16:45	0	102	104	206	0	99	0	99	2	0	0	16	16	0	0	0	0	2	321
16:45	17:00	0	120	97	217	0	82	0	82	0	0	0	16	16	0	0	0	0	0	315
17:00	17:15	0	113	75	188	0	69	0	69	1	0	0	14	14	0	0	0	0	1	271
17:15	17:30	0	109	98	207	0	54	0	54	1	0	0	22	22	0	0	0	0	1	283
17:30	17:45	0	95	43	138	0	59	0	59	0	0	0	24	24	0	0	0	0	0	221
17:45	18:00	0	99	48	147	0	42	0	42	2	0	0	13	13	0	0	0	0	2	202
Total:		0	1985	1752	3737	0	2093	0	2093	31	0	0	1476	1476	0	0	0	0	31	7,306

Note: U-Turns are included in Totals.

Transportation Services - Traffic Services

Turning Movement Count - Study Results

PARKDALE AVE @ SIR JOHN A. MACDONALD PKWY RAMPS

Survey Date: Wednesday, February 26, 2020 **WO No:** 39635

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

Full Study Cyclist Volume

Time Period		PARKDALE AVE			SJAM RAMPS			
		Northbound	Southbound	Street Total	Eastbound	Westbound	Street Total	Grand Total
07:00	07:15	0	0	0	0	0	0	0
07:15	07:30	0	1	1	0	0	0	1
07:30	07:45	0	0	0	0	0	0	0
07:45	08:00	0	0	0	0	0	0	0
08:00	08:15	0	0	0	0	0	0	0
08:15	08:30	0	0	0	0	0	0	0
08:30	08:45	0	0	0	0	0	0	0
08:45	09:00	0	0	0	0	0	0	0
09:00	09:15	0	0	0	0	0	0	0
09:15	09:30	0	0	0	0	0	0	0
09:30	09:45	0	0	0	0	0	0	0
09:45	10:00	0	0	0	0	0	0	0
11:30	11:45	0	0	0	0	0	0	0
11:45	12:00	0	0	0	0	0	0	0
12:00	12:15	0	0	0	0	0	0	0
12:15	12:30	0	0	0	0	0	0	0
12:30	12:45	0	0	0	0	0	0	0
12:45	13:00	0	0	0	0	0	0	0
13:00	13:15	0	0	0	0	0	0	0
13:15	13:30	0	0	0	0	0	0	0
15:00	15:15	0	0	0	0	0	0	0
15:15	15:30	0	0	0	0	0	0	0
15:30	15:45	0	0	0	0	0	0	0
15:45	16:00	0	0	0	0	0	0	0
16:00	16:15	0	0	0	0	0	0	0
16:15	16:30	0	0	0	0	0	0	0
16:30	16:45	0	0	0	0	0	0	0
16:45	17:00	0	0	0	0	0	0	0
17:00	17:15	0	0	0	0	0	0	0
17:15	17:30	0	0	0	0	0	0	0
17:30	17:45	0	0	0	0	0	0	0
17:45	18:00	0	0	0	0	0	0	0
Total		0	1	**1**	0	0	0	1

Transportation Services - Traffic Services

Turning Movement Count - Study Results

PARKDALE AVE @ SIR JOHN A. MACDONALD PKWY RAMPS

Survey Date: Wednesday, February 26, 2020 **WO No:** 39635

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

Full Study Pedestrian Volume

	PARKDALE AVE			SJAM RAMPS			
Time Period	NB Approach (E or W Crossing)	SB Approach (E or W Crossing)	Total	EB Approach (N or S Crossing)	WB Approach (N or S Crossing)	Total	Grand Total
07:00 07:15	0	0	**0**	0	0	**0**	**0**
07:15 07:30	0	0	**0**	0	0	**0**	**0**
07:30 07:45	0	0	**0**	0	0	**0**	**0**
07:45 08:00	0	0	**0**	2	0	**2**	**2**
08:00 08:15	0	0	**0**	2	0	**2**	**2**
08:15 08:30	0	0	**0**	0	0	**0**	**0**
08:30 08:45	0	0	**0**	0	0	**0**	**0**
08:45 09:00	0	0	**0**	0	0	**0**	**0**
09:00 09:15	0	0	**0**	0	0	**0**	**0**
09:15 09:30	0	0	**0**	0	0	**0**	**0**
09:30 09:45	0	0	**0**	0	0	**0**	**0**
09:45 10:00	0	0	**0**	0	0	**0**	**0**
11:30 11:45	0	0	**0**	0	0	**0**	**0**
11:45 12:00	0	0	**0**	1	0	**1**	**1**
12:00 12:15	0	0	**0**	3	0	**3**	**3**
12:15 12:30	0	0	**0**	4	0	**4**	**4**
12:30 12:45	0	0	**0**	9	1	**10**	**10**
12:45 13:00	0	0	**0**	4	0	**4**	**4**
13:00 13:15	0	0	**0**	0	0	**0**	**0**
13:15 13:30	0	0	**0**	0	0	**0**	**0**
15:00 15:15	0	0	**0**	1	0	**1**	**1**
15:15 15:30	0	0	**0**	1	0	**1**	**1**
15:30 15:45	0	0	**0**	0	0	**0**	**0**
15:45 16:00	0	0	**0**	0	0	**0**	**0**
16:00 16:15	0	0	**0**	0	0	**0**	**0**
16:15 16:30	0	0	**0**	0	0	**0**	**0**
16:30 16:45	0	0	**0**	0	0	**0**	**0**
16:45 17:00	0	0	**0**	1	0	**1**	**1**
17:00 17:15	0	0	**0**	0	0	**0**	**0**
17:15 17:30	0	0	**0**	0	0	**0**	**0**
17:30 17:45	0	0	**0**	0	0	**0**	**0**
17:45 18:00	0	0	**0**	0	0	**0**	**0**
Total	0	0	**0**	28	1	**29**	**29**

PARKDALE AVE @ SJAM RAMPS - FEB 26 2020 - 8HR

Transportation Services - Traffic Services

Turning Movement Count - Study Results

X 2 B Geo_ID DO NOT APPROVE @ X 2 B Geo_ID DO NOT APPROVE

Survey Date: Wednesday, February 26, 2020 **WO No:** 39635

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

Full Study Heavy Vehicles

PARKDALE AVE **SJAM RAMPS**

Time Period		Northbound				Southbound					Eastbound				Westbound					
		LT	ST	RT	**N TOT**	LT	ST	RT	**S TOT**	**STR TOT**	LT	ST	RT	**E TOT**	LT	ST	RT	**W TOT**	**STR TOT**	**Grand Total**
07:00	07:15	0	0	2	**2**	0	1	0	**1**	**3**	0	0	0	**0**	0	0	0	**0**	**0**	**3**
07:15	07:30	0	1	0	**1**	0	0	0	**0**	**1**	0	0	0	**0**	0	0	0	**0**	**0**	**1**
07:30	07:45	0	0	0	**0**	0	1	0	**1**	**1**	0	0	0	**0**	0	0	0	**0**	**0**	**1**
07:45	08:00	0	0	0	**0**	0	0	0	**0**	**0**	0	0	0	**0**	0	0	0	**0**	**0**	**0**
08:00	08:15	0	0	0	**0**	0	1	0	**1**	**1**	0	0	0	**0**	0	0	0	**0**	**0**	**1**
08:15	08:30	0	0	1	**1**	0	0	0	**0**	**1**	0	0	0	**0**	0	0	0	**0**	**0**	**1**
08:30	08:45	0	0	0	**0**	0	1	0	**1**	**1**	0	0	0	**0**	0	0	0	**0**	**0**	**1**
08:45	09:00	0	0	0	**0**	0	2	0	**2**	**2**	0	0	2	**2**	0	0	0	**0**	**2**	**4**
09:00	09:15	0	0	0	**0**	0	0	0	**0**	**0**	0	0	0	**0**	0	0	0	**0**	**0**	**0**
09:15	09:30	0	0	0	**0**	0	0	0	**0**	**0**	0	0	0	**0**	0	0	0	**0**	**0**	**0**
09:30	09:45	0	0	0	**0**	0	1	0	**1**	**1**	0	0	0	**0**	0	0	0	**0**	**0**	**1**
09:45	10:00	0	0	1	**1**	0	0	0	**0**	**1**	0	0	0	**0**	0	0	0	**0**	**0**	**1**
11:30	11:45	0	0	0	**0**	0	0	0	**0**	**0**	0	0	0	**0**	0	0	0	**0**	**0**	**0**
11:45	12:00	0	0	0	**0**	0	0	0	**0**	**0**	0	0	0	**0**	0	0	0	**0**	**0**	**0**
12:00	12:15	0	0	0	**0**	0	0	0	**0**	**0**	0	0	0	**0**	0	0	0	**0**	**0**	**0**
12:15	12:30	0	0	1	**1**	0	0	0	**0**	**1**	0	0	0	**0**	0	0	0	**0**	**0**	**1**
12:30	12:45	0	1	0	**1**	0	1	0	**1**	**2**	0	0	0	**0**	0	0	0	**0**	**0**	**2**
12:45	13:00	0	0	0	**0**	0	1	0	**1**	**1**	0	0	0	**0**	0	0	0	**0**	**0**	**1**
13:00	13:15	0	0	1	**1**	0	0	0	**0**	**1**	0	0	0	**0**	0	0	0	**0**	**0**	**1**
13:15	13:30	0	0	0	**0**	0	0	0	**0**	**0**	0	0	0	**0**	0	0	0	**0**	**0**	**0**
15:00	15:15	0	1	0	**1**	0	0	0	**0**	**1**	0	0	0	**0**	0	0	0	**0**	**0**	**1**
15:15	15:30	0	0	0	**0**	0	1	0	**1**	**1**	0	0	0	**0**	0	0	0	**0**	**0**	**1**
15:30	15:45	0	0	1	**1**	0	3	0	**3**	**4**	0	0	0	**0**	0	0	0	**0**	**0**	**4**
15:45	16:00	0	0	1	**1**	0	0	0	**0**	**1**	0	0	0	**0**	0	0	0	**0**	**0**	**1**
16:00	16:15	0	0	0	**0**	0	0	0	**0**	**0**	0	0	0	**0**	0	0	0	**0**	**0**	**0**
16:15	16:30	0	0	0	**0**	0	1	0	**1**	**1**	0	0	0	**0**	0	0	0	**0**	**0**	**1**
16:30	16:45	0	1	1	**2**	0	0	0	**0**	**2**	0	0	0	**0**	0	0	0	**0**	**0**	**2**
16:45	17:00	0	0	0	**0**	0	0	0	**0**	**0**	0	0	0	**0**	0	0	0	**0**	**0**	**0**
17:00	17:15	0	0	0	**0**	0	1	0	**1**	**1**	0	0	0	**0**	0	0	0	**0**	**0**	**1**
17:15	17:30	0	0	1	**1**	0	0	0	**0**	**1**	0	0	0	**0**	0	0	0	**0**	**0**	**1**
17:30	17:45	0	0	0	**0**	0	0	0	**0**	**0**	0	0	0	**0**	0	0	0	**0**	**0**	**0**
17:45	18:00	0	0	1	**1**	0	1	0	**1**	**2**	0	0	0	**0**	0	0	0	**0**	**0**	**2**
Total:	None	0	4	11	**15**	0	16	0	**16**	**31**	0	0	2	**2**	0	0	0	**0**	**2**	**33**

Transportation Services - Traffic Services

Turning Movement Count - Study Results

PARKDALE AVE @ SIR JOHN A. MACDONALD PKWY RAMPS

Survey Date: Wednesday, February 26, 2020 **WO No:** 39635

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

Full Study 15 Minute U-Turn Total

		PARKDALE AVE		SJAM RAMPS		
Time Period		Northbound U-Turn Total	Southbound U-Turn Total	Eastbound U-Turn Total	Westbound U-Turn Total	Total
07:00	07:15	0	0	0	0	0
07:15	07:30	0	0	0	0	0
07:30	07:45	0	0	0	0	0
07:45	08:00	0	0	0	0	0
08:00	08:15	0	0	0	0	0
08:15	08:30	0	0	0	0	0
08:30	08:45	0	0	0	0	0
08:45	09:00	0	0	0	0	0
09:00	09:15	0	0	0	0	0
09:15	09:30	0	0	0	0	0
09:30	09:45	0	0	0	0	0
09:45	10:00	0	0	0	0	0
11:30	11:45	0	0	0	0	0
11:45	12:00	0	0	0	0	0
12:00	12:15	0	0	0	0	0
12:15	12:30	0	0	0	0	0
12:30	12:45	0	0	0	0	0
12:45	13:00	0	0	0	0	0
13:00	13:15	0	0	0	0	0
13:15	13:30	0	0	0	0	0
15:00	15:15	0	0	0	0	0
15:15	15:30	0	0	0	0	0
15:30	15:45	0	0	0	0	0
15:45	16:00	0	0	0	0	0
16:00	16:15	0	0	0	0	0
16:15	16:30	0	0	0	0	0
16:30	16:45	0	0	0	0	0
16:45	17:00	0	0	0	0	0
17:00	17:15	0	0	0	0	0
17:15	17:30	0	0	0	0	0
17:30	17:45	0	0	0	0	0
17:45	18:00	0	0	0	0	0
Total		0	0	0	0	0

Public Works - Traffic Services

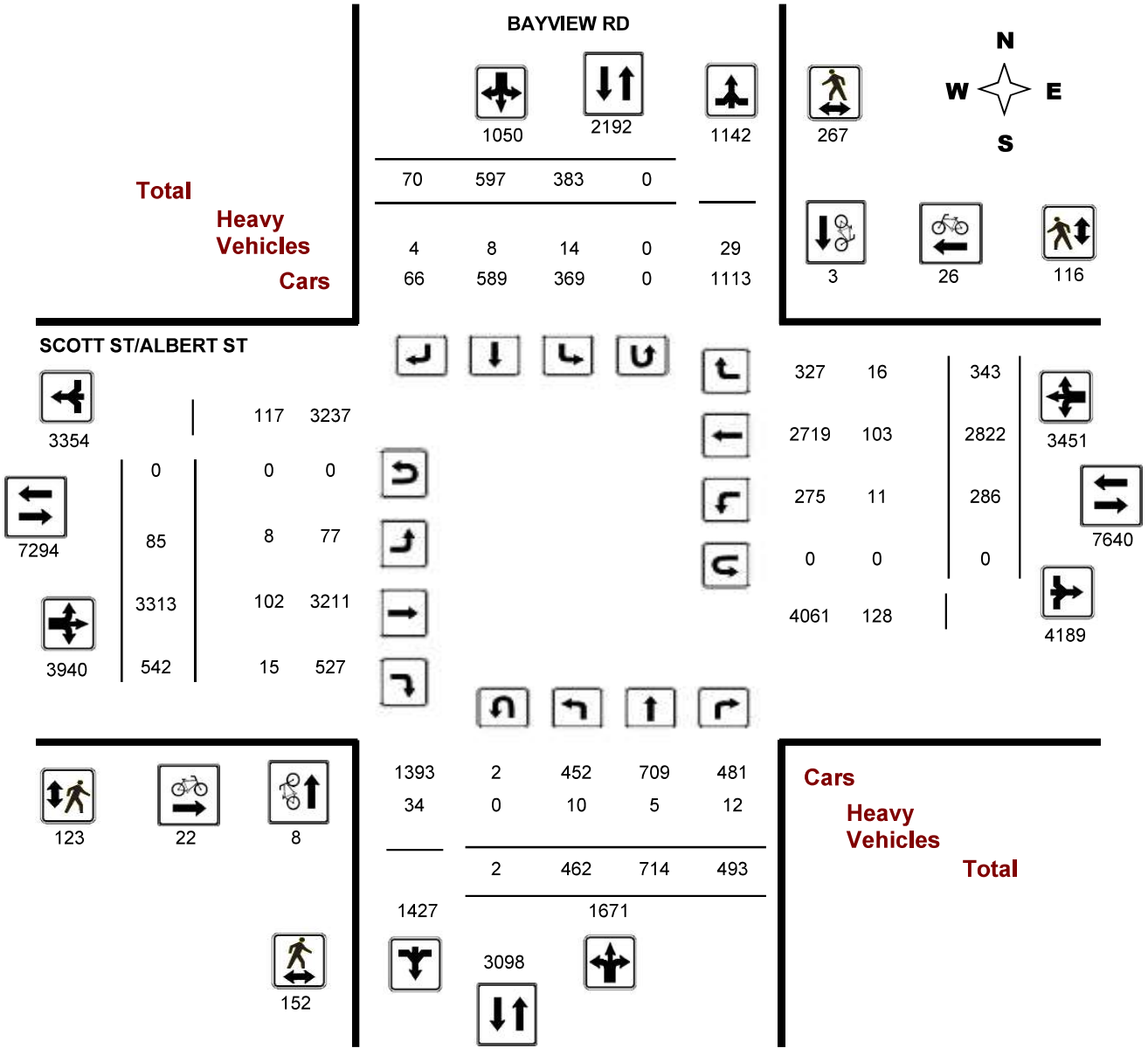
Turning Movement Count - Full Study Diagram

BAYVIEW RD @ SCOTT ST/ALBERT ST

Survey Date: Tuesday, April 01, 2014

WO#: 1292

Device: Miovision



Comments

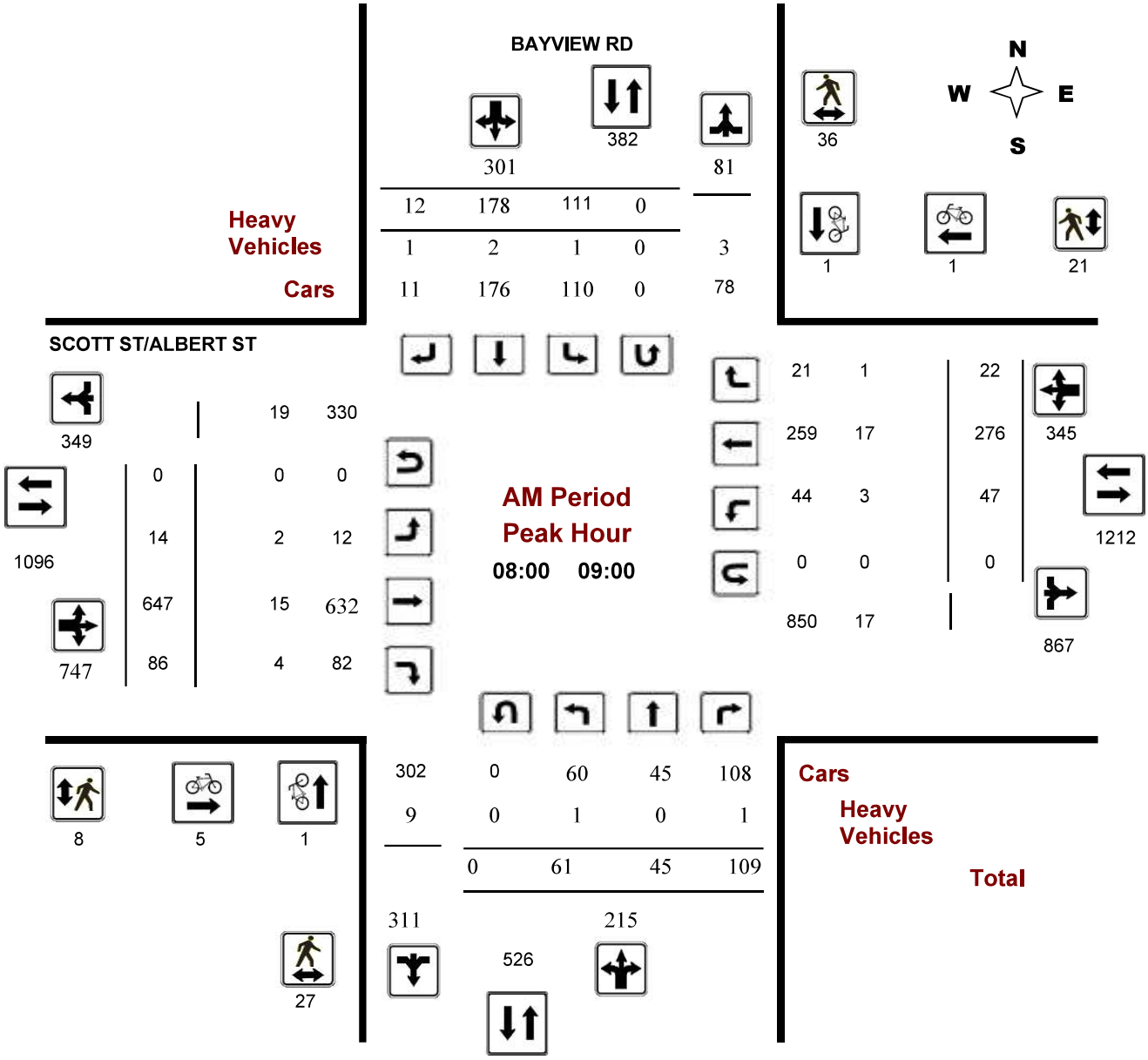
Public Works - Traffic Services

Turning Movement Count - Peak Hour Diagram

BAYVIEW RD @ SCOTT ST/ALBERT ST

Survey Date: Tuesday, April 01, 2014
Start Time: 07:00

WO No: 1292
Device: Miovision



Comments

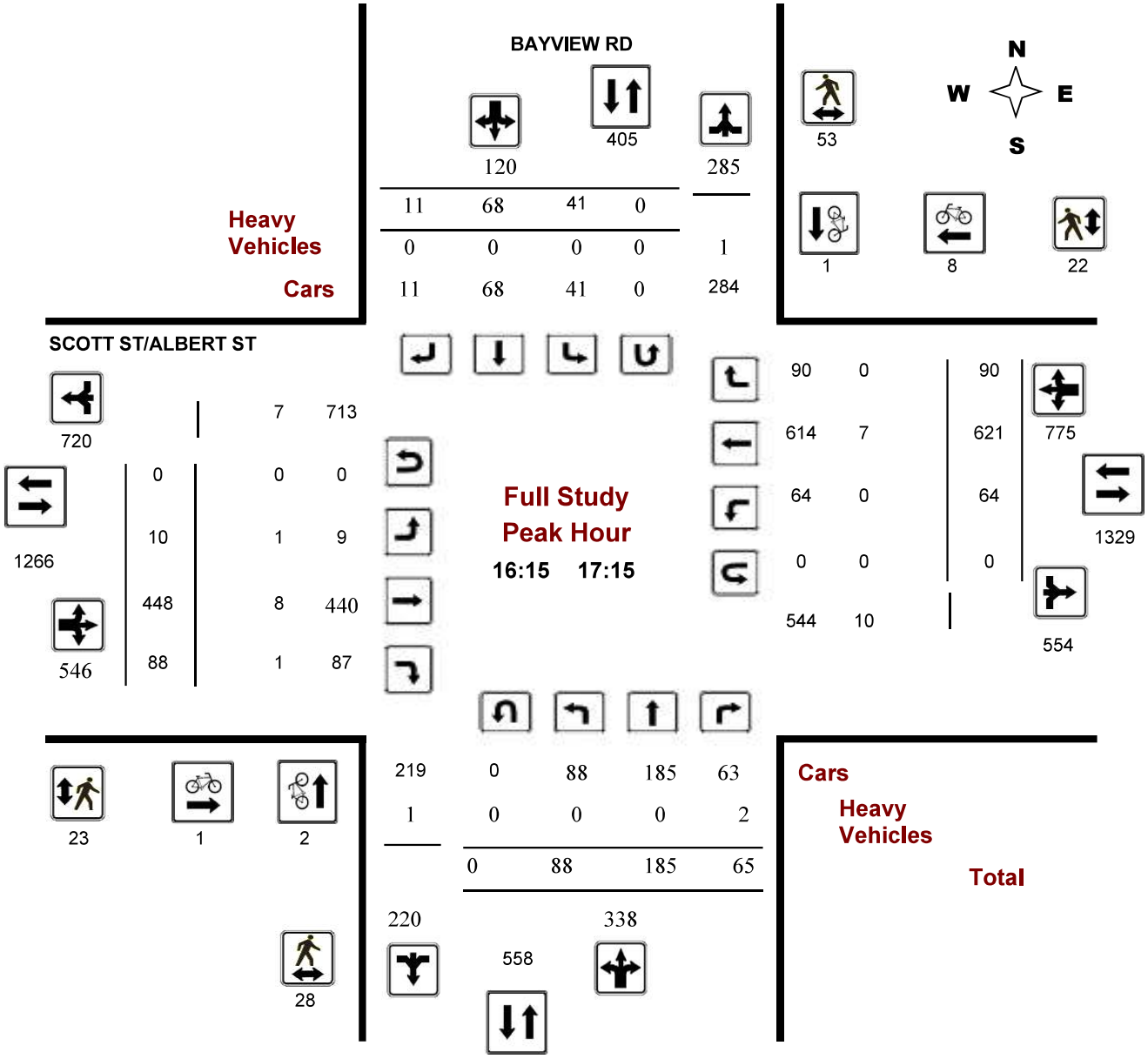
Public Works - Traffic Services

Turning Movement Count - Peak Hour Diagram

BAYVIEW RD @ SCOTT ST/ALBERT ST

Survey Date: Tuesday, April 01, 2014 **WO No:** 1292

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



Comments

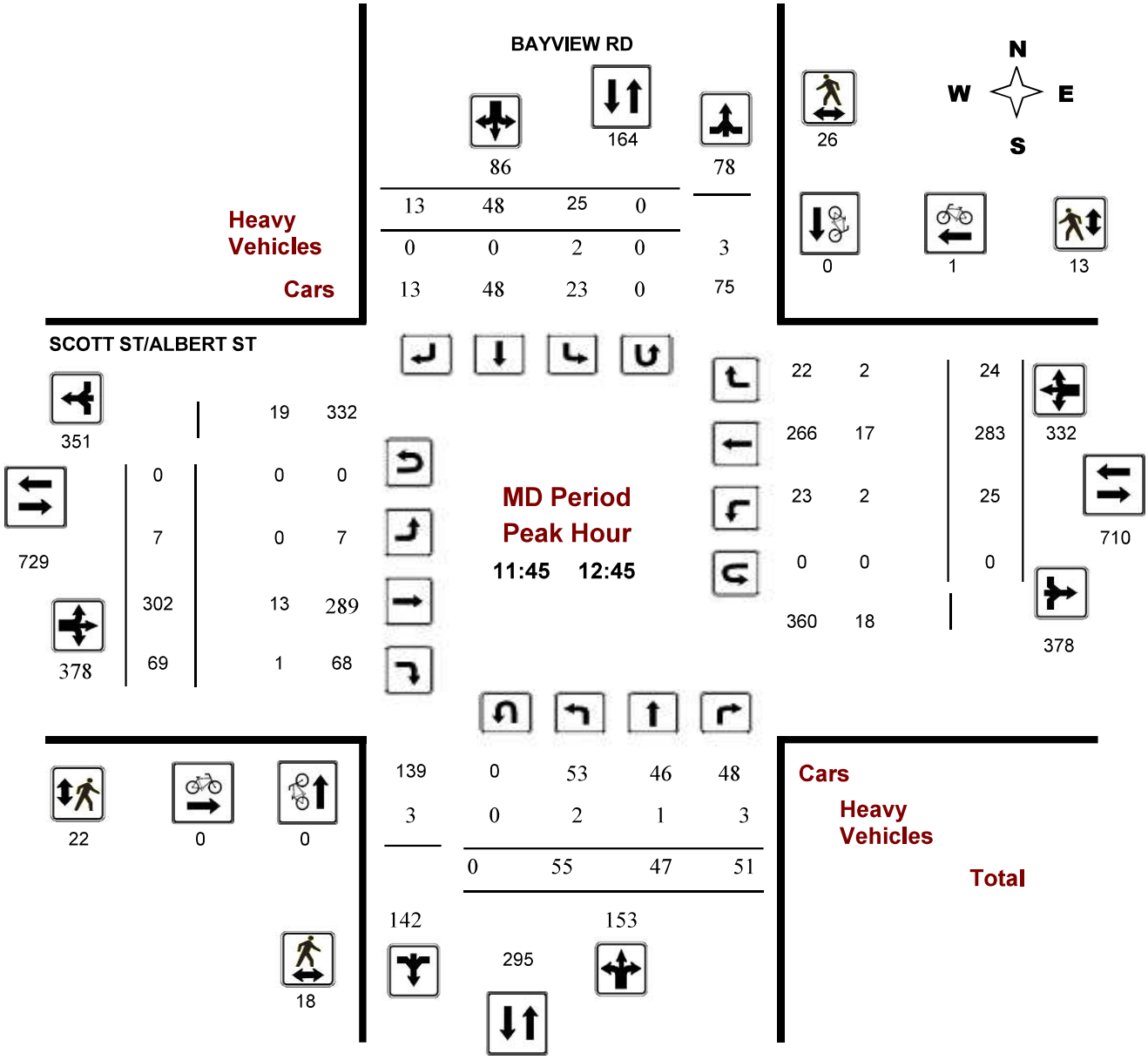
Public Works - Traffic Services

Turning Movement Count - Peak Hour Diagram

BAYVIEW RD @ SCOTT ST/ALBERT ST

Survey Date: Tuesday, April 01, 2014 **WO No:** 1292

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



Comments

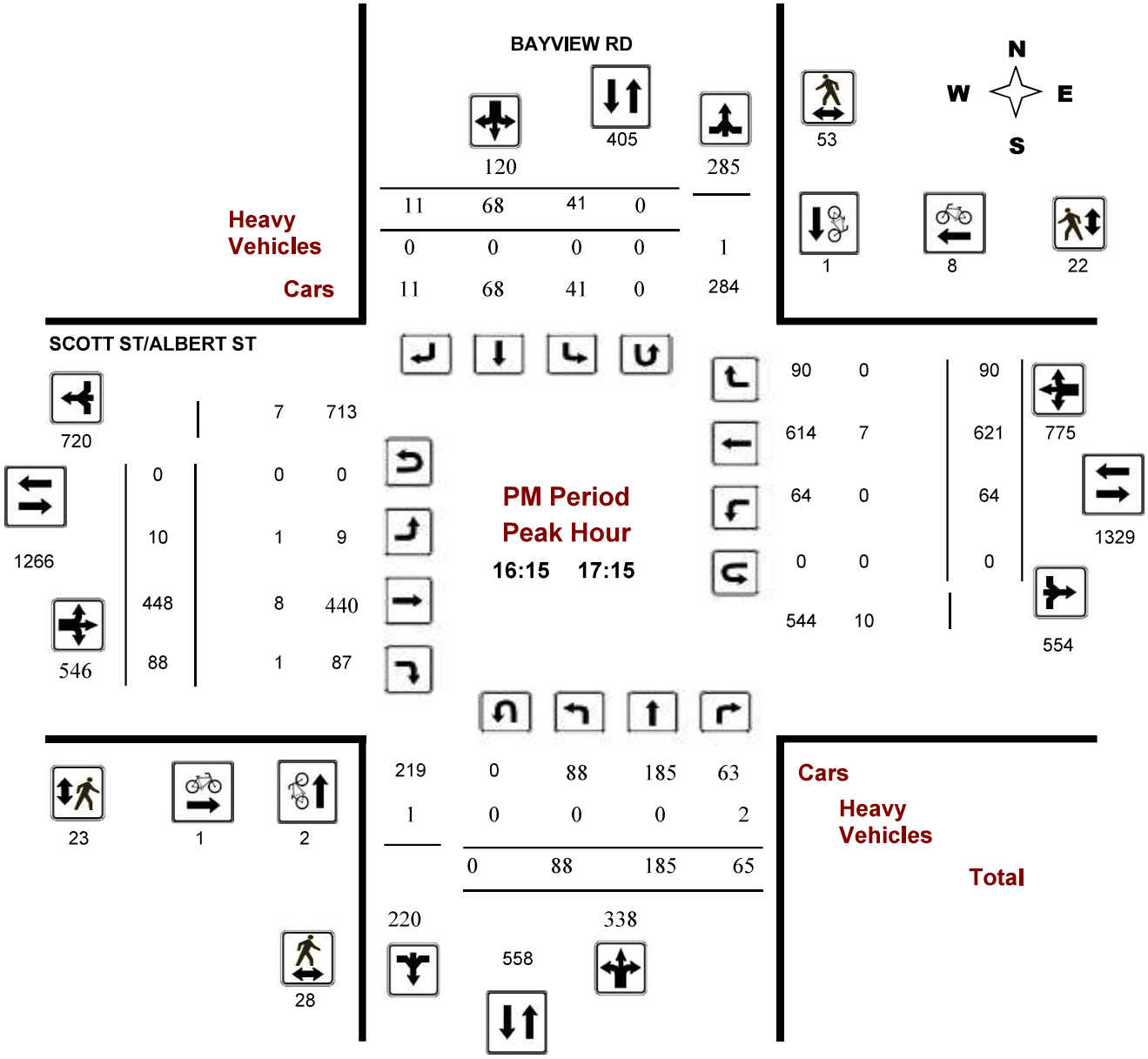
Public Works - Traffic Services

Turning Movement Count - Peak Hour Diagram

BAYVIEW RD @ SCOTT ST/ALBERT ST

Survey Date: Tuesday, April 01, 2014 **WO No:** 1292

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



Comments

Public Works - Traffic Services

Work Order
1292

Turning Movement Count - Full Study Summary Report

BAYVIEW RD @ SCOTT ST/ALBERT ST

Survey Date: Tuesday, April 01, 2014

Total Observed U-Turns

Northbound: 2 Southbound: 0
Eastbound: 0 Westbound: 0

AADT Factor
.90

Full Study

	BAYVIEW RD									SCOTT ST/ALBERT ST									
	Northbound				Southbound					Eastbound				Westbound					
Period	LT	ST	RT	NB TOT	LT	ST	RT	SB TOT	STR TOT	LT	ST	RT	EB TOT	LT	ST	RT	WB TOT	STR TOT	Grand Total
07:00 08:00	29	34	58	**121**	78	101	3	**182**	**303**	10	420	47	**477**	25	227	21	**273**	**750**	**1053**
08:00 09:00	61	45	109	**215**	111	178	12	**301**	**516**	14	647	86	**747**	47	276	22	**345**	**1092**	**1608**
09:00 10:00	34	28	50	**112**	48	64	9	**121**	**233**	12	384	45	**441**	36	222	29	**287**	**728**	**961**
11:30 12:30	49	43	54	**146**	32	53	11	**96**	**242**	7	318	72	**397**	20	268	17	**305**	**702**	**944**
12:30 13:30	55	37	48	**140**	28	40	14	**82**	**222**	19	278	64	**361**	23	269	24	**316**	**677**	**899**
15:00 16:00	72	185	45	**302**	20	54	6	**80**	**382**	6	391	71	**468**	22	364	76	**462**	**930**	**1312**
16:00 17:00	91	212	59	**362**	36	60	10	**106**	**468**	12	449	87	**548**	57	575	98	**730**	**1278**	**1746**
17:00 18:00	71	130	70	**271**	30	47	5	**82**	**353**	5	426	70	**501**	56	621	56	**733**	**1234**	**1587**
Sub Total	462	714	493	**1669**	383	597	70	**1050**	**2719**	85	3313	542	**3940**	286	2822	343	**3451**	**7391**	**10110**
U Turns				**2**				**0**	**2**				**0**				**0**	**0**	**2**
Total	462	714	493	**1671**	383	597	70	**1050**	**2721**	85	3313	542	**3940**	286	2822	343	**3451**	**7391**	**10112**
EQ 12Hr	642	992	685	**2323**	532	830	97	**1460**	**3783**	118	4605	753	**5477**	398	3923	477	**4797**	**10274**	**14057**
Note: These values are calculated by multiplying the totals by the appropriate expansion factor.													**1.39**						
AVG 12Hr	578	893	617	**2090**	479	747	88	**1314**	**3404**	106	4145	678	**4929**	358	3530	429	**4317**	**9246**	**12650**
Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor.													**.90**						
AVG 24Hr	757	1170	808	**2738**	628	978	115	**1721**	**4459**	139	5429	888	**6457**	469	4625	562	**5656**	**12113**	**16572**
Note: These volumes are calculated by multiplying the Average Daily 12 hr. totals by 12 to 24 expansion factor.													**1.31**						

Comments:

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

Public Works - Traffic Services

W.O. 1292

Turning Movement Count - 15 Minute Summary Report

BAYVIEW RD @ SCOTT ST/ALBERT ST

Survey Date: Tuesday, April 01, 2014

Total Observed U-Turns

Northbound: 2 Southbound: 0

Eastbound: 0 Westbound: 0

		BAYVIEW RD									SCOTT ST/ALBERT ST									
		Northbound				Southbound					Eastbound				Westbound					
Time Period		LT	ST	RT	N TOT	LT	ST	RT	S TOT	STR TOT	LT	ST	RT	E TOT	LT	ST	RT	W TOT	STR TOT	Grand Total
07:00	07:15	5	5	6	**16**	11	12	0	**23**	**39**	1	71	9	**81**	3	43	7	**53**	**134**	**173**
07:15	07:30	8	6	13	**27**	21	32	0	**53**	**80**	4	78	15	**97**	8	56	3	**67**	**164**	**244**
07:30	07:45	9	11	25	**47**	23	32	1	**56**	**103**	1	119	13	**133**	9	51	6	**66**	**199**	**302**
07:45	08:00	7	12	14	**33**	23	25	2	**50**	**83**	4	152	10	**166**	5	77	5	**87**	**253**	**336**
08:00	08:15	14	10	33	**57**	32	40	3	**75**	**132**	3	149	22	**174**	15	65	7	**87**	**261**	**393**
08:15	08:30	10	10	35	**55**	27	55	1	**83**	**138**	3	155	29	**187**	7	48	5	**60**	**247**	**385**
08:30	08:45	15	10	24	**49**	29	47	3	**79**	**128**	3	175	13	**191**	11	78	7	**96**	**287**	**415**
08:45	09:00	22	15	17	**54**	23	36	5	**64**	**118**	5	168	22	**195**	14	85	3	**102**	**297**	**415**
09:00	09:15	13	12	15	**40**	8	24	3	**35**	**75**	3	130	11	**144**	13	70	7	**90**	**234**	**309**
09:15	09:30	11	7	16	**34**	18	15	0	**33**	**67**	4	102	10	**116**	8	54	9	**71**	**187**	**254**
09:30	09:45	4	6	11	**21**	12	11	2	**25**	**46**	3	76	14	**93**	7	51	9	**67**	**160**	**206**
09:45	10:00	6	3	8	**17**	10	14	4	**28**	**45**	2	76	10	**88**	8	47	4	**59**	**147**	**192**
11:30	11:45	10	6	19	**35**	15	10	2	**27**	**62**	2	89	19	**110**	2	65	3	**70**	**180**	**242**
11:45	12:00	13	12	18	**43**	6	15	5	**26**	**69**	2	82	25	**109**	7	65	5	**77**	**186**	**255**
12:00	12:15	11	12	10	**33**	5	15	2	**22**	**55**	2	81	20	**103**	4	77	8	**89**	**192**	**247**
12:15	12:30	15	13	7	**35**	6	13	2	**21**	**56**	1	66	8	**75**	7	61	1	**69**	**144**	**200**
12:30	12:45	16	10	16	**42**	8	5	4	**17**	**59**	2	73	16	**91**	7	80	10	**97**	**188**	**247**
12:45	13:00	10	14	12	**36**	4	9	2	**15**	**51**	7	75	22	**104**	6	72	4	**82**	**186**	**237**
13:00	13:15	13	8	9	**30**	8	13	3	**24**	**54**	6	65	15	**86**	3	62	6	**71**	**157**	**211**
13:15	13:30	16	5	11	**32**	8	13	5	**26**	**58**	4	65	11	**80**	7	55	4	**66**	**146**	**204**
15:00	15:15	16	37	11	**64**	3	19	2	**24**	**88**	0	81	17	**98**	6	66	12	**84**	**182**	**270**
15:15	15:30	12	44	4	**60**	4	11	1	**16**	**76**	1	102	17	**120**	5	81	15	**101**	**221**	**297**
15:30	15:45	30	50	15	**95**	5	13	2	**20**	**115**	3	99	25	**127**	8	94	14	**116**	**243**	**358**
15:45	16:00	14	54	15	**83**	8	11	1	**20**	**103**	2	109	12	**123**	3	123	35	**161**	**284**	**387**
16:00	16:15	24	69	13	**106**	9	13	2	**24**	**130**	3	122	21	**146**	10	127	25	**162**	**308**	**438**
16:15	16:30	20	50	16	**86**	7	13	3	**23**	**109**	6	101	25	**132**	11	151	36	**198**	**330**	**439**
16:30	16:45	23	44	14	**81**	10	17	2	**29**	**110**	3	113	23	**139**	19	130	15	**164**	**303**	**413**
16:45	17:00	24	49	16	**89**	10	17	3	**30**	**119**	0	113	18	**131**	17	167	22	**206**	**337**	**456**
17:00	17:15	21	42	19	**82**	14	21	3	**38**	**120**	1	121	22	**144**	17	173	17	**207**	**351**	**471**
17:15	17:30	22	41	13	**76**	6	10	0	**16**	**92**	0	95	21	**116**	12	163	18	**193**	**309**	**401**
17:30	17:45	15	29	21	**65**	5	8	1	**14**	**79**	1	103	16	**120**	13	152	11	**176**	**296**	**375**
17:45	18:00	13	18	17	**48**	5	8	1	**14**	**62**	3	107	11	**121**	14	133	10	**157**	**278**	**340**
TOTAL:		462	714	493	**1671**	383	597	70	**1050**	**2721**	85	3313	542	**3940**	286	2822	343	**3451**	**7391**	**10112**

Note: U-Turns are included in Totals.

Comment:

Public Works - Traffic Services

Work Order
1292

Turning Movement Count - Pedestrian Volume Report

BAYVIEW RD @ SCOTT ST/ALBERT ST

Count Date: Tuesday, April 01, 2014 **Start Time:** 07:00

Time Period	NB Approach (E or W Crossing)	SB Approach (E or W Crossing)	Total	EB Approach (N or S Crossing)	WB Approach (N or S Crossing)	Total	Grand Total
07:00 07:15	1	4	**5**	2	0	**2**	**7**
07:15 07:30	1	8	**9**	2	4	**6**	**15**
07:30 07:45	2	14	**16**	8	0	**8**	**24**
07:45 08:00	9	12	**21**	4	5	**9**	**30**
07:00 08:00	13	38	**51**	16	9	**25**	**76**
08:00 08:15	7	8	**15**	3	5	**8**	**23**
08:15 08:30	5	12	**17**	4	4	**8**	**25**
08:30 08:45	9	11	**20**	0	9	**9**	**29**
08:45 09:00	6	5	**11**	1	3	**4**	**15**
08:00 09:00	27	36	**63**	8	21	**29**	**92**
09:00 09:15	5	6	**11**	4	4	**8**	**19**
09:15 09:30	3	5	**8**	0	3	**3**	**11**
09:30 09:45	3	2	**5**	1	4	**5**	**10**
09:45 10:00	4	1	**5**	1	1	**2**	**7**
09:00 10:00	15	14	**29**	6	12	**18**	**47**
11:30 11:45	1	6	**7**	2	1	**3**	**10**
11:45 12:00	0	5	**5**	4	1	**5**	**10**
12:00 12:15	3	10	**13**	2	5	**7**	**20**
12:15 12:30	8	6	**14**	13	2	**15**	**29**
11:30 12:30	12	27	**39**	21	9	**30**	**69**
12:30 12:45	7	5	**12**	3	5	**8**	**20**
12:45 13:00	1	2	**3**	5	4	**9**	**12**
13:00 13:15	2	2	**4**	4	2	**6**	**10**
13:15 13:30	4	7	**11**	2	1	**3**	**14**
12:30 13:30	14	16	**30**	14	12	**26**	**56**
15:00 15:15	7	2	**9**	2	3	**5**	**14**
15:15 15:30	2	6	**8**	1	2	**3**	**11**
15:30 15:45	2	5	**7**	4	3	**7**	**14**
15:45 16:00	6	9	**15**	0	4	**4**	**19**
15:00 16:00	17	22	**39**	7	12	**19**	**58**
16:00 16:15	2	16	**18**	6	0	**6**	**24**
16:15 16:30	7	14	**21**	9	4	**13**	**34**
16:30 16:45	8	12	**20**	5	4	**9**	**29**
16:45 17:00	6	13	**19**	4	7	**11**	**30**
16:00 17:00	23	55	**78**	24	15	**39**	**117**
17:00 17:15	7	14	**21**	5	7	**12**	**33**
17:15 17:30	5	16	**21**	8	3	**11**	**32**
17:30 17:45	12	20	**32**	5	8	**13**	**45**
17:45 18:00	7	9	**16**	9	8	**17**	**33**
17:00 18:00	31	59	**90**	27	26	**53**	**143**
Total	152	267	**419**	123	116	**239**	**658**

Comment:

Public Works - Traffic Services

Turning Movement Count - Cyclist Volume Report

Work Order
1292

BAYVIEW RD @ SCOTT ST/ALBERT ST

Count Date: Tuesday, April 01, 2014 **Start Time:** 07:00

	BAYVIEW RD			SCOTT ST/ALBERT ST			
Time Period	Northbound	Southbound	**Street Total**	Eastbound	Westbound	**Street Total**	**Grand Total**
07:00 08:00	0	0	**0**	6	1	**7**	**7**
08:00 09:00	1	1	**2**	5	1	**6**	**8**
09:00 10:00	0	0	**0**	5	0	**5**	**5**
11:30 12:30	1	0	**1**	0	0	**0**	**1**
12:30 13:30	0	1	**1**	0	1	**1**	**2**
15:00 16:00	2	0	**2**	2	5	**7**	**9**
16:00 17:00	2	1	**3**	1	9	**10**	**13**
17:00 18:00	2	0	**2**	3	9	**12**	**14**
Total	8	3	**11**	22	26	**48**	**59**

Comment:

Note: These volumes consists of bicycles only (no mopeds or motorcycles) and ARE NOT included in the Turning Movement Count Summary.

Public Works - Traffic Services

W.O. 1292

Turning Movement Count - Heavy Vehicle Report

BAYVIEW RD @ SCOTT ST/ALBERT ST

Survey Date: Tuesday, April 01, 2014

		BAYVIEW RD									SCOTT ST/ALBERT ST									
		Northbound				Southbound					Eastbound				Westbound					
Time Period		LT	ST	RT	N TOT	LT	ST	RT	S TOT	STR TOT	LT	ST	RT	E TOT	LT	ST	RT	W TOT	STR TOT	Grand Total
07:00	08:00	1	1	1	**3**	2	1	0	**3**	**6**	1	12	3	**16**	1	14	5	**20**	**36**	**42**
08:00	09:00	1	0	1	**2**	1	2	1	**4**	**6**	2	15	4	**21**	3	17	1	**21**	**42**	**48**
09:00	10:00	2	0	2	**4**	6	0	1	**7**	**11**	1	18	2	**21**	1	12	4	**17**	**38**	**49**
11:30	12:30	3	2	4	**9**	2	1	0	**3**	**12**	1	10	1	**12**	1	17	0	**18**	**30**	**42**
12:30	13:30	1	2	2	**5**	3	2	2	**7**	**12**	2	15	2	**19**	1	16	4	**21**	**40**	**52**
15:00	16:00	2	0	0	**2**	0	1	0	**1**	**3**	0	16	2	**18**	1	14	2	**17**	**35**	**38**
16:00	17:00	0	0	2	**2**	0	0	0	**0**	**2**	1	10	0	**11**	0	4	0	**4**	**15**	**17**
17:00	18:00	0	0	0	**0**	0	1	0	**1**	**1**	0	6	1	**7**	3	9	0	**12**	**19**	**20**
Sub Total		10	5	12	**27**	14	8	4	**26**	**53**	8	102	15	**125**	11	103	16	**130**	**255**	**308**
U-Turns (Heavy Vehicles)					**0**				**0**	**0**				**0**				**0**	**0**	**0**
Total		10	5	12	**0**	14	8	4	**26**	**53**	8	102	15	**125**	11	103	16	**130**	**255**	**308**

Heavy Vehicles are vehicles having one rear axle with four or more wheels, or having two or more rear axles. These vehicles include most O.C. Transpo, school and inter-city buses. Further, they ARE included in the Turning Movement Count Summary.

Public Works - Traffic Services

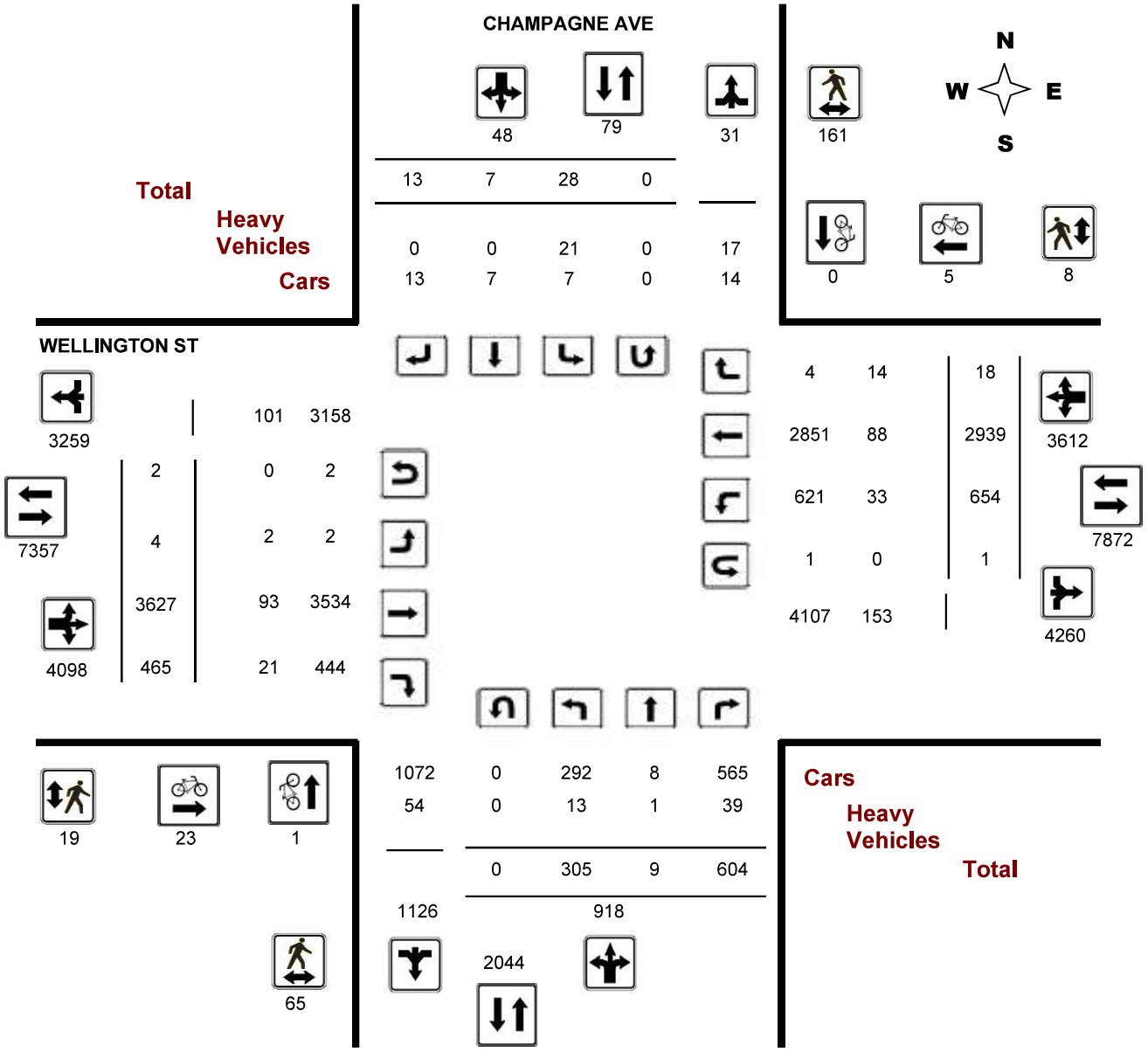
Turning Movement Count - Full Study Diagram

CHAMPAGNE AVE @ WELLINGTON ST

Survey Date: Wednesday, April 02, 2014

WO#: 29660

Device: Miovision



Comments

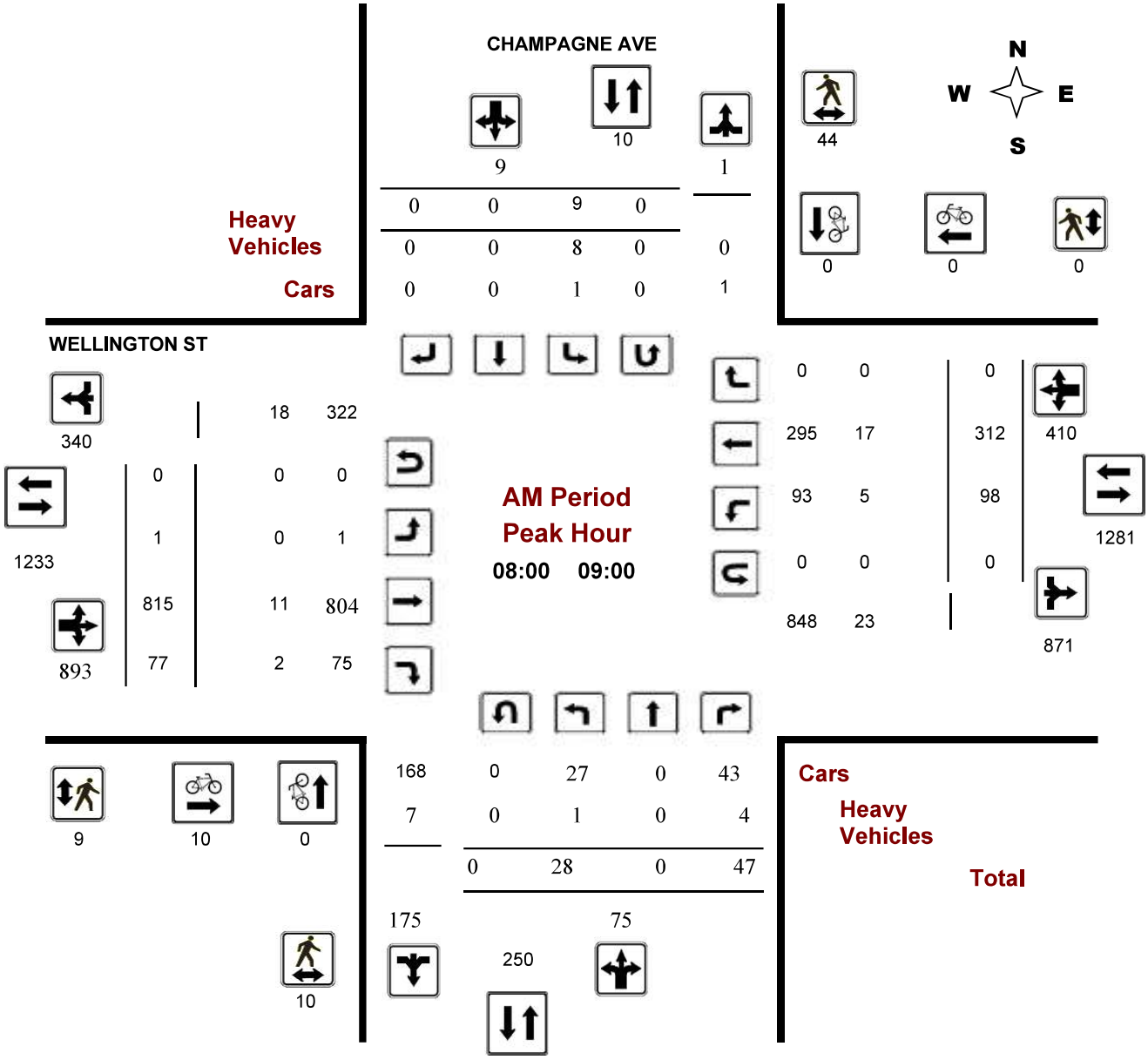
Public Works - Traffic Services

Turning Movement Count - Peak Hour Diagram

CHAMPAGNE AVE @ WELLINGTON ST

Survey Date: Wednesday, April 02, 2014 **WO No:** 29660

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



Comments

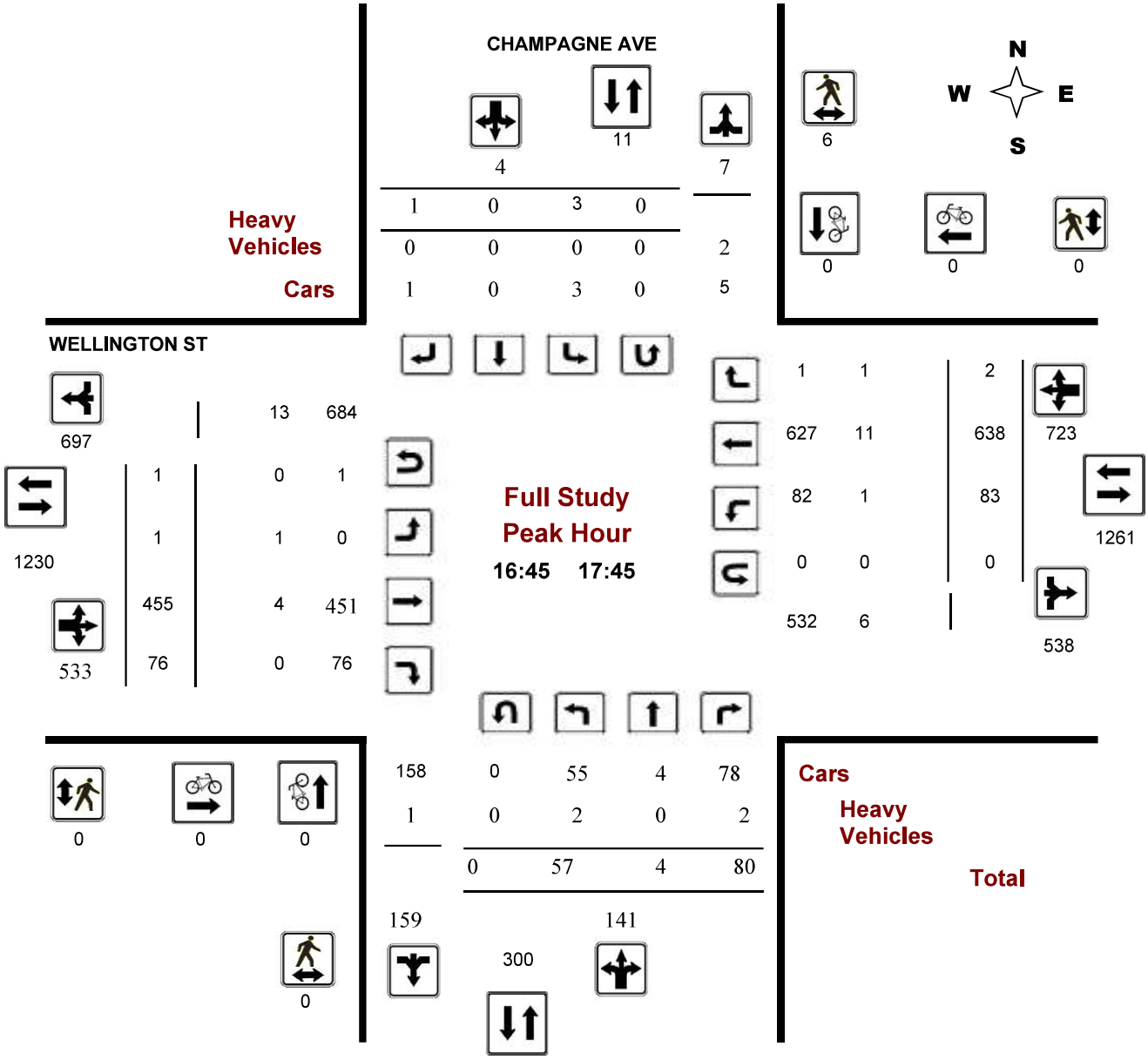
Public Works - Traffic Services

Turning Movement Count - Peak Hour Diagram

CHAMPAGNE AVE @ WELLINGTON ST

Survey Date: Wednesday, April 02, 2014 **WO No:** 29660

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



Comments

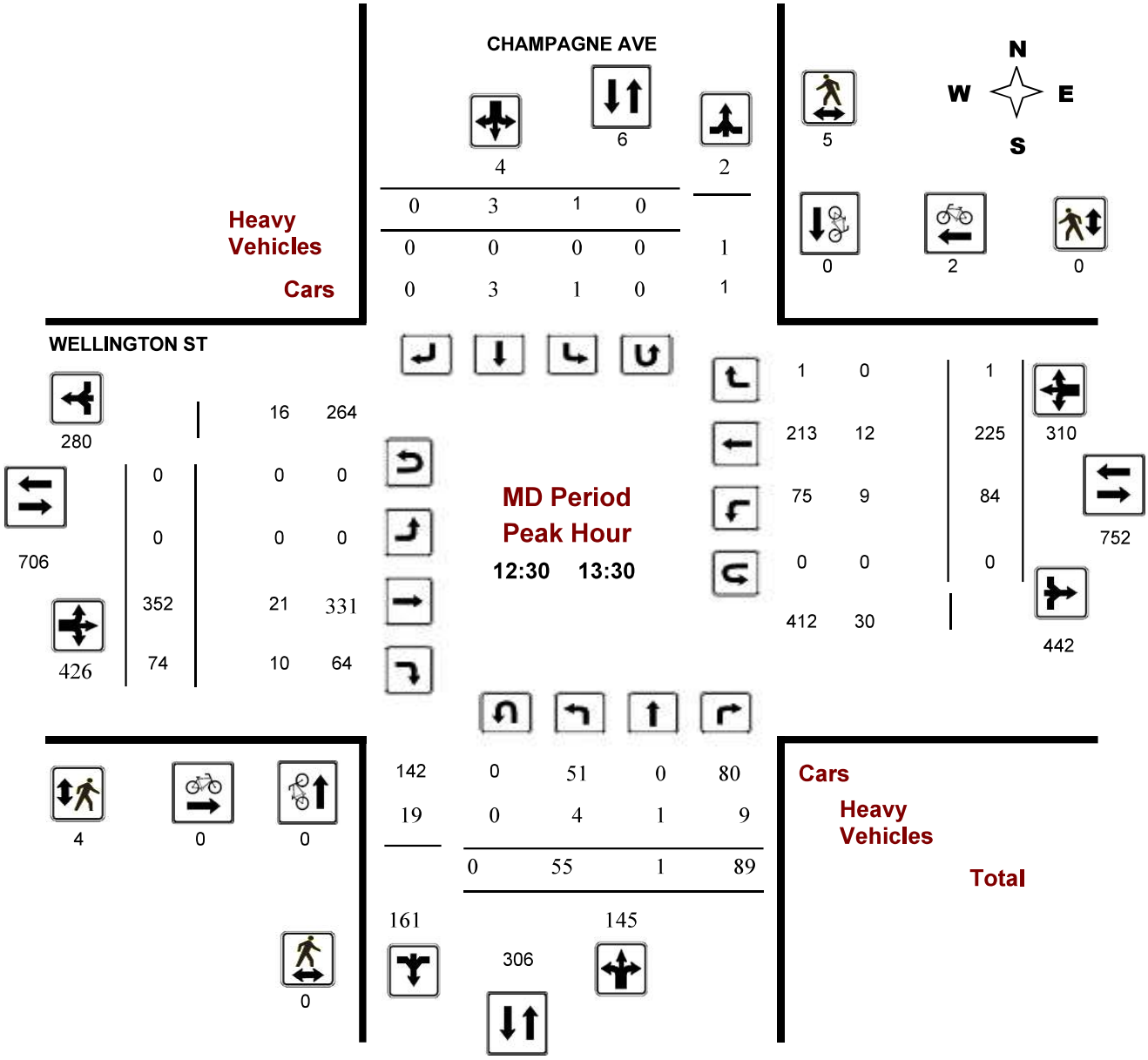
Public Works - Traffic Services

Turning Movement Count - Peak Hour Diagram

CHAMPAGNE AVE @ WELLINGTON ST

Survey Date: Wednesday, April 02, 2014
Start Time: 07:00

WO No: 29660
Device: Miovision



Comments

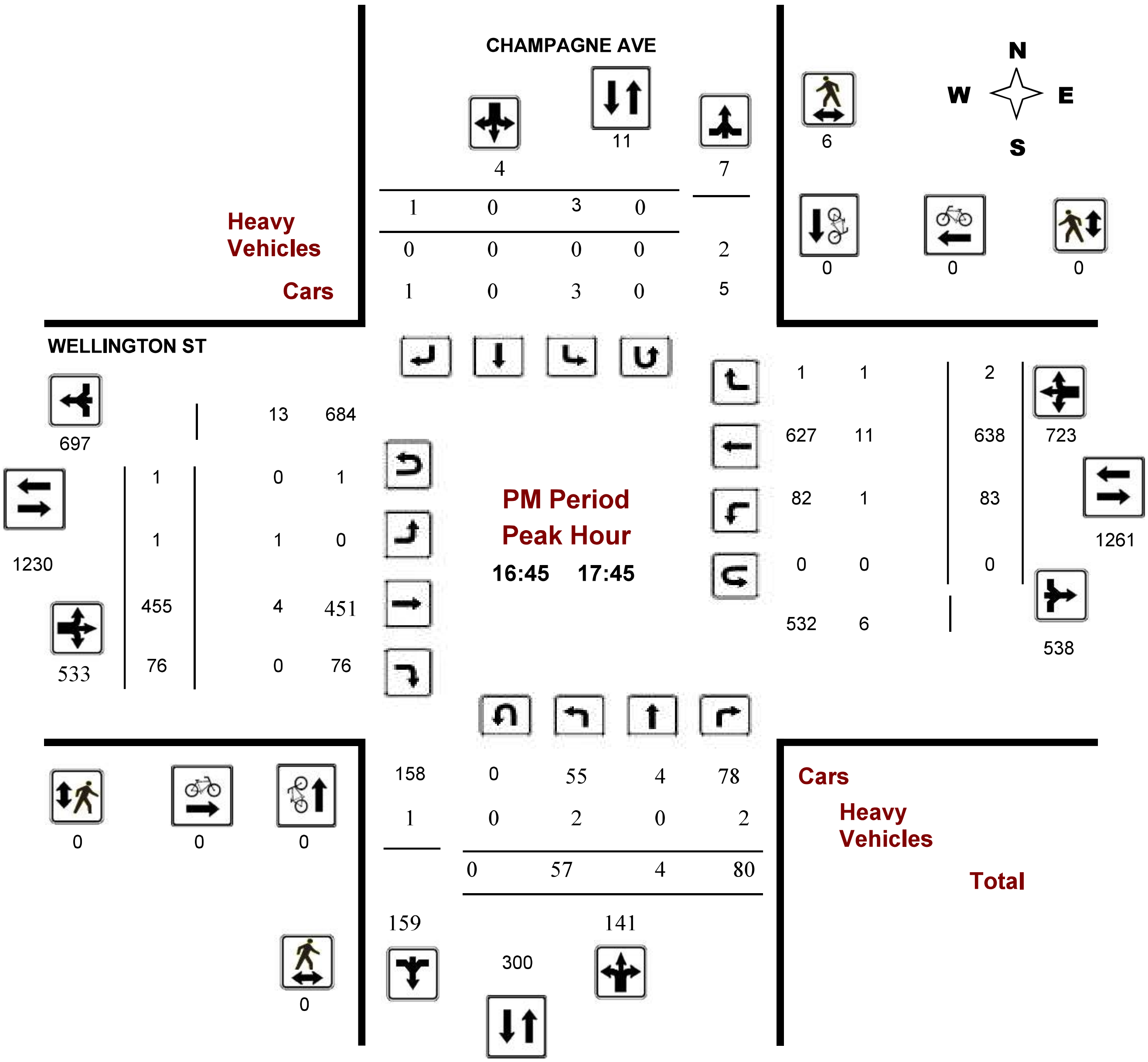
Public Works - Traffic Services

Turning Movement Count - Peak Hour Diagram

CHAMPAGNE AVE @ WELLINGTON ST

Survey Date: Wednesday, April 02, 2014 **WO No:** 29660

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



Comments

Public Works - Traffic Services

Work Order
29660

Turning Movement Count - Full Study Summary Report

CHAMPAGNE AVE @ WELLINGTON ST

Survey Date: Wednesday, April 02, 2014

Total Observed U-Turns

Northbound: 0 Southbound: 0
Eastbound: 2 Westbound: 1

AADT Factor
.90

Full Study

	CHAMPAGNE AVE									WELLINGTON ST									
	Northbound				Southbound					Eastbound				Westbound					
Period	LT	ST	RT	NB TOT	LT	ST	RT	SB TOT	STR TOT	LT	ST	RT	EB TOT	LT	ST	RT	WB TOT	STR TOT	Grand Total
07:00 08:00	7	0	33	**40**	8	0	0	**8**	**48**	0	466	50	**516**	68	253	3	**324**	**840**	**888**
08:00 09:00	28	0	47	**75**	9	0	0	**9**	**84**	1	815	77	**893**	98	312	0	**410**	**1303**	**1387**
09:00 10:00	25	0	66	**91**	4	1	0	**5**	**96**	0	423	54	**477**	100	256	2	**358**	**835**	**931**
11:30 12:30	43	0	111	**154**	0	0	0	**0**	**154**	0	320	53	**373**	98	240	0	**338**	**711**	**865**
12:30 13:30	55	1	89	**145**	1	3	0	**4**	**149**	0	352	74	**426**	84	225	1	**310**	**736**	**885**
15:00 16:00	44	1	92	**137**	1	3	11	**15**	**152**	1	452	28	**481**	66	436	9	**511**	**992**	**1144**
16:00 17:00	57	4	90	**151**	2	0	1	**3**	**154**	1	347	52	**400**	48	647	2	**697**	**1097**	**1251**
17:00 18:00	46	3	76	**125**	3	0	1	**4**	**129**	1	452	77	**530**	92	570	1	**663**	**1193**	**1322**
Sub Total	305	9	604	**918**	28	7	13	**48**	**966**	4	3627	465	**4096**	654	2939	18	**3611**	**7707**	**8673**
U Turns				**0**				**0**	**0**				**2**				**1**	**3**	**3**
Total	305	9	604	**918**	28	7	13	**48**	**966**	4	3627	465	**4098**	654	2939	18	**3612**	**7710**	**8676**
EQ 12Hr	424	13	840	**1276**	39	10	18	**67**	**1343**	6	5042	646	**5696**	909	4085	25	**5021**	**10717**	**12060**
Note: These values are calculated by multiplying the totals by the appropriate expansion factor.													**1.39**						
AVG 12Hr	382	11	756	**1148**	35	9	16	**60**	**1208**	5	4537	582	**5127**	818	3677	23	**4519**	**9646**	**10854**
Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor.													**.90**						
AVG 24Hr	500	15	990	**1504**	46	11	21	**79**	**1583**	7	5944	762	**6716**	1072	4816	29	**5919**	**12635**	**14218**
Note: These volumes are calculated by multiplying the Average Daily 12 hr. totals by 12 to 24 expansion factor.													**1.31**						

Comments:

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

Public Works - Traffic Services

W.O. 29660

Turning Movement Count - 15 Minute Summary Report

CHAMPAGNE AVE @ WELLINGTON ST

Survey Date: Wednesday, April 02, 2014

Total Observed U-Turns

Northbound: 0 Southbound: 0

Eastbound: 2 Westbound: 1

		CHAMPAGNE AVE									WELLINGTON ST									
		Northbound				Southbound					Eastbound				Westbound					
Time Period		LT	ST	RT	N TOT	LT	ST	RT	S TOT	STR TOT	LT	ST	RT	E TOT	LT	ST	RT	W TOT	STR TOT	Grand Total
07:00	07:15	2	0	8	**10**	1	0	0	**1**	**11**	0	67	10	**77**	12	50	2	**64**	**141**	**152**
07:15	07:30	3	0	4	**7**	2	0	0	**2**	**9**	0	95	13	**108**	21	55	0	**76**	**184**	**193**
07:30	07:45	1	0	9	**10**	2	0	0	**2**	**12**	0	144	14	**158**	18	75	1	**94**	**252**	**264**
07:45	08:00	1	0	12	**13**	3	0	0	**3**	**16**	0	160	13	**173**	17	73	0	**90**	**263**	**279**
08:00	08:15	6	0	12	**18**	2	0	0	**2**	**20**	1	196	14	**211**	21	78	0	**99**	**310**	**330**
08:15	08:30	6	0	5	**11**	1	0	0	**1**	**12**	0	225	20	**245**	27	72	0	**99**	**344**	**356**
08:30	08:45	11	0	16	**27**	2	0	0	**2**	**29**	0	190	22	**212**	24	66	0	**90**	**302**	**331**
08:45	09:00	5	0	14	**19**	4	0	0	**4**	**23**	0	204	21	**225**	26	96	0	**122**	**347**	**370**
09:00	09:15	11	0	19	**30**	2	0	0	**2**	**32**	0	125	21	**146**	31	77	1	**109**	**255**	**287**
09:15	09:30	5	0	17	**22**	2	0	0	**2**	**24**	0	128	14	**142**	27	73	1	**101**	**243**	**267**
09:30	09:45	4	0	17	**21**	0	0	0	**0**	**21**	0	90	6	**96**	22	57	0	**79**	**175**	**196**
09:45	10:00	5	0	13	**18**	0	1	0	**1**	**19**	0	80	13	**93**	20	49	0	**69**	**162**	**181**
11:30	11:45	11	0	22	**33**	0	0	0	**0**	**33**	0	77	7	**84**	30	70	0	**101**	**185**	**218**
11:45	12:00	11	0	32	**43**	0	0	0	**0**	**43**	0	85	20	**105**	30	51	0	**81**	**186**	**229**
12:00	12:15	13	0	34	**47**	0	0	0	**0**	**47**	0	73	10	**83**	19	60	0	**79**	**162**	**209**
12:15	12:30	8	0	23	**31**	0	0	0	**0**	**31**	0	85	16	**101**	19	59	0	**78**	**179**	**210**
12:30	12:45	20	0	21	**41**	0	3	0	**3**	**44**	0	75	14	**89**	22	59	0	**81**	**170**	**214**
12:45	13:00	12	0	21	**33**	0	0	0	**0**	**33**	0	62	32	**94**	23	60	0	**83**	**177**	**210**
13:00	13:15	11	0	23	**34**	0	0	0	**0**	**34**	0	78	15	**93**	17	42	1	**60**	**153**	**187**
13:15	13:30	12	1	24	**37**	1	0	0	**1**	**38**	0	137	13	**150**	22	64	0	**86**	**236**	**274**
15:00	15:15	14	1	27	**42**	0	3	5	**8**	**50**	0	108	5	**113**	26	94	1	**121**	**234**	**284**
15:15	15:30	13	0	16	**29**	0	0	2	**2**	**31**	0	94	9	**103**	15	94	2	**111**	**214**	**245**
15:30	15:45	9	0	29	**38**	0	0	4	**4**	**42**	0	117	7	**124**	9	117	3	**129**	**253**	**295**
15:45	16:00	8	0	20	**28**	1	0	0	**1**	**29**	1	133	7	**141**	16	131	3	**150**	**291**	**320**
16:00	16:15	9	0	22	**31**	0	0	0	**0**	**31**	0	99	13	**113**	7	135	0	**142**	**255**	**286**
16:15	16:30	15	2	23	**40**	2	0	0	**2**	**42**	0	87	14	**101**	16	161	0	**177**	**278**	**320**
16:30	16:45	19	1	26	**46**	0	0	1	**1**	**47**	1	68	11	**80**	9	167	1	**177**	**257**	**304**
16:45	17:00	14	1	19	**34**	0	0	0	**0**	**34**	0	93	14	**107**	16	184	1	**201**	**308**	**342**
17:00	17:15	19	3	28	**50**	2	0	1	**3**	**53**	1	131	24	**157**	16	159	0	**175**	**332**	**385**
17:15	17:30	13	0	19	**32**	0	0	0	**0**	**32**	0	108	18	**126**	25	152	0	**177**	**303**	**335**
17:30	17:45	11	0	14	**25**	1	0	0	**1**	**26**	0	123	20	**143**	26	143	1	**170**	**313**	**339**
17:45	18:00	3	0	15	**18**	0	0	0	**0**	**18**	0	90	15	**105**	25	116	0	**141**	**246**	**264**
TOTAL:		305	9	604	**918**	28	7	13	**48**	**966**	4	3627	465	**4098**	654	2939	18	**3612**	**7710**	**8676**

Note: U-Turns are included in Totals.

Comment:

Public Works - Traffic Services

Work Order
29660

Turning Movement Count - Pedestrian Volume Report

CHAMPAGNE AVE @ WELLINGTON ST

Count Date: Wednesday, April 02, 2014 **Start Time:** 07:00

Time Period	NB Approach (E or W Crossing)	SB Approach (E or W Crossing)	Total	EB Approach (N or S Crossing)	WB Approach (N or S Crossing)	Total	Grand Total
07:00 07:15	0	8	**8**	0	1	**1**	**9**
07:15 07:30	3	10	**13**	0	1	**1**	**14**
07:30 07:45	1	13	**14**	0	0	**0**	**14**
07:45 08:00	4	12	**16**	1	0	**1**	**17**
07:00 08:00	8	43	**51**	1	2	**3**	**54**
08:00 08:15	3	11	**14**	1	0	**1**	**15**
08:15 08:30	3	14	**17**	3	0	**3**	**20**
08:30 08:45	1	11	**12**	2	0	**2**	**14**
08:45 09:00	3	8	**11**	3	0	**3**	**14**
08:00 09:00	10	44	**54**	9	0	**9**	**63**
09:00 09:15	7	5	**12**	2	0	**2**	**14**
09:15 09:30	3	4	**7**	1	0	**1**	**8**
09:30 09:45	3	5	**8**	0	1	**1**	**9**
09:45 10:00	5	3	**8**	0	0	**0**	**8**
09:00 10:00	18	17	**35**	3	1	**4**	**39**
11:30 11:45	3	2	**5**	1	0	**1**	**6**
11:45 12:00	1	10	**11**	0	0	**0**	**11**
12:00 12:15	3	3	**6**	1	1	**2**	**8**
12:15 12:30	2	0	**2**	0	0	**0**	**2**
11:30 12:30	9	15	**24**	2	1	**3**	**27**
12:30 12:45	0	1	**1**	2	0	**2**	**3**
12:45 13:00	0	1	**1**	1	0	**1**	**2**
13:00 13:15	0	2	**2**	0	0	**0**	**2**
13:15 13:30	0	1	**1**	1	0	**1**	**2**
12:30 13:30	0	5	**5**	4	0	**4**	**9**
15:00 15:15	2	0	**2**	0	1	**1**	**3**
15:15 15:30	7	0	**7**	0	1	**1**	**8**
15:30 15:45	5	0	**5**	0	0	**0**	**5**
15:45 16:00	6	0	**6**	0	2	**2**	**8**
15:00 16:00	20	0	**20**	0	4	**4**	**24**
16:00 16:15	0	20	**20**	0	0	**0**	**20**
16:15 16:30	0	7	**7**	0	0	**0**	**7**
16:30 16:45	0	4	**4**	0	0	**0**	**4**
16:45 17:00	0	6	**6**	0	0	**0**	**6**
16:00 17:00	0	37	**37**	0	0	**0**	**37**
17:00 17:15	0	0	**0**	0	0	**0**	**0**
17:15 17:30	0	0	**0**	0	0	**0**	**0**
17:30 17:45	0	0	**0**	0	0	**0**	**0**
17:45 18:00	0	0	**0**	0	0	**0**	**0**
17:00 18:00	0	0	**0**	0	0	**0**	**0**
Total	65	161	**226**	19	8	**27**	**253**

Comment:

Public Works - Traffic Services

Turning Movement Count - Cyclist Volume Report

Work Order
29660

CHAMPAGNE AVE @ WELLINGTON ST

Count Date: Wednesday, April 02, 2014 **Start Time:** 07:00

	CHAMPAGNE AVE			WELLINGTON ST			
Time Period	Northbound	Southbound	**Street Total**	Eastbound	Westbound	**Street Total**	**Grand Total**
07:00 08:00	0	0	**0**	7	1	**8**	**8**
08:00 09:00	0	0	**0**	10	0	**10**	**10**
09:00 10:00	1	0	**1**	5	0	**5**	**6**
11:30 12:30	0	0	**0**	1	0	**1**	**1**
12:30 13:30	0	0	**0**	0	2	**2**	**2**
15:00 16:00	0	0	**0**	0	2	**2**	**2**
16:00 17:00	0	0	**0**	0	0	**0**	**0**
17:00 18:00	0	0	**0**	0	0	**0**	**0**
Total	1	0	**1**	23	5	**28**	**29**

Comment:

Note: These volumes consists of bicycles only (no mopeds or motorcycles) and ARE NOT included in the Turning Movement Count Summary.

Public Works - Traffic Services

W.O. 29660

Turning Movement Count - Heavy Vehicle Report

CHAMPAGNE AVE @ WELLINGTON ST

Survey Date: Wednesday, April 02, 2014

		CHAMPAGNE AVE									WELLINGTON ST									
		Northbound				Southbound					Eastbound				Westbound					
Time Period		LT	ST	RT	N TOT	LT	ST	RT	S TOT	STR TOT	LT	ST	RT	E TOT	LT	ST	RT	W TOT	STR TOT	Grand Total
07:00	08:00	0	0	6	**6**	7	0	0	**7**	**13**	0	6	1	**7**	3	11	2	**16**	**23**	**36**
08:00	09:00	1	0	4	**5**	8	0	0	**8**	**13**	0	11	2	**13**	5	17	0	**22**	**35**	**48**
09:00	10:00	2	0	5	**7**	4	0	0	**4**	**11**	0	21	1	**22**	4	15	2	**21**	**43**	**54**
11:30	12:30	1	0	9	**10**	0	0	0	**0**	**10**	0	9	4	**13**	7	7	0	**14**	**27**	**37**
12:30	13:30	4	1	9	**14**	0	0	0	**0**	**14**	0	21	10	**31**	9	12	0	**21**	**52**	**66**
15:00	16:00	1	0	2	**3**	1	0	0	**1**	**4**	1	14	2	**17**	4	11	8	**23**	**40**	**44**
16:00	17:00	2	0	2	**4**	1	0	0	**1**	**5**	0	6	1	**7**	1	4	1	**6**	**13**	**18**
17:00	18:00	2	0	2	**4**	0	0	0	**0**	**4**	1	5	0	**6**	0	11	1	**12**	**18**	**22**
Sub Total		13	1	39	**53**	21	0	0	**21**	**74**	2	93	21	**116**	33	88	14	**135**	**251**	**325**
U-Turns (Heavy Vehicles)					**0**				**0**	**0**				**0**				**0**	**0**	**0**
Total		13	1	39	**0**	21	0	0	**21**	**74**	2	93	21	**116**	33	88	14	**135**	**251**	**325**

Heavy Vehicles are vehicles having one rear axle with four or more wheels, or having two or more rear axles. These vehicles include most O.C. Transpo, school and inter-city buses. Further, they ARE included in the Turning Movement Count Summary.

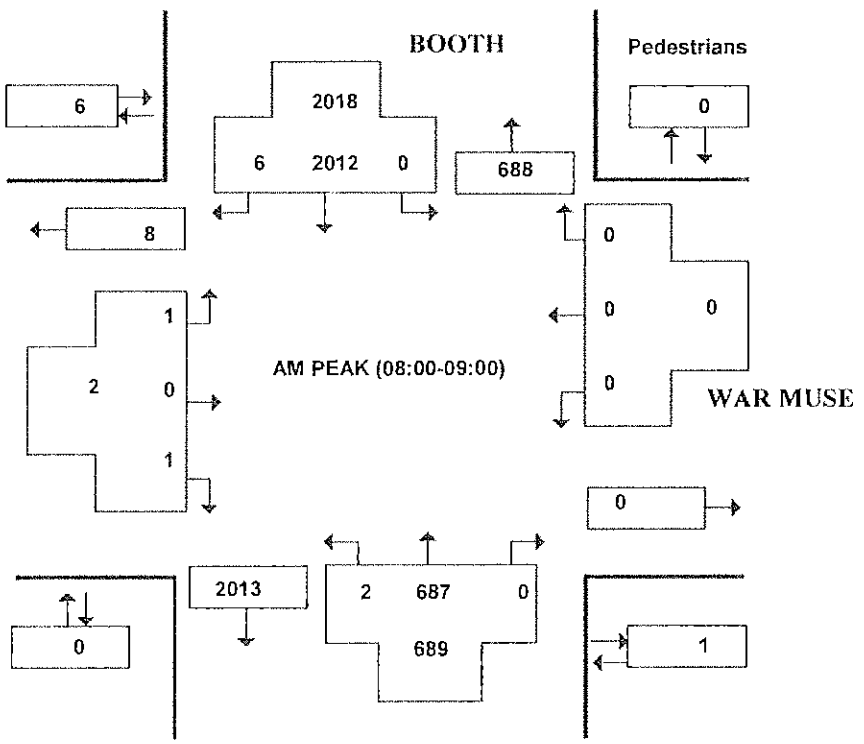
BOOTH ST and WAR MUSEUM

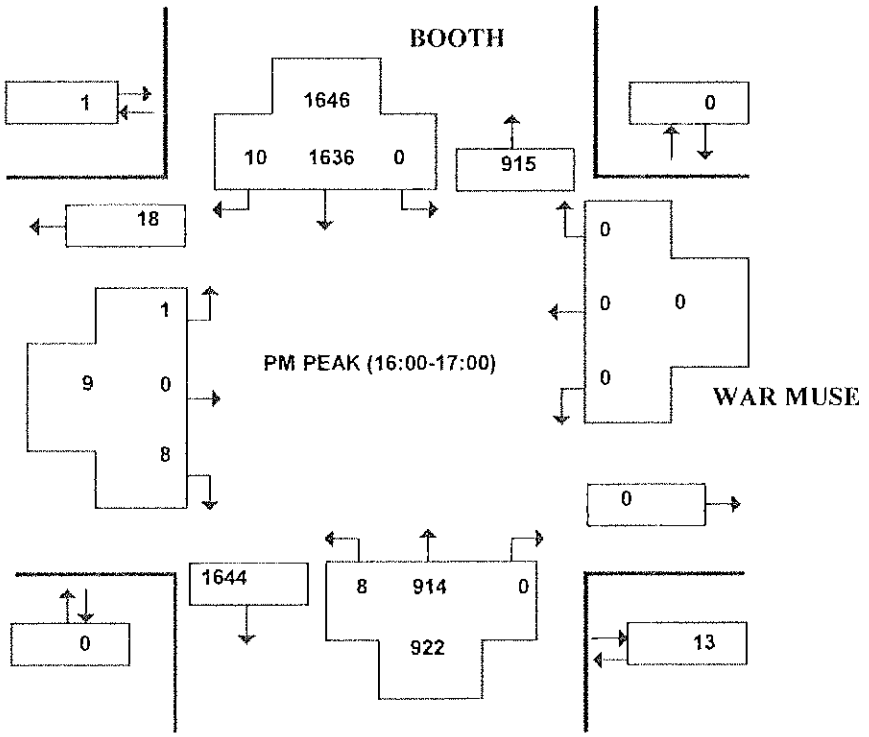
(ULRS Listing BOOTH & WAR MUSE)

Survey Date: Thursday 18 July 2013
Conditions: DRY
Start Time: 0700

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

AADT Factor
Thursday in July is 9





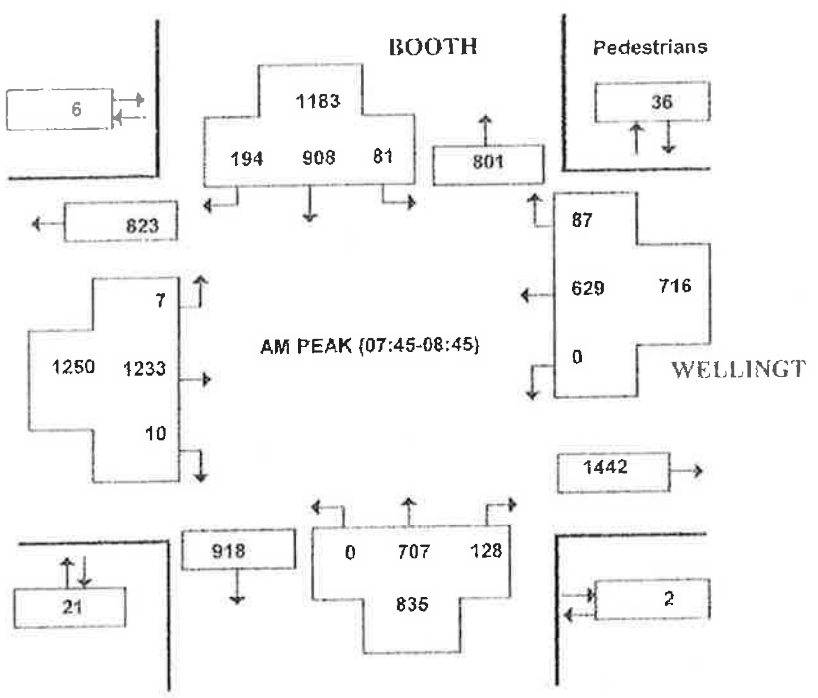
BOOTH ST and WELLINGTON ST /OT. R.

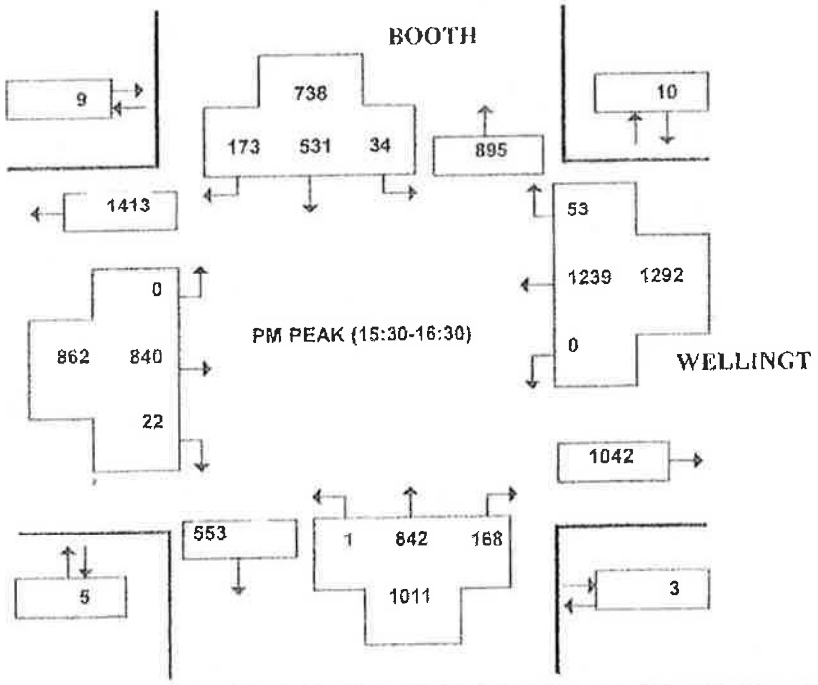
(ULRS Listing BOOTH & WELLINGT)

Survey Date: Friday 10 May 2013
Conditions: dry
Start Time: 0700

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

AADT Factor
Friday in May is
8





Approved by : MO

Printed on : 01/08/2013

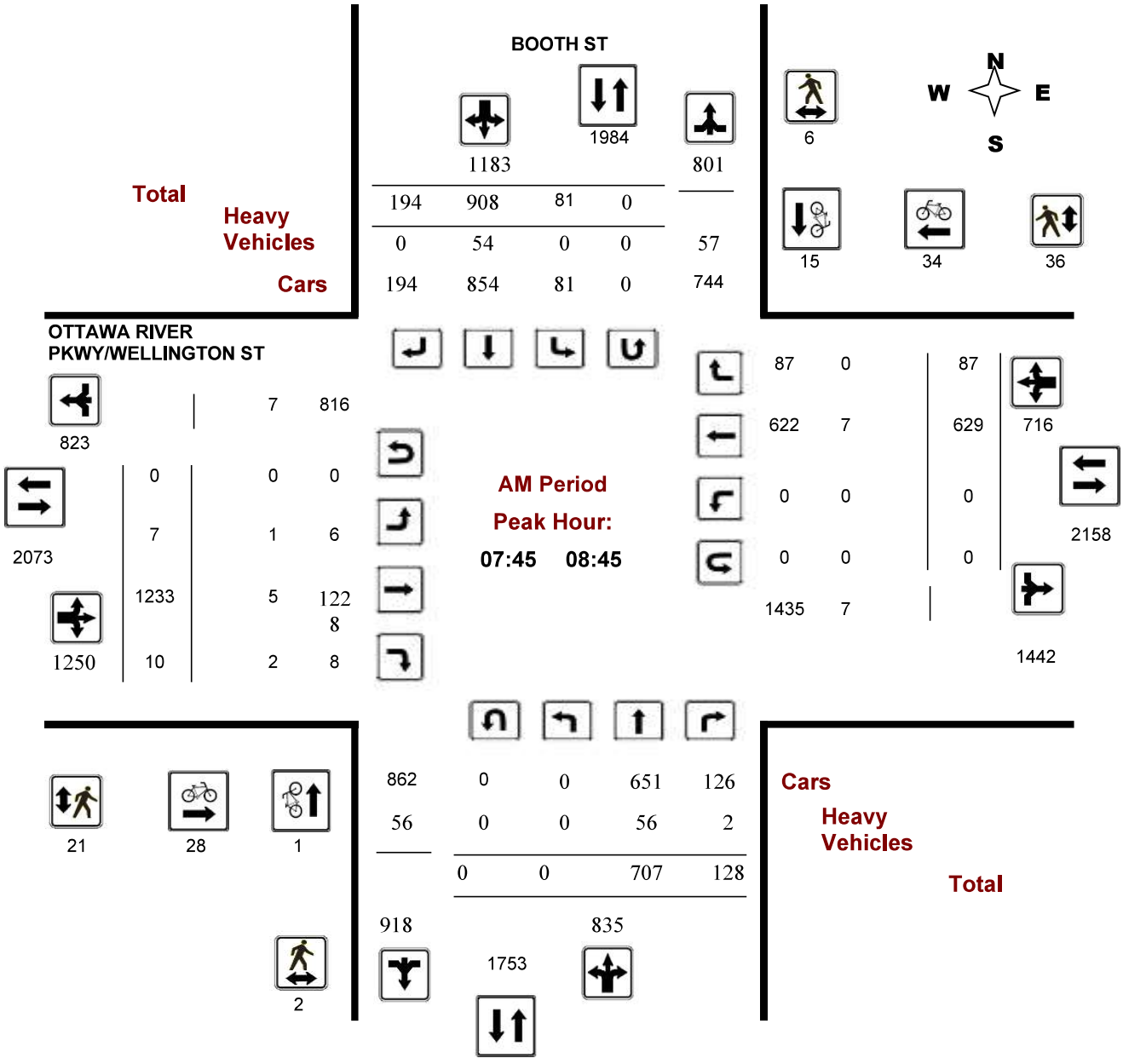
Public Works - Traffic Services

Turning Movement Count - Full Study Peak Hour Diagram

BOOTH ST @ OTTAWA RIVER PKWY/WELLINGTON ST

Survey Date: Friday, May 10, 2013 **WO No:** 31217

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



Comments

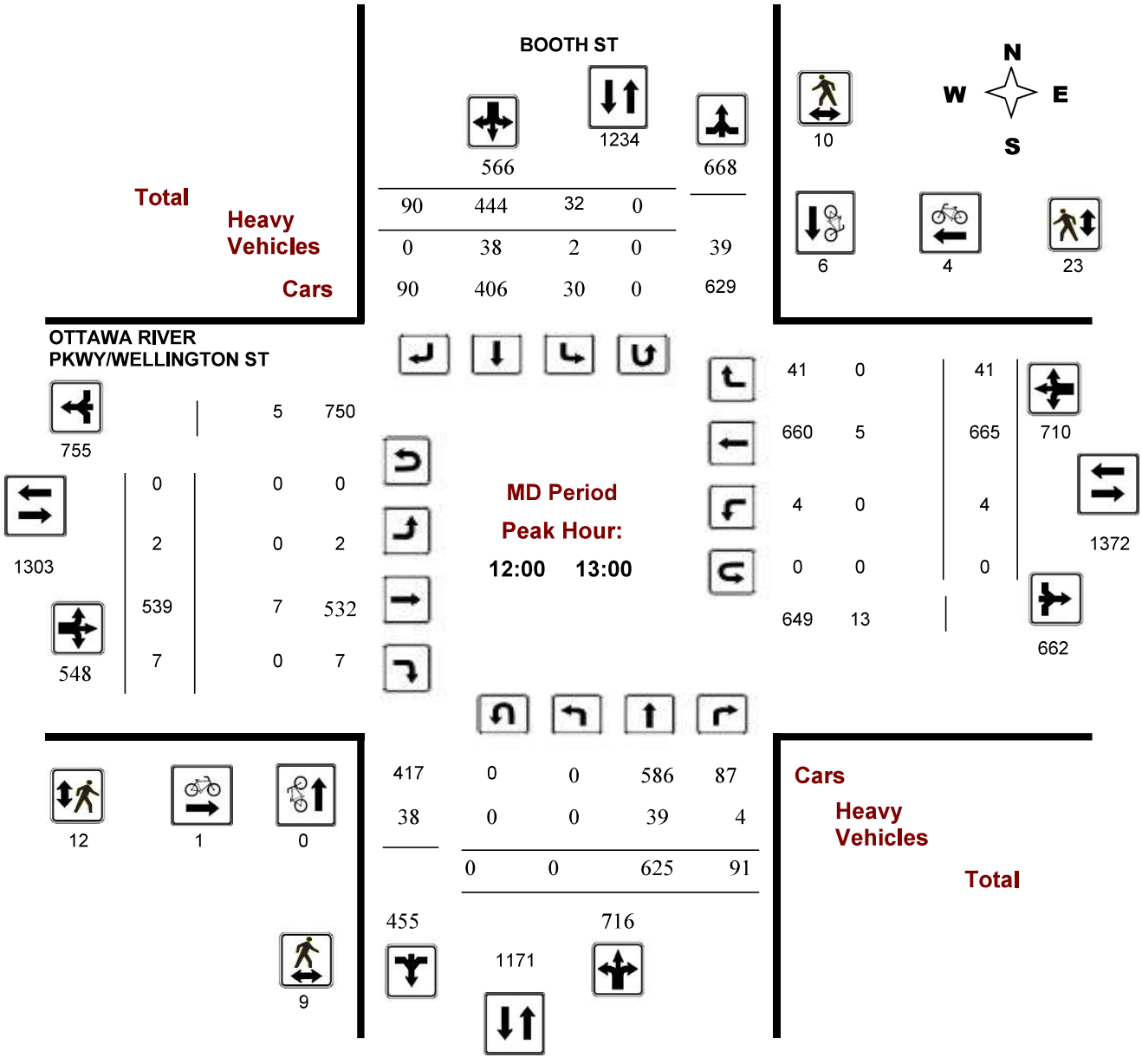
Public Works - Traffic Services

Turning Movement Count - Full Study Peak Hour Diagram

BOOTH ST @ OTTAWA RIVER PKWY/WELLINGTON ST

Survey Date: Friday, May 10, 2013 **WO No:** 31217

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



Comments

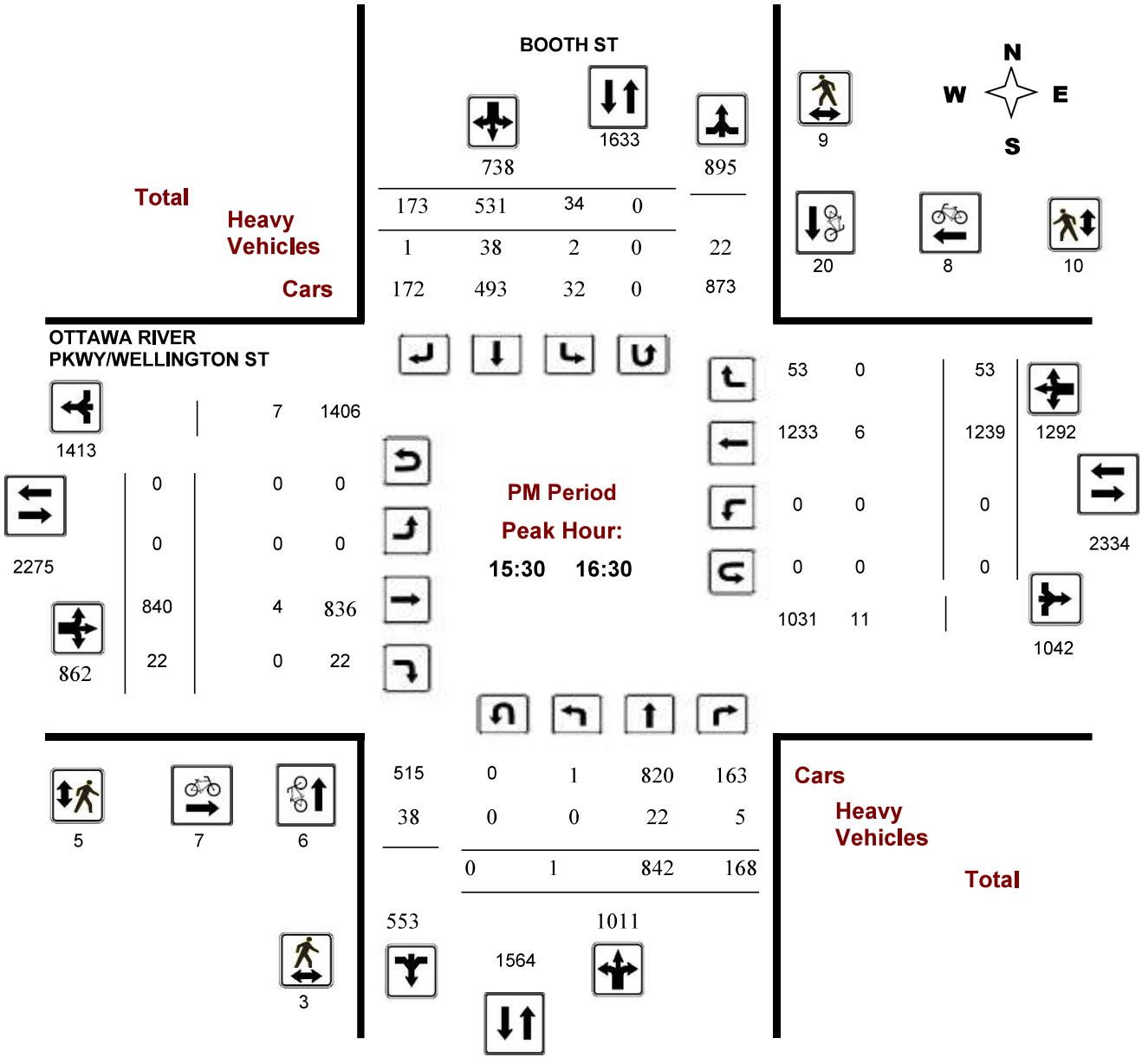
Public Works - Traffic Services

Turning Movement Count - Full Study Peak Hour Diagram

BOOTH ST @ OTTAWA RIVER PKWY/WELLINGTON ST

Survey Date: Friday, May 10, 2013 **WO No:** 31217

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



Total	173	531	34	0
Heavy Vehicles	1	38	2	0
Cars	172	493	32	0

Total	515	0	1	820	163
Heavy Vehicles	38	0	0	22	5
Cars		0	1	842	168

	7	1406	
0	0	0	53
0	0	0	1239
840	4	836	0
22	0	22	0

53	0	
1233	6	
0	0	
0	0	
1031	11	

Comments

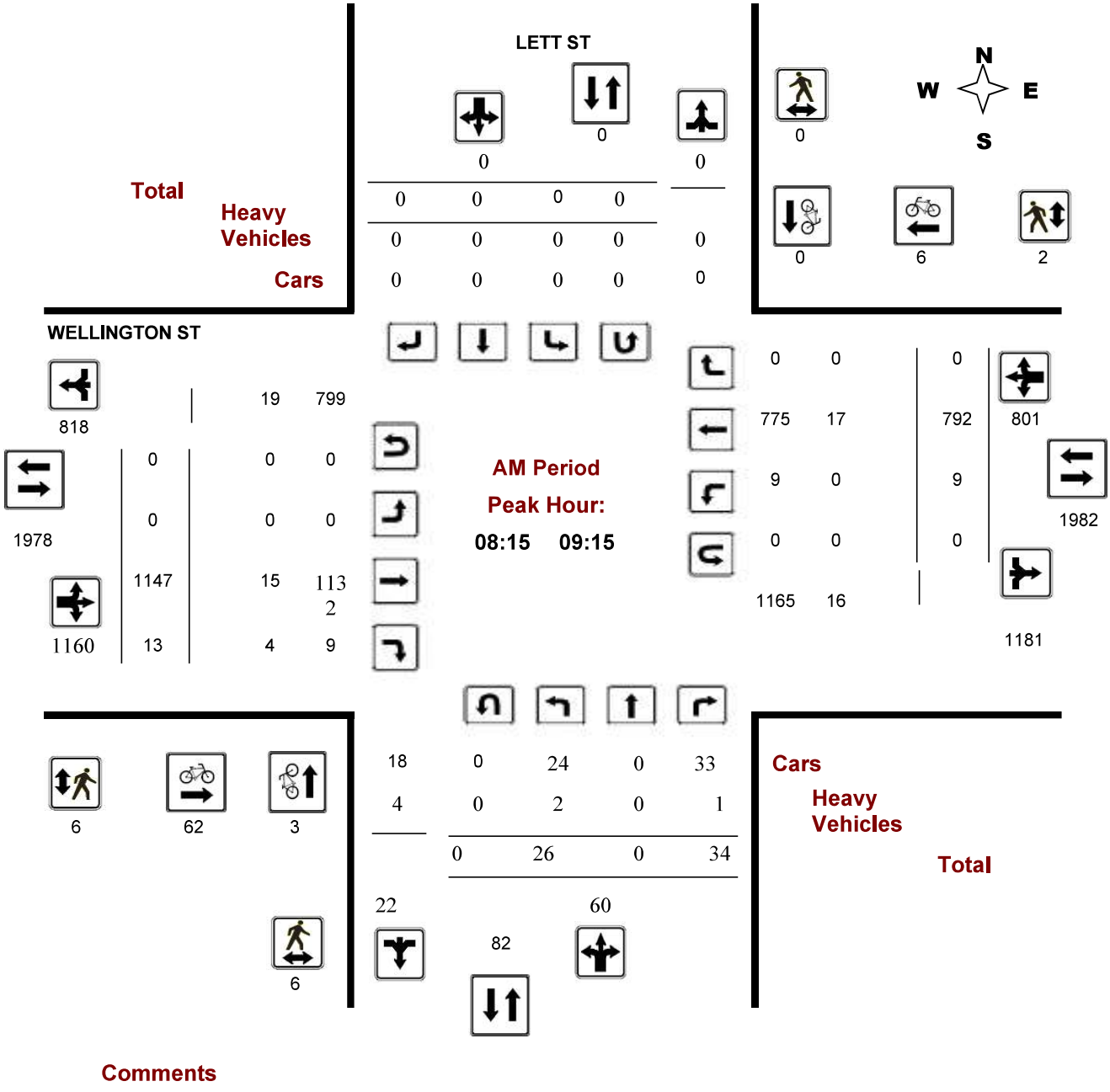
Public Works - Traffic Services

Turning Movement Count - Full Study Peak Hour Diagram

WELLINGTON ST @ LETT ST

Survey Date: Monday, August 17, 2015
Start Time: 07:00

WO No: 35251
Device: Jamar Technologies, Inc



Comments

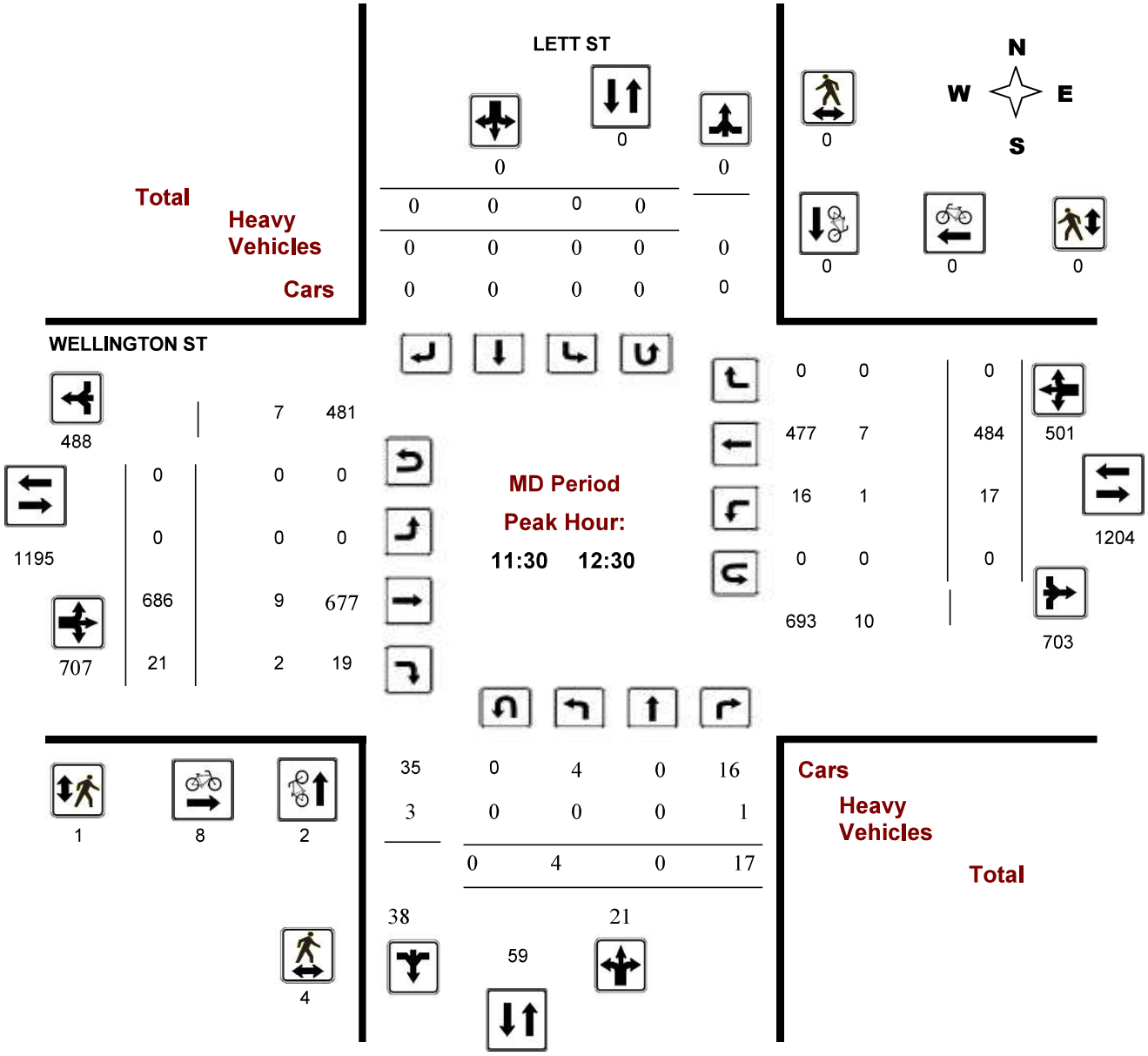
Public Works - Traffic Services

Turning Movement Count - Full Study Peak Hour Diagram

WELLINGTON ST @ LETT ST

Survey Date: Monday, August 17, 2015
Start Time: 07:00

WO No: 35251
Device: Jamar Technologies, Inc



Comments

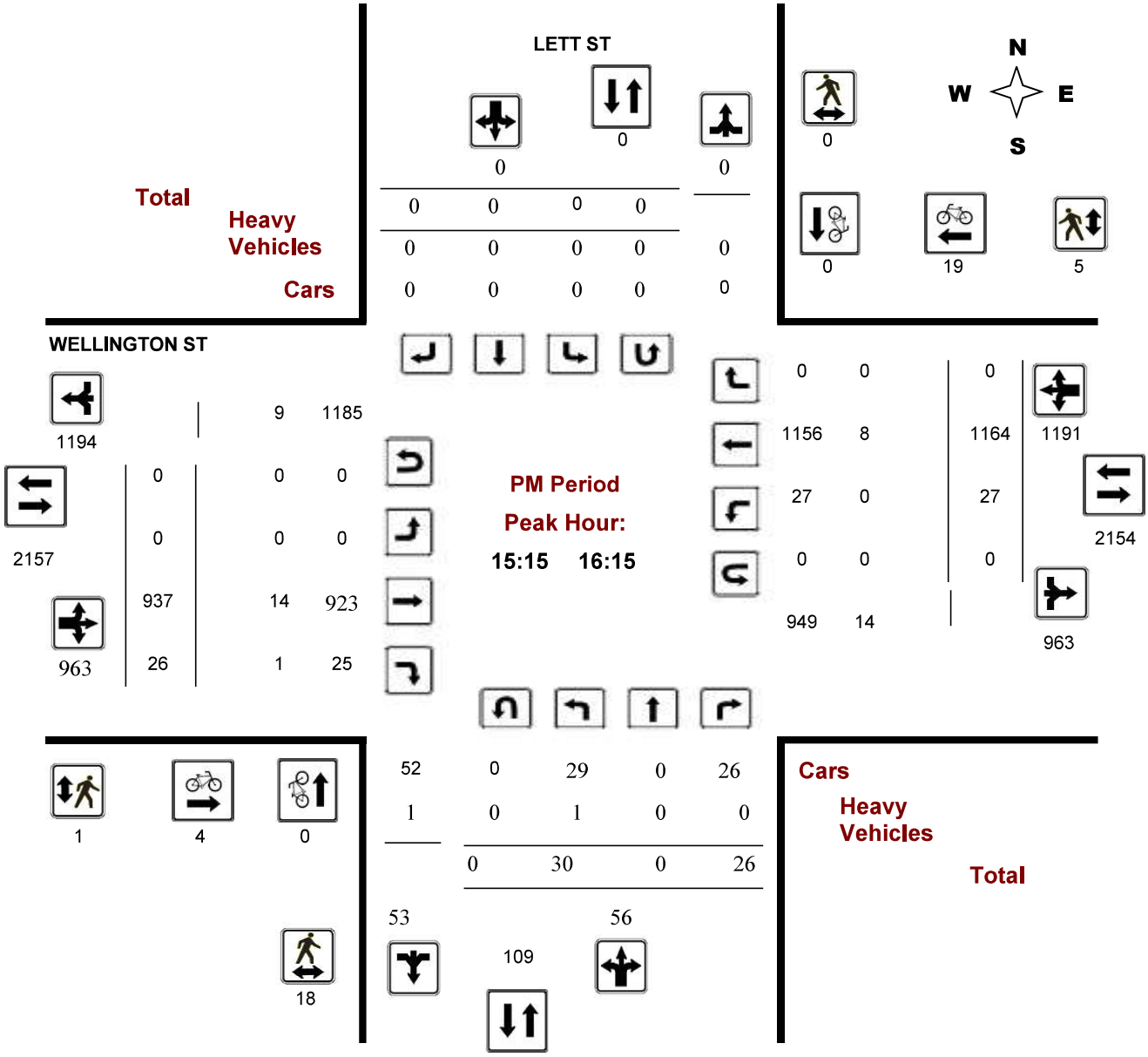
Public Works - Traffic Services

Turning Movement Count - Full Study Peak Hour Diagram

WELLINGTON ST @ LETT ST

Survey Date: Monday, August 17, 2015
Start Time: 07:00

WO No: 35251
Device: Jamar Technologies, Inc



Comments

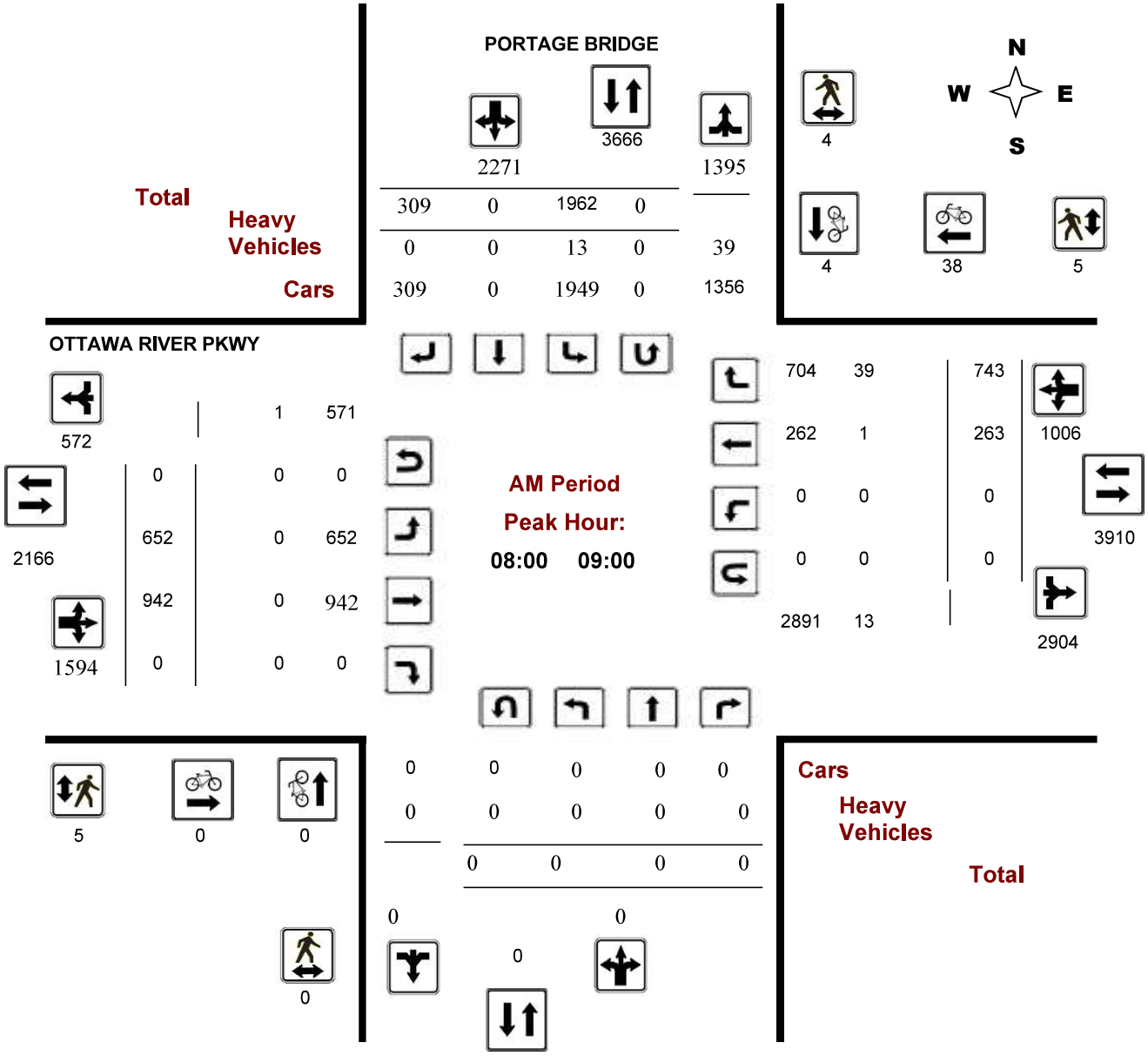
Public Works - Traffic Services

Turning Movement Count - Full Study Peak Hour Diagram

OTTAWA RIVER PKWY @ PORTAGE BRIDGE

Survey Date: Wednesday, June 11, 2014
Start Time: 07:00

WO No: 29831
Device: Jamar Technologies, Inc



Comments

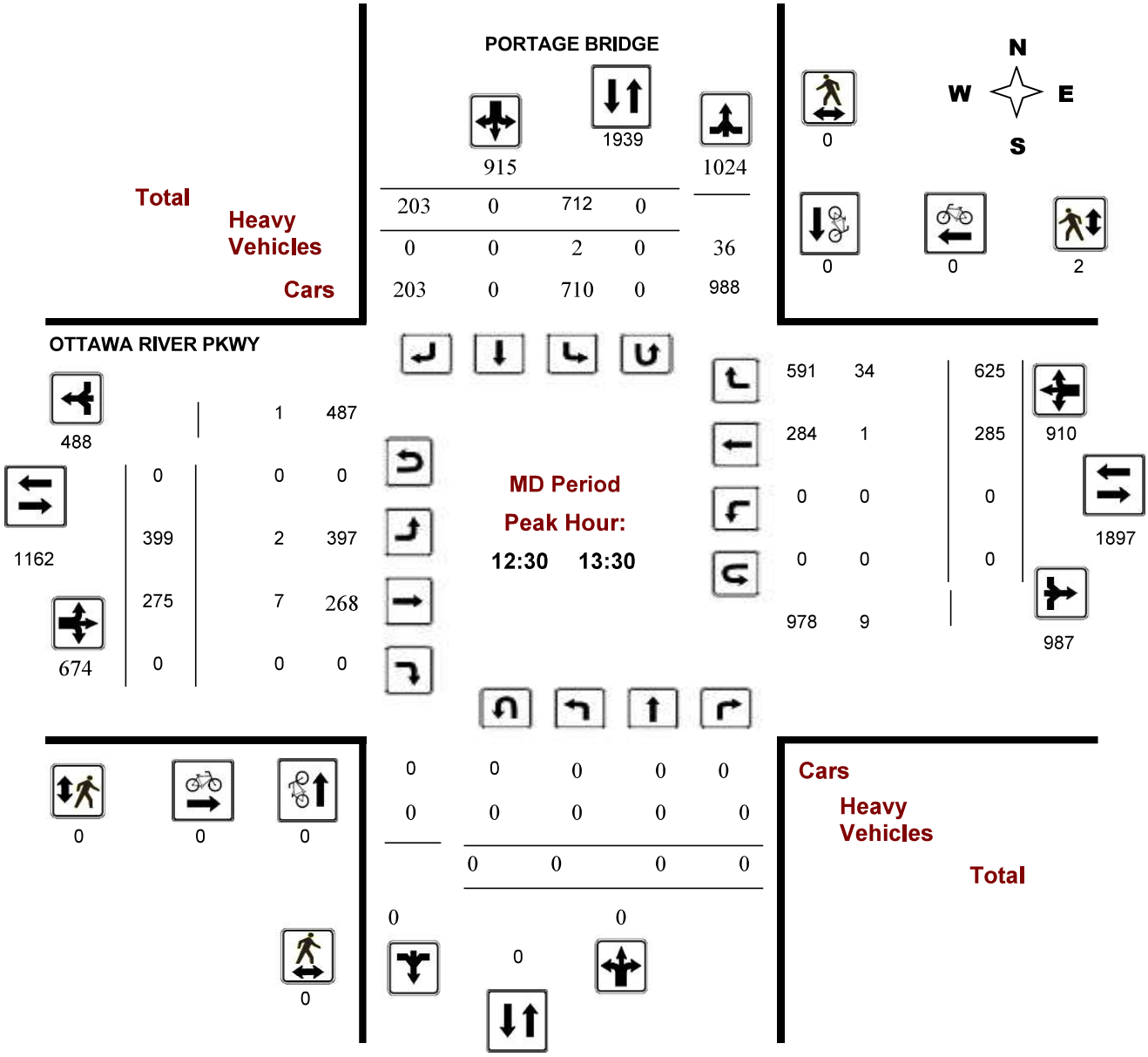
Public Works - Traffic Services

Turning Movement Count - Full Study Peak Hour Diagram

OTTAWA RIVER PKWY @ PORTAGE BRIDGE

Survey Date: Wednesday, June 11, 2014
Start Time: 07:00

WO No: 29831
Device: Jamar Technologies, Inc



Comments

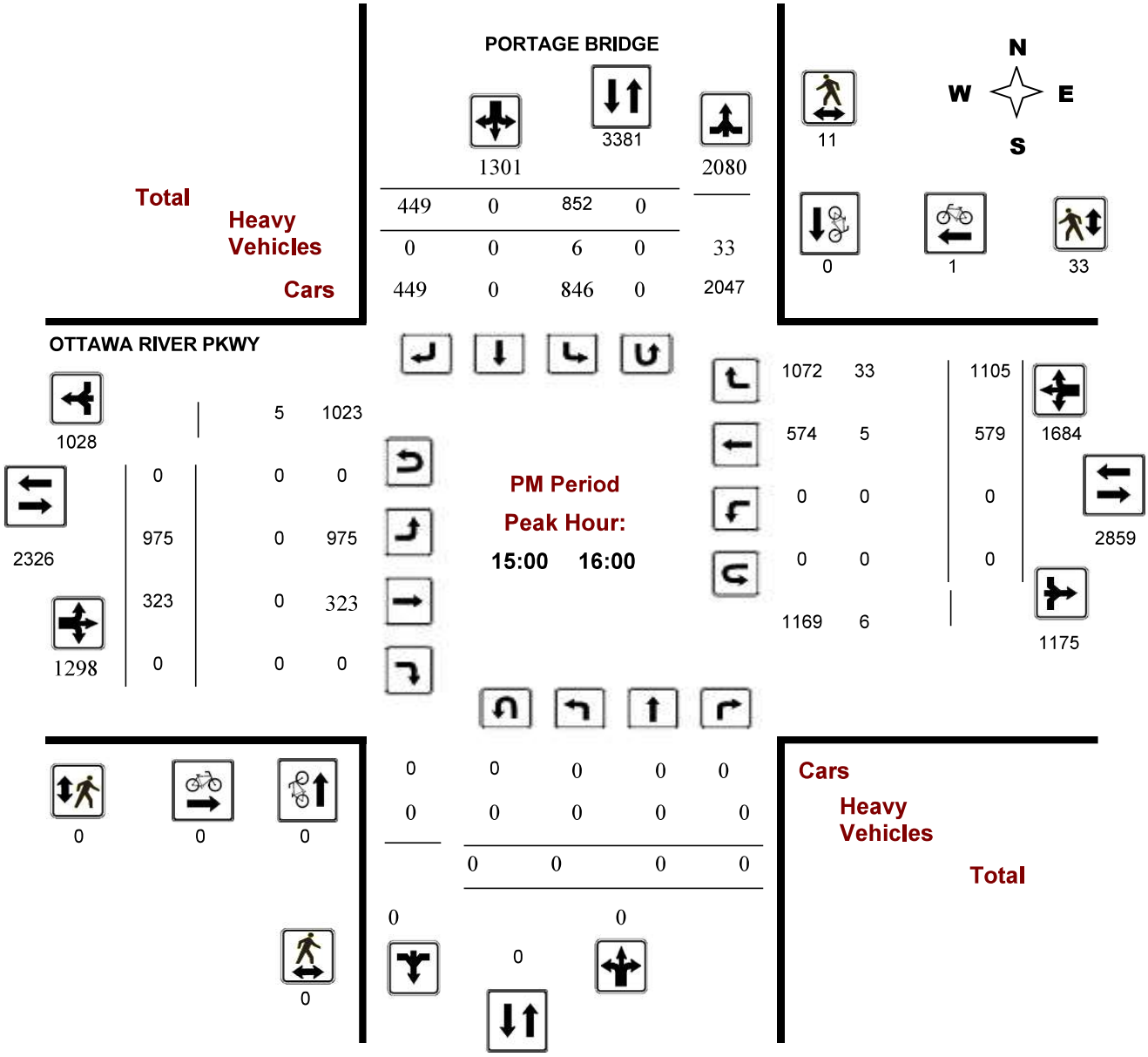
Public Works - Traffic Services

Turning Movement Count - Full Study Peak Hour Diagram

OTTAWA RIVER PKWY @ PORTAGE BRIDGE

Survey Date: Wednesday, June 11, 2014
Start Time: 07:00

WO No: 29831
Device: Jamar Technologies, Inc



Comments

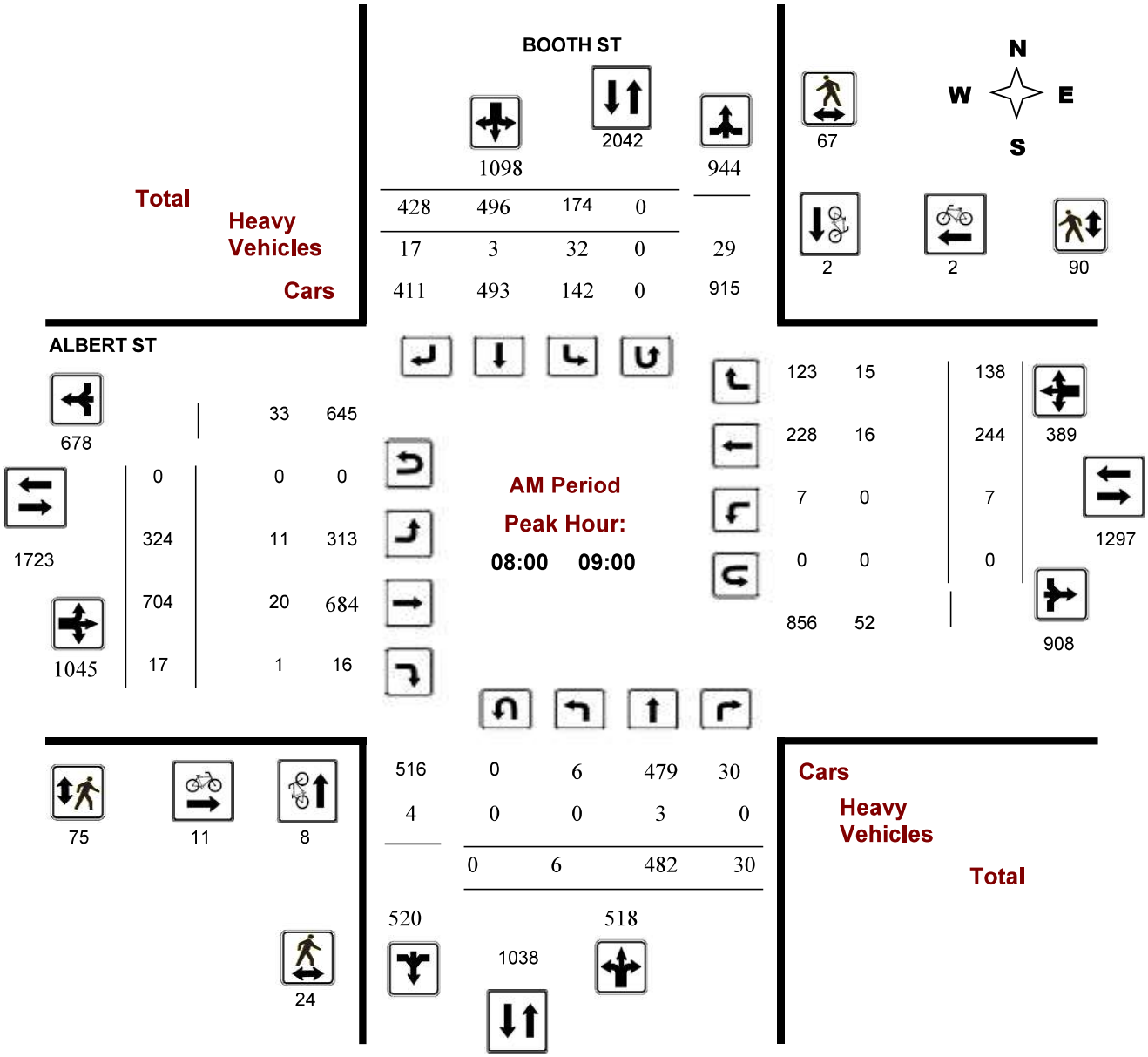
Public Works - Traffic Services

Turning Movement Count - Full Study Peak Hour Diagram

ALBERT ST @ BOOTH ST

Survey Date: Wednesday, April 02, 2014 **WO No:** 1294

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



Comments

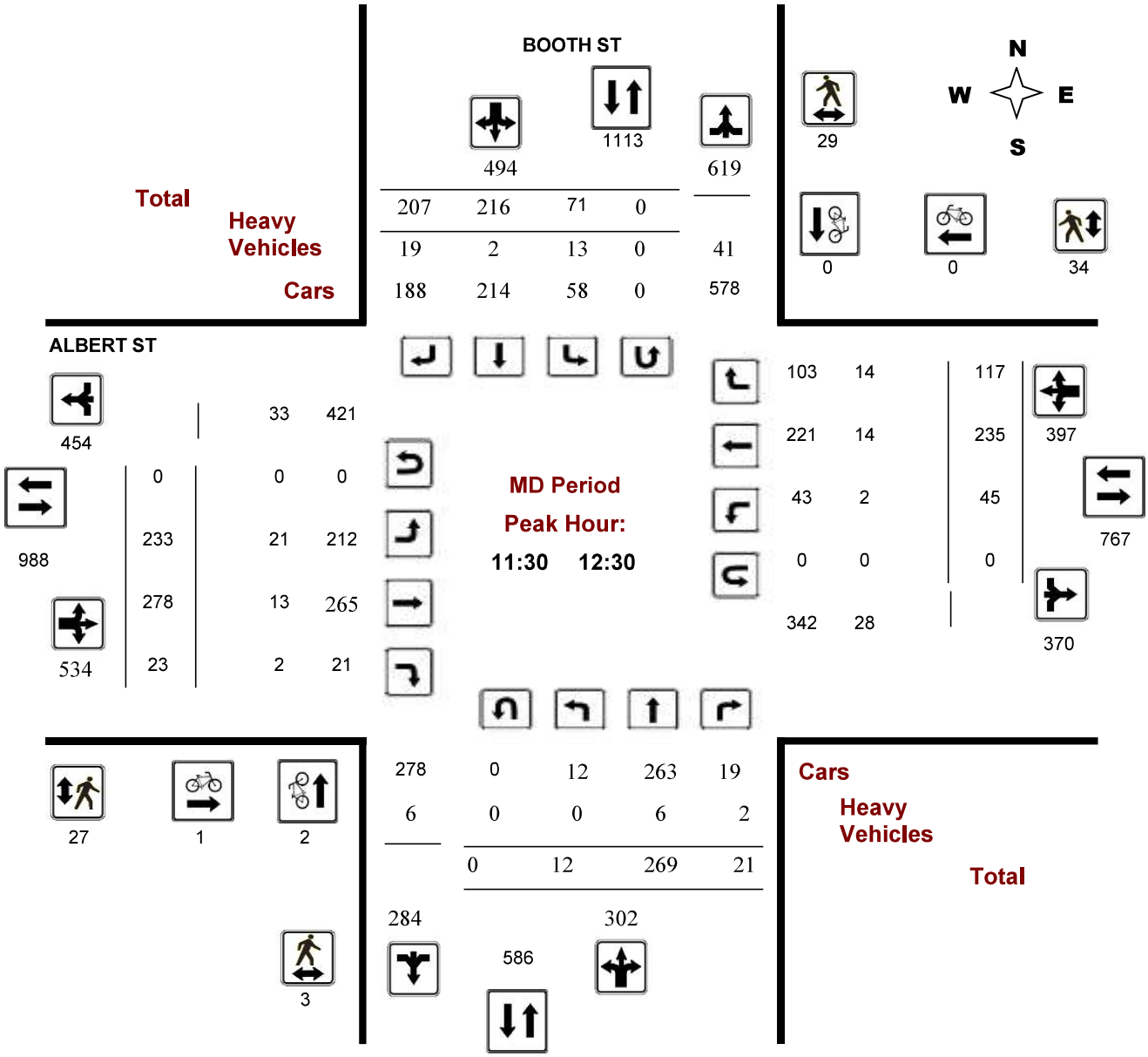
Public Works - Traffic Services

Turning Movement Count - Full Study Peak Hour Diagram

ALBERT ST @ BOOTH ST

Survey Date: Wednesday, April 02, 2014 **WO No:** 1294

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



Comments

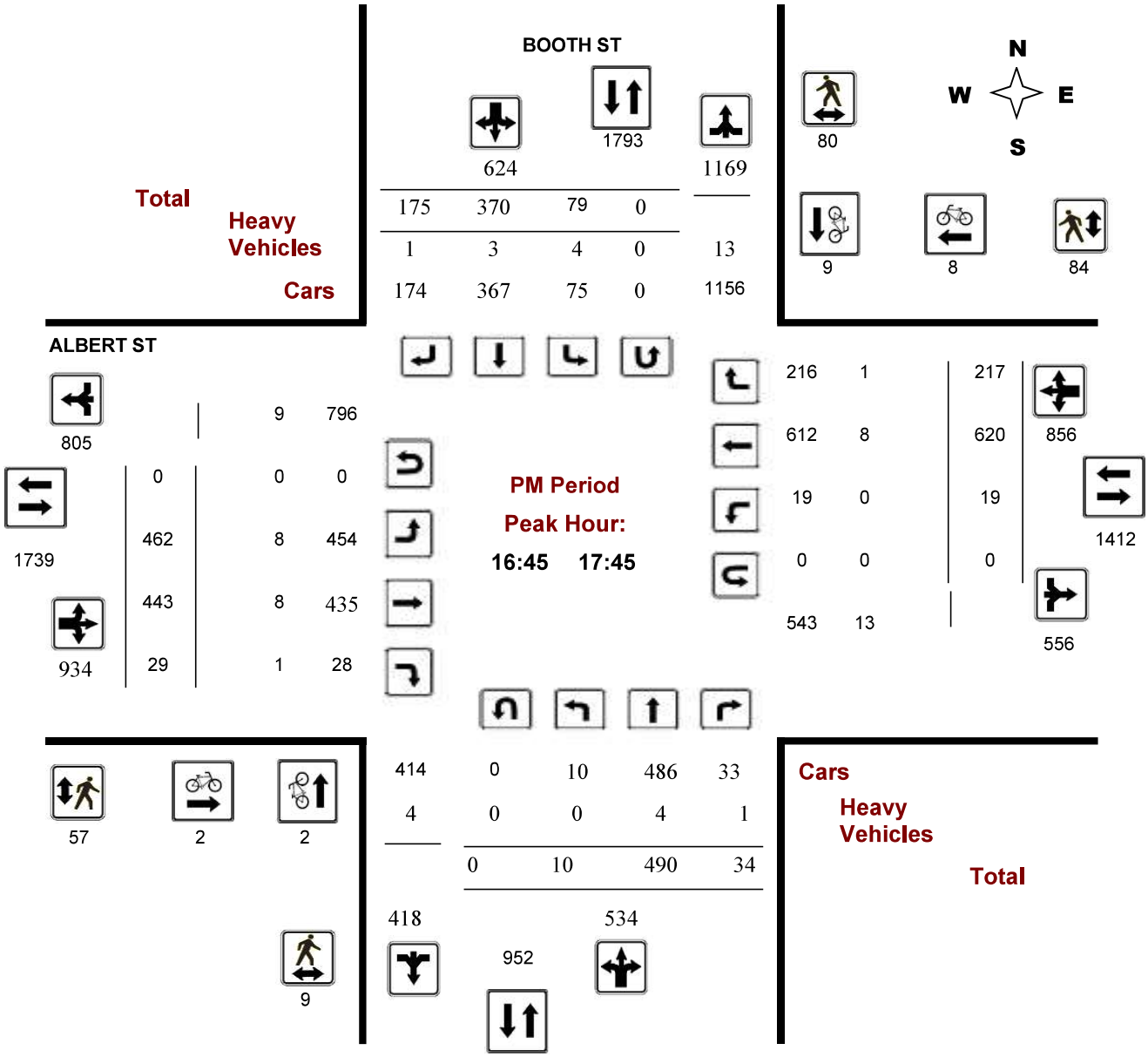
Public Works - Traffic Services

Turning Movement Count - Full Study Peak Hour Diagram

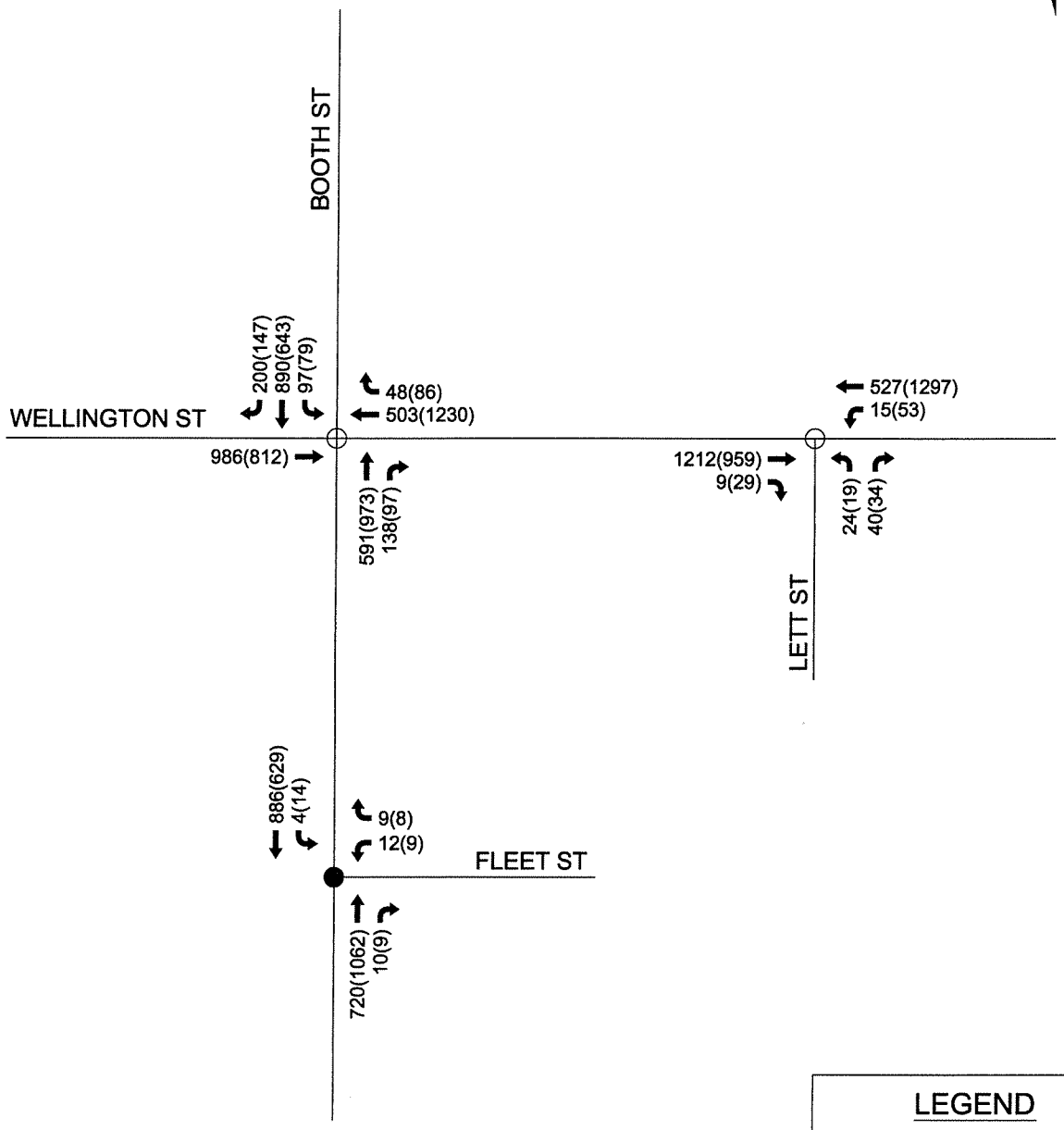
ALBERT ST @ BOOTH ST

Survey Date: Wednesday, April 02, 2014 **WO No:** 1294

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



Comments



LEGEND

- Unsignalized Intersection
- Signalized Intersection
- xx VPH AM Peak Hour
- (xx) VPH PM Peak Hour

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LEBRETON PHASE III, 300 LETT STREET

2013 TOTAL TRAFFIC

105006 APRIL 2011 FIGURE 7

SHT8X11.DWG - 216mmX278mm

Traffic Signal Timing

City of Ottawa, Transportation Services Department

Traffic Signal Operations Unit

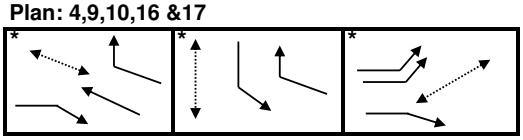
Intersection:	**Main:** Wellington	**Side:**	Portage Bridge
Controller:	**MS-3200**	**TSD:**	**5474**
Author:	Matthew Anderson	**Date:**	06-May-2020

Existing Timing Plans†

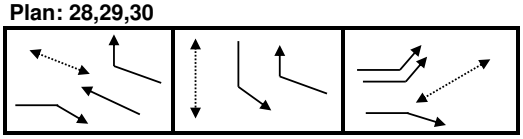
	Plan								**Ped Minimum Time**		
	Night 4	**Evening** 9	**Weekend AM** 10	**Morning** 16	**Weekend** 17	**AM Peak** 28	**Off Peak** 29	**PM Peak** 30	***Walk***	***DW***	***A+R***
Cycle	Free	Free	Free	Free	Free	Free	Free	Free			
Offset	X	X	X	X	X	X	X	X			
EB Thru	max=26.5	max=27.5	max=36.5	max=27.5	max=36.5	max=27.5	max=36.5	max=36.5	-	-	3.3+3.2
WB Thru	max=26.5	max=27.5	max=36.5	max=27.5	max=36.5	max=27.5	max=36.5	max=36.5	7	13	3.3+3.2
WB Right (fp)	max=26.1	max=31.1	max=41.1	max=51.1	max=31.1	max=51.1	44.1	44.1	-	-	3.3+2.8
SB Thru	max=26.1	max=31.1	max=41.1	max=58.1	max=31.1	max=51.1	44.1	44.1	26	12	3.3+2.8
EB Left (fp)	max=20.8	max=26.8	max=33.8	max=40.8	max=45.8	42.8	42.8	max=55.8	25	12	3.3+2.5

Phasing Sequence‡

Plan: 4,9,10,16 &17



Plan: 28,29,30



Notes:

1) For all plans except 28,29,30, the EW thru movements have minimum recalls of 10 seconds green. There are no ped recalls

2) For all plans except 28,29,30 the maximum splits provided will be extended if the pedestrian phases are actuated to satisfy the walk and flashing-don't-walk intervals.

