

DRAFT REPORT

# LeBreton Flats – Plan of Subdivision

## Transportation Impact Assessment

Ottawa, Ontario

Presented to:

**National Capital Commission**  
202-40 Elgin Street, Ottawa ON, K1P 1C7

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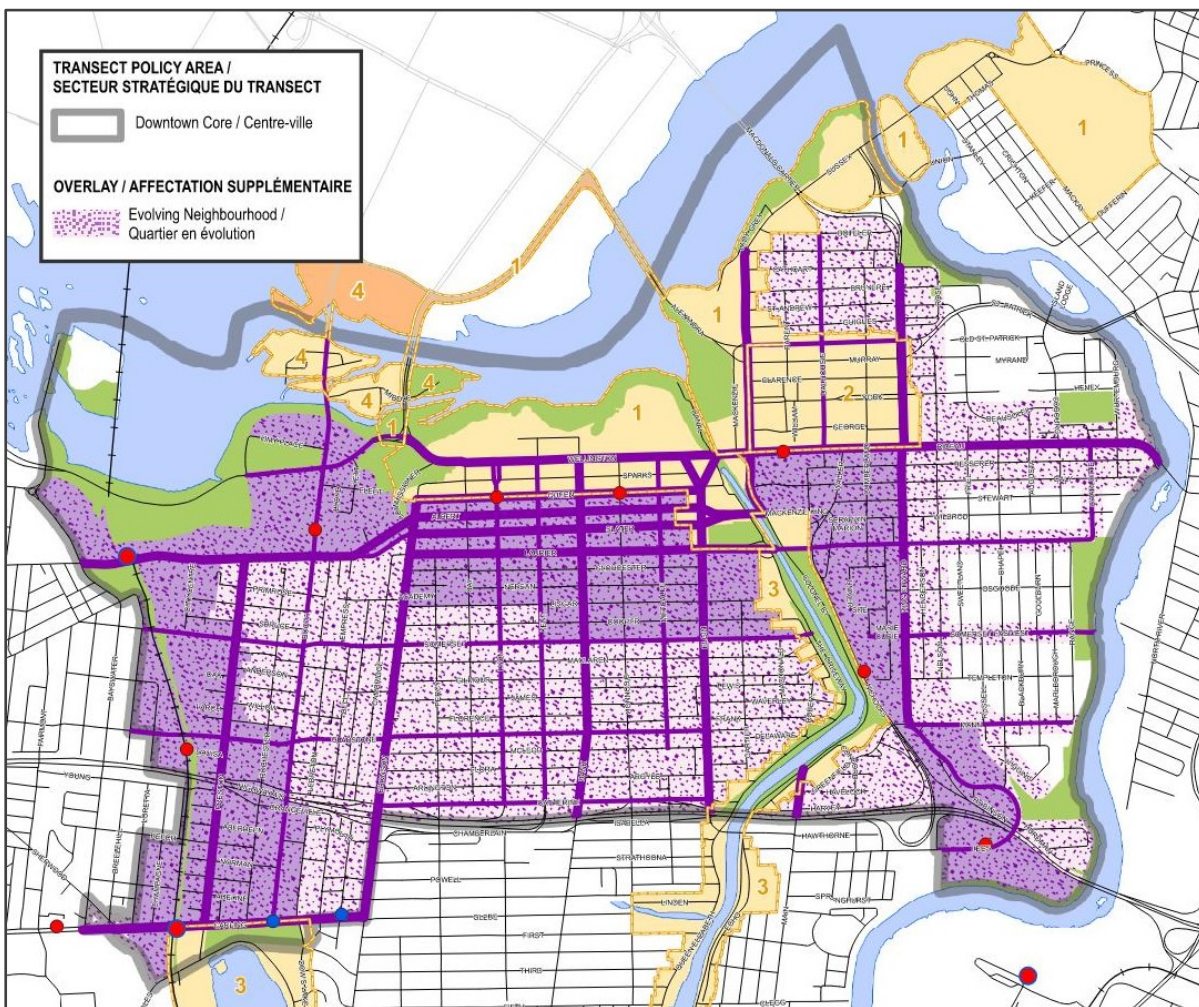
## 1. INTRODUCTION

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 after 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 (including changes to the TIA process in 2023), as required by the City of Ottawa in support of the Plan of Subdivision 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 Plan of Subdivision 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 starting in 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. Where possible, the most recent available traffic data (i.e., post-COVID) has been used.

- **Mode Share Targets:** LeBreton Flats currently has exceptional active transportation facilities, and the Plan of Subdivision 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 (TOD), 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 Plan of Subdivision. To help decision makers assess the potential traffic impacts, the development yield scenario that resulted in the highest predicted trip generation had been evaluated. It is likely that the proposed development will evolve over time, at which point, updated traffic studies can be completed, if required.
- **Future Opportunities for City Input:** This TIA is focused on the Plan of Subdivision for LeBreton Flats, and is one 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 Site Plan Applications, as TIAs 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 (including changes to the TIA process in 2023) 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 / Kichi Zibi Mikan 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 Plan of Subdivision 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 Plan of Subdivision depicts thirteen access points, including six access points to Albert Street, four 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. 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 Plan of Subdivision is provided in **Figure 3**, and the proposed development parcels are provided in **Figure 4**.

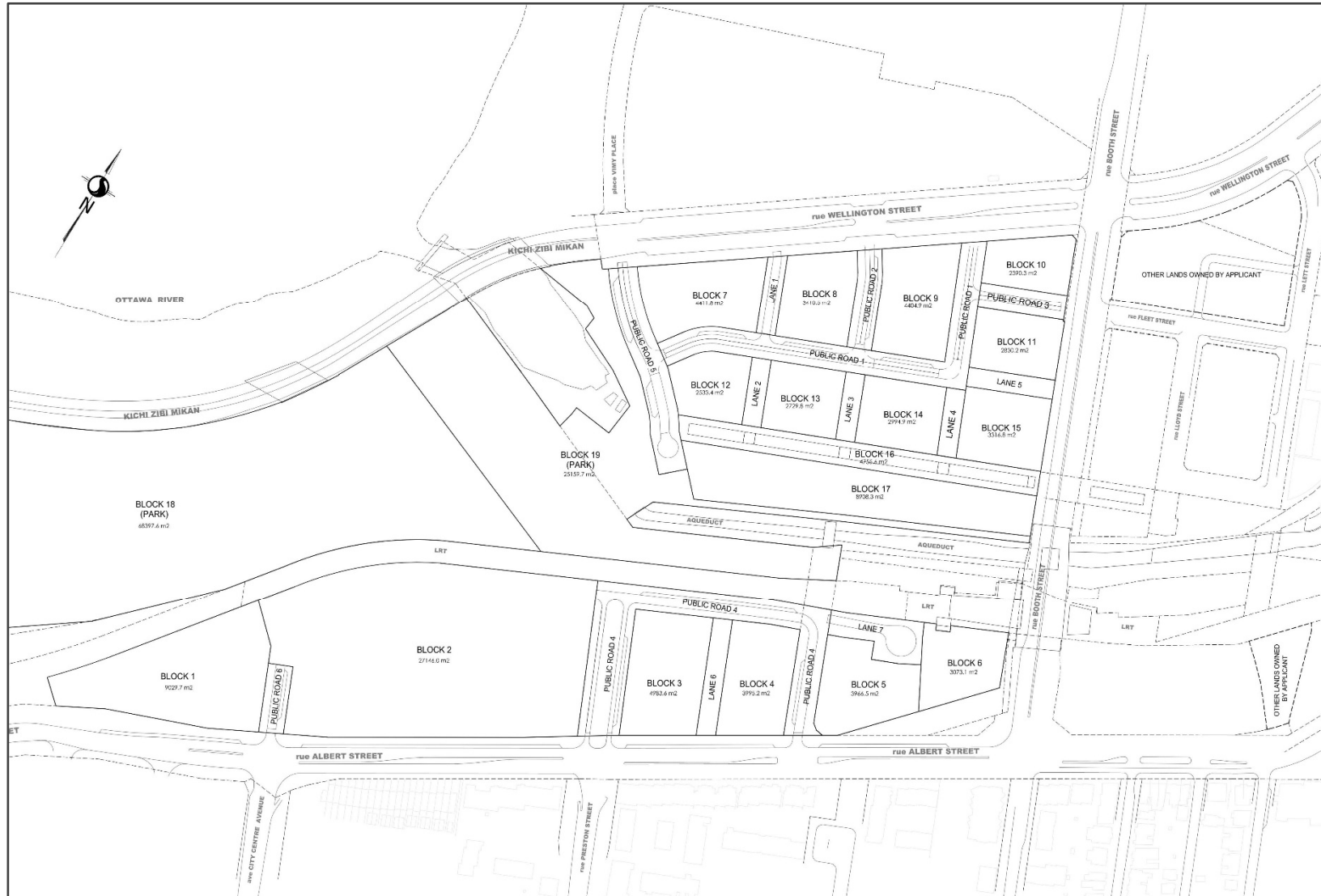
Figure 2: Local Context



Figure 3: Proposed Plan of Subdivision



Figure 4: Draft Plan of Subdivision - Development Parcels



### 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 Kichi Zibi Mikan, 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 cycling facilities 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: 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. It should be noted that there is an ongoing project at the time of this report for the re-alignment of Albert Street and Slater Street, between Empress Avenue to Bay Street, as well as construction on Queen Street (refer to **Section 3.1.3** for more details).

**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).

**Kichi Zibi Mikan (KZM)**, formerly known as the 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. It should be noted that there is an ongoing project at the time of this report provide a 'Complete Street' on Scott Street west of Bayview Station Road.

**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 KZM 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 KZM 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 KZM 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.

**Somerset Street** is a two-lane Arterial roadway (i.e., one travel lane per direction) with sidewalks sharrows on both sides of the street. It extends between Garland Street in the west and the Rideau Canal in the east. West of Garland Street it continues as Wellington Street W. The posted speed limit is 50 km/h and on-street parking is permitted on both sides of the roadway. It is designated as a Full Loads truck route with respect to the City's Urban Truck Routes network.

### ***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, four-legged intersection. All approaches to the intersection include a shared through/right lane and an auxiliary left turn lane, as the intersection has recently been reconstructed as part of the Zibi development project.

**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 through-right turn 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 KZM. 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 (KZM) 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.

**Kichi Zibi Mikan/Slidell** - The KZM/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 (KZM) each consists of one shared left-through lane and one shared through-right lane.

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

**Kichi Zibi Mikan/Parkdale** - The KZM/Parkdale is an unsignalized interchange connecting KZM and Parkdale Avenue. Two through lanes are maintained in each direction on KZM 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 a shared left-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). The south approach was recently reconstructed to accommodate a cycling facility on the east side of City Centre Avenue, resulting in a single northbound lane at the intersection. 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 right-turn lane. The west approach (Scott Street) consists of one left turn lane and one shared through-right lane. This intersection previously had transit priority lanes

in the eastbound and westbound directions, but is undergoing reconstruction as part of the Scott Street project identified in **Section 3.1.3**. 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 one right turn lane, one through lane, and one left turn lane. The west approach (Scott Street) consists of one right turn lane, one through lane, and one left turn lane. This intersection previously had transit priority lanes in the eastbound and westbound directions, but was recently reconstructed. There are no prohibited movements at this intersection.

**Somerset/Preston** - The Somerset/Preston intersection is a signalized, four-legged intersection. All four approaches consist of a shared through-right lane and a left turn lane. There are no prohibited vehicular movements at this intersection, however right turn on red (RTOR) is restricted from 7:00 AM to 7:00 PM.

**Somerset/Booth** - The Somerset/Booth intersection is a signalized, four-legged intersection. All four approaches consist of a shared through-right lane and a left turn lane. There are no prohibited vehicular 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. It should be noted that there is ongoing construction for numerous developments in the study area, and the list below does not include temporary construction accesses to these sites that may be present at the time of this report.

- 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. Recently the NCC finished construction on a new multi-use pathway north of the Confederation LRT alignment that separates pedestrians from cyclists, and connects the Ottawa River Pathway to Pimisi Station.

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 KZM does not have sidewalks.

With regard to cycling facilities, the study area is bisected by two Cross-Town Bikeways (Albert Street and Booth Street) as defined by Part 1 of the City's New Transportation Master Plan; additional Cross-Town Bikeways in the area include Wellington Street from the Portage Bridge to Rideau Street, and Laurier Street from Percy Street to Cumberland 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 10-minute walking distance (800m) to/from the subject development site.

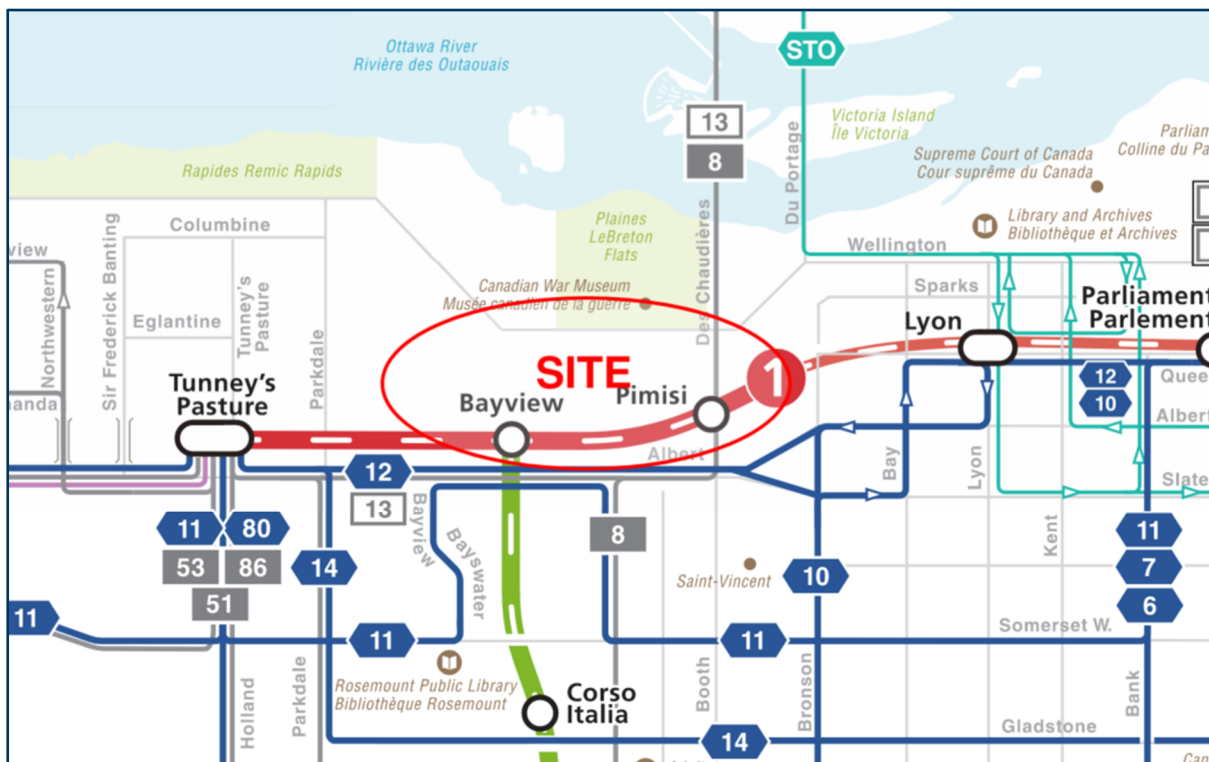
**Table 1: Transit Information**

Stop #	Location	Route Identifier <sup>1</sup>	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	57,61,75	Westbound
#2396	Immediately east of Albert/Empress	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	57,61,75	Westbound
#3010D	Immediately east of Booth/Albert	57,61,75	Eastbound
#3060	Bayview LRT Station	Confederation & Trillium Line	East/Westbound & Southbound
#3060A	150m west of City Centre/Albert	57,61,63,66,75	Westbound
#5684	100m east of Preston/Albert	57,61,75,85	Eastbound
#5722	120m north of Booth/Wellington	61, 63, 66, 75, 85	Northbound
#6659	70m west of Preston/Albert	57,61,75	Westbound
#8005	Immediately south of Preston/Albert	85	Northbound
#8048	Immediately east of City Centre/Albert	57,61,75	Eastbound

<sup>1</sup> OC Transpo routes are identified by their new route number, as defined in the "New Ways to Bus" realignment initiated in 2024.

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)**



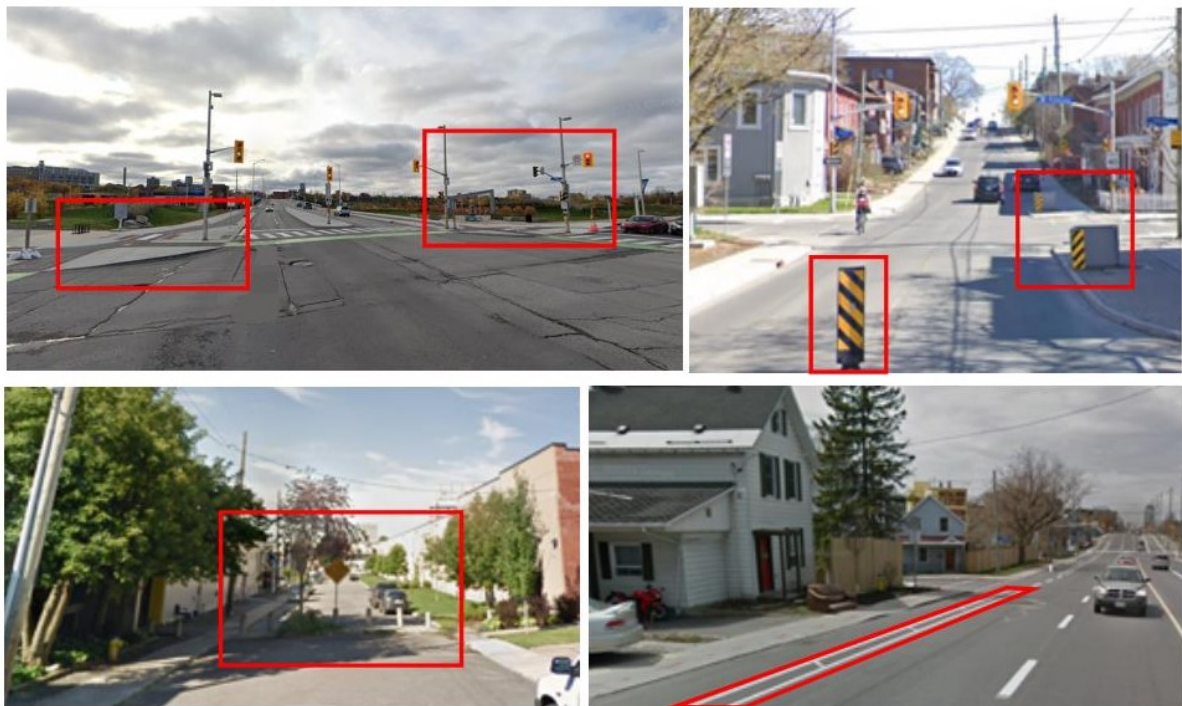
**Table 2: OC Transpo Route Information**

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
57	Tunney's Pasture ↔ Bells Corners	Rapid & Night Route	<i>Night Route: 20-30 min</i>
61	Tunney's Pasture ↔ Stittsville	Rapid & Night Route	<i>Night Route: 30 min</i>
63	Briarbrook ↔ Tunney's Pasture	Rapid	15 min
66	Tunney's Pasture ↔ Innovation	Limited Local	<i>Night Route: 20-30 min</i>
75	Cambrian ↔ Tunney's Pasture	Rapid & Night Route	<i>Night Route: 20-30 min</i>
85	Lees ↔ 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 figure below 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**

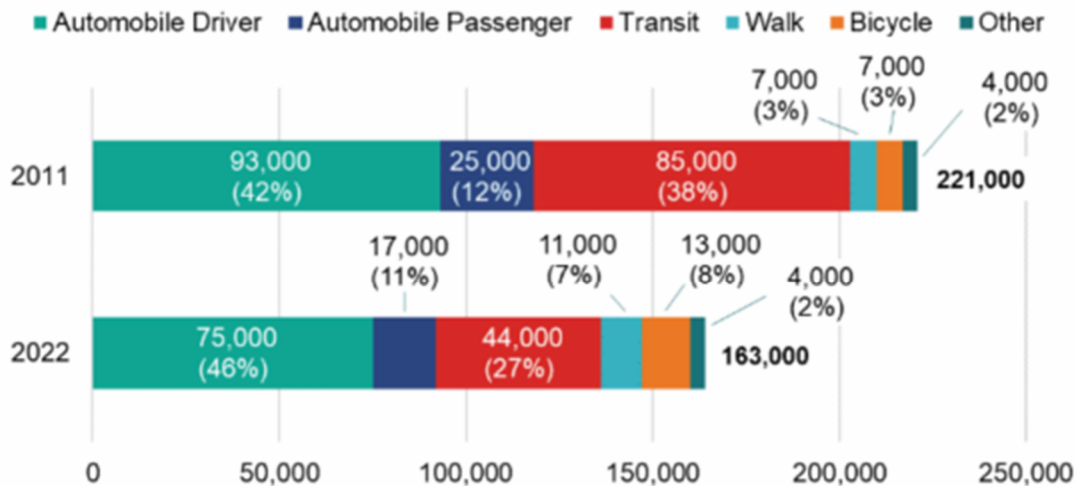
For the purpose of this assessment and based on the initial study, the following study area intersections have been identified for intersection capacity analysis (traffic count date included in parentheses):

- Portage Bridge/Wellington (June 2014)
- Booth/Chaudière
- Booth/Wellington (May 2013)
- Booth/Albert (January 2024)
- Booth/War Museum (July 2013)
- Albert/Preston (April 2014)
- Vimy/Wellington (June 2014)
- Wellington/Lett (January 2020)

- Slidell/Kichi Zibi Mikan (April 2017)
- Albert-Scott/Bayview Station (March 2023)
- Albert/City Centre (April 2014)
- Parkdale/Kichi Zibi Mikan (February 2020)
- Parkdale/Scott (March 2023)
- Somerset/Preston (December 2023)
- Somerset/Booth (August 2016)

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, dating back to 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. Initial conclusions from the updated Origin-Destination (OD) Travel Survey that was undertaken in 2022 as part of the New Transportation Master Plan (TMP) show that trips into downtown by all modes have been reduced due to the COVID-19 pandemic and the shift to hybrid work. **Figure 8** below, from the new 2022 OD Travel Survey, illustrates this graphically.

**Figure 8: Daily Mode Share for Trips Destined to the Downtown Core from Outside the Downtown Core (2011-2022)**



**Source:** 2011 and 2022 Origin-Destination Survey.

According to the City of Ottawa’s 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- and Chaudiere Crossing- related construction activities for a considerable time (generally 2015-2023) 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, the most recent traffic count data (where

available) was used, however the majority of data is historical traffic counts from the year 2014. 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 most of the counts were taken during winter or 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, Somerset Street, and KZM.

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 KZM 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)

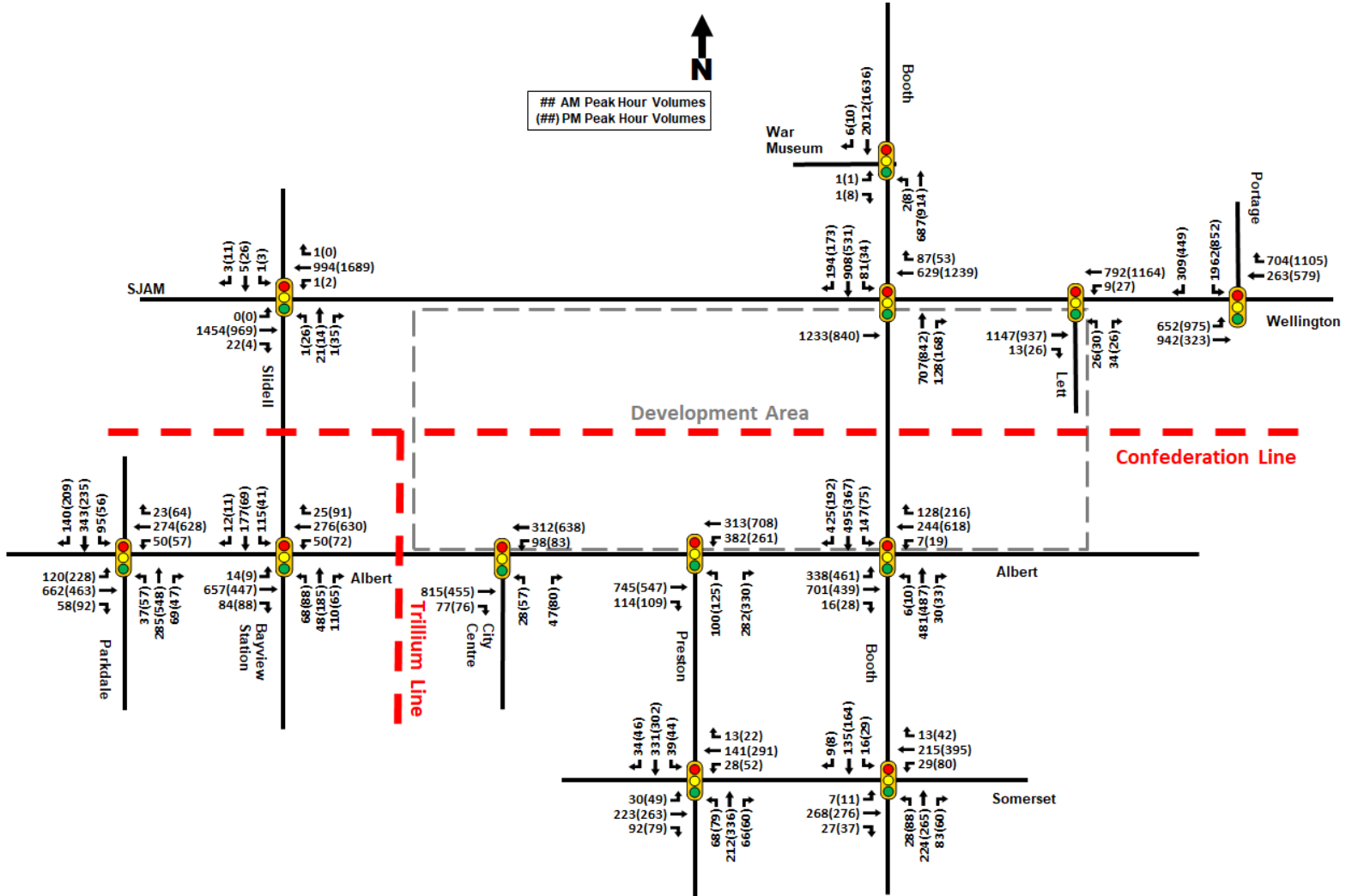
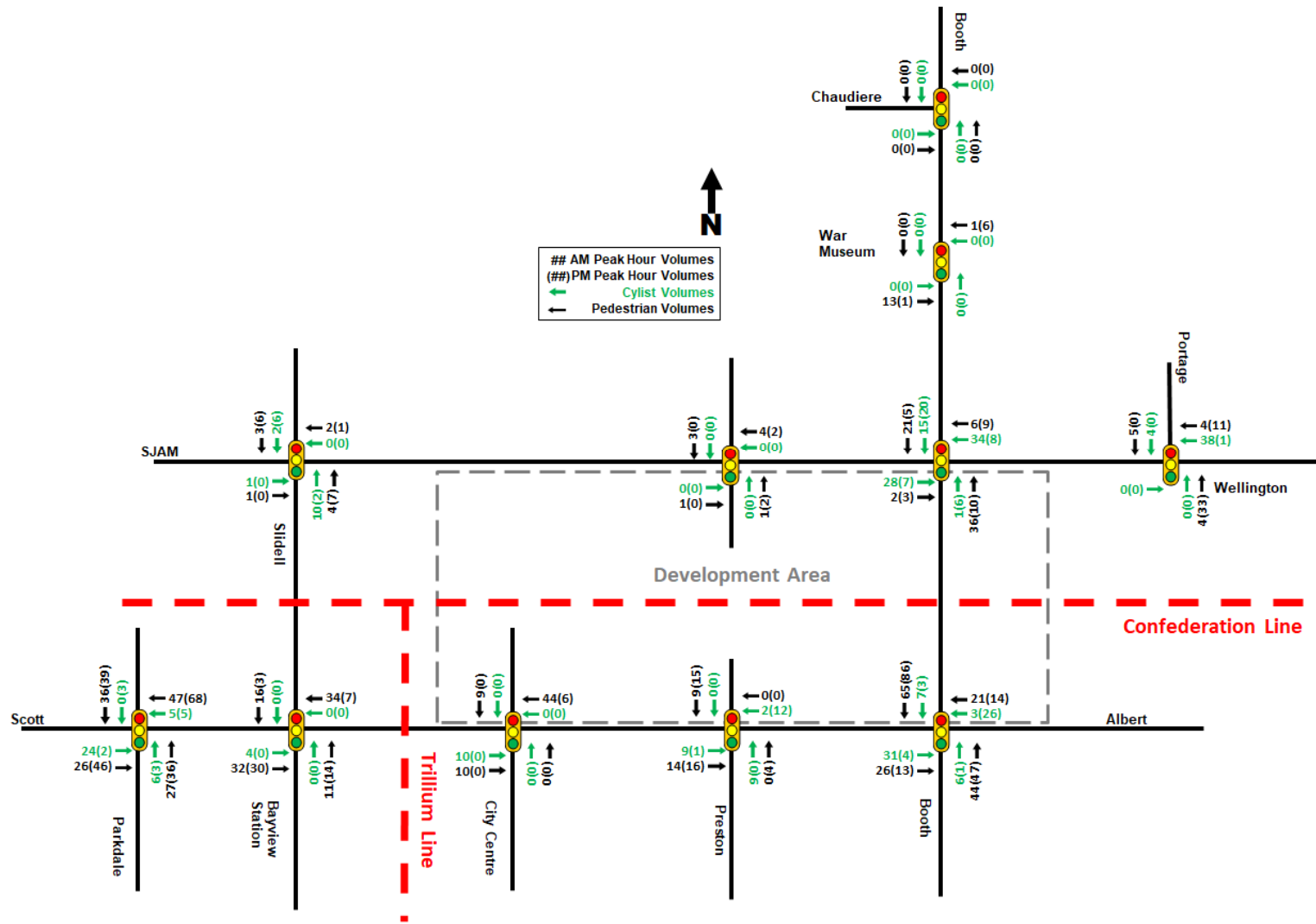


Figure 10: Existing Pedestrian and Cyclist Volumes, AM Peak (PM Peak)



### 3.1.3 Planned Conditions

#### **Active Transportation Projects**

Cycling projects recently completed, underway or planned in the area include:

- Approximately one kilometer of east-west 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<sup>2</sup>, 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.

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<sup>2</sup> 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 discussed 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<sup>3</sup>. **Figure 11** below shows all existing and proposed rapid transit networks in the downtown area.

Figure 11: Proposed Downtown Rapid Transit Network



<sup>3</sup> <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:

- Short-term (1-5 years)
  - 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 O’Connor to Vimy.
  - 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.
  - Commissioner Street resurfacing and sidewalk renewal
- Medium-term (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 <sup>2</sup> retail - 184,045 ft <sup>2</sup> office - 160 suite hotel	Mixed-use community
133 Booth	East LeBreton Flats Redevelopment	- 592 residential units - 5,190 ft <sup>2</sup> daycare - 3,265 ft <sup>2</sup> 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 <sup>2</sup> retail - 197,324 ft <sup>2</sup> 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 existing 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/Kichi Zibi Mikan
- Bayview Station/Albert
- Albert/City Centre
- Parkdale/Scott
- Somerset/Booth
- Somerset/Preston

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, 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 Development-Generated Travel Demand

#### 3.3.1 Land Use

As previously described, the Plan of Subdivision for 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 Plan of Subdivision includes an option to host a major event centre. As part of the previous Master Concept Plan process, a land use planning exercise was undertaken for four potential development scenarios that were envisioned for LeBreton Flats. Of the four scenarios, Scenario 4 had the highest density and therefore, was considered to exhibit the highest potential trip generation on standard weekday. As such, Scenario 4 was carried forward for analysis as it reflects the “worst case scenario” from a trip generation perspective. As part of the Plan of Subdivision, Scenario 4 has been further refined, as summarized in **Table 4**.

**Table 4: Potential Development Scenarios – Scenario 4**

Scenario	Description	Townhome (units)	Mid- / High-Rise (units)	Retail (ft <sup>2</sup> )	Office (ft <sup>2</sup> )	Hotel (ft <sup>2</sup> )
Master Concept Plan	Major Event Centre & Highest Density	301	3816	261,035	508,734	154,419
<b>Plan of Subdivision</b>	<b>Major Event Centre &amp; Highest Density</b>	300	5767	261,035	508,734	154,419
Difference	-	- 1	+ 1,951	0	0	0

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

#### **Phase 1: Early Stages (approximately 2024-2030)**

##### **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 5** summarizes the size and type of land uses for each development block per planned phase of development for Scenario 4.



Table 5: 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 <sup>2</sup> )	General Office (ft <sup>2</sup> )	Hotel (ft <sup>2</sup> )
<b>Phase 1 (2024-2030)</b>						
A1	0	120	472	14,951	-	-
A2-4 (Major Event Centre)	0	0	608	25,510	-	101,719 (201 rooms)
A9	0	59	169	10,333	-	-
A10	0	124	328	20,333	-	-
F1	74	0	81	-	-	-
F2	56	0	135	-	-	-
F3	76	0	135	-	-	-
F8	0	86	135	9,515	-	52,700 (104 rooms)
<i>Phase 1 Total</i>	<b>206</b>	<b>389</b>	<b>2063</b>	<b>80,643</b>	<b>-</b>	<b>154,419 (305 rooms)</b>
<b>Phase 2 (2030-2040)</b>						
A5	10	132	135	-	-	-
A6	10	145	203	9,020	-	-
A11	0	179	135	11,259	-	-
A12	0	60	135	6,458	-	-
F9	14	81	135	5,533	-	-
F10	14	86	202	5,877	-	-
<i>Phase 2 Total</i>	<b>48</b>	<b>683</b>	<b>945</b>	<b>38,147</b>	<b>-</b>	<b>-</b>
<b>Phase 3 (2040+)</b>						
A7	0	0	203	21,905	144,139	-
A8	0	0	270	30,257	117,563	-
F4	46	0	135	-	-	-
F5	0	56	135	-	-	-
F6	0	49	135	-	-	-
F7	0	55	0	-	-	-
F11	0	111	270	30,785	-	-
F12	0	66	202	19,289	-	-
AD1-5	0	0	0	40,009	247,032	-
<i>Phase 3 Total</i>	<b>46</b>	<b>337</b>	<b>1350</b>	<b>142,245</b>	<b>508,734</b>	<b>-</b>
<b>Total</b>	<b>300</b>	<b>1409</b>	<b>4358</b>	<b>261,035</b>	<b>508,734</b>	<b>154,419 (305 rooms)</b>

### 3.3.2 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 6** 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 6: Trip Generation Rates**

Land Use	Land Use Code (TRANS / ITE)	AM Peak Hour	PM Peak Hour
Low-Rise Multi-family Housing ( <i>X = Units</i> )	TRANS Multi-Unit (Low-Rise)	$T = 0.68(X)$	$T = 0.70(X)$
Mid-Rise Multi-family Housing ( <i>X = Dwelling Units</i> )	TRANS Multi-Unit (High-Rise)	$T = 0.4(X)$	$T = 0.4(X)$
High-Rise Multi-family Housing ( <i>X = Dwelling Units</i> )	TRANS Multi-Unit (High-Rise)		
Shopping Center ( <i>X = 1,000 ft<sup>2</sup> GFA</i> )	ITE 820 General Urban/Suburban	$T = 5.03(X)$ ; or $\text{Ln}(T) = 0.86(X) + 2.53$	$T = 7.49(X)$ ; or $\text{Ln}(T) = 0.66(X) + 4.04$
General Office Building ( <i>X = 1,000 ft<sup>2</sup> GFA</i> )	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 ( <i>X = Rooms</i> )	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 10<sup>th</sup> 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 7** and **Table 8** 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 7: Projected Site Person Trip Generation by Block / Parcel**

Block	AM Peak Hour			PM Peak Hour		
	In	Out	Total	In	Out	Total
<b>Phase 1 (2024-2030)</b>						
A1	144	222	366	306	269	575
A2-4 (Major Event Centre)	257	311	568	475	408	883
A9	79	107	186	185	171	356
A10	147	202	349	311	284	595
F1	25	57	82	48	35	83
F2	28	64	92	53	39	92
F3	32	73	105	61	45	106
F8	110	125	235	216	189	405
<i>Phase 1 Total</i>	<i>822</i>	<i>1161</i>	<i>1983</i>	<i>1655</i>	<i>1440</i>	<i>3095</i>
<b>Phase 2 (2030-2040)</b>						
A5	35	79	114	65	47	112
A6	90	139	229	205	183	388
A11	94	133	227	213	193	406
A12	57	83	140	143	130	273
F9	60	90	150	144	127	271
F10	70	112	182	164	144	308
<i>Phase 2 Total</i>	<i>406</i>	<i>636</i>	<i>1042</i>	<i>934</i>	<i>824</i>	<i>1758</i>
<b>Phase 3 (2040+)</b>						
A7	305	170	475	309	431	740
A8	314	211	525	371	471	842
F4	26	59	85	49	36	85
F5	24	52	76	44	31	75
F6	23	51	74	42	30	72
F7	7	15	22	13	9	22
F11	176	215	391	361	336	697
F12	119	148	267	262	246	508
AD1-5	460	191	651	392	595	987
<i>Phase 3 Total</i>	<i>1454</i>	<i>1112</i>	<i>2566</i>	<i>1843</i>	<i>2185</i>	<i>4028</i>
<b>Total Person Trips</b>	<b>2682</b>	<b>2909</b>	<b>5591</b>	<b>4432</b>	<b>4449</b>	<b>8881</b>

Table 8: Projected Site Person Trip Generation by Land Use Type

Block	AM Peak Hour			PM Peak Hour		
	In	Out	Total	In	Out	Total
<b>Phase 1 (2024-2030)</b>						
Residential			1120			1113
Retail	368	312	680	878	878	1756
Office	-	-	-	-	-	-
Hotel	107	75	182	133	93	226
<i>Phase 1 Total</i>	<i>822</i>	<i>1161</i>	<i>1983</i>	<i>1655</i>	<i>1440</i>	<i>3095</i>
<b>Phase 2 (2030-2040)</b>						
Residential			683			676
Retail	194	165	359	541	541	1082
Office	-	-	-	-	-	-
Hotel	-	-	-	-	-	-
<i>Phase 2 Total</i>	<i>406</i>	<i>636</i>	<i>1042</i>	<i>934</i>	<i>824</i>	<i>1758</i>
<b>Phase 3 (2040+)</b>						
Residential			705			698
Retail	600	513	1113	1287	1287	2574
Office	636	112	748	151	605	756
Hotel	-	-	-	-	-	-
<i>Phase 3 Total</i>	<i>1454</i>	<i>1112</i>	<i>2566</i>	<i>1843</i>	<i>2185</i>	<i>4028</i>
<b>Total Person Trips</b>	<b>2682</b>	<b>2909</b>	<b>5591</b>	<b>4432</b>	<b>4449</b>	<b>8881</b>

As shown in Tables 7 and 8, the full build-out of LeBreton Flats is ultimately projected to generate an approximate two-way total of 5,600 and 8,900 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.

### 3.3.3 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 9**, **Table 10**, and **Table 11**, 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 9: Projected Site Vehicle Trip Generation**

Block	AM Peak Hour			PM Peak Hour		
	In	Out	Total	In	Out	Total
<b>Phase 1 (2024-2030)</b>						
A1	22	33	54	46	41	86
A2-4 (Major Event Centre)	39	46	84	71	61	132
A9	12	16	28	28	26	54
A10	23	31	53	46	42	88
F1	4	9	13	7	5	12
F2	4	10	14	8	6	14
F3	5	11	16	9	7	16
F8	16	19	35	33	28	61
<i>Phase 1 Total</i>	<i>125</i>	<i>175</i>	<i>297</i>	<i>248</i>	<i>216</i>	<i>463</i>
<b>Phase 2 (2030-2040)</b>						
A5	5	12	17	10	7	17
A6	14	21	34	30	27	58
A11	14	20	34	32	29	61
A12	9	12	21	22	20	41
F9	10	14	23	21	19	40
F10	11	17	28	25	22	47
<i>Phase 2 Total</i>	<i>63</i>	<i>96</i>	<i>157</i>	<i>140</i>	<i>124</i>	<i>264</i>
<b>Phase 3 (2040+)</b>						
A7	46	25	72	47	65	111
A8	47	31	78	56	71	126
F4	4	9	13	7	5	12
F5	4	8	12	7	5	12
F6	3	8	11	6	5	11
F7	1	2	3	2	1	3
F11	26	33	59	54	50	104
F12	18	22	40	39	37	76
AD1-5	69	29	98	59	89	148
<i>Phase 3 Total</i>	<i>218</i>	<i>167</i>	<i>386</i>	<i>277</i>	<i>328</i>	<i>603</i>
<b>Total 'New' Vehicle Trips</b>	<b>406</b>	<b>438</b>	<b>840</b>	<b>665</b>	<b>668</b>	<b>1330</b>

As shown in Table 9, the full build-out of LeBreton Flats is projected to generate approximate two-way vehicle volumes of 840 veh/h and 1,330 veh/h during weekday morning and afternoon peak hours, respectively.

**Table 10: Projected Site Transit Trip Generation**

Block	AM Peak Hour			PM Peak Hour		
	In	Out	Total	In	Out	Total
<b>Phase 1 (2024-2030)</b>						
A1	86	133	219	184	161	345
A2-4 (Major Event Centre)	154	187	341	278	253	530
A9	48	64	111	111	103	214
A10	88	121	209	187	171	358
F1	15	34	49	29	21	50
F2	17	38	55	32	23	55
F3	19	44	63	37	27	64
F8	66	75	141	127	118	244
<i>Phase 1 Total</i>	<b>493</b>	<b>696</b>	<b>1188</b>	<b>985</b>	<b>877</b>	<b>1860</b>
<b>Phase 2 (2030-2040)</b>						
A5	21	47	68	39	28	67
A6	54	84	138	123	110	233
A11	56	80	136	128	116	243
A12	34	49	83	86	78	164
F9	36	54	90	87	76	163
F10	42	67	109	98	86	184
<i>Phase 2 Total</i>	<b>243</b>	<b>381</b>	<b>624</b>	<b>561</b>	<b>494</b>	<b>1054</b>
<b>Phase 3 (2040+)</b>						
A7	183	102	285	186	259	445
A8	188	126	315	222	283	505
F4	16	35	51	29	22	51
F5	14	31	45	26	19	45
F6	14	31	45	25	18	43
F7	4	9	13	8	5	13
F11	105	129	234	217	202	419
F12	72	88	160	158	148	305
AD1-5	276	115	391	235	357	592
<i>Phase 3 Total</i>	<b>872</b>	<b>666</b>	<b>1539</b>	<b>1106</b>	<b>1313</b>	<b>2418</b>
<b>Total 'New' Transit Trips</b>	<b>1608</b>	<b>1743</b>	<b>3351</b>	<b>2652</b>	<b>2684</b>	<b>5332</b>

As shown in Table 10, the full build-out of LeBreton Flats is projected to generate approximate two-way transit trip volumes of 3,350 trips/h and 5,330 trips/h during weekday morning and afternoon peak hours, respectively.

Table 11: Projected Site Active Trip Generation

Block	AM Peak Hour			PM Peak Hour		
	In	Out	Total	In	Out	Total
<b>Phase 1 (2024-2030)</b>						
A1	30	45	75	62	55	117
A2-4 (Major Event Centre)	53	62	115	92	85	177
A9	17	22	39	38	35	73
A10	31	42	73	62	56	118
F1	6	12	18	10	7	17
F2	6	14	20	11	8	19
F3	7	15	22	13	10	23
F8	22	25	47	43	39	82
<i>Phase 1 Total</i>	<i>172</i>	<i>237</i>	<i>409</i>	<i>331</i>	<i>295</i>	<i>626</i>
<b>Phase 2 (2030-2040)</b>						
A5	7	16	23	14	10	24
A6	19	29	48	41	37	78
A11	19	27	46	43	39	82
A12	13	16	29	30	27	57
F9	14	19	33	28	25	53
F10	15	23	38	34	30	64
<i>Phase 2 Total</i>	<i>87</i>	<i>130</i>	<i>217</i>	<i>190</i>	<i>168</i>	<i>358</i>
<b>Phase 3 (2040+)</b>						
A7	62	34	96	63	87	150
A8	63	41	104	76	96	172
F4	6	12	18	10	7	17
F5	6	11	17	10	7	17
F6	5	11	16	9	7	16
F7	2	3	5	3	2	5
F11	35	45	80	73	68	141
F12	24	30	54	53	50	103
AD1-5	92	39	131	78	118	196
<i>Phase 3 Total</i>	<i>295</i>	<i>226</i>	<i>521</i>	<i>375</i>	<i>442</i>	<i>817</i>
<b>Total 'New' Active Trips</b>	<b>554</b>	<b>593</b>	<b>1147</b>	<b>896</b>	<b>905</b>	<b>1801</b>

As shown in Table 11, the full build-out of LeBreton Flats is projected to generate approximate two-way active trip volumes of 1,150 trips/h and 1,800 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 4,500 trips/h and 7,130 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 section.

### 3.3.4 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 KZM 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 KZM 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

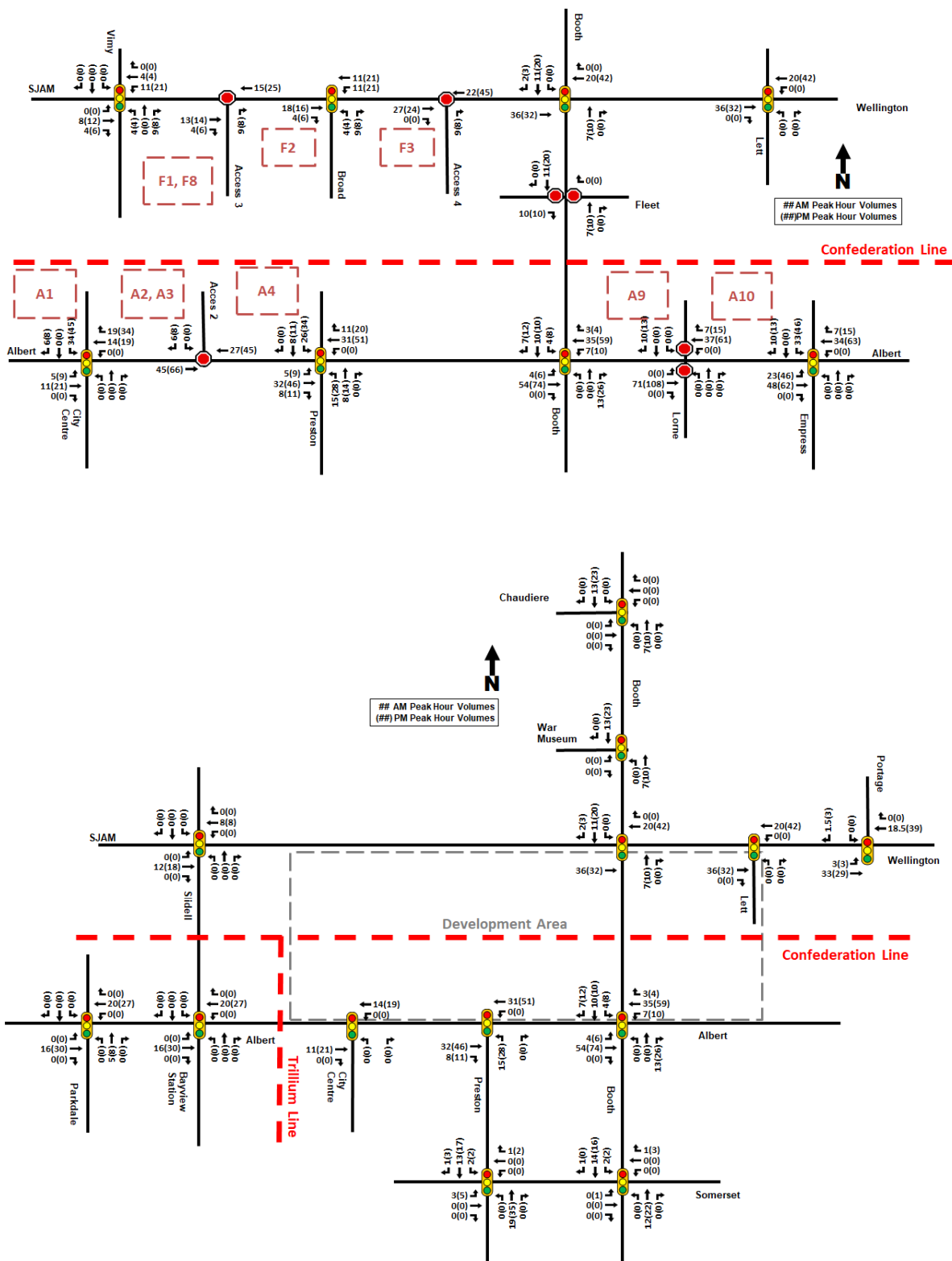


Figure 13: Projected Site-Generated Traffic – Phase 2

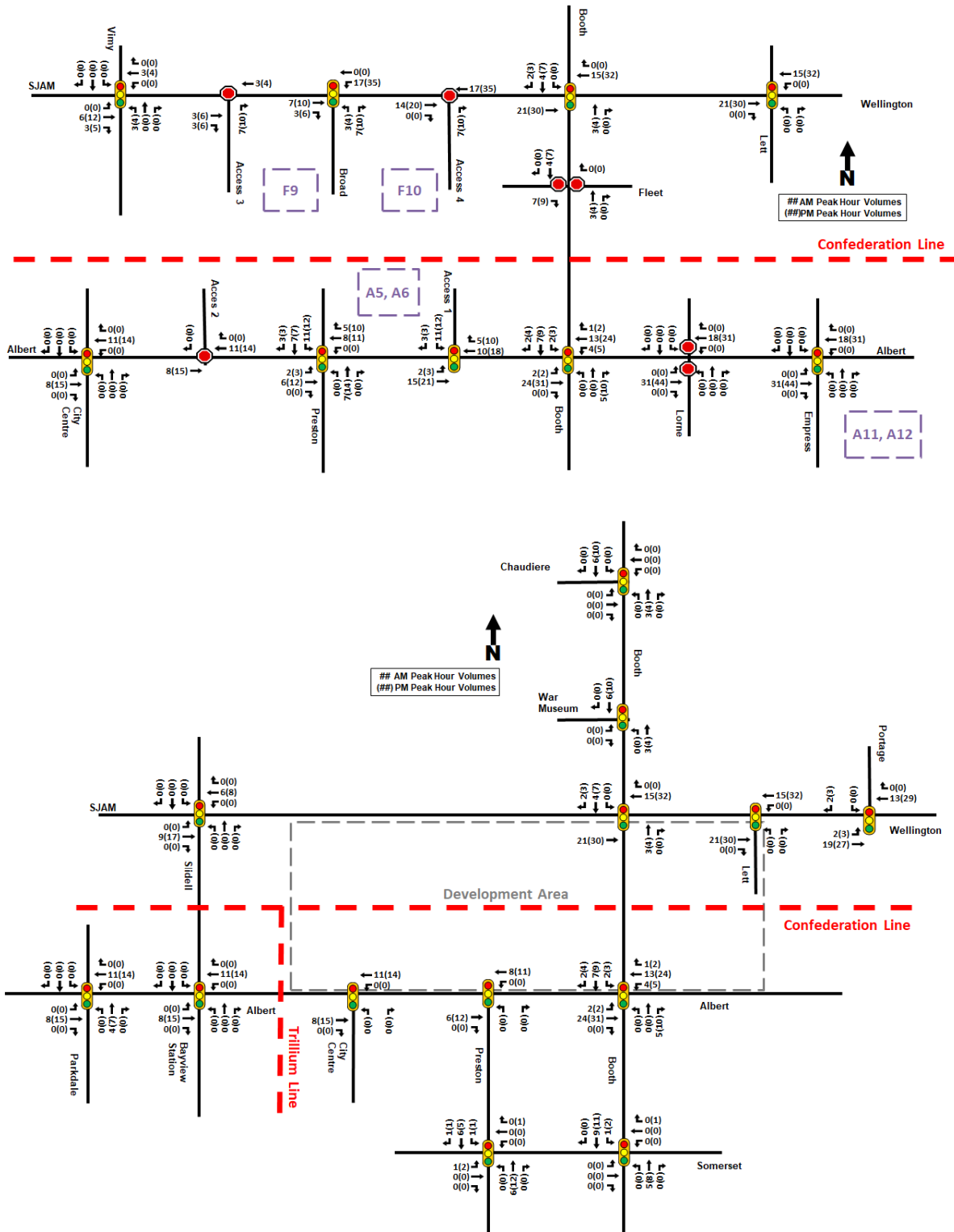


Figure 14: Projected Site-Generated Traffic – Phase 3

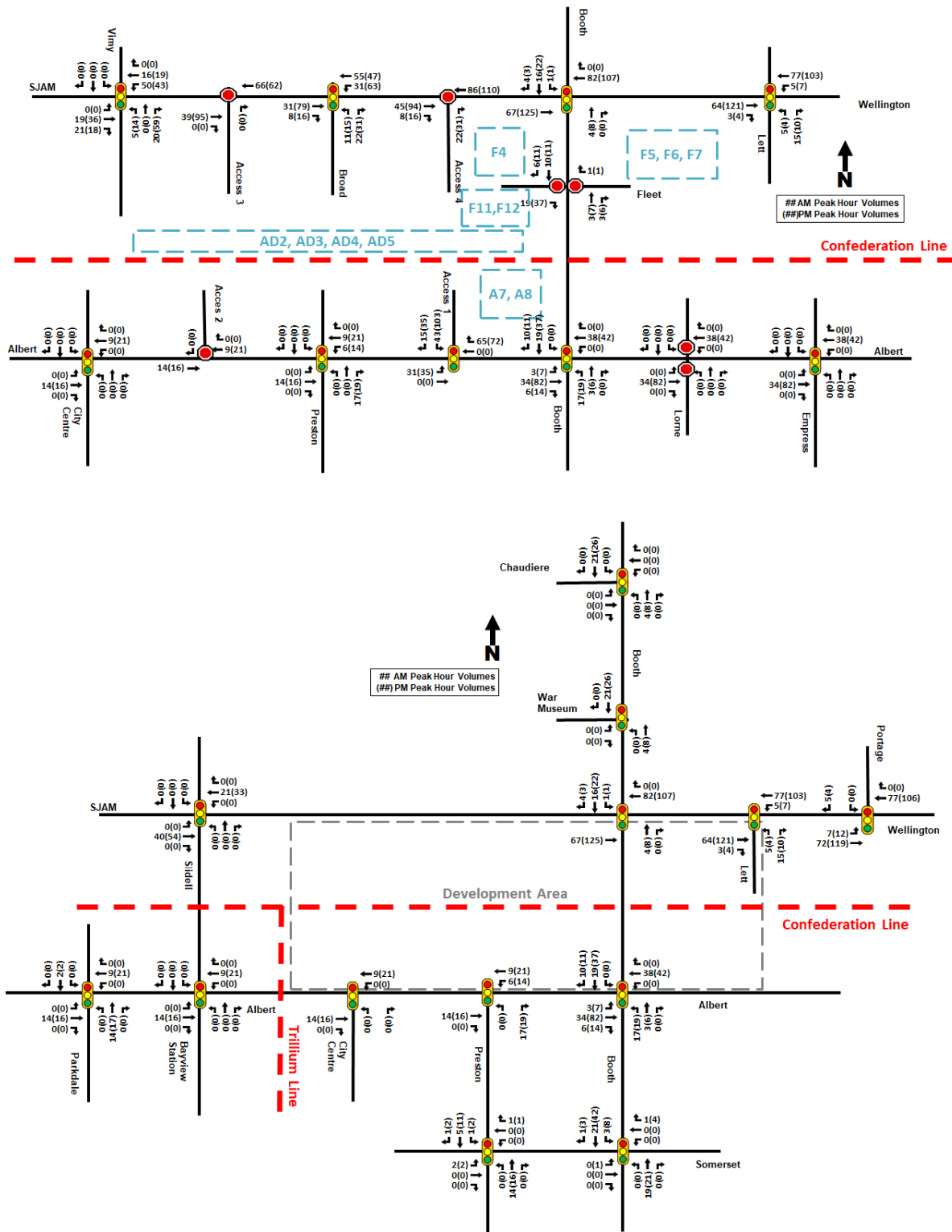
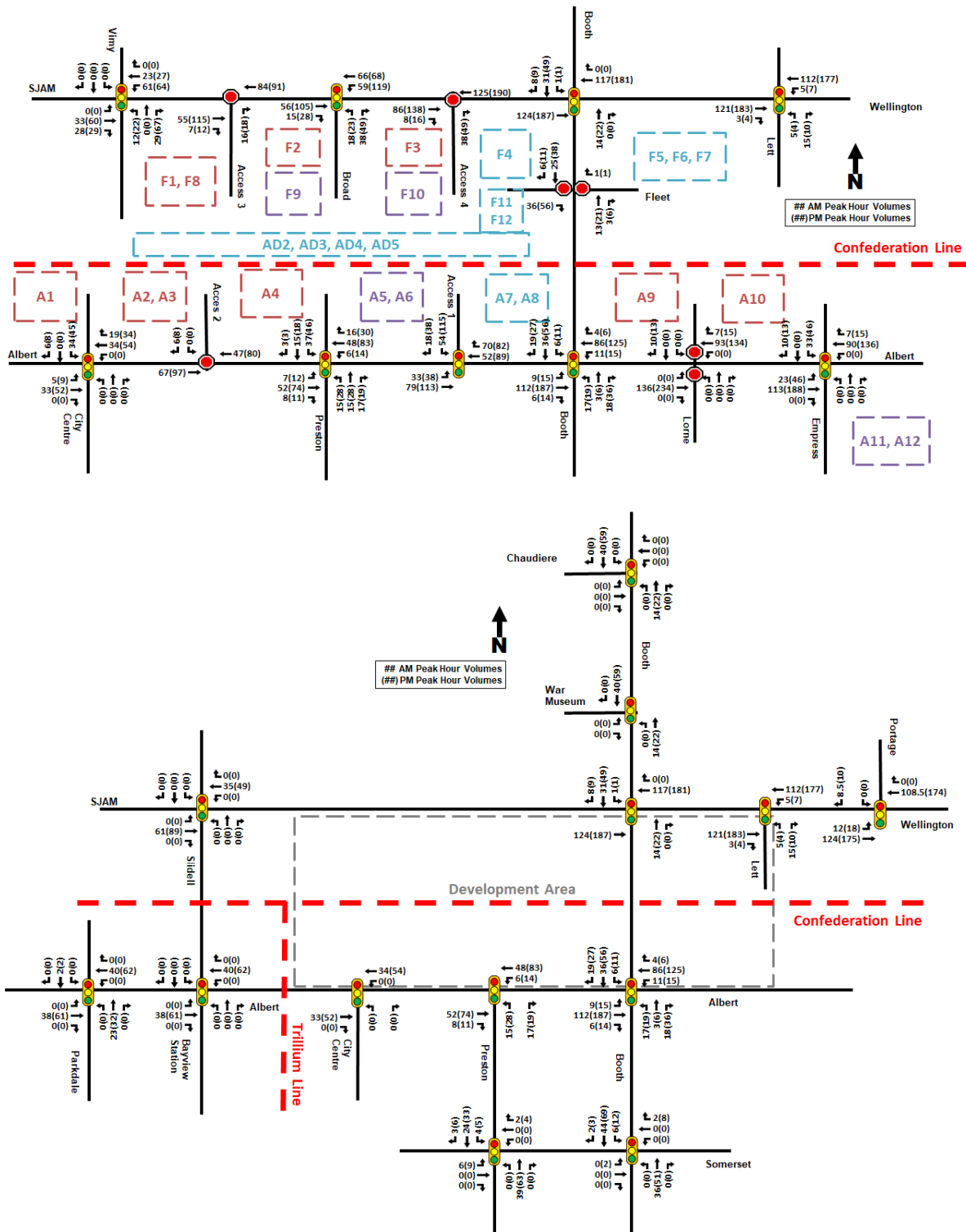


Figure 15: Projected Site-Generated Traffic – Full Build-Out



### 3.4 Exemptions Review

Given the size and nature of the proposed development lands, and following discussion with City Staff, the following TIA analysis modules are recommended to be exempted from this TIA analysis: Modules 4.1.2, 4.2, 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 12** summarizes the modules that were considered for exemption.

**Table 12: Module Exemption Review**

Module	Element	Exemption Criteria	Exemption Status
<b>Design Review</b>			
4.1 Development Design	4.1.2 Circulation and Access	Required for Site Plans	<b>Exempt</b>
	4.1.3 New Street Networks	Required for Plans of Subdivision	<b>Not Exempt</b>
4.2 Parking	4.2.1 Parking Supply	Required for Site Plans	<b>Exempt</b>
	4.2.2 Spillover Parking	Eliminated in 2023 TIA Update	<b>N/A</b>
4.4 Access Intersections	4.4.1 Location and Design of Access	Combined with 4.9 in 2023 TIA Update	<b>N/A</b>
	4.4.2 Intersection Control		
	4.4.3 Intersection Design		
<b>Network Impact</b>			
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	<b>Not Exempt</b>
4.6 Neighbourhood Traffic Calming	All Elements	Required when the development relies on local or collector streets for access and total volumes exceed ATM capacity thresholds	<b>Not Exempt</b>
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	<b>Not Exempt</b>

## 4. STEP 3 – ANALYSIS

### 4.1 Background Network Travel Demands

#### 4.1.1 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 Plan of Subdivision, 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 KZM/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.

These future transportation network plans have been included/assumed in the subsequent analysis, with the exception of a new interprovincial bridge between Ottawa and Gatineau with three potential corridors identified east of downtown. Further studies have been authorized for the Kettle Island corridor as of June 2024.

#### 4.1.2 Background Growth and Traffic Volume Balancing

Due to certain data gaps (i.e., not every study area intersection was counted during the same year), 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<sup>4</sup>: SB [-850(AM), -930(PM)]
- Booth/Wellington: SB [-120(AM), -70(PM)], WB [-50(PM)]
- Albert/Preston: EB [-110(AM), -50(PM)], WB [-50 (AM), -100 (PM)]
- Albert/City Centre: EB [-120(AM)]
- KZM/Slidell: WB [-50(AM), -120(PM)]

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<sup>4</sup> 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

- Wellington/Vimy: EB [+20(AM)]; WB [-90(PM)]
- Wellington/Lett: EB [+180(AM)]; WB [-130(AM), -50(PM)]
- Wellington/Portage: EB [-140 (AM), -240(PM)]
- Booth/Somerset: NB [+130 (PM)]

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, and it can be argued that they are trending downwards.

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 trips 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, with more recent counts used where available, and zero background growth (i.e., background growth rate of 0%) was applied.