Schedule

Weekday

Time	Plan
0:00	4
6:30	16
7:00	28
9:30	29
14:30	30
17:00	9
22:30	4

Weekend

Time	Plan
0:15	4
7:00	10
10:00	17
22:00	4

Notes

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

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

Asterisk (*) Indicates actuated phase

(fp): Fully Protected Left Turn

◄·····► Pedestrian signal

Cost is $59.96 ($53.06 + HST)

Traffic Signal Timing

City of Ottawa, Transportation Services Department

Traffic Signal Operations Unit

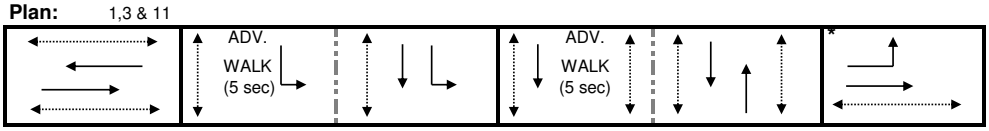
Intersection:	**Main:** Albert	**Side:**	Booth
Controller:	**ATC-3**	**TSD:**	**5465**
Author:	Matthew Anderson	**Date:**	09-Aug-2021

Existing Timing Plans†

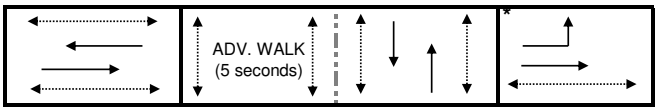
	Plan						Ped Minimum Time		
	AM Peak	**Off Peak**	**PM Peak**	**Night**	**Weekend**	**AM Heavy**	***Walk***	***DW***	***A+R***
	1	2	3	4	5	11			
Cycle	120	85	120	85	85	120			
Offset	104	38	9	3	38	104			
EB Thru	55	50	70	37	50	67	7	23	3.3+3.2
WB Thru	37	37	41	37	37	36	7	23	3.3+3.2
SB Left	25	-	12	13	-	15	-	-	3.3+3.2
NB Thru	40	35	38	35	35	38	7	21	3.3+3.2
SB Thru	65	35	50	48	35	53	7	21	3.3+3.2
EB Left	18	13	29	-	13	31	-	-	3.3+3.2

Phasing Sequence‡

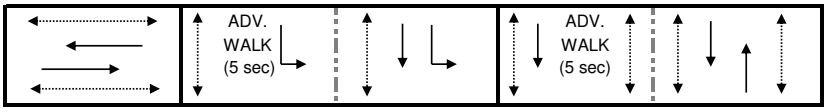
Plan: 1,3 & 11



Plan: 2 & 5



Plan: 4



Notes:
1) Plans 1, 3, and 11, have an alternative walk time of 10 seconds for the NS thru movements.
2) The SB thru movement is prohibited from 11:00pm to 6:00am.
3) The SB and WB right turn on red is prohibited on weekdays from 7:00am to 9:00pm.
4) The WB left turn is prohibited on weekdays from 7:00am to 9:00am, and 3:30pm to 5:30pm with bicycles excepted

Schedule

Weekday

Time	Plan
0:15	4
6:00	1
8:00	11
9:30	2
15:00	3
18:30	2
23:00	4

Saturday

Time	Plan
0:15	4
6:00	2
12:00	5
18:00	2
23:00	4

Sunday

Time	Plan
0:15	4
8:00	2
12:00	5
18:00	2
23:00	4

NOTES

†: Time for each direction includes amber and all red intervals
‡: Start of first phase should be used as reference point for offset
Asterisk (*) Indicates actuated phase
(fp): Fully Protected Left Turn
◄·····► Pedestrian signal

Cost is $59.96 ($53.06 + HST)

Traffic Signal Timing

City of Ottawa, Transportation Services Department

Traffic Signal Operations Unit

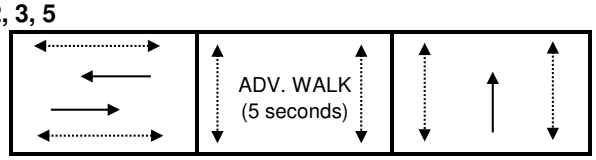
Intersection:	**Main:**	Albert / Slater	**Side:**	Empress	
Controller:	**ATC3**			**TSD:**	**5658**
Author:	Matthew Anderson			**Date:**	09-Aug-2021

Existing Timing Plans†

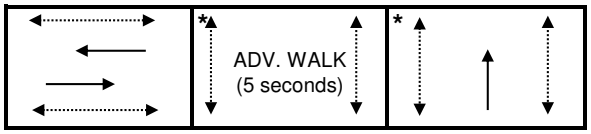
	Plan					**Ped Minimum Time**		
	AM Peak 1	**Off Peak** 2	**PM Peak** 3	**Night** 4	**Weekend** 5	***Walk***	***DW***	***A+R***
Cycle	120	75	120	70	75			
Offset	87	6	87	X	6			
EB Thru	81	36	81	31	36	7	15	3.3+3.8
WB Thru	81	36	81	31	36	7	15	3.3+3.8
NB Thru	39	39	39	39	39	10	23	3.3+3.0
SB Thru	39	39	39	39	39	10	23	3.3+3.0

Phasing Sequence‡

Plan: 1, 2, 3, 5



Plan: 4



Schedule

Weekday

Time	Plan
0:15	4
6:00	1
9:30	2
15:00	3
18:30	2
22:30	4

Weekend

Time	Plan
0:15	4
8:00	2
22:00	4

Notes

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

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

Asterisk (*) Indicates actuated phase

(fp): Fully Protected Left Turn

◄·····► Pedestrian signal

Cost is $59.96 ($53.06 + HST)

Traffic Signal Timing

City of Ottawa, Transportation Services Department

Traffic Signal Operations Unit

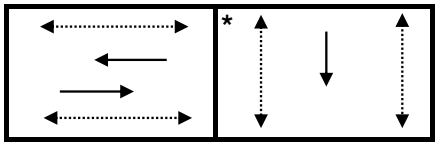
Intersection:	***Main:*** SJAM	***Side:***	Vimy
Controller:	**ATC 3**	**TSD:**	**6570**
Author:	Matthew Anderson	**Date:**	11-Aug-2021

Existing Timing Plans†

	Plan					**Ped Minimum Time**		
	AM Peak 1	**Off Peak** 2	**PM Peak** 3	**Night** 4	**Weekend** 5	***Walk***	***DW***	***A+R***
Cycle	95	80	120	80	80			
Offset	59	10	37	64	10			
EB Thru	62	47	87	47	47	-	-	3.7+2.3
WB Thru	62	47	87	47	47	20	11	3.7+2.3
SB Thru	33	33	33	33	33	7	19	3.3+3.0

Phasing Sequence‡

Plan: All



Schedule

Weekday

Time	Plan
0:15	4
6:00	1
9:30	2
15:00	3
18:00	2
22:00	4

Weekend

Time	Plan
0:15	4
8:00	2
12:00	5
18:00	2
22:00	4

Notes

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

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

Asterisk (*) Indicates actuated phase

(fp): Fully Protected Left Turn

◄·····► Pedestrian signal

Cost is $59.96 ($53.06 + HST)

Traffic Signal Timing

City of Ottawa, Transportation Services Department

Traffic Signal Operations Unit

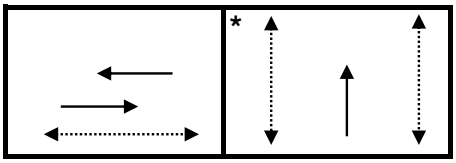
Intersection:	**Main:** Wellington	**Side:**	Lett
Controller:	**MS-3200**	**TSD:**	**6565**
Author:	Matthew Anderson	**Date:**	11-Aug-2021

Existing Timing Plans†

	Plan					Ped Minimum Time		
	AM Peak 1	**Off Peak** 2	**PM Peak** 3	**Night** 4	**Weekend** 5	***Walk***	***DW***	***A+R***
Cycle	95	80	120	70	80			
Offset	60	X	27	X	X			
EB Thru	61	46	86	36	46	15	9	3.7+2.1
WB Thru	61	46	86	36	46	-	-	3.7+2.1
NB Thru	34	34	34	34	34	7	21	3.3+2.6

Phasing Sequence‡

Plan: All



Schedule

Weekday

Time	Plan
0:15	4
6:00	1
9:30	2
15:00	3
18:00	2
22:00	4

Weekend

Time	Plan
0:15	4
8:00	2
12:00	5
18:00	2
22:00	4

Notes

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

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

Asterisk (*) Indicates actuated phase

(fp): Fully Protected Left Turn

◄·····► Pedestrian signal

Cost is $59.96 ($53.06 + HST)

Traffic Signal Timing

City of Ottawa, Transportation Services Department

Traffic Signal Operations Unit

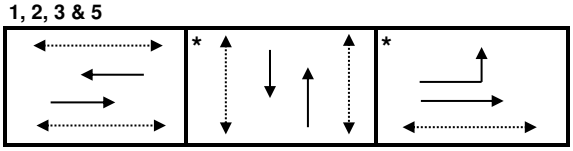
Intersection:	***Main:*** Albert	***Side:***	City Centre
Controller:	**ATC 3**	**TSD:**	**5661**
Author:	Matthew Anderson	**Date:**	11-Aug-2021

Existing Timing Plans†

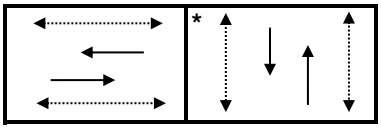
	Plan					**Ped Minimum Time**		
	AM Peak 1	**Off Peak** 2	**PM Peak** 3	**Night** 4	**Weekend** 5	***Walk***	***DW***	***A+R***
Cycle	120	85	120	65	85			
Offset	80	55	80	X	55			
EB Thru	84	56	84	35	56	7	14	3.3+3.0
WB Thru	67	45	67	35	45	7	14	3.3+3.0
NB Thru	36	29	36	30	29	7	16	3.3+3.0
SB Thru	36	29	36	30	29	7	16	3.3+3.0
EB Left	17	11	17	-	11	-	-	3.3+3.0

Phasing Sequence‡

Plan: 1, 2, 3 & 5



Plan: 4



Schedule

Weekday

Time	Plan
0:15	4
6:00	1
9:30	2
15:00	3
18:30	2
22:00	4

Weekend

Time	Plan
0:15	4
8:00	2
12:00	5
18:00	2
22:00	4

Notes

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

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

Asterisk (*) Indicates actuated phase

(fp): Fully Protected Left Turn

◄·····► Pedestrian signal

Cost is $59.96 ($53.06 + HST)

Traffic Signal Timing

City of Ottawa, Transportation Services Department

Traffic Signal Operations Unit

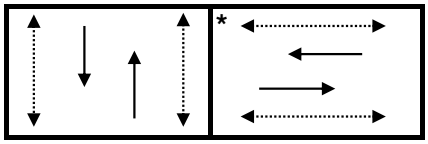
Intersection:	***Main:*** Booth	***Side:***	Perley
Controller:	**ATC3**	**TSD:**	**5461**
Author:	Matthew Anderson	**Date:**	09-Aug-2021

Existing Timing Plans†

	Plan					Ped Minimum Time		
	AM Peak 1	**Off Peak** 2	**PM Peak** 3	**Night** 4	**Weekend** 5	***Walk***	***DW***	***A+R***
Cycle	75	80	75	70	80			
Offset	47	X	10	X	X			
NB Thru	53	58	53	48	58	15	15	3.3+2.6
SB Thru	53	58	53	48	58	15	15	3.3+2.6
EB Thru	22	22	22	22	22	7	9	3.0+3.2
WB Thru	22	22	22	22	22	7	9	3.0+3.2

Phasing Sequence‡

Plan: All



Schedule

Weekday

Time	Plan
0:15	4
6:00	1
9:30	2
15:00	3
18:00	2
22:00	4

Weekend

Time	Plan
0:15	4
8:00	2
12:00	5
18:00	2
22:00	4

Notes

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

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

Asterisk (*) Indicates actuated phase

(fp): Fully Protected Left Turn

◄·····► Pedestrian signal

Cost is $59.96 ($53.06 + HST)

Traffic Signal Timing

City of Ottawa, Transportation Services Department

Traffic Signal Operations Unit

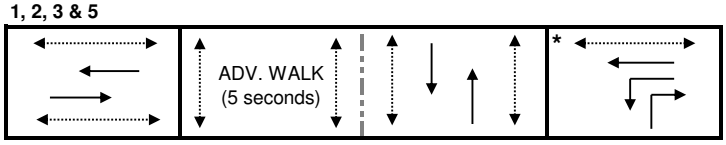
Intersection:	***Main:*** Albert	***Side:***	Preston
Controller:	**Ms 3200**	**TSD:**	**5009**
Author:	Matthew Anderson	**Date:**	11-Aug-2021

Existing Timing Plans†

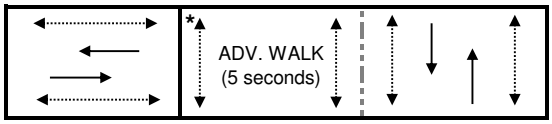
	Plan					**Ped Minimum Time**		
	AM Peak 1	**Off Peak** 2	**PM Peak** 3	**Night** 4	**Weekend** 5	***Walk***	***DW***	***A+R***
Cycle	120	80	120	70	80			
Offset	55	75	65	X	75			
EB Thru	65	35	61	41	35	7	18	3.3+3.5
WB Thru	90	48	77	41	48	7	18	3.3+3.5
NB Thru	30	32	43	29	32	7	16	3.3+3.0
NB Thru	30	32	43	29	32	7	16	3.3+3.0
WB Left	25	13	16	-	13	-	-	3.3+2.9
NB Right	25	13	16	-	13	-	-	3.3+2.9

Phasing Sequence‡

Plan: **1, 2, 3 & 5**



Plan: **4**



Notes: 1) The NB right turn is prohibited on red, weekdays between 700-1900

Schedule

Weekday

Time	Plan
0:15	4
6:00	1
9:30	2
15:00	3
18:30	2
22:00	4

Weekend

Time	Plan
0:15	4
8:00	2
12:00	5
18:00	2
22:00	4

Notes

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

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

Asterisk (*) Indicates actuated phase

(fp): Fully Protected Left Turn

◄·····► Pedestrian signal

Cost is $59.96 ($53.06 + HST)

Traffic Signal Timing

City of Ottawa, Transportation Services Department

Traffic Signal Operations Unit

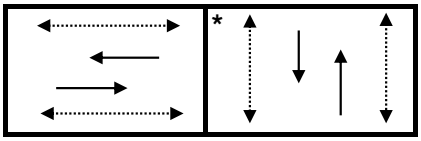
Intersection:	***Main:*** Albert / Scott	***Side:***	Bayview Station
Controller:	**MS 3200**	**TSD:**	**5613**
Author:	Matthew Anderson	**Date:**	11-Aug-2021

Existing Timing Plans†

	Plan						Ped Minimum Time		
	Early AM 1	**Off Peak** 2	**PM Peak** 3	**Night** 4	**Weekend** 5	**AM Peak** 21	***Walk***	***DW***	***A+R***
Cycle	95	65	100	70	65	100			
Offset	40	54	65	X	54	40			
EB Thru	63	33	68	38	33	68	7	19	3.3+3.2
WB Thru	63	33	68	38	33	68	7	19	3.3+3.2
NB Thru	32	32	32	32	32	32	7	19	3.3+3.1
SB Thru	32	32	32	32	32	32	7	19	3.3+3.1

Phasing Sequence‡

Plan: All



Schedule

Weekday

Time	Plan
0:15	4
6:30	1
7:45	21
9:30	2
15:00	3
18:30	2
22:30	4

Saturday

Time	Plan
0:15	4
6:30	2
9:00	5
18:30	2
22:30	4

Sunday

Time	Plan
0:15	4
6:30	2
9:00	5
18:00	2
22:30	4

Notes

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

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

Asterisk (*) Indicates actuated phase

(fp): Fully Protected Left Turn

◄·····► Pedestrian signal

Cost is $59.96 ($53.06 + HST)

Traffic Signal Timing

City of Ottawa, Transportation Services Department

Traffic Signal Operations Unit

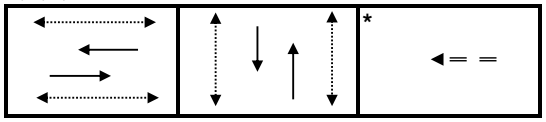
Intersection:	***Main:*** Scott	***Side:***	Parkdale
Controller:	**ATC 3**	**TSD:**	**5310**
Author:	Matthew Anderson	**Date:**	11-Aug-2021

Existing Timing Plans†

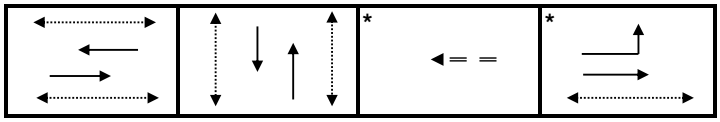
	Plan						**Ped Minimum Time**		
	AM Peak 1	**Off Peak** 2	**PM Peak** 3	**Night** 4	**Weekend** 5	**AM Heavy** 21	***Walk***	***DW***	***A+R***
Cycle	95	75	100	70	75	100			
Offset	91	33	8	61	33	91			
EB Thru	46	34	49	29	34	51	7	15	3.3+2.8
WB Thru	46	34	34	29	34	51	7	15	3.3+2.8
NB Thru	43	35	45	35	35	43	10	19	3.0+3.3
SB Thru	43	35	45	35	35	43	10	19	3.0+3.3
WB Bus	6	6	6	6	6	6	-	-	0.0+2.0
EB Left	-	-	15	-	-	-	-	-	3.3+2.3

Phasing Sequence‡

Plan: 1, 2, 4, 5 & 21



Plan: 3



Schedule

Weekday

Time	Plan
0:15	4
6:30	1
7:45	21
9:30	2
15:00	3
18:30	2
22:30	4

Saturday

Time	Plan
0:15	4
6:30	2
9:00	5
18:30	2
22:30	4

Sunday

Time	Plan
0:15	4
6:30	2
9:00	5
18:00	2
22:30	4

Notes

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

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

Asterisk (*) Indicates actuated phase

(fp): Fully Protected Left Turn

◄·····► Pedestrian signal

═ ═ ➔ Transit signal

Cost is $59.96 ($53.06 + HST)

Traffic Signal Timing

City of Ottawa, Transportation Services Department

Traffic Signal Operations Unit

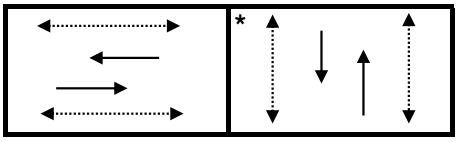
Intersection:	***Main:***	SJAM	***Side:***	Slidell
Controller:	**ATC 3**		**TSD:**	**5890**
Author:	Matthew Anderson		**Date:**	11-Aug-2021

Existing Timing Plans†

	Plan				**Ped Minimum Time**		
	AM Peak 1	**Off Peak** 2	**PM Peak** 3	**Night** 4	***Walk***	***DW***	***A+R***
Cycle	95	Free	95	Free			
Offset	0	X	0	X			
EB Thru	61	max = 53.5	61	max = 54.5	15	10	3.7+1.8
WB Thru	61	max = 53.5	61	max = 54.5	15	10	3.7+1.8
NB Thru	34	max = 31.3	34	max = 31.3	7	20	3.3+3.0
SB Thru	34	max = 31.3	34	max = 31.3	7	20	3.3+3.0

Phasing Sequence‡

Plan: All



Notes: 1) Plans 2 & 4, have a max and ped recall on the EW movements
2) Plans 1 & 3, have a ped recall on the EW movements

Schedule

Weekday

Time	Plan
0:15	4
6:30	1
9:00	2
15:00	3
18:30	2
21:00	4

Weekend

Time	Plan
0:10	4
7:00	2
19:00	4

Notes

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

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

Asterisk (*) Indicates actuated phase

(fp): Fully Protected Left Turn

◄·····► Pedestrian signal

Cost is $59.96 ($53.06 + HST)

Traffic Signal Timing

City of Ottawa, Transportation Services Department

Traffic Signal Operations Unit

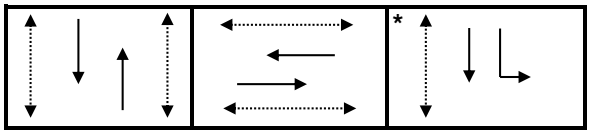
Intersection:	**Main:** Booth	**Side:**	SJAM / Wellington
Controller:	**MS 3200**	**TSD:**	**6567**
Author:	Matthew Anderson	**Date:**	09-Aug-2021

Existing Timing Plans†

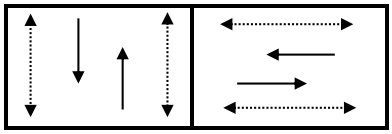
	Plan					**Ped Minimum Time**		
	AM Peak 1	**Off Peak** 2	**PM Peak** 3	**Night** 4	**Weekend** 5	***Walk***	***DW***	***A+R***
Cycle	95	85	120	75	85			
Offset	31	58	3	23	58			
NB Thru	35	35	48	35	35	10	15	3.3+3.5
SB Thru	35	35	48	35	35	10	15	3.3+3.6
EB Thru	48	38	60	40	38	10	19	3.7+3.1
WB Thru	48	38	60	40	38	10	19	3.7+3.1
SB Left	12	12	12	-	12	-	-	3.3+3.5

Phasing Sequence‡

Plan: 1,2,3,5



Plan: 4



Schedule

Weekday

Time	Plan
0:15	4
6:00	1
9:30	2
15:00	3
18:00	2
23:45	4

Weekend

Time	Plan
0:15	4
8:00	2
12:00	5
18:00	2
22:00	4

Notes

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

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

Asterisk (*) Indicates actuated phase

(fp): Fully Protected Left Turn

◄·····► Pedestrian signal

Cost is $59.96 ($53.06 + HST)

Traffic Signal Timing

City of Ottawa, Transportation Services Department

Traffic Signal Operations Unit

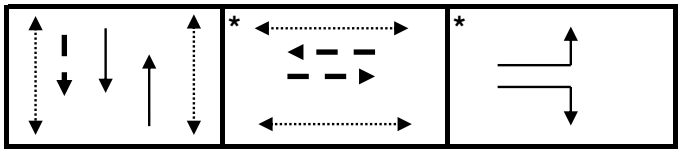
Intersection:	**Main:** Booth	**Side:**	War museum
Controller:	**MS 3200**	**TSD:**	**6564**
Author:	Matthew Anderson	**Date:**	09-Aug-2021

Existing Timing Plans†

	Plan					Ped Minimum Time		
	AM Peak 1	**Off Peak** 2	**PM Peak** 3	**Night** 4	**Weekend** 5	***Walk***	***DW***	***A+R***
Cycle	95	85	95	85	95			
Offset	47	X	10	X	X			
NB Thru	49	39	49	39	49	20	5	3.3+2.6
SB Thru	49	39	49	39	49	20	5	3.3+2.6
EW Bike	29	29	29	29	29	7	15	3.0+4.0
EB Exit (fp)	17	17	17	17	17	-	-	3.3+2.9

Phasing Sequence‡

Plan: All



Schedule

Weekday

Time	Plan
0:15	4
6:00	1
9:30	2
15:00	3
18:00	2
22:00	4

Weekend

Time	Plan
0:15	4
8:00	2
12:00	5
18:00	2
22:00	4

Notes

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

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

Asterisk (*) Indicates actuated phase

(fp): Fully Protected Left Turn

◄·····► Pedestrian signal

– – ► Bike signal

Cost is $58.78 ($52.02 + HST)

APPENDIX C: City of Ottawa - Collision Data

STUDY AREA	YEAR	DATE	TIME	COLLISION_ID	LOCATION	X	Y	LONGITUDE	LATITUDE	ENVIRONMENT	LIGHT	SURFACE_CONDITION	TRAFFIC_CONTROL	TRAFFIC_CONTROL_CONDITION	COLLISION_CLASSIFICATION	IMPACT_TYPE	NO_OF_PEDESTRIANS	FID
Y	2015	2015/07/05 04:00:00+00	1899/12/31 22:34:00+00	15-7406	ALBERT ST @ BRONSON AVE	366739.7188	5031015	-75.70859528	45.41632843	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	03 - P.D. only	02 - Angle	0	7191
Y	2015	2015/12/14 05:00:00+00	1900/01/01 01:55:00+00	15-12926	ALBERT ST @ BRONSON AVE	366738.9688	5031017.5	-75.70861053	45.41635132	02 - Rain	07 - Dark	02 - Wet	01 - Traffic signal	01 - Functioning	02 - Non-fatal injury	02 - Angle	0	12464
Y	2015	2015/12/08 05:00:00+00	1899/12/31 20:16:00+00	15-12682	ALBERT ST @ COMMISSIONER ST	366713.6875	5030970	-75.7089386	45.41592789	02 - Rain	01 - Daylight	02 - Wet	02 - Stop sign	01 - Functioning	03 - P.D. only	02 - Angle	0	12980
Y	2015	2015/01/05 05:00:00+00	1899/12/31 13:33:00+00	15-134	ALBERT ST @ EMPRESS AVE	366577.125	5030722	-75.71071625	45.41370773	06 - Strong wind	01 - Daylight	06 - Ice	01 - Traffic signal	01 - Functioning	02 - Non-fatal injury	03 - Rear end	0	234
Y	2015	2015/01/16 05:00:00+00	1899/12/31 19:29:00+00	15-853	ALBERT ST @ EMPRESS AVE	366576.6563	5030720.5	-75.71071625	45.41369629	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	03 - P.D. only	99 - Other	0	653
Y	2015	2015/02/20 05:00:00+00	1899/12/31 11:16:00+00	15-2852	ALBERT ST @ EMPRESS AVE	366573.8125	5030720	-75.71075439	45.41368866	01 - Clear	07 - Dark	02 - Wet	01 - Traffic signal	01 - Functioning	03 - P.D. only	07 - SMV other	0	2656
Y	2015	2015/01/29 05:00:00+00	1899/12/31 13:55:00+00	15-1510	ALBERT ST @ PRESTON ST	366160.375	5030465.5	-75.71607208	45.41143799	01 - Clear	01 - Daylight	06 - Ice	01 - Traffic signal	01 - Functioning	03 - P.D. only	03 - Rear end	0	1329
Y	2015	2015/02/04 05:00:00+00	1899/12/31 15:00:00+00	15-1958	ALBERT ST @ PRESTON ST	366158.6875	5030466.5	-75.71608734	45.41144562	03 - Snow	01 - Daylight	06 - Ice	01 - Traffic signal	01 - Functioning	02 - Non-fatal injury	03 - Rear end	0	1693
Y	2015	2015/02/17 05:00:00+00	1899/12/31 13:52:00+00	15-2700	ALBERT ST @ PRESTON ST	366160.375	5030465.5	-75.71607208	45.41143799	01 - Clear	01 - Daylight	06 - Ice	01 - Traffic signal	01 - Functioning	03 - P.D. only	03 - Rear end	0	2500
Y	2015	2015/03/03 05:00:00+00	1899/12/31 21:15:00+00	15-3451	ALBERT ST @ PRESTON ST	366158.6875	5030465	-75.71608734	45.41143036	03 - Snow	01 - Daylight	05 - Packed snow	01 - Traffic signal	01 - Functioning	03 - P.D. only	03 - Rear end	0	3949
Y	2015	2015/07/19 04:00:00+00	1899/12/31 22:55:00+00	15-7872	ALBERT ST @ PRESTON ST	366160.0625	5030465	-75.71607208	45.41143036	02 - Rain	01 - Daylight	02 - Wet	01 - Traffic signal	01 - Functioning	02 - Non-fatal injury	02 - Angle	0	7320
Y	2015	2015/07/10 04:00:00+00	1899/12/31 23:30:00+00	15-7596	ALBERT ST @ PRESTON ST	366161.4063	5030463	-75.71605682	45.41141129	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	03 - P.D. only	03 - Rear end	0	7443
Y	2015	2015/10/29 04:00:00+00	1899/12/31 21:25:00+00	15-11234	ALBERT ST @ PRESTON ST	366161.4063	5030464	-75.71605682	45.41142273	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	03 - P.D. only	05 - Turning movement	0	11258
Y	2015	2015/12/21 05:00:00+00	1899/12/31 12:20:00+00	15-13146	ALBERT ST @ PRESTON ST	366160.6875	5030464	-75.71606445	45.41141891	01 - Clear	03 - Dawn	01 - Dry	01 - Traffic signal	01 - Functioning	03 - P.D. only	01 - Approaching	0	13292
Y	2015	2015/05/27 04:00:00+00	1899/12/31 21:30:00+00	15-13635	ALBERT ST @ PRESTON ST	366161.4375	5030463	-75.71605682	45.41141129	00 - Unknown	01 - Daylight	00 - Unknown	01 - Traffic signal	00 - Unknown	03 - P.D. only	04 - Sideswipe	0	13643
Y	2015	2015/07/09 04:00:00+00	1899/12/31 19:32:00+00	15-7540	ALBERT ST btwn Continuation of ALBERT ST & BOOTH ST	366342.2188	5030573.5	-75.71372986	45.41239166	01 - Clear	01 - Daylight	01 - Dry	10 - No control		03 - P.D. only	04 - Sideswipe	0	7384
Y	2015	2015/07/05 04:00:00+00	1899/12/31 05:44:00+00	15-7394	ALBERT ST btwn PRESTON ST & Continuation of ALBERT ST	366289	5030545.5	-75.7144165	45.41214371	01 - Clear	07 - Dark	01 - Dry	10 - No control		03 - P.D. only	07 - SMV other	0	7100
Y	2015	2015/08/23 04:00:00+00	1900/01/01 02:16:00+00	15-8954	ALBERT ST btwn PRESTON ST & Continuation of ALBERT ST	366179.375	5030476	-75.71582794	45.41152954	01 - Clear	07 - Dark	01 - Dry	10 - No control		02 - Non-fatal injury	05 - Turning movement	0	8691
Y	2015	2015/10/20 04:00:00+00	1899/12/31 21:56:00+00	15-10904	ALBERT ST btwn PRESTON ST & Continuation of ALBERT ST	366178.4063	5030476	-75.71583557	45.41152573	01 - Clear	01 - Daylight	01 - Dry	10 - No control		03 - P.D. only	04 - Sideswipe	0	10122
Y	2015	2015/12/29 05:00:00+00	1899/12/31 19:54:00+00	15-13391	ALBERT ST btwn SCOTT ST & CITY CENTRE AVE (2)	365862.9688	5030304	-75.71988678	45.41001129	03 - Snow	01 - Daylight	03 - Loose snow	10 - No control		03 - P.D. only	07 - SMV other	0	13989
Y	2015	2015/01/07 05:00:00+00	1899/12/31 22:20:00+00	15-305	BAYVIEW RD @ SCOTT ST/ALBERT ST	365519.0313	5030071	-75.72431183	45.40794373	01 - Clear	05 - Dusk	05 - Packed snow	01 - Traffic signal	01 - Functioning	03 - P.D. only	05 - Turning movement	0	407
Y	2015	2015/02/13 05:00:00+00	1899/12/31 14:25:00+00	15-2476	BAYVIEW RD @ SCOTT ST/ALBERT ST	365520	5030071	-75.72429657	45.40794373	01 - Clear	01 - Daylight	02 - Wet	01 - Traffic signal	01 - Functioning	03 - P.D. only	04 - Sideswipe	0	2575
Y	2015	2015/03/15 04:00:00+00	1899/12/31 21:49:00+00	15-3848	BAYVIEW RD @ SCOTT ST/ALBERT ST	365518.0625	5030071	-75.72431946	45.40794373	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	03 - P.D. only	03 - Rear end	0	3757
Y	2015	2015/07/02 04:00:00+00	1900/01/01 00:46:00+00	15-7334	BAYVIEW RD @ SCOTT ST/ALBERT ST	365520.4688	5030070	-75.72428894	45.40793228	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	02 - Non-fatal injury	07 - SMV other	1	7040
Y	2015	2015/06/29 04:00:00+00	1899/12/31 15:53:00+00	15-7184	BAYVIEW RD @ SCOTT ST/ALBERT ST	365519.75	5030070.5	-75.7243042	45.4079361	01 - Clear	01 - Daylight	02 - Wet	01 - Traffic signal	01 - Functioning	02 - Non-fatal injury	02 - Angle	0	7618
Y	2015	2015/08/28 04:00:00+00	1899/12/31 12:30:00+00	15-9120	BAYVIEW RD @ SCOTT ST/ALBERT ST	365519.0313	5030072	-75.72431183	45.40795135	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	03 - P.D. only	05 - Turning movement	0	9681
Y	2015	2015/03/21 04:00:00+00	1899/12/31 22:51:00+00	15-4000	BOOTH ST @ 148 N OF MIDDLE ST/E.B.EDDY S	366035.5313	5031415	-75.71754456	45.41999054	06 - Strong wind	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	03 - P.D. only	03 - Rear end	0	3698
Y	2015	2015/07/21 04:00:00+00	1899/12/31 22:45:00+00	15-7932	BOOTH ST @ 148 N OF MIDDLE ST/E.B.EDDY S	366036.25	5031415.5	-75.71753693	45.41999435	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	02 - Non-fatal injury	03 - Rear end	0	7463
Y	2015	2015/01/05 05:00:00+00	1899/12/31 19:08:00+00	15-157	BOOTH ST @ OTTAWA RIVER PKWY/WELLINGTON ST	366264.25	5031006	-75.7146759	45.41629028	01 - Clear	01 - Daylight	02 - Wet	01 - Traffic signal	01 - Functioning	03 - P.D. only	03 - Rear end	0	257
Y	2015	2015/01/21 05:00:00+00	1900/01/01 00:19:00+00	15-1129	BOOTH ST @ OTTAWA RIVER PKWY/WELLINGTON ST	366263.2813	5031005	-75.71468353	45.41628265	01 - Clear	07 - Dark	02 - Wet	01 - Traffic signal	01 - Functioning	03 - P.D. only	07 - SMV other	0	1450
Y	2015	2015/01/28 05:00:00+00	1899/12/31 15:07:00+00	15-1437	BOOTH ST @ OTTAWA RIVER PKWY/WELLINGTON ST	366262.9375	5031007.5	-75.71469116	45.41630554	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	03 - P.D. only	04 - Sideswipe	0	1937
Y	2015	2015/02/12 05:00:00+00	1899/12/31 15:10:00+00	15-2422	BOOTH ST @ OTTAWA RIVER PKWY/WELLINGTON ST	366263.9063	5031007.5	-75.7146759	45.41630554	01 - Clear	01 - Daylight	04 - Slush	01 - Traffic signal	01 - Functioning	03 - P.D. only	03 - Rear end	0	2521
Y	2015	2015/02/13 05:00:00+00	1899/12/31 18:13:00+00	15-2490	BOOTH ST @ OTTAWA RIVER PKWY/WELLINGTON ST	366265.2188	5031006	-75.71466064	45.41629028	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	03 - P.D. only	03 - Rear end	0	2589
Y	2015	2015/03/22 04:00:00+00	1899/12/31 13:52:00+00	15-4013	BOOTH ST @ OTTAWA RIVER PKWY/WELLINGTON ST	366264.0313	5031005.5	-75.7146759	45.41628265	03 - Snow	01 - Daylight	03 - Loose snow	01 - Traffic signal	01 - Functioning	03 - P.D. only	03 - Rear end	0	4642
Y	2015	2015/05/28 04:00:00+00	1899/12/31 21:14:00+00	15-6074	BOOTH ST @ OTTAWA RIVER PKWY/WELLINGTON ST	366263.5938	5031008	-75.71468353	45.41630936	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	02 - Non-fatal injury	05 - Turning movement	0	6191
Y	2015	2015/07/20 04:00:00+00	1899/12/31 21:15:00+00	15-7895	BOOTH ST @ OTTAWA RIVER PKWY/WELLINGTON ST	366264.3125	5031006.5	-75.7146759	45.41629791	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	03 - P.D. only	03 - Rear end	0	7343
Y	2015	2015/08/01 04:00:00+00	1899/12/31 06:38:00+00	15-8276	BOOTH ST @ OTTAWA RIVER PKWY/WELLINGTON ST	366263.5938	5031007.5	-75.71468353	45.41630173	01 - Clear	07 - Dark	01 - Dry	01 - Traffic signal	01 - Functioning	03 - P.D. only	05 - Turning movement	0	8085
Y	2015	2015/08/18 04:00:00+00	1899/12/31 13:20:00+00	15-8819	BOOTH ST @ OTTAWA RIVER PKWY/WELLINGTON ST	366263.5313	5031005	-75.71468353	45.41627884	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	00 - Unknown	02 - Non-fatal injury	03 - Rear end	0	8917
Y	2015	2015/09/03 04:00:00+00	1899/12/31 14:48:00+00	15-9297	BOOTH ST @ OTTAWA RIVER PKWY/WELLINGTON ST	366264.25	5031006.5	-75.7146759	45.4162941	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	03 - P.D. only	04 - Sideswipe	0	9571
Y	2015	2015/11/05 05:00:00+00	1899/12/31 21:51:00+00	15-11488	BOOTH ST @ OTTAWA RIVER PKWY/WELLINGTON ST	366264.25	5031005	-75.7146759	45.41628265	01 - Clear	05 - Dusk	01 - Dry	01 - Traffic signal	01 - Functioning	03 - P.D. only	04 - Sideswipe	0	11202
Y	2015	2015/11/17 05:00:00+00	1900/01/01 01:00:00+00	15-11922	BOOTH ST @ OTTAWA RIVER PKWY/WELLINGTON ST	366264.25	5031006	-75.7146759	45.41629028	01 - Clear	07 - Dark	01 - Dry	01 - Traffic signal	01 - Functioning	03 - P.D. only	05 - Turning movement	0	11685
Y	2015	2015/11/26 05:00:00+00	1900/01/01 04:43:00+00	15-12279	BOOTH ST @ OTTAWA RIVER PKWY/WELLINGTON ST	366262.8125	5031006	-75.71469116	45.41629028	01 - Clear	07 - Dark	01 - Dry	01 - Traffic signal	00 - Unknown	03 - P.D. only	04 - Sideswipe	0	12414
Y	2015	2015/12/01 05:00:00+00	1899/12/31 10:40:00+00	15-12432	BOOTH ST @ OTTAWA RIVER PKWY/WELLINGTON ST	366264.25	5031005	-75.7146759	45.41628265	01 - Clear	07 - Dark	01 - Dry	01 - Traffic signal	01 - Functioning	03 - P.D. only	04 - Sideswipe	0	12490
Y	2015	2015/10/14 04:00:00+00	1899/12/31 22:09:00+00	15-13721	BOOTH ST @ OTTAWA RIVER PKWY/WELLINGTON ST	366265.7813	5031010	-75.71465302	45.41632843	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	00 - Unknown	02 - Non-fatal injury	03 - Rear end	0	13724
Y	2015	2015/10/02 04:00:00+00	1899/12/31 13:00:00+00	15-13734	BOOTH ST @ OTTAWA RIVER PKWY/WELLINGTON ST	366263.0625	5031004	-75.71469116	45.41627121	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	03 - P.D. only	03 - Rear end	0	13737
Y	2015	2015/02/20 05:00:00+00	1899/12/31 23:15:00+00	15-2913	BOOTH ST btwn 148 N OF MIDDLE ST/E.B. EDDY S & MIDDLE ST	366078.25	5031346.5	-75.7170105	45.41937256	01 - Clear	07 - Dark	02 - Wet	10 - No control		03 - P.D. only	07 - SMV other	0	2717
Y	2015	2015/08/27 04:00:00+00	1899/12/31 14:09:00+00	15-9081	BOOTH ST btwn 148 N OF MIDDLE ST/E.B. EDDY S & MIDDLE ST	366104.0625	5031304.5	-75.71668243	45.41899109	01 - Clear	01 - Daylight	01 - Dry	10 - No control		03 - P.D. only	04 - Sideswipe	0	9733
Y	2015	2015/05/12 04:00:00+00	1899/12/31 13:19:00+00	15-5527	BOOTH ST btwn MIDDLE ST & VIMY PLACE PRIV	366177.3438	5031202.5	-75.71575928	45.41806412	02 - Rain	01 - Daylight	02 - Wet	10 - No control		03 - P.D. only	07 - SMV other	0	5589
Y	2015	2015/09/17 04:00:00+00	1899/12/31 18:55:00+00	15-9802	BOOTH ST btwn MIDDLE ST & VIMY PLACE PRIV	366157.9375	5031233	-75.71600342	45.41834259	01 - Clear	01 - Daylight	01 - Dry	10 - No control		03 - P.D. only	03 - Rear end	0	9668
Y	2015	2015/12/15 05:00:00+00	1899/12/31 13:40:00+00	15-13769	BOOTH ST btwn PROVINCIAL BOUNDARY & 208 N OF MIDDLE ST/E.B. EDDY N	365991.7813	5031517.5	-75.71809387	45.4209137	02 - Rain	01 - Daylight	02 - Wet	10 - No control		03 - P.D. only	03 - Rear end	0	13771
Y	2015	2015/02/23 05:00:00+00	1900/01/01 04:34:00+00	15-3101	BOOTH ST btwn VIMY PLACE PRIV & OTTAWA RIVER PKWY	366249.4375	5031044	-75.71485901	45.41663361	01 - Clear	07 - Dark	06 - Ice	10 - No control		03 - P.D. only	03 - Rear end	0	3499
Y	2015	2015/06/24 04:00:00+00	1899/12/31 12:40:00+00	15-7014	BOOTH ST btwn VIMY PLACE PRIV & OTTAWA RIVER PKWY	366246.9688	5031048	-75.71488953	45.41667175	01 - Clear	01 - Daylight	01 - Dry	10 - No control		03 - P.D. only	04 - Sideswipe	0	7244
Y	2015	2015/09/14 04:00:00+00	1899/12/31 21:26:00+00	15-9672	BOOTH ST btwn VIMY PLACE PRIV & OTTAWA RIVER PKWY	366249.125	5031049.5	-75.71485901	45.4166832	01 - Clear	01 - Daylight	01 - Dry	10 - No control		03 - P.D. only	03 - Rear end	0	9188
Y	2015	2015/01/20 05:00:00+00	1899/12/31 15:15:00+00	15-1023	BRONSON AVE @ COMMISSIONER ST/SLATER ST	366768.5938	5030952.5	-75.70823669	45.41576385	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	02 - Non-fatal injury	02 - Angle	0	1243
Y	2015	2015/03/08 05:00:00+00	1899/12/31 22:47:00+00	15-3607	BRONSON AVE @ COMMISSIONER ST/SLATER ST	366767.75	5030946	-75.70825195	45.41570663	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	03 - P.D. only	04 - Sideswipe	0	3110
Y	2015	2015/03/23 04:00:00+00	1899/12/31 14:58:00+00	15-4035	BRONSON AVE @ COMMISSIONER ST/SLATER ST	366769.6563	5030949	-75.70822144	45.41573334	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	02 - Non-fatal injury	05 - Turning movement	0	4765
Y	2015	2015/03/23 04:00:00+00	1899/12/31 23:37:00+00	15-4062	BRONSON AVE @ COMMISSIONER ST/SLATER ST	366768.625	5030948	-75.70823669	45.41572571	01 - Clear	07 - Dark	01 - Dry	01 - Traffic signal	01 - Functioning	03 - P.D. only	05 - Turning movement	0	4792
Y	2015	2015/06/19 04:00:00+00	1899/12/31 13:05:00+00	15-6828	BRONSON AVE @ COMMISSIONER ST/SLATER ST	366768.7188	5030949	-75.70823669	45.41573334	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	00 - Unknown	02 - Non-fatal injury	04 - Sideswipe	0	6027
Y	2015	2015/06/19 04:00:00+00	1899/12/31 22:47:00+00	15-6867	BRONSON AVE @ COMMISSIONER ST/SLATER ST	366768	5030949.5	-75.70824432	45.41573715	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	02 - Non-fatal injury	05 - Turning movement	0	6066
Y	2015	2015/07/14 04:00:00+00	1900/01/01 03:04:00+00	15-7715	BRONSON AVE @ COMMISSIONER ST/SLATER ST	366769.4375	5030948	-75.70822906	45.41572571	01 - Clear	07 - Dark	01 - Dry	01 - Traffic signal	01 - Functioning	03 - P.D. only	04 - Sideswipe	0	7226
Y	2015	2015/10/28 04:00:00+00	1899/12/31 19:50:00+00	15-11179	BRONSON AVE @ COMMISSIONER ST/SLATER ST	366769.4375	5030947.5	-75.70822906	45.41571808	02 - Rain	01 - Daylight	02 - Wet	01 - Traffic signal	01 - Functioning	03 - P.D. only	05 - Turning movement	0	11538
Y	2015	2015/11/27 05:00:00+00	1899/12/31 11:24:00+00	15-12282	BRONSON AVE @ COMMISSIONER ST/SLATER ST	366769.4375	5030948.5	-75.70822906	45.41572952	01 - Clear	03 - Dawn	01 - Dry	01 - Traffic signal	01 - Functioning	02 - Non-fatal injury	05 - Turning movement	0	12417
Y	2015	2015/12/06 05:00:00+00	1899/12/31 23:10:00+00	15-12626	BRONSON AVE @ COMMISSIONER ST/SLATER ST	366769.3125	5030949.5	-75.70822906	45.41573715	01 - Clear	07 - Dark	01 - Dry	01 - Traffic signal	01 - Functioning	02 - Non-fatal injury	03 - Rear end	0	12741
Y	2015	2015/02/04 05:00:00+00	1899/12/31 20:16:00+00	15-1998	OTTAWA RIVER PKWY @ PORTAGE BRIDGE	366515.2188	5031315	-75.71142578	45.41904831	03 - Snow	01 - Daylight	03 - Loose snow	01 - Traffic signal	01 - Functioning	03 - P.D. only	03 - Rear end	0	1733
Y	2015	2015/02/25 05:00:00+00	1899/12/31 19:29:00+00	15-3221	OTTAWA RIVER PKWY @ PORTAGE BRIDGE	366515.9375	5031315	-75.71141815	45.41904831	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	03 - P.D. only	04 - Sideswipe	0	3219
Y	2015	2015/06/07 04:00:00+00	1899/12/31 08:55:00+00	15-13641	OTTAWA RIVER PKWY @ PORTAGE BRIDGE	366516.7813	5031316.5	-75.71141052	45.41906357	01 - Clear	07 - Dark	01 - Dry	01 - Traffic signal	01 - Functioning	03 - P.D. only	07 - SMV other	0	13649
Y	2015	2015/12/30 05:00:00+00	1900/01/01 03:06:00+00	15-13442	OTTAWA RIVER PKWY @ PORTAGE BRIDGE	366516.2188	5031314.5	-75.71141815	45.41904449	03 - Snow	07 - Dark	04 - Slush	01 - Traffic signal	01 - Functioning	02 - Non-fatal injury	03 - Rear end	0	13851
Y	2015	2015/01/26 05:00:00+00	1899/12/31 13:52:00+00	15-13516	OTTAWA RIVER PKWY @ RIVER ST/SLIDELL ST	365157.6563	5030377	-75.72888947	45.41072845	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	03 - P.D. only	03 - Rear end	0	13018
Y	2015	2015/02/21 05:00:00+00	1899/12/31 18:26:00+00	15-13561	OTTAWA RIVER PKWY @ RIVER ST/SLIDELL ST	365157.625	5030376	-75.72888947	45.41071701	00 - Unknown	01 - Daylight	03 - Loose snow	01 - Traffic signal	01 - Functioning	03 - P.D. only	02 - Angle	0	13061
Y	2015	2015/04/28 04:00:00+00	1899/12/31 20:55:00+00	15-13618	OTTAWA RIVER PKWY @ RIVER ST/SLIDELL ST	365158.4375	5030379.5	-75.72888184	45.41075134	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	03 - P.D. only	02 - Angle	0	13542
Y	2015	2015/10/28 04:00:00+00	1899/12/31 12:00:00+00	15-11156	OTTAWA RIVER PKWY @ VIMY PLACE PRIV	365974.8438	5030797.5	-75.71839905	45.41444016	01 - Clear	03 - Dawn	01 - Dry	01 - Traffic signal	01 - Functioning	03 - P.D. only	04 - Sideswipe	0	11515
Y	2015	2015/12/11 05:00:00+00	1899/12/31 21:16:00+00	15-12813	OTTAWA RIVER PKWY @ VIMY PLACE PRIV	365974.8125	5030797.5	-75.71839905	45.41444016	02 - Rain	05 - Dusk	02 - Wet	01 - Traffic signal	01 - Functioning	03 - P.D. only	05 - Turning movement	0	12285
Y	2015	2015/01/14 05:00:00+00	1899/12/31 14:22:00+00	15-13507	OTTAWA RIVER PKWY @ VIMY PLACE PRIV	365974.0625	5030797.5	-75.71840668	45.41444016	01 - Clear	01 - Daylight	02 - Wet	01 - Traffic signal	01 - Functioning	03 - P.D. only	03 - Rear end	0	13007
Y	2015	2015/12/22 05:00:00+00	1899/12/31 21:45:00+00	15-13216	OTTAWA RIVER PKWY @ VIMY PLACE PRIV	365975.125	5030798	-75.71839142	45.41444397	02 - Rain	05 - Dusk	02 - Wet	01 - Traffic signal	00 - Unknown	03 - P.D. only	03 - Rear end	0	13358
Y	2015	2015/01/15 05:00:00+00	1899/12/31 16:15:00+00	15-13503	OTTAWA RIVER PKWY @ VIMY PLACE PRIV	365971.9688	5030801.5	-75.71843719	45.4144783	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	03 - P.D. only	99 - Other	0	13911
Y	2015	2015/01/16 05:00:00+00	1899/12/31 11:45:00+00	15-906	OTTAWA RIVER PKWY btwn TRANSITWAY - TIME POINT & VIMY PLACE PRIV	365947.7188	5030781.5	-75.71874237	45.4142952	03 - Snow	07 - Dark	05 - Packed snow	10 - No control		03 - P.D. only	04 - Sideswipe	0	906
Y	2015	2015/03/12 04:00:00+00	1900/01/01 00:59:00+00	15-3739	OTTAWA RIVER PKWY btwn TRANSITWAY - TIME POINT & VIMY PLACE PRIV	365940.0625	5030779	-75.71884155	45.41427612	01 - Clear	07 - Dark	01 - Dry	10 - No control		02 - Non-fatal injury	03 - Rear end	0	3845
Y	2015	2015/01/13 05:00:00+00	1899/12/31 23:20:00+00	15-13523	OTTAWA RIVER PKWY btwn TRANSITWAY - TIME POINT & VIMY PLACE PRIV	365953.8125	5030784	-75.71866608	45.4143219	03 - Snow	07 - Dark	05 - Packed snow	10 - No control		03 - P.D. only	07 - SMV other	0	13025
Y	2015	2015/02/14 05:00:00+00	1899/12/31 14:15:00+00	15-13551	OTTAWA RIVER PKWY btwn TRANSITWAY - TIME POINT & VIMY PLACE PRIV	365907.0938	5030729.5	-75.7192688	45.41383362	03 - Snow	01 - Daylight	03 - Loose snow	10 - No control		03 - P.D. only	99 - Other	0	13052
Y	2015	2015/01/28 05:00:00+00	1899/12/31 15:15:00+00	15-1441	OTTAWA RIVER PKWY btwn VIMY PLACE PRIV & BOOTH ST	366254.0625	5030999.5	-75.7148056	45.41623306	01 - Clear	01 - Daylight	01 - Dry	10 - No control		02 - Non-fatal injury	03 - Rear end	0	1941
Y	2015	2015/02/13 05:00:00+00	1899/12/31 11:43:00+00	15-2458	OTTAWA RIVER PKWY btwn VIMY PLACE PRIV & BOOTH ST	366177.4375	5030945	-75.71578979	45.4157486	03 - Snow	03 - Dawn	06 - Ice	10 - No control		03 - P.D. only	07 - SMV other	0	2557
Y	2015	2015/06/02 04:00:00+00	1899/12/31 19:17:00+00	15-13637	OTTAWA RIVER PKWY btwn VIMY PLACE PRIV & BOOTH ST	366194.0625	5030956	-75.71557617	45.41584396	01 - Clear	01 - Daylight	01 - Dry	10 - No control		03 - P.D. only	04 - Sideswipe	0	13645
Y	2015	2015/10/15 04:00:00+00	1899/12/31 05:00:00+00	15-13725	OTTAWA RIVER PKWY btwn VIMY PLACE PRIV & BOOTH ST	366234.2188	5030985.5	-75.71505737	45.41610718	01 - Clear	00 - Unknown	01 - Dry	10 - No control		03 - P.D. only	04 - Sideswipe	0	13728
Y	2015	2015/06/26 04:00:00+00	1899/12/31 18:34:00+00	15-7099	OTTAWA RIVER PKWY OFFR-EB @ PARKDALE AVE	364682.75	5030333	-75.73496246	45.41036987	01 - Clear	01 - Daylight	01 - Dry	03 - Yield sign	01 - Functioning	02 - Non-fatal injury	03 - Rear end	0	7724
Y	2015	2015/02/12 05:00:00+00	1899/12/31 11:31:00+00	15-13550	OTTAWA RIVER PKWY OFFR-EB @ PARKDALE AVE	364683.5	5030331.5	-75.73495483	45.41035843	03 - Snow	03 - Dawn	02 - Wet	03 - Yield sign	01 - Functioning	03 - P.D. only	03 - Rear end	0	13051
Y	2015	2015/10/26 04:00:00+00	1899/12/31 13:49:00+00	15-13728	OTTAWA RIVER PKWY OFFR-EB @ PARKDALE AVE	364683	5030332	-75.73495483	45.41036224	01 - Clear	01 - Daylight	01 - Dry	03 - Yield sign	01 - Functioning	03 - P.D. only	03 - Rear end	0	13731
Y	2015	2015/09/28 04:00:00+00	1899/12/31 20:40:00+00	15-13731	OTTAWA RIVER PKWY WB @ PARKDALE AVE WB ON RAMP	364637.8438	5030468.5	-75.73551941	45.41159439	02 - Rain	01 - Daylight	02 - Wet	03 - Yield sign	00 - Unknown	03 - P.D. only	07 - SMV other	0	13734
Y	2015	2015/03/14 04:00:00+00	1899/12/31 07:05:00+00	15-13751	OTTAWA RIVER PKWY WB btwn RAMP & RIVER ST	365052.3438	5030362.5	-75.73023987	45.41060257	01 - Clear	07 - Dark	00 - Unknown	10 - No control		03 - P.D. only	04 - Sideswipe	0	13753
Y	2015	2015/09/23 04:00:00+00	1899/12/31 20:49:00+00	15-9963	PARKDALE AVE @ BURNSIDE AVE	364788.375	5030097.5	-75.73364258	45.40824127	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	03 - P.D. only	03 - Rear end	0	9397
Y	2015	2015/02/27 05:00:00+00	1899/12/31 13:42:00+00	15-3277	PARKDALE AVE @ SCOTT ST	364949.7188	5029726	-75.73162842	45.40488815	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	02 - Non-fatal injury	07 - SMV other	1	3275
Y	2015	2015/05/21 04:00:00+00	1899/12/31 13:35:00+00	15-5807	PARKDALE AVE @ SCOTT ST	364949.7188	5029725	-75.73162842	45.40488052	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	02 - Non-fatal injury	02 - Angle	0	5128
Y	2015	2015/07/05 04:00:00+00	1899/12/31 22:47:00+00	15-7407	PARKDALE AVE @ SCOTT ST	364950.4375	5029725	-75.73161316	45.40487671	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	03 - P.D. only	03 - Rear end	0	7206
Y	2015	2015/11/03 05:00:00+00	1899/12/31 20:00:00+00	15-11402	PARKDALE AVE @ SCOTT ST	364949.9375	5029726.5	-75.73162079	45.40488815	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	03 - P.D. only	05 - Turning movement	0	11858
Y	2015	2015/11/26 05:00:00+00	1900/01/01 03:35:00+00	15-12278	PARKDALE AVE @ SCOTT ST	364949.1875	5029726.5	-75.73162842	45.40488815	01 - Clear	07 - Dark	02 - Wet	01 - Traffic signal	01 - Functioning	03 - P.D. only	04 - Sideswipe	0	12413
Y	2015	2015/07/17 04:00:00+00	1899/12/31 22:42:00+00	15-13670	PARKDALE AVE EB ON RAMP/OTTAWA RIVER PKWY btwn OTTAWA RIVER PKWY & PAR	364731.5938	5030390.5	-75.73432922	45.41088486	02 - Rain	01 - Daylight	02 - Wet	10 - No control		02 - Non-fatal injury	07 - SMV other	0	13676
Y	2015	2015/06/12 04:00:00+00	1899/12/31 20:30:00+00	15-13647	PARKDALE AVE WB OFF RAMP/OTTAWA RIVER PKWY btwn OTTAWA RIVER PKWY & PA	364656.6563	5030588	-75.73526001	45.41266632	02 - Rain	01 - Daylight	02 - Wet	10 - No control		02 - Non-fatal injury	01 - Approaching	0	13654
Y	2015	2015/07/12 04:00:00+00	1899/12/31 20:00:00+00	15-13669	PARKDALE AVE WB OFF RAMP/OTTAWA RIVER PKWY btwn OTTAWA RIVER PKWY & PA	364659.2188	5030386.5	-75.73525238	45.41085434	01 - Clear	01 - Daylight	01 - Dry	10 - No control		03 - P.D. only	03 - Rear end	0	13675
Y	2015	2015/09/12 04:00:00+00	1899/12/31 19:10:00+00	15-13694	PARKDALE AVE WB OFF RAMP/OTTAWA RIVER PKWY btwn OTTAWA RIVER PKWY & PA	364645.5625	5030398.5	-75.73542786	45.41096115	02 - Rain	01 - Daylight	02 - Wet	10 - No control		03 - P.D. only	07 - SMV other	0	13700
Y	2015	2015/07/17 04:00:00+00	1899/12/31 20:00:00+00	15-13590	PARKDALE AVE WB ON RAMP/OTTAWA RIVER PKWY btwn PARKDALE AVE & OTTAWA R	364613.8125	5030524.5	-75.73581696	45.41210175	02 - Rain	01 - Daylight	02 - Wet	10 - No control		03 - P.D. only	07 - SMV other	0	13089
Y	2015	2015/01/08 05:00:00+00	1900/01/01 02:15:00+00	15-13499	PARKDALE AVE WB ON RAMP/OTTAWA RIVER PKWY btwn PARKDALE AVE & OTTAWA R	364648.9375	5030474	-75.73537445	45.41164398	03 - Snow	07 - Dark	06 - Ice	10 - No control		03 - P.D. only	07 - SMV other	0	13907
Y	2015	2015/11/23 05:00:00+00	1899/12/31 20:42:00+00	15-12151	SCOTT ST btwn HINCHEY AVE & CARRUTHERS AVE	365093.0938	5029812.5	-75.7297821	45.40565109	01 - Clear	01 - Daylight	01 - Dry	10 - No control		03 - P.D. only	02 - Angle	0	12214
Y	2015	2015/05/18 04:00:00+00	1900/01/01 00:34:00+00	15-5722	SCOTT ST btwn PARKDALE AVE & PINEHURST AVE	364963.4063	5029732	-75.73145294	45.40493774	01 - Clear	01 - Daylight	01 - Dry	10 - No control		02 - Non-fatal injury	02 - Angle	0	5247
Y	2015	2015/01/14 05:00:00+00	1899/12/31 20:28:00+00	15-725	WELLINGTON ST @ LETT ST	366355.4375	5031110	-75.71349335	45.41721725	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	03 - P.D. only	03 - Rear end	0	525
Y	2015	2015/01/29 05:00:00+00	1899/12/31 16:15:00+00	15-1498	WELLINGTON ST @ LETT ST	366353.4375	5031110.5	-75.71352386	45.41722488	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	03 - P.D. only	03 - Rear end	0	1998
Y	2015	2015/10/05 04:00:00+00	1899/12/31 13:50:00+00	15-10363	WELLINGTON ST @ LETT ST	366355.0625	5031112	-75.71350098	45.41723251	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	03 - P.D. only	02 - Angle	0	10484

STUDY ARI	YEAR	DATE	TIME	COLLISION_ID	LOCATION	X	Y	LONGITUDE	LATITUDE	ENVIRONMENT	LIGHT	SURFACE_CONDITION	TRAFFIC_CONTROL	TRAFFIC_CONTROL_CONDITION	COLLISION_CLASSIFICATION	IMPACT_TYPE	NO_OF_PEDESTRIANS	FID
Y	2016	2016/08/04 04:00:00+00	1899/12/31 22:03:00+00	16-7298	105 S OF COMMISSIONER ST @ ALBERT ST	366666.2813	5030879.5	-75.70955658	45.41511536	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	03 - P.D. only	04 - Sideswipe	0	7990
Y	2016	2016/01/15 05:00:00+00	1899/12/31 21:30:00+00	16-631	ALBERT ST @ BOOTH ST	366428.0313	5030626.5	-75.71263123	45.41286087	01 - Clear	01 - Daylight	02 - Wet	01 - Traffic signal	01 - Functioning	03 - P.D. only	03 - Rear end	0	831
Y	2016	2016/02/17 05:00:00+00	1900/01/01 00:31:00+00	16-1906	ALBERT ST @ BOOTH ST	366429.0938	5030626.5	-75.71261597	45.41286087	01 - Clear	07 - Dark	03 - Loose snow	01 - Traffic signal	01 - Functioning	03 - P.D. only	02 - Angle	0	1711
Y	2016	2016/02/25 05:00:00+00	1900/01/01 00:28:00+00	16-2363	ALBERT ST @ BOOTH ST	366427.5938	5030626.5	-75.71263123	45.41286087	01 - Clear	07 - Dark	02 - Wet	01 - Traffic signal	01 - Functioning	03 - P.D. only	03 - Rear end	0	2800
Y	2016	2016/07/16 04:00:00+00	1899/12/31 15:21:00+00	16-6736	ALBERT ST @ BOOTH ST	366428	5030626.5	-75.71263123	45.41286087	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	03 - P.D. only	04 - Sideswipe	0	6133
Y	2016	2016/07/06 04:00:00+00	1899/12/31 12:25:00+00	16-6429	ALBERT ST @ BOOTH ST	366428.2813	5030625	-75.7126236	45.41284943	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	02 - Non-fatal injury	05 - Turning movement	0	6483
Y	2016	2016/07/10 04:00:00+00	1899/12/31 16:59:00+00	16-6550	ALBERT ST @ BOOTH ST	366429.6563	5030625.5	-75.71260834	45.41285324	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	02 - Non-fatal injury	04 - Sideswipe	0	6943
Y	2016	2016/08/17 04:00:00+00	1899/12/31 06:56:00+00	16-7633	ALBERT ST @ BOOTH ST	366428.6875	5030628.5	-75.7126236	45.41287994	01 - Clear	07 - Dark	01 - Dry	01 - Traffic signal	01 - Functioning	03 - P.D. only	07 - SMV other	0	7337
Y	2016	2016/09/18 04:00:00+00	1899/12/31 15:29:00+00	16-8585	ALBERT ST @ BOOTH ST	366429.25	5030627	-75.71261597	45.41286469	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	03 - P.D. only	05 - Turning movement	0	8398
Y	2016	2016/11/16 05:00:00+00	1900/01/01 04:30:00+00	16-10577	ALBERT ST @ BOOTH ST	366427.5938	5030627.5	-75.71263123	45.41287231	01 - Clear	07 - Dark	01 - Dry	01 - Traffic signal	01 - Functioning	02 - Non-fatal injury	02 - Angle	0	10639
Y	2016	2016/12/17 05:00:00+00	1899/12/31 17:20:00+00	16-11948	ALBERT ST @ BOOTH ST	366428.4688	5030626.5	-75.7126236	45.41286087	03 - Snow	01 - Daylight	03 - Loose snow	01 - Traffic signal	01 - Functioning	03 - P.D. only	02 - Angle	0	11265
Y	2016	2016/11/29 05:00:00+00	1899/12/31 11:39:00+00	16-11077	ALBERT ST @ BOOTH ST	366429.5313	5030625.5	-75.71260834	45.41284943	03 - Snow	07 - Dark	02 - Wet	01 - Traffic signal	01 - Functioning	03 - P.D. only	02 - Angle	0	11691
Y	2016	2016/02/16 05:00:00+00	1899/12/31 19:53:00+00	16-1782	ALBERT ST @ BRONSON AVE	366741.0938	5031017.5	-75.70858002	45.41635513	03 - Snow	01 - Daylight	03 - Loose snow	01 - Traffic signal	01 - Functioning	02 - Non-fatal injury	01 - Approaching	0	1982
Y	2016	2016/07/31 04:00:00+00	1899/12/31 19:55:00+00	16-7187	ALBERT ST @ BRONSON AVE	366739.4375	5031017	-75.70860291	45.4163475	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	03 - P.D. only	02 - Angle	0	7473
Y	2016	2016/09/03 04:00:00+00	1900/01/01 02:47:00+00	16-8161	ALBERT ST @ BRONSON AVE	366739.0313	5031016.5	-75.70861053	45.41633987	01 - Clear	07 - Dark	01 - Dry	01 - Traffic signal	01 - Functioning	03 - P.D. only	02 - Angle	0	8175
Y	2016	2016/10/11 04:00:00+00	1899/12/31 19:34:00+00	16-9288	ALBERT ST @ BRONSON AVE	366739.0313	5031017	-75.70861053	45.41634369	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	03 - P.D. only	04 - Sideswipe	0	9787
Y	2016	2016/10/05 04:00:00+00	1899/12/31 12:47:00+00	16-9098	ALBERT ST @ COMMISSIONER ST	366713.9063	5030971.5	-75.70893097	45.41593933	01 - Clear	01 - Daylight	01 - Dry	02 - Stop sign	01 - Functioning	02 - Non-fatal injury	05 - Turning movement	0	9297
Y	2016	2016/06/14 04:00:00+00	1899/12/31 23:41:00+00	16-5718	ALBERT ST @ EMPRESS AVE	366577.375	5030720.5	-75.71070862	45.41369247	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	03 - P.D. only	03 - Rear end	0	5479
Y	2016	2016/06/30 04:00:00+00	1899/12/31 15:45:00+00	16-6251	ALBERT ST @ PERKINS ST	366534.5625	5030695	-75.71125793	45.41346741	01 - Clear	01 - Daylight	01 - Dry	02 - Stop sign	01 - Functioning	03 - P.D. only	03 - Rear end	0	6045
Y	2016	2016/01/04 05:00:00+00	1899/12/31 23:13:00+00	16-95	ALBERT ST @ PRESTON ST	366161.0625	5030464.5	-75.71605682	45.41142654	01 - Clear	07 - Dark	03 - Loose snow	01 - Traffic signal	01 - Functioning	03 - P.D. only	03 - Rear end	0	95
Y	2016	2016/02/15 05:00:00+00	1899/12/31 17:15:00+00	16-1731	ALBERT ST @ PRESTON ST	366160.3438	5030464.5	-75.71607208	45.41142654	01 - Clear	01 - Daylight	06 - Ice	01 - Traffic signal	01 - Functioning	03 - P.D. only	03 - Rear end	0	1931
Y	2016	2016/02/19 05:00:00+00	1899/12/31 15:51:00+00	16-2077	ALBERT ST @ PRESTON ST	366161.1875	5030464.5	-75.71605682	45.41142654	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	03 - P.D. only	03 - Rear end	0	2877
Y	2016	2016/03/21 04:00:00+00	1899/12/31 14:00:00+00	16-3140	ALBERT ST @ PRESTON ST	366160.3125	5030464.5	-75.71607208	45.41142654	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	02 - Non-fatal injury	05 - Turning movement	0	3039
Y	2016	2016/06/10 04:00:00+00	1899/12/31 15:44:00+00	16-5596	ALBERT ST @ PRESTON ST	366161	5030464.5	-75.71606445	45.41142654	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	03 - P.D. only	04 - Sideswipe	0	5213
Y	2016	2016/07/07 04:00:00+00	1899/12/31 20:46:00+00	16-6478	ALBERT ST @ PRESTON ST	366159.9063	5030465	-75.71607208	45.41143036	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	03 - P.D. only	03 - Rear end	0	6533
Y	2016	2016/08/24 04:00:00+00	1899/12/31 09:54:00+00	16-7834	ALBERT ST @ PRESTON ST	366161.0625	5030464.5	-75.71605682	45.41142654	01 - Clear	07 - Dark	01 - Dry	01 - Traffic signal	01 - Functioning	02 - Non-fatal injury	02 - Angle	0	7305
Y	2016	2016/08/01 04:00:00+00	1899/12/31 15:37:00+00	16-7196	ALBERT ST @ PRESTON ST	366160.1875	5030464.5	-75.71607208	45.41142654	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	02 - Non-fatal injury	04 - Sideswipe	0	7482
Y	2016	2016/09/23 04:00:00+00	1899/12/31 12:36:00+00	16-8760	ALBERT ST @ PRESTON ST	366160.7813	5030464.5	-75.71606445	45.41142654	02 - Rain	01 - Daylight	02 - Wet	01 - Traffic signal	01 - Functioning	03 - P.D. only	05 - Turning movement	0	8761
Y	2016	2016/09/14 04:00:00+00	1899/12/31 17:24:00+00	16-8460	ALBERT ST @ PRESTON ST	366161.0625	5030465	-75.71605682	45.41143036	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	03 - P.D. only	04 - Sideswipe	0	8950
Y	2016	2016/05/13 04:00:00+00	1900/01/01 02:33:00+00	16-4717	ALBERT ST btwn CITY CENTRE AVE & PRESTON ST	366116.4063	5030437.5	-75.71663666	45.41119003	01 - Clear	07 - Dark	01 - Dry	10 - No control		02 - Non-fatal injury	05 - Turning movement	0	4262
Y	2016	2016/08/05 04:00:00+00	1899/12/31 16:40:00+00	16-7318	ALBERT ST btwn PERKINS ST & TRANSIT	366556.4063	5030707.5	-75.71097565	45.41357803	01 - Clear	01 - Daylight	01 - Dry	10 - No control		03 - P.D. only	04 - Sideswipe	0	7200
Y	2016	2016/07/21 04:00:00+00	1899/12/31 12:05:00+00	16-6864	ALBERT ST btwn SCOTT ST & CITY CENTRE AVE (2)	365873.8125	5030307.5	-75.71974945	45.41003799	01 - Clear	01 - Daylight	01 - Dry	10 - No control		03 - P.D. only	04 - Sideswipe	0	6709
Y	2016	2016/10/21 04:00:00+00	1899/12/31 16:49:00+00	16-9657	ALBERT ST btwn SCOTT ST & CITY CENTRE AVE (2)	365944.5938	5030340	-75.71884155	45.4103241	02 - Rain	01 - Daylight	02 - Wet	10 - No control		02 - Non-fatal injury	01 - Approaching	0	9460
Y	2016	2016/02/10 05:00:00+00	1899/12/31 13:11:00+00	16-1493	BAYVIEW RD @ SCOTT ST/ALBERT ST	365518.8438	5030072	-75.72431183	45.40794754	03 - Snow	01 - Daylight	04 - Slush	01 - Traffic signal	01 - Functioning	02 - Non-fatal injury	05 - Turning movement	0	1893
Y	2016	2016/03/02 05:00:00+00	1899/12/31 23:24:00+00	16-2609	BAYVIEW RD @ SCOTT ST/ALBERT ST	365520.5313	5030072	-75.72428894	45.40795135	01 - Clear	05 - Dusk	02 - Wet	01 - Traffic signal	01 - Functioning	02 - Non-fatal injury	07 - SMV other	1	2234
Y	2016	2016/06/16 04:00:00+00	1899/12/31 13:38:00+00	16-5760	BAYVIEW RD @ SCOTT ST/ALBERT ST	365519.0313	5030071.5	-75.72431183	45.40794754	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	02 - Non-fatal injury	05 - Turning movement	0	5868
Y	2016	2016/08/18 04:00:00+00	1899/12/31 12:50:00+00	16-7677	BAYVIEW RD @ SCOTT ST/ALBERT ST	365518.125	5030072	-75.72431946	45.40794754	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	03 - P.D. only	04 - Sideswipe	0	7389
Y	2016	2016/08/02 04:00:00+00	1900/01/01 00:13:00+00	16-7236	BAYVIEW RD @ SCOTT ST/ALBERT ST	365519.1563	5030071.5	-75.72431183	45.40794754	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	02 - Non-fatal injury	05 - Turning movement	0	7588
Y	2016	2016/09/15 04:00:00+00	1899/12/31 18:14:00+00	16-8487	BAYVIEW RD @ SCOTT ST/ALBERT ST	365518.8125	5030072	-75.72431183	45.40794754	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	03 - P.D. only	05 - Turning movement	0	8977
Y	2016	2016/12/15 05:00:00+00	1899/12/31 22:07:00+00	16-11845	BAYVIEW RD @ SCOTT ST/ALBERT ST	365518.8125	5030071.5	-75.72431183	45.40794373	01 - Clear	07 - Dark	03 - Loose snow	01 - Traffic signal	01 - Functioning	03 - P.D. only	05 - Turning movement	0	11466
Y	2016	2016/12/20 05:00:00+00	1899/12/31 14:07:00+00	16-12093	BAYVIEW RD @ SCOTT ST/ALBERT ST	365519.875	5030071	-75.72429657	45.40794373	01 - Clear	01 - Daylight	04 - Slush	01 - Traffic signal	01 - Functioning	03 - P.D. only	02 - Angle	0	12809
Y	2016	2016/04/04 04:00:00+00	1899/12/31 14:18:00+00	16-3501	BOOTH ST @ 148 N OF MIDDLE ST/E.B.EDDY S	366034.5	5031417	-75.71755981	45.4200058	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	03 - P.D. only	03 - Rear end	0	3915
Y	2016	2016/07/07 04:00:00+00	1899/12/31 20:05:00+00	16-6477	BOOTH ST @ 208 N OF MIDDLE ST/E.B. EDDY N	366010.4063	5031471.5	-75.71785736	45.42050171	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	03 - P.D. only	04 - Sideswipe	0	6532
Y	2016	2016/09/15 04:00:00+00	1899/12/31 14:10:00+00	16-8481	BOOTH ST @ FLEET ST	366296.4688	5030935	-75.71427155	45.41564941	01 - Clear	01 - Daylight	01 - Dry	02 - Stop sign	01 - Functioning	03 - P.D. only	05 - Turning movement	0	8971
Y	2016	2016/04/07 04:00:00+00	1899/12/31 18:44:00+00	16-3669	BOOTH ST @ OTTAWA RIVER PKWY/WELLINGTON ST	366265.375	5031006.5	-75.71466064	45.4162941	03 - Snow	01 - Daylight	03 - Loose snow	01 - Traffic signal	01 - Functioning	03 - P.D. only	03 - Rear end	0	3182
Y	2016	2016/03/25 04:00:00+00	1900/01/01 03:21:00+00	16-3288	BOOTH ST @ OTTAWA RIVER PKWY/WELLINGTON ST	366262.8438	5031006	-75.71469116	45.41629028	01 - Clear	07 - Dark	01 - Dry	01 - Traffic signal	01 - Functioning	03 - P.D. only	04 - Sideswipe	0	3805
Y	2016	2016/05/13 04:00:00+00	1899/12/31 23:03:00+00	16-4706	BOOTH ST @ OTTAWA RIVER PKWY/WELLINGTON ST	366264.5	5031007.5	-75.71466827	45.41630173	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	03 - P.D. only	03 - Rear end	0	4127
Y	2016	2016/06/24 04:00:00+00	1899/12/31 18:42:00+00	16-6061	BOOTH ST @ OTTAWA RIVER PKWY/WELLINGTON ST	366264.1875	5031007	-75.7146759	45.41629791	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	03 - P.D. only	04 - Sideswipe	0	6412
Y	2016	2016/09/04 04:00:00+00	1899/12/31 18:30:00+00	16-8170	BOOTH ST @ OTTAWA RIVER PKWY/WELLINGTON ST	366264.8125	5031007	-75.71466827	45.41629791	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	03 - P.D. only	05 - Turning movement	0	8183
Y	2016	2016/10/03 04:00:00+00	1899/12/31 17:15:00+00	16-9042	BOOTH ST @ OTTAWA RIVER PKWY/WELLINGTON ST	366264.4375	5031008	-75.71466827	45.41630554	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	03 - P.D. only	02 - Angle	0	9239
Y	2016	2016/12/06 05:00:00+00	1899/12/31 13:45:00+00	16-11362	BOOTH ST @ OTTAWA RIVER PKWY/WELLINGTON ST	366264.0313	5031006	-75.7146759	45.41629028	01 - Clear	01 - Daylight	02 - Wet	01 - Traffic signal	01 - Functioning	03 - P.D. only	04 - Sideswipe	0	11576
Y	2016	2016/01/15 05:00:00+00	1899/12/31 23:43:00+00	16-12663	BOOTH ST @ OTTAWA RIVER PKWY/WELLINGTON ST	366263.9375	5031005	-75.7146759	45.41628265	01 - Clear	07 - Dark	01 - Dry	01 - Traffic signal	01 - Functioning	03 - P.D. only	04 - Sideswipe	0	12047
Y	2016	2016/09/04 04:00:00+00	1899/12/31 18:30:00+00	16-12537	BOOTH ST @ OTTAWA RIVER PKWY/WELLINGTON ST	366263.7188	5031008	-75.71468353	45.41630554	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	02 - Non-fatal injury	03 - Rear end	0	12651
Y	2016	2016/08/19 04:00:00+00	1899/12/31 22:11:00+00	16-12550	BOOTH ST @ OTTAWA RIVER PKWY/WELLINGTON ST	366264.4063	5031007	-75.7146759	45.41629791	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	03 - P.D. only	03 - Rear end	0	12664
Y	2016	2016/01/19 05:00:00+00	1899/12/31 13:05:00+00	16-754	BOOTH ST btwn MIDDLE ST & VIMY PLACE PRIV	366129.8438	5031271.5	-75.716362	45.41868973	01 - Clear	01 - Daylight	02 - Wet	10 - No control		03 - P.D. only	07 - SMV other	0	154
Y	2016	2016/03/15 04:00:00+00	1899/12/31 20:10:00+00	16-2991	BOOTH ST btwn MIDDLE ST & VIMY PLACE PRIV	366228.7813	5031102	-75.71511841	45.41715622	02 - Rain	01 - Daylight	02 - Wet	10 - No control		03 - P.D. only	03 - Rear end	0	2990
Y	2016	2016/06/16 04:00:00+00	1899/12/31 16:45:00+00	16-5764	BOOTH ST btwn OTTAWA RIVER PKWY & FLEET ST	366267.5	5030999	-75.71463013	45.41622925	01 - Clear	01 - Daylight	01 - Dry	10 - No control		03 - P.D. only	03 - Rear end	0	5872
Y	2016	2016/08/22 04:00:00+00	1899/12/31 20:37:00+00	16-7790	BOOTH ST btwn PROVINCIAL BOUNDARY & 208 N OF MIDDLE ST/E.B. EDDY N	365990.5	5031513.5	-75.71810913	45.42087936	01 - Clear	01 - Daylight	01 - Dry	10 - No control		02 - Non-fatal injury	05 - Turning movement	0	7083
Y	2016	2016/11/04 04:00:00+00	1899/12/31 11:22:00+00	16-10138	BOOTH ST btwn PROVINCIAL BOUNDARY & 208 N OF MIDDLE ST/E.B. EDDY N	366006.6563	5031480	-75.71790314	45.420578	01 - Clear	07 - Dark	01 - Dry	10 - No control		03 - P.D. only	04 - Sideswipe	0	10777
Y	2016	2016/12/24 05:00:00+00	1899/12/31 12:03:00+00	16-12594	BOOTH ST btwn PROVINCIAL BOUNDARY & 208 N OF MIDDLE ST/E.B. EDDY N	365983.9375	5031527.5	-75.71819305	45.42100906	03 - Snow	07 - Dark	02 - Wet	10 - No control		03 - P.D. only	07 - SMV other	0	12709
Y	2016	2016/02/01 05:00:00+00	1899/12/31 18:35:00+00	16-1238	BRONSON AVE @ COMMISSIONER ST/SLATER ST	366768.9375	5030949	-75.70823669	45.41572952	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	03 - P.D. only	02 - Angle	0	1447
Y	2016	2016/02/22 05:00:00+00	1899/12/31 13:02:00+00	16-2185	BRONSON AVE @ COMMISSIONER ST/SLATER ST	366769.8125	5030948.5	-75.70822144	45.41572571	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	03 - P.D. only	04 - Sideswipe	0	2623
Y	2016	2016/04/12 04:00:00+00	1899/12/31 15:16:00+00	16-3804	BRONSON AVE @ COMMISSIONER ST/SLATER ST	366768.4063	5030949	-75.70824432	45.41572952	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	03 - P.D. only	05 - Turning movement	0	3450
Y	2016	2016/05/23 04:00:00+00	1899/12/31 20:22:00+00	16-4988	BRONSON AVE @ COMMISSIONER ST/SLATER ST	366767.7813	5030949.5	-75.70825195	45.41573334	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	03 - P.D. only	05 - Turning movement	0	4910
Y	2016	2016/05/26 04:00:00+00	1899/12/31 19:39:00+00	16-5105	BRONSON AVE @ COMMISSIONER ST/SLATER ST	366768.5	5030949	-75.70823669	45.41573334	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	02 - Non-fatal injury	05 - Turning movement	0	5292
Y	2016	2016/06/05 04:00:00+00	1899/12/31 21:22:00+00	16-5456	BRONSON AVE @ COMMISSIONER ST/SLATER ST	366769.0938	5030948	-75.70822906	45.41572189	01 - Clear	01 - Daylight	02 - Wet	01 - Traffic signal	01 - Functioning	03 - P.D. only	05 - Turning movement	0	5705
Y	2016	2016/06/07 04:00:00+00	1899/12/31 21:16:00+00	16-5504	BRONSON AVE @ COMMISSIONER ST/SLATER ST	366769.0938	5030948.5	-75.70822906	45.41572952	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	03 - P.D. only	02 - Angle	0	5752
Y	2016	2016/06/16 04:00:00+00	1899/12/31 18:20:00+00	16-5769	BRONSON AVE @ COMMISSIONER ST/SLATER ST	366768.3125	5030948	-75.70824432	45.41572189	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	03 - P.D. only	05 - Turning movement	0	5877
Y	2016	2016/07/22 04:00:00+00	1899/12/31 17:31:00+00	16-6911	BRONSON AVE @ COMMISSIONER ST/SLATER ST	366769.3438	5030949.5	-75.70822906	45.41573334	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	03 - P.D. only	05 - Turning movement	0	6225
Y	2016	2016/07/20 04:00:00+00	1899/12/31 19:29:00+00	16-6847	BRONSON AVE @ COMMISSIONER ST/SLATER ST	366769.3438	5030948	-75.70822906	45.41572571	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	02 - Non-fatal injury	02 - Angle	0	6692
Y	2016	2016/09/18 04:00:00+00	1899/12/31 16:44:00+00	16-8587	BRONSON AVE @ COMMISSIONER ST/SLATER ST	366767.5938	5030948	-75.70825195	45.41572189	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	03 - P.D. only	05 - Turning movement	0	8400
Y	2016	2016/09/15 04:00:00+00	1899/12/31 23:50:00+00	16-8503	BRONSON AVE @ COMMISSIONER ST/SLATER ST	366767.5938	5030949	-75.70825195	45.41572952	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	03 - P.D. only	04 - Sideswipe	0	8993
Y	2016	2016/10/11 04:00:00+00	1899/12/31 15:07:00+00	16-9280	BRONSON AVE @ COMMISSIONER ST/SLATER ST	366770.125	5030948.5	-75.70822144	45.41572571	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	03 - P.D. only	05 - Turning movement	0	9779
Y	2016	2016/10/06 04:00:00+00	1899/12/31 19:01:00+00	16-9164	BRONSON AVE @ COMMISSIONER ST/SLATER ST	366769.375	5030949	-75.70822906	45.41572952	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	03 - P.D. only	05 - Turning movement	0	9953
Y	2016	2016/11/21 05:00:00+00	1900/01/01 03:01:00+00	16-10795	BRONSON AVE @ COMMISSIONER ST/SLATER ST	366769.4063	5030947.5	-75.70822906	45.41571808	03 - Snow	07 - Dark	03 - Loose snow	01 - Traffic signal	01 - Functioning	03 - P.D. only	07 - SMV other	0	10752
Y	2016	2016/01/04 05:00:00+00	1900/01/01 00:48:00+00	16-96	OTTAWA RIVER PKWY @ PORTAGE BRIDGE	366516.75	5031315	-75.71141052	45.41904831	03 - Snow	07 - Dark	03 - Loose snow	01 - Traffic signal	01 - Functioning	03 - P.D. only	04 - Sideswipe	0	96
Y	2016	2016/07/09 04:00:00+00	1899/12/31 22:39:00+00	16-6536	OTTAWA RIVER PKWY @ PORTAGE BRIDGE	366515.7188	5031314.5	-75.71142578	45.41904449	02 - Rain	01 - Daylight	02 - Wet	01 - Traffic signal	01 - Functioning	03 - P.D. only	03 - Rear end	0	6929
Y	2016	2016/08/25 04:00:00+00	1899/12/31 17:10:00+00	16-12568	OTTAWA RIVER PKWY @ PORTAGE BRIDGE	366516.2188	5031314.5	-75.71141815	45.41904449	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	03 - P.D. only	04 - Sideswipe	0	12683
Y	2016	2016/12/29 05:00:00+00	1899/12/31 18:32:00+00	16-12729	OTTAWA RIVER PKWY @ RIVER ST/SLIDELL ST	365159.2188	5030375.5	-75.72886658	45.4107132	03 - Snow	01 - Daylight	03 - Loose snow	01 - Traffic signal	01 - Functioning	01 - Fatal injury	03 - Rear end	0	12114
Y	2016	2016/07/17 04:00:00+00	1899/12/31 19:55:00+00	16-12578	OTTAWA RIVER PKWY @ RIVER ST/SLIDELL ST	365153.4688	5030375	-75.72894287	45.41070938	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	02 - Non-fatal injury	02 - Angle	0	12693
Y	2016	2016/10/30 04:00:00+00	1899/12/31 21:00:00+00	16-12602	OTTAWA RIVER PKWY @ RIVER ST/SLIDELL ST	365156.9063	5030377.5	-75.72889709	45.41073227	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	03 - P.D. only	02 - Angle	0	12717
Y	2016	2016/06/25 04:00:00+00	1899/12/31 15:56:00+00	16-6090	OTTAWA RIVER PKWY @ VIMY PLACE PRIV	365975.2188	5030800	-75.71839142	45.41445923	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	03 - P.D. only	03 - Rear end	0	6442
Y	2016	2016/09/01 04:00:00+00	1899/12/31 10:36:00+00	16-8059	OTTAWA RIVER PKWY @ VIMY PLACE PRIV	365973.8125	5030797.5	-75.71841431	45.41443634	01 - Clear	07 - Dark	01 - Dry	01 - Traffic signal	01 - Functioning	03 - P.D. only	04 - Sideswipe	0	8568
Y	2016	2016/01/13 05:00:00+00	1899/12/31 21:09:00+00	16-12656	OTTAWA RIVER PKWY @ VIMY PLACE PRIV	365975.9063	5030797.5	-75.71838379	45.41444016	01 - Clear	01 - Daylight	02 - Wet	01 - Traffic signal	01 - Functioning	03 - P.D. only	03 - Rear end	0	12041
Y	2016	2016/12/31 05:00:00+00	1899/12/31 18:50:00+00	16-12470	OTTAWA RIVER PKWY @ VIMY PLACE PRIV	365975.1875	5030798	-75.71839142	45.41444397	03 - Snow	01 - Daylight	03 - Loose snow	01 - Traffic signal	01 - Functioning	03 - P.D. only	05 - Turning movement	0	12956
Y	2016	2016/03/02 05:00:00+00	1899/12/31 16:05:00+00	16-12683	OTTAWA RIVER PKWY btwn TRANSITWAY - TIME POINT & VIMY PLACE PRIV	365723.8438	5030498.5	-75.72164154	45.41176987	03 - Snow	01 - Daylight	06 - Ice	10 - No control		03 - P.D. only	07 - SMV other	0	12067
Y	2016	2016/04/20 04:00:00+00	1899/12/31 21:17:00+00	16-12714	OTTAWA RIVER PKWY btwn TRANSITWAY - TIME POINT & VIMY PLACE PRIV	365949.8438	5030780	-75.71871948	45.41428375	01 - Clear	01 - Daylight	01 - Dry	10 - No control		02 - Non-fatal injury	07 - SMV other	0	12097
Y	2016	2016/09/26 04:00:00+00	1899/12/31 22:10:00+00	16-12512	OTTAWA RIVER PKWY btwn TRANSITWAY - TIME POINT & VIMY PLACE PRIV	365934.4063	5030778.5	-75.71891785	45.41426849	01 - Clear	01 - Daylight	01 - Dry	10 - No control		03 - P.D. only	03 - Rear end	0	12998
Y	2016	2016/06/13 04:00:00+00	1899/12/31 20:20:00+00	16-5683	OTTAWA RIVER PKWY btwn VIMY PLACE PRIV & BOOTH ST	366250.2813	5030996	-75.71485138	45.41620255	01 - Clear	01 - Daylight	01 - Dry	10 - No control		03 - P.D. only	04 - Sideswipe	0	5417
Y	2016	2016/07/13 04:00:00+00	1899/12/31 20:00:00+00	16-6640	OTTAWA RIVER PKWY btwn VIMY PLACE PRIV & BOOTH ST	366260.1875	5031004	-75.71472931	45.41627502	01 - Clear	01 - Daylight	01 - Dry	10 - No control		02 - Non-fatal injury	03 - Rear end	0	6270
Y	2016	2016/04/27 04:00:00+00	1899/12/31 08:20:00+00	16-12754	OTTAWA RIVER PKWY WB btwn RAMP & RIVER ST	365064.125	5030356	-75.73008728	45.41054916	01 - Clear	07 - Dark	01 - Dry	10 - No control		03 - P.D. only	07 - SMV other	0	12139
Y	2016	2016/07/06 04:00:00+00	1899/12/31 21:03:00+00	16-6444	PARKDALE AVE @ SCOTT ST	364949.3125	5029726.5	-75.73162842	45.40489197	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	03 - P.D. only	07 - SMV other	0	6498
Y	2016	2016/07/23 04:00:00+00	1899/12/31 15:33:00+00	16-6942	PARKDALE AVE @ SCOTT ST	364949.3125	5029726	-75.73162842	45.40488434	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	03 - P.D. only	05 - Turning movement	0	6573
Y	2016	2016/11/14 05:00:00+00	1899/12/31 22:31:00+00	16-10483	PARKDALE AVE @ SCOTT ST	364951.375	5029726	-75.73160553	45.40488815	01 - Clear	07 - Dark	01 - Dry	01 - Traffic signal	01 - Functioning	03 - P.D. only	03 - Rear end	0	10523
Y	2016	2016/12/06 05:00:00+00	1899/12/31 23:22:00+00	16-11387	PARKDALE AVE @ SCOTT ST	364948.5938	5029726.5	-75.73163605	45.40489197	01 - Clear	07 - Dark	01 - Dry	01 - Traffic signal	01 - Functioning	02 - Non-fatal injury	05 - Turning movement	0	11601
Y	2016	2016/03/16 04:00:00+00	1899/12/31 15:00:00+00	16-3007	PARKDALE AVE btwn BURNSIDE AVE & LYNDALE AVE	364825.1875	5030016.5	-75.73317719	45.40750885	01 - Clear	01 - Daylight	01 - Dry	10 - No control		03 - P.D. only	02 - Angle	0	3321
Y	2016	2016/04/14 04:00:00+00	1899/12/31 13:34:00+00	16-3855	PARKDALE AVE btwn LYNDALE AVE & SCOTT ST	364918.5	5029798.5	-75.73201752	45.40554428	01 - Clear	01 - Daylight	01 - Dry	10 - No control		03 - P.D. only	02 - Angle	0	3582
Y	2016	2016/06/22 04:00:00+00	1899/12/31 23:37:00+00	16-6008	PARKDALE AVE btwn LYNDALE AVE & SCOTT ST	364928.7188	5029773.5	-75.73188782	45.40531921	01 - Clear	01 - Daylight	01 - Dry	10 - No control		03 - P.D. only	02 - Angle	0	6143
Y	2016	2016/12/06 05:00:00+00	1899/12/31 13:19:00+00	16-11360	PARKDALE AVE btwn LYNDALE AVE & SCOTT ST	364936.1563	5029753	-75.73179626	45.40513229	01 - Clear	01 - Daylight	02 - Wet	10 - No control		03 - P.D. only	02 - Angle	0	11574
Y	2016	2016/06/14 04:00:00+00	1899/12/31 21:36:00+00	16-5712	PARKDALE AVE btwn TO BE DETERMINED & EMMERSON AVE	364706.875	5030289	-75.73465729	45.40997314	01 - Clear	01 - Daylight	01 - Dry	10 - No control		03 - P.D. only	03 - Rear end	0	5352
Y	2016	2016/06/01 04:00:00+00	1899/12/31 19:45:00+00	16-5357	PARKDALE AVE btwn TO BE DETERMINED & EMMERSON AVE	364706.5313	5030288	-75.73466492	45.40996552	01 - Clear	01 - Daylight	01 - Dry	10 - No control		03 - P.D. only	06 - SMV unattended vehicle	0	5781
Y	2016	2016/07/30 04:00:00+00	1899/12/31 15:10:00+00	16-12730	PARKDALE AVE EB OFF RAMP/OTTAWA RIVER PKWY btwn OTTAWA RIVER PKWY & PA	364585.125	5030405.5	-75.73619843	45.41103363	01 - Clear	01 - Daylight	01 - Dry	10 - No control		03 - P.D. only	03 - Rear end	0	12115
Y	2016	2016/01/04 05:00:00+00	1899/12/31 16:00:00+00	16-12658	PARKDALE AVE WB OFF RAMP/OTTAWA RIVER PKWY btwn OTTAWA RIVER PKWY & PA	364830.9375	5030402.5	-75.73306274	45.41098404	01 - Clear	01 - Daylight	01 - Dry	10 - No control		03 - P.D. only	07 - SMV other	0	12042
Y	2016	2016/06/06 04:00:00+00	1899/12/31 12:20:00+00	16-12726	PARKDALE AVE WB OFF RAMP/OTTAWA RIVER PKWY btwn OTTAWA RIVER PKWY & PA	364818.4375	5030412	-75.73321533	45.41107178	01 - Clear	01 - Daylight	01 - Dry	10 - No control		03 - P.D. only	04 - Sideswipe	0	12111
Y	2016	2016/12/09 05:00:00+00	1899/12/31 13:30:00+00	16-12589	PARKDALE AVE WB OFF RAMP/OTTAWA RIVER PKWY btwn OTTAWA RIVER PKWY & PA	364688.3438	5030584	-75.73485565	45.41262817	01 - Clear	01 - Daylight	06 - Ice	10 - No control		03 - P.D. only	03 - Rear end	0	12704
Y	2016	2016/05/20 04:00:00+00	1899/12/31 22:05:00+00	16-4915	SLATER ST btwn ALBERT ST & COMMISSIONER ST	366737.6875	5030913	-75.70864105	45.41540909	01 - Clear	01 - Daylight	01 - Dry	10 - No control		03 - P.D. only	04 - Sideswipe	0	4358
Y	2016	2016/04/04 04:00:00+00	1899/12/31 17:24:00+00	16-3505	WELLINGTON ST @ LETT ST	366354.5	5031111	-75.71350861	45.41722488	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	03 - P.D. only	03 - Rear end	0	3114
Y	2016	2016/04/06 04:00:00+00	1899/12/31 22:37:00+00	16-3595	WELLINGTON ST @ LETT ST	366355.6563	5031111	-75.71349335	45.4172287	03 - Snow	01 - Daylight	04 - Slush	01 - Traffic signal	01 - Functioning	03 - P.D. only	02 - Angle	0	3725
Y	2016	2016/08/10 04:00:00+00	1899/12/31 12:41:00+00	16-7423	WELLINGTON ST @ LETT ST	366354.8125	5031111	-75.71350098	45.41722488	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	03 - P.D. only	03 - Rear end	0	7199
Y	2016	2016/09/19 04:00:00+00	1899/12/31 20:51:00+00	16-8627	WELLINGTON ST @ LETT ST	366355.2188	5031111.5	-75.71350098	45.41723251	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	03 - P.D. only	03 - Rear end	0	8017
Y	2016	2016/06/13 04:00:00+00	1899/12/31 20:00:00+00	16-5680	WELLINGTON ST btwn OTTAWA RIVER PKWY & TO BE DETERMINED	366275.3438	5031015	-75.71453094	45.41637039	01 - Clear	01 - Daylight	01 - Dry	10 - No control		03 - P.D. only	04 - Sideswipe	0	5414