#### 4.1.3 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)

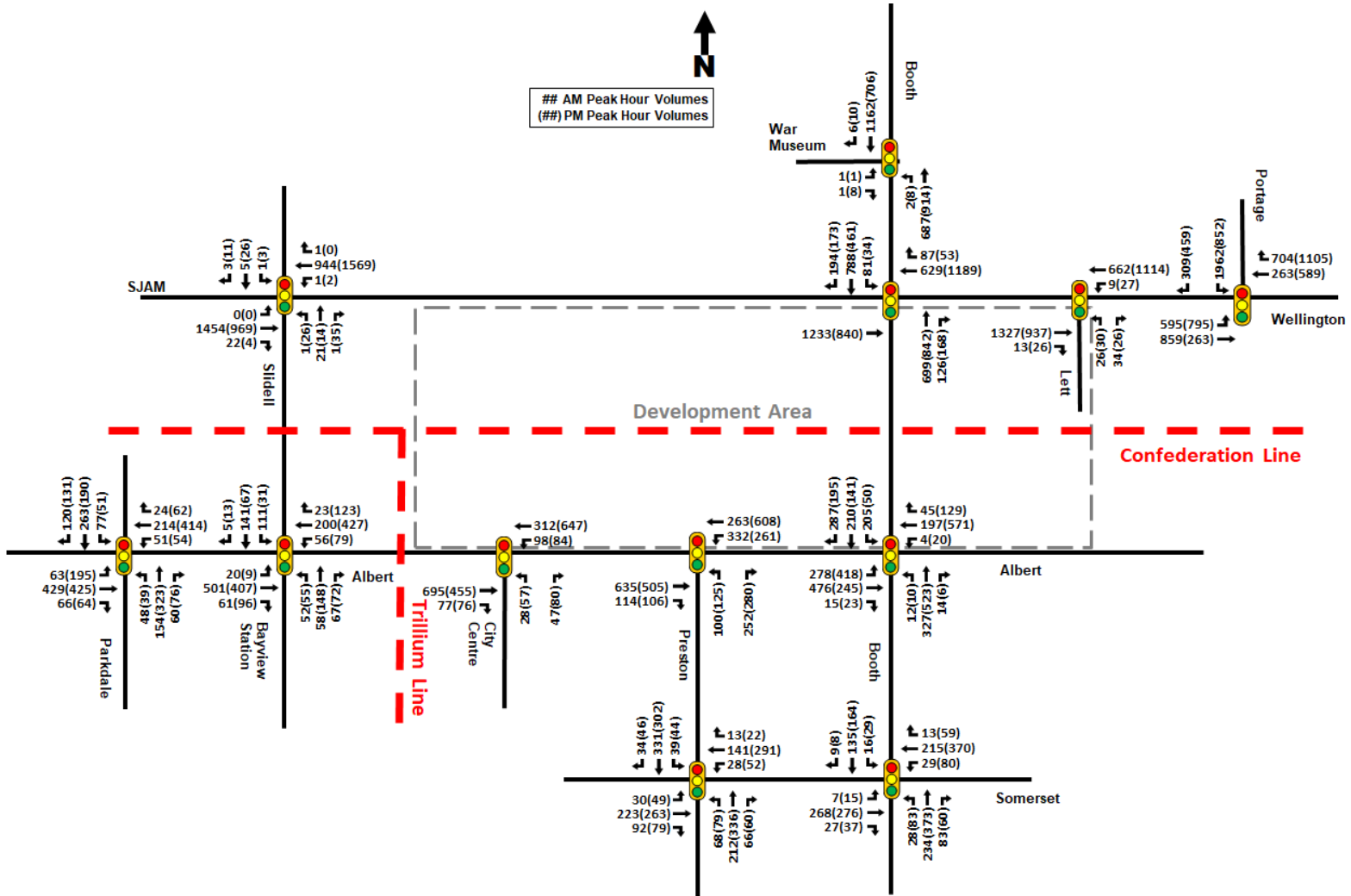




Figure 17: Trips Generated by Area Developments, AM Peak (PM Peak)

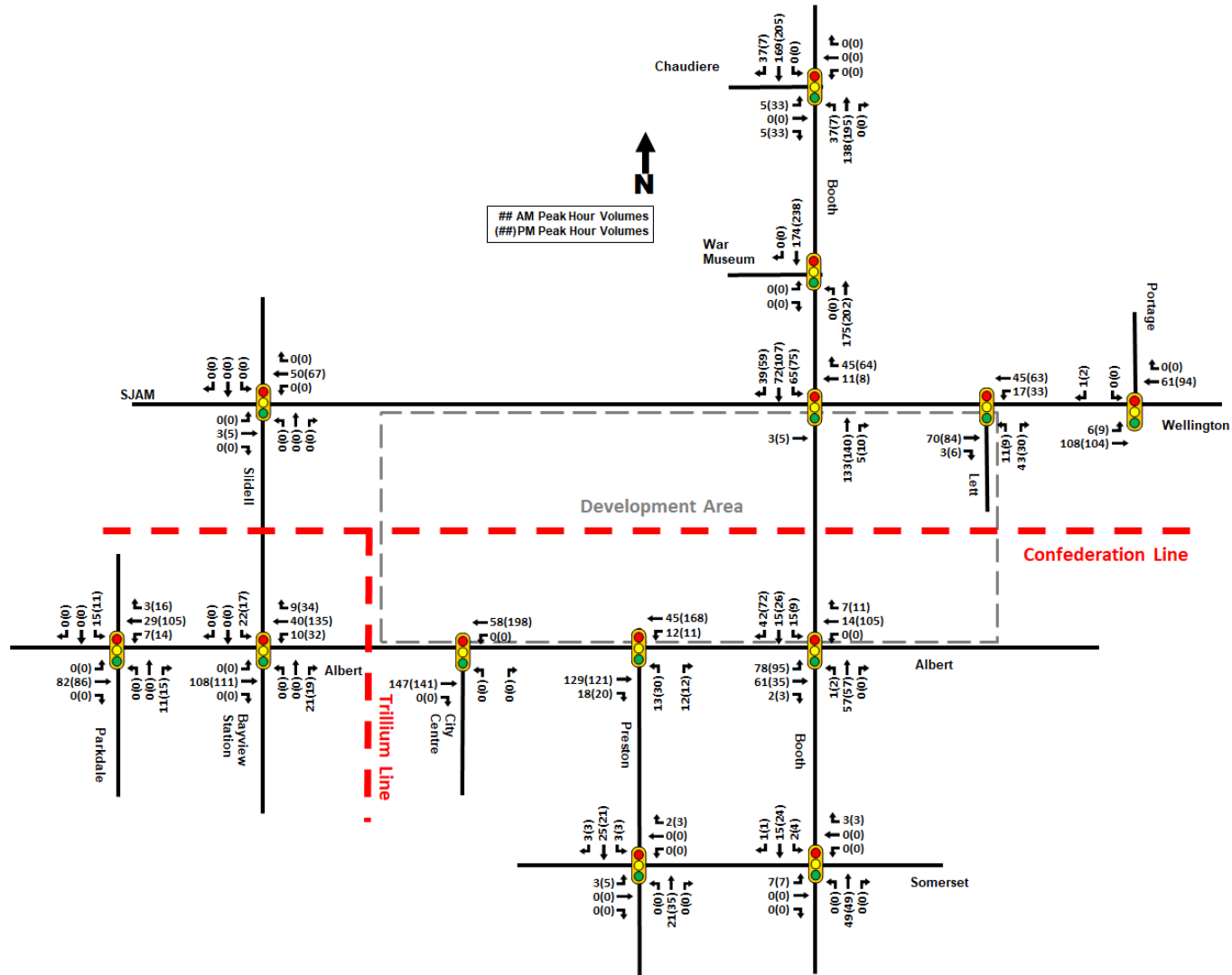
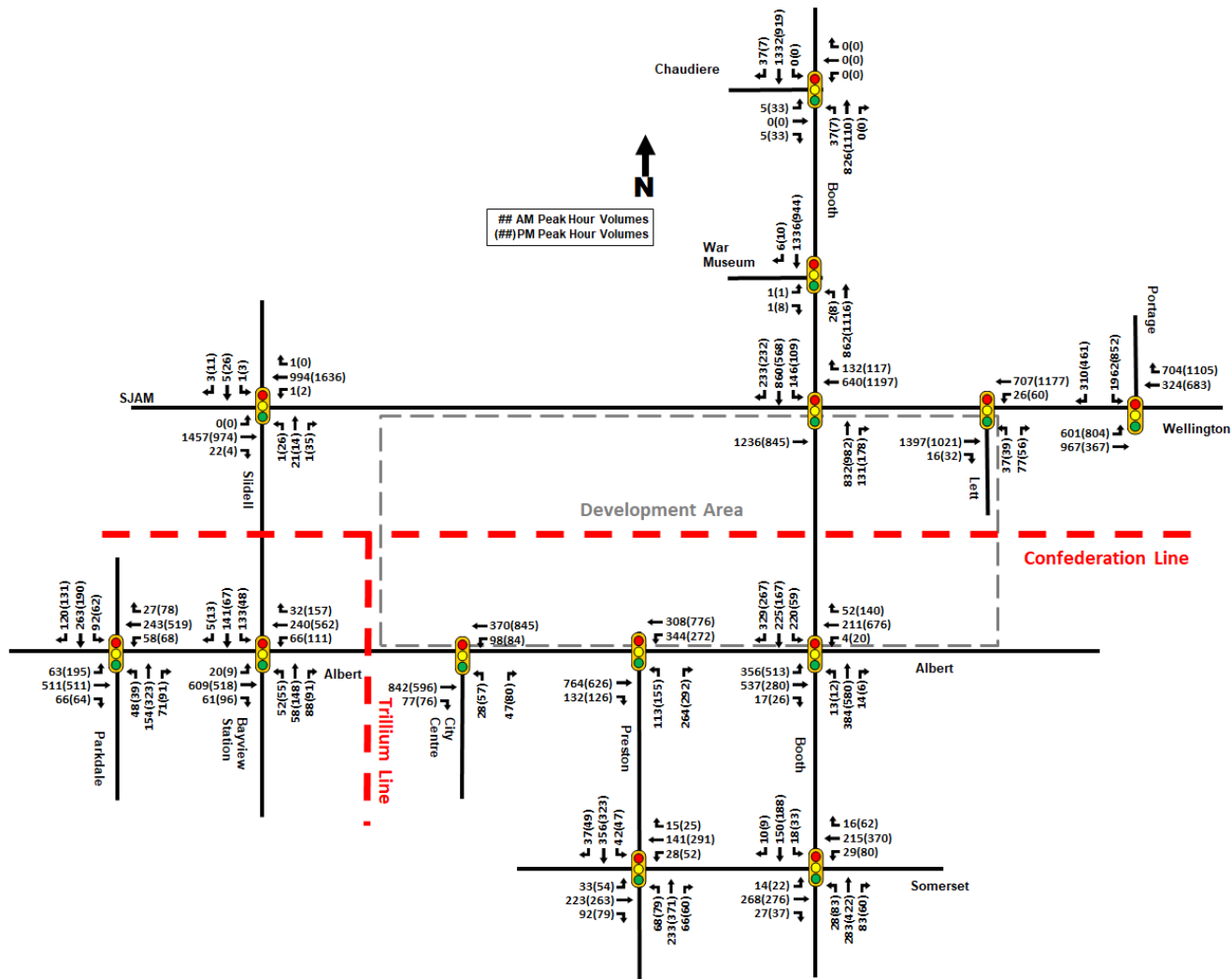


Figure 18: Future Background Turning Movement Volumes, AM Peak (PM Peak)



## 4.2 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 2024, 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 13** shows the vehicular level of service that corresponds to each v/c ratio.

**Table 13: 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 Plan of Subdivision for a large area such as LeBreton Flats, estimated 95<sup>th</sup> 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, 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, and are presented in **Table 14**.

**Table 14: Minimum Desirable MMLOS Targets by Official Plan Policy/Designation**

OP Designation / Policy Area	Ped LOS	Bike LOS		Transit LOS		Auto LOS
		Cross-Town	Elsewhere	TP – Isolated Measures	Mixed Traffic	
within 600m of Rapid Transit Station	A	A	B	D	E	E
Downtown Core Transect	A	A	B	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. Any streets with cross-town bikeways (Albert St., Scott St., Wellington St. east of Portage Bridge) have a Bike LOS (BLOS) target of LOS 'A', while other streets have BLOS targets of LOS 'B'. There are no plans for transit priority above and beyond isolated measures on Somerset St., therefore the Transit LOS (TLOS) target is LOS 'D' for Somerset St. and LOS 'E' for all other locations where transit operates in mixed traffic.

#### 4.2.1 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 15** summarizes the existing performance of study area intersections. Detailed Synchro output data for Existing and Future Background Conditions will be provided separately to City staff.

**Table 15: 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)	0.68 (0.54)	B (A)	SBTR	3 (1)	0.68 (0.42)	B (A)
Booth & War Museum	4 (5)	0.40 (0.31)	A (A)	SBTR	6 (5)	0.40 (0.25)	A (A)
Booth & Wellington	32 (30)	0.86 (0.83)	D (D)	EBT	34 (28)	0.90 (0.62)	D (B)
Booth & Albert	30 (34)	0.59 (0.70)	A (B)	EBL	21 (30)	0.55 (0.87)	A (D)
Albert & Empress	3 (4)	0.25 (0.33)	A (A)	WBLT	2 (2)	0.13 (0.33)	A (A)
Albert & Preston	17 (13)	0.66 (0.53)	B (A)	NBR	15 (14)	0.67 (0.67)	B (B)
Albert & City Centre	7 (7)	0.45 (0.48)	A (A)	EBT	7 (5)	0.50 (0.34)	A (A)
Albert/Scott & Bayview	16 (16)	0.45 (0.41)	A (A)	EBTR	6 (17)	0.49 (0.44)	A (A)
Scott & Parkdale	21 (26)	0.55 (0.64)	A (B)	WBT	14 (26)	0.26 (0.58)	A (A)
KZM & Slidell	3 (7)	0.50 (0.65)	A (B)	WBT	3 (8)	0.34 (0.65)	A (B)
Wellington/KZM & Vimy	2 (3)	0.46 (0.51)	A (A)	WBT	2 (4)	0.30 (0.52)	A (A)
Wellington & Lett	15 (4)	0.52 (0.41)	A (A)	EBTR	20 (2)	0.54 (0.36)	A (A)
Wellington & Portage	111 (39)	1.21 (0.84)	F (D)	SBL	230 (53)	1.44 (0.88)	F (D)
Somerset & Booth	20 (22)	0.50 (0.64)	A (B)	NBLTR	36 (30)	0.77 (0.82)	C (D)
Somerset & Preston	30 (28)	0.63 (0.65)	B (B)	NBTR	32 (43)	0.63 (0.85)	B (D)

As shown in Table 15, 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, and it should be noted that there will be only two vehicular lanes with the West Gatineau Tramway in the future. 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 only other notable intersection for Existing Conditions is Booth Street at Wellington Street, which operates with a LOS 'D' in both peak hours, with the heaviest movements being eastbound in the morning peak hour and westbound in the afternoon peak hour.

The following **Table 16** 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 16 summarizes the study area intersection performance for all the Future Background scenarios.

**Table 16: 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	9 (11)	0.83 (0.77)	D (C)	NBTR	4 (14)	0.51 (0.79)	A (C)
Booth & War Museum	7 (8)	0.65 (0.54)	B (A)	SBTR	11 (8)	0.65 (0.46)	B (A)
Booth & Wellington	46 (32)	0.93 (0.93)	E (E)	NBTR	89 (36)	0.98 (1.00)	E (E)
Booth & Albert	79 (93)	0.93 (1.08)	E (F)	EBL	81 (188)	0.99 (1.33)	E (F)
Albert & Empress	2 (5)	0.31 (0.35)	A (A)	EBTR	2 (8)	0.32 (0.21)	A (A)
Albert & Preston	35 (24)	0.70 (0.62)	B (B)	WBL	45 (21)	0.80 (0.54)	C (A)
Albert & City Centre	15 (14)	0.46 (0.40)	A (A)	EBTR	14 (13)	0.46 (0.35)	A (A)
Albert/Scott & Bayview	18 (16)	0.48 (0.48)	A (A)	EBTR	11 (15)	0.59 (0.54)	A (A)
Scott & Parkdale	26 (35)	0.65 (0.80)	B (C)	WBT	24 (49)	0.40 (0.91)	A (E)
KZM & Slidell	3 (7)	0.50 (0.68)	A (B)	WBT	3 (8)	0.36 (0.68)	A (B)
Wellington/KZM & Vimy	2 (3)	0.46 (0.54)	A (A)	WBT	2 (4)	0.32 (0.55)	A (A)
Wellington & Lett	16 (5)	0.55 (0.43)	A (A)	EBTR	20 (2)	0.57 (0.40)	A (A)
Wellington & Portage	109 (40)	1.21 (0.87)	F (D)	SBL	232 (53)	1.45 (0.88)	F (D)
Somerset & Booth	21 (25)	0.54 (0.69)	A (B)	NBLTR	36 (39)	0.80 (0.89)	C (D)
Somerset & Preston	33 (29)	0.68 (0.69)	B (B)	NBTR	35 (46)	0.72 (0.88)	C (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 current 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 westbound through movement at the intersection of Scott Street and Parkdale Avenue is approaching capacity in the PM peak hour, as the eastbound left turn movement is fully protected due to the westbound crossside. This results in less green time for the westbound through movement. 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.
- Despite having two eastbound and two westbound through lanes, the intersection of Albert Street and City Centre Avenue will have slightly worse operations in Future Background, as the fully protected westbound left turn phasing reduces the amount of green time available for the rest of the intersection. Additionally, the consolidation of the northbound approach into a single lane increases delays on this approach.
- The intersection of Albert Street and Preston Street will have increased delay, as the westbound left turn movement has to be fully protected due to the eastbound crossside. 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 in the PM peak hour and over 0.90 in the AM peak hour. The eastbound left turn operates poorly in both peak hours, as does the southbound left and right turns in the AM peak hour. Other over or approaching capacity movements at this intersection include northbound through/right movement in both peak hours. Mitigation measures are explored on subsequent pages.

### ***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 2027).

#### **Active Mobility Projects**

- 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 (as the mitigation measures are based on older traffic count data, there may be mode shifts to cycling and walking since the construction of new infrastructure).
- 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; however, the decision rests with the Government of Canada to implement a Sixth Crossing.

#### **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.

#### **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 17** outlines the intersection operations of Booth Street at Albert Street with a single eastbound left and with a double eastbound left.

**Table 17: 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	355 (515)	81 (188)	0.99 (1.33)	E (F)	#159 (#248)
	EBTR	535 (280)	8 (16)	0.34 (0.18)	A (A)	26 (37)
	Overall	-	79 (93)	0.93 (1.08)	E (F)	-
Double EBL	EBL	355 (515)	39 (36)	0.51 (0.77)	A (C)	45 (82)
	EBTR	535 (280)	15 (20)	0.67 (0.35)	B (A)	161 (88)
	Overall	-	65 (58)	0.87 (0.90)	D (D)	-

- 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 both peak hours, with significant improvement to the operations of the eastbound approach. There remain issues in the northbound and southbound directions that exist in both scenarios (i.e., single EBL and double EBL). Given this, **it is recommended that a double eastbound left turn lane be provided in the Albert Street proposed design.** It should be noted that this analysis is based on turning movement counts from January 2024, reflecting the most up to date traffic information possible.

#### 4.2.2 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)

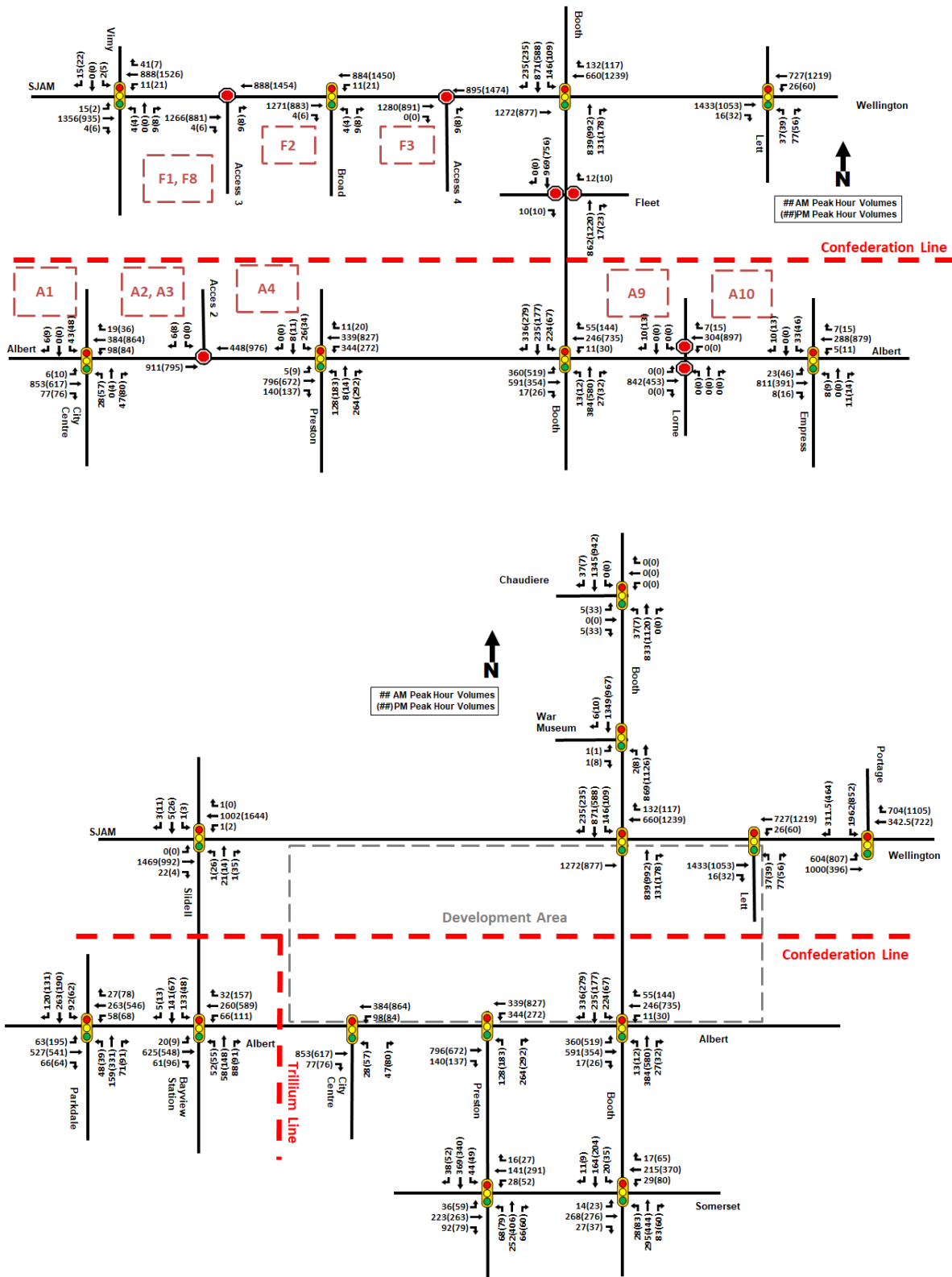


Figure 20: Total Projected Traffic Volumes – 2040 (Phase One & Two),  
AM Peak (PM Peak)

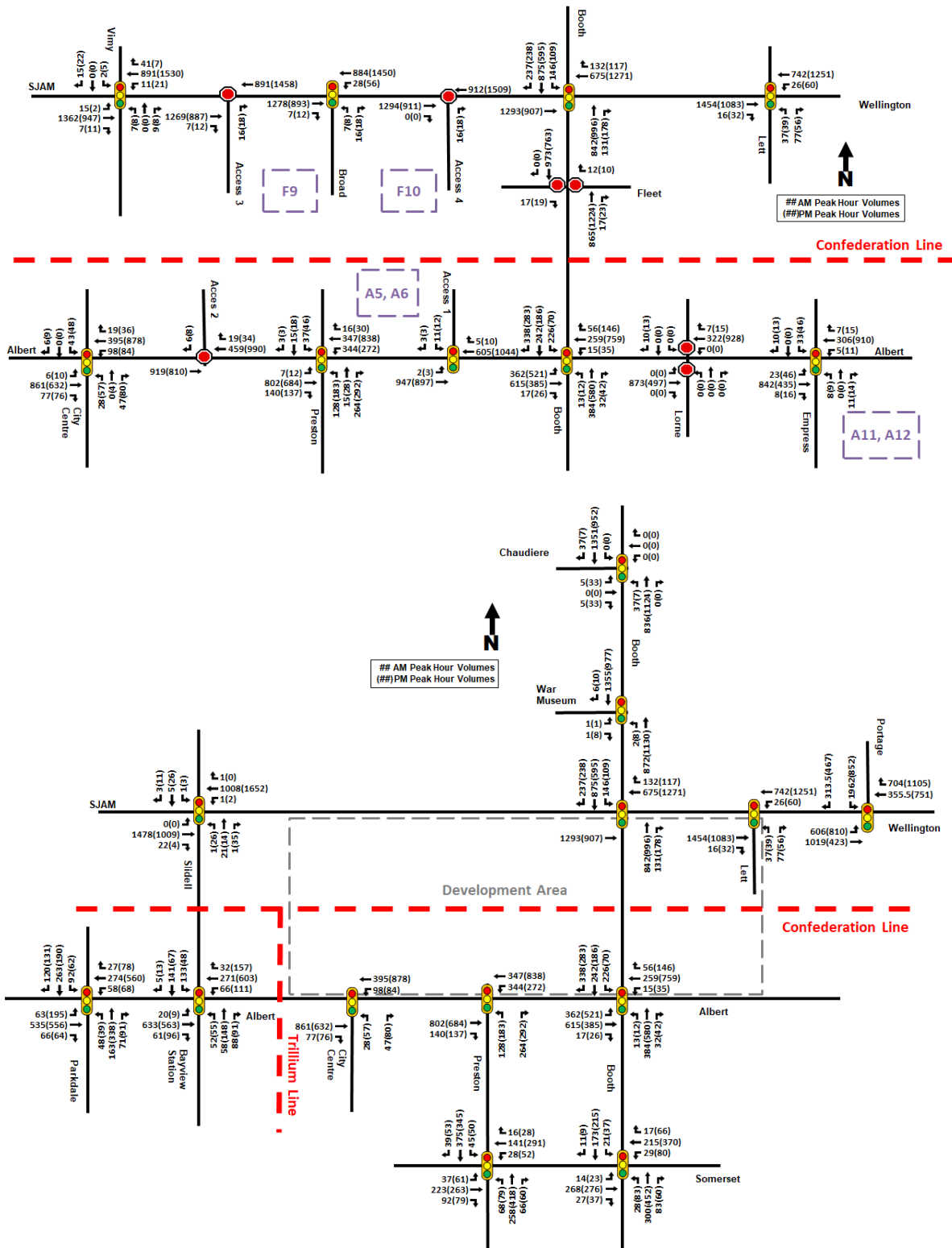
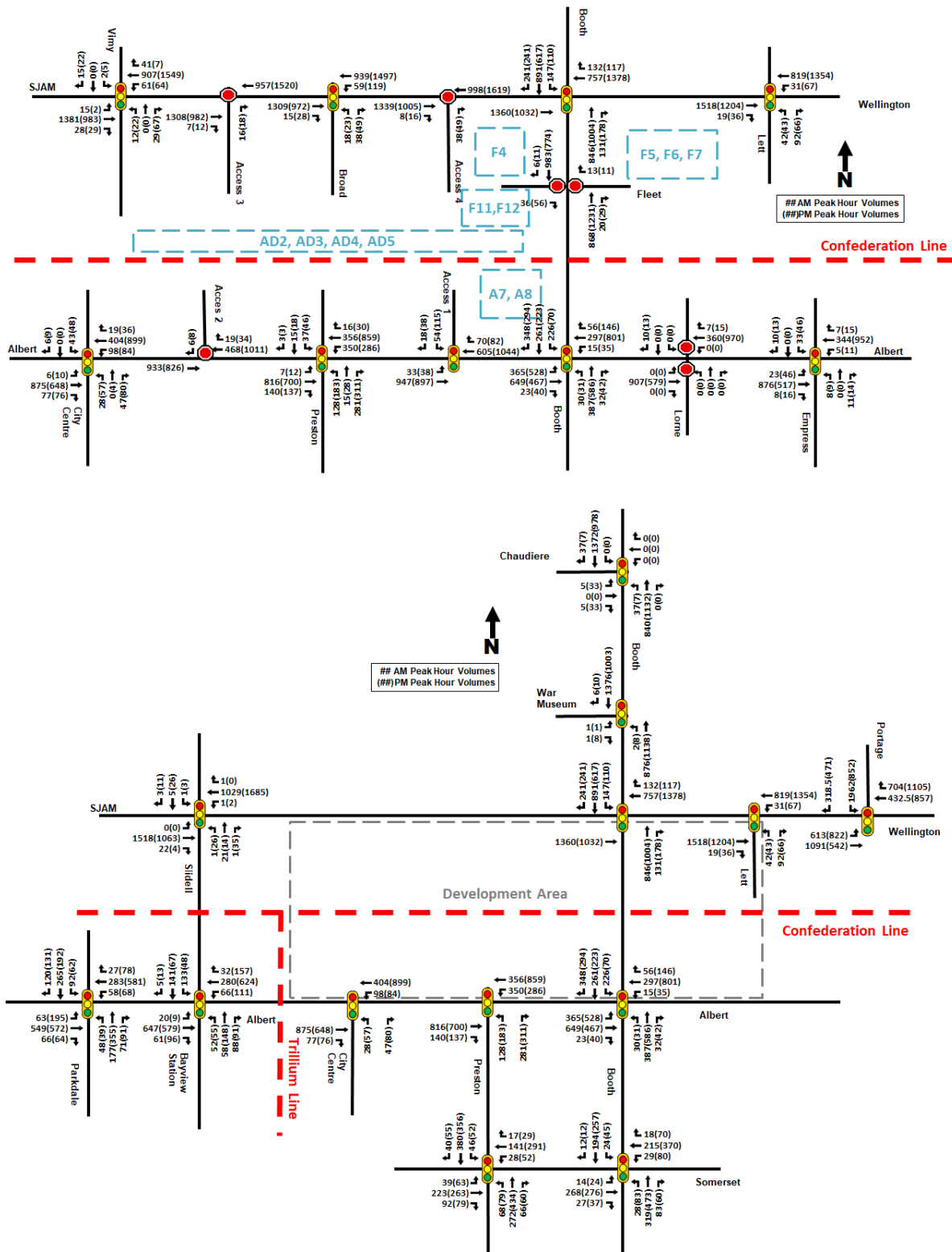


Figure 21: Total Projected Traffic Volumes – 2050 (Phase One, Two & Three),  
AM Peak (PM Peak)



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 Plan of Subdivision:

### ***Network Modifications from Plan of Subdivision***

#### **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 Plan of Subdivision***

#### **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.).

#### **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 18 - 20** summarizes the projected performance of study area intersections for the 2030, 2040 and 2050 horizon years. Detailed Synchro output data for total projected conditions will be provided separately to City staff.

Table 18: Study Area Intersection Operations - 2030 Phase 1 Total Projected Conditions

Intersections	Overall			Mvmt	Critical Movement		
	Delay (s)	v/c Ratio	v/c LOS		Delay (s)	v/c Ratio	v/c LOS
Booth & Chaudière	9 (12)	0.84 (0.78)	D (C)	SBTR	13 (9)	0.86 (0.68)	D (B)
Booth & War Museum	2 (2)	0.62 (0.52)	B (A)	SBTR	3 (2)	0.62 (0.45)	B (A)
Booth & Wellington	50 (36)	0.96 (0.95)	E (E)	NBTR	97 (50)	1.02 (1.05)	F (F)
Booth & Albert	85 (111)	0.95 (1.16)	E (F)	EBL	99 (256)	1.02 (1.46)	F (F)
Albert & Empress	5 (6)	0.29 (0.32)	A (A)	SBLTR	40 (44)	0.29 (0.39)	A (A)
Albert & Preston	49 (32)	0.82 (0.72)	D (C)	NBTR	127 (63)	0.88 (0.84)	D (D)
Albert & City Centre	13 (12)	0.46 (0.40)	A (A)	EBTR	15 (12)	0.53 (0.35)	A (A)
Albert/Scott & Bayview Station	17 (16)	0.55 (0.50)	A (A)	EBTR	11 (16)	0.60 (0.56)	A (A)
Scott & Parkdale	26 (38)	0.66 (0.84)	B (D)	WBT	25 (59)	0.43 (0.97)	A (E)
KZM & Slidell	3 (7)	0.50 (0.68)	A (B)	WBT	2 (8)	0.36 (0.68)	A (B)
Wellington/KZM & Vimy	3 (4)	0.45 (0.52)	A (A)	WBTR	3 (5)	0.32 (0.53)	A (A)
Wellington & Lett	15 (5)	0.56 (0.45)	A (A)	EBTR	19 (2)	0.58 (0.41)	A (A)
Wellington & Portage	109 (41)	1.21 (0.89)	F (D)	SBL	234 (53)	1.45 (0.88)	F (D)
Wellington & Broad	4 (4)	0.41 (0.46)	A (A)	WBT	3 (3)	0.29 (0.46)	A (A)
Somerset & Booth	21 (25)	0.55 (0.70)	A (B)	NBLTR	36 (35)	0.81 (0.87)	D (D)
Somerset & Preston	34 (28)	0.69 (0.71)	B (C)	NBTR	36 (43)	0.75 (0.87)	C (D)

As shown in Table 18, the Booth Street at Albert Street and Wellington Street at Portage Bridge intersections are projected to continue operating over capacity during weekday morning or afternoon peak hours.

The only other noticeable change to intersection operations from Future Background Conditions is the northbound through movement at the intersection of Booth Street at Wellington Street, which increases from a v/c ratio of 0.98 (AM) and 1.00 (PM) to 1.02 (AM) and 1.05 (PM), and the northbound through movement at the intersection of Booth Street at Albert Street, which increases from a v/c ratio of 0.99 (AM) and 1.33 (PM) to 1.02 (AM) and 1.46 (PM), 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 19: Study Area Intersection Operations - 2040 Phase 2 Total Projected Conditions

Intersections	Overall			Mvmt	Critical Movement		
	Delay (s)	v/c Ratio	v/c LOS		Delay (s)	v/c Ratio	v/c LOS
Booth & Chaudière	9 (12)	0.84 (0.78)	D (C)	SBTR	13 (9)	0.86 (0.68)	D (B)
Booth & War Museum	2 (2)	0.62 (0.52)	B (A)	SBTR	3 (2)	0.62 (0.45)	B (A)
Booth & Wellington	50 (36)	0.96 (0.95)	E (E)	NBTR	97 (50)	1.02 (1.05)	F (F)
Booth & Albert	85 (111)	0.95 (1.16)	E (F)	EBL	99 (256)	1.02 (1.46)	F (F)
Albert & Empress	5 (6)	0.29 (0.32)	A (A)	WBTR	3 (4)	0.11 (0.33)	A (A)
Albert & Preston	49 (32)	0.82 (0.72)	D (C)	NBTR	127 (63)	0.88 (0.84)	D (D)
Albert & City Centre	13 (12)	0.46 (0.40)	A (A)	EBTR	14 (12)	0.47 (0.35)	A (A)
Albert/Scott & Bayview Station	17 (16)	0.55 (0.50)	A (A)	EBTR	11 (16)	0.60 (0.56)	A (A)
Scott & Parkdale	26 (38)	0.66 (0.84)	B (D)	WBT	25 (59)	0.43 (0.97)	A (E)
KZM & Slidell	3 (7)	0.50 (0.68)	A (B)	WBT	2 (8)	0.36 (0.68)	A (B)
Wellington/KZM & Vimy	3 (4)	0.45 (0.52)	A (A)	WBTR	3 (5)	0.32 (0.53)	A (A)
Wellington & Lett	15 (5)	0.56 (0.45)	A (A)	EBTR	19 (2)	0.58 (0.41)	A (A)
Wellington & Portage	109 (41)	1.21 (0.89)	F (D)	SBL	234 (53)	1.45 (0.88)	F (D)
Wellington & Broad	4 (4)	0.41 (0.46)	A (A)	EBTR	5 (4)	0.42 (0.32)	A (A)
Albert & Access 1	5 (1)	0.40 (0.36)	A (A)	EBT	7 (2)	0.40 (0.36)	A (A)
Somerset & Booth	21 (25)	0.56 (0.71)	A (C)	NBLTR	36 (36)	0.81 (0.89)	D (D)
Somerset & Preston	35 (30)	0.70 (0.73)	B (C)	NBTR	37 (46)	0.75 (0.90)	C (D)

As shown in Table 19, 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 20: Study Area Intersection Operations - 2050 Phase 3 Total Projected Conditions

Intersections	Overall			Mvmt	Critical Movement		
	Delay (s)	v/c Ratio	v/c LOS		Delay (s)	v/c Ratio	v/c LOS
Booth & Chaudière	10 (12)	0.86 (0.78)	D (C)	SBTR	14 (10)	0.88 (0.70)	D (B)
Booth & War Museum	4 (2)	0.63 (0.52)	B (A)	SBTR	4 (3)	0.63 (0.47)	B (A)
Booth & Wellington	67 (53)	1.01 (1.00)	F (E)	NBTR	94 (53)	1.09 (1.05)	F (F)
Booth & Albert	88 (115)	0.96 (1.17)	E (F)	EBL	111 (285)	1.08 (1.52)	F (F)
Albert & Empress	7 (5)	0.32 (0.37)	A (A)	WBTR	3 (7)	0.13 (0.39)	A (A)
Albert & Preston	50 (35)	0.87 (0.75)	D (C)	EBTR	71 (46)	0.94 (0.69)	E (B)
Albert & City Centre	13 (11)	0.47 (0.41)	A (A)	EBTR	14 (13)	0.48 (0.37)	A (A)
Albert/Scott & Bayview Station	17 (16)	0.56 (0.52)	A (A)	EBTR	11 (14)	0.62 (0.58)	B (A)
Scott & Parkdale	27 (33)	0.67 (0.82)	B (D)	NBTR	24 (47)	0.41 (0.85)	A (D)
KZM & Slidell	3 (7)	0.51 (0.70)	A (B)	WBT	1 (8)	0.37 (0.70)	A (B)
Wellington/KZM & Vimy	7 (6)	0.58 (0.58)	A (A)	EBTR	10 (8)	0.61 (0.43)	B (A)
Wellington & Lett	18 (10)	0.60 (0.49)	A (A)	EBTR	23 (13)	0.62 (0.52)	B (A)
Wellington & Portage	134 (54)	1.29 (0.92)	F (E)	SBL	304 (64)	1.60 (0.93)	F (E)
Wellington & Broad	6 (9)	0.55 (0.53)	A (A)	EBTR	5 (6)	0.58 (0.42)	A (A)
Albert & Access 1	15 (15)	0.36 (0.55)	A (A)	WBTR	21 (14)	0.30 (0.54)	A (A)
Somerset & Booth	22 (29)	0.57 (0.76)	A (C)	NBLTR	37 (46)	0.83 (0.94)	D (E)
Somerset & Preston	35 (31)	0.71 (0.74)	C (C)	NBTR	39 (50)	0.78 (0.92)	C (E)

As shown in Table 20, 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
- Kichi Zibi Mikan and Slidell Street
- Wellington Street / Kichi Zibi Mikan and Vimy Place
- Wellington Street and Lett Street
- Wellington Street and Broad Street
- Albert Street and Access 1
- Somerset Street and Booth Street
- Somerset Street and Preston Street

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)
- Wellington Street and Portage Bridge (AM peak hour)

The following intersection was approaching capacity in at least one peak hour in the 2040 horizon year, and is now just over capacity in at least one peak hour in the 2050 horizon year, with minimal increase to the v/c ratio:

- Wellington Street and Booth Street (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 3.1.2**, 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 21** for a single eastbound left and a double eastbound left.

**Table 21: 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	365 (650)	111 (285)	1.08 (1.52)	F (F)	#169 (#276)
	EBTR	530 (465)	16 (10)	0.42 (0.30)	A (A)	88 (37)
	Overall	-	88 (115)	0.96 (1.17)	E (F)	-
Double EBL	EBL	365 (650)	41 (57)	0.54 (0.77)	A (C)	46 (90)
	EBTR	530 (465)	80 (15)	0.82 (0.58)	D (A)	226 (96)
	Overall	-	85 (81)	0.95 (0.99)	E (E)	-

The results of the double eastbound left analysis indicate that the proposed configuration is preferred over the single eastbound left configuration in the Phase 3 horizon, as well as in the Future Background Conditions. Therefore, **it is recommended that for the Albert Street Cycling / Pedestrian Modifications, the lane arrangement for the intersection of Albert Street at Booth Street be reconfigured in advance of construction, to accommodate a double eastbound left and a single eastbound through.** 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.

### 4.2.3 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 (which occurred after much of the traffic count data used in this analysis) 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 loop projects that have the potential to reduce interprovincial vehicular travel, including along the Booth Street corridor. Furthermore, with the planned and ongoing improvements to active transportation facilities as identified in **Section 3.1.3** and as proposed as part of the Plan of Subdivision, it is anticipated there will 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. The benefit of some of these can already be seen in more recent traffic counts (i.e., post-COVID) which show slightly lower vehicular volumes than pre-COVID.

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.

### ***Network Modifications to Support Removal of Preston Street Extension***

The LeBreton Flats Master Concept Plan proposed a shift in function of the planned Preston Street extension and bridge between Albert Street and KZM/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 had been previously identified in the City of Ottawa's Official Plan and Transportation Master Plan. The Master Concept Plan proposed to replace this planned roadway, including a vehicular bridge, with an active transportation bridge.

Due to the limited number of north-south connections between Wellington Street / KZM and Albert Street, there are limited opportunities for network modifications to improve north-south vehicular capacity while still prioritizing non-vehicular modes of transportation. An example of this is the potential for permitting northbound right turns at the intersection of Slidell Street at KZM, 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 / KZM may improve traffic operations in the study area, there are other reasons that it wouldn't be an acceptable network modification solution. It should be noted that this shouldn't preclude transit from being permitted to make the movement.

The only modification that appears to have some merit 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 as a protected intersection, 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. Based on traffic patterns (i.e., heavier westbound flow in PM peak hour), it was estimated that this volume would be 204 vehicles in the PM 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) for the Phase 3 horizon. This option is compared against the default Phase 3 scenario in the table below (i.e., with no northbound left turn movement).

**Table 22: Booth Street at Wellington Street – Permitted Northbound Left Turn, Phase 3**

Scenario	Movements	Delay (s)	v/c Ratio	v/c LOS
No Northbound Left Turn	EBT	103 (27)	0.97 (0.72)	E (C)
	WBT	28 (94)	0.54 (0.96)	A (E)
	WBR	22 (22)	0.21 (0.17)	A (A)
	NBTR	94 (53)	1.09 (1.05)	F (F)
	SBL	145 (86)	0.92 (0.91)	E (E)
	SBT	26 (25)	0.69 (0.46)	B (A)
	SBR	14 (19)	0.36 (0.35)	A (A)
	<b>Overall</b>	<b>67 (53)</b>	<b>1.01 (1.00)</b>	<b>F (E)</b>
Northbound Left Turn Permitted	EBT	103 (27)	0.97 (0.72)	E (C)
	WBT	28 (94)	0.54 (0.96)	A (E)
	WBR	22 (22)	0.21 (0.17)	A (A)
	NBL	219 (387)	1.27 (1.78)	F (F)
	NBTR	94 (54)	1.09 (1.05)	F (F)
	SBL	138 (89)	0.92 (0.92)	E (E)
	SBT	56 (36)	0.98 (0.59)	E (A)
	SBR	18 (20)	0.47 (0.41)	A (A)
	<b>Overall</b>	<b>77 (69)</b>	<b>0.99 (0.93)</b>	<b>E (E)</b>

Implementing a northbound left turn movement at the intersection of Booth Street at Wellington Street increases the overall delay in both peak hours, as well as the delay and v/c ratio for numerous movements. Specifically, the delay for the southbound through movement increases by approximately 30 seconds in the AM peak hour, with the v/c ratio approaching LOS ‘F’. The northbound left turn movement also operates with high levels of delay and v/c ratios, as the heavy movements on all approaches to the intersection do not allow for much green time to be assigned to this movement. 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.**

### 4.3 Boundary Street Design

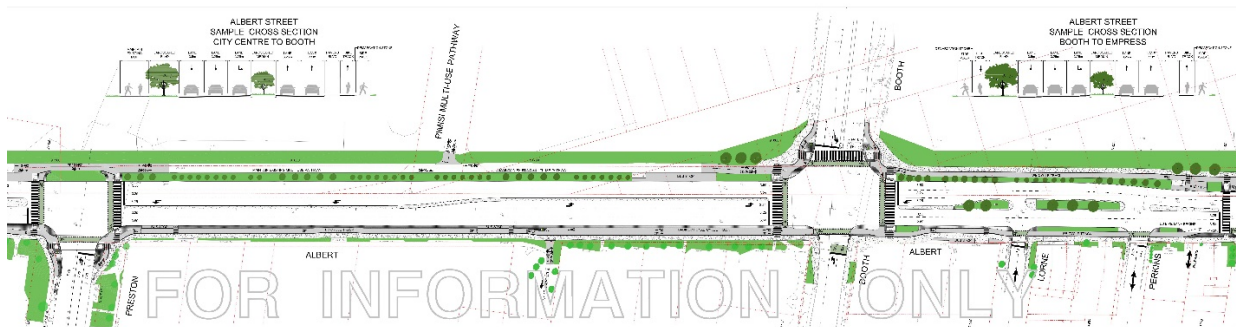
The LeBreton Flats site is bounded by arterial roadways on three sides, with Albert Street to the south, Booth Street to the east, and Wellington Street to the north. The Trillium Line forms the western boundary of the site. Of these roadways, Booth Street and Albert Street already meet (or are going to meet) the City’s Complete Streets philosophy, while Wellington Street could see benefit from improved Complete Street elements.

#### 4.3.1 Albert Street

As previously noted in this document, Albert Street has ongoing or planned construction that will transform it into a multi-modal corridor that supports all road users. As shown in **Figure 22**, this includes a four-lane cross-section, with cycle tracks and sidewalks on both sides of Albert Street adjacent to the LeBreton Flats site, which will support the multi-modal vision for LeBreton Flats. Some proposed changes to the design have already been identified in this report, including:

- Converting one of the eastbound through lanes at Albert Street / Booth Street into an eastbound left turn lane to accommodate the heavy eastbound left turn volumes.
- North legs at the protected signalized intersections of Albert Street / Preston Street and Albert Street / City Centre Avenue.
- Provision of a new protected signalized intersection at Albert Street / Access 1, between Booth Street and Preston Street.
- Provision of a right-in/right-out intersection at Albert Street / Access 2, between Preston Street and City Centre Avenue.

**Figure 22: Proposed Design for Albert Street Adjacent to Site (Source: Robinson Consultants Inc, March 2019)**



#### 4.3.2 Booth Street

Booth Street through the site mainly consists of the bridge across the Confederation Line LRT tracks, which features a four-lane cross-section, sidewalks and cycle tracks. South of the site, Booth Street through the residential area features a two-lane cross-section and numerous traffic calming elements. North of the site, Booth Street narrows to a two-lane cross-section with sidewalks and cycle tracks on both sides of the street. The intersection of Booth Street / Wellington Street was recently reconstructed to feature protected intersection elements, while the intersection of Booth Street / Albert Street is proposed to be reconstructed as part of the improvements to the Albert Street corridor. The only proposed change to Booth Street as part of this project is a right-in/right-out access on the west side of Booth Street, across from the existing right-in/right-out access on the east side of Booth Street, south of Wellington Street and north of the Confederation Line LRT.

#### 4.3.3 Wellington Street

Wellington Street adjacent to the site is a four-lane roadway with sidewalks and on-street parking on both sides of the street, with a speed limit of 60 km/h. The roadway cross-section has not been updated in some time, and reflects the previous purpose it served as part of the old Sir John A Macdonald Parkway, which was a scenic parkway focused on vehicular travel.

As part of the LeBreton Flats Plan of Subdivision, southern legs to the two signalized intersections (at Vimy Place and Broad Street) are proposed in order to provide access to the Flats District. In addition, two new right-in/right-out accesses are proposed between the signalized intersections. These changes will increase friction on the south side of Wellington Street, resulting in more turning conflicts between vehicles, pedestrians and cyclists.

West of Vimy Place, Wellington Street transitions into Kichi Zibi Mikan, which is governed by the National Capital Commission, who is reshaping their vision for parkways in the National Capital Region, focusing them more on active and sustainable transportation and less on vehicular movement. East of the LeBreton Flats site, Wellington Street is envisioned to be part of the West Gatineau Tramway

project, which will see a median tramway along the Portage Bridge and Wellington Street. The size of the LeBreton Flats development and desire to focus on multi-modal transportation presents an opportunity for the City of Ottawa to capitalize on the adjacent projects and consider a redesign of the Wellington Street corridor between Vimy Place and the Portage Bridge.

Some considerations for a redesign of the corridor include:

- The removal of on-street parking on both sides of Wellington Street, especially with the potential for additional underground parking to be provided at the LeBreton Flats site. This would reduce the roadway cross-section, allowing for a lower speed limit and a shorter crossing distance for pedestrians and cyclists.
- Removal of the concrete median, which in combination with a lower speed limit should encourage a slower operating speed for vehicles, increasing safety for all roadway users.
- Provision of cycle tracks or multi-use pathways on both sides of the street to provide cyclists with a separated facility, protecting users from vehicular traffic. These facilities would tie into the Ottawa River Pathway at Vimy Place, as well as existing cycle tracks at Booth Street and any future cycling facilities provided as part of the LeBreton Flats development (e.g., in the Flats District).
- Reconstruction of the signalized intersections into protected intersections, including the intersections at Vimy Place, Broad Street and Lett Street.

### Mobility

A Multi Modal Level of Service (MMLOS) analysis for Wellington Street from Vimy Place to Lett Street was undertaken for the future background conditions. MMLOS analysis was not undertaken for Booth Street as it is already designed as a complete street, nor Albert Street as it is currently part of a complete street renewal project. The results of this analysis are shown in **Table 23**. As there are no transit routes, and there is no truck route designation on this section of Wellington Street, the focus of this MMLOS analysis is only on pedestrians and cyclists. Public Realm LOS (PRLOS) is evaluated as well for Segment LOS, to support the consideration of Healthy Streets elements. The MMLOS targets are consistent with those shown in Table 19.

**Table 23: Segment MMLOS – Background LOS**

Street	Segment	PLOS	BLOS	TLOS	PRLOS
Wellington	Vimy - Lett	B	E	-	C
	<i>Target</i>	A	B	-	-

Due to the existing wide sidewalks (~4.0m) and presence of a parking lane, the PLOS score is LOS 'B', which approaches the desired LOS 'A'. The lack of cycling facilities requires cyclists to operate in vehicular lanes, resulting in a LOS 'E' and not approaching the desired BLOS target of LOS 'B'. The quality of Public Realm LOS on this corridor can be described as good. While the pedestrian and boulevard width is acceptable, the high design speed of 70 km/h, the lack of a cycling facility, and the number of midblock traffic lanes result in room for improvement, with a PRLOS 'C'.

To improve the MMLOS for pedestrians and cyclists, the recommended improvements for Wellington Street are to remove on-street parking and replace it with a cycle track. This would allow cyclists to operate on their own segregated facility, while maintaining the offset from vehicular travel lanes for pedestrians. An additional consideration would be to remove the center concrete median, reduce the width of travelled lanes to the minimum required, and reduce the posted speed limit from 60 km/h to 50 km/h. The benefits of these changes on the MMLOS scoring are shown in the table below.

Table 24: Segment MMLOS – Conceptual LOS

Street	Segment	PLOS	BLOS	TLOS	PRLOS
Wellington	Vimy - Lett	A	A	-	B
	<i>Target</i>	A	B	-	-

The removal of the parking lane and reduction to roadway cross-section, along with the implementation of separated cycling facilities, improves the LOS for both pedestrians and cyclists to LOS ‘A’, and the PRLOS to LOS ‘B’. These proposed changes would have minimal impact on the vehicular LOS, and therefore should be considered by the City of Ottawa in the future.

### Road Safety

As identified in **Section 3.1.2**, existing collision data was reviewed as part of this study. There were no concerning trends in collisions for this segment of Wellington Street, however it is worth noting that a lower speed limit and narrower travel lanes are generally associated with fewer collisions. In addition, the proposed changes to improve the cycling facilities will greatly improve safety for cyclists on Wellington Street.

### Neighbourhood Traffic Management

As identified in **Section 4.2.2**, the projected intersection operations on this corridor are not anticipated to be overly impacted by the LeBreton Flats development. The recommendations for improvements to Wellington Street will result in slower travel speeds, and improved conditions for active transportation, potentially increasing the shift of users from vehicular modes to other modes of transportation, in line with the City’s new TMP. No further changes are recommended for this section of Wellington Street as part of this TIA.

## 4.4 Development Design

### 4.4.1 New Street Networks

The proposed street network for the LeBreton Flats development, as shown in Figure 4, is designed with all modes of transportation in mind. All streets are designed to be low-speed, local streets that focus on providing safe connections for pedestrians and cyclists to pathways and sidewalks in the area, as well as to the nearby LRT stations. There are very few continuous streets in the development, as the focus of the development is on maximizing benefits for sustainable, alternative modes of transportation, while reducing the focus on personal vehicles. However, the planned street network does allow for emergency vehicles and maintenance operations (i.e. waste collection, snow removal) to operate efficiently.

## 4.5 Transportation Demand Management

### 4.5.1 Context for TDM

The proposed mode share of the development, as outlined in **Section 3.3.3**, is 15% auto driver, 5% auto passenger, 60% transit, and 20% walking and cycling. Comparatively, the mode share in the City’s EMME model (based on the 2011 OD Travel Survey) 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 previous 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. It should be noted that the City is currently updating its EMME model to represent the results of the 2021 OD Travel Survey, which may already reflect this shift in mode share.

With the LeBreton Flats location just west of downtown, it falls under the “Downtown Core Transect” in the Official Plan, but with two LRT stations located within the site, it can also be considered a Design Priority Area (DPA). 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 past studies for the lands make mention of a desire for minimal parking, and where required, implementing shared parking between land uses.

#### 4.5.2 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<sup>2</sup> 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 2170 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 250m<sup>2</sup> 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**.

### 4.5.3 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 design solutions such as filtered permeability, numerous multi-use pathways and sidewalks, and woonerf or slow streets.

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:

- **TDM Program Coordinator** – Given the scale of the development, there could be a dedicated coordinator position to manage the development and implementation of the LeBreton Flats TDM program.
- **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 4.7* 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 E** 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.

## 4.6 Neighbourhood Traffic Calming

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.

### 4.6.1 Adjacent Neighbourhoods

Given traffic volume on Wellington Street, Booth Street, Albert Street and KZM 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 Plan of Subdivision 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. 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 with traffic calming measures, as outlined in **Section 3.1.2**.

The arterial roads surrounding the development site, specifically Albert Street and Wellington Street, 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, as identified in **Section 4.3.1**, Albert Street is currently being redesigned as a complete street, and there are improvements that can be made to Wellington Street, as identified in **Section 4.3.3**.

## 4.7 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.

### 4.7.1 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 from the three phases of the LeBreton Flats development will range from 3,350 to 5,330 additional transit trips in both peak hours. This will result in an approximate total of 8,680 additional transit passengers generated by the LeBreton Flats development during the peak hours.

**Table 25: 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	493	696	1188	985	877	1860	3048
Phase 2 Total	243	381	624	561	494	1054	1678
Phase 3 Total	872	666	1539	1106	1313	2418	3957
Total ‘New’ Transit Trips	1608	1743	3351	2652	2684	5332	8683

Using information from the City of Ottawa’s EMMÉ 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 26** include all transit users, not just those from LeBreton Flats.

Table 26: EMME 2031 Transit Trip Distribution – AM Peak Hour

Transit Mode	Eastbound		Westbound	
	Volume	Percentage	Volume	Percentage
LRT	28,146	97%	9,557	95%
Bus	930	3%	543	5%
Total	29,076	100%	10,100	100%

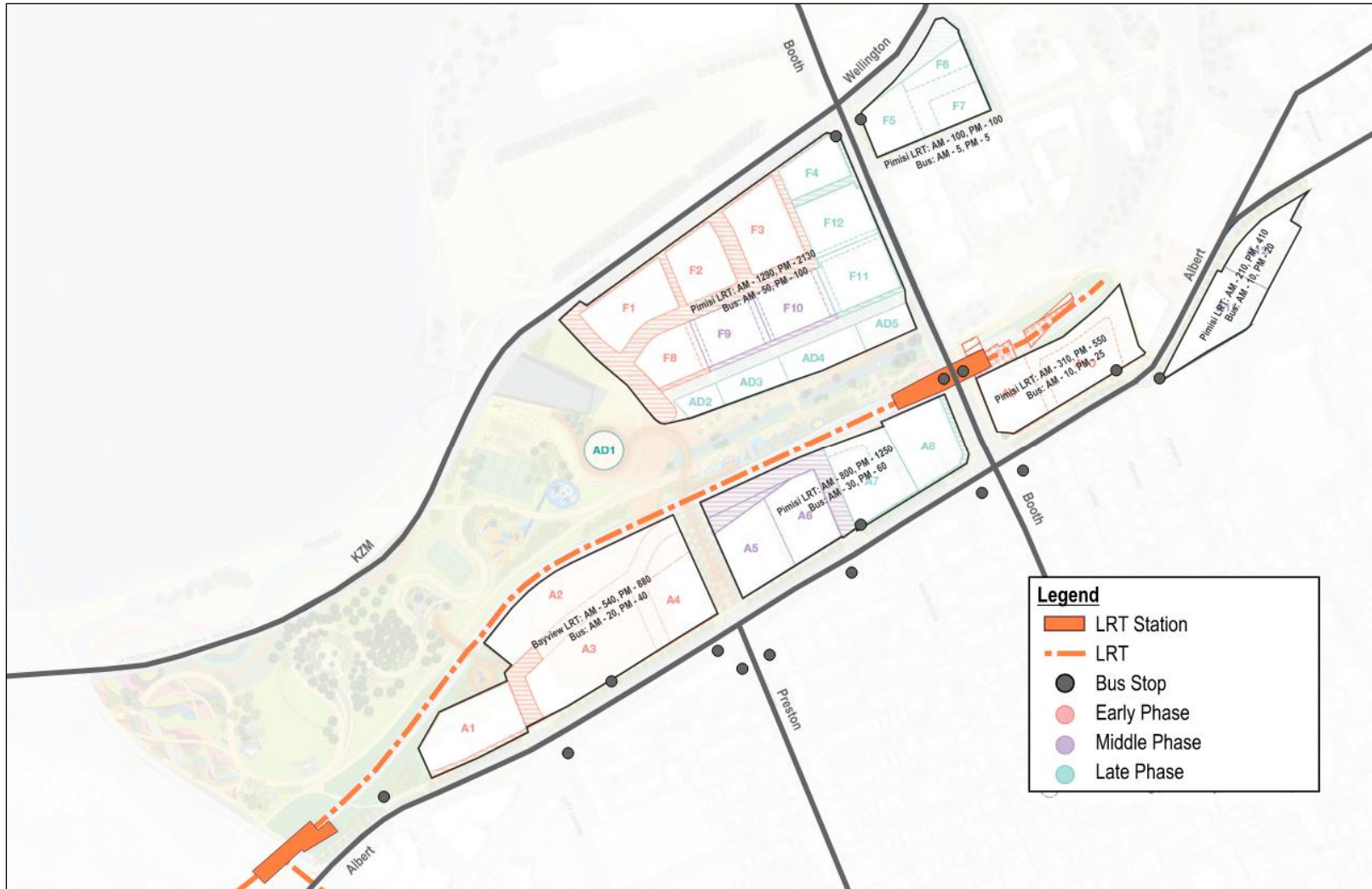
The data provided in Table 26 indicates that of all eastbound transit trips in the AM peak hour, 97% are made by LRT and 3% are made by bus. 95% of all westbound transit trips are made by LRT and 5% are made by bus. Of all LRT trips, 67% are headed eastbound and 33% are headed westbound, while bus trips 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 27** and **Figure 23** below.

Table 27: 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
<b>A1-4 (Major Events Centre)</b>	240	178	62	320	238	82	462	119	343	414	107	307
LRT (Bayview)	232	173	59	309	231	78	441	115	326	396	104	292
Bus	8	5	3	11	7	4	21	4	17	18	3	15
<b>A9-10</b>	136	101	35	185	137	48	298	77	221	274	71	203
LRT (Pimisi)	131	98	33	179	133	46	285	75	210	262	69	193
Bus	5	3	2	6	4	2	13	2	11	12	2	10
<b>Flats District (F1-4, 8-12, AD 1-5)</b>	664	493	171	679	504	175	1049	270	779	1080	278	802
LRT (Pimisi)	640	478	162	655	489	166	1002	262	740	1032	270	762
Bus	24	15	9	24	15	9	47	8	39	48	8	40
<b>A5-6</b>	75	56	19	131	97	34	162	42	120	138	36	102
LRT (Pimisi)	72	54	18	126	94	32	155	41	114	132	35	97
Bus	3	2	1	5	3	2	7	1	6	6	1	5
<b>A11-12</b>	90	67	23	129	96	33	214	55	159	194	50	144
LRT (Pimisi)	87	65	22	124	93	31	204	53	151	186	49	137
Bus	3	2	1	5	3	2	10	2	8	9	2	7
<b>A7-8</b>	371	275	96	228	169	59	408	105	303	542	140	402
LRT (Pimisi)	358	267	91	220	164	56	390	102	288	518	136	382
Bus	13	8	5	8	5	3	18	3	15	24	4	20
<b>F5-7</b>	32	24	8	71	53	18	59	15	44	42	11	31
LRT (Pimisi)	31	23	8	68	51	17	57	15	42	40	11	29
Bus	1	1	0	3	2	1	2	0	2	2	0	2
<b>LRT</b>	<b>1551</b>	<b>1158</b>	<b>393</b>	<b>1681</b>	<b>1255</b>	<b>426</b>	<b>2534</b>	<b>663</b>	<b>1871</b>	<b>2566</b>	<b>674</b>	<b>1892</b>
<b>Bus</b>	<b>57</b>	<b>36</b>	<b>21</b>	<b>62</b>	<b>39</b>	<b>23</b>	<b>118</b>	<b>20</b>	<b>98</b>	<b>119</b>	<b>20</b>	<b>99</b>

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, approximately 140 trips would arrive from and 50 trips would depart to the Trillium Line in the AM peak hour, while in the PM peak hour approximately 80 trips would arrive from and 225 trips would depart to the Trillium Line.

Figure 23: Projected LeBreton Flats Transit Trip Distribution – Full Buildout



The full build-out of the LeBreton Flats development is expected to generate approximately 3,230 LRT trips in the AM peak hour and 5,100 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 1,255 new eastbound riders boarding the LRT, and 1,160 new eastbound riders departing the LRT. Therefore, the net increase in LRT riders is not 2,415 riders, it is somewhere between 1158 and 1255 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 11% of eastbound and 4% of westbound capacity in the morning, and 6% of eastbound and 17% 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<sup>5</sup>, 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 140 northbound and 50 southbound Trillium Line trips in the AM peak hour, and 80 northbound and 225 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 7% of northbound capacity and 2% of southbound capacity in the morning, and 4% of northbound capacity and 11% of southbound capacity in the afternoon.

The full build-out of the LeBreton Flats development is expected to generate approximately 120 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 2 buses.
- Eastbound PM: 47 buses per hour = 1 new rider per 2 buses.
- Westbound PM: 32 buses per hour = 3 new riders per bus.

#### 4.7.2 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.

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<sup>5</sup> [https://www.octranspo.com/en/ready-for-rail/o\\_train\\_confederation\\_line\\_system\\_faqs](https://www.octranspo.com/en/ready-for-rail/o_train_confederation_line_system_faqs)

## 4.8 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 Plan of Subdivision 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 demand 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 Plan of Subdivision will increase the City's active and transit mode share, helping to achieve TMP mode share objectives. Further, the Plan of Subdivision supports the City's objectives of increasing the number of roadways that can be defined as "Complete Streets" (e.g. interior streets designed to prioritize active modes, recommended removal of on-street parking on Wellington Street). 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 Plan of Subdivision 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 past studies for the development.

## 4.9 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.

### 4.9.1 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 4.2.2*, 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 2027).

#### **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), has provided an attractive alternative route for pedestrians and cyclists to travel between Ottawa and Gatineau.

#### 4.9.2 Intersection Design

Intersection details are typically not part of plans of subdivisions; 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 boundary intersections on Wellington Street (since Albert Street will be reconstructed separate from this project), to gauge the extent of risk, comfort and stress for active modes and gauge the extent of impedance, delay and reliability for buses and cars. **Table 28** provides an MMLOS summary for existing conditions for all modes, including Pedestrian (PLOS), Bike (BLOS), Transit (TLOS), and Auto (AutoLOS) at signalized intersections. Target MMLOS values were identified in Table 14 and are identified at the bottom of each street in the table. **Table 28** summarizes the projected background intersection MMLOS with planned network improvements, as outlined in **Section 3.1.3**. **Table 29** 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 south side of Wellington Street. The detailed assessment is included as **Appendix F**.

One important note regarding the PLOS and BLOS is that this review focuses on existing city streets, and planned improvements. Therefore, it does not accurately reflect the robust segregated pathway network that is included as part of the Plan of Subdivision. 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 28: Intersection MMLOS – Existing LOS

Major Street	Cross Street	PLOS	BLOS	TLOS	AutoLOS
Wellington	Vimy Place	C	C	-	A
	Booth	C	A	C	C
	Lett	C	B	-	A
	<i>Target</i>	A	B	E	E

Table 29: Intersection MMLOS – Future LOS

Major Street	Cross Street	PLOS	BLOS	TLOS	AutoLOS
Wellington	Vimy Place	C	C	-	A
	Broad	C	B	-	A
	Booth	C	A	D	D
	Lett	C	B	-	A
	<i>Target</i>	A	B	E	E

As shown in Table 28 and Table 29, study area intersections on Wellington Street generally do not meet PLOS targets but meet BLOS, TLOS, and AutoOS targets. Takeaways regarding the Intersection MMLOS are noted below.

### Pedestrian LOS

- The removal of the existing parking lanes on Wellington Street has identified in **Section 4.3.3** would 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 noted above, a robust network of multi-use pathways is proposed as part of the Plan of Subdivision, 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

- Where protected intersections are provided, and intersection operations allow for it, leading bike intervals should be provided alongside the LPIs. These features in addition to a cycle track, can raise the BLOS to LOS 'A' at Vimy Place, Broad Street, and Lett Street.
- As noted above, a robust network of multi-use pathways is proposed as part of the Plan of Subdivision, 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 not considered to be too concerning, as 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. There is a slight decrease in TLOS and AutoLOS at Wellington / Booth in future conditions from LOS 'C' to 'D', which is still acceptable.



**Auto LOS**

- The Auto LOS exceeds the target at all intersections under existing and future conditions, operating with acceptable LOS during peak periods.

The impact of these suggestions on MMLOS scoring are shown in the table below.

**Table 30: Intersection MMLOS, Conceptual LOS**

Major Street	Cross Street	PLOS	BLOS	TLOS	AutoLOS
Wellington	Vimy Place	C	A	-	A
	Broad	C	A	-	A
	Booth	C	A	D	D
	Lett	C	A	-	A
	<i>Target</i>	A	B	E	E

There are minor improvements to the PLOS scoring that are not captured by the overall grade letters. The most significant improvements to PLOS will come with further reducing the number of vehicular lanes and reducing the signal cycle length, which may be challenging given the traffic volumes on this corridor. Protected intersections and crossrides, if implemented at Vimy Place, Broad, and Lett, are shown to benefit BLOS and should be considered by the City in the future.

## 5. 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 5,600 person trips in the weekday morning peak hour, and 8,900 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 840 vehicles per hour in the morning and 1,330 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 proposed to remain for active modes of transportation only, as shown in past studies for the development.

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, 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 4.5** 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)	4,448 residential units
Development Size (m <sup>2</sup> )	19,756m <sup>2</sup> commercial, 47,263m <sup>2</sup> office, 14,346m <sup>2</sup> hotel
Number of Accesses and Locations	9 new vehicular 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 (60 trips)
Single-Detached <sup>1</sup>	60 units
Multi-Use Family (Low-Rise) <sup>1</sup>	90 units
Multi-Use Family (High-Rise) <sup>1</sup>	150 units
Office <sup>2</sup>	1,400 square meters (m <sup>2</sup> )
Industrial <sup>2</sup>	7,000 m <sup>2</sup>
Fast-food restaurant or coffee shop <sup>2</sup>	110 m <sup>2</sup>
Destination retail <sup>2</sup>	1800 m <sup>2</sup>
Gas station or convenience market <sup>2</sup>	90 m <sup>2</sup>

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

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

### 3. Location Triggers

	Yes	No
Does the development propose a new driveway to a boundary street that is designated as part of the City’s Transit Priority, Rapid Transit or Cross-Town Bikeways Networks?	X	
Is the development in a Design Priority Area (DPA) , Transit-Oriented Development (TOD) zone , or Protected Major Transit Station Area (PMTSA)?*	X	

*\*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). PMTSAs are identified in Schedule C1 - Protected Major Transit Station Areas (PMTSA).*

**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

## Turning Movement Count - Study Results

### BAYVIEW RD/BAYVIEW STATION RD @ SCOTT ST/ALBERT ST

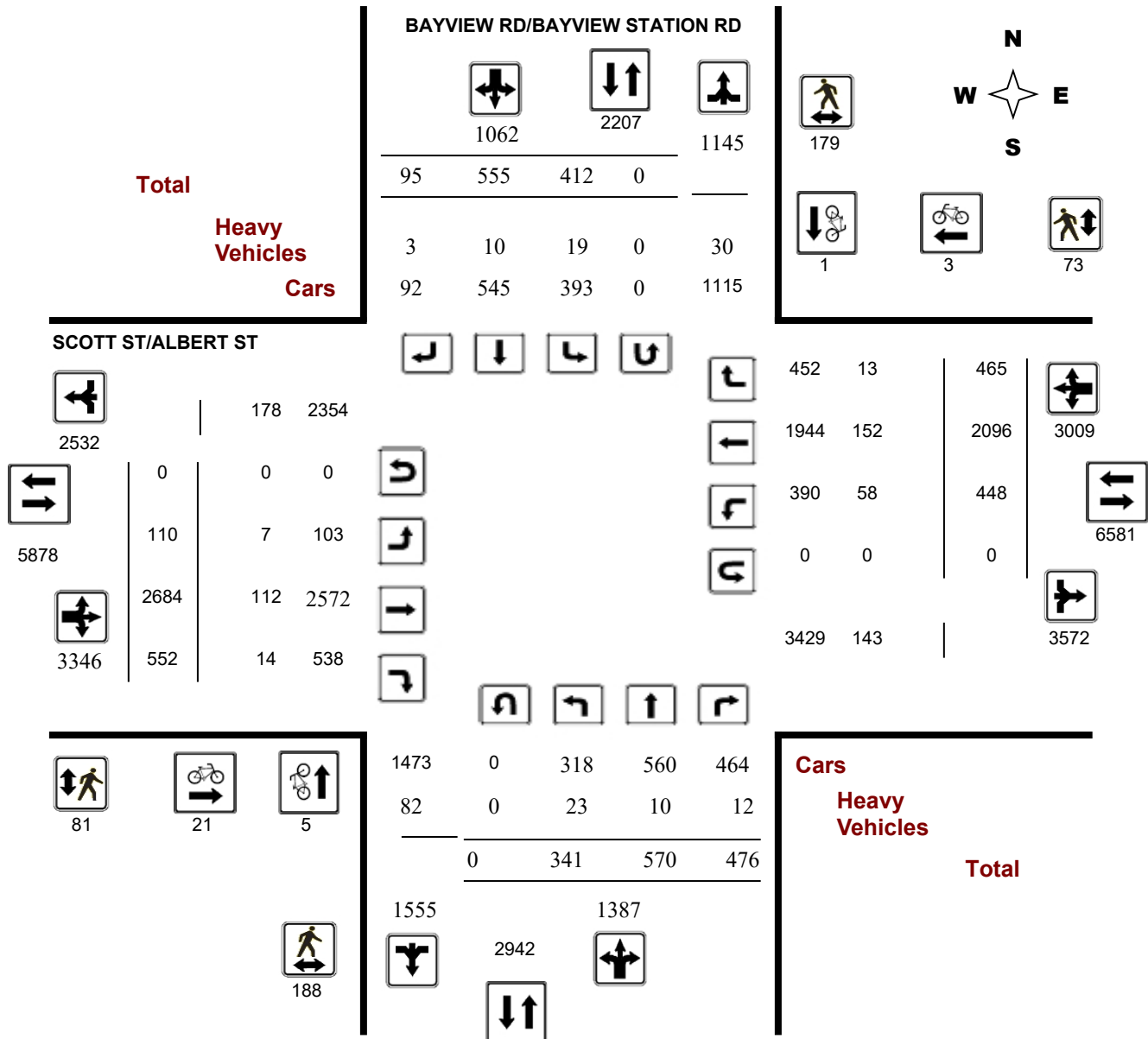
**Survey Date:** Wednesday, March 08, 2023

**WO No:** 40839

**Start Time:** 07:00

**Device:** Miovision

### Full Study Diagram



## Turning Movement Count - Study Results

### BAYVIEW RD/BAYVIEW STATION RD @ SCOTT ST/ALBERT ST

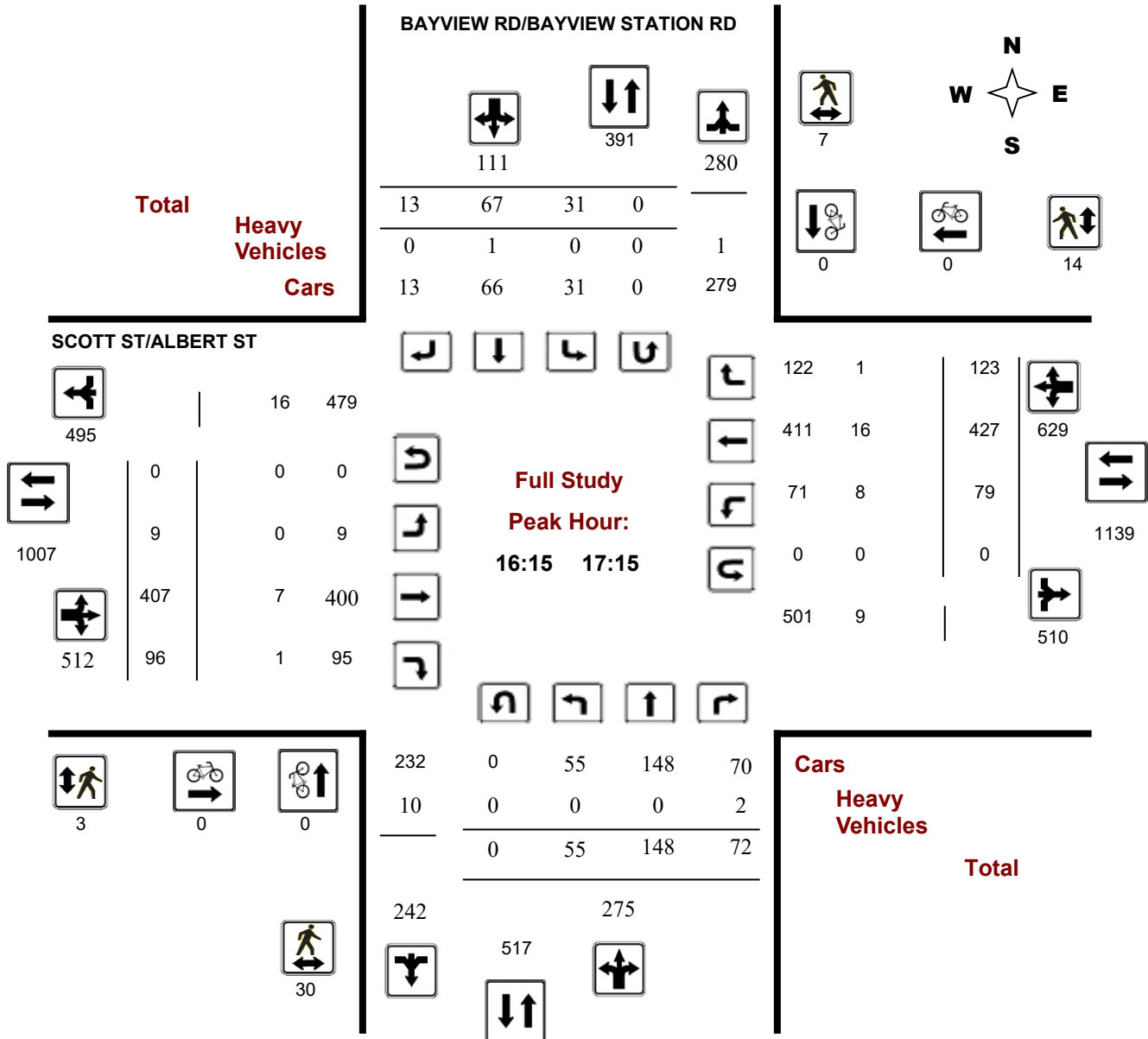
**Survey Date:** Wednesday, March 08, 2023

**WO No:** 40839

**Start Time:** 07:00

**Device:** Miovision

### Full Study Peak Hour Diagram





## Turning Movement Count - Study Results

### BAYVIEW RD/BAYVIEW STATION RD @ SCOTT ST/ALBERT ST

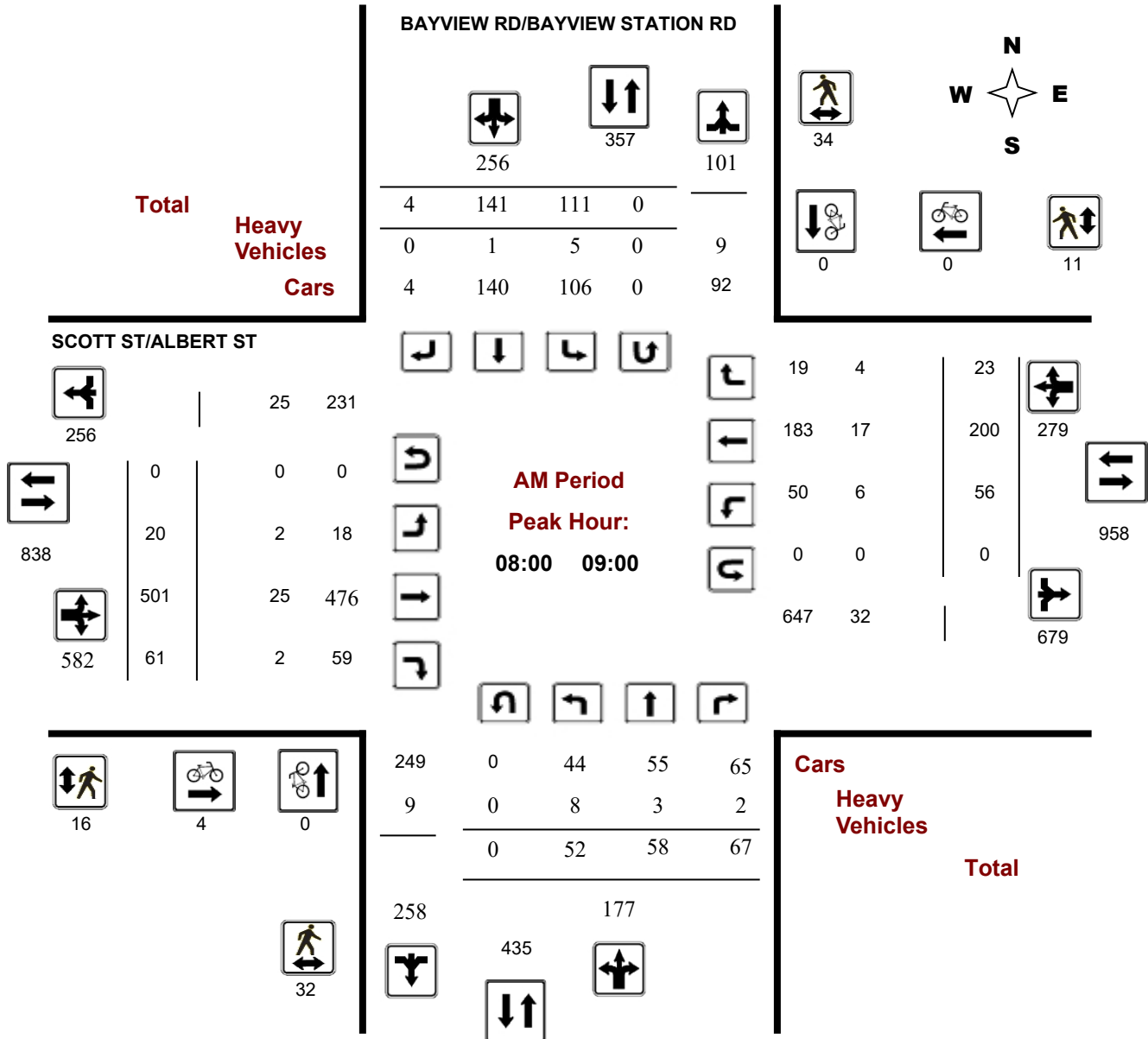
**Survey Date:** Wednesday, March 08, 2023

**WO No:** 40839

**Start Time:** 07:00

**Device:** Miovision

### AM Period Peak Hour Diagram



## Turning Movement Count - Study Results

### BAYVIEW RD/BAYVIEW STATION RD @ SCOTT ST/ALBERT ST

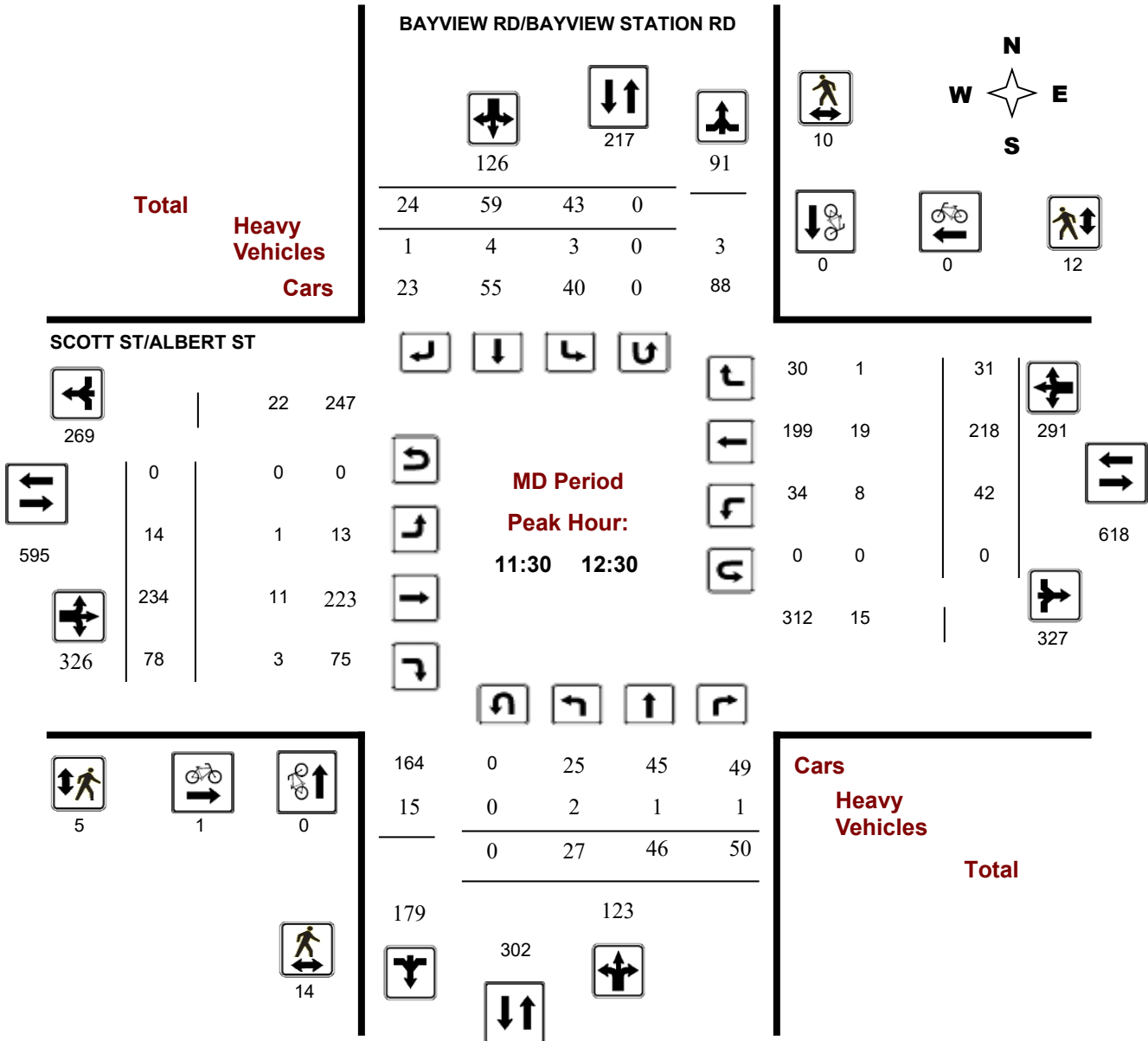
**Survey Date:** Wednesday, March 08, 2023

**WO No:** 40839

**Start Time:** 07:00

**Device:** Miovision

### MD Period Peak Hour Diagram



## Turning Movement Count - Study Results

### BAYVIEW RD/BAYVIEW STATION RD @ SCOTT ST/ALBERT ST

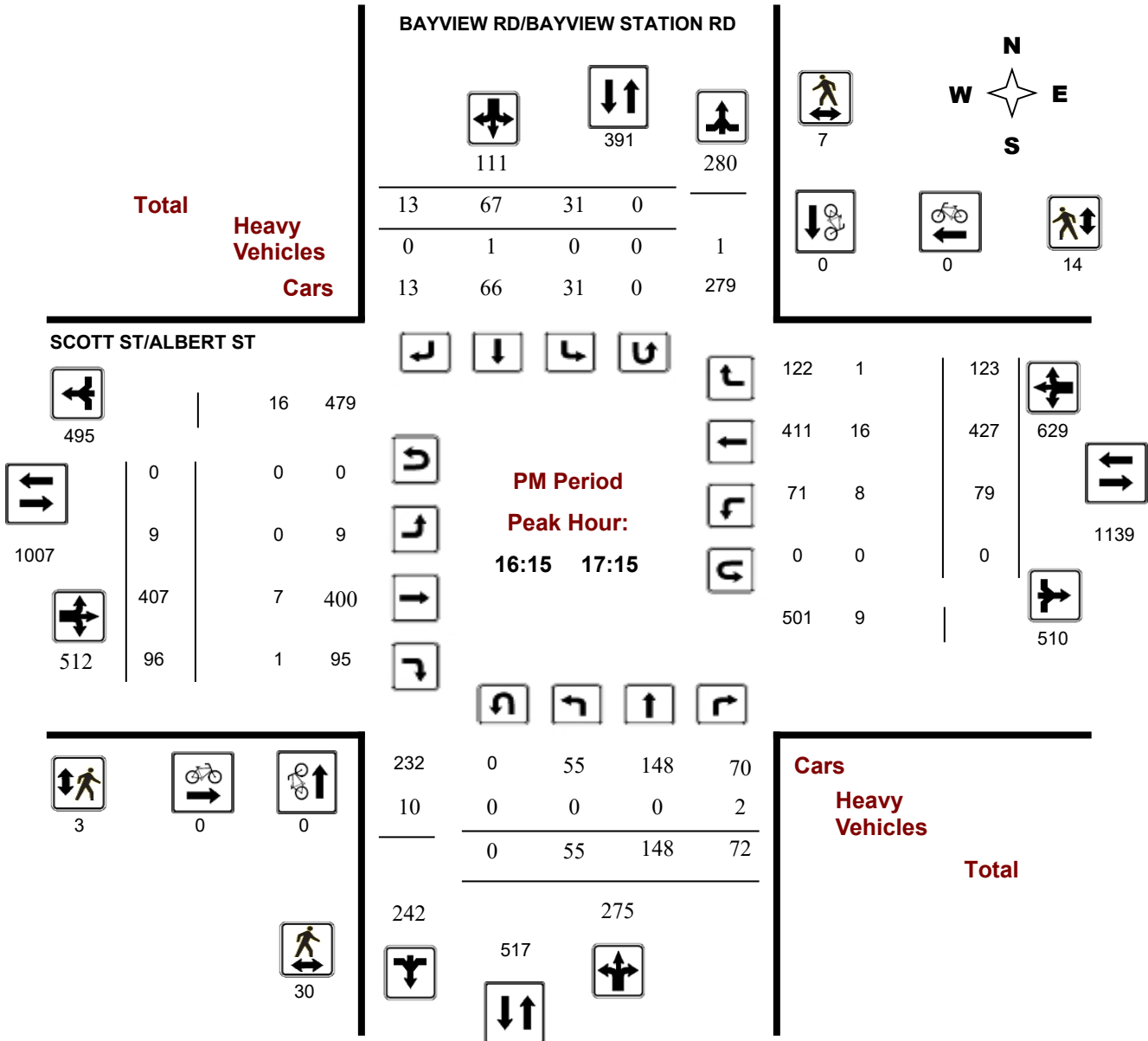
**Survey Date:** Wednesday, March 08, 2023

**WO No:** 40839

**Start Time:** 07:00

**Device:** Miovision

### PM Period Peak Hour Diagram





# Transportation Services - Traffic Services

## Turning Movement Count - Study Results

### BAYVIEW RD/BAYVIEW STATION RD @ SCOTT ST/ALBERT ST

**Survey Date:** Wednesday, March 08, 2023

**WO No:** 40839

**Start Time:** 07:00

**Device:** Miovision

### Full Study Summary (8 HR Standard)

**Survey Date:** Wednesday, March 08, 2023

**Total Observed U-Turns**

**AADT Factor**

Northbound: 0      Southbound: 0

1.00

Eastbound: 0      Westbound: 0

#### BAYVIEW RD/BAYVIEW STATION RD

#### SCOTT ST/ALBERT ST

Period	Northbound					Southbound					Eastbound					Westbound					Grand Total		
	LT	ST	RT	NB TOT	STR TOT	LT	ST	RT	SB TOT	STR TOT	LT	ST	RT	EB TOT	STR TOT	LT	ST	RT	WB TOT	STR TOT			
07:00 08:00	25	24	49	98	256	66	86	6	158	256	12	314	38	364	563	35	144	20	199	563	819		
08:00 09:00	52	58	67	177	433	111	141	4	256	433	20	501	61	582	861	56	200	23	279	861	1294		
09:00 10:00	36	39	59	134	249	53	57	5	115	249	19	294	63	376	619	47	168	28	243	619	868		
11:30 12:30	27	46	50	123	249	43	59	24	126	249	14	234	78	326	617	42	218	31	291	617	866		
12:30 13:30	44	40	47	131	205	23	39	12	74	205	15	243	47	305	595	57	201	32	290	595	800		
15:00 16:00	42	107	63	212	308	42	38	16	96	308	9	329	72	410	919	52	344	113	509	919	1227		
16:00 17:00	55	156	76	287	396	29	70	10	109	396	13	369	89	471	1108	85	427	125	637	1108	1504		
17:00 18:00	60	100	65	225	353	45	65	18	128	353	8	400	104	512	1073	74	394	93	561	1073	1426		
<b>Sub Total</b>	341	570	476	1387	2449	412	555	95	1062	2449	110	2684	552	3346	6355	448	2096	465	3009	6355	8804		
<b>U Turns</b>				0				0	0				0				0				0	0	0
<b>Total</b>	341	570	476	1387	2449	412	555	95	1062	2449	110	2684	552	3346	6355	448	2096	465	3009	6355	8804		

**EQ 12Hr** 474 792 662 1928 573 771 132 1476 3404 153 3731 767 4651 623 2913 646 4183 8833 12238

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

1.39

**AVG 12Hr** 474 792 662 1928 573 1011 173 1476 3404 153 3731 767 4651 623 2913 646 4183 8833 12238

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

1.00

**AVG 24Hr** 621 1038 867 2526 751 1324 227 1934 4459 200 4888 1005 6093 816 3816 846 5480 11571 16032

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

### BAYVIEW RD/BAYVIEW STATION RD @ SCOTT ST/ALBERT ST

**Survey Date:** Wednesday, March 08, 2023

**WO No:** 40839

**Start Time:** 07:00

**Device:** Miovision

### Full Study 15 Minute Increments

#### BAYVIEW RD/BAYVIEW STATION 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	7	7	19	5	9	0	14	33	4	62	7	73	8	29	1	38	111	144
07:15 07:30	3	3	7	13	13	21	1	35	48	1	63	8	72	10	22	5	37	109	157
07:30 07:45	9	7	19	35	28	24	2	54	89	2	96	8	106	8	33	5	46	152	241
07:45 08:00	8	7	16	31	20	32	3	55	86	5	93	15	113	9	60	9	78	191	277
08:00 08:15	8	7	19	34	23	33	0	56	90	3	116	11	130	16	38	7	61	191	281
08:15 08:30	11	10	20	41	41	43	2	86	127	6	142	13	161	18	45	4	67	228	355
08:30 08:45	13	22	16	51	27	34	0	61	112	3	109	16	128	14	61	6	81	209	321
09:00 09:15	9	6	21	36	26	14	3	43	79	6	87	17	110	11	53	6	70	180	259
09:15 09:30	14	13	15	42	10	14	0	24	66	8	82	12	102	13	40	6	59	161	227
09:30 09:45	7	10	14	31	10	17	2	29	60	3	59	12	74	11	33	5	49	123	183
11:30 11:45	4	8	10	22	13	15	5	33	55	3	45	11	59	16	50	3	69	128	183
11:45 12:00	10	14	13	37	13	18	4	35	72	2	74	24	100	7	49	8	64	164	236
12:00 12:15	5	12	16	33	9	13	8	30	63	4	58	21	83	8	55	9	72	155	218
12:15 12:30	8	12	11	31	8	13	7	28	59	5	57	22	84	11	64	11	86	170	229
12:30 12:45	11	8	5	24	6	7	2	15	39	2	58	14	74	9	48	9	66	140	179
12:45 13:00	13	6	11	30	7	9	3	19	49	2	68	11	81	8	45	8	61	142	191
13:00 13:15	9	10	13	32	4	9	3	16	48	4	54	9	67	23	58	10	91	158	206
17:30 17:45	11	21	21	53	13	17	3	33	86	2	88	31	121	12	97	30	139	260	346
17:45 18:00	18	12	22	52	15	14	6	35	87	3	118	23	144	15	97	19	131	275	362
08:45 09:00	20	19	12	51	20	31	2	53	104	8	134	21	163	8	56	6	70	233	337
09:45 10:00	6	10	9	25	7	12	0	19	44	2	66	22	90	12	42	11	65	155	199
13:15 13:30	11	16	18	45	6	14	4	24	69	7	63	13	83	17	50	5	72	155	224
15:00 15:15	8	20	12	40	11	5	5	21	61	0	86	20	106	6	73	24	103	209	270
15:15 15:30	21	25	17	63	15	11	3	29	92	7	75	19	101	18	89	26	133	234	326
15:30 15:45	7	28	21	56	11	11	5	27	83	1	81	15	97	17	87	31	135	232	315
15:45 16:00	6	34	13	53	5	11	3	19	72	1	87	18	106	11	95	32	138	244	316
16:00 16:15	15	39	16	70	10	21	4	35	105	5	72	21	98	28	112	23	163	261	366
16:15 16:30	15	43	14	72	9	13	4	26	98	3	109	15	127	10	110	35	155	282	380
16:30 16:45	13	38	27	78	3	16	0	19	97	0	81	28	109	25	110	38	173	282	379
16:45 17:00	12	36	19	67	7	20	2	29	96	5	107	25	137	22	95	29	146	283	379
17:00 17:15	15	31	12	58	12	18	7	37	95	1	110	28	139	22	112	21	155	294	389
17:15 17:30	16	36	10	62	5	16	2	23	85	2	84	22	108	25	88	23	136	244	329
Total:	341	570	476	1387	412	555	95	1062	2449	110	2684	552	3346	448	2096	465	3009	6355	8,804

Note: U-Turns are included in Totals.



# Transportation Services - Traffic Services

## Turning Movement Count - Study Results

### BAYVIEW RD/BAYVIEW STATION RD @ SCOTT ST/ALBERT ST

**Survey Date:** Wednesday, March 08, 2023

**WO No:** 40839

**Start Time:** 07:00

**Device:** Miovision

### Full Study Cyclist Volume

#### BAYVIEW RD/BAYVIEW STATION RD

#### SCOTT ST/ALBERT ST

Time Period	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	2	0	2	2
07:30 07:45	0	0	0	1	0	1	1
07:45 08:00	2	1	3	4	0	4	7
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	1	0	1	1
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	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	0	0	0
13:00 13:15	0	0	0	0	0	0	0
17:30 17:45	0	0	0	1	0	1	1
17:45 18:00	1	0	1	1	0	1	2
08:45 09:00	0	0	0	1	0	1	1
09:45 10:00	0	0	0	0	0	0	0
13:15 13:30	0	0	0	1	0	1	1
15:00 15:15	1	0	1	1	0	1	2
15:15 15:30	1	0	1	0	1	1	2
15:30 15:45	0	0	0	0	2	2	2
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
<b>Total</b>	<b>5</b>	<b>1</b>	<b>6</b>	<b>21</b>	<b>3</b>	<b>24</b>	<b>30</b>



# Transportation Services - Traffic Services

## Turning Movement Count - Study Results

### BAYVIEW RD/BAYVIEW STATION RD @ SCOTT ST/ALBERT ST

**Survey Date:** Wednesday, March 08, 2023

**WO No:** 40839

**Start Time:** 07:00

**Device:** Miovision

### Full Study Pedestrian Volume

#### BAYVIEW RD/BAYVIEW STATION RD

#### SCOTT 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	1	2	1	0	1	3
07:15 07:30	4	6	10	0	0	0	10
07:30 07:45	5	3	8	1	2	3	11
07:45 08:00	8	9	17	3	1	4	21
08:00 08:15	6	9	15	6	1	7	22
08:15 08:30	13	12	25	4	4	8	33
08:30 08:45	10	6	16	2	4	6	22
09:00 09:15	4	5	9	1	1	2	11
09:15 09:30	2	6	8	1	1	2	10
09:30 09:45	1	1	2	1	0	1	3
11:30 11:45	4	3	7	1	1	2	9
11:45 12:00	1	2	3	1	2	3	6
12:00 12:15	6	4	10	1	6	7	17
12:15 12:30	3	1	4	2	3	5	9
12:30 12:45	1	9	10	3	2	5	15
12:45 13:00	2	6	8	4	0	4	12
13:00 13:15	1	1	2	1	1	2	4
17:30 17:45	12	11	23	5	6	11	34
17:45 18:00	18	14	32	7	2	9	41
08:45 09:00	3	7	10	4	2	6	16
09:45 10:00	7	5	12	2	2	4	16
13:15 13:30	0	5	5	4	4	8	13
15:00 15:15	2	7	9	7	0	7	16
15:15 15:30	6	11	17	6	1	7	24
15:30 15:45	1	5	6	1	1	2	8
15:45 16:00	9	16	25	5	1	6	31
16:00 16:15	14	2	16	2	4	6	22
16:15 16:30	5	3	8	1	2	3	11
16:30 16:45	9	1	10	1	2	3	13
16:45 17:00	10	0	10	0	7	7	17
17:00 17:15	6	3	9	1	3	4	13
17:15 17:30	14	5	19	2	7	9	28
<b>Total .....</b>	<b>188</b>	<b>179</b>	<b>367</b>	<b>81</b>	<b>73</b>	<b>154</b>	<b>521</b>



# Transportation Services - Traffic Services

## Turning Movement Count - Study Results

### BAYVIEW RD/BAYVIEW STATION RD @ SCOTT ST/ALBERT ST

**Survey Date:** Wednesday, March 08, 2023

**WO No:** 40839

**Start Time:** 07:00

**Device:** Miovision

### Full Study Heavy Vehicles

**BAYVIEW RD/BAYVIEW STATION RD**

**SCOTT ST/ALBERT ST**

Northbound Southbound Eastbound Westbound

Time Period	Northbound			N TOT	Southbound			S TOT	STR TOT	Eastbound			E TOT	Westbound			W TOT	STR TOT	Grand Total	
	LT	ST	RT		LT	ST	RT			LT	ST	RT		LT	ST	RT				
07:00 07:15	0	0	1	1	0	0	0	0	1	1	0	4	0	4	2	6	1	9	13	14
07:15 07:30	0	0	0	0	0	1	0	1	1	0	2	0	2	2	1	0	3	5	6	6
07:30 07:45	0	2	0	2	0	0	0	0	2	1	3	0	4	3	3	0	6	10	12	12
07:45 08:00	0	0	0	0	1	0	0	1	1	1	6	1	8	0	8	3	11	19	20	20
08:00 08:15	1	0	1	2	0	0	0	0	2	0	6	0	6	2	7	2	11	17	19	19
08:15 08:30	0	1	0	1	0	0	0	0	1	0	4	0	4	1	6	0	7	11	12	12
08:30 08:45	0	2	1	3	2	0	0	2	5	1	9	0	10	1	1	2	4	14	19	19
09:00 09:15	2	0	0	2	0	0	0	0	2	0	5	0	5	2	2	0	4	9	11	11
09:15 09:30	6	2	0	8	0	0	0	0	8	1	5	0	6	3	8	0	11	17	25	25
09:30 09:45	2	2	0	4	3	0	0	3	7	0	6	0	6	3	5	1	9	15	22	22
11:30 11:45	0	0	1	1	1	1	1	3	4	0	1	1	2	2	3	0	5	7	11	11
11:45 12:00	0	0	0	0	1	2	0	3	3	1	4	1	6	3	7	1	11	17	20	20
12:00 12:15	1	1	0	2	1	0	0	1	3	0	3	1	4	1	5	0	6	10	13	13
12:15 12:30	1	0	0	1	0	1	0	1	2	0	3	0	3	2	4	0	6	9	11	11
12:30 12:45	0	0	0	0	0	0	0	0	0	0	4	1	5	0	6	0	6	11	11	11
12:45 13:00	1	0	1	2	0	0	0	0	2	0	5	0	5	2	3	1	6	11	13	13
13:00 13:15	0	0	0	0	1	0	0	1	1	0	3	1	4	1	5	0	6	10	11	11
17:30 17:45	0	0	1	1	0	0	0	0	1	0	3	0	3	1	2	0	3	6	7	7
17:45 18:00	0	0	0	0	1	0	0	1	1	0	3	0	3	2	5	1	8	11	12	12
08:45 09:00	7	0	0	7	3	1	0	4	11	1	6	2	9	2	3	0	5	14	25	25
09:45 10:00	1	0	0	1	0	1	0	1	2	1	7	2	10	2	7	0	9	19	21	21
13:15 13:30	0	0	0	0	0	0	0	0	0	0	2	1	3	1	4	0	5	8	8	8
15:00 15:15	0	0	1	1	0	1	1	2	3	0	1	1	2	1	10	0	11	13	16	16
15:15 15:30	0	0	0	0	4	1	0	5	5	0	2	0	2	2	5	0	7	9	14	14
15:30 15:45	1	0	1	2	0	0	0	0	2	0	3	1	4	4	6	0	10	14	16	16
15:45 16:00	0	0	0	0	0	0	0	0	0	0	2	0	2	1	5	0	6	8	8	8
16:00 16:15	0	0	2	2	0	0	0	0	2	0	2	0	2	3	7	0	10	12	14	14
16:15 16:30	0	0	0	0	0	0	0	0	0	0	0	1	1	1	4	0	5	6	6	6
16:30 16:45	0	0	1	1	0	1	0	1	2	0	2	0	2	2	5	1	8	10	12	12
16:45 17:00	0	0	0	0	0	0	0	0	0	0	3	0	3	2	3	0	5	8	8	8
17:00 17:15	0	0	1	1	0	0	0	0	1	0	2	0	2	3	4	0	7	9	10	10
17:15 17:30	0	0	0	0	1	0	1	2	2	0	1	0	1	1	2	0	3	4	6	6
Total: None	23	10	12	45	19	10	3	32	77	7	112	14	133	58	152	13	223	356	433	433





# Transportation Services - Traffic Services

## Turning Movement Count - Study Results

### BAYVIEW RD/BAYVIEW STATION RD @ SCOTT ST/ALBERT ST

**Survey Date:** Wednesday, March 08, 2023

**WO No:** 40839

**Start Time:** 07:00

**Device:** Miovision

#### Full Study 15 Minute U-Turn Total

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



## Turning Movement Count - Study Results

### BOOTH ST @ SIR JOHN A. MACDONALD PKWY/WELLINGTON ST

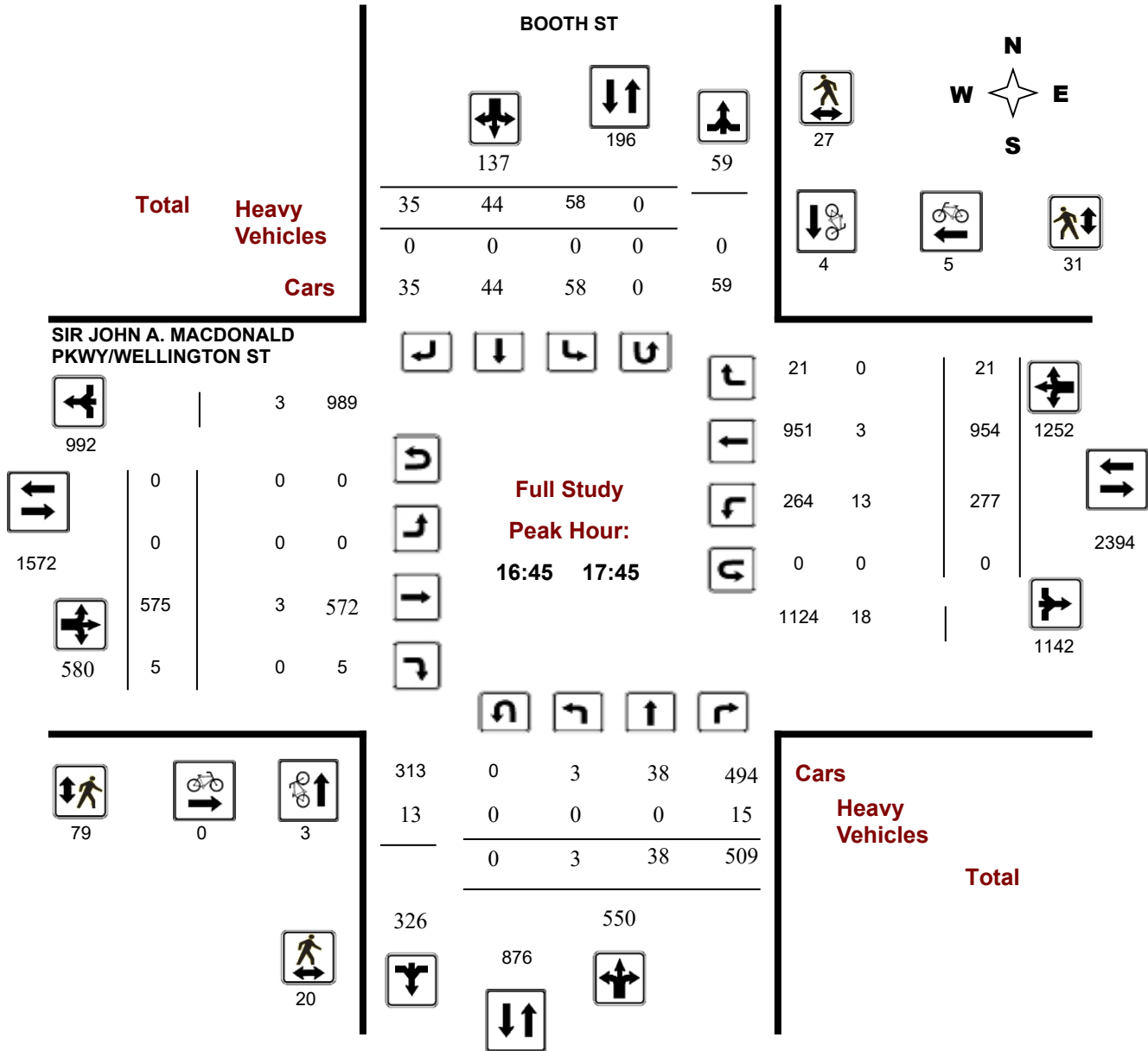
**Survey Date:** Thursday, March 02, 2023

**WO No:** 40833

**Start Time:** 07:00

**Device:** Miovision

### Full Study Peak Hour Diagram



## Turning Movement Count - Peak Hour Diagram

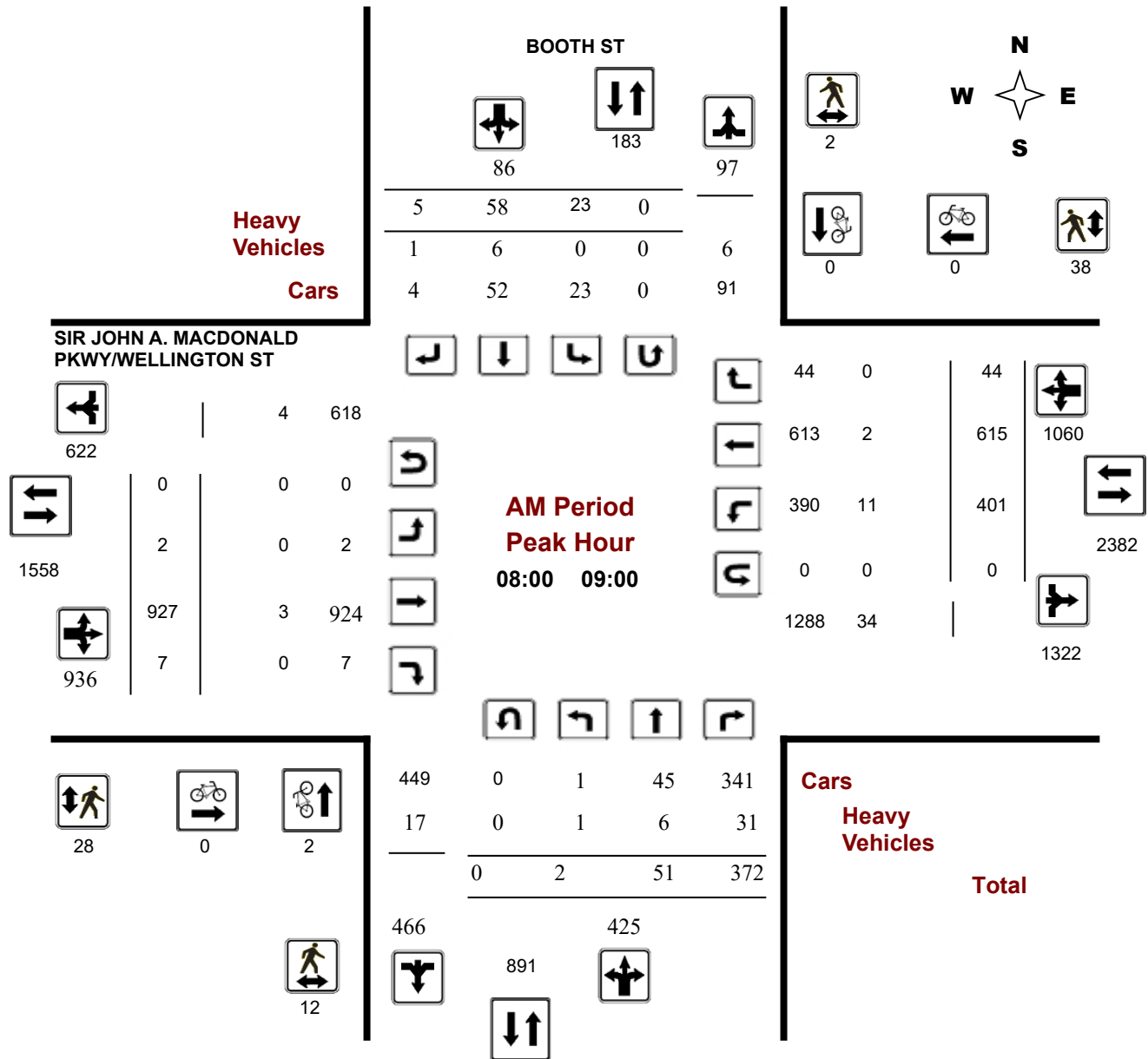
### BOOTH ST @ SIR JOHN A. MACDONALD PKWY/WELLINGTON ST

**Survey Date:** Thursday, March 02, 2023

**Start Time:** 07:00

**WO No:** 40833

**Device:** Miovision





# Transportation Services - Traffic Services

## Turning Movement Count - Peak Hour Diagram

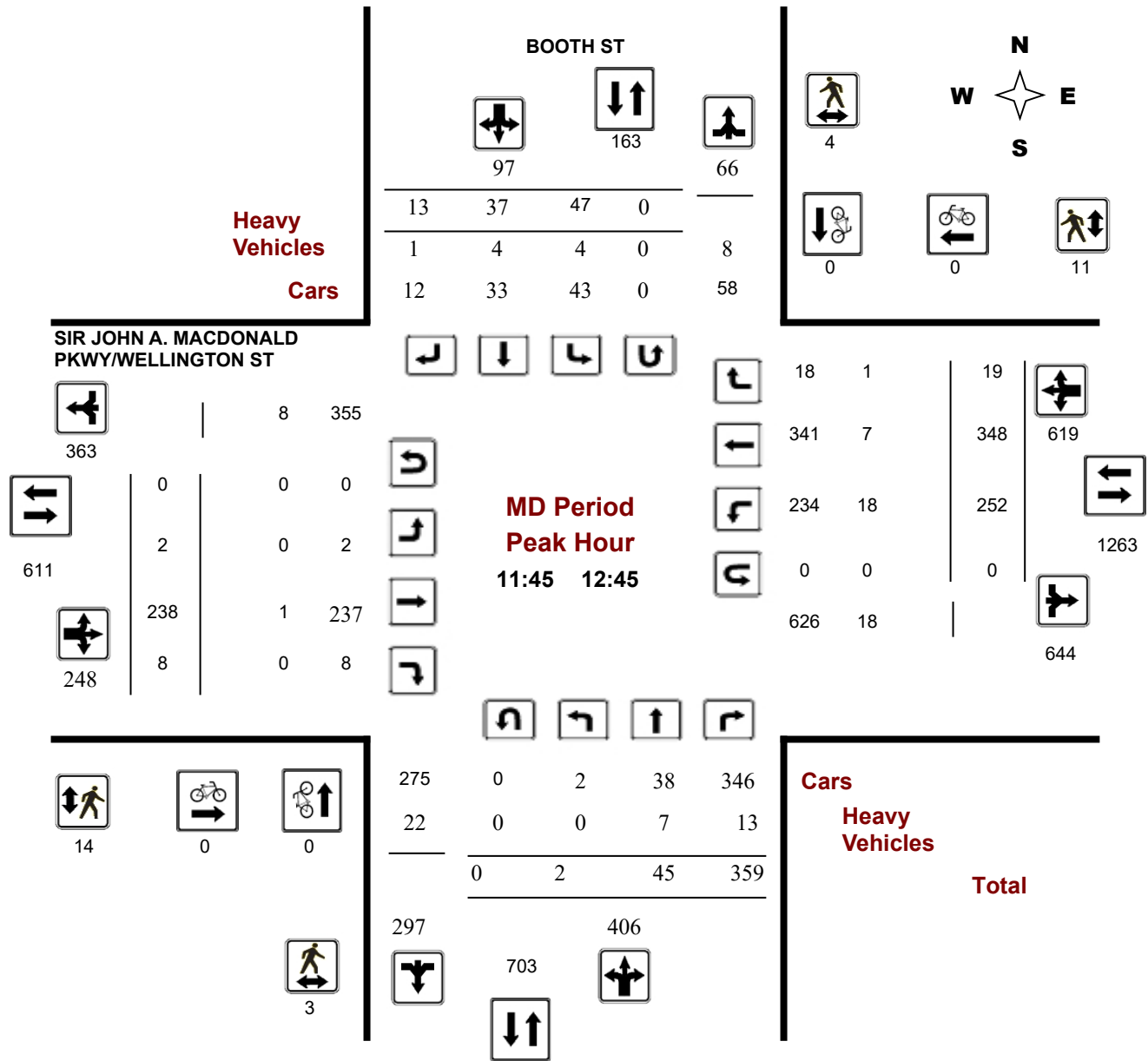
### BOOTH ST @ SIR JOHN A. MACDONALD PKWY/WELLINGTON ST

**Survey Date:** Thursday, March 02, 2023

**Start Time:** 07:00

**WO No:** 40833

**Device:** Miovision



## Turning Movement Count - Peak Hour Diagram

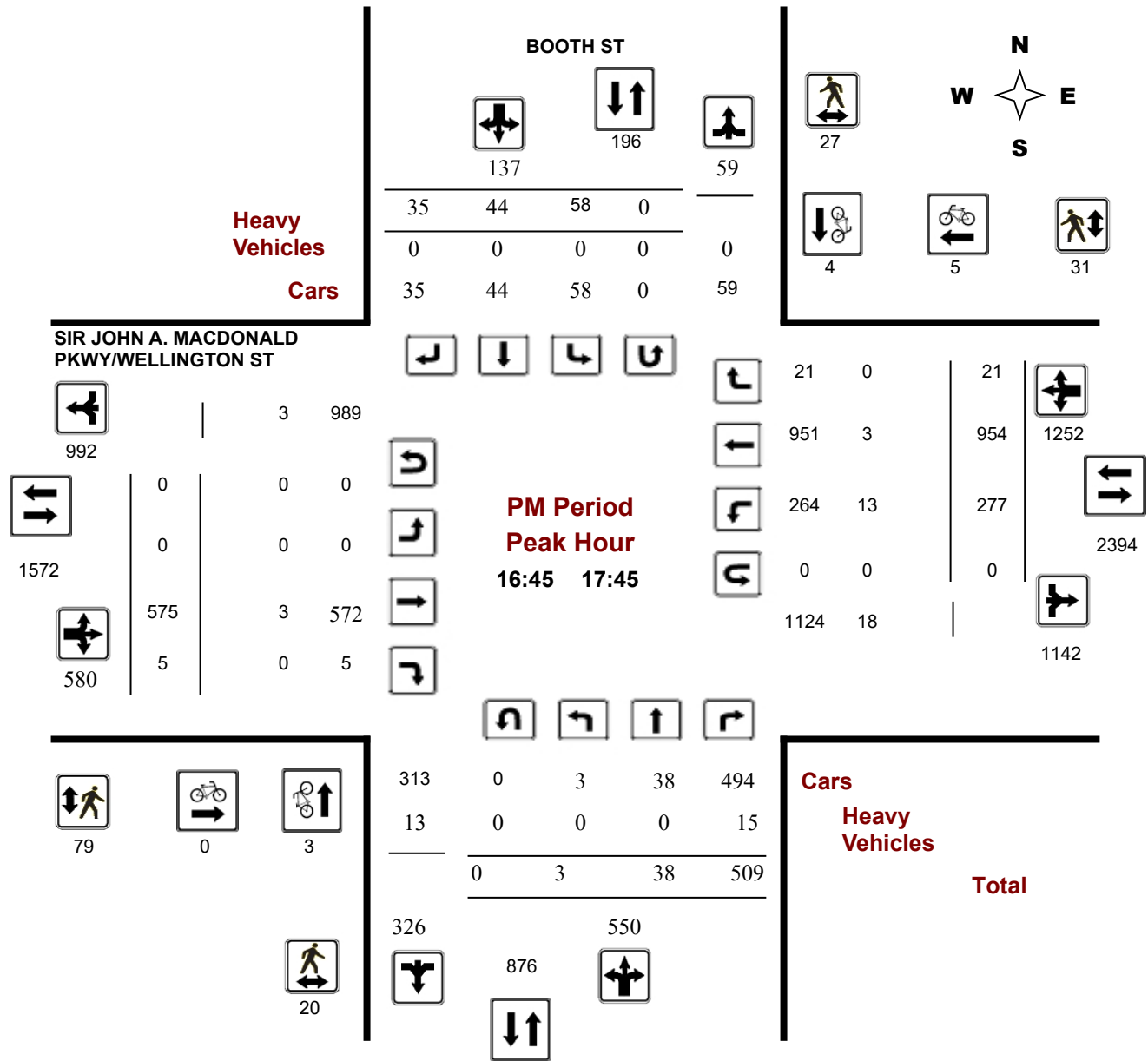
### BOOTH ST @ SIR JOHN A. MACDONALD PKWY/WELLINGTON ST

**Survey Date:** Thursday, March 02, 2023

**Start Time:** 07:00

**WO No:** 40833

**Device:** Miovision



**Comments**



# Transportation Services - Traffic Services

## Turning Movement Count - Study Results

### BOOTH ST @ SIR JOHN A. MACDONALD PKWY/WELLINGTON ST

**Survey Date:** Thursday, March 02, 2023

**WO No:** 40833

**Start Time:** 07:00

**Device:** Miovision

### Full Study Summary (8 HR Standard)

**Survey Date:** Thursday, March 02, 2023

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

**AADT Factor**  
 1.00

Period	BOOTH ST									SIR JOHN A. MACDONALD PKWY/WELLINGTON ST									Grand Total
	Northbound			NB TOT	Southbound			SB TOT	STR TOT	Eastbound			EB TOT	Westbound			WB TOT	STR TOT	
	LT	ST	RT		LT	ST	RT			LT	ST	RT		LT	ST	RT			
07:00 08:00	3	37	333	373	17	29	4	50	423	0	633	4	637	396	512	46	954	1591	2014
08:00 09:00	2	51	372	425	23	58	5	86	511	2	927	7	936	401	615	44	1060	1996	2507
09:00 10:00	2	49	357	408	26	21	2	49	457	0	552	8	560	319	382	23	724	1284	1741
11:30 12:30	2	48	371	421	38	33	12	83	504	2	239	4	245	262	343	16	621	866	1370
12:30 13:30	0	42	365	407	47	38	3	88	495	0	235	6	241	216	340	22	578	819	1314
15:00 16:00	2	29	422	453	50	57	24	131	584	0	530	5	535	239	832	11	1082	1617	2201
16:00 17:00	2	24	332	358	51	39	16	106	464	0	499	6	505	299	1051	28	1378	1883	2347
17:00 18:00	3	43	557	603	47	42	34	123	726	1	539	2	542	271	825	17	1113	1655	2381
<b>Sub Total</b>	16	323	3109	3448	299	317	100	716	4164	5	4154	42	4201	2403	4900	207	7510	11711	15875
<b>U Turns</b>				1				1	2				0				0	0	2
<b>Total</b>	16	323	3109	3449	299	317	100	717	4166	5	4154	42	4201	2403	4900	207	7510	11711	15877
<b>EQ 12Hr</b>	22	449	4322	4794	416	441	139	997	5791	7	5774	58	5839	3340	6811	288	10439	16278	22069
Note: These values are calculated by multiplying the totals by the appropriate expansion factor.													<b>1.39</b>						
<b>AVG 12Hr</b>	22	449	4322	4794	416	577	182	997	5791	7	5774	58	5839	3340	6811	288	10439	16278	22069
Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor.													<b>1.00</b>						
<b>AVG 24Hr</b>	29	588	5662	6280	545	756	238	1306	7586	9	7564	76	7649	4375	8922	377	13675	21324	28910
Note: These volumes are calculated by multiplying the Average Daily 12 hr. totals by 12 to 24 expansion factor.													<b>1.31</b>						

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



# Transportation Services - Traffic Services

## Turning Movement Count - Study Results

### BOOTH ST @ SIR JOHN A. MACDONALD PKWY/WELLINGTON ST

**Survey Date:** Thursday, March 02, 2023

**WO No:** 40833

**Start Time:** 07:00

**Device:** Miovision

### Full Study 15 Minute Increments

#### BOOTH ST

#### SIR JOHN A. MACDONALD PKWY/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	0	9	69	78	5	8	1	14	92	0	92	1	93	103	117	13	233	326	418
07:15 07:30	1	6	85	92	6	8	2	16	108	0	134	3	137	96	132	9	237	374	482
07:30 07:45	0	12	67	79	3	10	0	13	92	0	178	0	178	98	128	16	242	420	512
07:45 08:00	2	10	112	125	3	3	1	7	132	0	229	0	229	99	135	8	242	471	603
08:00 08:15	0	8	79	87	5	12	2	19	106	1	224	0	225	91	137	15	243	468	574
08:15 08:30	1	13	96	110	7	16	3	26	136	0	237	3	240	108	168	8	284	524	660
08:30 08:45	1	20	105	126	6	15	0	21	147	0	234	1	235	106	170	9	285	520	667
08:45 09:00	0	10	92	102	5	15	0	20	122	1	232	3	236	96	140	12	248	484	606
09:00 09:15	0	13	78	91	9	11	0	20	111	0	170	0	170	89	125	10	224	394	505
09:15 09:30	0	14	98	112	7	2	0	9	121	0	155	1	156	70	86	3	159	315	436
09:30 09:45	2	7	81	90	3	5	1	9	99	0	119	1	120	83	80	7	170	290	389
09:45 10:00	0	15	100	115	7	3	1	11	126	0	108	6	114	77	91	3	171	285	411
11:30 11:45	0	13	89	102	6	6	1	13	115	0	59	2	61	62	76	2	140	201	316
11:45 12:00	1	13	84	98	13	11	5	29	127	1	64	0	65	77	86	5	168	233	360
12:00 12:15	0	11	89	100	7	11	3	21	121	1	58	1	60	52	101	5	158	218	339
12:15 12:30	1	11	109	121	12	5	3	20	141	0	58	1	59	71	80	4	155	214	355
12:30 12:45	0	10	77	87	15	10	2	27	114	0	58	6	64	52	81	5	138	202	316
12:45 13:00	0	10	93	103	14	7	0	21	124	0	65	0	65	55	90	7	152	217	341
13:00 13:15	0	17	89	106	8	12	1	21	127	0	54	0	54	58	81	5	144	198	325
13:15 13:30	0	5	106	111	10	9	0	19	130	0	58	0	58	51	88	5	144	202	332
15:00 15:15	0	9	146	155	22	20	7	49	204	0	127	0	127	46	157	1	204	331	535
15:15 15:30	1	12	109	122	15	19	11	46	168	0	98	2	100	60	221	2	283	383	551
15:30 15:45	1	3	95	99	6	8	4	18	117	0	169	3	172	70	203	5	278	450	567
15:45 16:00	0	5	72	77	7	10	2	19	96	0	136	0	136	63	251	3	317	453	549
16:00 16:15	0	8	55	63	11	13	8	32	95	0	90	2	92	68	252	8	328	420	515
16:15 16:30	0	7	78	85	4	12	2	18	103	0	118	0	118	83	294	4	381	499	602
16:30 16:45	2	4	80	86	19	6	1	26	112	0	159	1	160	70	227	9	306	466	578
16:45 17:00	0	5	119	124	17	8	5	30	154	0	132	3	135	78	278	7	363	498	652
17:00 17:15	0	7	111	118	11	16	8	35	153	0	164	2	166	69	254	9	332	498	651
17:15 17:30	3	16	159	178	13	9	17	39	217	0	135	0	135	65	208	3	276	411	628
17:30 17:45	0	10	120	130	17	11	5	33	163	0	144	0	144	65	214	2	281	425	588
17:45 18:00	0	10	167	177	6	6	4	16	193	1	96	0	97	72	149	3	224	321	514
<b>Total:</b>	<b>16</b>	<b>323</b>	<b>3109</b>	<b>3449</b>	<b>299</b>	<b>317</b>	<b>100</b>	<b>717</b>	<b>4166</b>	<b>5</b>	<b>4154</b>	<b>42</b>	<b>4201</b>	<b>2403</b>	<b>4900</b>	<b>207</b>	<b>7510</b>	<b>11711</b>	<b>15,877</b>

Note: U-Turns are included in Totals.