Study Area	Year	Record	Location	X	Y	Longitude	Latitude	Date	Time	Environment	Road_Surface	Traffic_Control	Collision_Location	Light	Collision_Classification	Impact_type	FID
Y	2017	150	ALBERT ST @ BOOTH ST	366428.3438	5030626	-75.7126236	45.41285706	1.49638E+12	-2.209E+12	01 - Clear	01 - Dry	01 - Traffic signal	03 - At intersection	01 - Daylight	03 - P.D. only	07 - SMV other	51
Y	2017	151	ALBERT ST @ BOOTH ST	366429.0313	5030626.5	-75.71261597	45.41286087	1.49448E+12	-2.20902E+12	01 - Clear	01 - Dry	01 - Traffic signal	02 - Intersection related	01 - Daylight	03 - P.D. only	04 - Sideswipe	52
Y	2017	152	ALBERT ST @ BOOTH ST	366427.6875	5030626	-75.71263123	45.41285706	1.49975E+12	-2.209E+12	01 - Clear	02 - Wet	01 - Traffic signal	03 - At intersection	01 - Daylight	02 - Non-fatal injury	05 - Turning movement	53
Y	2017	153	ALBERT ST @ BOOTH ST	366429.1563	5030625.5	-75.71261597	45.41284943	1.50381E+12	-2.20897E+12	01 - Clear	01 - Dry	01 - Traffic signal	03 - At intersection	07 - Dark	03 - P.D. only	05 - Turning movement	54
Y	2017	154	ALBERT ST @ BOOTH ST	366430.375	5030626.5	-75.71260071	45.41286087	1.49966E+12	-2.20897E+12	01 - Clear	01 - Dry	01 - Traffic signal	03 - At intersection	07 - Dark	03 - P.D. only	05 - Turning movement	55
Y	2017	155	ALBERT ST @ BOOTH ST	366427.7813	5030627	-75.71263123	45.41286469	1.50078E+12	-2.209E+12	01 - Clear	01 - Dry	01 - Traffic signal	02 - Intersection related	01 - Daylight	03 - P.D. only	03 - Rear end	56
Y	2017	156	ALBERT ST @ BOOTH ST	366429.625	5030627.5	-75.71260834	45.4128685	1.50536E+12	-2.20903E+12	01 - Clear	01 - Dry	01 - Traffic signal	03 - At intersection	01 - Daylight	03 - P.D. only	02 - Angle	57
Y	2017	157	ALBERT ST @ BOOTH ST	366429.6875	5030626.5	-75.71260834	45.41286087	1.50942E+12	-2.209E+12	01 - Clear	01 - Dry	01 - Traffic signal	02 - Intersection related	01 - Daylight	03 - P.D. only	04 - Sideswipe	58
Y	2017	158	ALBERT ST @ BOOTH ST	366428.6875	5030627	-75.7126236	45.41286469	1.51305E+12	-2.20902E+12	03 - Snow	05 - Packed snow	01 - Traffic signal	02 - Intersection related	01 - Daylight	03 - P.D. only	03 - Rear end	59
Y	2017	159	ALBERT ST @ BOOTH ST	366427.6875	5030628	-75.71263123	45.41287231	1.51089E+12	-2.20898E+12	01 - Clear	01 - Dry	01 - Traffic signal	02 - Intersection related	07 - Dark	03 - P.D. only	03 - Rear end	60
Y	2017	160	ALBERT ST @ BOOTH ST	366429.1563	5030625.5	-75.71261597	45.41284943	1.51262E+12	-2.20898E+12	01 - Clear	01 - Dry	01 - Traffic signal	02 - Intersection related	07 - Dark	02 - Non-fatal injury	05 - Turning movement	61
Y	2017	161	ALBERT ST @ BOOTH ST	366429.4375	5030627.5	-75.71260834	45.41287231	1.4861E+12	-2.209E+12	01 - Clear	01 - Dry	01 - Traffic signal	02 - Intersection related	01 - Daylight	03 - P.D. only	03 - Rear end	62
Y	2017	162	ALBERT ST @ BOOTH ST	366428.6875	5030626.5	-75.7126236	45.41286087	1.48489E+12	-2.20902E+12	01 - Clear	01 - Dry	01 - Traffic signal	03 - At intersection	01 - Daylight	03 - P.D. only	04 - Sideswipe	63
Y	2017	163	ALBERT ST @ BOOTH ST	366429.4375	5030625.5	-75.71260834	45.41284943	1.48662E+12	-2.20902E+12	01 - Clear	01 - Dry	01 - Traffic signal	02 - Intersection related	01 - Daylight	03 - P.D. only	03 - Rear end	64
Y	2017	164	ALBERT ST @ BOOTH ST	366427.6875	5030627	-75.71263123	45.4128685	1.48713E+12	-2.20902E+12	01 - Clear	01 - Dry	01 - Traffic signal	02 - Intersection related	01 - Daylight	03 - P.D. only	03 - Rear end	65
Y	2017	165	ALBERT ST @ BOOTH ST	366428.3438	5030628	-75.7126236	45.41287231	1.48946E+12	-2.20901E+12	03 - Snow	03 - Loose snow	01 - Traffic signal	03 - At intersection	01 - Daylight	03 - P.D. only	05 - Turning movement	66
Y	2017	166	ALBERT ST @ BOOTH ST	366429.4375	5030627.5	-75.71260834	45.41287231	1.49119E+12	-2.20901E+12	01 - Clear	01 - Dry	01 - Traffic signal	02 - Intersection related	01 - Daylight	03 - P.D. only	03 - Rear end	67
Y	2017	167	ALBERT ST @ BOOTH ST	366429.1563	5030626	-75.71261597	45.41285324	1.51401E+12	-2.20901E+12	03 - Snow	03 - Loose snow	01 - Traffic signal	03 - At intersection	01 - Daylight	03 - P.D. only	03 - Rear end	68
Y	2017	169	ALBERT ST @ BRONSON AVE	366740.0313	5031018	-75.70859528	45.41635513	1.49733E+12	-2.209E+12	01 - Clear	01 - Dry	01 - Traffic signal	02 - Intersection related	01 - Daylight	03 - P.D. only	05 - Turning movement	70
Y	2017	170	ALBERT ST @ COMMISSIONER ST	366714.0313	5030973	-75.70893097	45.41595078	1.49499E+12	-2.209E+12	01 - Clear	01 - Dry	02 - Stop sign	03 - At intersection	01 - Daylight	02 - Non-fatal injury	05 - Turning movement	71
Y	2017	171	ALBERT ST @ COMMISSIONER ST	366714.6875	5030971	-75.70892334	45.41593552	1.50778E+12	-2.20901E+12	01 - Clear	01 - Dry	02 - Stop sign	03 - At intersection	01 - Daylight	03 - P.D. only	04 - Sideswipe	72
Y	2017	172	ALBERT ST @ COMMISSIONER ST	366714.0313	5030972	-75.70893097	45.41594696	1.49085E+12	-2.20902E+12	01 - Clear	01 - Dry	02 - Stop sign	02 - Intersection related	01 - Daylight	03 - P.D. only	02 - Angle	73
Y	2017	173	ALBERT ST @ COMMISSIONER ST	366714.6563	5030973	-75.70892334	45.41595078	1.51401E+12	-2.20901E+12	03 - Snow	03 - Loose snow	02 - Stop sign	03 - At intersection	01 - Daylight	03 - P.D. only	04 - Sideswipe	74
Y	2017	185	ALBERT ST @ EMPRESS AVE	366576.6875	5030720.5	-75.71071625	45.41369247	1.50579E+12	-2.209E+12	01 - Clear	01 - Dry	01 - Traffic signal	02 - Intersection related	01 - Daylight	03 - P.D. only	04 - Sideswipe	86
Y	2017	186	ALBERT ST @ EMPRESS AVE	366577.1875	5030720.5	-75.71070862	45.41369247	1.51012E+12	-2.20901E+12	01 - Clear	01 - Dry	01 - Traffic signal	02 - Intersection related	01 - Daylight	03 - P.D. only	04 - Sideswipe	87
Y	2017	187	ALBERT ST @ EMPRESS AVE	366577.4375	5030721	-75.71070862	45.41369629	1.48834E+12	-2.20901E+12	02 - Rain	02 - Wet	01 - Traffic signal	02 - Intersection related	01 - Daylight	03 - P.D. only	03 - Rear end	88
Y	2017	188	ALBERT ST @ EMPRESS AVE	366577.0313	5030721	-75.71071625	45.4137001	1.48938E+12	-2.20902E+12	01 - Clear	01 - Dry	01 - Traffic signal	03 - At intersection	01 - Daylight	03 - P.D. only	04 - Sideswipe	89
Y	2017	205	ALBERT ST @ PERKINS ST	366534.0313	5030697	-75.71126556	45.41348648	1.51012E+12	-2.20902E+12	01 - Clear	01 - Dry	02 - Stop sign	03 - At intersection	01 - Daylight	03 - P.D. only	07 - SMV other	205
Y	2017	206	ALBERT ST @ PRESTON ST	366160.2188	5030466	-75.71607208	45.41143799	1.49586E+12	-2.20899E+12	01 - Clear	01 - Dry	01 - Traffic signal	02 - Intersection related	01 - Daylight	03 - P.D. only	03 - Rear end	206
Y	2017	207	ALBERT ST @ PRESTON ST	366161.0313	5030466	-75.71605682	45.41143799	1.49672E+12	-2.209E+12	02 - Rain	02 - Wet	01 - Traffic signal	02 - Intersection related	01 - Daylight	03 - P.D. only	03 - Rear end	207
Y	2017	208	ALBERT ST @ PRESTON ST	366161.0313	5030464	-75.71605682	45.41142273	1.4994E+12	-2.20897E+12	01 - Clear	01 - Dry	01 - Traffic signal	02 - Intersection related	07 - Dark	03 - P.D. only	03 - Rear end	208
Y	2017	209	ALBERT ST @ PRESTON ST	366159.375	5030466	-75.71607971	45.4114418	1.50666E+12	-2.209E+12	01 - Clear	01 - Dry	01 - Traffic signal	02 - Intersection related	01 - Daylight	02 - Non-fatal injury	03 - Rear end	209
Y	2017	210	ALBERT ST @ PRESTON ST	366162.4063	5030466.5	-75.71604156	45.4114418	1.48351E+12	-2.20898E+12	03 - Snow	03 - Loose snow	01 - Traffic signal	02 - Intersection related	07 - Dark	03 - P.D. only	03 - Rear end	210
Y	2017	211	ALBERT ST @ PRESTON ST	366161.0313	5030465	-75.71605682	45.41143417	1.49206E+12	-2.20899E+12	01 - Clear	01 - Dry	01 - Traffic signal	02 - Intersection related	01 - Daylight	02 - Non-fatal injury	03 - Rear end	211
Y	2017	219	ALBERT ST btwn CITY CENTRE AVE & PRESTON ST	366132.9375	5030447	-75.71642303	45.41127396	1.48904E+12	-2.20901E+12	01 - Clear	01 - Dry	10 - No control	01 - Non intersection	01 - Daylight	03 - P.D. only	04 - Sideswipe	219
Y	2017	222	ALBERT ST btwn LORNE AVE & PERKINS ST	366519.3438	5030687	-75.7114563	45.41339493	1.48765E+12	-2.20899E+12	02 - Rain	02 - Wet	10 - No control	01 - Non intersection	05 - Dusk	03 - P.D. only	04 - Sideswipe	222
Y	2017	226	ALBERT ST btwn PRESTON ST & Continuation of ALBERT ST	366252.4375	5030526	-75.7148819	45.41197586	1.49966E+12	-2.209E+12	01 - Clear	01 - Dry	10 - No control	01 - Non intersection	01 - Daylight	02 - Non-fatal injury	07 - SMV other	226
Y	2017	227	ALBERT ST btwn SCOTT ST & CITY CENTRE AVE (1)	365728.5625	5030212.5	-75.72161865	45.40919876	1.50692E+12	-2.20903E+12	01 - Clear	01 - Dry	10 - No control	01 - Non intersection	01 - Daylight	03 - P.D. only	04 - Sideswipe	227
Y	2017	228	ALBERT ST btwn SCOTT ST & CITY CENTRE AVE (1)	365654.5313	5030150.5	-75.72257233	45.40864563	1.48955E+12	-2.20902E+12	05 - Drifting Snow	03 - Loose snow	10 - No control	01 - Non intersection	01 - Daylight	03 - P.D. only	03 - Rear end	228
Y	2017	1567	BAYVIEW RD @ SCOTT ST/ALBERT ST	365520.25	5030070.5	-75.72429657	45.40793991	1.49992E+12	-2.20899E+12	01 - Clear	01 - Dry	01 - Traffic signal	02 - Intersection related	01 - Daylight	03 - P.D. only	03 - Rear end	1795
Y	2017	1568	BAYVIEW RD @ SCOTT ST/ALBERT ST	365519.9688	5030071.5	-75.72429657	45.40794373	1.49992E+12	-2.20898E+12	01 - Clear	01 - Dry	01 - Traffic signal	03 - At intersection	07 - Dark	03 - P.D. only	02 - Angle	1796
Y	2017	1569	BAYVIEW RD @ SCOTT ST/ALBERT ST	365520.4688	5030072	-75.72428894	45.40794754	1.5064E+12	-2.20901E+12	01 - Clear	01 - Dry	01 - Traffic signal	03 - At intersection	01 - Daylight	02 - Non-fatal injury	05 - Turning movement	1797
Y	2017	1570	BAYVIEW RD @ SCOTT ST/ALBERT ST	365520.0625	5030071.5	-75.72429657	45.40794754	1.49007E+12	-2.20899E+12	01 - Clear	01 - Dry	01 - Traffic signal	03 - At intersection	07 - Dark	02 - Non-fatal injury	05 - Turning movement	1798
Y	2017	1571	BAYVIEW RD @ SCOTT ST/ALBERT ST	365518.5625	5030071.5	-75.72431946	45.40794373	1.51392E+12	-2.209E+12	01 - Clear	03 - Loose snow	01 - Traffic signal	03 - At intersection	01 - Daylight	03 - P.D. only	05 - Turning movement	1799
Y	2017	2052	BOOTH ST @ MIDDLE ST	366114.375	5031294	-75.71655273	45.41889191	1.49914E+12	-2.20902E+12	01 - Clear	01 - Dry	02 - Stop sign	02 - Intersection related	01 - Daylight	03 - P.D. only	03 - Rear end	2854
Y	2017	2053	BOOTH ST @ MIDDLE ST	366115.3125	5031291.5	-75.7165451	45.41887283	1.51323E+12	-2.20899E+12	03 - Snow	04 - Slush	02 - Stop sign	03 - At intersection	07 - Dark	03 - P.D. only	05 - Turning movement	2855
Y	2017	2054	BOOTH ST @ MIDDLE ST	366115.5313	5031291.5	-75.71653748	45.41887283	1.50994E+12	-2.209E+12	01 - Clear	01 - Dry	02 - Stop sign	02 - Intersection related	01 - Daylight	03 - P.D. only	04 - Sideswipe	2856
Y	2017	2059	BOOTH ST @ OTTAWA RIVER PKWY/WELLINGTON ST	366264.5938	5031007.5	-75.71466827	45.41630173	1.49776E+12	-2.20901E+12	01 - Clear	01 - Dry	01 - Traffic signal	02 - Intersection related	01 - Daylight	03 - P.D. only	03 - Rear end	2861
Y	2017	2060	BOOTH ST @ OTTAWA RIVER PKWY/WELLINGTON ST	366264.5625	5031005.5	-75.71466827	45.41628265	1.4937E+12	-2.209E+12	02 - Rain	02 - Wet	01 - Traffic signal	03 - At intersection	01 - Daylight	02 - Non-fatal injury	05 - Turning movement	2862
Y	2017	2061	BOOTH ST @ OTTAWA RIVER PKWY/WELLINGTON ST	366265.5313	5031005.5	-75.71466064	45.41628647	1.49914E+12	-2.209E+12	01 - Clear	01 - Dry	01 - Traffic signal	02 - Intersection related	01 - Daylight	03 - P.D. only	04 - Sideswipe	2863
Y	2017	2062	BOOTH ST @ OTTAWA RIVER PKWY/WELLINGTON ST	366263.7813	5031006.5	-75.71468353	45.4162941	1.49992E+12	-2.20899E+12	01 - Clear	01 - Dry	01 - Traffic signal	02 - Intersection related	01 - Daylight	03 - P.D. only	03 - Rear end	2864
Y	2017	2063	BOOTH ST @ OTTAWA RIVER PKWY/WELLINGTON ST	366263.7813	5031006	-75.71468353	45.41629028	1.50726E+12	-2.20901E+12	01 - Clear	01 - Dry	01 - Traffic signal	03 - At intersection	01 - Daylight	03 - P.D. only	05 - Turning movement	2865
Y	2017	2064	BOOTH ST @ OTTAWA RIVER PKWY/WELLINGTON ST	366265.25	5031005.5	-75.71466064	45.41628265	1.50813E+12	-2.20899E+12	01 - Clear	01 - Dry	01 - Traffic signal	02 - Intersection related	01 - Daylight	03 - P.D. only	03 - Rear end	2866
Y	2017	2065	BOOTH ST @ OTTAWA RIVER PKWY/WELLINGTON ST	366263.9375	5031005.5	-75.7146759	45.41628265	1.50864E+12	-2.20903E+12	01 - Clear	01 - Dry	01 - Traffic signal	03 - At intersection	01 - Daylight	03 - P.D. only	07 - SMV other	2867
Y	2017	2066	BOOTH ST @ OTTAWA RIVER PKWY/WELLINGTON ST	366264.5938	5031007.5	-75.71466827	45.41630173	1.51219E+12	-2.209E+12	01 - Clear	01 - Dry	01 - Traffic signal	02 - Intersection related	05 - Dusk	03 - P.D. only	03 - Rear end	2868
Y	2017	2067	BOOTH ST @ OTTAWA RIVER PKWY/WELLINGTON ST	366263.25	5031008	-75.71468353	45.41630936	1.51107E+12	-2.20902E+12	03 - Snow	02 - Wet	01 - Traffic signal	03 - At intersection	01 - Daylight	02 - Non-fatal injury	02 - Angle	2869
Y	2017	2068	BOOTH ST @ OTTAWA RIVER PKWY/WELLINGTON ST	366264.5938	5031007.5	-75.71466827	45.41630173	1.51029E+12	-2.20902E+12	01 - Clear	01 - Dry	01 - Traffic signal	03 - At intersection	01 - Daylight	03 - P.D. only	02 - Angle	2870
Y	2017	2069	BOOTH ST @ OTTAWA RIVER PKWY/WELLINGTON ST	366262.5938	5031008	-75.71469879	45.41630936	1.51141E+12	-2.20899E+12	01 - Clear	01 - Dry	01 - Traffic signal	03 - At intersection	07 - Dark	03 - P.D. only	05 - Turning movement	2871
Y	2017	2070	BOOTH ST @ OTTAWA RIVER PKWY/WELLINGTON ST	366264.7188	5031006.5	-75.71466827	45.4162941	1.51012E+12	-2.20902E+12	01 - Clear	01 - Dry	01 - Traffic signal	02 - Intersection related	01 - Daylight	03 - P.D. only	03 - Rear end	2872
Y	2017	2071	BOOTH ST @ OTTAWA RIVER PKWY/WELLINGTON ST	366264.3438	5031007.5	-75.7146759	45.41630554	1.48437E+12	-2.20899E+12	01 - Clear	01 - Dry	01 - Traffic signal	03 - At intersection	07 - Dark	03 - P.D. only	02 - Angle	2873
Y	2017	2072	BOOTH ST @ OTTAWA RIVER PKWY/WELLINGTON ST	366264.0313	5031006	-75.7146759	45.41629028	1.49007E+12	-2.20899E+12	01 - Clear	01 - Dry	01 - Traffic signal	03 - At intersection	05 - Dusk	03 - P.D. only	04 - Sideswipe	2874
Y	2017	2073	BOOTH ST @ OTTAWA RIVER PKWY/WELLINGTON ST	366262.5625	5031006.5	-75.71469879	45.41629791	1.48757E+12	-2.20903E+12	01 - Clear	02 - Wet	01 - Traffic signal	02 - Intersection related	01 - Daylight	03 - P.D. only	04 - Sideswipe	2875
Y	2017	2074	BOOTH ST @ OTTAWA RIVER PKWY/WELLINGTON ST	366264.6563	5031008.5	-75.71466827	45.41631317	1.49033E+12	-2.20902E+12	03 - Snow	05 - Packed snow	01 - Traffic signal	02 - Intersection related	01 - Daylight	03 - P.D. only	04 - Sideswipe	2876
Y	2017	2075	BOOTH ST @ OTTAWA RIVER PKWY/WELLINGTON ST	366264.25	5031006.5	-75.7146759	45.41629791	1.50847E+12	-2.209E+12	01 - Clear	01 - Dry	01 - Traffic signal	02 - Intersection related	01 - Daylight	03 - P.D. only	03 - Rear end	2877
Y	2017	2097	BOOTH ST btwn 148 N OF MIDDLE ST/E.B. EDDY S & MIDDLE ST	366054.2813	5031376	-75.71730804	45.41963959	1.51435E+12	-2.20899E+12	01 - Clear	01 - Dry	10 - No control	01 - Non intersection	07 - Dark	03 - P.D. only	07 - SMV other	2899
Y	2017	2101	BOOTH ST btwn FLEET ST & END	366345.75	5030822.5	-75.71365356	45.41463089	1.48774E+12	-2.20899E+12	01 - Clear	01 - Dry	10 - No control	01 - Non intersection	07 - Dark	03 - P.D. only	04 - Sideswipe	2019
Y	2017	2104	BOOTH ST btwn MIDDLE ST & VIMY PLACE PRIV	366223.7813	5031111	-75.71517944	45.41724014	1.49802E+12	-2.20899E+12	01 - Clear	01 - Dry	10 - No control	01 - Non intersection	01 - Daylight	03 - P.D. only	03 - Rear end	2120
Y	2017	2105	BOOTH ST btwn MIDDLE ST & VIMY PLACE PRIV	366141.7813	5031252	-75.71620941	45.41851044	1.51288E+12	-2.20906E+12	03 - Snow	05 - Packed snow	10 - No control	01 - Non intersection	07 - Dark	02 - Non-fatal injury	01 - Approaching	2124
Y	2017	2106	BOOTH ST btwn MIDDLE ST & VIMY PLACE PRIV	366193.3125	5031176	-75.71556091	45.41782379	1.49145E+12	-2.20903E+12	02 - Rain	02 - Wet	10 - No control	04 - At/near private drive	01 - Daylight	03 - P.D. only	02 - Angle	2128
Y	2017	2107	BOOTH ST btwn PROVINCIAL BOUNDARY & 208 N OF MIDDLE ST/E.B. EDDY N	365999.6875	5031495	-75.71799469	45.42071533	1.48368E+12	-2.20901E+12	03 - Snow	06 - Ice	10 - No control	01 - Non intersection	01 - Daylight	03 - P.D. only	03 - Rear end	2132
Y	2017	2108	BOOTH ST btwn PROVINCIAL BOUNDARY & 208 N OF MIDDLE ST/E.B. EDDY N	365991.8125	5031515	-75.71809387	45.42089081	1.50415E+12	-2.20905E+12	02 - Rain	02 - Wet	10 - No control	07 - Overpass or bridge	07 - Dark	03 - P.D. only	07 - SMV other	2133
Y	2017	2349	BRONSON AVE @ COMMISSIONER ST/SLATER ST	366769.25	5030948.5	-75.70822906	45.41572952	1.50389E+12	-2.20903E+12	01 - Clear	01 - Dry	01 - Traffic signal	03 - At intersection	01 - Daylight	03 - P.D. only	01 - Approaching	2493
Y	2017	2350	BRONSON AVE @ COMMISSIONER ST/SLATER ST	366767.6875	5030950	-75.70825195	45.41574097	1.50916E+12	-2.20898E+12	01 - Clear	02 - Wet	01 - Traffic signal	02 - Intersection related	07 - Dark	03 - P.D. only	05 - Turning movement	2494
Y	2017	2351	BRONSON AVE @ COMMISSIONER ST/SLATER ST	366768.9375	5030948.5	-75.70823669	45.41572571	1.50623E+12	-2.209E+12	01 - Clear	01 - Dry	01 - Traffic signal	02 - Intersection related	01 - Daylight	03 - P.D. only	04 - Sideswipe	2495
Y	2017	2352	BRONSON AVE @ COMMISSIONER ST/SLATER ST	366768.7188	5030949	-75.70823669	45.41572952	1.50683E+12	-2.20901E+12	01 - Clear	01 - Dry	01 - Traffic signal	02 - Intersection related	01 - Daylight	03 - P.D. only	06 - SMV unattended vehicle	2496
Y	2017	2353	BRONSON AVE @ COMMISSIONER ST/SLATER ST	366769.25	5030949	-75.70822906	45.41572952	1.5064E+12	-2.20901E+12	01 - Clear	01 - Dry	01 - Traffic signal	03 - At intersection	01 - Daylight	03 - P.D. only	05 - Turning movement	2497
Y	2017	2354	BRONSON AVE @ COMMISSIONER ST/SLATER ST	366768.8125	5030948.5	-75.70823669	45.41572952	1.51305E+12	-2.20899E+12	03 - Snow	03 - Loose snow	01 - Traffic signal	02 - Intersection related	07 - Dark	03 - P.D. only	07 - SMV other	2498
Y	2017	2355	BRONSON AVE @ COMMISSIONER ST/SLATER ST	366770.375	5030948	-75.70821381	45.41572189	1.51176E+12	-2.20902E+12	01 - Clear	02 - Wet	01 - Traffic signal	03 - At intersection	01 - Daylight	02 - Non-fatal injury	02 - Angle	2499
Y	2017	2356	BRONSON AVE @ COMMISSIONER ST/SLATER ST	366769.7813	5030948	-75.70822144	45.41572189	1.48437E+12	-2.20901E+12	01 - Clear	01 - Dry	01 - Traffic signal	03 - At intersection	01 - Daylight	03 - P.D. only	05 - Turning movement	2500
Y	2017	2357	BRONSON AVE @ COMMISSIONER ST/SLATER ST	366769.7188	5030948.5	-75.70822144	45.41572952	1.48713E+12	-2.20903E+12	03 - Snow	03 - Loose snow	01 - Traffic signal	03 - At intersection	01 - Daylight	03 - P.D. only	02 - Angle	2501
Y	2017	2358	BRONSON AVE @ COMMISSIONER ST/SLATER ST	366768.2813	5030948	-75.70824432	45.41572571	1.48618E+12	-2.20899E+12	01 - Clear	01 - Dry	01 - Traffic signal	03 - At intersection	07 - Dark	03 - P.D. only	05 - Turning movement	2502
Y	2017	2359	BRONSON AVE @ COMMISSIONER ST/SLATER ST	366769.7188	5030948	-75.70822144	45.41572189	1.48852E+12	-2.209E+12	01 - Clear	01 - Dry	01 - Traffic signal	03 - At intersection	01 - Daylight	03 - P.D. only	04 - Sideswipe	2503
Y	2017	2360	BRONSON AVE @ COMMISSIONER ST/SLATER ST	366769.7188	5030949	-75.70822144	45.41573334	1.48946E+12	-2.20897E+12	03 - Snow	05 - Packed snow	01 - Traffic signal	02 - Intersection related	07 - Dark	03 - P.D. only	03 - Rear end	2504
Y	2017	2361	BRONSON AVE @ COMMISSIONER ST/SLATER ST	366769.0625	5030949	-75.70822906	45.41573334	1.49128E+12	-2.209E+12	02 - Rain	02 - Wet	01 - Traffic signal	02 - Intersection related	01 - Daylight	03 - P.D. only	03 - Rear end	2505
Y	2017	11144	OTTAWA RIVER PKWY @ PORTAGE BRIDGE	366516.5313	5031314.5	-75.71141052	45.41904449	1.49551E+12	-2.20899E+12	01 - Clear	01 - Dry	01 - Traffic signal	02 - Intersection related	01 - Daylight	03 - P.D. only	02 - Angle	11640
Y	2017	11145	OTTAWA RIVER PKWY @ PORTAGE BRIDGE	366515.9688	5031314.5	-75.71141815	45.41904449	1.49491E+12	-2.209E+12	01 - Clear	01 - Dry	01 - Traffic signal	02 - Intersection related	01 - Daylight	03 - P.D. only	99 - Other	11641
Y	2017	11146	OTTAWA RIVER PKWY @ PORTAGE BRIDGE	366516.2813	5031313.5	-75.71141815	45.41903687	1.49016E+12	-2.20902E+12	01 - Clear	01 - Dry	01 - Traffic signal	02 - Intersection related	01 - Daylight	02 - Non-fatal injury	03 - Rear end	11642
Y	2017	11147	OTTAWA RIVER PKWY @ PORTAGE BRIDGE	366516.0938	5031313	-75.71141815	45.41903305	1.49111E+12	-2.20898E+12	01 - Clear	01 - Dry	01 - Traffic signal	02 - Intersection related	07 - Dark	03 - P.D. only	04 - Sideswipe	11643
Y	2017	11148	OTTAWA RIVER PKWY @ PORTAGE BRIDGE	366516.2188	5031314.5	-75.71141815	45.41904449	1.49577E+12	-2.20902E+12	01 - Clear	02 - Wet	01 - Traffic signal	02 - Intersection related	01 - Daylight	03 - P.D. only	03 - Rear end	11644
Y	2017	11149	OTTAWA RIVER PKWY @ PORTAGE BRIDGE	366516.0313	5031316.5	-75.71141815	45.41905975	1.49119E+12	-2.20899E+12	02 - Rain	02 - Wet	01 - Traffic signal	02 - Intersection related	01 - Daylight	03 - P.D. only	04 - Sideswipe	11645
Y	2017	11155	OTTAWA RIVER PKWY @ RIVER ST/SLIDELL ST	365156.7188	5030377.5	-75.72890472	45.41073227	1.50096E+12	-2.209E+12	01 - Clear	01 - Dry	01 - Traffic signal	02 - Intersection related	01 - Daylight	03 - P.D. only	03 - Rear end	11651
Y	2017	11156	OTTAWA RIVER PKWY @ VIMY PLACE PRIV	365977	5030795.5	-75.71836853	45.41442108	1.48601E+12	-2.20903E+12	01 - Clear	02 - Wet	01 - Traffic signal	02 - Intersection related	01 - Daylight	03 - P.D. only	03 - Rear end	11652
Y	2017	11157	OTTAWA RIVER PKWY @ VIMY PLACE PRIV	365975.75	5030796.5	-75.71838379	45.41443253	1.48904E+12	-2.209E+12	01 - Clear	01 - Dry	01 - Traffic signal	02 - Intersection related	01 - Daylight	03 - P.D. only	03 - Rear end	11653
Y	2017	11158	OTTAWA RIVER PKWY @ VIMY PLACE PRIV	365974.1875	5030798.5	-75.71840668	45.41444778	1.51444E+12	-2.209E+12	01 - Clear	06 - Ice	01 - Traffic signal	02 - Intersection related	01 - Daylight	02 - Non-fatal injury	03 - Rear end	11654
Y	2017	11159	OTTAWA RIVER PKWY @ WELLINGTON ST EB	366690.75	5031277.5	-75.70919037	45.41869736	1.49344E+12	-2.20901E+12	01 - Clear	01 - Dry	02 - Stop sign	02 - Intersection related	01 - Daylight	03 - P.D. only	03 - Rear end	11655
Y	2017	11163	OTTAWA RIVER PKWY btwn TRANSITWAY - TIME POINT & VIMY PLACE PRIV	365766.3125	5030525.5	-75.72109222	45.41201019	1.4981E+12	-2.20901E+12	01 - Clear	01 - Dry	10 - No control	01 - Non intersection	01 - Daylight	03 - P.D. only	07 - SMV other	11659
Y	2017	11164	OTTAWA RIVER PKWY btwn VIMY PLACE PRIV & BOOTH ST	366093.75	5030885	-75.71686554	45.41521835	1.50657E+12	-2.209E+12	00 - Unknown	01 - Dry	10 - No control	01 - Non intersection	01 - Daylight	03 - P.D. only	03 - Rear end	11660
Y	2017	11165	OTTAWA RIVER PKWY btwn VIMY PLACE PRIV & BOOTH ST	366227.75	5030980.5	-75.7151413	45.41606522	1.49473E+12	-2.20898E+12	02 - Rain	02 - Wet	10 - No control	01 - Non intersection	07 - Dark	03 - P.D. only	04 - Sideswipe	11661
Y	2017	11171	OTTAWA RIVER PKWY OFFR-EB @ PARKDALE AVE	364685.0938	5030331	-75.73493195	45.41035461	1.50441E+12	-2.20901E+12	02 - Rain	02 - Wet	03 - Yield sign	02 - Intersection related	01 - Daylight	02 - Non-fatal injury	07 - SMV other	11667
Y	2017	11172	OTTAWA RIVER PKWY OFFR-EB @ PARKDALE AVE	364683.0938	5030331.5	-75.73495483	45.41035843	1.51297E+12	-2.20903E+12	01 - Clear	01 - Dry	03 - Yield sign	03 - At intersection	01 - Daylight	03 - P.D. only	03 - Rear end	11668
Y	2017	11173	OTTAWA RIVER PKWY ONR-EB @ PARKDALE AVE	364692.625	5030334.5	-75.73483276	45.41038132	1.48964E+12	-2.20901E+12	01 - Clear	01 - Dry	10 - No control	02 - Intersection related	01 - Daylight	03 - P.D. only	04 - Sideswipe	11669
Y	2017	11174	OTTAWA RIVER PKWY WB @ PARKDALE AVE WB ON RAMP	364638.25	5030469	-75.73551178	45.41159821	1.49128E+12	-2.209E+12	01 - Clear	01 - Dry	03 - Yield sign	02 - Intersection related	01 - Daylight	03 - P.D. only	04 - Sideswipe	11670
Y	2017	11264	PARKDALE AVE @ SCOTT ST	364950.0313	5029728	-75.73162079	45.40490341	1.49551E+12	-2.209E+12	01 - Clear	01 - Dry	01 - Traffic signal	03 - At intersection	01 - Daylight	03 - P.D. only	07 - SMV other	11190

Y	2017	11265	PARKDALE AVE @ SCOTT ST	364950.0313	5029727	-75.73162079	45.4048996	1.49352E+12	-2.20901E+12	02 - Rain	02 - Wet	01 - Traffic signal	02 - Intersection related	01 - Daylight	03 - P.D. only	04 - Sideswipe	11191
Y	2017	11266	PARKDALE AVE @ SCOTT ST	364948.6875	5029726.5	-75.73163605	45.40489197	1.49923E+12	-2.20903E+12	01 - Clear	01 - Dry	01 - Traffic signal	03 - At intersection	01 - Daylight	03 - P.D. only	03 - Rear end	11192
Y	2017	11267	PARKDALE AVE @ SCOTT ST	364949.7188	5029726	-75.73162842	45.40488434	1.4988E+12	-2.20905E+12	01 - Clear	02 - Wet	01 - Traffic signal	03 - At intersection	07 - Dark	03 - P.D. only	02 - Angle	11193
Y	2017	11268	PARKDALE AVE @ SCOTT ST	364948.4375	5029727	-75.73164368	45.40489578	1.50173E+12	-2.209E+12	01 - Clear	01 - Dry	01 - Traffic signal	03 - At intersection	01 - Daylight	03 - P.D. only	05 - Turning movement	11194
Y	2017	11269	PARKDALE AVE @ SCOTT ST	364950.7188	5029726.5	-75.73161316	45.40489197	1.48791E+12	-2.20902E+12	01 - Clear	01 - Dry	01 - Traffic signal	03 - At intersection	01 - Daylight	03 - P.D. only	02 - Angle	11195
Y	2017	11270	PARKDALE AVE @ SCOTT ST	364950.0313	5029726	-75.73162079	45.40488434	1.4886E+12	-2.20899E+12	01 - Clear	01 - Dry	01 - Traffic signal	02 - Intersection related	05 - Dusk	03 - P.D. only	03 - Rear end	11196
Y	2017	11295	PARKDALE AVE btwn TO BE DETERMINED & EMMERSON AVE	364709.4375	5030285	-75.73462677	45.409935	1.49888E+12	-2.209E+12	01 - Clear	01 - Dry	10 - No control	01 - Non intersection	01 - Daylight	02 - Non-fatal injury	05 - Turning movement	11221
Y	2017	11296	PARKDALE AVE WB OFF RAMP/OTTAWA RIVER PKWY btwn OTTAWA RIVER PKWY & PA	364694.125	5030582	-75.73478699	45.41261292	1.49007E+12	-2.20903E+12	03 - Snow	05 - Packed snow	10 - No control	01 - Non intersection	01 - Daylight	03 - P.D. only	03 - Rear end	11222
Y	2017	11297	PARKDALE AVE WB ON RAMP/OTTAWA RIVER PKWY btwn PARKDALE AVE & OTTAWA R	364662	5030406.5	-75.73521423	45.41103363	1.49396E+12	-2.209E+12	02 - Rain	02 - Wet	10 - No control	01 - Non intersection	01 - Daylight	02 - Non-fatal injury	03 - Rear end	11223
Y	2017	12641	SCOTT ST @ STIRLING AVE	365212.5938	5029884	-75.7282486	45.40628815	1.51366E+12	-2.20903E+12	03 - Snow	03 - Loose snow	02 - Stop sign	02 - Intersection related	03 - Dawn	03 - P.D. only	02 - Angle	12802
Y	2017	12645	SCOTT ST btwn PARKDALE AVE & PINEHURST AVE	364974.7813	5029740.5	-75.73130035	45.40501785	1.4956E+12	-2.20901E+12	01 - Clear	01 - Dry	10 - No control	01 - Non intersection	01 - Daylight	03 - P.D. only	03 - Rear end	12806
Y	2017	12646	SCOTT ST btwn PINHEY ST & MERTON ST	365309.3125	5029944.5	-75.727005	45.4068222	1.5096E+12	-2.209E+12	01 - Clear	02 - Wet	10 - No control	01 - Non intersection	01 - Daylight	02 - Non-fatal injury	03 - Rear end	12807
Y	2017	12647	SCOTT ST btwn STIRLING AVE & PINHEY ST	365264.0938	5029915	-75.72758484	45.40656281	1.51089E+12	-2.209E+12	01 - Clear	01 - Dry	10 - No control	01 - Non intersection	07 - Dark	03 - P.D. only	04 - Sideswipe	12808
Y	2017	13996	WELLINGTON ST @ LETT ST	366355.2813	5031112	-75.71350098	45.41723633	1.49638E+12	-2.209E+12	01 - Clear	01 - Dry	01 - Traffic signal	02 - Intersection related	01 - Daylight	03 - P.D. only	03 - Rear end	13828
Y	2017	13997	WELLINGTON ST @ LETT ST	366354.125	5031111.5	-75.71351624	45.4172287	1.50372E+12	-2.20902E+12	01 - Clear	01 - Dry	01 - Traffic signal	02 - Intersection related	01 - Daylight	02 - Non-fatal injury	03 - Rear end	13829
Y	2017	14007	WELLINGTON ST btwn OTTAWA RIVER PKWY & TO BE DETERMINED	366357.25	5031113.5	-75.71347046	45.41725159	1.49041E+12	-2.20898E+12	01 - Clear	02 - Wet	10 - No control	01 - Non intersection	07 - Dark	03 - P.D. only	07 - SMV other	14269

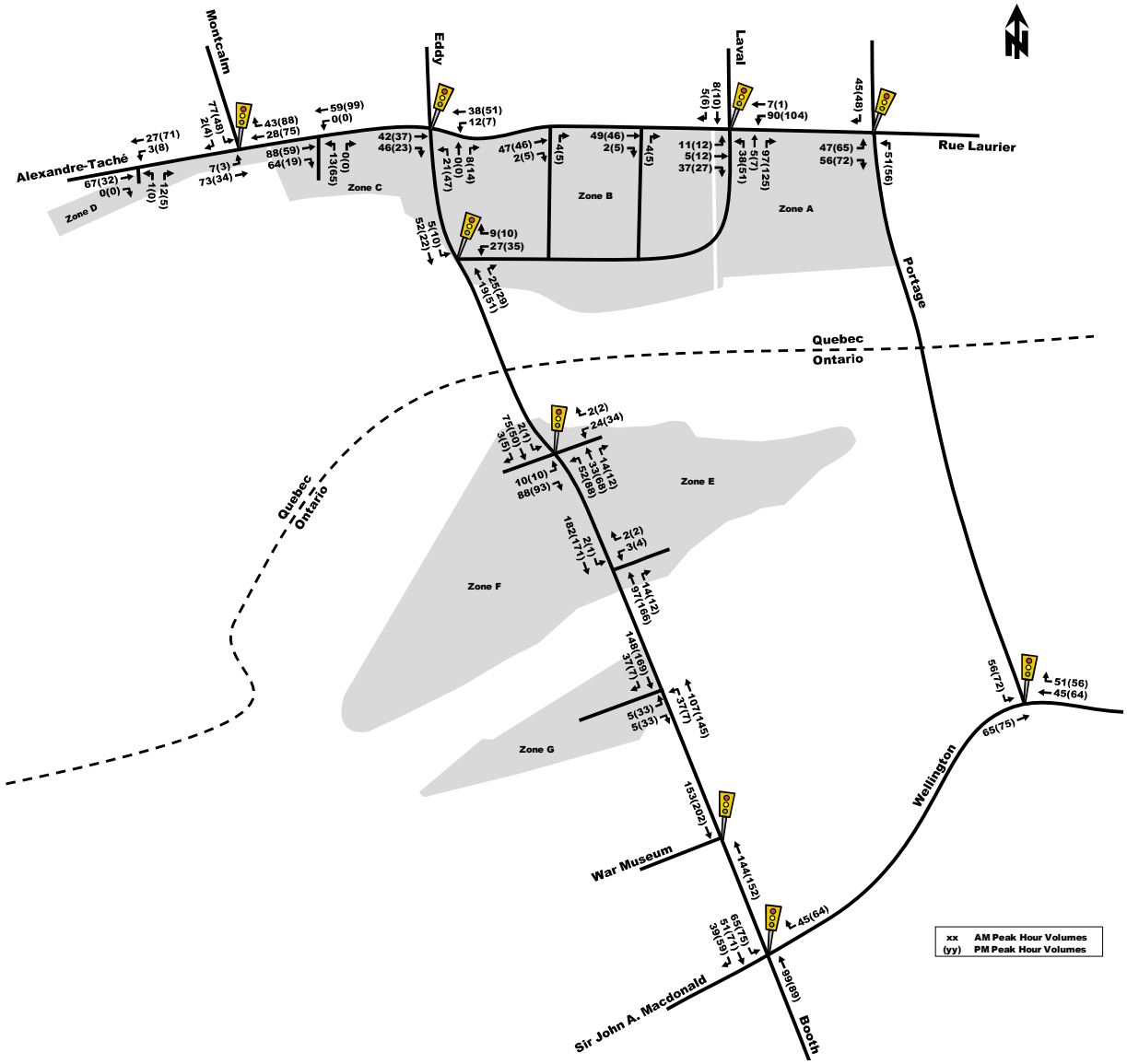
STUDY AREA	YEAR	DATE	ANOM_ID	TIME	LOCATION	GEO_ID	ACCIDENT_LOCATION	CLASS_OF_ACCIDENT	IMPACT_TYPE	ENVIRONMENT	LIGHT	ROAD_SURFACE_CONDITION	TRAFFIC_CONTROL	TRAFFIC_CONTROL_CONDITION	NO_OF_PEDESTRIANS	X	Y	LONGITUDE	LATITUDE	ObjectId
Y	2018	2018/03/23 00:00:00+00	18-3105	8:35:00 AM	ALBERT ST @ BOOTH ST (0002162)	2162	02 - Intersection related	03 - P.D. only	04 - Sideswipe	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	0	366428.3448	5030626.567	-75.71262535	45.41286137	3227
Y	2018	2018/04/10 00:00:00+00	18-3579	7:21:00 AM	ALBERT ST @ BOOTH ST (0002162)	2162	03 - At intersection	03 - P.D. only	05 - Turning movement	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	0	366427.6479	5030625.87	-75.71263434	45.41285516	3514
Y	2018	2018/05/30 00:00:00+00	18-4989	6:06:00 AM	ALBERT ST @ BOOTH ST (0002162)	2162	03 - At intersection	02 - Non-fatal injury	05 - Turning movement	01 - Clear	03 - Dawn	01 - Dry	01 - Traffic signal	01 - Functioning	0	366428.6235	5030626.715	-75.71262177	45.41286268	4447
Y	2018	2018/05/17 00:00:00+00	18-4633	9:51:00 PM	ALBERT ST @ BOOTH ST (0002162)	2162	03 - At intersection	02 - Non-fatal injury	02 - Angle	01 - Clear	07 - Dark	01 - Dry	01 - Traffic signal	01 - Functioning	0	366428.6933	5030626.566	-75.7126209	45.41286133	4757
Y	2018	2018/06/12 00:00:00+00	18-5487	4:30:00 PM	ALBERT ST @ BOOTH ST (0002162)	2162	02 - Intersection related	03 - P.D. only	03 - Rear end	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	0	366428.3247	5030626.736	-75.71262558	45.41286289	5524
Y	2018	2018/08/10 00:00:00+00	18-7283	5:52:00 PM	ALBERT ST @ BOOTH ST (0002162)	2162	03 - At intersection	02 - Non-fatal injury	05 - Turning movement	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	0	366428.6927	5030626.567	-75.7126209	45.41286134	7821
Y	2018	2018/09/22 00:00:00+00	18-8603	12:45:00 PM	ALBERT ST @ BOOTH ST (0002162)	2162	03 - At intersection	03 - P.D. only	02 - Angle	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	02 - Not functioning	0	366428.6934	5030626.566	-75.7126209	45.41286133	8009
Y	2018	2018/09/14 00:00:00+00	18-8281	2:58:00 PM	ALBERT ST @ BOOTH ST (0002162)	2162	02 - Intersection related	02 - Non-fatal injury	03 - Rear end	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	0	366428.7812	5030626.688	-75.71261976	45.41286242	8885
Y	2018	2018/10/20 00:00:00+00	18-9657	5:00:00 PM	ALBERT ST @ BOOTH ST (0002162)	2162	03 - At intersection	02 - Non-fatal injury	05 - Turning movement	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	0	366428.693	5030626.567	-75.7126209	45.41286134	9411
Y	2018	2018/11/02 00:00:00+00	18-10104	7:47:00 AM	ALBERT ST @ BOOTH ST (0002162)	2162	02 - Intersection related	02 - Non-fatal injury	03 - Rear end	02 - Rain	01 - Daylight	02 - Wet	01 - Traffic signal	01 - Functioning	0	366428.6931	5030626.567	-75.7126209	45.41286134	10134
Y	2018	2018/04/06 00:00:00+00	18-3499	4:02:00 PM	ALBERT ST @ BRONSON AVE (0002160)	2160	02 - Intersection related	03 - P.D. only	04 - Sideswipe	02 - Rain	01 - Daylight	04 - Slush	01 - Traffic signal	01 - Functioning	0	366739.7045	5031016.575	-75.70859873	45.41634306	3633
Y	2018	2018/05/15 00:00:00+00	18-4553	6:30:00 PM	ALBERT ST @ EMPRESS AVE (0010851)	10851	02 - Intersection related	03 - P.D. only	04 - Sideswipe	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	00 - Unknown	0	366576.8856	5030720.754	-75.71071594	45.41369574	4702
Y	2018	2018/04/09 00:00:00+00	18-3569	4:05:00 PM	ALBERT ST @ PERKINS ST (0002220)	2220	02 - Intersection related	03 - P.D. only	04 - Sideswipe	01 - Clear	01 - Daylight	01 - Dry	02 - Stop sign	01 - Functioning	0	366535.6983	5030695.574	-75.71124527	45.41347281	3504
Y	2018	2018/02/07 00:00:00+00	18-1685	7:41:00 PM	ALBERT ST @ PRESTON ST (0002217)	2217	03 - At intersection	03 - P.D. only	02 - Angle	03 - Snow	07 - Dark	03 - Loose snow	01 - Traffic signal	01 - Functioning	0	366160.3486	5030465.965	-75.71606899	45.41143986	1601
Y	2018	2018/07/08 00:00:00+00	18-6312	6:41:00 PM	ALBERT ST @ PRESTON ST (0002217)	2217	02 - Intersection related	02 - Non-fatal injury	07 - SMV other	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	1	366160.6974	5030464.571	-75.7160647	45.41142729	6290
Y	2018	2018/09/14 00:00:00+00	18-8272	1:24:00 PM	ALBERT ST @ PRESTON ST (0002217)	2217	02 - Intersection related	03 - P.D. only	04 - Sideswipe	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	0	366160.7063	5030464.569	-75.71606459	45.41142728	8876
Y	2018	2018/10/03 00:00:00+00	18-9027	4:51:00 PM	ALBERT ST @ PRESTON ST (0002217)	2217	03 - At intersection	03 - P.D. only	05 - Turning movement	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	0	366160.6781	5030464.577	-75.71606495	45.41142734	9578
Y	2018	2018/10/20 00:00:00+00	18-10218	6:15:00 PM	ALBERT ST @ PRESTON ST (0002217)	2217	03 - At intersection	02 - Non-fatal injury	02 - Angle	01 - Clear	07 - Dark	01 - Dry	01 - Traffic signal	01 - Functioning	0	366160.6966	5030464.571	-75.71606471	45.41142729	10506
Y	2018	2018/12/07 00:00:00+00	18-11658	2:35:00 PM	ALBERT ST @ PRESTON ST (0002217)	2217	03 - At intersection	03 - P.D. only	02 - Angle	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	0	366160.7182	5030464.54	-75.71606444	45.41142701	11064
Y	2018	2018/11/26 00:00:00+00	18-11180	10:16:00 AM	ALBERT ST btwn COMMISSIONER ST & BRONSON AVE (__3ZA337)	__3ZA337	01 - Non intersection	03 - P.D. only	04 - Sideswipe	02 - Rain	01 - Daylight	02 - Wet	10 - No control		0	366735.93	5031011.558	-75.70864758	45.41629825	11316
Y	2018	2018/10/10 00:00:00+00	18-9205	1:48:00 AM	ALBERT ST btwn Continuation of ALBERT ST & BOOTH ST (__3ZA2G2)	__3ZA2G2	01 - Non intersection	03 - P.D. only	03 - Rear end	01 - Clear	07 - Dark	01 - Dry	10 - No control		0	366421.7915	5030622.282	-75.7127096	45.41282339	9229
Y	2018	2018/12/03 00:00:00+00	18-11475	7:09:00 PM	ALBERT ST btwn PRESTON ST & Continuation of ALBERT ST (__3ZA33O)	__3ZA33O	01 - Non intersection	03 - P.D. only	99 - Other	01 - Clear	07 - Dark	01 - Dry	10 - No control		0	366228.677	5030508.138	-75.71519086	45.41181333	11727
Y	2018	2018/01/28 00:00:00+00	18-1149	3:33:00 AM	ALBERT ST btwn SCOTT ST & CITY CENTRE AVE (2) (__3ZA32WB)	__3ZA32WB	01 - Non intersection	03 - P.D. only	07 - SMV other	01 - Clear	07 - Dark	02 - Wet	10 - No control		0	365912.9405	5030324.138	-75.71924712	45.41018539	1363
Y	2018	2018/02/02 00:00:00+00	18-1397	4:30:00 PM	ALBERT ST btwn SCOTT ST & CITY CENTRE AVE (2) (__3ZA32WB)	__3ZA32WB	01 - Non intersection	03 - P.D. only	05 - Turning movement	01 - Clear	01 - Daylight	01 - Dry	10 - No control		0	365941.5853	5030338.003	-75.71887948	45.41030764	1811
Y	2018	2018/07/10 00:00:00+00	18-6376	11:22:00 PM	BAYVIEW RD @ SCOTT ST/ALBERT ST (0005646)	5646	03 - At intersection	03 - P.D. only	05 - Turning movement	01 - Clear	07 - Dark	01 - Dry	01 - Traffic signal	01 - Functioning	0	365519.0769	5030071.525	-75.72430961	45.40794672	6769
Y	2018	2018/10/19 00:00:00+00	18-9596	1:48:00 PM	BAYVIEW RD @ SCOTT ST/ALBERT ST (0005646)	5646	03 - At intersection	03 - P.D. only	03 - Rear end	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	0	365519.0369	5030071.564	-75.72431011	45.40794708	9102
Y	2018	2018/11/22 00:00:00+00	18-10993	12:42:00 PM	BAYVIEW RD @ SCOTT ST/ALBERT ST (0005646)	5646	02 - Intersection related	03 - P.D. only	03 - Rear end	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	0	365519.1445	5030071.453	-75.72430875	45.40794607	10237
Y	2018	2018/11/02 00:00:00+00	18-10109	8:54:00 AM	BAYVIEW RD @ SCOTT ST/ALBERT ST (0005646)	5646	03 - At intersection	03 - P.D. only	05 - Turning movement	02 - Rain	01 - Daylight	02 - Wet	01 - Traffic signal	01 - Functioning	0	365519.0372	5030071.565	-75.72431011	45.40794709	10271
Y	2018	2018/06/29 00:00:00+00	18-6050	3:22:00 PM	BOOTH ST @ 148 N OF MIDDLE ST/E.B.EDDY S (0012189)	12189	02 - Intersection related	03 - P.D. only	04 - Sideswipe	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	0	366035.5926	5031416.536	-75.71754458	45.42000377	6230
Y	2018	2018/01/07 00:00:00+00	18-302	8:10:00 PM	BOOTH ST @ OTTAWA RIVER PKWY/WELLINGTON ST (0012252)	12252	03 - At intersection	03 - P.D. only	02 - Angle	03 - Snow	07 - Dark	05 - Packed snow	01 - Traffic signal	01 - Functioning	0	366263.2117	5031005.991	-75.7146876	45.41628984	502
Y	2018	2018/04/23 00:00:00+00	18-3931	6:20:00 PM	BOOTH ST @ OTTAWA RIVER PKWY/WELLINGTON ST (0012252)	12252	02 - Intersection related	03 - P.D. only	04 - Sideswipe	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	0	366264.2571	5031006.688	-75.71467416	45.41629603	3360
Y	2018	2018/04/09 00:00:00+00	18-3573	5:57:00 PM	BOOTH ST @ OTTAWA RIVER PKWY/WELLINGTON ST (0012252)	12252	02 - Intersection related	02 - Non-fatal injury	03 - Rear end	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	0	366264.6054	5031007.385	-75.71466962	45.41630226	3508
Y	2018	2018/07/04 00:00:00+00	18-6169	11:43:00 AM	BOOTH ST @ OTTAWA RIVER PKWY/WELLINGTON ST (0012252)	12252	03 - At intersection	03 - P.D. only	05 - Turning movement	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	0	366264.301	5031006.754	-75.71467359	45.41629661	6351
Y	2018	2018/11/16 00:00:00+00	18-10670	6:39:00 AM	BOOTH ST @ OTTAWA RIVER PKWY/WELLINGTON ST (0012252)	12252	02 - Intersection related	03 - P.D. only	03 - Rear end	03 - Snow	07 - Dark	03 - Loose snow	01 - Traffic signal	01 - Functioning	0	366264.2082	5031006.528	-75.7146748	45.41629459	10341
Y	2018	2018/12/08 00:00:00+00	18-11710	10:32:00 PM	BOOTH ST @ OTTAWA RIVER PKWY/WELLINGTON ST (0012252)	12252	03 - At intersection	03 - P.D. only	05 - Turning movement	03 - Snow	07 - Dark	05 - Packed snow	01 - Traffic signal	01 - Functioning	0	366264.455	5031006.711	-75.71467163	45.41629621	11554
Y	2018	2018/01/13 00:00:00+00	18-12621	3:02:00 AM	BOOTH ST @ OTTAWA RIVER PKWY/WELLINGTON ST (0012252)	12252	03 - At intersection	03 - P.D. only	07 - SMV other	03 - Snow	07 - Dark	04 - Slush	01 - Traffic signal	01 - Functioning	0	366264.257	5031006.663	-75.71467416	45.4162958	12145
Y	2018	2018/12/01 00:00:00+00	18-12819	5:01:00 PM	BOOTH ST @ OTTAWA RIVER PKWY/WELLINGTON ST (0012252)	12252	02 - Intersection related	03 - P.D. only	03 - Rear end	01 - Clear	07 - Dark	01 - Dry	01 - Traffic signal	01 - Functioning	0	366264.2599	5031006.689	-75.71467412	45.41629603	12609
Y	2018	2018/05/28 00:00:00+00	18-12810	5:30:00 AM	BOOTH ST btwn 148 N OF MIDDLE ST/E.B. EDDY S & MIDDLE ST (__3ZBPMPC)	__3ZBPMPC	07 - Overpass or bridge	03 - P.D. only	07 - SMV other	02 - Rain	03 - Dawn	02 - Wet	10 - No control		0	366075.1822	5031344.406	-75.71704773	45.4193513	12479
Y	2018	2018/12/06 00:00:00+00	18-12825	10:00:00 AM	BOOTH ST btwn MIDDLE ST & VIMY PLACE PRIV (__5VHJ3U)	__5VHJ3U	01 - Non intersection	03 - P.D. only	04 - Sideswipe	01 - Clear	01 - Daylight	01 - Dry	10 - No control		0	366138.2042	5031259.619	-75.71625309	45.41858289	12615
Y	2018	2018/01/07 00:00:00+00	18-278	10:30:00 AM	BOOTH ST btwn PROVINCIAL BOUNDARY & 208 N OF MIDDLE ST/E.B. EDDY N (__3ZBPMPA)	__3ZBPMPA	01 - Non intersection	03 - P.D. only	03 - Rear end	01 - Clear	01 - Daylight	01 - Dry	10 - No control		0	366001.6988	5031489.73	-75.71796854	45.42066532	178
Y	2018	2018/07/16 00:00:00+00	18-6570	7:13:00 AM	BOOTH ST btwn VIMY PLACE PRIV & OTTAWA RIVER PKWY (__5VHJ2X)	__5VHJ2X	01 - Non intersection	03 - P.D. only	03 - Rear end	01 - Clear	01 - Daylight	01 - Dry	10 - No control		0	366256.8775	5031025.669	-75.71476607	45.41646746	6835
Y	2018	2018/01/11 00:00:00+00	18-504	7:48:00 PM	BRONSON AVE @ COMMISSIONER ST/SLATER ST (0001679)	1679	02 - Intersection related	03 - P.D. only	04 - Sideswipe	02 - Rain	07 - Dark	02 - Wet	01 - Traffic signal	01 - Functioning	0	366769.0538	5030949.961	-75.70823214	45.41574109	204
Y	2018	2018/01/08 00:00:00+00	18-320	8:40:00 AM	BRONSON AVE @ COMMISSIONER ST/SLATER ST (0001679)	1679	02 - Intersection related	03 - P.D. only	03 - Rear end	03 - Snow	01 - Daylight	03 - Loose snow	01 - Traffic signal	01 - Functioning	0	366768.7058	5030948.568	-75.70823677	45.41572858	520
Y	2018	2018/01/08 00:00:00+00	18-324	9:51:00 AM	BRONSON AVE @ COMMISSIONER ST/SLATER ST (0001679)	1679	02 - Intersection related	03 - P.D. only	04 - Sideswipe	03 - Snow	01 - Daylight	03 - Loose snow	01 - Traffic signal	01 - Functioning	0	366768.7054	5030948.568	-75.70823677	45.41572858	524
Y	2018	2018/07/06 00:00:00+00	18-6265	4:30:00 PM	BRONSON AVE @ COMMISSIONER ST/SLATER ST (0001679)	1679	03 - At intersection	03 - P.D. only	02 - Angle	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	0	366768.6969	5030948.412	-75.7082369	45.41572718	6965
Y	2018	2018/08/15 00:00:00+00	18-7397	6:31:00 PM	BRONSON AVE @ COMMISSIONER ST/SLATER ST (0001679)	1679	03 - At intersection	03 - P.D. only	02 - Angle	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	0	366768.7054	5030948.568	-75.70823677	45.41572858	7214
Y	2018	2018/09/02 00:00:00+00	18-7878	2:44:00 AM	BRONSON AVE @ COMMISSIONER ST/SLATER ST (0001679)	1679	03 - At intersection	02 - Non-fatal injury	02 - Angle	01 - Clear	07 - Dark	01 - Dry	01 - Traffic signal	01 - Functioning	0	366768.6848	5030948.633	-75.70823703	45.41572917	7535
Y	2018	2018/09/16 00:00:00+00	18-8348	12:42:00 PM	BRONSON AVE @ COMMISSIONER ST/SLATER ST (0001679)	1679	03 - At intersection	02 - Non-fatal injury	05 - Turning movement	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	0	366768.6369	5030948.822	-75.70823761	45.41573087	8417
Y	2018	2018/12/12 00:00:00+00	18-11856	11:20:00 AM	BRONSON AVE @ COMMISSIONER ST/SLATER ST (0001679)	1679	03 - At intersection	03 - P.D. only	02 - Angle	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	0	366768.6327	5030948.555	-75.7082377	45.41572847	11801
Y	2018	2018/09/28 00:00:00+00	18-8977	12:30:00 PM	OTTAWA RIVER PKWY @ RIVER ST/SLIDELL ST (0005099)	5099	02 - Intersection related	03 - P.D. only	03 - Rear end	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	0	365156.696	5030377.639	-75.72890114	45.41073241	8363
Y	2018	2018/01/05 00:00:00+00	18-12607	2:00:00 PM	OTTAWA RIVER PKWY @ RIVER ST/SLIDELL ST (0005099)	5099	02 - Intersection related	03 - P.D. only	03 - Rear end	03 - Snow	01 - Daylight	06 - Ice	01 - Traffic signal	01 - Functioning	0	365156.8347	5030377.421	-75.7288994	45.41073043	12131
Y	2018	2018/10/20 00:00:00+00	18-12762	11:30:00 PM	OTTAWA RIVER PKWY @ RIVER ST/SLIDELL ST (0005099)	5099	03 - At intersection	03 - P.D. only	05 - Turning movement	01 - Clear	07 - Dark	01 - Dry	01 - Traffic signal	01 - Functioning	0	365156.7038	5030377.572	-75.72890105	45.41073181	12299
Y	2018	2018/12/07 00:00:00+00	18-12826	6:45:00 AM	OTTAWA RIVER PKWY @ RIVER ST/SLIDELL ST (0005099)	5099	03 - At intersection	01 - Fatal injury	02 - Angle	99 - Other	07 - Dark	01 - Dry	01 - Traffic signal	01 - Functioning	0	365156.7032	5030377.572	-75.72890106	45.41073181	12616
Y	2018	2018/01/07 00:00:00+00	18-12610	7:35:00 AM	OTTAWA RIVER PKWY btwn TRANSITWAY - TIME POINT & VIMY PLACE PRIV (__5VHJ2QA)	__5VHJ2QA	01 - Non intersection	02 - Non-fatal injury	07 - SMV other	00 - Unknown	03 - Dawn	06 - Ice	10 - No control		0	365913.5887	5030742.975	-75.71918691	45.41395392	12134
Y	2018	2018/04/05 00:00:00+00	18-12736	4:00:00 PM	OTTAWA RIVER PKWY btwn TRANSITWAY - TIME POINT & VIMY PLACE PRIV (__5VHJ2QA)	__5VHJ2QA	01 - Non intersection	03 - P.D. only	04 - Sideswipe	00 - Unknown	01 - Daylight	00 - Unknown	10 - No control		0	365650.0956	5030463.838	-75.72258756	45.41146528	12273
Y	2018	2018/07/16 00:00:00+00	18-6579	4:20:00 PM	OTTAWA RIVER PKWY btwn VIMY PLACE PRIV & BOOTH ST (__5VHJ2QB)	__5VHJ2QB	01 - Non intersection	03 - P.D. only	04 - Sideswipe	01 - Clear	01 - Daylight	01 - Dry	10 - No control		0	366171.553	5030939.441	-75.7158669	45.41569909	6844
Y	2018	2018/09/07 00:00:00+00	18-8037	3:35:00 PM	OTTAWA RIVER PKWY btwn VIMY PLACE PRIV & BOOTH ST (__5VHJ2QB)	__5VHJ2QB	01 - Non intersection	03 - P.D. only	03 - Rear end	01 - Clear	01 - Daylight	01 - Dry	10 - No control		0	366003.7567	5030818.227	-75.71802565	45.41462314	8598
Y	2018	2018/02/12 00:00:00+00	18-12666	6:18:00 PM	OTTAWA RIVER PKWY btwn VIMY PLACE PRIV & BOOTH ST (__5VHJ2QB)	__5VHJ2QB	01 - Non intersection	03 - P.D. only	03 - Rear end	02 - Rain	05 - Dusk	02 - Wet	10 - No control		0	366201.7542	5030961.596	-75.7154783	45.41589578	12190
Y	2018	2018/09/28 00:00:00+00	18-12732	12:45:00 PM	OTTAWA RIVER PKWY EB btwn RAMP & SLIDELL ST (__3ZA24L)	__3ZA24L	01 - Non intersection	03 - P.D. only	04 - Sideswipe	01 - Clear	01 - Daylight	01 - Dry	10 - No control		0	364841.2972	5030362.706	-75.73293204	45.41062517	12269
Y	2018	2018/06/11 00:00:00+00	18-5409	12:48:00 PM	OTTAWA RIVER PKWY OFFR-EB @ PARKDALE AVE (0011241)	11241	02 - Intersection related	03 - P.D. only	03 - Rear end	01 - Clear	01 - Daylight	01 - Dry	03 - Yield sign	01 - Functioning	0	364684.0285	5030331.417	-75.73494487	45.41035712	5442
Y	2018	2018/10/25 00:00:00+00	18-12634	6:45:00 AM	OTTAWA RIVER PKWY OFFR-EB @ PARKDALE AVE (0011241)	11241	02 - Intersection related	02 - Non-fatal injury	03 - Rear end	01 - Clear	07 - Dark	01 - Dry	03 - Yield sign	01 - Functioning	0	364684.068	5030331.424	-75.73494437	45.41035718	12158
Y	2018	2018/09/08 00:00:00+00	18-12705	5:30:00 PM	OTTAWA RIVER PKWY WB btwn RAMP & RIVER ST (__3ZA24N)	__3ZA24N	01 - Non intersection	02 - Non-fatal injury	07 - SMV other	01 - Clear	01 - Daylight	01 - Dry	10 - No control		0	364861.6894	5030385.3	-75.73266879	45.41082672	12127
Y	2018	2018/04/04 00:00:00+00	18-12722	6:50:00 AM	OTTAWA RIVER PKWY WB btwn RAMP & RIVER ST (__3ZA24N)	__3ZA24N	01 - Non intersection	03 - P.D. only	03 - Rear end	03 - Snow	01 - Daylight	02 - Wet	10 - No control		0	364947.2127	5030355.422	-75.73157991	45.41055055	12259
Y	2018	2018/03/17 00:00:00+00	18-2968	3:05:00 PM	PARKDALE AVE @ SCOTT ST (0002213)	2213	02 - Intersection related	03 - P.D. only	04 - Sideswipe	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	0	364949.7034	5029726.559	-75.73162481	45.40489197	2809
Y	2018	2018/04/12 00:00:00+00	18-3658	5:56:00 PM	PARKDALE AVE @ SCOTT ST (0002213)	2213	02 - Intersection related	03 - P.D. only	03 - Rear end	02 - Rain	01 - Daylight	02 - Wet	01 - Traffic signal	01 - Functioning	0	364950.052	5029726.56	-75.73162036	45.40489194	3168
Y	2018	2018/03/23 00:00:00+00	18-3104	7:46:00 AM	PARKDALE AVE @ SCOTT ST (0002213)	2213	02 - Intersection related	03 - P.D. only	04 - Sideswipe	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	0	364949.7034	5029726.56	-75.73162481	45.40489197	3221
Y	2018	2018/05/10 00:00:00+00	18-4404	8:45:00 AM	PARKDALE AVE @ SCOTT ST (0002213)	2213	02 - Intersection related	03 - P.D. only	04 - Sideswipe	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	0	364949.7034	5029726.561	-75.73162481	45.40489198	4360
Y	2018	2018/08/24 00:00:00+00	18-7636	1:55:00 PM	PARKDALE AVE @ SCOTT ST (0002213)	2213	03 - At intersection	02 - Non-fatal injury	05 - Turning movement	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	0	364949.7032	5029726.56	-75.73162482	45.40489197	7037
Y	2018	2018/10/04 00:00:00+00	18-9055	2:43:00 PM	PARKDALE AVE @ SCOTT ST (0002213)	2213	03 - At intersection	02 - Non-fatal injury	05 - Turning movement	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	0	364949.6268	5029726.598	-75.73162579	45.40489232	9607
Y	2018	2018/10/23 00:00:00+00	18-9735	5:07:00 PM	PARKDALE AVE @ SCOTT ST (0002213)	2213	02 - Intersection related	03 - P.D. only	04 - Sideswipe	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	0	364949.7347	5029726.48	-75.73162442	45.40489125	9680
Y	2018	2018/11/18 00:00:00+00	18-10796	6:30:00 PM	PARKDALE AVE @ SCOTT ST (0002213)	2213	02 - Intersection related	03 - P.D. only	03 - Rear end	01 - Clear	07 - Dark	01 - Dry	01 - Traffic signal	01 - Functioning	0	364949.4987	5029726.643	-75.73162742	45.40489274	10101
Y	2018	2018/12/03 00:00:00+00	18-11496	6:35:00 PM	PARKDALE AVE @ SCOTT ST (0002213)	2213	03 - At intersection	03 - P.D. only	01 - Approaching	01 - Clear	07 - Dark	02 - Wet	01 - Traffic signal	01 - Functioning	0	364949.65	5029726.675	-75.73162548	45.40489301	11748
Y	2018	2018/02/28 00:00:00+00	18-2412	2:45:00 PM	PARKDALE AVE btwn BURNSIDE AVE & LYNDALE AVE (__3ZA32H)	__3ZA32H	04 - At/near private drive	03 - P.D. only	02 - Angle	01 - Clear	01 - Daylight	01 - Dry	10 - No control		0	364792.9333	5030088.056	-75.73358329	45.40815809	2445
Y	2018	2018/03/20 00:00:00+00	18-3141	4:15:00 PM	PARKDALE AVE btwn BURNSIDE AVE & LYNDALE AVE (__3ZA32H)	__3ZA32H	01 - Non intersection	02 - Non-fatal injury	03 - Rear end	01 - Clear	01 - Daylight	01 - Dry	10 - No control		0	364790.7691	5030094.278	-75.73361018	45.40821426	3672
Y	2018	2018/01/17 00:00:00+00	18-805	12:00:00 PM	PARKDALE AVE btwn EMMERSON AVE & COLOMBINE DRWY (__3ZA326)	__3ZA326	01 - Non intersection	03 - P.D. only	06 - SMV unattended vehicle	01 - Clear	01 - Daylight	03 - Loose snow	10 - No control		0	364725.5097	5030246.092	-75.73442535	45.40958583	605
Y	2018	2018/11/07 00:00:00+00	18-10329	7:50:00 AM	PARKDALE AVE btwn EMMERSON AVE & COLOMBINE DRWY (__3ZA326)	__3ZA326	01 - Non intersection	03 - P.D. only	03 - Rear end	01 - Clear	01 - Daylight	01 - Dry	10 - No control		0	364726.8039	5030243.532	-75.73440912	45.40956269	10419
Y	2018	2018/10/19 00:00:00+00	18-9601	2:30:00 PM	WELLINGTON ST btwn BOOTH ST & END (__3ZA2GX)	__3ZA2GX	01 - Non intersection	03 - P.D. only	04 - Sideswipe	01 - Clear	01 - Daylight	01 - Dry	10 - No control		0	366503.3738	5030787.431	-75.71164672	45.41430217	9015
Y	2018	2018/05/12 00:00:00+00	18-4476	4:53:00 PM	WELLINGTON ST btwn OTTAWA RIVER PKWY & TO BE DETERMINED (__5VHJWJ)	__5VHJWJ	01 - Non intersection	03 - P.D. only	06 - SMV unattended vehicle	01 - Clear	01 - Daylight	01 - Dry	10 - No control		0	366345.6769	5031093.295	-75.71362314	45.41706813	4882
Y	2018	2018/10/11 00:00:00+00	18-9254	6:52:00 AM	WELLINGTON ST btwn TURN LANE & Continuation of WELLINGTON ST (__3ZBPOI)	__3ZBPOI	01 - Non intersection	03 - P.D. only	03 - Rear end	02 - Rain	07 - Dark	02 - Wet	10 - No control		0	366685.2788	5031294.64	-75.70925913	45.41884983	9507
Y	2018	2018/01/30 00:00:00+00	18-1212	9:02:00 AM	WELLINGTON ST btwn TURN LANE & TO BE DETERMINED (__3ZA2L9)	__3ZA2L9	07 - Overpass or bridge	02 - Non-fatal injury	03 - Rear end	03 - Snow	01 - Daylight	02 - Wet	10 - No control		0	366611.6676	5031284.853	-75.71020084	45.41876827	1633
Y	2018	2018/09/18 00:00:00+00	18-8446	6:03:00 PM	WELLINGTON ST btwn TURN LANE & TO BE DETERMINED (__3ZA2L9)	__3ZA2L9	01 - Non intersection	03 - P.D. only	04 - Sideswipe	01 - Clear	01 - Daylight	00 - Unknown	10 - No control		0	366687.0988	5031277.16	-75.70923808	45.41869238	8849

Study Area	Year	Accident_Date	Accident_Time	Location	Geo_ID	Accident_Location	Classification	Initial_Impact_Type	Environment	Light	Road_Surface	Traffic_Control	Traffic_Control_Condition	Number_of_Pedestrians	X	Y	Latitude	Longitude	FID
Y	2019	2019/07/19 10:56:00+00	2019/07/19 10:56:00+00	105 S OF COMMISSIONER ST @ ALBERT ST (0016880)	16880	02 - Intersection related	03 - P.D. only	03 - Rear end	01 - Clear	01 - Daylight	01 - Dry	13 - MPS	01 - Functioning	0	366666.2747	5030879.415	45.41511543	-75.70955407	7631
Y	2019	2019/01/11 14:25:00+00	2019/01/11 14:25:00+00	ALBERT ST @ BOOTH ST (0002162)	2162	02 - Intersection related	03 - P.D. only	03 - Rear end	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	0	366428.7192	5030626.722	45.41286273	-75.71262055	815
Y	2019	2019/01/14 16:14:00+00	2019/01/14 16:14:00+00	ALBERT ST @ BOOTH ST (0002162)	2162	03 - At intersection	03 - P.D. only	05 - Turning movement	01 - Clear	01 - Daylight	02 - Wet	01 - Traffic signal	01 - Functioning	0	366428.7517	5030626.628	45.41286188	-75.71262014	963
Y	2019	2019/01/29 19:45:00+00	2019/01/29 19:45:00+00	ALBERT ST @ BOOTH ST (0002162)	2162	02 - Intersection related	03 - P.D. only	07 - SMV other	03 - Snow	07 - Dark	04 - Slush	01 - Traffic signal	01 - Functioning	0	366428.7587	5030626.706	45.41286258	-75.71262004	1826
Y	2019	2019/02/25 12:36:00+00	2019/02/25 12:36:00+00	ALBERT ST @ BOOTH ST (0002162)	2162	03 - At intersection	03 - P.D. only	02 - Angle	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	0	366428.6932	5030626.567	45.41286134	-75.7126209	2049
Y	2019	2019/02/14 19:30:00+00	2019/02/14 19:30:00+00	ALBERT ST @ BOOTH ST (0002162)	2162	03 - At intersection	03 - P.D. only	05 - Turning movement	03 - Snow	07 - Dark	04 - Slush	01 - Traffic signal	01 - Functioning	0	366428.6818	5030626.696	45.4128625	-75.71262103	2396
Y	2019	2019/02/11 14:03:00+00	2019/02/11 14:03:00+00	ALBERT ST @ BOOTH ST (0002162)	2162	03 - At intersection	02 - Non-fatal injury	02 - Angle	01 - Clear	01 - Daylight	06 - Ice	01 - Traffic signal	01 - Functioning	0	366428.6929	5030626.567	45.41286134	-75.7126209	2715
Y	2019	2019/03/13 20:22:00+00	2019/03/13 20:22:00+00	ALBERT ST @ BOOTH ST (0002162)	2162	02 - Intersection related	03 - P.D. only	04 - Sideswipe	03 - Snow	07 - Dark	03 - Loose snow	01 - Traffic signal	01 - Functioning	0	366428.5996	5030626.621	45.41286184	-75.71262209	3743
Y	2019	2019/03/13 17:15:00+00	2019/03/13 17:15:00+00	ALBERT ST @ BOOTH ST (0002162)	2162	02 - Intersection related	03 - P.D. only	03 - Rear end	03 - Snow	01 - Daylight	04 - Slush	01 - Traffic signal	01 - Functioning	0	366428.6928	5030626.567	45.41286134	-75.7126209	3976
Y	2019	2019/04/10 07:00:00+00	2019/04/10 07:00:00+00	ALBERT ST @ BOOTH ST (0002162)	2162	02 - Intersection related	03 - P.D. only	04 - Sideswipe	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	0	366428.6596	5030626.503	45.41286076	-75.71262134	4084
Y	2019	2019/04/06 22:18:00+00	2019/04/06 22:18:00+00	ALBERT ST @ BOOTH ST (0002162)	2162	03 - At intersection	02 - Non-fatal injury	07 - SMV other	01 - Clear	07 - Dark	01 - Dry	01 - Traffic signal	01 - Functioning	1	366428.793	5030626.518	45.41286089	-75.71261963	4457
Y	2019	2019/04/12 21:40:00+00	2019/04/12 21:40:00+00	ALBERT ST @ BOOTH ST (0002162)	2162	02 - Intersection related	03 - P.D. only	03 - Rear end	01 - Clear	07 - Dark	01 - Dry	01 - Traffic signal	01 - Functioning	0	366428.7026	5030626.698	45.41286252	-75.71262076	4664
Y	2019	2019/05/21 08:30:00+00	2019/05/21 08:30:00+00	ALBERT ST @ BOOTH ST (0002162)	2162	03 - At intersection	02 - Non-fatal injury	05 - Turning movement	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	0	366428.7056	5030626.587	45.41286152	-75.71262074	5533
Y	2019	2019/05/14 09:33:00+00	2019/05/14 09:33:00+00	ALBERT ST @ BOOTH ST (0002162)	2162	03 - At intersection	03 - P.D. only	04 - Sideswipe	02 - Rain	01 - Daylight	02 - Wet	01 - Traffic signal	01 - Functioning	0	366428.6454	5030626.755	45.41286303	-75.71262148	5620
Y	2019	2019/05/17 14:45:00+00	2019/05/17 14:45:00+00	ALBERT ST @ BOOTH ST (0002162)	2162	02 - Intersection related	03 - P.D. only	03 - Rear end	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	0	366428.7653	5030626.475	45.4128605	-75.71261999	5782
Y	2019	2019/07/14 14:53:00+00	2019/07/14 14:53:00+00	ALBERT ST @ BOOTH ST (0002162)	2162	03 - At intersection	02 - Non-fatal injury	02 - Angle	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	0	366428.6593	5030626.515	45.41286088	-75.71262134	7099
Y	2019	2019/08/30 13:00:00+00	2019/08/30 13:00:00+00	ALBERT ST @ BOOTH ST (0002162)	2162	03 - At intersection	03 - P.D. only	02 - Angle	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	0	366428.5725	5030626.691	45.41286246	-75.71262242	9850
Y	2019	2019/10/16 15:08:00+00	2019/10/16 15:08:00+00	ALBERT ST @ BOOTH ST (0002162)	2162	02 - Intersection related	03 - P.D. only	03 - Rear end	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	00 - Unknown	0	366428.6226	5030626.641	45.41286201	-75.71262179	10674
Y	2019	2019/11/20 23:34:00+00	2019/11/20 23:34:00+00	ALBERT ST @ BOOTH ST (0002162)	2162	03 - At intersection	03 - P.D. only	02 - Angle	01 - Clear	07 - Dark	02 - Wet	01 - Traffic signal	01 - Functioning	0	366428.8509	5030626.299	45.41285892	-75.71261892	12312
Y	2019	2019/11/19 09:43:00+00	2019/11/19 09:43:00+00	ALBERT ST @ BOOTH ST (0002162)	2162	03 - At intersection	02 - Non-fatal injury	07 - SMV other	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	1	366428.6845	5030626.586	45.41286151	-75.71262101	12430
Y	2019	2019/11/14 09:00:00+00	2019/11/14 09:00:00+00	ALBERT ST @ BOOTH ST (0002162)	2162	02 - Intersection related	03 - P.D. only	03 - Rear end	03 - Snow	01 - Daylight	04 - Slush	01 - Traffic signal	01 - Functioning	0	366430.5388	5030628.093	45.41287491	-75.71259713	12967
Y	2019	2019/12/14 17:23:00+00	2019/12/14 17:23:00+00	ALBERT ST @ BOOTH ST (0002162)	2162	03 - At intersection	02 - Non-fatal injury	07 - SMV other	02 - Rain	07 - Dark	02 - Wet	01 - Traffic signal	01 - Functioning	1	366428.8187	5030626.661	45.41286218	-75.71261928	13679
Y	2019	2019/12/05 19:00:00+00	2019/12/05 19:00:00+00	ALBERT ST @ BOOTH ST (0002162)	2162	02 - Intersection related	03 - P.D. only	03 - Rear end	01 - Clear	07 - Dark	03 - Loose snow	01 - Traffic signal	01 - Functioning	0	366428.5005	5030626.394	45.4128598	-75.71262338	13922
Y	2019	2019/02/12 12:23:00+00	2019/02/12 12:23:00+00	ALBERT ST @ BRONSON AVE (0002160)	2160	02 - Intersection related	03 - P.D. only	04 - Sideswipe	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	0	366739.8248	5031016.425	45.41634169	-75.70859721	2758
Y	2019	2019/04/14 12:58:00+00	2019/04/14 12:58:00+00	ALBERT ST @ BRONSON AVE (0002160)	2160	02 - Intersection related	03 - P.D. only	04 - Sideswipe	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	0	366739.6031	5031016.897	45.41634597	-75.70859998	4781
Y	2019	2019/07/14 16:10:00+00	2019/07/14 16:10:00+00	ALBERT ST @ BRONSON AVE (0002160)	2160	02 - Intersection related	03 - P.D. only	02 - Angle	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	0	366739.744	5031016.629	45.41634355	-75.70859822	7104
Y	2019	2019/02/12 18:00:00+00	2019/02/12 18:00:00+00	ALBERT ST @ CITY CENTRE AVE (0006346)	6346	03 - At intersection	03 - P.D. only	02 - Angle	03 - Snow	05 - Dusk	03 - Loose snow	01 - Traffic signal	01 - Functioning	0	365955.5448	5030344.518	45.41036504	-75.71870035	2774
Y	2019	2019/08/06 11:22:00+00	2019/08/06 11:22:00+00	ALBERT ST @ CITY CENTRE AVE (0006346)	6346	02 - Intersection related	03 - P.D. only	04 - Sideswipe	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	0	365955.4853	5030344.657	45.4103663	-75.71870109	8688
Y	2019	2019/08/29 15:49:00+00	2019/08/29 15:49:00+00	ALBERT ST @ CITY CENTRE AVE (0006346)	6346	02 - Intersection related	03 - P.D. only	03 - Rear end	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	0	365955.6605	5030344.664	45.41036635	-75.71869886	9220
Y	2019	2019/06/13 20:01:00+00	2019/06/13 20:01:00+00	ALBERT ST @ COMMISSIONER ST (0002171)	2171	02 - Intersection related	03 - P.D. only	07 - SMV other	01 - Clear	01 - Daylight	02 - Wet	02 - Stop sign	01 - Functioning	0	366713.5301	5030971.623	45.41594091	-75.70893877	6465
Y	2019	2019/06/12 22:03:00+00	2019/06/12 22:03:00+00	ALBERT ST @ COMMISSIONER ST (0002171)	2171	03 - At intersection	03 - P.D. only	02 - Angle	01 - Clear	07 - Dark	01 - Dry	02 - Stop sign	01 - Functioning	0	366713.6186	5030971.612	45.4159408	-75.70893764	6688
Y	2019	2019/04/26 20:11:00+00	2019/04/26 20:11:00+00	ALBERT ST @ EMPRESS AVE (0010851)	10851	02 - Intersection related	03 - P.D. only	04 - Sideswipe	02 - Rain	05 - Dusk	02 - Wet	01 - Traffic signal	01 - Functioning	0	366576.5109	5030720.742	45.41369567	-75.71072073	4166
Y	2019	2019/05/10 15:36:00+00	2019/05/10 15:36:00+00	ALBERT ST @ EMPRESS AVE (0010851)	10851	02 - Intersection related	03 - P.D. only	04 - Sideswipe	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	0	366576.792	5030720.592	45.41369429	-75.71071716	5079
Y	2019	2019/06/05 15:13:00+00	2019/06/05 15:13:00+00	ALBERT ST @ EMPRESS AVE (0010851)	10851	02 - Intersection related	03 - P.D. only	04 - Sideswipe	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	0	366576.8112	5030720.473	45.41369322	-75.71071693	6235
Y	2019	2019/10/15 09:38:00+00	2019/10/15 09:38:00+00	ALBERT ST @ EMPRESS AVE (0010851)	10851	03 - At intersection	02 - Non-fatal injury	07 - SMV other	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	1	366576.6376	5030720.594	45.41369432	-75.71071913	10345
Y	2019	2019/07/26 10:24:00+00	2019/07/26 10:24:00+00	ALBERT ST @ PERKINS ST (0002220)	2220	02 - Intersection related	03 - P.D. only	02 - Angle	01 - Clear	01 - Daylight	01 - Dry	02 - Stop sign	01 - Functioning	0	366535.7477	5030695.577	45.41347283	-75.71124464	8924
Y	2019	2019/01/03 22:00:00+00	2019/01/03 22:00:00+00	ALBERT ST @ PRESTON ST (0002217)	2217	02 - Intersection related	03 - P.D. only	04 - Sideswipe	03 - Snow	07 - Dark	02 - Wet	01 - Traffic signal	01 - Functioning	0	366160.7515	5030464.526	45.41142689	-75.71606402	328
Y	2019	2019/01/29 16:14:00+00	2019/01/29 16:14:00+00	ALBERT ST @ PRESTON ST (0002217)	2217	02 - Intersection related	03 - P.D. only	03 - Rear end	03 - Snow	01 - Daylight	04 - Slush	01 - Traffic signal	01 - Functioning	0	366160.5651	5030464.683	45.41142831	-75.71606638	1634
Y	2019	2019/02/18 16:57:00+00	2019/02/18 16:57:00+00	ALBERT ST @ PRESTON ST (0002217)	2217	02 - Intersection related	03 - P.D. only	03 - Rear end	01 - Clear	05 - Dusk	01 - Dry	01 - Traffic signal	01 - Functioning	0	366160.3794	5030464.573	45.41142733	-75.71606877	2279
Y	2019	2019/02/15 19:58:00+00	2019/02/15 19:58:00+00	ALBERT ST @ PRESTON ST (0002217)	2217	02 - Intersection related	03 - P.D. only	04 - Sideswipe	01 - Clear	07 - Dark	01 - Dry	01 - Traffic signal	01 - Functioning	0	366160.5798	5030464.589	45.41142746	-75.7160662	2852
Y	2019	2019/04/06 15:29:00+00	2019/04/06 15:29:00+00	ALBERT ST @ PRESTON ST (0002217)	2217	02 - Intersection related	03 - P.D. only	04 - Sideswipe	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	0	366160.7718	5030464.609	45.41142762	-75.71606375	4451
Y	2019	2019/07/03 11:30:00+00	2019/07/03 11:30:00+00	ALBERT ST @ PRESTON ST (0002217)	2217	02 - Intersection related	03 - P.D. only	03 - Rear end	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	0	366160.7424	5030464.521	45.41142684	-75.71606413	7451
Y	2019	2019/03/13 18:43:00+00	2019/03/13 18:43:00+00	ALBERT ST btwn BRICKHILL ST & COMMISSIONER ST (__3ZA2GZ)	__3ZA2GZ	01 - Non intersection	03 - P.D. only	03 - Rear end	03 - Snow	05 - Dusk	04 - Slush	10 - No control		0	366710.4099	5030965.335	45.41588461	-75.70897942	3992
Y	2019	2019/04/05 01:04:00+00	2019/04/05 01:04:00+00	ALBERT ST btwn CITY CENTRE AVE & PRESTON ST (__3ZA32G)	__3ZA32G	01 - Non intersection	03 - P.D. only	07 - SMV other	01 - Clear	07 - Dark	01 - Dry	10 - No control		0	365978.6298	5030356.251	45.4104686	-75.718404	4402
Y	2019	2019/02/21 17:10:00+00	2019/02/21 17:10:00+00	ALBERT ST btwn Continuation of ALBERT ST & BOOTH ST (__3ZA2G2)	__3ZA2G2	01 - Non intersection	03 - P.D. only	04 - Sideswipe	01 - Clear	01 - Daylight	01 - Dry	10 - No control		0	366353.5011	5030579.711	45.41244636	-75.71358733	2168
Y	2019	2019/11/30 11:00:00+00	2019/11/30 11:00:00+00	ALBERT ST btwn PRESTON ST & Continuation of ALBERT ST (__3ZA33O)	__3ZA33O	01 - Non intersection	03 - P.D. only	04 - Sideswipe	01 - Clear	01 - Daylight	01 - Dry	10 - No control		0	366238.912	5030514.909	45.41187336	-75.71505926	12527
Y	2019	2019/01/16 17:40:00+00	2019/01/16 17:40:00+00	ALBERT ST btwn SLATER ST & BRICKHILL ST (__3ZBOG9)	__3ZBOG9	01 - Non intersection	03 - P.D. only	03 - Rear end	01 - Clear	07 - Dark	02 - Wet	10 - No control		0	366613.1856	5030775.724	45.41418714	-75.71024531	663
Y	2019	2019/04/23 18:19:00+00	2019/04/23 18:19:00+00	BAYVIEW RD @ SCOTT ST/ALBERT ST (0005646)	5646	03 - At intersection	02 - Non-fatal injury	05 - Turning movement	02 - Rain	01 - Daylight	02 - Wet	01 - Traffic signal	01 - Functioning	0	365518.9208	5030071.735	45.40794863	-75.72431157	4912
Y	2019	2019/12/03 10:35:00+00	2019/12/03 10:35:00+00	BAYVIEW RD @ SCOTT ST/ALBERT ST (0005646)	5646	02 - Intersection related	03 - P.D. only	03 - Rear end	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	0	365519.0592	5030071.462	45.40794616	-75.72430984	13808
Y	2019	2019/01/01 14:10:00+00	2019/01/01 14:10:00+00	BOOTH ST @ SIR JOHN A. MACDONALD PKWY/WELLINGTON ST (00122	12252	03 - At intersection	03 - P.D. only	02 - Angle	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	0	366264.2684	5031006.876	45.41629772	-75.71467399	131
Y	2019	2019/03/21 09:20:00+00	2019/03/21 09:20:00+00	BOOTH ST @ SIR JOHN A. MACDONALD PKWY/WELLINGTON ST (00122	12252	02 - Intersection related	02 - Non-fatal injury	03 - Rear end	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	0	366264.1644	5031006.65	45.41629569	-75.71467535	3392
Y	2019	2019/05/28 06:20:00+00	2019/05/28 06:20:00+00	BOOTH ST @ SIR JOHN A. MACDONALD PKWY/WELLINGTON ST (00122	12252	02 - Intersection related	03 - P.D. only	04 - Sideswipe	02 - Rain	01 - Daylight	02 - Wet	01 - Traffic signal	01 - Functioning	0	366264.2234	5031006.833	45.41629734	-75.71467457	5744
Y	2019	2019/08/21 17:45:00+00	2019/08/21 17:45:00+00	BOOTH ST @ SIR JOHN A. MACDONALD PKWY/WELLINGTON ST (00122	12252	02 - Intersection related	03 - P.D. only	04 - Sideswipe	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	0	366264.3879	5031006.732	45.41629641	-75.71467248	8030
Y	2019	2019/08/22 19:12:00+00	2019/08/22 19:12:00+00	BOOTH ST @ SIR JOHN A. MACDONALD PKWY/WELLINGTON ST (00122	12252	02 - Intersection related	03 - P.D. only	03 - Rear end	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	0	366264.2384	5031006.753	45.41629661	-75.71467439	8076
Y	2019	2019/08/27 08:45:00+00	2019/08/27 08:45:00+00	BOOTH ST @ SIR JOHN A. MACDONALD PKWY/WELLINGTON ST (00122	12252	02 - Intersection related	03 - P.D. only	04 - Sideswipe	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	0	366264.1485	5031006.726	45.41629637	-75.71467554	9154
Y	2019	2019/08/24 07:29:00+00	2019/08/24 07:29:00+00	BOOTH ST @ SIR JOHN A. MACDONALD PKWY/WELLINGTON ST (00122	12252	02 - Intersection related	03 - P.D. only	04 - Sideswipe	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	0	366264.2451	5031006.678	45.41629593	-75.71467431	9919
Y	2019	2019/08/27 06:50:00+00	2019/08/27 06:50:00+00	BOOTH ST @ SIR JOHN A. MACDONALD PKWY/WELLINGTON ST (00122	12252	03 - At intersection	03 - P.D. only	05 - Turning movement	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	0	366264.2078	5031006.748	45.41629657	-75.71467478	9997
Y	2019	2019/08/27 08:38:00+00	2019/08/27 08:38:00+00	BOOTH ST @ SIR JOHN A. MACDONALD PKWY/WELLINGTON ST (00122	12252	03 - At intersection	03 - P.D. only	05 - Turning movement	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	0	366264.209	5031006.748	45.41629657	-75.71467476	10000
Y	2019	2019/10/19 06:56:00+00	2019/10/19 06:56:00+00	BOOTH ST @ SIR JOHN A. MACDONALD PKWY/WELLINGTON ST (00122	12252	03 - At intersection	02 - Non-fatal injury	02 - Angle	01 - Clear	03 - Dawn	01 - Dry	01 - Traffic signal	01 - Functioning	0	366264.0645	5031006.769	45.41629677	-75.71467661	11676
Y	2019	2019/06/04 10:30:00+00	2019/06/04 10:30:00+00	BOOTH ST @ SIR JOHN A. MACDONALD PKWY/WELLINGTON ST (00122	12252	02 - Intersection related	03 - P.D. only	03 - Rear end	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	0	366264.1332	5031006.688	45.41629604	-75.71467574	14001
Y	2019	2019/11/27 14:00:00+00	2019/11/27 14:00:00+00	BOOTH ST @ SIR JOHN A. MACDONALD PKWY/WELLINGTON ST (00122	12252	02 - Intersection related	03 - P.D. only	04 - Sideswipe	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	0	366264.3611	5031006.876	45.4162977	-75.7146728	14010
Y	2019	2019/04/14 17:10:00+00	2019/04/14 17:10:00+00	BOOTH ST @ SIR JOHN A. MACDONALD PKWY/WELLINGTON ST (00122	12252	02 - Intersection related	03 - P.D. only	03 - Rear end	02 - Rain	01 - Daylight	02 - Wet	01 - Traffic signal	01 - Functioning	0	366264.2745	5031006.601	45.41629524	-75.71467395	14285
Y	2019	2019/12/30 17:51:00+00	2019/12/30 17:51:00+00	BOOTH ST @ SIR JOHN A. MACDONALD PKWY/WELLINGTON ST (00122	12252	02 - Intersection related	02 - Non-fatal injury	03 - Rear end	04 - Freezing Rain	07 - Dark	04 - Slush	01 - Traffic signal	01 - Functioning	0	366264.9567	5031006.536	45.41629459	-75.71466524	14391
Y	2019	2019/12/21 13:34:00+00	2019/12/21 13:34:00+00	BOOTH ST @ SIR JOHN A. MACDONALD PKWY/WELLINGTON ST (00122	12252	02 - Intersection related	03 - P.D. only	05 - Turning movement	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	0	366264.0356	5031005.6	45.41628625	-75.71467712	14934
Y	2019	2019/02/21 23:00:00+00	2019/02/21 23:00:00+00	BOOTH ST btwn MIDDLE ST & VIMY PLACE PRIV (__5VHJ3U)	__5VHJ3U	01 - Non intersection	03 - P.D. only	04 - Sideswipe	01 - Clear	07 - Dark	02 - Wet	10 - No control		0	366166.189	5031222.885	45.41824991	-75.71590013	2124
Y	2019	2019/02/24 07:02:00+00	2019/02/24 07:02:00+00	BOOTH ST btwn MIDDLE ST & VIMY PLACE PRIV (__5VHJ3U)	__5VHJ3U	01 - Non intersection	03 - P.D. only	07 - SMV other	04 - Freezing Rain	03 - Dawn	06 - Ice	10 - No control		0	366228.8533	5031095.914	45.41710196	-75.71511534	2193
Y	2019	2019/12/21 12:00:00+00	2019/12/21 12:00:00+00	BOOTH ST btwn MIDDLE ST & VIMY PLACE PRIV (__5VHJ3U)	__5VHJ3U	07 - Overpass or bridge	02 - Non-fatal injury	03 - Rear end	01 - Clear	01 - Daylight	02 - Wet	10 - No control		0	366129.92	5031270.151	45.41867838	-75.71635762	14932
Y	2019	2019/04/22 07:00:00+00	2019/04/22 07:00:00+00	BOOTH ST btwn OTTAWA RIVER PKWY & FLEET ST (__5VHJ61)	__5VHJ61	01 - Non intersection	03 - P.D. only	04 - Sideswipe	01 - Clear	01 - Daylight	01 - Dry	10 - No control		0	366286.4937	5030956.785	45.41584506	-75.71439629	4541
Y	2019	2019/09/17 06:30:00+00	2019/09/17 06:30:00+00	BOOTH ST btwn OTTAWA RIVER PKWY & FLEET ST (__5VHJ61)	__5VHJ61	01 - Non intersection	03 - P.D. only	04 - Sideswipe	01 - Clear	03 - Dawn	01 - Dry	10 - No control		0	366281.7139	5030967.471	45.41594163	-75.71445603	9027
Y	2019	2019/10/27 10:50:00+00	2019/10/27 10:50:00+00	BOOTH ST btwn VIMY PLACE PRIV & OTTAWA RIVER PKWY (__5VHJ2X)	__5VHJ2X	01 - Non intersection	03 - P.D. only	03 - Rear end	01 - Clear	01 - Daylight	01 - Dry	10 - No control		0	366258.6417	5031020.957	45.41642491	-75.71474412	11919
Y	2019	2019/04/10 15:35:00+00	2019/04/10 15:35:00+00	BOOTH ST btwn VIMY PLACE PRIV & OTTAWA RIVER PKWY (__5VHJ2X)	__5VHJ2X	01 - Non intersection	03 - P.D. only	03 - Rear end	01 - Clear	01 - Daylight	01 - Dry	10 - No control		0	366242.2096	5031063.401	45.41680825	-75.71494876	14281
Y	2019	2019/03/14 06:01:00+00	2019/03/14 06:01:00+00	BOOTH ST btwn WELLINGTON ST & ALBERT ST (__3ZA2G1)	__3ZA2G1	01 - Non intersection	03 - P.D. only	04 - Sideswipe	01 - Clear	03 - Dawn	04 - Slush	10 - No control		0	366411.3301	5030661.251	45.41317495	-75.71283837	3752
Y	2019	2019/01/18 10:50:00+00	2019/01/18 10:50:00+00	BRONSON AVE @ COMMISSIONER ST/SLATER ST (0001679)	1679	02 - Intersection related	03 - P.D. only	03 - Rear end	03 - Snow	01 - Daylight	04 - Slush	01 - Traffic signal	01 - Functioning	0	366768.7904	5030948.362	45.41572672	-75.70823571	286
Y	2019	2019/01/20 15:14:00+00	2019/01/20 15:14:00+00	BRONSON AVE @ COMMISSIONER ST/SLATER ST (0001679)	1679	02 - Intersection related	03 - P.D. only	03 - Rear end	03 - Snow	01 - Daylight	02 - Wet	01 - Traffic signal	01 - Functioning	0	366768.4681	5030948.622	45.41572909	-75.7082398	402
Y	2019	2019/01/20 15:31:00+00	2019/01/20 15:31:00+00	BRONSON AVE @ COMMISSIONER ST/SLATER ST (0001679)	1679	02 - Intersection related	03 - P.D. only	03 - Rear end	03 - Snow	01 - Daylight	05 - Packed snow	01 - Traffic signal	01 - Functioning	0	366768.7211	5030948.706	45.41572982	-75.70823655	415
Y	2019	2019/01/27 10:08:00+00	2019/01/27 10:08:00+00	BRONSON AVE @ COMMISSIONER ST/SLATER ST (0001679)	1679	03 - At intersection	03 - P.D. only	02 - Angle	03 - Snow	01 - Daylight	03 - Loose snow	01 - Traffic signal	01 - Functioning	0	366768.8223	5030948.486	45.41572784	-75.70823529	1261
Y	2019	2019/02/02 12:30:00+00	2019/02/02 12:30:00+00	BRONSON AVE @ COMMISSIONER ST/SLATER ST (0001679)	1679	02 - Intersection related	03 - P.D. only	03 - Rear end	03 - Snow	01 - Daylight	03 - Loose snow	01 - Traffic signal	01 - Functioning	0	366768.4342	5030948.497	45.41572797	-75.70824024	1624
Y	2019	2019/02/25 08:55:00+00	2019/02/25 08:55:00+00	BRONSON AVE @ COMMISSIONER ST/SLATER ST (0001679)	1679	02 - Intersection related	03 - P.D. only	04 - Sideswipe	01 - Clear	01 - Daylight	02 - Wet	01 - Traffic signal	01 - Functioning	0	366768.8385	5030948.726	45.41572999	-75.70823505	2038
Y	2019	2019/02/13 09:55:00+00	2019/02/13 09:55:00+00	BRONSON AVE @ COMMISSIONER ST/SLATER ST (0001679)	1679	02 - Intersection related	03 - P.D. only	03 - Rear end	03 - Snow	01 - Daylight	04 - Slush	01 - Traffic signal	01 - Functioning	0	366768.7056	5030948.567	45.41572858	-75.70823677	2792
Y	2019	2019/03/07 15:14:00+00	2019/03/07 15:14:00+00	BRONSON AVE @ COMMISSIONER ST/SLATER ST (0001679)	1679	02 - Intersection related	03 - P.D. only	04 - Sideswipe	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	0	366768.7315	5030948.438	45.41572741	-75.70823645	3047
Y	2019	2019/05/17 08:30:00+00	2019/05/17 08:30:00+00	BRONSON AVE @ COMMISSIONER ST/SLATER ST (0001679)	1679	03 - At intersection	03 - P.D. only	05 - Turning movement	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	0	366768.6877	5030948.577	45.41572867	-75.708237	5865
Y	2019	2019/02/21 07:57:00+00	2019/02/21 07:57:00+00	OTTAWA RIVER PKWY @ PORTAGE BRIDGE (0009072)	9072	02 - Intersection related	02 - Non-fatal injury	03 - Rear end	03 - Snow	01 - Daylight	04 - Slush	01 - Traffic signal	01 - Functioning	0	366516.3123	5031314.647	45.41904476	-75.7114154	2248
Y	2019	2019/03/27 21:30:00+00	2019/03/27 21:30:00+00	OTTAWA RIVER PKWY @ PORTAGE BRIDGE (0009072)	9072	02 - Intersection related	03 - P.D. only	04 - Sideswipe	01 - Clear	07 - Dark	01 - Dry	01 - Traffic signal	01 - Functioning	0	366516.0839	5031314.712	45.41904537	-75.71141831	3286
Y	2019	2019/03/21 21:26:00+00	2019/03/21 21:26:00+00	OTTAWA RIVER PKWY @ PORTAGE BRIDGE (0009072)	9072	02 - Intersection related	03 - P.D. only	03 - Rear end	02 - Rain	07 - Dark	02 - Wet	01 - Traffic signal	01 - Functioning	0	366516.1176	5031314.474	45.41904323	-75.7114179	3415
Y	2019	2019/04/18 11:29:00+00	2019/04/18 11:29:00+00	OTTAWA RIVER PKWY @ PORTAGE BRIDGE (0009072)	9072	02 - Intersection related	03 - P.D. only	04 - Sideswipe	02 - Rain	01 - Daylight	02 - Wet	01 - Traffic signal	00 - Unknown	0	366516.1941	5031314.834	45.41904645	-75.71141688	4484
Y	2019	2019/08/12 18:00:00+00	2019/08/12 18:00:00+00	OTTAWA RIVER PKWY @ PORTAGE BRIDGE (0009072)	9072	02 - Intersection related	03 - P.D. only	03 - Rear end	02 - Rain	01 - Daylight	02 - Wet	01 - Traffic signal	01 - Functioning	0	366516.0216	5031314.867	45.41904677	-75.71141908	8647
Y	2019	2019/10/11 22:47:00+00	2019/10/11 22:47:00+00	OTTAWA RIVER PKWY @ PORTAGE BRIDGE (0009072)	9072	02 - Intersection related	03 - P.D. only	05 - Turning movement	01 - Clear	07 - Dark	01 - Dry	01 - Traffic signal	01 - Functioning	0	366516.069	5031314.476	45.41904324	-75.71141853	10715
Y	2019	2019/06/11 12:55:00+00	2019/06/11 12:55:00+00	OTTAWA RIVER PKWY @ PORTAGE BRIDGE (0009072)	9072	02 - Intersection related	03 - P.D. only	03 - Rear end	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	0	366516.0466	5031314.671	45.419045	-75.71141879	14023
Y	2019	2019/01/21 12:01:00+00	2019/01/21 12:01:00+00	OTTAWA RIVER PKWY @ PORTAGE BRIDGE (0009072)	9072	02 - Intersection related	03 - P.D. only	07 - SMV other	01 - Clear	01 - Daylight	05 - Packed snow	01 - Traffic signal	01 - Functioning	0	366516.2708	5031314.58	45.41904416	-75.71141593	14738
Y	2019	2019/08/22 06:53:00+00	2019/08/22 06:53:00+00	OTTAWA RIVER PKWY @ PORTAGE BRIDGE (0009072)	9072	02 - Intersection related	03 - P.D. only	03 - Rear end	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	0	366516.263	5031314.444	45.41904294	-75.71141605	14878
Y	2019	2019/03/13 17:30:00+00	2019/03/13 17:30:00+00	OTTAWA RIVER PKWY @ RIVER ST/SLIDELL ST (0005099)	5099	02 - Intersection related	03 - P.D. only	04 - Sideswipe	03 - Snow	05 - Dusk	05 - Packed snow	01 - Traffic signal	01 - Functioning	0	365156.8235	5030377.62	45.41073223	-75.72889952	4717
Y	2019	2019/08/16 07:46:00+00	2019/08/16 07:46:00+00	OTTAWA RIVER PKWY @ RIVER ST/SLIDELL ST (0005099)	5099	02 - Intersection related	03 - P.D. only	03 - Rear end	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	0	365156.4237	5030377.635	45.4107324	-75.72890462	14867
Y	2019	2019/09/30 17:30:00+00	2019/09/30 17:30:00+00	OTTAWA RIVER PKWY @ VIMY PLACE PRIV (0012251)	12251	02 - Intersection related	03 - P.D. only	03 - Rear end	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	0	365973.9275	5030798.141	45.41444502	-75.71840922	10471
Y	2019	2019/03/17 16:15:00+00	2019/03/17 16:15:00+00	OTTAWA RIVER PKWY @ VIMY PLACE PRIV (0012251)	12251	02 - Intersection related	03 - P.D. only	04 - Sideswipe	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	0	365974.0473	5030798.043	45.41444412	-75.71840771	14009
Y	2019	2019/07/23 08:05:00+00	2019/07/23 08:05:00+00	OTTAWA RIVER PKWY @ VIMY PLACE PRIV (0012251)	12251	02 - Intersection related	03 - P.D. only	03 - Rear end	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	0	365974.0957	5030798.06	45.41444427	-75.71840708	14359
Y	2019	2019/05/03 10:28:00+00	2019/05/03 10:28:00+00	OTTAWA RIVER PKWY btwn VIMY PLACE PRIV & BOOTH ST (__5VHJ2Q	__5VHJ2QB	01 - Non intersection	03 - P.D. only	04 - Sideswipe	02 - Rain	01 - Daylight	02 - Wet	10 - No control		0	366071.725	5030867.807	45.4150633	-75.71715117	14308
Y	2019	2019/10/18 11:53:00+00	2019/10/18 11:53:00+00	OTTAWA RIVER PKWY OFFR-EB @ PARKDALE AVE (0011241)	11241	02 - Intersection related	03 - P.D. only	03 - Rear end	01 - Clear	01 - Daylight	01 - Dry	03 - Yield sign	01 - Functioning	0	364684.0505	5030331.791	45.41036048	-75.73494455	11650
Y	2019	2019/06/20 12:30:00+00	2019/06/20 12:30:00+00	OTTAWA RIVER PKWY WB @ PARKDALE AVE WB ON RAMP (0011376)	11376	02 - Intersection related	03 - P.D. only	07 - SMV other	02 - Rain	01 - Daylight	02 - Wet	03 - Yield sign	01 - Functioning	0	364638.3144	5030469.151	45.41160033	-75.73551213	14048
Y	2019	2019/02/06 08:39:00+00	2019/02/06 08:39:00+00	PARKDALE AVE @ SCOTT ST (0002213)	2213	02 - Intersection related	03 - P.D. only	03 - Rear end	01 - Clear	01 - Daylight	03 - Loose snow	01 - Traffic signal	01 - Functioning	0	364949.7217	5029726.658	45.40489285	-75.73162457	1722
Y	2019	2019/02/22 15:30:00+00	2019/02/22 15:30:00+00	PARKDALE AVE @ SCOTT ST (0002213)	2213	02 - Intersection related	03 - P.D. only	03 - Rear end	01 - Clear	01 - Daylight	02 - Wet	01 - Traffic signal	01 - Functioning	0	364949.6092	5029726.317	45.40488979	-75.73162605	2141
Y	2019	2019/03/30 13:46:00+00	2019/03/30 13:46:00+00	PARKDALE AVE @ SCOTT ST (0002213)	2213	03 - At intersection	02 - Non-fatal injury	05 - Turning movement	02 - Rain	01 - Daylight	02 - Wet	01 - Traffic signal	01 - Functioning	0	364949.5477	5029726.714	45.40489337	-75.73162678	3357
Y	2019	2019/04/16 09:15:00+00	2019/04/16 09:15:00+00	PARKDALE AVE @ SCOTT ST (0002213)	2213	02 - Intersection related	03 - P.D. only	03 - Rear end	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	0	364949.7023	5029726.608	45.4048924	-75.73162482	4599
Y	2019	2019/07/14 08:25:00+00	2019/07/14 08:25:00+00	PARKDALE AVE @ SCOTT ST (0002213)	2213	03 - At intersection	03 - P.D. only	02 - Angle	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	0	364949.7335	5029726.379	45.40489034	-75.73162445	7087
Y	2019	2019/10/08 11:00:00+00	2019/10/08 11:00:00+00	PARKDALE AVE @ SCOTT ST (0002213)	2213	02 - Intersection related	03 - P.D. only	03 - Rear end	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	0	364949.6519	5029726.811	45.40489424	-75.73162544	10559
Y	2019	2019/10/31 09:11:00+00	2019/10/31 09:11:00+00	PARKDALE AVE @ SCOTT ST (0002213)	2213	03 - At intersection	03 - P.D. only	02 - Angle	02 - Rain	01 - Daylight	02 - Wet	01 - Traffic signal	01 - Functioning	0	364949.8011	5029726.739	45.40489357	-75.73162354	11477
Y	2019	2019/11/22 15:16:00+00	2019/11/22 15:16:00+00	PARKDALE AVE @ SCOTT ST (0002213)	2213	02 - Intersection related	03 - P.D. only	05 - Turning movement	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	0	364949.8214	5029726.408	45.40489059	-75.73162333	12180

Y	2019	2019/01/16 00:00:00+00	2019/01/16 00:00:00+00	PARKDALE AVE btwn BURNSIDE AVE & LYNDALE AVE (__3ZA32H)	__3ZA32H	01 - Non intersection	03 - P.D. only	06 - SMV unattended vehicle	03 - Snow	00 - Unknown	04 - Slush	10 - No control		0	364853.56	5029948.291	45.40689531	-75.73282587	633
Y	2019	2019/01/24 22:00:00+00	2019/01/24 22:00:00+00	PARKDALE AVE btwn BURNSIDE AVE & LYNDALE AVE (__3ZA32H)	__3ZA32H	01 - Non intersection	03 - P.D. only	06 - SMV unattended vehicle	01 - Clear	07 - Dark	01 - Dry	10 - No control		0	364793.6364	5030086.203	45.40814135	-75.73357453	1418
Y	2019	2019/07/18 12:57:00+00	2019/07/18 12:57:00+00	PARKDALE AVE btwn LYNDALE AVE & SCOTT ST (__3ZA31W)	__3ZA31W	04 - At/near private drive	03 - P.D. only	02 - Angle	01 - Clear	01 - Daylight	01 - Dry	10 - No control		0	364877.7554	5029892.617	45.40639229	-75.73252359	7600
Y	2019	2019/08/06 10:25:00+00	2019/08/06 10:25:00+00	PARKDALE AVE btwn LYNDALE AVE & SCOTT ST (__3ZA31W)	__3ZA31W	04 - At/near private drive	02 - Non-fatal injury	07 - SMV other	01 - Clear	01 - Daylight	01 - Dry	10 - No control		1	364916.979	5029801.718	45.40557103	-75.73203365	8687
Y	2019	2019/02/02 13:42:00+00	2019/02/02 13:42:00+00	SCOTT ST btwn HILDA ST & BAYVIEW RD (__3ZA32U)	__3ZA32U	01 - Non intersection	03 - P.D. only	04 - Sideswipe	03 - Snow	01 - Daylight	03 - Loose snow	10 - No control		0	365514.9775	5030069.363	45.40792763	-75.72436224	1610
Y	2019	2019/12/31 06:30:00+00	2019/12/31 06:30:00+00	SCOTT ST btwn PARKDALE AVE & PINEHURST AVE (__3ZA31U)	__3ZA31U	04 - At/near private drive	03 - P.D. only	02 - Angle	03 - Snow	07 - Dark	03 - Loose snow	10 - No control		0	364962.4684	5029734.056	45.40495832	-75.73146085	14424
Y	2019	2019/06/25 16:50:00+00	2019/06/25 16:50:00+00	WELLINGTON ST @ LETT ST (0012269)	12269	02 - Intersection related	03 - P.D. only	03 - Rear end	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	0	366355.3951	5031111.272	45.41722903	-75.71349674	6753
Y	2019	2019/07/17 10:36:00+00	2019/07/17 10:36:00+00	WELLINGTON ST btwn TURN LANE & TO BE DETERMINED (__3ZA2L9)	__3ZA2L9	01 - Non intersection	03 - P.D. only	04 - Sideswipe	01 - Clear	01 - Daylight	01 - Dry	10 - No control		0	366474.49	5031272.137	45.41866596	-75.71195505	7546
Y	2019	2019/05/21 08:05:00+00	2019/05/21 08:05:00+00	WELLINGTON ST btwn TURN LANE & TO BE DETERMINED (__3ZA2L9)	__3ZA2L9	01 - Non intersection	03 - P.D. only	04 - Sideswipe	01 - Clear	01 - Daylight	01 - Dry	10 - No control		0	366630.6264	5031280.427	45.41872677	-75.70995917	14333

APPENDIX D: Adjacent Development TIAs

Figure 12: 'New' Site-Generated Traffic Volumes (Ottawa + Gatineau Sites)



5.4 Other Planned/Potential Development in the Vicinity of the Study Area

The Domtar lands are not the only site in this area of Gatineau and Ottawa that has development/redevelopment potential. The following Table 8 summarizes development sites identified by the Cities of Gatineau and Ottawa, as well their assumed development yield. Also included in this table are the assumptions used to estimate vehicle trips and the resultant peak hour vehicle trips. These being approximately 1000 vph two-way total during both peak hours for the Gatineau sites, and approximately 1300 vph two-way total during both peak hours for the Ottawa sites. Combining both provinces, the two-way peak hour total is approximately 2200 vph to 2400 vph.

Figure 9: Site Generated Traffic Volumes

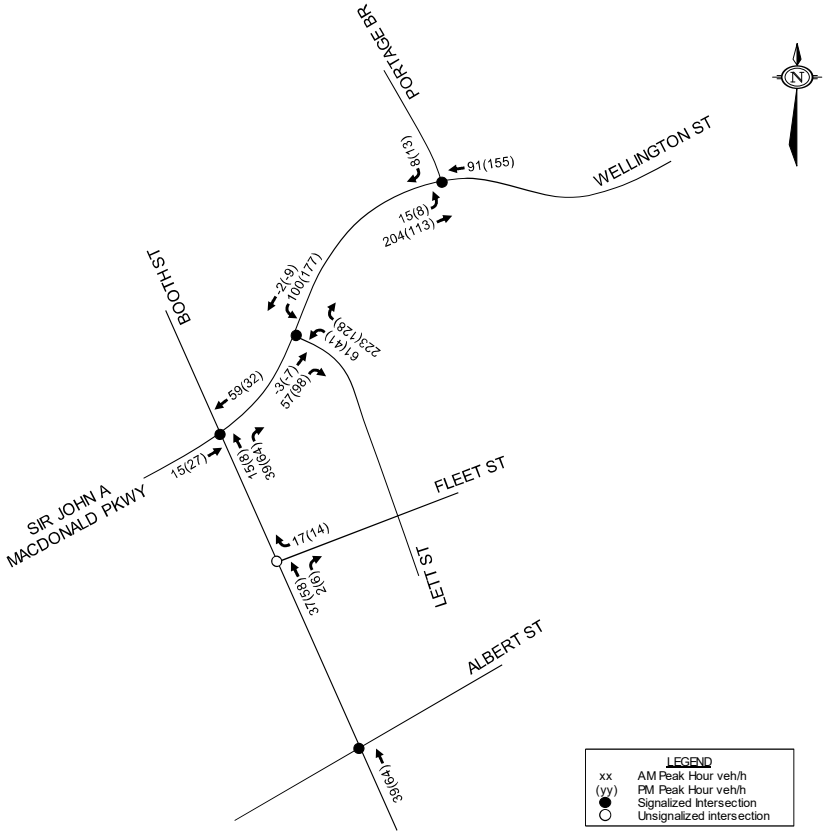


Figure 10: 2031 Total Traffic Volumes

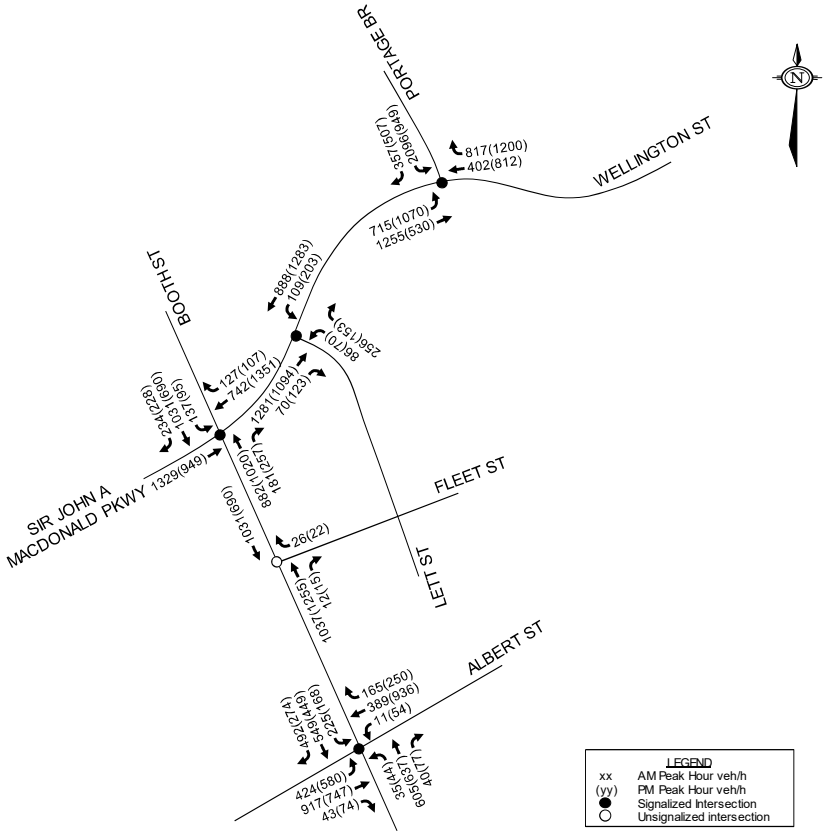
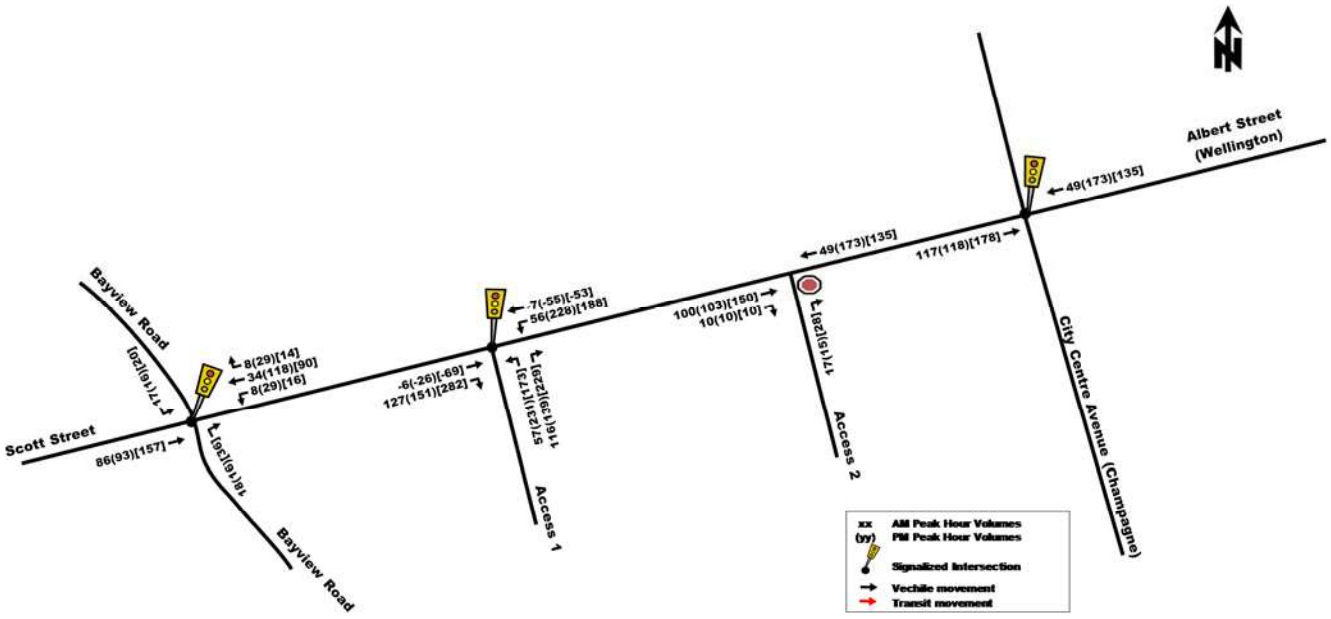


Figure 11: New and Pass-by Site-Generated Traffic Volumes – 2025

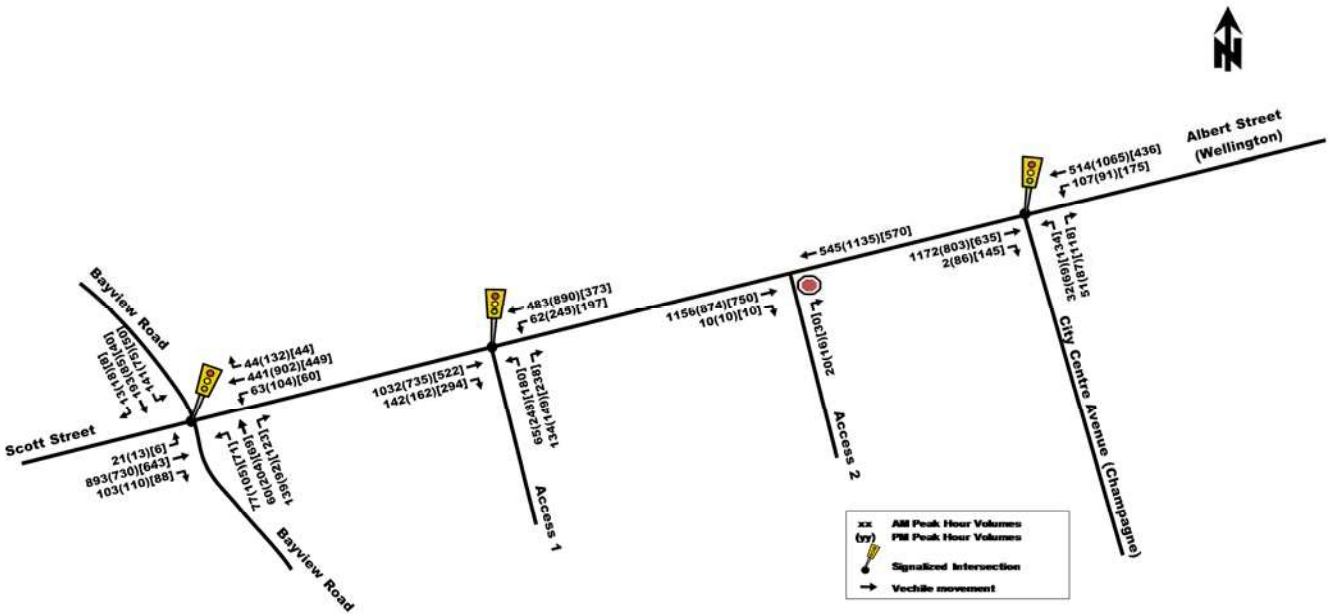


FUTURE TRAFFIC OPERATIONS

PROJECTED CONDITIONS AT FULL SITE DEVELOPMENT

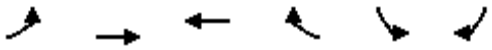
The total projected volumes associated with the proposed development were derived by superimposing new and pass-by site-generated traffic volumes (Figure 10 and 11) onto projected background traffic volumes (Figure 7 and 8). The resulting total projected volumes for the horizon years 2020 and 2025 are illustrated as Figure 12 and 13, respectively.

Figure 12: Total Projected Peak Hour Traffic Volumes - 2020



APPENDIX E: Existing and Future Background Conditions - Synchro Outputs

Synchro Modelling Outputs – Existing Conditions



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	595	859	263	704	1962	309
Future Volume (vph)	595	859	263	704	1962	309
Satd. Flow (prot)	3317	4914	3420	2693	3285	1530
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	3301	4914	3420	2693	3272	1501
Satd. Flow (RTOR)						68
Lane Group Flow (vph)	626	904	277	741	2065	325
Turn Type	Prot	NA	NA	pt+ov	Prot	Perm
Protected Phases	7	4	8	1 8	1	
Permitted Phases						1
Detector Phase	7	4	8	1 8	1	1
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0		10.0	10.0
Minimum Split (s)	42.8	26.5	26.5		45.1	45.1
Total Split (s)	42.8	70.3	27.5		51.1	51.1
Total Split (%)	35.3%	57.9%	22.7%		42.1%	42.1%
Yellow Time (s)	3.3	3.3	3.3		3.3	3.3
All-Red Time (s)	2.5	3.2	3.2		2.8	2.8
Lost Time Adjust (s)	0.0	0.0	0.0		-2.1	0.0
Total Lost Time (s)	5.8	6.5	6.5		4.0	6.1
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	Min	Min	Min		Max	Max
Act Effct Green (s)	26.0	50.7	18.9	70.7	47.4	45.3
Actuated g/C Ratio	0.24	0.47	0.17	0.65	0.44	0.42
v/c Ratio	0.79	0.39	0.47	0.42	1.44	0.49
Control Delay	46.6	19.1	44.0	10.8	230.0	22.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.6	19.1	44.0	10.8	230.0	22.6
LOS	D	B	D	B	F	C
Approach Delay		30.4	19.9		201.8	
Approach LOS		C	B		F	
Queue Length 50th (m)	69.3	46.5	29.3	40.8	~331.2	42.0
Queue Length 95th (m)	89.3	56.5	47.6	71.7	#427.2	80.2
Internal Link Dist (m)		234.2	291.0		48.7	
Turn Bay Length (m)	150.0					30.0
Base Capacity (vph)	1136	2903	665	1738	1433	665
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	0.55	0.31	0.42	0.43	1.44	0.49

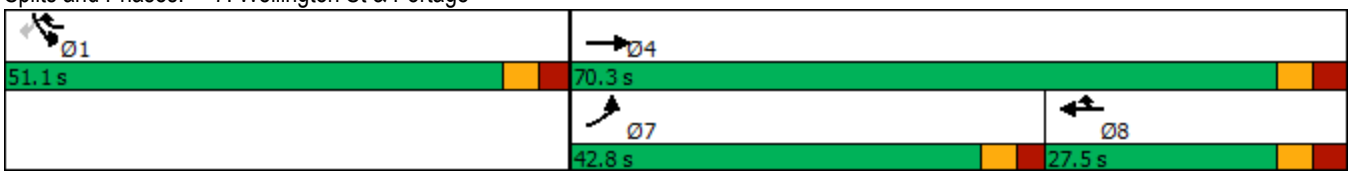
Intersection Summary
Cycle Length: 121.4
Actuated Cycle Length: 108.7
Natural Cycle: 145
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 1.44

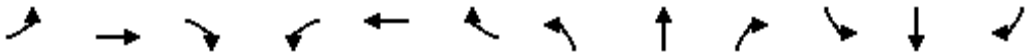
Intersection Signal Delay: 111.2	Intersection LOS: F
Intersection Capacity Utilization 100.0%	ICU Level of Service F
Analysis Period (min) 15	

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

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

Splits and Phases: 7: Wellington St & Portage





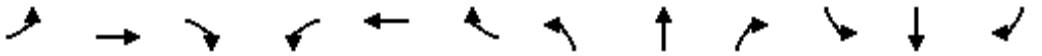
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	0	0	0	688	0	0	1283	0
Future Volume (vph)	0	0	0	0	0	0	0	688	0	0	1283	0
Satd. Flow (prot)	1800	1800	0	1800	1800	0	1800	1800	0	1800	1800	0
Flt Permitted												
Satd. Flow (perm)	1800	1800	0	1800	1800	0	1800	1800	0	1800	1800	0
Satd. Flow (RTOR)												
Lane Group Flow (vph)	0	0	0	0	0	0	0	724	0	0	1351	0
Turn Type	Perm			Perm			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)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	22.0	22.0		22.0	22.0		53.0	53.0		53.0	53.0	
Total Split (s)	22.0	22.0		22.0	22.0		53.0	53.0		53.0	53.0	
Total Split (%)	29.3%	29.3%		29.3%	29.3%		70.7%	70.7%		70.7%	70.7%	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.3	3.3		3.3	3.3	
All-Red Time (s)	3.2	3.2		3.2	3.2		2.6	2.6		2.6	2.6	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.2	6.2		6.2	6.2		5.9	5.9		5.9	5.9	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	
Act Effct Green (s)								75.0			75.0	
Actuated g/C Ratio								1.00			1.00	
v/c Ratio								0.40			0.75	
Control Delay								0.7			2.9	
Queue Delay								0.0			0.0	
Total Delay								0.7			2.9	
LOS								A			A	
Approach Delay								0.7			2.9	
Approach LOS								A			A	
Queue Length 50th (m)								0.0			0.0	
Queue Length 95th (m)								0.0			0.0	
Internal Link Dist (m)		60.2			43.3			76.9			31.3	
Turn Bay Length (m)												
Base Capacity (vph)								1800			1800	
Starvation Cap Reductn								0			0	
Spillback Cap Reductn								0			0	
Storage Cap Reductn								0			0	
Reduced v/c Ratio								0.40			0.75	

Intersection Summary
Cycle Length: 75
Actuated Cycle Length: 75
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.75

Intersection Signal Delay: 2.1	Intersection LOS: A
Intersection Capacity Utilization 76.2%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 10: Booth St & Chaudiere



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1233	0	0	629	87	0	699	126	81	908	194
Future Volume (vph)	0	1233	0	0	629	87	0	699	126	81	908	194
Satd. Flow (prot)	0	3420	0	0	3386	1530	0	3095	0	1710	3226	1530
Flt Permitted										0.132		
Satd. Flow (perm)	0	3420	0	0	3386	1478	0	3095	0	236	3226	1465
Satd. Flow (RTOR)								22				141
Lane Group Flow (vph)	0	1298	0	0	662	92	0	869	0	85	956	204
Turn Type		NA			NA	Perm		NA		pm+pt	NA	Perm
Protected Phases		4			8			2		1	6	
Permitted Phases						8				6		6
Detector Phase		4			8	8		2		1	6	6
Switch Phase												
Minimum Initial (s)		10.0			10.0	10.0		10.0		5.2	10.0	10.0
Minimum Split (s)		35.8			35.8	35.8		31.8		12.0	31.9	31.9
Total Split (s)		48.0			48.0	48.0		35.0		12.0	47.0	47.0
Total Split (%)		50.5%			50.5%	50.5%		36.8%		12.6%	49.5%	49.5%
Yellow Time (s)		3.7			3.7	3.7		3.3		3.3	3.3	3.3
All-Red Time (s)		3.1			3.1	3.1		3.5		3.5	3.6	3.6
Lost Time Adjust (s)		0.0			0.0	-2.8		0.0		0.0	0.0	-2.9
Total Lost Time (s)		6.8			6.8	4.0		6.8		6.8	6.9	4.0
Lead/Lag								Lag		Lead		
Lead-Lag Optimize?								Yes		Yes		
Recall Mode		Min			Min	Min		C-Max		None	C-Min	C-Min
Act Effct Green (s)		40.0			40.0	42.8		31.7		41.4	41.3	44.2
Actuated g/C Ratio		0.42			0.42	0.45		0.33		0.44	0.43	0.47
v/c Ratio		0.90			0.46	0.14		0.83		0.45	0.68	0.27
Control Delay		32.6			29.4	22.9		38.4		32.4	30.7	12.1
Queue Delay		0.8			0.0	0.0		2.7		3.7	0.0	0.0
Total Delay		33.4			29.4	22.9		41.1		36.1	30.7	12.1
LOS		C			C	C		D		D	C	B
Approach Delay		33.4			28.6			41.1			28.1	
Approach LOS		C			C			D			C	
Queue Length 50th (m)		117.1			62.7	13.3		83.6		9.7	77.7	6.7
Queue Length 95th (m)		#151.9			83.4	27.7		#123.1		33.7	126.9	49.1
Internal Link Dist (m)		331.0			128.4			47.8			192.9	
Turn Bay Length (m)						70.0				145.0		55.0
Base Capacity (vph)		1483			1468	684		1046		188	1403	757
Starvation Cap Reductn		0			0	0		0		0	0	0
Spillback Cap Reductn		46			0	0		92		50	0	0
Storage Cap Reductn		0			0	0		0		0	0	0
Reduced v/c Ratio		0.90			0.45	0.13		0.91		0.62	0.68	0.27

Intersection Summary
Cycle Length: 95
Actuated Cycle Length: 95
Offset: 31 (33%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

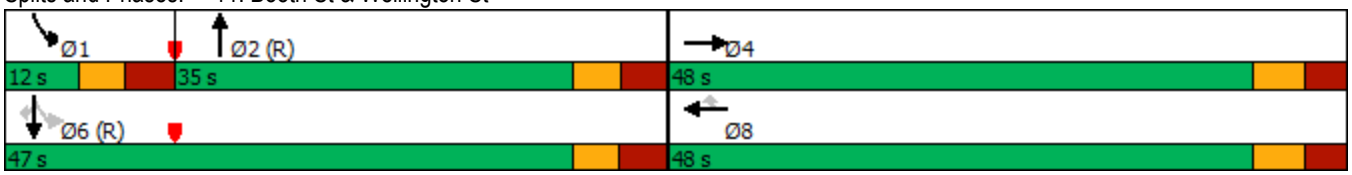
Maximum v/c Ratio: 0.90

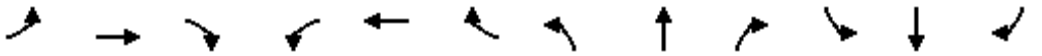
Intersection Signal Delay: 32.5	Intersection LOS: C
Intersection Capacity Utilization 82.8%	ICU Level of Service E
Analysis Period (min) 15	

Description:

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

Splits and Phases: 11: Booth St & Wellington St





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	324	704	17	7	244	138	6	482	30	162	454	393
Future Volume (vph)	324	704	17	7	244	138	6	482	30	162	454	393
Satd. Flow (prot)	1660	1748	1443	1710	3196	1378	0	3329	0	1425	1782	1471
Flt Permitted	0.493			0.239				0.948		0.215		
Satd. Flow (perm)	819	1748	1377	428	3196	1251	0	3157	0	310	1782	1313
Satd. Flow (RTOR)			91					5				
Lane Group Flow (vph)	341	741	18	7	257	145	0	545	0	171	478	414
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA		pm+pt	NA	Perm
Protected Phases	7	4			8			2		1	6	
Permitted Phases	4		4	8		8	2			6		6
Detector Phase	7	4	4	8	8	8	2	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0		5.0	10.0	10.0
Minimum Split (s)	11.5	36.5	36.5	36.5	36.5	36.5	34.5	34.5		11.5	34.5	34.5
Total Split (s)	18.0	55.0	55.0	37.0	37.0	37.0	40.0	40.0		25.0	65.0	65.0
Total Split (%)	15.0%	45.8%	45.8%	30.8%	30.8%	30.8%	33.3%	33.3%		20.8%	54.2%	54.2%
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3		3.3	3.3	3.3
All-Red Time (s)	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2		3.2	3.2	3.2
Lost Time Adjust (s)	0.0	0.0	-2.5	0.0	0.0	0.0		0.0		0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	4.0	6.5	6.5	6.5		6.5		6.5	6.5	6.5
Lead/Lag	Lead			Lag	Lag	Lag	Lag	Lag		Lead		
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes	Yes		Yes		
Recall Mode	None	C-Min	C-Min	C-Max	C-Max	C-Max	Min	Min		None	None	None
Act Effct Green (s)	58.3	58.3	60.8	34.8	34.8	34.8		27.2		48.7	48.7	48.7
Actuated g/C Ratio	0.49	0.49	0.51	0.29	0.29	0.29		0.23		0.41	0.41	0.41
v/c Ratio	0.66	0.87	0.02	0.06	0.28	0.40		0.76		0.65	0.66	0.78
Control Delay	27.4	34.4	0.1	37.9	36.7	41.9		49.9		34.6	33.1	41.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0
Total Delay	27.4	34.4	0.1	37.9	36.7	41.9		49.9		34.6	33.1	41.2
LOS	C	C	A	D	D	D		D		C	C	D
Approach Delay		31.6			38.5			49.9			36.5	
Approach LOS		C			D			D			D	
Queue Length 50th (m)	40.8	95.0	0.0	1.3	27.1	30.2		65.6		27.8	93.3	86.4
Queue Length 95th (m)	m56.3	m#235.7	m0.0	5.7	41.8	54.6		82.1		40.0	116.1	114.4
Internal Link Dist (m)		285.1			168.5			37.2			86.5	
Turn Bay Length (m)	160.0		40.0	40.0		95.0						120.0
Base Capacity (vph)	517	849	743	123	926	362		884		297	868	640
Starvation Cap Reductn	0	0	0	0	0	0		0		0	0	0
Spillback Cap Reductn	0	0	0	0	0	0		0		0	0	0
Storage Cap Reductn	0	0	0	0	0	0		0		0	0	0
Reduced v/c Ratio	0.66	0.87	0.02	0.06	0.28	0.40		0.62		0.58	0.55	0.65

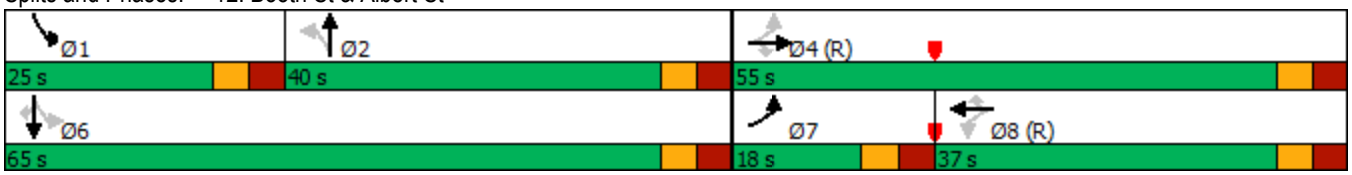
Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 104 (87%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green
Natural Cycle: 95
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.87

Intersection Signal Delay: 37.4	Intersection LOS: D
Intersection Capacity Utilization 117.3%	ICU Level of Service H
Analysis Period (min) 15	

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

Splits and Phases: 12: Booth St & Albert St



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	745	114	382	313	100	282
Future Volume (vph)	745	114	382	313	100	282
Satd. Flow (prot)	1748	1471	1629	3288	1583	1471
Flt Permitted			0.099		0.950	
Satd. Flow (perm)	1748	1384	170	3288	1561	1417
Satd. Flow (RTOR)		28				297
Lane Group Flow (vph)	784	120	402	329	105	297
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases		4	8			2
Detector Phase	4	4	3	8	2	2
Switch Phase						
Minimum Initial (s)	10.0	10.0	5.0	10.0	10.0	10.0
Minimum Split (s)	31.8	31.8	11.2	31.8	29.3	29.3
Total Split (s)	65.0	65.0	25.0	90.0	30.0	30.0
Total Split (%)	54.2%	54.2%	20.8%	75.0%	25.0%	25.0%
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	3.5	3.5	2.9	3.5	3.0	3.0
Lost Time Adjust (s)	0.0	-2.8	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.8	4.0	6.2	6.8	6.3	6.3
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Max	C-Max	None	C-Max	None	None
Act Effct Green (s)	58.2	61.0	93.8	93.2	13.7	13.7
Actuated g/C Ratio	0.48	0.51	0.78	0.78	0.11	0.11
v/c Ratio	0.93	0.17	0.83	0.13	0.58	0.70
Control Delay	40.1	7.6	35.1	1.5	62.9	14.8
Queue Delay	0.3	0.0	0.0	0.0	0.0	0.0
Total Delay	40.3	7.6	35.1	1.5	62.9	14.8
LOS	D	A	D	A	E	B
Approach Delay	36.0			20.0	27.4	
Approach LOS	D			B	C	
Queue Length 50th (m)	176.4	9.9	52.1	3.3	25.2	0.0
Queue Length 95th (m)	#263.0	4.8	#138.1	5.7	42.3	27.2
Internal Link Dist (m)	78.2			285.1	54.7	
Turn Bay Length (m)		16.0	90.0			
Base Capacity (vph)	847	717	483	2554	312	518
Starvation Cap Reductn	3	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	0.93	0.17	0.83	0.13	0.34	0.57

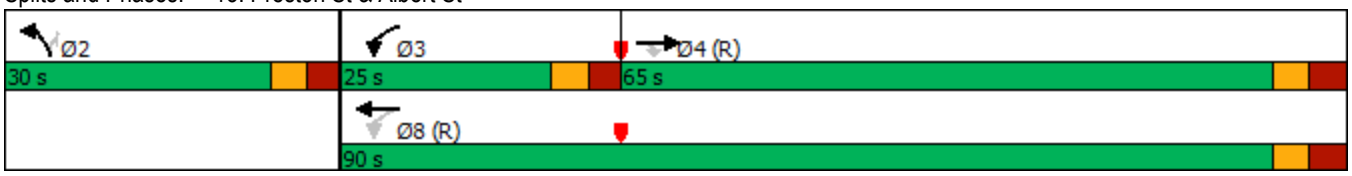
Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 80 (67%), Referenced to phase 4:EBT and 8:WBTL, Start of Green
Natural Cycle: 120
Control Type: Actuated-Coordinated

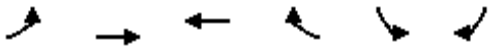
Maximum v/c Ratio: 0.93

Intersection Signal Delay: 28.5	Intersection LOS: C
Intersection Capacity Utilization 88.1%	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.