# Transportation Services - Traffic Services

## Turning Movement Count - Study Results

### BOOTH ST @ SIR JOHN A. MACDONALD PKWY/WELLINGTON ST

**Survey Date:** Thursday, March 02, 2023

**WO No:** 40833

**Start Time:** 07:00

**Device:** Miovision

### Full Study Cyclist Volume

BOOTH ST

SIR JOHN A. MACDONALD  
PKWY/WELLINGTON ST

Time Period	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	1	1	0	0	0	1
08:00 08:15	0	0	0	0	0	0	0
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	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	1	1	1
13:15 13:30	0	0	0	0	0	0	0
15:00 15:15	0	1	1	1	1	2	3
15:15 15:30	0	1	1	0	0	0	1
15:30 15:45	0	3	3	0	0	0	3
15:45 16:00	0	2	2	0	0	0	2
16:00 16:15	0	0	0	0	0	0	0
16:15 16:30	2	0	2	0	0	0	2
16:30 16:45	0	0	0	0	0	0	0
16:45 17:00	0	1	1	0	2	2	3
17:00 17:15	1	1	2	0	1	1	3
17:15 17:30	1	0	1	0	0	0	1
17:30 17:45	1	2	3	0	2	2	5
17:45 18:00	0	1	1	0	1	1	2
<b>Total</b>	<b>7</b>	<b>13</b>	<b>20</b>	<b>1</b>	<b>8</b>	<b>9</b>	<b>29</b>



# Transportation Services - Traffic Services

## Turning Movement Count - Study Results

### BOOTH ST @ SIR JOHN A. MACDONALD PKWY/WELLINGTON ST

**Survey Date:** Thursday, March 02, 2023

**WO No:** 40833

**Start Time:** 07:00

**Device:** Miovision

### Full Study Pedestrian Volume

**BOOTH ST**

**SIR JOHN A. MACDONALD  
PKWY/WELLINGTON 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	2	0	2	0	6	6	8
07:15 07:30	1	1	2	3	2	5	7
07:30 07:45	2	0	2	3	7	10	12
07:45 08:00	0	0	0	4	8	12	12
08:00 08:15	4	0	4	6	7	13	17
08:15 08:30	0	1	1	2	14	16	17
08:30 08:45	5	0	5	9	12	21	26
08:45 09:00	3	1	4	11	5	16	20
09:00 09:15	0	0	0	0	8	8	8
09:15 09:30	0	0	0	2	1	3	3
09:30 09:45	0	0	0	3	2	5	5
09:45 10:00	0	0	0	3	2	5	5
11:30 11:45	1	0	1	1	0	1	2
11:45 12:00	0	0	0	4	3	7	7
12:00 12:15	1	1	2	2	6	8	10
12:15 12:30	2	1	3	4	2	6	9
12:30 12:45	0	2	2	4	0	4	6
12:45 13:00	0	0	0	2	0	2	2
13:00 13:15	1	1	2	1	2	3	5
13:15 13:30	2	0	2	4	1	5	7
15:00 15:15	0	0	0	5	1	6	6
15:15 15:30	0	0	0	2	4	6	6
15:30 15:45	1	0	1	7	8	15	16
15:45 16:00	1	1	2	10	6	16	18
16:00 16:15	3	1	4	6	5	11	15
16:15 16:30	0	3	3	8	9	17	20
16:30 16:45	2	2	4	8	12	20	24
16:45 17:00	4	9	13	21	9	30	43
17:00 17:15	5	9	14	24	7	31	45
17:15 17:30	5	3	8	17	9	26	34
17:30 17:45	6	6	12	17	6	23	35
17:45 18:00	3	2	5	11	12	23	28
<b>Total .....</b>	<b>54</b>	<b>44</b>	<b>98</b>	<b>204</b>	<b>176</b>	<b>380</b>	<b>478</b>



# Transportation Services - Traffic Services

## Turning Movement Count - Study Results

### BOOTH ST @ SIR JOHN A. MACDONALD PKWY/WELLINGTON ST

**Survey Date:** Thursday, March 02, 2023

**WO No:** 40833

**Start Time:** 07:00

**Device:** Miovision

### Full Study Heavy Vehicles

#### BOOTH ST

#### SIR JOHN A. MACDONALD PKWY/WELLINGTON ST

Northbound

Southbound

Eastbound

Westbound

Time Period	Northbound			N TOT	Southbound			S TOT	STR TOT	Eastbound			E TOT	Westbound			W TOT	STR TOT	Grand Total
	LT	ST	RT		LT	ST	RT			LT	ST	RT		LT	ST	RT			
07:00 07:15	0	0	8	14	0	0	0	1	15	0	0	0	1	6	1	1	16	17	16
07:15 07:30	0	1	3	9	1	0	0	2	11	0	0	0	1	5	1	0	10	11	11
07:30 07:45	0	1	3	8	1	0	0	3	11	0	2	0	4	4	2	1	13	17	14
07:45 08:00	1	0	5	8	0	0	0	0	8	0	0	0	2	2	1	0	8	10	9
08:00 08:15	0	1	9	13	0	1	0	2	15	0	0	0	1	2	1	0	12	13	14
08:15 08:30	1	3	7	17	0	2	1	6	23	0	0	0	3	4	1	0	12	15	19
08:30 08:45	0	2	11	16	0	1	0	3	19	0	2	0	2	2	0	0	15	17	18
08:45 09:00	0	0	4	9	0	2	0	2	11	0	1	0	1	3	0	0	8	9	10
09:00 09:15	0	2	6	12	1	1	0	4	16	0	0	0	0	3	0	0	10	10	13
09:15 09:30	0	2	9	15	0	1	0	3	18	0	4	0	6	3	2	0	18	24	21
09:30 09:45	1	1	2	7	0	1	0	2	9	0	0	1	2	1	0	0	3	5	7
09:45 10:00	0	0	10	14	0	1	0	1	15	0	1	1	2	2	0	0	13	15	15
11:30 11:45	0	3	7	16	0	2	0	5	21	0	0	0	1	4	1	0	12	13	17
11:45 12:00	0	2	1	7	1	1	0	4	11	0	1	0	3	3	2	0	8	11	11
12:00 12:15	0	4	3	12	1	1	0	7	19	0	0	0	1	4	1	1	10	11	15
12:15 12:30	0	1	7	13	2	0	1	4	17	0	0	0	3	5	2	0	16	19	18
12:30 12:45	0	0	2	10	0	2	0	2	12	0	0	0	2	6	2	0	10	12	12
12:45 13:00	0	1	5	9	0	1	0	2	11	0	0	0	0	2	0	0	7	7	9
13:00 13:15	0	4	2	13	0	3	0	7	20	0	1	0	1	4	0	0	7	8	14
13:15 13:30	0	0	6	9	2	3	0	5	14	0	0	0	2	0	2	0	10	12	13
15:00 15:15	0	0	4	11	0	1	0	1	12	0	0	0	0	6	0	0	10	10	11
15:15 15:30	0	2	8	13	0	0	0	2	15	0	0	0	1	3	1	0	12	13	14
15:30 15:45	0	0	2	8	0	1	0	2	10	0	2	0	3	5	1	1	11	14	12
15:45 16:00	0	0	3	7	0	0	0	0	7	0	1	0	1	4	0	0	8	9	8
16:00 16:15	0	0	1	7	0	1	0	2	9	0	2	0	3	5	1	1	10	13	11
16:15 16:30	0	0	3	5	0	1	0	1	6	0	1	0	3	1	2	0	7	10	8
16:30 16:45	0	0	3	7	1	0	0	1	8	0	0	0	0	4	0	0	8	8	8
16:45 17:00	0	0	4	8	0	0	0	0	8	0	0	0	0	4	0	0	8	8	8
17:00 17:15	0	0	5	9	0	0	0	0	9	0	0	0	0	4	0	0	9	9	9
17:15 17:30	0	0	4	6	0	0	0	0	6	0	2	0	4	2	2	0	10	14	10
17:30 17:45	0	0	2	5	0	0	0	0	5	0	1	0	2	3	1	0	7	9	7
17:45 18:00	0	1	1	5	0	0	0	1	6	0	0	0	0	3	0	0	4	4	5
Total: None	3	31	150	322	10	27	2	75	397	0	21	2	55	109	27	5	322	377	387



# Transportation Services - Traffic Services

## Turning Movement Count - Study Results

### BOOTH ST @ SIR JOHN A. MACDONALD PKWY/WELLINGTON ST

**Survey Date:** Thursday, March 02, 2023

**WO No:** 40833

**Start Time:** 07:00

**Device:** Miovision

### Full Study 15 Minute U-Turn Total

Time Period		BOOTH ST		SIR JOHN A. MACDONALD PKWY/WELLINGTON ST		Total
		Northbound U-Turn Total	Southbound U-Turn Total	Eastbound U-Turn Total	Westbound U-Turn 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	1	0	0	0	1
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	1	0	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	1	0	0	2

## Turning Movement Count - Study Results

### PARKDALE AVE @ SCOTT ST

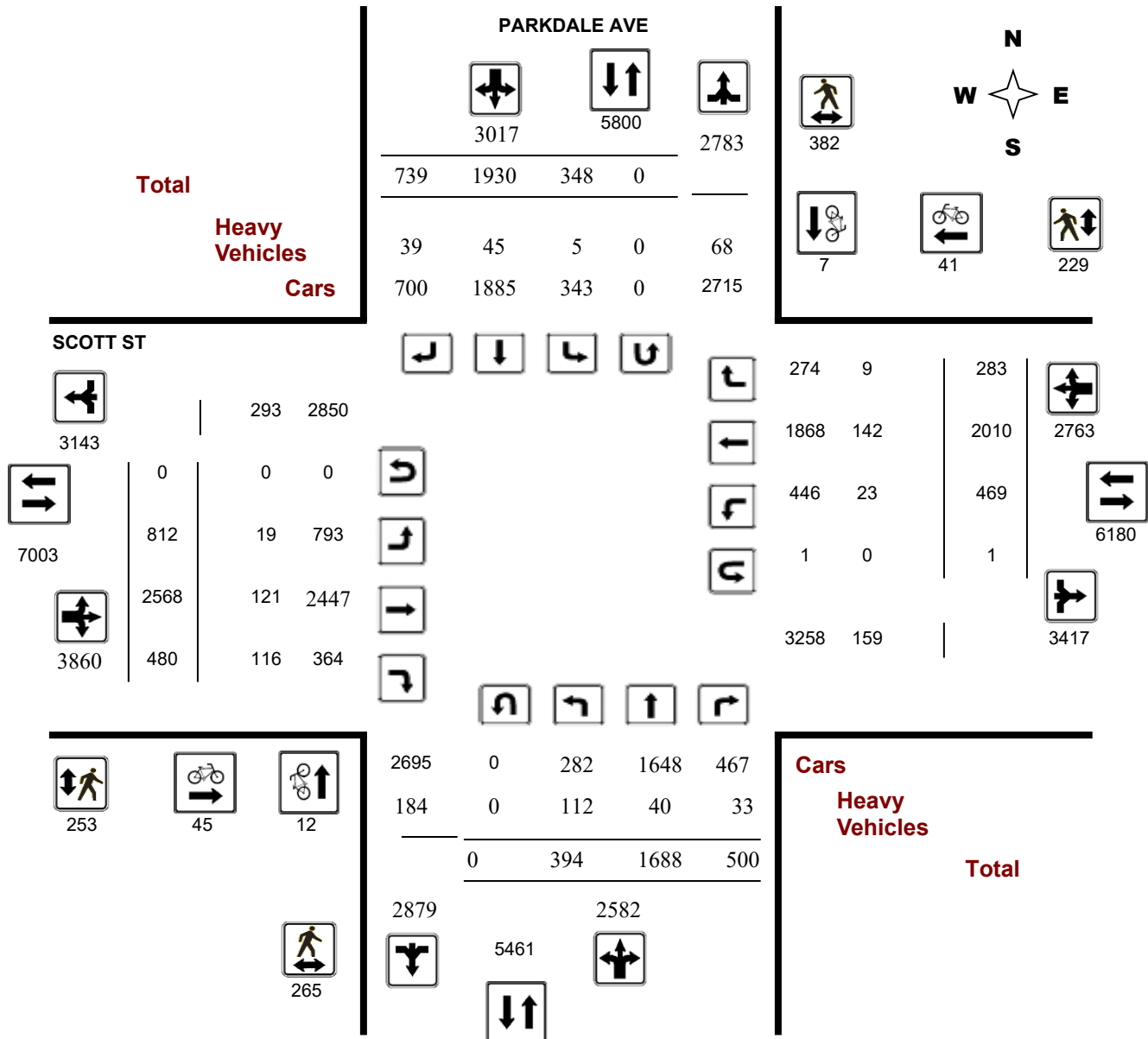
**Survey Date:** Wednesday, March 08, 2023

**WO No:** 40838

**Start Time:** 07:00

**Device:** Miovision

### Full Study Diagram





## Turning Movement Count - Study Results

### PARKDALE AVE @ SCOTT ST

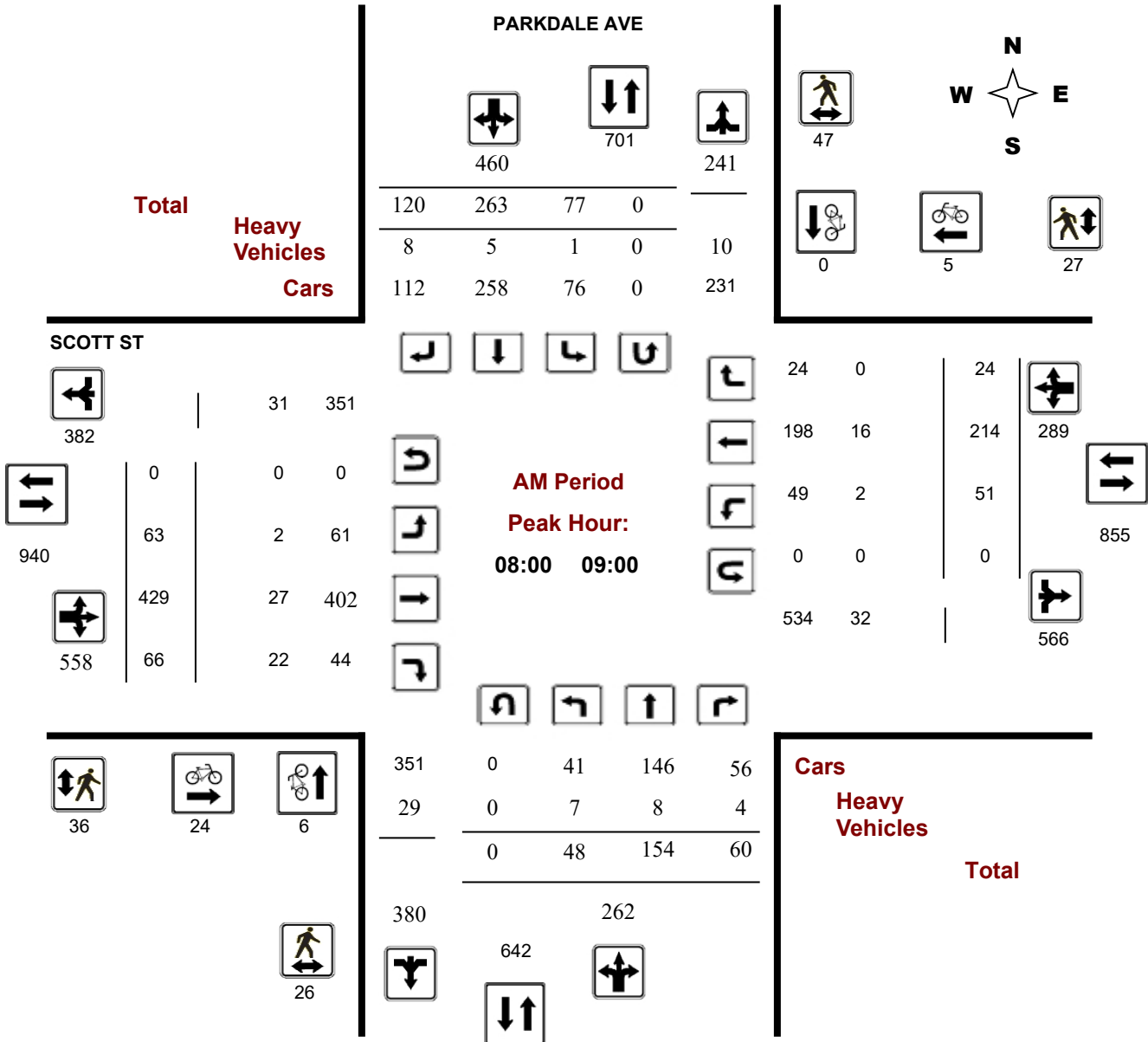
**Survey Date:** Wednesday, March 08, 2023

**WO No:** 40838

**Start Time:** 07:00

**Device:** Miovision

### AM Period Peak Hour Diagram



## Turning Movement Count - Study Results

### PARKDALE AVE @ SCOTT ST

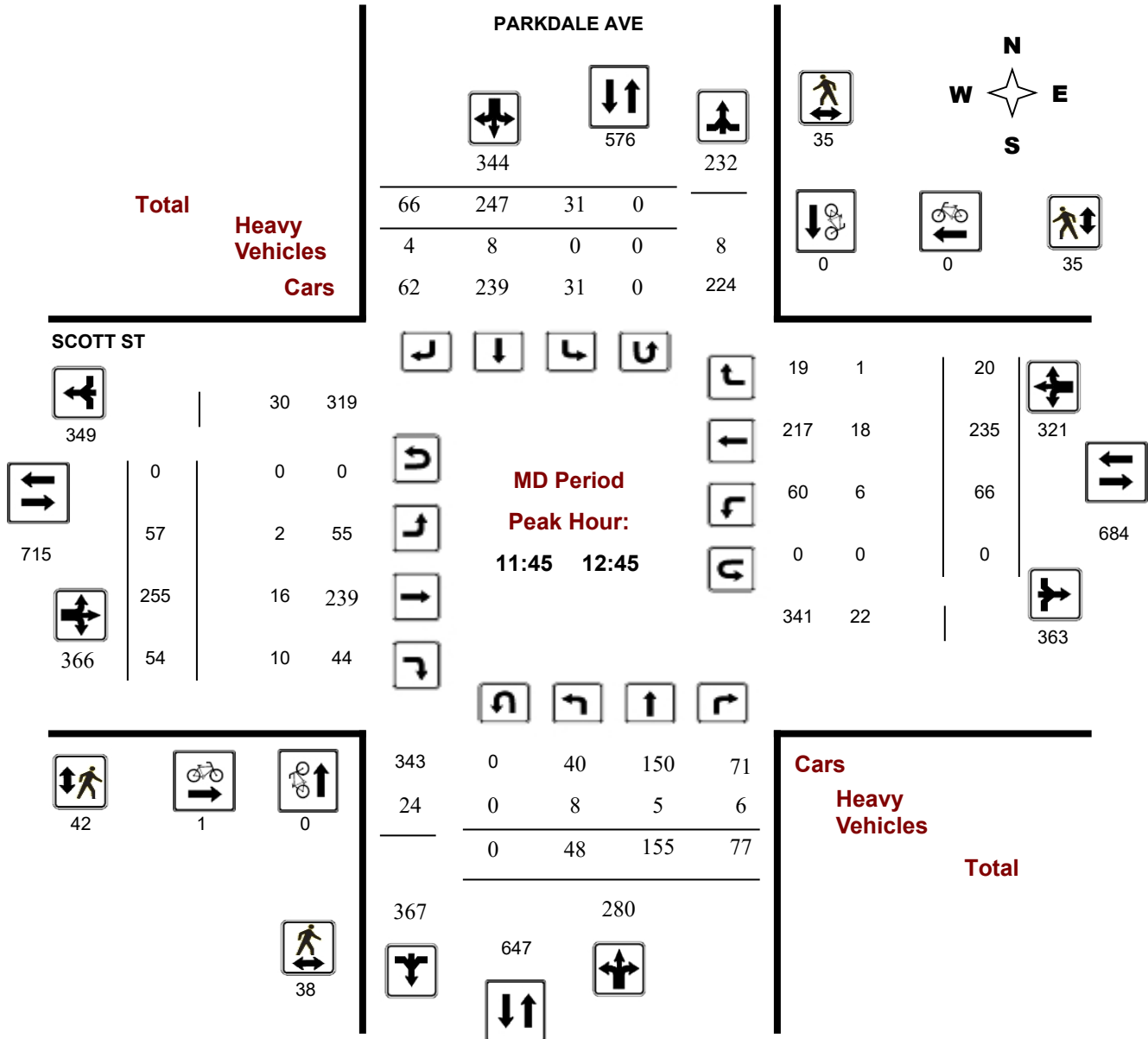
**Survey Date:** Wednesday, March 08, 2023

**WO No:** 40838

**Start Time:** 07:00

**Device:** Miovision

### MD Period Peak Hour Diagram





## Turning Movement Count - Study Results

### PARKDALE AVE @ SCOTT ST

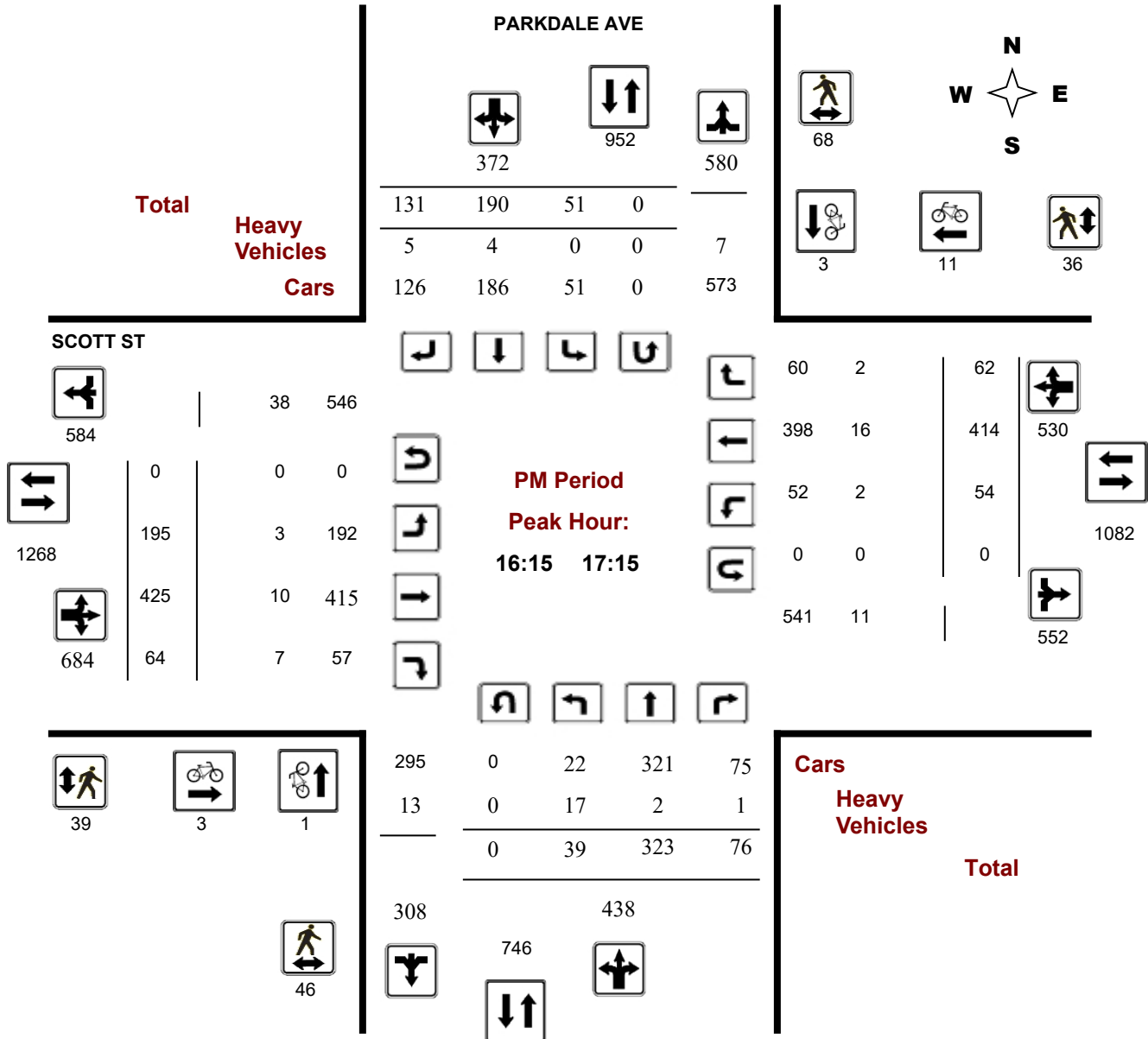
**Survey Date:** Wednesday, March 08, 2023

**WO No:** 40838

**Start Time:** 07:00

**Device:** Miovision

### PM Period Peak Hour Diagram





# Transportation Services - Traffic Services

## Turning Movement Count - Study Results

### PARKDALE AVE @ SCOTT ST

**Survey Date:** Wednesday, March 08, 2023

**WO No:** 40838

**Start Time:** 07:00

**Device:** Miovision

### Full Study Summary (8 HR Standard)

**Survey Date:** Wednesday, March 08, 2023

**Total Observed U-Turns**

**AADT Factor**

Northbound: 0      Southbound: 0

1.00

Eastbound: 0      Westbound: 1

#### PARKDALE AVE

#### SCOTT ST

Period	PARKDALE AVE Northbound					PARKDALE AVE Southbound					SCOTT ST Eastbound					SCOTT ST Westbound			Grand Total			
	LT	ST	RT	NB TOT	STR TOT	LT	ST	RT	SB TOT	STR TOT	LT	ST	RT	EB TOT	STR TOT	LT	ST	RT		WB TOT	STR TOT	
07:00 08:00	51	177	55	283	768	31	353	101	485	5599	49	266	34	349	6622	41	141	25	207	556	1324	
08:00 09:00	48	154	60	262	722	77	263	120	460	5599	63	429	66	558	6622	51	214	24	289	847	1569	
09:00 10:00	63	153	61	277	635	44	230	84	358	5599	71	269	49	389	621	40	172	20	232	621	1256	
11:30 12:30	47	156	72	275	609	31	238	65	334	5599	52	236	51	339	640	69	213	19	301	640	1249	
12:30 13:30	46	178	65	289	588	24	223	52	299	5599	56	233	66	355	649	78	186	30	294	649	1237	
15:00 16:00	53	205	60	318	671	45	221	87	353	5599	154	323	70	547	985	74	310	54	438	985	1656	
16:00 17:00	41	335	71	447	824	47	210	120	377	5599	194	397	77	668	2002	50	399	61	510	1178	2002	
17:00 18:00	45	330	56	431	782	49	192	110	351	5599	173	415	67	655	1928	66	375	50	491	1146	1928	
<b>Sub Total</b>	394	1688	500	2582	5599	348	1930	739	3017	5599	812	2568	480	3860	6622	469	2010	283	2762	6622	12221	
<b>U Turns</b>	0				0		0		0		0		0		1		1		1		1	
<b>Total</b>	394	1688	500	2582	5599	348	1930	739	3017	5599	812	2568	480	3860	6622	469	2010	283	2763	6623	12222	

**EQ 12Hr** 548 2346 695 3589 484 2683 1027 4194 7783 1129 3570 667 5365 652 2794 393 3841 9206 16989  
 Note: These values are calculated by multiplying the totals by the appropriate expansion factor. **1.39**

**AVG 12Hr** 548 2346 695 3589 484 3514 1346 4194 7783 1129 3570 667 5365 652 2794 393 3841 9206 16989  
 Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor. **1.00**

**AVG 24Hr** 718 3073 910 4702 634 4603 1763 5494 10196 1479 4677 874 7028 854 3660 515 5032 12060 22256  
 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:** Wednesday, March 08, 2023

**WO No:** 40838

**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	13	53	19	85	7	80	19	106	191	11	45	10	66	7	25	7	39	105	296
07:15 07:30	11	42	5	58	4	82	26	112	170	11	55	6	72	7	24	1	32	104	274
07:30 07:45	15	36	13	64	6	108	30	144	208	8	82	6	96	13	33	7	53	149	357
07:45 08:00	12	46	18	76	14	83	26	123	199	19	84	12	115	14	59	10	83	198	397
08:00 08:15	10	44	11	65	28	74	28	130	195	12	90	15	117	12	47	0	59	176	371
08:15 08:30	9	42	15	66	19	78	30	127	193	19	122	20	161	14	45	11	70	231	424
08:30 08:45	16	27	11	54	19	58	31	108	162	15	100	13	128	16	60	8	84	212	374
08:45 09:00	13	41	23	77	11	53	31	95	172	17	117	18	152	9	62	5	76	228	400
09:00 09:15	19	50	16	85	16	50	31	97	182	18	71	15	104	11	58	10	79	183	365
09:15 09:30	23	36	18	77	12	56	21	89	166	17	74	13	104	11	44	3	58	162	328
09:30 09:45	11	42	11	64	5	61	20	86	150	16	55	10	81	9	35	4	48	129	279
09:45 10:00	10	25	16	51	11	63	12	86	137	20	69	11	100	9	35	3	47	147	284
11:30 11:45	11	40	16	67	4	65	16	85	152	12	39	14	65	23	36	6	65	130	282
11:45 12:00	14	34	25	73	11	55	14	80	153	12	69	12	93	16	52	7	75	168	321
12:00 12:15	5	33	20	58	10	58	17	85	143	14	59	11	84	15	57	3	75	159	302
12:15 12:30	17	49	11	77	6	60	18	84	161	14	69	14	97	15	68	3	86	183	344
12:30 12:45	12	39	21	72	4	74	17	95	167	17	58	17	92	20	58	7	85	177	344
12:45 13:00	8	43	23	74	6	58	9	73	147	10	61	13	84	17	42	8	67	151	298
13:00 13:15	15	57	9	81	4	36	16	56	137	16	56	24	96	20	42	7	69	165	302
13:15 13:30	11	39	12	62	10	55	10	75	137	13	58	12	83	21	44	8	73	156	293
15:00 15:15	10	59	17	86	16	68	26	110	196	18	70	17	105	16	68	9	93	198	394
15:15 15:30	22	39	14	75	10	45	17	72	147	51	80	13	144	22	89	8	119	263	410
15:30 15:45	12	75	18	105	8	47	20	75	180	46	86	21	153	21	78	20	119	272	452
15:45 16:00	9	32	11	52	11	61	24	96	148	39	87	19	145	15	75	17	107	252	400
16:00 16:15	13	85	17	115	12	63	22	97	212	50	83	31	164	14	88	14	116	280	492
16:15 16:30	12	86	18	116	15	55	26	96	212	49	95	15	159	9	108	17	134	293	505
16:30 16:45	9	77	24	110	8	41	38	87	197	49	107	14	170	13	113	13	139	309	506
16:45 17:00	7	87	12	106	12	51	34	97	203	46	112	17	175	14	90	17	121	296	499
17:00 17:15	11	73	22	106	16	43	33	92	198	51	111	18	180	18	103	15	136	316	514
17:30 17:45	10	79	7	96	11	48	31	90	186	33	99	20	152	11	83	15	110	262	448
17:45 18:00	14	86	16	116	16	52	18	86	202	41	102	9	152	22	92	8	122	274	476
17:15 17:30	10	92	11	113	6	49	28	83	196	48	103	20	171	15	97	12	124	295	491
<b>Total:</b>	<b>394</b>	<b>1688</b>	<b>500</b>	<b>2582</b>	<b>348</b>	<b>1930</b>	<b>739</b>	<b>3017</b>	<b>5599</b>	<b>812</b>	<b>2568</b>	<b>480</b>	<b>3860</b>	<b>469</b>	<b>2010</b>	<b>283</b>	<b>2763</b>	<b>6623</b>	<b>12,222</b>

Note: U-Turns are included in Totals.



# Transportation Services - Traffic Services

## Turning Movement Count - Study Results

### PARKDALE AVE @ SCOTT ST

**Survey Date:** Wednesday, March 08, 2023

**WO No:** 40838

**Start Time:** 07:00

**Device:** Miovision

### Full Study Cyclist Volume

		PARKDALE AVE			SCOTT ST			
Time Period		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	1	0	1	0	1	1	2
07:30	07:45	0	0	0	1	2	3	3
07:45	08:00	1	0	1	0	0	0	1
08:00	08:15	2	0	2	7	2	9	11
08:15	08:30	0	0	0	4	1	5	5
08:30	08:45	1	0	1	6	1	7	8
08:45	09:00	3	0	3	7	1	8	11
09:00	09:15	0	0	0	1	0	1	1
09:15	09:30	0	0	0	3	0	3	3
09:30	09:45	0	0	0	3	0	3	3
09:45	10:00	0	1	1	2	3	5	6
11:30	11:45	0	1	1	1	2	3	4
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	1	0	1	1
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	1	0	1	1	0	1	2
15:15	15:30	0	1	1	0	4	4	5
15:30	15:45	1	0	1	0	0	0	1
15:45	16:00	0	1	1	0	3	3	4
16:00	16:15	0	0	0	2	0	2	2
16:15	16:30	0	1	1	1	1	2	3
16:30	16:45	0	0	0	1	3	4	4
16:45	17:00	1	2	3	0	5	5	8
17:00	17:15	0	0	0	1	2	3	3
17:30	17:45	1	0	1	1	3	4	5
17:45	18:00	0	0	0	1	6	7	7
17:15	17:30	0	0	0	1	1	2	2
<b>Total</b>		<b>12</b>	<b>7</b>	<b>19</b>	<b>45</b>	<b>41</b>	<b>86</b>	<b>105</b>



# Transportation Services - Traffic Services

## Turning Movement Count - Study Results

### PARKDALE AVE @ SCOTT ST

**Survey Date:** Wednesday, March 08, 2023

**WO No:** 40838

**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	6	3	9	1	10	11	20
07:15 07:30	1	12	13	0	3	3	16
07:30 07:45	9	11	20	4	6	10	30
07:45 08:00	16	17	33	14	8	22	55
08:00 08:15	8	17	25	13	8	21	46
08:15 08:30	6	10	16	7	4	11	27
08:30 08:45	7	12	19	10	9	19	38
08:45 09:00	5	8	13	6	6	12	25
09:00 09:15	4	4	8	2	3	5	13
09:15 09:30	2	4	6	2	4	6	12
09:30 09:45	4	6	10	4	3	7	17
09:45 10:00	2	4	6	6	2	8	14
11:30 11:45	2	6	8	4	5	9	17
11:45 12:00	9	11	20	7	5	12	32
12:00 12:15	12	6	18	12	9	21	39
12:15 12:30	8	8	16	14	9	23	39
12:30 12:45	9	10	19	9	12	21	40
12:45 13:00	8	11	19	12	13	25	44
13:00 13:15	4	9	13	9	7	16	29
13:15 13:30	7	10	17	10	6	16	33
15:00 15:15	0	16	16	9	2	11	27
15:15 15:30	3	13	16	8	3	11	27
15:30 15:45	4	13	17	8	6	14	31
15:45 16:00	6	19	25	9	7	16	41
16:00 16:15	10	19	29	10	14	24	53
16:15 16:30	17	18	35	12	8	20	55
16:30 16:45	7	24	31	10	11	21	52
16:45 17:00	14	12	26	8	13	21	47
17:00 17:15	8	14	22	9	4	13	35
17:30 17:45	36	17	53	10	10	20	73
17:45 18:00	19	23	42	7	9	16	58
17:15 17:30	12	15	27	7	10	17	44
<b>Total .....</b>	<b>265</b>	<b>382</b>	<b>647</b>	<b>253</b>	<b>229</b>	<b>482</b>	<b>1129</b>



# Transportation Services - Traffic Services

## Turning Movement Count - Study Results

### PARKDALE AVE @ SCOTT ST

**Survey Date:** Wednesday, March 08, 2023

**WO No:** 40838

**Start Time:** 07:00

**Device:** Miovision

### Full Study Heavy Vehicles

#### PARKDALE AVE

#### SCOTT ST

Northbound

Southbound

Eastbound

Westbound

Time Period	Northbound				Southbound				Eastbound				Westbound				Grand Total		
	LT	ST	RT	N TOT	LT	ST	RT	S TOT	STR TOT	LT	ST	RT	E TOT	LT	ST	RT		W TOT	STR TOT
07:00 07:15	4	1	1	6	0	1	2	3	9	2	0	5	7	2	5	1	8	15	24
07:15 07:30	3	2	0	5	0	1	2	3	8	0	3	4	7	0	1	0	1	8	16
07:30 07:45	1	2	2	5	0	2	2	4	9	0	3	2	5	0	2	0	2	7	16
07:45 08:00	3	0	6	9	1	0	1	2	11	1	10	5	16	1	7	1	9	25	36
08:00 08:15	3	2	1	6	0	2	2	4	10	0	6	3	9	0	7	0	7	16	26
08:15 08:30	0	1	1	2	0	1	1	2	4	0	6	7	13	2	5	0	7	20	24
08:30 08:45	2	3	1	6	1	1	3	5	11	2	8	4	14	0	2	0	2	16	27
08:45 09:00	2	2	1	5	0	1	2	3	8	0	7	8	15	0	2	0	2	17	25
09:00 09:15	4	2	0	6	0	1	2	3	9	0	3	10	13	1	1	0	2	15	24
09:15 09:30	7	2	4	13	0	2	1	3	16	0	7	5	12	0	7	0	7	19	35
09:30 09:45	2	4	1	7	0	4	3	7	14	1	5	8	14	1	4	0	5	19	33
09:45 10:00	2	2	3	7	0	2	1	3	10	1	10	2	13	2	8	1	11	24	34
11:30 11:45	3	2	0	5	0	1	1	2	7	1	2	6	9	1	3	0	4	13	20
11:45 12:00	3	3	3	9	0	2	1	3	12	0	5	2	7	2	2	0	4	11	23
12:00 12:15	1	0	0	1	0	2	1	3	4	0	3	3	6	0	5	1	6	12	16
12:15 12:30	1	2	1	4	0	1	0	1	5	0	3	2	5	2	4	0	6	11	16
12:30 12:45	3	0	2	5	0	3	2	5	10	2	5	3	10	2	7	0	9	19	29
12:45 13:00	2	4	1	7	1	4	0	5	12	0	3	3	6	1	4	1	6	12	24
13:00 13:15	3	0	0	3	0	1	3	4	7	0	5	6	11	1	5	0	6	17	24
13:15 13:30	3	0	1	4	0	2	0	2	6	1	2	2	5	0	5	0	5	10	16
15:00 15:15	5	1	0	6	1	1	1	3	9	0	1	2	3	0	7	1	8	11	20
15:15 15:30	6	2	0	8	0	1	0	1	9	1	1	1	3	0	8	0	8	11	20
15:30 15:45	4	1	1	6	0	2	1	3	9	1	2	3	6	1	8	0	9	15	24
15:45 16:00	8	0	0	8	0	2	0	2	10	0	2	2	4	0	4	0	4	8	18
16:00 16:15	6	0	1	7	1	0	0	1	8	1	2	5	8	1	5	1	7	15	23
16:15 16:30	3	0	0	3	0	3	0	3	6	0	2	3	5	0	4	1	5	10	16
16:30 16:45	5	1	0	6	0	0	3	3	9	1	3	2	6	0	4	1	5	11	20
16:45 17:00	4	0	1	5	0	1	0	1	6	0	3	2	5	1	5	0	6	11	17
17:00 17:15	5	1	0	6	0	0	2	2	8	2	2	0	4	1	3	0	4	8	16
17:30 17:45	6	0	0	6	0	0	1	1	7	0	3	3	6	1	1	0	2	8	15
17:45 18:00	4	0	1	5	0	1	0	1	6	1	2	1	4	0	4	0	4	8	14
17:15 17:30	4	0	0	4	0	0	1	1	5	1	2	2	5	0	3	0	3	8	13
Total: None	112	40	33	185	5	45	39	89	274	19	121	116	256	23	142	9	174	430	704



# Transportation Services - Traffic Services

## Turning Movement Count - Study Results

### PARKDALE AVE @ SCOTT ST

**Survey Date:** Wednesday, March 08, 2023

**WO No:** 40838

**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	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
17:30	17:45	0	0	0	1	1
17:45	18:00	0	0	0	0	0
17:15	17:30	0	0	0	0	0
Total		0	0	0	1	1

## Turning Movement Count - Study Results

### PRESTON ST @ SOMERSET ST

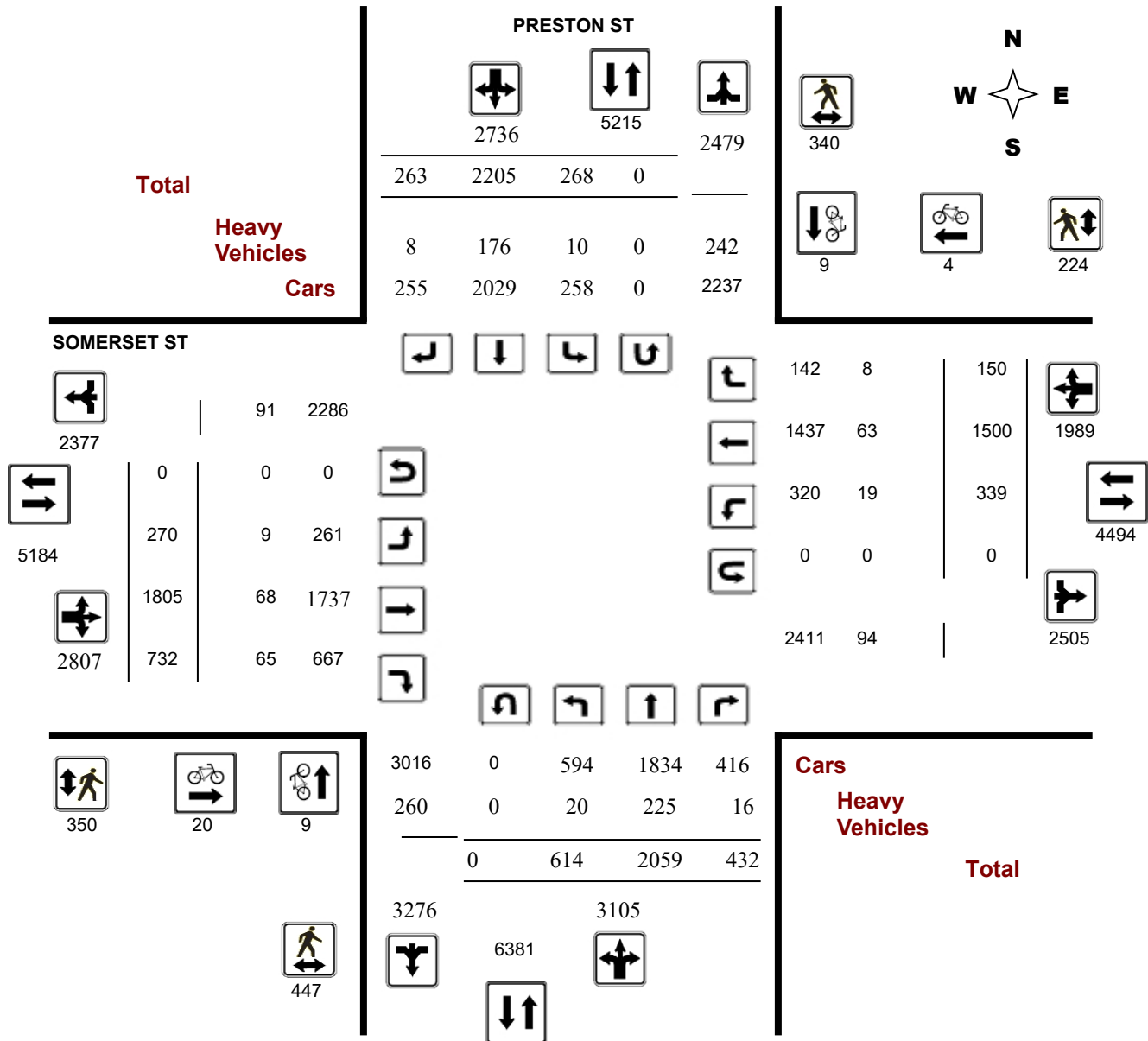
**Survey Date:** Tuesday, December 19, 2023

**WO No:** 41404

**Start Time:** 07:00

**Device:** Miovision

### Full Study Diagram





## Turning Movement Count - Study Results

### PRESTON ST @ SOMERSET ST

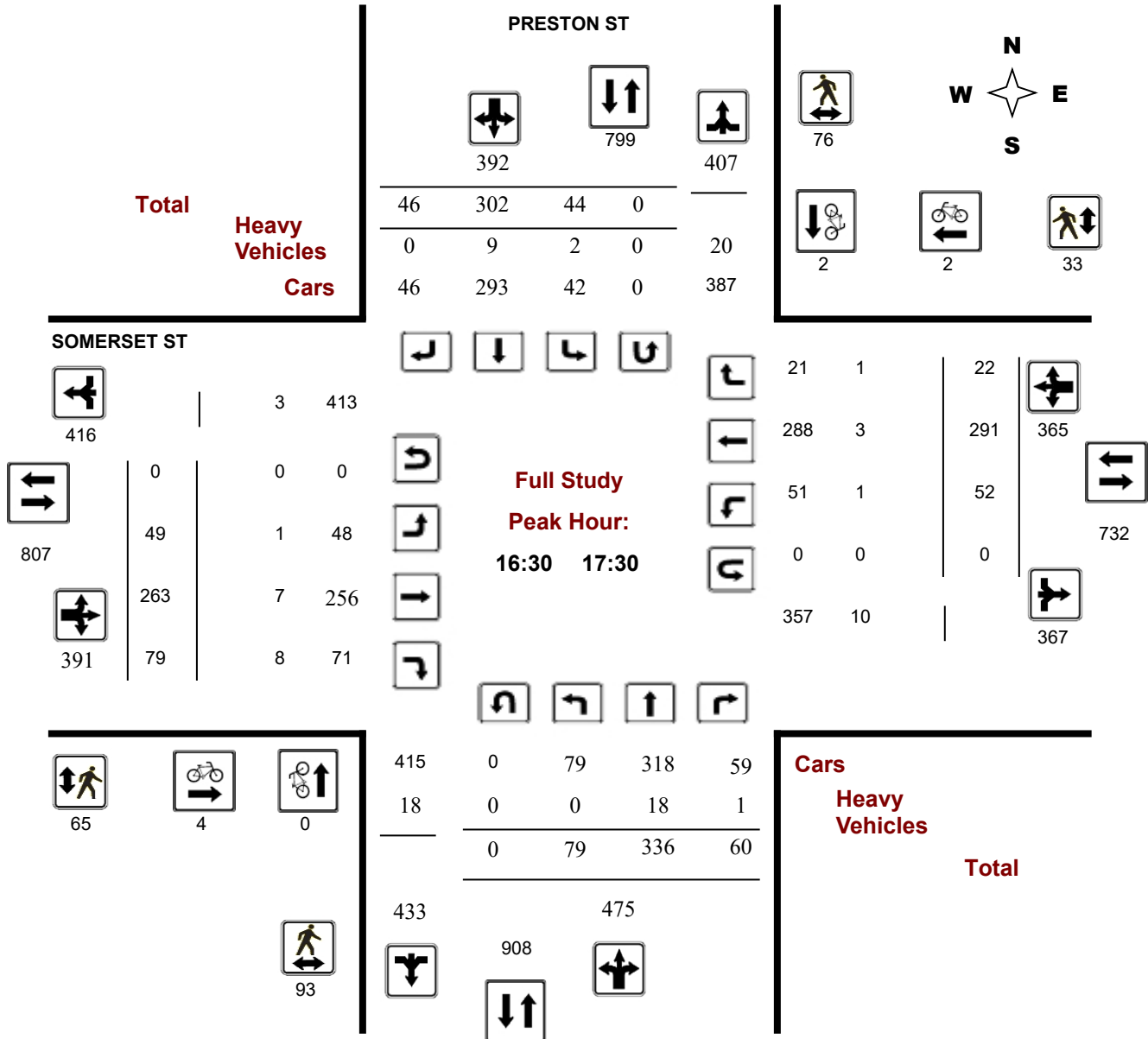
**Survey Date:** Tuesday, December 19, 2023

**WO No:** 41404

**Start Time:** 07:00

**Device:** Miovision

### Full Study Peak Hour Diagram



## Turning Movement Count - Study Results

### PRESTON ST @ SOMERSET ST

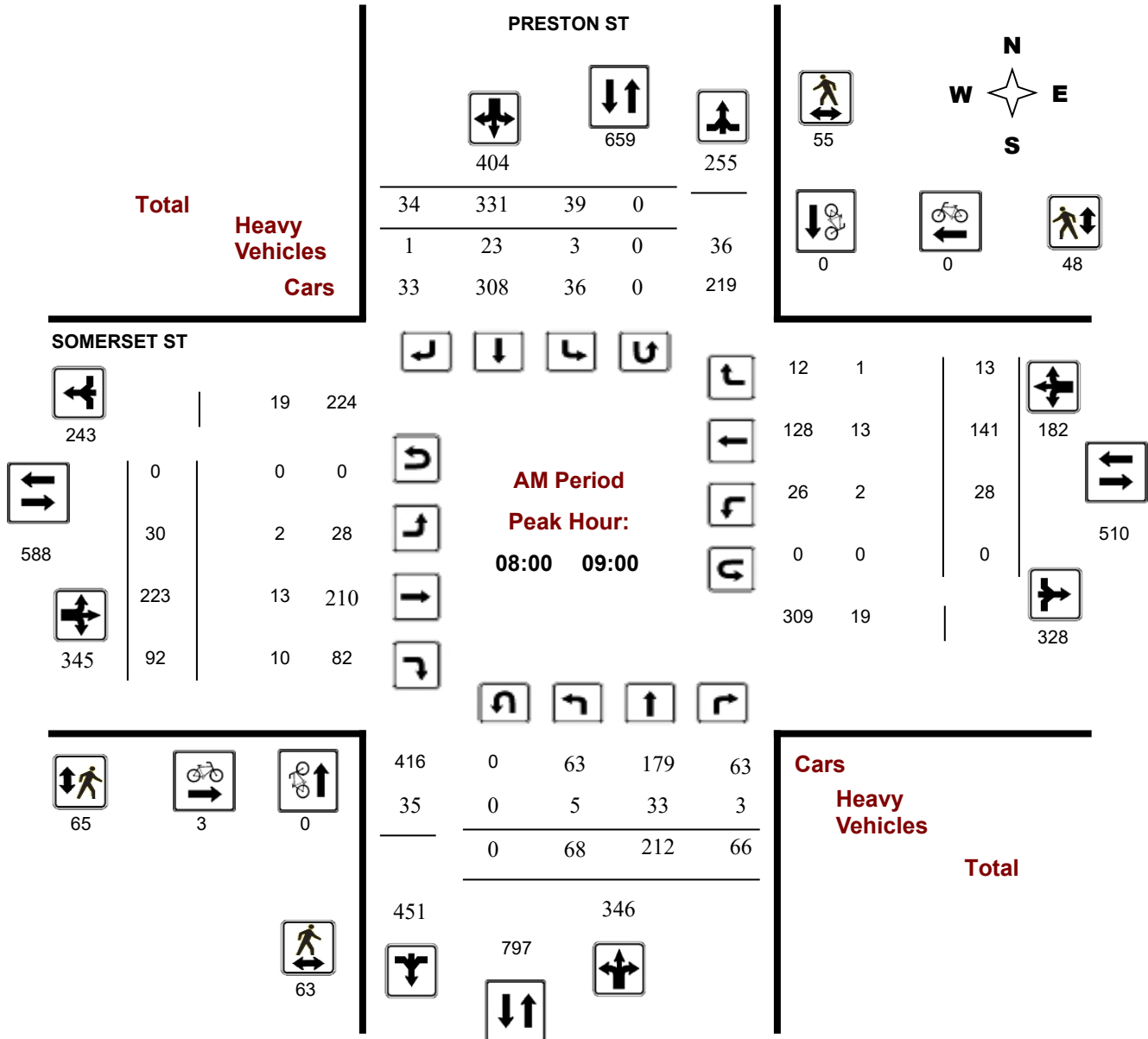
**Survey Date:** Tuesday, December 19, 2023

**WO No:** 41404

**Start Time:** 07:00

**Device:** Miovision

### AM Period Peak Hour Diagram



## Turning Movement Count - Study Results

### PRESTON ST @ SOMERSET ST

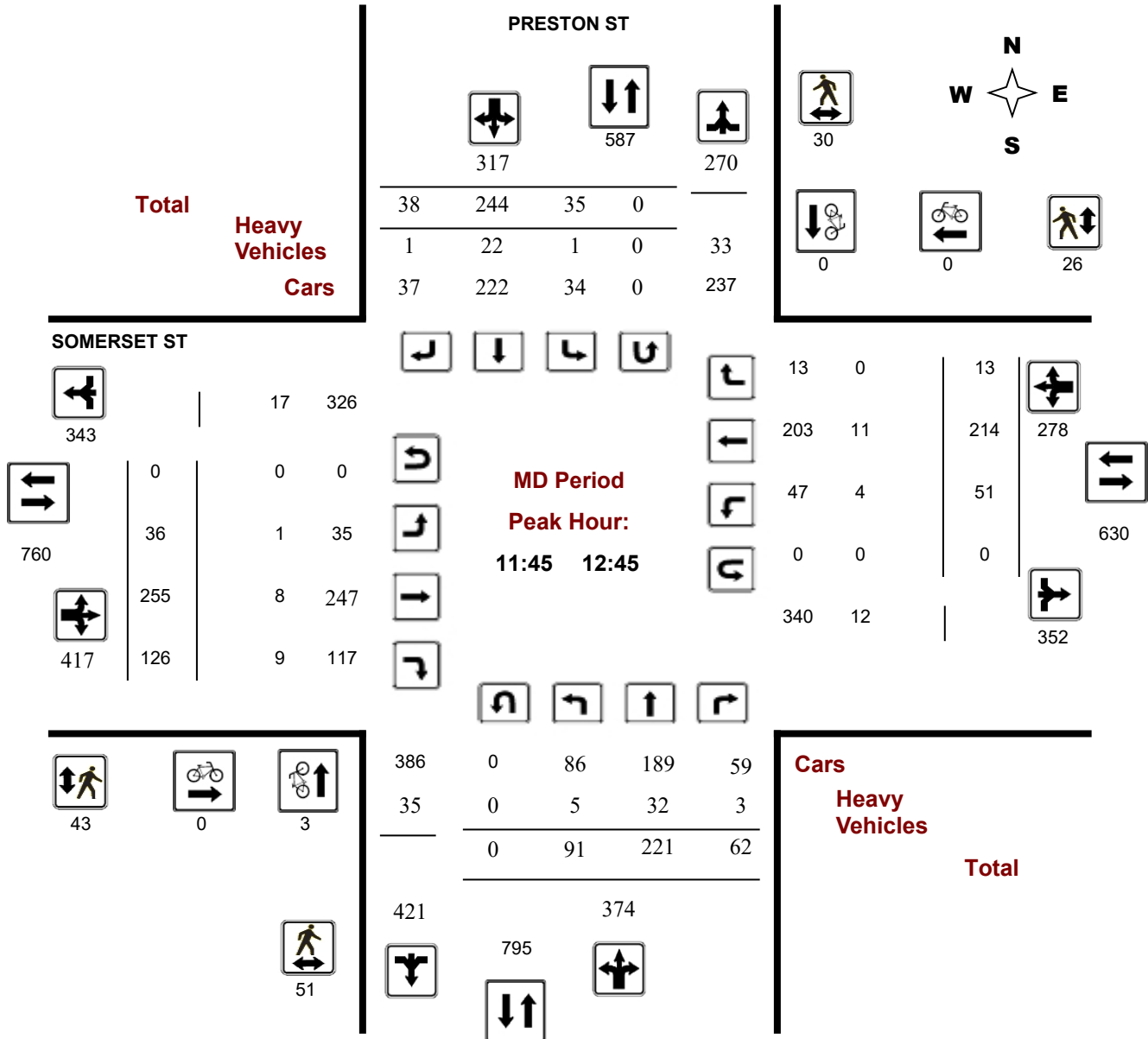
**Survey Date:** Tuesday, December 19, 2023

**WO No:** 41404

**Start Time:** 07:00

**Device:** Miovision

### MD Period Peak Hour Diagram



## Turning Movement Count - Study Results

### PRESTON ST @ SOMERSET ST

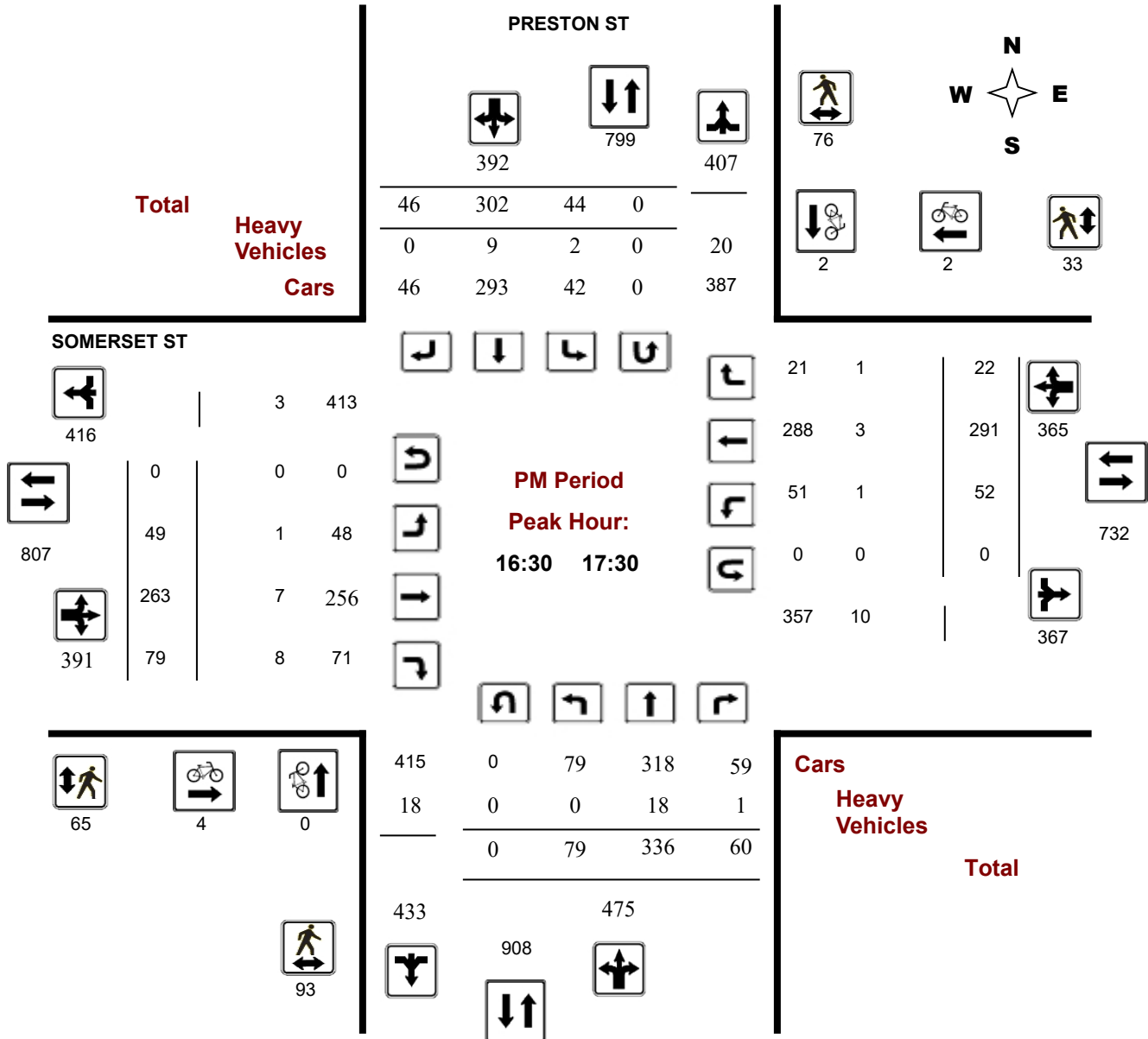
**Survey Date:** Tuesday, December 19, 2023

**WO No:** 41404

**Start Time:** 07:00

**Device:** Miovision

### PM Period Peak Hour Diagram





# Transportation Services - Traffic Services

## Turning Movement Count - Study Results

### PRESTON ST @ SOMERSET ST

**Survey Date:** Tuesday, December 19, 2023

**WO No:** 41404

**Start Time:** 07:00

**Device:** Miovision

### Full Study Summary (8 HR Standard)

**Survey Date:** Tuesday, December 19, 2023

**Total Observed U-Turns**

**AADT Factor**

Northbound: 0      Southbound: 0

1.30

Eastbound: 0      Westbound: 0

#### PRESTON ST

#### SOMERSET ST

Period	Northbound					Southbound					Eastbound					Westbound					Grand Total	
	LT	ST	RT	NB TOT	STR TOT	LT	ST	RT	SB TOT	STR TOT	LT	ST	RT	EB TOT	STR TOT	LT	ST	RT	WB TOT	STR TOT		
07:00 08:00	38	191	28	257	647	24	349	17	390	5841	19	167	79	265	667	19	84	4	107	372	1019	
08:00 09:00	68	212	66	346	750	39	331	34	404	5841	30	223	92	345	667	28	141	13	182	527	1277	
09:00 10:00	65	220	46	331	641	28	254	28	310	5841	20	183	68	271	667	34	130	14	178	449	1090	
11:30 12:30	84	207	59	350	667	31	245	41	317	5841	35	261	135	431	667	44	219	14	277	708	1375	
12:30 13:30	91	215	65	371	685	31	252	31	314	5841	32	221	102	355	685	56	188	16	260	615	1300	
15:00 16:00	98	348	51	497	811	35	245	34	314	5841	43	267	107	417	811	50	217	32	299	716	1527	
16:00 17:00	75	325	57	457	835	42	291	45	378	5841	50	246	61	357	835	56	298	31	385	742	1577	
17:00 18:00	95	341	60	496	805	38	238	33	309	5841	41	237	88	366	805	52	223	26	301	667	1472	
<b>Sub Total</b>	614	2059	432	3105	5841	268	2205	263	2736	5841	270	1805	732	2807	5841	339	1500	150	1989	4796	10637	
<b>U Turns</b>	0				0		0		0		0		0		0		0		0		0	
<b>Total</b>	614	2059	432	3105	5841	268	2205	263	2736	5841	270	1805	732	2807	5841	339	1500	150	1989	4796	10637	

**EQ 12Hr** 853 2862 600 **4316** 373 3065 366 **3803** **8119** 375 2509 1017 **3902** 471 2085 208 **2765** **6666** **14785**

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

**1.39**

**AVG 12Hr** 1109 3721 780 **5611** 485 5220 623 **4944** **10555** 488 3262 1322 **5073** 612 2711 270 **3595** **8666** **19221**

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

**1.30**

**AVG 24Hr** 1453 4875 1022 **7350** 635 6838 816 **6477** **13827** 639 4273 1732 **6646** 802 3551 354 **4709** **11352** **25180**

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

### PRESTON ST @ SOMERSET ST

**Survey Date:** Tuesday, December 19, 2023

**WO No:** 41404

**Start Time:** 07:00

**Device:** Miovision

### Full Study 15 Minute Increments

#### PRESTON ST

#### SOMERSET 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	7	42	5	54	4	102	1	107	161	9	37	22	68	1	15	2	18	86	247
07:15 07:30	9	47	5	61	4	71	3	78	139	3	37	17	57	3	14	0	17	74	213
07:30 07:45	10	52	10	72	9	87	5	101	173	0	42	18	60	10	22	1	33	93	266
07:45 08:00	12	50	8	70	7	89	8	104	174	7	51	22	80	5	33	1	39	119	293
08:00 08:15	8	61	18	87	15	89	12	116	203	5	55	19	79	5	36	2	43	122	325
08:15 08:30	16	61	17	94	4	77	10	91	185	12	56	24	92	5	33	4	42	134	319
08:30 08:45	19	44	12	75	11	93	9	113	188	5	60	29	94	7	34	1	42	136	324
08:45 09:00	25	46	19	90	9	72	3	84	174	8	52	20	80	11	38	6	55	135	309
09:00 09:15	11	62	14	87	11	69	3	83	170	4	43	21	68	10	39	1	50	118	288
09:15 09:30	16	56	16	88	5	68	8	81	169	7	47	15	69	8	34	9	51	120	289
09:30 09:45	19	55	11	85	4	58	8	70	155	6	49	18	73	9	21	2	32	105	260
09:45 10:00	19	47	5	71	8	59	9	76	147	3	44	14	61	7	36	2	45	106	253
11:30 11:45	16	31	14	61	2	66	12	80	141	5	58	35	98	11	55	6	72	170	311
17:45 18:00	22	70	18	110	10	46	8	64	174	14	64	23	101	15	40	7	62	163	337
16:30 16:45	14	75	12	101	14	83	12	109	210	16	63	12	91	15	83	4	102	193	403
11:45 12:00	20	62	16	98	8	63	10	81	179	12	73	41	126	14	64	2	80	206	385
12:00 12:15	27	54	15	96	13	58	10	81	177	13	58	30	101	10	52	4	66	167	344
12:15 12:30	21	60	14	95	8	58	9	75	170	5	72	29	106	9	48	2	59	165	335
12:30 12:45	23	45	17	85	6	65	9	80	165	6	52	26	84	18	50	5	73	157	322
12:45 13:00	22	71	20	113	8	59	8	75	188	12	47	26	85	11	48	1	60	145	333
13:00 13:15	28	43	8	79	11	59	5	75	154	8	62	25	95	14	35	3	52	147	301
13:15 13:30	18	56	20	94	6	69	9	84	178	6	60	25	91	13	55	7	75	166	344
15:00 15:15	22	88	13	123	8	53	11	72	195	16	72	30	118	15	52	7	74	192	387
15:15 15:30	23	81	18	122	7	76	9	92	214	7	50	28	85	13	50	8	71	156	370
15:30 15:45	28	96	9	133	10	57	6	73	206	12	69	24	105	16	55	7	78	183	389
15:45 16:00	25	83	11	119	10	59	8	77	196	8	76	25	109	6	60	10	76	185	381
16:00 16:15	24	95	15	134	5	63	11	79	213	10	45	15	70	11	68	12	91	161	374
16:15 16:30	17	82	14	113	9	72	10	91	204	10	60	17	87	18	70	8	96	183	387
16:45 17:00	20	73	16	109	14	73	12	99	208	14	78	17	109	12	77	7	96	205	413
17:00 17:15	29	89	16	134	8	62	15	85	219	11	64	22	97	14	67	6	87	184	403
17:15 17:30	16	99	16	131	8	84	7	99	230	8	58	28	94	11	64	5	80	174	404
17:30 17:45	28	83	10	121	12	46	3	61	182	8	51	15	74	12	52	8	72	146	328
<b>Total:</b>	<b>614</b>	<b>2059</b>	<b>432</b>	<b>3105</b>	<b>268</b>	<b>2205</b>	<b>263</b>	<b>2736</b>	<b>5841</b>	<b>270</b>	<b>1805</b>	<b>732</b>	<b>2807</b>	<b>339</b>	<b>1500</b>	<b>150</b>	<b>1989</b>	<b>4796</b>	<b>10,637</b>

Note: U-Turns are included in Totals.



# Transportation Services - Traffic Services

## Turning Movement Count - Study Results

### PRESTON ST @ SOMERSET ST

**Survey Date:** Tuesday, December 19, 2023

**WO No:** 41404

**Start Time:** 07:00

**Device:** Miovision

### Full Study Cyclist Volume

Time Period	PRESTON ST			SOMERSET ST			Grand Total
	Northbound	Southbound	Street Total	Eastbound	Westbound	Street 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	1	0	1	1
08:00 08:15	0	0	0	0	0	0	0
08:15 08:30	0	0	0	2	0	2	2
08:30 08:45	0	0	0	0	0	0	0
08:45 09:00	0	0	0	1	0	1	1
09:00 09:15	0	0	0	2	0	2	2
09:15 09:30	0	0	0	0	0	0	0
09:30 09:45	0	1	1	2	0	2	3
09:45 10:00	0	0	0	1	0	1	1
11:30 11:45	0	3	3	1	0	1	4
17:45 18:00	0	0	0	0	0	0	0
16:30 16:45	0	0	0	0	1	1	1
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	2	0	2	0	0	0	2
12:45 13:00	5	0	5	1	0	1	6
13:00 13:15	0	1	1	3	0	3	4
13:15 13:30	0	1	1	0	0	0	1
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	1	0	1	0	1	1	2
15:45 16:00	0	1	1	0	0	0	1
16:00 16:15	0	0	0	0	1	1	1
16:15 16:30	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	1	1	2	2
17:15 17:30	0	2	2	2	0	2	4
17:30 17:45	0	0	0	2	0	2	2
<b>Total</b>	<b>9</b>	<b>9</b>	<b>18</b>	<b>20</b>	<b>4</b>	<b>24</b>	<b>42</b>



# Transportation Services - Traffic Services

## Turning Movement Count - Study Results

### PRESTON ST @ SOMERSET ST

**Survey Date:** Tuesday, December 19, 2023

**WO No:** 41404

**Start Time:** 07:00

**Device:** Miovision

### Full Study Pedestrian Volume

#### PRESTON ST

#### SOMERSET 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	9	3	12	4	5	9	21
07:15 07:30	4	4	8	3	1	4	12
07:30 07:45	8	3	11	4	5	9	20
07:45 08:00	5	6	11	7	4	11	22
08:00 08:15	11	12	23	19	12	31	54
08:15 08:30	25	20	45	21	18	39	84
08:30 08:45	19	17	36	19	15	34	70
08:45 09:00	8	6	14	6	3	9	23
09:00 09:15	3	11	14	7	1	8	22
09:15 09:30	5	4	9	9	3	12	21
09:30 09:45	2	6	8	4	2	6	14
09:45 10:00	7	8	15	10	4	14	29
11:30 11:45	6	5	11	6	4	10	21
17:45 18:00	18	8	26	10	10	20	46
16:30 16:45	25	18	43	18	6	24	67
11:45 12:00	13	14	27	12	7	19	46
12:00 12:15	7	4	11	7	8	15	26
12:15 12:30	12	7	19	8	5	13	32
12:30 12:45	19	5	24	16	6	22	46
12:45 13:00	8	11	19	7	0	7	26
13:00 13:15	10	13	23	12	5	17	40
13:15 13:30	14	3	17	6	5	11	28
15:00 15:15	28	10	38	13	7	20	58
15:15 15:30	30	13	43	6	11	17	60
15:30 15:45	10	11	21	8	8	16	37
15:45 16:00	19	18	37	12	5	17	54
16:00 16:15	16	14	30	23	12	35	65
16:15 16:30	20	14	34	13	13	26	60
16:45 17:00	24	20	44	16	9	25	69
17:00 17:15	26	16	42	13	12	25	67
17:15 17:30	18	22	40	18	6	24	64
17:30 17:45	18	14	32	13	12	25	57
<b>Total .....</b>	<b>447</b>	<b>340</b>	<b>787</b>	<b>350</b>	<b>224</b>	<b>574</b>	<b>1361</b>





# Transportation Services - Traffic Services

## Turning Movement Count - Study Results

### PRESTON ST @ SOMERSET ST

**Survey Date:** Tuesday, December 19, 2023

**WO No:** 41404

**Start Time:** 07:00

**Device:** Miovision

### Full Study Heavy Vehicles

#### PRESTON ST

#### SOMERSET ST

Northbound

Southbound

Eastbound

Westbound

Time Period	Northbound			N TOT	Southbound			S TOT	STR TOT	Eastbound			E TOT	Westbound			W TOT	STR TOT	Grand Total
	LT	ST	RT		LT	ST	RT			LT	ST	RT		LT	ST	RT			
07:00 07:15	0	9	0	9	0	8	0	8	17	0	1	2	3	0	3	1	4	7	24
07:15 07:30	0	5	1	6	0	7	0	7	13	0	2	1	3	0	0	0	0	3	16
07:30 07:45	0	10	1	11	0	7	1	8	19	0	2	1	3	0	3	0	3	6	25
07:45 08:00	1	6	1	8	0	7	0	7	15	2	3	0	5	0	4	0	4	9	24
08:00 08:15	0	10	1	11	2	4	1	7	18	1	5	4	10	0	3	0	3	13	31
08:15 08:30	2	7	0	9	0	5	0	5	14	0	2	1	3	0	4	0	4	7	21
08:30 08:45	2	7	0	9	0	7	0	7	16	1	4	4	9	1	3	1	5	14	30
08:45 09:00	1	9	2	12	1	7	0	8	20	0	2	1	3	1	3	0	4	7	27
09:00 09:15	0	9	0	9	1	9	0	10	19	0	1	2	3	0	3	0	3	6	25
09:15 09:30	1	8	1	10	0	8	0	8	18	1	0	3	4	1	3	1	5	9	27
09:30 09:45	1	9	0	10	0	5	1	6	16	0	5	1	6	1	3	0	4	10	26
09:45 10:00	2	9	0	11	0	12	0	12	23	0	2	2	4	0	1	2	3	7	30
11:30 11:45	0	6	0	6	0	11	1	12	18	0	0	2	2	1	4	0	5	7	25
17:45 18:00	0	4	0	4	0	2	0	2	6	0	0	3	3	0	0	0	0	3	9
16:30 16:45	0	4	1	5	1	3	0	4	9	1	1	3	5	0	1	0	1	6	15
11:45 12:00	1	4	1	6	0	6	0	6	12	0	3	1	4	1	3	0	4	8	20
12:00 12:15	2	6	0	8	0	4	0	4	12	0	1	3	4	1	1	0	2	6	18
12:15 12:30	1	14	1	16	1	5	1	7	23	0	2	4	6	1	2	0	3	9	32
12:30 12:45	1	8	1	10	0	7	0	7	17	1	2	1	4	1	5	0	6	10	27
12:45 13:00	3	9	1	13	0	4	0	4	17	0	2	3	5	1	4	0	5	10	27
13:00 13:15	1	8	0	9	1	11	0	12	21	0	3	2	5	3	1	0	4	9	30
13:15 13:30	1	11	2	14	1	11	2	14	28	1	4	2	7	0	1	0	1	8	36
15:00 15:15	0	8	0	8	1	2	0	3	11	0	2	2	4	0	0	0	0	4	15
15:15 15:30	0	7	1	8	0	2	0	2	10	0	2	1	3	0	0	0	0	3	13
15:30 15:45	0	4	0	4	0	6	0	6	10	1	5	1	7	1	1	0	2	9	19
15:45 16:00	0	7	0	7	0	2	0	2	9	0	0	3	3	1	1	0	2	5	14
16:00 16:15	0	2	1	3	0	3	1	4	7	0	1	3	4	1	1	1	3	7	14
16:15 16:30	0	4	0	4	0	3	0	3	7	0	5	3	8	2	1	1	4	12	19
16:45 17:00	0	5	0	5	1	5	0	6	11	0	2	1	3	0	0	1	1	4	15
17:00 17:15	0	4	0	4	0	1	0	1	5	0	2	3	5	0	2	0	2	7	12
17:15 17:30	0	5	0	5	0	0	0	0	5	0	2	1	3	1	0	0	1	4	9
17:30 17:45	0	7	0	7	0	2	0	2	9	0	0	1	1	0	2	0	2	3	12
Total: None	20	225	16	261	10	176	8	194	455	9	68	65	142	19	63	8	90	232	687



# Transportation Services - Traffic Services

## Turning Movement Count - Study Results

### PRESTON ST @ SOMERSET ST

**Survey Date:** Tuesday, December 19, 2023

**WO No:** 41404

**Start Time:** 07:00

**Device:** Miovision

### Full Study 15 Minute U-Turn Total

#### PRESTON ST

#### SOMERSET 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	0	0	0	0
17:45	18:00	0	0	0	0	0
16:30	16:45	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
16:45	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
Total		0	0	0	0	0

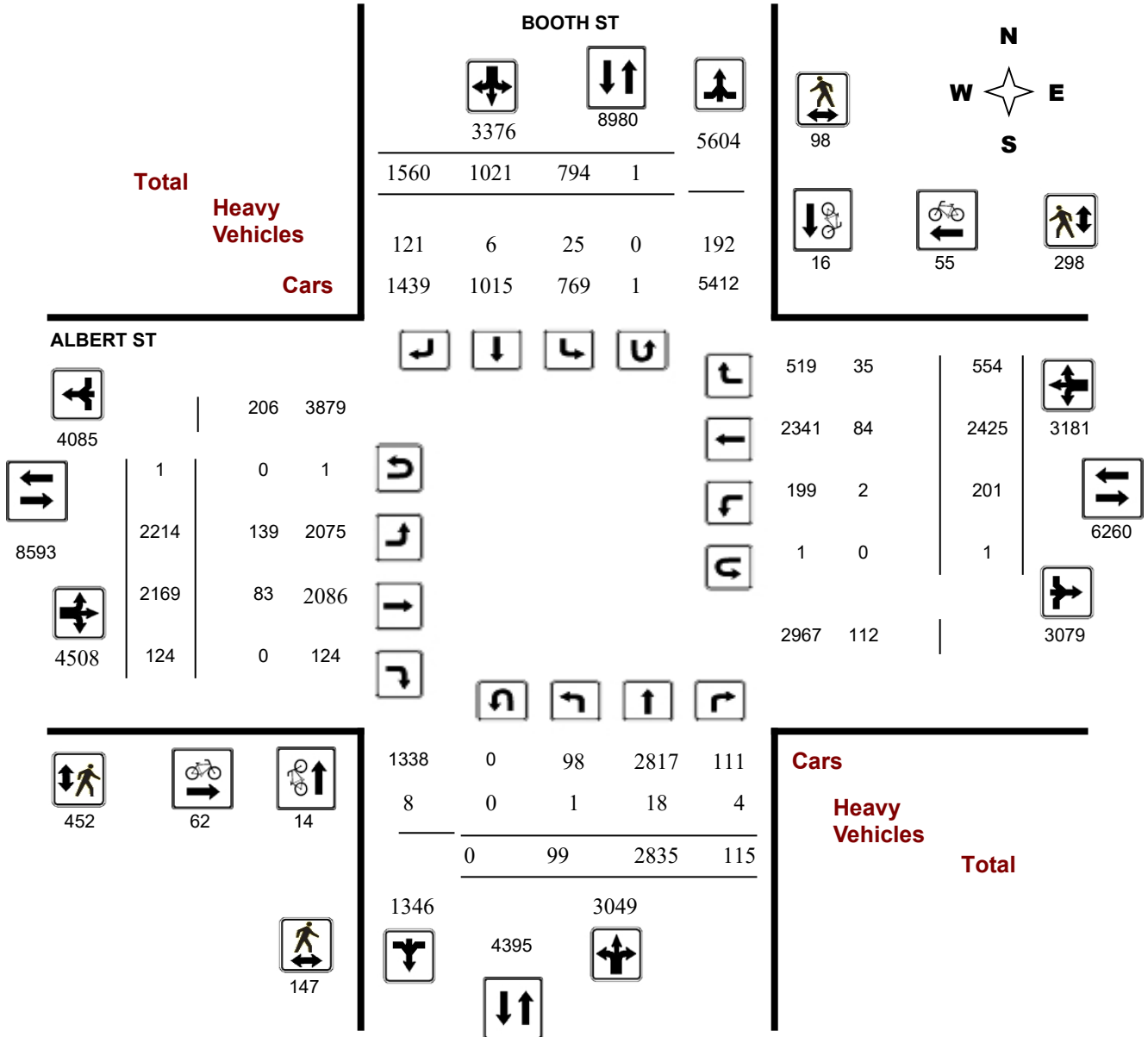
**Survey Date:** Tuesday, January 30, 2024

**WO No:** 41538

**Start Time:** 07:00

**Device:** Miovision

### Full Study Diagram



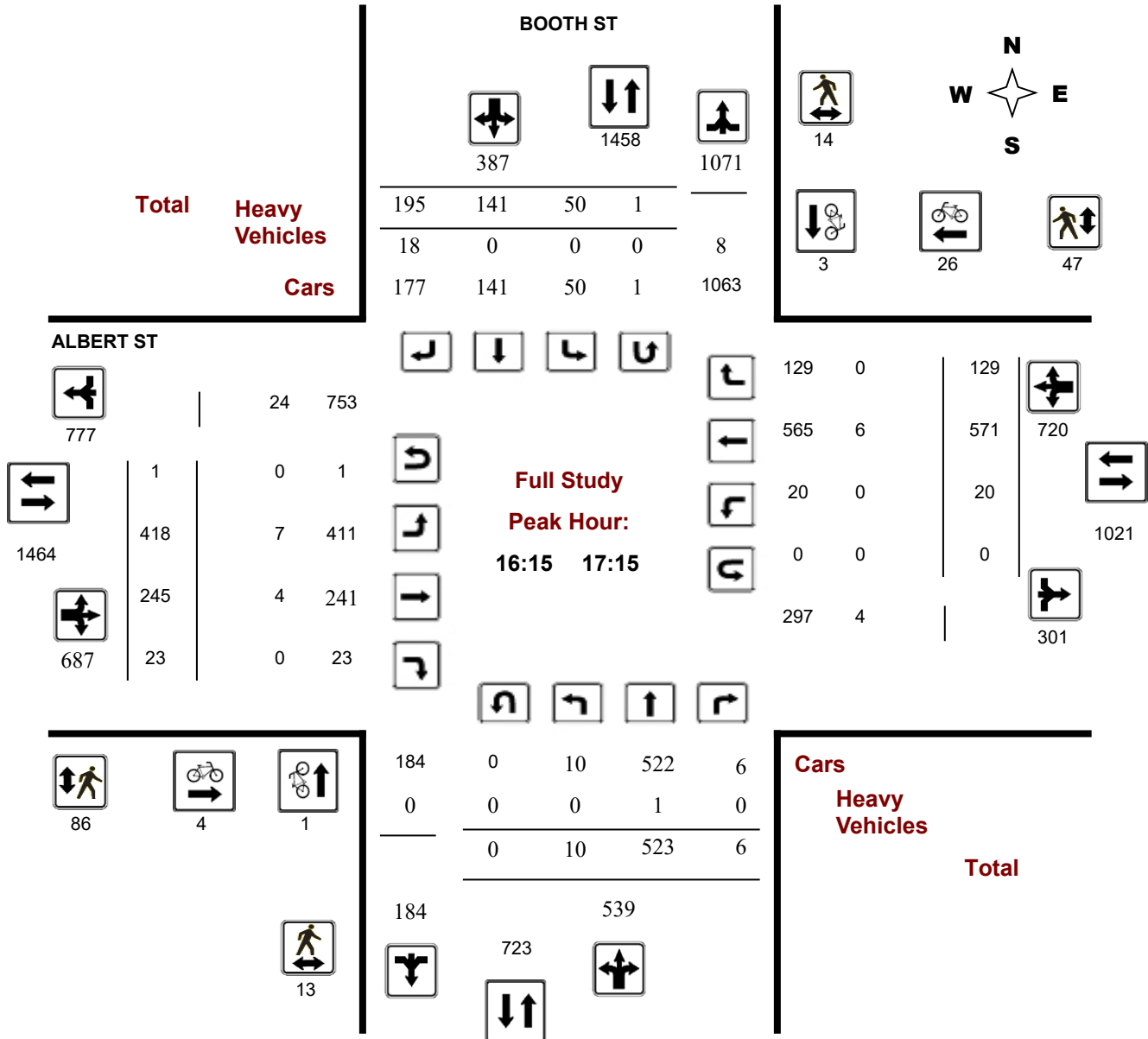
**Survey Date:** Tuesday, January 30, 2024

**WO No:** 41538

**Start Time:** 07:00

**Device:** Miovision

### Full Study Peak Hour Diagram



## Turning Movement Count - Peak Hour Diagram

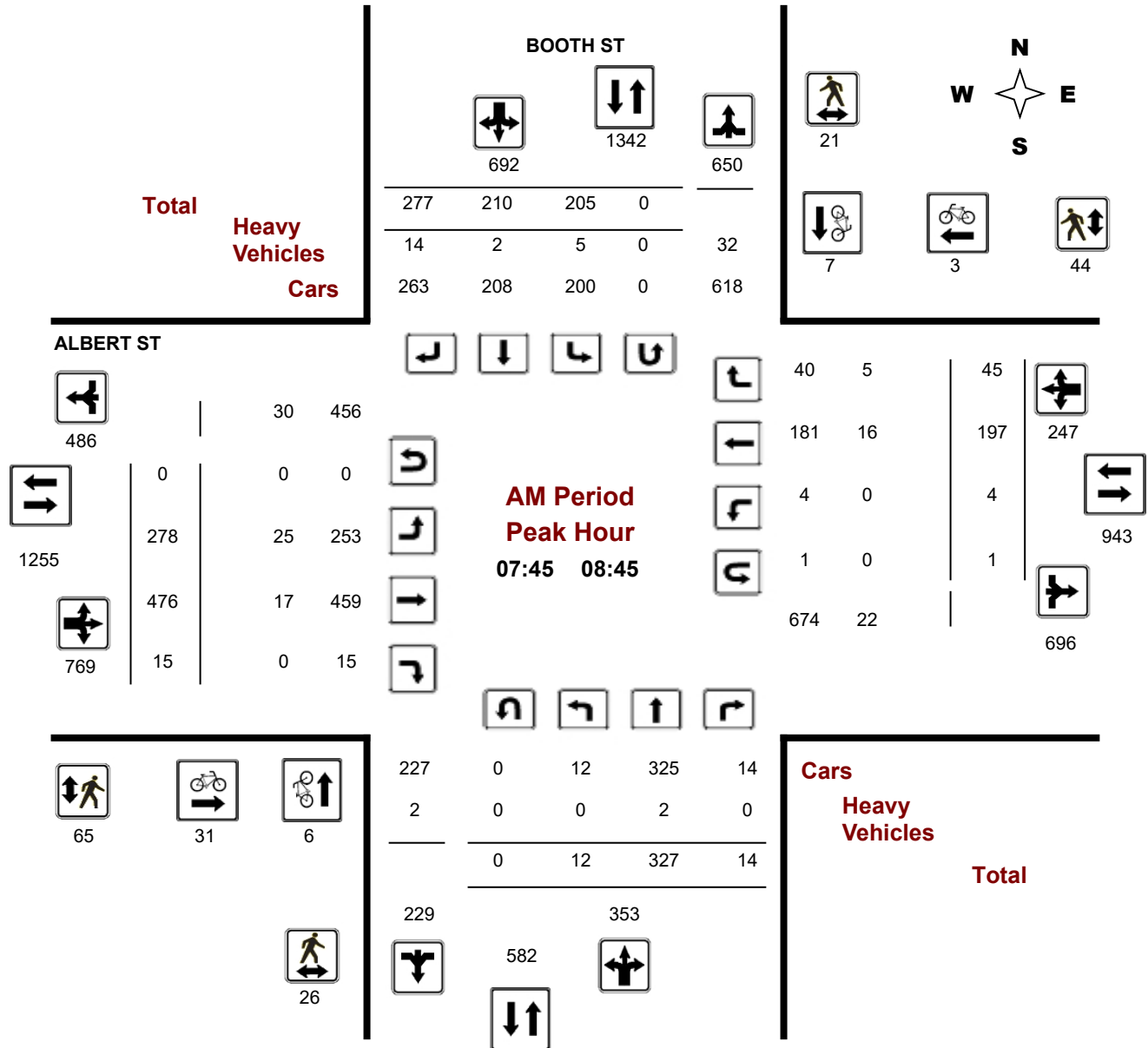
### ALBERT ST @ BOOTH ST

**Survey Date:** Tuesday, January 30, 2024

**Start Time:** 07:00

**WO No:** 41538

**Device:** Miovision



**Comments:**



# Transportation Services - Traffic Services

## Turning Movement Count - Peak Hour Diagram

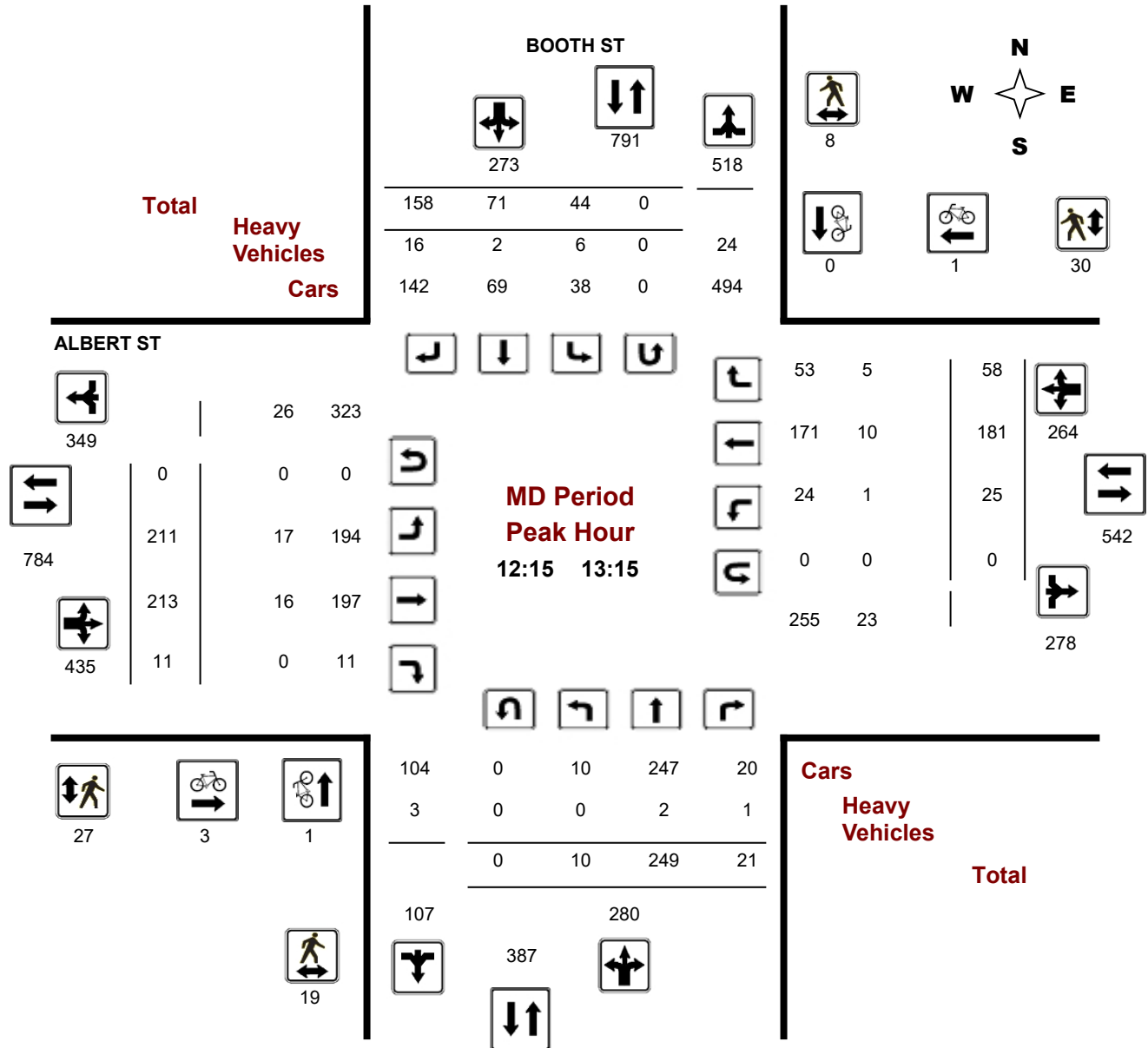
### ALBERT ST @ BOOTH ST

**Survey Date:** Tuesday, January 30, 2024

**Start Time:** 07:00

**WO No:** 41538

**Device:** Miovision





# Transportation Services - Traffic Services

## Turning Movement Count - Peak Hour Diagram

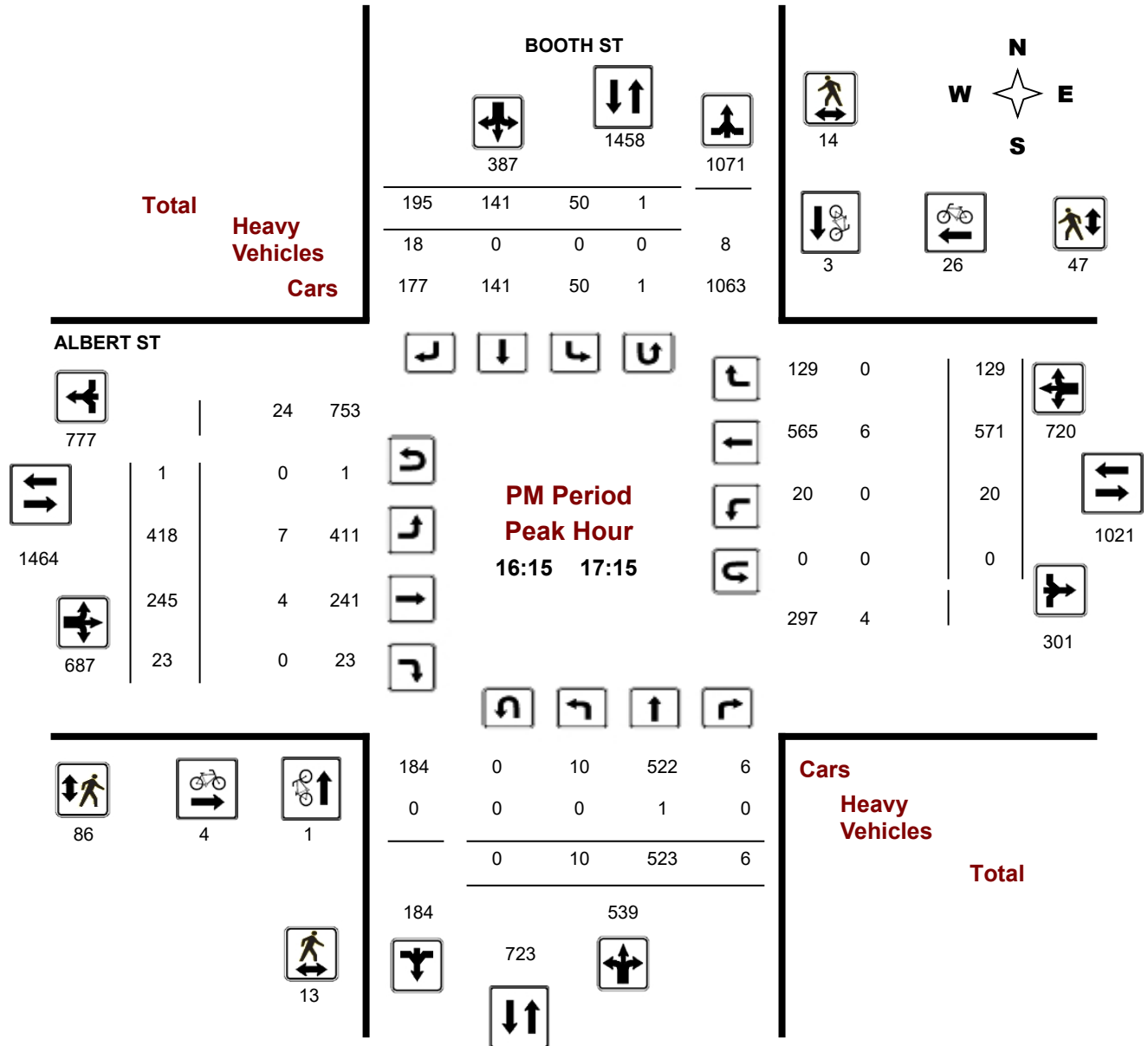
### ALBERT ST @ BOOTH ST

Survey Date: Tuesday, January 30, 2024

Start Time: 07:00

WO No: 41538

Device: Miovision



Comments:



# Transportation Services - Traffic Services

## Turning Movement Count - Study Results

### ALBERT ST @ BOOTH ST

**Survey Date:** Tuesday, January 30, 2024

**WO No:** 41538

**Start Time:** 07:00

**Device:** Miovision

### Full Study Summary (8 HR Standard)

**Survey Date:** Tuesday, January 30, 2024

**Total Observed U-Turns**

**AADT Factor**

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

1.10

Period	BOOTH ST									ALBERT ST									Grand Total	
	Northbound			Southbound			STR TOT	Eastbound			Westbound			WB TOT	STR TOT					
	LT	ST	RT	NB TOT	LT	ST		RT	SB TOT	LT	ST	RT	EB TOT			LT	ST	RT		
07:00 08:00	3	383	2	388	151	178	288	617	1005	220	261	1	482	0	113	26	139	621	1626	
08:00 09:00	12	283	17	312	214	204	269	687	999	269	493	21	783	4	210	47	261	1044	2043	
09:00 10:00	11	302	22	335	87	115	198	400	735	189	281	20	490	24	162	36	222	712	1447	
11:30 12:30	18	244	20	282	36	78	130	244	526	187	193	16	396	29	198	62	289	685	1211	
12:30 13:30	10	268	20	298	43	66	150	259	557	204	204	10	418	24	163	53	240	658	1215	
15:00 16:00	24	420	14	458	117	124	137	378	836	414	234	16	664	69	494	117	680	1344	2180	
16:00 17:00	8	537	6	551	55	159	209	423	974	375	235	17	627	16	584	124	724	1351	2325	
17:00 18:00	13	398	14	425	91	97	179	367	792	356	268	23	647	35	501	89	625	1272	2064	
<b>Sub Total</b>	99	2835	115	3049	794	1021	1560	3375	6424	2214	2169	124	4507	201	2425	554	3180	7687	14111	
<b>U Turns</b>				0				1	1				1				1	2	3	
<b>Total</b>	99	2835	115	3049	794	1021	1560	3376	6425	2214	2169	124	4508	201	2425	554	3181	7689	14114	
<b>EQ 12Hr</b>	138	3941	160	4238	1104	1419	2168	4693	8931	3077	3015	172	6266	279	3371	770	4422	10688	19618	
Note: These values are calculated by multiplying the totals by the appropriate expansion factor.													<b>1.39</b>							
<b>AVG 12Hr</b>	152	4335	176	4662	1214	2045	3125	5162	9824	3385	3317	189	6893	307	3708	847	4864	11757	21580	
Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor.													<b>1.10</b>							
<b>AVG 24Hr</b>	199	5679	231	6107	1590	2679	4094	6762	12869	4434	4345	248	9030	402	4857	1110	6372	15402	28270	
Note: These volumes are calculated by multiplying the Average Daily 12 hr. totals by 12 to 24 expansion factor.													<b>1.31</b>							
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:** Tuesday, January 30, 2024

**WO No:** 41538

**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	2	78	1	81	32	34	82	148	229	55	43	1	99	0	22	9	31	130	359
07:15 07:30	0	100	0	100	32	37	72	141	241	47	42	0	89	0	25	8	33	122	363
07:30 07:45	0	105	1	106	38	41	69	148	254	58	84	0	142	0	39	3	42	184	438
07:45 08:00	1	100	0	101	49	66	65	180	281	60	92	0	152	0	27	6	34	186	467
08:00 08:15	5	65	5	75	41	51	72	164	239	53	121	8	182	1	50	14	65	247	486
08:15 08:30	4	88	6	98	64	51	74	189	287	73	140	3	216	2	62	10	74	290	577
08:30 08:45	2	74	3	79	51	42	66	159	238	92	123	4	219	1	58	15	74	293	531
08:45 09:00	1	56	3	60	58	60	57	175	235	51	109	6	166	0	40	8	48	214	449
09:00 09:15	1	81	2	84	25	41	60	126	210	63	114	10	187	5	50	8	63	250	460
09:15 09:30	3	75	3	81	25	30	36	91	172	39	66	4	109	7	40	10	57	166	338
09:30 09:45	3	82	5	90	24	22	55	101	191	51	52	2	105	4	38	9	51	156	347
09:45 10:00	4	64	12	80	13	22	47	82	162	36	49	4	89	8	34	9	51	140	302
11:30 11:45	3	67	1	71	9	17	25	51	122	40	46	4	90	9	44	13	66	156	278
11:45 12:00	5	65	3	73	10	21	41	72	145	42	45	3	90	6	50	17	73	163	308
12:00 12:15	6	58	11	75	9	17	27	53	128	49	51	6	106	8	44	16	68	174	302
12:15 12:30	4	54	5	63	8	23	37	68	131	56	51	3	110	6	60	16	82	192	323
12:30 12:45	3	69	3	75	14	21	44	79	154	43	60	3	106	7	44	8	59	165	319
12:45 13:00	2	60	4	66	9	13	35	57	123	52	51	0	103	4	42	22	68	171	294
13:00 13:15	1	66	9	76	13	14	42	69	145	60	51	5	116	8	35	12	55	171	316
13:15 13:30	4	73	4	81	7	18	29	54	135	49	42	2	93	5	42	11	58	151	286
15:00 15:15	7	102	1	110	19	24	25	68	178	113	62	4	179	24	75	24	123	302	480
15:15 15:30	5	110	4	119	38	38	42	118	237	85	58	5	148	32	148	34	214	362	599
15:30 15:45	8	126	8	142	31	34	34	99	241	107	60	3	170	4	129	27	160	330	571
15:45 16:00	4	82	1	87	29	28	36	93	180	109	54	4	167	9	142	32	183	350	530
16:00 16:15	3	141	1	145	22	35	56	113	258	66	67	4	137	6	135	32	173	310	568
16:15 16:30	4	133	3	140	16	35	46	97	237	107	48	5	160	1	171	44	216	376	613
16:30 16:45	1	135	1	137	5	46	53	104	241	105	60	5	171	4	116	19	139	310	551
16:45 17:00	0	128	1	129	12	43	54	110	239	97	60	3	160	5	162	29	196	356	595
17:00 17:15	5	127	1	133	17	17	42	76	209	109	77	10	196	10	122	37	169	365	574
17:15 17:30	1	84	6	91	29	26	45	100	191	94	68	4	166	9	158	23	190	356	547
17:30 17:45	5	107	7	119	28	29	47	104	223	92	61	5	158	5	113	16	134	292	515
17:45 18:00	2	80	0	82	17	25	45	87	169	61	62	4	127	11	108	13	132	259	428
<b>Total:</b>	<b>99</b>	<b>2835</b>	<b>115</b>	<b>3049</b>	<b>794</b>	<b>1021</b>	<b>1560</b>	<b>3376</b>	<b>6425</b>	<b>2214</b>	<b>2169</b>	<b>124</b>	<b>4508</b>	<b>201</b>	<b>2425</b>	<b>554</b>	<b>3181</b>	<b>7689</b>	<b>14,114</b>

Note: U-Turns are included in Totals.



# Transportation Services - Traffic Services

## Turning Movement Count - Study Results

### ALBERT ST @ BOOTH ST

**Survey Date:** Tuesday, January 30, 2024

**WO No:** 41538

**Start Time:** 07:00

**Device:** Miovision

### Full Study Cyclist Volume

Time Period	BOOTH ST			ALBERT ST			Grand Total
	Northbound	Southbound	Street Total	Eastbound	Westbound	Street Total	
07:00-07:15	0	0	0	3	1	4	4
07:15-07:30	0	2	2	1	0	1	3
07:30-07:45	0	0	0	1	1	2	2
07:45-08:00	1	1	2	3	2	5	7
08:00-08:15	1	3	4	6	0	6	10
08:15-08:30	3	1	4	7	1	8	12
08:30-08:45	1	2	3	15	0	15	18
08:45-09:00	0	1	1	5	0	5	6
09:00-09:15	0	0	0	2	0	2	2
09:15-09:30	0	1	1	5	0	5	6
09:30-09:45	0	0	0	2	0	2	2
09:45-10:00	0	0	0	0	0	0	0
11:30-11:45	1	0	1	0	0	0	1
11:45-12:00	0	1	1	0	2	2	3
12:00-12:15	1	0	1	0	0	0	1
12:15-12:30	1	0	1	0	0	0	1
12:30-12:45	0	0	0	2	0	2	2
12:45-13:00	0	0	0	0	0	0	0
13:00-13:15	0	0	0	1	1	2	2
13:15-13:30	0	0	0	0	0	0	0
15:00-15:15	1	0	1	0	2	2	3
15:15-15:30	0	1	1	0	2	2	3
15:30-15:45	1	0	1	1	1	2	3
15:45-16:00	1	0	1	1	0	1	2
16:00-16:15	0	0	0	3	4	7	7
16:15-16:30	1	3	4	3	3	6	10
16:30-16:45	0	0	0	0	4	4	4
16:45-17:00	0	0	0	0	13	13	13
17:00-17:15	0	0	0	1	6	7	7
17:15-17:30	0	0	0	0	3	3	3
17:30-17:45	1	0	1	0	5	5	6
17:45-18:00	0	0	0	0	4	4	4
<b>Total</b>	<b>14</b>	<b>16</b>	<b>30</b>	<b>62</b>	<b>55</b>	<b>117</b>	<b>147</b>



# Transportation Services - Traffic Services

## Turning Movement Count - Study Results

### ALBERT ST @ BOOTH ST

**Survey Date:** Tuesday, January 30, 2024

**WO No:** 41538

**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	0	5	5	5	6	11	16
07:15 07:30	0	3	3	13	6	19	22
07:30 07:45	0	2	2	12	5	17	19
07:45 08:00	0	5	5	22	10	32	37
08:00 08:15	6	8	14	17	14	31	45
08:15 08:30	8	6	14	14	12	26	40
08:30 08:45	12	2	14	12	8	20	34
08:45 09:00	4	2	6	21	9	30	36
09:00 09:15	5	4	9	9	11	20	29
09:15 09:30	5	1	6	6	13	19	25
09:30 09:45	7	1	8	12	4	16	24
09:45 10:00	4	3	7	9	4	13	20
11:30 11:45	2	0	2	11	5	16	18
11:45 12:00	2	1	3	11	1	12	15
12:00 12:15	6	2	8	6	10	16	24
12:15 12:30	7	1	8	7	13	20	28
12:30 12:45	4	2	6	5	3	8	14
12:45 13:00	5	0	5	10	7	17	22
13:00 13:15	3	5	8	5	7	12	20
13:15 13:30	4	1	5	8	4	12	17
15:00 15:15	5	0	5	13	2	15	20
15:15 15:30	6	6	12	25	15	40	52
15:30 15:45	3	0	3	15	12	27	30
15:45 16:00	9	1	10	28	16	44	54
16:00 16:15	3	7	10	12	11	23	33
16:15 16:30	0	8	8	22	13	35	43
16:30 16:45	0	3	3	19	15	34	37
16:45 17:00	1	1	2	26	7	33	35
17:00 17:15	12	2	14	19	12	31	45
17:15 17:30	11	10	21	21	15	36	57
17:30 17:45	8	0	8	21	16	37	45
17:45 18:00	5	6	11	16	12	28	39
<b>Total .....</b>	<b>147</b>	<b>98</b>	<b>245</b>	<b>452</b>	<b>298</b>	<b>750</b>	<b>995</b>



# Transportation Services - Traffic Services

## Turning Movement Count - Study Results

### ALBERT ST @ BOOTH ST

**Survey Date:** Tuesday, January 30, 2024

**WO No:** 41538

**Start Time:** 07:00

**Device:** Miovision

### Full Study Heavy Vehicles

#### BOOTH ST

#### ALBERT ST

Northbound

Southbound

Eastbound

Westbound

Time Period	Northbound			N TOT	Southbound			S TOT	STR TOT	Eastbound			E TOT	Westbound			W TOT	STR TOT	Grand Total
	LT	ST	RT		LT	ST	RT			LT	ST	RT		LT	ST	RT			
07:00 07:15	0	0	0	0	1	0	4	5	5	6	4	0	10	0	1	2	3	13	18
07:15 07:30	0	0	0	0	1	0	5	6	6	6	1	0	7	0	0	0	0	7	13
07:30 07:45	0	1	0	1	0	0	3	3	4	5	2	0	7	0	3	1	4	11	15
07:45 08:00	0	0	0	0	0	1	4	5	5	4	4	0	8	0	0	1	1	9	14
08:00 08:15	0	2	0	2	3	0	3	6	8	3	4	0	7	0	9	1	10	17	25
08:15 08:30	0	0	0	0	0	1	4	5	5	10	8	0	18	0	3	1	4	22	27
08:30 08:45	0	0	0	0	2	0	3	5	5	8	1	0	9	0	4	2	6	15	20
08:45 09:00	0	0	0	0	1	0	7	8	8	4	3	0	7	0	2	1	3	10	18
09:00 09:15	0	0	0	0	0	0	3	3	3	6	7	0	13	0	5	1	6	19	22
09:15 09:30	0	0	0	0	1	1	3	5	5	4	4	0	8	0	1	5	6	14	19
09:30 09:45	0	1	0	1	1	0	5	6	7	9	3	0	12	0	3	2	5	17	24
09:45 10:00	0	3	0	3	1	0	3	4	7	5	3	0	8	0	4	4	8	16	23
11:30 11:45	1	1	0	2	1	0	2	3	5	3	1	0	4	0	5	2	7	11	16
11:45 12:00	0	0	0	0	1	0	2	3	3	2	2	0	4	0	2	1	3	7	10
12:00 12:15	0	0	0	0	1	0	2	3	3	3	4	0	7	0	4	2	6	13	16
12:15 12:30	0	0	0	0	1	0	5	6	6	6	4	0	10	0	3	1	4	14	20
12:30 12:45	0	0	0	0	2	2	5	9	9	4	2	0	6	0	2	0	2	8	17
12:45 13:00	0	1	1	2	1	0	2	3	5	4	5	0	9	0	2	4	6	15	20
13:00 13:15	0	1	0	1	2	0	4	6	7	3	5	0	8	1	3	0	4	12	19
13:15 13:30	0	2	0	2	2	0	3	5	7	6	3	0	9	1	3	3	7	16	23
15:00 15:15	0	0	0	0	1	1	4	6	6	9	2	0	11	0	5	0	5	16	22
15:15 15:30	0	2	1	3	0	0	5	5	8	4	2	0	6	0	6	0	6	12	20
15:30 15:45	0	0	0	0	0	0	6	6	6	4	0	0	4	0	2	1	3	7	13
15:45 16:00	0	2	1	3	0	0	3	3	6	2	2	0	4	0	2	0	2	6	12
16:00 16:15	0	0	0	0	1	0	4	5	5	2	2	0	4	0	2	0	2	6	11
16:15 16:30	0	0	0	0	0	0	2	2	2	0	1	0	1	0	1	0	1	2	4
16:30 16:45	0	0	0	0	0	0	7	7	7	2	0	0	2	0	3	0	3	5	12
16:45 17:00	0	1	0	1	0	0	3	3	4	2	2	0	4	0	1	0	1	5	9
17:00 17:15	0	0	0	0	0	0	6	6	6	3	1	0	4	0	1	0	1	5	11
17:15 17:30	0	0	0	0	0	0	1	1	1	4	1	0	5	0	1	0	1	6	7
17:30 17:45	0	0	1	1	1	0	5	6	7	4	0	0	4	0	1	0	1	5	12
17:45 18:00	0	1	0	1	0	0	3	3	4	2	0	0	2	0	0	0	0	2	6
Total: None	1	18	4	23	25	6	121	152	175	139	83	0	222	2	84	35	121	343	518



# Transportation Services - Traffic Services

## Turning Movement Count - Study Results

### ALBERT ST @ BOOTH ST

**Survey Date:** Tuesday, January 30, 2024

**WO No:** 41538

**Start Time:** 07:00

**Device:** Miovision

### Full Study 15 Minute U-Turn Total

BOOTH ST

ALBERT 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	1	1
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	1	0	1
16:45	17:00	0	1	0	0	1
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	1	1	3

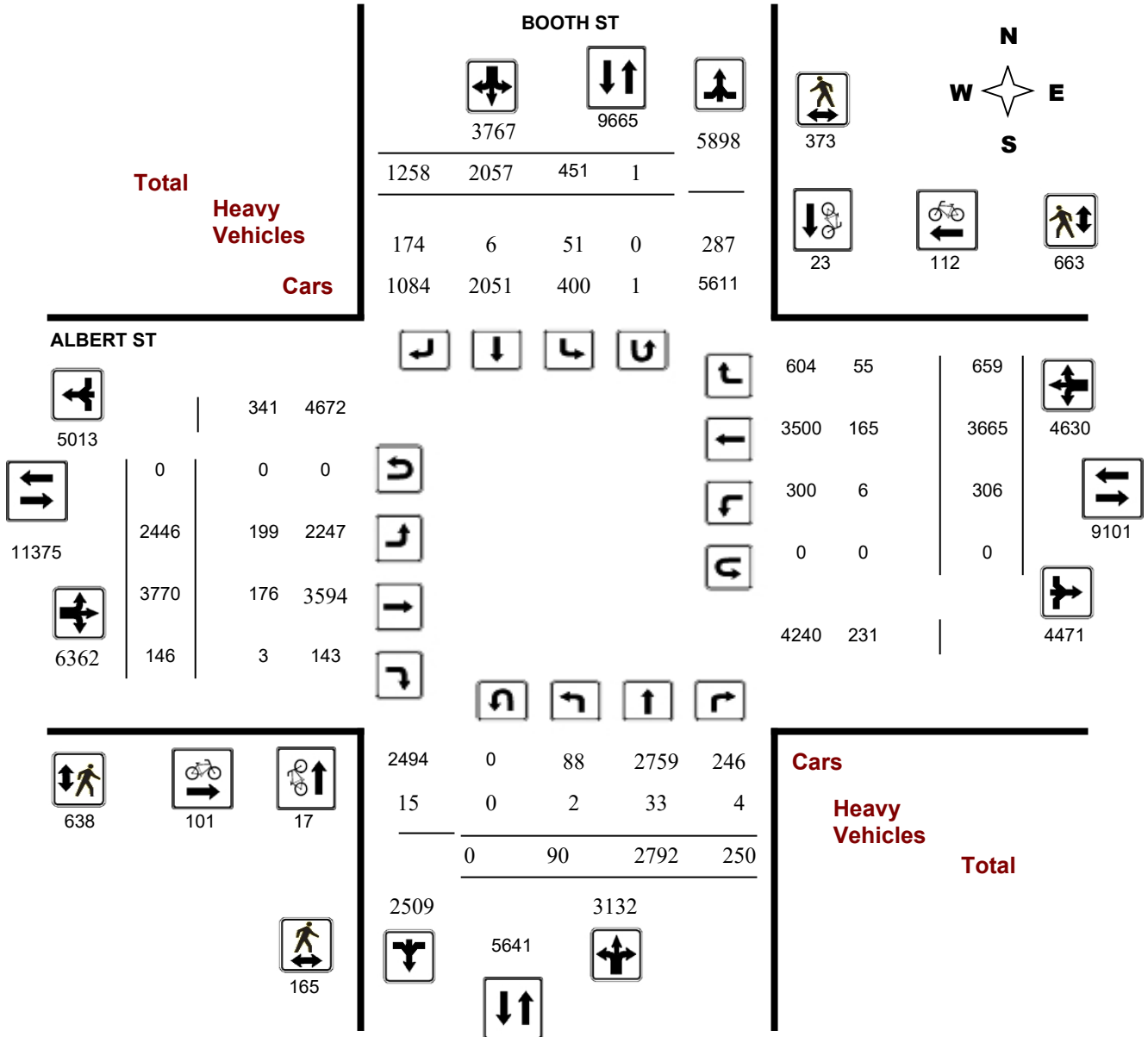
**Survey Date:** Thursday, December 05, 2019

**WO No:** 39199

**Start Time:** 07:00

**Device:** Miovision

### Full Study Diagram



## Turning Movement Count - Study Results

### ALBERT ST @ BOOTH ST

**Survey Date:** Thursday, December 05, 2019

**WO No:**

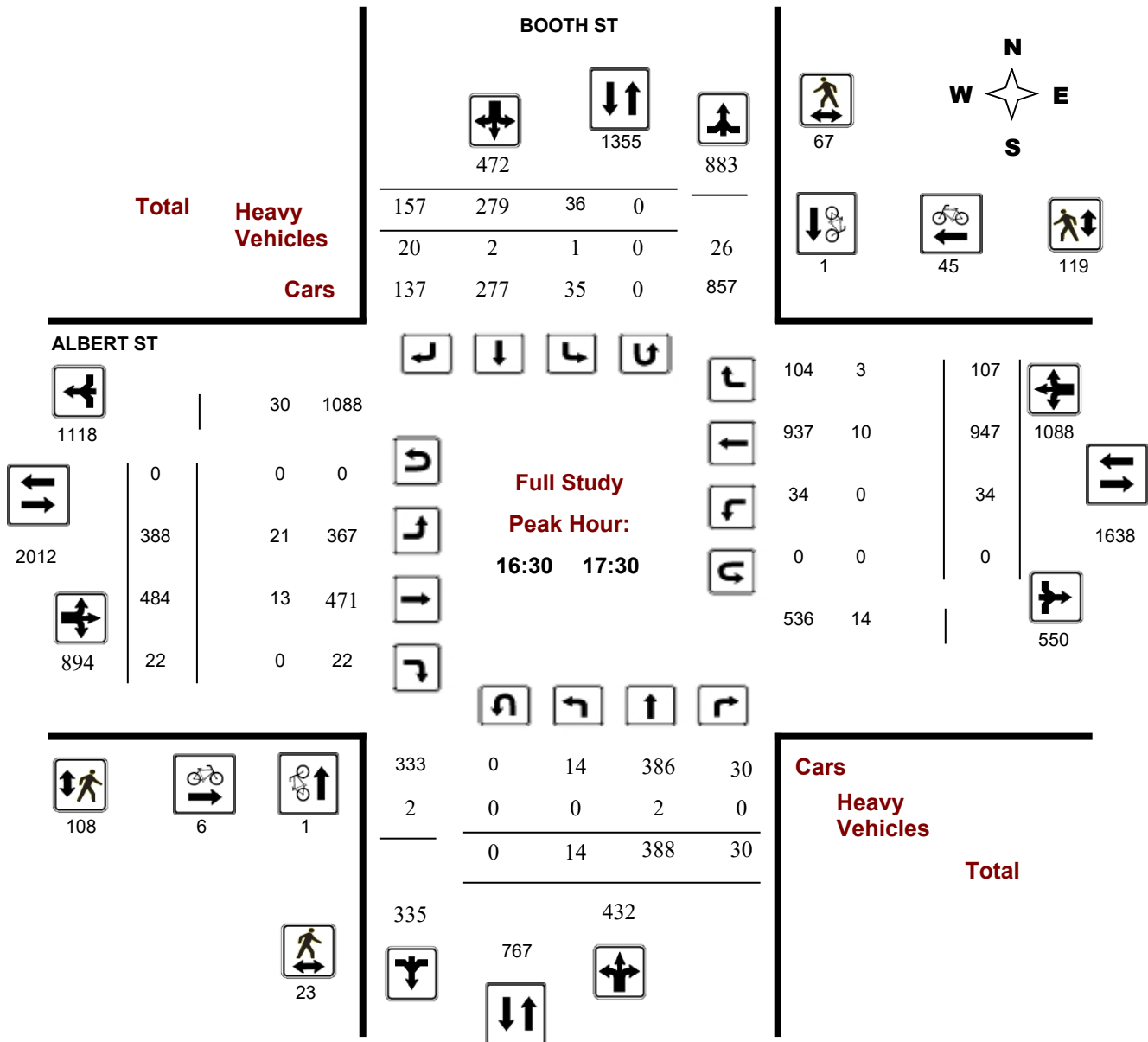
39199

**Start Time:** 07:00

**Device:**

Miovision

### Full Study Peak Hour Diagram



## Turning Movement Count - Peak Hour Diagram

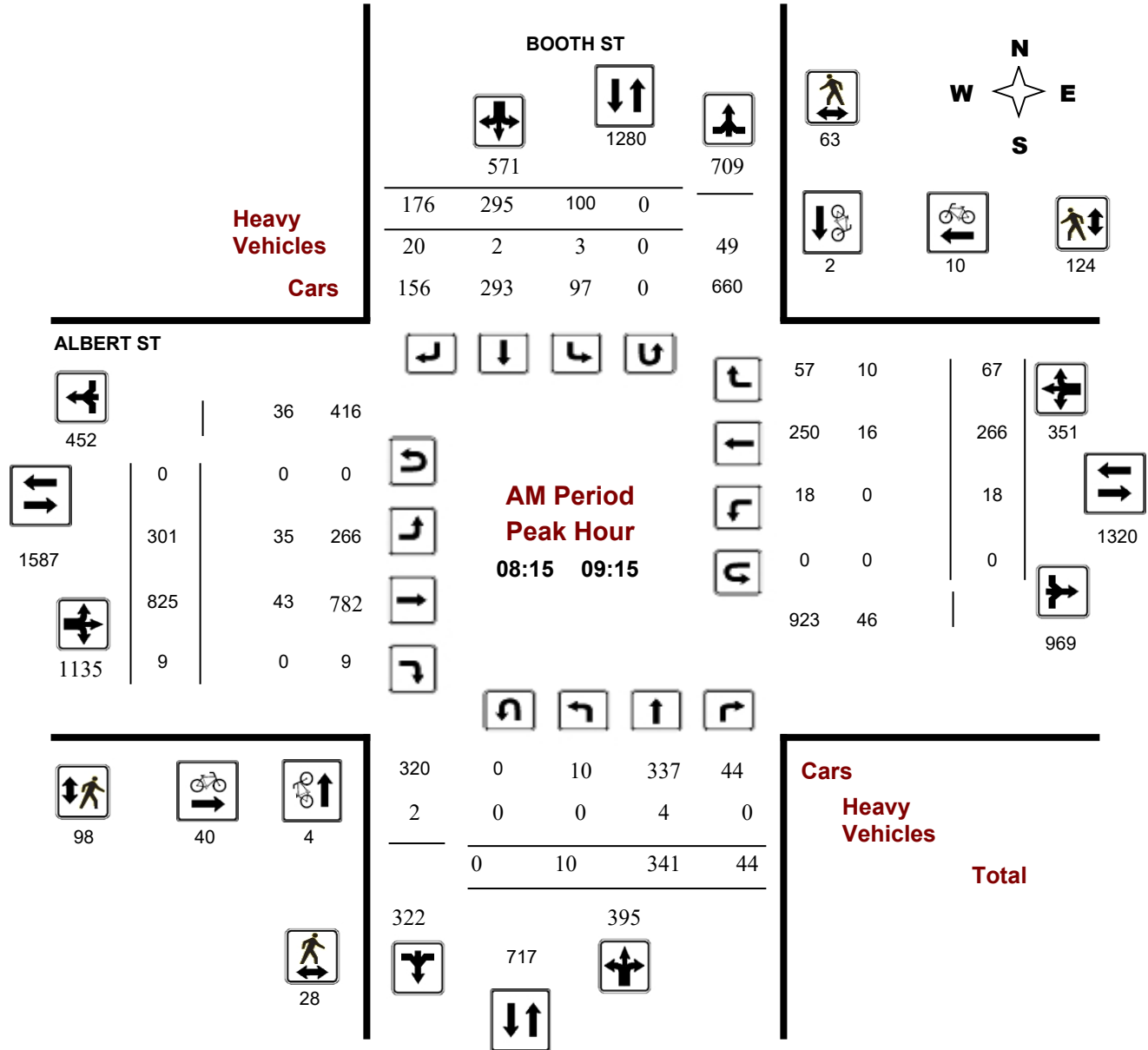
### ALBERT ST @ BOOTH ST

**Survey Date:** Thursday, December 05, 2019

**Start Time:** 07:00

**WO No:** 39199

**Device:** Miovision





## Turning Movement Count - Peak Hour Diagram

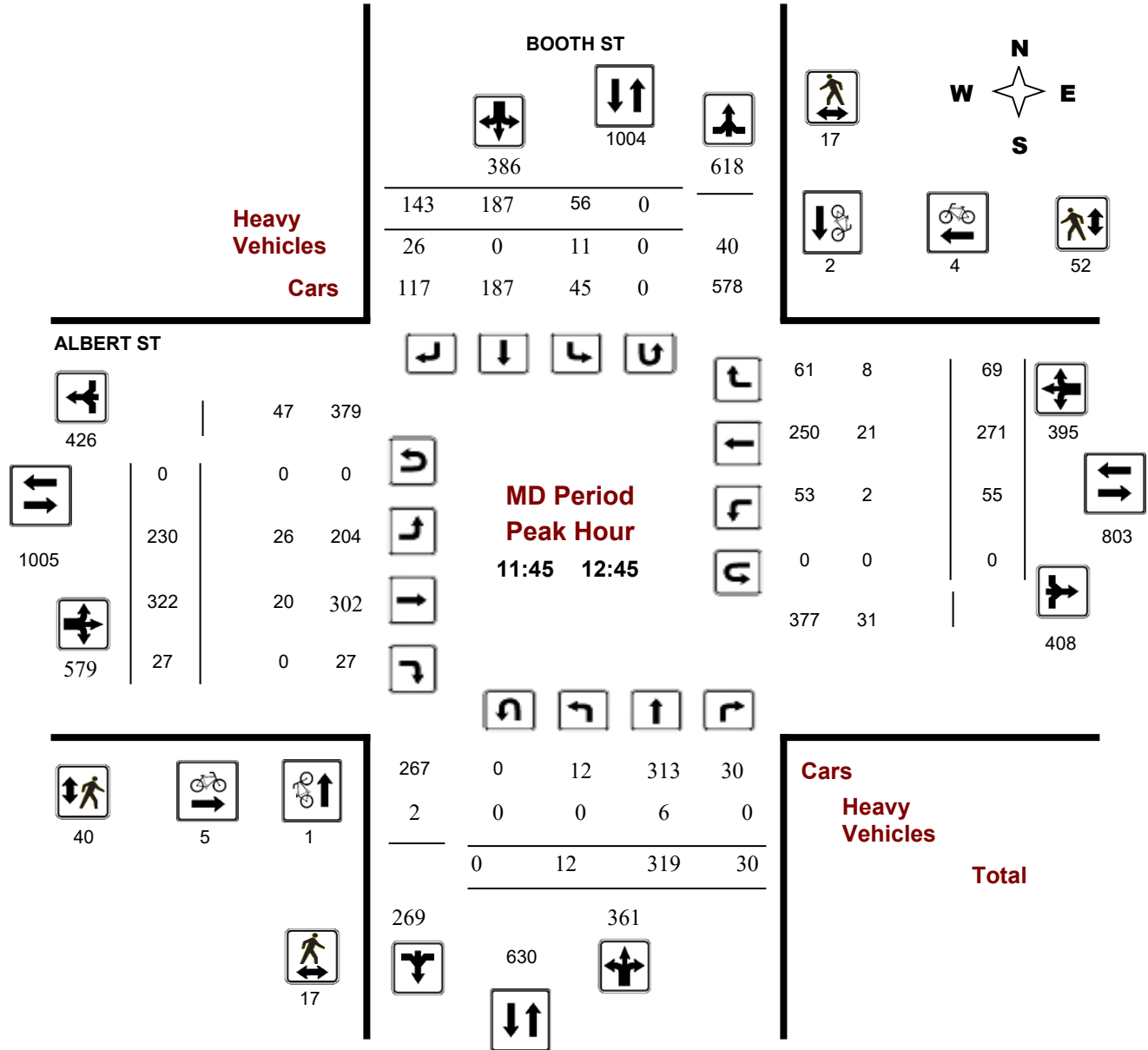
### ALBERT ST @ BOOTH ST

**Survey Date:** Thursday, December 05, 2019

**Start Time:** 07:00

**WO No:** 39199

**Device:** Miovision



## Turning Movement Count - Peak Hour Diagram

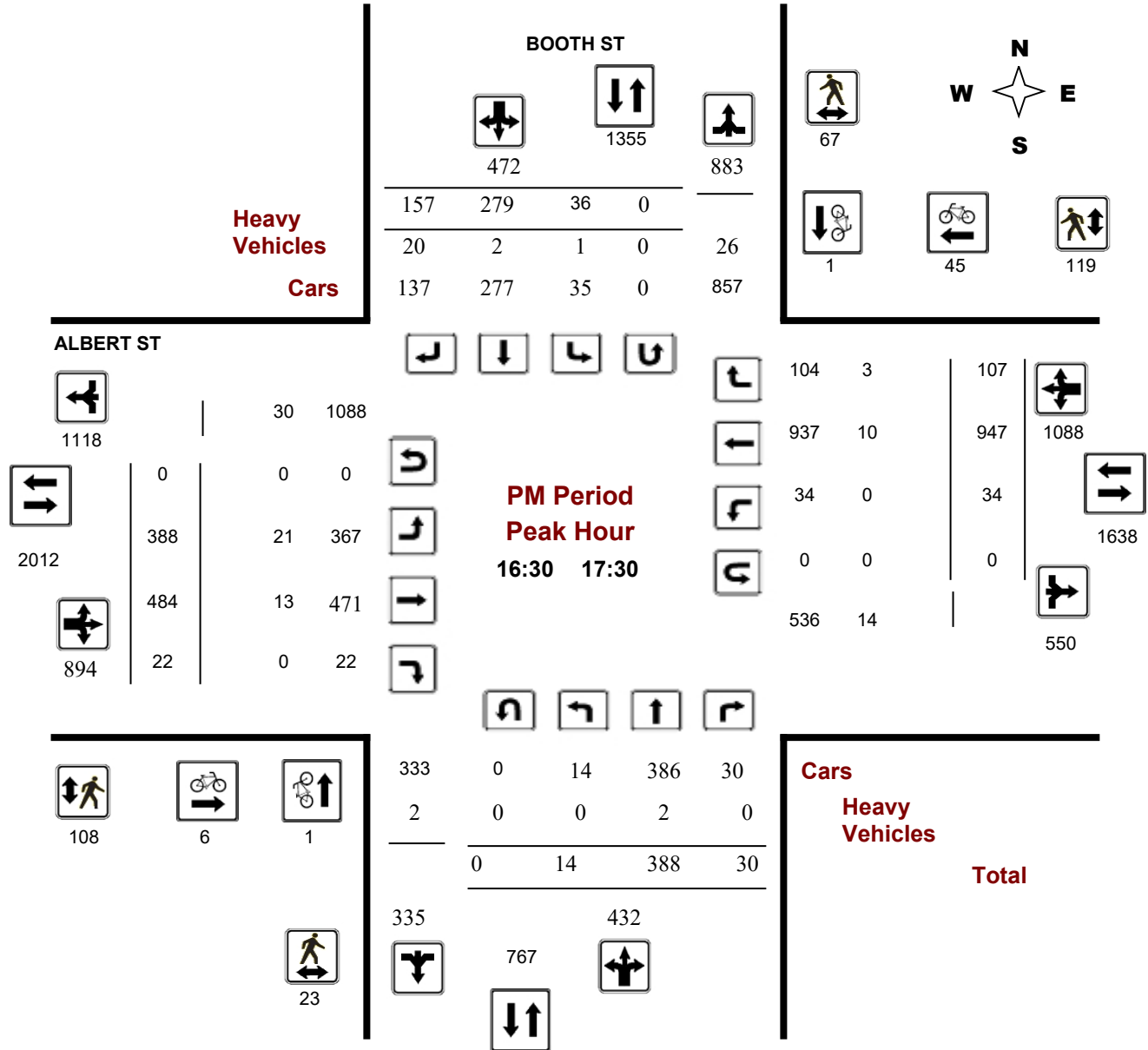
### ALBERT ST @ BOOTH ST

**Survey Date:** Thursday, December 05, 2019

**Start Time:** 07:00

**WO No:** 39199

**Device:** Miovision





# 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**

**AADT Factor**

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

1.00

Period	BOOTH ST									ALBERT ST									Grand Total
	Northbound			NB TOT	Southbound			SB TOT	STR TOT	Eastbound			EB TOT	Westbound			WB TOT	STR TOT	
	LT	ST	RT		LT	ST	RT			LT	ST	RT		LT	ST	RT			
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
<b>Sub Total</b>	90	2792	250	3132	451	2057	1258	3766	6898	2446	3770	146	6362	306	3665	659	4630	10992	17890
<b>U Turns</b>				0				1	1				0				0	0	1
<b>Total</b>	90	2792	250	3132	451	2057	1258	3767	6899	2446	3770	146	6362	306	3665	659	4630	10992	17891
<b>EQ 12Hr</b>	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.																<b>1.39</b>			
<b>AVG 12Hr</b>	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.																<b>1</b>			
<b>AVG 24Hr</b>	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.																<b>1.31</b>			
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			Grand Total
	Northbound	Southbound	Street Total	Eastbound	Westbound	Street 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
<b>Total</b>	<b>17</b>	<b>23</b>	<b>40</b>	<b>101</b>	<b>112</b>	<b>213</b>	<b>253</b>



# 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
<b>Total</b> .....	<b>165</b>	<b>373</b>	<b>538</b>	<b>638</b>	<b>663</b>	<b>1301</b>	<b>1839</b>



# 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	Northbound			N TOT	Southbound			S TOT	STR TOT	Eastbound			E TOT	Westbound			W TOT	STR TOT	Grand Total	
	LT	ST	RT		LT	ST	RT			LT	ST	RT		LT	ST	RT				
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	
<b>Total:</b>	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

BOOTH ST

ALBERT 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	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



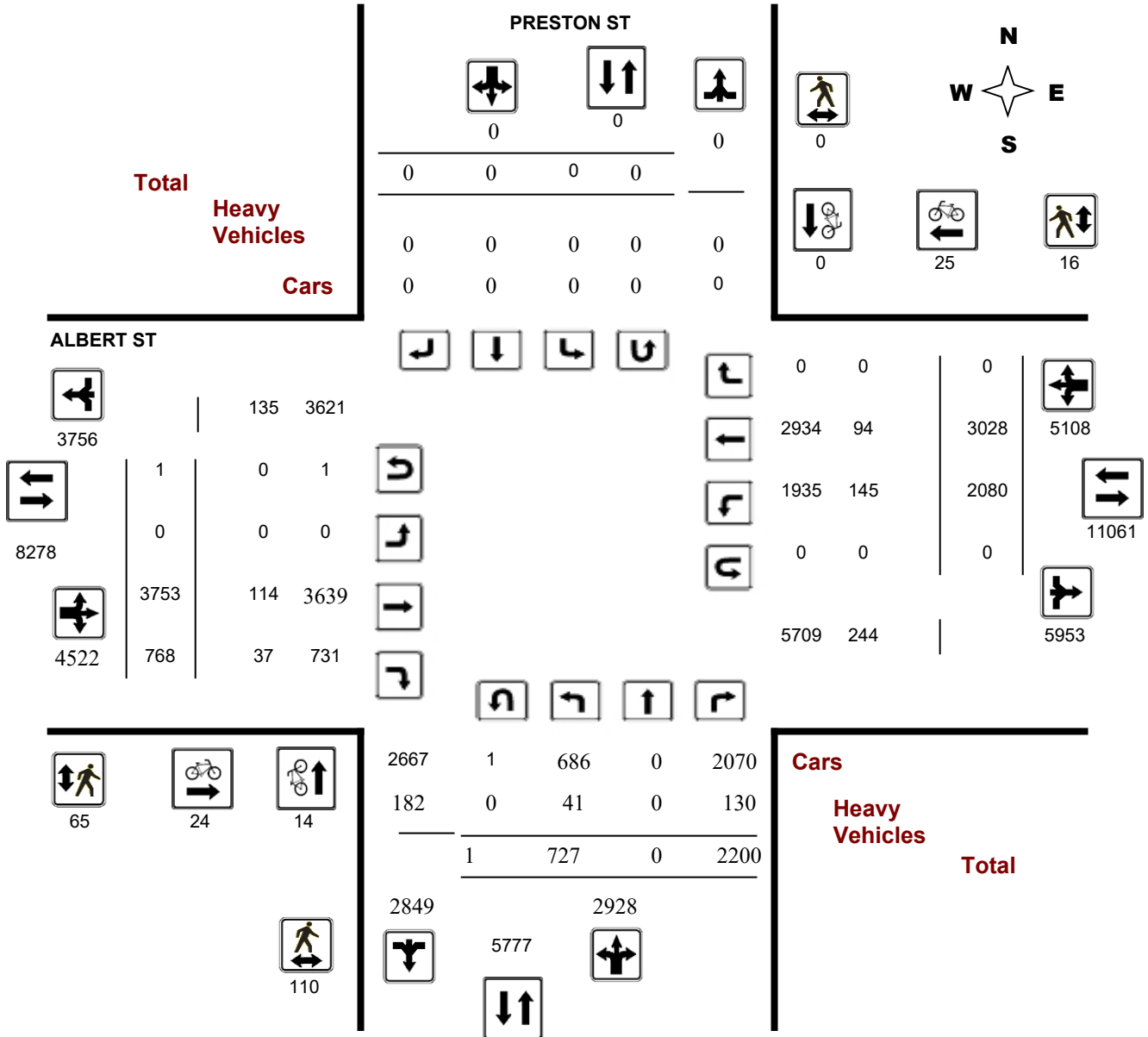
**Survey Date:** Wednesday, April 02, 2014