Splits and Phases: 13: Preston St & Albert St





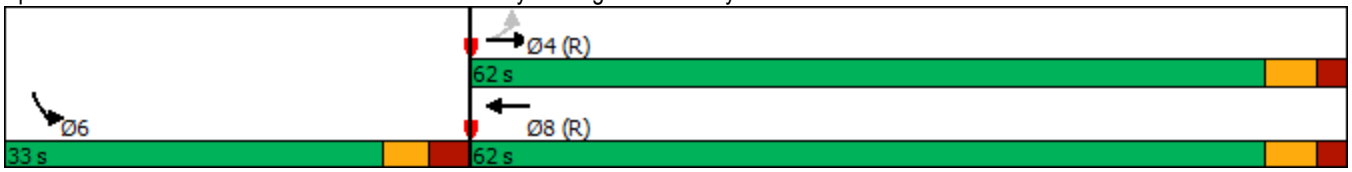
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	15	1345	834	41	2	15
Future Volume (vph)	15	1345	834	41	2	15
Satd. Flow (prot)	1710	3420	3360	0	1462	0
Flt Permitted	0.310				0.994	
Satd. Flow (perm)	557	3420	3360	0	1462	0
Satd. Flow (RTOR)			9		16	
Lane Group Flow (vph)	16	1416	921	0	18	0
Turn Type	Perm	NA	NA		Prot	
Protected Phases		4	8		6	
Permitted Phases	4					
Detector Phase	4	4	8		6	
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0		10.0	
Minimum Split (s)	37.0	37.0	37.0		32.3	
Total Split (s)	62.0	62.0	62.0		33.0	
Total Split (%)	65.3%	65.3%	65.3%		34.7%	
Yellow Time (s)	3.7	3.7	3.7		3.3	
All-Red Time (s)	2.3	2.3	2.3		3.0	
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	
Total Lost Time (s)	6.0	6.0	6.0		6.3	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	C-Max		None	
Act Effct Green (s)	86.1	86.1	86.1		10.0	
Actuated g/C Ratio	0.91	0.91	0.91		0.11	
v/c Ratio	0.03	0.46	0.30		0.11	
Control Delay	2.4	2.8	1.1		20.9	
Queue Delay	0.0	0.0	0.0		0.0	
Total Delay	2.4	2.8	1.1		20.9	
LOS	A	A	A		C	
Approach Delay		2.8	1.1		20.9	
Approach LOS		A	A		C	
Queue Length 50th (m)	0.0	0.0	3.3		0.4	
Queue Length 95th (m)	2.0	58.5	5.7		7.0	
Internal Link Dist (m)		651.1	331.0		21.1	
Turn Bay Length (m)	40.0					
Base Capacity (vph)	505	3099	3045		422	
Starvation Cap Reductn	0	0	0		0	
Spillback Cap Reductn	0	0	0		0	
Storage Cap Reductn	0	0	0		0	
Reduced v/c Ratio	0.03	0.46	0.30		0.04	

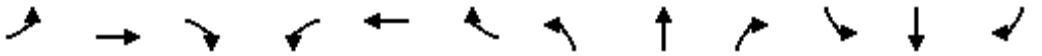
Intersection Summary
Cycle Length: 95
Actuated Cycle Length: 95
Offset: 59 (62%), Referenced to phase 4:EBTL and 8:WBT, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.46

Intersection Signal Delay: 2.3	Intersection LOS: A
Intersection Capacity Utilization 59.1%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 14: Sir John A. Macdonald Pkwy/Wellington St & Vimy Pl



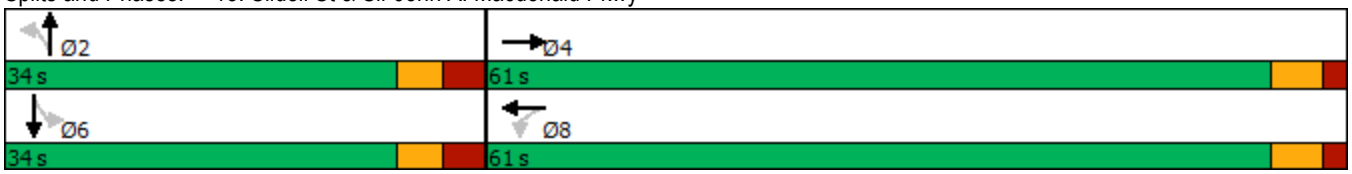


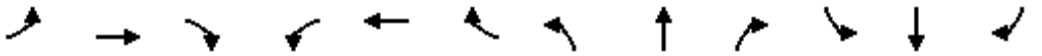
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1454	22	1	944	1	1	21	1	1	5	3
Future Volume (vph)	0	1454	22	1	944	1	1	21	1	1	5	3
Satd. Flow (prot)	0	3412	0	0	3386	0	0	1784	0	0	1699	0
Flt Permitted					0.954			0.984			0.956	
Satd. Flow (perm)	0	3412	0	0	3230	0	0	1759	0	0	1634	0
Satd. Flow (RTOR)		3						1			3	
Lane Group Flow (vph)	0	1554	0	0	996	0	0	24	0	0	9	0
Turn Type		NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases				8			2			6		
Detector Phase		4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)		10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)		30.5		30.5	30.5		33.3	33.3		33.3	33.3	
Total Split (s)		61.0		61.0	61.0		34.0	34.0		34.0	34.0	
Total Split (%)		64.2%		64.2%	64.2%		35.8%	35.8%		35.8%	35.8%	
Yellow Time (s)		3.7		3.7	3.7		3.3	3.3		3.3	3.3	
All-Red Time (s)		1.8		1.8	1.8		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.5			5.5			6.3			6.3	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode		Max		Max	Max		None	None		None	None	
Act Effct Green (s)		72.2			72.2			10.1			10.1	
Actuated g/C Ratio		0.90			0.90			0.13			0.13	
v/c Ratio		0.51			0.34			0.11			0.04	
Control Delay		3.3			2.4			33.2			28.7	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		3.3			2.4			33.2			28.7	
LOS		A			A			C			C	
Approach Delay		3.3			2.4			33.2			28.7	
Approach LOS		A			A			C			C	
Queue Length 50th (m)		0.0			0.0			3.1			0.8	
Queue Length 95th (m)		69.2			35.8			10.4			5.2	
Internal Link Dist (m)		121.2			288.5			29.2			167.1	
Turn Bay Length (m)												
Base Capacity (vph)		3067			2904			610			569	
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		0.51			0.34			0.04			0.02	

Intersection Summary
Cycle Length: 95
Actuated Cycle Length: 80.3
Natural Cycle: 75
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.51

Intersection Signal Delay: 3.3	Intersection LOS: A
Intersection Capacity Utilization 63.1%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 15: Slidell St & Sir John A. Macdonald Pkwy





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	647	86	47	276	22	61	45	109	111	178	12
Future Volume (vph)	14	647	86	47	276	22	61	45	109	111	178	12
Satd. Flow (prot)	1500	1712	0	1613	1698	1457	1676	1800	1515	1693	1752	0
Flt Permitted	0.582			0.282			0.499			0.726		
Satd. Flow (perm)	877	1712	0	474	1698	1328	871	1800	1420	1243	1752	0
Satd. Flow (RTOR)		12				37			115		3	
Lane Group Flow (vph)	15	772	0	49	291	23	64	47	115	117	200	0
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2		2	6		
Detector Phase	4	4		8	8	8	2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	32.5	32.5		32.5	32.5	32.5	31.4	31.4	31.4	31.4	31.4	
Total Split (s)	68.0	68.0		68.0	68.0	68.0	32.0	32.0	32.0	32.0	32.0	
Total Split (%)	68.0%	68.0%		68.0%	68.0%	68.0%	32.0%	32.0%	32.0%	32.0%	32.0%	
Yellow Time (s)	3.3	3.3		3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	
All-Red Time (s)	3.2	3.2		3.2	3.2	3.2	3.1	3.1	3.1	3.1	3.1	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.5	6.5		6.5	6.5	6.5	6.4	6.4	6.4	6.4	6.4	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		C-Max	C-Max	C-Max	None	None	None	None	None	
Act Effct Green (s)	68.9	68.9		68.9	68.9	68.9	18.2	18.2	18.2	18.2	18.2	
Actuated g/C Ratio	0.69	0.69		0.69	0.69	0.69	0.18	0.18	0.18	0.18	0.18	
v/c Ratio	0.02	0.65		0.15	0.25	0.02	0.41	0.14	0.33	0.52	0.62	
Control Delay	3.0	7.6		8.5	7.5	1.4	41.7	32.5	8.4	43.7	44.8	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	3.0	7.6		8.5	7.5	1.4	41.7	32.5	8.4	43.7	44.8	
LOS	A	A		A	A	A	D	C	A	D	D	
Approach Delay		7.5			7.2			22.9			44.4	
Approach LOS		A			A			C			D	
Queue Length 50th (m)	0.2	9.0		2.8	18.3	0.0	11.9	8.3	0.0	22.3	38.2	
Queue Length 95th (m)	m0.7	187.3		9.7	38.7	1.9	23.2	16.9	13.7	37.0	56.3	
Internal Link Dist (m)		635.7			497.2			83.8			141.3	
Turn Bay Length (m)	45.0			65.0		40.0	50.0		20.0	45.0		
Base Capacity (vph)	604	1183		326	1170	926	222	460	449	318	450	
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.02	0.65		0.15	0.25	0.02	0.29	0.10	0.26	0.37	0.44	

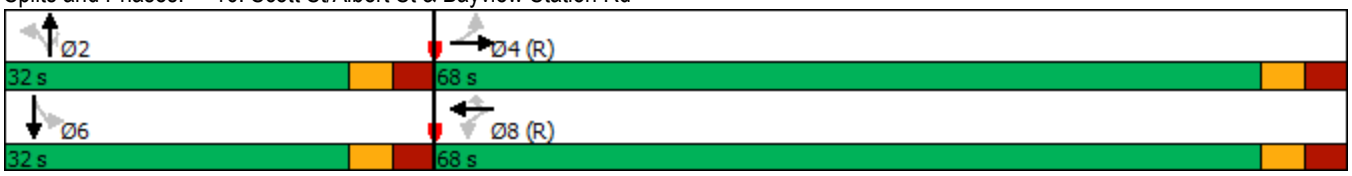
Intersection Summary
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 40 (40%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated

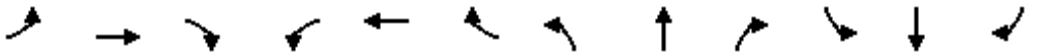
Maximum v/c Ratio: 0.65

Intersection Signal Delay: 16.4	Intersection LOS: B
Intersection Capacity Utilization 81.2%	ICU Level of Service D
Analysis Period (min) 15	

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

Splits and Phases: 16: Scott St/Albert St & Bayview Station Rd





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	120	653	37	49	275	24	31	281	67	95	354	145
Future Volume (vph)	120	653	37	49	275	24	31	281	67	95	354	145
Satd. Flow (prot)	1676	1748	1485	1676	1698	1471	1660	1724	0	1693	1564	0
Flt Permitted	0.545			0.212			0.215			0.396		
Satd. Flow (perm)	868	1748	1485	374	1698	1209	363	1724	0	706	1564	0
Satd. Flow (RTOR)			58			58		14			23	
Lane Group Flow (vph)	126	687	39	52	289	25	33	367	0	100	526	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2			6		
Detector Phase	4	4	4	8	8	8	2	2		6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	28.1	28.1	28.1	28.1	28.1	28.1	35.3	35.3		35.3	35.3	
Total Split (s)	51.0	51.0	51.0	51.0	51.0	51.0	43.0	43.0		43.0	43.0	
Total Split (%)	51.0%	51.0%	51.0%	51.0%	51.0%	51.0%	43.0%	43.0%		43.0%	43.0%	
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3	3.0	3.0		3.0	3.0	
All-Red Time (s)	2.8	2.8	2.8	2.8	2.8	2.8	3.3	3.3		3.3	3.3	
Lost Time Adjust (s)	0.0	0.0	-2.1	0.0	0.0	-2.1	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.1	6.1	4.0	6.1	6.1	4.0	6.3	6.3		6.3	6.3	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max	C-Max	C-Max	C-Max	C-Max	Max	Max		Max	Max	
Act Effct Green (s)	50.9	50.9	53.0	50.9	50.9	53.0	36.7	36.7		36.7	36.7	
Actuated g/C Ratio	0.51	0.51	0.53	0.51	0.51	0.53	0.37	0.37		0.37	0.37	
v/c Ratio	0.29	0.77	0.05	0.27	0.33	0.04	0.25	0.57		0.39	0.89	
Control Delay	16.3	27.2	1.8	16.3	14.5	0.6	28.2	28.6		28.9	48.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	16.3	27.2	1.8	16.3	14.5	0.6	28.2	28.6		28.9	48.5	
LOS	B	C	A	B	B	A	C	C		C	D	
Approach Delay		24.4			13.8			28.6			45.3	
Approach LOS		C			B			C			D	
Queue Length 50th (m)	14.1	108.5	0.0	7.1	40.9	0.1	4.6	56.9		14.8	96.1	
Queue Length 95th (m)	27.1	159.0	3.1	17.7	28.7	m0.6	13.3	87.0		30.5	#160.9	
Internal Link Dist (m)		207.0			635.7			70.7			630.1	
Turn Bay Length (m)	55.0		45.0	65.0		35.0	55.0			50.0		
Base Capacity (vph)	441	889	814	190	864	668	133	641		259	588	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.29	0.77	0.05	0.27	0.33	0.04	0.25	0.57		0.39	0.89	

Intersection Summary
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 91 (91%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Satd. Flow (RTOR)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	4.0
Minimum Split (s)	6.0
Total Split (s)	6.0
Total Split (%)	6%
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	None
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (m)	
Queue Length 95th (m)	
Internal Link Dist (m)	
Turn Bay Length (m)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

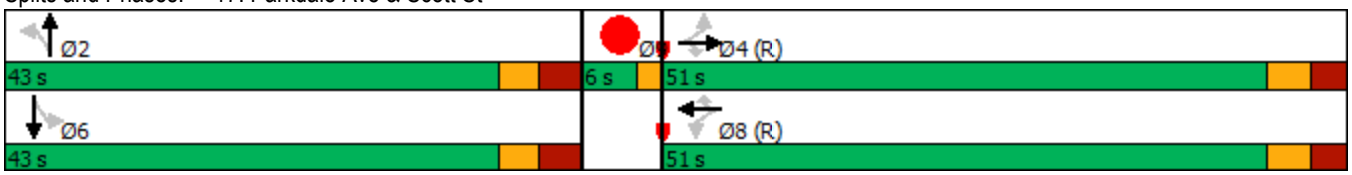
Intersection Summary

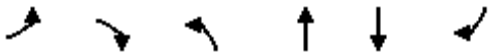
Maximum v/c Ratio: 0.89

Intersection Signal Delay: 29.3	Intersection LOS: C
Intersection Capacity Utilization 103.9%	ICU Level of Service G
Analysis Period (min) 15	

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

Splits and Phases: 17: Parkdale Ave & Scott St





Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø9
Lane Configurations							
Traffic Volume (vph)	1	1	2	687	1282	6	
Future Volume (vph)	1	1	2	687	1282	6	
Satd. Flow (prot)	1600	0	1710	3420	3417	0	
Flt Permitted	0.976		0.170				
Satd. Flow (perm)	1598	0	306	3420	3417	0	
Satd. Flow (RTOR)	1				1		
Lane Group Flow (vph)	2	0	2	723	1355	0	
Turn Type	Prot		Perm	NA	NA		
Protected Phases	4			2	6		9
Permitted Phases			2				
Detector Phase	4		2	2	6		
Switch Phase							
Minimum Initial (s)	7.8		10.0	10.0	10.0		10.0
Minimum Split (s)	14.0		30.9	30.9	30.9		29.0
Total Split (s)	17.0		49.0	49.0	49.0		29.0
Total Split (%)	17.9%		51.6%	51.6%	51.6%		31%
Yellow Time (s)	3.3		3.3	3.3	3.3		3.0
All-Red Time (s)	2.9		2.6	2.6	2.6		4.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0		
Total Lost Time (s)	6.2		5.9	5.9	5.9		
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	None		C-Max	C-Max	C-Max		None
Act Effct Green (s)	7.8		85.2	85.2	85.2		
Actuated g/C Ratio	0.08		0.90	0.90	0.90		
v/c Ratio	0.02		0.01	0.24	0.44		
Control Delay	35.0		0.5	0.4	6.4		
Queue Delay	0.0		0.0	0.0	0.0		
Total Delay	35.0		0.5	0.4	6.4		
LOS	C		A	A	A		
Approach Delay	35.0			0.4	6.4		
Approach LOS	C			A	A		
Queue Length 50th (m)	0.2		0.0	0.0	0.0		
Queue Length 95th (m)	2.4		m0.0	m3.2	143.1		
Internal Link Dist (m)	148.9			192.9	188.6		
Turn Bay Length (m)			35.0				
Base Capacity (vph)	182		274	3068	3065		
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	0.01		0.01	0.24	0.44		

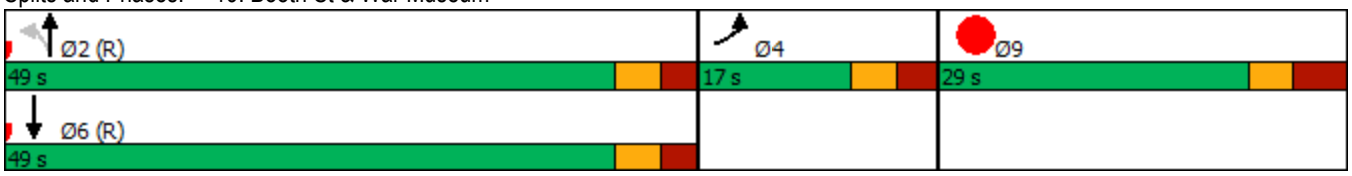
Intersection Summary
Cycle Length: 95
Actuated Cycle Length: 95
Offset: 47 (49%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated

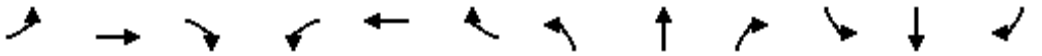
Maximum v/c Ratio: 0.44

Intersection Signal Delay: 4.3	Intersection LOS: A
Intersection Capacity Utilization 54.2%	ICU Level of Service A
Analysis Period (min) 15	

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

Splits and Phases: 19: Booth St & War Museum





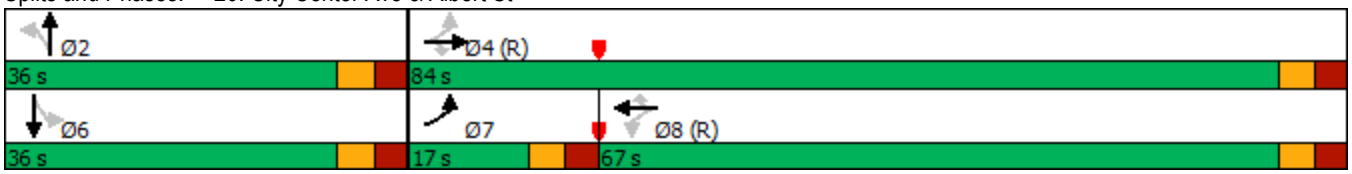
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	815	77	98	312	0	28	0	47	0	0	0
Future Volume (vph)	0	815	77	98	312	0	28	0	47	0	0	0
Satd. Flow (prot)	1800	1782	1485	1629	1714	1800	1644	1404	0	0	1800	0
Flt Permitted				0.291			0.950					
Satd. Flow (perm)	1800	1782	1406	496	1714	1800	1606	1404	0	0	1800	0
Satd. Flow (RTOR)			62					184				
Lane Group Flow (vph)	0	858	81	103	328	0	29	49	0	0	0	0
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA				
Protected Phases	7	4			8			2			6	
Permitted Phases	4		4	8		8	2			6		
Detector Phase	7	4	4	8	8	8	2	2		6	6	
Switch Phase												
Minimum Initial (s)	6.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	12.3	27.3	27.3	27.3	27.3	27.3	29.3	29.3		29.3	29.3	
Total Split (s)	17.0	84.0	84.0	67.0	67.0	67.0	36.0	36.0		36.0	36.0	
Total Split (%)	14.2%	70.0%	70.0%	55.8%	55.8%	55.8%	30.0%	30.0%		30.0%	30.0%	
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3		3.3	3.3	
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0	-2.3	0.0	0.0	-2.3	0.0	0.0			0.0	
Total Lost Time (s)	6.3	6.3	4.0	6.3	6.3	4.0	6.3	6.3			6.3	
Lead/Lag	Lead			Lag	Lag	Lag						
Lead-Lag Optimize?	Yes			Yes	Yes	Yes						
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	C-Max	None	None		None	None	
Act Effct Green (s)		99.3	101.2	99.3	99.3		12.6	12.6				
Actuated g/C Ratio		0.83	0.84	0.83	0.83		0.10	0.10				
v/c Ratio		0.58	0.07	0.25	0.23		0.17	0.16				
Control Delay		7.4	1.4	10.2	7.3		49.1	1.1				
Queue Delay		0.1	0.0	0.0	0.0		0.0	0.0				
Total Delay		7.5	1.4	10.2	7.3		49.1	1.1				
LOS		A	A	B	A		D	A				
Approach Delay		7.0			8.0			18.9				
Approach LOS		A			A			B				
Queue Length 50th (m)		61.1	0.6	8.8	22.0		6.8	0.0				
Queue Length 95th (m)		153.6	5.4	32.9	56.4		14.8	0.0				
Internal Link Dist (m)		497.2			115.1			178.8			41.9	
Turn Bay Length (m)			50.0	35.0			30.0					
Base Capacity (vph)		1475	1195	410	1418		397	485				
Starvation Cap Reductn		0	0	0	0		0	0				
Spillback Cap Reductn		73	0	0	0		0	7				
Storage Cap Reductn		0	0	0	0		0	0				
Reduced v/c Ratio		0.61	0.07	0.25	0.23		0.07	0.10				

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 80 (67%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.58

Intersection Signal Delay: 7.9	Intersection LOS: A
Intersection Capacity Utilization 80.5%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 20: City Center Ave & Albert St



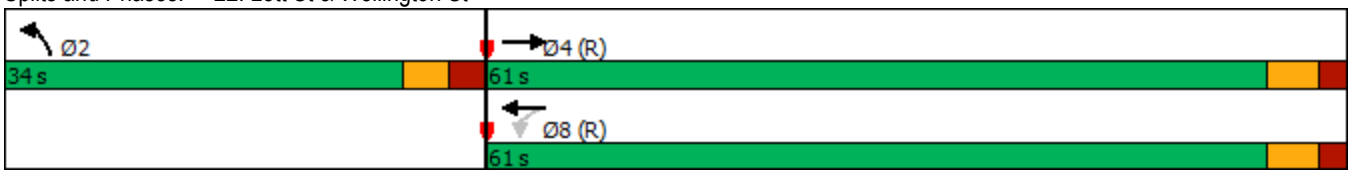
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1327	13	9	662	26	34
Future Volume (vph)	1327	13	9	662	26	34
Satd. Flow (prot)	3370	0	1710	3320	1533	0
Flt Permitted			0.162		0.979	
Satd. Flow (perm)	3370	0	291	3320	1529	0
Satd. Flow (RTOR)	2				36	
Lane Group Flow (vph)	1411	0	9	697	63	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	4			8	2	
Permitted Phases			8			
Detector Phase	4		8	8	2	
Switch Phase						
Minimum Initial (s)	1.2		10.0	10.0	10.0	
Minimum Split (s)	30.0		30.0	30.0	33.9	
Total Split (s)	61.0		61.0	61.0	34.0	
Total Split (%)	64.2%		64.2%	64.2%	35.8%	
Yellow Time (s)	3.7		3.7	3.7	3.3	
All-Red Time (s)	2.1		2.1	2.1	2.6	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	5.8		5.8	5.8	5.9	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max		C-Max	C-Max	None	
Act Effct Green (s)	74.0		74.0	74.0	13.6	
Actuated g/C Ratio	0.78		0.78	0.78	0.14	
v/c Ratio	0.54		0.04	0.27	0.25	
Control Delay	18.4		6.6	5.1	19.6	
Queue Delay	1.2		0.0	0.0	0.0	
Total Delay	19.7		6.6	5.1	19.6	
LOS	B		A	A	B	
Approach Delay	19.7			5.1	19.6	
Approach LOS	B			A	B	
Queue Length 50th (m)	128.3		0.3	16.1	4.8	
Queue Length 95th (m)	161.5		3.0	46.3	13.4	
Internal Link Dist (m)	128.4			234.2	63.1	
Turn Bay Length (m)			65.0			
Base Capacity (vph)	2626		226	2587	478	
Starvation Cap Reductn	918		0	0	0	
Spillback Cap Reductn	0		0	0	0	
Storage Cap Reductn	0		0	0	0	
Reduced v/c Ratio	0.83		0.04	0.27	0.13	

Intersection Summary
Cycle Length: 95
Actuated Cycle Length: 95
Offset: 23 (24%), Referenced to phase 4:EBT and 8:WBTL, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.54

Intersection Signal Delay: 15.0	Intersection LOS: B
Intersection Capacity Utilization 58.2%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 22: Lett St & Wellington St



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	888	8	5	376	8	11
Future Volume (vph)	888	8	5	376	8	11
Satd. Flow (prot)	3417	0	0	3417	1621	0
Flt Permitted				0.945	0.980	
Satd. Flow (perm)	3417	0	0	3232	1621	0
Satd. Flow (RTOR)	1				12	
Lane Group Flow (vph)	943	0	0	401	20	0
Turn Type	NA		Perm	NA	Perm	
Protected Phases	4			8		
Permitted Phases			8		2	
Detector Phase	4		8	8	2	
Switch Phase						
Minimum Initial (s)	10.0		10.0	10.0	10.0	
Minimum Split (s)	40.1		40.1	40.1	28.3	
Total Split (s)	81.0		81.0	81.0	39.0	
Total Split (%)	67.5%		67.5%	67.5%	32.5%	
Yellow Time (s)	3.3		3.3	3.3	3.3	
All-Red Time (s)	3.8		3.8	3.8	3.0	
Lost Time Adjust (s)	0.0			-3.1	-2.3	
Total Lost Time (s)	7.1			4.0	4.0	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max		C-Max	C-Max	None	
Act Effct Green (s)	110.6			111.9	12.3	
Actuated g/C Ratio	0.92			0.93	0.10	
v/c Ratio	0.30			0.13	0.11	
Control Delay	4.2			1.1	31.5	
Queue Delay	0.0			0.0	0.0	
Total Delay	4.2			1.1	31.5	
LOS	A			A	C	
Approach Delay	4.2			1.1	31.5	
Approach LOS	A			A	C	
Queue Length 50th (m)	0.0			0.0	1.8	
Queue Length 95th (m)	m85.5			10.4	9.7	
Internal Link Dist (m)	168.5			265.3	49.5	
Turn Bay Length (m)						
Base Capacity (vph)	3150			3013	481	
Starvation Cap Reductn	0			0	0	
Spillback Cap Reductn	0			0	0	
Storage Cap Reductn	0			0	0	
Reduced v/c Ratio	0.30			0.13	0.04	

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 39 (33%), Referenced to phase 4:EBT and 8:WBTL, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.30

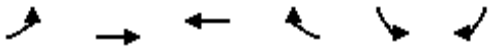
Intersection Signal Delay: 3.7	Intersection LOS: A
Intersection Capacity Utilization 43.8%	ICU Level of Service A
Analysis Period (min) 15	

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

Splits and Phases: 23: Empress Ave & Albert St/Slater St

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	9	720	10	0	886
Future Volume (vph)	0	9	720	10	0	886
Satd. Flow (prot)	0	1557	3413	0	0	3420
Flt Permitted						
Satd. Flow (perm)	0	1557	3413	0	0	3420
Lane Group Flow (vph)	0	9	769	0	0	933
Sign Control	Stop		Free			Free

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization 31.3%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	795	263	579	1105	852	449
Future Volume (vph)	795	263	579	1105	852	449
Satd. Flow (prot)	3317	4914	3386	2614	3285	1530
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	3285	4914	3386	2614	3168	1530
Satd. Flow (RTOR)						178
Lane Group Flow (vph)	837	277	609	1163	897	473
Turn Type	Prot	NA	NA	pt+ov	Prot	Perm
Protected Phases	7	4	8	8 1	1	
Permitted Phases						1
Detector Phase	7	4	8	8 1	1	1
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0		10.0	10.0
Minimum Split (s)	42.8	26.5	26.5		44.1	44.1
Total Split (s)	55.8	92.3	36.5		44.1	44.1
Total Split (%)	40.9%	67.7%	26.8%		32.3%	32.3%
Yellow Time (s)	3.3	3.3	3.3		3.3	3.3
All-Red Time (s)	2.5	3.2	3.2		2.8	2.8
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	5.8	6.5	6.5		6.1	6.1
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	Min	Min	Max		Max	Max
Act Effct Green (s)	36.1	72.0	30.1	74.3	38.1	38.1
Actuated g/C Ratio	0.29	0.59	0.25	0.61	0.31	0.31
v/c Ratio	0.86	0.10	0.73	0.74	0.88	0.79
Control Delay	50.4	11.0	49.7	22.0	52.1	35.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.4	11.0	49.7	22.0	52.1	35.4
LOS	D	B	D	C	D	D
Approach Delay		40.6	31.5		46.3	
Approach LOS		D	C		D	
Queue Length 50th (m)	103.0	10.6	75.4	113.4	111.5	71.5
Queue Length 95th (m)	127.5	14.8	106.8	174.7	#167.9	#140.6
Internal Link Dist (m)		240.3	292.7		47.6	
Turn Bay Length (m)	150.0					30.0
Base Capacity (vph)	1354	3443	829	1582	1019	597
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	0.08	0.73	0.74	0.88	0.79

Intersection Summary
Cycle Length: 136.4
Actuated Cycle Length: 122.8
Natural Cycle: 115
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.88

Intersection Signal Delay: 38.7	Intersection LOS: D
Intersection Capacity Utilization 81.8%	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.

Splits and Phases: 7: Wellington St & Portage

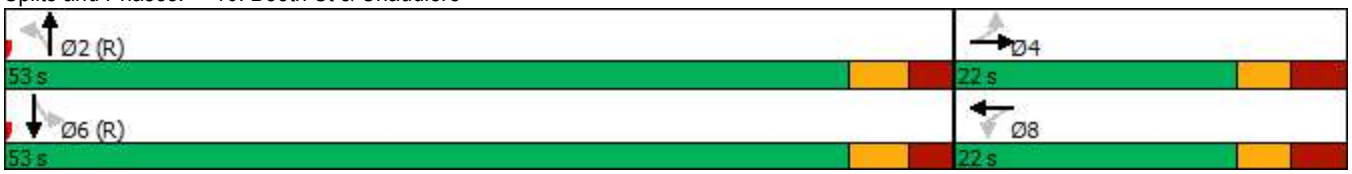
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	0	0	0	915	0	0	834	0
Future Volume (vph)	0	0	0	0	0	0	0	915	0	0	834	0
Satd. Flow (prot)	1800	1800	0	1800	1800	0	1800	1800	0	1800	1800	0
Flt Permitted												
Satd. Flow (perm)	1800	1800	0	1800	1800	0	1800	1800	0	1800	1800	0
Satd. Flow (RTOR)												
Lane Group Flow (vph)	0	0	0	0	0	0	0	963	0	0	878	0
Turn Type	Perm			Perm			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)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	22.0	22.0		22.0	22.0		53.0	53.0		53.0	53.0	
Total Split (s)	22.0	22.0		22.0	22.0		53.0	53.0		53.0	53.0	
Total Split (%)	29.3%	29.3%		29.3%	29.3%		70.7%	70.7%		70.7%	70.7%	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.3	3.3		3.3	3.3	
All-Red Time (s)	3.2	3.2		3.2	3.2		2.6	2.6		2.6	2.6	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.2	6.2		6.2	6.2		5.9	5.9		5.9	5.9	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	
Act Effct Green (s)								75.0			75.0	
Actuated g/C Ratio								1.00			1.00	
v/c Ratio								0.54			0.49	
Control Delay								1.1			0.9	
Queue Delay								0.0			0.0	
Total Delay								1.1			0.9	
LOS								A			A	
Approach Delay								1.1			0.9	
Approach LOS								A			A	
Queue Length 50th (m)								0.0			0.0	
Queue Length 95th (m)								0.0			0.0	
Internal Link Dist (m)		60.2			43.3			76.9			31.3	
Turn Bay Length (m)												
Base Capacity (vph)								1800			1800	
Starvation Cap Reductn								0			0	
Spillback Cap Reductn								0			0	
Storage Cap Reductn								0			0	
Reduced v/c Ratio								0.54			0.49	

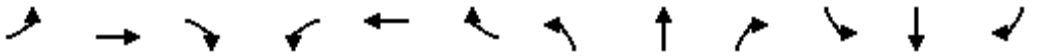
Intersection Summary
Cycle Length: 75
Actuated Cycle Length: 75
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.54

Intersection Signal Delay: 1.1	Intersection LOS: A
Intersection Capacity Utilization 55.8%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 10: Booth St & Chaudiere





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	840	0	0	1239	53	0	842	168	34	531	173
Future Volume (vph)	0	840	0	0	1239	53	0	842	168	34	531	173
Satd. Flow (prot)	0	3420	0	0	3420	1530	0	3221	0	1613	3196	1515
Flt Permitted										0.096		
Satd. Flow (perm)	0	3420	0	0	3420	1480	0	3221	0	163	3196	1471
Satd. Flow (RTOR)								21				35
Lane Group Flow (vph)	0	884	0	0	1304	56	0	1063	0	36	559	182
Turn Type		NA			NA	Perm		NA		pm+pt	NA	Perm
Protected Phases		4			8			2		1	6	
Permitted Phases						8				6		6
Detector Phase		4			8	8		2		1	6	6
Switch Phase												
Minimum Initial (s)		10.0			10.0	10.0		10.0		5.2	10.0	10.0
Minimum Split (s)		35.8			35.8	35.8		31.8		12.0	31.9	31.9
Total Split (s)		60.0			60.0	60.0		48.0		12.0	60.0	60.0
Total Split (%)		50.0%			50.0%	50.0%		40.0%		10.0%	50.0%	50.0%
Yellow Time (s)		3.7			3.7	3.7		3.3		3.3	3.3	3.3
All-Red Time (s)		3.1			3.1	3.1		3.5		3.5	3.6	3.6
Lost Time Adjust (s)		0.0			0.0	0.0		0.0		0.0	0.0	0.0
Total Lost Time (s)		6.8			6.8	6.8		6.8		6.8	6.9	6.9
Lead/Lag								Lag		Lead		
Lead-Lag Optimize?								Yes		Yes		
Recall Mode		Min			Min	Min		C-Max		None	C-Min	C-Min
Act Effct Green (s)		50.8			50.8	50.8		48.2		55.6	55.5	55.5
Actuated g/C Ratio		0.42			0.42	0.42		0.40		0.46	0.46	0.46
v/c Ratio		0.61			0.90	0.09		0.81		0.25	0.38	0.26
Control Delay		26.6			37.9	15.6		33.1		23.2	22.5	17.6
Queue Delay		0.0			1.1	0.0		0.0		0.0	0.0	0.0
Total Delay		26.6			39.0	15.6		33.1		23.2	22.5	17.6
LOS		C			D	B		C		C	C	B
Approach Delay		26.6			38.0			33.1			21.3	
Approach LOS		C			D			C			C	
Queue Length 50th (m)		85.7			152.1	8.1		126.1		4.9	47.8	22.0
Queue Length 95th (m)		105.7			183.3	11.7		m#163.3		11.5	63.2	39.2
Internal Link Dist (m)		331.0			119.3			51.3			192.9	
Turn Bay Length (m)						70.0				145.0		55.0
Base Capacity (vph)		1516			1516	656		1307		143	1477	698
Starvation Cap Reductn		0			70	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		0.58			0.90	0.09		0.81		0.25	0.38	0.26

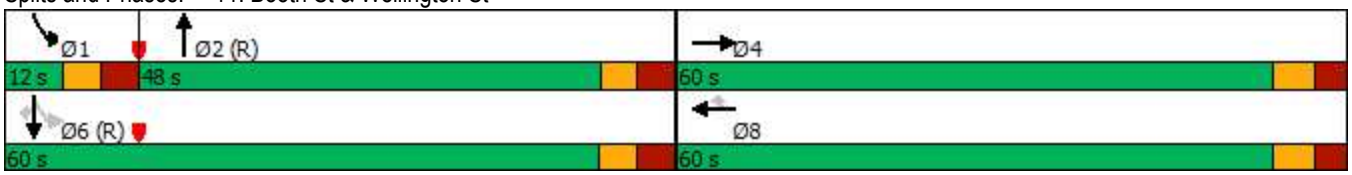
Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 3 (3%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.90

Intersection Signal Delay: 31.1	Intersection LOS: C
Intersection Capacity Utilization 77.9%	ICU Level of Service D
Analysis Period (min) 15	

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

Splits and Phases: 11: Booth St & Wellington St



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	462	443	29	19	675	217	10	490	34	79	370	190
Future Volume (vph)	462	443	29	19	675	217	10	490	34	79	370	190
Satd. Flow (prot)	1676	1765	1485	1710	3386	1530	0	3320	0	1629	1782	1515
Flt Permitted	0.163			0.495				0.942		0.207		
Satd. Flow (perm)	281	1765	1451	886	3386	1360	0	3128	0	343	1782	1381
Satd. Flow (RTOR)			91					6				
Lane Group Flow (vph)	486	466	31	20	711	228	0	563	0	83	389	200
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA		pm+pt	NA	Perm
Protected Phases	7	4			8			2		1	6	
Permitted Phases	4		4	8		8	2			6		6
Detector Phase	7	4	4	8	8	8	2	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0		4.5	10.0	10.0
Minimum Split (s)	11.5	36.5	36.5	36.5	36.5	36.5	34.5	34.5		11.5	34.5	34.5
Total Split (s)	29.0	70.0	70.0	41.0	41.0	41.0	38.0	38.0		12.0	50.0	50.0
Total Split (%)	24.2%	58.3%	58.3%	34.2%	34.2%	34.2%	31.7%	31.7%		10.0%	41.7%	41.7%
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3		3.3	3.3	3.3
All-Red Time (s)	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2		3.2	3.2	3.2
Lost Time Adjust (s)	0.0	0.0	-2.5	0.0	0.0	0.0		0.0		0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	4.0	6.5	6.5	6.5		6.5		6.5	6.5	6.5
Lead/Lag	Lead			Lag	Lag	Lag	Lag	Lag		Lead		
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes	Yes		Yes		
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	C-Max	Min	Min		None	Min	Min
Act Effct Green (s)	69.6	69.6	72.1	34.5	34.5	34.5		27.8		37.4	37.4	37.4
Actuated g/C Ratio	0.58	0.58	0.60	0.29	0.29	0.29		0.23		0.31	0.31	0.31
v/c Ratio	0.98	0.46	0.03	0.08	0.73	0.58		0.77		0.50	0.70	0.47
Control Delay	59.2	13.1	0.1	32.9	42.3	42.4		50.3		32.4	37.1	29.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0
Total Delay	59.2	13.1	0.1	32.9	42.3	42.4		50.3		32.4	37.1	29.5
LOS	E	B	A	C	D	D		D		C	D	C
Approach Delay		35.5			42.1			50.3			34.3	
Approach LOS		D			D			D			C	
Queue Length 50th (m)	~107.7	72.3	0.0	3.6	72.1	43.9		68.2		17.1	97.4	45.9
Queue Length 95th (m)	#185.2	93.8	m0.2	10.2	86.9	63.2		86.1		31.9	133.1	72.6
Internal Link Dist (m)		285.1			168.5			37.2			83.1	
Turn Bay Length (m)	160.0		40.0	40.0		95.0						120.0
Base Capacity (vph)	495	1023	908	254	973	391		825		166	645	500
Starvation Cap Reductn	0	0	0	0	0	0		0		0	0	0
Spillback Cap Reductn	0	0	0	0	0	0		0		0	0	0
Storage Cap Reductn	0	0	0	0	0	0		0		0	0	0
Reduced v/c Ratio	0.98	0.46	0.03	0.08	0.73	0.58		0.68		0.50	0.60	0.40

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 9 (8%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green
Natural Cycle: 115
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.98

Intersection Signal Delay: 39.8	Intersection LOS: D
Intersection Capacity Utilization 119.5%	ICU Level of Service H
Analysis Period (min) 15	

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

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

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

Splits and Phases: 12: Booth St & Albert St

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	530	106	261	708	125	330
Future Volume (vph)	530	106	261	708	125	330
Satd. Flow (prot)	1782	1500	1676	3386	1629	1485
Flt Permitted			0.339		0.950	
Satd. Flow (perm)	1782	1412	598	3386	1590	1441
Satd. Flow (RTOR)		34				334
Lane Group Flow (vph)	558	112	275	745	132	347
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	4		3	8	2	
Permitted Phases		4	8			2
Detector Phase	4	4	3	8	2	2
Switch Phase						
Minimum Initial (s)	10.0	10.0	5.0	10.0	10.0	10.0
Minimum Split (s)	31.8	31.8	11.2	31.8	29.3	29.3
Total Split (s)	61.0	61.0	16.0	77.0	43.0	43.0
Total Split (%)	50.8%	50.8%	13.3%	64.2%	35.8%	35.8%
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	3.5	3.5	2.9	3.5	3.0	3.0
Lost Time Adjust (s)	0.0	-2.8	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.8	4.0	6.2	6.8	6.3	6.3
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Max	C-Max	None	C-Max	Min	Min
Act Effct Green (s)	73.4	76.2	92.2	91.6	15.3	15.3
Actuated g/C Ratio	0.61	0.64	0.77	0.76	0.13	0.13
v/c Ratio	0.51	0.12	0.49	0.29	0.64	0.73
Control Delay	14.5	5.6	8.9	7.4	63.0	15.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.5	5.6	8.9	7.4	63.0	15.6
LOS	B	A	A	A	E	B
Approach Delay	13.0			7.8	28.6	
Approach LOS	B			A	C	
Queue Length 50th (m)	73.4	2.6	31.3	55.7	31.6	2.9
Queue Length 95th (m)	132.3	12.1	m70.5	92.6	50.3	33.1
Internal Link Dist (m)	82.0			285.1	54.7	
Turn Bay Length (m)		16.0	90.0			
Base Capacity (vph)	1089	908	569	2584	498	672
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	98	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.51	0.12	0.48	0.30	0.27	0.52

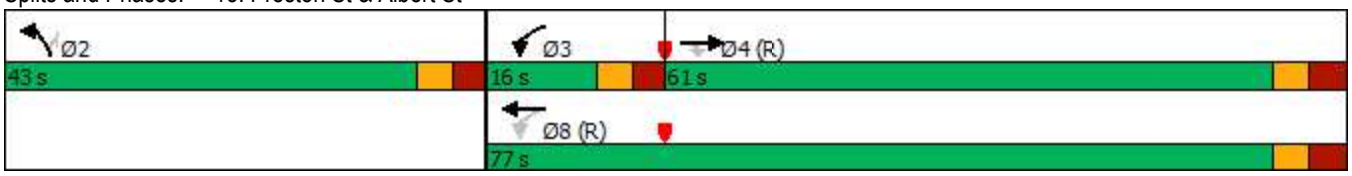
Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 81 (68%), Referenced to phase 4:EBT and 8:WBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated

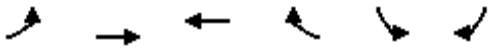
Maximum v/c Ratio: 0.73

Intersection Signal Delay: 14.0	Intersection LOS: B
Intersection Capacity Utilization 70.5%	ICU Level of Service C
Analysis Period (min) 15	

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

Splits and Phases: 13: Preston St & Albert St





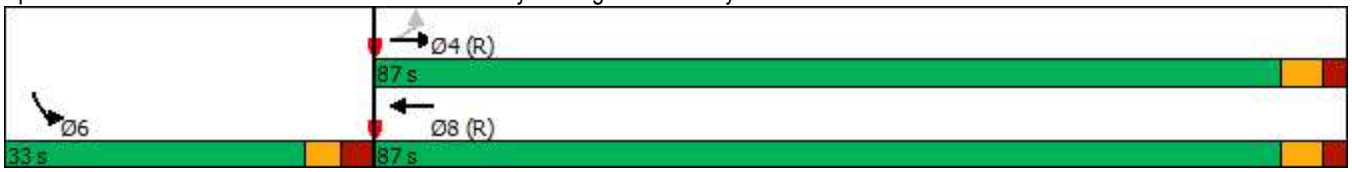
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	2	918	1505	7	5	22
Future Volume (vph)	2	918	1505	7	5	22
Satd. Flow (prot)	1710	3386	3416	0	1586	0
Flt Permitted	0.143				0.991	
Satd. Flow (perm)	257	3386	3416	0	1585	0
Satd. Flow (RTOR)			1		23	
Lane Group Flow (vph)	2	966	1591	0	28	0
Turn Type	Perm	NA	NA		Prot	
Protected Phases		4	8		6	
Permitted Phases	4					
Detector Phase	4	4	8		6	
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0		10.0	
Minimum Split (s)	37.0	37.0	37.0		32.3	
Total Split (s)	87.0	87.0	87.0		33.0	
Total Split (%)	72.5%	72.5%	72.5%		27.5%	
Yellow Time (s)	3.7	3.7	3.7		3.3	
All-Red Time (s)	2.3	2.3	2.3		3.0	
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	
Total Lost Time (s)	6.0	6.0	6.0		6.3	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	C-Max		None	
Act Effct Green (s)	106.6	106.6	106.6		10.0	
Actuated g/C Ratio	0.89	0.89	0.89		0.08	
v/c Ratio	0.01	0.32	0.52		0.18	
Control Delay	2.0	2.3	3.5		25.8	
Queue Delay	0.0	0.0	0.0		0.0	
Total Delay	2.0	2.3	3.5		25.8	
LOS	A	A	A		C	
Approach Delay		2.3	3.5		25.8	
Approach LOS		A	A		C	
Queue Length 50th (m)	0.1	25.8	27.2		1.2	
Queue Length 95th (m)	0.6	32.0	49.8		10.7	
Internal Link Dist (m)		651.1	331.0		21.1	
Turn Bay Length (m)	40.0					
Base Capacity (vph)	228	3008	3035		370	
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	0.01	0.32	0.52		0.08	

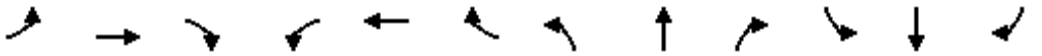
Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 37 (31%), Referenced to phase 4:EBTL and 8:WBT, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.52

Intersection Signal Delay: 3.3	Intersection LOS: A
Intersection Capacity Utilization 62.7%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 14: Sir John A. Macdonald Pkwy/Wellington St & Vimy Pl



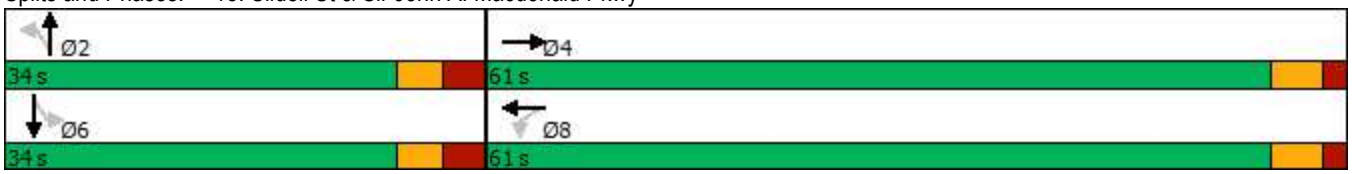


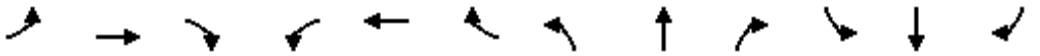
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	969	4	2	1659	0	26	14	35	3	26	11
Future Volume (vph)	0	969	4	2	1659	0	26	14	35	3	26	11
Satd. Flow (prot)	0	3383	0	0	3420	0	0	1642	0	0	1669	0
Flt Permitted					0.954			0.870			0.969	
Satd. Flow (perm)	0	3383	0	0	3263	0	0	1450	0	0	1623	0
Satd. Flow (RTOR)		1						37			12	
Lane Group Flow (vph)	0	1024	0	0	1748	0	0	79	0	0	42	0
Turn Type		NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases				8			2			6		
Detector Phase		4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)		10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)		30.5		30.5	30.5		33.3	33.3		33.3	33.3	
Total Split (s)		61.0		61.0	61.0		34.0	34.0		34.0	34.0	
Total Split (%)		64.2%		64.2%	64.2%		35.8%	35.8%		35.8%	35.8%	
Yellow Time (s)		3.7		3.7	3.7		3.3	3.3		3.3	3.3	
All-Red Time (s)		1.8		1.8	1.8		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.5			5.5			6.3			6.3	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode		Max		Max	Max		None	None		None	None	
Act Effct Green (s)		61.7			61.7			10.3			10.3	
Actuated g/C Ratio		0.78			0.78			0.13			0.13	
v/c Ratio		0.39			0.69			0.36			0.19	
Control Delay		4.4			7.8			24.0			25.9	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		4.4			7.8			24.0			25.9	
LOS		A			A			C			C	
Approach Delay		4.4			7.8			24.0			25.9	
Approach LOS		A			A			C			C	
Queue Length 50th (m)		27.1			69.6			5.9			4.2	
Queue Length 95th (m)		39.1			102.2			18.3			13.1	
Internal Link Dist (m)		121.2			288.5			33.4			167.1	
Turn Bay Length (m)												
Base Capacity (vph)		2634			2540			532			576	
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			0.69			0.15			0.07	

Intersection Summary
Cycle Length: 95
Actuated Cycle Length: 79.3
Natural Cycle: 90
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.69

Intersection Signal Delay: 7.3	Intersection LOS: A
Intersection Capacity Utilization 73.6%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 15: Slidell St & Sir John A. Macdonald Pkwy





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	448	88	64	621	90	88	185	65	41	68	11
Future Volume (vph)	10	448	88	64	621	90	88	185	65	41	68	11
Satd. Flow (prot)	1555	1703	0	1710	1782	1530	1710	1800	1485	1710	1745	0
Flt Permitted	0.349			0.402			0.702			0.509		
Satd. Flow (perm)	555	1703	0	710	1782	1340	1212	1800	1388	887	1745	0
Satd. Flow (RTOR)		18				87			61		8	
Lane Group Flow (vph)	11	565	0	67	654	95	93	195	68	43	84	0
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2		2	6		
Detector Phase	4	4		8	8	8	2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	32.5	32.5		32.5	32.5	32.5	31.4	31.4	31.4	31.4	31.4	
Total Split (s)	68.0	68.0		68.0	68.0	68.0	32.0	32.0	32.0	32.0	32.0	
Total Split (%)	68.0%	68.0%		68.0%	68.0%	68.0%	32.0%	32.0%	32.0%	32.0%	32.0%	
Yellow Time (s)	3.3	3.3		3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	
All-Red Time (s)	3.2	3.2		3.2	3.2	3.2	3.1	3.1	3.1	3.1	3.1	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	-2.5	0.0	0.0	-2.4	0.0	0.0	
Total Lost Time (s)	6.5	6.5		6.5	6.5	4.0	6.4	6.4	4.0	6.4	6.4	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		C-Max	C-Max	C-Max	None	None	None	None	None	
Act Effct Green (s)	69.1	69.1		69.1	69.1	71.6	18.0	18.0	20.4	18.0	18.0	
Actuated g/C Ratio	0.69	0.69		0.69	0.69	0.72	0.18	0.18	0.20	0.18	0.18	
v/c Ratio	0.03	0.48		0.14	0.53	0.10	0.43	0.60	0.21	0.27	0.26	
Control Delay	11.6	19.0		7.7	10.7	2.0	40.6	44.5	10.4	37.0	31.7	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	11.6	19.0		7.7	10.7	2.0	40.6	44.5	10.4	37.0	31.7	
LOS	B	B		A	B	A	D	D	B	D	C	
Approach Delay		18.9			9.4			37.0			33.5	
Approach LOS		B			A			D			C	
Queue Length 50th (m)	1.2	92.4		3.8	53.0	0.4	17.5	37.9	1.2	7.8	13.8	
Queue Length 95th (m)	m2.5	m132.0		11.6	106.6	5.9	30.1	55.2	11.4	16.7	25.0	
Internal Link Dist (m)		635.7			497.2			83.8			130.2	
Turn Bay Length (m)	45.0			50.0		40.0	50.0		20.0	45.0		
Base Capacity (vph)	383	1182		490	1231	984	310	460	432	227	452	
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.03	0.48		0.14	0.53	0.10	0.30	0.42	0.16	0.19	0.19	

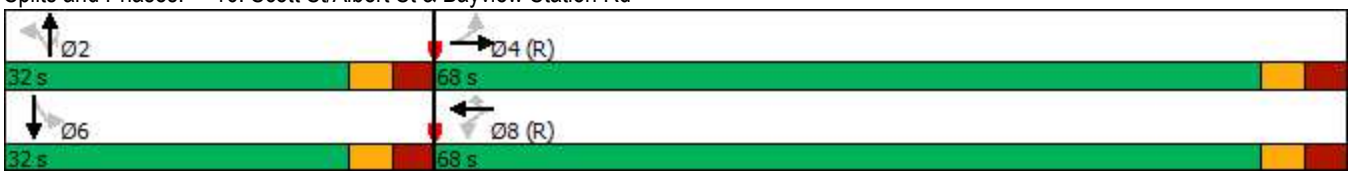
Intersection Summary
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 65 (65%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green
Natural Cycle: 65
Control Type: Actuated-Coordinated

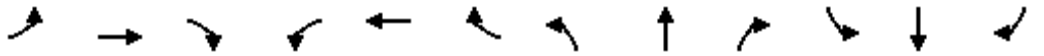
Maximum v/c Ratio: 0.60

Intersection Signal Delay: 19.2	Intersection LOS: B
Intersection Capacity Utilization 88.4%	ICU Level of Service E
Analysis Period (min) 15	

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

Splits and Phases: 16: Scott St/Albert St & Bayview Station Rd





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	227	462	86	55	615	62	40	546	47	56	233	210
Future Volume (vph)	227	462	86	55	615	62	40	546	47	56	233	210
Satd. Flow (prot)	1693	1765	1515	1710	1800	1530	1710	1756	0	1710	1565	0
Flt Permitted	0.118			0.486			0.290			0.121		
Satd. Flow (perm)	210	1765	1240	802	1800	1222	507	1756	0	212	1565	0
Satd. Flow (RTOR)			81			119		5			53	
Lane Group Flow (vph)	239	486	91	58	647	65	42	624	0	59	466	0
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	7	4			8			2			6	
Permitted Phases	4		4	8		8	2			6		
Detector Phase	7	4	4	8	8	8	2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	10.6	28.1	28.1	28.1	28.1	28.1	35.3	35.3		35.3	35.3	
Total Split (s)	15.0	49.0	49.0	34.0	34.0	34.0	45.0	45.0		45.0	45.0	
Total Split (%)	15.0%	49.0%	49.0%	34.0%	34.0%	34.0%	45.0%	45.0%		45.0%	45.0%	
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3	3.0	3.0		3.0	3.0	
All-Red Time (s)	2.3	2.8	2.8	2.8	2.8	2.8	3.3	3.3		3.3	3.3	
Lost Time Adjust (s)	0.0	0.0	-2.1	0.0	-2.1	-2.1	0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.6	6.1	4.0	6.1	4.0	4.0	6.3	6.3		6.3	6.3	
Lead/Lag	Lead			Lag	Lag	Lag						
Lead-Lag Optimize?	Yes			Yes	Yes	Yes						
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	C-Max	Min	Min		Min	Min	
Act Effct Green (s)	50.6	50.1	52.2	28.5	30.6	30.6	37.5	37.5		37.5	37.5	
Actuated g/C Ratio	0.51	0.50	0.52	0.28	0.31	0.31	0.38	0.38		0.38	0.38	
v/c Ratio	0.69	0.55	0.13	0.25	1.18	0.14	0.22	0.95		0.75	0.75	
Control Delay	31.9	20.5	4.1	28.3	125.3	1.5	24.4	54.7		79.5	32.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	31.9	20.5	4.1	28.3	125.3	1.5	24.4	54.7		79.5	32.6	
LOS	C	C	A	C	F	A	C	D		E	C	
Approach Delay		22.0			107.5			52.8			37.8	
Approach LOS		C			F			D			D	
Queue Length 50th (m)	30.1	67.2	1.0	6.9	~162.9	0.0	5.6	118.0		10.1	71.3	
Queue Length 95th (m)	#64.1	99.3	8.9	m14.1	#227.4	m0.6	14.4	#189.2		#34.6	111.4	
Internal Link Dist (m)		92.9			635.7			70.7			630.1	
Turn Bay Length (m)	55.0		45.0	65.0		35.0	55.0			50.0		
Base Capacity (vph)	345	885	686	228	550	455	196	682		82	638	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.69	0.55	0.13	0.25	1.18	0.14	0.21	0.91		0.72	0.73	

Intersection Summary
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 8 (8%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green
Natural Cycle: 110
Control Type: Actuated-Coordinated

Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Satd. Flow (RTOR)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	2.0
Minimum Split (s)	6.0
Total Split (s)	6.0
Total Split (%)	6%
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	None
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (m)	
Queue Length 95th (m)	
Internal Link Dist (m)	
Turn Bay Length (m)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Maximum v/c Ratio: 1.18

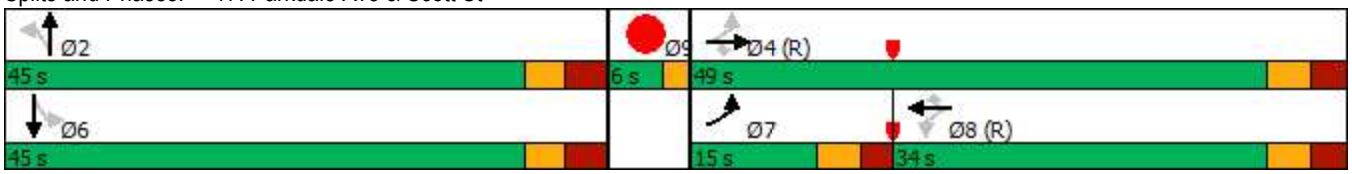
Intersection Signal Delay: 56.1	Intersection LOS: E
Intersection Capacity Utilization 108.0%	ICU Level of Service G
Analysis Period (min) 15	

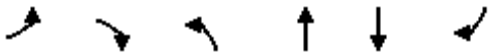
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

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

Splits and Phases: 17: Parkdale Ave & Scott St





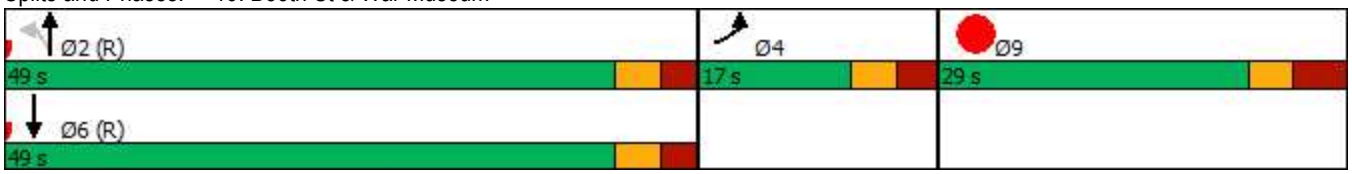
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø9
Lane Configurations							
Traffic Volume (vph)	1	8	8	914	826	10	
Future Volume (vph)	1	8	8	914	826	10	
Satd. Flow (prot)	1554	0	1710	3420	3413	0	
Flt Permitted	0.994		0.310				
Satd. Flow (perm)	1551	0	558	3420	3413	0	
Satd. Flow (RTOR)	8				2		
Lane Group Flow (vph)	9	0	8	962	880	0	
Turn Type	Prot		Perm	NA	NA		
Protected Phases	4			2	6		9
Permitted Phases			2				
Detector Phase	4		2	2	6		
Switch Phase							
Minimum Initial (s)	3.8		10.0	10.0	10.0		10.0
Minimum Split (s)	10.0		30.9	30.9	30.9		29.0
Total Split (s)	17.0		49.0	49.0	49.0		29.0
Total Split (%)	17.9%		51.6%	51.6%	51.6%		31%
Yellow Time (s)	3.3		3.3	3.3	3.3		3.0
All-Red Time (s)	2.9		2.6	2.6	2.6		4.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0		
Total Lost Time (s)	6.2		5.9	5.9	5.9		
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	None		C-Max	C-Max	C-Max		None
Act Effct Green (s)	5.9		85.4	85.4	85.4		
Actuated g/C Ratio	0.06		0.90	0.90	0.90		
v/c Ratio	0.09		0.02	0.31	0.29		
Control Delay	26.9		7.0	5.0	4.8		
Queue Delay	0.0		0.0	0.0	0.0		
Total Delay	26.9		7.0	5.0	4.8		
LOS	C		A	A	A		
Approach Delay	26.9			5.0	4.8		
Approach LOS	C			A	A		
Queue Length 50th (m)	0.2		0.0	0.0	0.0		
Queue Length 95th (m)	5.0		3.3	84.9	75.5		
Internal Link Dist (m)	148.9			192.9	188.6		
Turn Bay Length (m)			35.0				
Base Capacity (vph)	183		502	3074	3068		
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	0.05		0.02	0.31	0.29		

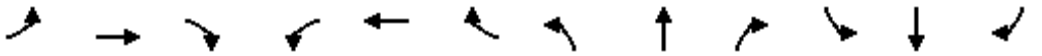
Intersection Summary
Cycle Length: 95
Actuated Cycle Length: 95
Offset: 10 (11%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.31

Intersection Signal Delay: 5.0	Intersection LOS: A
Intersection Capacity Utilization 40.1%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 19: Booth St & War Museum





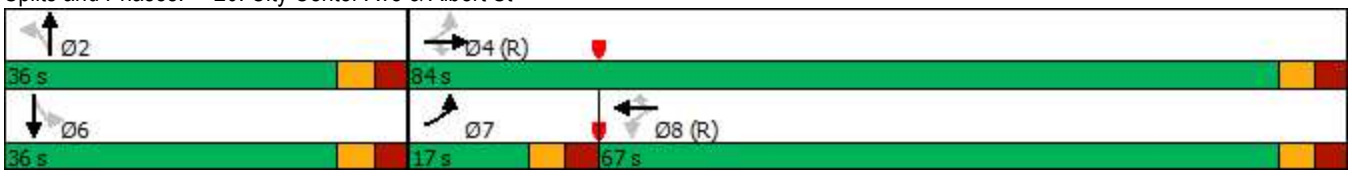
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	455	76	84	647	0	57	4	80	3	0	0
Future Volume (vph)	1	455	76	84	647	0	57	4	80	3	0	0
Satd. Flow (prot)	855	1782	1530	1693	1765	1200	1644	1500	0	0	1710	0
Flt Permitted	0.319			0.490			0.756				0.700	
Satd. Flow (perm)	287	1782	1530	873	1765	1200	1308	1500	0	0	1260	0
Satd. Flow (RTOR)			80					84				
Lane Group Flow (vph)	1	479	80	88	681	0	60	88	0	0	3	0
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	7	4			8			2			6	
Permitted Phases	4		4	8		8	2			6		
Detector Phase	7	4	4	8	8	8	2	2		6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	16.3	27.3	27.3	27.3	27.3	27.3	29.3	29.3		29.3	29.3	
Total Split (s)	17.0	84.0	84.0	67.0	67.0	67.0	36.0	36.0		36.0	36.0	
Total Split (%)	14.2%	70.0%	70.0%	55.8%	55.8%	55.8%	30.0%	30.0%		30.0%	30.0%	
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3		3.3	3.3	
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0	-2.3	0.0	0.0	-2.3	0.0	0.0			0.0	
Total Lost Time (s)	6.3	6.3	4.0	6.3	6.3	4.0	6.3	6.3			6.3	
Lead/Lag	Lead			Lag	Lag	Lag						
Lead-Lag Optimize?	Yes			Yes	Yes	Yes						
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	C-Max	None	None		None	None	
Act Effct Green (s)	95.5	95.5	97.8	92.2	92.2		11.9	11.9			11.2	
Actuated g/C Ratio	0.80	0.80	0.82	0.77	0.77		0.10	0.10			0.09	
v/c Ratio	0.00	0.34	0.06	0.13	0.50		0.46	0.39			0.03	
Control Delay	3.0	4.4	0.7	1.9	7.9		62.2	16.5			48.3	
Queue Delay	0.0	0.0	0.0	0.0	0.1		0.0	0.0			0.0	
Total Delay	3.0	4.4	0.7	1.9	8.0		62.2	16.5			48.3	
LOS	A	A	A	A	A		E	B			D	
Approach Delay		3.8			7.3			35.0			48.3	
Approach LOS		A			A			D			D	
Queue Length 50th (m)	0.1	25.5	0.0	0.2	40.1		14.4	0.9			0.7	
Queue Length 95th (m)	0.5	46.0	3.0	6.6	211.5		28.1	16.5			3.8	
Internal Link Dist (m)		497.2			111.3			178.8			36.6	
Turn Bay Length (m)	30.0		50.0	35.0			30.0					
Base Capacity (vph)	278	1418	1261	670	1356		323	434			311	
Starvation Cap Reductn	0	0	0	0	65		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	0.00	0.34	0.06	0.13	0.53		0.19	0.20			0.01	

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 80 (67%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.50

Intersection Signal Delay: 8.8	Intersection LOS: A
Intersection Capacity Utilization 68.4%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 20: City Center Ave & Albert St



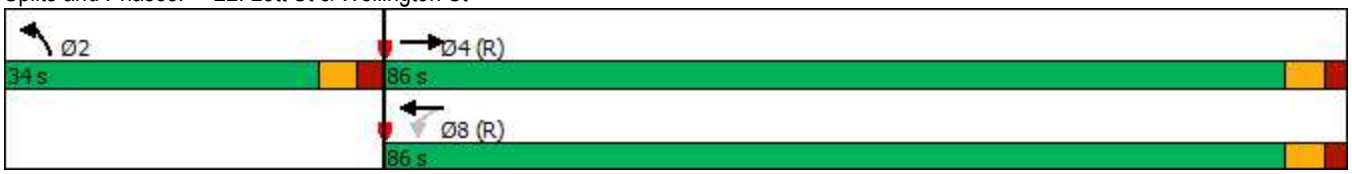
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	937	26	27	1094	30	26
Future Volume (vph)	937	26	27	1094	30	26
Satd. Flow (prot)	3364	0	1710	3386	1605	0
Flt Permitted			0.271		0.974	
Satd. Flow (perm)	3364	0	484	3386	1604	0
Satd. Flow (RTOR)	5				27	
Lane Group Flow (vph)	1013	0	28	1152	59	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	4			8	2	
Permitted Phases			8			
Detector Phase	4		8	8	2	
Switch Phase						
Minimum Initial (s)	10.0		10.0	10.0	10.0	
Minimum Split (s)	30.0		22.0	22.0	33.9	
Total Split (s)	86.0		86.0	86.0	34.0	
Total Split (%)	71.7%		71.7%	71.7%	28.3%	
Yellow Time (s)	3.7		3.7	3.7	3.3	
All-Red Time (s)	2.1		2.1	2.1	2.6	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	5.8		5.8	5.8	5.9	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max		C-Max	C-Max	None	
Act Effct Green (s)	99.0		99.0	99.0	13.6	
Actuated g/C Ratio	0.82		0.82	0.82	0.11	
v/c Ratio	0.36		0.07	0.41	0.29	
Control Delay	1.6		4.8	4.9	31.2	
Queue Delay	0.1		0.0	0.1	0.0	
Total Delay	1.6		4.8	5.1	31.2	
LOS	A		A	A	C	
Approach Delay	1.6			5.1	31.2	
Approach LOS	A			A	C	
Queue Length 50th (m)	7.5		1.1	32.0	7.6	
Queue Length 95th (m)	19.3		5.9	84.6	17.8	
Internal Link Dist (m)	119.3			240.3	83.4	
Turn Bay Length (m)			65.0			
Base Capacity (vph)	2777		399	2794	396	
Starvation Cap Reductn	454		0	0	0	
Spillback Cap Reductn	0		0	605	4	
Storage Cap Reductn	0		0	0	0	
Reduced v/c Ratio	0.44		0.07	0.53	0.15	

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 27 (23%), Referenced to phase 4:EBT and 8:WBTL, Start of Green
Natural Cycle: 65
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.41

Intersection Signal Delay: 4.2	Intersection LOS: A
Intersection Capacity Utilization 52.3%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 22: Lett St & Wellington St



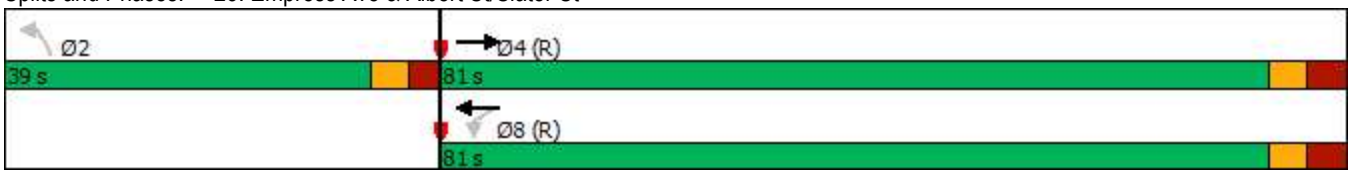
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	540	16	11	891	9	14
Future Volume (vph)	540	16	11	891	9	14
Satd. Flow (prot)	3406	0	0	3417	1619	0
Flt Permitted				0.946	0.982	
Satd. Flow (perm)	3406	0	0	3235	1619	0
Satd. Flow (RTOR)	5				15	
Lane Group Flow (vph)	585	0	0	950	24	0
Turn Type	NA		Perm	NA	Perm	
Protected Phases	4			8		
Permitted Phases			8		2	
Detector Phase	4		8	8	2	
Switch Phase						
Minimum Initial (s)	10.0		10.0	10.0	10.0	
Minimum Split (s)	40.1		40.1	40.1	28.3	
Total Split (s)	81.0		81.0	81.0	39.0	
Total Split (%)	67.5%		67.5%	67.5%	32.5%	
Yellow Time (s)	3.3		3.3	3.3	3.3	
All-Red Time (s)	3.8		3.8	3.8	3.0	
Lost Time Adjust (s)	0.0			-3.1	-2.3	
Total Lost Time (s)	7.1			4.0	4.0	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max		C-Max	C-Max	None	
Act Effct Green (s)	106.0			107.8	12.3	
Actuated g/C Ratio	0.88			0.90	0.10	
v/c Ratio	0.19			0.33	0.13	
Control Delay	6.6			2.0	30.0	
Queue Delay	0.0			0.0	0.0	
Total Delay	6.6			2.0	30.0	
LOS	A			A	C	
Approach Delay	6.6			2.0	30.0	
Approach LOS	A			A	C	
Queue Length 50th (m)	42.4			22.5	2.1	
Queue Length 95th (m)	60.9			28.1	10.7	
Internal Link Dist (m)	168.5			265.3	48.5	
Turn Bay Length (m)						
Base Capacity (vph)	3008			2906	482	
Starvation Cap Reductn	0			0	0	
Spillback Cap Reductn	0			0	0	
Storage Cap Reductn	0			0	0	
Reduced v/c Ratio	0.19			0.33	0.05	

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 39 (33%), Referenced to phase 4:EBT and 8:WBTL, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.33

Intersection Signal Delay: 4.1	Intersection LOS: A
Intersection Capacity Utilization 49.2%	ICU Level of Service A
Analysis Period (min) 15	

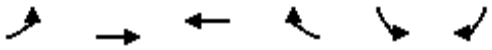
Splits and Phases: 23: Empress Ave & Albert St/Slater St



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	8	1062	9	0	629
Future Volume (vph)	0	8	1062	9	0	629
Satd. Flow (prot)	0	1557	3417	0	0	3420
Flt Permitted						
Satd. Flow (perm)	0	1557	3417	0	0	3420
Lane Group Flow (vph)	0	8	1127	0	0	662
Sign Control	Stop		Free			Free

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization 41.3%		ICU Level of Service A	
Analysis Period (min) 15			

Synchro Modelling Outputs – Future Background Conditions



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	601	967	324	704	1962	310
Future Volume (vph)	601	967	324	704	1962	310
Satd. Flow (prot)	3317	4914	3420	2693	3285	1530
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	3302	4914	3420	2693	3272	1501
Satd. Flow (RTOR)						69
Lane Group Flow (vph)	633	1018	341	741	2065	326
Turn Type	Prot	NA	NA	pt+ov	Prot	Perm
Protected Phases	7	4	8	1 8	1	
Permitted Phases						1
Detector Phase	7	4	8	1 8	1	1
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0		10.0	10.0
Minimum Split (s)	42.8	26.5	26.5		45.1	45.1
Total Split (s)	42.8	70.3	27.5		51.1	51.1
Total Split (%)	35.3%	57.9%	22.7%		42.1%	42.1%
Yellow Time (s)	3.3	3.3	3.3		3.3	3.3
All-Red Time (s)	2.5	3.2	3.2		2.8	2.8
Lost Time Adjust (s)	0.0	0.0	0.0		-2.1	0.0
Total Lost Time (s)	5.8	6.5	6.5		4.0	6.1
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	Min	Min	Min		Max	Max
Act Effct Green (s)	26.2	50.9	18.9	70.7	47.4	45.3
Actuated g/C Ratio	0.24	0.47	0.17	0.65	0.44	0.42
v/c Ratio	0.79	0.44	0.58	0.42	1.45	0.49
Control Delay	46.8	19.8	46.3	10.9	231.5	22.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.8	19.8	46.3	10.9	231.5	22.6
LOS	D	B	D	B	F	C
Approach Delay		30.1	22.1		203.0	
Approach LOS		C	C		F	
Queue Length 50th (m)	70.3	53.9	36.8	41.1	~332.2	42.1
Queue Length 95th (m)	90.4	64.7	58.0	71.7	#427.2	80.5
Internal Link Dist (m)		234.2	291.0		48.7	
Turn Bay Length (m)	150.0					30.0
Base Capacity (vph)	1134	2897	663	1734	1429	664
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	0.56	0.35	0.51	0.43	1.45	0.49

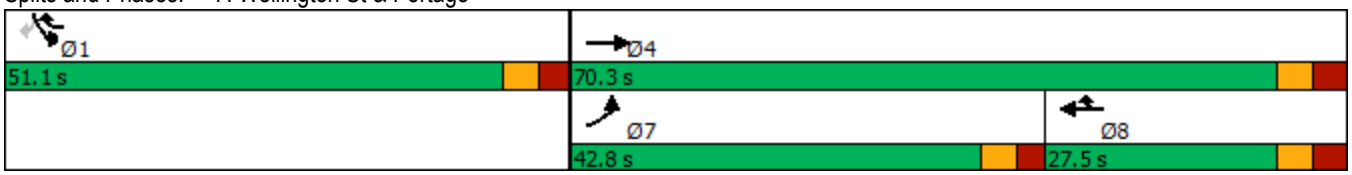
Intersection Summary
Cycle Length: 121.4
Actuated Cycle Length: 108.9
Natural Cycle: 145
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 1.45

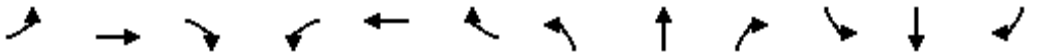
Intersection Signal Delay: 109.1	Intersection LOS: F
Intersection Capacity Utilization 101.1%	ICU Level of Service G
Analysis Period (min) 15	

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

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

Splits and Phases: 7: Wellington St & Portage





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	0	5	0	0	0	37	821	0	0	1454	37
Future Volume (vph)	5	0	5	0	0	0	37	821	0	0	1454	37
Satd. Flow (prot)	1710	1530	0	1800	1800	0	1710	1800	0	1800	1793	0
Flt Permitted							0.066					
Satd. Flow (perm)	1800	1530	0	1800	1800	0	119	1800	0	1800	1793	0
Satd. Flow (RTOR)		42									3	
Lane Group Flow (vph)	5	5	0	0	0	0	39	864	0	0	1570	0
Turn Type	Perm	NA		Perm			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)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	22.0	22.0		22.0	22.0		53.0	53.0		53.0	53.0	
Total Split (s)	22.0	22.0		22.0	22.0		53.0	53.0		53.0	53.0	
Total Split (%)	29.3%	29.3%		29.3%	29.3%		70.7%	70.7%		70.7%	70.7%	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.3	3.3		3.3	3.3	
All-Red Time (s)	3.2	3.2		3.2	3.2		2.6	2.6		2.6	2.6	
Lost Time Adjust (s)	0.0	-2.2		0.0	-2.2		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.2	4.0		6.2	4.0		5.9	5.9		5.9	5.9	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	
Act Effct Green (s)	10.0	12.2					70.6	70.6			70.6	
Actuated g/C Ratio	0.13	0.16					0.94	0.94			0.94	
v/c Ratio	0.02	0.02					0.35	0.51			0.93	
Control Delay	28.6	0.2					15.8	3.4			17.4	
Queue Delay	0.0	0.0					0.0	0.0			0.0	
Total Delay	28.6	0.2					15.8	3.4			17.4	
LOS	C	A					B	A			B	
Approach Delay		14.4						3.9			17.4	
Approach LOS		B						A			B	
Queue Length 50th (m)	0.7	0.0					0.0	0.0			0.0	
Queue Length 95th (m)	3.6	0.0					#18.0	96.5			#379.6	
Internal Link Dist (m)		60.2			43.3			76.9			31.3	
Turn Bay Length (m)	30.0						30.0					
Base Capacity (vph)	379	399					112	1694			1687	
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	0.01	0.01					0.35	0.51			0.93	

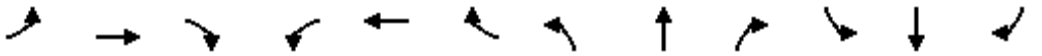
Intersection Summary
Cycle Length: 75
Actuated Cycle Length: 75
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.93

Intersection Signal Delay: 12.5	Intersection LOS: B
Intersection Capacity Utilization 99.7%	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.

Splits and Phases: 10: Booth St & Chaudiere



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1236	0	0	640	132	0	827	131	146	982	233
Future Volume (vph)	0	1236	0	0	640	132	0	827	131	146	982	233
Satd. Flow (prot)	0	3420	0	0	3386	1530	0	3101	0	1710	3226	1530
Flt Permitted										0.114		
Satd. Flow (perm)	0	3420	0	0	3386	1476	0	3101	0	205	3226	1464
Satd. Flow (RTOR)								20				135
Lane Group Flow (vph)	0	1301	0	0	674	139	0	1009	0	154	1034	245
Turn Type		NA			NA	Perm		NA		pm+pt	NA	Perm
Protected Phases		4			8			2		1	6	
Permitted Phases						8				6		6
Detector Phase		4			8	8		2		1	6	6
Switch Phase												
Minimum Initial (s)		10.0			10.0	10.0		10.0		5.2	10.0	10.0
Minimum Split (s)		35.8			35.8	35.8		31.8		12.0	31.9	31.9
Total Split (s)		48.0			48.0	48.0		35.0		12.0	47.0	47.0
Total Split (%)		50.5%			50.5%	50.5%		36.8%		12.6%	49.5%	49.5%
Yellow Time (s)		3.7			3.7	3.7		3.3		3.3	3.3	3.3
All-Red Time (s)		3.1			3.1	3.1		3.5		3.5	3.6	3.6
Lost Time Adjust (s)		0.0			0.0	0.0		-2.8		0.0	0.0	0.0
Total Lost Time (s)		6.8			6.8	6.8		4.0		6.8	6.9	6.9
Lead/Lag								Lag		Lead		
Lead-Lag Optimize?								Yes		Yes		
Recall Mode		Min			Min	Min		C-Max		None	C-Min	C-Min
Act Effct Green (s)		40.0			40.0	40.0		31.1		41.4	41.3	41.3
Actuated g/C Ratio		0.42			0.42	0.42		0.33		0.44	0.43	0.43
v/c Ratio		0.90			0.47	0.22		0.98		0.81	0.74	0.34
Control Delay		32.8			29.9	25.5		56.0		56.5	32.1	15.8
Queue Delay		0.9			0.0	0.0		30.3		57.7	0.0	0.0
Total Delay		33.6			29.9	25.5		86.3		114.2	32.1	15.8
LOS		C			C	C		F		F	C	B
Approach Delay		33.6			29.1			86.3			38.2	
Approach LOS		C			C			F			D	
Queue Length 50th (m)		117.5			62.9	21.9		99.2		18.4	87.0	12.9
Queue Length 95th (m)		#152.8			83.6	39.4		#145.2		#54.7	136.0	63.0
Internal Link Dist (m)		331.0			128.4			47.8			192.9	
Turn Bay Length (m)						70.0				145.0		55.0
Base Capacity (vph)		1483			1468	640		1029		189	1403	712
Starvation Cap Reductn		0			0	0		0		0	0	0
Spillback Cap Reductn		47			0	0		93		48	0	0
Storage Cap Reductn		0			0	0		0		0	0	0
Reduced v/c Ratio		0.91			0.46	0.22		1.08		1.09	0.74	0.34

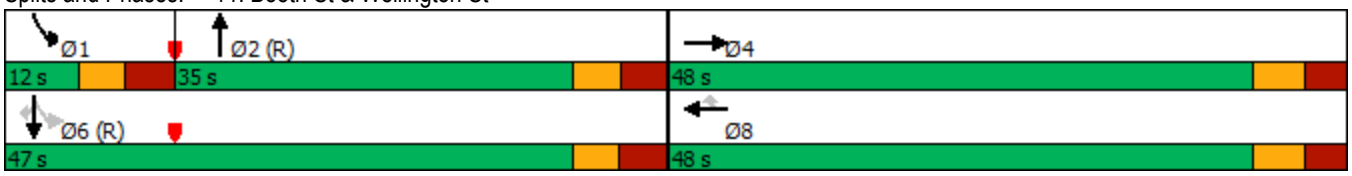
Intersection Summary
Cycle Length: 95
Actuated Cycle Length: 95
Offset: 31 (33%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

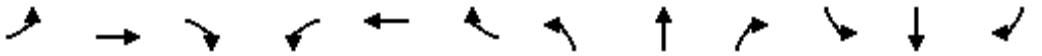
Maximum v/c Ratio: 0.98

Intersection Signal Delay: 45.9	Intersection LOS: D
Intersection Capacity Utilization 88.2%	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.

Splits and Phases: 11: Booth St & Wellington St





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	389	772	19	7	258	152	6	540	30	170	477	436
Future Volume (vph)	389	772	19	7	258	152	6	540	30	170	477	436
Satd. Flow (prot)	1660	3301	0	1710	2874	0	1710	1757	0	1425	1782	1471
Flt Permitted	0.950			0.338			0.374			0.950		
Satd. Flow (perm)	1587	3301	0	603	2874	0	645	1757	0	1353	1782	1471
Satd. Flow (RTOR)		3						2				
Lane Group Flow (vph)	409	833	0	7	432	0	6	600	0	179	502	459
Turn Type	Prot	NA		Perm	NA		Perm	NA		Prot	NA	Over
Protected Phases	5	2			6			8		7	4	5
Permitted Phases				6			8					
Detector Phase	5	2		6	6		8	8		7	4	5
Switch Phase												
Minimum Initial (s)	5.0	10.0		10.0	10.0		10.0	10.0		5.0	10.0	5.0
Minimum Split (s)	11.5	36.5		36.5	36.5		34.5	34.5		11.5	34.5	11.5
Total Split (s)	29.0	67.0		38.0	38.0		38.0	38.0		15.0	53.0	29.0
Total Split (%)	24.2%	55.8%		31.7%	31.7%		31.7%	31.7%		12.5%	44.2%	24.2%
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	3.3
All-Red Time (s)	3.2	3.2		3.2	3.2		3.2	3.2		3.2	3.2	3.2
Lost Time Adjust (s)	-3.3	0.0		0.0	0.0		0.0	-3.3		-3.3	0.0	-3.3
Total Lost Time (s)	3.2	6.5		6.5	6.5		6.5	3.2		3.2	6.5	3.2
Lead/Lag	Lead			Lag	Lag		Lag	Lag		Lead		Lead
Lead-Lag Optimize?	Yes			Yes	Yes		Yes	Yes		Yes		Yes
Recall Mode	None	C-Min		C-Max	C-Max		Min	Min		None	None	None
Act Effct Green (s)	25.8	60.5		31.5	31.5		31.5	34.8		11.8	46.5	25.8
Actuated g/C Ratio	0.22	0.50		0.26	0.26		0.26	0.29		0.10	0.39	0.22
v/c Ratio	1.15	0.50		0.04	0.57		0.04	1.18		1.28	0.73	1.45
Control Delay	125.3	9.0		33.4	40.9		34.0	136.8		212.5	38.7	255.7
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	125.3	9.0		33.4	40.9		34.0	136.8		212.5	38.7	255.7
LOS	F	A		C	D		C	F		F	D	F
Approach Delay		47.3			40.8			135.8			153.4	
Approach LOS		D			D			F			F	
Queue Length 50th (m)	~119.2	30.3		1.3	49.1		1.1	~178.1		~56.2	104.9	~155.2
Queue Length 95th (m)	#180.1	40.5		4.6	66.9		4.8	#251.0		#103.1	147.6	#221.2
Internal Link Dist (m)		285.1			168.5			37.2			86.5	
Turn Bay Length (m)	160.0			40.0								120.0
Base Capacity (vph)	356	1665		158	754		169	510		140	690	316
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	1.15	0.50		0.04	0.57		0.04	1.18		1.28	0.73	1.45

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 104 (87%), Referenced to phase 2:EBT and 6:WBTL, Start of Green
Natural Cycle: 145
Control Type: Actuated-Coordinated

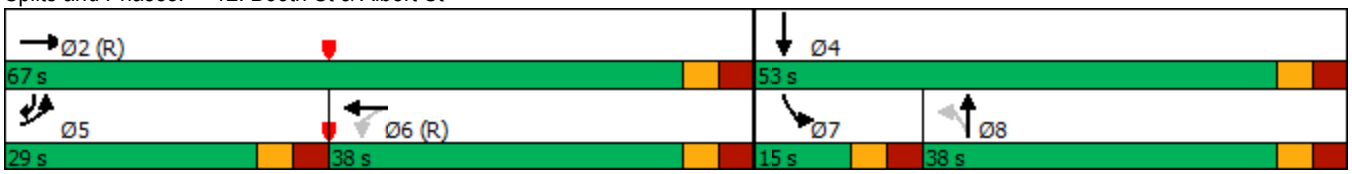
Maximum v/c Ratio: 1.45

Intersection Signal Delay: 97.4	Intersection LOS: F
Intersection Capacity Utilization 105.3%	ICU Level of Service G
Analysis Period (min) 15	

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

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

Splits and Phases: 12: Booth St & Albert St



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	871	130	393	359	112	291
Future Volume (vph)	871	130	393	359	112	291
Satd. Flow (prot)	3228	0	1629	3288	1583	1471
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3228	0	1616	3288	1561	1471
Satd. Flow (RTOR)	17					
Lane Group Flow (vph)	1054	0	414	378	118	306
Turn Type	NA		Prot	NA	Prot	Over
Protected Phases	2		1	6	8	1
Permitted Phases						
Detector Phase	2		1	6	8	1
Switch Phase						
Minimum Initial (s)	10.0		5.0	10.0	10.0	5.0
Minimum Split (s)	31.8		11.2	31.8	29.3	11.2
Total Split (s)	58.0		32.0	90.0	30.0	32.0
Total Split (%)	48.3%		26.7%	75.0%	25.0%	26.7%
Yellow Time (s)	3.3		3.3	3.3	3.3	3.3
All-Red Time (s)	3.5		2.9	3.5	3.0	2.9
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	6.8		6.2	6.8	6.3	6.2
Lead/Lag	Lag		Lead			Lead
Lead-Lag Optimize?	Yes		Yes			Yes
Recall Mode	C-Max		None	C-Max	None	None
Act Effct Green (s)	51.2		35.0	92.4	14.5	35.0
Actuated g/C Ratio	0.43		0.29	0.77	0.12	0.29
v/c Ratio	0.76		0.87	0.15	0.62	0.71
Control Delay	37.4		34.4	11.5	63.6	49.7
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	37.4		34.4	11.5	63.6	49.7
LOS	D		C	B	E	D
Approach Delay	37.4			23.5	53.6	
Approach LOS	D			C	D	
Queue Length 50th (m)	80.6		109.8	30.4	28.3	67.6
Queue Length 95th (m)	138.0		m103.6	m31.1	46.3	#122.0
Internal Link Dist (m)	78.2			285.1	54.7	
Turn Bay Length (m)			90.0			
Base Capacity (vph)	1387		475	2531	312	428
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	0.76		0.87	0.15	0.38	0.71

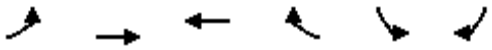
Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 55 (46%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.87

Intersection Signal Delay: 35.6	Intersection LOS: D
Intersection Capacity Utilization 77.4%	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.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 13: Preston St & Albert St



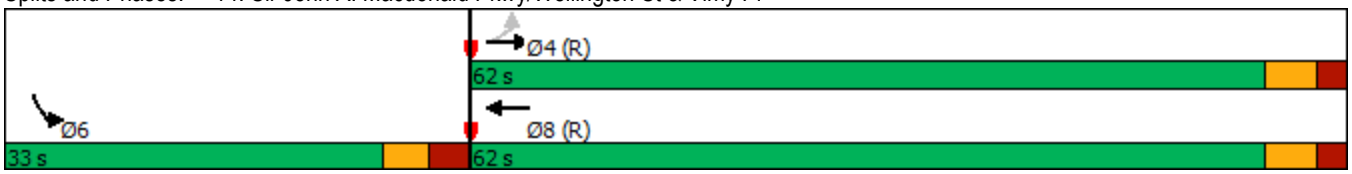
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	15	1348	884	41	2	15
Future Volume (vph)	15	1348	884	41	2	15
Satd. Flow (prot)	1710	3420	3360	0	1462	0
Flt Permitted	0.292				0.994	
Satd. Flow (perm)	525	3420	3360	0	1462	0
Satd. Flow (RTOR)			8		16	
Lane Group Flow (vph)	16	1419	974	0	18	0
Turn Type	Perm	NA	NA		Prot	
Protected Phases		4	8		6	
Permitted Phases	4					
Detector Phase	4	4	8		6	
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0		10.0	
Minimum Split (s)	37.0	37.0	37.0		32.3	
Total Split (s)	62.0	62.0	62.0		33.0	
Total Split (%)	65.3%	65.3%	65.3%		34.7%	
Yellow Time (s)	3.7	3.7	3.7		3.3	
All-Red Time (s)	2.3	2.3	2.3		3.0	
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	
Total Lost Time (s)	6.0	6.0	6.0		6.3	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	C-Max		None	
Act Effct Green (s)	86.1	86.1	86.1		10.0	
Actuated g/C Ratio	0.91	0.91	0.91		0.11	
v/c Ratio	0.03	0.46	0.32		0.11	
Control Delay	2.4	2.8	1.1		20.9	
Queue Delay	0.0	0.0	0.0		0.0	
Total Delay	2.4	2.8	1.1		20.9	
LOS	A	A	A		C	
Approach Delay		2.8	1.1		20.9	
Approach LOS		A	A		C	
Queue Length 50th (m)	0.0	0.0	3.0		0.4	
Queue Length 95th (m)	2.1	58.8	6.8		7.0	
Internal Link Dist (m)		651.1	331.0		21.1	
Turn Bay Length (m)	40.0					
Base Capacity (vph)	475	3099	3045		422	
Starvation Cap Reductn	0	0	0		0	
Spillback Cap Reductn	0	0	0		0	
Storage Cap Reductn	0	0	0		0	
Reduced v/c Ratio	0.03	0.46	0.32		0.04	

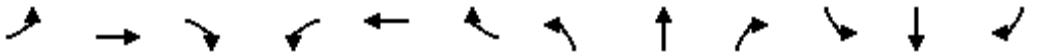
Intersection Summary
Cycle Length: 95
Actuated Cycle Length: 95
Offset: 59 (62%), Referenced to phase 4:EBTL and 8:WBT, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.46

Intersection Signal Delay: 2.3	Intersection LOS: A
Intersection Capacity Utilization 59.2%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 14: Sir John A. Macdonald Pkwy/Wellington St & Vimy Pl



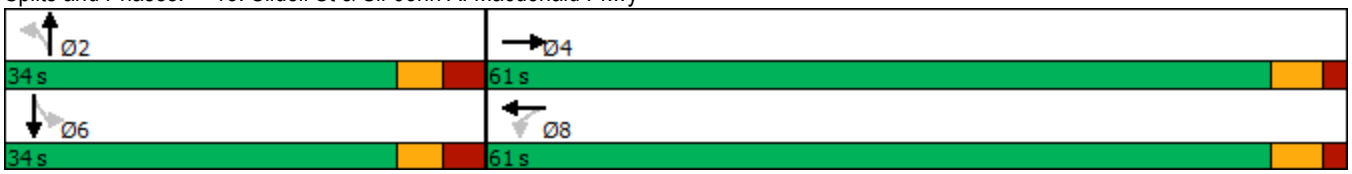


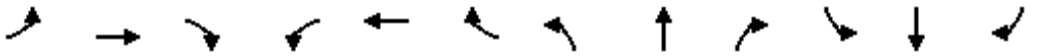
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1457	22	1	994	1	1	21	1	1	5	3
Future Volume (vph)	0	1457	22	1	994	1	1	21	1	1	5	3
Satd. Flow (prot)	0	3412	0	0	3386	0	0	1784	0	0	1699	0
Flt Permitted					0.954			0.984			0.956	
Satd. Flow (perm)	0	3412	0	0	3230	0	0	1759	0	0	1634	0
Satd. Flow (RTOR)		3						1			3	
Lane Group Flow (vph)	0	1557	0	0	1048	0	0	24	0	0	9	0
Turn Type		NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases				8			2			6		
Detector Phase		4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)		10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)		30.5		30.5	30.5		33.3	33.3		33.3	33.3	
Total Split (s)		61.0		61.0	61.0		34.0	34.0		34.0	34.0	
Total Split (%)		64.2%		64.2%	64.2%		35.8%	35.8%		35.8%	35.8%	
Yellow Time (s)		3.7		3.7	3.7		3.3	3.3		3.3	3.3	
All-Red Time (s)		1.8		1.8	1.8		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.5			5.5			6.3			6.3	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode		Max		Max	Max		None	None		None	None	
Act Effct Green (s)		72.2			72.2			10.1			10.1	
Actuated g/C Ratio		0.90			0.90			0.13			0.13	
v/c Ratio		0.51			0.36			0.11			0.04	
Control Delay		3.3			2.5			33.2			28.7	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		3.3			2.5			33.2			28.7	
LOS		A			A			C			C	
Approach Delay		3.3			2.5			33.2			28.7	
Approach LOS		A			A			C			C	
Queue Length 50th (m)		0.0			0.0			3.1			0.8	
Queue Length 95th (m)		69.5			38.3			10.4			5.2	
Internal Link Dist (m)		192.5			288.5			29.2			167.1	
Turn Bay Length (m)												
Base Capacity (vph)		3067			2904			610			569	
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		0.51			0.36			0.04			0.02	

Intersection Summary
Cycle Length: 95
Actuated Cycle Length: 80.3
Natural Cycle: 75
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.51

Intersection Signal Delay: 3.3	Intersection LOS: A
Intersection Capacity Utilization 63.2%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 15: Slidell St & Sir John A. Macdonald Pkwy





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	752	86	56	317	31	61	45	130	131	178	12
Future Volume (vph)	14	752	86	56	317	31	61	45	130	131	178	12
Satd. Flow (prot)	1500	1720	0	1613	1698	1457	1676	1800	1515	1693	1752	0
Flt Permitted	0.555			0.222			0.499			0.726		
Satd. Flow (perm)	840	1720	0	377	1698	1328	871	1800	1458	1263	1752	0
Satd. Flow (RTOR)		11				37			137		3	
Lane Group Flow (vph)	15	883	0	59	334	33	64	47	137	138	200	0
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6		6	8		8	4		
Detector Phase	2	2		6	6	6	8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	32.5	32.5		32.5	32.5	32.5	31.4	31.4	31.4	31.4	31.4	
Total Split (s)	68.0	68.0		68.0	68.0	68.0	32.0	32.0	32.0	32.0	32.0	
Total Split (%)	68.0%	68.0%		68.0%	68.0%	68.0%	32.0%	32.0%	32.0%	32.0%	32.0%	
Yellow Time (s)	3.3	3.3		3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	
All-Red Time (s)	3.2	3.2		3.2	3.2	3.2	3.1	3.1	3.1	3.1	3.1	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.5	6.5		6.5	6.5	6.5	6.4	6.4	6.4	6.4	6.4	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		C-Max	C-Max	C-Max	None	None	None	None	None	
Act Effct Green (s)	68.9	68.9		68.9	68.9	68.9	18.2	18.2	18.2	18.2	18.2	
Actuated g/C Ratio	0.69	0.69		0.69	0.69	0.69	0.18	0.18	0.18	0.18	0.18	
v/c Ratio	0.03	0.74		0.23	0.29	0.04	0.41	0.14	0.36	0.60	0.62	
Control Delay	3.6	14.2		10.3	7.8	2.3	41.7	32.5	8.2	47.4	44.8	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	3.6	14.2		10.3	7.8	2.3	41.7	32.5	8.2	47.4	44.8	
LOS	A	B		B	A	A	D	C	A	D	D	
Approach Delay		14.0			7.7			21.5			45.9	
Approach LOS		B			A			C			D	
Queue Length 50th (m)	0.3	147.4		3.6	21.6	0.0	11.9	8.3	0.0	26.7	38.2	
Queue Length 95th (m)	m1.0	m213.0		12.8	45.2	3.2	23.2	16.9	14.9	42.9	56.3	
Internal Link Dist (m)		635.7			497.2			83.8			141.3	
Turn Bay Length (m)	45.0			50.0			50.0		20.0	45.0		
Base Capacity (vph)	579	1188		260	1170	926	222	460	475	323	450	
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.03	0.74		0.23	0.29	0.04	0.29	0.10	0.29	0.43	0.44	

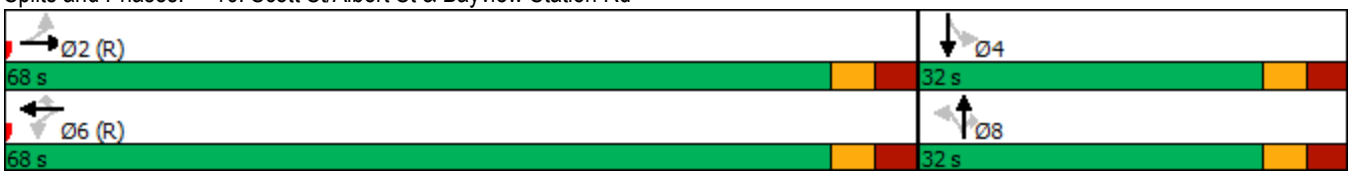
Intersection Summary
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 40 (40%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

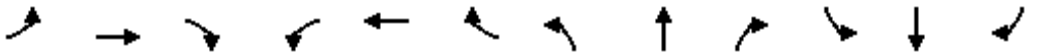
Maximum v/c Ratio: 0.74

Intersection Signal Delay: 19.2	Intersection LOS: B
Intersection Capacity Utilization 88.2%	ICU Level of Service E
Analysis Period (min) 15	

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

Splits and Phases: 16: Scott St/Albert St & Bayview Station Rd





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	120	668	37	50	281	24	31	281	69	97	354	145
Future Volume (vph)	120	668	37	50	281	24	31	281	69	97	354	145
Satd. Flow (prot)	1676	1734	0	1676	1698	1471	1660	1722	0	1693	1564	0
Flt Permitted	0.950			0.255			0.215			0.394		
Satd. Flow (perm)	1497	1734	0	450	1698	1209	363	1722	0	702	1564	0
Satd. Flow (RTOR)		4				119		14			23	
Lane Group Flow (vph)	126	742	0	53	296	25	33	369	0	102	526	0
Turn Type	Prot	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	2			6			8			4	
Permitted Phases				6		6	8			4		
Detector Phase	5	2		6	6	6	8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0		10.0	10.0	10.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	10.6	28.1		28.1	28.1	28.1	35.3	35.3		35.3	35.3	
Total Split (s)	11.0	51.0		40.0	40.0	40.0	43.0	43.0		43.0	43.0	
Total Split (%)	11.0%	51.0%		40.0%	40.0%	40.0%	43.0%	43.0%		43.0%	43.0%	
Yellow Time (s)	3.3	3.3		3.3	3.3	3.3	3.0	3.0		3.0	3.0	
All-Red Time (s)	2.3	2.8		2.8	2.8	2.8	3.3	3.3		3.3	3.3	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	-2.1	0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.6	6.1		6.1	6.1	4.0	6.3	6.3		6.3	6.3	
Lead/Lag	Lead			Lag	Lag	Lag						
Lead-Lag Optimize?	Yes			Yes	Yes	Yes						
Recall Mode	None	C-Max		C-Max	C-Max	C-Max	Max	Max		Max	Max	
Act Effct Green (s)	11.4	50.9		33.9	33.9	36.0	36.7	36.7		36.7	36.7	
Actuated g/C Ratio	0.11	0.51		0.34	0.34	0.36	0.37	0.37		0.37	0.37	
v/c Ratio	0.66	0.84		0.35	0.51	0.05	0.25	0.58		0.40	0.89	
Control Delay	60.0	31.5		28.3	27.1	0.2	28.2	28.7		29.3	48.5	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	60.0	31.5		28.3	27.1	0.2	28.2	28.7		29.3	48.5	
LOS	E	C		C	C	A	C	C		C	D	
Approach Delay		35.6			25.5			28.7			45.3	
Approach LOS		D			C			C			D	
Queue Length 50th (m)	25.0	123.7		8.8	51.9	0.0	4.6	57.4		15.2	96.1	
Queue Length 95th (m)	#50.2	#199.5		21.6	78.9	m0.0	13.3	87.8		31.3	#160.9	
Internal Link Dist (m)		207.0			635.7			70.7			630.1	
Turn Bay Length (m)	55.0			65.0		35.0	55.0			50.0		
Base Capacity (vph)	191	884		152	575	511	133	640		257	588	
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	
Reduced v/c Ratio	0.66	0.84		0.35	0.51	0.05	0.25	0.58		0.40	0.89	

Intersection Summary
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 91 (91%), Referenced to phase 2:EBT and 6:WBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Satd. Flow (RTOR)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	2.0
Minimum Split (s)	6.0
Total Split (s)	6.0
Total Split (%)	6%
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	None
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (m)	
Queue Length 95th (m)	
Internal Link Dist (m)	
Turn Bay Length (m)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

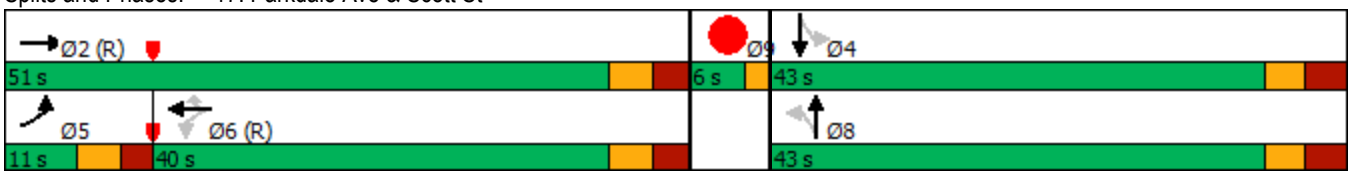
Intersection Summary

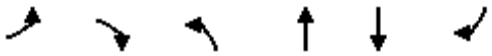
Maximum v/c Ratio: 0.89

Intersection Signal Delay: 35.4	Intersection LOS: D
Intersection Capacity Utilization 107.1%	ICU Level of Service G
Analysis Period (min) 15	

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

Splits and Phases: 17: Parkdale Ave & Scott St





Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø9
Lane Configurations							
Traffic Volume (vph)	1	1	2	857	1458	6	
Future Volume (vph)	1	1	2	857	1458	6	
Satd. Flow (prot)	1600	0	1710	3420	3417	0	
Flt Permitted	0.976		0.131				
Satd. Flow (perm)	1598	0	236	3420	3417	0	
Satd. Flow (RTOR)	1				1		
Lane Group Flow (vph)	2	0	2	902	1541	0	
Turn Type	Prot		Perm	NA	NA		
Protected Phases	4			2	6		9
Permitted Phases			2				
Detector Phase	4		2	2	6		
Switch Phase							
Minimum Initial (s)	7.8		10.0	10.0	10.0		10.0
Minimum Split (s)	14.0		30.9	30.9	30.9		29.0
Total Split (s)	17.0		49.0	49.0	49.0		29.0
Total Split (%)	17.9%		51.6%	51.6%	51.6%		31%
Yellow Time (s)	3.3		3.3	3.3	3.3		3.0
All-Red Time (s)	2.9		2.6	2.6	2.6		4.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0		
Total Lost Time (s)	6.2		5.9	5.9	5.9		
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	None		C-Max	C-Max	C-Max		None
Act Effct Green (s)	7.8		85.2	85.2	85.2		
Actuated g/C Ratio	0.08		0.90	0.90	0.90		
v/c Ratio	0.02		0.01	0.29	0.50		
Control Delay	35.0		2.0	0.8	7.3		
Queue Delay	0.0		0.0	0.0	0.0		
Total Delay	35.0		2.0	0.8	7.3		
LOS	C		A	A	A		
Approach Delay	35.0			0.8	7.3		
Approach LOS	C			A	A		
Queue Length 50th (m)	0.2		0.0	0.0	0.0		
Queue Length 95th (m)	2.4		m0.0	m7.0	#195.3		
Internal Link Dist (m)	148.9			192.9	188.6		
Turn Bay Length (m)			35.0				
Base Capacity (vph)	182		212	3068	3065		
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	0.01		0.01	0.29	0.50		

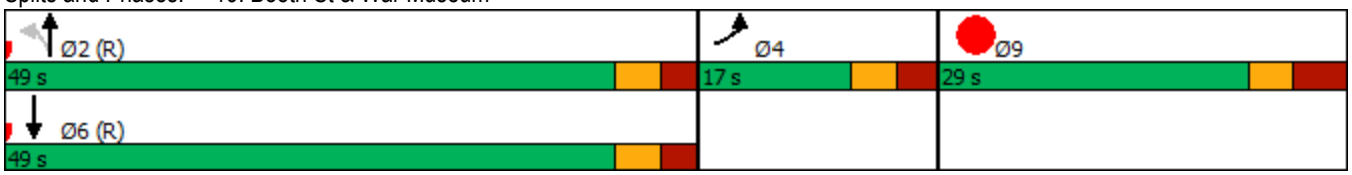
Intersection Summary
Cycle Length: 95
Actuated Cycle Length: 95
Offset: 47 (49%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.50

Intersection Signal Delay: 5.0	Intersection LOS: A
Intersection Capacity Utilization 59.3%	ICU Level of Service B
Analysis Period (min) 15	

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

Splits and Phases: 19: Booth St & War Museum



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	957	77	98	370	28	47
Future Volume (vph)	957	77	98	370	28	47
Satd. Flow (prot)	3330	0	1629	3257	1644	1404
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3330	0	1618	3257	1621	1404
Satd. Flow (RTOR)	11					49
Lane Group Flow (vph)	1088	0	103	389	29	49
Turn Type	NA		Prot	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases						8
Detector Phase	2		1	6	8	8
Switch Phase						
Minimum Initial (s)	10.0		5.0	10.0	10.0	10.0
Minimum Split (s)	27.3		11.3	27.3	29.3	29.3
Total Split (s)	72.0		12.0	84.0	36.0	36.0
Total Split (%)	60.0%		10.0%	70.0%	30.0%	30.0%
Yellow Time (s)	3.3		3.3	3.3	3.3	3.3
All-Red Time (s)	3.0		3.0	3.0	3.0	3.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3		6.3	6.3	6.3	6.3
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	C-Max		None	C-Max	None	None
Act Effct Green (s)	75.1		16.7	99.3	12.6	12.6
Actuated g/C Ratio	0.63		0.14	0.83	0.10	0.10
v/c Ratio	0.52		0.46	0.14	0.17	0.26
Control Delay	14.4		37.3	9.3	49.0	15.6
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	14.4		37.3	9.3	49.0	15.6
LOS	B		D	A	D	B
Approach Delay	14.4			15.1	28.0	
Approach LOS	B			B	C	
Queue Length 50th (m)	73.6		27.0	30.7	6.8	0.0
Queue Length 95th (m)	111.6		#48.3	42.2	14.8	10.9
Internal Link Dist (m)	497.2			115.1	178.8	
Turn Bay Length (m)			35.0		30.0	
Base Capacity (vph)	2087		226	2695	406	384
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	0.52		0.46	0.14	0.07	0.13

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 80 (67%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.52

Intersection Signal Delay: 15.3	Intersection LOS: B
Intersection Capacity Utilization 60.4%	ICU Level of Service B
Analysis Period (min) 15	

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

Splits and Phases: 20: City Center Ave & Albert St

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1397	16	26	707	37	77
Future Volume (vph)	1397	16	26	707	37	77
Satd. Flow (prot)	3365	0	1710	3320	1522	0
Flt Permitted			0.139		0.984	
Satd. Flow (perm)	3365	0	250	3320	1519	0
Satd. Flow (RTOR)	2				35	
Lane Group Flow (vph)	1488	0	27	744	120	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	4			8	2	
Permitted Phases			8			
Detector Phase	4		8	8	2	
Switch Phase						
Minimum Initial (s)	10.0		10.0	10.0	10.0	
Minimum Split (s)	30.0		30.0	30.0	33.9	
Total Split (s)	61.0		61.0	61.0	34.0	
Total Split (%)	64.2%		64.2%	64.2%	35.8%	
Yellow Time (s)	3.7		3.7	3.7	3.3	
All-Red Time (s)	2.1		2.1	2.1	2.6	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	5.8		5.8	5.8	5.9	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max		C-Max	C-Max	None	
Act Effct Green (s)	68.9		68.9	68.9	14.4	
Actuated g/C Ratio	0.73		0.73	0.73	0.15	
v/c Ratio	0.61		0.15	0.31	0.46	
Control Delay	21.2		8.8	5.9	30.0	
Queue Delay	6.5		0.0	0.0	0.0	
Total Delay	27.7		8.8	5.9	30.0	
LOS	C		A	A	C	
Approach Delay	27.7			6.0	30.0	
Approach LOS	C			A	C	
Queue Length 50th (m)	133.4		1.1	18.4	15.7	
Queue Length 95th (m)	m166.5		7.6	50.0	26.7	
Internal Link Dist (m)	128.4			234.2	63.1	
Turn Bay Length (m)			65.0			
Base Capacity (vph)	2442		181	2409	474	
Starvation Cap Reductn	901		0	0	0	
Spillback Cap Reductn	0		0	0	0	
Storage Cap Reductn	0		0	0	0	
Reduced v/c Ratio	0.97		0.15	0.31	0.25	

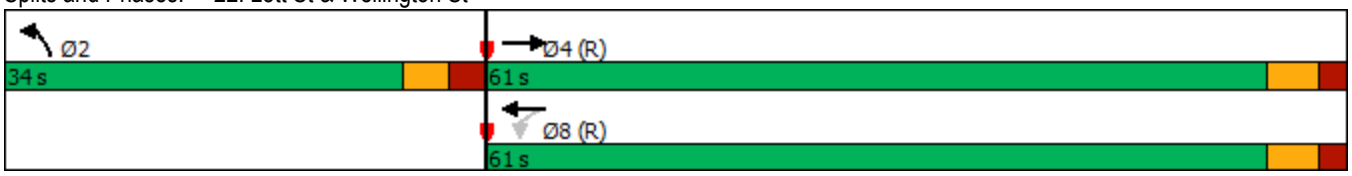
Intersection Summary
Cycle Length: 95
Actuated Cycle Length: 95
Offset: 23 (24%), Referenced to phase 4:EBT and 8:WBTL, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.61

Intersection Signal Delay: 20.8	Intersection LOS: C
Intersection Capacity Utilization 60.4%	ICU Level of Service B
Analysis Period (min) 15	

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

Splits and Phases: 22: Lett St & Wellington St



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	964	8	5	404	8	11
Future Volume (vph)	964	8	5	404	8	11
Satd. Flow (prot)	3417	0	1710	3420	1621	0
Flt Permitted			0.279		0.980	
Satd. Flow (perm)	3417	0	502	3420	1621	0
Satd. Flow (RTOR)	1				12	
Lane Group Flow (vph)	1023	0	5	425	20	0
Turn Type	NA		Perm	NA	Perm	
Protected Phases	4			8		
Permitted Phases			8		2	
Detector Phase	4		8	8	2	
Switch Phase						
Minimum Initial (s)	10.0		10.0	10.0	10.0	
Minimum Split (s)	40.1		40.1	40.1	28.3	
Total Split (s)	81.0		81.0	81.0	39.0	
Total Split (%)	67.5%		67.5%	67.5%	32.5%	
Yellow Time (s)	3.3		3.3	3.3	3.3	
All-Red Time (s)	3.8		3.8	3.8	3.0	
Lost Time Adjust (s)	0.0		-3.1	-3.1	-2.3	
Total Lost Time (s)	7.1		4.0	4.0	4.0	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max		C-Max	C-Max	None	
Act Effct Green (s)	110.6		111.9	111.9	12.3	
Actuated g/C Ratio	0.92		0.93	0.93	0.10	
v/c Ratio	0.32		0.01	0.13	0.11	
Control Delay	2.2		1.6	1.1	31.5	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	2.3		1.6	1.1	31.5	
LOS	A		A	A	C	
Approach Delay	2.3			1.1	31.5	
Approach LOS	A			A	C	
Queue Length 50th (m)	0.0		0.0	0.0	1.8	
Queue Length 95th (m)	m52.7		0.8	11.0	9.7	
Internal Link Dist (m)	168.5			265.3	32.8	
Turn Bay Length (m)			50.0			
Base Capacity (vph)	3150		468	3188	481	
Starvation Cap Reductn	384		0	0	0	
Spillback Cap Reductn	0		0	0	0	
Storage Cap Reductn	0		0	0	0	
Reduced v/c Ratio	0.37		0.01	0.13	0.04	

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 4:EBT and 8:WBTL, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.32

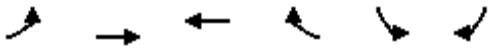
Intersection Signal Delay: 2.3	Intersection LOS: A
Intersection Capacity Utilization 46.0%	ICU Level of Service A
Analysis Period (min) 15	

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

Splits and Phases: 23: Empress Ave & Albert St/Slater St

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	12	850	17	0	960
Future Volume (vph)	0	12	850	17	0	960
Satd. Flow (prot)	0	1557	3410	0	0	3420
Flt Permitted						
Satd. Flow (perm)	0	1557	3410	0	0	3420
Lane Group Flow (vph)	0	13	913	0	0	1011
Sign Control	Stop		Free			Free

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization 35.4%		ICU Level of Service A	
Analysis Period (min) 15			



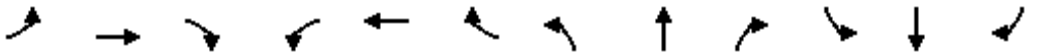
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	802	367	673	1105	852	451
Future Volume (vph)	802	367	673	1105	852	451
Satd. Flow (prot)	3317	4914	3386	2614	3285	1530
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	3289	4914	3386	2614	3168	1530
Satd. Flow (RTOR)						179
Lane Group Flow (vph)	844	386	708	1163	897	475
Turn Type	Prot	NA	NA	pt+ov	Prot	Perm
Protected Phases	7	4	8	8 1	1	
Permitted Phases						1
Detector Phase	7	4	8	8 1	1	1
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0		10.0	10.0
Minimum Split (s)	42.8	26.5	26.5		44.1	44.1
Total Split (s)	55.8	92.3	36.5		44.1	44.1
Total Split (%)	40.9%	67.7%	26.8%		32.3%	32.3%
Yellow Time (s)	3.3	3.3	3.3		3.3	3.3
All-Red Time (s)	2.5	3.2	3.2		2.8	2.8
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	5.8	6.5	6.5		6.1	6.1
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	Min	Min	Max		Max	Max
Act Effct Green (s)	36.5	72.4	30.1	74.3	38.1	38.1
Actuated g/C Ratio	0.30	0.59	0.24	0.60	0.31	0.31
v/c Ratio	0.86	0.13	0.86	0.74	0.88	0.80
Control Delay	50.4	11.3	56.5	22.2	52.5	35.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.4	11.3	56.5	22.2	52.5	35.8
LOS	D	B	E	C	D	D
Approach Delay		38.2	35.2		46.7	
Approach LOS		D	D		D	
Queue Length 50th (m)	104.2	15.2	91.3	114.2	111.9	72.2
Queue Length 95th (m)	128.6	20.1	#139.3	176.0	#168.6	#142.1
Internal Link Dist (m)		240.3	292.7		47.6	
Turn Bay Length (m)	150.0					30.0
Base Capacity (vph)	1351	3434	827	1578	1017	597
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	0.11	0.86	0.74	0.88	0.80

Intersection Summary
Cycle Length: 136.4
Actuated Cycle Length: 123.1
Natural Cycle: 115
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.88

Intersection Signal Delay: 39.5	Intersection LOS: D
Intersection Capacity Utilization 84.8%	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.

Splits and Phases: 7: Wellington St & Portage



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	0	33	0	0	0	7	1100	0	0	1035	7
Future Volume (vph)	33	0	33	0	0	0	7	1100	0	0	1035	7
Satd. Flow (prot)	1710	1530	0	1800	1800	0	1710	1800	0	1800	1798	0
Flt Permitted	0.757						0.167					
Satd. Flow (perm)	1363	1530	0	1800	1800	0	301	1800	0	1800	1798	0
Satd. Flow (RTOR)		110									1	
Lane Group Flow (vph)	35	35	0	0	0	0	7	1158	0	0	1096	0
Turn Type	Perm	NA		Perm			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)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	22.0	22.0		22.0	22.0		53.0	53.0		53.0	53.0	
Total Split (s)	22.0	22.0		22.0	22.0		53.0	53.0		53.0	53.0	
Total Split (%)	29.3%	29.3%		29.3%	29.3%		70.7%	70.7%		70.7%	70.7%	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.3	3.3		3.3	3.3	
All-Red Time (s)	3.2	3.2		3.2	3.2		2.6	2.6		2.6	2.6	
Lost Time Adjust (s)	0.0	-2.2		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.2	4.0		6.2	6.2		5.9	5.9		5.9	5.9	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	
Act Effct Green (s)	10.0	12.2					61.7	61.7			61.7	
Actuated g/C Ratio	0.13	0.16					0.82	0.82			0.82	
v/c Ratio	0.19	0.10					0.03	0.78			0.74	
Control Delay	31.9	0.6					3.7	13.0			11.2	
Queue Delay	0.0	0.0					0.0	0.0			0.0	
Total Delay	31.9	0.6					3.7	13.0			11.2	
LOS	C	A					A	B			B	
Approach Delay		16.2						12.9			11.2	
Approach LOS		B						B			B	
Queue Length 50th (m)	4.7	0.0					0.3	116.4			100.4	
Queue Length 95th (m)	12.9	0.0					1.4	#239.2			#219.3	
Internal Link Dist (m)		60.2			43.3			76.9			31.3	
Turn Bay Length (m)	30.0						30.0					
Base Capacity (vph)	287	450					247	1481			1480	
Starvation Cap Reductn	0	0					0	0			0	
Spillback Cap Reductn	0	0					0	0			0	
Storage Cap Reductn	0	0					0	0			0	
Reduced v/c Ratio	0.12	0.08					0.03	0.78			0.74	

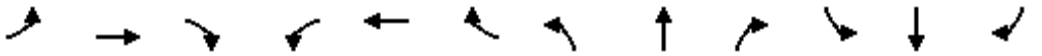
Intersection Summary
Cycle Length: 75
Actuated Cycle Length: 75
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.78

Intersection Signal Delay: 12.2	Intersection LOS: B
Intersection Capacity Utilization 77.7%	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.

Splits and Phases: 10: Booth St & Chaudiere



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	845	0	0	1247	117	0	972	176	146	982	233
Future Volume (vph)	0	845	0	0	1247	117	0	972	176	146	982	233
Satd. Flow (prot)	0	3420	0	0	3420	1530	0	3229	0	1613	3196	1515
Flt Permitted										0.084		
Satd. Flow (perm)	0	3420	0	0	3420	1480	0	3229	0	143	3196	1471
Satd. Flow (RTOR)								19				35
Lane Group Flow (vph)	0	889	0	0	1313	123	0	1208	0	154	1034	245
Turn Type		NA			NA	Perm		NA		pm+pt	NA	Perm
Protected Phases		4			8			2		1	6	
Permitted Phases						8				6		6
Detector Phase		4			8	8		2		1	6	6
Switch Phase												
Minimum Initial (s)		10.0			10.0	10.0		10.0		5.2	10.0	10.0
Minimum Split (s)		35.8			35.8	35.8		31.8		12.0	31.9	31.9
Total Split (s)		60.0			60.0	60.0		48.0		12.0	60.0	60.0
Total Split (%)		50.0%			50.0%	50.0%		40.0%		10.0%	50.0%	50.0%
Yellow Time (s)		3.7			3.7	3.7		3.3		3.3	3.3	3.3
All-Red Time (s)		3.1			3.1	3.1		3.5		3.5	3.6	3.6
Lost Time Adjust (s)		0.0			0.0	0.0		-2.7		0.0	0.0	0.0
Total Lost Time (s)		6.8			6.8	6.8		4.1		6.8	6.9	6.9
Lead/Lag								Lag		Lead		
Lead-Lag Optimize?								Yes		Yes		
Recall Mode		Min			Min	Min		C-Max		None	C-Min	C-Min
Act Effct Green (s)		51.1			51.1	51.1		43.9		55.3	55.2	55.2
Actuated g/C Ratio		0.43			0.43	0.43		0.37		0.46	0.46	0.46
v/c Ratio		0.61			0.90	0.20		1.01		0.99	0.70	0.35
Control Delay		26.5			37.2	17.4		39.0		101.2	29.6	20.0
Queue Delay		0.0			1.4	0.0		0.0		0.0	0.0	0.0
Total Delay		26.5			38.6	17.4		39.0		101.2	29.6	20.0
LOS		C			D	B		D		F	C	C
Approach Delay		26.5			36.8			39.0			35.6	
Approach LOS		C			D			D			D	
Queue Length 50th (m)		85.4			152.3	18.2		~166.7		~31.7	108.8	33.5
Queue Length 95th (m)		106.4			185.5	24.4		m104.0		#76.2	135.4	54.7
Internal Link Dist (m)		331.0			119.3			51.3			192.9	
Turn Bay Length (m)						70.0				145.0		55.0
Base Capacity (vph)		1516			1516	656		1193		155	1470	695
Starvation Cap Reductn		0			77	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			0.91	0.19		1.01		0.99	0.70	0.35

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 3 (3%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.01

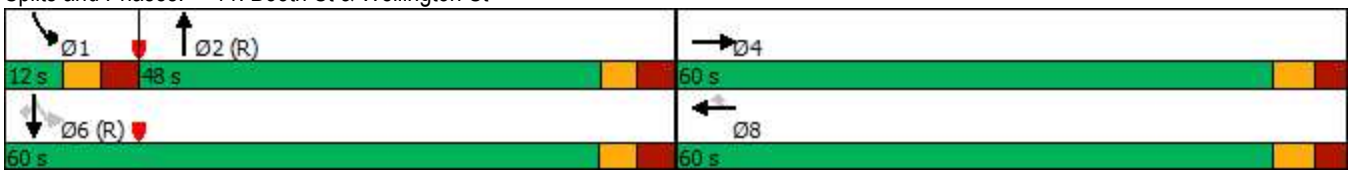
Intersection Signal Delay: 35.2	Intersection LOS: D
Intersection Capacity Utilization 94.1%	ICU Level of Service F
Analysis Period (min) 15	

~ 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.