**WO No:** 29661

**Start Time:** 07:00

**Device:** Miovision

### Full Study Diagram



## Turning Movement Count - Study Results

### ALBERT ST @ PRESTON ST

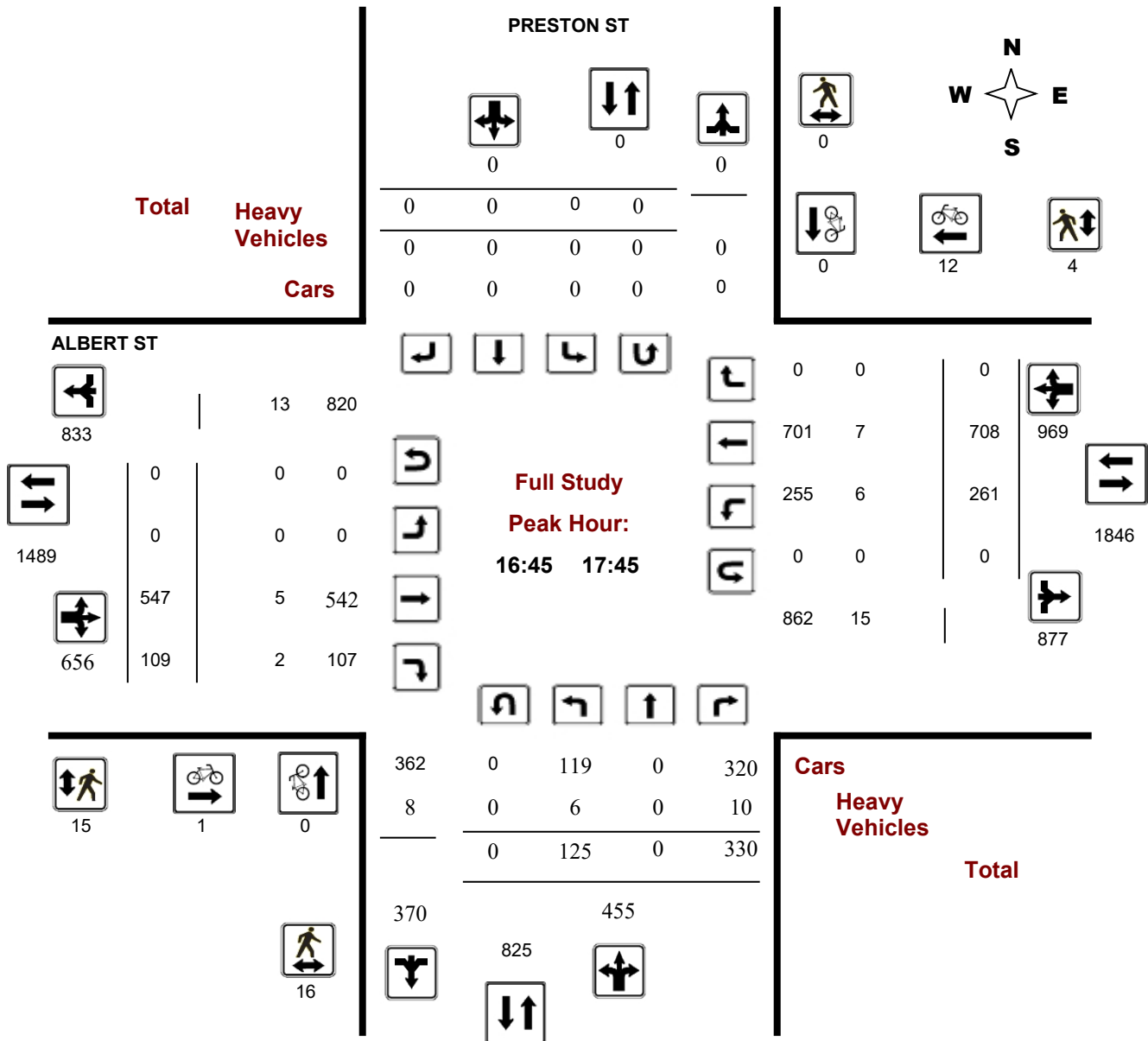
**Survey Date:** Wednesday, April 02, 2014

**WO No:** 29661

**Start Time:** 07:00

**Device:** Miovision

### Full Study Peak Hour Diagram



## Turning Movement Count - Peak Hour Diagram

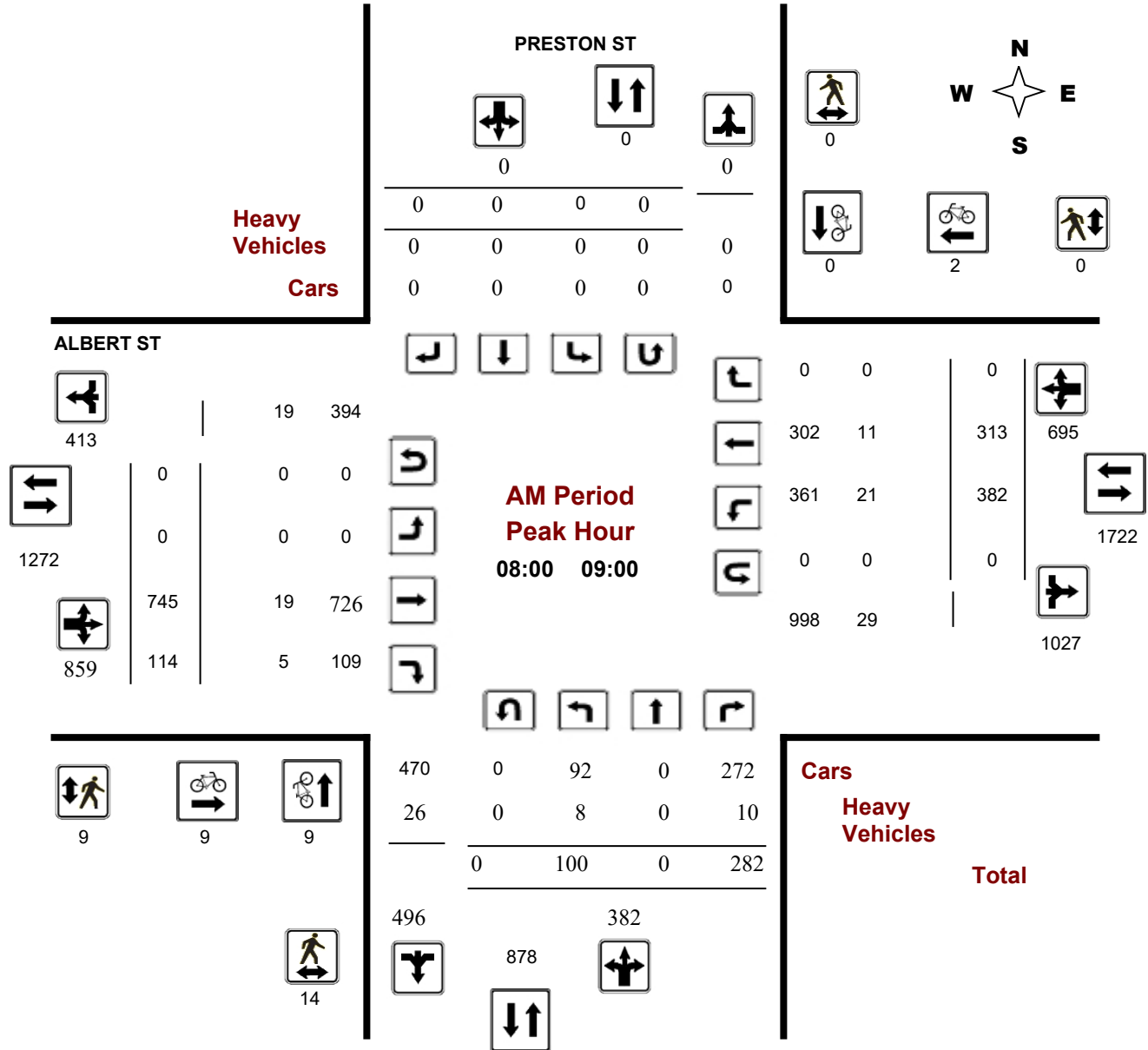
### ALBERT ST @ PRESTON ST

**Survey Date:** Wednesday, April 02, 2014

**Start Time:** 07:00

**WO No:** 29661

**Device:** Miovision



## Turning Movement Count - Peak Hour Diagram

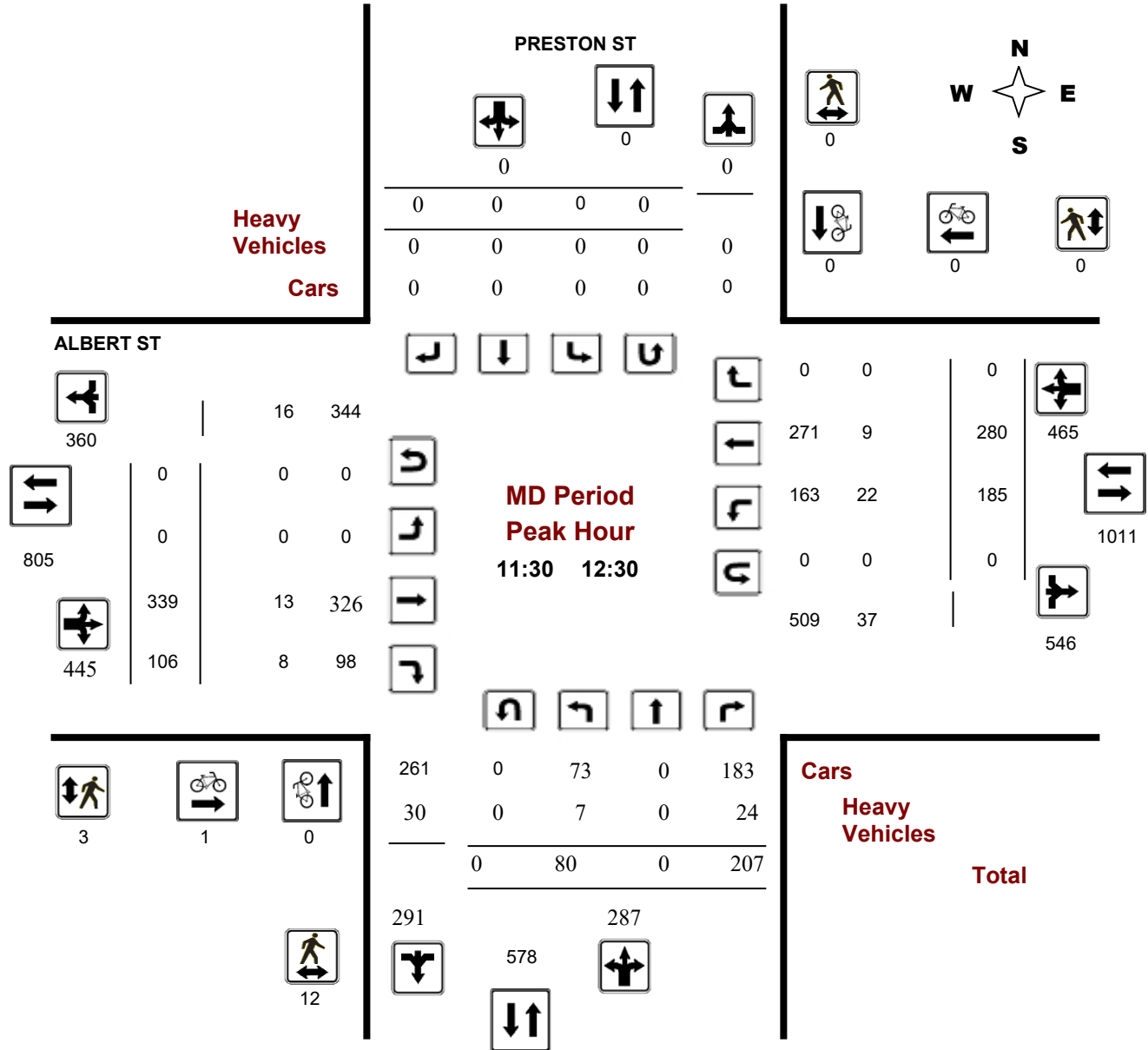
### ALBERT ST @ PRESTON ST

**Survey Date:** Wednesday, April 02, 2014

**Start Time:** 07:00

**WO No:** 29661

**Device:** Miovision



## Turning Movement Count - Peak Hour Diagram

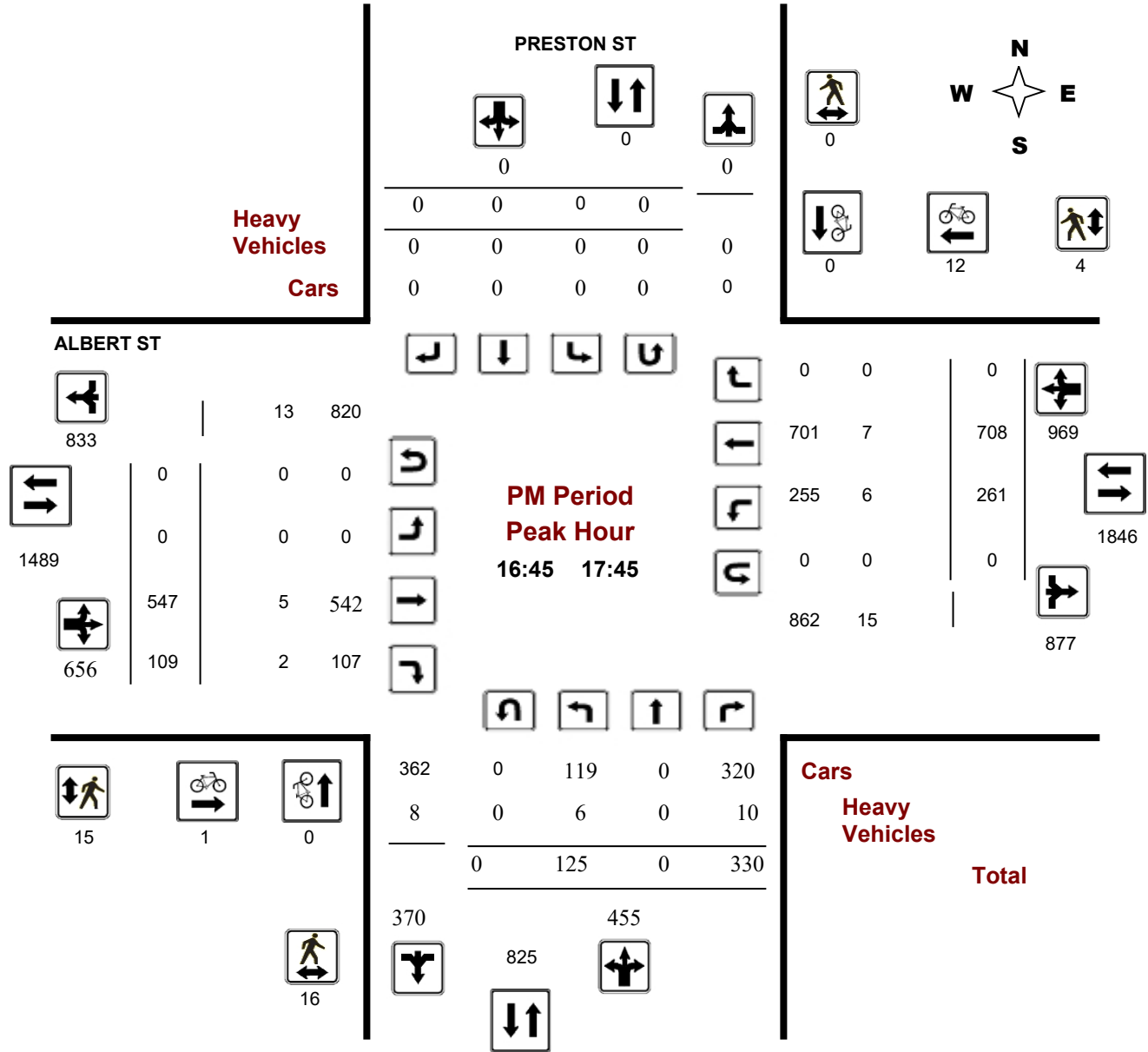
### ALBERT ST @ PRESTON ST

**Survey Date:** Wednesday, April 02, 2014

**Start Time:** 07:00

**WO No:** 29661

**Device:** Miovision





# 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

Period	PRESTON ST Northbound					PRESTON ST Southbound					ALBERT ST Eastbound					ALBERT ST Westbound					Grand Total
	LT	ST	RT	NB TOT	STR TOT	LT	ST	RT	SB TOT	STR TOT	LT	ST	RT	EB TOT	STR TOT	LT	ST	RT	WB TOT	STR TOT	
07:00 08:00	54	0	245	299	299	0	0	0	0	299	0	450	69	519	519	390	277	0	667	1186	1485
08:00 09:00	100	0	282	382	382	0	0	0	0	382	0	745	114	859	859	382	313	0	695	1554	1936
09:00 10:00	82	0	198	280	280	0	0	0	0	280	0	416	81	497	497	228	263	0	491	988	1268
11:30 12:30	80	0	207	287	287	0	0	0	0	287	0	339	106	445	445	185	280	0	465	910	1197
12:30 13:30	72	0	190	262	262	0	0	0	0	262	0	317	82	399	399	166	239	0	405	804	1066
15:00 16:00	113	0	377	490	490	0	0	0	0	490	0	458	97	555	555	223	406	0	629	1184	1674
16:00 17:00	112	0	370	482	482	0	0	0	0	482	0	548	104	652	652	247	639	0	886	1538	2020
17:00 18:00	114	0	331	445	445	0	0	0	0	445	0	480	115	595	595	259	611	0	870	1465	1910
<b>Sub Total</b>	727	0	2200	2927	2927	0	0	0	0	2927	0	3753	768	4521	4521	2080	3028	0	5108	9629	12556
<b>U Turns</b>				1	1				0	1				1	1				0	1	2
<b>Total</b>	727	0	2200	2928	2928	0	0	0	0	2928	0	3753	768	4522	4522	2080	3028	0	5108	9630	12558
<b>EQ 12Hr</b>	1011	0	3058	4070	4070	0	0	0	0	4070	0	5217	1068	6286	6286	2891	4209	0	7100	13386	17456
Note: These values are calculated by multiplying the totals by the appropriate expansion factor.														<b>1.39</b>							
<b>AVG 12Hr</b>	857	0	2594	3452	3452	0	0	0	0	3663	0	4425	905	5331	5331	2452	3570	0	6022	12047	15710
Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor.														<b>0.9</b>							
<b>AVG 24Hr</b>	1123	0	3398	4522	4522	0	0	0	0	4522	0	5796	1186	6984	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
<b>Total:</b>	<b>727</b>	<b>0</b>	<b>2200</b>	<b>2928</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>171</b>	<b>0</b>	<b>3753</b>	<b>768</b>	<b>4522</b>	<b>2080</b>	<b>3028</b>	<b>0</b>	<b>5108</b>	<b>171</b>	<b>12,558</b>

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			Grand Total
	Northbound	Southbound	Street Total	Eastbound	Westbound	Street 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
<b>Total</b>	<b>14</b>	<b>0</b>	<b>14</b>	<b>24</b>	<b>25</b>	<b>49</b>	<b>63</b>





# 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
<b>Total .....</b>	<b>110</b>	<b>0</b>	<b>110</b>	<b>65</b>	<b>16</b>	<b>81</b>	<b>191</b>



# 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	Northbound			N TOT	Southbound			S TOT	STR TOT	Eastbound			E TOT	Westbound			W TOT	STR TOT	Grand Total
	LT	ST	RT		LT	ST	RT			LT	ST	RT		LT	ST	RT			
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

PRESTON ST

ALBERT 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	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

## Turning Movement Count - Study Results

### OTTAWA RIVER PKWY @ RIVER ST/SLIDELL ST

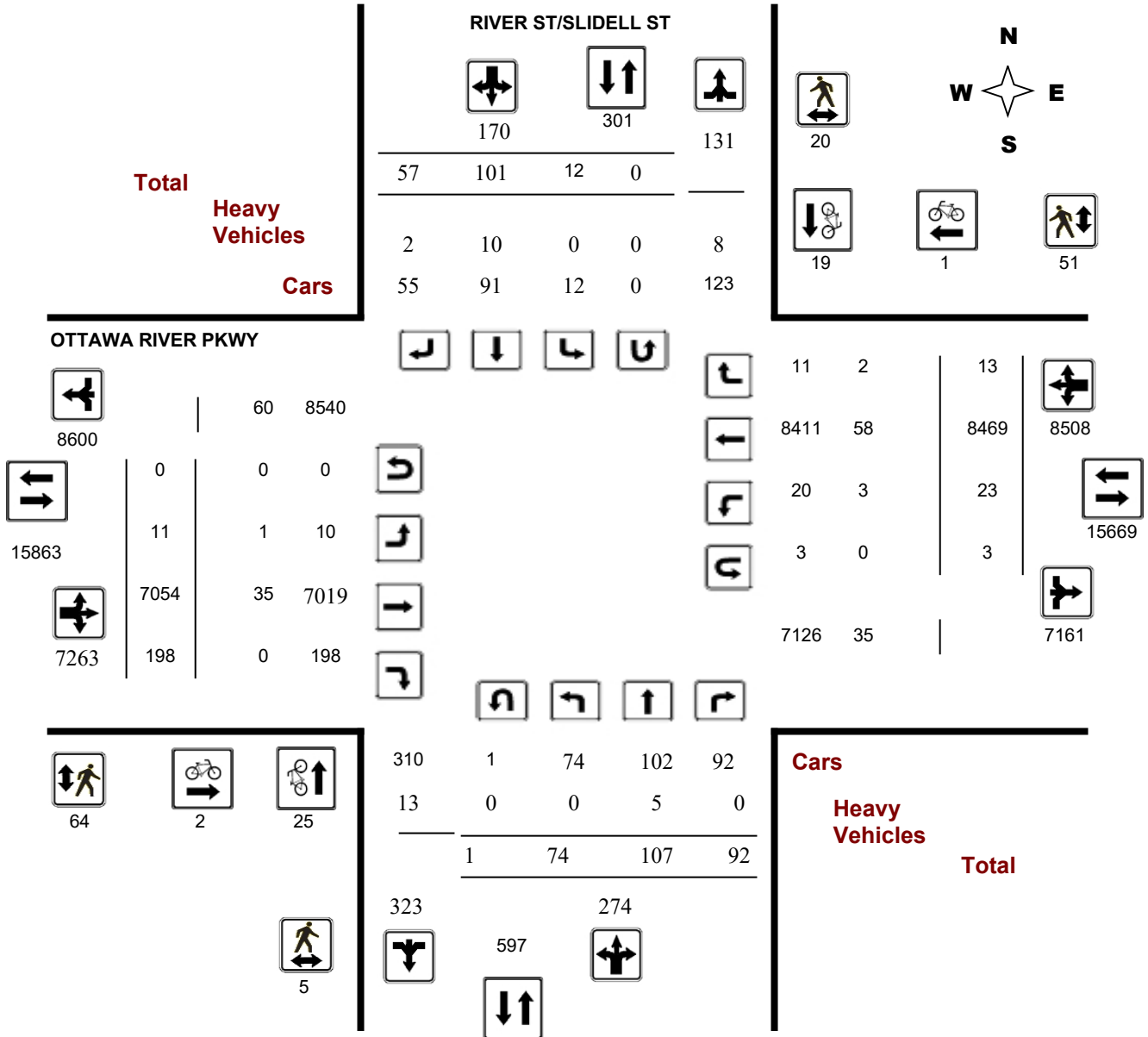
**Survey Date:** Tuesday, April 25, 2017

**WO No:** 36950

**Start Time:** 07:00

**Device:** Miovision

### Full Study Diagram



## Turning Movement Count - Study Results

### OTTAWA RIVER PKWY @ RIVER ST/SLIDELL ST

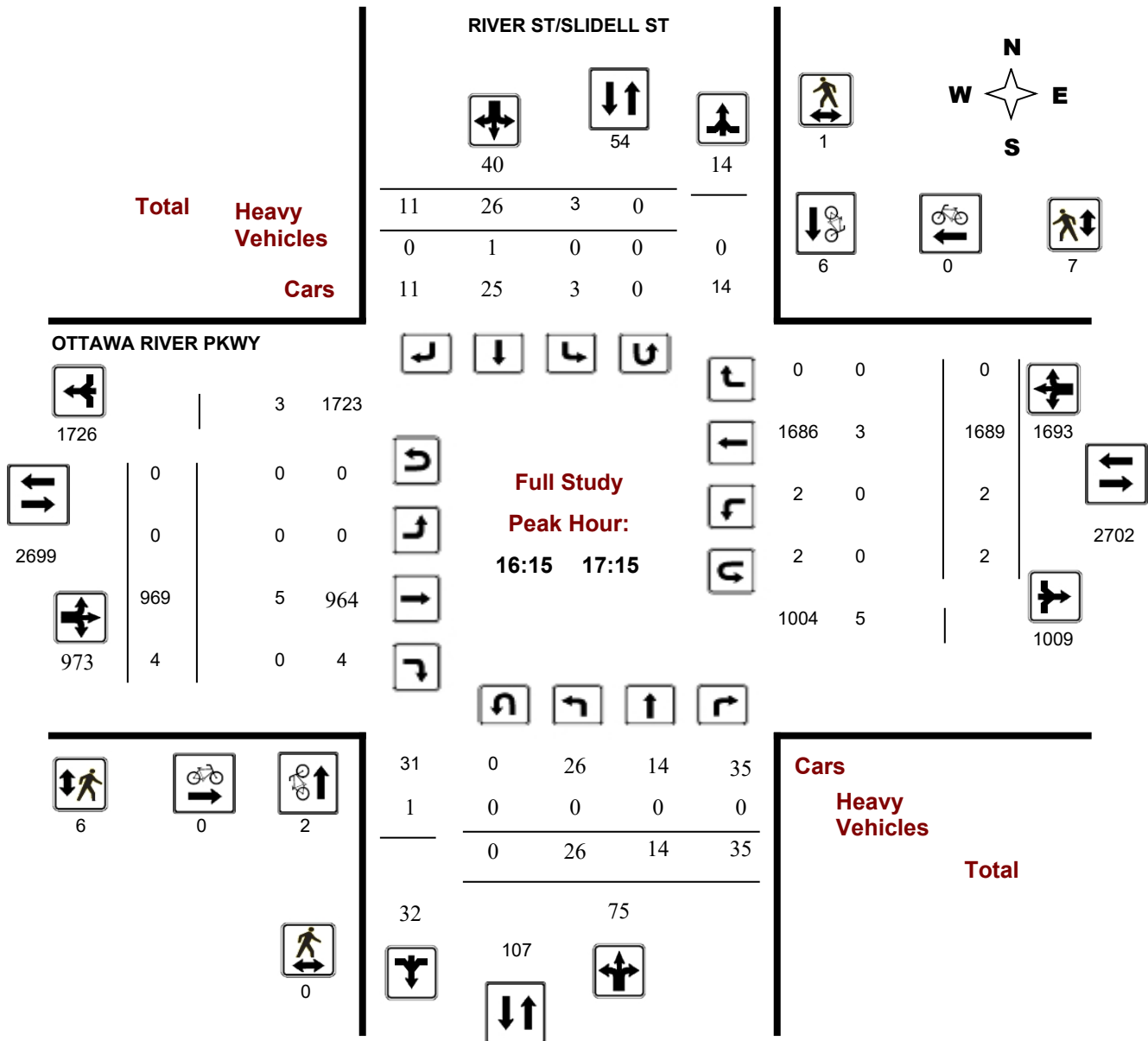
**Survey Date:** Tuesday, April 25, 2017

**WO No:** 36950

**Start Time:** 07:00

**Device:** Miovision

### Full Study Peak Hour Diagram





# Transportation Services - Traffic Services

## Turning Movement Count - Peak Hour Diagram

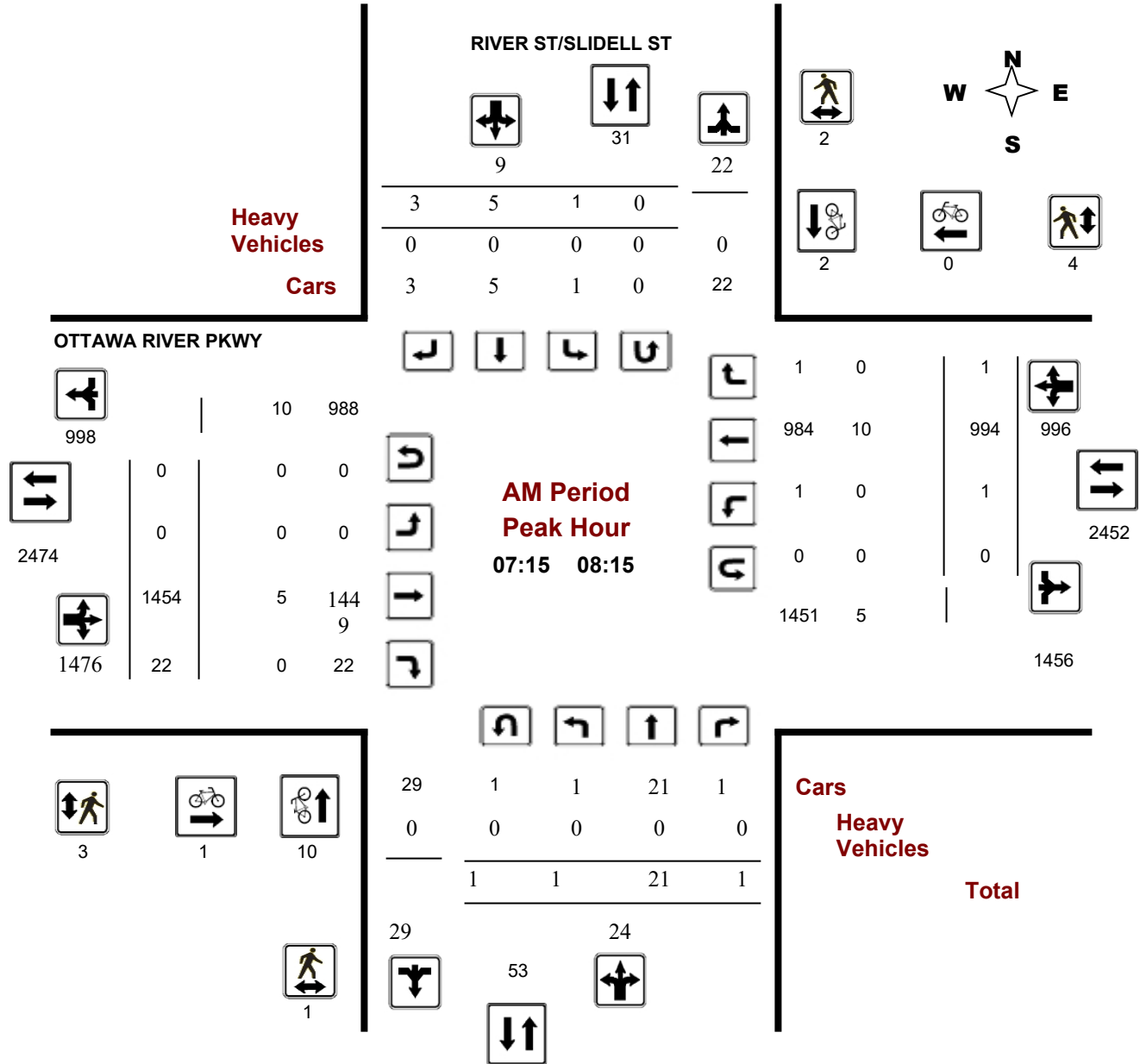
### OTTAWA RIVER PKWY @ RIVER ST/SLIDELL ST

**Survey Date:** Tuesday, April 25, 2017

**Start Time:** 07:00

**WO No:** 36950

**Device:** Miovision





# Transportation Services - Traffic Services

## Turning Movement Count - Peak Hour Diagram

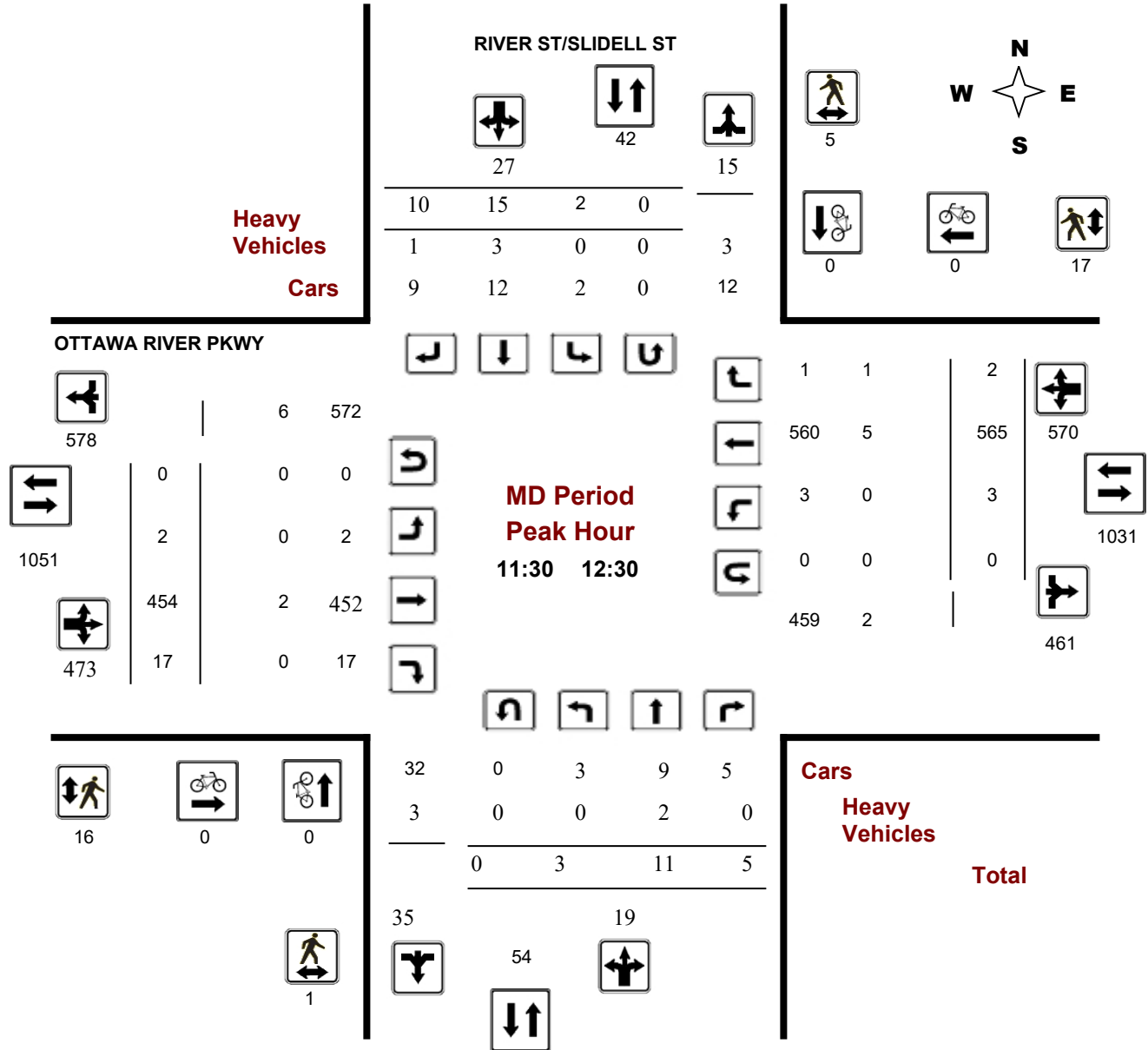
### OTTAWA RIVER PKWY @ RIVER ST/SLIDELL ST

**Survey Date:** Tuesday, April 25, 2017

**Start Time:** 07:00

**WO No:** 36950

**Device:** Miovision



**Comments**

## Turning Movement Count - Peak Hour Diagram

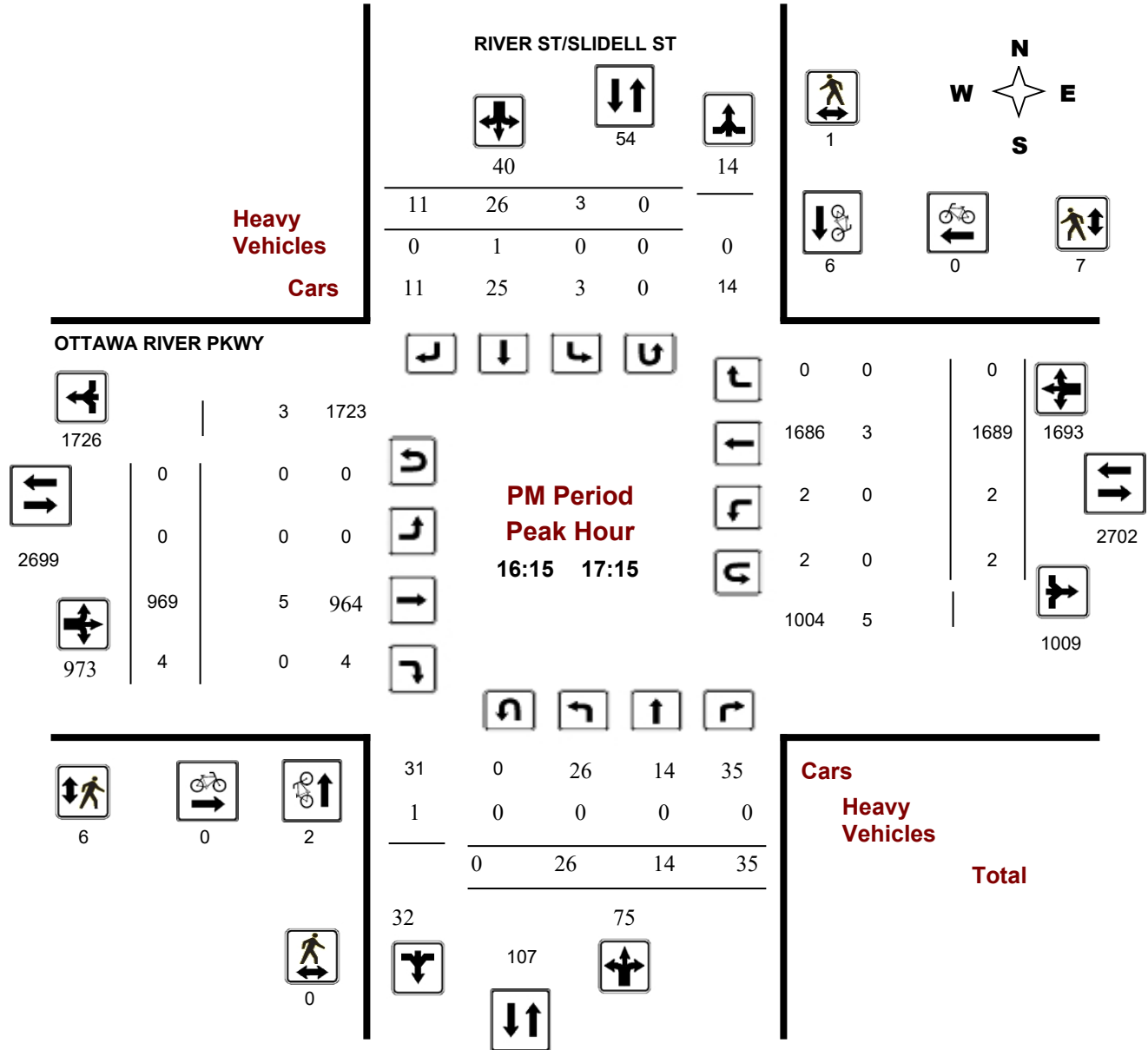
### OTTAWA RIVER PKWY @ RIVER ST/SLIDELL ST

**Survey Date:** Tuesday, April 25, 2017

**Start Time:** 07:00

**WO No:** 36950

**Device:** Miovision







# 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**

**AADT Factor**

Northbound: 1      Southbound: 0  
 Eastbound: 0      Westbound: 3

.90

**RIVER ST/SLIDELL ST**

**OTTAWA RIVER PKWY**

Period	RIVER ST/SLIDELL ST					OTTAWA RIVER PKWY										Grand Total			
	Northbound			NB TOT	Southbound			SB TOT	STR TOT	Eastbound			EB TOT	Westbound			WB TOT	STR TOT	
LT	ST	RT	LT		ST	RT	LT			ST	RT	LT		ST	RT	LT			ST
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
<b>Sub Total</b>	74	107	92	273	12	101	57	170	443	11	7054	198	7263	23	8469	13	8505	15768	16211
<b>U Turns</b>				1				0	1				0				3	3	4
<b>Total</b>	74	107	92	274	12	101	57	170	444	11	7054	198	7263	23	8469	13	8508	15771	16215
<b>EQ 12Hr</b>	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.													<b>1.39</b>						
<b>AVG 12Hr</b>	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.													<b>0.9</b>						
<b>AVG 24Hr</b>	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.													<b>1.31</b>						

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
<b>Total:</b>	<b>74</b>	<b>107</b>	<b>92</b>	<b>274</b>	<b>12</b>	<b>101</b>	<b>57</b>	<b>170</b>	<b>17</b>	<b>11</b>	<b>7054</b>	<b>198</b>	<b>7263</b>	<b>23</b>	<b>8469</b>	<b>13</b>	<b>8508</b>	<b>17</b>	<b>16,215</b>

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

#### RIVER ST/SLIDELL ST

#### OTTAWA RIVER PKWY

Time Period		RIVER ST/SLIDELL ST			OTTAWA RIVER PKWY			Grand Total
		Northbound	Southbound	Street Total	Eastbound	Westbound	Street 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
<b>Total</b>		<b>25</b>	<b>19</b>	<b>44</b>	<b>2</b>	<b>1</b>	<b>3</b>	<b>47</b>



# 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
<b>Total .....</b>	<b>5</b>	<b>20</b>	<b>25</b>	<b>64</b>	<b>51</b>	<b>115</b>	<b>140</b>



# 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	Northbound			N TOT	Southbound			S TOT	STR TOT	Eastbound			E TOT	Westbound			W TOT	STR TOT	Grand Total
	LT	ST	RT		LT	ST	RT			LT	ST	RT		LT	ST	RT			
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

RIVER ST/SLIDELL ST                      OTTAWA RIVER PKWY

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	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

## Turning Movement Count - Study Results

### OTTAWA RIVER PKWY @ VIMY PLACE PRIV

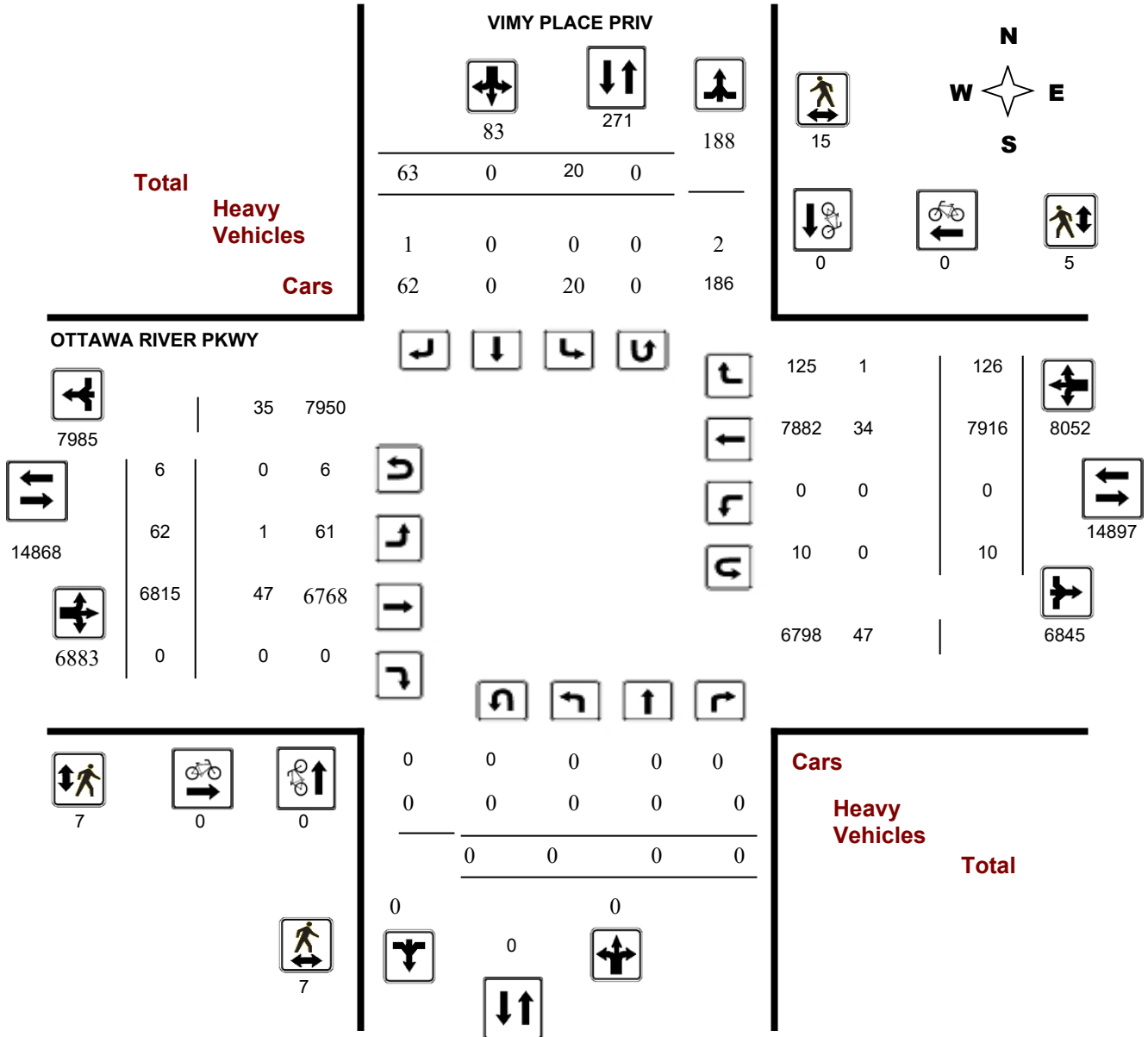
**Survey Date:** Thursday, January 23, 2020

**WO No:** 39382

**Start Time:** 07:00

**Device:** Miovision

### Full Study Diagram



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

## Turning Movement Count - Study Results

### OTTAWA RIVER PKWY @ VIMY PLACE PRIV

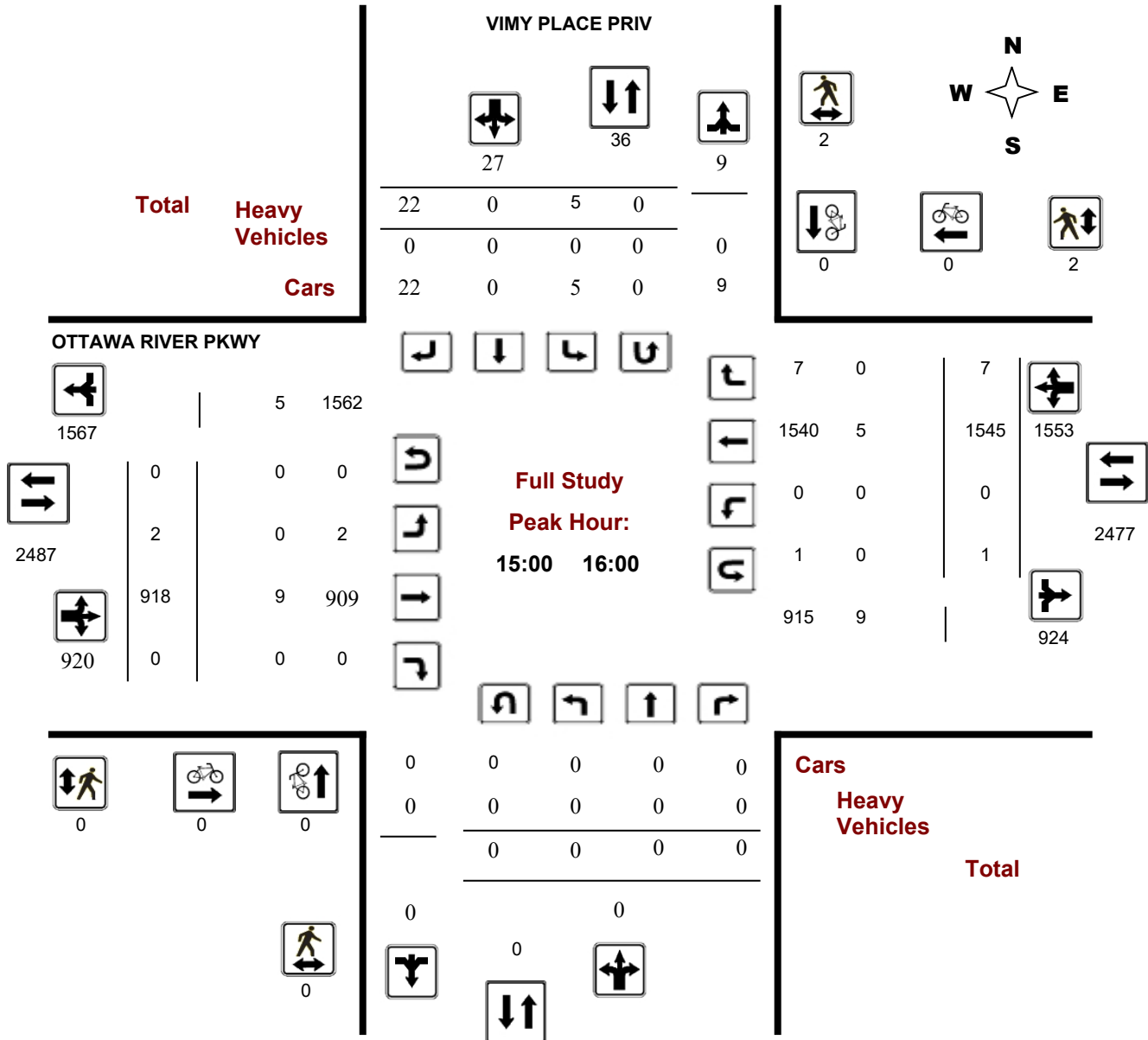
**Survey Date:** Thursday, January 23, 2020

**WO No:** 39382

**Start Time:** 07:00

**Device:** Miovision

### Full Study Peak Hour Diagram



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





# Transportation Services - Traffic Services

## Turning Movement Count - Peak Hour Diagram

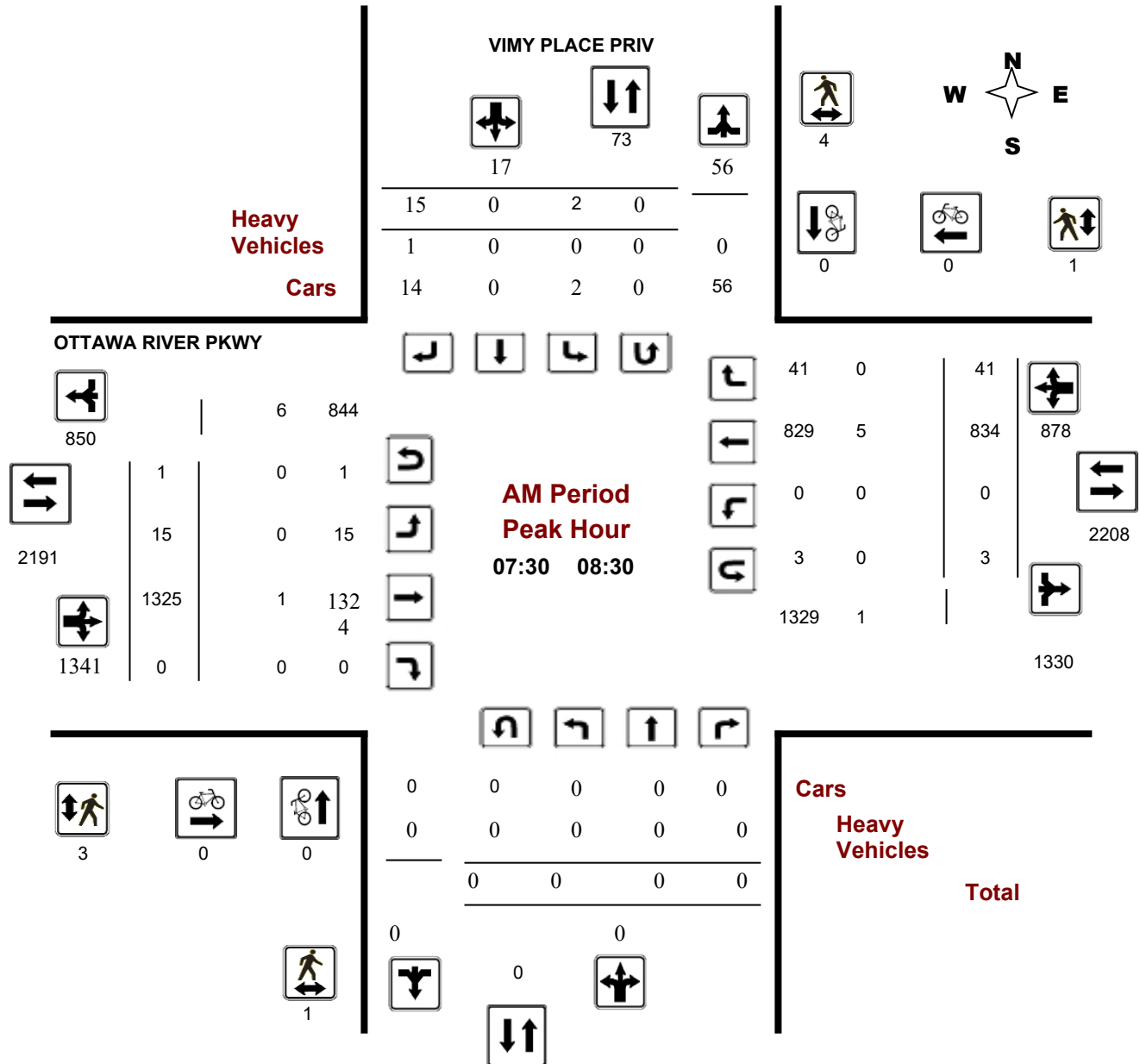
### OTTAWA RIVER PKWY @ VIMY PLACE PRIV

**Survey Date:** Thursday, January 23, 2020

**Start Time:** 07:00

**WO No:** 39382

**Device:** Miovision



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



# Transportation Services - Traffic Services

## Turning Movement Count - Peak Hour Diagram

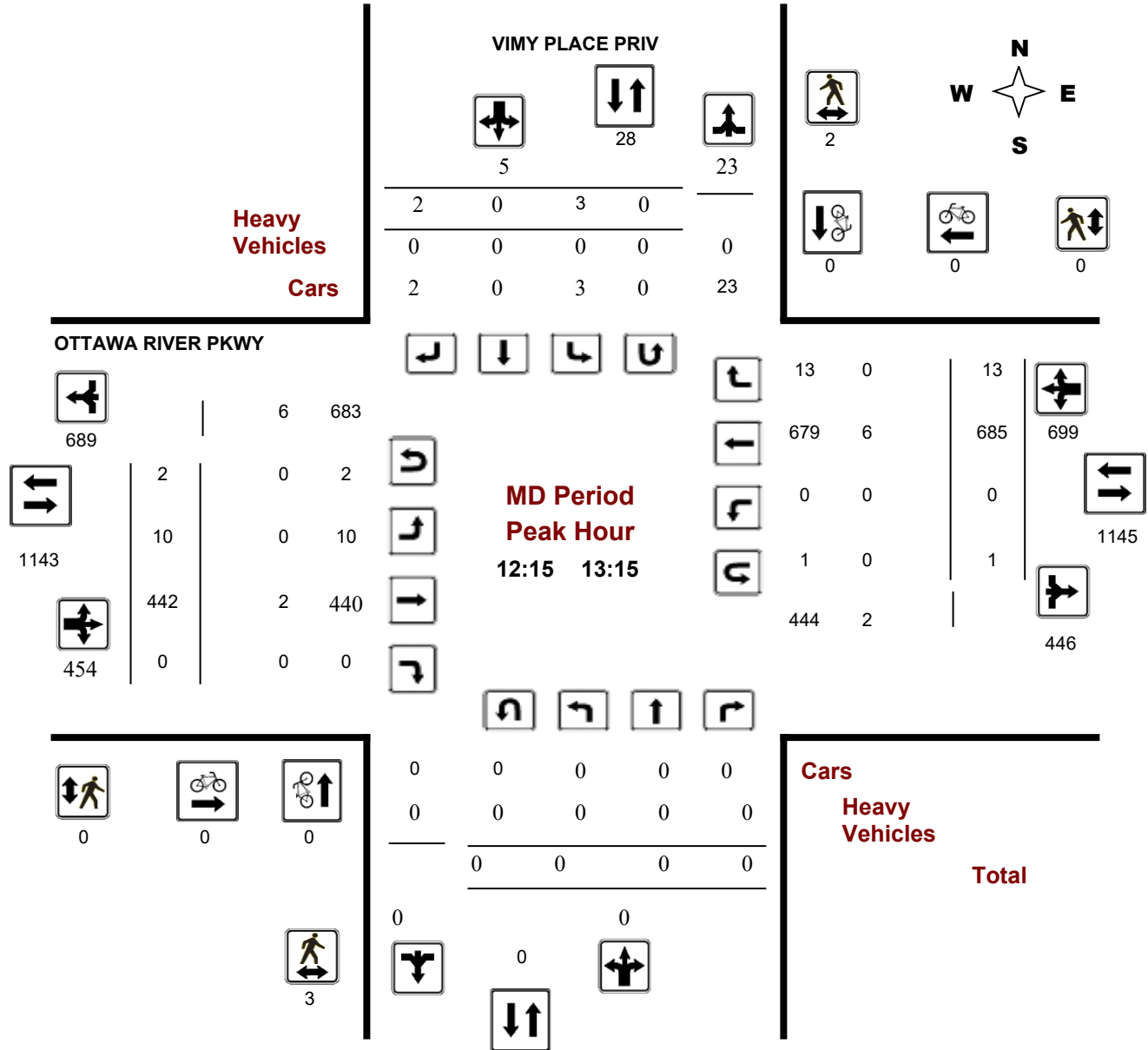
### OTTAWA RIVER PKWY @ VIMY PLACE PRIV

**Survey Date:** Thursday, January 23, 2020

**Start Time:** 07:00

**WO No:** 39382

**Device:** Miovision



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

## Turning Movement Count - Peak Hour Diagram

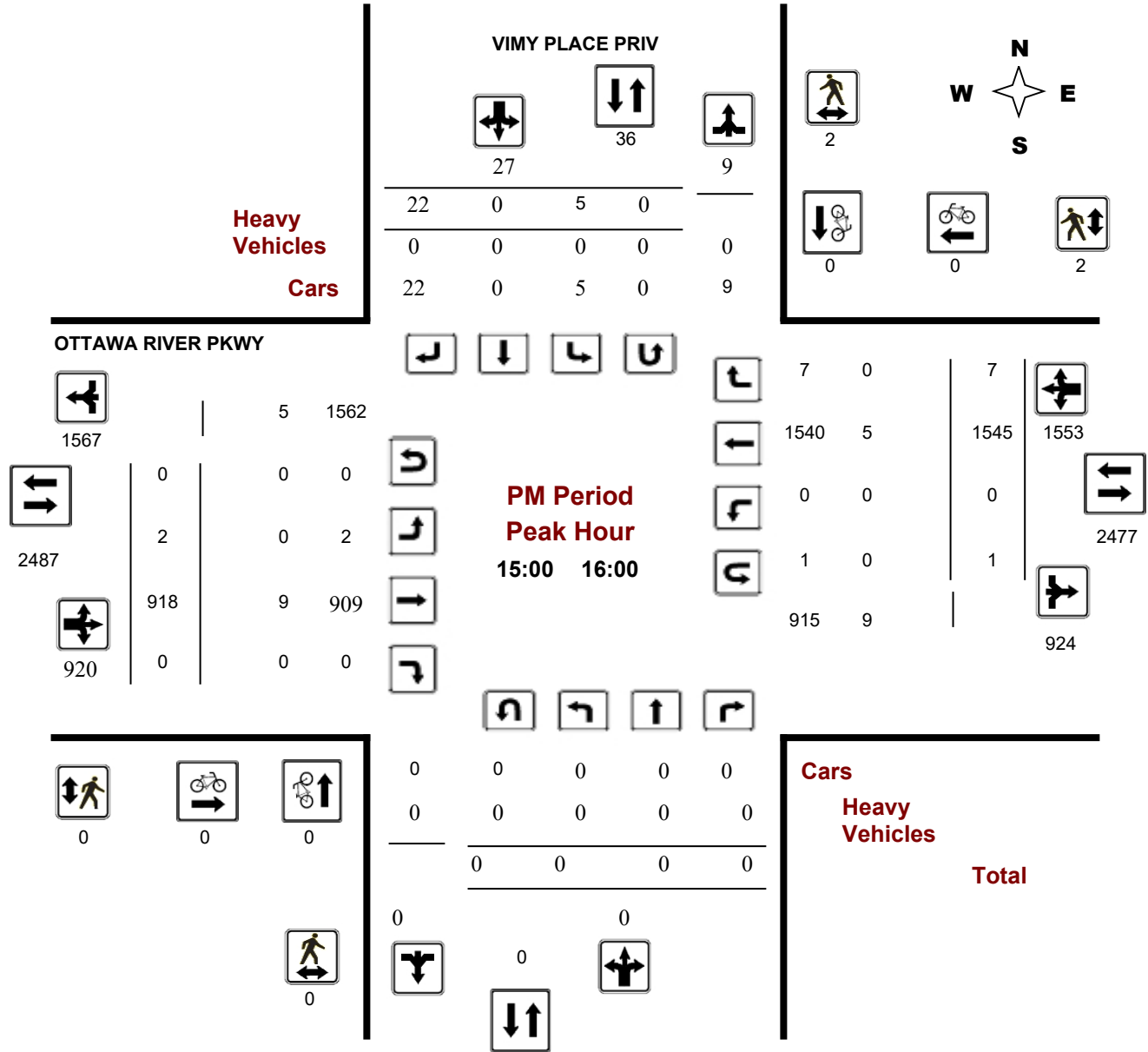
### OTTAWA RIVER PKWY @ VIMY PLACE PRIV

**Survey Date:** Thursday, January 23, 2020

**Start Time:** 07:00

**WO No:** 39382

**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**

**AADT Factor**

Northbound: 0      Southbound: 0  
Eastbound: 6      Westbound: 10

1.00

#### VIMY PLACE PRIV

#### OTTAWA RIVER PKWY

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

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
<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>20</b>	<b>0</b>	<b>63</b>	<b>83</b>	<b>1</b>	<b>62</b>	<b>6815</b>	<b>0</b>	<b>6883</b>	<b>0</b>	<b>7916</b>	<b>126</b>	<b>8052</b>	<b>1</b>	<b>15,018</b>

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

#### VIMY PLACE PRIV

#### OTTAWA RIVER PKWY

Time Period	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
<b>Total</b>	<b>7</b>	<b>15</b>	<b>22</b>	<b>7</b>	<b>5</b>	<b>12</b>	<b>34</b>

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	Northbound			N TOT	Southbound			S TOT	STR TOT	Eastbound			E TOT	Westbound			W TOT	STR TOT	Grand Total
	LT	ST	RT		LT	ST	RT			LT	ST	RT		LT	ST	RT			
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

#### VIMY PLACE PRIV

#### OTTAWA RIVER PKWY

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	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

## Turning Movement Count - Study Results

### PARKDALE AVE @ SCOTT ST

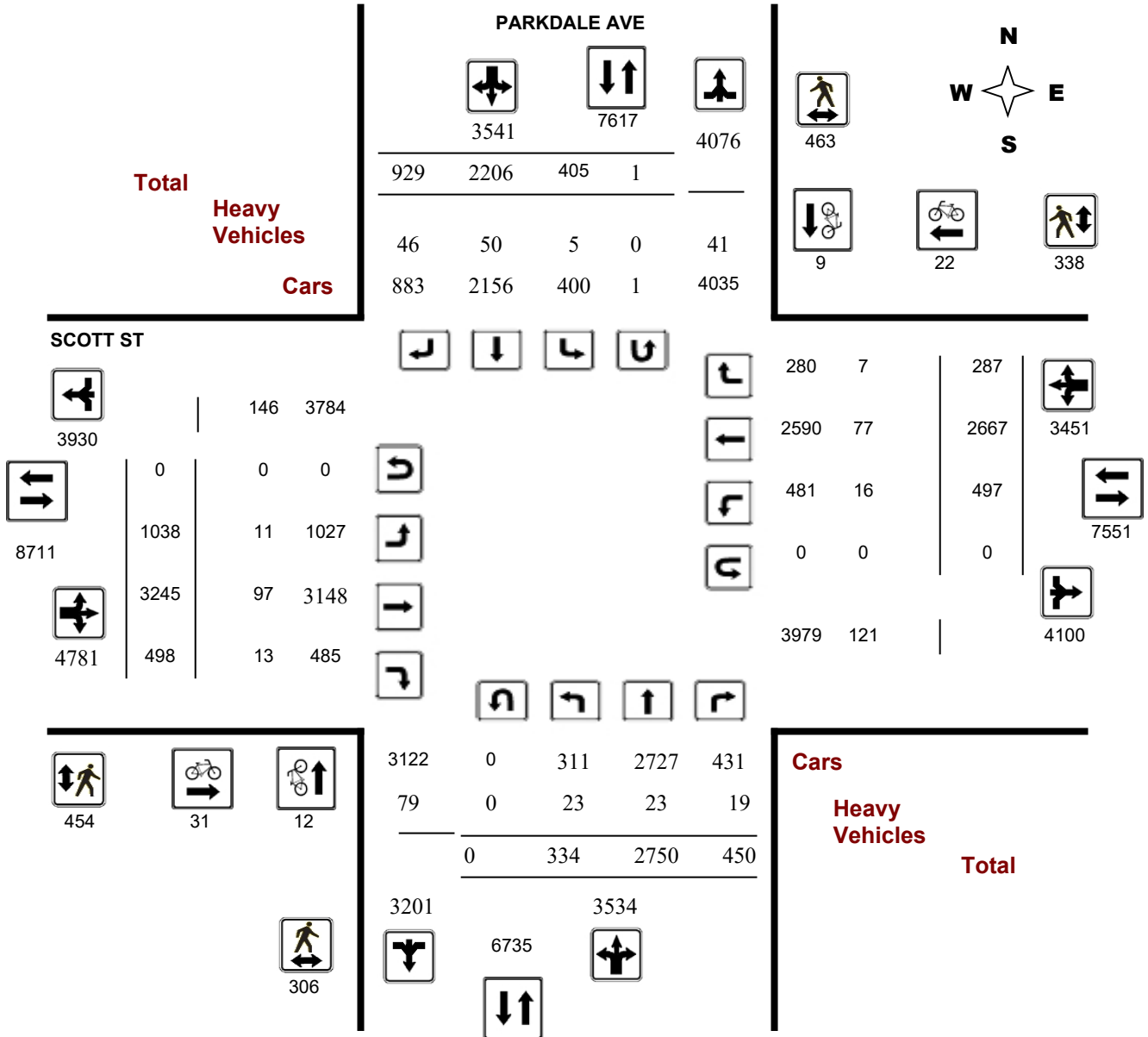
**Survey Date:** Tuesday, April 01, 2014

**WO No:** 1288

**Start Time:** 07:00

**Device:** Miovision

### Full Study Diagram



## Turning Movement Count - Study Results

### PARKDALE AVE @ SCOTT ST

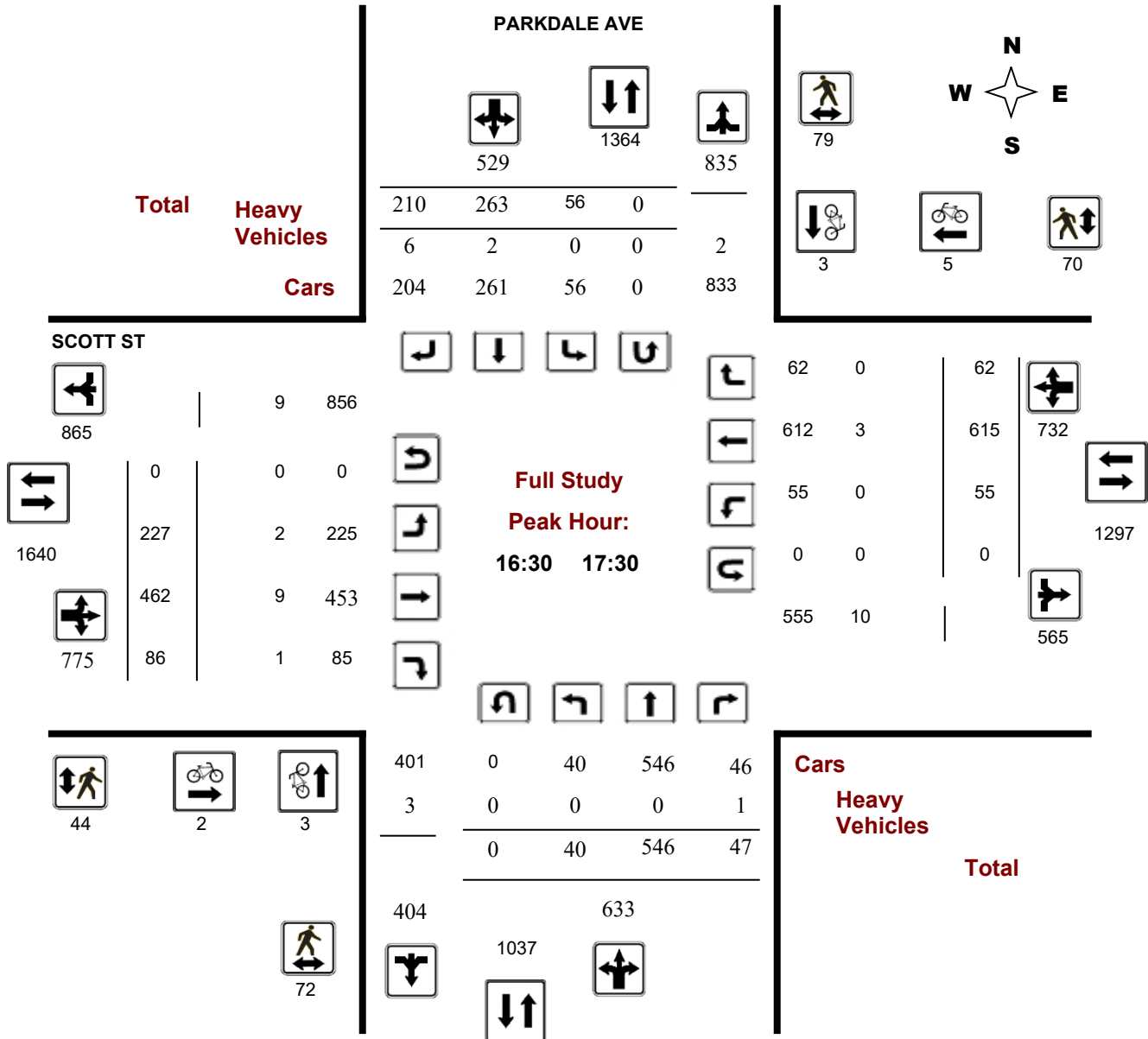
**Survey Date:** Tuesday, April 01, 2014

**WO No:** 1288

**Start Time:** 07:00

**Device:** Miovision

### Full Study Peak Hour Diagram





# Transportation Services - Traffic Services

## Turning Movement Count - Peak Hour Diagram

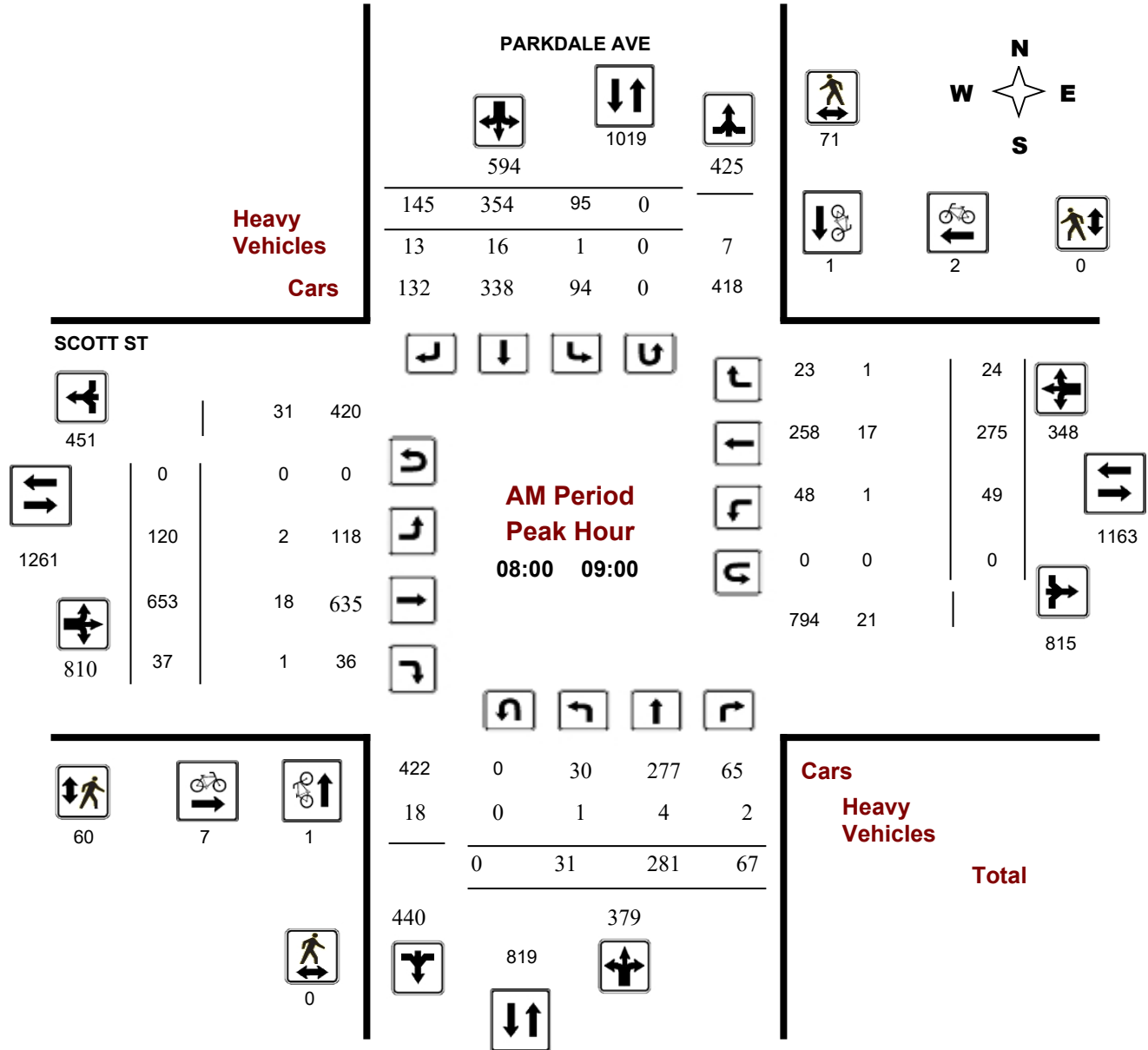
### PARKDALE AVE @ SCOTT ST

**Survey Date:** Tuesday, April 01, 2014

**Start Time:** 07:00

**WO No:** 1288

**Device:** Miovision



## Turning Movement Count - Peak Hour Diagram

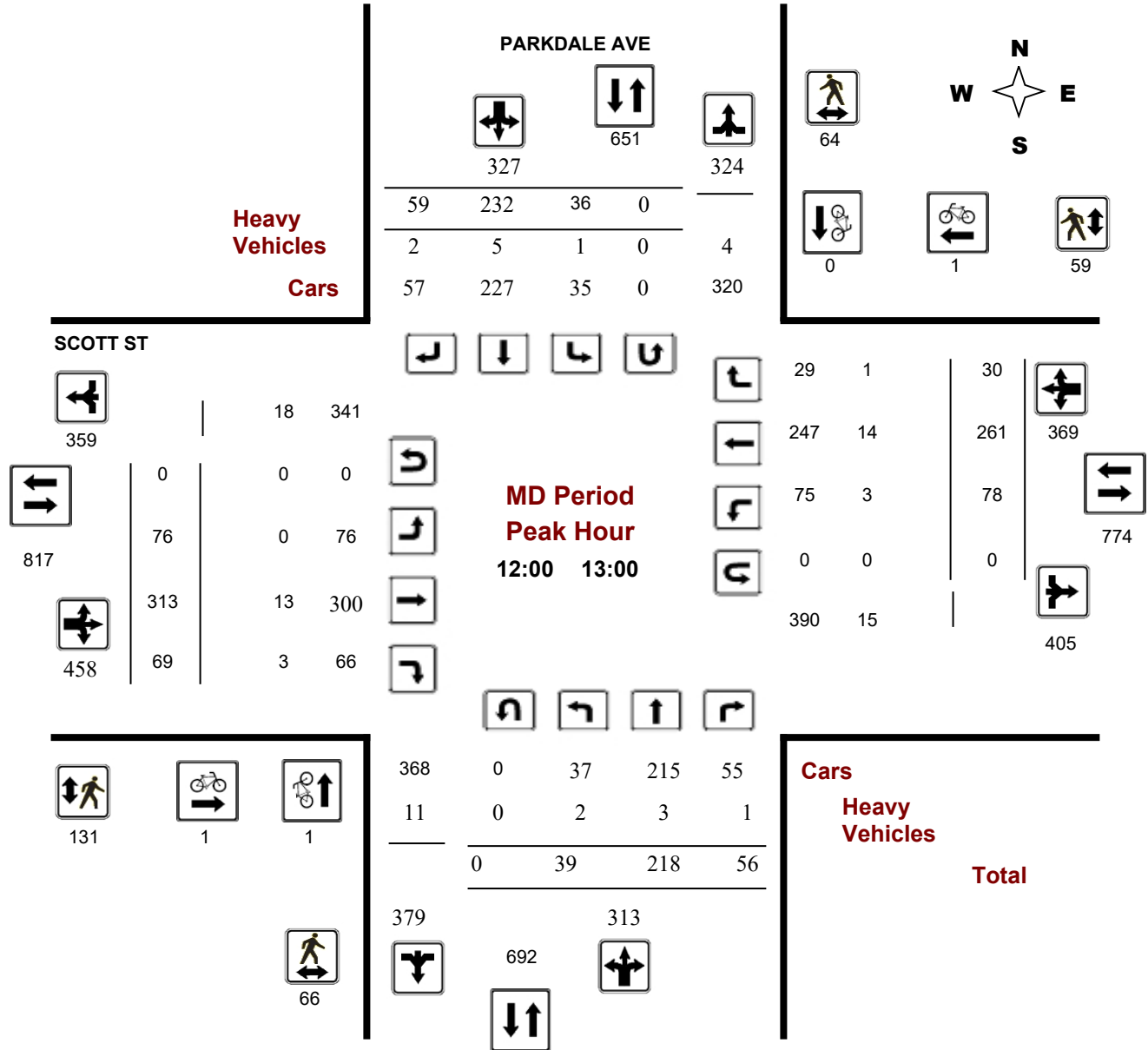
### PARKDALE AVE @ SCOTT ST

**Survey Date:** Tuesday, April 01, 2014

**Start Time:** 07:00

**WO No:** 1288

**Device:** Miovision



**Comments**

## Turning Movement Count - Peak Hour Diagram

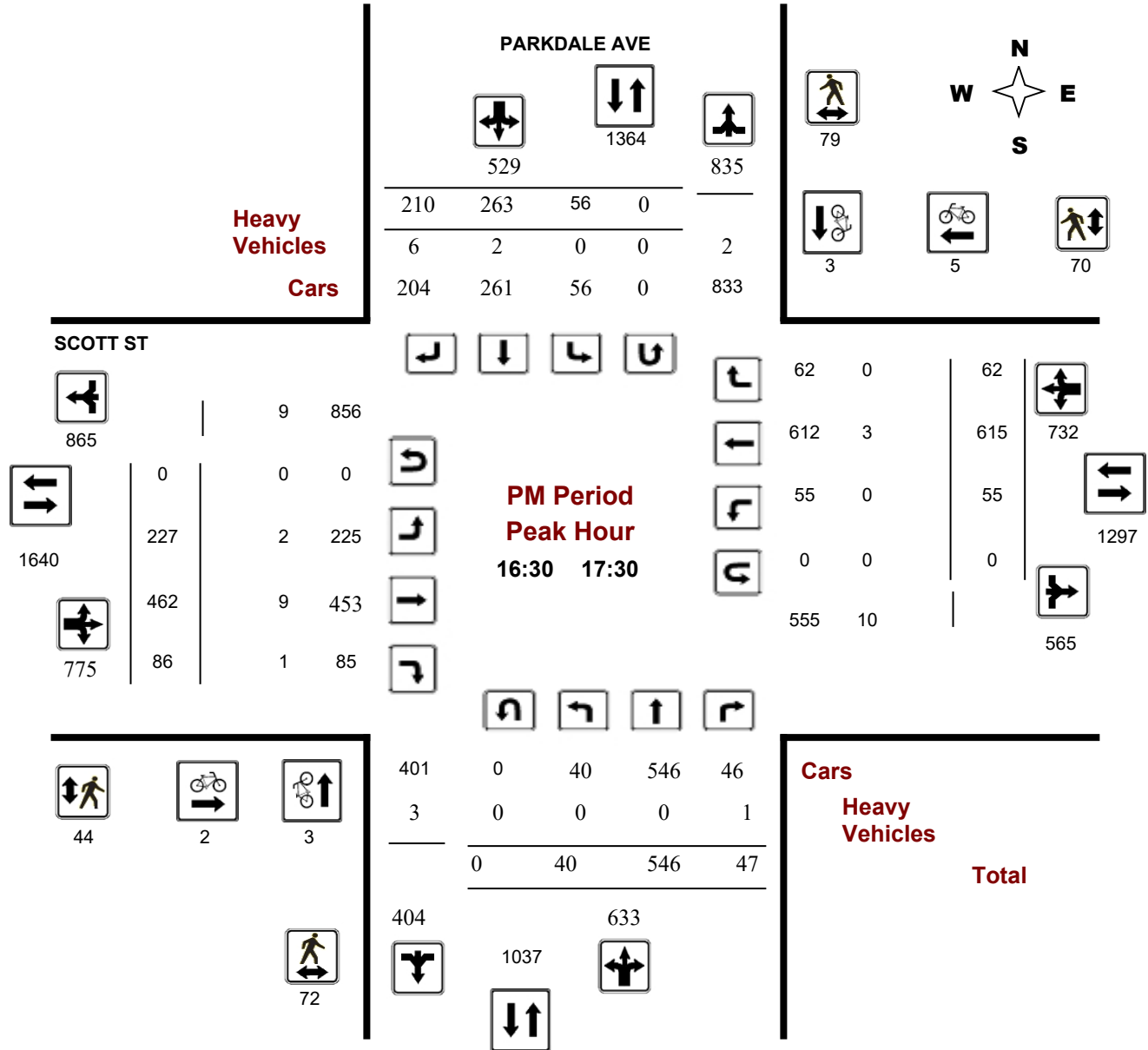
### PARKDALE AVE @ SCOTT ST

**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

Period	PARKDALE AVE Northbound					PARKDALE AVE Southbound					SCOTT ST Eastbound					SCOTT ST Westbound					Grand Total
	LT	ST	RT	NB TOT	STR TOT	LT	ST	RT	SB TOT	STR TOT	LT	ST	RT	EB TOT	STR TOT	LT	ST	RT	WB TOT	STR TOT	
07:00 08:00	30	227	47	304	887	63	381	139	583	79	356	44	479	59	198	21	278	757	1644		
08:00 09:00	31	281	67	379	973	95	354	145	594	120	653	37	810	49	275	24	348	1158	2131		
09:00 10:00	53	216	61	330	717	34	264	89	387	58	377	54	489	63	221	24	308	797	1514		
11:30 12:30	41	194	60	295	653	43	240	75	358	66	316	68	450	55	240	33	328	778	1431		
12:30 13:30	48	235	54	337	645	35	218	55	308	70	289	67	426	79	256	31	366	792	1437		
15:00 16:00	53	508	63	624	1008	34	244	106	384	202	367	72	641	50	349	36	435	1076	2084		
16:00 17:00	34	590	47	671	1129	55	237	166	458	238	461	65	764	52	550	65	667	1431	2560		
17:00 18:00	44	499	51	594	1062	46	268	154	468	205	426	91	722	90	578	53	721	1443	2505		
<b>Sub Total</b>	334	2750	450	3534	7074	405	2206	929	3540	1038	3245	498	4781	497	2667	287	3451	8232	15306		
<b>U Turns</b>				0	1				1				0				0	0	1		
<b>Total</b>	334	2750	450	3534	7075	405	2206	929	3541	1038	3245	498	4781	497	2667	287	3451	8232	15307		
<b>EQ 12Hr</b>	464	3822	626	4912	9834	563	3066	1291	4922	1443	4511	692	6646	691	3707	399	4797	11442	21277		
Note: These values are calculated by multiplying the totals by the appropriate expansion factor.																	<b>1.39</b>				
<b>AVG 12Hr</b>	394	3242	531	4167	8851	477	2601	1095	4175	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.																	<b>0.9</b>				
<b>AVG 24Hr</b>	516	4247	695	5458	10927	626	3407	1435	5469	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.																	<b>1.31</b>				
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
<b>Total:</b>	<b>334</b>	<b>2750</b>	<b>450</b>	<b>3534</b>	<b>405</b>	<b>2206</b>	<b>929</b>	<b>3541</b>	<b>166</b>	<b>1038</b>	<b>3245</b>	<b>498</b>	<b>4781</b>	<b>497</b>	<b>2667</b>	<b>287</b>	<b>3451</b>	<b>166</b>	<b>15,307</b>

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			Grand Total
	Northbound	Southbound	Street Total	Eastbound	Westbound	Street 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
<b>Total</b>	<b>12</b>	<b>9</b>	<b>21</b>	<b>31</b>	<b>22</b>	<b>53</b>	<b>74</b>



# 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
<b>Total</b> .....	<b>306</b>	<b>463</b>	<b>769</b>	<b>454</b>	<b>338</b>	<b>792</b>	<b>1561</b>



# 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	Northbound			N TOT	Southbound			S TOT	STR TOT	Eastbound			E TOT	Westbound			W TOT	STR TOT	Grand Total
	LT	ST	RT		LT	ST	RT			LT	ST	RT		LT	ST	RT			
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
<b>Total:</b> None	<b>23</b>	<b>23</b>	<b>19</b>	<b>65</b>	<b>5</b>	<b>50</b>	<b>46</b>	<b>101</b>	<b>166</b>	<b>11</b>	<b>97</b>	<b>13</b>	<b>121</b>	<b>16</b>	<b>77</b>	<b>7</b>	<b>100</b>	<b>221</b>	<b>387</b>



# 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

## Turning Movement Count - Study Results

### PARKDALE AVE @ SIR JOHN A. MACDONALD PKWY RAMPS

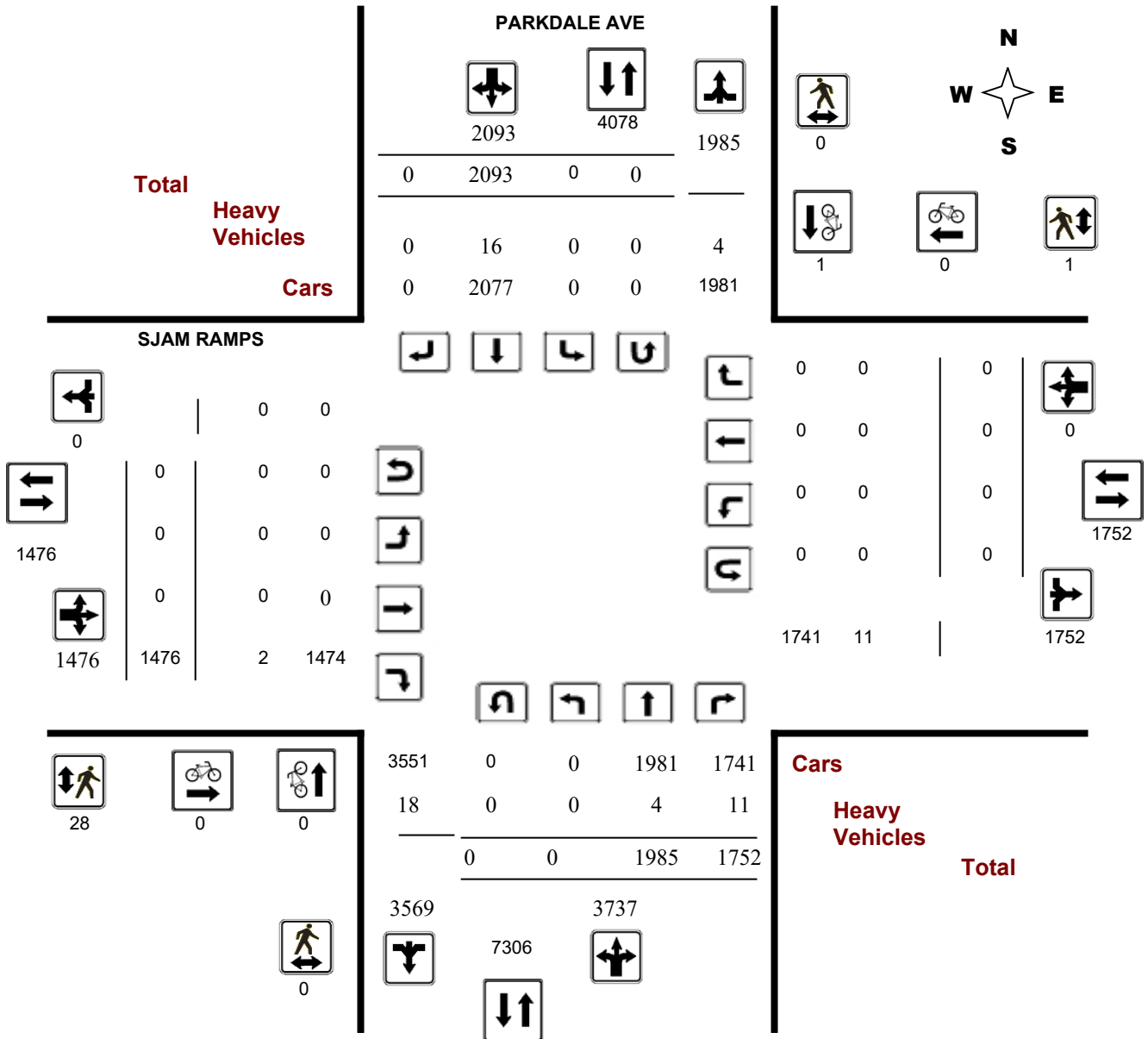
**Survey Date:** Wednesday, February 26, 2020

**WO No:** 39635

**Start Time:** 07:00

**Device:** Miovision

### Full Study Diagram



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

## Turning Movement Count - Study Results

### PARKDALE AVE @ SIR JOHN A. MACDONALD PKWY RAMPS

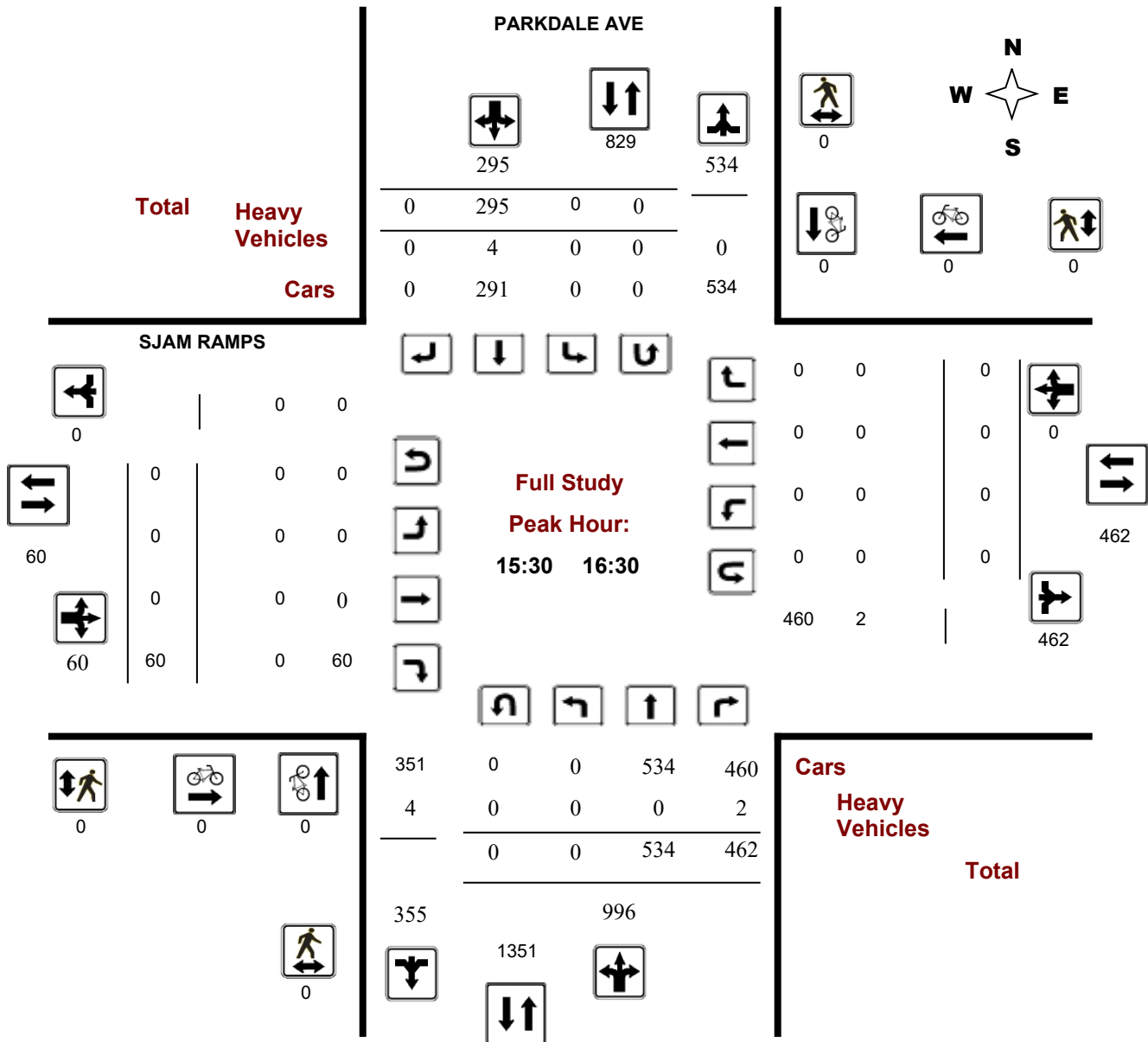
**Survey Date:** Wednesday, February 26, 2020

**WO No:** 39635

**Start Time:** 07:00

**Device:** Miovision

### Full Study Peak Hour Diagram



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



## Turning Movement Count - Peak Hour Diagram

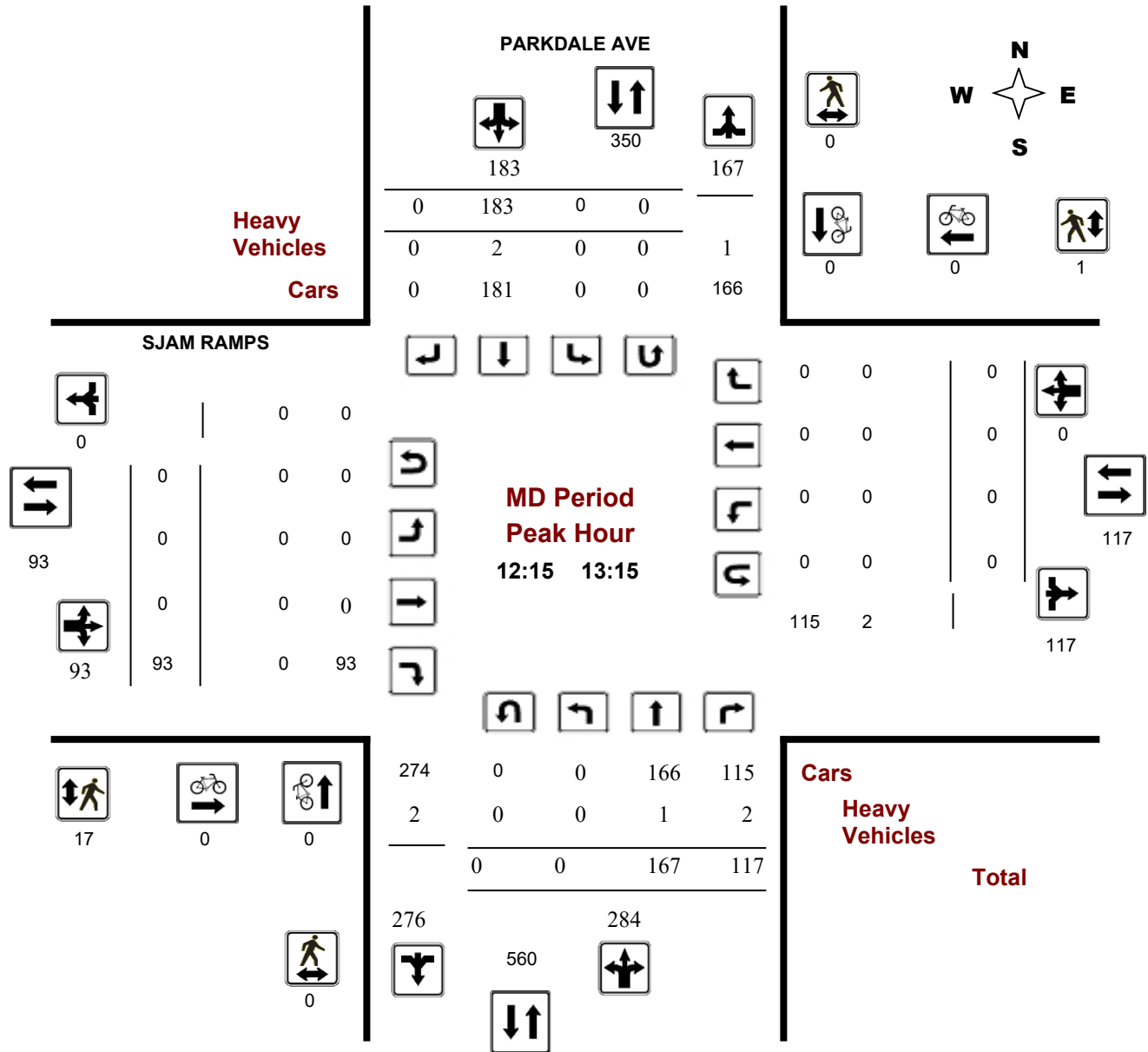
### PARKDALE AVE @ SIR JOHN A. MACDONALD PKWY RAMPS

**Survey Date:** Wednesday, February 26, 2020

**Start Time:** 07:00

**WO No:** 39635

**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

Period	Northbound				Southbound				STR TOT	Eastbound				Westbound				STR TOT	Grand Total
	LT	ST	RT	NB TOT	LT	ST	RT	SB TOT		LT	ST	RT	EB TOT	LT	ST	RT	WB TOT		
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
<b>Sub Total</b>	0	1985	1752	3737	0	2093	0	2093	5830	0	0	1476	1476	0	0	0	0	1476	7306
<b>U Turns</b>				0				0	0				0				0	0	0
<b>Total</b>	0	1985	1752	3737	0	2093	0	2093	5830	0	0	1476	1476	0	0	0	0	1476	7306
<b>EQ 12Hr</b>	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.													<b>1.39</b>						
<b>AVG 12Hr</b>	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.													<b>1</b>						
<b>AVG 24Hr</b>	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

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	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
<b>Total:</b>	<b>0</b>	<b>1985</b>	<b>1752</b>	<b>3737</b>	<b>0</b>	<b>2093</b>	<b>0</b>	<b>2093</b>	<b>31</b>	<b>0</b>	<b>0</b>	<b>1476</b>	<b>1476</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>31</b>	<b>7,306</b>

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

#### PARKDALE AVE

#### SJAM RAMPS

Time Period	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
<b>Total</b>	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
<b>Total</b> .....	<b>0</b>	<b>0</b>	<b>0</b>	<b>28</b>	<b>1</b>	<b>29</b>	<b>29</b>

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**

Northbound                      Southbound                      Eastbound                      Westbound

Time Period	Northbound			N TOT	Southbound			S TOT	STR TOT	Eastbound			E TOT	Westbound			W TOT	STR TOT	Grand Total
	LT	ST	RT		LT	ST	RT			LT	ST	RT		LT	ST	RT			
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



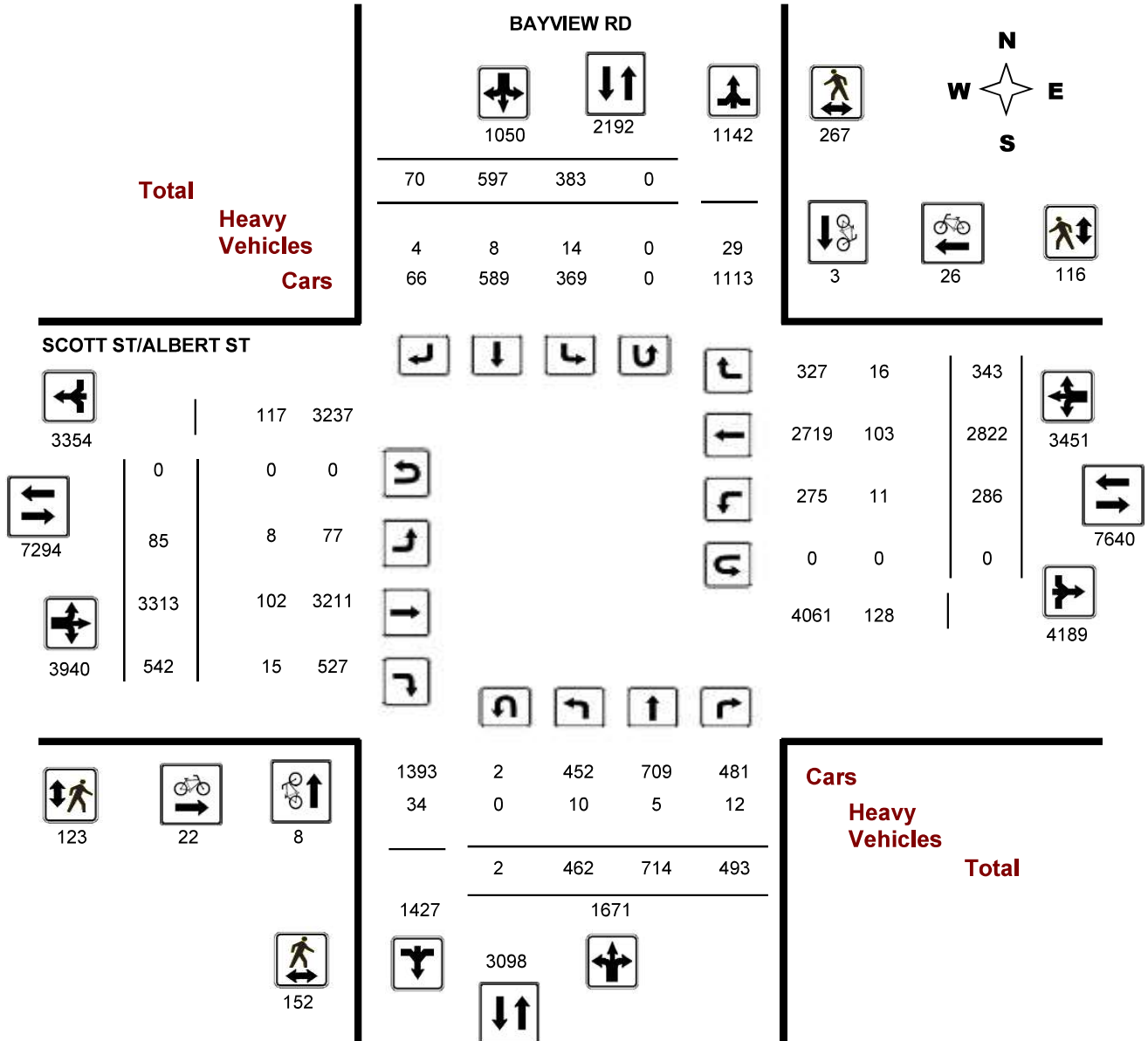
# Public Works - Traffic Services

## 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

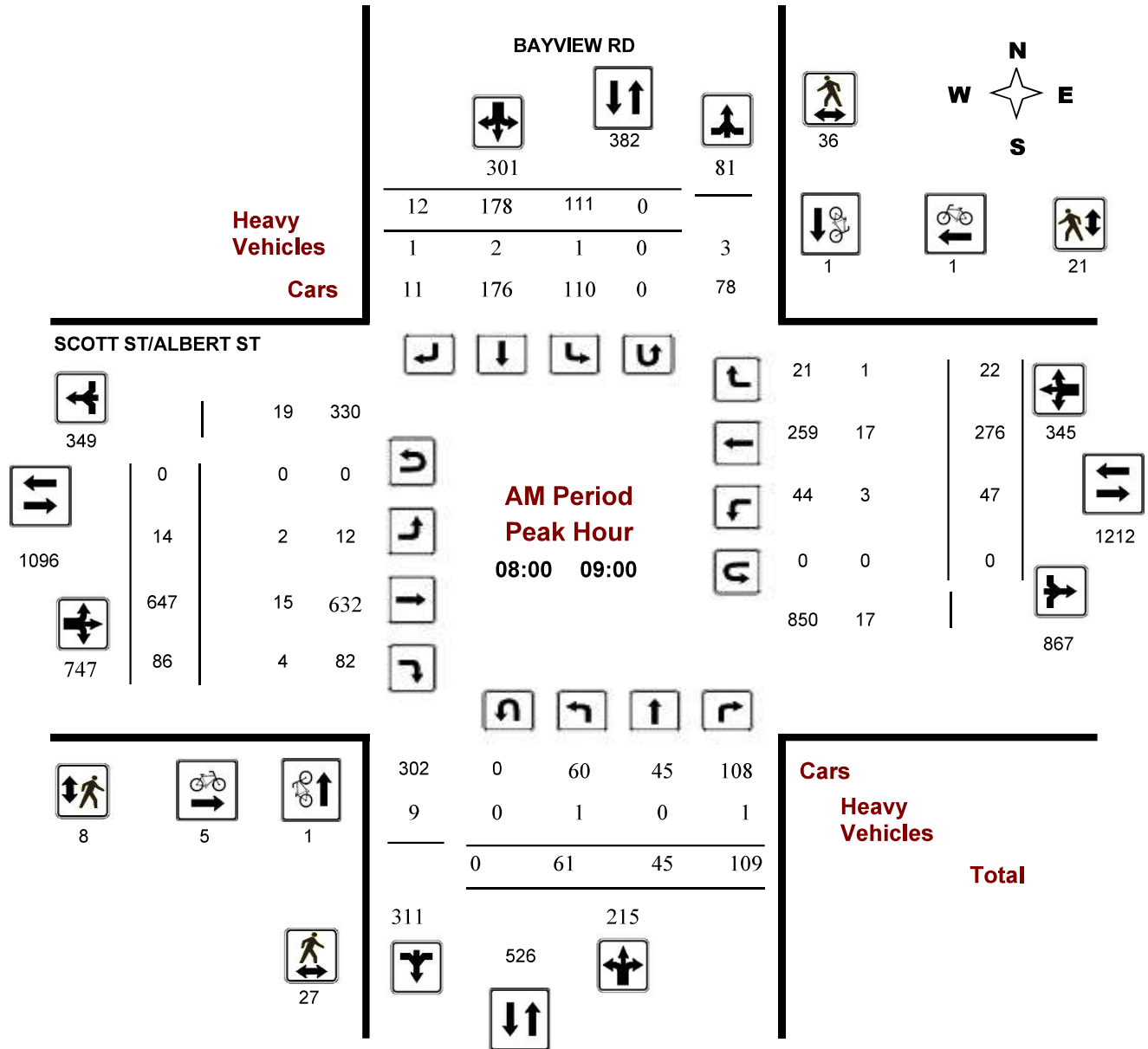
### BAYVIEW RD @ SCOTT ST/ALBERT ST

**Survey Date:** Tuesday, April 01, 2014

**Start Time:** 07:00

**WO No:** 1292

**Device:** Miovision





# Public Works - Traffic Services

## Turning Movement Count - Peak Hour Diagram

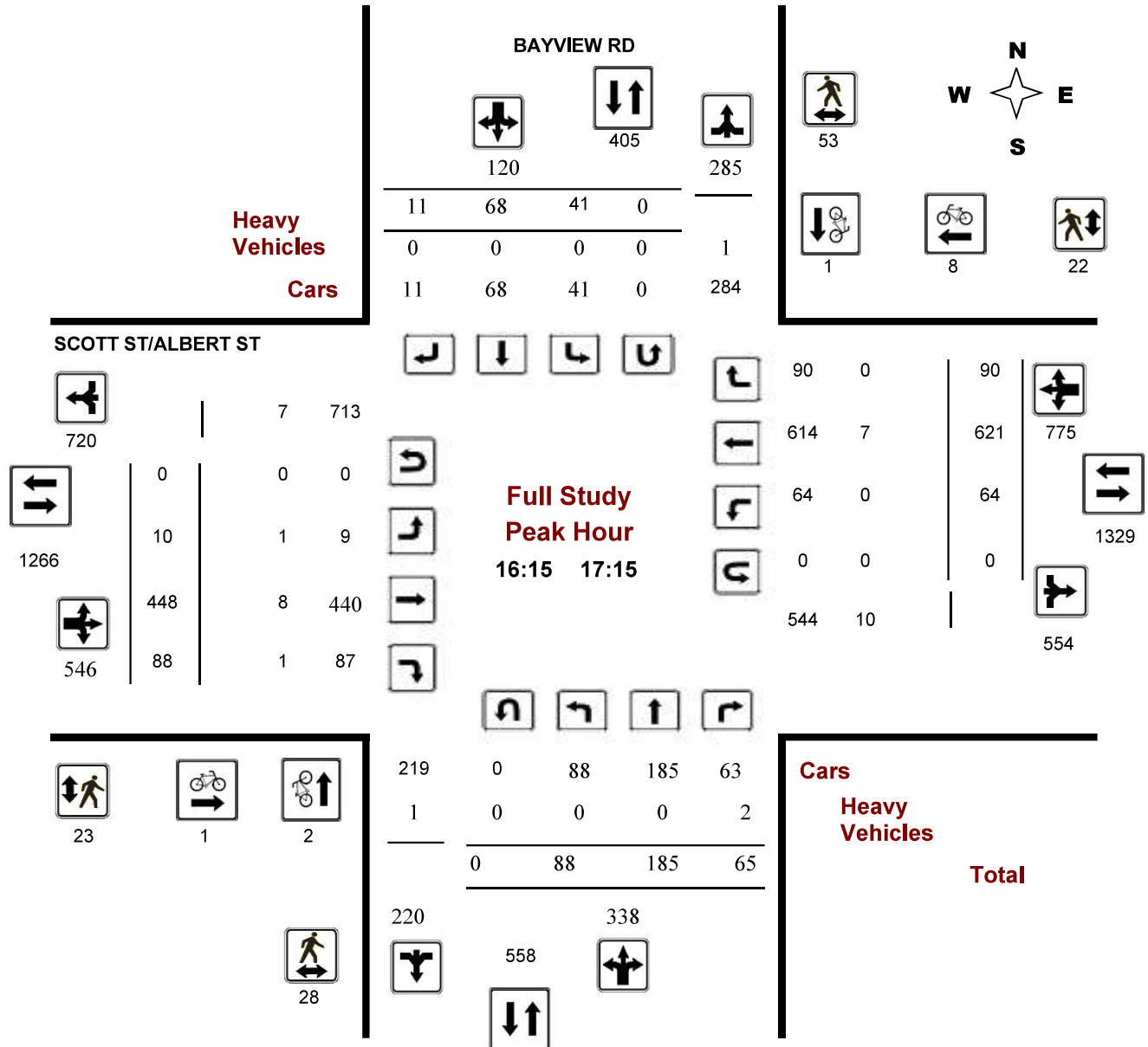
### BAYVIEW RD @ SCOTT ST/ALBERT ST

**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

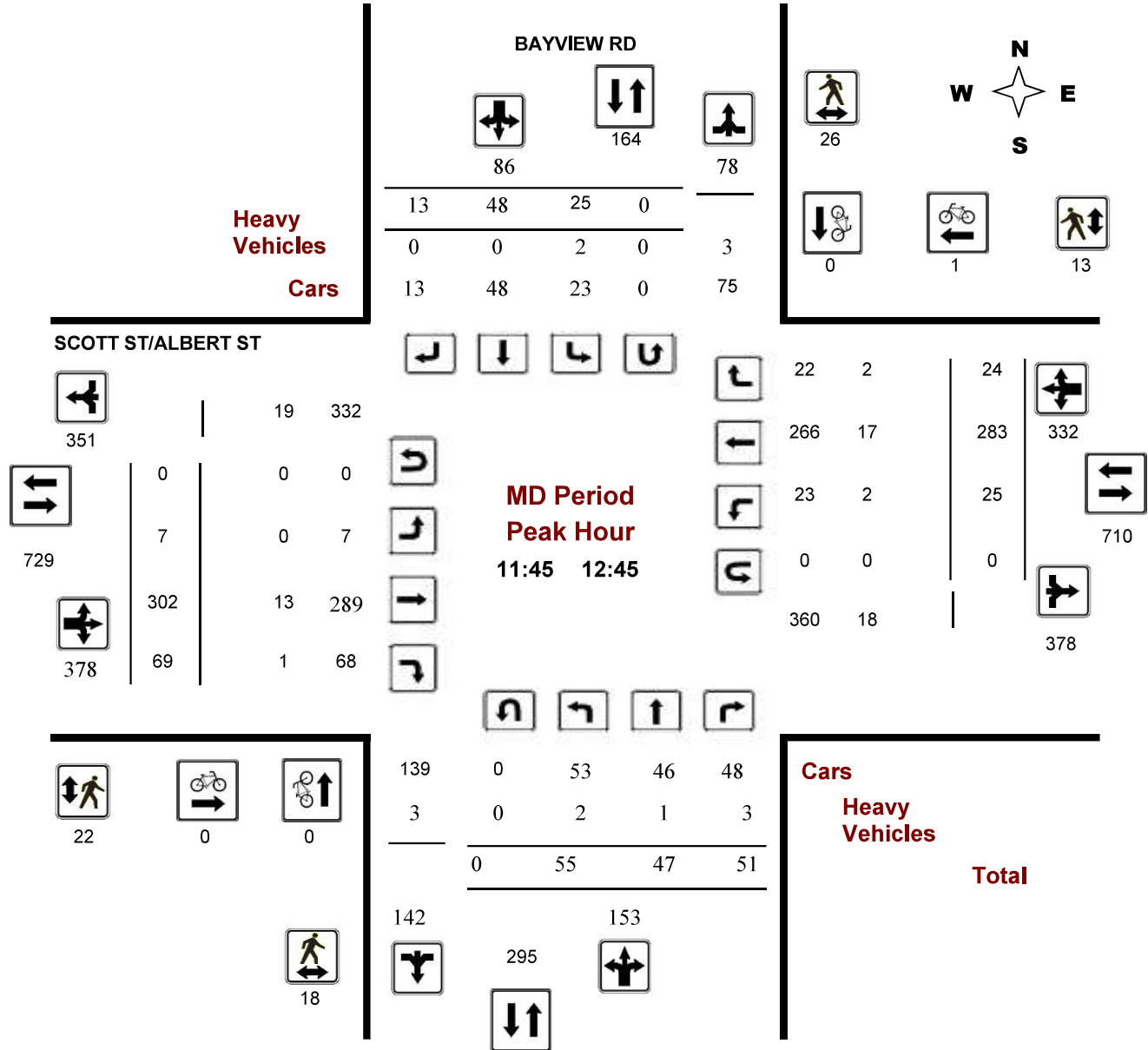
### BAYVIEW RD @ SCOTT ST/ALBERT ST

**Survey Date:** Tuesday, April 01, 2014

**Start Time:** 07:00

**WO No:** 1292

**Device:** Miovision





# Public Works - Traffic Services

## Turning Movement Count - Peak Hour Diagram

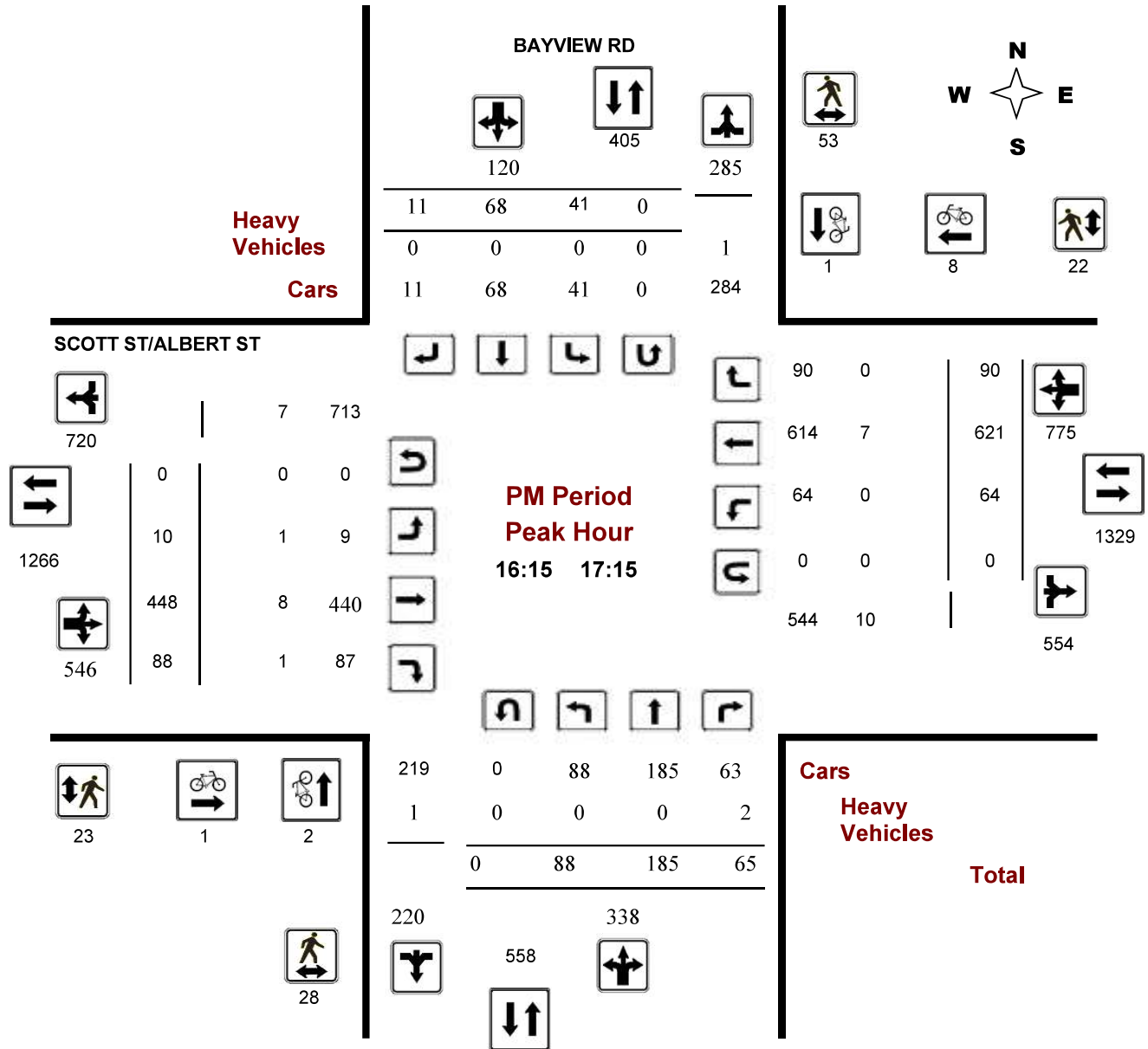
### BAYVIEW RD @ SCOTT ST/ALBERT ST

**Survey Date:** Tuesday, April 01, 2014

**Start Time:** 07:00

**WO No:** 1292

**Device:** Miovision



**Comments**



## 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**

Period	BAYVIEW RD									SCOTT ST/ALBERT ST									Grand Total	
	Northbound				Southbound					Eastbound			Westbound							
	LT	ST	RT	NB TOT	LT	ST	RT	SB TOT	STR TOT	LT	ST	RT	EB TOT	LT	ST	RT	WB TOT	STR TOT		
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	
<b>Sub Total</b>	462	714	493	1669	383	597	70	1050	2719	85	3313	542	3940	286	2822	343	3451	7391	10110	
<b>U Turns</b>				2				0	2				0				0	0	2	
<b>Total</b>	462	714	493	1671	383	597	70	1050	2721	85	3313	542	3940	286	2822	343	3451	7391	10112	
<b>EQ 12Hr</b>	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.													<b>1.39</b>							
<b>AVG 12Hr</b>	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.													<b>.90</b>							
<b>AVG 24Hr</b>	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.													<b>1.31</b>							

**Comments:**

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



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

Table with columns for Time Period, Northbound (LT, ST, RT, N TOT), Southbound (LT, ST, RT, S TOT, STR TOT), Eastbound (LT, ST, RT, E TOT), Westbound (LT, ST, RT, W TOT, STR TOT), and Grand Total. Rows represent 15-minute intervals from 07:00 to 18:00.

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
<b>07:00 08:00</b>	<b>13</b>	<b>38</b>	<b>51</b>	<b>16</b>	<b>9</b>	<b>25</b>	<b>76</b>
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
<b>08:00 09:00</b>	<b>27</b>	<b>36</b>	<b>63</b>	<b>8</b>	<b>21</b>	<b>29</b>	<b>92</b>
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
<b>09:00 10:00</b>	<b>15</b>	<b>14</b>	<b>29</b>	<b>6</b>	<b>12</b>	<b>18</b>	<b>47</b>
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
<b>11:30 12:30</b>	<b>12</b>	<b>27</b>	<b>39</b>	<b>21</b>	<b>9</b>	<b>30</b>	<b>69</b>
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
<b>12:30 13:30</b>	<b>14</b>	<b>16</b>	<b>30</b>	<b>14</b>	<b>12</b>	<b>26</b>	<b>56</b>
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
<b>15:00 16:00</b>	<b>17</b>	<b>22</b>	<b>39</b>	<b>7</b>	<b>12</b>	<b>19</b>	<b>58</b>
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
<b>16:00 17:00</b>	<b>23</b>	<b>55</b>	<b>78</b>	<b>24</b>	<b>15</b>	<b>39</b>	<b>117</b>
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
<b>17:00 18:00</b>	<b>31</b>	<b>59</b>	<b>90</b>	<b>27</b>	<b>26</b>	<b>53</b>	<b>143</b>
<b>Total .....</b>	<b>152</b>	<b>267</b>	<b>419</b>	<b>123</b>	<b>116</b>	<b>239</b>	<b>658</b>

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

Time Period	BAYVIEW RD			SCOTT ST/ALBERT ST			Grand Total
	Northbound	Southbound	Street Total	Eastbound	Westbound	Street 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
<b>Total .....</b>	<b>8</b>	<b>3</b>	<b>11</b>	<b>22</b>	<b>26</b>	<b>48</b>	<b>59</b>

**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

Time Period	BAYVIEW RD									SCOTT ST/ALBERT ST									Grand Total
	Northbound			Southbound			S TOT	STR TOT	Eastbound			Westbound			W TOT	STR TOT			
	LT	ST	RT	N TOT	LT	ST			RT	LT	ST	RT	E TOT	LT			ST	RT	
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
<b>Sub Total</b>	<b>10</b>	<b>5</b>	<b>12</b>	<b>27</b>	<b>14</b>	<b>8</b>	<b>4</b>	<b>26</b>	<b>53</b>	<b>8</b>	<b>102</b>	<b>15</b>	<b>125</b>	<b>11</b>	<b>103</b>	<b>16</b>	<b>130</b>	<b>255</b>	<b>308</b>
<b>U-Turns (Heavy Vehicles)</b>				<b>0</b>				<b>0</b>	<b>0</b>				<b>0</b>				<b>0</b>	<b>0</b>	<b>0</b>
<b>Total</b>	<b>10</b>	<b>5</b>	<b>12</b>	<b>0</b>	<b>14</b>	<b>8</b>	<b>4</b>	<b>26</b>	<b>53</b>	<b>8</b>	<b>102</b>	<b>15</b>	<b>125</b>	<b>11</b>	<b>103</b>	<b>16</b>	<b>130</b>	<b>255</b>	<b>308</b>

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

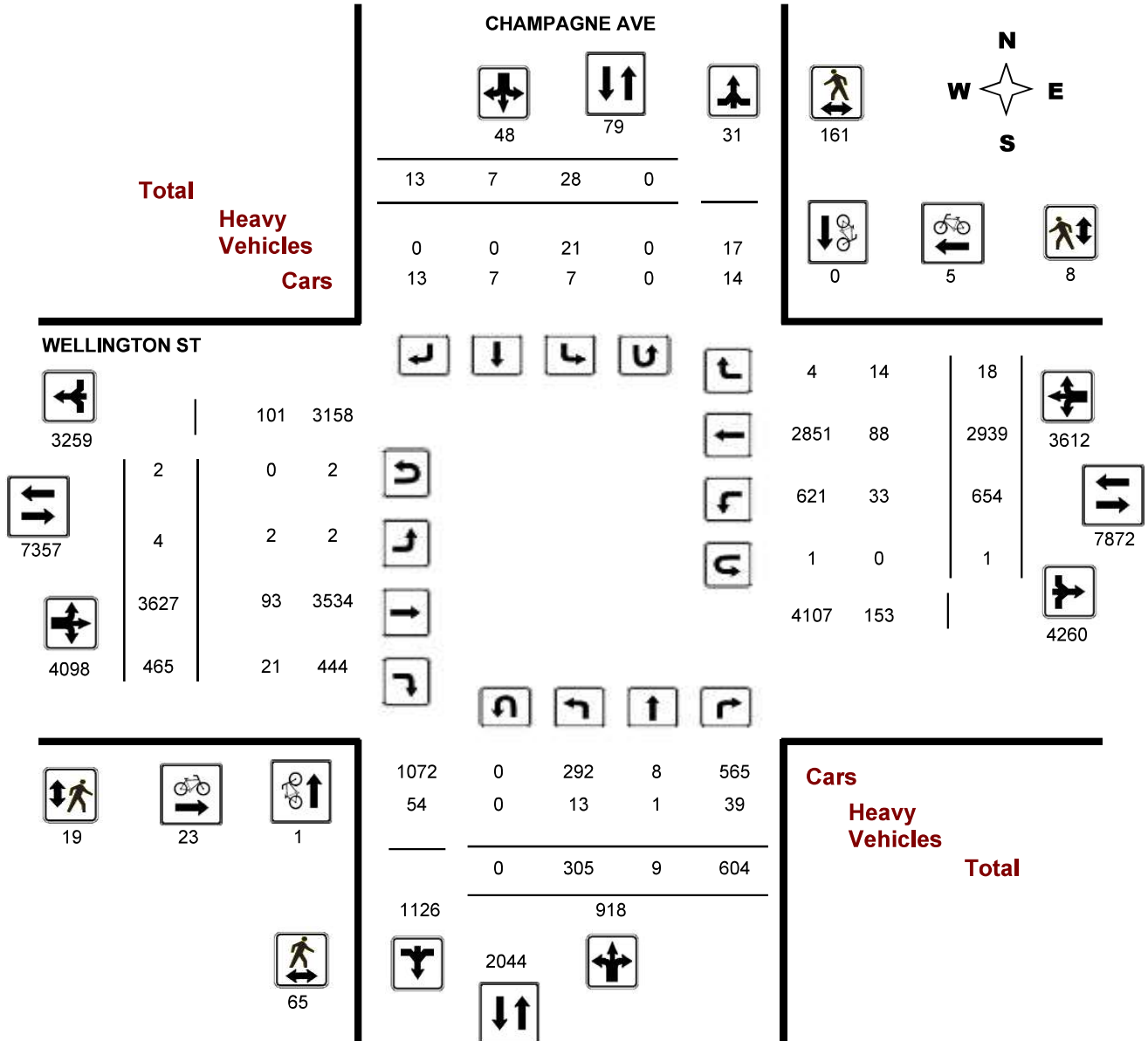
## Turning Movement Count - Full Study Diagram