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

Splits and Phases: 11: Booth St & Wellington St



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	545	489	32	19	788	234	12	540	34	88	411	243
Future Volume (vph)	545	489	32	19	788	234	12	540	34	88	411	243
Satd. Flow (prot)	1676	3316	0	1710	3195	0	1710	1752	0	1629	1782	1515
Flt Permitted	0.950			0.447			0.418			0.105		
Satd. Flow (perm)	1640	3316	0	801	3195	0	725	1752	0	180	1782	1515
Satd. Flow (RTOR)		8						3				
Lane Group Flow (vph)	574	549	0	20	1075	0	13	604	0	93	433	256
Turn Type	Prot	NA		Perm	NA		Perm	NA		pm+pt	NA	Over
Protected Phases	5	2			6			8		7	4	5
Permitted Phases				6			8			4		
Detector Phase	5	2		6	6		8	8		7	4	5
Switch Phase												
Minimum Initial (s)	5.0	10.0		10.0	10.0		10.0	10.0		4.5	10.0	5.0
Minimum Split (s)	11.5	36.5		36.5	36.5		34.5	34.5		11.5	34.5	11.5
Total Split (s)	30.0	70.0		40.0	40.0		38.0	38.0		12.0	50.0	30.0
Total Split (%)	25.0%	58.3%		33.3%	33.3%		31.7%	31.7%		10.0%	41.7%	25.0%
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	3.3
All-Red Time (s)	3.2	3.2		3.2	3.2		3.2	3.2		3.2	3.2	3.2
Lost Time Adjust (s)	-3.3	0.0		0.0	-3.3		0.0	-3.3		0.0	0.0	-3.3
Total Lost Time (s)	3.2	6.5		6.5	3.2		6.5	3.2		6.5	6.5	3.2
Lead/Lag	Lead			Lag	Lag		Lag	Lag		Lead		Lead
Lead-Lag Optimize?	Yes			Yes	Yes		Yes	Yes		Yes		Yes
Recall Mode	None	C-Max		C-Max	C-Max		Min	Min		None	Min	None
Act Effct Green (s)	26.8	63.5		33.5	36.8		31.5	34.8		43.5	43.5	26.8
Actuated g/C Ratio	0.22	0.53		0.28	0.31		0.26	0.29		0.36	0.36	0.22
v/c Ratio	1.53	0.31		0.09	1.10		0.07	1.18		0.71	0.67	0.76
Control Delay	277.5	18.8		34.1	97.1		34.6	139.6		39.8	28.3	79.7
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	277.5	18.8		34.1	97.1		34.6	139.6		39.8	28.3	79.7
LOS	F	B		C	F		C	F		D	C	E
Approach Delay		151.0			95.9			137.4			46.5	
Approach LOS		F			F			F			D	
Queue Length 50th (m)	~203.2	51.5		3.7	~159.5		2.4	~180.2		17.8	114.0	68.3
Queue Length 95th (m)	#267.2	65.5		10.4	#200.8		8.0	#253.1		m#21.7	148.7	#101.8
Internal Link Dist (m)		285.1			168.5			37.2			83.1	
Turn Bay Length (m)	160.0			40.0								120.0
Base Capacity (vph)	374	1758		223	979		190	510		131	645	338
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	1.53	0.31		0.09	1.10		0.07	1.18		0.71	0.67	0.76

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 9 (8%), Referenced to phase 2:EBT and 6:WBTL, Start of Green
Natural Cycle: 145
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.53

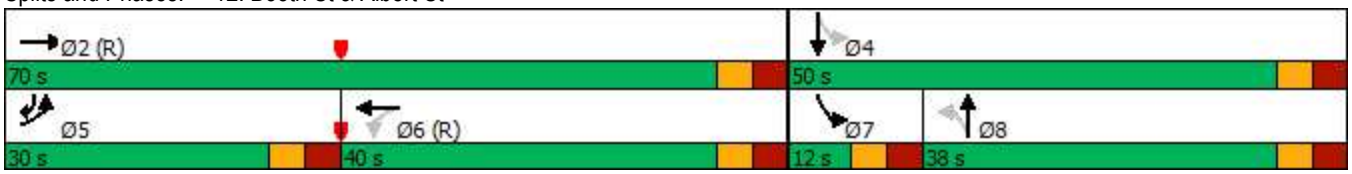
Intersection Signal Delay: 109.4	Intersection LOS: F
Intersection Capacity Utilization 117.0%	ICU Level of Service H
Analysis Period (min) 15	

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

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

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

Splits and Phases: 12: Booth St & Albert St



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	650	126	267	870	151	343
Future Volume (vph)	650	126	267	870	151	343
Satd. Flow (prot)	3268	0	1676	3386	1629	1485
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3268	0	1656	3386	1590	1485
Satd. Flow (RTOR)	22					
Lane Group Flow (vph)	817	0	281	916	159	361
Turn Type	NA		Prot	NA	Prot	Over
Protected Phases	2		1	6	8	1
Permitted Phases						
Detector Phase	2		1	6	8	1
Switch Phase						
Minimum Initial (s)	10.0		5.0	10.0	10.0	5.0
Minimum Split (s)	31.8		11.2	31.8	29.3	11.2
Total Split (s)	52.0		25.0	77.0	43.0	25.0
Total Split (%)	43.3%		20.8%	64.2%	35.8%	20.8%
Yellow Time (s)	3.3		3.3	3.3	3.3	3.3
All-Red Time (s)	3.5		2.9	3.5	3.0	2.9
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	6.8		6.2	6.8	6.3	6.2
Lead/Lag	Lag		Lead			Lead
Lead-Lag Optimize?	Yes		Yes			Yes
Recall Mode	C-Max		None	C-Max	Min	None
Act Effct Green (s)	45.2		38.4	89.8	17.1	38.4
Actuated g/C Ratio	0.38		0.32	0.75	0.14	0.32
v/c Ratio	0.66		0.52	0.36	0.69	0.76
Control Delay	27.4		22.2	3.8	63.4	49.7
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	27.4		22.2	3.8	63.4	49.7
LOS	C		C	A	E	D
Approach Delay	27.4			8.1	53.9	
Approach LOS	C			A	D	
Queue Length 50th (m)	56.0		34.4	30.4	38.0	80.2
Queue Length 95th (m)	69.2		m36.0	m30.6	58.2	#145.6
Internal Link Dist (m)	82.0			285.1	54.7	
Turn Bay Length (m)			90.0			
Base Capacity (vph)	1244		536	2533	498	475
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	0.66		0.52	0.36	0.32	0.76

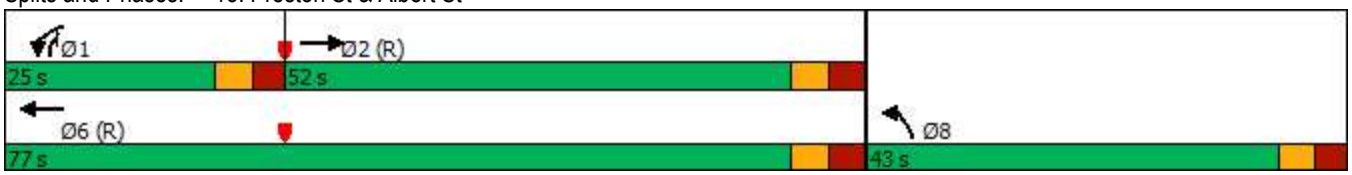
Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 65 (54%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

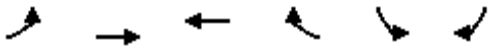
Maximum v/c Ratio: 0.76

Intersection Signal Delay: 23.8	Intersection LOS: C
Intersection Capacity Utilization 65.3%	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.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 13: Preston St & Albert St





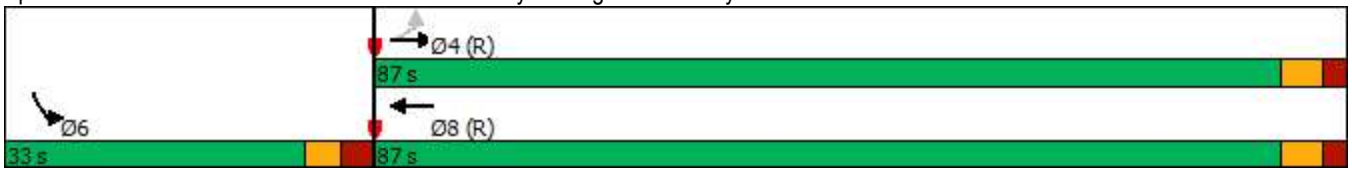
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	2	923	1572	7	5	22
Future Volume (vph)	2	923	1572	7	5	22
Satd. Flow (prot)	1710	3386	3416	0	1586	0
Flt Permitted	0.131				0.991	
Satd. Flow (perm)	236	3386	3416	0	1585	0
Satd. Flow (RTOR)			1		23	
Lane Group Flow (vph)	2	972	1662	0	28	0
Turn Type	Perm	NA	NA		Prot	
Protected Phases		4	8		6	
Permitted Phases	4					
Detector Phase	4	4	8		6	
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0		10.0	
Minimum Split (s)	37.0	37.0	37.0		32.3	
Total Split (s)	87.0	87.0	87.0		33.0	
Total Split (%)	72.5%	72.5%	72.5%		27.5%	
Yellow Time (s)	3.7	3.7	3.7		3.3	
All-Red Time (s)	2.3	2.3	2.3		3.0	
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	
Total Lost Time (s)	6.0	6.0	6.0		6.3	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	C-Max		None	
Act Effct Green (s)	106.6	106.6	106.6		10.0	
Actuated g/C Ratio	0.89	0.89	0.89		0.08	
v/c Ratio	0.01	0.32	0.55		0.18	
Control Delay	2.0	2.3	3.6		25.8	
Queue Delay	0.0	0.0	0.0		0.0	
Total Delay	2.0	2.3	3.6		25.8	
LOS	A	A	A		C	
Approach Delay		2.3	3.6		25.8	
Approach LOS		A	A		C	
Queue Length 50th (m)	0.1	26.0	32.4		1.2	
Queue Length 95th (m)	0.6	32.3	52.6		10.7	
Internal Link Dist (m)		651.1	331.0		21.1	
Turn Bay Length (m)	40.0					
Base Capacity (vph)	210	3008	3035		370	
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	0.01	0.32	0.55		0.08	

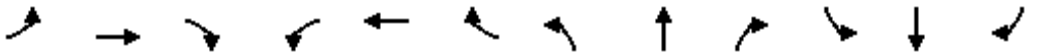
Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 37 (31%), Referenced to phase 4:EBTL and 8:WBT, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.55

Intersection Signal Delay: 3.4	Intersection LOS: A
Intersection Capacity Utilization 64.7%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 14: Sir John A. Macdonald Pkwy/Wellington St & Vimy Pl



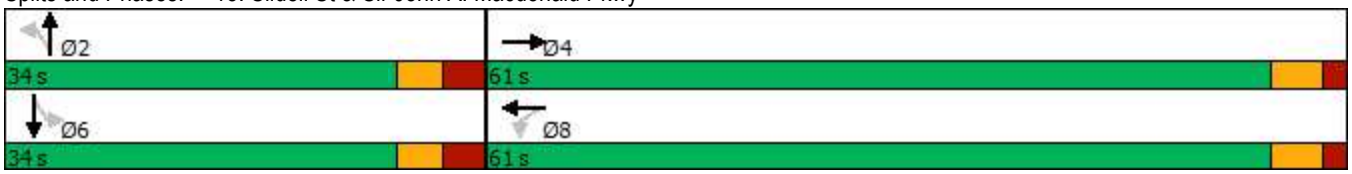


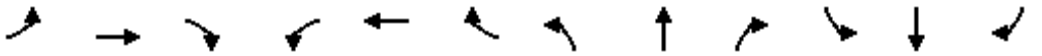
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	974	4	2	1726	0	26	14	35	3	26	11
Future Volume (vph)	0	974	4	2	1726	0	26	14	35	3	26	11
Satd. Flow (prot)	0	3383	0	0	3420	0	0	1642	0	0	1669	0
Flt Permitted					0.954			0.870			0.969	
Satd. Flow (perm)	0	3383	0	0	3263	0	0	1450	0	0	1623	0
Satd. Flow (RTOR)		1						37			12	
Lane Group Flow (vph)	0	1029	0	0	1819	0	0	79	0	0	42	0
Turn Type		NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases				8			2			6		
Detector Phase		4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)		10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)		30.5		30.5	30.5		33.3	33.3		33.3	33.3	
Total Split (s)		61.0		61.0	61.0		34.0	34.0		34.0	34.0	
Total Split (%)		64.2%		64.2%	64.2%		35.8%	35.8%		35.8%	35.8%	
Yellow Time (s)		3.7		3.7	3.7		3.3	3.3		3.3	3.3	
All-Red Time (s)		1.8		1.8	1.8		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.5			5.5			6.3			6.3	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode		Max		Max	Max		None	None		None	None	
Act Effct Green (s)		61.7			61.7			10.3			10.3	
Actuated g/C Ratio		0.78			0.78			0.13			0.13	
v/c Ratio		0.39			0.72			0.36			0.19	
Control Delay		4.4			8.3			24.0			25.9	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		4.4			8.3			24.0			25.9	
LOS		A			A			C			C	
Approach Delay		4.4			8.3			24.0			25.9	
Approach LOS		A			A			C			C	
Queue Length 50th (m)		27.3			76.0			5.9			4.2	
Queue Length 95th (m)		39.2			112.2			18.3			13.1	
Internal Link Dist (m)		192.5			288.5			38.4			167.1	
Turn Bay Length (m)												
Base Capacity (vph)		2634			2540			532			576	
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			0.72			0.15			0.07	

Intersection Summary
Cycle Length: 95
Actuated Cycle Length: 79.3
Natural Cycle: 90
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.72

Intersection Signal Delay: 7.6	Intersection LOS: A
Intersection Capacity Utilization 75.5%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 15: Slidell St & Sir John A. Macdonald Pkwy





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	559	88	94	751	121	88	185	84	59	68	11
Future Volume (vph)	10	559	88	94	751	121	88	185	84	59	68	11
Satd. Flow (prot)	1555	1714	0	1710	1782	1530	1710	1800	1485	1710	1745	0
Flt Permitted	0.272			0.334			0.702			0.509		
Satd. Flow (perm)	437	1714	0	593	1782	1340	1212	1800	1427	899	1745	0
Satd. Flow (RTOR)		15				127			76		8	
Lane Group Flow (vph)	11	681	0	99	791	127	93	195	88	62	84	0
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6		6	8		8	4		
Detector Phase	2	2		6	6	6	8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	32.5	32.5		32.5	32.5	32.5	31.4	31.4	31.4	31.4	31.4	
Total Split (s)	68.0	68.0		68.0	68.0	68.0	32.0	32.0	32.0	32.0	32.0	
Total Split (%)	68.0%	68.0%		68.0%	68.0%	68.0%	32.0%	32.0%	32.0%	32.0%	32.0%	
Yellow Time (s)	3.3	3.3		3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	
All-Red Time (s)	3.2	3.2		3.2	3.2	3.2	3.1	3.1	3.1	3.1	3.1	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.5	6.5		6.5	6.5	6.5	6.4	6.4	6.4	6.4	6.4	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		C-Max	C-Max	C-Max	None	None	None	None	None	
Act Effct Green (s)	69.1	69.1		69.1	69.1	69.1	18.0	18.0	18.0	18.0	18.0	
Actuated g/C Ratio	0.69	0.69		0.69	0.69	0.69	0.18	0.18	0.18	0.18	0.18	
v/c Ratio	0.04	0.57		0.24	0.64	0.13	0.43	0.60	0.28	0.39	0.26	
Control Delay	7.3	15.4		9.1	13.1	1.8	40.6	44.5	11.6	40.8	31.7	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	7.3	15.4		9.1	13.1	1.8	40.6	44.5	11.6	40.8	31.7	
LOS	A	B		A	B	A	D	D	B	D	C	
Approach Delay		15.3			11.3			35.8			35.6	
Approach LOS		B			B			D			D	
Queue Length 50th (m)	0.6	106.0		6.1	72.9	0.0	17.5	37.9	2.1	11.5	13.8	
Queue Length 95th (m)	m1.5	m158.3		17.9	148.3	6.6	30.1	55.2	14.2	22.5	25.0	
Internal Link Dist (m)		635.7			497.2			83.8			130.2	
Turn Bay Length (m)	45.0			50.0			50.0		20.0	45.0		
Base Capacity (vph)	302	1189		410	1231	965	310	460	421	230	452	
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.04	0.57		0.24	0.64	0.13	0.30	0.42	0.21	0.27	0.19	

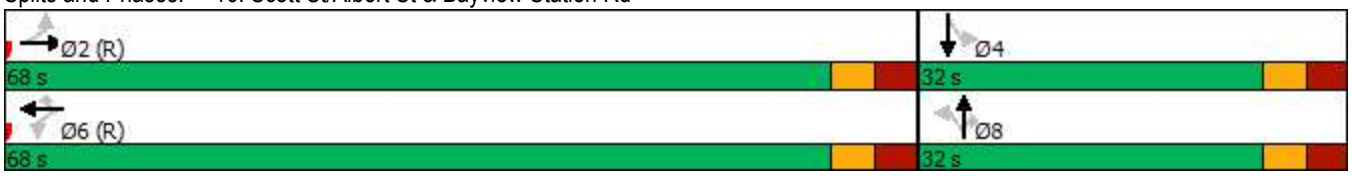
Intersection Summary
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 65 (65%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated

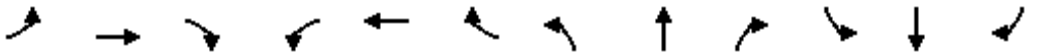
Maximum v/c Ratio: 0.64

Intersection Signal Delay: 18.2	Intersection LOS: B
Intersection Capacity Utilization 95.7%	ICU Level of Service F
Analysis Period (min) 15	

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

Splits and Phases: 16: Scott St/Albert St & Bayview Station Rd





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	227	477	86	56	625	63	40	546	48	58	233	210
Future Volume (vph)	227	477	86	56	625	63	40	546	48	58	233	210
Satd. Flow (prot)	1693	1679	0	1710	1800	1530	1710	1755	0	1710	1565	0
Flt Permitted	0.950			0.441			0.290			0.119		
Satd. Flow (perm)	1571	1679	0	746	1800	1222	507	1755	0	208	1565	0
Satd. Flow (RTOR)		11				119		5			53	
Lane Group Flow (vph)	239	593	0	59	658	66	42	626	0	61	466	0
Turn Type	Prot	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	2			6			8			4	
Permitted Phases				6		6	8			4		
Detector Phase	5	2		6	6	6	8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0		10.0	10.0	10.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	10.6	28.1		28.1	28.1	28.1	35.3	35.3		35.3	35.3	
Total Split (s)	15.0	49.0		34.0	34.0	34.0	45.0	45.0		45.0	45.0	
Total Split (%)	15.0%	49.0%		34.0%	34.0%	34.0%	45.0%	45.0%		45.0%	45.0%	
Yellow Time (s)	3.3	3.3		3.3	3.3	3.3	3.0	3.0		3.0	3.0	
All-Red Time (s)	2.3	2.8		2.8	2.8	2.8	3.3	3.3		3.3	3.3	
Lost Time Adjust (s)	0.0	0.0		0.0	-3.3	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.6	6.1		6.1	2.8	6.1	6.3	6.3		6.3	6.3	
Lead/Lag	Lead			Lag	Lag	Lag						
Lead-Lag Optimize?	Yes			Yes	Yes	Yes						
Recall Mode	None	C-Max		C-Max	C-Max	C-Max	Min	Min		Min	Min	
Act Effct Green (s)	16.6	50.1		27.9	31.2	27.9	37.5	37.5		37.5	37.5	
Actuated g/C Ratio	0.17	0.50		0.28	0.31	0.28	0.38	0.38		0.38	0.38	
v/c Ratio	0.85	0.70		0.28	1.17	0.15	0.22	0.95		0.78	0.75	
Control Delay	69.5	24.8		29.2	122.2	2.3	24.4	55.0		87.8	32.5	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	69.5	24.8		29.2	122.2	2.3	24.4	55.0		87.8	32.5	
LOS	E	C		C	F	A	C	E		F	C	
Approach Delay		37.6			105.1			53.1			38.9	
Approach LOS		D			F			D			D	
Queue Length 50th (m)	48.6	90.0		7.8	~162.9	0.1	5.6	118.6		10.6	71.3	
Queue Length 95th (m)	#95.1	133.7		m12.6	#228.7	m1.5	14.4	#190.2		#35.8	111.4	
Internal Link Dist (m)		92.9			635.7			70.7			630.1	
Turn Bay Length (m)	55.0			65.0		35.0	55.0			50.0		
Base Capacity (vph)	280	846		208	561	426	196	682		80	638	
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	
Reduced v/c Ratio	0.85	0.70		0.28	1.17	0.15	0.21	0.92		0.76	0.73	

Intersection Summary
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 14 (14%), Referenced to phase 2:EBT and 6:WBTL, Start of Green
Natural Cycle: 120
Control Type: Actuated-Coordinated

Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Satd. Flow (RTOR)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	2.0
Minimum Split (s)	6.0
Total Split (s)	6.0
Total Split (%)	6%
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	None
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (m)	
Queue Length 95th (m)	
Internal Link Dist (m)	
Turn Bay Length (m)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Maximum v/c Ratio: 1.17

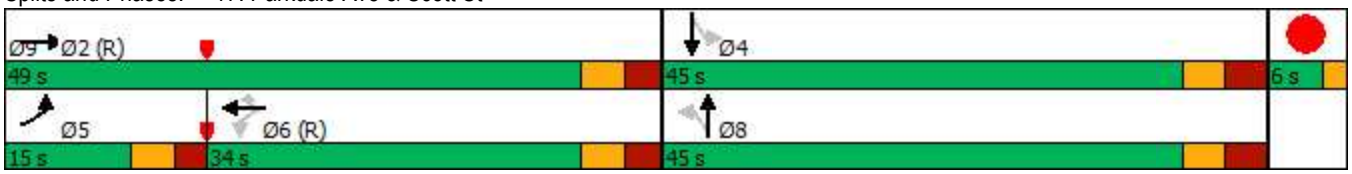
Intersection Signal Delay: 60.3	Intersection LOS: E
Intersection Capacity Utilization 108.6%	ICU Level of Service G
Analysis Period (min) 15	

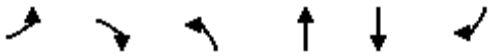
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

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

Splits and Phases: 17: Parkdale Ave & Scott St





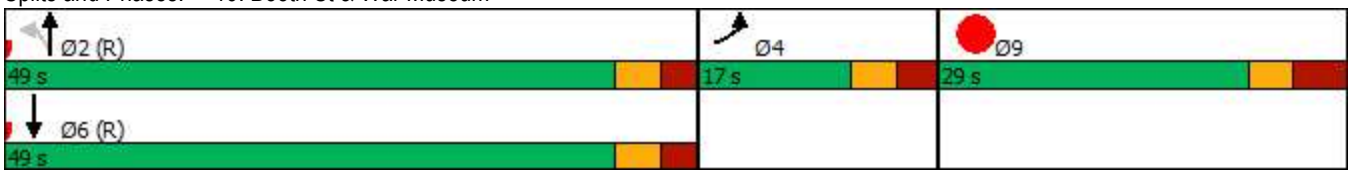
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø9
Lane Configurations							
Traffic Volume (vph)	1	8	8	1106	1060	10	
Future Volume (vph)	1	8	8	1106	1060	10	
Satd. Flow (prot)	1554	0	1710	3420	3417	0	
Flt Permitted	0.994		0.230				
Satd. Flow (perm)	1551	0	414	3420	3417	0	
Satd. Flow (RTOR)	8				1		
Lane Group Flow (vph)	9	0	8	1164	1127	0	
Turn Type	Prot		Perm	NA	NA		
Protected Phases	4			2	6		9
Permitted Phases			2				
Detector Phase	4		2	2	6		
Switch Phase							
Minimum Initial (s)	3.8		10.0	10.0	10.0		10.0
Minimum Split (s)	10.0		30.9	30.9	30.9		29.0
Total Split (s)	17.0		49.0	49.0	49.0		29.0
Total Split (%)	17.9%		51.6%	51.6%	51.6%		31%
Yellow Time (s)	3.3		3.3	3.3	3.3		3.0
All-Red Time (s)	2.9		2.6	2.6	2.6		4.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0		
Total Lost Time (s)	6.2		5.9	5.9	5.9		
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	None		C-Max	C-Max	C-Max		None
Act Effct Green (s)	5.9		85.4	85.4	85.4		
Actuated g/C Ratio	0.06		0.90	0.90	0.90		
v/c Ratio	0.09		0.02	0.38	0.37		
Control Delay	26.9		7.2	5.5	5.4		
Queue Delay	0.0		0.0	0.0	0.0		
Total Delay	26.9		7.2	5.5	5.4		
LOS	C		A	A	A		
Approach Delay	26.9			5.5	5.4		
Approach LOS	C			A	A		
Queue Length 50th (m)	0.2		0.0	0.0	0.0		
Queue Length 95th (m)	5.0		3.4	110.7	105.6		
Internal Link Dist (m)	148.9			192.9	188.6		
Turn Bay Length (m)			35.0				
Base Capacity (vph)	183		372	3074	3072		
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	0.05		0.02	0.38	0.37		

Intersection Summary
Cycle Length: 95
Actuated Cycle Length: 95
Offset: 10 (11%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.38

Intersection Signal Delay: 5.5	Intersection LOS: A
Intersection Capacity Utilization 45.7%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 19: Booth St & War Museum



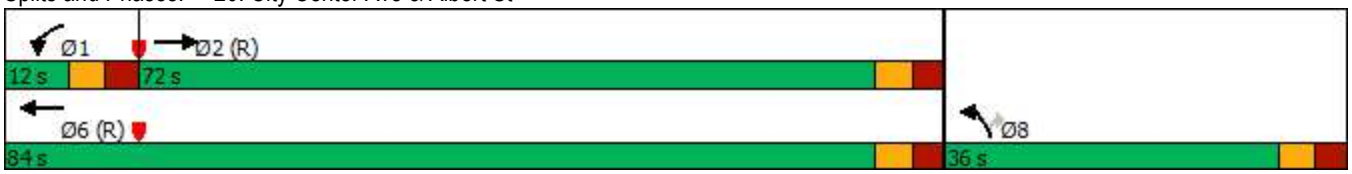
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	595	76	84	835	57	80
Future Volume (vph)	595	76	84	835	57	80
Satd. Flow (prot)	3332	0	1693	3353	1644	1485
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3332	0	1693	3353	1644	1485
Satd. Flow (RTOR)	18					84
Lane Group Flow (vph)	706	0	88	879	60	84
Turn Type	NA		Prot	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases						8
Detector Phase	2		1	6	8	8
Switch Phase						
Minimum Initial (s)	10.0		5.0	10.0	10.0	10.0
Minimum Split (s)	27.3		11.3	27.3	29.3	29.3
Total Split (s)	72.0		12.0	84.0	36.0	36.0
Total Split (%)	60.0%		10.0%	70.0%	30.0%	30.0%
Yellow Time (s)	3.3		3.3	3.3	3.3	3.3
All-Red Time (s)	3.0		3.0	3.0	3.0	3.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3		6.3	6.3	6.3	6.3
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	C-Max		None	C-Max	None	None
Act Effct Green (s)	75.6		14.5	96.4	11.0	11.0
Actuated g/C Ratio	0.63		0.12	0.80	0.09	0.09
v/c Ratio	0.34		0.43	0.33	0.40	0.40
Control Delay	10.9		49.5	4.6	59.1	16.1
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	10.9		49.5	4.6	59.1	16.1
LOS	B		D	A	E	B
Approach Delay	10.9			8.7	34.0	
Approach LOS	B			A	C	
Queue Length 50th (m)	37.6		18.0	28.2	14.4	0.0
Queue Length 95th (m)	55.6		29.0	62.7	28.1	15.4
Internal Link Dist (m)	497.2			111.3	178.8	
Turn Bay Length (m)			35.0		30.0	
Base Capacity (vph)	2105		204	2693	406	430
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	0.34		0.43	0.33	0.15	0.20

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 80 (67%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.43

Intersection Signal Delay: 11.5	Intersection LOS: B
Intersection Capacity Utilization 48.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 20: City Center Ave & Albert St



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1019	32	60	1157	39	56
Future Volume (vph)	1019	32	60	1157	39	56
Satd. Flow (prot)	3359	0	1710	3386	1586	0
Flt Permitted			0.240		0.980	
Satd. Flow (perm)	3359	0	429	3386	1585	0
Satd. Flow (RTOR)	6				56	
Lane Group Flow (vph)	1107	0	63	1218	100	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	4			8	2	
Permitted Phases			8			
Detector Phase	4		8	8	2	
Switch Phase						
Minimum Initial (s)	10.0		10.0	10.0	10.0	
Minimum Split (s)	30.0		22.0	22.0	33.9	
Total Split (s)	86.0		86.0	86.0	34.0	
Total Split (%)	71.7%		71.7%	71.7%	28.3%	
Yellow Time (s)	3.7		3.7	3.7	3.3	
All-Red Time (s)	2.1		2.1	2.1	2.6	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	5.8		5.8	5.8	5.9	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max		C-Max	C-Max	None	
Act Effct Green (s)	94.5		94.5	94.5	13.8	
Actuated g/C Ratio	0.79		0.79	0.79	0.12	
v/c Ratio	0.42		0.19	0.46	0.43	
Control Delay	2.5		6.2	5.7	28.1	
Queue Delay	0.1		0.0	0.2	0.0	
Total Delay	2.6		6.2	5.9	28.1	
LOS	A		A	A	C	
Approach Delay	2.6			5.9	28.1	
Approach LOS	A			A	C	
Queue Length 50th (m)	16.4		2.6	35.0	10.5	
Queue Length 95th (m)	m32.7		12.8	91.6	23.8	
Internal Link Dist (m)	119.3			240.3	83.4	
Turn Bay Length (m)			65.0			
Base Capacity (vph)	2645		337	2665	414	
Starvation Cap Reductn	476		0	0	0	
Spillback Cap Reductn	0		0	596	9	
Storage Cap Reductn	0		0	0	0	
Reduced v/c Ratio	0.51		0.19	0.59	0.25	

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 27 (23%), Referenced to phase 4:EBT and 8:WBTL, Start of Green
Natural Cycle: 65
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.46

Intersection Signal Delay: 5.3	Intersection LOS: A
Intersection Capacity Utilization 64.4%	ICU Level of Service C
Analysis Period (min) 15	

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

Splits and Phases: 22: Lett St & Wellington St

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	595	16	11	1021	9	14
Future Volume (vph)	595	16	11	1021	9	14
Satd. Flow (prot)	3406	0	1710	3420	1619	0
Flt Permitted			0.408		0.982	
Satd. Flow (perm)	3406	0	734	3420	1619	0
Satd. Flow (RTOR)	4				15	
Lane Group Flow (vph)	643	0	12	1075	24	0
Turn Type	NA		Perm	NA	Perm	
Protected Phases				8		
Permitted Phases	4		8		2	
Detector Phase	4		8	8	2	
Switch Phase						
Minimum Initial (s)	10.0		10.0	10.0	10.0	
Minimum Split (s)	40.1		40.1	40.1	28.3	
Total Split (s)	81.0		81.0	81.0	39.0	
Total Split (%)	67.5%		67.5%	67.5%	32.5%	
Yellow Time (s)	3.3		3.3	3.3	3.3	
All-Red Time (s)	3.8		3.8	3.8	3.0	
Lost Time Adjust (s)	0.0		-3.1	-3.1	-2.3	
Total Lost Time (s)	7.1		4.0	4.0	4.0	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max		C-Max	C-Max	None	
Act Effct Green (s)	106.0		107.8	107.8	12.3	
Actuated g/C Ratio	0.88		0.90	0.90	0.10	
v/c Ratio	0.21		0.02	0.35	0.13	
Control Delay	11.5		1.8	2.1	30.0	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	11.5		1.8	2.1	30.0	
LOS	B		A	A	C	
Approach Delay	11.5			2.1	30.0	
Approach LOS	B			A	C	
Queue Length 50th (m)	70.1		0.4	26.3	2.1	
Queue Length 95th (m)	m84.5		1.3	32.3	10.7	
Internal Link Dist (m)	168.5			265.3	36.3	
Turn Bay Length (m)			50.0			
Base Capacity (vph)	3008		659	3073	482	
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	0.21		0.02	0.35	0.05	

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 39 (33%), Referenced to phase 4:EBT and 8:WBTL, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.35

Intersection Signal Delay: 5.9	Intersection LOS: A
Intersection Capacity Utilization 44.8%	ICU Level of Service A
Analysis Period (min) 15	

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

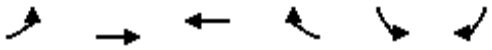
Splits and Phases: 23: Empress Ave & Albert St/Slater St

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	10	1198	23	0	732
Future Volume (vph)	0	10	1198	23	0	732
Satd. Flow (prot)	0	1557	3410	0	0	3420
Flt Permitted						
Satd. Flow (perm)	0	1557	3410	0	0	3420
Lane Group Flow (vph)	0	11	1285	0	0	771
Sign Control	Stop		Free			Free

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization 45.7%		ICU Level of Service A	
Analysis Period (min) 15			

APPENDIX F: Future Total Conditions - Synchro Outputs

Synchro Modelling Outputs – Phase One (2030) Conditions



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	603	985	338	704	1962	311
Future Volume (vph)	603	985	338	704	1962	311
Satd. Flow (prot)	3317	4914	3420	2693	3285	1530
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	3303	4914	3420	2693	3272	1501
Satd. Flow (RTOR)						69
Lane Group Flow (vph)	635	1037	356	741	2065	327
Turn Type	Prot	NA	NA	pt+ov	Prot	Perm
Protected Phases	7	4	8	1 8	1	
Permitted Phases						1
Detector Phase	7	4	8	1 8	1	1
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0		10.0	10.0
Minimum Split (s)	42.8	26.5	26.5		44.1	44.1
Total Split (s)	42.8	70.3	27.5		51.1	51.1
Total Split (%)	35.3%	57.9%	22.7%		42.1%	42.1%
Yellow Time (s)	3.3	3.3	3.3		3.3	3.3
All-Red Time (s)	2.5	3.2	3.2		2.8	2.8
Lost Time Adjust (s)	0.0	0.0	0.0		-2.1	0.0
Total Lost Time (s)	5.8	6.5	6.5		4.0	6.1
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	Min	Min	Min		Max	Max
Act Effct Green (s)	26.3	51.3	19.1	70.9	47.4	45.3
Actuated g/C Ratio	0.24	0.47	0.17	0.65	0.43	0.41
v/c Ratio	0.79	0.45	0.60	0.42	1.45	0.49
Control Delay	46.9	19.8	46.8	10.9	233.7	22.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.9	19.8	46.8	10.9	233.7	22.8
LOS	D	B	D	B	F	C
Approach Delay		30.1	22.6		204.8	
Approach LOS		C	C		F	
Queue Length 50th (m)	70.5	55.2	38.7	41.2	~332.7	42.3
Queue Length 95th (m)	90.8	66.1	60.6	71.7	#427.2	80.8
Internal Link Dist (m)		244.7	295.5		47.9	
Turn Bay Length (m)	150.0					30.0
Base Capacity (vph)	1130	2887	661	1729	1425	662
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	0.56	0.36	0.54	0.43	1.45	0.49

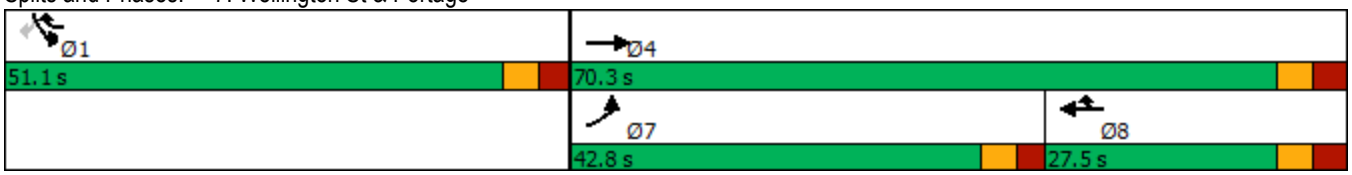
Intersection Summary
Cycle Length: 121.4
Actuated Cycle Length: 109.2
Natural Cycle: 145
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 1.45

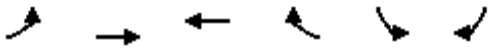
Intersection Signal Delay: 109.5	Intersection LOS: F
Intersection Capacity Utilization 101.5%	ICU Level of Service G
Analysis Period (min) 15	

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

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

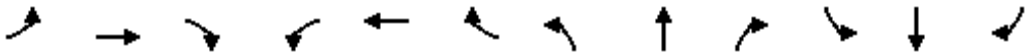
Splits and Phases: 7: Wellington St & Portage





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	1012	494	16	0	5
Future Volume (vph)	0	1012	494	16	0	5
Satd. Flow (prot)	0	3420	3403	0	0	1557
Flt Permitted						
Satd. Flow (perm)	0	3420	3403	0	0	1557
Lane Group Flow (vph)	0	1065	537	0	0	5
Sign Control		Free	Free		Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization 32.9%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	0	5	0	0	0	37	828	0	0	1465	37
Future Volume (vph)	5	0	5	0	0	0	37	828	0	0	1465	37
Satd. Flow (prot)	1710	1530	0	1800	1800	0	1710	1800	0	1800	1793	0
Flt Permitted							0.066					
Satd. Flow (perm)	1800	1530	0	1800	1800	0	119	1800	0	1800	1793	0
Satd. Flow (RTOR)		42									3	
Lane Group Flow (vph)	5	5	0	0	0	0	39	872	0	0	1581	0
Turn Type	Perm	NA		Perm			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)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	22.0	22.0		22.0	22.0		35.9	35.9		35.9	35.9	
Total Split (s)	22.0	22.0		22.0	22.0		53.0	53.0		53.0	53.0	
Total Split (%)	29.3%	29.3%		29.3%	29.3%		70.7%	70.7%		70.7%	70.7%	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.3	3.3		3.3	3.3	
All-Red Time (s)	3.2	3.2		3.2	3.2		2.6	2.6		2.6	2.6	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.2	6.2		6.2	6.2		5.9	5.9		5.9	5.9	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	
Act Effct Green (s)	10.0	10.0					70.6	70.6			70.6	
Actuated g/C Ratio	0.13	0.13					0.94	0.94			0.94	
v/c Ratio	0.02	0.02					0.35	0.51			0.94	
Control Delay	28.6	0.2					15.8	3.4			18.2	
Queue Delay	0.0	0.0					0.0	0.0			0.0	
Total Delay	28.6	0.2					15.8	3.4			18.2	
LOS	C	A					B	A			B	
Approach Delay		14.4						3.9			18.2	
Approach LOS		B						A			B	
Queue Length 50th (m)	0.7	0.0					0.0	0.0			0.0	
Queue Length 95th (m)	3.6	0.0					#18.0	98.8			#383.2	
Internal Link Dist (m)		60.2			43.3			76.9			31.3	
Turn Bay Length (m)	30.0						30.0					
Base Capacity (vph)	379	355					112	1694			1687	
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	0.01	0.01					0.35	0.51			0.94	

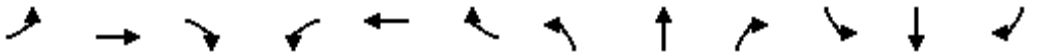
Intersection Summary
Cycle Length: 75
Actuated Cycle Length: 75
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.94

Intersection Signal Delay: 13.0	Intersection LOS: B
Intersection Capacity Utilization 102.2%	ICU Level of Service G
Analysis Period (min) 15	

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

Splits and Phases: 10: Booth St & Chaudiere



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1256	0	0	655	132	0	834	131	146	992	234
Future Volume (vph)	0	1256	0	0	655	132	0	834	131	146	992	234
Satd. Flow (prot)	0	3420	0	0	3386	1530	0	3104	0	1710	3226	1530
Flt Permitted										0.115		
Satd. Flow (perm)	0	3420	0	0	3386	1476	0	3104	0	207	3226	1464
Satd. Flow (RTOR)								19				129
Lane Group Flow (vph)	0	1322	0	0	689	139	0	1016	0	154	1044	246
Turn Type		NA			NA	Perm		NA		pm+pt	NA	Perm
Protected Phases		4			8			2		1	6	
Permitted Phases						8				6		6
Detector Phase		4			8	8		2		1	6	6
Switch Phase												
Minimum Initial (s)		10.0			10.0	10.0		10.0		5.2	10.0	10.0
Minimum Split (s)		35.8			35.8	35.8		31.9		12.0	37.9	37.9
Total Split (s)		48.0			48.0	48.0		35.0		12.0	47.0	47.0
Total Split (%)		50.5%			50.5%	50.5%		36.8%		12.6%	49.5%	49.5%
Yellow Time (s)		3.7			3.7	3.7		3.3		3.3	3.3	3.3
All-Red Time (s)		3.1			3.1	3.1		3.5		3.5	3.6	3.6
Lost Time Adjust (s)		0.0			0.0	0.0		-2.1		0.0	0.0	0.0
Total Lost Time (s)		6.8			6.8	6.8		4.7		6.8	6.9	6.9
Lead/Lag								Lag		Lead		
Lead-Lag Optimize?								Yes		Yes		
Recall Mode		Min			Min	Min		C-Max		None	C-Min	C-Min
Act Effct Green (s)		40.2			40.2	40.2		30.3		41.2	41.1	41.1
Actuated g/C Ratio		0.42			0.42	0.42		0.32		0.43	0.43	0.43
v/c Ratio		0.91			0.48	0.22		1.01		0.82	0.75	0.35
Control Delay		41.0			27.2	22.9		64.6		54.9	25.7	9.5
Queue Delay		3.2			0.0	0.0		31.7		61.9	0.0	0.0
Total Delay		44.2			27.2	22.9		96.3		116.7	25.7	9.5
LOS		D			C	C		F		F	C	A
Approach Delay		44.2			26.5			96.3			32.7	
Approach LOS		D			C			F			C	
Queue Length 50th (m)		120.6			61.6	20.9		~103.7		18.4	88.3	13.8
Queue Length 95th (m)		#173.1			82.3	37.5		#149.3		#54.4	83.1	24.4
Internal Link Dist (m)		67.5			116.7			55.5			192.9	
Turn Bay Length (m)						70.0				145.0		55.0
Base Capacity (vph)		1483			1468	640		1002		187	1394	706
Starvation Cap Reductn		94			0	0		0		0	0	0
Spillback Cap Reductn		50			0	0		98		60	0	0
Storage Cap Reductn		0			0	0		0		0	0	0
Reduced v/c Ratio		0.95			0.47	0.22		1.12		1.21	0.75	0.35

Intersection Summary
Cycle Length: 95
Actuated Cycle Length: 95
Offset: 31 (33%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

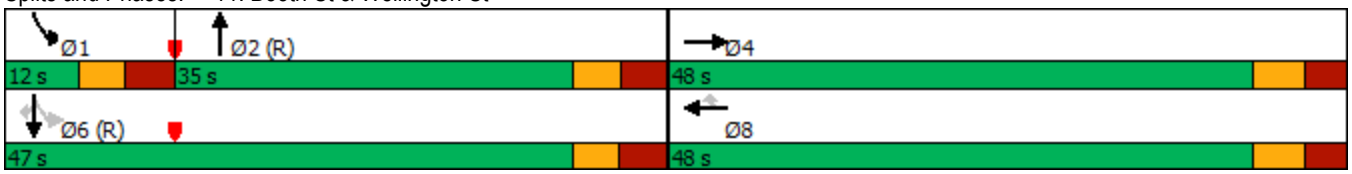
Maximum v/c Ratio: 1.01

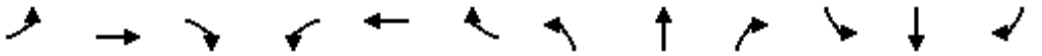
Intersection Signal Delay: 48.9	Intersection LOS: D
Intersection Capacity Utilization 89.6%	ICU Level of Service E
Analysis Period (min) 15	

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

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

Splits and Phases: 11: Booth St & Wellington St





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	393	814	19	14	288	155	6	540	42	174	483	442
Future Volume (vph)	393	814	19	14	288	155	6	540	42	174	483	442
Satd. Flow (prot)	1660	3305	0	1710	2894	0	1710	1747	0	1425	1782	1471
Flt Permitted	0.950			0.324			0.365			0.950		
Satd. Flow (perm)	1590	3305	0	578	2894	0	630	1747	0	1355	1782	1471
Satd. Flow (RTOR)		3						3				
Lane Group Flow (vph)	414	877	0	15	466	0	6	612	0	183	508	465
Turn Type	Prot	NA		Perm	NA		Perm	NA		Prot	NA	Over
Protected Phases	5	2			6			8		7	4	5
Permitted Phases				6			8					
Detector Phase	5	2		6	6		8	8		7	4	5
Switch Phase												
Minimum Initial (s)	5.0	10.0		10.0	10.0		10.0	10.0		5.0	10.0	5.0
Minimum Split (s)	11.5	36.5		36.5	36.5		34.5	34.5		11.5	34.5	11.5
Total Split (s)	29.0	67.0		38.0	38.0		38.0	38.0		15.0	53.0	29.0
Total Split (%)	24.2%	55.8%		31.7%	31.7%		31.7%	31.7%		12.5%	44.2%	24.2%
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	3.3
All-Red Time (s)	3.2	3.2		3.2	3.2		3.2	3.2		3.2	3.2	3.2
Lost Time Adjust (s)	-3.3	0.0		0.0	0.0		0.0	-3.3		-3.3	0.0	-3.3
Total Lost Time (s)	3.2	6.5		6.5	6.5		6.5	3.2		3.2	6.5	3.2
Lead/Lag	Lead			Lag	Lag		Lag	Lag		Lead		Lead
Lead-Lag Optimize?	Yes			Yes	Yes		Yes	Yes		Yes		Yes
Recall Mode	Max	C-Max		C-Max	C-Max		None	None		None	None	Max
Act Effct Green (s)	25.8	60.5		31.5	31.5		31.5	34.8		11.8	46.5	25.8
Actuated g/C Ratio	0.22	0.50		0.26	0.26		0.26	0.29		0.10	0.39	0.22
v/c Ratio	1.16	0.53		0.10	0.61		0.04	1.20		1.31	0.74	1.47
Control Delay	139.1	13.4		42.4	46.6		34.0	147.3		222.7	39.2	263.5
Queue Delay	0.0	0.4		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	139.1	13.8		42.4	46.6		34.0	147.3		222.7	39.2	263.5
LOS	F	B		D	D		C	F		F	D	F
Approach Delay		54.0			46.5			146.2			158.4	
Approach LOS		D			D			F			F	
Queue Length 50th (m)	~118.1	16.7		2.6	52.2		1.1	~184.8		~58.3	106.6	~158.3
Queue Length 95th (m)	#191.1	102.8		10.9	82.7		4.8	#258.2		#105.7	149.8	#224.3
Internal Link Dist (m)		141.9			62.1			37.2			83.1	
Turn Bay Length (m)	160.0			40.0								120.0
Base Capacity (vph)	356	1667		151	759		165	508		140	690	316
Starvation Cap Reductn	0	318		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	1.16	0.65		0.10	0.61		0.04	1.20		1.31	0.74	1.47

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 104 (87%), Referenced to phase 2:EBT and 6:WBTL, Start of Green
Natural Cycle: 145
Control Type: Actuated-Coordinated

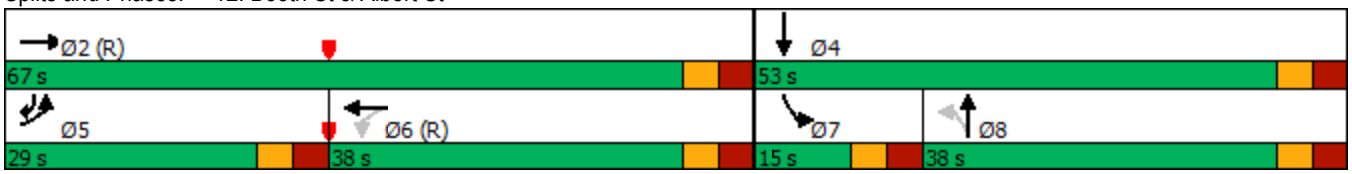
Maximum v/c Ratio: 1.47

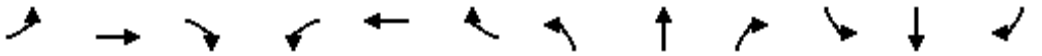
Intersection Signal Delay: 103.1	Intersection LOS: F
Intersection Capacity Utilization 106.7%	ICU Level of Service G
Analysis Period (min) 15	

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

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

Splits and Phases: 12: Booth St & Albert St





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	896	137	393	385	10	125	7	291	21	7	0
Future Volume (vph)	4	896	137	393	385	10	125	7	291	21	7	0
Satd. Flow (prot)	1710	3223	0	1629	3277	0	1583	1446	0	1710	1800	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1710	3223	0	1616	3277	0	1561	1446	0	1710	1800	0
Satd. Flow (RTOR)		16			3			292				
Lane Group Flow (vph)	4	1087	0	414	416	0	132	313	0	22	7	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases												
Detector Phase	5	2		1	6		3	8		7	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		5.0	10.0		5.0	10.0	
Minimum Split (s)	11.2	31.8		11.2	31.8		11.3	29.3		11.3	29.3	
Total Split (s)	12.0	53.0		25.0	66.0		12.0	30.0		12.0	30.0	
Total Split (%)	10.0%	44.2%		20.8%	55.0%		10.0%	25.0%		10.0%	25.0%	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.9	3.5		2.9	3.5		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.2	6.8		6.2	6.8		6.3	6.3		6.3	6.3	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	C-Max		Min	C-Max		None	None		None	None	
Act Effct Green (s)	5.9	46.2		34.7	84.5		14.5	12.6		5.7	12.0	
Actuated g/C Ratio	0.05	0.38		0.29	0.70		0.12	0.10		0.05	0.10	
v/c Ratio	0.05	0.87		0.88	0.18		0.69	0.76		0.28	0.04	
Control Delay	41.5	44.7		50.9	19.1		69.0	19.7		63.9	46.4	
Queue Delay	0.0	1.9		0.0	0.0		0.0	0.8		4.2	0.0	
Total Delay	41.5	46.6		50.9	19.1		69.0	20.5		68.1	46.4	
LOS	D	D		D	B		E	C		E	D	
Approach Delay		46.6			34.9			34.9			62.9	
Approach LOS		D			C			C			E	
Queue Length 50th (m)	0.9	86.0		109.8	46.4		29.5	4.9		5.4	1.6	
Queue Length 95th (m)	m1.9	142.6		#205.7	73.4		#90.0	33.8		14.5	5.9	
Internal Link Dist (m)		88.5			119.1			54.7			65.4	
Turn Bay Length (m)	30.0			90.0						15.0		
Base Capacity (vph)	85	1250		471	2308		191	519		81	355	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	69		0	0		0	53		27	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.05	0.92		0.88	0.18		0.69	0.67		0.41	0.02	

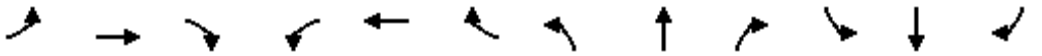
Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 55 (46%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 145
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.88

Intersection Signal Delay: 40.6	Intersection LOS: D
Intersection Capacity Utilization 89.4%	ICU Level of Service E
Analysis Period (min) 15	

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

Splits and Phases: 13: Preston St & Albert St



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	1352	1	8	887	41	3	0	5	2	0	15
Future Volume (vph)	15	1352	1	8	887	41	3	0	5	2	0	15
Satd. Flow (prot)	1710	3420	0	1710	3360	0	0	1606	0	0	1462	0
Flt Permitted	0.291			0.174				0.869			0.959	
Satd. Flow (perm)	523	3420	0	313	3360	0	0	1419	0	0	1411	0
Satd. Flow (RTOR)					8			34			34	
Lane Group Flow (vph)	16	1424	0	8	977	0	0	8	0	0	18	0
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)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	37.0	37.0		37.0	37.0		32.3	32.3		32.3	32.3	
Total Split (s)	62.0	62.0		62.0	62.0		33.0	33.0		33.0	33.0	
Total Split (%)	65.3%	65.3%		65.3%	65.3%		34.7%	34.7%		34.7%	34.7%	
Yellow Time (s)	3.7	3.7		3.7	3.7		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.3	2.3		2.3	2.3		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0			6.3			6.3	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	
Act Effct Green (s)	86.1	86.1		86.1	86.1			10.0			10.0	
Actuated g/C Ratio	0.91	0.91		0.91	0.91			0.11			0.11	
v/c Ratio	0.03	0.46		0.03	0.32			0.04			0.10	
Control Delay	2.4	2.6		3.1	2.2			0.5			7.4	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	2.4	2.6		3.1	2.2			0.5			7.4	
LOS	A	A		A	A			A			A	
Approach Delay		2.6			2.2			0.5			7.4	
Approach LOS		A			A			A			A	
Queue Length 50th (m)	0.0	0.0		0.0	0.8			0.0			0.0	
Queue Length 95th (m)	m1.2	59.0		m1.5	40.5			0.0			3.7	
Internal Link Dist (m)		651.1			64.4			41.8			21.1	
Turn Bay Length (m)	40.0			50.0								
Base Capacity (vph)	474	3099		283	3045			423			421	
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	0.03	0.46		0.03	0.32			0.02			0.04	

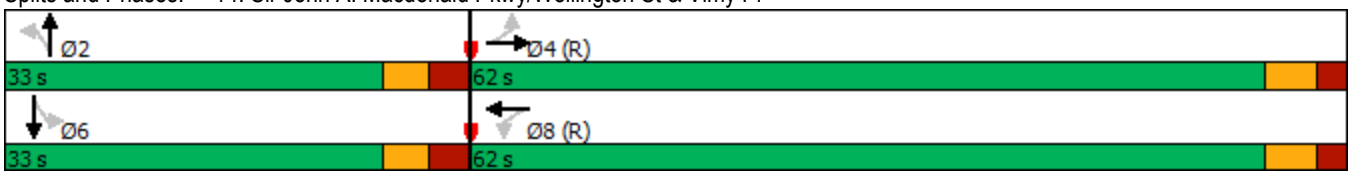
Intersection Summary
Cycle Length: 95
Actuated Cycle Length: 95
Offset: 59 (62%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated

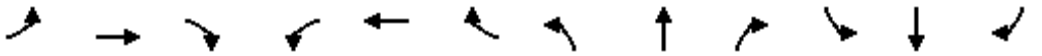
Maximum v/c Ratio: 0.46

Intersection Signal Delay: 2.5	Intersection LOS: A
Intersection Capacity Utilization 59.3%	ICU Level of Service B
Analysis Period (min) 15	

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

Splits and Phases: 14: Sir John A. Macdonald Pkwy/Wellington St & Vimy Pl





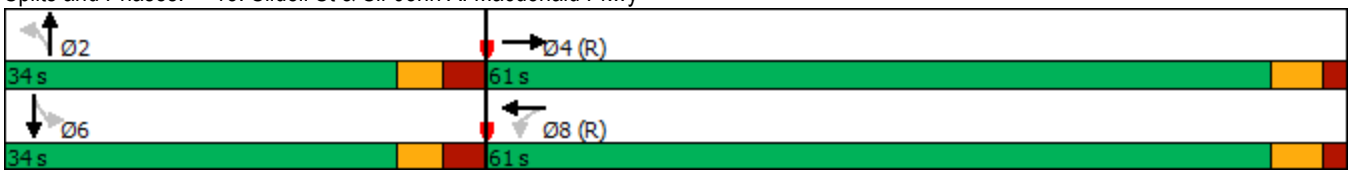
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1463	22	1	1000	1	1	21	1	1	5	3
Future Volume (vph)	0	1463	22	1	1000	1	1	21	1	1	5	3
Satd. Flow (prot)	0	3412	0	0	3386	0	0	1784	0	0	1699	0
Flt Permitted					0.954			0.984			0.956	
Satd. Flow (perm)	0	3412	0	0	3230	0	0	1759	0	0	1634	0
Satd. Flow (RTOR)		3						1			3	
Lane Group Flow (vph)	0	1563	0	0	1055	0	0	24	0	0	9	0
Turn Type		NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases				8			2			6		
Detector Phase		4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)		10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)		30.5		30.5	30.5		33.3	33.3		33.3	33.3	
Total Split (s)		61.0		61.0	61.0		34.0	34.0		34.0	34.0	
Total Split (%)		64.2%		64.2%	64.2%		35.8%	35.8%		35.8%	35.8%	
Yellow Time (s)		3.7		3.7	3.7		3.3	3.3		3.3	3.3	
All-Red Time (s)		1.8		1.8	1.8		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.5			5.5			6.3			6.3	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode		C-Max		C-Max	C-Max		None	None		None	None	
Act Effct Green (s)		86.3			86.3			10.0			10.0	
Actuated g/C Ratio		0.91			0.91			0.11			0.11	
v/c Ratio		0.50			0.36			0.13			0.05	
Control Delay		3.0			2.0			39.3			33.4	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		3.0			2.0			39.3			33.4	
LOS		A			A			D			C	
Approach Delay		3.0			2.0			39.3			33.4	
Approach LOS		A			A			D			C	
Queue Length 50th (m)		0.0			1.5			4.1			1.1	
Queue Length 95th (m)		67.6			51.2			12.1			5.8	
Internal Link Dist (m)		176.2			288.5			38.4			167.1	
Turn Bay Length (m)												
Base Capacity (vph)		3099			2933			513			478	
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		0.50			0.36			0.05			0.02	

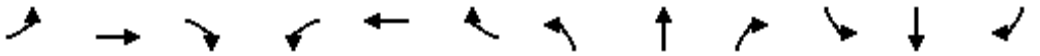
Intersection Summary
Cycle Length: 95
Actuated Cycle Length: 95
Offset: 34 (36%), Referenced to phase 4:EBT and 8:WBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.50

Intersection Signal Delay: 3.0	Intersection LOS: A
Intersection Capacity Utilization 63.4%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 15: Slidell St & Sir John A. Macdonald Pkwy





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	765	86	56	334	31	61	45	130	131	178	12
Future Volume (vph)	14	765	86	56	334	31	61	45	130	131	178	12
Satd. Flow (prot)	1500	1720	0	1613	1698	1457	1676	1800	1515	1693	1752	0
Flt Permitted	0.542			0.215			0.499			0.726		
Satd. Flow (perm)	821	1720	0	365	1698	1328	871	1800	1458	1263	1752	0
Satd. Flow (RTOR)		11				37			137		3	
Lane Group Flow (vph)	15	896	0	59	352	33	64	47	137	138	200	0
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6		6	8		8	4		
Detector Phase	2	2		6	6	6	8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	32.5	32.5		32.5	32.5	32.5	31.4	31.4	31.4	31.4	31.4	
Total Split (s)	68.0	68.0		68.0	68.0	68.0	32.0	32.0	32.0	32.0	32.0	
Total Split (%)	68.0%	68.0%		68.0%	68.0%	68.0%	32.0%	32.0%	32.0%	32.0%	32.0%	
Yellow Time (s)	3.3	3.3		3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	
All-Red Time (s)	3.2	3.2		3.2	3.2	3.2	3.1	3.1	3.1	3.1	3.1	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.5	6.5		6.5	6.5	6.5	6.4	6.4	6.4	6.4	6.4	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		C-Max	C-Max	C-Max	None	None	None	None	None	
Act Effct Green (s)	68.9	68.9		68.9	68.9	68.9	18.2	18.2	18.2	18.2	18.2	
Actuated g/C Ratio	0.69	0.69		0.69	0.69	0.69	0.18	0.18	0.18	0.18	0.18	
v/c Ratio	0.03	0.75		0.24	0.30	0.04	0.41	0.14	0.36	0.60	0.62	
Control Delay	3.6	13.2		10.6	7.9	2.3	41.7	32.5	8.2	47.4	44.8	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	3.6	13.2		10.6	7.9	2.3	41.7	32.5	8.2	47.4	44.8	
LOS	A	B		B	A	A	D	C	A	D	D	
Approach Delay		13.1			7.8			21.5			45.9	
Approach LOS		B			A			C			D	
Queue Length 50th (m)	0.3	136.2		3.7	23.1	0.0	11.9	8.3	0.0	26.7	38.2	
Queue Length 95th (m)	m1.0	m190.0		13.0	47.9	3.2	23.2	16.9	14.9	42.9	56.3	
Internal Link Dist (m)		635.7			497.2			83.8			171.5	
Turn Bay Length (m)	45.0			50.0			50.0		20.0	45.0		
Base Capacity (vph)	565	1188		251	1170	926	222	460	475	323	450	
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.03	0.75		0.24	0.30	0.04	0.29	0.10	0.29	0.43	0.44	

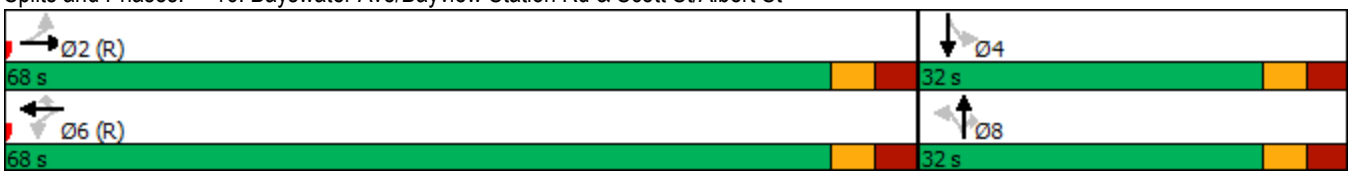
Intersection Summary
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 40 (40%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

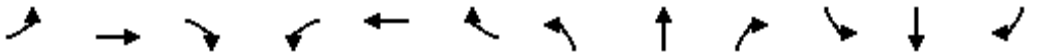
Maximum v/c Ratio: 0.75

Intersection Signal Delay: 18.7	Intersection LOS: B
Intersection Capacity Utilization 88.4%	ICU Level of Service E
Analysis Period (min) 15	

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

Splits and Phases: 16: Bayswater Ave/Bayview Station Rd & Scott St/Albert St





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	120	750	37	55	325	26	31	284	76	107	354	145
Future Volume (vph)	120	750	37	55	325	26	31	284	76	107	354	145
Satd. Flow (prot)	1676	1735	0	1676	1698	1471	1660	1718	0	1693	1564	0
Flt Permitted	0.950			0.158			0.215			0.382		
Satd. Flow (perm)	1508	1735	0	279	1698	1209	363	1718	0	681	1564	0
Satd. Flow (RTOR)		3				119		15			23	
Lane Group Flow (vph)	126	828	0	58	342	27	33	379	0	113	526	0
Turn Type	Prot	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	2			6			8			4	
Permitted Phases				6		6	8			4		
Detector Phase	5	2		6	6	6	8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0		10.0	10.0	10.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	10.6	28.1		28.1	28.1	28.1	35.3	35.3		35.3	35.3	
Total Split (s)	11.0	51.0		40.0	40.0	40.0	43.0	43.0		43.0	43.0	
Total Split (%)	11.0%	51.0%		40.0%	40.0%	40.0%	43.0%	43.0%		43.0%	43.0%	
Yellow Time (s)	3.3	3.3		3.3	3.3	3.3	3.0	3.0		3.0	3.0	
All-Red Time (s)	2.3	2.8		2.8	2.8	2.8	3.3	3.3		3.3	3.3	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	-2.1	0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.6	6.1		6.1	6.1	4.0	6.3	6.3		6.3	6.3	
Lead/Lag	Lead			Lag	Lag	Lag						
Lead-Lag Optimize?	Yes			Yes	Yes	Yes						
Recall Mode	None	C-Max		C-Max	C-Max	C-Max	Max	Max		Max	Max	
Act Effct Green (s)	11.4	50.9		33.9	33.9	36.0	36.7	36.7		36.7	36.7	
Actuated g/C Ratio	0.11	0.51		0.34	0.34	0.36	0.37	0.37		0.37	0.37	
v/c Ratio	0.66	0.94		0.62	0.59	0.05	0.25	0.59		0.45	0.89	
Control Delay	60.0	42.7		54.5	29.1	0.2	28.2	29.1		31.3	48.5	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	60.0	42.7		54.5	29.1	0.2	28.2	29.1		31.3	48.5	
LOS	E	D		D	C	A	C	C		C	D	
Approach Delay		44.9			30.7			29.1			45.4	
Approach LOS		D			C			C			D	
Queue Length 50th (m)	25.0	151.2		10.5	61.4	0.0	4.6	59.3		17.3	96.1	
Queue Length 95th (m)	#50.2	#239.2		#24.5	91.8	m0.0	13.3	90.5		35.1	#160.9	
Internal Link Dist (m)		92.9			635.7			70.7			630.1	
Turn Bay Length (m)	55.0			65.0		35.0	55.0			50.0		
Base Capacity (vph)	191	884		94	575	511	133	640		249	588	
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	
Reduced v/c Ratio	0.66	0.94		0.62	0.59	0.05	0.25	0.59		0.45	0.89	

Intersection Summary
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 91 (91%), Referenced to phase 2:EBT and 6:WBTL, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated

Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Satd. Flow (RTOR)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	2.0
Minimum Split (s)	6.0
Total Split (s)	6.0
Total Split (%)	6%
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	None
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (m)	
Queue Length 95th (m)	
Internal Link Dist (m)	
Turn Bay Length (m)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

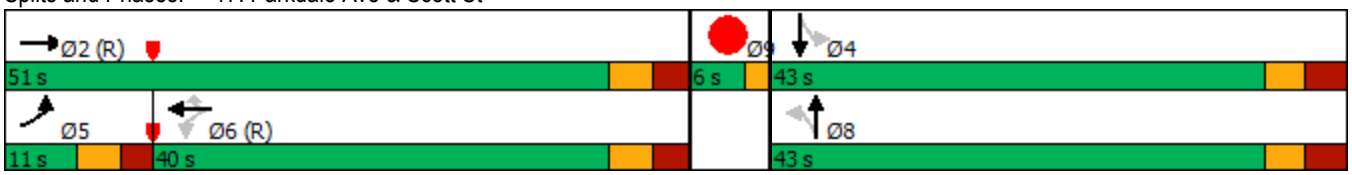
Intersection Summary

Maximum v/c Ratio: 0.94

Intersection Signal Delay: 39.9	Intersection LOS: D
Intersection Capacity Utilization 111.7%	ICU Level of Service H
Analysis Period (min) 15	

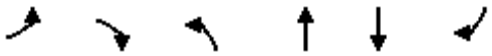
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 17: Parkdale Ave & Scott St



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	0	134
Future Volume (vph)	0	0	0	0	0	134
Satd. Flow (prot)	0	1800	0	0	0	0
Flt Permitted						
Satd. Flow (perm)	0	1800	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	141	0
Sign Control	Free			Free	Free	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization Err%		ICU Level of Service H	
Analysis Period (min) 15			



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø9
Lane Configurations							
Traffic Volume (vph)	1	1	2	864	1469	6	
Future Volume (vph)	1	1	2	864	1469	6	
Satd. Flow (prot)	1600	0	1710	3420	3417	0	
Flt Permitted	0.976		0.154				
Satd. Flow (perm)	1598	0	277	3420	3417	0	
Satd. Flow (RTOR)	1				1		
Lane Group Flow (vph)	2	0	2	909	1552	0	
Turn Type	Prot		Perm	NA	NA		
Protected Phases	4			2	6		9
Permitted Phases			2				
Detector Phase	4		2	2	6		
Switch Phase							
Minimum Initial (s)	6.3		10.0	10.0	10.0		10.0
Minimum Split (s)	14.0		30.7	30.7	30.9		29.0
Total Split (s)	17.0		49.0	49.0	49.0		29.0
Total Split (%)	17.9%		51.6%	51.6%	51.6%		31%
Yellow Time (s)	3.3		3.3	3.3	3.3		3.0
All-Red Time (s)	2.9		2.4	2.4	2.6		4.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0		
Total Lost Time (s)	6.2		5.7	5.7	5.9		
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	None		C-Max	C-Max	C-Max		None
Act Effct Green (s)	6.3		91.4	91.4	91.3		
Actuated g/C Ratio	0.07		0.96	0.96	0.96		
v/c Ratio	0.02		0.01	0.28	0.47		
Control Delay	36.0		0.5	0.3	1.4		
Queue Delay	0.0		0.0	0.0	0.0		
Total Delay	36.0		0.5	0.3	1.4		
LOS	D		A	A	A		
Approach Delay	36.0			0.3	1.4		
Approach LOS	D			A	A		
Queue Length 50th (m)	0.2		0.0	0.0	0.0		
Queue Length 95th (m)	2.4		m0.0	m5.2	52.4		
Internal Link Dist (m)	148.9			192.9	188.6		
Turn Bay Length (m)			35.0				
Base Capacity (vph)	182		266	3289	3285		
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	0.01		0.01	0.28	0.47		

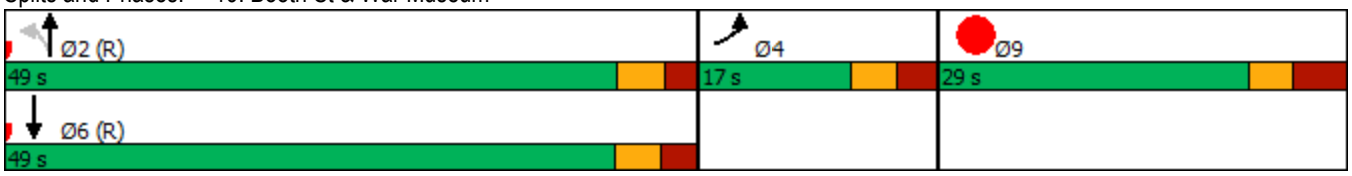
Intersection Summary
Cycle Length: 95
Actuated Cycle Length: 95
Offset: 47 (49%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

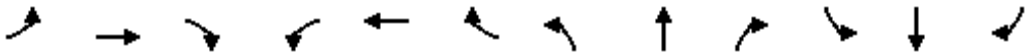
Maximum v/c Ratio: 0.47

Intersection Signal Delay: 1.0	Intersection LOS: A
Intersection Capacity Utilization 58.4%	ICU Level of Service B
Analysis Period (min) 15	

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

Splits and Phases: 19: Booth St & War Museum





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	966	77	98	382	16	28	0	47	36	0	5
Future Volume (vph)	5	966	77	98	382	16	28	0	47	36	0	5
Satd. Flow (prot)	1710	3331	0	1629	3225	0	1644	1404	0	0	947	0
Flt Permitted	0.950			0.950			0.729				0.716	
Satd. Flow (perm)	1590	3331	0	1618	3225	0	1245	1404	0	0	708	0
Satd. Flow (RTOR)		11			5			174			87	
Lane Group Flow (vph)	5	1098	0	103	419	0	29	49	0	0	43	0
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases							8			4		
Detector Phase	5	2		1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	11.3	27.3		11.3	27.3		29.3	29.3		29.3	29.3	
Total Split (s)	17.0	72.0		12.0	67.0		36.0	36.0		36.0	36.0	
Total Split (%)	14.2%	60.0%		10.0%	55.8%		30.0%	30.0%		30.0%	30.0%	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)	6.3	6.3		6.3	6.3		6.3	6.3			6.3	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	
Act Effct Green (s)	6.0	75.1		16.7	96.7		12.6	12.6			12.6	
Actuated g/C Ratio	0.05	0.63		0.14	0.81		0.10	0.10			0.10	
v/c Ratio	0.06	0.53		0.46	0.16		0.22	0.16			0.28	
Control Delay	55.4	14.5		35.4	6.2		51.2	1.1			5.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Total Delay	55.4	14.5		35.4	6.2		51.2	1.1			5.0	
LOS	E	B		D	A		D	A			A	
Approach Delay		14.7			12.0			19.8			5.0	
Approach LOS		B			B			B			A	
Queue Length 50th (m)	1.2	74.6		23.2	35.9		6.9	0.0			0.0	
Queue Length 95th (m)	5.6	113.0		m#28.6	55.6		15.0	0.0			1.0	
Internal Link Dist (m)		497.2			104.8			178.8			41.9	
Turn Bay Length (m)	30.0			35.0			30.0					
Base Capacity (vph)	152	2088		226	2599		308	478			240	
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	0.03	0.53		0.46	0.16		0.09	0.10			0.18	

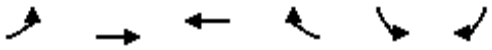
Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 80 (67%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.53

Intersection Signal Delay: 13.9	Intersection LOS: B
Intersection Capacity Utilization 64.1%	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.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 20: City Centre Ave & Albert St



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	1197	736	0	0	0
Future Volume (vph)	0	1197	736	0	0	0
Satd. Flow (prot)	1800	3320	3226	0	1800	0
Flt Permitted						
Satd. Flow (perm)	1800	3320	3226	0	1800	0
Satd. Flow (RTOR)						
Lane Group Flow (vph)	0	1260	775	0	0	0
Turn Type	Prot	NA	NA		Prot	
Protected Phases	5	2	6		4	
Permitted Phases						
Detector Phase	5	2	6		4	
Switch Phase						
Minimum Initial (s)	5.0	10.0	10.0		10.0	
Minimum Split (s)	11.3	22.0	22.0		30.0	
Total Split (s)	12.0	90.0	78.0		30.0	
Total Split (%)	10.0%	75.0%	65.0%		25.0%	
Yellow Time (s)	3.3	3.3	3.3		3.0	
All-Red Time (s)	3.0	3.0	3.0		3.0	
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	
Total Lost Time (s)	6.3	6.3	6.3		6.0	
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	None	C-Max	C-Min		None	
Act Effct Green (s)		112.7	112.7			
Actuated g/C Ratio		0.94	0.94			
v/c Ratio		0.40	0.26			
Control Delay		6.6	3.7			
Queue Delay		0.0	0.0			
Total Delay		6.7	3.7			
LOS		A	A			
Approach Delay		6.7	3.7			
Approach LOS		A	A			
Queue Length 50th (m)		0.0	0.0			
Queue Length 95th (m)		165.2	m61.6			
Internal Link Dist (m)		119.1	141.9		77.8	
Turn Bay Length (m)						
Base Capacity (vph)		3119	3031			
Starvation Cap Reductn		372	402			
Spillback Cap Reductn		0	0			
Storage Cap Reductn		0	0			
Reduced v/c Ratio		0.46	0.29			

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 65
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.40

Intersection Signal Delay: 5.6	Intersection LOS: A
Intersection Capacity Utilization 40.2%	ICU Level of Service A
Analysis Period (min) 15	

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

Splits and Phases: 21: Albert St & Access 1

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1417	16	26	722	37	77
Future Volume (vph)	1417	16	26	722	37	77
Satd. Flow (prot)	3365	0	1710	3320	1522	0
Flt Permitted			0.135		0.984	
Satd. Flow (perm)	3365	0	243	3320	1519	0
Satd. Flow (RTOR)	2				33	
Lane Group Flow (vph)	1509	0	27	760	120	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	4			8	1	
Permitted Phases			8			
Detector Phase	4		8	8	1	
Switch Phase						
Minimum Initial (s)	10.0		10.0	10.0	10.0	
Minimum Split (s)	30.0		22.0	22.0	33.9	
Total Split (s)	61.0		61.0	61.0	34.0	
Total Split (%)	64.2%		64.2%	64.2%	35.8%	
Yellow Time (s)	3.7		3.7	3.7	3.3	
All-Red Time (s)	2.1		2.1	2.1	2.6	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	5.8		5.8	5.8	5.9	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max		C-Max	C-Max	None	
Act Effct Green (s)	68.9		68.9	68.9	14.4	
Actuated g/C Ratio	0.73		0.73	0.73	0.15	
v/c Ratio	0.62		0.15	0.32	0.47	
Control Delay	18.8		9.0	6.0	30.6	
Queue Delay	7.9		0.0	0.0	0.0	
Total Delay	26.6		9.0	6.0	30.6	
LOS	C		A	A	C	
Approach Delay	26.6			6.1	30.6	
Approach LOS	C			A	C	
Queue Length 50th (m)	118.3		1.1	19.1	16.0	
Queue Length 95th (m)	m149.7		7.7	51.3	27.0	
Internal Link Dist (m)	116.7			244.7	48.8	
Turn Bay Length (m)			70.0			
Base Capacity (vph)	2440		176	2407	473	
Starvation Cap Reductn	895		0	0	0	
Spillback Cap Reductn	0		0	0	0	
Storage Cap Reductn	0		0	0	0	
Reduced v/c Ratio	0.98		0.15	0.32	0.25	

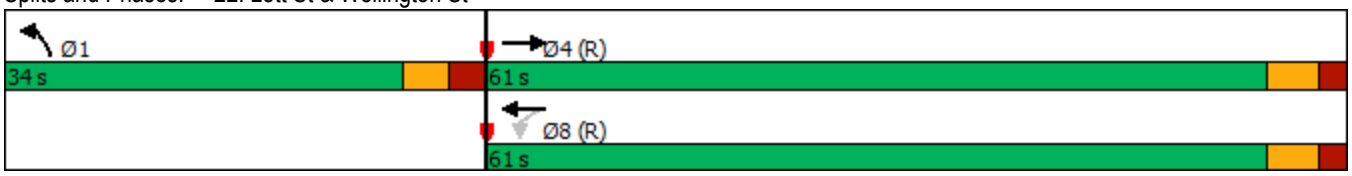
Intersection Summary
Cycle Length: 95
Actuated Cycle Length: 95
Offset: 27 (28%), Referenced to phase 4:EBT and 8:WBTL, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated

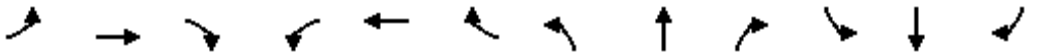
Maximum v/c Ratio: 0.62

Intersection Signal Delay: 20.1	Intersection LOS: C
Intersection Capacity Utilization 60.9%	ICU Level of Service B
Analysis Period (min) 15	

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

Splits and Phases: 22: Lett St & Wellington St





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	1001	8	5	434	7	8	0	11	28	0	8
Future Volume (vph)	21	1001	8	5	434	7	8	0	11	28	0	8
Satd. Flow (prot)	1710	3417	0	1710	3413	0	0	1621	0	0	1681	0
Flt Permitted	0.485			0.260				0.884			0.759	
Satd. Flow (perm)	873	3417	0	468	3413	0	0	1462	0	0	1327	0
Satd. Flow (RTOR)		1			2			15			15	
Lane Group Flow (vph)	22	1062	0	5	464	0	0	20	0	0	37	0
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)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	22.6	22.6		22.6	22.6		30.5	30.5		30.5	30.5	
Total Split (s)	81.0	81.0		81.0	81.0		39.0	39.0		39.0	39.0	
Total Split (%)	67.5%	67.5%		67.5%	67.5%		32.5%	32.5%		32.5%	32.5%	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	1.3	1.3		1.3	1.3		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.6	0.0			0.0			0.0	
Total Lost Time (s)	4.6	4.6		5.2	4.6			4.3			4.3	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	
Act Effct Green (s)	105.7	105.7		105.3	105.7			13.0			13.0	
Actuated g/C Ratio	0.88	0.88		0.88	0.88			0.11			0.11	
v/c Ratio	0.03	0.35		0.01	0.15			0.12			0.24	
Control Delay	5.9	6.3		3.8	2.4			24.4			34.8	
Queue Delay	0.0	0.3		0.0	0.0			0.0			0.0	
Total Delay	5.9	6.6		3.8	2.4			24.4			34.8	
LOS	A	A		A	A			C			C	
Approach Delay		6.6			2.4			24.4			34.8	
Approach LOS		A			A			C			C	
Queue Length 50th (m)	1.3	45.6		0.2	8.1			1.2			5.2	
Queue Length 95th (m)	m3.7	m95.5		1.5	23.3			7.9			14.2	
Internal Link Dist (m)		82.5			218.4			58.0			17.2	
Turn Bay Length (m)	70.0			50.0								
Base Capacity (vph)	768	3008		410	3005			433			394	
Starvation Cap Reductn	0	1146		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	0.03	0.57		0.01	0.15			0.05			0.09	

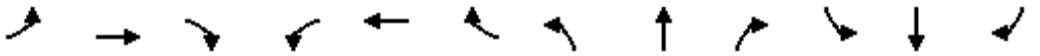
Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 22 (18%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.35

Intersection Signal Delay: 6.2	Intersection LOS: A
Intersection Capacity Utilization 45.2%	ICU Level of Service A
Analysis Period (min) 15	

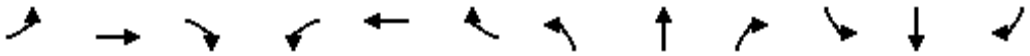
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 23: Empress Ave & Albert St



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1030	0	0	448	7	0	0	0	0	0	8
Future Volume (vph)	0	1030	0	0	448	7	0	0	0	0	0	8
Satd. Flow (prot)	0	3420	0	0	3413	0	0	0	1800	0	0	1557
Flt Permitted												
Satd. Flow (perm)	0	3420	0	0	3413	0	0	0	1800	0	0	1557
Lane Group Flow (vph)	0	1084	0	0	479	0	0	0	0	0	0	8
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization 33.4%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	6	0	0	12	0	857	17	0	970	0
Future Volume (vph)	0	0	6	0	0	12	0	857	17	0	970	0
Satd. Flow (prot)	0	0	1557	0	0	1557	0	3410	0	0	3420	0
Flt Permitted												
Satd. Flow (perm)	0	0	1557	0	0	1557	0	3410	0	0	3420	0
Lane Group Flow (vph)	0	0	6	0	0	13	0	920	0	0	1021	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization 38.3%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1268	0	0	889	0	5
Future Volume (vph)	1268	0	0	889	0	5
Satd. Flow (prot)	3420	0	0	3420	0	1557
Flt Permitted						
Satd. Flow (perm)	3420	0	0	3420	0	1557
Lane Group Flow (vph)	1335	0	0	936	0	5
Sign Control	Free			Free	Stop	

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

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1263	2	8	881	3	5
Future Volume (vph)	1263	2	8	881	3	5
Satd. Flow (prot)	3420	0	1710	3386	1619	0
Flt Permitted			0.950		0.982	
Satd. Flow (perm)	3420	0	1710	3386	1619	0
Satd. Flow (RTOR)					5	
Lane Group Flow (vph)	1331	0	8	927	8	0
Turn Type	NA		Prot	NA	Prot	
Protected Phases	4		3	8	2	
Permitted Phases						
Detector Phase	4		3	8	2	
Switch Phase						
Minimum Initial (s)	10.0		5.0	10.0	10.0	
Minimum Split (s)	37.0		11.0	37.0	32.3	
Total Split (s)	47.0		15.0	62.0	33.0	
Total Split (%)	49.5%		15.8%	65.3%	34.7%	
Yellow Time (s)	3.7		3.7	3.7	3.3	
All-Red Time (s)	2.3		2.3	2.3	3.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	6.0		6.0	6.0	6.3	
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	C-Max		None	C-Max	None	
Act Effct Green (s)	87.9		6.1	90.5	10.0	
Actuated g/C Ratio	0.93		0.06	0.95	0.11	
v/c Ratio	0.42		0.07	0.29	0.05	
Control Delay	4.2		51.5	2.4	28.5	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	4.3		51.5	2.4	28.5	
LOS	A		D	A	C	
Approach Delay	4.3			2.8	28.5	
Approach LOS	A			A	C	
Queue Length 50th (m)	0.0		1.6	1.3	0.5	
Queue Length 95th (m)	136.7		m2.5	93.6	5.0	
Internal Link Dist (m)	77.2			49.9	32.0	
Turn Bay Length (m)			60.0			
Base Capacity (vph)	3165		162	3227	458	
Starvation Cap Reductn	105		0	0	0	
Spillback Cap Reductn	280		0	0	0	
Storage Cap Reductn	0		0	0	0	
Reduced v/c Ratio	0.46		0.05	0.29	0.02	

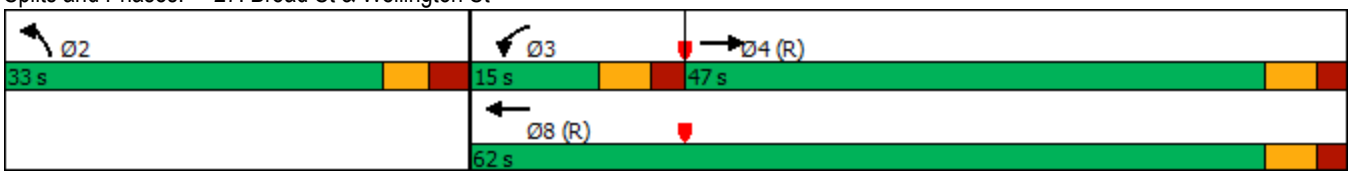
Intersection Summary
Cycle Length: 95
Actuated Cycle Length: 95
Offset: 22 (23%), Referenced to phase 4:EBT and 8:WBT, Start of Green
Natural Cycle: 85
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.42

Intersection Signal Delay: 3.7	Intersection LOS: A
Intersection Capacity Utilization 55.5%	ICU Level of Service B
Analysis Period (min) 15	

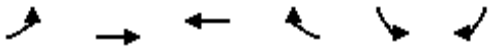
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 27: Broad St & Wellington St



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1260	2	0	884	0	5
Future Volume (vph)	1260	2	0	884	0	5
Satd. Flow (prot)	3420	0	0	3420	0	1557
Flt Permitted						
Satd. Flow (perm)	3420	0	0	3420	0	1557
Lane Group Flow (vph)	1328	0	0	931	0	5
Sign Control	Free			Free	Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization 46.8%		ICU Level of Service A	
Analysis Period (min) 15			



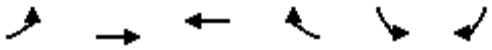
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	804	389	701	1105	852	453
Future Volume (vph)	804	389	701	1105	852	453
Satd. Flow (prot)	3317	4914	3386	2614	3285	1530
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	3291	4914	3386	2614	3168	1530
Satd. Flow (RTOR)						179
Lane Group Flow (vph)	846	409	738	1163	897	477
Turn Type	Prot	NA	NA	pt+ov	Prot	Perm
Protected Phases	7	4	8	8 1	1	
Permitted Phases						1
Detector Phase	7	4	8	8 1	1	1
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0		10.0	10.0
Minimum Split (s)	42.8	26.5	26.5		44.1	44.1
Total Split (s)	55.8	92.3	36.5		44.1	44.1
Total Split (%)	40.9%	67.7%	26.8%		32.3%	32.3%
Yellow Time (s)	3.3	3.3	3.3		3.3	3.3
All-Red Time (s)	2.5	3.2	3.2		2.8	2.8
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	5.8	6.5	6.5		6.1	6.1
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	Min	Min	Max		Max	Max
Act Effct Green (s)	36.6	72.5	30.1	74.3	38.1	38.1
Actuated g/C Ratio	0.30	0.59	0.24	0.60	0.31	0.31
v/c Ratio	0.86	0.14	0.89	0.74	0.88	0.80
Control Delay	50.5	11.3	60.0	22.3	52.6	36.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.5	11.3	60.0	22.3	52.6	36.1
LOS	D	B	E	C	D	D
Approach Delay		37.7	37.0		46.9	
Approach LOS		D	D		D	
Queue Length 50th (m)	104.6	16.1	96.3	114.4	112.0	72.9
Queue Length 95th (m)	129.2	21.3	#148.8	176.4	#168.8	#144.0
Internal Link Dist (m)		245.5	293.2		634.3	
Turn Bay Length (m)	150.0					30.0
Base Capacity (vph)	1350	3431	826	1576	1016	596
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	0.63	0.12	0.89	0.74	0.88	0.80

Intersection Summary
Cycle Length: 136.4
Actuated Cycle Length: 123.2
Natural Cycle: 115
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.89

Intersection Signal Delay: 40.2	Intersection LOS: D
Intersection Capacity Utilization 85.7%	ICU Level of Service E
Analysis Period (min) 15	

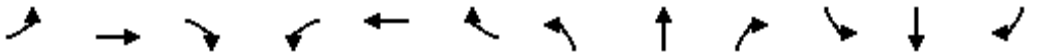
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 7: Wellington St & Portage



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	812	1061	0	0	7
Future Volume (vph)	0	812	1061	0	0	7
Satd. Flow (prot)	0	3420	3420	0	0	1557
Flt Permitted						
Satd. Flow (perm)	0	3420	3420	0	0	1557
Lane Group Flow (vph)	0	855	1117	0	0	7
Sign Control		Free	Free		Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization 41.0%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	0	33	0	0	0	7	1109	0	0	1055	7
Future Volume (vph)	33	0	33	0	0	0	7	1109	0	0	1055	7
Satd. Flow (prot)	1710	1530	0	1800	1800	0	1710	1800	0	1800	1798	0
Flt Permitted	0.757						0.157					
Satd. Flow (perm)	1363	1530	0	1800	1800	0	283	1800	0	1800	1798	0
Satd. Flow (RTOR)		105									1	
Lane Group Flow (vph)	35	35	0	0	0	0	7	1167	0	0	1118	0
Turn Type	Perm	NA		Perm			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)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	22.0	22.0		22.0	22.0		35.9	35.9		35.9	35.9	
Total Split (s)	22.0	22.0		22.0	22.0		53.0	53.0		53.0	53.0	
Total Split (%)	29.3%	29.3%		29.3%	29.3%		70.7%	70.7%		70.7%	70.7%	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.3	3.3		3.3	3.3	
All-Red Time (s)	3.2	3.2		3.2	3.2		2.6	2.6		2.6	2.6	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.2	6.2		6.2	6.2		5.9	5.9		5.9	5.9	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	
Act Effct Green (s)	10.0	10.0					61.7	61.7			61.7	
Actuated g/C Ratio	0.13	0.13					0.82	0.82			0.82	
v/c Ratio	0.19	0.12					0.03	0.79			0.76	
Control Delay	31.9	0.8					3.9	13.3			11.8	
Queue Delay	0.0	0.0					0.0	0.0			0.0	
Total Delay	31.9	0.8					3.9	13.3			11.8	
LOS	C	A					A	B			B	
Approach Delay		16.3						13.2			11.8	
Approach LOS		B						B			B	
Queue Length 50th (m)	4.7	0.0					0.3	119.2			105.9	
Queue Length 95th (m)	12.9	0.0					1.3	#242.0			#226.8	
Internal Link Dist (m)		60.2			43.3			76.9			31.3	
Turn Bay Length (m)	30.0						30.0					
Base Capacity (vph)	287	405					233	1481			1480	
Starvation Cap Reductn	0	0					0	0			0	
Spillback Cap Reductn	0	0					0	0			0	
Storage Cap Reductn	0	0					0	0			0	
Reduced v/c Ratio	0.12	0.09					0.03	0.79			0.76	

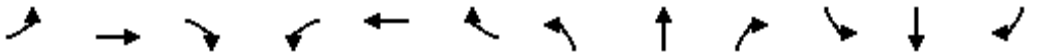
Intersection Summary
Cycle Length: 75
Actuated Cycle Length: 75
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.79

Intersection Signal Delay: 12.6	Intersection LOS: B
Intersection Capacity Utilization 80.0%	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.

Splits and Phases: 10: Booth St & Chaudiere



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	869	0	0	1277	117	0	981	176	109	652	234
Future Volume (vph)	0	869	0	0	1277	117	0	981	176	109	652	234
Satd. Flow (prot)	0	3420	0	0	3420	1530	0	3229	0	1613	3196	1515
Flt Permitted										0.084		
Satd. Flow (perm)	0	3420	0	0	3420	1489	0	3229	0	143	3196	1471
Satd. Flow (RTOR)								19				35
Lane Group Flow (vph)	0	915	0	0	1344	123	0	1218	0	115	686	246
Turn Type		NA			NA	Perm		NA		pm+pt	NA	Perm
Protected Phases		4			8			2		1	6	
Permitted Phases						8				6		6
Detector Phase		4			8	8		2		1	6	6
Switch Phase												
Minimum Initial (s)		10.0			10.0	10.0		10.0		5.2	10.0	10.0
Minimum Split (s)		35.8			35.8	35.8		31.8		12.0	31.9	31.9
Total Split (s)		60.0			60.0	60.0		48.0		12.0	60.0	60.0
Total Split (%)		50.0%			50.0%	50.0%		40.0%		10.0%	50.0%	50.0%
Yellow Time (s)		3.7			3.7	3.7		3.3		3.3	3.3	3.3
All-Red Time (s)		3.1			3.1	3.1		3.5		3.5	3.6	3.6
Lost Time Adjust (s)		0.0			0.0	-2.8		-2.1		0.0	0.0	0.0
Total Lost Time (s)		6.8			6.8	4.0		4.7		6.8	6.9	6.9
Lead/Lag								Lag		Lead		
Lead-Lag Optimize?								Yes		Yes		
Recall Mode		Max			Max	Max		C-Min		None	C-Min	C-Min
Act Effct Green (s)		53.2			53.2	56.0		43.3		53.2	53.1	53.1
Actuated g/C Ratio		0.44			0.44	0.47		0.36		0.44	0.44	0.44
v/c Ratio		0.60			0.89	0.18		1.03		0.91	0.49	0.37
Control Delay		25.4			35.0	15.0		46.8		83.8	25.2	20.8
Queue Delay		0.4			1.6	0.0		0.0		0.0	0.0	0.0
Total Delay		25.8			36.6	15.0		46.8		83.8	25.2	20.8
LOS		C			D	B		D		F	C	C
Approach Delay		25.8			34.8			46.8			30.6	
Approach LOS		C			C			D			C	
Queue Length 50th (m)		88.9			158.1	17.6		~171.7		16.7	62.2	33.8
Queue Length 95th (m)		121.3			192.3	25.0		m98.2		#51.1	79.8	54.9
Internal Link Dist (m)		72.0			117.1			52.2			192.9	
Turn Bay Length (m)						70.0				145.0		55.0
Base Capacity (vph)		1516			1516	694		1177		127	1414	670
Starvation Cap Reductn		214			68	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		0.70			0.93	0.18		1.03		0.91	0.49	0.37

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 3 (3%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.03

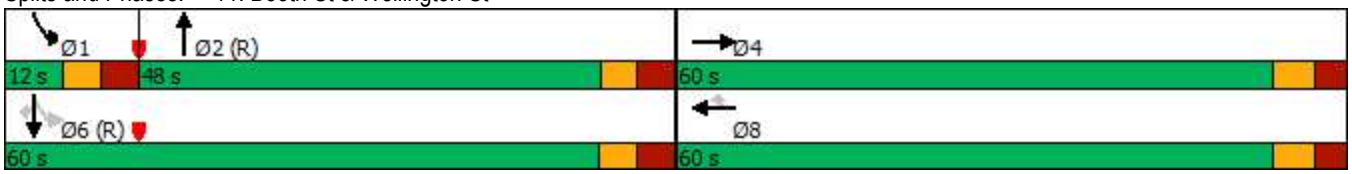
Intersection Signal Delay: 35.2	Intersection LOS: D
Intersection Capacity Utilization 93.6%	ICU Level of Service F
Analysis Period (min) 15	

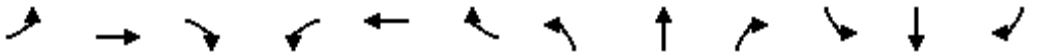
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

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

Splits and Phases: 11: Booth St & Wellington St





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	550	554	32	28	841	238	12	540	59	95	418	254
Future Volume (vph)	550	554	32	28	841	238	12	540	59	95	418	254
Satd. Flow (prot)	1676	3320	0	1710	3201	0	1710	1731	0	1629	1782	1515
Flt Permitted	0.950			0.418			0.407			0.950		
Satd. Flow (perm)	1643	3320	0	749	3201	0	707	1731	0	1555	1782	1515
Satd. Flow (RTOR)		7						5				
Lane Group Flow (vph)	579	617	0	29	1136	0	13	630	0	100	440	267
Turn Type	Prot	NA		Perm	NA		Perm	NA		Prot	NA	Over
Protected Phases	5	2			6			8		7	4	5
Permitted Phases				6			8					
Detector Phase	5	2		6	6		8	8		7	4	5
Switch Phase												
Minimum Initial (s)	5.0	10.0		10.0	10.0		10.0	10.0		5.0	10.0	5.0
Minimum Split (s)	11.5	36.5		36.5	36.5		34.5	34.5		11.5	34.5	11.5
Total Split (s)	30.0	70.0		40.0	40.0		38.0	38.0		12.0	50.0	30.0
Total Split (%)	25.0%	58.3%		33.3%	33.3%		31.7%	31.7%		10.0%	41.7%	25.0%
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	3.3
All-Red Time (s)	3.2	3.2		3.2	3.2		3.2	3.2		3.2	3.2	3.2
Lost Time Adjust (s)	-3.3	0.0		0.0	-3.3		0.0	-3.3		0.0	0.0	-3.3
Total Lost Time (s)	3.2	6.5		6.5	3.2		6.5	3.2		6.5	6.5	3.2
Lead/Lag	Lead			Lag	Lag		Lag	Lag		Lead		Lead
Lead-Lag Optimize?	Yes			Yes	Yes		Yes	Yes		Yes		Yes
Recall Mode	None	C-Max		C-Max	C-Max		Min	Min		None	Min	None
Act Effct Green (s)	26.8	63.5		33.5	36.8		31.5	34.8		5.5	43.5	26.8
Actuated g/C Ratio	0.22	0.53		0.28	0.31		0.26	0.29		0.05	0.36	0.22
v/c Ratio	1.55	0.35		0.14	1.16		0.07	1.25		1.35	0.68	0.79
Control Delay	289.4	17.8		35.9	118.7		34.7	163.8		253.7	33.6	84.1
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	289.4	17.8		35.9	118.7		34.7	163.8		253.7	33.6	84.1
LOS	F	B		D	F		C	F		F	C	F
Approach Delay		149.3			116.6			161.2			77.6	
Approach LOS		F			F			F			E	
Queue Length 50th (m)	~204.0	51.7		4.6	~176.1		2.4	~194.7		~32.5	112.9	70.2
Queue Length 95th (m)	#281.9	56.3		12.4	#211.5		8.0	#268.2		#70.1	148.8	#108.3
Internal Link Dist (m)		138.6			62.5			37.2			83.1	
Turn Bay Length (m)	155.0			40.0								120.0
Base Capacity (vph)	374	1760		209	981		185	505		74	645	338
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	1.55	0.35		0.14	1.16		0.07	1.25		1.35	0.68	0.79

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 9 (8%), Referenced to phase 2:EBT and 6:WBTL, Start of Green
Natural Cycle: 145
Control Type: Actuated-Coordinated

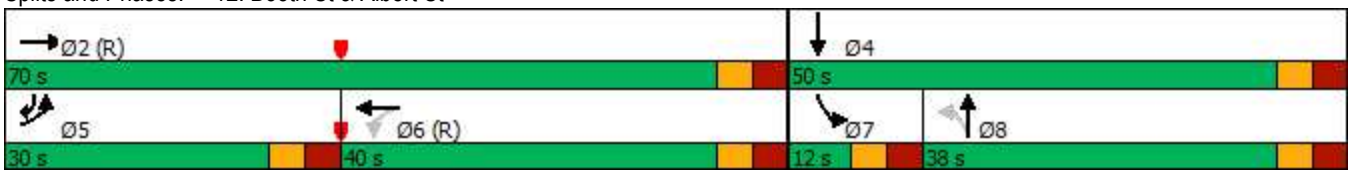
Maximum v/c Ratio: 1.55

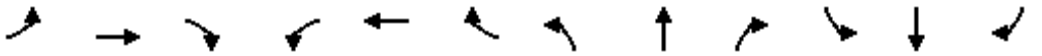
Intersection Signal Delay: 126.1	Intersection LOS: F
Intersection Capacity Utilization 121.2%	ICU Level of Service H
Analysis Period (min) 15	

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

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

Splits and Phases: 12: Booth St & Albert St





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	691	135	267	916	18	175	12	343	30	9	0
Future Volume (vph)	8	691	135	267	916	18	175	12	343	30	9	0
Satd. Flow (prot)	1710	3264	0	1676	3375	0	1629	1470	0	1710	1800	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1710	3264	0	1657	3375	0	1591	1470	0	1704	1800	0
Satd. Flow (RTOR)		18			2			361				
Lane Group Flow (vph)	8	869	0	281	983	0	184	374	0	32	9	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases												
Detector Phase	5	2		1	6		3	8		7	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		5.0	10.0		5.0	10.0	
Minimum Split (s)	11.2	31.8		11.2	31.8		11.3	29.3		11.3	29.3	
Total Split (s)	12.0	37.0		36.0	61.0		17.0	35.0		12.0	30.0	
Total Split (%)	10.0%	30.8%		30.0%	50.8%		14.2%	29.2%		10.0%	25.0%	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.9	3.5		2.9	3.5		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.2	6.8		6.2	6.8		6.3	6.3		6.3	6.3	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	
Act Effct Green (s)	6.2	55.2		25.1	83.9		15.8	13.1		5.7	11.3	
Actuated g/C Ratio	0.05	0.46		0.21	0.70		0.13	0.11		0.05	0.09	
v/c Ratio	0.09	0.57		0.80	0.42		0.86	0.78		0.40	0.05	
Control Delay	48.5	31.7		65.4	4.8		84.4	17.6		70.2	48.7	
Queue Delay	0.0	0.0		0.0	0.2		0.0	0.0		0.0	0.0	
Total Delay	48.5	31.7		65.4	5.0		84.4	17.6		70.2	48.7	
LOS	D	C		E	A		F	B		E	D	
Approach Delay		31.9			18.4			39.6			65.5	
Approach LOS		C			B			D			E	
Queue Length 50th (m)	1.9	67.2		67.9	11.2		42.4	3.0		7.9	2.1	
Queue Length 95th (m)	m6.1	#139.0		57.0	151.7		#104.4	33.7		18.9	7.1	
Internal Link Dist (m)		84.9			122.5			54.7			49.4	
Turn Bay Length (m)	30.0			90.0						15.0		
Base Capacity (vph)	89	1512		425	2359		214	626		81	355	
Starvation Cap Reductn	0	0		0	512		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	0.09	0.57		0.66	0.53		0.86	0.60		0.40	0.03	

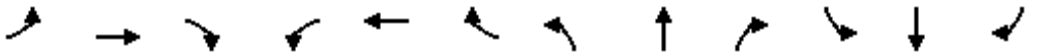
Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 65 (54%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 105
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.86

Intersection Signal Delay: 27.7	Intersection LOS: C
Intersection Capacity Utilization 83.0%	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.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 13: Preston St & Albert St



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	931	2	15	1575	7	3	0	6	5	0	22
Future Volume (vph)	2	931	2	15	1575	7	3	0	6	5	0	22
Satd. Flow (prot)	1710	3386	0	1710	3416	0	0	1596	0	0	1586	0
Flt Permitted	0.130			0.288				0.878			0.935	
Satd. Flow (perm)	234	3386	0	518	3416	0	0	1424	0	0	1495	0
Satd. Flow (RTOR)					1			27			27	
Lane Group Flow (vph)	2	982	0	16	1665	0	0	9	0	0	28	0
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)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	37.0	37.0		37.0	37.0		32.3	32.3		32.3	32.3	
Total Split (s)	87.0	87.0		87.0	87.0		33.0	33.0		33.0	33.0	
Total Split (%)	72.5%	72.5%		72.5%	72.5%		27.5%	27.5%		27.5%	27.5%	
Yellow Time (s)	3.7	3.7		3.7	3.7		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.3	2.3		2.3	2.3		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0			6.3			6.3	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	
Act Effct Green (s)	106.6	106.6		106.6	106.6			10.0			10.0	
Actuated g/C Ratio	0.89	0.89		0.89	0.89			0.08			0.08	
v/c Ratio	0.01	0.33		0.03	0.55			0.06			0.19	
Control Delay	2.0	2.3		2.5	4.5			3.6			21.8	
Queue Delay	0.0	0.0		0.0	0.1			0.0			0.0	
Total Delay	2.0	2.3		2.5	4.6			3.6			21.8	
LOS	A	A		A	A			A			C	
Approach Delay		2.3			4.6			3.6			21.8	
Approach LOS		A			A			A			C	
Queue Length 50th (m)	0.1	26.4		0.3	31.8			0.0			0.2	
Queue Length 95th (m)	0.6	32.6		m2.0	143.4			1.2			9.8	
Internal Link Dist (m)		651.1			66.3			44.5			21.1	
Turn Bay Length (m)	40.0			50.0								
Base Capacity (vph)	208	3008		460	3035			337			353	
Starvation Cap Reductn	0	0		0	233			0			0	
Spillback Cap Reductn	0	0		0	0			0			0	
Storage Cap Reductn	0	0		0	0			0			0	
Reduced v/c Ratio	0.01	0.33		0.03	0.59			0.03			0.08	

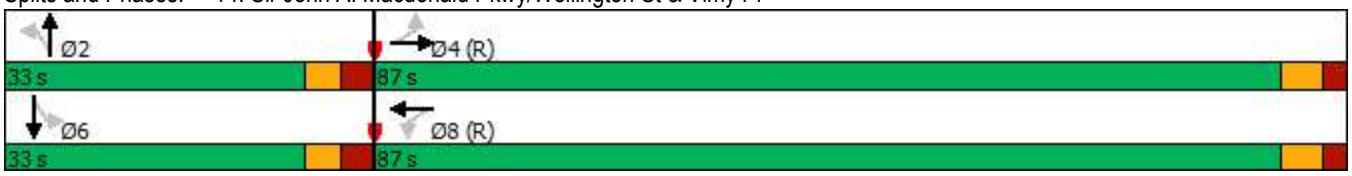
Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 37 (31%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated

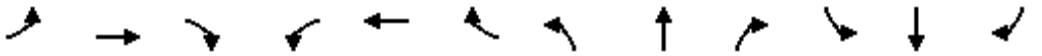
Maximum v/c Ratio: 0.55

Intersection Signal Delay: 3.9	Intersection LOS: A
Intersection Capacity Utilization 65.6%	ICU Level of Service C
Analysis Period (min) 15	

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

Splits and Phases: 14: Sir John A. Macdonald Pkwy/Wellington St & Vimy Pl



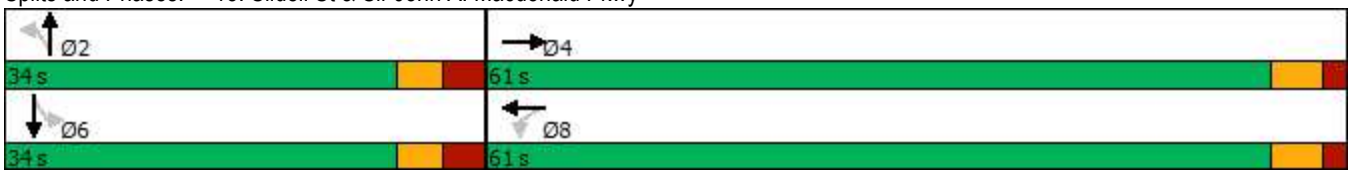


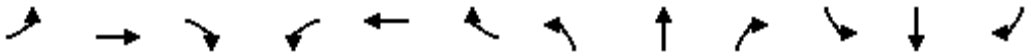
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	986	4	2	1732	0	26	14	35	3	26	11
Future Volume (vph)	0	986	4	2	1732	0	26	14	35	3	26	11
Satd. Flow (prot)	0	3383	0	0	3420	0	0	1642	0	0	1669	0
Flt Permitted					0.954			0.870			0.969	
Satd. Flow (perm)	0	3383	0	0	3263	0	0	1450	0	0	1623	0
Satd. Flow (RTOR)		1						37			12	
Lane Group Flow (vph)	0	1042	0	0	1825	0	0	79	0	0	42	0
Turn Type		NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases				8			2			6		
Detector Phase		4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)		10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)		30.5		30.5	30.5		33.3	33.3		33.3	33.3	
Total Split (s)		61.0		61.0	61.0		34.0	34.0		34.0	34.0	
Total Split (%)		64.2%		64.2%	64.2%		35.8%	35.8%		35.8%	35.8%	
Yellow Time (s)		3.7		3.7	3.7		3.3	3.3		3.3	3.3	
All-Red Time (s)		1.8		1.8	1.8		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.5			5.5			6.3			6.3	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode		Max		Max	Max		None	None		None	None	
Act Effct Green (s)		61.7			61.7			10.3			10.3	
Actuated g/C Ratio		0.78			0.78			0.13			0.13	
v/c Ratio		0.40			0.72			0.36			0.19	
Control Delay		4.4			8.4			24.0			25.9	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		4.4			8.4			24.0			25.9	
LOS		A			A			C			C	
Approach Delay		4.4			8.4			24.0			25.9	
Approach LOS		A			A			C			C	
Queue Length 50th (m)		27.8			76.7			5.9			4.2	
Queue Length 95th (m)		40.0			112.7			18.3			13.1	
Internal Link Dist (m)		176.2			288.5			38.4			167.1	
Turn Bay Length (m)												
Base Capacity (vph)		2634			2540			532			576	
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		0.40			0.72			0.15			0.07	

Intersection Summary
Cycle Length: 95
Actuated Cycle Length: 79.3
Natural Cycle: 90
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.72

Intersection Signal Delay: 7.7	Intersection LOS: A
Intersection Capacity Utilization 75.7%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 15: Slidell St & Sir John A. Macdonald Pkwy





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	586	88	94	775	121	88	185	84	59	68	11
Future Volume (vph)	10	586	88	94	775	121	88	185	84	59	68	11
Satd. Flow (prot)	1555	1715	0	1710	1782	1530	1710	1800	1485	1710	1745	0
Flt Permitted	0.259			0.317			0.702			0.509		
Satd. Flow (perm)	417	1715	0	563	1782	1340	1212	1800	1427	899	1745	0
Satd. Flow (RTOR)		14				127			76		8	
Lane Group Flow (vph)	11	710	0	99	816	127	93	195	88	62	84	0
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6		6	8		8	4		
Detector Phase	2	2		6	6	6	8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	32.5	32.5		32.5	32.5	32.5	31.4	31.4	31.4	31.4	31.4	
Total Split (s)	68.0	68.0		68.0	68.0	68.0	32.0	32.0	32.0	32.0	32.0	
Total Split (%)	68.0%	68.0%		68.0%	68.0%	68.0%	32.0%	32.0%	32.0%	32.0%	32.0%	
Yellow Time (s)	3.3	3.3		3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	
All-Red Time (s)	3.2	3.2		3.2	3.2	3.2	3.1	3.1	3.1	3.1	3.1	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.5	6.5		6.5	6.5	6.5	6.4	6.4	6.4	6.4	6.4	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		C-Max	C-Max	C-Max	None	None	None	None	None	
Act Effct Green (s)	69.1	69.1		69.1	69.1	69.1	18.0	18.0	18.0	18.0	18.0	
Actuated g/C Ratio	0.69	0.69		0.69	0.69	0.69	0.18	0.18	0.18	0.18	0.18	
v/c Ratio	0.04	0.60		0.26	0.66	0.13	0.43	0.60	0.28	0.39	0.26	
Control Delay	6.7	14.9		9.4	13.6	1.8	40.6	44.5	11.6	40.8	31.7	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	6.7	14.9		9.4	13.6	1.8	40.6	44.5	11.6	40.8	31.7	
LOS	A	B		A	B	A	D	D	B	D	C	
Approach Delay		14.8			11.8			35.8			35.6	
Approach LOS		B			B			D			D	
Queue Length 50th (m)	0.5	123.0		6.2	77.0	0.0	17.5	37.9	2.1	11.5	13.8	
Queue Length 95th (m)	m1.0	m163.7		18.3	157.5	6.6	30.1	55.2	14.2	22.5	25.0	
Internal Link Dist (m)		635.7			497.2			83.8			171.5	
Turn Bay Length (m)	45.0			50.0			50.0		20.0	45.0		
Base Capacity (vph)	288	1189		388	1231	965	310	460	421	230	452	
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.04	0.60		0.26	0.66	0.13	0.30	0.42	0.21	0.27	0.19	

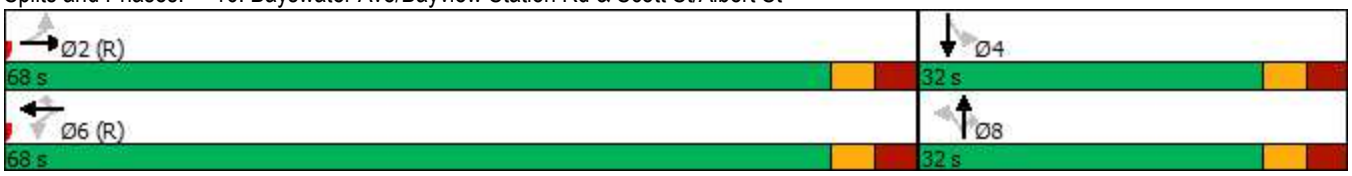
Intersection Summary
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 65 (65%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated

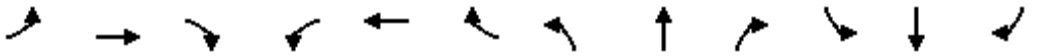
Maximum v/c Ratio: 0.66

Intersection Signal Delay: 18.2	Intersection LOS: B
Intersection Capacity Utilization 97.0%	ICU Level of Service F
Analysis Period (min) 15	

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

Splits and Phases: 16: Bayswater Ave/Bayview Station Rd & Scott St/Albert St





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	227	580	86	65	748	73	40	552	56	67	233	210
Future Volume (vph)	227	580	86	65	748	73	40	552	56	67	233	210
Satd. Flow (prot)	1693	1693	0	1710	1800	1530	1710	1749	0	1710	1565	0
Flt Permitted	0.950			0.337			0.294			0.111		
Satd. Flow (perm)	1591	1693	0	582	1800	1222	514	1749	0	195	1565	0
Satd. Flow (RTOR)		9				119		6			53	
Lane Group Flow (vph)	239	702	0	68	787	77	42	640	0	71	466	0
Turn Type	Prot	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	2			6			8			4	
Permitted Phases				6		6	8			4		
Detector Phase	5	2		6	6	6	8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0		10.0	10.0	10.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	10.6	28.1		28.1	28.1	28.1	35.3	35.3		35.3	35.3	
Total Split (s)	15.0	49.0		34.0	34.0	34.0	45.0	45.0		45.0	45.0	
Total Split (%)	15.0%	49.0%		34.0%	34.0%	34.0%	45.0%	45.0%		45.0%	45.0%	
Yellow Time (s)	3.3	3.3		3.3	3.3	3.3	3.0	3.0		3.0	3.0	
All-Red Time (s)	2.3	2.8		2.8	2.8	2.8	3.3	3.3		3.3	3.3	
Lost Time Adjust (s)	0.0	0.0		0.0	-3.3	-2.1	0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.6	6.1		6.1	2.8	4.0	6.3	6.3		6.3	6.3	
Lead/Lag	Lead			Lag	Lag	Lag						
Lead-Lag Optimize?	Yes			Yes	Yes	Yes						
Recall Mode	None	C-Max		C-Max	C-Max	C-Max	Min	Min		Min	Min	
Act Effct Green (s)	16.2	49.7		27.9	31.2	30.0	37.9	37.9		37.9	37.9	
Actuated g/C Ratio	0.16	0.50		0.28	0.31	0.30	0.38	0.38		0.38	0.38	
v/c Ratio	0.88	0.83		0.42	1.40	0.17	0.22	0.96		0.97	0.74	
Control Delay	73.0	32.0		34.8	217.4	2.9	24.2	57.5		132.6	32.0	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	73.0	32.0		34.8	217.4	2.9	24.2	57.5		132.6	32.0	
LOS	E	C		C	F	A	C	E		F	C	
Approach Delay		42.4			186.4			55.4			45.3	
Approach LOS		D			F			E			D	
Queue Length 50th (m)	48.6	118.6		9.8	~218.9	0.4	5.6	122.9		13.7	71.3	
Queue Length 95th (m)	#95.1	#192.2		m15.9	#288.5	m2.2	14.3	#196.9		#43.3	111.4	
Internal Link Dist (m)		92.9			635.7			70.7			630.1	
Turn Bay Length (m)	55.0			65.0		35.0	55.0			50.0		
Base Capacity (vph)	273	845		162	561	449	198	680		75	638	
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	
Reduced v/c Ratio	0.88	0.83		0.42	1.40	0.17	0.21	0.94		0.95	0.73	

Intersection Summary
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 14 (14%), Referenced to phase 2:EBT and 6:WBTL, Start of Green
Natural Cycle: 130
Control Type: Actuated-Coordinated

Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Satd. Flow (RTOR)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	2.0
Minimum Split (s)	6.0
Total Split (s)	6.0
Total Split (%)	6%
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	None
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (m)	
Queue Length 95th (m)	
Internal Link Dist (m)	
Turn Bay Length (m)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Maximum v/c Ratio: 1.40

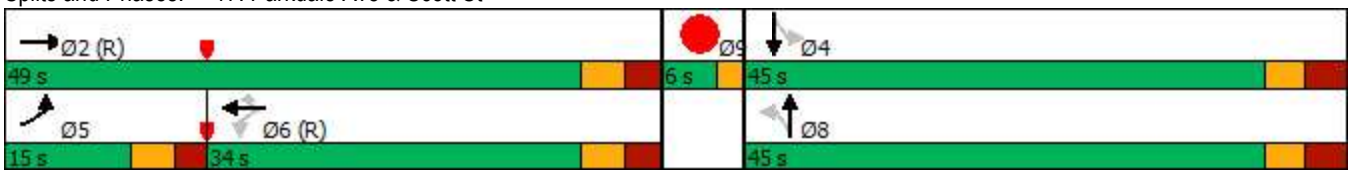
Intersection Signal Delay: 89.2	Intersection LOS: F
Intersection Capacity Utilization 116.4%	ICU Level of Service H
Analysis Period (min) 15	

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

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

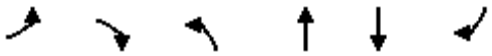
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 17: Parkdale Ave & Scott St



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	0	464
Future Volume (vph)	0	0	0	0	0	464
Satd. Flow (prot)	0	1800	0	0	0	0
Flt Permitted						
Satd. Flow (perm)	0	1800	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	488	0
Sign Control	Free			Free	Free	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization Err%		ICU Level of Service H	
Analysis Period (min) 15			



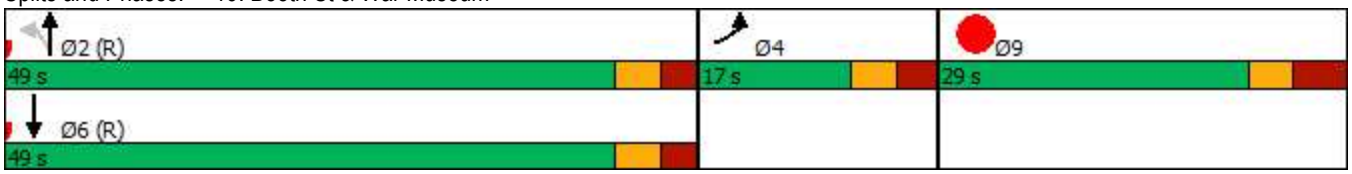
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø9
Lane Configurations							
Traffic Volume (vph)	1	8	8	1115	1080	10	
Future Volume (vph)	1	8	8	1115	1080	10	
Satd. Flow (prot)	1554	0	1710	3420	3417	0	
Flt Permitted	0.994		0.244				
Satd. Flow (perm)	1551	0	439	3420	3417	0	
Satd. Flow (RTOR)	8				1		
Lane Group Flow (vph)	9	0	8	1174	1148	0	
Turn Type	Prot		Perm	NA	NA		
Protected Phases	4			2	6		9
Permitted Phases			2				
Detector Phase	4		2	2	6		
Switch Phase							
Minimum Initial (s)	10.0		10.0	10.0	10.0		22.0
Minimum Split (s)	17.0		30.9	30.9	30.9		29.0
Total Split (s)	17.0		49.0	49.0	49.0		29.0
Total Split (%)	17.9%		51.6%	51.6%	51.6%		31%
Yellow Time (s)	3.3		3.3	3.3	3.3		3.0
All-Red Time (s)	2.9		2.6	2.6	2.6		4.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0		
Total Lost Time (s)	6.2		5.9	5.9	5.9		
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	None		C-Max	C-Max	C-Max		None
Act Effct Green (s)	10.0		90.6	90.6	90.6		
Actuated g/C Ratio	0.11		0.95	0.95	0.95		
v/c Ratio	0.05		0.02	0.36	0.35		
Control Delay	23.9		1.6	1.4	1.4		
Queue Delay	0.0		0.0	0.0	0.0		
Total Delay	23.9		1.6	1.4	1.4		
LOS	C		A	A	A		
Approach Delay	23.9			1.4	1.4		
Approach LOS	C			A	A		
Queue Length 50th (m)	0.2		0.0	0.0	0.0		
Queue Length 95th (m)	4.8		1.3	43.0	41.6		
Internal Link Dist (m)	148.9			192.9	188.6		
Turn Bay Length (m)			35.0				
Base Capacity (vph)	183		418	3261	3258		
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	0.05		0.02	0.36	0.35		

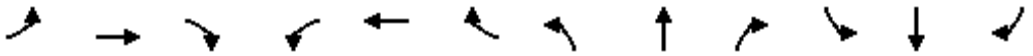
Intersection Summary
Cycle Length: 95
Actuated Cycle Length: 95
Offset: 10 (11%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.36

Intersection Signal Delay: 1.5	Intersection LOS: A
Intersection Capacity Utilization 51.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 19: Booth St & War Museum





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	614	76	84	852	32	57	4	80	42	0	8
Future Volume (vph)	9	614	76	84	852	32	57	4	80	42	0	8
Satd. Flow (prot)	855	3332	0	1693	3275	0	1644	1500	0	0	1690	0
Flt Permitted	0.950			0.950			0.788				0.698	
Satd. Flow (perm)	851	3332	0	1693	3275	0	1364	1500	0	0	1230	0
Satd. Flow (RTOR)		18			5			84			87	
Lane Group Flow (vph)	9	726	0	88	931	0	60	88	0	0	52	0
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases							8			4		
Detector Phase	5	2		1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	11.3	27.3		11.3	27.3		29.3	29.3		29.3	29.3	
Total Split (s)	17.0	72.0		12.0	67.0		36.0	36.0		36.0	36.0	
Total Split (%)	14.2%	60.0%		10.0%	55.8%		30.0%	30.0%		30.0%	30.0%	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)	6.3	6.3		6.3	6.3		6.3	6.3			6.3	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	
Act Effct Green (s)	7.0	74.5		14.5	92.1		12.1	12.1			12.1	
Actuated g/C Ratio	0.06	0.62		0.12	0.77		0.10	0.10			0.10	
v/c Ratio	0.18	0.35		0.43	0.37		0.44	0.39			0.26	
Control Delay	60.9	11.7		62.2	4.7		60.2	16.3			5.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Total Delay	60.9	11.7		62.2	4.7		60.2	16.3			5.9	
LOS	E	B		E	A		E	B			A	
Approach Delay		12.3			9.7			34.1			5.9	
Approach LOS		B			A			C			A	
Queue Length 50th (m)	2.2	40.2		19.7	26.9		14.4	0.9			0.0	
Queue Length 95th (m)	7.7	60.8		m29.3	92.4		27.8	16.4			4.0	
Internal Link Dist (m)		497.2			108.4			178.8			36.6	
Turn Bay Length (m)	30.0			35.0			30.0					
Base Capacity (vph)	76	2075		204	2515		337	434			369	
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	0.12	0.35		0.43	0.37		0.18	0.20			0.14	

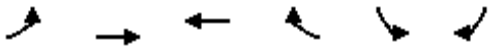
Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 80 (67%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.44

Intersection Signal Delay: 12.4	Intersection LOS: B
Intersection Capacity Utilization 55.5%	ICU Level of Service B
Analysis Period (min) 15	

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

Splits and Phases: 20: City Centre Ave & Albert St



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	1114	1107	0	0	0
Future Volume (vph)	0	1114	1107	0	0	0
Satd. Flow (prot)	1800	3353	3386	0	1800	0
Flt Permitted						
Satd. Flow (perm)	1800	3353	3386	0	1800	0
Satd. Flow (RTOR)						
Lane Group Flow (vph)	0	1173	1165	0	0	0
Turn Type	Prot	NA	NA		Prot	
Protected Phases	5	2	6		4	
Permitted Phases						
Detector Phase	5	2	6		4	
Switch Phase						
Minimum Initial (s)	5.0	10.0	10.0		10.0	
Minimum Split (s)	11.3	22.0	22.0		20.0	
Total Split (s)	12.0	90.0	78.0		30.0	
Total Split (%)	10.0%	75.0%	65.0%		25.0%	
Yellow Time (s)	3.3	3.3	3.3		3.0	
All-Red Time (s)	3.0	3.0	3.0		3.0	
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	
Total Lost Time (s)	6.3	6.3	6.3		6.0	
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	None	C-Max	C-Min		None	
Act Effct Green (s)		115.1	115.1			
Actuated g/C Ratio		0.96	0.96			
v/c Ratio		0.36	0.36			
Control Delay		2.2	0.2			
Queue Delay		0.0	0.0			
Total Delay		2.2	0.3			
LOS		A	A			
Approach Delay		2.2	0.3			
Approach LOS		A	A			
Queue Length 50th (m)		0.0	0.0			
Queue Length 95th (m)		63.7	m2.8			
Internal Link Dist (m)		122.5	138.6		61.4	
Turn Bay Length (m)						
Base Capacity (vph)		3217	3249			
Starvation Cap Reductn		359	396			
Spillback Cap Reductn		0	94			
Storage Cap Reductn		0	0			
Reduced v/c Ratio		0.41	0.41			

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 22 (18%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.36

Intersection Signal Delay: 1.2	Intersection LOS: A
Intersection Capacity Utilization 37.8%	ICU Level of Service A
Analysis Period (min) 15	

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

Splits and Phases: 21: Albert St & Access 1

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1043	32	60	1187	39	56
Future Volume (vph)	1043	32	60	1187	39	56
Satd. Flow (prot)	3360	0	1710	3386	1586	0
Flt Permitted			0.233		0.980	
Satd. Flow (perm)	3360	0	417	3386	1585	0
Satd. Flow (RTOR)	5				56	
Lane Group Flow (vph)	1132	0	63	1249	100	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	4			8	2	
Permitted Phases			8			
Detector Phase	4		8	8	2	
Switch Phase						
Minimum Initial (s)	10.0		10.0	10.0	10.0	
Minimum Split (s)	30.0		22.0	22.0	33.8	
Total Split (s)	66.0		86.0	86.0	34.0	
Total Split (%)	55.0%		71.7%	71.7%	28.3%	
Yellow Time (s)	3.7		3.7	3.7	3.3	
All-Red Time (s)	1.9		1.9	1.9	2.5	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	5.6		5.6	5.6	5.8	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max		C-Max	C-Max	None	
Act Effct Green (s)	94.8		94.8	94.8	13.8	
Actuated g/C Ratio	0.79		0.79	0.79	0.12	
v/c Ratio	0.43		0.19	0.47	0.43	
Control Delay	2.0		6.2	5.7	28.1	
Queue Delay	0.1		0.0	0.3	0.0	
Total Delay	2.1		6.2	5.9	28.1	
LOS	A		A	A	C	
Approach Delay	2.1			6.0	28.1	
Approach LOS	A			A	C	
Queue Length 50th (m)	4.4		2.5	35.7	10.5	
Queue Length 95th (m)	m22.5		12.8	94.4	23.8	
Internal Link Dist (m)	117.1			245.5	41.8	
Turn Bay Length (m)			70.0			
Base Capacity (vph)	2654		329	2674	415	
Starvation Cap Reductn	526		0	0	0	
Spillback Cap Reductn	0		0	653	10	
Storage Cap Reductn	0		0	0	0	
Reduced v/c Ratio	0.53		0.19	0.62	0.25	

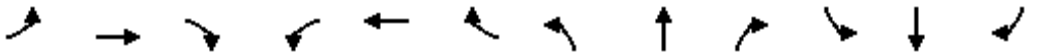
Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 23 (19%), Referenced to phase 4:EBT and 8:WBTL, Start of Green
Natural Cycle: 65
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.47

Intersection Signal Delay: 5.1	Intersection LOS: A
Intersection Capacity Utilization 64.7%	ICU Level of Service C
Analysis Period (min) 15	

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

Splits and Phases: 22: Lett St & Wellington St



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	43	649	16	11	1078	14	9	0	14	44	0	12
Future Volume (vph)	43	649	16	11	1078	14	9	0	14	44	0	12
Satd. Flow (prot)	1710	3406	0	1710	3413	0	0	1619	0	0	1680	0
Flt Permitted	0.233			0.383				0.894			0.757	
Satd. Flow (perm)	419	3406	0	689	3413	0	0	1474	0	0	1322	0
Satd. Flow (RTOR)		4			2			15			15	
Lane Group Flow (vph)	45	700	0	12	1150	0	0	24	0	0	59	0
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)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	22.0	22.0		22.0	22.0		30.5	30.5		30.5	30.5	
Total Split (s)	81.0	81.0		81.0	81.0		39.0	39.0		39.0	39.0	
Total Split (%)	67.5%	67.5%		67.5%	67.5%		32.5%	32.5%		32.5%	32.5%	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	1.3	1.3		1.3	1.3		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.6	0.0			0.0			0.0	
Total Lost Time (s)	4.6	4.6		5.2	4.6			4.3			4.3	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Min	C-Min		C-Max	C-Max		None	None		None	None	
Act Effct Green (s)	101.7	101.7		101.2	101.7			13.2			13.2	
Actuated g/C Ratio	0.85	0.85		0.84	0.85			0.11			0.11	
v/c Ratio	0.13	0.24		0.02	0.40			0.14			0.37	
Control Delay	4.9	4.3		3.5	3.8			26.8			43.4	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	4.9	4.3		3.5	3.8			26.8			43.4	
LOS	A	A		A	A			C			D	
Approach Delay		4.3			3.8			26.8			43.4	
Approach LOS		A			A			C			D	
Queue Length 50th (m)	0.3	2.6		0.4	26.1			2.1			10.5	
Queue Length 95th (m)	m9.7	m48.3		2.6	69.2			9.4			21.4	
Internal Link Dist (m)		82.0			212.6			72.6			45.7	
Turn Bay Length (m)	75.0			50.0								
Base Capacity (vph)	355	2886		581	2892			436			392	
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	0.13	0.24		0.02	0.40			0.06			0.15	

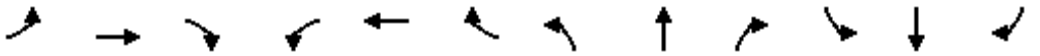
Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 22 (18%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.40

Intersection Signal Delay: 5.4	Intersection LOS: A
Intersection Capacity Utilization 53.5%	ICU Level of Service A
Analysis Period (min) 15	

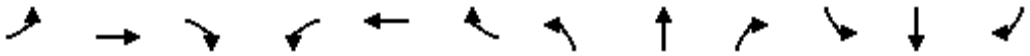
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 23: Empress Ave & Albert St



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	708	0	0	1096	14	0	0	0	0	0	12
Future Volume (vph)	0	708	0	0	1096	14	0	0	0	0	0	12
Satd. Flow (prot)	0	3420	0	0	3413	0	0	0	1800	0	0	1557
Flt Permitted												
Satd. Flow (perm)	0	3420	0	0	3413	0	0	0	1800	0	0	1557
Lane Group Flow (vph)	0	745	0	0	1169	0	0	0	0	0	0	13
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization 42.4%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	7	0	0	10	0	1207	23	0	750	0
Future Volume (vph)	0	0	7	0	0	10	0	1207	23	0	750	0
Satd. Flow (prot)	0	0	1557	0	0	1557	0	3410	0	0	3420	0
Flt Permitted												
Satd. Flow (perm)	0	0	1557	0	0	1557	0	3410	0	0	3420	0
Lane Group Flow (vph)	0	0	7	0	0	11	0	1295	0	0	789	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Control Type: Unsignalized	
Intersection Capacity Utilization 46.0%	ICU Level of Service A
Analysis Period (min) 15	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	885	0	0	1511	0	6
Future Volume (vph)	885	0	0	1511	0	6
Satd. Flow (prot)	3420	0	0	3420	0	1557
Flt Permitted						
Satd. Flow (perm)	3420	0	0	3420	0	1557
Lane Group Flow (vph)	932	0	0	1591	0	6
Sign Control	Free			Free	Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization 47.4%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	879	4	15	1494	3	6
Future Volume (vph)	879	4	15	1494	3	6
Satd. Flow (prot)	3383	0	1710	3420	1612	0
Flt Permitted			0.950		0.984	
Satd. Flow (perm)	3383	0	1710	3420	1612	0
Satd. Flow (RTOR)	1				6	
Lane Group Flow (vph)	929	0	16	1573	9	0
Turn Type	NA		Prot	NA	Prot	
Protected Phases	4		3	8	2	
Permitted Phases						
Detector Phase	4		3	8	2	
Switch Phase						
Minimum Initial (s)	10.0		5.0	10.0	10.0	
Minimum Split (s)	37.0		11.0	37.0	32.3	
Total Split (s)	72.0		15.0	87.0	33.0	
Total Split (%)	60.0%		12.5%	72.5%	27.5%	
Yellow Time (s)	3.7		3.7	3.7	3.3	
All-Red Time (s)	2.3		2.3	2.3	3.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	6.0		6.0	6.0	6.3	
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	C-Max		None	C-Max	None	
Act Effct Green (s)	108.8		6.7	115.5	10.0	
Actuated g/C Ratio	0.91		0.06	0.96	0.08	
v/c Ratio	0.30		0.17	0.48	0.06	
Control Delay	2.7		39.3	3.2	35.8	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	2.7		39.3	3.2	35.8	
LOS	A		D	A	D	
Approach Delay	2.7			3.6	35.8	
Approach LOS	A			A	D	
Queue Length 50th (m)	0.0		3.3	0.0	0.7	
Queue Length 95th (m)	52.2		m5.0	120.4	6.1	
Internal Link Dist (m)	71.8			49.0	28.0	
Turn Bay Length (m)			60.0			
Base Capacity (vph)	3066		128	3293	363	
Starvation Cap Reductn	125		0	254	0	
Spillback Cap Reductn	0		0	0	0	
Storage Cap Reductn	0		0	0	0	
Reduced v/c Ratio	0.32		0.13	0.52	0.02	

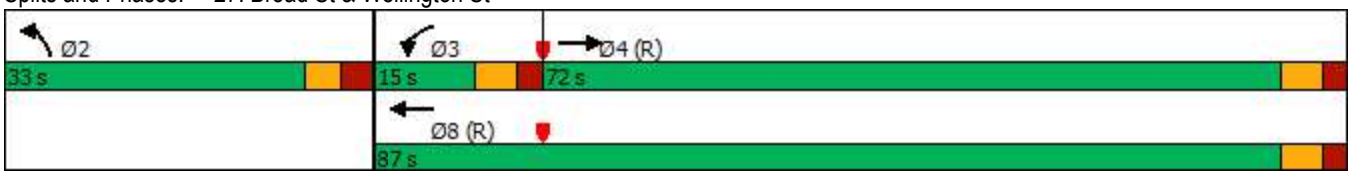
Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 22 (18%), Referenced to phase 4:EBT and 8:WBT, Start of Green
Natural Cycle: 85
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.48

Intersection Signal Delay: 3.4	Intersection LOS: A
Intersection Capacity Utilization 62.2%	ICU Level of Service B
Analysis Period (min) 15	

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

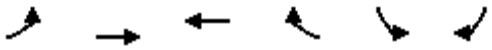
Splits and Phases: 27: Broad St & Wellington St



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	877	4	0	1497	0	6
Future Volume (vph)	877	4	0	1497	0	6
Satd. Flow (prot)	3417	0	0	3420	0	1557
Flt Permitted						
Satd. Flow (perm)	3417	0	0	3420	0	1557
Lane Group Flow (vph)	927	0	0	1576	0	6
Sign Control	Free			Free	Stop	

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

Synchro Modelling Outputs – Phase Two (2040) Conditions



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	605	1001	351	704	1962	312
Future Volume (vph)	605	1001	351	704	1962	312
Satd. Flow (prot)	3317	4914	3420	2693	3285	1530
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	3303	4914	3420	2693	3272	1501
Satd. Flow (RTOR)						71
Lane Group Flow (vph)	637	1054	369	741	2065	328
Turn Type	Prot	NA	NA	pt+ov	Prot	Perm
Protected Phases	7	4	8	1 8	1	
Permitted Phases						1
Detector Phase	7	4	8	1 8	1	1
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0		10.0	10.0
Minimum Split (s)	42.8	16.5	26.5		45.1	45.1
Total Split (s)	42.8	70.3	27.5		51.1	51.1
Total Split (%)	35.3%	57.9%	22.7%		42.1%	42.1%
Yellow Time (s)	3.3	3.3	3.3		3.3	3.3
All-Red Time (s)	2.5	3.2	3.2		2.8	2.8
Lost Time Adjust (s)	0.0	0.0	0.0		-2.1	-2.1
Total Lost Time (s)	5.8	6.5	6.5		4.0	4.0
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	Max	Min	Min		Max	Max
Act Effct Green (s)	37.0	63.4	20.6	72.1	47.1	47.1
Actuated g/C Ratio	0.31	0.52	0.17	0.60	0.39	0.39
v/c Ratio	0.63	0.41	0.63	0.46	1.62	0.52
Control Delay	39.5	18.0	52.2	14.8	308.9	25.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.5	18.0	52.2	14.8	308.9	25.4
LOS	D	B	D	B	F	C
Approach Delay		26.1	27.2		270.1	
Approach LOS		C	C		F	
Queue Length 50th (m)	70.8	56.4	45.6	55.4	~384.1	48.7
Queue Length 95th (m)	91.1	67.4	62.6	71.7	#427.2	78.2
Internal Link Dist (m)		246.9	299.2		39.9	
Turn Bay Length (m)	150.0					30.0
Base Capacity (vph)	1013	2591	593	1586	1278	627
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	0.63	0.41	0.62	0.47	1.62	0.52

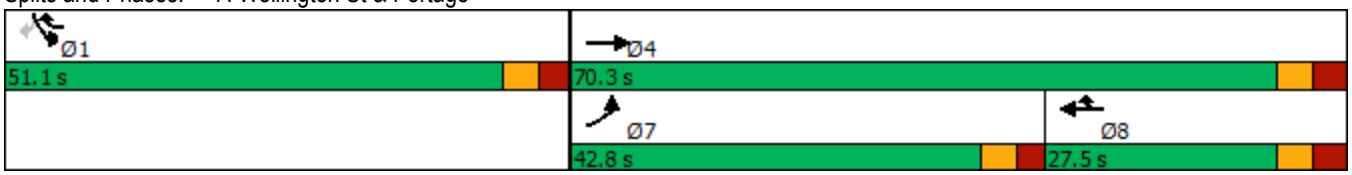
Intersection Summary
Cycle Length: 121.4
Actuated Cycle Length: 121
Natural Cycle: 145
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 1.62

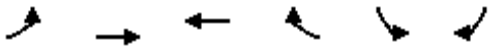
Intersection Signal Delay: 138.8	Intersection LOS: F
Intersection Capacity Utilization 101.9%	ICU Level of Service G
Analysis Period (min) 15	

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

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

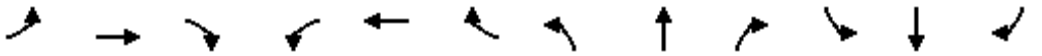
Splits and Phases: 7: Wellington St & Portage





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	1019	504	16	0	5
Future Volume (vph)	0	1019	504	16	0	5
Satd. Flow (prot)	0	3420	3403	0	0	1557
Flt Permitted						
Satd. Flow (perm)	0	3420	3403	0	0	1557
Lane Group Flow (vph)	0	1073	548	0	0	5
Sign Control		Free	Free		Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization 33.1%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	0	5	0	0	0	37	831	0	0	1469	37
Future Volume (vph)	5	0	5	0	0	0	37	831	0	0	1469	37
Satd. Flow (prot)	1710	1530	0	1800	1800	0	1710	1800	0	1800	1793	0
Flt Permitted							0.066					
Satd. Flow (perm)	1800	1530	0	1800	1800	0	119	1800	0	1800	1793	0
Satd. Flow (RTOR)		42									3	
Lane Group Flow (vph)	5	5	0	0	0	0	39	875	0	0	1585	0
Turn Type	Perm	NA		Perm			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)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	22.0	22.0		22.0	22.0		35.9	35.9		35.9	35.9	
Total Split (s)	22.0	22.0		22.0	22.0		53.0	53.0		53.0	53.0	
Total Split (%)	29.3%	29.3%		29.3%	29.3%		70.7%	70.7%		70.7%	70.7%	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.3	3.3		3.3	3.3	
All-Red Time (s)	3.2	3.2		3.2	3.2		2.6	2.6		2.6	2.6	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.2	6.2		6.2	6.2		5.9	5.9		5.9	5.9	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	
Act Effct Green (s)	10.0	10.0					70.6	70.6			70.6	
Actuated g/C Ratio	0.13	0.13					0.94	0.94			0.94	
v/c Ratio	0.02	0.02					0.35	0.52			0.94	
Control Delay	28.6	0.2					15.8	3.4			18.5	
Queue Delay	0.0	0.0					0.0	0.0			0.0	
Total Delay	28.6	0.2					15.8	3.4			18.5	
LOS	C	A					B	A			B	
Approach Delay		14.4						4.0			18.5	
Approach LOS		B						A			B	
Queue Length 50th (m)	0.7	0.0					0.0	0.0			0.0	
Queue Length 95th (m)	3.6	0.0					#18.0	99.5			#384.5	
Internal Link Dist (m)		60.2			43.3			76.9			31.3	
Turn Bay Length (m)	30.0						30.0					
Base Capacity (vph)	379	355					112	1694			1687	
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	0.01	0.01					0.35	0.52			0.94	

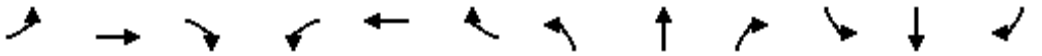
Intersection Summary
Cycle Length: 75
Actuated Cycle Length: 75
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.94

Intersection Signal Delay: 13.2	Intersection LOS: B
Intersection Capacity Utilization 102.4%	ICU Level of Service G
Analysis Period (min) 15	

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

Splits and Phases: 10: Booth St & Chaudiere



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1274	0	0	669	132	0	837	131	146	995	235
Future Volume (vph)	0	1274	0	0	669	132	0	837	131	146	995	235
Satd. Flow (prot)	0	3420	0	0	3386	1530	0	3104	0	1710	3226	1530
Flt Permitted										0.114		
Satd. Flow (perm)	0	3420	0	0	3386	1478	0	3104	0	205	3226	1465
Satd. Flow (RTOR)								19				123
Lane Group Flow (vph)	0	1341	0	0	704	139	0	1019	0	154	1047	247
Turn Type		NA			NA	Perm		NA		pm+pt	NA	Perm
Protected Phases		4			8			2		1	6	
Permitted Phases						8				6		6
Detector Phase		4			8	8		2		1	6	6
Switch Phase												
Minimum Initial (s)		10.0			10.0	10.0		10.0		5.2	10.0	10.0
Minimum Split (s)		35.8			35.8	35.8		31.9		12.0	37.8	37.8
Total Split (s)		48.0			48.0	48.0		35.0		12.0	47.0	47.0
Total Split (%)		50.5%			50.5%	50.5%		36.8%		12.6%	49.5%	49.5%
Yellow Time (s)		3.7			3.7	3.7		3.3		3.3	3.3	3.3
All-Red Time (s)		3.1			3.1	3.1		3.5		3.5	3.5	3.5
Lost Time Adjust (s)		0.0			0.0	-2.8		-2.1		0.0	0.0	-2.8
Total Lost Time (s)		6.8			6.8	4.0		4.7		6.8	6.8	4.0
Lead/Lag								Lag		Lead		
Lead-Lag Optimize?								Yes		Yes		
Recall Mode		Min			Min	Min		C-Max		None	C-Min	C-Min
Act Effct Green (s)		40.4			40.4	43.2		30.3		41.0	41.0	43.8
Actuated g/C Ratio		0.43			0.43	0.45		0.32		0.43	0.43	0.46
v/c Ratio		0.92			0.49	0.21		1.02		0.84	0.75	0.33
Control Delay		46.2			27.4	22.6		65.4		58.0	25.7	8.9
Queue Delay		4.1			0.0	0.0		30.8		63.3	0.0	0.0
Total Delay		50.3			27.4	22.6		96.3		121.3	25.7	8.9
LOS		D			C	C		F		F	C	A
Approach Delay		50.3			26.6			96.3			33.0	
Approach LOS		D			C			F			C	
Queue Length 50th (m)		123.3			63.4	20.9		~104.8		18.4	88.5	13.8
Queue Length 95th (m)		#177.6			84.4	37.5		#150.0		#54.7	67.4	23.5
Internal Link Dist (m)		67.5			116.7			55.5			192.9	
Turn Bay Length (m)						70.0				145.0		55.0
Base Capacity (vph)		1483			1468	684		1002		183	1391	741
Starvation Cap Reductn		93			0	0		0		0	0	0
Spillback Cap Reductn		57			0	0		98		72	0	0
Storage Cap Reductn		0			0	0		0		0	0	0
Reduced v/c Ratio		0.96			0.48	0.20		1.13		1.39	0.75	0.33

Intersection Summary
Cycle Length: 95
Actuated Cycle Length: 95
Offset: 31 (33%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

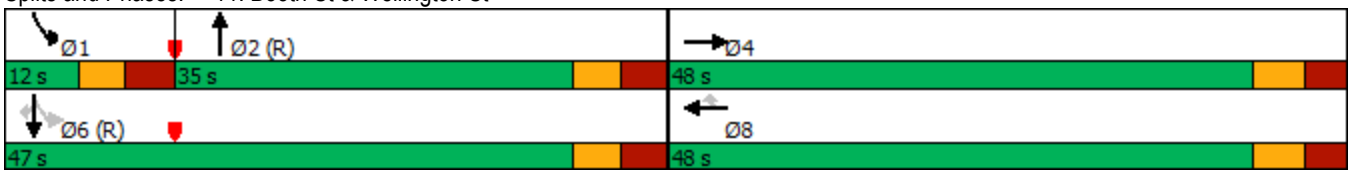
Maximum v/c Ratio: 1.02

Intersection Signal Delay: 50.7	Intersection LOS: D
Intersection Capacity Utilization 90.2%	ICU Level of Service E
Analysis Period (min) 15	

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

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

Splits and Phases: 11: Booth St & Wellington St



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	395	835	19	17	300	156	6	540	46	175	489	444
Future Volume (vph)	395	835	19	17	300	156	6	540	46	175	489	444
Satd. Flow (prot)	1660	3305	0	1710	2901	0	1710	1744	0	1425	1782	1471
Flt Permitted	0.950			0.317			0.354			0.950		
Satd. Flow (perm)	1592	3305	0	566	2901	0	611	1744	0	1355	1782	1471
Satd. Flow (RTOR)		3						4				
Lane Group Flow (vph)	416	899	0	18	480	0	6	616	0	184	515	467
Turn Type	Prot	NA		Perm	NA		Perm	NA		Prot	NA	Over
Protected Phases	5	2			6			8		7	4	5
Permitted Phases				6			8					
Detector Phase	5	2		6	6		8	8		7	4	5
Switch Phase												
Minimum Initial (s)	5.0	10.0		10.0	10.0		10.0	10.0		5.0	10.0	5.0
Minimum Split (s)	11.5	36.5		36.5	36.5		34.5	34.5		11.5	34.5	11.5
Total Split (s)	29.0	67.0		38.0	38.0		38.0	38.0		15.0	53.0	29.0
Total Split (%)	24.2%	55.8%		31.7%	31.7%		31.7%	31.7%		12.5%	44.2%	24.2%
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	3.3
All-Red Time (s)	3.2	3.2		3.2	3.2		3.2	3.2		3.2	3.2	3.2
Lost Time Adjust (s)	-3.3	0.0		0.0	0.0		0.0	-3.3		-3.3	0.0	-3.3
Total Lost Time (s)	3.2	6.5		6.5	6.5		6.5	3.2		3.2	6.5	3.2
Lead/Lag	Lead			Lag	Lag		Lag	Lag		Lead		Lead
Lead-Lag Optimize?	Yes			Yes	Yes		Yes	Yes		Yes		Yes
Recall Mode	Max	C-Max		C-Max	C-Max		None	None		None	None	Max
Act Effct Green (s)	25.8	60.5		31.5	31.5		31.5	34.8		11.8	46.5	25.8
Actuated g/C Ratio	0.22	0.50		0.26	0.26		0.26	0.29		0.10	0.39	0.22
v/c Ratio	1.17	0.54		0.12	0.63		0.04	1.21		1.31	0.75	1.48
Control Delay	136.7	16.3		42.8	47.0		34.0	150.3		225.3	39.7	266.1
Queue Delay	0.0	0.7		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	136.7	17.0		42.8	47.0		34.0	150.3		225.3	39.7	266.1
LOS	F	B		D	D		C	F		F	D	F
Approach Delay		54.9			46.9			149.1			159.6	
Approach LOS		D			D			F			F	
Queue Length 50th (m)	~119.1	18.4		3.4	53.6		1.1	~186.7		~58.8	108.7	~159.3
Queue Length 95th (m)	#183.4	146.4		12.7	84.8		4.8	#260.2		#105.7	152.4	#225.9
Internal Link Dist (m)		141.9			62.1			37.2			83.1	
Turn Bay Length (m)	160.0			40.0								120.0
Base Capacity (vph)	356	1667		148	761		160	508		140	690	316
Starvation Cap Reductn	0	413		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	1.17	0.72		0.12	0.63		0.04	1.21		1.31	0.75	1.48

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 104 (87%), Referenced to phase 2:EBT and 6:WBTL, Start of Green
Natural Cycle: 145
Control Type: Actuated-Coordinated

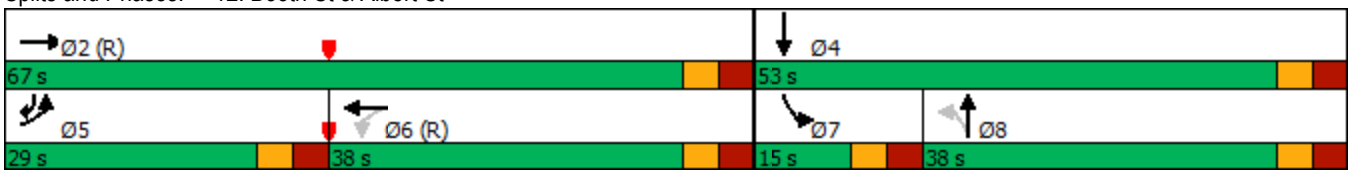
Maximum v/c Ratio: 1.48

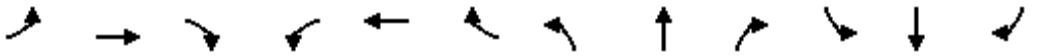
Intersection Signal Delay: 104.0	Intersection LOS: F
Intersection Capacity Utilization 107.1%	ICU Level of Service G
Analysis Period (min) 15	

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

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

Splits and Phases: 12: Booth St & Albert St





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	901	137	393	392	15	125	13	291	31	13	3
Future Volume (vph)	6	901	137	393	392	15	125	13	291	31	13	3
Satd. Flow (prot)	1710	3224	0	1629	3271	0	1583	1454	0	1710	1745	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1710	3224	0	1617	3271	0	1562	1454	0	1710	1745	0
Satd. Flow (RTOR)		16			5			278			3	
Lane Group Flow (vph)	6	1092	0	414	429	0	132	320	0	33	17	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases												
Detector Phase	5	2		1	6		3	8		7	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		5.0	10.0		5.0	10.0	
Minimum Split (s)	11.2	31.8		11.2	31.8		11.3	29.3		11.3	29.3	
Total Split (s)	12.0	53.0		25.0	66.0		12.0	30.0		12.0	30.0	
Total Split (%)	10.0%	44.2%		20.8%	55.0%		10.0%	25.0%		10.0%	25.0%	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.9	3.5		2.9	3.5		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.2	6.8		6.2	6.8		6.3	6.3		6.3	6.3	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	C-Max		Min	C-Max		None	None		None	None	
Act Effct Green (s)	6.0	46.2		33.9	83.7		10.7	13.4		5.7	13.4	
Actuated g/C Ratio	0.05	0.38		0.28	0.70		0.09	0.11		0.05	0.11	
v/c Ratio	0.07	0.87		0.90	0.19		0.94	0.78		0.41	0.09	
Control Delay	41.7	45.0		55.9	9.8		115.9	23.0		70.9	39.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	41.7	45.0		55.9	9.8		115.9	23.0		70.9	39.9	
LOS	D	D		E	A		F	C		E	D	
Approach Delay		45.0			32.5			50.1			60.4	
Approach LOS		D			C			D			E	
Queue Length 50th (m)	1.3	86.6		110.0	47.7		29.5	10.0		8.1	3.3	
Queue Length 95th (m)	m3.0	#143.5		#198.8	25.3		#90.0	39.8		19.4	9.6	
Internal Link Dist (m)		80.9			119.1			54.7			65.4	
Turn Bay Length (m)	30.0			90.0								
Base Capacity (vph)	87	1251		460	2282		140	510		81	347	
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	0.07	0.87		0.90	0.19		0.94	0.63		0.41	0.05	

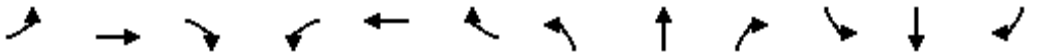
Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 55 (46%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 145
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.94

Intersection Signal Delay: 42.0	Intersection LOS: D
Intersection Capacity Utilization 97.3%	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.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 13: Preston St & Albert St



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	1358	2	8	889	41	5	0	5	2	0	15
Future Volume (vph)	15	1358	2	8	889	41	5	0	5	2	0	15
Satd. Flow (prot)	1710	3420	0	1710	3360	0	0	1627	0	0	1462	0
Flt Permitted	0.291			0.172				0.833			0.958	
Satd. Flow (perm)	523	3420	0	310	3360	0	0	1386	0	0	1409	0
Satd. Flow (RTOR)					8			34			34	
Lane Group Flow (vph)	16	1431	0	8	979	0	0	10	0	0	18	0
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)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	37.0	37.0		37.0	37.0		32.3	32.3		32.3	32.3	
Total Split (s)	62.0	62.0		62.0	62.0		33.0	33.0		33.0	33.0	
Total Split (%)	65.3%	65.3%		65.3%	65.3%		34.7%	34.7%		34.7%	34.7%	
Yellow Time (s)	3.7	3.7		3.7	3.7		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.3	2.3		2.3	2.3		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0			6.3			6.3	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	
Act Effct Green (s)	86.1	86.1		86.1	86.1			10.0			10.0	
Actuated g/C Ratio	0.91	0.91		0.91	0.91			0.11			0.11	
v/c Ratio	0.03	0.46		0.03	0.32			0.06			0.10	
Control Delay	2.5	2.6		4.0	3.1			1.2			7.4	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	2.5	2.6		4.0	3.1			1.2			7.4	
LOS	A	A		A	A			A			A	
Approach Delay		2.6			3.1			1.2			7.4	
Approach LOS		A			A			A			A	
Queue Length 50th (m)	0.0	0.0		0.0	1.2			0.0			0.0	
Queue Length 95th (m)	m1.2	59.7		m1.4	41.1			0.7			3.7	
Internal Link Dist (m)		651.1			64.4			41.8			21.1	
Turn Bay Length (m)	40.0			50.0								
Base Capacity (vph)	474	3099		281	3045			413			420	
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	0.03	0.46		0.03	0.32			0.02			0.04	

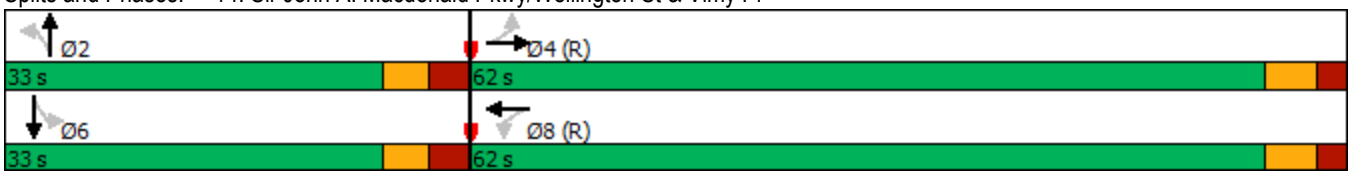
Intersection Summary
Cycle Length: 95
Actuated Cycle Length: 95
Offset: 59 (62%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated

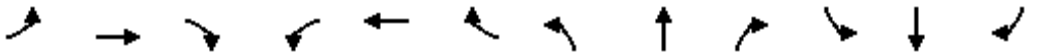
Maximum v/c Ratio: 0.46

Intersection Signal Delay: 2.9	Intersection LOS: A
Intersection Capacity Utilization 59.5%	ICU Level of Service B
Analysis Period (min) 15	

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

Splits and Phases: 14: Sir John A. Macdonald Pkwy/Wellington St & Vimy Pl





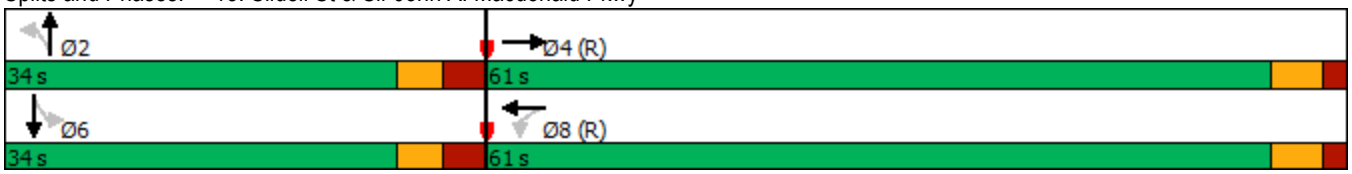
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1471	22	1	1004	1	1	21	1	1	5	3
Future Volume (vph)	0	1471	22	1	1004	1	1	21	1	1	5	3
Satd. Flow (prot)	0	3412	0	0	3386	0	0	1784	0	0	1699	0
Flt Permitted					0.954			0.984			0.956	
Satd. Flow (perm)	0	3412	0	0	3230	0	0	1759	0	0	1634	0
Satd. Flow (RTOR)		3						1			3	
Lane Group Flow (vph)	0	1571	0	0	1059	0	0	24	0	0	9	0
Turn Type		NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases				8			2			6		
Detector Phase		4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)		10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)		30.5		30.5	30.5		33.3	33.3		33.3	33.3	
Total Split (s)		61.0		61.0	61.0		34.0	34.0		34.0	34.0	
Total Split (%)		64.2%		64.2%	64.2%		35.8%	35.8%		35.8%	35.8%	
Yellow Time (s)		3.7		3.7	3.7		3.3	3.3		3.3	3.3	
All-Red Time (s)		1.8		1.8	1.8		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.5			5.5			6.3			6.3	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode		C-Max		C-Max	C-Max		None	None		None	None	
Act Effct Green (s)		86.3			86.3			10.0			10.0	
Actuated g/C Ratio		0.91			0.91			0.11			0.11	
v/c Ratio		0.51			0.36			0.13			0.05	
Control Delay		3.0			2.3			39.3			33.4	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		3.0			2.3			39.3			33.4	
LOS		A			A			D			C	
Approach Delay		3.0			2.3			39.3			33.4	
Approach LOS		A			A			D			C	
Queue Length 50th (m)		0.0			1.5			4.1			1.1	
Queue Length 95th (m)		68.3			51.1			12.1			5.8	
Internal Link Dist (m)		151.1			288.5			38.4			167.1	
Turn Bay Length (m)												
Base Capacity (vph)		3099			2933			513			478	
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		0.51			0.36			0.05			0.02	

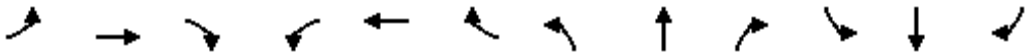
Intersection Summary
Cycle Length: 95
Actuated Cycle Length: 95
Offset: 34 (36%), Referenced to phase 4:EBT and 8:WBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.51

Intersection Signal Delay: 3.1	Intersection LOS: A
Intersection Capacity Utilization 63.6%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 15: Slidell St & Sir John A. Macdonald Pkwy





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	772	86	56	344	31	61	45	130	131	178	12
Future Volume (vph)	14	772	86	56	344	31	61	45	130	131	178	12
Satd. Flow (prot)	1500	1720	0	1613	1698	1457	1676	1800	1515	1693	1752	0
Flt Permitted	0.535			0.211			0.499			0.726		
Satd. Flow (perm)	812	1720	0	358	1698	1328	871	1800	1458	1263	1752	0
Satd. Flow (RTOR)		10				37			137		3	
Lane Group Flow (vph)	15	904	0	59	362	33	64	47	137	138	200	0
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6		6	8		8	4		
Detector Phase	2	2		6	6	6	8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	32.5	32.5		32.5	32.5	32.5	31.4	31.4	31.4	31.4	31.4	
Total Split (s)	68.0	68.0		68.0	68.0	68.0	32.0	32.0	32.0	32.0	32.0	
Total Split (%)	68.0%	68.0%		68.0%	68.0%	68.0%	32.0%	32.0%	32.0%	32.0%	32.0%	
Yellow Time (s)	3.3	3.3		3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	
All-Red Time (s)	3.2	3.2		3.2	3.2	3.2	3.1	3.1	3.1	3.1	3.1	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.5	6.5		6.5	6.5	6.5	6.4	6.4	6.4	6.4	6.4	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		C-Max	C-Max	C-Max	None	None	None	None	None	
Act Effct Green (s)	68.9	68.9		68.9	68.9	68.9	18.2	18.2	18.2	18.2	18.2	
Actuated g/C Ratio	0.69	0.69		0.69	0.69	0.69	0.18	0.18	0.18	0.18	0.18	
v/c Ratio	0.03	0.76		0.24	0.31	0.04	0.41	0.14	0.36	0.60	0.62	
Control Delay	3.6	13.4		10.7	8.0	2.3	41.7	32.5	8.2	47.4	44.8	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	3.6	13.4		10.7	8.0	2.3	41.7	32.5	8.2	47.4	44.8	
LOS	A	B		B	A	A	D	C	A	D	D	
Approach Delay		13.3			7.9			21.5			45.9	
Approach LOS		B			A			C			D	
Queue Length 50th (m)	0.3	139.1		3.7	23.9	0.0	11.9	8.3	0.0	26.7	38.2	
Queue Length 95th (m)	m1.0	m191.2		13.1	49.6	3.2	23.2	16.9	14.9	42.9	56.3	
Internal Link Dist (m)		635.7			497.2			83.8			171.5	
Turn Bay Length (m)	45.0			50.0			50.0		20.0	45.0		
Base Capacity (vph)	559	1188		246	1170	926	222	460	475	323	450	
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.03	0.76		0.24	0.31	0.04	0.29	0.10	0.29	0.43	0.44	

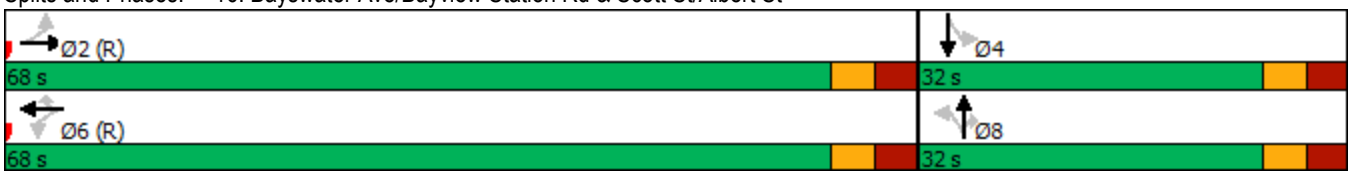
Intersection Summary
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 40 (40%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

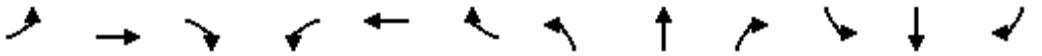
Maximum v/c Ratio: 0.76

Intersection Signal Delay: 18.7	Intersection LOS: B
Intersection Capacity Utilization 88.8%	ICU Level of Service E
Analysis Period (min) 15	

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

Splits and Phases: 16: Bayswater Ave/Bayview Station Rd & Scott St/Albert St





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	120	757	37	55	335	26	31	287	76	107	354	145
Future Volume (vph)	120	757	37	55	335	26	31	287	76	107	354	145
Satd. Flow (prot)	1676	1735	0	1676	1698	1471	1660	1720	0	1693	1564	0
Flt Permitted	0.950			0.149			0.215			0.378		
Satd. Flow (perm)	1511	1735	0	263	1698	1209	363	1720	0	674	1564	0
Satd. Flow (RTOR)		3				119		15			23	
Lane Group Flow (vph)	126	836	0	58	353	27	33	382	0	113	526	0
Turn Type	Prot	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	2			6			8			4	
Permitted Phases				6		6	8			4		
Detector Phase	5	2		6	6	6	8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0		10.0	10.0	10.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	10.6	28.1		28.1	28.1	28.1	35.3	35.3		35.3	35.3	
Total Split (s)	11.0	51.0		40.0	40.0	40.0	43.0	43.0		43.0	43.0	
Total Split (%)	11.0%	51.0%		40.0%	40.0%	40.0%	43.0%	43.0%		43.0%	43.0%	
Yellow Time (s)	3.3	3.3		3.3	3.3	3.3	3.0	3.0		3.0	3.0	
All-Red Time (s)	2.3	2.8		2.8	2.8	2.8	3.3	3.3		3.3	3.3	
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	6.1		6.1	6.1	6.1	6.3	6.3		6.3	6.3	
Lead/Lag	Lead			Lag	Lag	Lag						
Lead-Lag Optimize?	Yes			Yes	Yes	Yes						
Recall Mode	None	C-Max		C-Max	C-Max	C-Max	Max	Max		Max	Max	
Act Effct Green (s)	11.4	50.9		33.9	33.9	33.9	36.7	36.7		36.7	36.7	
Actuated g/C Ratio	0.11	0.51		0.34	0.34	0.34	0.37	0.37		0.37	0.37	
v/c Ratio	0.66	0.95		0.65	0.61	0.06	0.25	0.60		0.46	0.89	
Control Delay	60.0	44.2		59.9	29.6	0.3	28.2	29.3		31.5	48.5	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	60.0	44.2		59.9	29.6	0.3	28.2	29.3		31.5	48.5	
LOS	E	D		E	C	A	C	C		C	D	
Approach Delay		46.3			31.8			29.2			45.5	
Approach LOS		D			C			C			D	
Queue Length 50th (m)	25.0	154.0		10.6	63.7	0.0	4.6	59.8		17.3	96.1	
Queue Length 95th (m)	#50.2	#242.7		#25.6	94.4	m0.0	13.3	91.3		35.2	#160.9	
Internal Link Dist (m)		92.9			635.7			70.7			630.1	
Turn Bay Length (m)	55.0			65.0		35.0	55.0			50.0		
Base Capacity (vph)	191	884		89	575	488	133	640		247	588	
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	
Reduced v/c Ratio	0.66	0.95		0.65	0.61	0.06	0.25	0.60		0.46	0.89	

Intersection Summary
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 91 (91%), Referenced to phase 2:EBT and 6:WBTL, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated

Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Satd. Flow (RTOR)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	2.0
Minimum Split (s)	6.0
Total Split (s)	6.0
Total Split (%)	6%
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	None
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (m)	
Queue Length 95th (m)	
Internal Link Dist (m)	
Turn Bay Length (m)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

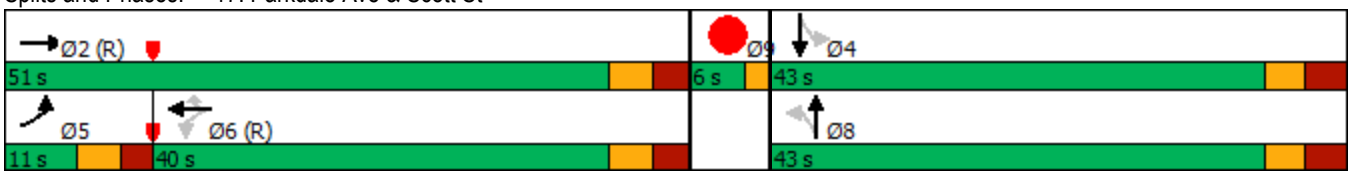
Intersection Summary

Maximum v/c Ratio: 0.95

Intersection Signal Delay: 40.6	Intersection LOS: D
Intersection Capacity Utilization 112.0%	ICU Level of Service H
Analysis Period (min) 15	

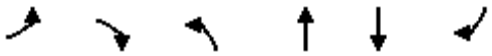
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 17: Parkdale Ave & Scott St



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	0	140
Future Volume (vph)	0	0	0	0	0	140
Satd. Flow (prot)	0	1800	0	0	0	0
Flt Permitted						
Satd. Flow (perm)	0	1800	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	147	0
Sign Control	Free			Free	Free	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization Err%		ICU Level of Service H	
Analysis Period (min) 15			



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø9
Lane Configurations							
Traffic Volume (vph)	1	1	2	867	1473	6	
Future Volume (vph)	1	1	2	867	1473	6	
Satd. Flow (prot)	1600	0	1710	3420	3417	0	
Flt Permitted	0.976		0.152				
Satd. Flow (perm)	1598	0	274	3420	3417	0	
Satd. Flow (RTOR)	1				1		
Lane Group Flow (vph)	2	0	2	913	1557	0	
Turn Type	Prot		Perm	NA	NA		
Protected Phases	4			2	6		9
Permitted Phases			2				
Detector Phase	4		2	2	6		
Switch Phase							
Minimum Initial (s)	8.3		10.0	10.0	10.0		10.0
Minimum Split (s)	14.5		30.7	30.7	30.9		29.0
Total Split (s)	17.0		49.0	49.0	49.0		29.0
Total Split (%)	17.9%		51.6%	51.6%	51.6%		31%
Yellow Time (s)	3.3		3.3	3.3	3.3		3.0
All-Red Time (s)	2.9		2.4	2.4	2.6		4.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0		
Total Lost Time (s)	6.2		5.7	5.7	5.9		
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	None		C-Max	C-Max	C-Max		None
Act Effct Green (s)	8.3		91.0	91.0	90.9		
Actuated g/C Ratio	0.09		0.96	0.96	0.96		
v/c Ratio	0.01		0.01	0.28	0.48		
Control Delay	34.5		0.5	0.3	1.7		
Queue Delay	0.0		0.0	0.0	0.0		
Total Delay	34.5		0.5	0.3	1.7		
LOS	C		A	A	A		
Approach Delay	34.5			0.3	1.7		
Approach LOS	C			A	A		
Queue Length 50th (m)	0.2		0.0	0.0	0.0		
Queue Length 95th (m)	2.4		m0.0	m5.4	61.2		
Internal Link Dist (m)	148.9			192.9	188.6		
Turn Bay Length (m)			35.0				
Base Capacity (vph)	182		262	3274	3270		
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	0.01		0.01	0.28	0.48		

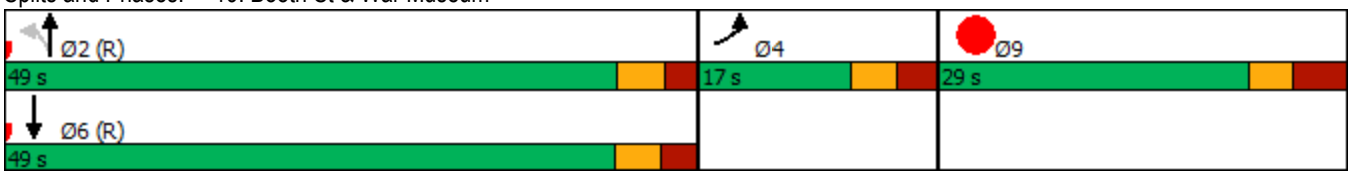
Intersection Summary
Cycle Length: 95
Actuated Cycle Length: 95
Offset: 47 (49%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

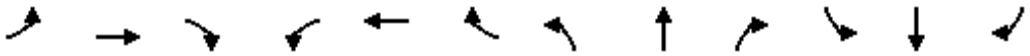
Maximum v/c Ratio: 0.48

Intersection Signal Delay: 1.2	Intersection LOS: A
Intersection Capacity Utilization 60.2%	ICU Level of Service B
Analysis Period (min) 15	

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

Splits and Phases: 19: Booth St & War Museum





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	973	77	98	392	16	28	0	47	36	0	5
Future Volume (vph)	5	973	77	98	392	16	28	0	47	36	0	5
Satd. Flow (prot)	1710	3331	0	1629	3225	0	1644	1404	0	0	1692	0
Flt Permitted	0.950			0.950			0.729				0.716	
Satd. Flow (perm)	1592	3331	0	1619	3225	0	1245	1404	0	0	1264	0
Satd. Flow (RTOR)		11			5			173			87	
Lane Group Flow (vph)	5	1105	0	103	430	0	29	49	0	0	43	0
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases							8			4		
Detector Phase	5	2		1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	11.3	27.3		11.3	27.3		29.3	29.3		29.3	29.3	
Total Split (s)	17.0	72.0		12.0	67.0		36.0	36.0		36.0	36.0	
Total Split (%)	14.2%	60.0%		10.0%	55.8%		30.0%	30.0%		30.0%	30.0%	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)	6.3	6.3		6.3	6.3		6.3	6.3			6.3	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	
Act Effct Green (s)	6.0	75.1		16.7	96.7		12.6	12.6			12.6	
Actuated g/C Ratio	0.05	0.63		0.14	0.81		0.10	0.10			0.10	
v/c Ratio	0.06	0.53		0.46	0.17		0.22	0.16			0.20	
Control Delay	55.4	14.6		37.3	5.1		51.2	1.1			2.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Total Delay	55.4	14.6		37.3	5.1		51.2	1.1			2.5	
LOS	E	B		D	A		D	A			A	
Approach Delay		14.8			11.4			19.8			2.5	
Approach LOS		B			B			B			A	
Queue Length 50th (m)	1.2	75.4		22.6	36.8		6.9	0.0			0.0	
Queue Length 95th (m)	5.6	114.0		m28.1	m38.5		15.0	0.0			1.0	
Internal Link Dist (m)		497.2			112.4			178.8			41.9	
Turn Bay Length (m)	30.0			35.0			30.0					
Base Capacity (vph)	152	2088		226	2599		308	477			378	
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	0.03	0.53		0.46	0.17		0.09	0.10			0.11	

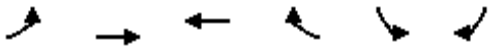
Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 80 (67%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.53

Intersection Signal Delay: 13.6	Intersection LOS: B
Intersection Capacity Utilization 64.3%	ICU Level of Service C
Analysis Period (min) 15	

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

Splits and Phases: 20: City Centre Ave & Albert St



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	2	1210	745	5	10	3
Future Volume (vph)	2	1210	745	5	10	3
Satd. Flow (prot)	1710	3320	3194	0	1681	0
Flt Permitted	0.950				0.962	
Satd. Flow (perm)	1710	3320	3194	0	1681	0
Satd. Flow (RTOR)			1		3	
Lane Group Flow (vph)	2	1274	789	0	14	0
Turn Type	Prot	NA	NA		Prot	
Protected Phases	5	2	6		4	
Permitted Phases						
Detector Phase	5	2	6		4	
Switch Phase						
Minimum Initial (s)	5.0	10.0	10.0		10.0	
Minimum Split (s)	11.3	22.0	22.0		30.3	
Total Split (s)	12.0	89.0	77.0		31.0	
Total Split (%)	10.0%	74.2%	64.2%		25.8%	
Yellow Time (s)	3.3	3.3	3.3		3.3	
All-Red Time (s)	3.0	3.0	3.0		3.0	
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	
Total Lost Time (s)	6.3	6.3	6.3		6.3	
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	None	C-Max	C-Max		None	
Act Effct Green (s)	5.8	108.2	105.6		12.8	
Actuated g/C Ratio	0.05	0.90	0.88		0.11	
v/c Ratio	0.02	0.43	0.28		0.08	
Control Delay	46.0	5.3	12.1		39.0	
Queue Delay	0.0	0.0	0.0		0.0	
Total Delay	46.0	5.3	12.1		39.0	
LOS	D	A	B		D	
Approach Delay		5.4	12.1		39.0	
Approach LOS		A	B		D	
Queue Length 50th (m)	0.3	0.0	0.0		2.6	
Queue Length 95th (m)	m0.7	97.0	m84.6		8.2	
Internal Link Dist (m)		119.1	141.9		77.8	
Turn Bay Length (m)	30.0					
Base Capacity (vph)	83	2992	2812		348	
Starvation Cap Reductn	0	246	265		0	
Spillback Cap Reductn	0	39	0		0	
Storage Cap Reductn	0	0	0		0	
Reduced v/c Ratio	0.02	0.46	0.31		0.04	

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 22 (18%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 65
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.43

Intersection Signal Delay: 8.1	Intersection LOS: A
Intersection Capacity Utilization 54.1%	ICU Level of Service A
Analysis Period (min) 15	

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

Splits and Phases: 21: Albert St & Access 1

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1435	16	26	736	37	77
Future Volume (vph)	1435	16	26	736	37	77
Satd. Flow (prot)	3366	0	1710	3320	1522	0
Flt Permitted			0.131		0.984	
Satd. Flow (perm)	3366	0	236	3320	1519	0
Satd. Flow (RTOR)	2				32	
Lane Group Flow (vph)	1528	0	27	775	120	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	4			8	2	
Permitted Phases			8			
Detector Phase	4		8	8	2	
Switch Phase						
Minimum Initial (s)	10.0		10.0	10.0	10.0	
Minimum Split (s)	30.0		22.0	22.0	33.9	
Total Split (s)	61.0		61.0	61.0	34.0	
Total Split (%)	64.2%		64.2%	64.2%	35.8%	
Yellow Time (s)	3.7		3.7	3.7	3.3	
All-Red Time (s)	2.1		2.1	2.1	2.6	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	5.8		5.8	5.8	5.9	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max		C-Max	C-Max	None	
Act Effct Green (s)	68.9		68.9	68.9	14.4	
Actuated g/C Ratio	0.73		0.73	0.73	0.15	
v/c Ratio	0.63		0.16	0.32	0.47	
Control Delay	19.0		9.2	6.1	31.0	
Queue Delay	10.2		0.0	0.0	0.0	
Total Delay	29.2		9.2	6.1	31.0	
LOS	C		A	A	C	
Approach Delay	29.2			6.2	31.0	
Approach LOS	C			A	C	
Queue Length 50th (m)	120.5		1.1	19.6	16.2	
Queue Length 95th (m)	m149.9		7.8	52.5	27.2	
Internal Link Dist (m)	116.7			246.9	48.8	
Turn Bay Length (m)			70.0			
Base Capacity (vph)	2441		171	2407	472	
Starvation Cap Reductn	899		0	0	0	
Spillback Cap Reductn	0		0	0	0	
Storage Cap Reductn	0		0	0	0	
Reduced v/c Ratio	0.99		0.16	0.32	0.25	

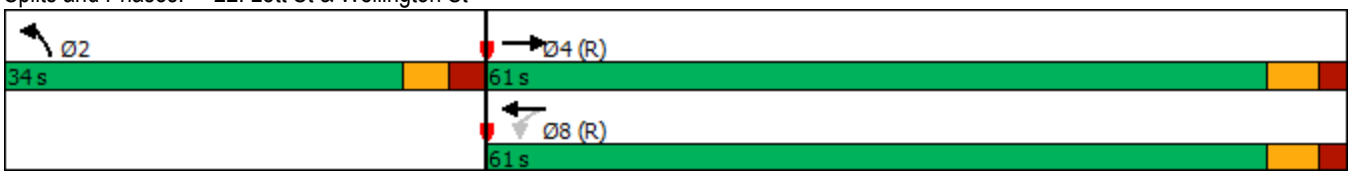
Intersection Summary
Cycle Length: 95
Actuated Cycle Length: 95
Offset: 27 (28%), Referenced to phase 4:EBT and 8:WBTL, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated

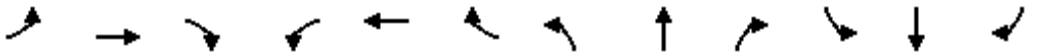
Maximum v/c Ratio: 0.63

Intersection Signal Delay: 21.8	Intersection LOS: C
Intersection Capacity Utilization 61.5%	ICU Level of Service B
Analysis Period (min) 15	

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

Splits and Phases: 22: Lett St & Wellington St





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	1027	8	5	450	7	8	0	11	28	0	8
Future Volume (vph)	21	1027	8	5	450	7	8	0	11	28	0	8
Satd. Flow (prot)	1710	3318	0	1710	3193	0	0	1621	0	0	1681	0
Flt Permitted	0.477			0.253				0.884			0.759	
Satd. Flow (perm)	859	3318	0	455	3193	0	0	1462	0	0	1327	0
Satd. Flow (RTOR)		1			2			15			15	
Lane Group Flow (vph)	22	1089	0	5	481	0	0	20	0	0	37	0
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)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	22.6	22.6		22.6	22.6		30.5	30.5		30.5	30.5	
Total Split (s)	81.0	81.0		81.0	81.0		39.0	39.0		39.0	39.0	
Total Split (%)	67.5%	67.5%		67.5%	67.5%		32.5%	32.5%		32.5%	32.5%	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	1.3	1.3		1.3	1.3		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.6	0.0			0.0			0.0	
Total Lost Time (s)	4.6	4.6		5.2	4.6			4.3			4.3	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	
Act Effct Green (s)	105.7	105.7		105.3	105.7			13.0			13.0	
Actuated g/C Ratio	0.88	0.88		0.88	0.88			0.11			0.11	
v/c Ratio	0.03	0.37		0.01	0.17			0.12			0.24	
Control Delay	7.8	8.0		3.8	2.5			24.4			34.8	
Queue Delay	0.0	0.3		0.0	0.0			0.0			0.0	
Total Delay	7.8	8.3		3.8	2.5			24.4			34.8	
LOS	A	A		A	A			C			C	
Approach Delay		8.3			2.5			24.4			34.8	
Approach LOS		A			A			C			C	
Queue Length 50th (m)	1.3	50.0		0.2	8.5			1.2			5.2	
Queue Length 95th (m)	m5.8	m98.4		1.5	24.5			7.9			14.2	
Internal Link Dist (m)		82.5			218.4			58.0			17.2	
Turn Bay Length (m)				50.0								
Base Capacity (vph)	756	2921		399	2811			433			394	
Starvation Cap Reductn	0	1073		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	0.03	0.59		0.01	0.17			0.05			0.09	

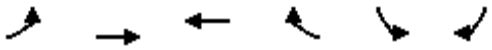
Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 22 (18%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.37

Intersection Signal Delay: 7.4	Intersection LOS: A
Intersection Capacity Utilization 46.0%	ICU Level of Service A
Analysis Period (min) 15	

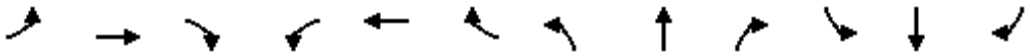
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 23: Empress Ave & Albert St



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	1056	464	7	0	8
Future Volume (vph)	0	1056	464	7	0	8
Satd. Flow (prot)	0	3420	3413	0	0	1557
Flt Permitted						
Satd. Flow (perm)	0	3420	3413	0	0	1557
Lane Group Flow (vph)	0	1112	495	0	0	8
Sign Control		Free	Free		Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization 34.1%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	12	0	0	12	0	860	17	0	973	0
Future Volume (vph)	0	0	12	0	0	12	0	860	17	0	973	0
Satd. Flow (prot)	0	0	1557	0	0	1557	0	3410	0	0	3420	0
Flt Permitted												
Satd. Flow (perm)	0	0	1557	0	0	1557	0	3410	0	0	3420	0
Lane Group Flow (vph)	0	0	13	0	0	13	0	923	0	0	1024	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization 38.4%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1280	0	0	904	0	11
Future Volume (vph)	1280	0	0	904	0	11
Satd. Flow (prot)	3420	0	0	3420	0	1557
Flt Permitted						
Satd. Flow (perm)	3420	0	0	3420	0	1557
Lane Group Flow (vph)	1347	0	0	952	0	12
Sign Control	Free			Free	Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization 47.3%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1269	5	23	881	5	11
Future Volume (vph)	1269	5	23	881	5	11
Satd. Flow (prot)	3417	0	1710	3420	1606	0
Flt Permitted			0.161		0.986	
Satd. Flow (perm)	3417	0	290	3420	1606	0
Satd. Flow (RTOR)					12	
Lane Group Flow (vph)	1341	0	24	927	17	0
Turn Type	NA		pm+pt	NA	Prot	
Protected Phases	4		3	8	2	
Permitted Phases			8			
Detector Phase	4		3	8	2	
Switch Phase						
Minimum Initial (s)	10.0		5.0	10.0	10.0	
Minimum Split (s)	37.0		11.0	37.0	32.3	
Total Split (s)	47.0		15.0	62.0	33.0	
Total Split (%)	49.5%		15.8%	65.3%	34.7%	
Yellow Time (s)	3.7		3.7	3.7	3.3	
All-Red Time (s)	2.3		2.3	2.3	3.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	6.0		6.0	6.0	6.3	
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	C-Max		None	C-Max	None	
Act Effct Green (s)	81.2		82.5	86.1	10.0	
Actuated g/C Ratio	0.85		0.87	0.91	0.11	
v/c Ratio	0.46		0.07	0.30	0.09	
Control Delay	7.0		2.0	4.1	24.4	
Queue Delay	0.1		0.0	0.0	0.0	
Total Delay	7.0		2.0	4.1	24.4	
LOS	A		A	A	C	
Approach Delay	7.0			4.0	24.4	
Approach LOS	A			A	C	
Queue Length 50th (m)	0.0		0.1	0.0	0.9	
Queue Length 95th (m)	137.0		m1.7	95.1	7.4	
Internal Link Dist (m)	77.2			49.9	32.0	
Turn Bay Length (m)			60.0			
Base Capacity (vph)	2921		386	3099	459	
Starvation Cap Reductn	114		0	0	0	
Spillback Cap Reductn	291		0	0	0	
Storage Cap Reductn	0		0	0	0	
Reduced v/c Ratio	0.51		0.06	0.30	0.04	

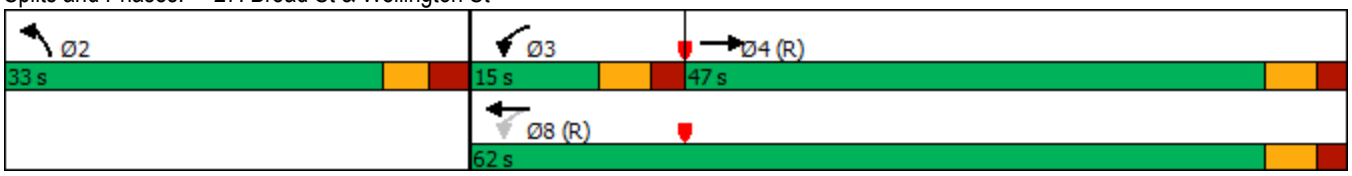
Intersection Summary
Cycle Length: 95
Actuated Cycle Length: 95
Offset: 22 (23%), Referenced to phase 4:EBT and 8:WBTL, Start of Green
Natural Cycle: 85
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.46

Intersection Signal Delay: 5.9	Intersection LOS: A
Intersection Capacity Utilization 55.8%	ICU Level of Service B
Analysis Period (min) 15	

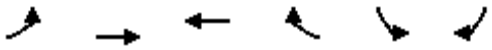
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 27: Broad St & Wellington St



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1263	5	0	886	0	11
Future Volume (vph)	1263	5	0	886	0	11
Satd. Flow (prot)	3417	0	0	3420	0	1557
Flt Permitted						
Satd. Flow (perm)	3417	0	0	3420	0	1557
Lane Group Flow (vph)	1334	0	0	933	0	12
Sign Control	Free			Free	Stop	

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



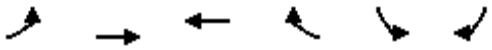
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	806	414	728	1105	852	456
Future Volume (vph)	806	414	728	1105	852	456
Satd. Flow (prot)	3317	4914	3386	2614	3285	1530
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	3292	4914	3386	2614	3168	1530
Satd. Flow (RTOR)						181
Lane Group Flow (vph)	848	436	766	1163	897	480
Turn Type	Prot	NA	NA	pt+ov	Prot	Perm
Protected Phases	7	4	8	8 1	1	
Permitted Phases						1
Detector Phase	7	4	8	8 1	1	1
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0		10.0	10.0
Minimum Split (s)	42.8	26.5	26.5		44.1	44.1
Total Split (s)	55.8	92.3	36.5		44.1	44.1
Total Split (%)	40.9%	67.7%	26.8%		32.3%	32.3%
Yellow Time (s)	3.3	3.3	3.3		3.3	3.3
All-Red Time (s)	2.5	3.2	3.2		2.8	2.8
Lost Time Adjust (s)	0.0	0.0	-2.5		-2.1	0.0
Total Lost Time (s)	5.8	6.5	4.0		4.0	6.1
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	Max	Min	Min		None	None
Act Effct Green (s)	50.0	85.8	32.5	74.1	40.1	38.0
Actuated g/C Ratio	0.37	0.63	0.24	0.54	0.29	0.28
v/c Ratio	0.70	0.14	0.95	0.82	0.93	0.86
Control Delay	40.5	10.4	72.8	31.7	63.2	45.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.5	10.4	72.8	31.7	63.2	45.4
LOS	D	B	E	C	E	D
Approach Delay		30.3	48.0		57.0	
Approach LOS		C	D		E	
Queue Length 50th (m)	104.9	17.3	113.3	149.1	127.6	86.0
Queue Length 95th (m)	129.0	22.5	#153.8	185.6	#167.5	#149.5
Internal Link Dist (m)		245.9	289.7		38.9	
Turn Bay Length (m)	150.0					30.0
Base Capacity (vph)	1215	3091	806	1420	965	556
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	0.70	0.14	0.95	0.82	0.93	0.86

Intersection Summary
Cycle Length: 136.4
Actuated Cycle Length: 136.4
Natural Cycle: 115
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.95

Intersection Signal Delay: 45.7	Intersection LOS: D
Intersection Capacity Utilization 82.7%	ICU Level of Service E
Analysis Period (min) 15	

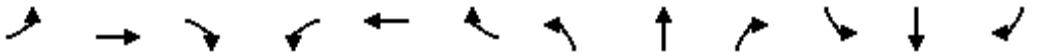
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 7: Wellington St & Portage



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	826	1074	30	0	7
Future Volume (vph)	0	826	1074	30	0	7
Satd. Flow (prot)	0	3420	3406	0	0	1557
Flt Permitted						
Satd. Flow (perm)	0	3420	3406	0	0	1557
Lane Group Flow (vph)	0	869	1163	0	0	7
Sign Control		Free	Free		Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization 42.3%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	0	33	0	0	0	7	1113	0	0	1065	7
Future Volume (vph)	33	0	33	0	0	0	7	1113	0	0	1065	7
Satd. Flow (prot)	1710	1530	0	1800	1800	0	1710	1800	0	1800	1798	0
Flt Permitted	0.757						0.152					
Satd. Flow (perm)	1363	1530	0	1800	1800	0	274	1800	0	1800	1798	0
Satd. Flow (RTOR)		102									1	
Lane Group Flow (vph)	35	35	0	0	0	0	7	1172	0	0	1128	0
Turn Type	Perm	NA		Perm			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)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	22.0	22.0		22.0	22.0		35.9	35.9		35.9	35.9	
Total Split (s)	22.0	22.0		22.0	22.0		53.0	53.0		53.0	53.0	
Total Split (%)	29.3%	29.3%		29.3%	29.3%		70.7%	70.7%		70.7%	70.7%	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.3	3.3		3.3	3.3	
All-Red Time (s)	3.2	3.2		3.2	3.2		2.6	2.6		2.6	2.6	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.2	6.2		6.2	6.2		5.9	5.9		5.9	5.9	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	
Act Effct Green (s)	10.0	10.0					61.7	61.7			61.7	
Actuated g/C Ratio	0.13	0.13					0.82	0.82			0.82	
v/c Ratio	0.19	0.12					0.03	0.79			0.76	
Control Delay	31.9	0.8					3.9	13.5			12.1	
Queue Delay	0.0	0.0					0.0	0.0			0.0	
Total Delay	31.9	0.8					3.9	13.5			12.1	
LOS	C	A					A	B			B	
Approach Delay		16.4						13.4			12.1	
Approach LOS		B						B			B	
Queue Length 50th (m)	4.7	0.0					0.3	120.5			108.6	
Queue Length 95th (m)	12.9	0.0					1.4	#243.9			#230.3	
Internal Link Dist (m)		60.2			43.3			76.9			31.3	
Turn Bay Length (m)	30.0						30.0					
Base Capacity (vph)	287	402					225	1481			1480	
Starvation Cap Reductn	0	0					0	0			0	
Spillback Cap Reductn	0	0					0	0			0	
Storage Cap Reductn	0	0					0	0			0	
Reduced v/c Ratio	0.12	0.09					0.03	0.79			0.76	

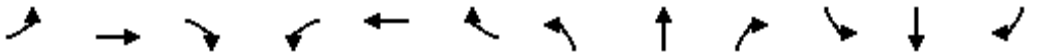
Intersection Summary
Cycle Length: 75
Actuated Cycle Length: 75
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.79

Intersection Signal Delay: 12.9	Intersection LOS: B
Intersection Capacity Utilization 80.3%	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.

Splits and Phases: 10: Booth St & Chaudiere

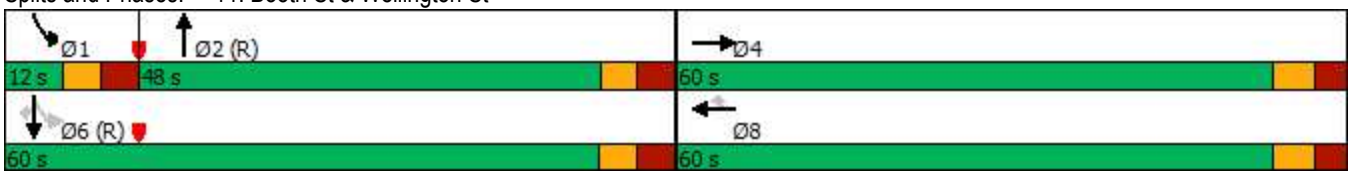


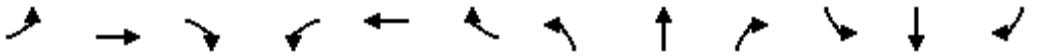
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	896	0	0	1307	117	0	985	176	109	659	237
Future Volume (vph)	0	896	0	0	1307	117	0	985	176	109	659	237
Satd. Flow (prot)	0	3420	0	0	3420	1530	0	3229	0	1613	3196	1515
Flt Permitted										0.084		
Satd. Flow (perm)	0	3420	0	0	3420	1489	0	3229	0	143	3196	1472
Satd. Flow (RTOR)								19				35
Lane Group Flow (vph)	0	943	0	0	1376	123	0	1222	0	115	694	249
Turn Type		NA			NA	Perm		NA		pm+pt	NA	Perm
Protected Phases		4			8			2		1	6	
Permitted Phases						8				6		6
Minimum Split (s)		35.8			37.4	37.4		31.8		12.0	31.9	31.9
Total Split (s)		60.0			60.0	60.0		48.0		12.0	60.0	60.0
Total Split (%)		50.0%			50.0%	50.0%		40.0%		10.0%	50.0%	50.0%
Yellow Time (s)		3.7			3.7	3.7		3.3		3.3	3.3	3.3
All-Red Time (s)		3.1			3.1	3.1		3.5		3.5	3.6	3.6
Lost Time Adjust (s)		0.0			0.0	-2.8		-2.1		0.0	0.0	-2.9
Total Lost Time (s)		6.8			6.8	4.0		4.7		6.8	6.9	4.0
Lead/Lag								Lag		Lead		
Lead-Lag Optimize?								Yes		Yes		
Act Effct Green (s)		53.2			53.2	56.0		43.3		53.2	53.1	56.0
Actuated g/C Ratio		0.44			0.44	0.47		0.36		0.44	0.44	0.47
v/c Ratio		0.62			0.91	0.18		1.04		0.91	0.49	0.35
Control Delay		25.2			45.9	22.7		47.7		83.8	25.3	19.1
Queue Delay		0.7			46.3	0.0		0.0		0.0	0.0	0.0
Total Delay		25.9			92.2	22.7		47.7		83.8	25.3	19.1
LOS		C			F	C		D		F	C	B
Approach Delay		25.9			86.5			47.7			30.2	
Approach LOS		C			F			D			C	
Queue Length 50th (m)		101.9			188.4	21.0		~173.3		16.7	63.2	32.6
Queue Length 95th (m)		126.5			#216.6	36.5		m92.7		#51.1	80.8	53.1
Internal Link Dist (m)		72.0			117.1			52.2			192.9	
Turn Bay Length (m)						70.0				145.0		55.0
Base Capacity (vph)		1516			1516	694		1177		127	1414	705
Starvation Cap Reductn		256			334	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		0.75			1.16	0.18		1.04		0.91	0.49	0.35

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 3 (3%), Referenced to phase 2:NBT and 6:SBTL, Start of Green	
Natural Cycle: 105	
Control Type: Pretimed	
Maximum v/c Ratio: 1.04	
Intersection Signal Delay: 51.7	Intersection LOS: D
Intersection Capacity Utilization 94.6%	ICU Level of Service F
Analysis Period (min) 15	

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

Splits and Phases: 11: Booth St & Wellington St





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	552	582	32	33	864	240	12	540	68	98	426	258
Future Volume (vph)	552	582	32	33	864	240	12	540	68	98	426	258
Satd. Flow (prot)	1676	3320	0	1710	3202	0	1710	1725	0	1629	1782	1515
Flt Permitted	0.950			0.406			0.394			0.105		
Satd. Flow (perm)	1644	3320	0	728	3202	0	685	1725	0	180	1782	1515
Satd. Flow (RTOR)		7						5				
Lane Group Flow (vph)	581	647	0	35	1162	0	13	640	0	103	448	272
Turn Type	Prot	NA		Perm	NA		Perm	NA		pm+pt	NA	Over
Protected Phases	5	2			6			8		7	4	5
Permitted Phases				6			8			4		
Detector Phase	5	2		6	6		8	8		7	4	5
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0		4.5	10.0	10.0
Minimum Split (s)	16.5	36.5		36.5	36.5		34.5	34.5		11.0	34.5	16.5
Total Split (s)	29.0	70.0		41.0	41.0		38.0	38.0		12.0	50.0	29.0
Total Split (%)	24.2%	58.3%		34.2%	34.2%		31.7%	31.7%		10.0%	41.7%	24.2%
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	3.3
All-Red Time (s)	3.2	3.2		3.2	3.2		3.2	3.2		3.2	3.2	3.2
Lost Time Adjust (s)	-3.3	0.0		0.0	-3.3		0.0	-3.3		0.0	0.0	-3.3
Total Lost Time (s)	3.2	6.5		6.5	3.2		6.5	3.2		6.5	6.5	3.2
Lead/Lag	Lead			Lag	Lag		Lag	Lag		Lead		Lead
Lead-Lag Optimize?	Yes			Yes	Yes		Yes	Yes		Yes		Yes
Recall Mode	None	C-Max		C-Max	C-Max		Min	Min		None	None	None
Act Effct Green (s)	25.8	63.5		34.5	37.8		31.5	34.8		43.5	43.5	25.8
Actuated g/C Ratio	0.22	0.53		0.29	0.32		0.26	0.29		0.36	0.36	0.22
v/c Ratio	1.61	0.37		0.17	1.15		0.07	1.27		0.79	0.69	0.84
Control Delay	319.1	18.5		34.0	114.4		34.8	173.6		60.1	34.9	89.4
Queue Delay	0.0	0.0		0.0	0.4		0.0	0.0		0.0	0.0	0.0
Total Delay	319.1	18.5		34.0	114.8		34.8	173.6		60.1	34.9	89.4
LOS	F	B		C	F		C	F		E	C	F
Approach Delay		160.7			112.5			170.9			56.1	
Approach LOS		F			F			F			E	
Queue Length 50th (m)	~209.2	57.5		4.2	~179.5		2.4	~200.4		21.4	116.4	71.7
Queue Length 95th (m)	#286.5	61.6		m12.0	#215.4		8.0	#274.4		#41.3	151.1	#114.6
Internal Link Dist (m)		138.6			62.5			37.2			83.1	
Turn Bay Length (m)	160.0			40.0								120.0
Base Capacity (vph)	360	1760		209	1008		179	503		131	645	325
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	81		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	1.61	0.37		0.17	1.25		0.07	1.27		0.79	0.69	0.84

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 9 (8%), Referenced to phase 2:EBT and 6:WBTL, Start of Green
Natural Cycle: 140
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.61

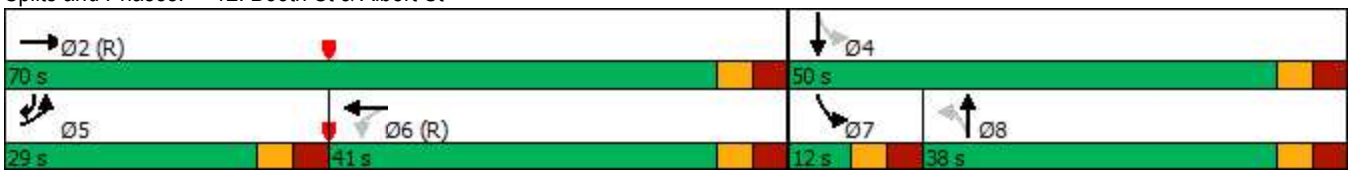
Intersection Signal Delay: 125.5	Intersection LOS: F
Intersection Capacity Utilization 122.9%	ICU Level of Service H
Analysis Period (min) 15	

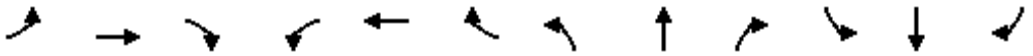
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

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

Splits and Phases: 12: Booth St & Albert St





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	702	135	267	926	28	175	25	343	41	16	3
Future Volume (vph)	11	702	135	267	926	28	175	25	343	41	16	3
Satd. Flow (prot)	1710	3268	0	1676	3371	0	1629	1480	0	1710	1749	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1710	3268	0	1658	3371	0	1591	1480	0	1704	1749	0
Satd. Flow (RTOR)		18			3			361			3	
Lane Group Flow (vph)	12	881	0	281	1004	0	184	387	0	43	20	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases												
Detector Phase	5	2		1	6		3	8		7	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		5.0	10.0		5.0	10.0	
Minimum Split (s)	11.2	31.8		11.2	31.8		11.3	29.3		11.3	29.3	
Total Split (s)	12.0	37.0		36.0	61.0		17.0	35.0		12.0	30.0	
Total Split (%)	10.0%	30.8%		30.0%	50.8%		14.2%	29.2%		10.0%	25.0%	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.9	3.5		2.9	3.5		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.2	6.8		6.2	6.8		6.3	6.3		6.3	6.3	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	
Act Effct Green (s)	6.5	52.3		25.1	78.1		15.2	13.7		5.7	11.6	
Actuated g/C Ratio	0.05	0.44		0.21	0.65		0.13	0.11		0.05	0.10	
v/c Ratio	0.13	0.61		0.80	0.46		0.89	0.79		0.53	0.12	
Control Delay	49.3	34.0		69.6	3.4		91.8	19.2		79.6	44.2	
Queue Delay	0.0	0.0		0.0	0.2		0.0	0.0		0.0	0.0	
Total Delay	49.3	34.0		69.6	3.6		91.8	19.2		79.6	44.2	
LOS	D	C		E	A		F	B		E	D	
Approach Delay		34.2			18.1			42.6			68.4	
Approach LOS		C			B			D			E	
Queue Length 50th (m)	2.9	68.1		67.1	9.2		42.4	6.1		10.6	4.0	
Queue Length 95th (m)	m8.7	#146.8		58.8	10.2		#104.4	38.0		#26.5	11.2	
Internal Link Dist (m)		83.1			122.5			54.7			49.4	
Turn Bay Length (m)	30.0			90.0						15.0		
Base Capacity (vph)	93	1433		425	2196		206	628		81	347	
Starvation Cap Reductn	0	0		0	467		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	0.13	0.61		0.66	0.58		0.89	0.62		0.53	0.06	

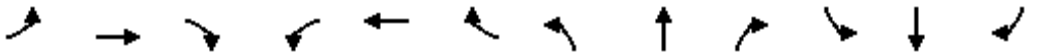
Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 65 (54%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 105
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.89

Intersection Signal Delay: 29.3	Intersection LOS: C
Intersection Capacity Utilization 90.6%	ICU Level of Service E
Analysis Period (min) 15	

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

Splits and Phases: 13: Preston St & Albert St



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	941	9	15	1578	7	6	0	6	5	0	22
Future Volume (vph)	2	941	9	15	1578	7	6	0	6	5	0	22
Satd. Flow (prot)	1710	3383	0	1710	3416	0	0	1625	0	0	1586	0
Flt Permitted	0.141			0.255				0.827			0.934	
Satd. Flow (perm)	254	3383	0	459	3416	0	0	1377	0	0	1494	0
Satd. Flow (RTOR)		1			1			82			82	
Lane Group Flow (vph)	2	1000	0	16	1668	0	0	12	0	0	28	0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		3	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		5.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	37.0	37.0		11.0	37.0		32.3	32.3		32.3	32.3	
Total Split (s)	72.0	72.0		15.0	87.0		33.0	33.0		33.0	33.0	
Total Split (%)	60.0%	60.0%		12.5%	72.5%		27.5%	27.5%		27.5%	27.5%	
Yellow Time (s)	3.7	3.7		3.7	3.7		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.3	2.3		2.3	2.3		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0			6.3			6.3	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Recall Mode	C-Max	C-Max		None	C-Max		None	None		None	None	
Act Effct Green (s)	101.9	101.9		104.2	106.6			10.0			10.0	
Actuated g/C Ratio	0.85	0.85		0.87	0.89			0.08			0.08	
v/c Ratio	0.01	0.35		0.03	0.55			0.06			0.14	
Control Delay	5.0	4.3		1.1	3.5			0.6			1.5	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	5.0	4.3		1.1	3.5			0.6			1.5	
LOS	A	A		A	A			A			A	
Approach Delay		4.4			3.5			0.6			1.5	
Approach LOS		A			A			A			A	
Queue Length 50th (m)	0.1	27.0		1.2	89.4			0.0			0.0	
Queue Length 95th (m)	1.0	58.2		m0.1	2.3			0.0			0.0	
Internal Link Dist (m)		651.1			66.3			44.5			21.1	
Turn Bay Length (m)	40.0			50.0								
Base Capacity (vph)	215	2871		492	3035			370			396	
Starvation Cap Reductn	0	0		0	94			0			0	
Spillback Cap Reductn	0	0		0	0			0			0	
Storage Cap Reductn	0	0		0	0			0			0	
Reduced v/c Ratio	0.01	0.35		0.03	0.57			0.03			0.07	

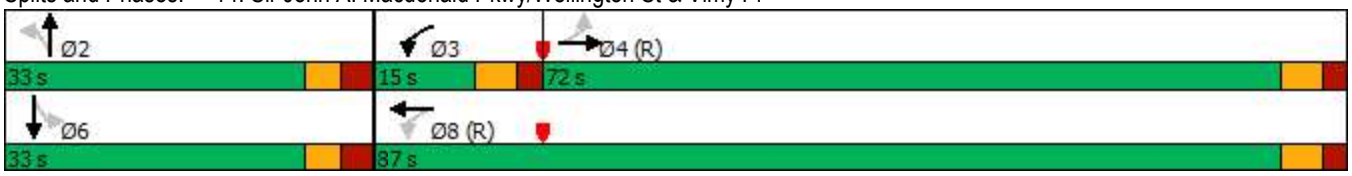
Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 37 (31%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green
Natural Cycle: 85
Control Type: Actuated-Coordinated

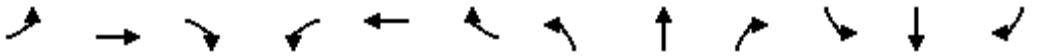
Maximum v/c Ratio: 0.55

Intersection Signal Delay: 3.8	Intersection LOS: A
Intersection Capacity Utilization 65.7%	ICU Level of Service C
Analysis Period (min) 15	

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

Splits and Phases: 14: Sir John A. Macdonald Pkwy/Wellington St & Vimy Pl



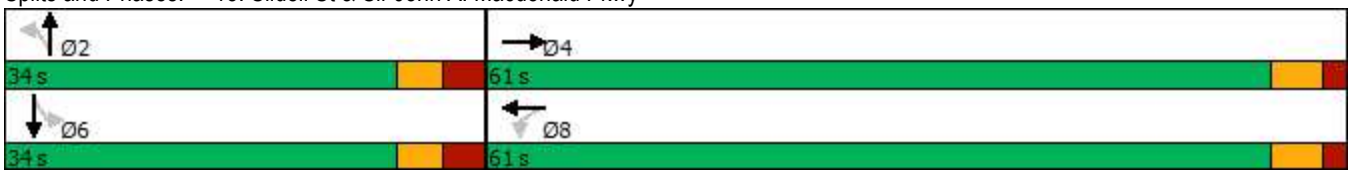


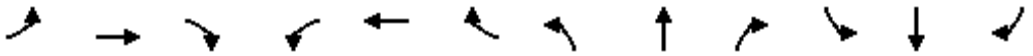
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1001	4	2	1738	0	26	14	35	3	26	11
Future Volume (vph)	0	1001	4	2	1738	0	26	14	35	3	26	11
Satd. Flow (prot)	0	3383	0	0	3420	0	0	1642	0	0	1669	0
Flt Permitted					0.954			0.870			0.969	
Satd. Flow (perm)	0	3383	0	0	3263	0	0	1450	0	0	1623	0
Satd. Flow (RTOR)		1						37			12	
Lane Group Flow (vph)	0	1058	0	0	1831	0	0	79	0	0	42	0
Turn Type		NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases				8			2			6		
Detector Phase		4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)		10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)		30.5		30.5	30.5		33.3	33.3		33.3	33.3	
Total Split (s)		61.0		61.0	61.0		34.0	34.0		34.0	34.0	
Total Split (%)		64.2%		64.2%	64.2%		35.8%	35.8%		35.8%	35.8%	
Yellow Time (s)		3.7		3.7	3.7		3.3	3.3		3.3	3.3	
All-Red Time (s)		1.8		1.8	1.8		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.5			5.5			6.3			6.3	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode		Max		Max	Max		None	None		None	None	
Act Effct Green (s)		61.7			61.7			10.3			10.3	
Actuated g/C Ratio		0.78			0.78			0.13			0.13	
v/c Ratio		0.40			0.72			0.36			0.19	
Control Delay		4.5			8.4			24.0			25.9	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		4.5			8.4			24.0			25.9	
LOS		A			A			C			C	
Approach Delay		4.5			8.4			24.0			25.9	
Approach LOS		A			A			C			C	
Queue Length 50th (m)		28.4			77.2			5.9			4.2	
Queue Length 95th (m)		40.8			113.8			18.3			13.1	
Internal Link Dist (m)		151.1			288.5			38.4			167.1	
Turn Bay Length (m)												
Base Capacity (vph)		2634			2540			532			576	
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		0.40			0.72			0.15			0.07	

Intersection Summary
Cycle Length: 95
Actuated Cycle Length: 79.3
Natural Cycle: 90
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.72

Intersection Signal Delay: 7.7	Intersection LOS: A
Intersection Capacity Utilization 75.9%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 15: Slidell St & Sir John A. Macdonald Pkwy





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	600	88	94	788	121	88	185	84	59	68	11
Future Volume (vph)	10	600	88	94	788	121	88	185	84	59	68	11
Satd. Flow (prot)	1555	1717	0	1710	1782	1530	1710	1800	1485	1710	1745	0
Flt Permitted	0.252			0.309			0.702			0.509		
Satd. Flow (perm)	412	1717	0	549	1782	1340	1212	1800	1427	899	1745	0
Satd. Flow (RTOR)		14				127			79		8	
Lane Group Flow (vph)	11	725	0	99	829	127	93	195	88	62	84	0
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6		6	8		8	4		
Detector Phase	2	2		6	6	6	8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	32.5	32.5		32.5	32.5	32.5	31.4	31.4	31.4	31.4	31.4	
Total Split (s)	68.0	68.0		68.0	68.0	68.0	32.0	32.0	32.0	32.0	32.0	
Total Split (%)	68.0%	68.0%		68.0%	68.0%	68.0%	32.0%	32.0%	32.0%	32.0%	32.0%	
Yellow Time (s)	3.3	3.3		3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	
All-Red Time (s)	3.2	3.2		3.2	3.2	3.2	3.1	3.1	3.1	3.1	3.1	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	-2.4	0.0	0.0	
Total Lost Time (s)	6.5	6.5		6.5	6.5	6.5	6.4	6.4	4.0	6.4	6.4	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		C-Max	C-Max	C-Max	None	None	None	None	None	
Act Effct Green (s)	69.1	69.1		69.1	69.1	69.1	18.0	18.0	20.4	18.0	18.0	
Actuated g/C Ratio	0.69	0.69		0.69	0.69	0.69	0.18	0.18	0.20	0.18	0.18	
v/c Ratio	0.04	0.61		0.26	0.67	0.13	0.43	0.60	0.25	0.39	0.26	
Control Delay	6.6	15.1		9.6	13.9	1.8	40.6	44.5	9.9	40.8	31.7	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	6.6	15.1		9.6	13.9	1.8	40.6	44.5	9.9	40.8	31.7	
LOS	A	B		A	B	A	D	D	A	D	C	
Approach Delay		15.0			12.0			35.4			35.6	
Approach LOS		B			B			D			D	
Queue Length 50th (m)	0.6	128.5		6.2	79.3	0.0	17.5	37.9	1.5	11.5	13.8	
Queue Length 95th (m)	m1.0	m163.6		18.6	162.4	6.6	30.1	55.2	13.2	22.5	25.0	
Internal Link Dist (m)		635.7			497.2			83.8			171.5	
Turn Bay Length (m)	45.0			50.0			50.0		20.0	45.0		
Base Capacity (vph)	284	1190		379	1231	965	310	460	456	230	452	
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.04	0.61		0.26	0.67	0.13	0.30	0.42	0.19	0.27	0.19	

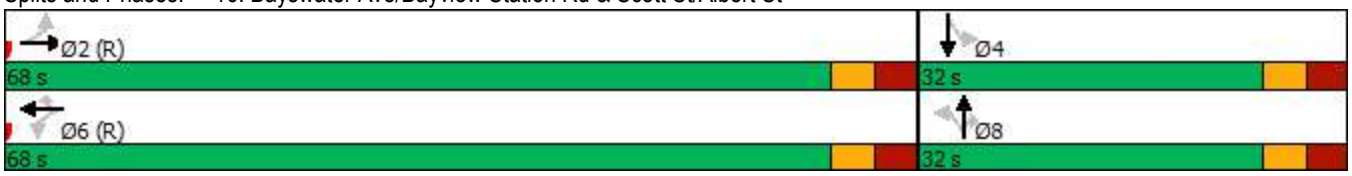
Intersection Summary
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 65 (65%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated

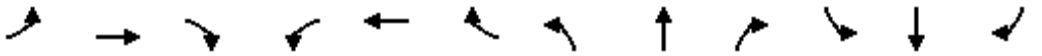
Maximum v/c Ratio: 0.67

Intersection Signal Delay: 18.3	Intersection LOS: B
Intersection Capacity Utilization 97.7%	ICU Level of Service F
Analysis Period (min) 15	

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

Splits and Phases: 16: Bayswater Ave/Bayview Station Rd & Scott St/Albert St





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	227	594	86	65	761	73	40	559	56	67	233	210
Future Volume (vph)	227	594	86	65	761	73	40	559	56	67	233	210
Satd. Flow (prot)	1693	1693	0	1710	1800	1530	1710	1749	0	1710	1565	0
Flt Permitted	0.950			0.313			0.296			0.106		
Satd. Flow (perm)	1593	1693	0	542	1800	1222	517	1749	0	186	1565	0
Satd. Flow (RTOR)		9				119		6			53	
Lane Group Flow (vph)	239	716	0	68	801	77	42	647	0	71	466	0
Turn Type	Prot	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	2			6			8			4	
Permitted Phases				6		6	8			4		
Detector Phase	5	2		6	6	6	8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0		10.0	10.0	10.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	10.6	28.1		28.1	28.1	28.1	35.3	35.3		35.3	35.3	
Total Split (s)	15.0	49.0		34.0	34.0	34.0	45.0	45.0		45.0	45.0	
Total Split (%)	15.0%	49.0%		34.0%	34.0%	34.0%	45.0%	45.0%		45.0%	45.0%	
Yellow Time (s)	3.3	3.3		3.3	3.3	3.3	3.0	3.0		3.0	3.0	
All-Red Time (s)	2.3	2.8		2.8	2.8	2.8	3.3	3.3		3.3	3.3	
Lost Time Adjust (s)	0.0	0.0		0.0	-3.3	-2.1	0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.6	6.1		6.1	2.8	4.0	6.3	6.3		6.3	6.3	
Lead/Lag	Lead			Lag	Lag	Lag						
Lead-Lag Optimize?	Yes			Yes	Yes	Yes						
Recall Mode	None	C-Max		C-Max	C-Max	C-Max	Min	Min		Min	Min	
Act Effct Green (s)	16.0	49.5		27.9	31.2	30.0	38.1	38.1		38.1	38.1	
Actuated g/C Ratio	0.16	0.50		0.28	0.31	0.30	0.38	0.38		0.38	0.38	
v/c Ratio	0.89	0.85		0.45	1.43	0.17	0.21	0.97		1.01	0.74	
Control Delay	74.7	33.7		36.7	228.1	3.0	24.1	58.6		148.3	31.7	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	74.7	33.7		36.7	228.1	3.0	24.1	58.6		148.3	31.7	
LOS	E	C		D	F	A	C	E		F	C	
Approach Delay		43.9			196.0			56.5			47.1	
Approach LOS		D			F			E			D	
Queue Length 50th (m)	48.6	122.5		9.9	~225.3	0.3	5.6	124.9		14.1	71.3	
Queue Length 95th (m)	#95.1	#198.2		m16.0	#294.7	m2.3	14.3	#200.0		#44.0	111.4	
Internal Link Dist (m)		92.9			635.7			70.7			630.1	
Turn Bay Length (m)	55.0			65.0		35.0	55.0			50.0		
Base Capacity (vph)	270	842		151	561	449	200	680		71	638	
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	
Reduced v/c Ratio	0.89	0.85		0.45	1.43	0.17	0.21	0.95		1.00	0.73	

Intersection Summary
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 14 (14%), Referenced to phase 2:EBT and 6:WBTL, Start of Green
Natural Cycle: 130
Control Type: Actuated-Coordinated

Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Satd. Flow (RTOR)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	4.0
Minimum Split (s)	6.0
Total Split (s)	6.0
Total Split (%)	6%
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	None
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (m)	
Queue Length 95th (m)	
Internal Link Dist (m)	
Turn Bay Length (m)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Maximum v/c Ratio: 1.43

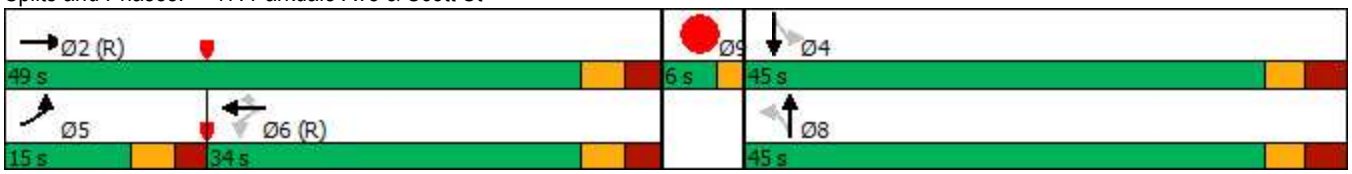
Intersection Signal Delay: 93.3	Intersection LOS: F
Intersection Capacity Utilization 117.5%	ICU Level of Service H
Analysis Period (min) 15	

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

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

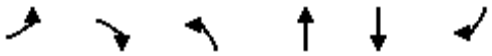
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 17: Parkdale Ave & Scott St



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	0	468
Future Volume (vph)	0	0	0	0	0	468
Satd. Flow (prot)	0	1800	0	0	0	0
Flt Permitted						
Satd. Flow (perm)	0	1800	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	493	0
Sign Control	Free			Free	Free	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization Err%		ICU Level of Service H	
Analysis Period (min) 15			



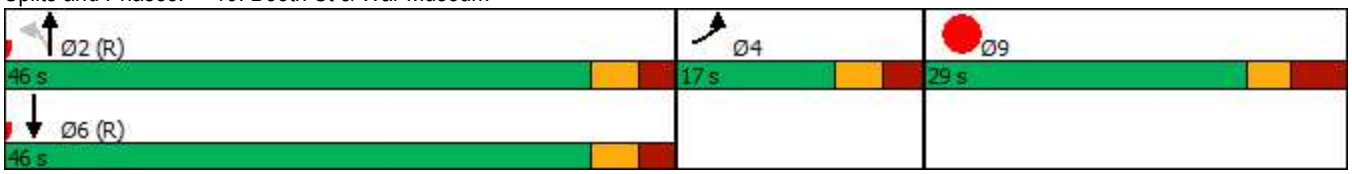
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø9
Lane Configurations							
Traffic Volume (vph)	1	8	8	1119	1090	10	
Future Volume (vph)	1	8	8	1119	1090	10	
Satd. Flow (prot)	1554	0	1710	3420	3417	0	
Flt Permitted	0.994		0.241				
Satd. Flow (perm)	1552	0	434	3420	3417	0	
Satd. Flow (RTOR)	8				1		
Lane Group Flow (vph)	9	0	8	1178	1158	0	
Turn Type	Prot		Perm	NA	NA		
Protected Phases	4			2	6		9
Permitted Phases			2				
Detector Phase	4		2	2	6		
Switch Phase							
Minimum Initial (s)	10.0		10.0	10.0	10.0		22.0
Minimum Split (s)	17.0		30.9	30.9	30.9		29.0
Total Split (s)	17.0		46.0	46.0	46.0		29.0
Total Split (%)	18.5%		50.0%	50.0%	50.0%		32%
Yellow Time (s)	3.3		3.3	3.3	3.3		3.0
All-Red Time (s)	2.9		2.6	2.6	2.6		4.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0		
Total Lost Time (s)	6.2		5.9	5.9	5.9		
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	None		C-Max	C-Max	C-Max		None
Act Effct Green (s)	10.0		87.6	87.6	87.6		
Actuated g/C Ratio	0.11		0.95	0.95	0.95		
v/c Ratio	0.05		0.02	0.36	0.36		
Control Delay	23.0		1.6	1.5	1.4		
Queue Delay	0.0		0.0	0.0	0.0		
Total Delay	23.0		1.6	1.5	1.4		
LOS	C		A	A	A		
Approach Delay	23.0			1.5	1.4		
Approach LOS	C			A	A		
Queue Length 50th (m)	0.2		0.0	0.0	0.0		
Queue Length 95th (m)	4.8		1.3	43.5	42.4		
Internal Link Dist (m)	148.9			192.9	188.6		
Turn Bay Length (m)			35.0				
Base Capacity (vph)	189		413	3256	3253		
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	0.05		0.02	0.36	0.36		

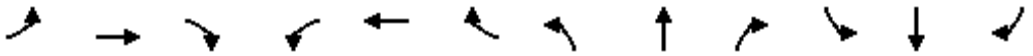
Intersection Summary
Cycle Length: 92
Actuated Cycle Length: 92
Offset: 10 (11%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.36

Intersection Signal Delay: 1.5	Intersection LOS: A
Intersection Capacity Utilization 51.1%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 19: Booth St & War Museum





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	628	76	84	865	32	57	4	80	42	0	8
Future Volume (vph)	9	628	76	84	865	32	57	4	80	42	0	8
Satd. Flow (prot)	1710	3336	0	1693	3334	0	1644	1500	0	0	1690	0
Flt Permitted	0.950			0.950			0.788				0.698	
Satd. Flow (perm)	1702	3336	0	1693	3334	0	1364	1500	0	0	1230	0
Satd. Flow (RTOR)		17			4			84			87	
Lane Group Flow (vph)	9	741	0	88	945	0	60	88	0	0	52	0
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases							8			4		
Detector Phase	5	2		1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	11.3	27.3		11.3	27.3		29.3	29.3		29.3	29.3	
Total Split (s)	17.0	72.0		12.0	67.0		36.0	36.0		36.0	36.0	
Total Split (%)	14.2%	60.0%		10.0%	55.8%		30.0%	30.0%		30.0%	30.0%	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)	6.3	6.3		6.3	6.3		6.3	6.3			6.3	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	
Act Effct Green (s)	6.3	74.5		14.5	92.5		12.1	12.1			12.1	
Actuated g/C Ratio	0.05	0.62		0.12	0.77		0.10	0.10			0.10	
v/c Ratio	0.10	0.36		0.43	0.37		0.44	0.39			0.26	
Control Delay	56.2	11.8		64.5	2.9		60.2	16.3			5.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Total Delay	56.2	11.8		64.5	2.9		60.2	16.3			5.9	
LOS	E	B		E	A		E	B			A	
Approach Delay		12.3			8.2			34.1			5.9	
Approach LOS		B			A			C			A	
Queue Length 50th (m)	2.2	41.3		19.7	27.3		14.4	0.9			0.0	
Queue Length 95th (m)	7.7	62.3		m31.1	m34.6		27.8	16.4			4.0	
Internal Link Dist (m)		497.2			110.2			178.8			36.6	
Turn Bay Length (m)	30.0			35.0			30.0					
Base Capacity (vph)	152	2077		204	2571		337	434			369	
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	0.06	0.36		0.43	0.37		0.18	0.20			0.14	

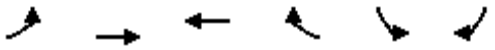
Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 80 (67%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.44

Intersection Signal Delay: 11.6	Intersection LOS: B
Intersection Capacity Utilization 55.9%	ICU Level of Service B
Analysis Period (min) 15	

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

Splits and Phases: 20: City Centre Ave & Albert St



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	3	1133	1124	10	11	3
Future Volume (vph)	3	1133	1124	10	11	3
Satd. Flow (prot)	1710	3353	3383	0	1685	0
Flt Permitted	0.950				0.962	
Satd. Flow (perm)	1710	3353	3383	0	1685	0
Satd. Flow (RTOR)			1		3	
Lane Group Flow (vph)	3	1193	1194	0	15	0
Turn Type	Prot	NA	NA		Prot	
Protected Phases	5	2	6		4	
Permitted Phases						
Detector Phase	5	2	6		4	
Switch Phase						
Minimum Initial (s)	5.0	10.0	10.0		10.0	
Minimum Split (s)	11.3	22.0	22.0		30.3	
Total Split (s)	12.0	89.0	77.0		31.0	
Total Split (%)	10.0%	74.2%	64.2%		25.8%	
Yellow Time (s)	3.3	3.3	3.3		3.3	
All-Red Time (s)	3.0	3.0	3.0		3.0	
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	
Total Lost Time (s)	6.3	6.3	6.3		6.3	
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	None	C-Max	C-Max		None	
Act Effct Green (s)	5.8	108.2	105.6		12.8	
Actuated g/C Ratio	0.05	0.90	0.88		0.11	
v/c Ratio	0.04	0.39	0.40		0.08	
Control Delay	44.7	5.4	3.8		39.6	
Queue Delay	0.0	0.0	0.0		0.0	
Total Delay	44.7	5.4	3.9		39.6	
LOS	D	A	A		D	
Approach Delay		5.5	3.9		39.6	
Approach LOS		A	A		D	
Queue Length 50th (m)	0.6	0.0	0.0		2.8	
Queue Length 95th (m)	m1.1	93.1	m35.7		8.6	
Internal Link Dist (m)		122.5	138.6		61.4	
Turn Bay Length (m)	30.0					
Base Capacity (vph)	84	3022	2978		349	
Starvation Cap Reductn	0	277	320		0	
Spillback Cap Reductn	0	0	0		0	
Storage Cap Reductn	0	0	0		0	
Reduced v/c Ratio	0.04	0.43	0.45		0.04	

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 22 (18%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.40

Intersection Signal Delay: 4.9	Intersection LOS: A
Intersection Capacity Utilization 52.0%	ICU Level of Service A
Analysis Period (min) 15	

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

Splits and Phases: 21: Albert St & Access 1

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1070	32	60	1217	39	56
Future Volume (vph)	1070	32	60	1217	39	56
Satd. Flow (prot)	3363	0	1710	3386	1586	0
Flt Permitted			0.193		0.980	
Satd. Flow (perm)	3363	0	347	3386	1585	0
Satd. Flow (RTOR)	4				56	
Lane Group Flow (vph)	1160	0	63	1281	100	0
Turn Type	NA		pm+pt	NA	Prot	
Protected Phases	4		3	8	2	
Permitted Phases			8			
Detector Phase	4		3	8	2	
Switch Phase						
Minimum Initial (s)	10.0		5.0	10.0	10.0	
Minimum Split (s)	30.0		14.0	22.0	33.8	
Total Split (s)	66.0		20.0	86.0	34.0	
Total Split (%)	55.0%		16.7%	71.7%	28.3%	
Yellow Time (s)	3.7		3.7	3.7	3.3	
All-Red Time (s)	1.9		1.9	1.9	2.5	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	5.6		5.6	5.6	5.8	
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	C-Max		None	C-Max	None	
Act Effct Green (s)	84.8		94.8	94.8	13.8	
Actuated g/C Ratio	0.71		0.79	0.79	0.12	
v/c Ratio	0.49		0.18	0.48	0.43	
Control Delay	9.4		5.0	5.8	28.1	
Queue Delay	0.4		0.0	0.8	0.0	
Total Delay	9.8		5.0	6.7	28.2	
LOS	A		A	A	C	
Approach Delay	9.8			6.6	28.2	
Approach LOS	A			A	C	
Queue Length 50th (m)	34.4		2.3	37.2	10.5	
Queue Length 95th (m)	m82.2		9.8	98.3	23.8	
Internal Link Dist (m)	117.1			245.9	41.8	
Turn Bay Length (m)			70.0			
Base Capacity (vph)	2378		437	2674	415	
Starvation Cap Reductn	667		0	0	0	
Spillback Cap Reductn	0		0	998	16	
Storage Cap Reductn	0		0	0	0	
Reduced v/c Ratio	0.68		0.14	0.76	0.25	

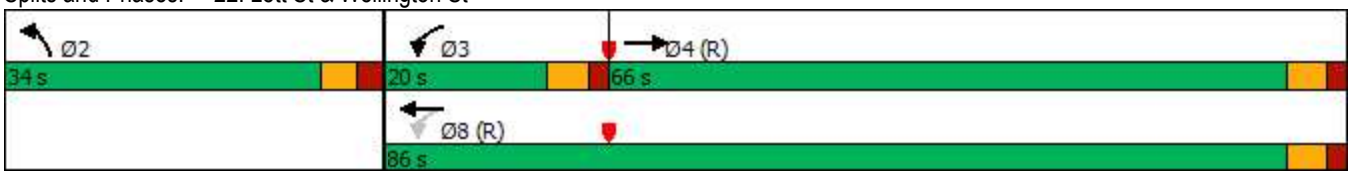
Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 23 (19%), Referenced to phase 4:EBT and 8:WBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated

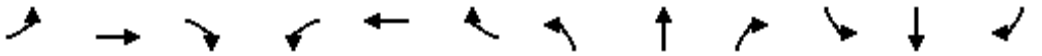
Maximum v/c Ratio: 0.49

Intersection Signal Delay: 8.9	Intersection LOS: A
Intersection Capacity Utilization 61.3%	ICU Level of Service B
Analysis Period (min) 15	

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

Splits and Phases: 22: Lett St & Wellington St





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	43	689	16	11	1108	14	9	0	14	44	0	12
Future Volume (vph)	43	689	16	11	1108	14	9	0	14	44	0	12
Satd. Flow (prot)	1710	3344	0	1710	3380	0	0	1619	0	0	1680	0
Flt Permitted	0.200			0.370				0.900			0.757	
Satd. Flow (perm)	360	3344	0	666	3380	0	0	1484	0	0	1322	0
Satd. Flow (RTOR)		4			1			56			56	
Lane Group Flow (vph)	45	742	0	12	1181	0	0	24	0	0	59	0
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases	7	4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	9.6	22.0		22.0	22.0		30.5	30.5		30.5	30.5	
Total Split (s)	15.0	80.0		65.0	65.0		40.0	40.0		40.0	40.0	
Total Split (%)	12.5%	66.7%		54.2%	54.2%		33.3%	33.3%		33.3%	33.3%	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	1.3	1.3		1.3	1.3		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.6	0.0			0.0			0.0	
Total Lost Time (s)	4.6	4.6		5.2	4.6			4.3			4.3	
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes			Yes	Yes							
Recall Mode	None	C-Min		C-Max	C-Max		None	None		None	None	
Act Effct Green (s)	101.0	101.9		92.7	93.1			13.0			13.0	
Actuated g/C Ratio	0.84	0.85		0.77	0.78			0.11			0.11	
v/c Ratio	0.12	0.26		0.02	0.45			0.11			0.31	
Control Delay	2.0	1.8		6.8	7.6			1.7			16.6	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	2.0	1.8		6.8	7.6			1.7			16.6	
LOS	A	A		A	A			A			B	
Approach Delay		1.8			7.5			1.7			16.6	
Approach LOS		A			A			A			B	
Queue Length 50th (m)	0.5	4.8		0.7	49.8			0.0			0.7	
Queue Length 95th (m)	m2.6	m13.6		3.7	103.9			1.0			12.2	
Internal Link Dist (m)		82.0			212.6			72.6			45.7	
Turn Bay Length (m)	75.0			50.0								
Base Capacity (vph)	420	2839		514	2623			480			432	
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	0.11	0.26		0.02	0.45			0.05			0.14	

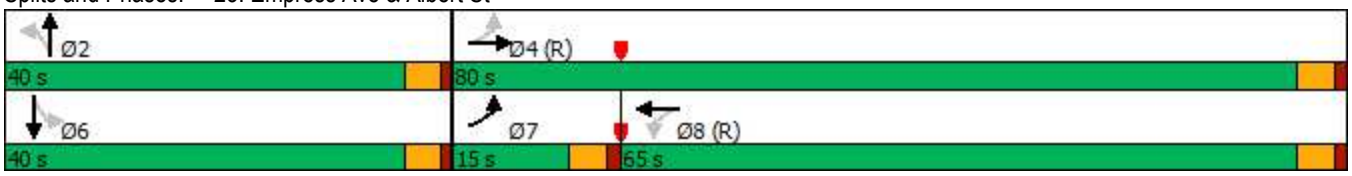
Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 22 (18%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated

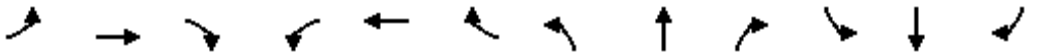
Maximum v/c Ratio: 0.45

Intersection Signal Delay: 5.6	Intersection LOS: A
Intersection Capacity Utilization 53.5%	ICU Level of Service A
Analysis Period (min) 15	

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

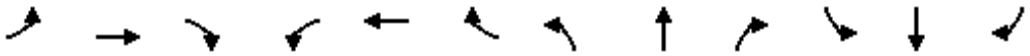
Splits and Phases: 23: Empress Ave & Albert St





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	748	0	0	1126	14	0	0	0	0	0	12
Future Volume (vph)	0	748	0	0	1126	14	0	0	0	0	0	12
Satd. Flow (prot)	0	3420	0	0	3413	0	0	0	1800	0	0	1557
Flt Permitted												
Satd. Flow (perm)	0	3420	0	0	3413	0	0	0	1800	0	0	1557
Lane Group Flow (vph)	0	787	0	0	1200	0	0	0	0	0	0	13
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization 43.3%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	15	0	0	10	0	1211	23	0	757	0
Future Volume (vph)	0	0	15	0	0	10	0	1211	23	0	757	0
Satd. Flow (prot)	0	0	1557	0	0	1557	0	3410	0	0	3420	0
Flt Permitted												
Satd. Flow (perm)	0	0	1557	0	0	1557	0	3410	0	0	3420	0
Lane Group Flow (vph)	0	0	16	0	0	11	0	1299	0	0	797	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization 46.1%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	903	0	0	1544	0	15
Future Volume (vph)	903	0	0	1544	0	15
Satd. Flow (prot)	3420	0	0	3420	0	1557
Flt Permitted						
Satd. Flow (perm)	3420	0	0	3420	0	1557
Lane Group Flow (vph)	951	0	0	1625	0	16
Sign Control	Free			Free	Stop	

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

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	888	9	48	1494	6	15
Future Volume (vph)	888	9	48	1494	6	15
Satd. Flow (prot)	3417	0	1710	3420	1602	0
Flt Permitted			0.271		0.987	
Satd. Flow (perm)	3417	0	488	3420	1602	0
Satd. Flow (RTOR)	1				16	
Lane Group Flow (vph)	944	0	51	1573	22	0
Turn Type	NA		pm+pt	NA	Prot	
Protected Phases	4		3	8	2	
Permitted Phases			8			
Detector Phase	4		3	8	2	
Switch Phase						
Minimum Initial (s)	10.0		5.0	10.0	10.0	
Minimum Split (s)	37.0		11.0	37.0	32.3	
Total Split (s)	72.0		15.0	87.0	33.0	
Total Split (%)	60.0%		12.5%	72.5%	27.5%	
Yellow Time (s)	3.7		3.7	3.7	3.3	
All-Red Time (s)	2.3		2.3	2.3	3.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	6.0		6.0	6.0	6.3	
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	C-Max		None	C-Max	None	
Act Effct Green (s)	99.0		107.5	111.1	10.0	
Actuated g/C Ratio	0.82		0.90	0.93	0.08	
v/c Ratio	0.33		0.10	0.50	0.15	
Control Delay	3.6		3.4	5.3	29.3	
Queue Delay	0.1		0.0	0.0	0.0	
Total Delay	3.7		3.4	5.3	29.3	
LOS	A		A	A	C	
Approach Delay	3.7			5.2	29.3	
Approach LOS	A			A	C	
Queue Length 50th (m)	17.8		0.0	0.0	1.4	
Queue Length 95th (m)	33.9		m4.8	m119.9	10.0	
Internal Link Dist (m)	71.8			49.0	28.0	
Turn Bay Length (m)			60.0			
Base Capacity (vph)	2819		528	3166	368	
Starvation Cap Reductn	476		0	256	0	
Spillback Cap Reductn	0		0	0	0	
Storage Cap Reductn	0		0	0	0	
Reduced v/c Ratio	0.40		0.10	0.54	0.06	

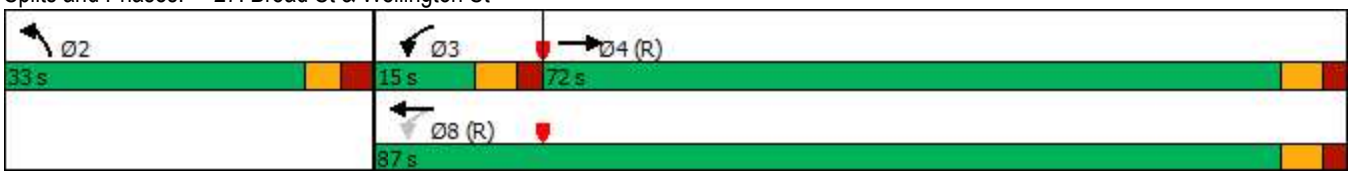
Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 22 (18%), Referenced to phase 4:EBT and 8:WBTL, Start of Green
Natural Cycle: 85
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.50

Intersection Signal Delay: 4.9	Intersection LOS: A
Intersection Capacity Utilization 62.2%	ICU Level of Service B
Analysis Period (min) 15	

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

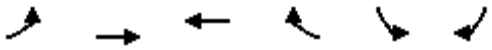
Splits and Phases: 27: Broad St & Wellington St



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	882	9	0	1500	0	15
Future Volume (vph)	882	9	0	1500	0	15
Satd. Flow (prot)	3417	0	0	3420	0	1557
Flt Permitted						
Satd. Flow (perm)	3417	0	0	3420	0	1557
Lane Group Flow (vph)	937	0	0	1579	0	16
Sign Control	Free			Free	Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization 47.1%		ICU Level of Service A	
Analysis Period (min) 15			

Synchro Modelling Outputs – Phase Three (2050) Conditions



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	612	1061	424	704	1962	317
Future Volume (vph)	612	1061	424	704	1962	317
Satd. Flow (prot)	3317	4914	3420	2693	3285	1530
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	3317	4914	3420	2693	3285	1530
Satd. Flow (RTOR)						70
Lane Group Flow (vph)	644	1117	446	741	2065	334
Turn Type	Prot	NA	NA	pt+ov	Prot	Perm
Protected Phases	7	4	8	1 8	1	
Permitted Phases						1
Detector Phase	7	4	8	1 8	1	1
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0		10.0	10.0
Minimum Split (s)	42.8	16.5	26.5		45.1	45.1
Total Split (s)	42.8	70.3	26.5		51.1	51.1
Total Split (%)	35.3%	57.9%	21.8%		42.1%	42.1%
Yellow Time (s)	3.3	3.3	3.3		3.3	3.3
All-Red Time (s)	2.5	3.2	3.2		2.8	2.8
Lost Time Adjust (s)	0.0	0.0	0.0		-2.1	0.0
Total Lost Time (s)	5.8	6.5	6.5		4.0	6.1
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	Max	Min	Min		Max	Max
Act Effct Green (s)	37.0	62.6	19.8	71.3	47.1	45.0
Actuated g/C Ratio	0.31	0.52	0.16	0.59	0.39	0.37
v/c Ratio	0.63	0.44	0.79	0.46	1.60	0.54
Control Delay	39.1	18.5	59.5	14.9	304.0	26.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.1	18.5	59.5	14.9	304.0	26.8
LOS	D	B	E	B	F	C
Approach Delay		26.0	31.6		265.4	
Approach LOS		C	C		F	
Queue Length 50th (m)	70.8	60.7	56.6	55.4	~379.4	50.9
Queue Length 95th (m)	91.2	72.4	#76.4	71.7	#422.7	81.2
Internal Link Dist (m)		246.9	299.2		39.9	
Turn Bay Length (m)	150.0					30.0
Base Capacity (vph)	1021	2607	597	1487	1287	616
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	0.63	0.43	0.75	0.50	1.60	0.54

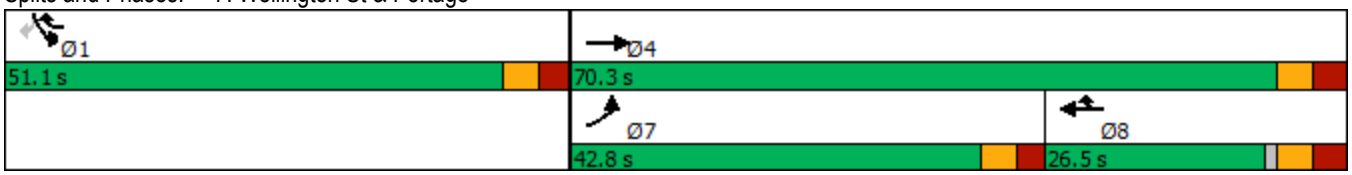
Intersection Summary
Cycle Length: 121.4
Actuated Cycle Length: 120.2
Natural Cycle: 145
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 1.60

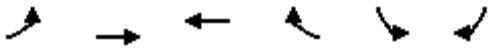
Intersection Signal Delay: 134.7	Intersection LOS: F
Intersection Capacity Utilization 103.5%	ICU Level of Service G
Analysis Period (min) 15	

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

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

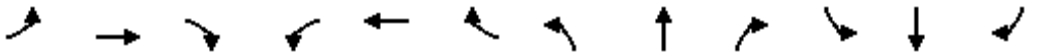
Splits and Phases: 7: Wellington St & Portage





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	1033	512	16	0	5
Future Volume (vph)	0	1033	512	16	0	5
Satd. Flow (prot)	0	3353	3336	0	0	1526
Flt Permitted						
Satd. Flow (perm)	0	3353	3336	0	0	1526
Lane Group Flow (vph)	0	1087	556	0	0	5
Sign Control		Free	Free		Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization 33.5%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	0	5	0	0	0	37	835	0	0	1490	37
Future Volume (vph)	5	0	5	0	0	0	37	835	0	0	1490	37
Satd. Flow (prot)	1710	1530	0	1800	1800	0	1710	1800	0	1800	1793	0
Flt Permitted							0.066					
Satd. Flow (perm)	1800	1530	0	1800	1800	0	119	1800	0	1800	1793	0
Satd. Flow (RTOR)		42									3	
Lane Group Flow (vph)	5	5	0	0	0	0	39	879	0	0	1607	0
Turn Type	Perm	NA		Perm			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)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	22.0	22.0		22.0	22.0		35.9	35.9		35.9	35.9	
Total Split (s)	22.0	22.0		22.0	22.0		53.0	53.0		53.0	53.0	
Total Split (%)	29.3%	29.3%		29.3%	29.3%		70.7%	70.7%		70.7%	70.7%	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.3	3.3		3.3	3.3	
All-Red Time (s)	3.2	3.2		3.2	3.2		2.6	2.6		2.6	2.6	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.2	6.2		6.2	6.2		5.9	5.9		5.9	5.9	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	
Act Effct Green (s)	10.0	10.0					70.6	70.6			70.6	
Actuated g/C Ratio	0.13	0.13					0.94	0.94			0.94	
v/c Ratio	0.02	0.02					0.35	0.52			0.95	
Control Delay	28.6	0.2					15.8	3.5			20.1	
Queue Delay	0.0	0.0					0.0	0.0			0.0	
Total Delay	28.6	0.2					15.8	3.5			20.1	
LOS	C	A					B	A			C	
Approach Delay		14.4						4.0			20.1	
Approach LOS		B						A			C	
Queue Length 50th (m)	0.7	0.0					0.0	0.0			0.0	
Queue Length 95th (m)	3.6	0.0					#18.0	100.4			#392.0	
Internal Link Dist (m)		60.2			43.3			76.9			31.3	
Turn Bay Length (m)	30.0						30.0					
Base Capacity (vph)	379	355					112	1694			1687	
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	0.01	0.01					0.35	0.52			0.95	

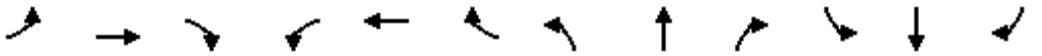
Intersection Summary
Cycle Length: 75
Actuated Cycle Length: 75
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.95

Intersection Signal Delay: 14.3	Intersection LOS: B
Intersection Capacity Utilization 103.6%	ICU Level of Service G
Analysis Period (min) 15	

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

Splits and Phases: 10: Booth St & Chaudiere



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1332	0	0	747	132	0	841	131	147	1011	239
Future Volume (vph)	0	1332	0	0	747	132	0	841	131	147	1011	239
Satd. Flow (prot)	0	3420	0	0	3386	1530	0	3127	0	1710	3226	1530
Flt Permitted										0.114		
Satd. Flow (perm)	0	3420	0	0	3386	1530	0	3127	0	205	3226	1530
Satd. Flow (RTOR)								19				99
Lane Group Flow (vph)	0	1402	0	0	786	139	0	1023	0	155	1064	252
Turn Type		NA			NA	Perm		NA		pm+pt	NA	Perm
Protected Phases		4			8			2		1	6	
Permitted Phases						8				6		6
Detector Phase		4			8	8		2		1	6	6
Switch Phase												
Minimum Initial (s)		10.0			10.0	10.0		10.0		5.2	10.0	10.0
Minimum Split (s)		35.8			35.8	35.8		31.9		12.0	37.8	37.8
Total Split (s)		48.0			48.0	48.0		35.0		12.0	47.0	47.0
Total Split (%)		50.5%			50.5%	50.5%		36.8%		12.6%	49.5%	49.5%
Yellow Time (s)		3.7			3.7	3.7		3.3		3.3	3.3	3.3
All-Red Time (s)		3.1			3.1	3.1		3.5		3.5	3.5	3.5
Lost Time Adjust (s)		0.0			0.0	0.0		0.0		0.0	0.0	0.0
Total Lost Time (s)		6.8			6.8	6.8		6.8		6.8	6.8	6.8
Lead/Lag								Lag		Lead		
Lead-Lag Optimize?								Yes		Yes		
Recall Mode		Min			Min	Min		C-Max		None	C-Min	C-Min
Act Effct Green (s)		40.9			40.9	40.9		28.2		40.5	40.5	40.5
Actuated g/C Ratio		0.43			0.43	0.43		0.30		0.43	0.43	0.43
v/c Ratio		0.95			0.54	0.21		1.09		0.89	0.77	0.36
Control Delay		54.0			28.2	22.2		88.6		65.9	26.5	11.9
Queue Delay		38.2			0.8	0.0		5.9		75.2	0.0	0.0
Total Delay		92.2			28.9	22.2		94.5		141.0	26.5	11.9
LOS		F			C	C		F		F	C	B
Approach Delay		92.2			27.9			94.5			36.0	
Approach LOS		F			C			F			D	
Queue Length 50th (m)		155.4			72.8	20.6		~116.5		18.5	90.6	18.4
Queue Length 95th (m)		#191.4			95.8	37.2		#157.6		#55.2	69.3	28.2
Internal Link Dist (m)		67.5			116.7			55.5			192.9	
Turn Bay Length (m)						70.0				145.0		55.0
Base Capacity (vph)		1483			1468	663		941		175	1376	709
Starvation Cap Reductn		192			364	0		0		0	0	0
Spillback Cap Reductn		75			0	0		112		115	0	0
Storage Cap Reductn		0			0	0		0		0	0	0
Reduced v/c Ratio		1.09			0.71	0.21		1.23		2.58	0.77	0.36

Intersection Summary
Cycle Length: 95
Actuated Cycle Length: 95
Offset: 31 (33%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated

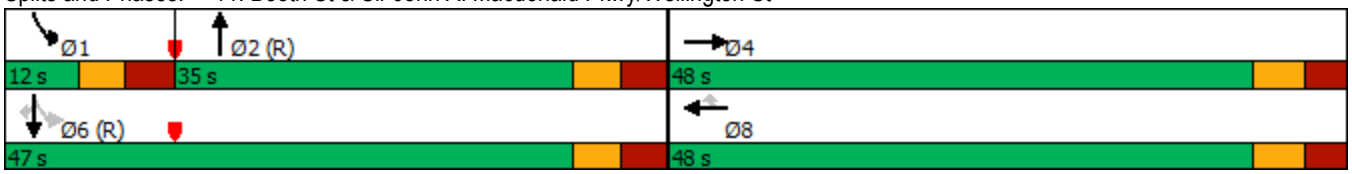
Maximum v/c Ratio: 1.09

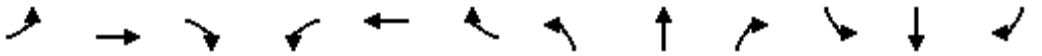
Intersection Signal Delay: 63.2	Intersection LOS: E
Intersection Capacity Utilization 93.4%	ICU Level of Service F
Analysis Period (min) 15	

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

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

Splits and Phases: 11: Booth St & Sir John A. Macdonald Pkwy/Wellington St





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	398	867	25	17	337	156	22	543	46	175	506	454
Future Volume (vph)	398	867	25	17	337	156	22	543	46	175	506	454
Satd. Flow (prot)	1660	3300	0	1710	2923	0	1710	1744	0	1425	1782	1471
Flt Permitted	0.950			0.304			0.326			0.950		
Satd. Flow (perm)	1595	3300	0	543	2923	0	564	1744	0	1355	1782	1471
Satd. Flow (RTOR)		3						4				
Lane Group Flow (vph)	419	939	0	18	519	0	23	620	0	184	533	478
Turn Type	Prot	NA		Perm	NA		Perm	NA		Prot	NA	Over
Protected Phases	5	2			6			8		7	4	5
Permitted Phases				6			8					
Detector Phase	5	2		6	6		8	8		7	4	5
Switch Phase												
Minimum Initial (s)	5.0	10.0		10.0	10.0		10.0	10.0		5.0	10.0	5.0
Minimum Split (s)	11.5	36.5		36.5	36.5		34.5	34.5		11.5	34.5	11.5
Total Split (s)	28.0	67.0		39.0	39.0		38.0	38.0		15.0	53.0	28.0
Total Split (%)	23.3%	55.8%		32.5%	32.5%		31.7%	31.7%		12.5%	44.2%	23.3%
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	3.3
All-Red Time (s)	3.2	3.2		3.2	3.2		3.2	3.2		3.2	3.2	3.2
Lost Time Adjust (s)	-3.3	0.0		0.0	0.0		0.0	-3.3		-3.3	0.0	-3.3
Total Lost Time (s)	3.2	6.5		6.5	6.5		6.5	3.2		3.2	6.5	3.2
Lead/Lag	Lead			Lag	Lag		Lag	Lag		Lead		Lead
Lead-Lag Optimize?	Yes			Yes	Yes		Yes	Yes		Yes		Yes
Recall Mode	Max	C-Max		C-Max	C-Max		None	None		None	None	Max
Act Effct Green (s)	24.8	60.5		32.5	32.5		31.5	34.8		11.8	46.5	24.8
Actuated g/C Ratio	0.21	0.50		0.27	0.27		0.26	0.29		0.10	0.39	0.21
v/c Ratio	1.22	0.56		0.12	0.66		0.16	1.22		1.31	0.77	1.57
Control Delay	156.0	17.6		42.6	47.2		37.5	153.3		225.3	41.2	306.0
Queue Delay	0.0	1.2		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	156.0	18.9		42.6	47.2		37.5	153.3		225.3	41.2	306.0
LOS	F	B		D	D		D	F		F	D	F
Approach Delay		61.2			47.0			149.1			175.5	
Approach LOS		E			D			F			F	
Queue Length 50th (m)	~123.5	39.7		3.4	57.5		4.4	~188.9		~58.8	114.1	~168.2
Queue Length 95th (m)	#188.5	146.8		12.3	91.2		12.1	#262.3		#105.7	159.9	#235.2
Internal Link Dist (m)		141.9			62.1			37.2			83.1	
Turn Bay Length (m)	160.0			40.0								120.0
Base Capacity (vph)	343	1665		147	791		148	508		140	690	304
Starvation Cap Reductn	0	475		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	1.22	0.79		0.12	0.66		0.16	1.22		1.31	0.77	1.57

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 104 (87%), Referenced to phase 2:EBT and 6:WBTL, Start of Green
Natural Cycle: 145
Control Type: Actuated-Coordinated

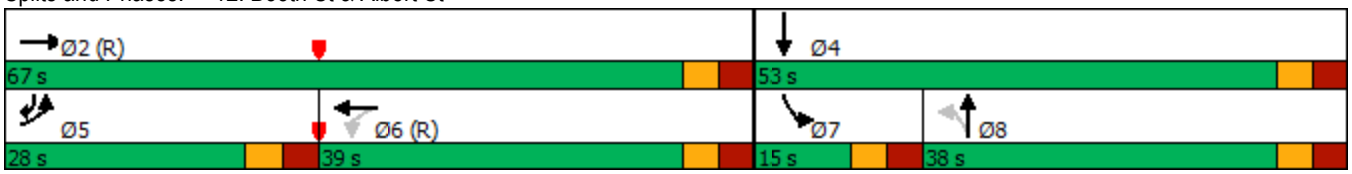
Maximum v/c Ratio: 1.57

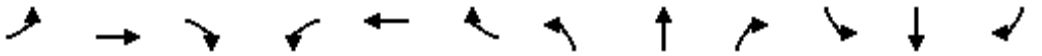
Intersection Signal Delay: 110.9	Intersection LOS: F
Intersection Capacity Utilization 107.5%	ICU Level of Service G
Analysis Period (min) 15	

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

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

Splits and Phases: 12: Booth St & Albert St





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	915	137	399	400	15	125	13	307	31	13	3
Future Volume (vph)	6	915	137	399	400	15	125	13	307	31	13	3
Satd. Flow (prot)	1710	3223	0	1629	3274	0	1583	1454	0	1710	1745	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1710	3223	0	1617	3274	0	1562	1454	0	1710	1745	0
Satd. Flow (RTOR)		15			4			323			3	
Lane Group Flow (vph)	6	1107	0	420	437	0	132	337	0	33	17	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases												
Detector Phase	5	2		1	6		3	8		7	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		5.0	10.0		5.0	10.0	
Minimum Split (s)	11.2	31.8		11.2	31.8		11.3	29.3		11.3	29.3	
Total Split (s)	12.0	43.0		32.0	63.0		15.0	33.0		12.0	30.0	
Total Split (%)	10.0%	35.8%		26.7%	52.5%		12.5%	27.5%		10.0%	25.0%	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.9	3.5		2.9	3.5		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	-3.3		0.0	0.0		-1.5	0.0		0.0	0.0	
Total Lost Time (s)	6.2	3.5		6.2	6.8		4.8	6.3		6.3	6.3	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	C-Max		Max	C-Max		None	None		None	None	
Act Effct Green (s)	6.0	39.5		44.6	84.4		13.4	12.7		5.7	11.5	
Actuated g/C Ratio	0.05	0.33		0.37	0.70		0.11	0.11		0.05	0.10	
v/c Ratio	0.07	1.03		0.69	0.19		0.75	0.76		0.41	0.10	
Control Delay	41.5	89.3		26.3	4.3		77.6	18.2		70.9	43.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	41.5	89.3		26.3	4.3		77.6	18.2		70.9	43.2	
LOS	D	F		C	A		E	B		E	D	
Approach Delay		89.1			15.1			34.9			61.5	
Approach LOS		F			B			C			E	
Queue Length 50th (m)	1.3	~137.1		21.2	8.2		29.0	3.3		8.1	3.3	
Queue Length 95th (m)	m3.0	#203.4		#161.3	11.8		#74.7	32.7		19.4	10.1	
Internal Link Dist (m)		80.9			119.1			54.7			65.4	
Turn Bay Length (m)	30.0			90.0						15.0		
Base Capacity (vph)	87	1070		605	2303		176	574		81	347	
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	0.07	1.03		0.69	0.19		0.75	0.59		0.41	0.05	

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 55 (46%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 145
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.03

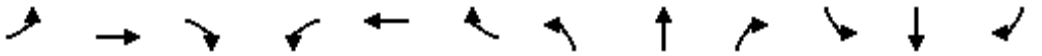
Intersection Signal Delay: 52.8	Intersection LOS: D
Intersection Capacity Utilization 95.8%	ICU Level of Service F
Analysis Period (min) 15	

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

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

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

Splits and Phases: 13: Preston St & Albert St



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	1376	25	58	902	41	10	0	25	2	0	15
Future Volume (vph)	15	1376	25	58	902	41	10	0	25	2	0	15
Satd. Flow (prot)	1710	3410	0	1710	3364	0	0	1605	0	0	1482	0
Flt Permitted	0.289			0.950				0.893			0.954	
Satd. Flow (perm)	520	3410	0	1710	3364	0	0	1455	0	0	1423	0
Satd. Flow (RTOR)		2			8			103			103	
Lane Group Flow (vph)	16	1474	0	61	992	0	0	37	0	0	18	0
Turn Type	Perm	NA		Prot	NA		Perm	NA		Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4						2			6		
Detector Phase	4	4		3	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		5.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	37.0	37.0		11.0	37.0		32.3	32.3		32.3	32.3	
Total Split (s)	51.0	51.0		11.0	62.0		33.0	33.0		33.0	33.0	
Total Split (%)	53.7%	53.7%		11.6%	65.3%		34.7%	34.7%		34.7%	34.7%	
Yellow Time (s)	3.7	3.7		3.7	3.7		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.3	2.3		2.3	2.3		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0			6.3			6.3	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Recall Mode	C-Max	C-Max		None	C-Max		None	None		None	None	
Act Effct Green (s)	67.7	67.7		9.1	81.6			10.0			10.0	
Actuated g/C Ratio	0.71	0.71		0.10	0.86			0.11			0.11	
v/c Ratio	0.04	0.61		0.37	0.34			0.15			0.07	
Control Delay	5.1	9.3		54.0	1.3			1.3			0.6	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	5.1	9.3		54.0	1.3			1.3			0.6	
LOS	A	A		D	A			A			A	
Approach Delay		9.2			4.4			1.3			0.6	
Approach LOS		A			A			A			A	
Queue Length 50th (m)	1.2	95.8		12.6	8.4			0.0			0.0	
Queue Length 95th (m)	m1.2	132.3		25.7	12.2			0.0			0.0	
Internal Link Dist (m)		651.1			64.4			41.8			21.1	
Turn Bay Length (m)	40.0			50.0								
Base Capacity (vph)	370	2430		164	2891			482			473	
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	0.04	0.61		0.37	0.34			0.08			0.04	

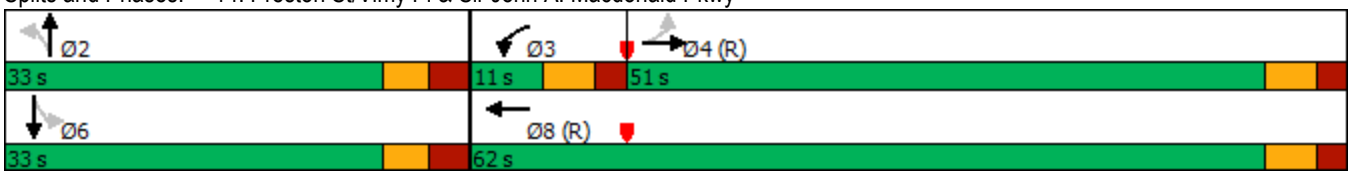
Intersection Summary
Cycle Length: 95
Actuated Cycle Length: 95
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green
Natural Cycle: 85
Control Type: Actuated-Coordinated

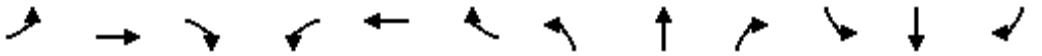
Maximum v/c Ratio: 0.61

Intersection Signal Delay: 7.1	Intersection LOS: A
Intersection Capacity Utilization 68.7%	ICU Level of Service C
Analysis Period (min) 15	

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

Splits and Phases: 14: Preston St/Vimy Pl & Sir John A. Macdonald Pkwy





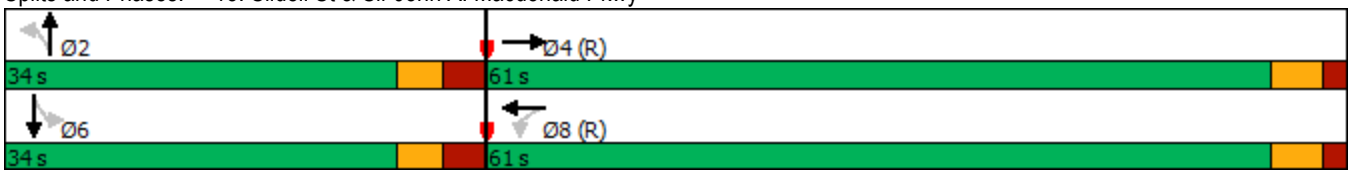
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1510	22	1	1022	1	1	21	1	1	5	3
Future Volume (vph)	0	1510	22	1	1022	1	1	21	1	1	5	3
Satd. Flow (prot)	0	3413	0	0	3386	0	0	1786	0	0	1709	0
Flt Permitted					0.954			0.984			0.956	
Satd. Flow (perm)	0	3413	0	0	3230	0	0	1761	0	0	1643	0
Satd. Flow (RTOR)		3						1			3	
Lane Group Flow (vph)	0	1612	0	0	1078	0	0	24	0	0	9	0
Turn Type		NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases				8			2			6		
Detector Phase		4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)		10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)		30.5		30.5	30.5		33.3	33.3		33.3	33.3	
Total Split (s)		61.0		61.0	61.0		34.0	34.0		34.0	34.0	
Total Split (%)		64.2%		64.2%	64.2%		35.8%	35.8%		35.8%	35.8%	
Yellow Time (s)		3.7		3.7	3.7		3.3	3.3		3.3	3.3	
All-Red Time (s)		1.8		1.8	1.8		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.5			5.5			6.3			6.3	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode		C-Max		C-Max	C-Max		None	None		None	None	
Act Effct Green (s)		86.3			86.3			10.0			10.0	
Actuated g/C Ratio		0.91			0.91			0.11			0.11	
v/c Ratio		0.52			0.37			0.13			0.05	
Control Delay		3.1			1.0			39.3			33.4	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		3.1			1.0			39.3			33.4	
LOS		A			A			D			C	
Approach Delay		3.1			1.0			39.3			33.4	
Approach LOS		A			A			D			C	
Queue Length 50th (m)		0.0			0.7			4.1			1.1	
Queue Length 95th (m)		71.8			11.8			12.1			5.7	
Internal Link Dist (m)		354.8			288.5			38.4			167.1	
Turn Bay Length (m)												
Base Capacity (vph)		3100			2933			514			481	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.52			0.37			0.05			0.02	

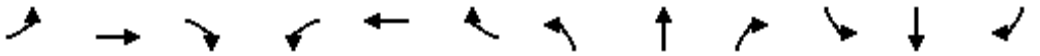
Intersection Summary
Cycle Length: 95
Actuated Cycle Length: 95
Offset: 34 (36%), Referenced to phase 4:EBT and 8:WBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.52

Intersection Signal Delay: 2.7	Intersection LOS: A
Intersection Capacity Utilization 63.0%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 15: Slidell St & Sir John A. Macdonald Pkwy





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	786	86	56	352	31	61	45	130	131	178	12
Future Volume (vph)	14	786	86	56	352	31	61	45	130	131	178	12
Satd. Flow (prot)	1500	1733	0	1613	1698	1457	1676	1800	1515	1693	1756	0
Flt Permitted	0.528			0.203			0.499			0.726		
Satd. Flow (perm)	834	1733	0	345	1698	1457	881	1800	1515	1294	1756	0
Satd. Flow (RTOR)		10				37			137		3	
Lane Group Flow (vph)	15	918	0	59	371	33	64	47	137	138	200	0
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6		6	8		8	4		
Detector Phase	2	2		6	6	6	8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	32.5	32.5		32.5	32.5	32.5	31.4	31.4	31.4	31.4	31.4	
Total Split (s)	68.0	68.0		68.0	68.0	68.0	32.0	32.0	32.0	32.0	32.0	
Total Split (%)	68.0%	68.0%		68.0%	68.0%	68.0%	32.0%	32.0%	32.0%	32.0%	32.0%	
Yellow Time (s)	3.3	3.3		3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	
All-Red Time (s)	3.2	3.2		3.2	3.2	3.2	3.1	3.1	3.1	3.1	3.1	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.5	6.5		6.5	6.5	6.5	6.4	6.4	6.4	6.4	6.4	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		C-Max	C-Max	C-Max	None	None	None	None	None	
Act Effct Green (s)	68.9	68.9		68.9	68.9	68.9	18.2	18.2	18.2	18.2	18.2	
Actuated g/C Ratio	0.69	0.69		0.69	0.69	0.69	0.18	0.18	0.18	0.18	0.18	
v/c Ratio	0.03	0.77		0.25	0.32	0.03	0.40	0.14	0.35	0.59	0.62	
Control Delay	3.6	13.5		11.0	8.1	2.3	41.4	32.5	8.0	46.5	44.7	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	3.6	13.5		11.0	8.1	2.3	41.4	32.5	8.0	46.5	44.7	
LOS	A	B		B	A	A	D	C	A	D	D	
Approach Delay		13.4			8.0			21.3			45.4	
Approach LOS		B			A			C			D	
Queue Length 50th (m)	0.3	132.2		3.7	24.7	0.0	11.9	8.3	0.0	26.6	38.2	
Queue Length 95th (m)	m1.0	m192.9		13.4	51.0	3.2	23.2	16.9	14.9	42.7	56.3	
Internal Link Dist (m)		635.7			497.2			83.8			171.5	
Turn Bay Length (m)	45.0			50.0			50.0		20.0	45.0		
Base Capacity (vph)	574	1197		237	1170	1015	225	460	489	331	451	
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.03	0.77		0.25	0.32	0.03	0.28	0.10	0.28	0.42	0.44	

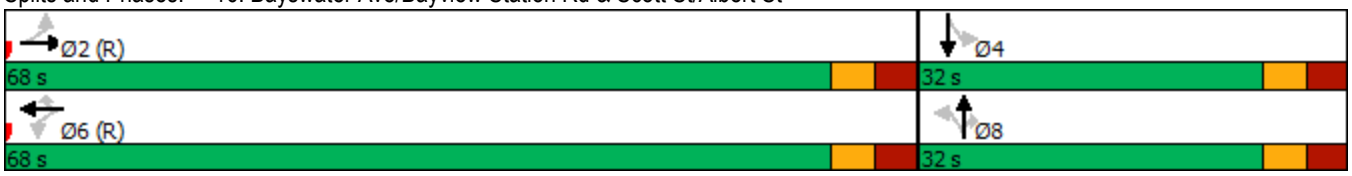
Intersection Summary
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 40 (40%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

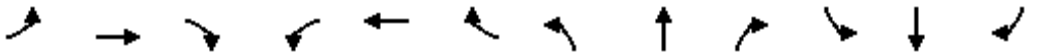
Maximum v/c Ratio: 0.77

Intersection Signal Delay: 18.6	Intersection LOS: B
Intersection Capacity Utilization 84.2%	ICU Level of Service E
Analysis Period (min) 15	

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

Splits and Phases: 16: Bayswater Ave/Bayview Station Rd & Scott St/Albert St





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	120	771	37	55	343	26	31	301	76	107	356	145
Future Volume (vph)	120	771	37	55	343	26	31	301	76	107	356	145
Satd. Flow (prot)	1676	1735	0	1676	1698	1471	1660	1722	0	1693	1623	0
Flt Permitted	0.950			0.133			0.213			0.361		
Satd. Flow (perm)	1676	1735	0	235	1698	1471	372	1722	0	643	1623	0
Satd. Flow (RTOR)		3				119		14			23	
Lane Group Flow (vph)	126	851	0	58	361	27	33	397	0	113	528	0
Turn Type	Prot	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	2			6			8			4	
Permitted Phases				6		6	8			4		
Detector Phase	5	2		6	6	6	8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0		10.0	10.0	10.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	10.6	28.1		28.1	28.1	28.1	35.3	35.3		35.3	35.3	
Total Split (s)	11.0	51.0		40.0	40.0	40.0	43.0	43.0		43.0	43.0	
Total Split (%)	11.0%	51.0%		40.0%	40.0%	40.0%	43.0%	43.0%		43.0%	43.0%	
Yellow Time (s)	3.3	3.3		3.3	3.3	3.3	3.0	3.0		3.0	3.0	
All-Red Time (s)	2.3	2.8		2.8	2.8	2.8	3.3	3.3		3.3	3.3	
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	6.1		6.1	6.1	6.1	6.3	6.3		6.3	6.3	
Lead/Lag	Lead			Lag	Lag	Lag						
Lead-Lag Optimize?	Yes			Yes	Yes	Yes						
Recall Mode	None	C-Max		C-Max	C-Max	C-Max	Max	Max		Max	Max	
Act Effct Green (s)	11.4	50.9		33.9	33.9	33.9	36.7	36.7		36.7	36.7	
Actuated g/C Ratio	0.11	0.51		0.34	0.34	0.34	0.37	0.37		0.37	0.37	
v/c Ratio	0.66	0.96		0.73	0.63	0.05	0.24	0.62		0.48	0.87	
Control Delay	60.0	47.4		75.6	30.0	0.2	27.9	30.1		32.7	44.5	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	60.0	47.4		75.6	30.0	0.2	27.9	30.1		32.7	44.5	
LOS	E	D		E	C	A	C	C		C	D	
Approach Delay		49.0			34.1			29.9			42.4	
Approach LOS		D			C			C			D	
Queue Length 50th (m)	25.0	159.4		10.9	65.5	0.0	4.6	63.1		17.5	94.8	
Queue Length 95th (m)	#50.2	#249.7		#27.9	97.0	m0.0	13.2	96.0		35.9	#157.4	
Internal Link Dist (m)		92.9			635.7			70.7			630.1	
Turn Bay Length (m)	55.0			65.0		35.0	55.0			50.0		
Base Capacity (vph)	191	884		79	575	577	136	640		235	610	
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	
Reduced v/c Ratio	0.66	0.96		0.73	0.63	0.05	0.24	0.62		0.48	0.87	

Intersection Summary
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 91 (91%), Referenced to phase 2:EBT and 6:WBTL, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated

Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Satd. Flow (RTOR)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	2.0
Minimum Split (s)	6.0
Total Split (s)	6.0
Total Split (%)	6%
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	None
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (m)	
Queue Length 95th (m)	
Internal Link Dist (m)	
Turn Bay Length (m)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

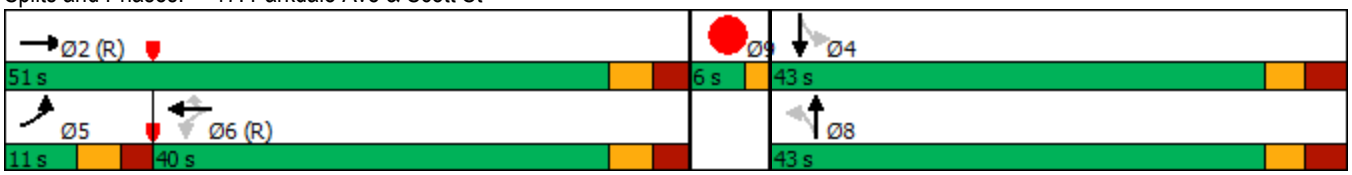
Intersection Summary

Maximum v/c Ratio: 0.96

Intersection Signal Delay: 41.4	Intersection LOS: D
Intersection Capacity Utilization 111.6%	ICU Level of Service H
Analysis Period (min) 15	

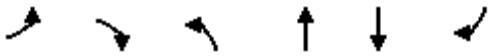
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 17: Parkdale Ave & Scott St



Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SER	SWL	SWR
Lane Configurations										
Traffic Volume (vph)	0	65	140	0	385	0	0	0	0	0
Future Volume (vph)	0	65	140	0	385	0	0	0	0	0
Satd. Flow (prot)	0	1602	0	0	1765	0	0	1765	0	0
Flt Permitted										
Satd. Flow (perm)	0	1602	0	0	1765	0	0	1765	0	0
Lane Group Flow (vph)	0	215	0	0	405	0	0	0	0	0
Sign Control		Free			Free		Free		Free	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization 31.4%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø9
Lane Configurations							
Traffic Volume (vph)	1	1	2	871	1494	6	
Future Volume (vph)	1	1	2	871	1494	6	
Satd. Flow (prot)	1637	0	1710	3420	3417	0	
Flt Permitted	0.976		0.148				
Satd. Flow (perm)	1637	0	266	3420	3417	0	
Satd. Flow (RTOR)	1				1		
Lane Group Flow (vph)	2	0	2	917	1579	0	
Turn Type	Prot		Perm	NA	NA		
Protected Phases	4			2	6		9
Permitted Phases			2				
Detector Phase	4		2	2	6		
Switch Phase							
Minimum Initial (s)	8.3		10.0	10.0	10.0		10.0
Minimum Split (s)	14.5		30.7	30.7	30.9		29.0
Total Split (s)	17.0		49.0	49.0	49.0		29.0
Total Split (%)	17.9%		51.6%	51.6%	51.6%		31%
Yellow Time (s)	3.3		3.3	3.3	3.3		3.0
All-Red Time (s)	2.9		2.4	2.4	2.6		4.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0		
Total Lost Time (s)	6.2		5.7	5.7	5.9		
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	None		C-Max	C-Max	C-Max		None
Act Effct Green (s)	8.3		91.0	91.0	90.9		
Actuated g/C Ratio	0.09		0.96	0.96	0.96		
v/c Ratio	0.01		0.01	0.28	0.48		
Control Delay	34.5		0.5	0.3	1.7		
Queue Delay	0.0		0.0	0.0	0.0		
Total Delay	34.5		0.5	0.3	1.7		
LOS	C		A	A	A		
Approach Delay	34.5			0.3	1.7		
Approach LOS	C			A	A		
Queue Length 50th (m)	0.2		0.0	0.0	0.0		
Queue Length 95th (m)	2.4		m0.0	m4.8	63.0		
Internal Link Dist (m)	148.9			192.9	188.6		
Turn Bay Length (m)			35.0				
Base Capacity (vph)	186		255	3274	3270		
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	0.01		0.01	0.28	0.48		

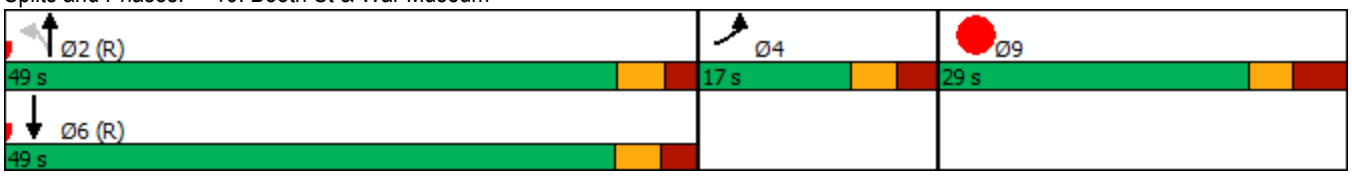
Intersection Summary
Cycle Length: 95
Actuated Cycle Length: 95
Offset: 47 (49%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

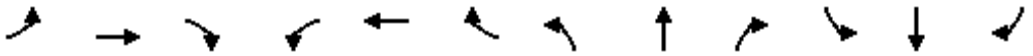
Maximum v/c Ratio: 0.48

Intersection Signal Delay: 1.2	Intersection LOS: A
Intersection Capacity Utilization 60.8%	ICU Level of Service B
Analysis Period (min) 15	

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

Splits and Phases: 19: Booth St & War Museum





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	987	77	98	400	16	28	0	47	36	0	5
Future Volume (vph)	5	987	77	98	400	16	28	0	47	36	0	5
Satd. Flow (prot)	1710	3344	0	1629	3244	0	1644	1378	0	0	1697	0
Flt Permitted	0.950			0.950			0.729				0.716	
Satd. Flow (perm)	1710	3344	0	1629	3244	0	1262	1378	0	0	1262	0
Satd. Flow (RTOR)		11			5			168			87	
Lane Group Flow (vph)	5	1120	0	103	438	0	29	49	0	0	43	0
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases							8			4		
Detector Phase	5	2		1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	11.3	27.3		11.3	27.3		29.3	29.3		29.3	29.3	
Total Split (s)	12.0	72.0		12.0	72.0		36.0	36.0		36.0	36.0	
Total Split (%)	10.0%	60.0%		10.0%	60.0%		30.0%	30.0%		30.0%	30.0%	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)	6.3	6.3		6.3	6.3		6.3	6.3			6.3	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	
Act Effct Green (s)	6.0	75.1		16.7	96.7		12.6	12.6			12.6	
Actuated g/C Ratio	0.05	0.63		0.14	0.81		0.10	0.10			0.10	
v/c Ratio	0.06	0.53		0.46	0.17		0.22	0.17			0.20	
Control Delay	55.4	14.6		39.0	6.5		51.0	1.2			2.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Total Delay	55.4	14.6		39.0	6.5		51.0	1.2			2.6	
LOS	E	B		D	A		D	A			A	
Approach Delay		14.8			12.7			19.7			2.6	
Approach LOS		B			B			B			A	
Queue Length 50th (m)	1.2	76.7		16.6	12.2		6.9	0.0			0.0	
Queue Length 95th (m)	5.6	116.0		m38.3	56.2		15.0	0.0			1.0	
Internal Link Dist (m)		497.2			112.4			178.8			41.9	
Turn Bay Length (m)	30.0			35.0			30.0					
Base Capacity (vph)	86	2096		226	2614		312	467			377	
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	0.06	0.53		0.46	0.17		0.09	0.10			0.11	

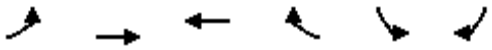
Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 80 (67%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.53

Intersection Signal Delay: 14.1	Intersection LOS: B
Intersection Capacity Utilization 62.6%	ICU Level of Service B
Analysis Period (min) 15	

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

Splits and Phases: 20: City Centre Ave & Albert St



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	32	1210	745	68	51	17
Future Volume (vph)	32	1210	745	68	51	17
Satd. Flow (prot)	1710	3320	3172	0	1671	0
Flt Permitted	0.950				0.964	
Satd. Flow (perm)	1710	3320	3172	0	1659	0
Satd. Flow (RTOR)			14		13	
Lane Group Flow (vph)	34	1274	856	0	72	0
Turn Type	Prot	NA	NA		Prot	
Protected Phases	5	2	6		4	
Permitted Phases						
Detector Phase	5	2	6		4	
Switch Phase						
Minimum Initial (s)	5.0	10.0	10.0		10.0	
Minimum Split (s)	11.3	22.0	22.0		30.3	
Total Split (s)	12.0	89.0	77.0		31.0	
Total Split (%)	10.0%	74.2%	64.2%		25.8%	
Yellow Time (s)	3.3	3.3	3.3		3.3	
All-Red Time (s)	3.0	3.0	3.0		3.0	
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	
Total Lost Time (s)	6.3	6.3	6.3		6.3	
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	None	C-Max	C-Max		None	
Act Effct Green (s)	7.0	98.9	90.5		13.1	
Actuated g/C Ratio	0.06	0.82	0.75		0.11	
v/c Ratio	0.34	0.47	0.36		0.37	
Control Delay	44.2	7.9	22.3		44.6	
Queue Delay	0.0	0.6	0.5		0.0	
Total Delay	44.2	8.5	22.8		44.6	
LOS	D	A	C		D	
Approach Delay		9.4	22.8		44.6	
Approach LOS		A	C		D	
Queue Length 50th (m)	8.7	57.0	87.4		14.2	
Queue Length 95th (m)	m10.0	m71.1	m90.1		25.9	
Internal Link Dist (m)		119.1	141.9		77.8	
Turn Bay Length (m)	30.0					
Base Capacity (vph)	101	2735	2394		354	
Starvation Cap Reductn	0	955	977		0	
Spillback Cap Reductn	0	38	0		10	
Storage Cap Reductn	0	0	0		0	
Reduced v/c Ratio	0.34	0.72	0.60		0.21	

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 22 (18%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 65
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.47

Intersection Signal Delay: 15.7	Intersection LOS: B
Intersection Capacity Utilization 54.5%	ICU Level of Service A
Analysis Period (min) 15	

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

Splits and Phases: 21: Albert St & Access 1

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1491	18	30	810	41	88
Future Volume (vph)	1491	18	30	810	41	88
Satd. Flow (prot)	3367	0	1710	3320	1538	0
Flt Permitted			0.119		0.984	
Satd. Flow (perm)	3367	0	214	3320	1538	0
Satd. Flow (RTOR)	2				28	
Lane Group Flow (vph)	1588	0	32	853	136	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	4			8	2	
Permitted Phases			8			
Detector Phase	4		8	8	2	
Switch Phase						
Minimum Initial (s)	10.0		10.0	10.0	10.0	
Minimum Split (s)	30.0		22.0	22.0	33.9	
Total Split (s)	61.0		61.0	61.0	34.0	
Total Split (%)	64.2%		64.2%	64.2%	35.8%	
Yellow Time (s)	3.7		3.7	3.7	3.3	
All-Red Time (s)	2.1		2.1	2.1	2.6	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	5.8		5.8	5.8	5.9	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max		C-Max	C-Max	None	
Act Effct Green (s)	68.4		68.4	68.4	14.9	
Actuated g/C Ratio	0.72		0.72	0.72	0.16	
v/c Ratio	0.66		0.21	0.36	0.51	
Control Delay	19.8		11.0	6.5	34.3	
Queue Delay	21.4		0.0	0.0	0.0	
Total Delay	41.2		11.0	6.5	34.3	
LOS	D		B	A	C	
Approach Delay	41.2			6.6	34.3	
Approach LOS	D			A	C	
Queue Length 50th (m)	127.7		1.5	24.0	19.8	
Queue Length 95th (m)	m150.2		9.6	59.2	31.6	
Internal Link Dist (m)	116.7			246.9	48.8	
Turn Bay Length (m)			70.0			
Base Capacity (vph)	2423		154	2389	474	
Starvation Cap Reductn	884		0	0	0	
Spillback Cap Reductn	0		0	0	0	
Storage Cap Reductn	0		0	0	0	
Reduced v/c Ratio	1.03		0.21	0.36	0.29	

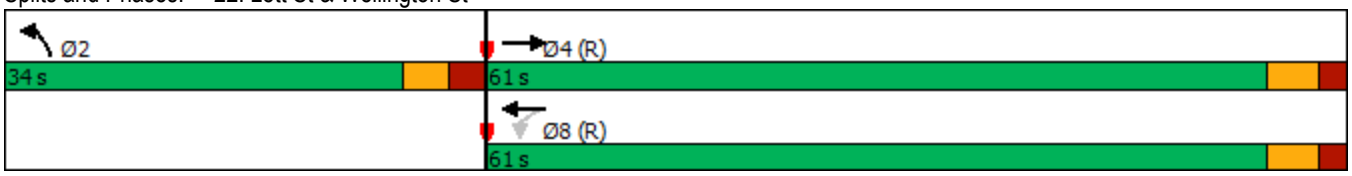
Intersection Summary
Cycle Length: 95
Actuated Cycle Length: 95
Offset: 27 (28%), Referenced to phase 4:EBT and 8:WBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated

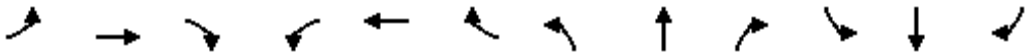
Maximum v/c Ratio: 0.66

Intersection Signal Delay: 29.1	Intersection LOS: C
Intersection Capacity Utilization 62.2%	ICU Level of Service B
Analysis Period (min) 15	

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

Splits and Phases: 22: Lett St & Wellington St





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	1059	8	5	487	7	8	0	11	28	0	8
Future Volume (vph)	21	1059	8	5	487	7	8	0	11	28	0	8
Satd. Flow (prot)	1710	3318	0	1710	3315	0	0	1621	0	0	1681	0
Flt Permitted	0.460			0.243				0.884			0.759	
Satd. Flow (perm)	828	3318	0	437	3315	0	0	1462	0	0	1327	0
Satd. Flow (RTOR)		1			2			15			15	
Lane Group Flow (vph)	22	1123	0	5	520	0	0	20	0	0	37	0
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)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	22.6	22.6		22.6	22.6		30.5	30.5		30.5	30.5	
Total Split (s)	81.0	81.0		81.0	81.0		39.0	39.0		39.0	39.0	
Total Split (%)	67.5%	67.5%		67.5%	67.5%		32.5%	32.5%		32.5%	32.5%	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	1.3	1.3		1.3	1.3		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.6	0.0			0.0			0.0	
Total Lost Time (s)	4.6	4.6		5.2	4.6			4.3			4.3	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	
Act Effct Green (s)	105.7	105.7		105.3	105.7			13.0			13.0	
Actuated g/C Ratio	0.88	0.88		0.88	0.88			0.11			0.11	
v/c Ratio	0.03	0.38		0.01	0.18			0.12			0.24	
Control Delay	7.9	8.9		3.8	2.5			24.4			34.8	
Queue Delay	0.0	0.4		0.0	0.0			0.0			0.0	
Total Delay	7.9	9.3		3.8	2.5			24.4			34.8	
LOS	A	A		A	A			C			C	
Approach Delay		9.2			2.5			24.4			34.8	
Approach LOS		A			A			C			C	
Queue Length 50th (m)	1.9	69.5		0.2	9.3			1.2			5.2	
Queue Length 95th (m)	m5.5	m106.9		1.5	26.4			7.9			14.2	
Internal Link Dist (m)		82.5			218.4			58.0			17.2	
Turn Bay Length (m)				50.0								
Base Capacity (vph)	729	2921		383	2919			433			394	
Starvation Cap Reductn	0	1092		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	0.03	0.61		0.01	0.18			0.05			0.09	

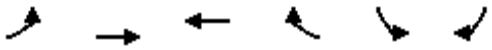
Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 22 (18%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.38

Intersection Signal Delay: 7.9	Intersection LOS: A
Intersection Capacity Utilization 46.9%	ICU Level of Service A
Analysis Period (min) 15	

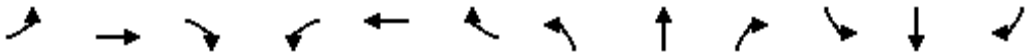
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 23: Empress Ave & Albert St



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	1088	501	7	0	8
Future Volume (vph)	0	1088	501	7	0	8
Satd. Flow (prot)	0	3353	3346	0	0	1526
Flt Permitted						
Satd. Flow (perm)	0	3353	3346	0	0	1526
Lane Group Flow (vph)	0	1145	534	0	0	8
Sign Control		Free	Free		Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization 35.1%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	29	0	0	13	0	863	20	0	983	6
Future Volume (vph)	0	0	29	0	0	13	0	863	20	0	983	6
Satd. Flow (prot)	0	0	1526	0	0	1526	0	3343	0	0	3350	0
Flt Permitted												
Satd. Flow (perm)	0	0	1526	0	0	1526	0	3343	0	0	3350	0
Lane Group Flow (vph)	0	0	31	0	0	14	0	929	0	0	1041	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Control Type: Unsignalized	
Intersection Capacity Utilization 38.9%	ICU Level of Service A
Analysis Period (min) 15	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1320	8	0	986	0	29
Future Volume (vph)	1320	8	0	986	0	29
Satd. Flow (prot)	3350	0	0	3353	0	1526
Flt Permitted						
Satd. Flow (perm)	3350	0	0	3353	0	1526
Lane Group Flow (vph)	1397	0	0	1038	0	31
Sign Control	Free			Free	Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization 48.8%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1299	13	51	935	14	29
Future Volume (vph)	1299	13	51	935	14	29
Satd. Flow (prot)	3413	0	1710	3420	1610	0
Flt Permitted			0.141		0.984	
Satd. Flow (perm)	3413	0	254	3420	1610	0
Satd. Flow (RTOR)	1				31	
Lane Group Flow (vph)	1381	0	54	984	46	0
Turn Type	NA		pm+pt	NA	Prot	
Protected Phases	4		3	8	2	
Permitted Phases			8			
Detector Phase	4		3	8	2	
Switch Phase						
Minimum Initial (s)	10.0		5.0	10.0	10.0	
Minimum Split (s)	37.0		11.0	37.0	32.3	
Total Split (s)	47.0		15.0	62.0	33.0	
Total Split (%)	49.5%		15.8%	65.3%	34.7%	
Yellow Time (s)	3.7		3.7	3.7	3.3	
All-Red Time (s)	2.3		2.3	2.3	3.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	6.0		6.0	6.0	6.3	
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	C-Max		None	C-Max	None	
Act Effct Green (s)	70.6		79.2	81.6	10.0	
Actuated g/C Ratio	0.74		0.83	0.86	0.11	
v/c Ratio	0.54		0.18	0.33	0.23	
Control Delay	1.9		3.1	5.4	22.8	
Queue Delay	0.4		0.0	0.2	8.3	
Total Delay	2.3		3.1	5.6	31.0	
LOS	A		A	A	C	
Approach Delay	2.3			5.4	31.0	
Approach LOS	A			A	C	
Queue Length 50th (m)	1.3		1.8	84.2	2.7	
Queue Length 95th (m)	1.5		m3.2	100.8	13.4	
Internal Link Dist (m)	77.2			49.9	32.0	
Turn Bay Length (m)			60.0			
Base Capacity (vph)	2535		349	2938	474	
Starvation Cap Reductn	265		0	974	0	
Spillback Cap Reductn	558		0	0	393	
Storage Cap Reductn	0		0	0	0	
Reduced v/c Ratio	0.70		0.15	0.50	0.57	

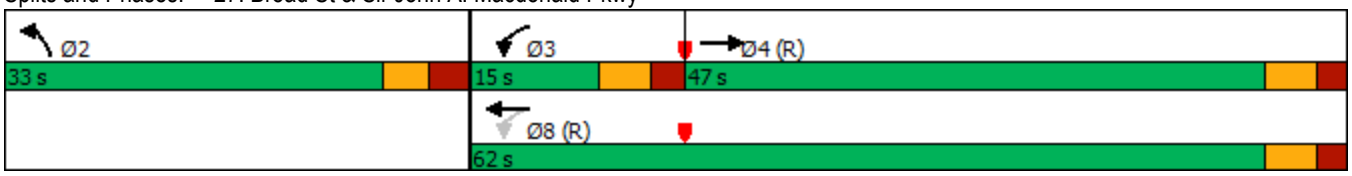
Intersection Summary
Cycle Length: 95
Actuated Cycle Length: 95
Offset: 22 (23%), Referenced to phase 4:EBT and 8:WBTL, Start of Green
Natural Cycle: 85
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.54

Intersection Signal Delay: 4.1	Intersection LOS: A
Intersection Capacity Utilization 63.3%	ICU Level of Service B
Analysis Period (min) 15	

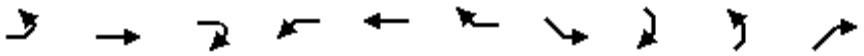
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 27: Broad St & Sir John A. Macdonald Pkwy



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1301	5	0	949	0	11
Future Volume (vph)	1301	5	0	949	0	11
Satd. Flow (prot)	3350	0	0	3353	0	1526
Flt Permitted						
Satd. Flow (perm)	3350	0	0	3353	0	1526
Lane Group Flow (vph)	1374	0	0	999	0	12
Sign Control	Free			Free	Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization 48.1%		ICU Level of Service A	
Analysis Period (min) 15			

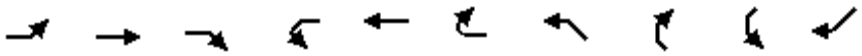


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SER	NEL	NER
Lane Configurations		↑↑			↑↑					↱
Traffic Volume (vph)	0	0	0	0	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0	0	0	0	0
Satd. Flow (prot)	0	3353	0	0	3353	0	0	0	0	1765
Flt Permitted										
Satd. Flow (perm)	0	3353	0	0	3353	0	0	0	0	1765
Lane Group Flow (vph)	0	0	0	0	0	0	0	0	0	0
Sign Control		Free			Free		Free		Free	

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

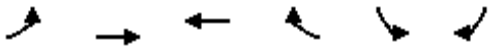
Lane Group	NBL	NBR	SET	SER	NWL	NWT
Lane Configurations			↑			↑
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Satd. Flow (prot)	0	0	1765	0	0	1765
Flt Permitted						
Satd. Flow (perm)	0	0	1765	0	0	1765
Lane Group Flow (vph)	0	0	0	0	0	0
Sign Control	Free		Free			Free

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization 31.4%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NWL	NWR	SWL	SWR
Lane Configurations		↑↑			↑↑				↰	
Traffic Volume (vph)	0	0	0	0	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0	0	0	0	0
Satd. Flow (prot)	0	3353	0	0	3353	0	0	0	1765	0
Flt Permitted										
Satd. Flow (perm)	0	3353	0	0	3353	0	0	0	1765	0
Lane Group Flow (vph)	0	0	0	0	0	0	0	0	0	0
Sign Control		Free			Free		Free		Free	

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



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	818	529	829	1105	852	460
Future Volume (vph)	818	529	829	1105	852	460
Satd. Flow (prot)	3317	4914	3386	2614	3285	1530
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	3317	4914	3386	2614	3285	1530
Satd. Flow (RTOR)						182
Lane Group Flow (vph)	861	557	873	1163	897	484
Turn Type	Prot	NA	NA	pt+ov	Prot	Perm
Protected Phases	7	4	8	8 1	1	
Permitted Phases						1
Detector Phase	7	4	8	8 1	1	1
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0		10.0	10.0
Minimum Split (s)	42.8	26.5	26.5		44.1	44.1
Total Split (s)	55.8	92.3	36.5		44.1	44.1
Total Split (%)	40.9%	67.7%	26.8%		32.3%	32.3%
Yellow Time (s)	3.3	3.3	3.3		3.3	3.3
All-Red Time (s)	2.5	3.2	3.2		2.8	2.8
Lost Time Adjust (s)	0.0	0.0	-2.5		-2.1	0.0
Total Lost Time (s)	5.8	6.5	4.0		4.0	6.1
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	Max	Min	Min		None	None
Act Effct Green (s)	50.0	85.8	32.5	74.1	40.1	38.0
Actuated g/C Ratio	0.37	0.63	0.24	0.54	0.29	0.28
v/c Ratio	0.71	0.18	1.08	0.82	0.93	0.87
Control Delay	40.9	10.8	105.0	31.7	63.2	46.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.9	10.8	105.0	31.7	63.2	46.0
LOS	D	B	F	C	E	D
Approach Delay		29.0	63.1		57.2	
Approach LOS		C	E		E	
Queue Length 50th (m)	107.0	22.7	~145.5	149.1	127.6	87.3
Queue Length 95th (m)	131.5	28.6	#188.2	185.6	#167.5	#151.5
Internal Link Dist (m)		245.9	286.9		42.1	
Turn Bay Length (m)	150.0					30.0
Base Capacity (vph)	1215	3091	806	1420	965	557
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	0.71	0.18	1.08	0.82	0.93	0.87

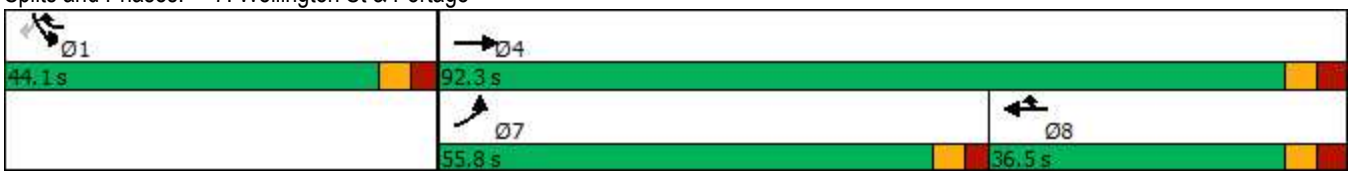
Intersection Summary
Cycle Length: 136.4
Actuated Cycle Length: 136.4
Natural Cycle: 115
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 1.08

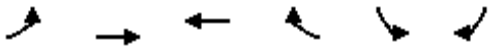
Intersection Signal Delay: 51.4	Intersection LOS: D
Intersection Capacity Utilization 86.0%	ICU Level of Service E
Analysis Period (min) 15	

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

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

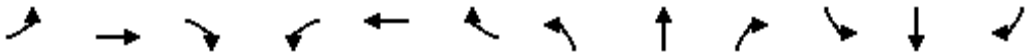
Splits and Phases: 7: Wellington St & Portage





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	841	1095	30	0	7
Future Volume (vph)	0	841	1095	30	0	7
Satd. Flow (prot)	0	3353	3340	0	0	1526
Flt Permitted						
Satd. Flow (perm)	0	3353	3340	0	0	1526
Lane Group Flow (vph)	0	885	1185	0	0	7
Sign Control		Free	Free		Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization 43.0%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	0	33	0	0	0	7	1121	0	0	1089	7
Future Volume (vph)	33	0	33	0	0	0	7	1121	0	0	1089	7
Satd. Flow (prot)	1710	1530	0	1800	1800	0	1710	1800	0	1800	1798	0
Flt Permitted	0.757						0.140					
Satd. Flow (perm)	1363	1530	0	1800	1800	0	252	1800	0	1800	1798	0
Satd. Flow (RTOR)		97									1	
Lane Group Flow (vph)	35	35	0	0	0	0	7	1180	0	0	1153	0
Turn Type	Perm	NA		Perm			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)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	22.0	22.0		22.0	22.0		35.9	35.9		35.9	35.9	
Total Split (s)	22.0	22.0		22.0	22.0		53.0	53.0		53.0	53.0	
Total Split (%)	29.3%	29.3%		29.3%	29.3%		70.7%	70.7%		70.7%	70.7%	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.3	3.3		3.3	3.3	
All-Red Time (s)	3.2	3.2		3.2	3.2		2.6	2.6		2.6	2.6	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.2	6.2		6.2	6.2		5.9	5.9		5.9	5.9	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	
Act Effct Green (s)	10.0	10.0					61.7	61.7			61.7	
Actuated g/C Ratio	0.13	0.13					0.82	0.82			0.82	
v/c Ratio	0.19	0.12					0.03	0.80			0.78	
Control Delay	31.9	0.8					3.9	13.8			12.9	
Queue Delay	0.0	0.0					0.0	0.0			0.0	
Total Delay	31.9	0.8					3.9	13.8			12.9	
LOS	C	A					A	B			B	
Approach Delay		16.4						13.7			12.9	
Approach LOS		B						B			B	
Queue Length 50th (m)	4.7	0.0					0.3	123.1			115.1	
Queue Length 95th (m)	12.9	0.0					1.4	#246.4			#238.8	
Internal Link Dist (m)		60.2			43.3			76.9			31.3	
Turn Bay Length (m)	30.0						30.0					
Base Capacity (vph)	287	398					207	1481			1480	
Starvation Cap Reductn	0	0					0	0			0	
Spillback Cap Reductn	0	0					0	0			0	
Storage Cap Reductn	0	0					0	0			0	
Reduced v/c Ratio	0.12	0.09					0.03	0.80			0.78	

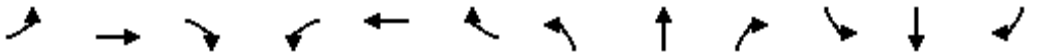
Intersection Summary
Cycle Length: 75
Actuated Cycle Length: 75
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.80

Intersection Signal Delay: 13.4	Intersection LOS: B
Intersection Capacity Utilization 80.7%	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.

Splits and Phases: 10: Booth St & Chaudiere

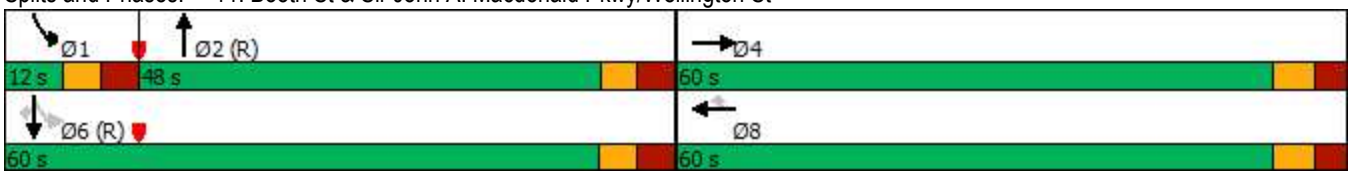


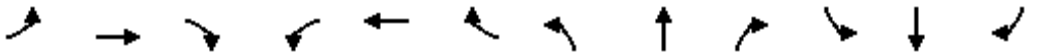
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1018	0	0	1409	117	0	993	176	110	679	240
Future Volume (vph)	0	1018	0	0	1409	117	0	993	176	110	679	240
Satd. Flow (prot)	0	3420	0	0	3420	1530	0	3244	0	1613	3196	1515
Flt Permitted										0.084		
Satd. Flow (perm)	0	3420	0	0	3420	1530	0	3244	0	143	3196	1515
Satd. Flow (RTOR)								19				35
Lane Group Flow (vph)	0	1072	0	0	1483	123	0	1230	0	116	715	253
Turn Type		NA			NA	Perm		NA		pm+pt	NA	Perm
Protected Phases		4			8			2		1	6	
Permitted Phases						8				6		6
Minimum Split (s)		35.8			37.4	37.4		31.8		12.0	31.9	31.9
Total Split (s)		60.0			60.0	60.0		48.0		12.0	60.0	60.0
Total Split (%)		50.0%			50.0%	50.0%		40.0%		10.0%	50.0%	50.0%
Yellow Time (s)		3.7			3.7	3.7		3.3		3.3	3.3	3.3
All-Red Time (s)		3.1			3.1	3.1		3.5		3.5	3.6	3.6
Lost Time Adjust (s)		0.0			0.0	-2.8		-2.1		0.0	0.0	-2.9
Total Lost Time (s)		6.8			6.8	4.0		4.7		6.8	6.9	4.0
Lead/Lag								Lag		Lead		
Lead-Lag Optimize?								Yes		Yes		
Act Effct Green (s)		53.2			53.2	56.0		43.3		53.2	53.1	56.0
Actuated g/C Ratio		0.44			0.44	0.47		0.36		0.44	0.44	0.47
v/c Ratio		0.71			0.98	0.17		1.04		0.91	0.51	0.35
Control Delay		25.0			55.9	22.3		47.6		85.6	25.6	19.0
Queue Delay		1.0			41.0	0.0		6.3		1.3	0.0	0.0
Total Delay		26.0			96.8	22.3		53.9		86.9	25.6	19.0
LOS		C			F	C		D		F	C	B
Approach Delay		26.0			91.1			53.9			30.6	
Approach LOS		C			F			D			C	
Queue Length 50th (m)		121.9			203.8	21.0		~174.4		16.9	65.6	33.2
Queue Length 95th (m)		151.2			#246.8	36.1		m83.1		#51.6	83.8	53.5
Internal Link Dist (m)		72.0			117.1			52.2			192.9	
Turn Bay Length (m)						70.0				145.0		55.0
Base Capacity (vph)		1516			1516	714		1182		127	1414	725
Starvation Cap Reductn		209			317	0		0		0	0	0
Spillback Cap Reductn		0			0	0		19		1	0	0
Storage Cap Reductn		0			0	0		0		0	0	0
Reduced v/c Ratio		0.82			1.24	0.17		1.06		0.92	0.51	0.35

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 3 (3%), Referenced to phase 2:NBT and 6:SBTL, Start of Green	
Natural Cycle: 115	
Control Type: Pretimed	
Maximum v/c Ratio: 1.04	
Intersection Signal Delay: 54.8	Intersection LOS: D
Intersection Capacity Utilization 97.7%	ICU Level of Service F
Analysis Period (min) 15	

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

Splits and Phases: 11: Booth St & Sir John A. Macdonald Pkwy/Wellington St





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	559	663	46	33	904	240	30	544	68	98	462	268
Future Volume (vph)	559	663	46	33	904	240	30	544	68	98	462	268
Satd. Flow (prot)	1676	3312	0	1710	3212	0	1710	1725	0	1629	1782	1515
Flt Permitted	0.950			0.368			0.345			0.103		
Satd. Flow (perm)	1646	3312	0	660	3212	0	602	1725	0	177	1782	1515
Satd. Flow (RTOR)		9						5				
Lane Group Flow (vph)	588	746	0	35	1205	0	32	645	0	103	486	282
Turn Type	Prot	NA		Perm	NA		Perm	NA		pm+pt	NA	Over
Protected Phases	5	2			6			8		7	4	5
Permitted Phases				6			8			4		
Detector Phase	5	2		6	6		8	8		7	4	5
Switch Phase												
Minimum Initial (s)	5.0	10.0		10.0	10.0		10.0	10.0		5.0	10.0	5.0
Minimum Split (s)	11.5	36.5		36.5	36.5		34.5	34.5		11.5	34.5	11.5
Total Split (s)	27.0	69.0		42.0	42.0		39.0	39.0		12.0	51.0	27.0
Total Split (%)	22.5%	57.5%		35.0%	35.0%		32.5%	32.5%		10.0%	42.5%	22.5%
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	3.3
All-Red Time (s)	3.2	3.2		3.2	3.2		3.2	3.2		3.2	3.2	3.2
Lost Time Adjust (s)	-3.3	0.0		0.0	-3.3		0.0	-3.3		0.0	0.0	-3.3
Total Lost Time (s)	3.2	6.5		6.5	3.2		6.5	3.2		6.5	6.5	3.2
Lead/Lag	Lead			Lag	Lag		Lag	Lag		Lead		Lead
Lead-Lag Optimize?	Yes			Yes	Yes		Yes	Yes		Yes		Yes
Recall Mode	Max	C-Max		C-Max	C-Max		None	None		None	None	Max
Act Effct Green (s)	23.8	62.5		35.5	38.8		32.5	35.8		44.5	44.5	23.8
Actuated g/C Ratio	0.20	0.52		0.30	0.32		0.27	0.30		0.37	0.37	0.20
v/c Ratio	1.77	0.43		0.18	1.16		0.20	1.25		0.78	0.74	0.94
Control Delay	389.9	18.5		33.7	116.8		37.6	162.2		59.8	37.8	105.8
Queue Delay	0.0	0.0		0.0	0.6		0.0	0.0		0.0	0.0	0.0
Total Delay	389.9	18.5		33.7	117.5		37.6	162.2		59.8	37.8	105.8
LOS	F	B		C	F		D	F		E	D	F
Approach Delay		182.2			115.1			156.3			62.4	
Approach LOS		F			F			F			E	
Queue Length 50th (m)	~224.7	59.4		4.1	~187.2		6.1	~199.3		21.5	125.7	74.4
Queue Length 95th (m)	#294.1	63.0		m11.5	#223.4		15.5	#273.7		#41.1	161.9	#127.1
Internal Link Dist (m)		138.6			62.5			37.2			83.1	
Turn Bay Length (m)	160.0			40.0								120.0
Base Capacity (vph)	332	1729		195	1038		163	518		132	660	300
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	127		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	1.77	0.43		0.18	1.32		0.20	1.25		0.78	0.74	0.94

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 9 (8%), Referenced to phase 2:EBT and 6:WBTL, Start of Green
Natural Cycle: 145
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.77

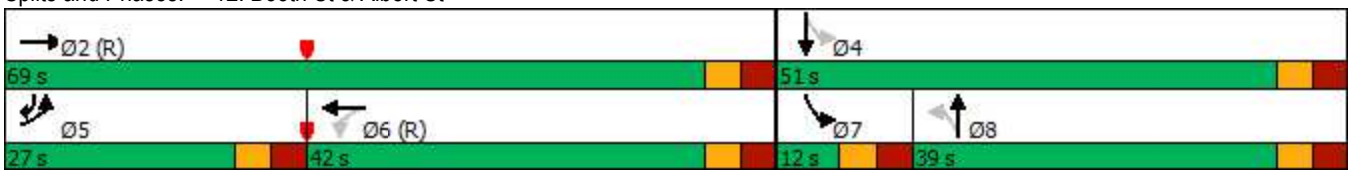
Intersection Signal Delay: 132.5	Intersection LOS: F
Intersection Capacity Utilization 124.6%	ICU Level of Service H
Analysis Period (min) 15	

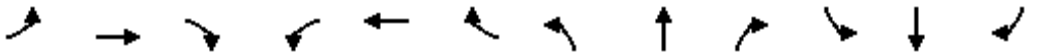
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

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

Splits and Phases: 12: Booth St & Albert St





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	717	135	281	947	28	175	25	361	41	16	3
Future Volume (vph)	11	717	135	281	947	28	175	25	361	41	16	3
Satd. Flow (prot)	1710	3269	0	1676	3371	0	1629	1480	0	1710	1749	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1710	3269	0	1658	3371	0	1591	1480	0	1704	1749	0
Satd. Flow (RTOR)		17			3			380			3	
Lane Group Flow (vph)	12	897	0	296	1026	0	184	406	0	43	20	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases												
Detector Phase	5	2		1	6		3	8		7	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		5.0	10.0		5.0	10.0	
Minimum Split (s)	11.2	31.8		11.2	31.8		11.3	29.3		11.3	29.3	
Total Split (s)	12.0	37.0		36.0	61.0		17.0	35.0		12.0	30.0	
Total Split (%)	10.0%	30.8%		30.0%	50.8%		14.2%	29.2%		10.0%	25.0%	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.9	3.5		2.9	3.5		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		-3.3	0.0		0.0	0.0	
Total Lost Time (s)	6.2	6.8		6.2	6.8		3.0	6.3		6.3	6.3	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	
Act Effct Green (s)	6.5	51.1		26.1	78.0		18.5	13.8		5.7	11.7	
Actuated g/C Ratio	0.05	0.43		0.22	0.65		0.15	0.12		0.05	0.10	
v/c Ratio	0.13	0.64		0.81	0.47		0.73	0.80		0.53	0.12	
Control Delay	49.3	41.3		70.2	2.8		66.7	19.1		79.6	43.9	
Queue Delay	0.0	0.0		0.0	0.1		0.0	0.0		0.0	0.0	
Total Delay	49.3	41.3		70.2	3.0		66.7	19.1		79.6	43.9	
LOS	D	D		E	A		E	B		E	D	
Approach Delay		41.4			18.0			33.9			68.3	
Approach LOS		D			B			C			E	
Queue Length 50th (m)	2.9	86.8		62.1	7.2		40.9	6.1		10.6	4.0	
Queue Length 95th (m)	m8.4	#167.1		68.5	34.6		#92.8	38.9		#26.5	11.2	
Internal Link Dist (m)		83.6			122.5			54.7			49.4	
Turn Bay Length (m)	30.0			90.0						15.0		
Base Capacity (vph)	93	1403		428	2192		251	643		81	347	
Starvation Cap Reductn	0	0		0	319		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	0.13	0.64		0.69	0.55		0.73	0.63		0.53	0.06	

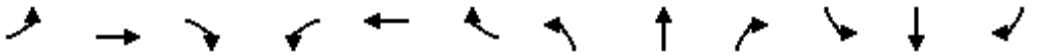
Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 65 (54%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 105
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.81

Intersection Signal Delay: 29.7	Intersection LOS: C
Intersection Capacity Utilization 93.0%	ICU Level of Service F
Analysis Period (min) 15	

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

Splits and Phases: 13: Preston St & Albert St



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	974	27	58	1595	7	20	0	65	5	0	22
Future Volume (vph)	2	974	27	58	1595	7	20	0	65	5	0	22
Satd. Flow (prot)	1710	3373	0	1710	3417	0	0	1595	0	0	1586	0
Flt Permitted	0.135			0.228				0.910			0.940	
Satd. Flow (perm)	243	3373	0	410	3417	0	0	1469	0	0	1504	0
Satd. Flow (RTOR)		4			1			82			82	
Lane Group Flow (vph)	2	1053	0	61	1686	0	0	89	0	0	28	0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		3	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		5.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	37.0	37.0		11.0	37.0		32.3	32.3		32.3	32.3	
Total Split (s)	72.0	72.0		15.0	87.0		33.0	33.0		33.0	33.0	
Total Split (%)	60.0%	60.0%		12.5%	72.5%		27.5%	27.5%		27.5%	27.5%	
Yellow Time (s)	3.7	3.7		3.7	3.7		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.3	2.3		2.3	2.3		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0			6.3			6.3	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Recall Mode	C-Max	C-Max		None	C-Max		None	None		None	None	
Act Effct Green (s)	87.4	87.4		97.4	97.4			10.3			10.3	
Actuated g/C Ratio	0.73	0.73		0.81	0.81			0.09			0.09	
v/c Ratio	0.01	0.43		0.15	0.61			0.45			0.14	
Control Delay	6.0	7.5		1.2	4.0			20.2			1.4	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	6.0	7.5		1.2	4.1			20.2			1.4	
LOS	A	A		A	A			C			A	
Approach Delay		7.5			4.0			20.2			1.4	
Approach LOS		A			A			C			A	
Queue Length 50th (m)	0.1	51.0		0.2	3.1			1.6			0.0	
Queue Length 95th (m)	1.0	68.3		m0.5	4.5			18.0			0.0	
Internal Link Dist (m)		651.1			66.3			44.5			21.1	
Turn Bay Length (m)	40.0			50.0								
Base Capacity (vph)	176	2457		430	2773			390			398	
Starvation Cap Reductn	0	0		0	108			0			0	
Spillback Cap Reductn	0	0		0	0			0			0	
Storage Cap Reductn	0	0		0	0			0			0	
Reduced v/c Ratio	0.01	0.43		0.14	0.63			0.23			0.07	

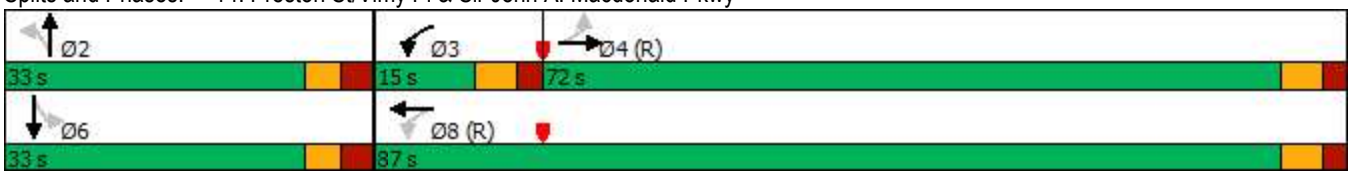
Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 37 (31%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green
Natural Cycle: 85
Control Type: Actuated-Coordinated

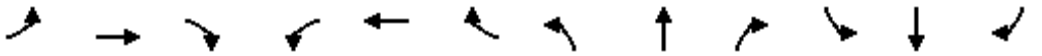
Maximum v/c Ratio: 0.61

Intersection Signal Delay: 5.7	Intersection LOS: A
Intersection Capacity Utilization 69.5%	ICU Level of Service C
Analysis Period (min) 15	

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

Splits and Phases: 14: Preston St/Vimy Pl & Sir John A. Macdonald Pkwy



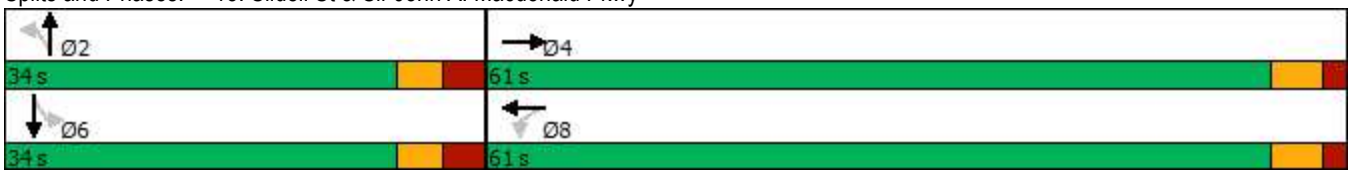


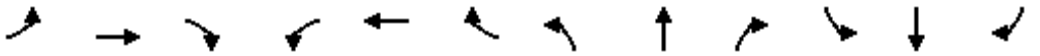
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1052	4	2	1769	0	26	14	35	3	26	11
Future Volume (vph)	0	1052	4	2	1769	0	26	14	35	3	26	11
Satd. Flow (prot)	0	3383	0	0	3420	0	0	1658	0	0	1680	0
Flt Permitted					0.954			0.870			0.969	
Satd. Flow (perm)	0	3383	0	0	3263	0	0	1467	0	0	1634	0
Satd. Flow (RTOR)		1						37			12	
Lane Group Flow (vph)	0	1111	0	0	1864	0	0	79	0	0	42	0
Turn Type		NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases				8			2			6		
Detector Phase		4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)		10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)		30.5		30.5	30.5		33.3	33.3		33.3	33.3	
Total Split (s)		61.0		61.0	61.0		34.0	34.0		34.0	34.0	
Total Split (%)		64.2%		64.2%	64.2%		35.8%	35.8%		35.8%	35.8%	
Yellow Time (s)		3.7		3.7	3.7		3.3	3.3		3.3	3.3	
All-Red Time (s)		1.8		1.8	1.8		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.5			5.5			6.3			6.3	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode		Max		Max	Max		None	None		None	None	
Act Effct Green (s)		61.8			61.8			10.3			10.3	
Actuated g/C Ratio		0.78			0.78			0.13			0.13	
v/c Ratio		0.42			0.73			0.36			0.19	
Control Delay		4.6			8.7			23.9			25.9	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		4.6			8.7			23.9			25.9	
LOS		A			A			C			C	
Approach Delay		4.6			8.7			23.9			25.9	
Approach LOS		A			A			C			C	
Queue Length 50th (m)		30.5			80.3			5.9			4.2	
Queue Length 95th (m)		43.6			118.6			18.3			13.1	
Internal Link Dist (m)		354.8			288.5			38.4			167.1	
Turn Bay Length (m)												
Base Capacity (vph)		2635			2541			538			580	
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		0.42			0.73			0.15			0.07	

Intersection Summary
Cycle Length: 95
Actuated Cycle Length: 79.3
Natural Cycle: 90
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.73

Intersection Signal Delay: 7.9	Intersection LOS: A
Intersection Capacity Utilization 74.1%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 15: Slidell St & Sir John A. Macdonald Pkwy





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	615	88	94	809	121	88	185	84	59	68	11
Future Volume (vph)	10	615	88	94	809	121	88	185	84	59	68	11
Satd. Flow (prot)	1555	1733	0	1710	1782	1530	1710	1800	1485	1710	1762	0
Flt Permitted	0.240			0.301			0.702			0.509		
Satd. Flow (perm)	393	1733	0	542	1782	1530	1264	1800	1485	916	1762	0
Satd. Flow (RTOR)		13				127			79		8	
Lane Group Flow (vph)	11	740	0	99	852	127	93	195	88	62	84	0
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6		6	8		8	4		
Detector Phase	2	2		6	6	6	8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	32.5	32.5		32.5	32.5	32.5	31.4	31.4	31.4	31.4	31.4	
Total Split (s)	68.0	68.0		68.0	68.0	68.0	32.0	32.0	32.0	32.0	32.0	
Total Split (%)	68.0%	68.0%		68.0%	68.0%	68.0%	32.0%	32.0%	32.0%	32.0%	32.0%	
Yellow Time (s)	3.3	3.3		3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	
All-Red Time (s)	3.2	3.2		3.2	3.2	3.2	3.1	3.1	3.1	3.1	3.1	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	-2.4	0.0	0.0	
Total Lost Time (s)	6.5	6.5		6.5	6.5	6.5	6.4	6.4	4.0	6.4	6.4	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		C-Max	C-Max	C-Max	None	None	None	None	None	
Act Effct Green (s)	69.1	69.1		69.1	69.1	69.1	18.0	18.0	20.4	18.0	18.0	
Actuated g/C Ratio	0.69	0.69		0.69	0.69	0.69	0.18	0.18	0.20	0.18	0.18	
v/c Ratio	0.04	0.62		0.26	0.69	0.12	0.41	0.60	0.24	0.38	0.26	
Control Delay	6.8	14.9		9.7	14.5	1.7	39.8	44.5	9.8	40.4	31.6	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	6.8	14.9		9.7	14.5	1.7	39.8	44.5	9.8	40.4	31.6	
LOS	A	B		A	B	A	D	D	A	D	C	
Approach Delay		14.8			12.5			35.2			35.3	
Approach LOS		B			B			D			D	
Queue Length 50th (m)	0.6	119.7		6.2	83.6	0.0	17.4	37.9	1.5	11.5	13.7	
Queue Length 95th (m)	m1.1	m172.1		18.6	171.6	6.6	29.9	55.2	13.2	22.4	25.0	
Internal Link Dist (m)		635.7			497.2			83.8			171.5	
Turn Bay Length (m)	45.0			50.0			50.0		20.0	45.0		
Base Capacity (vph)	271	1201		374	1231	1096	323	460	472	234	457	
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.04	0.62		0.26	0.69	0.12	0.29	0.42	0.19	0.26	0.18	

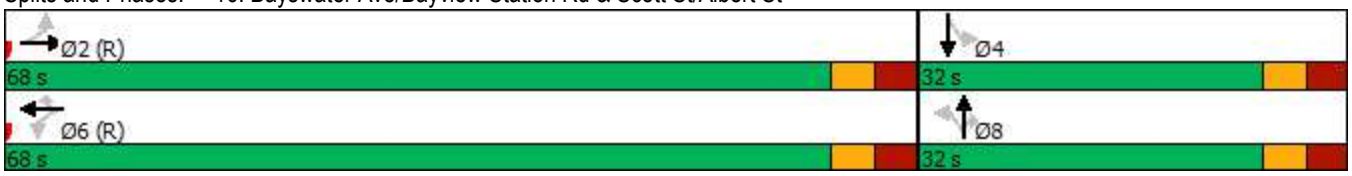
Intersection Summary
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 65 (65%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated

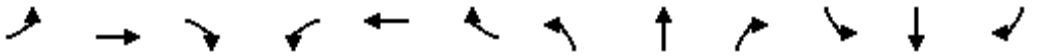
Maximum v/c Ratio: 0.69

Intersection Signal Delay: 18.3	Intersection LOS: B
Intersection Capacity Utilization 93.4%	ICU Level of Service F
Analysis Period (min) 15	

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

Splits and Phases: 16: Bayswater Ave/Bayview Station Rd & Scott St/Albert St





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	227	609	86	65	782	73	40	575	56	67	234	210
Future Volume (vph)	227	609	86	65	782	73	40	575	56	67	234	210
Satd. Flow (prot)	1693	1733	0	1710	1800	1530	1710	1773	0	1710	1640	0
Flt Permitted	0.950			0.359			0.190			0.121		
Satd. Flow (perm)	1693	1733	0	646	1800	1530	342	1773	0	218	1640	0
Satd. Flow (RTOR)		11				119		5			46	
Lane Group Flow (vph)	239	732	0	68	823	77	42	664	0	71	467	0
Turn Type	Prot	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	2			6			8			4	
Permitted Phases				6		6	8			4		
Detector Phase	5	2		6	6	6	8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0		10.0	10.0	10.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	10.6	28.1		28.1	28.1	28.1	35.3	35.3		35.3	35.3	
Total Split (s)	14.0	58.0		44.0	44.0	44.0	36.0	36.0		36.0	36.0	
Total Split (%)	14.0%	58.0%		44.0%	44.0%	44.0%	36.0%	36.0%		36.0%	36.0%	
Yellow Time (s)	3.3	3.3		3.3	3.3	3.3	3.0	3.0		3.0	3.0	
All-Red Time (s)	2.3	2.8		2.8	2.8	2.8	3.3	3.3		3.3	3.3	
Lost Time Adjust (s)	0.0	0.0		0.0	-3.3	0.0	0.0	-3.3		-3.3	0.0	
Total Lost Time (s)	5.6	6.1		6.1	2.8	6.1	6.3	3.0		3.0	6.3	
Lead/Lag	Lead			Lag	Lag	Lag						
Lead-Lag Optimize?	Yes			Yes	Yes	Yes						
Recall Mode	None	C-Max		C-Max	C-Max	C-Max	Min	Min		Min	Min	
Act Effct Green (s)	14.4	57.9		37.9	41.2	37.9	29.7	33.0		33.0	29.7	
Actuated g/C Ratio	0.14	0.58		0.38	0.41	0.38	0.30	0.33		0.33	0.30	
v/c Ratio	0.98	0.73		0.28	1.11	0.12	0.42	1.13		1.00	0.90	
Control Delay	98.1	20.3		20.4	89.8	1.5	43.0	110.7		146.2	52.8	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	98.1	20.3		20.4	89.8	1.5	43.0	110.7		146.2	52.8	
LOS	F	C		C	F	A	D	F		F	D	
Approach Delay		39.5			77.9			106.7			65.1	
Approach LOS		D			E			F			E	
Queue Length 50th (m)	49.2	99.9		7.6	~194.6	0.3	6.9	~157.8		14.3	83.3	
Queue Length 95th (m)	#98.7	147.9		m10.6	#264.8	m1.4	18.8	#228.4		#44.0	#144.0	
Internal Link Dist (m)		92.9			635.7			70.7			630.1	
Turn Bay Length (m)	55.0			65.0		35.0	55.0			50.0		
Base Capacity (vph)	243	1008		244	741	653	101	588		71	519	
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	
Reduced v/c Ratio	0.98	0.73		0.28	1.11	0.12	0.42	1.13		1.00	0.90	

Intersection Summary
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 14 (14%), Referenced to phase 2:EBT and 6:WBTL, Start of Green
Natural Cycle: 120
Control Type: Actuated-Coordinated

Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Satd. Flow (RTOR)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	2.0
Minimum Split (s)	6.0
Total Split (s)	6.0
Total Split (%)	6%
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	None
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (m)	
Queue Length 95th (m)	
Internal Link Dist (m)	
Turn Bay Length (m)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Maximum v/c Ratio: 1.13

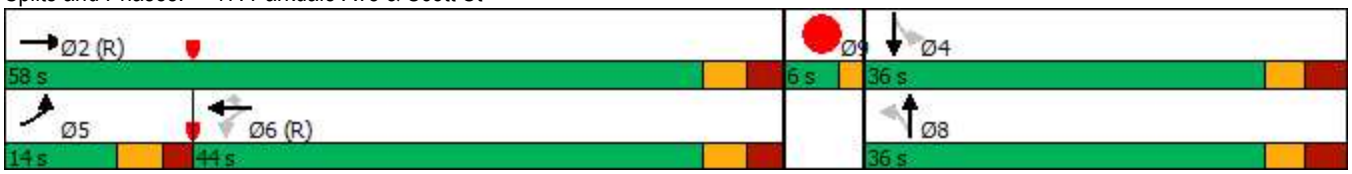
Intersection Signal Delay: 70.4	Intersection LOS: E
Intersection Capacity Utilization 115.2%	ICU Level of Service H
Analysis Period (min) 15	

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

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

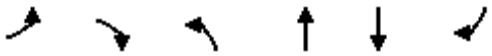
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 17: Parkdale Ave & Scott St



Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SER	SWL	SWR
Lane Configurations										
Traffic Volume (vph)	0	534	469	0	295	0	0	0	0	0
Future Volume (vph)	0	534	469	0	295	0	0	0	0	0
Satd. Flow (prot)	0	1654	0	0	1765	0	0	1765	0	0
Flt Permitted										
Satd. Flow (perm)	0	1654	0	0	1765	0	0	1765	0	0
Lane Group Flow (vph)	0	1056	0	0	311	0	0	0	0	0
Sign Control		Free			Free		Free		Free	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization 63.3%		ICU Level of Service B	
Analysis Period (min) 15			



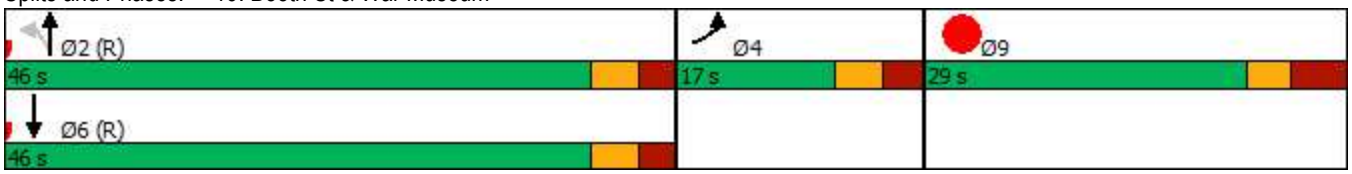
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø9
Lane Configurations							
Traffic Volume (vph)	1	8	8	1127	1114	10	
Future Volume (vph)	1	8	8	1127	1114	10	
Satd. Flow (prot)	1574	0	1710	3420	3417	0	
Flt Permitted	0.994		0.234				
Satd. Flow (perm)	1574	0	421	3420	3417	0	
Satd. Flow (RTOR)	8				1		
Lane Group Flow (vph)	9	0	8	1186	1184	0	
Turn Type	Prot		Perm	NA	NA		
Protected Phases	4			2	6		9
Permitted Phases			2				
Detector Phase	4		2	2	6		
Switch Phase							
Minimum Initial (s)	10.0		10.0	10.0	10.0		10.0
Minimum Split (s)	17.0		30.9	30.9	30.9		29.0
Total Split (s)	17.0		46.0	46.0	46.0		29.0
Total Split (%)	18.5%		50.0%	50.0%	50.0%		32%
Yellow Time (s)	3.3		3.3	3.3	3.3		3.0
All-Red Time (s)	2.9		2.6	2.6	2.6		4.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0		
Total Lost Time (s)	6.2		5.9	5.9	5.9		
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	None		C-Max	C-Max	C-Max		None
Act Effct Green (s)	10.0		87.6	87.6	87.6		
Actuated g/C Ratio	0.11		0.95	0.95	0.95		
v/c Ratio	0.05		0.02	0.36	0.36		
Control Delay	23.0		1.6	1.5	1.5		
Queue Delay	0.0		0.0	0.0	0.0		
Total Delay	23.0		1.6	1.5	1.5		
LOS	C		A	A	A		
Approach Delay	23.0			1.5	1.5		
Approach LOS	C			A	A		
Queue Length 50th (m)	0.2		0.0	0.0	0.0		
Queue Length 95th (m)	4.8		1.3	44.0	43.9		
Internal Link Dist (m)	148.9			192.9	188.6		
Turn Bay Length (m)			35.0				
Base Capacity (vph)	191		401	3256	3253		
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	0.05		0.02	0.36	0.36		

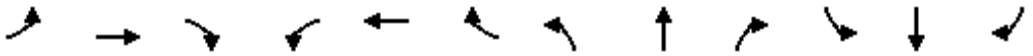
Intersection Summary
Cycle Length: 92
Actuated Cycle Length: 92
Offset: 10 (11%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.36

Intersection Signal Delay: 1.5	Intersection LOS: A
Intersection Capacity Utilization 51.3%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 19: Booth St & War Museum





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	643	76	84	886	32	57	4	80	42	0	8
Future Volume (vph)	9	643	76	84	886	32	57	4	80	42	0	8
Satd. Flow (prot)	1710	3335	0	1693	3338	0	1644	1500	0	0	1690	0
Flt Permitted	0.950			0.950			0.788				0.698	
Satd. Flow (perm)	1710	3335	0	1693	3338	0	1364	1500	0	0	1230	0
Satd. Flow (RTOR)		17			5			84			87	
Lane Group Flow (vph)	9	757	0	88	967	0	60	88	0	0	52	0
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases							8			4		
Detector Phase	5	2		1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	11.3	27.3		11.3	27.3		29.3	29.3		29.3	29.3	
Total Split (s)	12.0	72.0		12.0	72.0		36.0	36.0		36.0	36.0	
Total Split (%)	10.0%	60.0%		10.0%	60.0%		30.0%	30.0%		30.0%	30.0%	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)	6.3	6.3		6.3	6.3		6.3	6.3			6.3	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	
Act Effct Green (s)	6.3	74.5		14.5	92.5		12.1	12.1			12.1	
Actuated g/C Ratio	0.05	0.62		0.12	0.77		0.10	0.10			0.10	
v/c Ratio	0.10	0.36		0.43	0.38		0.44	0.39			0.26	
Control Delay	56.2	11.9		60.5	4.0		60.2	16.3			5.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Total Delay	56.2	11.9		60.5	4.0		60.2	16.3			5.9	
LOS	E	B		E	A		E	B			A	
Approach Delay		12.4			8.7			34.1			5.9	
Approach LOS		B			A			C			A	
Queue Length 50th (m)	2.2	42.5		17.4	17.1		14.4	0.9			0.0	
Queue Length 95th (m)	7.7	64.1		m29.2	87.9		27.8	16.4			4.0	
Internal Link Dist (m)		497.2			109.7			178.8			36.6	
Turn Bay Length (m)	30.0			35.0			30.0					
Base Capacity (vph)	90	2076		204	2575		337	434			369	
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	0.10	0.36		0.43	0.38		0.18	0.20			0.14	

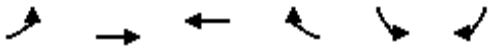
Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 80 (67%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.44

Intersection Signal Delay: 11.9	Intersection LOS: B
Intersection Capacity Utilization 56.5%	ICU Level of Service B
Analysis Period (min) 15	

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

Splits and Phases: 20: City Centre Ave & Albert St



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	36	1133	1124	78	113	38
Future Volume (vph)	36	1133	1124	78	113	38
Satd. Flow (prot)	1676	3340	3313	0	1643	0
Flt Permitted	0.950				0.964	
Satd. Flow (perm)	1676	3340	3313	0	1643	0
Satd. Flow (RTOR)			10		13	
Lane Group Flow (vph)	38	1193	1265	0	159	0
Turn Type	Prot	NA	NA		Prot	
Protected Phases	5	2	6		4	
Permitted Phases						
Detector Phase	5	2	6		4	
Switch Phase						
Minimum Initial (s)	5.0	10.0	10.0		10.0	
Minimum Split (s)	11.3	22.0	22.0		30.3	
Total Split (s)	12.0	89.0	77.0		31.0	
Total Split (%)	10.0%	74.2%	64.2%		25.8%	
Yellow Time (s)	3.3	3.3	3.3		3.3	
All-Red Time (s)	3.0	3.0	3.0		3.0	
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	
Total Lost Time (s)	6.3	6.3	6.3		6.3	
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	None	C-Max	C-Max		None	
Act Effct Green (s)	7.3	91.0	82.4		16.4	
Actuated g/C Ratio	0.06	0.76	0.69		0.14	
v/c Ratio	0.38	0.47	0.56		0.68	
Control Delay	54.2	9.4	7.7		58.6	
Queue Delay	0.0	0.3	4.3		0.0	
Total Delay	54.2	9.7	12.0		58.6	
LOS	D	A	B		E	
Approach Delay		11.1	12.0		58.6	
Approach LOS		B	B		E	
Queue Length 50th (m)	9.6	51.6	39.6		35.0	
Queue Length 95th (m)	m15.6	98.9	m39.1		54.7	
Internal Link Dist (m)		122.5	138.6		61.4	
Turn Bay Length (m)	30.0					
Base Capacity (vph)	102	2532	2279		348	
Starvation Cap Reductn	0	669	918		0	
Spillback Cap Reductn	0	0	0		0	
Storage Cap Reductn	0	0	0		0	
Reduced v/c Ratio	0.37	0.64	0.93		0.46	

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 22 (18%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.68

Intersection Signal Delay: 14.4	Intersection LOS: B
Intersection Capacity Utilization 55.0%	ICU Level of Service A
Analysis Period (min) 15	

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

Splits and Phases: 21: Albert St & Access 1

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1189	35	66	1316	42	64
Future Volume (vph)	1189	35	66	1316	42	64
Satd. Flow (prot)	3370	0	1710	3386	1604	0
Flt Permitted			0.162		0.981	
Satd. Flow (perm)	3370	0	292	3386	1604	0
Satd. Flow (RTOR)	3				60	
Lane Group Flow (vph)	1289	0	69	1385	111	0
Turn Type	NA		pm+pt	NA	Prot	
Protected Phases	4		3	8	2	
Permitted Phases			8			
Detector Phase	4		3	8	2	
Switch Phase						
Minimum Initial (s)	10.0		5.0	10.0	10.0	
Minimum Split (s)	30.0		14.0	22.0	33.8	
Total Split (s)	66.0		20.0	86.0	34.0	
Total Split (%)	55.0%		16.7%	71.7%	28.3%	
Yellow Time (s)	3.7		3.7	3.7	3.3	
All-Red Time (s)	1.9		1.9	1.9	2.5	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	5.6		5.6	5.6	5.8	
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	C-Max		None	C-Max	None	
Act Effct Green (s)	84.7		94.7	94.7	13.9	
Actuated g/C Ratio	0.71		0.79	0.79	0.12	
v/c Ratio	0.54		0.22	0.52	0.46	
Control Delay	12.3		5.6	6.2	29.3	
Queue Delay	0.7		0.0	2.3	0.1	
Total Delay	13.0		5.6	8.5	29.4	
LOS	B		A	A	C	
Approach Delay	13.0			8.4	29.4	
Approach LOS	B			A	C	
Queue Length 50th (m)	60.7		2.5	42.3	12.2	
Queue Length 95th (m)	m104.7		10.5	111.4	26.1	
Internal Link Dist (m)	117.1			245.9	41.8	
Turn Bay Length (m)			70.0			
Base Capacity (vph)	2378		400	2671	422	
Starvation Cap Reductn	665		0	0	0	
Spillback Cap Reductn	0		0	1102	19	
Storage Cap Reductn	0		0	0	0	
Reduced v/c Ratio	0.75		0.17	0.88	0.28	

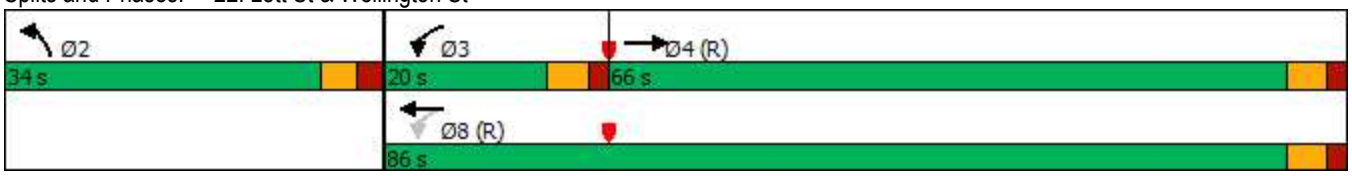
Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 23 (19%), Referenced to phase 4:EBT and 8:WBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

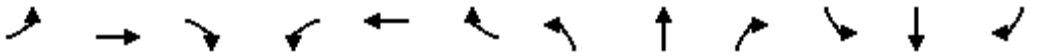
Maximum v/c Ratio: 0.54

Intersection Signal Delay: 11.3	Intersection LOS: B
Intersection Capacity Utilization 62.5%	ICU Level of Service B
Analysis Period (min) 15	

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

Splits and Phases: 22: Lett St & Wellington St





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	43	770	16	11	1148	14	9	0	14	44	0	12
Future Volume (vph)	43	770	16	11	1148	14	9	0	14	44	0	12
Satd. Flow (prot)	1710	3344	0	1710	3380	0	0	1619	0	0	1680	0
Flt Permitted	0.190			0.340				0.900			0.757	
Satd. Flow (perm)	342	3344	0	612	3380	0	0	1484	0	0	1322	0
Satd. Flow (RTOR)		3			1			56			56	
Lane Group Flow (vph)	45	828	0	12	1223	0	0	24	0	0	59	0
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases	7	4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	9.6	22.0		22.0	22.0		30.5	30.5		30.5	30.5	
Total Split (s)	15.0	80.0		65.0	65.0		40.0	40.0		40.0	40.0	
Total Split (%)	12.5%	66.7%		54.2%	54.2%		33.3%	33.3%		33.3%	33.3%	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	1.3	1.3		1.3	1.3		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.6	0.0			0.0			0.0	
Total Lost Time (s)	4.6	4.6		5.2	4.6			4.3			4.3	
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes			Yes	Yes							
Recall Mode	None	C-Min		C-Max	C-Max		None	None		None	None	
Act Effct Green (s)	101.0	101.9		92.7	93.1			13.0			13.0	
Actuated g/C Ratio	0.84	0.85		0.77	0.78			0.11			0.11	
v/c Ratio	0.13	0.29		0.03	0.47			0.11			0.31	
Control Delay	1.9	1.5		6.8	7.7			1.7			16.6	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	1.9	1.5		6.8	7.7			1.7			16.6	
LOS	A	A		A	A			A			B	
Approach Delay		1.5			7.7			1.7			16.6	
Approach LOS		A			A			A			B	
Queue Length 50th (m)	0.5	5.0		0.7	52.6			0.0			0.7	
Queue Length 95th (m)	m2.4	m14.1		3.8	109.4			1.0			12.2	
Internal Link Dist (m)		82.0			212.6			72.6			45.7	
Turn Bay Length (m)	70.0			50.0								
Base Capacity (vph)	406	2839		472	2623			480			432	
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	0.11	0.29		0.03	0.47			0.05			0.14	

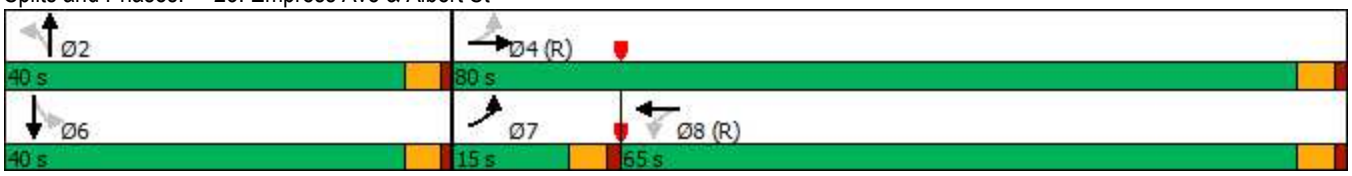
Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 22 (18%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated

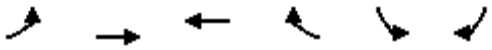
Maximum v/c Ratio: 0.47

Intersection Signal Delay: 5.4	Intersection LOS: A
Intersection Capacity Utilization 53.5%	ICU Level of Service A
Analysis Period (min) 15	

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

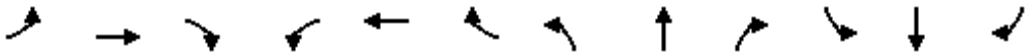
Splits and Phases: 23: Empress Ave & Albert St





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	829	1166	14	0	12
Future Volume (vph)	0	829	1166	14	0	12
Satd. Flow (prot)	0	3353	3346	0	0	1526
Flt Permitted						
Satd. Flow (perm)	0	3353	3346	0	0	1526
Lane Group Flow (vph)	0	873	1242	0	0	13
Sign Control		Free	Free		Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization 44.5%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	51	0	0	11	0	1218	27	0	767	10
Future Volume (vph)	0	0	51	0	0	11	0	1218	27	0	767	10
Satd. Flow (prot)	0	0	1526	0	0	1526	0	3343	0	0	3346	0
Flt Permitted												
Satd. Flow (perm)	0	0	1526	0	0	1526	0	3343	0	0	3346	0
Lane Group Flow (vph)	0	0	54	0	0	12	0	1310	0	0	818	0
Sign Control		Stop			Stop			Free			Free	

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

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	995	15	0	1649	0	45
Future Volume (vph)	995	15	0	1649	0	45
Satd. Flow (prot)	3346	0	0	3353	0	1526
Flt Permitted						
Satd. Flow (perm)	3346	0	0	3353	0	1526
Lane Group Flow (vph)	1063	0	0	1736	0	47
Sign Control	Free			Free	Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization 51.4%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	965	24	107	1540	20	45
Future Volume (vph)	965	24	107	1540	20	45
Satd. Flow (prot)	3406	0	1710	3420	1608	0
Flt Permitted			0.231		0.985	
Satd. Flow (perm)	3406	0	416	3420	1608	0
Satd. Flow (RTOR)	3				47	
Lane Group Flow (vph)	1041	0	113	1621	68	0
Turn Type	NA		pm+pt	NA	Prot	
Protected Phases	4		3	8	2	
Permitted Phases			8			
Detector Phase	4		3	8	2	
Switch Phase						
Minimum Initial (s)	10.0		5.0	10.0	10.0	
Minimum Split (s)	37.0		11.0	37.0	32.3	
Total Split (s)	72.0		15.0	87.0	33.0	
Total Split (%)	60.0%		12.5%	72.5%	27.5%	
Yellow Time (s)	3.7		3.7	3.7	3.3	
All-Red Time (s)	2.3		2.3	2.3	3.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	6.0		6.0	6.0	6.3	
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	C-Max		None	C-Max	None	
Act Effct Green (s)	87.7		100.7	101.9	10.3	
Actuated g/C Ratio	0.73		0.84	0.85	0.09	
v/c Ratio	0.42		0.27	0.56	0.38	
Control Delay	5.9		5.5	9.5	27.9	
Queue Delay	0.0		0.0	0.5	0.0	
Total Delay	5.9		5.5	10.1	27.9	
LOS	A		A	B	C	
Approach Delay	5.9			9.8	27.9	
Approach LOS	A			A	C	
Queue Length 50th (m)	33.3		9.4	113.8	4.9	
Queue Length 95th (m)	41.5		m11.2	m117.1	19.5	
Internal Link Dist (m)	71.8			49.0	28.0	
Turn Bay Length (m)			60.0			
Base Capacity (vph)	2488		445	2903	394	
Starvation Cap Reductn	214		0	753	0	
Spillback Cap Reductn	112		0	0	1	
Storage Cap Reductn	0		0	0	0	
Reduced v/c Ratio	0.46		0.25	0.75	0.17	

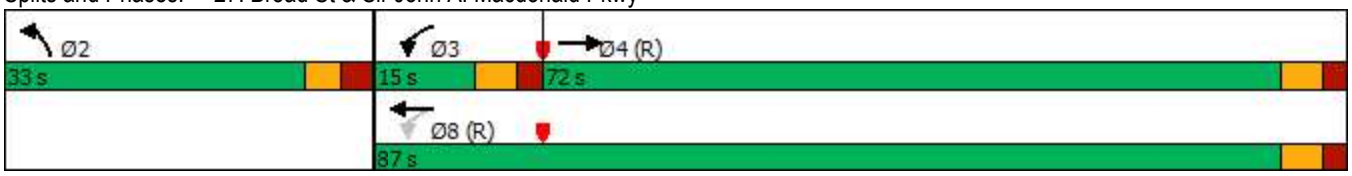
Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 22 (18%), Referenced to phase 4:EBT and 8:WBTL, Start of Green
Natural Cycle: 85
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.56

Intersection Signal Delay: 8.8	Intersection LOS: A
Intersection Capacity Utilization 63.5%	ICU Level of Service B
Analysis Period (min) 15	

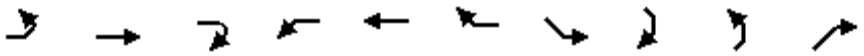
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 27: Broad St & Sir John A. Macdonald Pkwy



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	974	9	0	1560	0	15
Future Volume (vph)	974	9	0	1560	0	15
Satd. Flow (prot)	3350	0	0	3353	0	1526
Flt Permitted						
Satd. Flow (perm)	3350	0	0	3353	0	1526
Lane Group Flow (vph)	1034	0	0	1642	0	16
Sign Control	Free			Free	Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization 48.9%		ICU Level of Service A	
Analysis Period (min) 15			

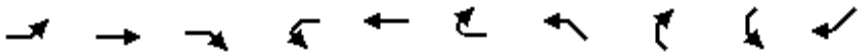


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SER	NEL	NER
Lane Configurations		↑↑			↑↑					↱
Traffic Volume (vph)	0	0	0	0	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0	0	0	0	0
Satd. Flow (prot)	0	3353	0	0	3353	0	0	0	0	1765
Flt Permitted										
Satd. Flow (perm)	0	3353	0	0	3353	0	0	0	0	1765
Lane Group Flow (vph)	0	0	0	0	0	0	0	0	0	0
Sign Control		Free			Free		Free		Free	

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

Lane Group	NBL	NBR	SET	SER	NWL	NWT
Lane Configurations			↑			↑
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Satd. Flow (prot)	0	0	1765	0	0	1765
Flt Permitted						
Satd. Flow (perm)	0	0	1765	0	0	1765
Lane Group Flow (vph)	0	0	0	0	0	0
Sign Control	Free		Free			Free

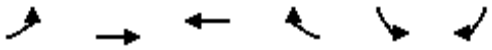
Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization 63.3%		ICU Level of Service B	
Analysis Period (min) 15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NWL	NWR	SWL	SWR
Lane Configurations		↑↑			↑↑				↰	
Traffic Volume (vph)	0	0	0	0	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0	0	0	0	0
Satd. Flow (prot)	0	3353	0	0	3353	0	0	0	1765	0
Flt Permitted										
Satd. Flow (perm)	0	3353	0	0	3353	0	0	0	1765	0
Lane Group Flow (vph)	0	0	0	0	0	0	0	0	0	0
Sign Control		Free			Free		Free		Free	

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

Synchro Modelling Outputs – Preston Extension (Phase Three) Conditions



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	634	1077	340	695	1848	491
Future Volume (vph)	634	1077	340	695	1848	491
Satd. Flow (prot)	3317	4914	3420	2693	3285	1530
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	3317	4914	3420	2693	3285	1530
Satd. Flow (RTOR)						117
Lane Group Flow (vph)	667	1134	358	732	1945	517
Turn Type	Prot	NA	NA	pt+ov	Prot	Perm
Protected Phases	7	4	8	1 8	1	
Permitted Phases						1
Detector Phase	7	4	8	1 8	1	1
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0		10.0	10.0
Minimum Split (s)	42.8	16.5	26.5		45.1	45.1
Total Split (s)	42.8	69.3	26.5		52.1	52.1
Total Split (%)	35.3%	57.1%	21.8%		42.9%	42.9%
Yellow Time (s)	3.3	3.3	3.3		3.3	3.3
All-Red Time (s)	2.5	3.2	3.2		2.8	2.8
Lost Time Adjust (s)	0.0	0.0	0.0		-2.1	0.0
Total Lost Time (s)	5.8	6.5	6.5		4.0	6.1
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	Max	Min	Min		Max	Max
Act Effct Green (s)	37.0	62.6	19.8	72.3	48.1	46.0
Actuated g/C Ratio	0.31	0.52	0.16	0.60	0.40	0.38
v/c Ratio	0.66	0.45	0.64	0.46	1.49	0.79
Control Delay	40.4	19.1	53.3	14.7	255.2	35.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.4	19.1	53.3	14.7	255.2	35.7
LOS	D	B	D	B	F	D
Approach Delay		27.0	27.4		209.1	
Approach LOS		C	C		F	
Queue Length 50th (m)	75.0	63.1	44.6	54.4	~348.2	90.9
Queue Length 95th (m)	95.9	75.1	61.4	70.4	#391.5	139.8
Internal Link Dist (m)		246.9	299.2		39.9	
Turn Bay Length (m)	150.0					30.0
Base Capacity (vph)	1012	2547	564	1584	1304	653
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	0.66	0.45	0.63	0.46	1.49	0.79

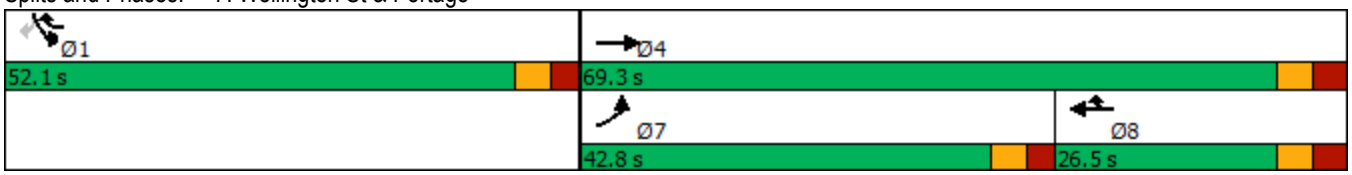
Intersection Summary
Cycle Length: 121.4
Actuated Cycle Length: 121.2
Natural Cycle: 145
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 1.49

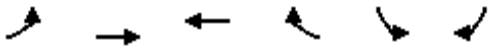
Intersection Signal Delay: 110.8	Intersection LOS: F
Intersection Capacity Utilization 98.2%	ICU Level of Service F
Analysis Period (min) 15	

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

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

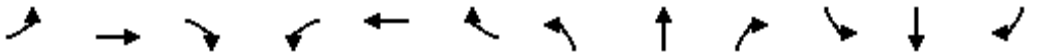
Splits and Phases: 7: Wellington St & Portage





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	1055	518	24	0	5
Future Volume (vph)	0	1055	518	24	0	5
Satd. Flow (prot)	0	3353	3329	0	0	1526
Flt Permitted						
Satd. Flow (perm)	0	3353	3329	0	0	1526
Lane Group Flow (vph)	0	1111	570	0	0	5
Sign Control		Free	Free		Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization 34.1%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	0	5	0	0	0	37	838	0	0	1489	37
Future Volume (vph)	5	0	5	0	0	0	37	838	0	0	1489	37
Satd. Flow (prot)	1710	1530	0	1800	1800	0	1710	1800	0	1800	1793	0
Flt Permitted							0.066					
Satd. Flow (perm)	1800	1530	0	1800	1800	0	119	1800	0	1800	1793	0
Satd. Flow (RTOR)		42									3	
Lane Group Flow (vph)	5	5	0	0	0	0	39	882	0	0	1606	0
Turn Type	Perm	NA		Perm			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)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	22.0	22.0		22.0	22.0		35.9	35.9		35.9	35.9	
Total Split (s)	22.0	22.0		22.0	22.0		53.0	53.0		53.0	53.0	
Total Split (%)	29.3%	29.3%		29.3%	29.3%		70.7%	70.7%		70.7%	70.7%	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.3	3.3		3.3	3.3	
All-Red Time (s)	3.2	3.2		3.2	3.2		2.6	2.6		2.6	2.6	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.2	6.2		6.2	6.2		5.9	5.9		5.9	5.9	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	
Act Effct Green (s)	10.0	10.0					70.6	70.6			70.6	
Actuated g/C Ratio	0.13	0.13					0.94	0.94			0.94	
v/c Ratio	0.02	0.02					0.35	0.52			0.95	
Control Delay	28.6	0.2					15.8	3.5			20.1	
Queue Delay	0.0	0.0					0.0	0.0			0.0	
Total Delay	28.6	0.2					15.8	3.5			20.1	
LOS	C	A					B	A			C	
Approach Delay		14.4						4.0			20.1	
Approach LOS		B						A			C	
Queue Length 50th (m)	0.7	0.0					0.0	0.0			0.0	
Queue Length 95th (m)	3.6	0.0					#18.0	101.1			#391.6	
Internal Link Dist (m)		60.2			43.3			76.9			31.3	
Turn Bay Length (m)	30.0						30.0					
Base Capacity (vph)	379	355					112	1694			1687	
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	0.01	0.01					0.35	0.52			0.95	

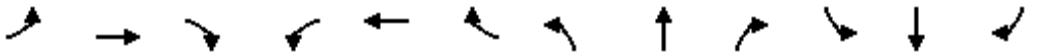
Intersection Summary
Cycle Length: 75
Actuated Cycle Length: 75
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.95

Intersection Signal Delay: 14.2	Intersection LOS: B
Intersection Capacity Utilization 103.5%	ICU Level of Service G
Analysis Period (min) 15	

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

Splits and Phases: 10: Booth St & Chaudiere



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1401	0	0	773	133	0	844	53	148	836	433
Future Volume (vph)	0	1401	0	0	773	133	0	844	53	148	836	433
Satd. Flow (prot)	0	3420	0	0	3386	1530	0	3149	0	1710	3226	1530
Flt Permitted										0.111		
Satd. Flow (perm)	0	3420	0	0	3386	1530	0	3149	0	200	3226	1530
Satd. Flow (RTOR)								7				84
Lane Group Flow (vph)	0	1475	0	0	814	140	0	944	0	156	880	456
Turn Type		NA			NA	Perm		NA		pm+pt	NA	Perm
Protected Phases		4			8			2		1	6	
Permitted Phases						8				6		6
Detector Phase		4			8	8		2		1	6	6
Switch Phase												
Minimum Initial (s)		10.0			10.0	10.0		10.0		5.2	10.0	10.0
Minimum Split (s)		35.8			35.8	35.8		31.9		12.0	37.8	37.8
Total Split (s)		47.0			47.0	47.0		36.0		12.0	48.0	48.0
Total Split (%)		49.5%			49.5%	49.5%		37.9%		12.6%	50.5%	50.5%
Yellow Time (s)		3.7			3.7	3.7		3.3		3.3	3.3	3.3
All-Red Time (s)		3.1			3.1	3.1		3.5		3.5	3.5	3.5
Lost Time Adjust (s)		0.0			0.0	0.0		0.0		0.0	0.0	0.0
Total Lost Time (s)		6.8			6.8	6.8		6.8		6.8	6.8	6.8
Lead/Lag								Lag		Lead		
Lead-Lag Optimize?								Yes		Yes		
Recall Mode		Min			Min	Min		C-Max		None	C-Min	C-Min
Act Effct Green (s)		40.2			40.2	40.2		29.2		41.2	41.2	41.2
Actuated g/C Ratio		0.42			0.42	0.42		0.31		0.43	0.43	0.43
v/c Ratio		1.02			0.57	0.22		0.97		0.92	0.63	0.64
Control Delay		69.7			29.5	22.9		56.0		73.5	22.1	20.2
Queue Delay		31.3			0.9	0.0		40.7		78.2	0.0	0.0
Total Delay		101.0			30.4	22.9		96.8		151.7	22.1	20.2
LOS		F			C	C		F		F	C	C
Approach Delay		101.0			29.3			96.8			35.1	
Approach LOS		F			C			F			D	
Queue Length 50th (m)		~166.6			77.5	21.4		93.5		18.3	67.6	54.8
Queue Length 95th (m)		#211.6			102.3	38.6		#137.2		#55.4	56.6	52.7
Internal Link Dist (m)		67.5			116.7			55.5			192.9	
Turn Bay Length (m)						70.0				145.0		55.0
Base Capacity (vph)		1447			1432	647		972		169	1399	711
Starvation Cap Reductn		154			332	0		0		0	0	0
Spillback Cap Reductn		237			0	0		119		122	0	0
Storage Cap Reductn		0			0	0		0		0	0	0
Reduced v/c Ratio		1.22			0.74	0.22		1.11		3.32	0.63	0.64

Intersection Summary
Cycle Length: 95
Actuated Cycle Length: 95
Offset: 31 (33%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated

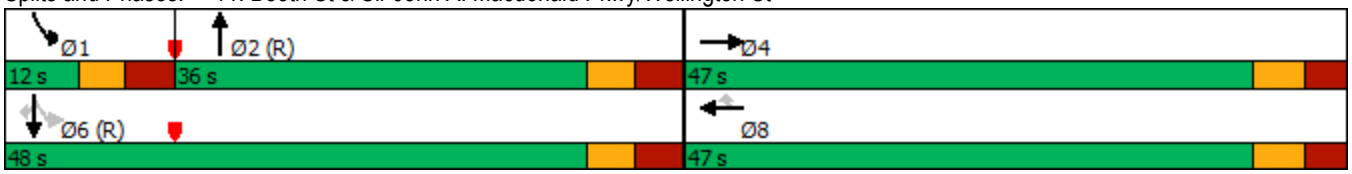
Maximum v/c Ratio: 1.02

Intersection Signal Delay: 65.9	Intersection LOS: E
Intersection Capacity Utilization 92.9%	ICU Level of Service F
Analysis Period (min) 15	

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

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

Splits and Phases: 11: Booth St & Sir John A. Macdonald Pkwy/Wellington St



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	316	861	30	18	293	146	38	539	49	174	556	212
Future Volume (vph)	316	861	30	18	293	146	38	539	49	174	556	212
Satd. Flow (prot)	1660	3295	0	1710	2907	0	1710	1741	0	1425	1782	1471
Flt Permitted	0.950			0.305			0.312			0.950		
Satd. Flow (perm)	1590	3295	0	545	2907	0	542	1741	0	1355	1782	1471
Satd. Flow (RTOR)		4						4				
Lane Group Flow (vph)	333	938	0	19	462	0	40	619	0	183	585	223
Turn Type	Prot	NA		Perm	NA		Perm	NA		Prot	NA	Over
Protected Phases	5	2			6			8		7	4	5
Permitted Phases				6			8					
Detector Phase	5	2		6	6		8	8		7	4	5
Switch Phase												
Minimum Initial (s)	5.0	10.0		10.0	10.0		10.0	10.0		5.0	10.0	5.0
Minimum Split (s)	11.5	36.5		36.5	36.5		34.5	34.5		11.5	34.5	11.5
Total Split (s)	24.0	63.0		39.0	39.0		40.0	40.0		17.0	57.0	24.0
Total Split (%)	20.0%	52.5%		32.5%	32.5%		33.3%	33.3%		14.2%	47.5%	20.0%
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	3.3
All-Red Time (s)	3.2	3.2		3.2	3.2		3.2	3.2		3.2	3.2	3.2
Lost Time Adjust (s)	-3.3	0.0		0.0	0.0		0.0	-3.3		-3.3	0.0	-3.3
Total Lost Time (s)	3.2	6.5		6.5	6.5		6.5	3.2		3.2	6.5	3.2
Lead/Lag	Lead			Lag	Lag		Lag	Lag		Lead		Lead
Lead-Lag Optimize?	Yes			Yes	Yes		Yes	Yes		Yes		Yes
Recall Mode	Max	C-Max		C-Max	C-Max		None	None		None	None	Max
Act Effct Green (s)	20.8	56.5		32.5	32.5		33.5	36.8		13.8	50.5	20.8
Actuated g/C Ratio	0.17	0.47		0.27	0.27		0.28	0.31		0.12	0.42	0.17
v/c Ratio	1.16	0.60		0.13	0.59		0.26	1.15		1.12	0.78	0.88
Control Delay	137.2	20.5		42.9	45.4		39.4	127.3		155.4	38.7	81.3
Queue Delay	0.0	1.4		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	137.2	21.9		42.9	45.4		39.4	127.3		155.4	38.7	81.3
LOS	F	C		D	D		D	F		F	D	F
Approach Delay		52.1			45.3			121.9			69.9	
Approach LOS		D			D			F			E	
Queue Length 50th (m)	~94.9	78.3		3.4	51.2		7.7	~180.9		~52.1	122.9	54.4
Queue Length 95th (m)	#153.9	147.2		12.9	82.4		18.6	#254.3		#99.6	171.8	#100.3
Internal Link Dist (m)		141.9			62.1			37.2			83.1	
Turn Bay Length (m)	160.0			40.0								120.0
Base Capacity (vph)	287	1553		147	787		151	536		163	749	254
Starvation Cap Reductn	0	389		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	1.16	0.81		0.13	0.59		0.26	1.15		1.12	0.78	0.88

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 104 (87%), Referenced to phase 2:EBT and 6:WBTL, Start of Green
Natural Cycle: 145
Control Type: Actuated-Coordinated

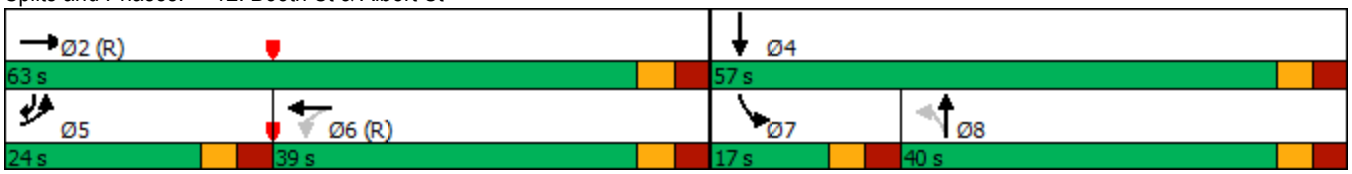
Maximum v/c Ratio: 1.16

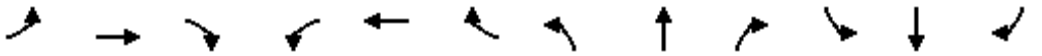
Intersection Signal Delay: 69.8	Intersection LOS: E
Intersection Capacity Utilization 102.6%	ICU Level of Service G
Analysis Period (min) 15	

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

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

Splits and Phases: 12: Booth St & Albert St





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	86	851	143	203	250	39	131	226	141	109	291	253
Future Volume (vph)	86	851	143	203	250	39	131	226	141	109	291	253
Satd. Flow (prot)	1710	3214	0	1629	3229	0	1583	1657	0	1710	1800	1530
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1710	3214	0	1616	3229	0	1569	1657	0	1710	1800	1530
Satd. Flow (RTOR)		17			14			24				
Lane Group Flow (vph)	91	1047	0	214	304	0	138	386	0	115	306	266
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	Over
Protected Phases	5	2		1	6		3	8		7	4	5
Permitted Phases												
Detector Phase	5	2		1	6		3	8		7	4	5
Switch Phase												
Minimum Initial (s)	10.0	10.0		5.0	10.0		5.0	10.0		10.0	10.0	10.0
Minimum Split (s)	16.2	31.8		11.2	31.8		11.3	29.3		16.3	29.3	16.2
Total Split (s)	32.0	45.0		24.0	37.0		18.0	34.0		17.0	33.0	32.0
Total Split (%)	26.7%	37.5%		20.0%	30.8%		15.0%	28.3%		14.2%	27.5%	26.7%
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	3.3
All-Red Time (s)	2.9	3.5		2.9	3.5		3.0	3.0		3.0	3.0	2.9
Lost Time Adjust (s)	0.0	-2.8		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.2	4.0		6.2	6.8		6.3	6.3		6.3	6.3	6.2
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Recall Mode	None	C-Max		Max	C-Max		None	None		None	None	None
Act Effct Green (s)	23.8	41.0		18.0	32.4		11.7	27.7		10.6	26.5	23.8
Actuated g/C Ratio	0.20	0.34		0.15	0.27		0.10	0.23		0.09	0.22	0.20
v/c Ratio	0.27	0.94		0.88	0.34		0.90	0.96		0.77	0.77	0.88
Control Delay	33.0	73.8		78.7	24.9		103.3	80.6		84.7	58.0	75.4
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	33.0	73.8		78.7	24.9		103.3	80.6		84.7	58.0	75.4
LOS	C	E		E	C		F	F		F	E	E
Approach Delay		70.5			47.1			86.6			69.2	
Approach LOS		E			D			F			E	
Queue Length 50th (m)	20.0	144.1		31.9	36.3		34.4	90.1		28.3	71.6	63.2
Queue Length 95th (m)	36.4	#180.8		#93.8	43.2		#73.7	#154.1		#59.2	#112.3	#107.1
Internal Link Dist (m)		80.9			119.1			54.7			128.4	
Turn Bay Length (m)	30.0			90.0						60.0		60.0
Base Capacity (vph)	367	1109		243	882		154	400		152	400	328
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.25	0.94		0.88	0.34		0.90	0.96		0.76	0.77	0.81

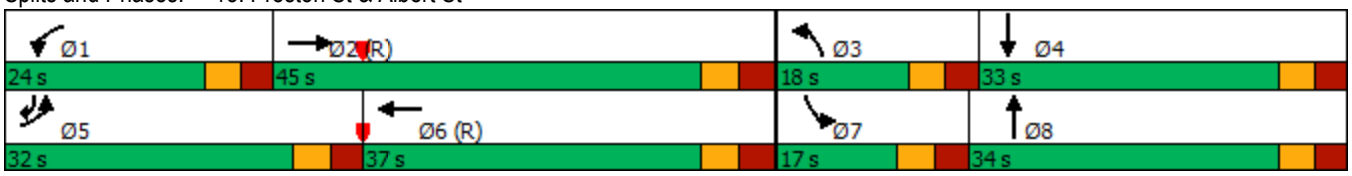
Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 55 (46%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 105
Control Type: Actuated-Coordinated

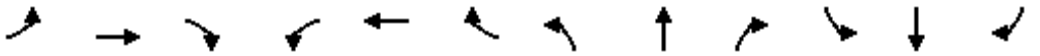
Maximum v/c Ratio: 0.96

Intersection Signal Delay: 68.9	Intersection LOS: E
Intersection Capacity Utilization 90.7%	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.

Splits and Phases: 13: Preston St & Albert St





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	1146	44	609	562	41	91	0	261	2	0	15
Future Volume (vph)	15	1146	44	609	562	41	91	0	261	2	0	15
Satd. Flow (prot)	1710	3399	0	1710	3355	0	1710	0	1530	0	1482	0
Flt Permitted	0.411			0.950			0.746				0.994	
Satd. Flow (perm)	740	3399	0	1710	3355	0	1343	0	1530	0	1482	0
Satd. Flow (RTOR)					14						103	
Lane Group Flow (vph)	16	1252	0	641	635	0	96	0	275	0	18	0
Turn Type	Perm	NA		Prot	NA		Perm		Over	Perm	NA	
Protected Phases		4		3	8				3		6	
Permitted Phases	4						2			6		
Detector Phase	4	4		3	8		2		3	6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		5.0	10.0		10.0		5.0	10.0	10.0	
Minimum Split (s)	37.0	37.0		16.0	37.0		32.3		16.0	32.3	32.3	
Total Split (s)	37.7	37.7		25.0	62.7		32.3		25.0	32.3	32.3	
Total Split (%)	39.7%	39.7%		26.3%	66.0%		34.0%		26.3%	34.0%	34.0%	
Yellow Time (s)	3.7	3.7		3.7	3.7		3.3		3.7	3.3	3.3	
All-Red Time (s)	2.3	2.3		2.3	2.3		3.0		2.3	3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0		0.0		0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.3		6.0		6.3	
Lead/Lag	Lag	Lag		Lead					Lead			
Lead-Lag Optimize?	Yes	Yes		Yes					Yes			
Recall Mode	C-Max	C-Max		None	C-Max		None		None	None	None	
Act Effct Green (s)	31.7	31.7		35.5	74.4		12.8		35.5		12.4	
Actuated g/C Ratio	0.33	0.33		0.37	0.78		0.13		0.37		0.13	
v/c Ratio	0.07	1.10		1.00	0.24		0.53		0.48		0.06	
Control Delay	23.9	89.9		67.3	8.2		48.5		28.8		0.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0		0.1		0.0	
Total Delay	23.9	89.9		67.3	8.2		48.5		28.9		0.4	
LOS	C	F		E	A		D		C		A	
Approach Delay		89.0			37.9			34.0			0.4	
Approach LOS		F			D			C			A	
Queue Length 50th (m)	2.1	~145.8		~139.1	39.6		17.7		41.8		0.0	
Queue Length 95th (m)	m5.4	#181.6		#230.2	53.7		32.2		73.8		0.0	
Internal Link Dist (m)		651.1			64.4			203.6			21.1	
Turn Bay Length (m)	40.0			65.0			70.0					
Base Capacity (vph)	246	1134		638	2629		367		570		480	
Starvation Cap Reductn	0	0		0	0		0		0		0	
Spillback Cap Reductn	0	0		0	0		0		14		0	
Storage Cap Reductn	0	0		0	0		0		0		0	
Reduced v/c Ratio	0.07	1.10		1.00	0.24		0.26		0.49		0.04	

Intersection Summary
Cycle Length: 95
Actuated Cycle Length: 95
Offset: 59 (62%), Referenced to phase 4:EBTL and 8:WBT, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.10

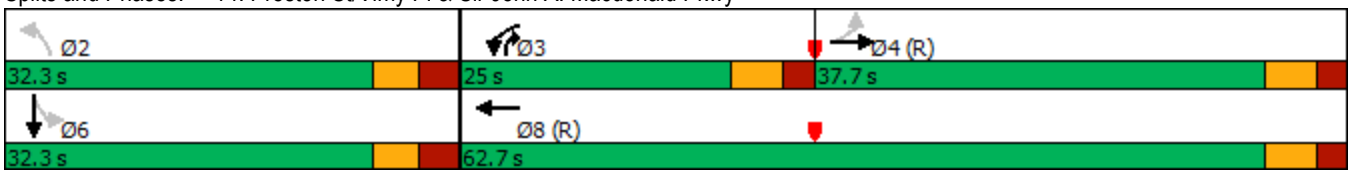
Intersection Signal Delay: 59.3	Intersection LOS: E
Intersection Capacity Utilization 95.9%	ICU Level of Service F
Analysis Period (min) 15	

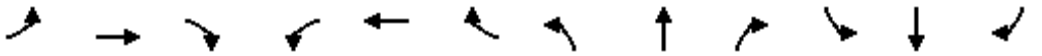
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

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

Splits and Phases: 14: Preston St/Vimy Pl & Sir John A. Macdonald Pkwy





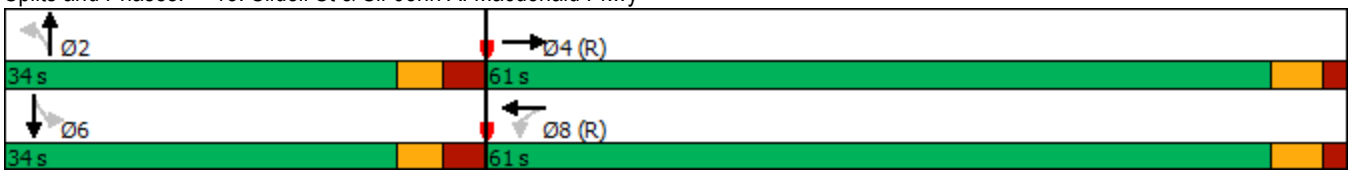
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1190	22	1	653	1	1	21	1	1	5	3
Future Volume (vph)	0	1190	22	1	653	1	1	21	1	1	5	3
Satd. Flow (prot)	0	3410	0	0	3386	0	0	1786	0	0	1709	0
Flt Permitted					0.954			0.984			0.956	
Satd. Flow (perm)	0	3410	0	0	3230	0	0	1761	0	0	1643	0
Satd. Flow (RTOR)		3						1			3	
Lane Group Flow (vph)	0	1276	0	0	689	0	0	24	0	0	9	0
Turn Type		NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases				8			2			6		
Detector Phase		4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)		10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)		30.5		30.5	30.5		33.3	33.3		33.3	33.3	
Total Split (s)		61.0		61.0	61.0		34.0	34.0		34.0	34.0	
Total Split (%)		64.2%		64.2%	64.2%		35.8%	35.8%		35.8%	35.8%	
Yellow Time (s)		3.7		3.7	3.7		3.3	3.3		3.3	3.3	
All-Red Time (s)		1.8		1.8	1.8		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.5			5.5			6.3			6.3	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode		C-Max		C-Max	C-Max		None	None		None	None	
Act Effct Green (s)		86.3			86.3			10.0			10.0	
Actuated g/C Ratio		0.91			0.91			0.11			0.11	
v/c Ratio		0.41			0.23			0.13			0.05	
Control Delay		2.4			4.1			39.3			33.4	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		2.4			4.1			39.3			33.4	
LOS		A			A			D			C	
Approach Delay		2.4			4.1			39.3			33.4	
Approach LOS		A			A			D			C	
Queue Length 50th (m)		0.0			0.0			4.1			1.1	
Queue Length 95th (m)		47.9			48.8			12.1			5.7	
Internal Link Dist (m)		354.8			288.5			38.4			167.1	
Turn Bay Length (m)												
Base Capacity (vph)		3097			2933			514			481	
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		0.41			0.23			0.05			0.02	

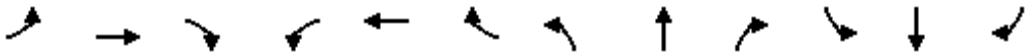
Intersection Summary
Cycle Length: 95
Actuated Cycle Length: 95
Offset: 34 (36%), Referenced to phase 4:EBT and 8:WBTL, Start of Green
Natural Cycle: 65
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.41

Intersection Signal Delay: 3.6	Intersection LOS: A
Intersection Capacity Utilization 53.6%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 15: Slidell St & Sir John A. Macdonald Pkwy





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	805	89	72	439	34	69	51	151	126	170	11
Future Volume (vph)	14	805	89	72	439	34	69	51	151	126	170	11
Satd. Flow (prot)	1500	1733	0	1613	1698	1457	1676	1800	1515	1693	1758	0
Flt Permitted	0.468			0.193			0.518			0.722		
Satd. Flow (perm)	739	1733	0	328	1698	1457	914	1800	1515	1287	1758	0
Satd. Flow (RTOR)		10				37			159		3	
Lane Group Flow (vph)	15	941	0	76	462	36	73	54	159	133	191	0
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6		6	8		8	4		
Detector Phase	2	2		6	6	6	8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	32.5	32.5		32.5	32.5	32.5	31.4	31.4	31.4	31.4	31.4	
Total Split (s)	68.0	68.0		68.0	68.0	68.0	32.0	32.0	32.0	32.0	32.0	
Total Split (%)	68.0%	68.0%		68.0%	68.0%	68.0%	32.0%	32.0%	32.0%	32.0%	32.0%	
Yellow Time (s)	3.3	3.3		3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	
All-Red Time (s)	3.2	3.2		3.2	3.2	3.2	3.1	3.1	3.1	3.1	3.1	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.5	6.5		6.5	6.5	6.5	6.4	6.4	6.4	6.4	6.4	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		C-Max	C-Max	C-Max	None	None	None	None	None	
Act Effct Green (s)	69.2	69.2		69.2	69.2	69.2	17.9	17.9	17.9	17.9	17.9	
Actuated g/C Ratio	0.69	0.69		0.69	0.69	0.69	0.18	0.18	0.18	0.18	0.18	
v/c Ratio	0.03	0.78		0.34	0.39	0.04	0.45	0.17	0.40	0.58	0.60	
Control Delay	3.4	14.1		13.3	8.8	2.5	43.3	33.1	8.1	46.3	44.1	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	3.4	14.1		13.3	8.8	2.5	43.3	33.1	8.1	46.3	44.1	
LOS	A	B		B	A	A	D	C	A	D	D	
Approach Delay		13.9			9.0			21.8			45.0	
Approach LOS		B			A			C			D	
Queue Length 50th (m)	0.3	157.2		5.1	32.4	0.0	13.7	9.6	0.0	25.7	36.5	
Queue Length 95th (m)	m1.0	m198.1		18.7	67.0	3.6	25.6	18.7	15.7	41.2	53.6	
Internal Link Dist (m)		635.7			497.2			83.8			171.5	
Turn Bay Length (m)	45.0			50.0			50.0		20.0	45.0		
Base Capacity (vph)	511	1202		226	1175	1019	233	460	506	329	452	
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.03	0.78		0.34	0.39	0.04	0.31	0.12	0.31	0.40	0.42	

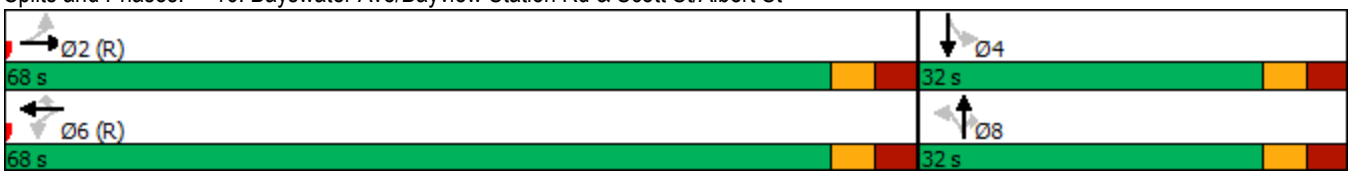
Intersection Summary
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 40 (40%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

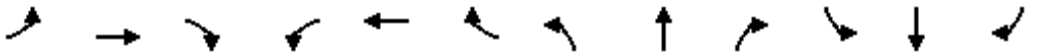
Maximum v/c Ratio: 0.78

Intersection Signal Delay: 18.3	Intersection LOS: B
Intersection Capacity Utilization 97.7%	ICU Level of Service F
Analysis Period (min) 15	

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

Splits and Phases: 16: Bayswater Ave/Bayview Station Rd & Scott St/Albert St





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	120	773	37	65	400	25	30	269	76	98	320	131
Future Volume (vph)	120	773	37	65	400	25	30	269	76	98	320	131
Satd. Flow (prot)	1676	1735	0	1676	1698	1471	1660	1716	0	1693	1621	0
Flt Permitted	0.950			0.130			0.272			0.401		
Satd. Flow (perm)	1676	1735	0	229	1698	1471	475	1716	0	715	1621	0
Satd. Flow (RTOR)		3				119		16			23	
Lane Group Flow (vph)	126	853	0	68	421	26	32	363	0	103	475	0
Turn Type	Prot	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	2			6			8			4	
Permitted Phases				6		6	8			4		
Detector Phase	5	2		6	6	6	8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0		10.0	10.0	10.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	10.6	28.1		28.1	28.1	28.1	35.3	35.3		35.3	35.3	
Total Split (s)	11.0	51.0		40.0	40.0	40.0	43.0	43.0		43.0	43.0	
Total Split (%)	11.0%	51.0%		40.0%	40.0%	40.0%	43.0%	43.0%		43.0%	43.0%	
Yellow Time (s)	3.3	3.3		3.3	3.3	3.3	3.0	3.0		3.0	3.0	
All-Red Time (s)	2.3	2.8		2.8	2.8	2.8	3.3	3.3		3.3	3.3	
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	6.1		6.1	6.1	6.1	6.3	6.3		6.3	6.3	
Lead/Lag	Lead			Lag	Lag	Lag						
Lead-Lag Optimize?	Yes			Yes	Yes	Yes						
Recall Mode	None	C-Max		C-Max	C-Max	C-Max	Max	Max		Max	Max	
Act Effct Green (s)	11.4	50.9		33.9	33.9	33.9	36.7	36.7		36.7	36.7	
Actuated g/C Ratio	0.11	0.51		0.34	0.34	0.34	0.37	0.37		0.37	0.37	
v/c Ratio	0.66	0.96		0.88	0.73	0.05	0.18	0.57		0.39	0.78	
Control Delay	60.0	47.9		104.3	33.0	0.2	25.0	28.3		29.0	37.2	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	60.0	47.9		104.3	33.0	0.2	25.0	28.3		29.0	37.2	
LOS	E	D		F	C	A	C	C		C	D	
Approach Delay		49.4			40.8			28.1			35.7	
Approach LOS		D			D			C			D	
Queue Length 50th (m)	25.0	160.1		13.5	78.6	0.0	4.4	55.8		15.3	81.0	
Queue Length 95th (m)	#50.2	#250.5		#32.1	115.1	m0.3	12.1	85.8		31.3	#127.2	
Internal Link Dist (m)		92.9			635.7			70.7			630.1	
Turn Bay Length (m)	55.0			65.0		35.0	55.0			50.0		
Base Capacity (vph)	191	884		77	575	577	174	639		262	609	
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	
Reduced v/c Ratio	0.66	0.96		0.88	0.73	0.05	0.18	0.57		0.39	0.78	

Intersection Summary
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 91 (91%), Referenced to phase 2:EBT and 6:WBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Satd. Flow (RTOR)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	2.0
Minimum Split (s)	6.0
Total Split (s)	6.0
Total Split (%)	6%
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	None
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (m)	
Queue Length 95th (m)	
Internal Link Dist (m)	
Turn Bay Length (m)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

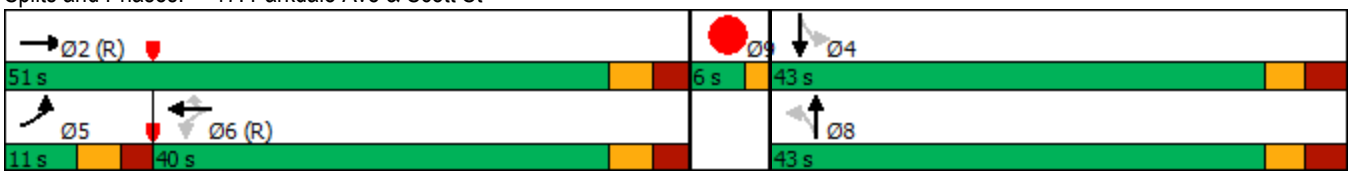
Intersection Summary

Maximum v/c Ratio: 0.96

Intersection Signal Delay: 41.0	Intersection LOS: D
Intersection Capacity Utilization 108.8%	ICU Level of Service G
Analysis Period (min) 15	

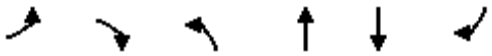
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 17: Parkdale Ave & Scott St



Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SER	SWL	SWR
Lane Configurations										
Traffic Volume (vph)	0	65	140	0	385	0	0	0	0	0
Future Volume (vph)	0	65	140	0	385	0	0	0	0	0
Satd. Flow (prot)	0	1602	0	0	1765	0	0	1765	0	0
Flt Permitted										
Satd. Flow (perm)	0	1602	0	0	1765	0	0	1765	0	0
Lane Group Flow (vph)	0	215	0	0	405	0	0	0	0	0
Sign Control		Free			Free		Free		Free	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization 31.4%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø9
Lane Configurations							
Traffic Volume (vph)	1	1	2	874	1493	6	
Future Volume (vph)	1	1	2	874	1493	6	
Satd. Flow (prot)	1637	0	1710	3420	3417	0	
Flt Permitted	0.976		0.149				
Satd. Flow (perm)	1637	0	268	3420	3417	0	
Satd. Flow (RTOR)	1				1		
Lane Group Flow (vph)	2	0	2	920	1578	0	
Turn Type	Prot		Perm	NA	NA		
Protected Phases	4			2	6		9
Permitted Phases			2				
Detector Phase	4		2	2	6		
Switch Phase							
Minimum Initial (s)	8.3		10.0	10.0	10.0		10.0
Minimum Split (s)	14.5		30.7	30.7	30.9		29.0
Total Split (s)	17.0		49.0	49.0	49.0		29.0
Total Split (%)	17.9%		51.6%	51.6%	51.6%		31%
Yellow Time (s)	3.3		3.3	3.3	3.3		3.0
All-Red Time (s)	2.9		2.4	2.4	2.6		4.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0		
Total Lost Time (s)	6.2		5.7	5.7	5.9		
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	None		C-Max	C-Max	C-Max		None
Act Effct Green (s)	8.3		91.0	91.0	90.9		
Actuated g/C Ratio	0.09		0.96	0.96	0.96		
v/c Ratio	0.01		0.01	0.28	0.48		
Control Delay	34.5		0.5	0.4	1.7		
Queue Delay	0.0		0.0	0.0	0.0		
Total Delay	34.5		0.5	0.4	1.7		
LOS	C		A	A	A		
Approach Delay	34.5			0.4	1.7		
Approach LOS	C			A	A		
Queue Length 50th (m)	0.2		0.0	0.0	0.0		
Queue Length 95th (m)	2.4		m0.0	m6.4	62.8		
Internal Link Dist (m)	148.9			192.9	188.6		
Turn Bay Length (m)			35.0				
Base Capacity (vph)	186		257	3274	3270		
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	0.01		0.01	0.28	0.48		

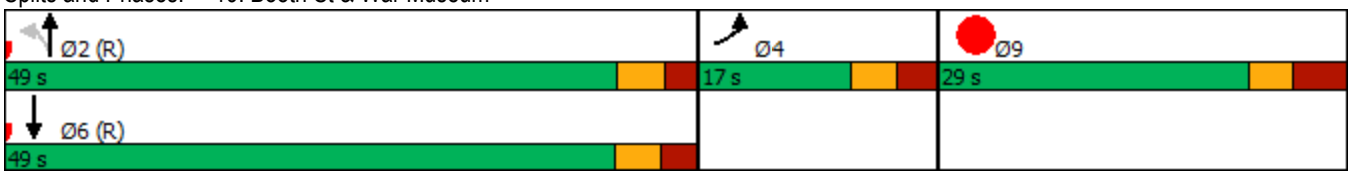
Intersection Summary
Cycle Length: 95
Actuated Cycle Length: 95
Offset: 47 (49%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.48

Intersection Signal Delay: 1.2	Intersection LOS: A
Intersection Capacity Utilization 60.8%	ICU Level of Service B
Analysis Period (min) 15	

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

Splits and Phases: 19: Booth St & War Museum



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	1007	77	98	498	24	28	0	47	63	0	5
Future Volume (vph)	9	1007	77	98	498	24	28	0	47	63	0	5
Satd. Flow (prot)	1710	3344	0	1629	3241	0	1644	1378	0	0	1704	0
Flt Permitted	0.950			0.950			0.769				0.705	
Satd. Flow (perm)	1710	3344	0	1629	3241	0	1331	1378	0	0	1249	0
Satd. Flow (RTOR)		10			6			163			87	
Lane Group Flow (vph)	9	1141	0	103	549	0	29	49	0	0	71	0
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases							8			4		
Detector Phase	5	2		1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	11.3	27.3		11.3	27.3		29.3	29.3		29.3	29.3	
Total Split (s)	12.0	72.0		12.0	72.0		36.0	36.0		36.0	36.0	
Total Split (%)	10.0%	60.0%		10.0%	60.0%		30.0%	30.0%		30.0%	30.0%	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)	6.3	6.3		6.3	6.3		6.3	6.3			6.3	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	
Act Effct Green (s)	6.3	75.1		16.7	96.6		12.6	12.6			12.6	
Actuated g/C Ratio	0.05	0.63		0.14	0.80		0.10	0.10			0.10	
v/c Ratio	0.10	0.54		0.46	0.21		0.21	0.17			0.34	
Control Delay	56.2	14.8		57.5	4.7		50.6	1.3			10.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Total Delay	56.2	14.8		57.5	4.7		50.6	1.3			10.5	
LOS	E	B		E	A		D	A			B	
Approach Delay		15.2			13.0			19.6			10.5	
Approach LOS		B			B			B			B	
Queue Length 50th (m)	2.2	79.0		21.3	6.4		6.9	0.0			0.0	
Queue Length 95th (m)	7.7	119.3		m38.0	m67.5		15.0	0.0			9.5	
Internal Link Dist (m)		497.2			112.4			178.8			41.9	
Turn Bay Length (m)	30.0			35.0			30.0					
Base Capacity (vph)	90	2095		226	2609		329	463			374	
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	0.10	0.54		0.46	0.21		0.09	0.11			0.19	

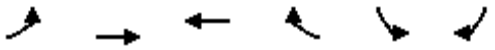
Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 80 (67%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.54

Intersection Signal Delay: 14.5	Intersection LOS: B
Intersection Capacity Utilization 64.1%	ICU Level of Service C
Analysis Period (min) 15	

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

Splits and Phases: 20: City Centre Ave & Albert St



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	42	1198	757	69	60	24
Future Volume (vph)	42	1198	757	69	60	24
Satd. Flow (prot)	1710	3320	3172	0	1665	0
Flt Permitted	0.950				0.965	
Satd. Flow (perm)	1710	3320	3172	0	1654	0
Satd. Flow (RTOR)			14		15	
Lane Group Flow (vph)	44	1261	870	0	88	0
Turn Type	Prot	NA	NA		Prot	
Protected Phases	5	2	6		4	
Permitted Phases						
Detector Phase	5	2	6		4	
Switch Phase						
Minimum Initial (s)	5.0	10.0	10.0		10.0	
Minimum Split (s)	11.3	22.0	22.0		30.3	
Total Split (s)	12.0	89.0	77.0		31.0	
Total Split (%)	10.0%	74.2%	64.2%		25.8%	
Yellow Time (s)	3.3	3.3	3.3		3.3	
All-Red Time (s)	3.0	3.0	3.0		3.0	
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	
Total Lost Time (s)	6.3	6.3	6.3		6.3	
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	None	C-Max	C-Max		None	
Act Effct Green (s)	7.6	98.5	87.0		13.5	
Actuated g/C Ratio	0.06	0.82	0.72		0.11	
v/c Ratio	0.41	0.46	0.38		0.44	
Control Delay	53.8	4.2	20.0		46.6	
Queue Delay	0.0	0.4	0.4		0.1	
Total Delay	53.8	4.6	20.4		46.7	
LOS	D	A	C		D	
Approach Delay		6.3	20.4		46.7	
Approach LOS		A	C		D	
Queue Length 50th (m)	11.3	30.7	92.6		17.5	
Queue Length 95th (m)	m13.6	m56.7	m115.2		30.9	
Internal Link Dist (m)		119.1	141.9		77.8	
Turn Bay Length (m)	30.0					
Base Capacity (vph)	108	2724	2303		354	
Starvation Cap Reductn	0	845	865		0	
Spillback Cap Reductn	0	37	0		29	
Storage Cap Reductn	0	0	0		0	
Reduced v/c Ratio	0.41	0.67	0.61		0.27	

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 22 (18%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 65
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.46

Intersection Signal Delay: 13.3	Intersection LOS: B
Intersection Capacity Utilization 54.2%	ICU Level of Service A
Analysis Period (min) 15	

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

Splits and Phases: 21: Albert St & Access 1

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1626	19	30	854	41	88
Future Volume (vph)	1626	19	30	854	41	88
Satd. Flow (prot)	3368	0	1710	3320	1538	0
Flt Permitted			0.093		0.984	
Satd. Flow (perm)	3368	0	167	3320	1538	0
Satd. Flow (RTOR)	2				20	
Lane Group Flow (vph)	1732	0	32	899	136	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	4			8	2	
Permitted Phases			8			
Detector Phase	4		8	8	2	
Switch Phase						
Minimum Initial (s)	10.0		10.0	10.0	10.0	
Minimum Split (s)	30.0		22.0	22.0	33.9	
Total Split (s)	61.0		61.0	61.0	34.0	
Total Split (%)	64.2%		64.2%	64.2%	35.8%	
Yellow Time (s)	3.7		3.7	3.7	3.3	
All-Red Time (s)	2.1		2.1	2.1	2.6	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	5.8		5.8	5.8	5.9	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max		C-Max	C-Max	None	
Act Effct Green (s)	68.1		68.1	68.1	15.2	
Actuated g/C Ratio	0.72		0.72	0.72	0.16	
v/c Ratio	0.72		0.27	0.38	0.52	
Control Delay	23.7		14.8	6.7	36.6	
Queue Delay	48.1		0.0	0.0	0.0	
Total Delay	71.8		14.8	6.7	36.6	
LOS	E		B	A	D	
Approach Delay	71.8			7.0	36.6	
Approach LOS	E			A	D	
Queue Length 50th (m)	154.6		1.6	26.4	21.3	
Queue Length 95th (m)	m161.2		11.5	63.4	33.0	
Internal Link Dist (m)	116.7			246.9	48.8	
Turn Bay Length (m)			70.0			
Base Capacity (vph)	2416		119	2381	469	
Starvation Cap Reductn	921		0	0	0	
Spillback Cap Reductn	0		0	0	0	
Storage Cap Reductn	0		0	0	0	
Reduced v/c Ratio	1.16		0.27	0.38	0.29	

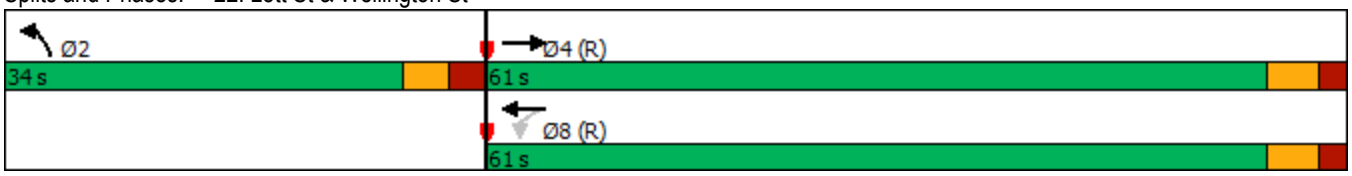
Intersection Summary
Cycle Length: 95
Actuated Cycle Length: 95
Offset: 27 (28%), Referenced to phase 4:EBT and 8:WBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated

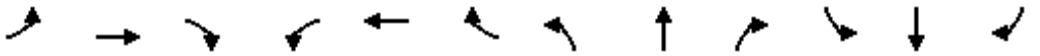
Maximum v/c Ratio: 0.72

Intersection Signal Delay: 48.5	Intersection LOS: D
Intersection Capacity Utilization 66.2%	ICU Level of Service C
Analysis Period (min) 15	

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

Splits and Phases: 22: Lett St & Wellington St





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	1057	8	5	489	7	8	0	11	28	0	8
Future Volume (vph)	21	1057	8	5	489	7	8	0	11	28	0	8
Satd. Flow (prot)	1710	3318	0	1710	3315	0	0	1621	0	0	1681	0
Flt Permitted	0.459			0.244				0.884			0.759	
Satd. Flow (perm)	826	3318	0	439	3315	0	0	1462	0	0	1327	0
Satd. Flow (RTOR)		1			2			15			15	
Lane Group Flow (vph)	22	1121	0	5	522	0	0	20	0	0	37	0
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)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	22.6	22.6		22.6	22.6		30.5	30.5		30.5	30.5	
Total Split (s)	81.0	81.0		81.0	81.0		39.0	39.0		39.0	39.0	
Total Split (%)	67.5%	67.5%		67.5%	67.5%		32.5%	32.5%		32.5%	32.5%	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	1.3	1.3		1.3	1.3		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.6	0.0			0.0			0.0	
Total Lost Time (s)	4.6	4.6		5.2	4.6			4.3			4.3	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	
Act Effct Green (s)	105.7	105.7		105.3	105.7			13.0			13.0	
Actuated g/C Ratio	0.88	0.88		0.88	0.88			0.11			0.11	
v/c Ratio	0.03	0.38		0.01	0.18			0.12			0.24	
Control Delay	8.1	10.3		3.8	2.5			24.4			34.8	
Queue Delay	0.0	0.4		0.0	0.0			0.0			0.0	
Total Delay	8.1	10.8		3.8	2.5			24.4			34.8	
LOS	A	B		A	A			C			C	
Approach Delay		10.7			2.5			24.4			34.8	
Approach LOS		B			A			C			C	
Queue Length 50th (m)	1.9	85.4		0.2	9.3			1.2			5.2	
Queue Length 95th (m)	m5.1	m124.1		1.5	26.5			7.9			14.2	
Internal Link Dist (m)		82.5			218.4			58.0			17.2	
Turn Bay Length (m)												
Base Capacity (vph)	727	2921		385	2919			433			394	
Starvation Cap Reductn	0	1175		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	0.03	0.64		0.01	0.18			0.05			0.09	

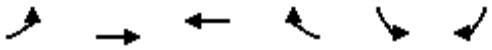
Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 22 (18%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.38

Intersection Signal Delay: 8.9	Intersection LOS: A
Intersection Capacity Utilization 46.9%	ICU Level of Service A
Analysis Period (min) 15	

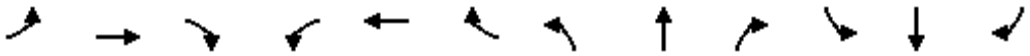
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 23: Empress Ave & Albert St



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	1086	503	7	0	8
Future Volume (vph)	0	1086	503	7	0	8
Satd. Flow (prot)	0	3353	3346	0	0	1526
Flt Permitted						
Satd. Flow (perm)	0	3353	3346	0	0	1526
Lane Group Flow (vph)	0	1143	536	0	0	8
Sign Control		Free	Free		Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization 35.0%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	15	0	0	13	0	859	19	0	974	0
Future Volume (vph)	0	0	15	0	0	13	0	859	19	0	974	0
Satd. Flow (prot)	0	0	1526	0	0	1526	0	3343	0	0	3353	0
Flt Permitted												
Satd. Flow (perm)	0	0	1526	0	0	1526	0	3343	0	0	3353	0
Lane Group Flow (vph)	0	0	16	0	0	14	0	924	0	0	1025	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization 38.4%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1324	28	0	965	0	32
Future Volume (vph)	1324	28	0	965	0	32
Satd. Flow (prot)	3343	0	0	3353	0	1526
Flt Permitted						
Satd. Flow (perm)	3343	0	0	3353	0	1526
Lane Group Flow (vph)	1423	0	0	1016	0	34
Sign Control	Free			Free	Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization 49.6%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1320	28	79	886	38	32
Future Volume (vph)	1320	28	79	886	38	32
Satd. Flow (prot)	3410	0	1710	3420	1645	0
Flt Permitted			0.126		0.974	
Satd. Flow (perm)	3410	0	227	3420	1645	0
Satd. Flow (RTOR)	3				34	
Lane Group Flow (vph)	1418	0	83	933	74	0
Turn Type	NA		pm+pt	NA	Prot	
Protected Phases	4		3	8	2	
Permitted Phases			8			
Detector Phase	4		3	8	2	
Switch Phase						
Minimum Initial (s)	10.0		5.0	10.0	10.0	
Minimum Split (s)	37.0		11.0	37.0	32.3	
Total Split (s)	47.0		15.0	62.0	33.0	
Total Split (%)	49.5%		15.8%	65.3%	34.7%	
Yellow Time (s)	3.7		3.7	3.7	3.3	
All-Red Time (s)	2.3		2.3	2.3	3.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	6.0		6.0	6.0	6.3	
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	C-Max		None	C-Max	None	
Act Effct Green (s)	66.3		75.6	76.8	10.3	
Actuated g/C Ratio	0.70		0.80	0.81	0.11	
v/c Ratio	0.60		0.29	0.34	0.35	
Control Delay	20.9		4.2	4.5	28.8	
Queue Delay	1.9		0.0	0.0	91.2	
Total Delay	22.8		4.2	4.5	120.0	
LOS	C		A	A	F	
Approach Delay	22.8			4.5	120.0	
Approach LOS	C			A	F	
Queue Length 50th (m)	128.0		2.1	42.0	7.2	
Queue Length 95th (m)	m122.2		m4.8	54.8	20.4	
Internal Link Dist (m)	77.2			49.9	32.0	
Turn Bay Length (m)			60.0			
Base Capacity (vph)	2380		321	2765	486	
Starvation Cap Reductn	352		0	0	0	
Spillback Cap Reductn	762		0	0	423	
Storage Cap Reductn	0		0	0	0	
Reduced v/c Ratio	0.88		0.26	0.34	1.17	

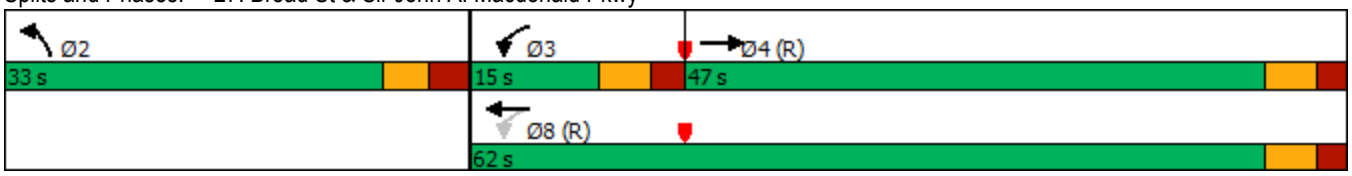
Intersection Summary
Cycle Length: 95
Actuated Cycle Length: 95
Offset: 22 (23%), Referenced to phase 4:EBT and 8:WBTL, Start of Green
Natural Cycle: 85
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.60

Intersection Signal Delay: 18.2	Intersection LOS: B
Intersection Capacity Utilization 67.7%	ICU Level of Service C
Analysis Period (min) 15	

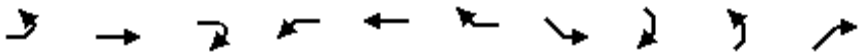
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 27: Broad St & Sir John A. Macdonald Pkwy



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1316	28	0	924	0	32
Future Volume (vph)	1316	28	0	924	0	32
Satd. Flow (prot)	3343	0	0	3353	0	1526
Flt Permitted						
Satd. Flow (perm)	3343	0	0	3353	0	1526
Lane Group Flow (vph)	1414	0	0	973	0	34
Sign Control	Free			Free	Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization 49.3%		ICU Level of Service A	
Analysis Period (min) 15			

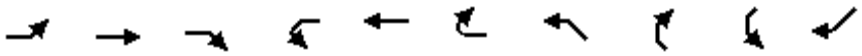


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SER	NEL	NER
Lane Configurations										
Traffic Volume (vph)	0	0	0	0	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0	0	0	0	0
Satd. Flow (prot)	0	3353	0	0	3353	0	0	0	0	1765
Flt Permitted										
Satd. Flow (perm)	0	3353	0	0	3353	0	0	0	0	1765
Lane Group Flow (vph)	0	0	0	0	0	0	0	0	0	0
Sign Control		Free			Free		Free		Free	

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

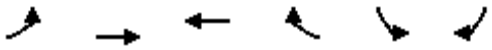
Lane Group	NBL	NBR	SET	SER	NWL	NWT
Lane Configurations			↑			↑
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Satd. Flow (prot)	0	0	1765	0	0	1765
Flt Permitted						
Satd. Flow (perm)	0	0	1765	0	0	1765
Lane Group Flow (vph)	0	0	0	0	0	0
Sign Control	Free		Free			Free

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization 31.4%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NWL	NWR	SWL	SWR
Lane Configurations		↑↑			↑↑				↰	
Traffic Volume (vph)	0	0	0	0	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0	0	0	0	0
Satd. Flow (prot)	0	3353	0	0	3353	0	0	0	1765	0
Flt Permitted										
Satd. Flow (perm)	0	3353	0	0	3353	0	0	0	1765	0
Lane Group Flow (vph)	0	0	0	0	0	0	0	0	0	0
Sign Control		Free			Free		Free		Free	

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



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	955	504	677	1110	780	659
Future Volume (vph)	955	504	677	1110	780	659
Satd. Flow (prot)	3317	4914	3386	2614	3285	1530
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	3317	4914	3386	2614	3285	1530
Satd. Flow (RTOR)						285
Lane Group Flow (vph)	1005	531	713	1168	821	694
Turn Type	Prot	NA	NA	pt+ov	Prot	Perm
Protected Phases	7	4	8	8 1	1	
Permitted Phases						1
Detector Phase	7	4	8	8 1	1	1
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0		10.0	10.0
Minimum Split (s)	42.8	26.5	26.5		44.1	44.1
Total Split (s)	55.8	92.3	36.5		44.1	44.1
Total Split (%)	40.9%	67.7%	26.8%		32.3%	32.3%
Yellow Time (s)	3.3	3.3	3.3		3.3	3.3
All-Red Time (s)	2.5	3.2	3.2		2.8	2.8
Lost Time Adjust (s)	0.0	0.0	-2.5		-2.1	0.0
Total Lost Time (s)	5.8	6.5	4.0		4.0	6.1
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	Max	Min	Min		None	None
Act Effct Green (s)	50.0	85.8	32.5	74.1	40.1	38.0
Actuated g/C Ratio	0.37	0.63	0.24	0.54	0.29	0.28
v/c Ratio	0.83	0.17	0.88	0.82	0.85	1.10
Control Delay	46.3	10.7	63.9	31.9	55.0	93.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.3	10.7	63.9	31.9	55.0	93.4
LOS	D	B	E	C	E	F
Approach Delay		34.0	44.0		72.6	
Approach LOS		C	D		E	
Queue Length 50th (m)	132.7	21.6	103.4	150.2	113.1	~160.8
Queue Length 95th (m)	161.3	27.3	#136.8	186.9	139.6	#239.1
Internal Link Dist (m)		245.9	286.9		42.1	
Turn Bay Length (m)	150.0					30.0
Base Capacity (vph)	1215	3091	806	1420	965	631
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	0.83	0.17	0.88	0.82	0.85	1.10

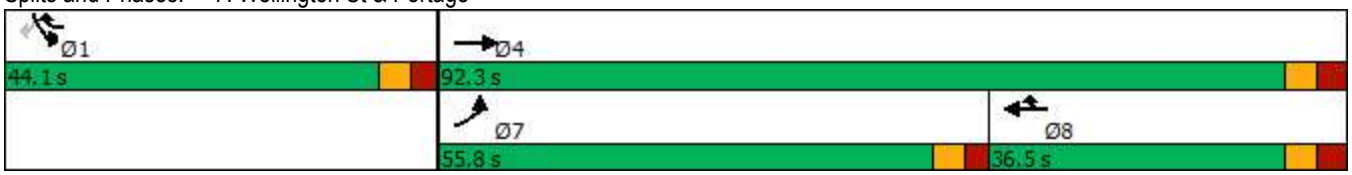
Intersection Summary
Cycle Length: 136.4
Actuated Cycle Length: 136.4
Natural Cycle: 115
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 1.10

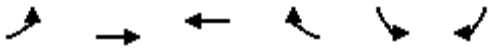
Intersection Signal Delay: 49.7	Intersection LOS: D
Intersection Capacity Utilization 83.5%	ICU Level of Service E
Analysis Period (min) 15	

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

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

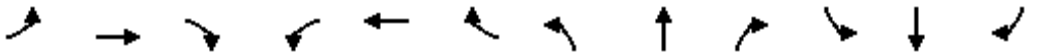
Splits and Phases: 7: Wellington St & Portage





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	871	1107	44	0	7
Future Volume (vph)	0	871	1107	44	0	7
Satd. Flow (prot)	0	3353	3333	0	0	1526
Flt Permitted						
Satd. Flow (perm)	0	3353	3333	0	0	1526
Lane Group Flow (vph)	0	917	1211	0	0	7
Sign Control		Free	Free		Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization 43.8%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	0	33	0	0	0	7	1122	0	0	1090	7
Future Volume (vph)	33	0	33	0	0	0	7	1122	0	0	1090	7
Satd. Flow (prot)	1710	1530	0	1800	1800	0	1710	1800	0	1800	1798	0
Flt Permitted	0.757						0.139					
Satd. Flow (perm)	1363	1530	0	1800	1800	0	250	1800	0	1800	1798	0
Satd. Flow (RTOR)		97									1	
Lane Group Flow (vph)	35	35	0	0	0	0	7	1181	0	0	1154	0
Turn Type	Perm	NA		Perm			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)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	22.0	22.0		22.0	22.0		35.9	35.9		35.9	35.9	
Total Split (s)	22.0	22.0		22.0	22.0		53.0	53.0		53.0	53.0	
Total Split (%)	29.3%	29.3%		29.3%	29.3%		70.7%	70.7%		70.7%	70.7%	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.3	3.3		3.3	3.3	
All-Red Time (s)	3.2	3.2		3.2	3.2		2.6	2.6		2.6	2.6	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.2	6.2		6.2	6.2		5.9	5.9		5.9	5.9	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	
Act Effct Green (s)	10.0	10.0					61.7	61.7			61.7	
Actuated g/C Ratio	0.13	0.13					0.82	0.82			0.82	
v/c Ratio	0.19	0.12					0.03	0.80			0.78	
Control Delay	31.9	0.8					3.9	13.8			12.9	
Queue Delay	0.0	0.0					0.0	0.0			0.0	
Total Delay	31.9	0.8					3.9	13.8			12.9	
LOS	C	A					A	B			B	
Approach Delay		16.4						13.7			12.9	
Approach LOS		B						B			B	
Queue Length 50th (m)	4.7	0.0					0.3	123.2			115.2	
Queue Length 95th (m)	12.9	0.0					1.4	#247.1			#239.1	
Internal Link Dist (m)		60.2			43.3			76.9			31.3	
Turn Bay Length (m)	30.0						30.0					
Base Capacity (vph)	287	398					206	1481			1480	
Starvation Cap Reductn	0	0					0	0			0	
Spillback Cap Reductn	0	0					0	0			0	
Storage Cap Reductn	0	0					0	0			0	
Reduced v/c Ratio	0.12	0.09					0.03	0.80			0.78	

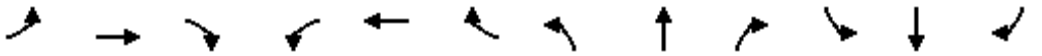
Intersection Summary
Cycle Length: 75
Actuated Cycle Length: 75
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.80

Intersection Signal Delay: 13.4	Intersection LOS: B
Intersection Capacity Utilization 80.8%	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.

Splits and Phases: 10: Booth St & Chaudiere

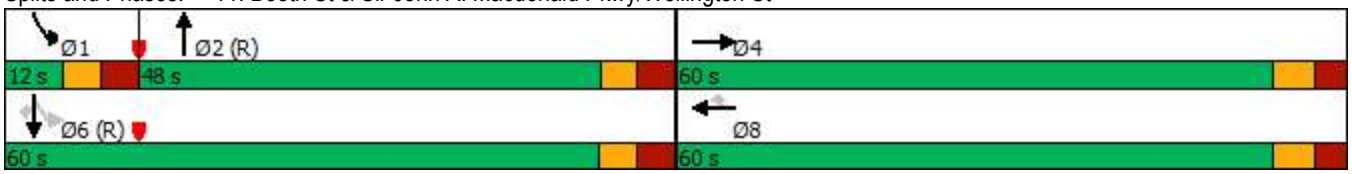


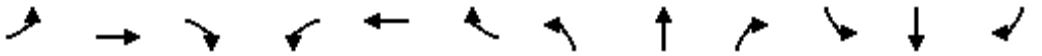
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1076	0	0	1430	117	0	994	82	111	590	344
Future Volume (vph)	0	1076	0	0	1430	117	0	994	82	111	590	344
Satd. Flow (prot)	0	3420	0	0	3420	1530	0	3284	0	1613	3196	1515
Flt Permitted										0.084		
Satd. Flow (perm)	0	3420	0	0	3420	1530	0	3284	0	143	3196	1515
Satd. Flow (RTOR)								8				35
Lane Group Flow (vph)	0	1133	0	0	1505	123	0	1132	0	117	621	362
Turn Type		NA			NA	Perm		NA		pm+pt	NA	Perm
Protected Phases		4			8			2		1	6	
Permitted Phases						8				6		6
Minimum Split (s)		35.8			37.4	37.4		31.8		12.0	31.9	31.9
Total Split (s)		60.0			60.0	60.0		48.0		12.0	60.0	60.0
Total Split (%)		50.0%			50.0%	50.0%		40.0%		10.0%	50.0%	50.0%
Yellow Time (s)		3.7			3.7	3.7		3.3		3.3	3.3	3.3
All-Red Time (s)		3.1			3.1	3.1		3.5		3.5	3.6	3.6
Lost Time Adjust (s)		0.0			0.0	-2.8		-2.1		0.0	0.0	-2.9
Total Lost Time (s)		6.8			6.8	4.0		4.7		6.8	6.9	4.0
Lead/Lag								Lag		Lead		
Lead-Lag Optimize?								Yes		Yes		
Act Effct Green (s)		53.2			53.2	56.0		43.3		53.2	53.1	56.0
Actuated g/C Ratio		0.44			0.44	0.47		0.36		0.44	0.44	0.47
v/c Ratio		0.75			0.99	0.17		0.95		0.92	0.44	0.50
Control Delay		16.9			58.7	22.0		30.6		87.4	24.4	22.8
Queue Delay		1.3			38.5	0.0		43.4		28.0	0.0	0.0
Total Delay		18.2			97.2	22.0		74.0		115.3	24.4	22.8
LOS		B			F	C		E		F	C	C
Approach Delay		18.2			91.5			74.0			33.5	
Approach LOS		B			F			E			C	
Queue Length 50th (m)		79.6			207.8	21.2		151.7		17.1	54.9	54.8
Queue Length 95th (m)		120.0			#253.8	36.5		m96.1		#52.1	71.2	83.3
Internal Link Dist (m)		72.0			117.1			52.2			192.9	
Turn Bay Length (m)						70.0				145.0		55.0
Base Capacity (vph)		1516			1516	714		1190		127	1414	725
Starvation Cap Reductn		192			332	0		0		0	0	0
Spillback Cap Reductn		0			0	0		163		14	0	0
Storage Cap Reductn		0			0	0		0		0	0	0
Reduced v/c Ratio		0.86			1.27	0.17		1.10		1.04	0.44	0.50

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 3 (3%), Referenced to phase 2:NBT and 6:SBTL, Start of Green	
Natural Cycle: 115	
Control Type: Pretimed	
Maximum v/c Ratio: 0.99	
Intersection Signal Delay: 58.1	Intersection LOS: E
Intersection Capacity Utilization 95.2%	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.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 11: Booth St & Sir John A. Macdonald Pkwy/Wellington St





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	459	534	51	33	895	230	75	537	73	92	444	127
Future Volume (vph)	459	534	51	33	895	230	75	537	73	92	444	127
Satd. Flow (prot)	1676	3300	0	1710	3213	0	1710	1721	0	1629	1782	1515
Flt Permitted	0.950			0.419			0.365			0.105		
Satd. Flow (perm)	1645	3300	0	751	3213	0	636	1721	0	180	1782	1515
Satd. Flow (RTOR)		13						6				
Lane Group Flow (vph)	483	616	0	35	1184	0	79	642	0	97	467	134
Turn Type	Prot	NA		Perm	NA		Perm	NA		pm+pt	NA	Over
Protected Phases	5	2			6			8		7	4	5
Permitted Phases				6			8			4		
Detector Phase	5	2		6	6		8	8		7	4	5
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0		5.0	10.0	10.0
Minimum Split (s)	16.5	36.5		36.5	36.5		34.5	34.5		11.5	34.5	16.5
Total Split (s)	29.0	70.0		41.0	41.0		38.0	38.0		12.0	50.0	29.0
Total Split (%)	24.2%	58.3%		34.2%	34.2%		31.7%	31.7%		10.0%	41.7%	24.2%
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	3.3
All-Red Time (s)	3.2	3.2		3.2	3.2		3.2	3.2		3.2	3.2	3.2
Lost Time Adjust (s)	-3.3	0.0		0.0	-3.3		0.0	-3.3		0.0	0.0	0.0
Total Lost Time (s)	3.2	6.5		6.5	3.2		6.5	3.2		6.5	6.5	6.5
Lead/Lag	Lead			Lag	Lag		Lag	Lag		Lead		Lead
Lead-Lag Optimize?	Yes			Yes	Yes		Yes	Yes		Yes		Yes
Recall Mode	Max	C-Max		C-Max	C-Max		None	None		None	None	Max
Act Effct Green (s)	25.8	63.5		34.5	37.8		31.5	34.8		43.5	43.5	22.5
Actuated g/C Ratio	0.22	0.53		0.29	0.32		0.26	0.29		0.36	0.36	0.19
v/c Ratio	1.34	0.35		0.16	1.17		0.48	1.28		0.74	0.72	0.47
Control Delay	211.2	11.5		34.3	121.2		48.5	175.1		55.5	37.5	68.6
Queue Delay	0.0	0.0		0.0	0.9		0.0	0.0		0.0	0.0	0.0
Total Delay	211.2	11.5		34.3	122.1		48.5	175.1		55.5	37.5	68.6
LOS	F	B		C	F		D	F		E	D	E
Approach Delay		99.3			119.6			161.3			46.0	
Approach LOS		F			F			F			D	
Queue Length 50th (m)	~160.9	39.5		4.2	~184.9		16.6	~201.4		19.8	119.6	34.5
Queue Length 95th (m)	#227.7	53.1		m11.9	#222.0		33.8	#275.4		#37.4	155.7	55.6
Internal Link Dist (m)		138.6			62.5			37.2			83.1	
Turn Bay Length (m)	160.0			40.0								120.0
Base Capacity (vph)	360	1752		215	1012		166	503		131	645	284
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	158		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	1.34	0.35		0.16	1.39		0.48	1.28		0.74	0.72	0.47

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 9 (8%), Referenced to phase 2:EBT and 6:WBTL, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.34

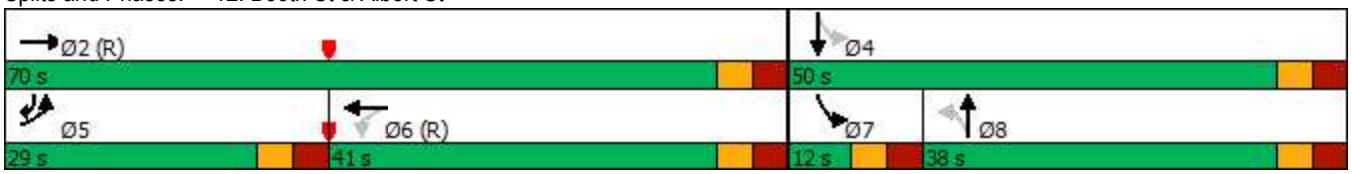
Intersection Signal Delay: 107.9	Intersection LOS: F
Intersection Capacity Utilization 117.8%	ICU Level of Service H
Analysis Period (min) 15	

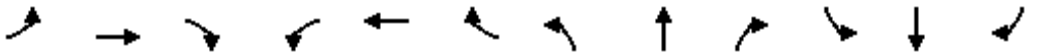
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

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

Splits and Phases: 12: Booth St & Albert St





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	330	538	144	201	708	158	187	230	281	126	186	291
Future Volume (vph)	330	538	144	201	708	158	187	230	281	126	186	291
Satd. Flow (prot)	1710	3230	0	1676	3279	0	1629	1608	0	1710	1800	1530
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1710	3230	0	1653	3279	0	1599	1608	0	1705	1800	1530
Satd. Flow (RTOR)		28			22			54				
Lane Group Flow (vph)	347	718	0	212	911	0	197	538	0	133	196	306
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	Over
Protected Phases	5	2		1	6		3	8		7	4	5
Permitted Phases												
Detector Phase	5	2		1	6		3	8		7	4	5
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		5.0	10.0		5.0	10.0	5.0
Minimum Split (s)	11.2	31.8		11.2	31.8		11.3	29.3		11.3	29.3	11.2
Total Split (s)	28.0	40.0		26.0	38.0		23.0	41.0		13.0	31.0	28.0
Total Split (%)	23.3%	33.3%		21.7%	31.7%		19.2%	34.2%		10.8%	25.8%	23.3%
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	3.3
All-Red Time (s)	2.9	3.5		2.9	3.5		3.0	3.0		3.0	3.0	2.9
Lost Time Adjust (s)	-3.3	0.0		0.0	-3.3		0.0	-3.3		-3.3	0.0	-3.3
Total Lost Time (s)	2.9	6.8		6.2	3.5		6.3	3.0		3.0	6.3	2.9
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Recall Mode	None	C-Max		None	C-Min		None	None		None	None	None
Act Effct Green (s)	25.1	34.8		18.2	34.5		16.3	38.0		10.0	25.1	25.1
Actuated g/C Ratio	0.21	0.29		0.15	0.29		0.14	0.32		0.08	0.21	0.21
v/c Ratio	0.97	0.75		0.83	0.95		0.90	0.99		0.94	0.52	0.96
Control Delay	90.7	53.8		69.0	47.1		90.0	72.3		79.7	74.1	62.1
Queue Delay	0.0	0.0		0.0	1.9		0.0	0.0		0.0	0.0	0.0
Total Delay	90.7	53.8		69.0	49.0		90.0	72.3		79.7	74.1	62.1
LOS	F	D		E	D		F	E		E	E	E
Approach Delay		65.8			52.8			77.0			69.5	
Approach LOS		E			D			E			E	
Queue Length 50th (m)	91.1	74.2		38.2	121.6		48.5	121.7		35.5	52.0	78.3
Queue Length 95th (m)	#151.1	112.0		#85.6	#160.5		#91.6	#197.0		m37.8	m55.2	m#87.5
Internal Link Dist (m)		83.6			122.5			54.7			128.4	
Turn Bay Length (m)	30.0			90.0						60.0		60.0
Base Capacity (vph)	357	955		276	958		226	546		142	377	320
Starvation Cap Reductn	0	0		0	15		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.97	0.75		0.77	0.97		0.87	0.99		0.94	0.52	0.96

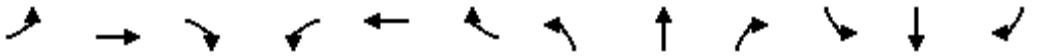
Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 65 (54%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 115
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.99

Intersection Signal Delay: 64.7	Intersection LOS: E
Intersection Capacity Utilization 97.2%	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.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 13: Preston St & Albert St



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	710	258	345	1368	7	375	0	343	5	0	22
Future Volume (vph)	2	710	258	345	1368	7	375	0	343	5	0	22
Satd. Flow (prot)	1710	3259	0	1710	3417	0	1710	0	1530	0	1586	0
Flt Permitted	0.183			0.950			0.739				0.991	
Satd. Flow (perm)	329	3259	0	1710	3417	0	1330	0	1530	0	1586	0
Satd. Flow (RTOR)					1						82	
Lane Group Flow (vph)	2	1019	0	363	1447	0	395	0	361	0	28	0
Turn Type	Perm	NA		Prot	NA		Perm		Over	Perm	NA	
Protected Phases		4		3	8				3		6	
Permitted Phases	4						2			6		
Detector Phase	4	4		3	8		2		3	6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		5.0	10.0		10.0		5.0	10.0	10.0	
Minimum Split (s)	37.0	37.0		11.0	37.0		32.3		11.0	32.3	32.3	
Total Split (s)	44.0	44.0		34.0	78.0		42.0		34.0	42.0	42.0	
Total Split (%)	36.7%	36.7%		28.3%	65.0%		35.0%		28.3%	35.0%	35.0%	
Yellow Time (s)	3.7	3.7		3.7	3.7		3.3		3.7	3.3	3.3	
All-Red Time (s)	2.3	2.3		2.3	2.3		3.0		2.3	3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0		0.0		0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.3		6.0		6.3	
Lead/Lag	Lag	Lag		Lead					Lead			
Lead-Lag Optimize?	Yes	Yes		Yes					Yes			
Recall Mode	C-Max	C-Max		None	C-Max		None		None	None	None	
Act Effct Green (s)	38.0	38.0		28.0	72.0		35.7		28.0		25.4	
Actuated g/C Ratio	0.32	0.32		0.23	0.60		0.30		0.23		0.21	
v/c Ratio	0.02	0.99		0.91	0.71		1.00		1.01		0.07	
Control Delay	29.0	66.2		61.1	27.7		58.5		83.3		0.3	
Queue Delay	0.0	0.0		0.0	0.2		0.0		0.0		0.0	
Total Delay	29.0	66.2		61.1	27.9		58.5		83.3		0.3	
LOS	C	E		E	C		E		F		A	
Approach Delay		66.1			34.6			70.3			0.3	
Approach LOS		E			C			E			A	
Queue Length 50th (m)	0.3	131.8		73.5	182.8		~100.2		~92.2		0.0	
Queue Length 95th (m)	2.5	#179.1		#142.8	206.8		m#109.1		m#100.1		0.0	
Internal Link Dist (m)		651.1			66.3			203.6			21.1	
Turn Bay Length (m)	40.0			65.0			70.0					
Base Capacity (vph)	104	1032		399	2050		395		357		529	
Starvation Cap Reductn	0	0		0	130		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	0.02	0.99		0.91	0.75		1.00		1.01		0.05	

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 37 (31%), Referenced to phase 4:EBTL and 8:WBT, Start of Green
Natural Cycle: 115
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.01

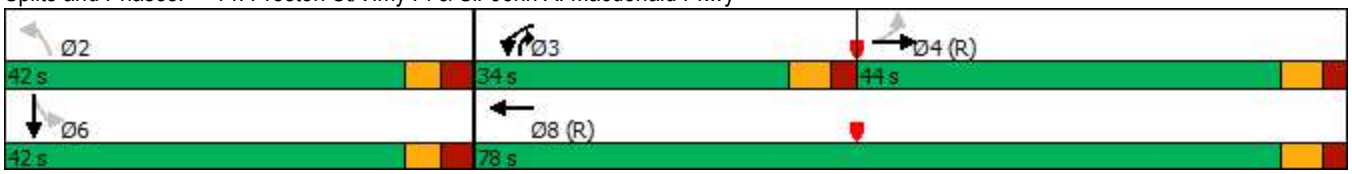
Intersection Signal Delay: 50.7	Intersection LOS: D
Intersection Capacity Utilization 91.5%	ICU Level of Service F
Analysis Period (min) 15	

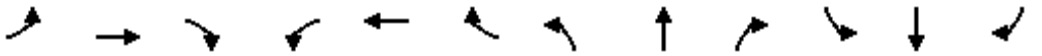
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

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

Splits and Phases: 14: Preston St/Vimy Pl & Sir John A. Macdonald Pkwy



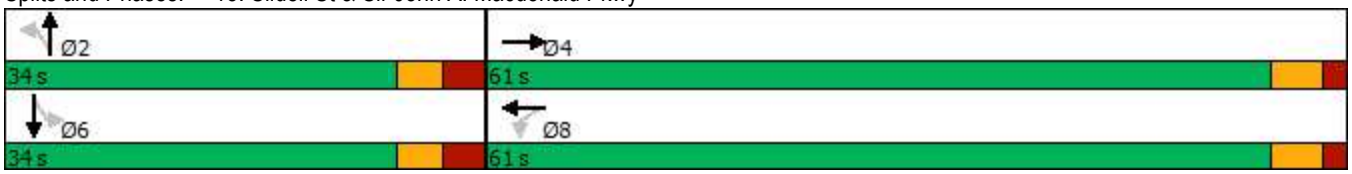


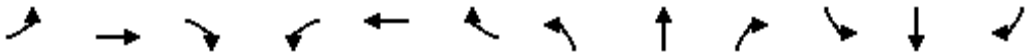
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	968	4	2	1743	0	26	14	35	3	26	11
Future Volume (vph)	0	968	4	2	1743	0	26	14	35	3	26	11
Satd. Flow (prot)	0	3383	0	0	3420	0	0	1658	0	0	1680	0
Flt Permitted					0.954			0.870			0.969	
Satd. Flow (perm)	0	3383	0	0	3263	0	0	1467	0	0	1634	0
Satd. Flow (RTOR)		1						37			12	
Lane Group Flow (vph)	0	1023	0	0	1837	0	0	79	0	0	42	0
Turn Type		NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases				8			2			6		
Detector Phase		4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)		10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)		30.5		30.5	30.5		33.3	33.3		33.3	33.3	
Total Split (s)		61.0		61.0	61.0		34.0	34.0		34.0	34.0	
Total Split (%)		64.2%		64.2%	64.2%		35.8%	35.8%		35.8%	35.8%	
Yellow Time (s)		3.7		3.7	3.7		3.3	3.3		3.3	3.3	
All-Red Time (s)		1.8		1.8	1.8		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.5			5.5			6.3			6.3	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode		Max		Max	Max		None	None		None	None	
Act Effct Green (s)		61.8			61.8			10.3			10.3	
Actuated g/C Ratio		0.78			0.78			0.13			0.13	
v/c Ratio		0.39			0.72			0.36			0.19	
Control Delay		4.4			8.5			23.9			25.9	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		4.4			8.5			23.9			25.9	
LOS		A			A			C			C	
Approach Delay		4.4			8.5			23.9			25.9	
Approach LOS		A			A			C			C	
Queue Length 50th (m)		27.2			77.6			5.9			4.2	
Queue Length 95th (m)		38.8			114.2			18.3			13.1	
Internal Link Dist (m)		354.8			288.5			38.4			167.1	
Turn Bay Length (m)												
Base Capacity (vph)		2635			2541			538			580	
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			0.72			0.15			0.07	

Intersection Summary
Cycle Length: 95
Actuated Cycle Length: 79.3
Natural Cycle: 90
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.72

Intersection Signal Delay: 7.7	Intersection LOS: A
Intersection Capacity Utilization 73.4%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 15: Slidell St & Sir John A. Macdonald Pkwy





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	698	104	108	882	114	81	171	93	63	75	12
Future Volume (vph)	12	698	104	108	882	114	81	171	93	63	75	12
Satd. Flow (prot)	1555	1733	0	1710	1782	1530	1710	1800	1485	1710	1762	0
Flt Permitted	0.201			0.246			0.697			0.544		
Satd. Flow (perm)	329	1733	0	443	1782	1530	1255	1800	1485	979	1762	0
Satd. Flow (RTOR)		14				120			95		8	
Lane Group Flow (vph)	13	844	0	114	928	120	85	180	98	66	92	0
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6		6	8		8	4		
Detector Phase	2	2		6	6	6	8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	32.5	32.5		32.5	32.5	32.5	31.4	31.4	31.4	31.4	31.4	
Total Split (s)	68.0	68.0		68.0	68.0	68.0	32.0	32.0	32.0	32.0	32.0	
Total Split (%)	68.0%	68.0%		68.0%	68.0%	68.0%	32.0%	32.0%	32.0%	32.0%	32.0%	
Yellow Time (s)	3.3	3.3		3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	
All-Red Time (s)	3.2	3.2		3.2	3.2	3.2	3.1	3.1	3.1	3.1	3.1	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	-2.4	0.0	0.0	
Total Lost Time (s)	6.5	6.5		6.5	6.5	6.5	6.4	6.4	4.0	6.4	6.4	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		C-Max	C-Max	C-Max	None	None	None	None	None	
Act Effct Green (s)	69.4	69.4		69.4	69.4	69.4	17.7	17.7	20.1	17.7	17.7	
Actuated g/C Ratio	0.69	0.69		0.69	0.69	0.69	0.18	0.18	0.20	0.18	0.18	
v/c Ratio	0.06	0.70		0.37	0.75	0.11	0.38	0.57	0.26	0.38	0.29	
Control Delay	5.8	14.8		12.4	16.6	1.7	39.3	43.4	8.3	40.5	32.7	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	5.8	14.8		12.4	16.6	1.7	39.3	43.4	8.3	40.5	32.7	
LOS	A	B		B	B	A	D	D	A	D	C	
Approach Delay		14.6			14.7			33.0			36.0	
Approach LOS		B			B			C			D	
Queue Length 50th (m)	0.5	142.6		7.6	95.8	0.0	16.0	35.0	0.5	12.4	15.4	
Queue Length 95th (m)	m1.0	m204.7		25.2	206.8	6.4	27.7	51.0	12.7	23.2	27.0	
Internal Link Dist (m)		635.7			497.2			83.8			171.5	
Turn Bay Length (m)	45.0			50.0			50.0		20.0	45.0		
Base Capacity (vph)	228	1207		307	1237	1099	321	460	484	250	457	
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.06	0.70		0.37	0.75	0.11	0.26	0.39	0.20	0.26	0.20	

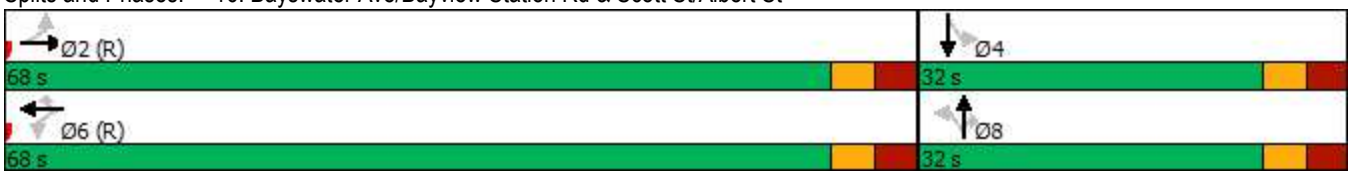
Intersection Summary
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 65 (65%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

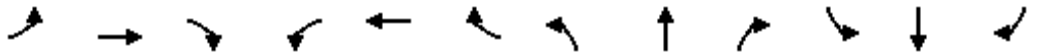
Maximum v/c Ratio: 0.75

Intersection Signal Delay: 18.6	Intersection LOS: B
Intersection Capacity Utilization 96.7%	ICU Level of Service F
Analysis Period (min) 15	

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

Splits and Phases: 16: Bayswater Ave/Bayview Station Rd & Scott St/Albert St





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	274	704	104	76	897	63	34	458	66	52	171	154
Future Volume (vph)	274	704	104	76	897	63	34	458	66	52	171	154
Satd. Flow (prot)	1693	1733	0	1710	1800	1530	1710	1761	0	1710	1640	0
Flt Permitted	0.950			0.235			0.365			0.135		
Satd. Flow (perm)	1693	1733	0	423	1800	1530	657	1761	0	243	1640	0
Satd. Flow (RTOR)		11				119		8			46	
Lane Group Flow (vph)	288	850	0	80	944	66	36	551	0	55	342	0
Turn Type	Prot	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	2			6			8			4	
Permitted Phases				6		6	8			4		
Detector Phase	5	2		6	6	6	8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0		10.0	10.0	10.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	10.6	28.1		28.1	28.1	28.1	35.3	35.3		35.3	35.3	
Total Split (s)	13.0	58.0		45.0	45.0	45.0	36.0	36.0		36.0	36.0	
Total Split (%)	13.0%	58.0%		45.0%	45.0%	45.0%	36.0%	36.0%		36.0%	36.0%	
Yellow Time (s)	3.3	3.3		3.3	3.3	3.3	3.0	3.0		3.0	3.0	
All-Red Time (s)	2.3	2.8		2.8	2.8	2.8	3.3	3.3		3.3	3.3	
Lost Time Adjust (s)	-3.3	0.0		0.0	-3.3	0.0	0.0	-3.3		0.0	0.0	
Total Lost Time (s)	2.3	6.1		6.1	2.8	6.1	6.3	3.0		6.3	6.3	
Lead/Lag	Lead			Lag	Lag	Lag						
Lead-Lag Optimize?	Yes			Yes	Yes	Yes						
Recall Mode	None	C-Max		C-Max	C-Max	C-Max	Min	Min		Min	Min	
Act Effct Green (s)	16.7	57.9		38.9	42.2	38.9	29.7	33.0		29.7	29.7	
Actuated g/C Ratio	0.17	0.58		0.39	0.42	0.39	0.30	0.33		0.30	0.30	
v/c Ratio	1.02	0.84		0.49	1.24	0.10	0.18	0.94		0.76	0.66	
Control Delay	101.9	26.8		28.5	143.3	1.1	29.3	58.4		91.6	33.5	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	101.9	26.8		28.5	143.3	1.1	29.3	58.4		91.6	33.5	
LOS	F	C		C	F	A	C	E		F	C	
Approach Delay		45.8			126.3			56.7			41.5	
Approach LOS		D			F			E			D	
Queue Length 50th (m)	~61.0	132.0		10.5	~243.5	0.0	5.5	107.0		10.2	52.7	
Queue Length 95th (m)	#114.7	#207.4		m14.8	#316.3	m0.6	14.2	#175.6		#33.7	85.0	
Internal Link Dist (m)		92.9			635.7			70.7			630.1	
Turn Bay Length (m)	55.0			65.0		35.0	55.0			50.0		
Base Capacity (vph)	282	1008		164	759	667	195	586		72	519	
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	
Reduced v/c Ratio	1.02	0.84		0.49	1.24	0.10	0.18	0.94		0.76	0.66	

Intersection Summary
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 14 (14%), Referenced to phase 2:EBT and 6:WBTL, Start of Green
Natural Cycle: 140
Control Type: Actuated-Coordinated

Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Satd. Flow (RTOR)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	2.0
Minimum Split (s)	6.0
Total Split (s)	6.0
Total Split (%)	6%
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	None
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (m)	
Queue Length 95th (m)	
Internal Link Dist (m)	
Turn Bay Length (m)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Maximum v/c Ratio: 1.24

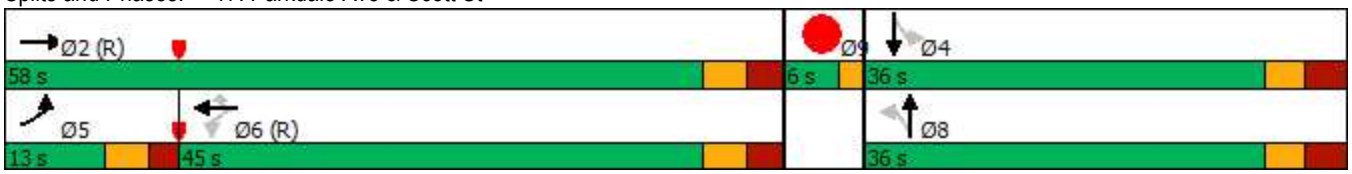
Intersection Signal Delay: 74.6	Intersection LOS: E
Intersection Capacity Utilization 119.1%	ICU Level of Service H
Analysis Period (min) 15	

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

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

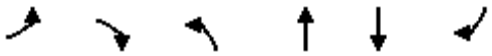
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 17: Parkdale Ave & Scott St



Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SER	SWL	SWR
Lane Configurations										
Traffic Volume (vph)	0	534	469	0	295	0	0	0	0	0
Future Volume (vph)	0	534	469	0	295	0	0	0	0	0
Satd. Flow (prot)	0	1654	0	0	1765	0	0	1765	0	0
Flt Permitted										
Satd. Flow (perm)	0	1654	0	0	1765	0	0	1765	0	0
Lane Group Flow (vph)	0	1056	0	0	311	0	0	0	0	0
Sign Control		Free			Free		Free		Free	

Intersection Summary	
Control Type: Unsignalized	
Intersection Capacity Utilization 63.3%	ICU Level of Service B
Analysis Period (min) 15	



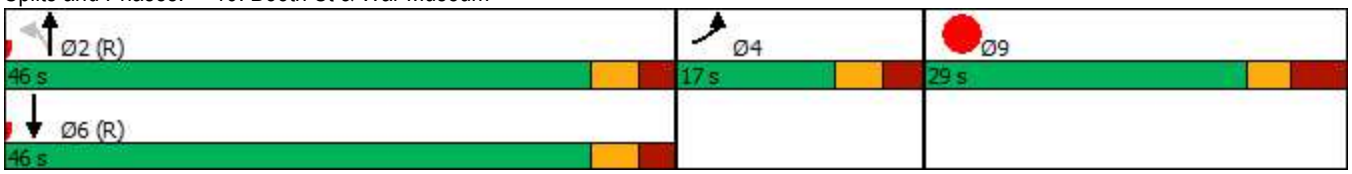
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø9
Lane Configurations							
Traffic Volume (vph)	1	8	8	1128	1115	10	
Future Volume (vph)	1	8	8	1128	1115	10	
Satd. Flow (prot)	1574	0	1710	3420	3417	0	
Flt Permitted	0.994		0.233				
Satd. Flow (perm)	1574	0	419	3420	3417	0	
Satd. Flow (RTOR)	8				1		
Lane Group Flow (vph)	9	0	8	1187	1185	0	
Turn Type	Prot		Perm	NA	NA		
Protected Phases	4			2	6		9
Permitted Phases			2				
Detector Phase	4		2	2	6		
Switch Phase							
Minimum Initial (s)	10.0		10.0	10.0	10.0		10.0
Minimum Split (s)	17.0		30.9	30.9	30.9		29.0
Total Split (s)	17.0		46.0	46.0	46.0		29.0
Total Split (%)	18.5%		50.0%	50.0%	50.0%		32%
Yellow Time (s)	3.3		3.3	3.3	3.3		3.0
All-Red Time (s)	2.9		2.6	2.6	2.6		4.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0		
Total Lost Time (s)	6.2		5.9	5.9	5.9		
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	None		C-Max	C-Max	C-Max		None
Act Effct Green (s)	10.0		87.6	87.6	87.6		
Actuated g/C Ratio	0.11		0.95	0.95	0.95		
v/c Ratio	0.05		0.02	0.36	0.36		
Control Delay	23.0		1.6	1.5	1.5		
Queue Delay	0.0		0.0	0.0	0.0		
Total Delay	23.0		1.6	1.5	1.5		
LOS	C		A	A	A		
Approach Delay	23.0			1.5	1.5		
Approach LOS	C			A	A		
Queue Length 50th (m)	0.2		0.0	0.0	0.0		
Queue Length 95th (m)	4.8		1.3	44.0	43.9		
Internal Link Dist (m)	148.9			192.9	188.6		
Turn Bay Length (m)			35.0				
Base Capacity (vph)	191		399	3256	3253		
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	0.05		0.02	0.36	0.36		

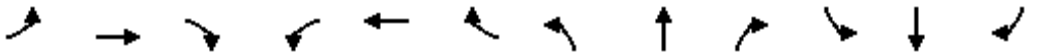
Intersection Summary
Cycle Length: 92
Actuated Cycle Length: 92
Offset: 10 (11%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.36

Intersection Signal Delay: 1.5	Intersection LOS: A
Intersection Capacity Utilization 51.3%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 19: Booth St & War Museum





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	17	839	76	84	962	46	57	4	80	80	0	8
Future Volume (vph)	17	839	76	84	962	46	57	4	80	80	0	8
Satd. Flow (prot)	1710	3348	0	1693	3332	0	1644	1500	0	0	1700	0
Flt Permitted	0.950			0.950			0.772				0.682	
Satd. Flow (perm)	1710	3348	0	1693	3332	0	1336	1500	0	0	1213	0
Satd. Flow (RTOR)		12			6			84			87	
Lane Group Flow (vph)	18	963	0	88	1061	0	60	88	0	0	92	0
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases							8			4		
Detector Phase	5	2		1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	11.3	27.3		11.3	27.3		29.3	29.3		29.3	29.3	
Total Split (s)	12.0	72.0		12.0	72.0		36.0	36.0		36.0	36.0	
Total Split (%)	10.0%	60.0%		10.0%	60.0%		30.0%	30.0%		30.0%	30.0%	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)	6.3	6.3		6.3	6.3		6.3	6.3			6.3	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	
Act Effct Green (s)	6.9	74.5		14.5	89.5		12.1	12.1			12.1	
Actuated g/C Ratio	0.06	0.62		0.12	0.75		0.10	0.10			0.10	
v/c Ratio	0.19	0.46		0.43	0.43		0.45	0.39			0.46	
Control Delay	57.7	13.2		67.7	1.0		60.7	16.3			19.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Total Delay	57.7	13.2		67.7	1.0		60.7	16.3			19.0	
LOS	E	B		E	A		E	B			B	
Approach Delay		14.1			6.1			34.3			19.0	
Approach LOS		B			A			C			B	
Queue Length 50th (m)	4.4	59.3		21.3	0.3		14.4	0.9			1.2	
Queue Length 95th (m)	12.1	87.8		m21.1	m25.4		27.8	16.4			16.9	
Internal Link Dist (m)		497.2			109.7			178.8			36.6	
Turn Bay Length (m)	30.0			35.0			30.0					
Base Capacity (vph)	98	2082		204	2487		330	434			365	
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	0.18	0.46		0.43	0.43		0.18	0.20			0.25	

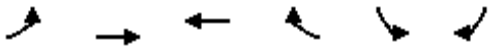
Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 80 (67%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.46

Intersection Signal Delay: 11.7	Intersection LOS: B
Intersection Capacity Utilization 61.4%	ICU Level of Service B
Analysis Period (min) 15	

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

Splits and Phases: 20: City Centre Ave & Albert St



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	53	1118	1112	87	122	48
Future Volume (vph)	53	1118	1112	87	122	48
Satd. Flow (prot)	1676	3340	3309	0	1638	0
Flt Permitted	0.950				0.965	
Satd. Flow (perm)	1676	3340	3309	0	1638	0
Satd. Flow (RTOR)			12		15	
Lane Group Flow (vph)	56	1177	1263	0	179	0
Turn Type	Prot	NA	NA		Prot	
Protected Phases	5	2	6		4	
Permitted Phases						
Detector Phase	5	2	6		4	
Switch Phase						
Minimum Initial (s)	5.0	10.0	10.0		10.0	
Minimum Split (s)	11.3	22.0	22.0		30.3	
Total Split (s)	12.0	89.0	77.0		31.0	
Total Split (%)	10.0%	74.2%	64.2%		25.8%	
Yellow Time (s)	3.3	3.3	3.3		3.3	
All-Red Time (s)	3.0	3.0	3.0		3.0	
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	
Total Lost Time (s)	6.3	6.3	6.3		6.3	
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	None	C-Max	C-Max		None	
Act Effct Green (s)	8.3	90.1	78.0		17.3	
Actuated g/C Ratio	0.07	0.75	0.65		0.14	
v/c Ratio	0.49	0.47	0.59		0.72	
Control Delay	59.9	8.7	8.1		60.3	
Queue Delay	0.0	1.0	6.0		0.0	
Total Delay	59.9	9.7	14.0		60.3	
LOS	E	A	B		E	
Approach Delay		11.9	14.0		60.3	
Approach LOS		B	B		E	
Queue Length 50th (m)	13.6	52.1	25.3		39.3	
Queue Length 95th (m)	m18.8	m94.4	m72.7		60.7	
Internal Link Dist (m)		122.5	138.6		61.4	
Turn Bay Length (m)	30.0					
Base Capacity (vph)	115	2506	2155		349	
Starvation Cap Reductn	0	981	829		0	
Spillback Cap Reductn	0	0	201		0	
Storage Cap Reductn	0	0	0		0	
Reduced v/c Ratio	0.49	0.77	0.95		0.51	

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 22 (18%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.72

Intersection Signal Delay: 16.2	Intersection LOS: B
Intersection Capacity Utilization 65.5%	ICU Level of Service C
Analysis Period (min) 15	

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

Splits and Phases: 21: Albert St & Access 1

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1341	37	66	1420	42	63
Future Volume (vph)	1341	37	66	1420	42	63
Satd. Flow (prot)	3370	0	1710	3386	1602	0
Flt Permitted			0.127		0.980	
Satd. Flow (perm)	3370	0	229	3386	1602	0
Satd. Flow (RTOR)	3				59	
Lane Group Flow (vph)	1451	0	69	1495	110	0
Turn Type	NA		pm+pt	NA	Prot	
Protected Phases	4		3	8	2	
Permitted Phases			8			
Detector Phase	4		3	8	2	
Switch Phase						
Minimum Initial (s)	10.0		5.0	10.0	10.0	
Minimum Split (s)	30.0		14.0	22.0	33.8	
Total Split (s)	66.0		20.0	86.0	34.0	
Total Split (%)	55.0%		16.7%	71.7%	28.3%	
Yellow Time (s)	3.7		3.7	3.7	3.3	
All-Red Time (s)	1.9		1.9	1.9	2.5	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	5.6		5.6	5.6	5.8	
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	C-Max		None	C-Max	None	
Act Effct Green (s)	84.5		94.7	94.7	13.9	
Actuated g/C Ratio	0.70		0.79	0.79	0.12	
v/c Ratio	0.61		0.26	0.56	0.46	
Control Delay	16.5		6.3	6.7	29.5	
Queue Delay	1.2		0.0	6.5	0.0	
Total Delay	17.7		6.3	13.2	29.5	
LOS	B		A	B	C	
Approach Delay	17.7			12.9	29.5	
Approach LOS	B			B	C	
Queue Length 50th (m)	85.8		2.5	48.3	12.2	
Queue Length 95th (m)	m127.1		10.5	127.2	26.1	
Internal Link Dist (m)	117.1			245.9	41.8	
Turn Bay Length (m)			70.0			
Base Capacity (vph)	2373		358	2671	421	
Starvation Cap Reductn	634		0	441	0	
Spillback Cap Reductn	0		0	1122	19	
Storage Cap Reductn	0		0	0	0	
Reduced v/c Ratio	0.83		0.19	0.97	0.27	

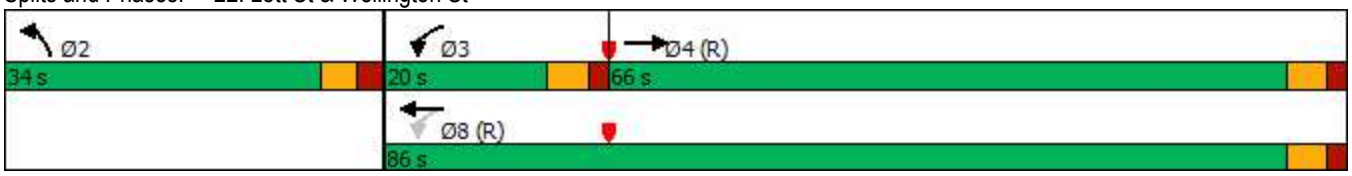
Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 23 (19%), Referenced to phase 4:EBT and 8:WBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

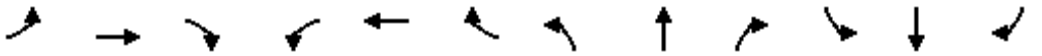
Maximum v/c Ratio: 0.61

Intersection Signal Delay: 15.7	Intersection LOS: B
Intersection Capacity Utilization 67.0%	ICU Level of Service C
Analysis Period (min) 15	

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

Splits and Phases: 22: Lett St & Wellington St





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	43	768	16	11	1150	14	9	0	14	44	0	12
Future Volume (vph)	43	768	16	11	1150	14	9	0	14	44	0	12
Satd. Flow (prot)	1710	3344	0	1710	3380	0	0	1619	0	0	1680	0
Flt Permitted	0.189			0.341				0.900			0.757	
Satd. Flow (perm)	340	3344	0	614	3380	0	0	1484	0	0	1322	0
Satd. Flow (RTOR)		3			1			56			56	
Lane Group Flow (vph)	45	825	0	12	1226	0	0	24	0	0	59	0
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases	7	4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	9.6	22.0		22.0	22.0		30.5	30.5		30.5	30.5	
Total Split (s)	15.0	80.0		65.0	65.0		40.0	40.0		40.0	40.0	
Total Split (%)	12.5%	66.7%		54.2%	54.2%		33.3%	33.3%		33.3%	33.3%	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	1.3	1.3		1.3	1.3		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.6	0.0			0.0			0.0	
Total Lost Time (s)	4.6	4.6		5.2	4.6			4.3			4.3	
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes			Yes	Yes							
Recall Mode	None	C-Min		C-Max	C-Max		None	None		None	None	
Act Effct Green (s)	101.0	101.9		92.7	93.1			13.0			13.0	
Actuated g/C Ratio	0.84	0.85		0.77	0.78			0.11			0.11	
v/c Ratio	0.13	0.29		0.03	0.47			0.11			0.31	
Control Delay	2.5	2.3		6.8	7.7			1.7			16.6	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	2.5	2.3		6.8	7.7			1.7			16.6	
LOS	A	A		A	A			A			B	
Approach Delay		2.3			7.7			1.7			16.6	
Approach LOS		A			A			A			B	
Queue Length 50th (m)	0.7	7.4		0.7	52.7			0.0			0.7	
Queue Length 95th (m)	m3.2	m43.7		3.8	109.8			1.0			12.2	
Internal Link Dist (m)		82.0			212.6			72.6			45.7	
Turn Bay Length (m)	70.0											
Base Capacity (vph)	404	2839		474	2623			480			432	
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	0.11	0.29		0.03	0.47			0.05			0.14	

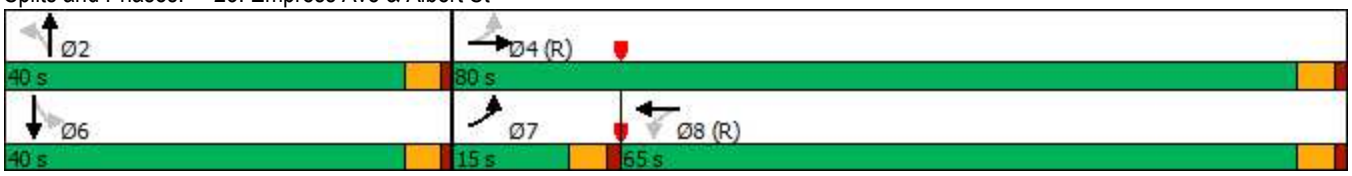
Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 22 (18%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated

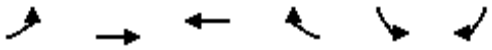
Maximum v/c Ratio: 0.47

Intersection Signal Delay: 5.7	Intersection LOS: A
Intersection Capacity Utilization 53.5%	ICU Level of Service A
Analysis Period (min) 15	

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

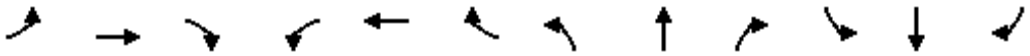
Splits and Phases: 23: Empress Ave & Albert St





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	826	1168	14	0	12
Future Volume (vph)	0	826	1168	14	0	12
Satd. Flow (prot)	0	3353	3346	0	0	1526
Flt Permitted						
Satd. Flow (perm)	0	3353	3346	0	0	1526
Lane Group Flow (vph)	0	869	1244	0	0	13
Sign Control		Free	Free		Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization 44.6%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	26	0	0	11	0	1212	25	0	755	0
Future Volume (vph)	0	0	26	0	0	11	0	1212	25	0	755	0
Satd. Flow (prot)	0	0	1526	0	0	1526	0	3343	0	0	3353	0
Flt Permitted												
Satd. Flow (perm)	0	0	1526	0	0	1526	0	3343	0	0	3353	0
Lane Group Flow (vph)	0	0	27	0	0	12	0	1302	0	0	795	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization 46.2%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	993	42	0	1629	0	57
Future Volume (vph)	993	42	0	1629	0	57
Satd. Flow (prot)	3333	0	0	3353	0	1526
Flt Permitted						
Satd. Flow (perm)	3333	0	0	3353	0	1526
Lane Group Flow (vph)	1089	0	0	1715	0	60
Sign Control	Free			Free	Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization 50.9%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	975	42	121	1495	66	57
Future Volume (vph)	975	42	121	1495	66	57
Satd. Flow (prot)	3399	0	1710	3420	1643	0
Flt Permitted			0.213		0.974	
Satd. Flow (perm)	3399	0	383	3420	1643	0
Satd. Flow (RTOR)	6				34	
Lane Group Flow (vph)	1070	0	127	1574	129	0
Turn Type	NA		pm+pt	NA	Prot	
Protected Phases	4		3	8	2	
Permitted Phases			8			
Detector Phase	4		3	8	2	
Switch Phase						
Minimum Initial (s)	10.0		5.0	10.0	10.0	
Minimum Split (s)	37.0		11.0	37.0	32.3	
Total Split (s)	72.0		15.0	87.0	33.0	
Total Split (%)	60.0%		12.5%	72.5%	27.5%	
Yellow Time (s)	3.7		3.7	3.7	3.3	
All-Red Time (s)	2.3		2.3	2.3	3.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	6.0		6.0	6.0	6.3	
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	C-Max		None	C-Max	None	
Act Effct Green (s)	81.0		94.6	94.6	13.1	
Actuated g/C Ratio	0.68		0.79	0.79	0.11	
v/c Ratio	0.47		0.33	0.58	0.61	
Control Delay	0.6		7.4	10.9	49.6	
Queue Delay	0.2		0.0	0.7	0.0	
Total Delay	0.8		7.4	11.6	49.6	
LOS	A		A	B	D	
Approach Delay	0.8			11.3	49.6	
Approach LOS	A			B	D	
Queue Length 50th (m)	2.2		11.3	107.3	22.8	
Queue Length 95th (m)	m2.8		m15.4	m113.7	41.9	
Internal Link Dist (m)	71.8			49.0	28.0	
Turn Bay Length (m)			60.0			
Base Capacity (vph)	2295		402	2695	392	
Starvation Cap Reductn	391		0	677	0	
Spillback Cap Reductn	52		0	417	3	
Storage Cap Reductn	0		0	0	0	
Reduced v/c Ratio	0.56		0.32	0.78	0.33	

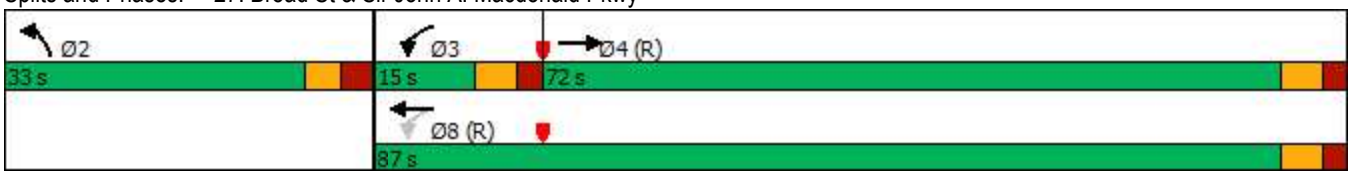
Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 22 (18%), Referenced to phase 4:EBT and 8:WBTL, Start of Green
Natural Cycle: 85
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.61

Intersection Signal Delay: 9.1	Intersection LOS: A
Intersection Capacity Utilization 62.2%	ICU Level of Service B
Analysis Period (min) 15	

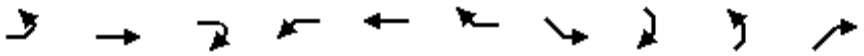
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 27: Broad St & Sir John A. Macdonald Pkwy



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	963	42	0	1561	0	57
Future Volume (vph)	963	42	0	1561	0	57
Satd. Flow (prot)	3333	0	0	3353	0	1526
Flt Permitted						
Satd. Flow (perm)	3333	0	0	3353	0	1526
Lane Group Flow (vph)	1058	0	0	1643	0	60
Sign Control	Free			Free	Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization 48.9%		ICU Level of Service A	
Analysis Period (min) 15			

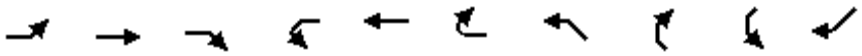


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SER	NEL	NER
Lane Configurations										
Traffic Volume (vph)	0	0	0	0	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0	0	0	0	0
Satd. Flow (prot)	0	3353	0	0	3353	0	0	0	0	1765
Flt Permitted										
Satd. Flow (perm)	0	3353	0	0	3353	0	0	0	0	1765
Lane Group Flow (vph)	0	0	0	0	0	0	0	0	0	0
Sign Control		Free			Free		Free		Free	

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

Lane Group	NBL	NBR	SET	SER	NWL	NWT
Lane Configurations			↑			↑
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Satd. Flow (prot)	0	0	1765	0	0	1765
Flt Permitted						
Satd. Flow (perm)	0	0	1765	0	0	1765
Lane Group Flow (vph)	0	0	0	0	0	0
Sign Control	Free		Free			Free

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization 63.3%		ICU Level of Service B	
Analysis Period (min) 15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NWL	NWR	SWL	SWR
Lane Configurations										
Traffic Volume (vph)	0	0	0	0	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0	0	0	0	0
Satd. Flow (prot)	0	3353	0	0	3353	0	0	0	1765	0
Flt Permitted										
Satd. Flow (perm)	0	3353	0	0	3353	0	0	0	1765	0
Lane Group Flow (vph)	0	0	0	0	0	0	0	0	0	0
Sign Control		Free			Free		Free		Free	

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

APPENDIX G: Preston Street Extension EMME Models

TRANS Regional Model

Version 2.15 - Assigned August 25, 2021

AM Peak Hour Total Traffic Volume

Lebreton Flats Development

2011 Model - Basecase

N/A

User Initials: TIMW
Plot Prepared: August 25, 2021
EMME Scenario: 21711

Legend

AM Peak Hour Total Traffic Volume

1000 2000 3000 4000 5000

N

Distance (m)

100 200 300 400 500

TRANS Regional Model

Version 2.15 - Assigned May 25, 2021

AM Peak Hour Total Traffic Volume

Lebreton Flats Development

2031 Model - Basecase

With Preston Extension

User Initials: TIMW
Plot Prepared: May 26, 2021
EMME Scenario: 201

Legend

AM Peak Hour Total Traffic Volume

1000 2000 3000 4000 5000

Distance (m)

100 200 300 400 500

TRANS Regional Model

Version 2.15 - Assigned May 25, 2021

AM Peak Hour Total Traffic Volume

Lebreton Flats Development

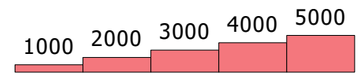
2031 Model - Scenario 2

Without Preston Extension

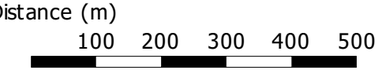
User Initials: TIMW
Plot Prepared: May 26, 2021
EMME Scenario: 202

Legend

AM Peak Hour Total Traffic Volume



Distance (m)



TRANS Regional Model

Version 2.15 - Assigned May 25, 2021

AM Peak Hour Total Traffic Volume

Lebreton Flats Development

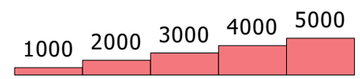
2031 Model - Scenario 2e

Without Preston Extension
Permit NBR movement at Slidell
Right-in, Right-out Access

User Initials: TIMW
Plot Prepared: May 26, 2021
EMME Scenario: 206

Legend

AM Peak Hour Total Traffic Volume



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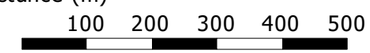


TRANS Regional Model

Version 2.15 - Assigned May 25, 2021

AM Peak Hour Total Traffic Volume

Lebreton Flats Development

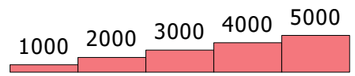
2031 Model - Scenario 3a

Without Preston Extension
Without turn restriction at Booth/Wellington

User Initials: TIMW
Plot Prepared: May 26, 2021
EMME Scenario: 301

Legend

AM Peak Hour Total Traffic Volume



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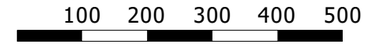


TRANS Regional Model

Version 2.15 - Assigned May 25, 2021

AM Peak Hour Total Traffic Volume

Lebreton Flats Development

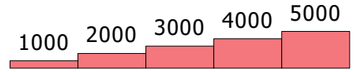
2031 Model - Scenario 3b

Without Preston Extension
Removal of NBL turn restriction at Booth/Wellingto

User Initials: TIMW
Plot Prepared: May 26, 2021
EMME Scenario: 302

Legend

AM Peak Hour Total Traffic Volume



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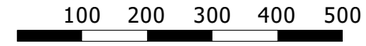

APPENDIX H: Transportation Demand Management Checklist

Introduction

The City of Ottawa's *Transportation Impact Assessment (TIA) Guidelines* (specifically Module 4.3—Transportation Demand Management) requires proponents of qualifying developments to assess the context, need and opportunity for transportation demand management (TDM) measures at their development. The guidelines require that proponents complete the City's **TDM Measures Checklist**, at a minimum, to identify any TDM measures being proposed.

The remaining sections of this document are:

- Using the Checklist
- Glossary
- TDM Measures Checklist: Non-Residential Developments
- TDM Measures Checklist: Residential developments

Readers are encouraged to contact the City of Ottawa's TDM Officer for any guidance and assistance they require to complete this checklist.

Using the Checklist

The City's *TIA Guidelines* are designed so that *Module 3.1—Development-Generated Travel Demand*, *Module 4.1—Development Design*, and *Module 4.2—Parking* are complete before a proponent begins *Module 4.3—Transportation Demand Management*.

Within Module 4.3, *Element 4.3.1—Context for TDM* and *Element 4.3.2—Need and Opportunity* are intended to create an understanding of the need for any TDM measures, and of the results they are expected to achieve or support. Once those two elements are complete, proponents begin *Element 4.3.3—TDM Program* that requires proponents to identify proposed TDM measures using the **TDM Measures Checklist**, at a minimum. The *TIA Guidelines* note that the City may require additional analysis for large or complex development proposals, or those that represent a higher degree of performance risk; as well, proponents proposing TDM measures for a new development must also propose an implementation plan that addresses planning and coordination, funding and human resources, timelines for action, performance targets and monitoring requirements.

This **TDM Measures Checklist** document includes two actual checklists, one for non-residential developments (office, institutional, retail or industrial) and one for residential developments (multi-family, condominium or subdivision). Readers may download the applicable checklist in electronic format and complete it electronically, or print it out and complete it by hand. As an alternative, they may create a freestanding document that lists the TDM measures being proposed and provides additional detail on them, including an implementation plan as required by the City's *TIA Guidelines*.

Each measure in the checklist is numbered for easy reference. Each measure is also flagged as:

- BASIC —The measure is generally feasible and effective, and in most cases would benefit the development and its users.
- BETTER —The measure could maximize support for users of sustainable modes, and optimize development performance.
- ★ —The measure is one of the most dependably effective tools to encourage the use of sustainable modes.

Glossary

This glossary defines and describes the following measures that are identified in the **TDM Measures Checklist**:

TDM program management
- Program coordinator
- Travel surveys

Parking
- Priced parking

Walking & cycling
- Information on walking/cycling routes & destinations
- Bicycle skills training
- Valet bike parking

Transit
- Transit information
- Transit fare incentives
- Enhanced public transit service
- Private transit service

Ridesharing
- Ridematching service
- Carpool parking price incentives
- Vanpool service

Carsharing & bikesharing
- Bikeshare stations & memberships
- Carshare vehicles & memberships

TDM marketing & communications
- Multimodal travel information
- Personalized trip planning
- Promotions

Other incentives & amenities
- Emergency ride home
- Alternative work arrangements
- Local business travel options
- Commuter incentives
- On-site amenities

For further information on selecting and implementing TDM measures (particularly as they apply to non-residential developments, with a focus on workplaces), readers may find it helpful to consult Transport Canada's *Workplace Travel Plans: Guidance for Canadian Employers*, which can be downloaded in English and French from the ACT Canada website at www.actcanada.com/resources/act-resources.

▶ *TDM program management*

While some TDM measures can be implemented with a minimum of effort through routine channels (e.g. parking or human resources), more complex measures or a larger development site may warrant assigning responsibility for TDM program coordination to a designated person either inside or outside the implementing organization. Similarly, some TDM measures are more effective if they are targeted or customized for specific audiences, and would benefit from the collection of related information.

Program coordinator. This person is charged with day-to-day TDM program development and implementation. Only in very large employers with thousands of workers is this likely to be a full-time, dedicated position. Usually, it is added to an existing role in parking, real estate, human resources or environmental management. In practice, this role may be called TDM coordinator, commute trip reduction coordinator or employee transportation coordinator. The City of Ottawa can identify external resources (e.g. non-profit organizations or consultants) that could provide these services.

Travel surveys. Travel surveys are most commonly conducted at workplaces, but can be helpful in other settings. They identify how and why people travel the way they do, and what barriers and opportunities exist for different behaviours. They usually capture the following information:

- *Personal data* including home address or postal code, destination, job type or function, employment status (full-time, part-time and/or teleworker), gender, age and hours of work
- *Commute information* including distance or time for the trip between home and work, usual methods of commuting, and reasons for choosing them
- *Barriers and opportunities* including why other commuting methods are unattractive, willingness to consider other options, and what improvements to other options could make them more attractive

▶ *Parking*

Priced parking. Charging for parking is typically among the most effective ways of getting drivers to consider other travel options. While drivers may not support parking fees, they can be more accepting if the revenues are used to improve other travel options (e.g. new showers and change rooms, improved bicycle parking or subsidized transit passes). At workplaces or daytime destinations, parking discounts (e.g. early bird specials, daily passes that cost significantly less than the equivalent hourly charge, monthly passes that cost significantly less than the equivalent daily charge) encourage long-term parking and discourage the use of other travel options. For residential uses, unbundling parking costs from dwelling purchase, lease or rental costs provides an incentive for residents to own fewer cars, and can reduce car use and the costs of parking provision.

▶ *Walking & cycling*

Active transportation options like cycling and walking are particularly attractive for short trips (typically up to 5 km and 2 km, respectively). Other supportive factors include an active, health-conscious audience, and development proximity to high-quality walking and cycling networks. Common challenges to active transportation include rain, darkness, snowy or icy conditions, personal safety concerns, the potential for bicycle theft, and a lack of shower and change facilities for those making longer trips.

Information on walking/cycling routes & destinations. Ottawa, Gatineau and the National Capital Commission all publish maps to help people identify the most convenient and comfortable walking or cycling routes.

Bicycle skills training. Potential cyclists can be intimidated by the need to ride on roads shared with motor vehicles. This barrier can be reduced or eliminated by offering cycling skills training to interested cyclists (e.g. CAN-BIKE certification courses).

Valet bike parking. For large events, temporary “valet parking” areas can be easily set up to maximize convenience and security for cyclists. Experienced local non-profit groups can help.

▶ *Transit*

Transit information. Difficulty in finding or understanding basic information on transit fares, routes and schedules can prevent people from trying transit. Employers can help by providing online links to OC Transpo and STO websites. Transit users also appreciate visible maps and schedules of transit routes that serve the site; even better, a screen that shows real-time transit arrival information is particularly useful at sites with many transit users and an adjacent transit stop or station.

Transit fare incentives. Free or subsidized transit fares are an attractive incentive for non-transit riders to try transit. Many non-users are unsure of how to pay a fare, and providing tickets or a preloaded PRESTO card (or, for special events, pre-arranging with OC Transpo that transit fares are included with event tickets) overcome that barrier.

Enhanced public transit service. OC Transpo may adjust transit routes, stop locations, service hours or frequencies for an agreed fee under contract, or at no cost where warranted by the potential ridership increase. Information provided by a survey of people who travel to a given development can support these decisions.

Private transit service. At remote suburban or rural workplaces, a poor transit connection to the nearest rapid transit station can be an obstacle for potential transit users, and an employer in this situation could initiate a private shuttle service to make transit use more feasible or attractive. Other circumstances where a shuttle makes sense include large special events, or a residential development for people with limited independent mobility who still require regular access to shops and services.

▶ *Ridesharing*

Ridesharing's potential is greatest in situations where transit ridership is low, where parking costs are high, and/or where large numbers of car commuters (e.g. employees or full-time students) live reasonably far from the workplace.

Ridematching service. Potential carpoolers in Ottawa are served by www.OttawaRideMatch.com, an online service to help people find carpool partners. Employers can arrange for a dedicated portal where their employees can search for potential carpool partners only among their colleagues, if they desire. Some very large employers may establish internal ridematching services, to maximize employee uptake and corporate control. Ridematching service providers typically include a waiver to relieve employers of liability when their employees start carpooling through a ridematching service. Ridesharing with co-workers also tends to eliminate security concerns.

Carpool parking price incentives. Discounted parking fees for carpools can be an extra incentive to rideshare.

Vanpool service. Vanpools operate in the Toronto and Vancouver metropolitan areas, where vans that carry up to about ten occupants are driven by one of the vanpool members. Vanpools tend to operate on a cost-recovery basis, and are most practical for long-distance commutes where transit is not an option. Current legislation in Ontario does not permit third-party (i.e. private or non-profit) vanpool services, but does permit employers to operate internal vanpools.

▶ *Carsharing & bikesharing*

Bikeshare station & memberships. VeloGO Bike Share and Right Bike both operate bikesharing services in Ottawa. Developments that would benefit from having a bikeshare station installed at or near their development may negotiate directly with either service provider.

Carshare vehicles & memberships. VRTUCAR and Zipcar both operate carsharing services in Ottawa, for use by the general public or by businesses as an alternative to corporate fleets. Carsharing services offer 24-hour access, self-serve reservation systems, itemized monthly billings, and outsourcing of all financing, insurance, maintenance and administrative responsibilities.

▶ *TDM marketing & communications*

Multimodal travel information. Aside from mode-specific information discussed elsewhere in this document, multimodal information that identifies and explains the full range of travel options available to people can be very influential—especially when provided at times and locations where individuals are actively choosing among those options. Examples include: employees when their employer is relocating, or when they are joining a new employer; students when they are starting a program at a new institution; visitors or customers travelling to an unfamiliar destination, or when faced with new options (e.g. shuttle services or parking restrictions); and residents when they purchase or occupy a residence that is new to them.

Personalized trip planning. As an extension to the simple provision of information, this technique (also known as *individualized marketing*) is effective in helping people make more sustainable travel choices. The approach involves identifying who is most likely to change their travel choices (notably relocating employees, students or residents) giving them customized information, training and incentives to support them in making that change. It may be conducted with assistance from an external service provider with the necessary skills, and delivered in a variety of settings including workplaces and homes.

Promotions. Special events and incentives can raise awareness and encourage individuals to examine and try new travel options.

- *Special events* can help attract attention, build participation and celebrate successes. Events that have been held in Ottawa include Earth Day (in April) Bike to Work Month (in May), Environment Week (early June), International Car Free Day (September 22), and Canadian Ridesharing Week (October). At workplaces or educational institutions, similarly effective internal events could include workshops, lunch-and-learns, inter-departmental challenges, pancake breakfasts, and so on.
- *Incentives* can encourage trial of sustainable modes, and might include loyalty rewards for duration or consistency of activity (e.g. 1,000 km commuted by bicycle), participation prizes (e.g. for completing a survey or joining a special event), or personal recognition that highlights individual accomplishments.

▶ ***Other incentives & amenities***

Emergency ride home. This measure assures non-driving commuters that they will be able to get home quickly and conveniently in case of family emergency (or in some workplaces, in case of unexpected overtime, severe weather conditions, or the early departure of a carpool driver) by offering a chit or reimbursement for taxi, carshare or rental car usage. Limits on annual usage or cost per employee may be set, although across North America the actual rates of usage are typically very low.

Alternative work arrangements. A number of alternatives to the standard 9-to-5, Monday-to-Friday workweek can support sustainable commuting (and work-life balance) at workplaces:

- *Flexible working hours* allow transit commuters to take advantage of the fastest and most convenient transit services, and allow potential carpoolers to include people who work slightly different schedules in their search for carpool partners. They also allow active commuters to travel at least one direction in daylight, either in the morning or the afternoon, during the winter.
- *Compressed workweeks* allow employees to work their required hours over fewer days (e.g. five days in four, or ten days in nine), eliminating the need to commute on certain days. For employees, this can promote work-life balance and gives flexibility for appointments. For employers, this can permit extended service hours as well as reduced parking demands if employees stagger their days off.
- *Telework* is a normal part of many workplaces. It helps reduce commuting activity, and can lead to significant cost savings through workspace sharing. Telework initiatives involve many stakeholders, and may face as much resistance as support within an organization. Consultation, education and training are helpful.

Local business travel options. A common obstacle for people who might prefer to not drive to work is that their employer requires them to bring a car to work so they can make business trips during the day. Giving employees convenient alternatives to private cars for local business travel during the workday makes walking, cycling, transit or carpooling in someone else's car more practical.

- *Walking and cycling*—Active transportation can be a convenient and enjoyable way to make short business trips. They can also reduce employer expenses, although they may require extra travel time. Providing a fleet of shared bikes, or reimbursing cyclists for the kilometres they ride, are inexpensive ways to validate their choice.
- *Public transit*—Transit can be convenient and inexpensive compared to driving. OC Transpo's PRESTO cards are transferable among employees and automatically reloadable, making them the perfect tool for enabling transit use during the day.
- *Ridesharin*g—When multiple employees attend the same off-site meeting or event, they can be reminded to carpool whenever possible.
- *Taxis or ride-hailing*—Taxis and ride-hailing can eliminate parking costs, save time and eliminate collision liability concerns. Taxi chits eliminate cash transactions and minimize paperwork.
    - *Fleet vehicles or carsharing*—Fleet vehicles can be cost-effective for high travel volumes, while carsharing is a great option for less frequent trips.
    - *Interoffice shuttles*—Employers with multiple worksites in the region could use a shuttle service to move people as well as mail or supplies.
    - *Videoconferencing*—New technologies mean that staying in the office to hold meetings electronically is more viable, affordable and productive than ever.

Commuter incentives. Financial incentives can help create a level playing field and support commuting by sustainable modes. A "commuting allowance" given to all employees as a taxable benefit is one such incentive; employees who choose to drive could then be charged for parking, while other employees could use the allowance for transit fares or cycling equipment, or for spending or saving. (Note that in the United States this practice is known as "parking cash-out," and is popular because commuting allowances are not taxable up to a certain limit). Alternatively, a monthly commuting allowance for non-driving employees would give drivers an incentive to choose a different commuting mode. Another practical incentive for active commuters or transit users is to offer them discounted "rainy day" parking passes for a small number of days each month.

On-site amenities. Developments that offer services to limit employees' need for a car during their commute (e.g. to drop off clothing at the dry cleaners) or during their workday (e.g. to buy lunch) can free employees to make the commuting decision that otherwise works best for them.

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

Legend

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

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

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

		TDM measures: *Non-residential developments*	Check if proposed & add descriptions
	1.	**TDM PROGRAM MANAGEMENT**	
	1.1	**Program coordinator**	
BASIC ★	1.1.1	Designate an internal coordinator, or contract with an external coordinator	☐ To be determined by individual developers
	1.2	**Travel surveys**	
BETTER	1.2.1	Conduct periodic surveys to identify travel-related behaviours, attitudes, challenges and solutions, and to track progress	☐ The NCC could commission a travel survey every 5 years during the development to gauge the effectiveness of measures.
	2.	**WALKING AND CYCLING**	
	2.1	**Information on walking/cycling routes & destinations**	
BASIC	2.1.1	Display local area maps with walking/cycling access routes and key destinations at major entrances	☐ This could be made to be a requirement of all developments in the LeBreton Flats area.
	2.2	**Bicycle skills training**	
		Commuter travel	
BETTER ★	2.2.1	Offer on-site cycling courses for commuters, or subsidize off-site courses	☐ To be determined by individual developers
	2.3	**Valet bike parking**	
		Visitor travel	
BETTER	2.3.1	Offer secure valet bike parking during public events when demand exceeds fixed supply (e.g. for festivals, concerts, games)	☐ To be determined by individual developers

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

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

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

TDM Measures Checklist:
Residential Developments (multi-family, condominium or subdivision)

Legend

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

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

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

		TDM measures: *Residential developments*	Check if proposed & add descriptions
	1.	**TDM PROGRAM MANAGEMENT**	
	1.1	**Program coordinator**	
BASIC ★	1.1.1	Designate an internal coordinator, or contract with an external coordinator	☐ **To be determined by individual developers**
	1.2	**Travel surveys**	
BETTER	1.2.1	Conduct periodic surveys to identify travel-related behaviours, attitudes, challenges and solutions, and to track progress	☐ **The NCC could commission a travel survey every 5 years during the development to gauge the effectiveness of measures.**
	2.	**WALKING AND CYCLING**	
	2.1	**Information on walking/cycling routes & destinations**	
BASIC	2.1.1	Display local area maps with walking/cycling access routes and key destinations at major entrances *(multi-family, condominium)*	☐ **This could be made to be a requirement of all developments in the LeBreton Flats area.**
	2.2	**Bicycle skills training**	
BETTER	2.2.1	Offer on-site cycling courses for residents, or subsidize off-site courses	☐ **To be determined by individual developers**

		TDM measures: *Residential developments*	Check if proposed & add descriptions
		3. TRANSIT	
		3.1 Transit information	
BASIC	3.1.1	Display relevant transit schedules and route maps at entrances *(multi-family, condominium)*	☐ This could be made to be a requirement of all developments in the LeBreton Flats area.
BETTER	3.1.2	Provide real-time arrival information display at entrances *(multi-family, condominium)*	☐ This could be made to be a requirement of all developments in the LeBreton Flats area.
		3.2 Transit fare incentives	
BASIC ★	3.2.1	Offer PRESTO cards preloaded with one monthly transit pass on residence purchase/move-in, to encourage residents to use transit	☐ To be determined by individual developers
BETTER	3.2.2	Offer at least one year of free monthly transit passes on residence purchase/move-in	☐ To be determined by individual developers
		3.3 Enhanced public transit service	
BETTER ★	3.3.1	Contract with OC Transpo to provide early transit services until regular services are warranted by occupancy levels *(subdivision)*	☐ Given the existing OC Transpo service in the area, it is assumed this will be ongoing throughout the development of LeBreton Flats.
		3.4 Private transit service	
BETTER	3.4.1	Provide shuttle service for seniors homes or lifestyle communities (e.g. scheduled mall or supermarket runs)	☐ To be determined by individual developers
		4. CARSHARING & BIKESHARING	
		4.1 Bikeshare stations & memberships	
BETTER	4.1.1	Contract with provider to install on-site bikeshare station (*multi-family)*	☐ This could be made to be a requirement of all developments in the LeBreton Flats area.
BETTER	4.1.2	Provide residents with bikeshare memberships, either free or subsidized *(multi-family)*	☐ To be determined by individual developers
		4.2 Carshare vehicles & memberships	
BETTER	4.2.1	Contract with provider to install on-site carshare vehicles and promote their use by residents	☐ To be determined by individual developers
BETTER	4.2.2	Provide residents with carshare memberships, either free or subsidized	☐ To be determined by individual developers
		5. PARKING	
		5.1 Priced parking	
BASIC ★	5.1.1	Unbundle parking cost from purchase price *(condominium)*	☐ This could be made to be a requirement of all developments in the LeBreton Flats area.
BASIC ★	5.1.2	Unbundle parking cost from monthly rent *(multi-family)*	☐ This could be made to be a requirement of all developments in the LeBreton Flats area.

			TDM measures: *Residential developments*	Check if proposed & add descriptions
		6.	**TDM MARKETING & COMMUNICATIONS**	
		6.1	**Multimodal travel information**	
BASIC	★	6.1.1	Provide a multimodal travel option information package to new residents	☐ To be determined by individual developers
		6.2	**Personalized trip planning**	
BETTER	★	6.2.1	Offer personalized trip planning to new residents	☐ To be determined by individual developers

APPENDIX I: Intersection MMLOS Analysis

MMLOS Analysis Sheets – Existing Conditions

INTERSECTIONS	Wellington / Vimy				Booth / Wellington				Booth / Albert				Albert / Preston				Albert / City Centre			
Designation/Policy Area	Within 600m of a Rapid Transit Station				Within 600m of a Rapid Transit Station				Within 600m of a Rapid Transit Station				Within 600m of a Rapid Transit Station				Within 600m of a Rapid Transit Station			
Roadway Classification	Arterial				Arterial				Arterial				Arterial				Arterial			
Approach	Northbound	Southbound	Eastbound	Westbound	Northbound	Southbound	Eastbound	Westbound	Northbound	Southbound	Eastbound	Westbound	Northbound	Southbound	Eastbound	Westbound	Northbound	Southbound	Eastbound	Westbound
Pedestrian	Total travel lanes crossed	-	2	5	5	4	5	4	5	3	5	6	7	3	-	6	6	3	2	6	6
	Centre Median (>2.4m)	-	No	No	No	No	No	Yes	Yes	No	No	No	No	No	-	No	No	No	No	No	No
	Left-Turn Conflict	-	Perm.	None/Prohibited	Perm.	None/Prohibited	None/Prohibited	None/Prohibited	Prot./Perm.	Perm.	Prot./Perm.	Perm.	Prot./Perm.	Prot./Perm.	-	Perm.	None/Prohibited	Perm.	Prot./Perm.	Perm.	Perm.
	Right-Turn Conflict	-	Perm./Yield	Prot./Perm.	None	None	Perm./Yield	Perm./Yield	Perm./Yield	Perm./Yield	Perm./Yield	Perm./Yield	Perm./Yield	Perm./Yield	-	None	Perm./Yield	Perm./Yield	Perm./Yield	Perm./Yield	Perm./Yield
	RTOR	-	Perm.	Perm.	Perm.	Perm.	Perm.	Prohibited	Prohibited	Perm.	Perm.	Perm.	Prohibited	Perm.	-	Perm.	Prohibited	Perm.	Perm.	Perm.	Perm.
	Leading Ped Interval	-	No	No	No	No	No	No	No	No	No	No	No	No	-	No	No	No	No	No	No
	Right-Turn Channel	-	No Right-Turn Channel	No Right-Turn Channel	No Right-Turn Channel	No Right-Turn Channel	No Right-Turn Channel	No Right-Turn	No Right-Turn Channel	No Right-Turn Channel	No Right-Turn Channel	No Right-Turn Channel	No Right-Turn Channel	No Right-Turn Channel	-	No Right-Turn Channel	No Right-Turn Channel	No Right-Turn Channel	No Right-Turn Channel	No Right-Turn Channel	No Right-Turn Channel
	Right-Turn Corner Radius	-	> 5m to 10m	> 10m to 15m	No Right-Turn	No Right-Turn	> 5m to 10m	> 5m to 10m	> 5m to 10m	> 5m to 10m	> 5m to 10m	> 15m to 25m	> 5m to 10m	> 5m to 10m	-	No Right-Turn	> 5m to 10m	> 10m to 15m	> 5m to 10m	> 10m to 15m	> 10m to 15m
	Crosswalk Treatment	-	Standard Transverse Markings	Standard Transverse Markings	Standard Transverse Markings	Zebra Stripe Hi-Vis Markings	Zebra Stripe Hi-Vis Markings	Zebra Stripe Hi-Vis Markings	Zebra Stripe Hi-Vis Markings	Zebra Stripe Hi-Vis Markings	Zebra Stripe Hi-Vis Markings	Zebra Stripe Hi-Vis Markings	Zebra Stripe Hi-Vis Markings	Zebra Stripe Hi-Vis Markings	-	Zebra Stripe Hi-Vis Markings	Zebra Stripe Hi-Vis Markings	Zebra Stripe Hi-Vis Markings	Zebra Stripe Hi-Vis Markings	Zebra Stripe Hi-Vis Markings	Zebra Stripe Hi-Vis Markings
	PETSI Score	-	86	40	48	75	49	74	47	74	41	34	21	74	-	34	33	73	89	23	23
	PETSI LOS	-	B	D	D	B	D	C	D	C	E	F	F	C	-	E	E	C	B	F	F
	Cycle Length (s)		95				95				120				120				120		
	Directional Split (s)	-	62	33	33	48	48	47	35	55	37	65	40	65	-	30	30	84	67	36	36
	FDW + Intergreen	-	17	25.3	25.3	25.8	25.8	21.9	21.9	29.5	29.5	27.5	27.5	24.2	-	22.3	22.3	20.3	20.3	22.3	22.3
	Pedestrian Delay (s)	-	13	40	40	28	28	26	35	37	53	28	48	26	-	53	53	13	22	47	47
	Delay LOS	-	B	D	D	C	C	C	D	D	E	C	E	C	-	E	E	B	C	E	E
	Resultant LOS	-	B	D	D	C	D	C	D	D	E	F	F	C	-	E	E	C	C	F	F
	Overall Intersection		**D**				**D**				**F**				**C**				**F**		
	Target LOS		**A**				**A**				**A**				**A**				**A**		
Cycle	**Route Classification**		**Spine Route**				**Spine Route**				**Cross-Town Bikeway**				**Cross-Town Bikeway**				**Cross-Town Bikeway**		
	Facility	-	Mixed Traffic	Mixed Traffic	Mixed Traffic	Bike Lane (or better)	Bike Lane (or better)	Bike Lane (or better)	Bike Lane (or better)	Mixed Traffic	Mixed Traffic	Mixed Traffic	Bike Lane (or better)	Mixed Traffic	-	Mixed Traffic	Bike Lane (or better)	Mixed Traffic	-	Mixed Traffic	Bike Lane (or better)
	Right-Turn Type	-	Shared Lane	Shared Lane	Shared Lane	Veh. Crosses Bike Lane	Veh. Crosses Bike Lane	Veh. Crosses Bike Lane	Veh. Crosses Bike Lane	Shared Lane	Shared Lane	Shared Lane	Cycle Track	Shared Lane	-	Shared Lane	-	Shared Lane	-	Shared Lane	-
	Turning Bay Length (m)	-	> 50	<= 50	> 50	> 50	> 50	<= 50	> 50	> 50	> 50	> 50	-	> 50	-	> 50	-	> 50	-	> 50	-
	Veh. Turning Speed (km/h)	-	-	<= 25	-	<= 30	<= 30	<= 25	<= 30	-	-	-	-	-	-	-	-	-	-	-	-
	Right-Turn LOS	-	F	D	F	A	A	A	A	F	F	F	A	F	-	F	-	F	-	F	-
	Left-Turn Type	-	Single Left	Single Left	-	Cycle Track	Cycle Track	Cycle Track	Cycle Track	Single Left	Single Left	Single Left	Single Left	Single Left	-	-	Single Left	Single Left	-	Single Left	Single Left
	# of Lanes Crossed	-	1	2+	-	-	-	-	-	2+	2+	0	2+	0	-	-	2+	1	-	2+	2+
	Veh. Approach Speed (km/h)	-	50	>= 60	-	-	-	-	-	50	50	50	50	<= 40	-	-	50	<= 40	-	50	50
	Left-Turn LOS	-	D	F	-	A	A	A	A	F	F	B	F	B	-	-	F	B	-	F	F
	Resultant LOS	-	F	F	F	A	A	A	A	F	F	F	F	F	-	F	F	F	-	F	F
	Overall Intersection		**F**				**A**				**F**				**F**				**F**		
	Target LOS		**C**				**C**				**A**				**A**				**A**		
Transit	**Transit Facility**		-				**TP - Isolated Measures**				**TP - Continuous Lanes**				**TP - Continuous Lanes**				**TP - Continuous Lanes**		
	Transit Delay (s)	-	-	-	-	> 40	<= 40	-	-	-	> 40	<= 40	> 40	<= 30	-	<= 40	<= 40	-	-	<= 10	<= 10
	Resultant LOS	-	-	-	-	F	E	-	-	-	F	E	F	D	-	E	E	-	-	B	B
	Overall Intersection		-				**F**				**E**				**E**				**B**		
	Target LOS		-				**D**				**C**				**C**				**C**		
Truck	**Truck Facility**		-				**Truck Route**				**Truck Route**				**Truck Route**				**Truck Route**		
	Effective Corner Radius (m)	-	-	-	-	< 10	< 10	-	-	< 10	> 15	< 10	< 10	< 10	-	< 10	-	10 - 15	-	10 - 15	-
	# of Receiving Lanes	-	-	-	-	2+	2+	-	-	2+	2+	1	2+	2+	-	1	-	2+	-	1	-
	Resultant LOS	-	-	-	-	D	D	-	-	D	A	F	D	D	-	F	-	B	-	E	-
	Overall Intersection		-				**D**				**F**				**E**				**E**		
	Target LOS		-				**D**				**D**				**D**				**D**		

MMLOS Analysis Sheets – Future Background Conditions

INTERSECTIONS	Wellington / Vimy				Booth / Wellington				Booth / Albert				Albert / Preston				Albert / City Centre			
Designation/Policy Area	Within 600m of a Rapid Transit Station				Within 600m of a Rapid Transit Station				Within 600m of a Rapid Transit Station				Within 600m of a Rapid Transit Station				Within 600m of a Rapid Transit Station			
Roadway Classification	Arterial				Arterial				Arterial				Arterial				Arterial			
Approach	Northbound	Southbound	Eastbound	Westbound	Northbound	Southbound	Eastbound	Westbound	Northbound	Southbound	Eastbound	Westbound	Northbound	Southbound	Eastbound	Westbound	Northbound	Southbound	Eastbound	Westbound
Pedestrian	Total travel lanes crossed	-	2	5	5	4	5	4	5	3	5	5	5	4	-	5	5	3	-	5	5
	Centre Median (>2.4m)	-	No	No	No	No	No	Yes	Yes	No	No	No	No	No	-	No	No	No	-	No	No
	Left-Turn Conflict	-	Perm.	None/Prohibited	Perm.	None/Prohibited	None/Prohibited	None/Prohibited	Prot./Perm.	Perm.	Prot.	Perm./Yield	Perm.	Prot.	-	Prot.	None/Prohibited	Prot.	-	Perm.	None/Prohibited
	Right-Turn Conflict	-	Perm./Yield	Prot./Perm.	None	None	Perm./Yield	Perm./Yield	Perm./Yield	Perm./Yield	Prot.	Perm./Yield	Perm./Yield	Perm./Yield	-	None	Prot.	Perm./Yield	-	Perm./Yield	Perm./Yield
	RTOR	-	Perm.	Perm.	Perm.	Perm.	Perm.	Prohibited	Prohibited	Perm.	Prohibited	Perm.	Prohibited	Prohibited	-	Perm.	Prohibited	Perm.	-	Perm.	Perm.
	Leading Ped Interval	-	No	No	No	No	No	No	No	No	No	No	No	No	-	No	No	No	-	No	No
	Right-Turn Channel	-	No Right-Turn Channel	No Right-Turn Channel	No Right-Turn Channel	No Right-Turn Channel	No Right-Turn	No Right-Turn Channel	No Right-Turn Channel	No Right-Turn Channel	No Right-Turn Channel	No Right-Turn Channel	No Right-Turn Channel	No Right-Turn Channel	-	No Right-Turn Channel	No Right-Turn Channel	No Right-Turn Channel	-	No Right-Turn Channel	No Right-Turn Channel
	Right-Turn Corner Radius	-	> 5m to 10m	> 10m to 15m	No Right-Turn	No Right-Turn	> 5m to 10m	> 5m to 10m	> 5m to 10m	> 5m to 10m	> 5m to 10m	> 15m to 25m	> 10m to 15m	-	> 5m to 10m	No Right-Turn	> 10m to 15m	-	> 5m to 10m	> 15m to 25m
	Crosswalk Treatment	-	Standard Transverse Markings	Standard Transverse Markings	Standard Transverse Markings	Zebra Stripe Hi-Vis Markings	Zebra Stripe Hi-Vis Markings	Zebra Stripe Hi-Vis Markings	Zebra Stripe Hi-Vis Markings	Zebra Stripe Hi-Vis Markings	Zebra Stripe Hi-Vis Markings	Zebra Stripe Hi-Vis Markings	Zebra Stripe Hi-Vis Markings	Zebra Stripe Hi-Vis Markings	-	Zebra Stripe Hi-Vis Markings	Zebra Stripe Hi-Vis Markings	Zebra Stripe Hi-Vis Markings	-	Zebra Stripe Hi-Vis Markings	Zebra Stripe Hi-Vis Markings
	PETSI Score	-	86	43	48	75	49	74	47	74	54	49	41	67	-	54	62	81	0	41	46
	PETSI LOS	-	B	D	D	B	D	C	D	C	D	D	E	C	-	D	C	B	-	E	D
	Cycle Length (s)		95				95				120				120				120		
	Directional Split (s)	-	62	33	33	48	48	47	35	67	38	53	38	38	-	58	60	72	-	36	36
	FDW + Intergreen	-	17	25.3	25.3	25.8	25.8	21.9	21.9	29.5	29.5	27.5	27.5	24.2	-	22.3	22.3	20.3	-	22.3	22.3
	Pedestrian Delay (s)	-	13	40	40	28	28	26	35	28	52	37	50	47	-	30	11	19	-	47	47
	Delay LOS	-	B	D	D	C	C	C	D	C	E	D	E	E	-	C	B	B	-	E	E
	Resultant LOS	-	B	D	D	C	D	C	D	C	E	D	E	E	-	D	C	B	-	E	E
	Overall Intersection		**D**				**D**				**E**				**C**				**E**		
	Target LOS		**A**				**A**				**A**				**A**				**A**		
Cycle	**Route Classification**		**Spine Route**				**Spine Route**				**Cross-Town Bikeway**				**Cross-Town Bikeway**				**Cross-Town Bikeway**	
	Facility	-	Mixed Traffic	Mixed Traffic	Mixed Traffic	Bike Lane (or better)	Bike Lane (or better)	Bike Lane (or better)	Bike Lane (or better)	Bike Lane (or better)	Bike Lane (or better)	Bike Lane (or better)	Bike Lane (or better)	Bike Lane (or better)	-	Bike Lane (or better)	Bike Lane (or better)	Bike Lane (or better)	-	Bike Lane (or better)	Bike Lane (or better)
	Right-Turn Type	-	Shared Lane	Shared Lane	Shared Lane	Veh. Crosses Bike Lane	Veh. Crosses Bike Lane	Veh. Crosses Bike Lane	Veh. Crosses Bike Lane	Veh. Crosses Bike Lane	Veh. Crosses Bike Lane	Veh. Crosses Bike Lane	Veh. Crosses Bike Lane	Fully Protected	-	Veh. Crosses Bike Lane	Multi-Use Pathway	Veh. Crosses Bike Lane	-	Veh. Crosses Bike Lane	Multi-Use Pathway
	Turning Bay Length (m)	-	> 50	<= 50	> 50	> 50	> 50	<= 50	> 50	<= 50	> 50	<= 50	<= 50	-	-	> 50	-	<= 50	-	<= 50	-
	Veh. Turning Speed (km/h)	-	-	<= 25	-	<= 30	<= 30	<= 25	<= 30	<= 25	<= 30	<= 25	<= 25	-	-	<= 30	-	<= 25	-	<= 25	-
	Right-Turn LOS	-	F	D	F	A	A	A	A	B	D	B	B	A	-	D	-	B	-	B	A
	Left-Turn Type	-	Single Left	Single Left	-	Cycle Track	Cycle Track	Cycle Track	Cycle Track	Bike Box	Bike Box	Bike Box	Bike Box	Bike Box	-	Bike Box	Bike Box	Bike Box	-	Bike Box	Bike Box
	# of Lanes Crossed	-	1	2+	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	2+	2+
	Veh. Approach Speed (km/h)	-	50	>= 60	-	-	-	-	-	50	50	50	50	50	-	50	50	<= 40	-	50	50
	Left-Turn LOS	-	D	F	-	A	A	A	A	A	A	A	A	A	-	A	A	-	-	-	-
	Resultant LOS	-	F	F	F	A	A	A	A	B	D	B	B	A	-	D	A	B	-	B	A
	Overall Intersection		**F**				**A**				**D**				**D**				**B**		
	Target LOS		**C**				**C**				**A**				**A**				**A**		
Transit	**Transit Facility**		-				**TP - Isolated Measures**				**TP - Continuous Lanes**				**TP - Continuous Lanes**				**TP - Continuous Lanes**	
	Transit Delay (s)	-	-	-	-	> 40	<= 40	-	-	-	> 40	<= 40	> 40	> 40	-	<= 40	<= 40	-	-	<= 20	<= 20
	Resultant LOS	-	-	-	-	F	E	-	-	-	F	E	F	F	-	E	E	-	-	C	C
	Overall Intersection		-				**F**				**F**				**F**				**C**		
	Target LOS		-				**D**				**C**				**C**				**C**		
Truck	**Truck Facility**		-				**Truck Route**				**Truck Route**				**Truck Route**				**Truck Route**	
	Effective Corner Radius (m)	-	-	-	-	< 10	< 10	-	-	< 10	> 15	< 10	< 10	10 - 15	-	< 10	-	> 15	-	10 - 15	-
	# of Receiving Lanes	-	-	-	-	2+	2+	-	-	2+	2+	1	2+	2+	-	2+	-	2+	-	1	-
	Resultant LOS	-	-	-	-	D	D	-	-	D	A	F	D	B	-	D	-	A	-	E	-
	Overall Intersection		-				**D**				**F**				**D**				**E**		
	Target LOS		-				**D**				**D**				**D**				**D**		

MMLOS Analysis Sheets – Phase Three (2050) Conditions

	INTERSECTIONS	Wellington / Vimy			
	Designation/Policy Area	Within 600m of a Rapid Transit Station			
	Roadway Classification	Arterial			
	Approach	Northbound	Southbound	Eastbound	Westbound
Pedestrians	Total travel lanes crossed	2	2	5	5
	Centre Median (>2.4m)	No	No	No	No
	Left-Turn Conflict	Prot./Perm.	Perm.	None/Prohibited	Perm.
	Right-Turn Conflict	Perm./Yield	Perm./Yield	Prot./Perm.	None
	RTOR	Perm.	Perm.	Perm.	Perm.
	Leading Ped Interval	No	No	No	No
	Right-Turn Channel	No Right-Turn Channel	No Right-Turn Channel	No Right-Turn Channel	No Right-Turn Channel
	Right-Turn Corner Radius	> 10m to 15m	> 5m to 10m	> 10m to 15m	No Right-Turn
	Crosswalk Treatment	Zebra Stripe Hi-Vis Markings	Zebra Stripe Hi-Vis Markings	Zebra Stripe Hi-Vis Markings	Zebra Stripe Hi-Vis Markings
	PETSI Score	88	89	48	51
	PETSI LOS	B	B	D	D
	Cycle Length (s)	95			
	Directional Split (s)	62	62	33	33
	FDW + Intergreen	17	17	25.3	25.3
	Pedestrian Delay (s)	13	13	40	40
	Delay LOS	B	B	D	D
	Resultant LOS	B	B	D	D
	Overall Intersection	D			
	Target LOS	A			
Cyclists	Route Classification	Spine Route			
	Facility	Bike Lane (or better)	Bike Lane (or better)	Mixed Traffic	Mixed Traffic
	Right-Turn Type	Curbside	Curbside	Shared Lane	Shared Lane
	Turning Bay Length (m)	-	-	<= 50	> 50
	Veh. Turning Speed (km/h)	-	-	<= 25	-
	Right-Turn LOS	A	A	D	F
	Left-Turn Type	Single Left	Single Left	Single Left	Single Left
	# of Lanes Crossed	1	1	2+	2+
	Veh. Approach Speed (km/h)	<= 40	<= 40	>= 60	>= 60
	Left-Turn LOS	B	B	F	F
	Resultant LOS	B	B	F	F
	Overall Intersection	F			
	Target LOS	C			
Transit	Transit Facility	-			
	Transit Delay (s)	-	-	-	-
	Resultant LOS	-	-	-	-
	Overall Intersection	-			
	Target LOS	-			
Truck	Truck Facility	-			
	Effective Corner Radius (m)	-	-	-	-
	# of Receiving Lanes	-	-	-	-
	Resultant LOS	-	-	-	-
	Overall Intersection	-			
	Target LOS	-			

	INTERSECTIONS	Booth / Wellington			
	Designation/Policy Area	Within 600m of a Rapid Transit Station			
	Roadway Classification	Arterial			
	Approach	Northbound	Southbound	Eastbound	Westbound
Pedestrians	Total travel lanes crossed	4	5	4	5
	Centre Median (>2.4m)	No	No	Yes	Yes
	Left-Turn Conflict	None/Prohibited	None/Prohibited	None/Prohibited	Prot./Perm.
	Right-Turn Conflict	None	Perm./Yield	Perm./Yield	Perm./Yield
	RTOR	Perm.	Perm.	Prohibited	Prohibited
	Leading Ped Interval	No	No	No	No
	Right-Turn Channel	No Right-Turn Channel	No Right-Turn Channel	No Right-Turn	No Right-Turn Channel
	Right-Turn Corner Radius	No Right-Turn	> 5m to 10m	> 5m to 10m	> 5m to 10m
	Crosswalk Treatment	Zebra Stripe Hi-Vis Markings	Zebra Stripe Hi-Vis Markings	Zebra Stripe Hi-Vis Markings	Zebra Stripe Hi-Vis Markings
	PETSI Score	75	49	74	47
	PETSI LOS	B	D	C	D
	Cycle Length (s)	95			
	Directional Split (s)	48	48	47	35
	FDW + Intergreen	25.8	25.8	21.9	21.9
	Pedestrian Delay (s)	28	28	26	35
	Delay LOS	C	C	C	D
	Resultant LOS	C	D	C	D
	Overall Intersection	D			
	Target LOS	A			
Cyclists	Route Classification	Spine Route			
	Facility	Bike Lane (or better)	Bike Lane (or better)	Bike Lane (or better)	Bike Lane (or better)
	Right-Turn Type	Veh. Crosses Bike Lane	Veh. Crosses Bike Lane	Veh. Crosses Bike Lane	Veh. Crosses Bike Lane
	Turning Bay Length (m)	> 50	> 50	<= 50	> 50
	Veh. Turning Speed (km/h)	<= 30	<= 30	<= 25	<= 30
	Right-Turn LOS	A	A	A	A
	Left-Turn Type	Cycle Track	Cycle Track	Cycle Track	Cycle Track
	# of Lanes Crossed	-	-	-	-
	Veh. Approach Speed (km/h)	-	-	-	-
	Left-Turn LOS	A	A	A	A
	Resultant LOS	A	A	A	A
	Overall Intersection	A			
	Target LOS	C			
Transit	Transit Facility	TP - Isolated Measures			
	Transit Delay (s)	> 40	<= 40	-	-
	Resultant LOS	F	E	-	-
	Overall Intersection	F			
	Target LOS	D			
Truck	Truck Facility	Truck Route			
	Effective Corner Radius (m)	< 10	< 10	-	-
	# of Receiving Lanes	2+	2+	-	-
	Resultant LOS	D	D	-	-
	Overall Intersection	D			
	Target LOS	D			

	INTERSECTIONS	Booth / Albert			
	Designation/Policy Area	Within 600m of a Rapid Transit Station			
	Roadway Classification	Arterial			
	Approach	Northbound	Southbound	Eastbound	Westbound
Pedestrians	Total travel lanes crossed	3	5	5	5
	Centre Median (>2.4m)	No	No	No	No
	Left-Turn Conflict	Perm.	Prot.	Prot.	Perm.
	Right-Turn Conflict	Perm./Yield	Prot.	Perm./Yield	Perm./Yield
	RTOR	Perm.	Prohibited	Perm.	Prohibited
	Leading Ped Interval	No	No	No	No
	Right-Turn Channel	No Right-Turn Channel	No Right-Turn Channel	No Right-Turn Channel	No Right-Turn Channel
	Right-Turn Corner Radius	> 5m to 10m	> 15m to 25m	> 5m to 10m	> 15m to 25m
	Crosswalk Treatment	Zebra Stripe Hi-Vis Markings	Zebra Stripe Hi-Vis Markings	Zebra Stripe Hi-Vis Markings	Zebra Stripe Hi-Vis Markings
	PETSI Score	74	54	49	41
	PETSI LOS	C	D	D	E
	Cycle Length (s)	120			
	Directional Split (s)	67	38	53	38
	FDW + Intergreen	29.5	29.5	27.5	27.5
	Pedestrian Delay (s)	28	52	37	50
	Delay LOS	C	E	D	E
	Resultant LOS	C	E	D	E
	Overall Intersection	E			
	Target LOS	A			
Cyclists	Route Classification	Cross-Town Bikeway			
	Facility	Bike Lane (or better)	Bike Lane (or better)	Bike Lane (or better)	Bike Lane (or better)
	Right-Turn Type	Veh. Crosses Bike Lane	Veh. Crosses Bike Lane	Veh. Crosses Bike Lane	Veh. Crosses Bike Lane
	Turning Bay Length (m)	<= 50	> 50	<= 50	<= 50
	Veh. Turning Speed (km/h)	<= 25	<= 30	<= 25	<= 25
	Right-Turn LOS	B	D	B	B
	Left-Turn Type	Bike Box	Bike Box	Bike Box	Bike Box
	# of Lanes Crossed	-	-	-	-
	Veh. Approach Speed (km/h)	50	50	50	50
	Left-Turn LOS	A	A	A	A
	Resultant LOS	B	D	B	B
	Overall Intersection	D			
	Target LOS	A			
Transit	Transit Facility	TP - Continuous Lanes			
	Transit Delay (s)	-	> 40	<= 40	> 40
	Resultant LOS	-	F	E	F
	Overall Intersection	F			
	Target LOS	C			
Truck	Truck Facility	Truck Route			
	Effective Corner Radius (m)	< 10	> 15	< 10	< 10
	# of Receiving Lanes	2+	2+	1	2+
	Resultant LOS	D	A	F	D
	Overall Intersection	F			
	Target LOS	D			

	INTERSECTIONS	Albert / Preston			
	Designation/Policy Area	Within 600m of a Rapid Transit Station			
	Roadway Classification	Arterial			
	Approach	Northbound	Southbound	Eastbound	Westbound
Pedestrians	Total travel lanes crossed	4	3	5	5
	Centre Median (>2.4m)	No	No	No	No
	Left-Turn Conflict	Prot.	Prot.	Prot.	None/Prohibited
	Right-Turn Conflict	Perm./Yield	Perm./Yield	None	Prot.
	RTOR	Perm.	Perm.	Perm.	Perm.
	Leading Ped Interval	No	No	No	No
	Right-Turn Channel	No Right-Turn Channel	No Right-Turn Channel	No Right-Turn Channel	No Right-Turn Channel
	Right-Turn Corner Radius	> 10m to 15m	> 5m to 10m	> 5m to 10m	> 5m to 10m
	Crosswalk Treatment	Zebra Stripe Hi-Vis Markings	Zebra Stripe Hi-Vis Markings	Zebra Stripe Hi-Vis Markings	Zebra Stripe Hi-Vis Markings
	PETSI Score	64	82	54	54
	PETSI LOS	C	B	D	D
	Cycle Length (s)	120			
	Directional Split (s)	38	38	58	90
	FDW + Intergreen	24.2	24.2	22.3	22.3
	Pedestrian Delay (s)	47	47	30	11
	Delay LOS	E	E	C	B
	Resultant LOS	E	E	D	D
	Overall Intersection	E			
	Target LOS	A			
Cyclists	Route Classification	Cross-Town Bikeway			
	Facility	Bike Lane (or better)	Bike Lane (or better)	Bike Lane (or better)	Bike Lane (or better)
	Right-Turn Type	Veh. Crosses Bike Lane	Veh. Crosses Bike Lane	Veh. Crosses Bike Lane	Veh. Crosses Bike Lane
	Turning Bay Length (m)	-	<= 50	> 50	<= 50
	Veh. Turning Speed (km/h)	-	<= 25	<= 30	<= 25
	Right-Turn LOS	A	B	D	B
	Left-Turn Type	Bike Box	Bike Box	Bike Box	Bike Box
	# of Lanes Crossed	-	-	-	-
	Veh. Approach Speed (km/h)	50	50	50	50
	Left-Turn LOS	A	A	A	A
	Resultant LOS	A	B	D	B
	Overall Intersection	D			
	Target LOS	A			
Transit	Transit Facility	TP - Continuous Lanes			
	Transit Delay (s)	> 40	-	<= 40	<= 40
	Resultant LOS	F	-	E	E
	Overall Intersection	F			
	Target LOS	C			
Truck	Truck Facility	Truck Route			
	Effective Corner Radius (m)	10 - 15	-	< 10	-
	# of Receiving Lanes	2+	-	2+	-
	Resultant LOS	B	-	D	-
	Overall Intersection	D			
	Target LOS	D			

	INTERSECTIONS	Albert / City Centre			
	Designation/Policy Area	Within 600m of a Rapid Transit Station			
	Roadway Classification	Arterial			
	Approach	Northbound	Southbound	Eastbound	Westbound
Pedestrians	Total travel lanes crossed	3	2	5	5
	Centre Median (>2.4m)	No	No	No	No
	Left-Turn Conflict	Prot.	Prot.	Perm.	None/Prohibited
	Right-Turn Conflict	Perm./Yield	Perm./Yield	Perm./Yield	Perm./Yield
	RTOR	Perm.	Perm.	Perm.	Perm.
	Leading Ped Interval	No	No	No	No
	Right-Turn Channel	No Right-Turn Channel	No Right-Turn Channel	No Right-Turn Channel	No Right-Turn Channel
	Right-Turn Corner Radius	> 10m to 15m	> 10m to 15m	> 5m to 10m	> 15m to 25m
	Crosswalk Treatment	Zebra Stripe Hi-Vis Markings	Zebra Stripe Hi-Vis Markings	Zebra Stripe Hi-Vis Markings	Zebra Stripe Hi-Vis Markings
	PETSI Score	81	96	41	46
	PETSI LOS	B	A	E	D
	Cycle Length (s)	120			
	Directional Split (s)	72	72	36	36
	FDW + Intergreen	20.3	20.3	22.3	22.3
	Pedestrian Delay (s)	19	19	47	47
	Delay LOS	B	B	E	E
	Resultant LOS	B	B	E	E
	Overall Intersection	E			
	Target LOS	A			
Cyclists	Route Classification	Cross-Town Bikeway			
	Facility	Bike Lane (or better)	Bike Lane (or better)	Bike Lane (or better)	Bike Lane (or better)
	Right-Turn Type	Veh. Crosses Bike Lane	Veh. Crosses Bike Lane	Veh. Crosses Bike Lane	Veh. Crosses Bike Lane
	Turning Bay Length (m)	<= 50	<= 50	<= 50	<= 50
	Veh. Turning Speed (km/h)	<= 25	<= 25	<= 25	<= 25
	Right-Turn LOS	B	B	B	B
	Left-Turn Type	Bike Box	Bike Box	Bike Box	Bike Box
	# of Lanes Crossed	-	-	-	-
	Veh. Approach Speed (km/h)	<= 40	<= 40	50	50
	Left-Turn LOS	A	A	A	A
	Resultant LOS	B	B	B	B
	Overall Intersection	B			
	Target LOS	A			
Transit	Transit Facility	TP - Continuous Lanes			
	Transit Delay (s)	-	-	<= 20	<= 20
	Resultant LOS	-	-	C	C
	Overall Intersection	C			
	Target LOS	C			
Truck	Truck Facility	Truck Route			
	Effective Corner Radius (m)	> 15	-	10 - 15	-
	# of Receiving Lanes	2+	-	1	-
	Resultant LOS	A	-	E	-
	Overall Intersection	E			
	Target LOS	D			

	INTERSECTIONS	Albert / Access 1			
	Designation/Policy Area	Within 600m of a Rapid Transit Station			
	Roadway Classification	Arterial			
	Approach	Northbound	Southbound	Eastbound	Westbound
Pedestrians	Total travel lanes crossed	-	2	5	5
	Centre Median (>2.4m)	-	No	No	No
	Left-Turn Conflict	-	Prot.	None/Prohibited	Perm.
	Right-Turn Conflict	-	Perm./Yield	Perm./Yield	None
	RTOR	-	Perm.	Prohibited	Perm.
	Leading Ped Interval	-	No	No	No
	Right-Turn Channel	-	No Right-Turn Channel	No Right-Turn Channel	No Right-Turn Channel
	Right-Turn Corner Radius	-	> 10m to 15m	> 10m to 15m	> 10m to 15m
	Crosswalk Treatment	-	Zebra Stripe Hi-Vis Markings	Zebra Stripe Hi-Vis Markings	Zebra Stripe Hi-Vis Markings
	PETSI Score	-	96	51	45
	PETSI LOS	-	A	D	D
	Cycle Length (s)	120			
	Directional Split (s)	-	77	31	31
	FDW + Intergreen	-	12	24	24
	Pedestrian Delay (s)	-	13	53	53
	Delay LOS	-	B	E	E
	Resultant LOS	-	B	E	E
	Overall Intersection	E			
	Target LOS	A			
Cyclists	Route Classification	Cross-Town Bikeway			
	Facility	Bike Lane (or better)	Bike Lane (or better)	-	Bike Lane (or better)
	Right-Turn Type	Veh. Crosses Bike Lane	Veh. Crosses Bike Lane	-	Veh. Crosses Bike Lane
	Turning Bay Length (m)	<= 50	<= 50	-	<= 50
	Veh. Turning Speed (km/h)	<= 25	<= 25	-	<= 25
	Right-Turn LOS	B	B	-	B
	Left-Turn Type	Bike Box	Bike Box	-	Bike Box
	# of Lanes Crossed	-	-	-	-
	Veh. Approach Speed (km/h)	<= 40	50	-	50
	Left-Turn LOS	A	A	-	A
	Resultant LOS	B	B	-	B
	Overall Intersection	B			
	Target LOS	A			
Transit	Transit Facility	TP - Continuous Lanes			
	Transit Delay (s)	-	-	<= 20	<= 30
	Resultant LOS	-	-	C	D
	Overall Intersection	D			
	Target LOS	C			
Truck	Truck Facility	Truck Route			
	Effective Corner Radius (m)	-	-	-	-
	# of Receiving Lanes	-	-	-	-
	Resultant LOS	-	-	-	-
	Overall Intersection	-			
	Target LOS	D			

	INTERSECTIONS	Wellington / Broad			
	Designation/Policy Area	Within 600m of a Rapid Transit Station			
	Roadway Classification	Arterial			
	Approach	Northbound	Southbound	Eastbound	Westbound
Pedestrians	Total travel lanes crossed	2	-	5	5
	Centre Median (>2.4m)	No	-	No	No
	Left-Turn Conflict	Prot./Perm.	-	Perm.	None/Prohibited
	Right-Turn Conflict	Perm./Yield	-	None	Perm./Yield
	RTOR	Perm.	-	Perm.	Perm.
	Leading Ped Interval	No	-	No	No
	Right-Turn Channel	No Right-Turn	-	No Right-Turn	No Right-Turn
	Right-Turn Corner Radius	> 10m to 15m	-	> 10m to 15m	> 10m to 15m
	Crosswalk Treatment	Zebra Stripe Hi-Vis Markings	-	Zebra Stripe Hi-Vis Markings	Zebra Stripe Hi-Vis Markings
	PETSI Score	92	-	49	52
	PETSI LOS	A	-	D	D
	Cycle Length (s)	120			
	Directional Split (s)	72	-	33	33
	FDW + Intergreen	31	-	26	26
	Pedestrian Delay (s)	26	-	53	53
	Delay LOS	C	-	E	E
	Resultant LOS	C	-	E	E
	Overall Intersection	E			
	Target LOS	A			
Cyclists	Route Classification	Spine Route			
	Facility	Bike Lane (or better)	-	Mixed Traffic	Mixed Traffic
	Right-Turn Type	Veh. Crosses Bike Lane	-	Shared Lane	Shared Lane
	Turning Bay Length (m)	<= 50	-	<= 50	<= 50
	Veh. Turning Speed (km/h)	<= 25	-	> 25	> 25
	Right-Turn LOS	B	-	E	E
	Left-Turn Type	Single Left	-	-	Single Left
	# of Lanes Crossed	0	-	-	2+
	Veh. Approach Speed (km/h)	50	-	-	50
	Left-Turn LOS	B	-	-	F
	Resultant LOS	B	-	E	F
	Overall Intersection	F			
	Target LOS	C			
Transit	Transit Facility	-			
	Transit Delay (s)	-	-	-	-
	Resultant LOS	-	-	-	-
	Overall Intersection	-			
	Target LOS	-			
Truck	Truck Facility	-			
	Effective Corner Radius (m)	-	-	-	-
	# of Receiving Lanes	-	-	-	-
	Resultant LOS	-	-	-	-
	Overall Intersection	-			
	Target LOS	-			