### 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

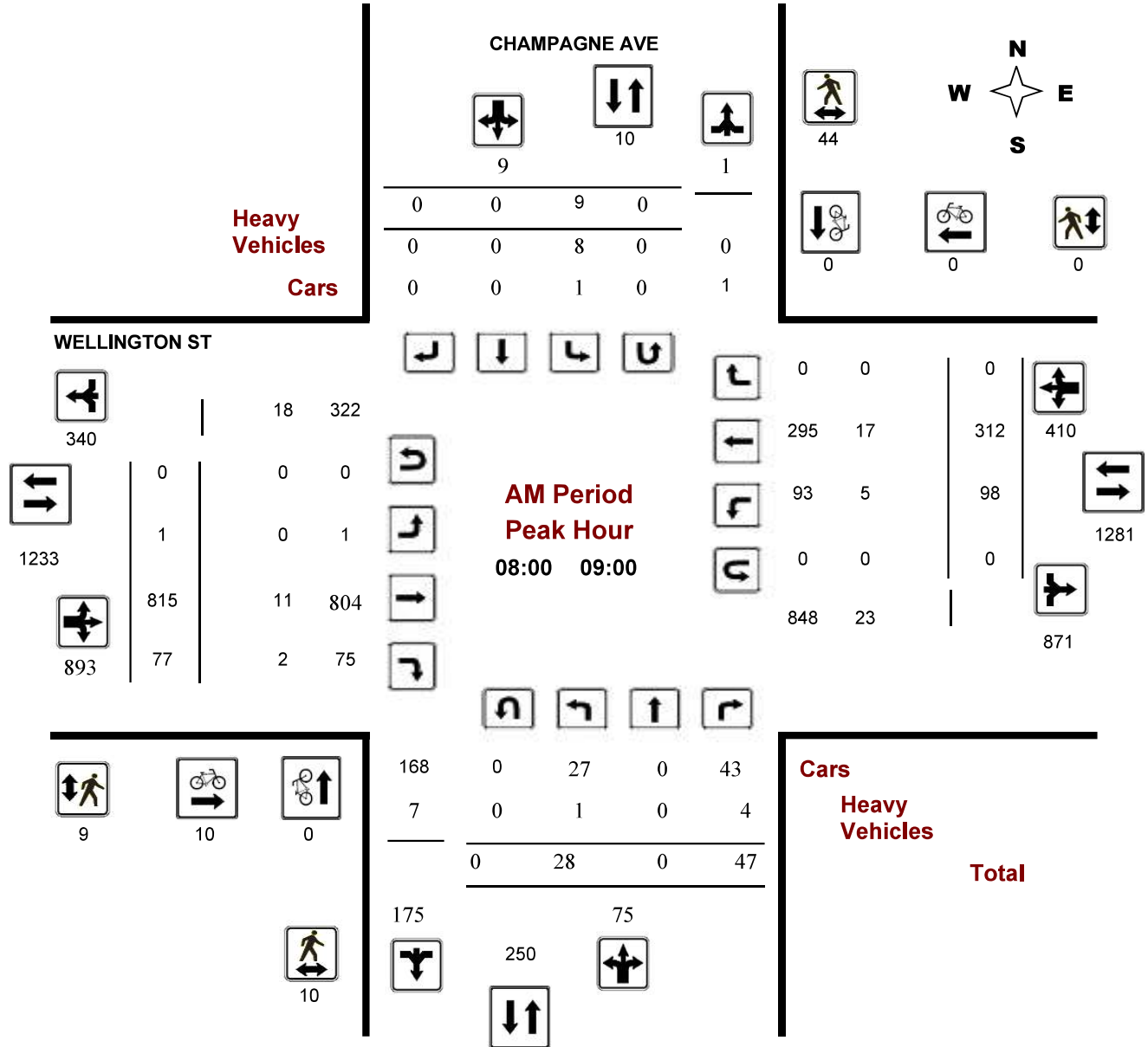
### CHAMPAGNE AVE @ WELLINGTON ST

**Survey Date:** Wednesday, April 02, 2014

**Start Time:** 07:00

**WO No:** 29660

**Device:** Miovision







# Public Works - Traffic Services

## Turning Movement Count - Peak Hour Diagram

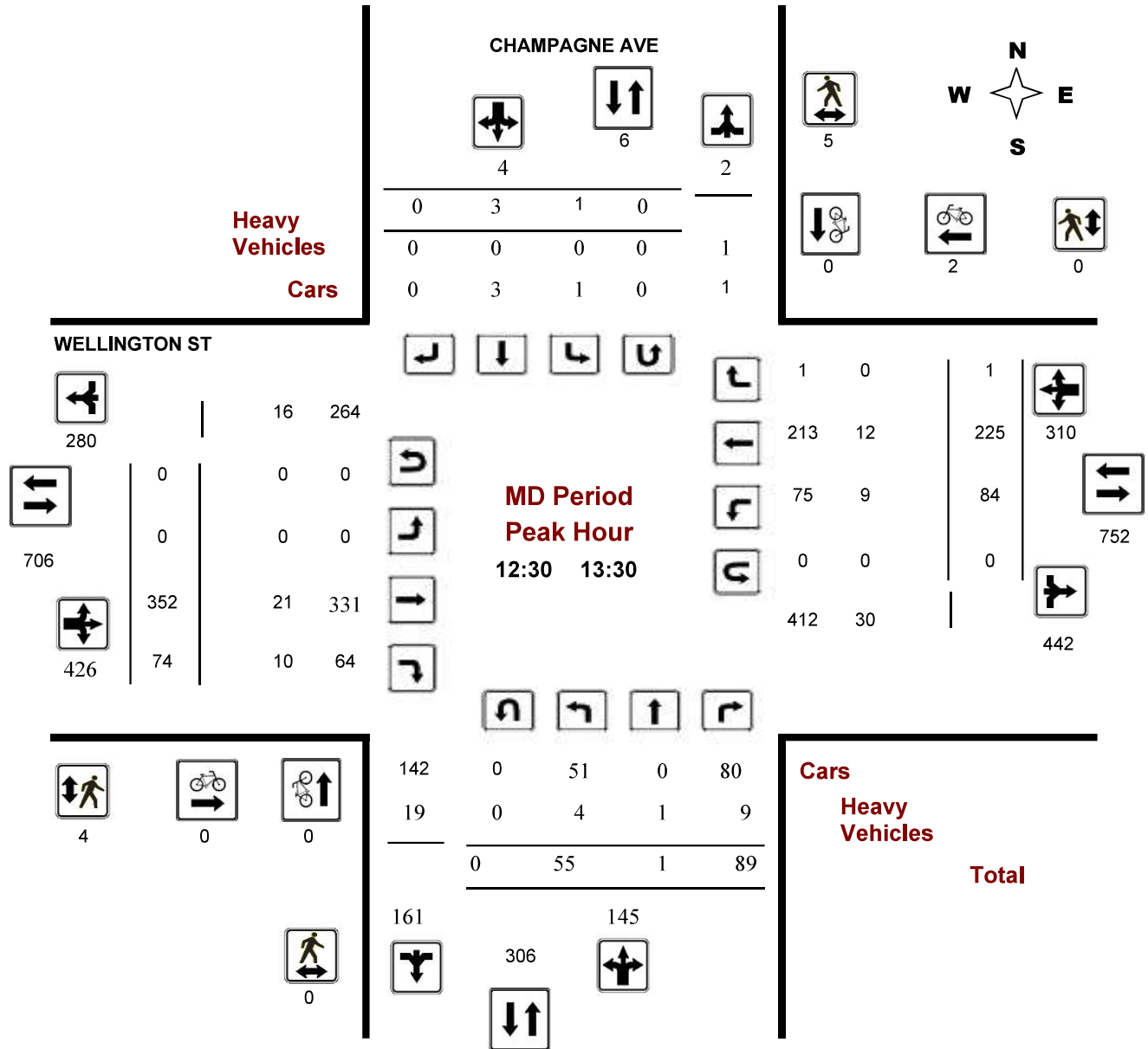
### CHAMPAGNE AVE @ WELLINGTON ST

**Survey Date:** Wednesday, April 02, 2014

**Start Time:** 07:00

**WO No:** 29660

**Device:** Miovision





# Public Works - Traffic Services

## Turning Movement Count - Peak Hour Diagram

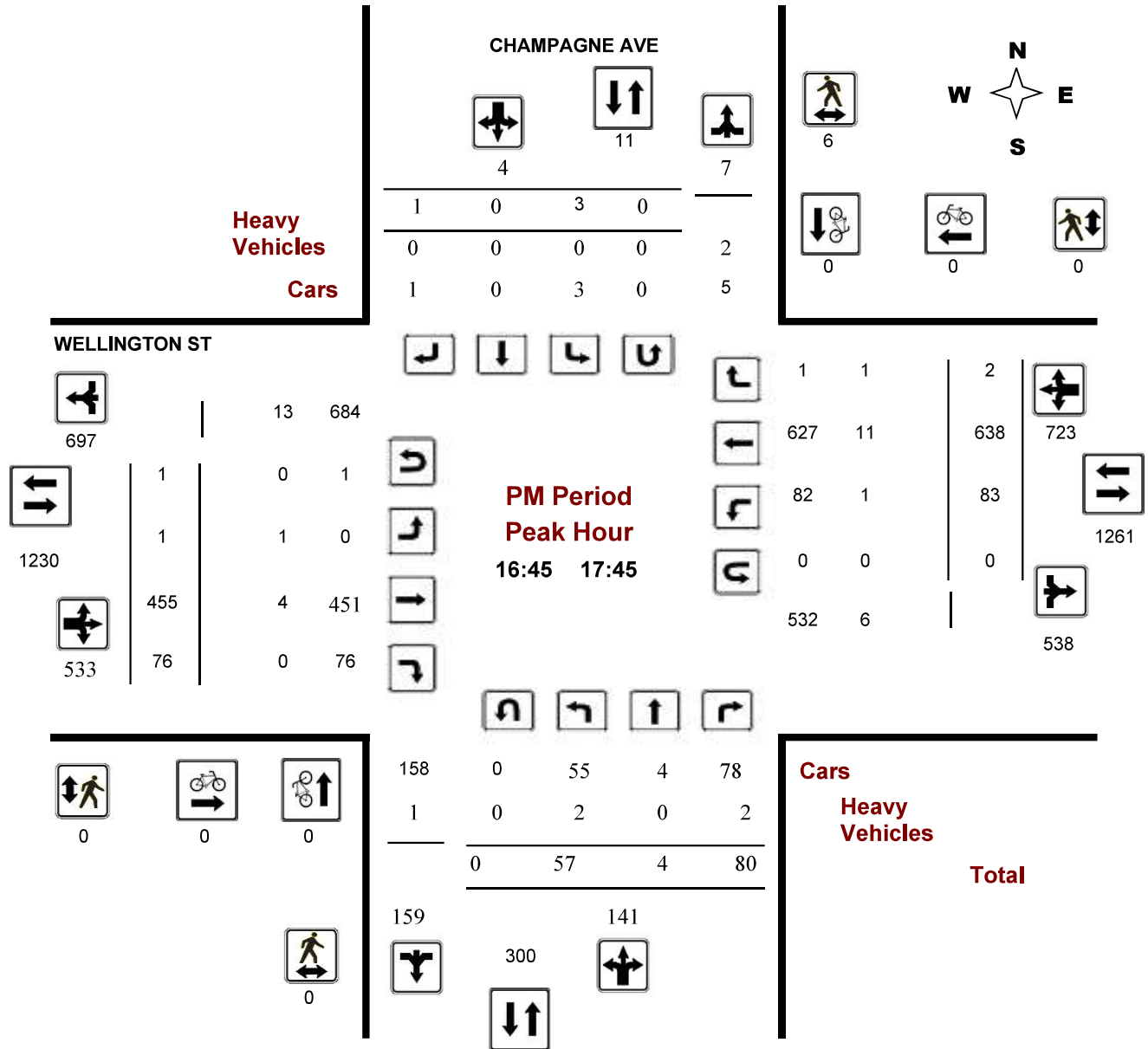
### CHAMPAGNE AVE @ WELLINGTON ST

**Survey Date:** Wednesday, April 02, 2014

**Start Time:** 07:00

**WO No:** 29660

**Device:** Miovision



**Comments**



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

Period	CHAMPAGNE AVE									WELLINGTON ST									Grand Total
	Northbound				Southbound					Eastbound			Westbound						
	LT	ST	RT	NB TOT	LT	ST	RT	SB TOT	STR TOT	LT	ST	RT	EB TOT	LT	ST	RT	WB TOT	STR TOT	
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
<b>Sub Total</b>	305	9	604	918	28	7	13	48	966	4	3627	465	4096	654	2939	18	3611	7707	8673
<b>U Turns</b>				0				0	0				2				1	3	3
<b>Total</b>	305	9	604	918	28	7	13	48	966	4	3627	465	4098	654	2939	18	3612	7710	8676
<b>EQ 12Hr</b>	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.													<b>1.39</b>						
<b>AVG 12Hr</b>	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.													<b>.90</b>						
<b>AVG 24Hr</b>	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.													<b>1.31</b>						

Comments:

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



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

Time Period	CHAMPAGNE AVE									WELLINGTON ST									Grand Total
	Northbound			N TOT	Southbound			S TOT	STR TOT	Eastbound			E TOT	Westbound			W TOT	STR TOT	
LT	ST	RT	LT		ST	RT	LT			ST	RT	LT		ST	RT	LT			ST
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
<b>TOTAL:</b>	<b>305</b>	<b>9</b>	<b>604</b>	<b>918</b>	<b>28</b>	<b>7</b>	<b>13</b>	<b>48</b>	<b>966</b>	<b>4</b>	<b>3627</b>	<b>465</b>	<b>4098</b>	<b>654</b>	<b>2939</b>	<b>18</b>	<b>3612</b>	<b>7710</b>	<b>8676</b>

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
<b>07:00 08:00</b>	<b>8</b>	<b>43</b>	<b>51</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>54</b>
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
<b>08:00 09:00</b>	<b>10</b>	<b>44</b>	<b>54</b>	<b>9</b>	<b>0</b>	<b>9</b>	<b>63</b>
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
<b>09:00 10:00</b>	<b>18</b>	<b>17</b>	<b>35</b>	<b>3</b>	<b>1</b>	<b>4</b>	<b>39</b>
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
<b>11:30 12:30</b>	<b>9</b>	<b>15</b>	<b>24</b>	<b>2</b>	<b>1</b>	<b>3</b>	<b>27</b>
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
<b>12:30 13:30</b>	<b>0</b>	<b>5</b>	<b>5</b>	<b>4</b>	<b>0</b>	<b>4</b>	<b>9</b>
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
<b>15:00 16:00</b>	<b>20</b>	<b>0</b>	<b>20</b>	<b>0</b>	<b>4</b>	<b>4</b>	<b>24</b>
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
<b>16:00 17:00</b>	<b>0</b>	<b>37</b>	<b>37</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>37</b>
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
<b>17:00 18:00</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Total .....</b>	<b>65</b>	<b>161</b>	<b>226</b>	<b>19</b>	<b>8</b>	<b>27</b>	<b>253</b>

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

Time Period	CHAMPAGNE AVE			WELLINGTON ST			Grand Total
	Northbound	Southbound	Street Total	Eastbound	Westbound	Street 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
<b>Total .....</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>23</b>	<b>5</b>	<b>28</b>	<b>29</b>

**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

Time Period	CHAMPAGNE AVE									WELLINGTON ST									Grand Total
	Northbound			Southbound			S TOT	STR TOT	Eastbound			Westbound			W TOT	STR TOT			
	LT	ST	RT	N TOT	LT	ST			RT	LT	ST	RT	E TOT	LT			ST	RT	
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
<b>Sub Total</b>	<b>13</b>	<b>1</b>	<b>39</b>	<b>53</b>	<b>21</b>	<b>0</b>	<b>0</b>	<b>21</b>	<b>74</b>	<b>2</b>	<b>93</b>	<b>21</b>	<b>116</b>	<b>33</b>	<b>88</b>	<b>14</b>	<b>135</b>	<b>251</b>	<b>325</b>
<b>U-Turns (Heavy Vehicles)</b>				<b>0</b>				<b>0</b>	<b>0</b>				<b>0</b>				<b>0</b>	<b>0</b>	<b>0</b>
<b>Total</b>	<b>13</b>	<b>1</b>	<b>39</b>	<b>0</b>	<b>21</b>	<b>0</b>	<b>0</b>	<b>21</b>	<b>74</b>	<b>2</b>	<b>93</b>	<b>21</b>	<b>116</b>	<b>33</b>	<b>88</b>	<b>14</b>	<b>135</b>	<b>251</b>	<b>325</b>

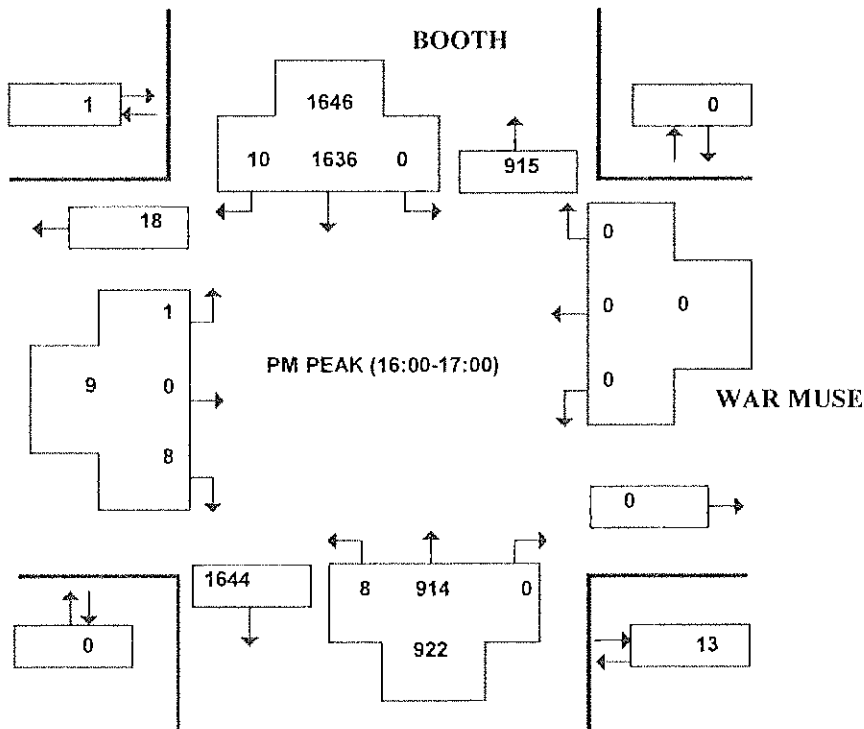
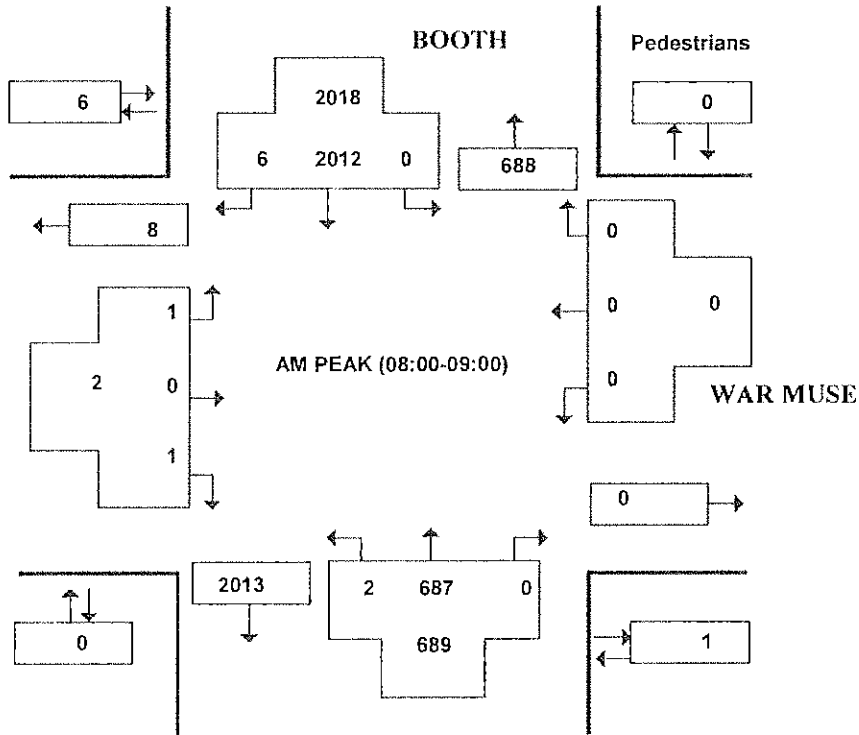
Heavy Vehicles are vehicles having one rear axle with four or more wheels, or having two or more rear axles. These vehicles include most O.C. Transpo, school and inter-city buses. Further, they ARE included in the Turning Movement Count Summary.

**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

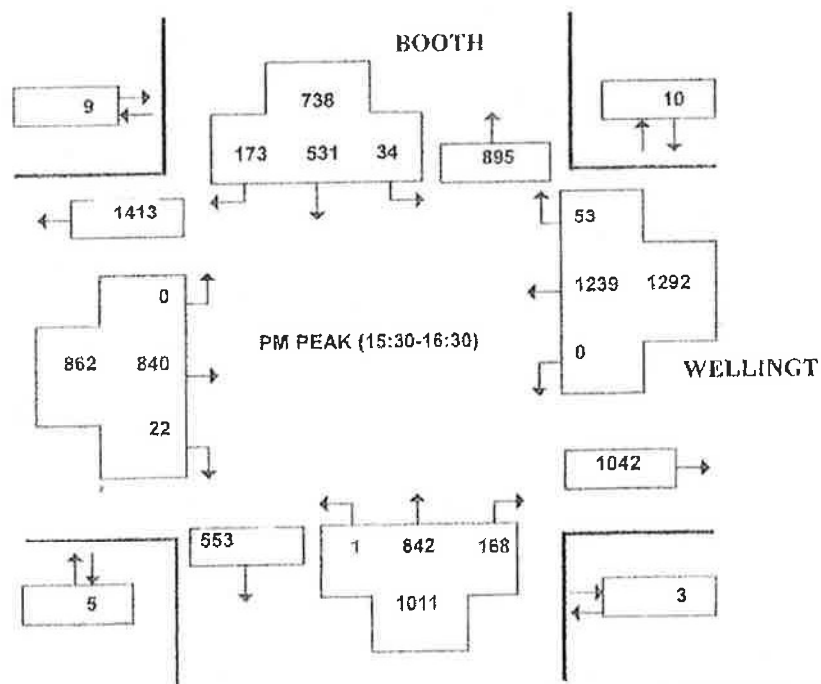
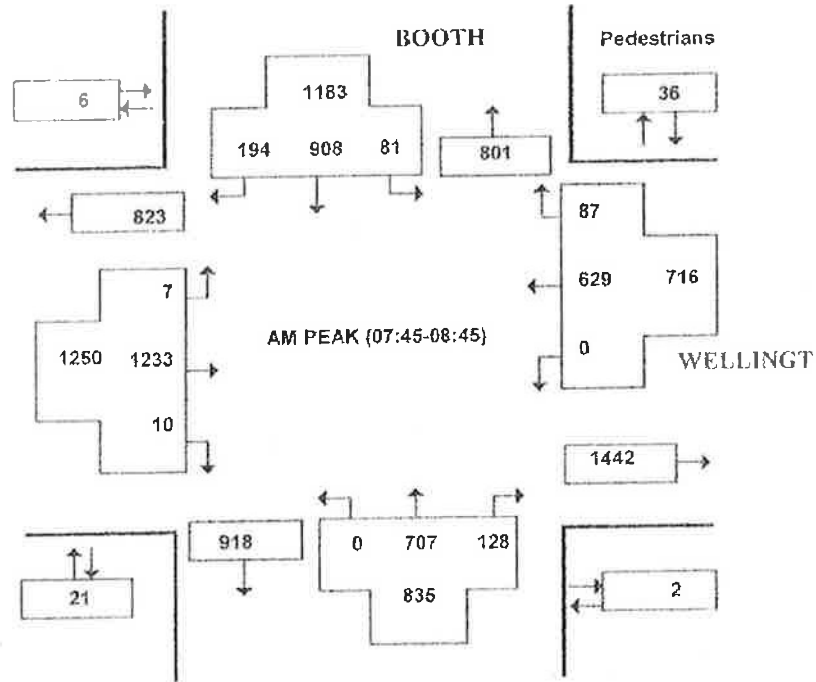


**BOOTH ST and WELLINGTON ST /OT. R.**  
(ULRS Listing BOOTH & WELLINGT)

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

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

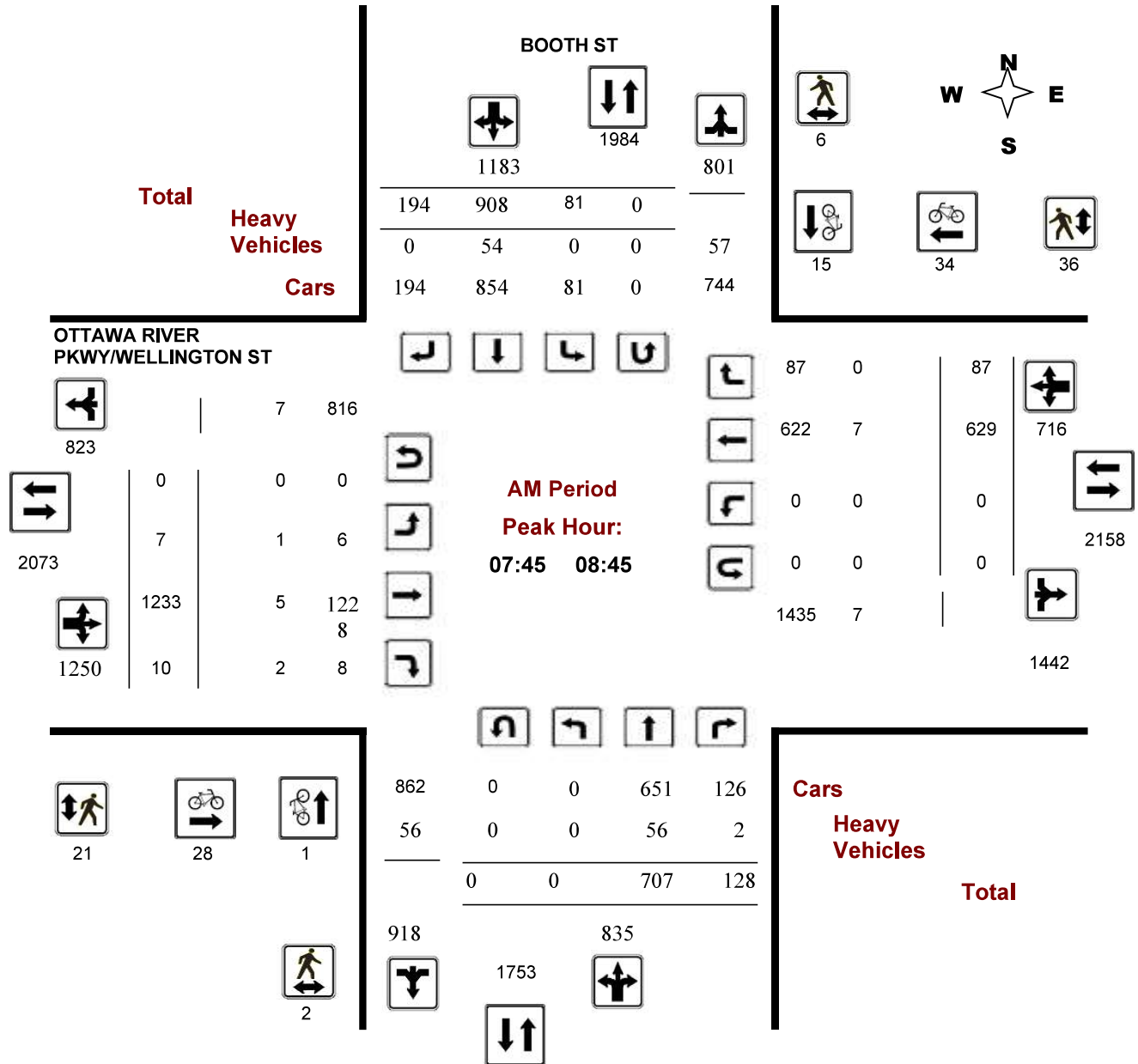
AADT Factor  
 Friday in May is  
 8



## Turning Movement Count - Full Study Peak Hour Diagram BOOTH ST @ OTTAWA RIVER PKWY/WELLINGTON ST

**Survey Date:** Friday, May 10, 2013  
**Start Time:** 07:00

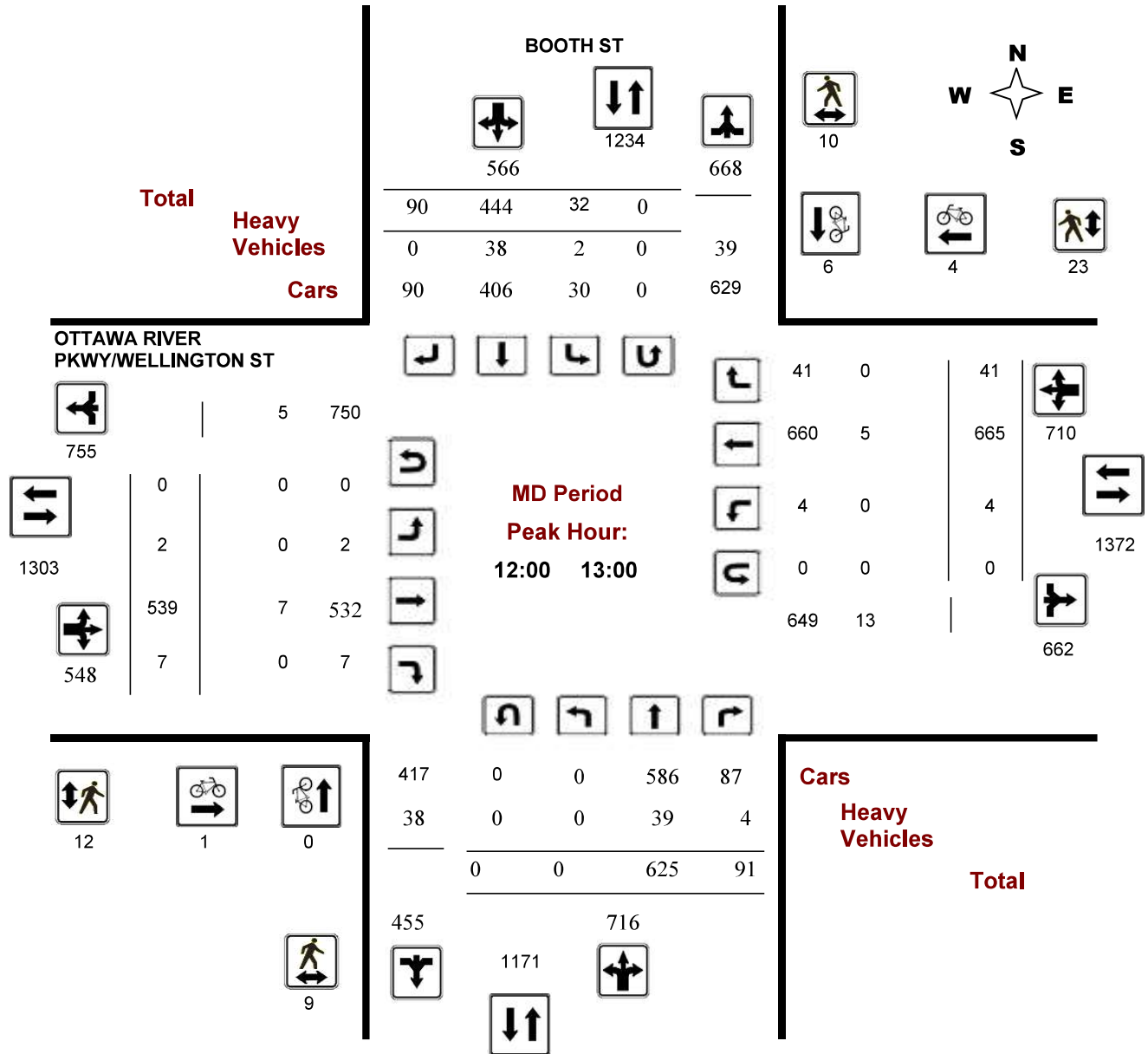
**WO No:** 31217  
**Device:**



## Turning Movement Count - Full Study Peak Hour Diagram BOOTH ST @ OTTAWA RIVER PKWY/WELLINGTON ST

**Survey Date:** Friday, May 10, 2013  
**Start Time:** 07:00

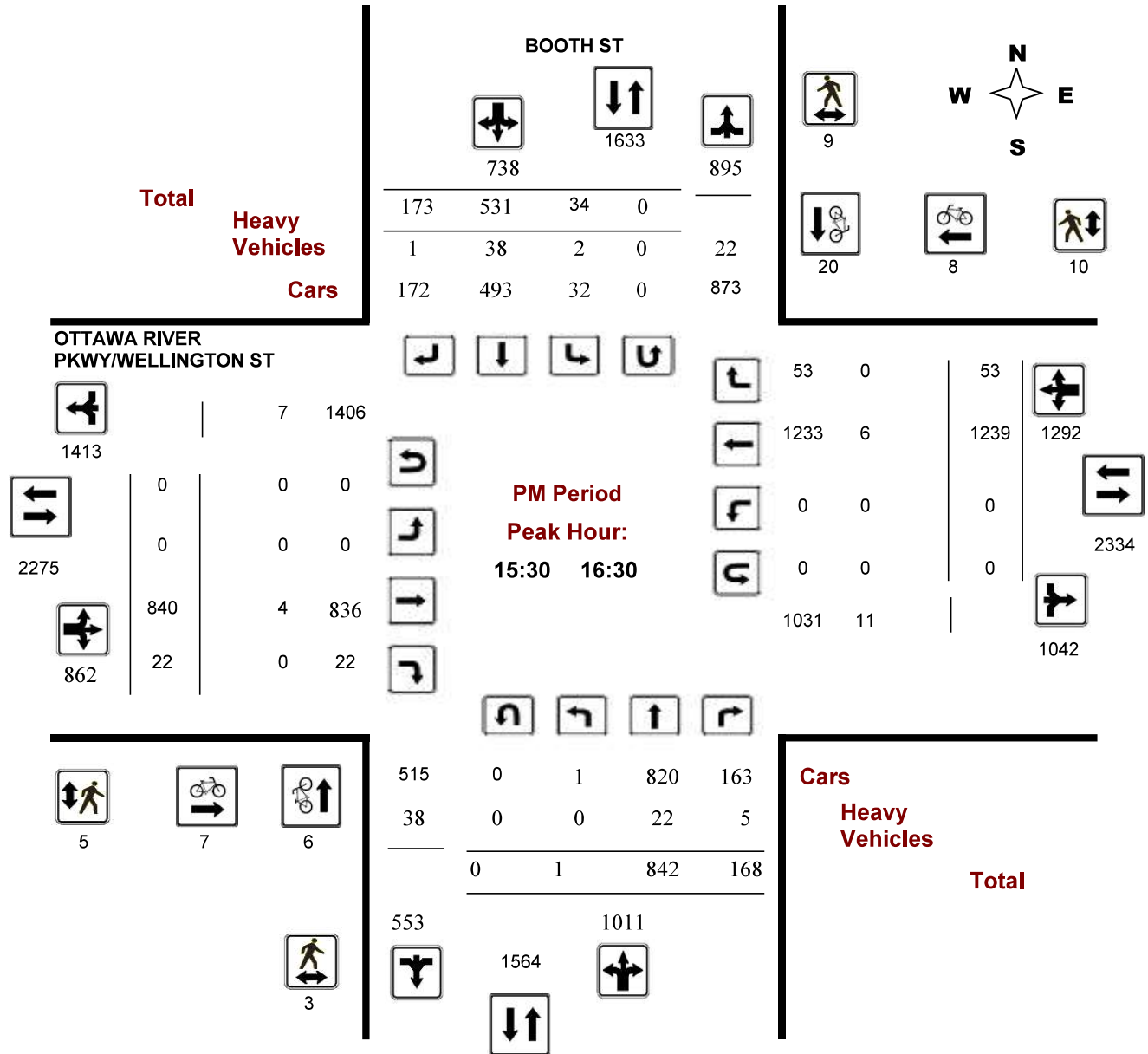
**WO No:** 31217  
**Device:**



## Turning Movement Count - Full Study Peak Hour Diagram BOOTH ST @ OTTAWA RIVER PKWY/WELLINGTON ST

**Survey Date:** Friday, May 10, 2013  
**Start Time:** 07:00

**WO No:** 31217  
**Device:**





## Turning Movement Count - Full Study Peak Hour Diagram

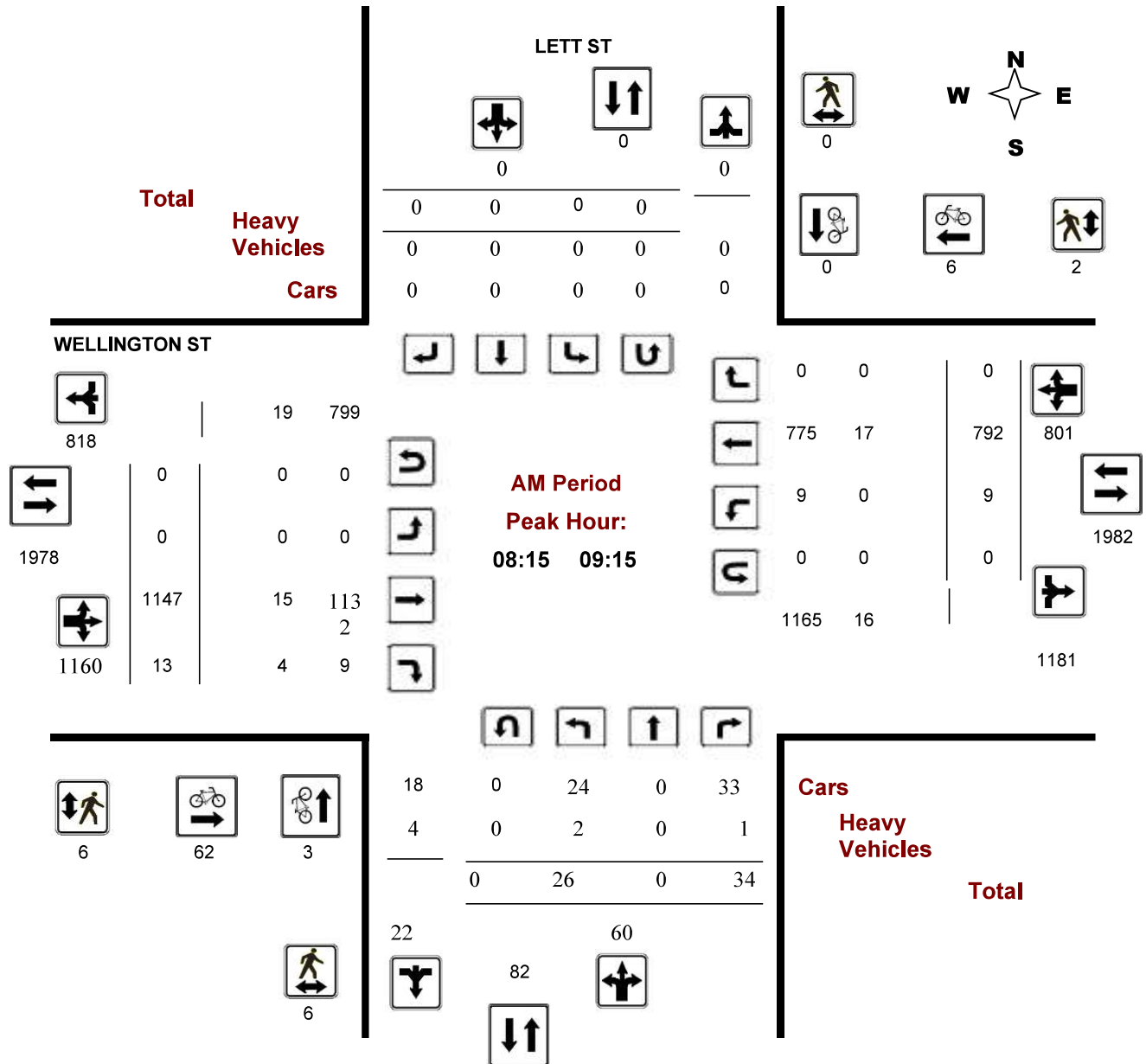
### WELLINGTON ST @ LETT ST

**Survey Date:** Monday, August 17, 2015

**Start Time:** 07:00

**WO No:** 35251

**Device:** Jamar Technologies, Inc



## Turning Movement Count - Full Study Peak Hour Diagram

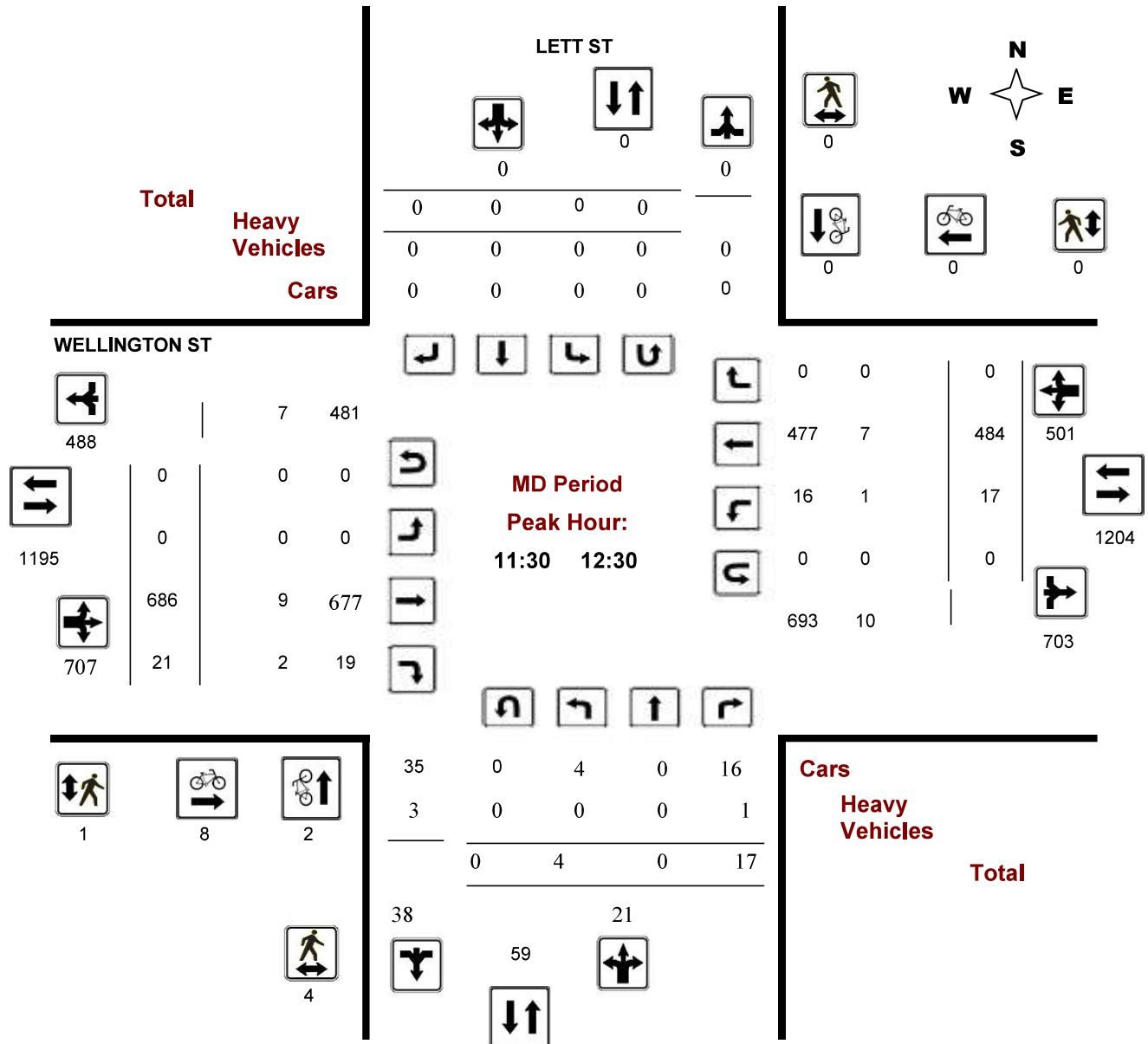
### WELLINGTON ST @ LETT ST

**Survey Date:** Monday, August 17, 2015

**Start Time:** 07:00

**WO No:** 35251

**Device:** Jamar Technologies, Inc



## Turning Movement Count - Full Study Peak Hour Diagram

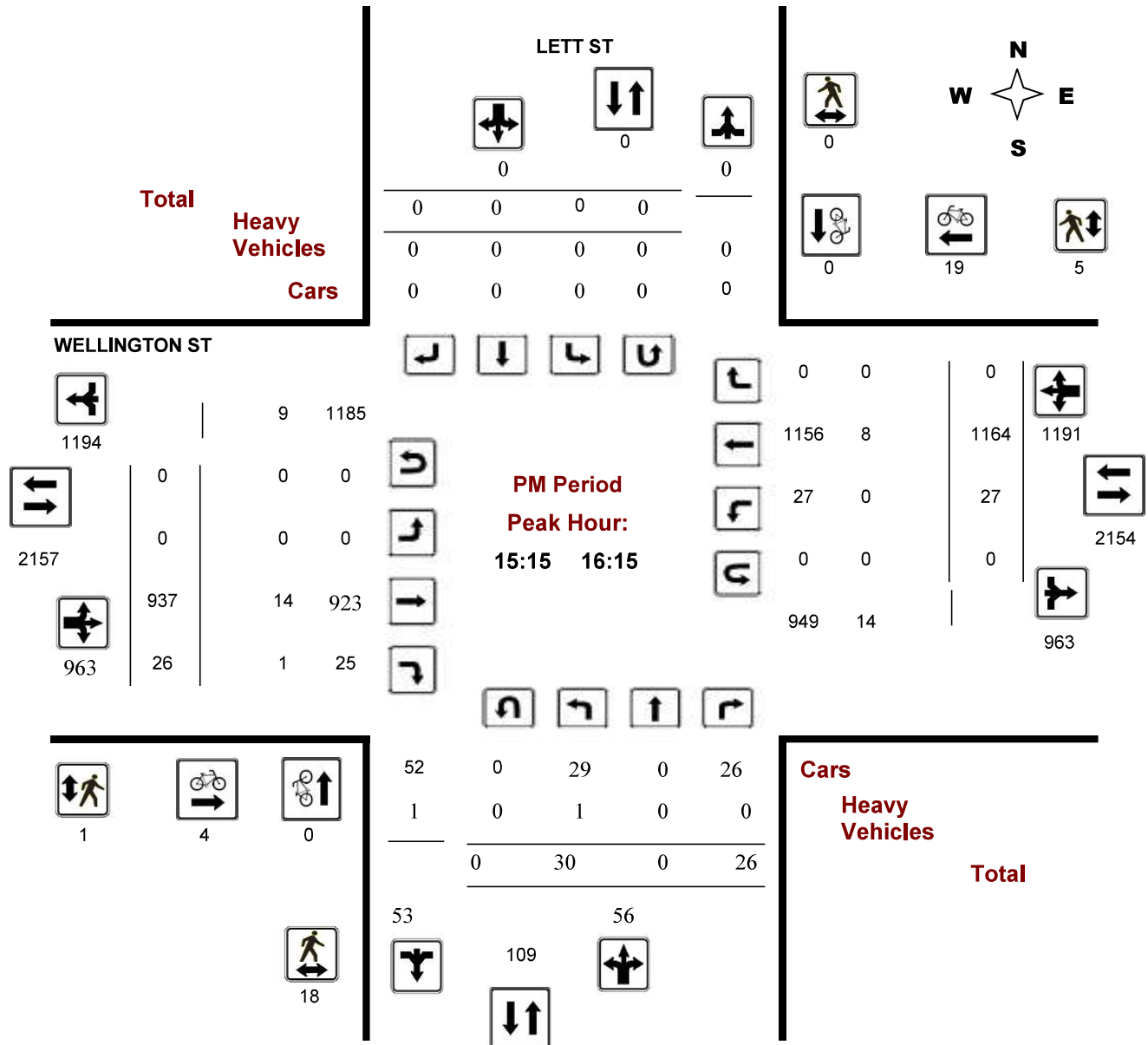
### WELLINGTON ST @ LETT ST

**Survey Date:** Monday, August 17, 2015

**Start Time:** 07:00

**WO No:** 35251

**Device:** Jamar Technologies, Inc



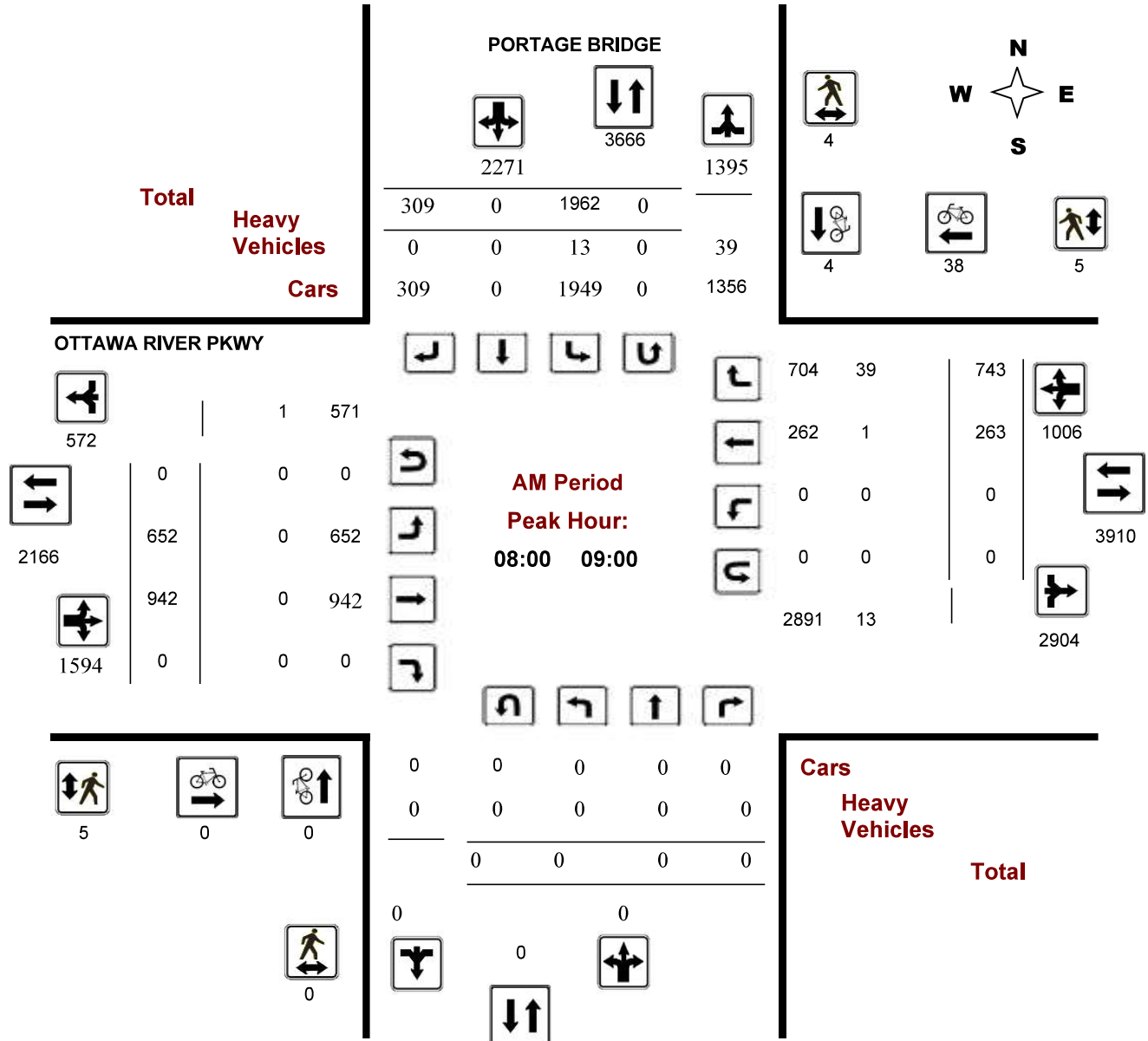
## Turning Movement Count - Full Study Peak Hour Diagram OTTAWA RIVER PKWY @ PORTAGE BRIDGE

**Survey Date:** Wednesday, June 11, 2014

**Start Time:** 07:00

**WO No:** 29831

**Device:** Jamar Technologies, Inc



## Turning Movement Count - Full Study Peak Hour Diagram

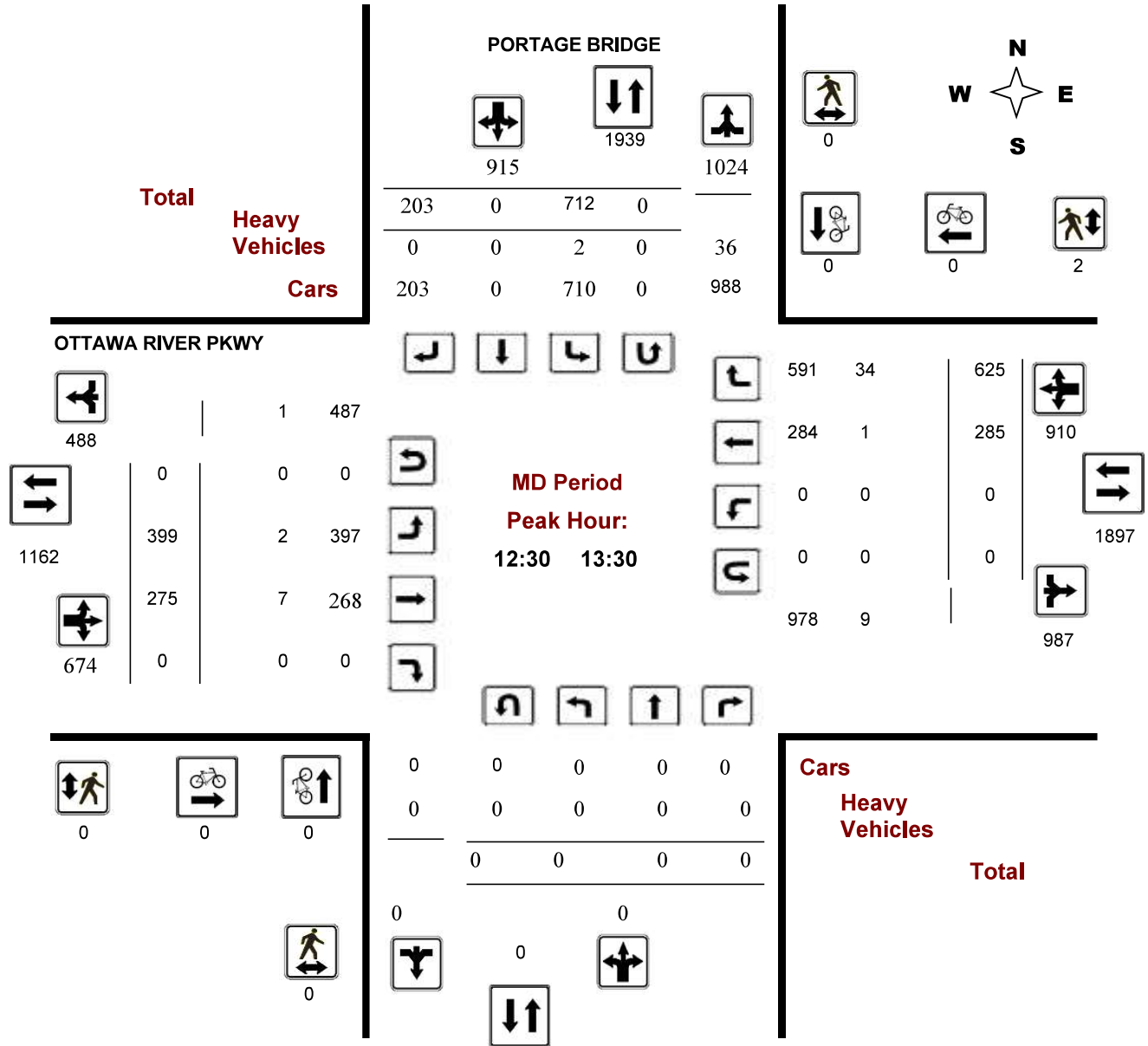
### OTTAWA RIVER PKWY @ PORTAGE BRIDGE

**Survey Date:** Wednesday, June 11, 2014

**Start Time:** 07:00

**WO No:** 29831

**Device:** Jamar Technologies, Inc



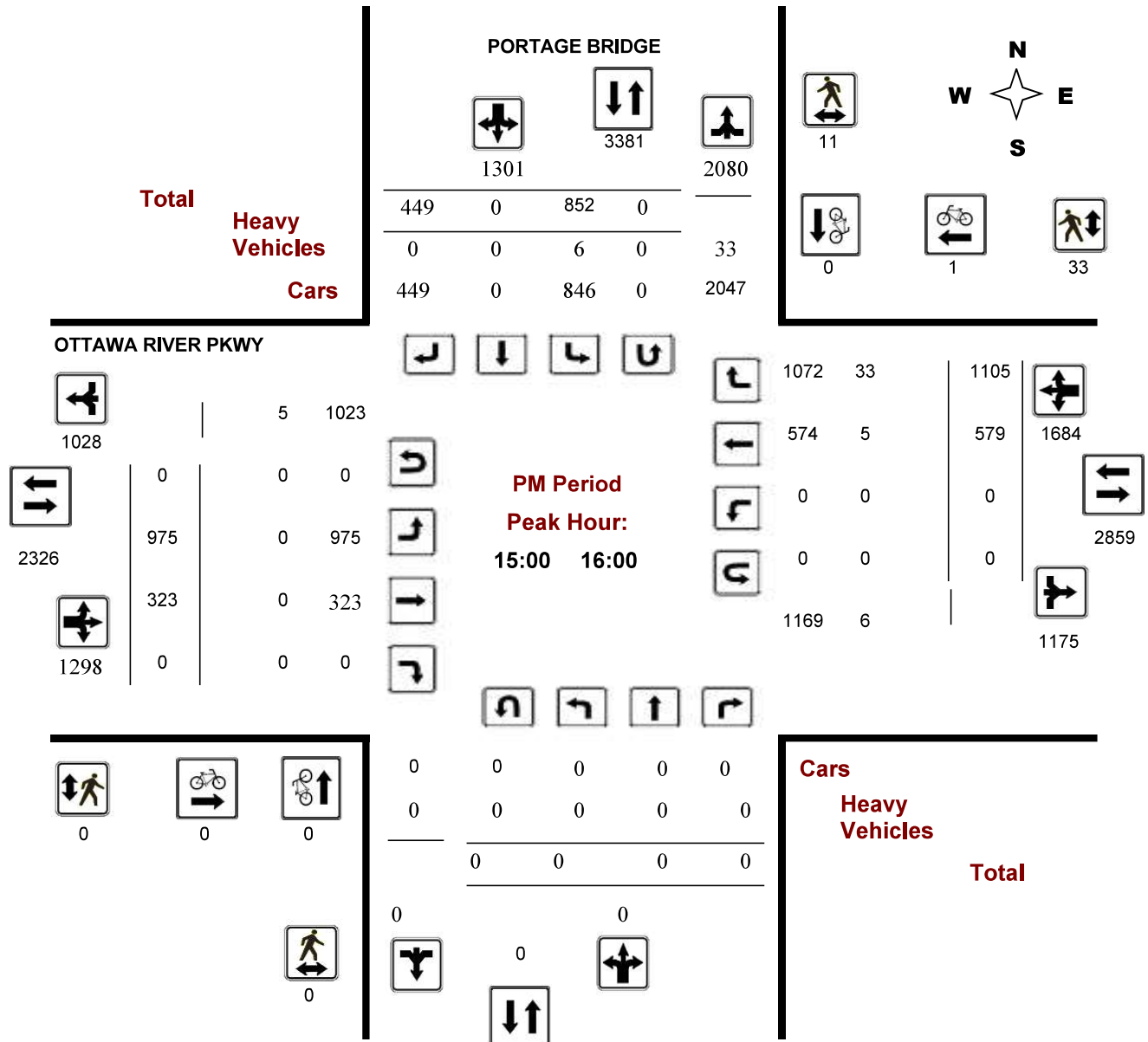
## Turning Movement Count - Full Study Peak Hour Diagram OTTAWA RIVER PKWY @ PORTAGE BRIDGE

**Survey Date:** Wednesday, June 11, 2014

**Start Time:** 07:00

**WO No:** 29831

**Device:** Jamar Technologies, Inc



# Public Works - Traffic Services

## Turning Movement Count - Full Study Peak Hour Diagram

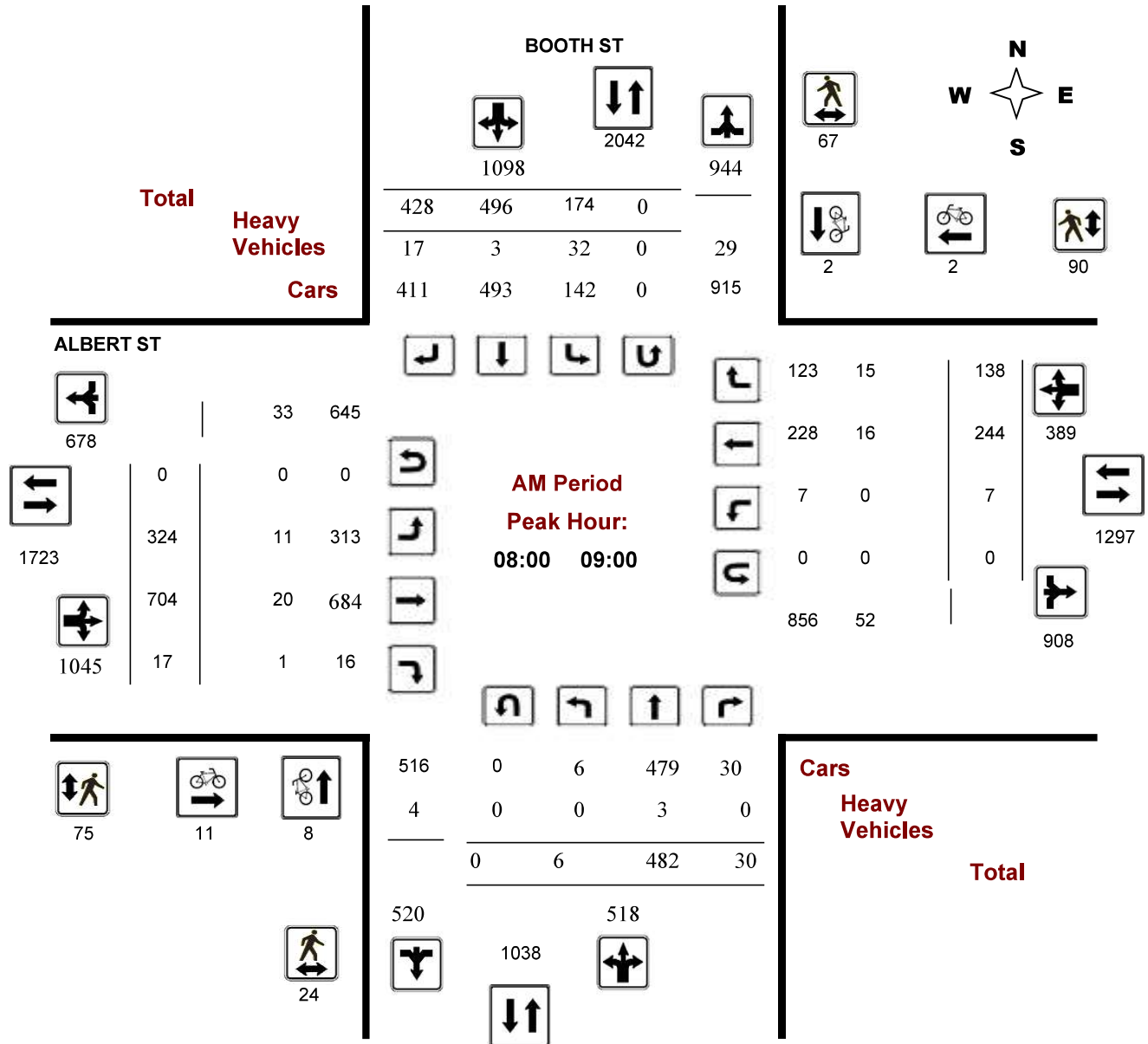
### ALBERT ST @ BOOTH ST

**Survey Date:** Wednesday, April 02, 2014

**Start Time:** 07:00

**WO No:** 1294

**Device:** Miovision



**Comments**

# Public Works - Traffic Services

## Turning Movement Count - Full Study Peak Hour Diagram

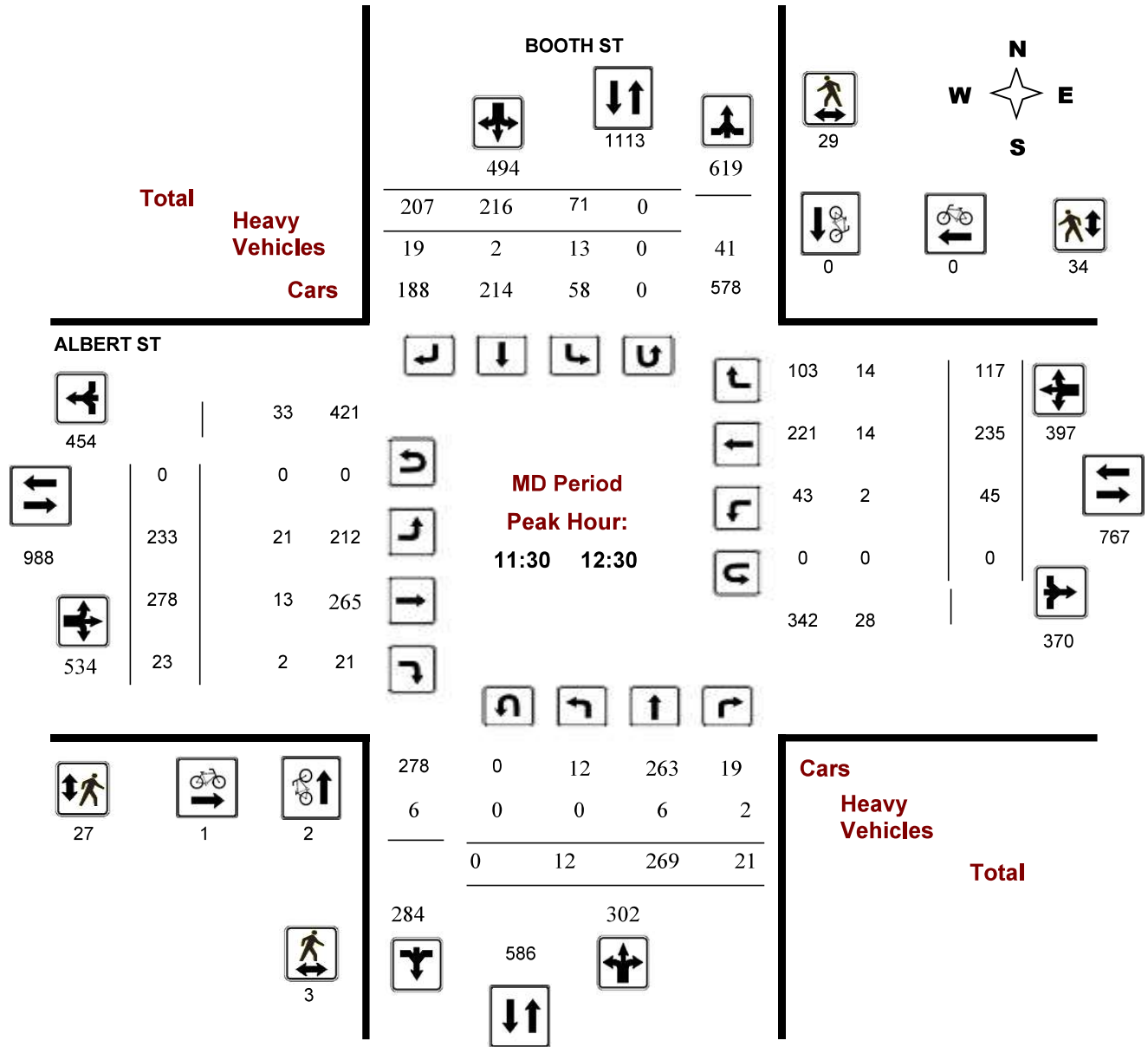
### ALBERT ST @ BOOTH ST

**Survey Date:** Wednesday, April 02, 2014

**Start Time:** 07:00

**WO No:** 1294

**Device:** Miovision





## Turning Movement Count - Full Study Peak Hour Diagram

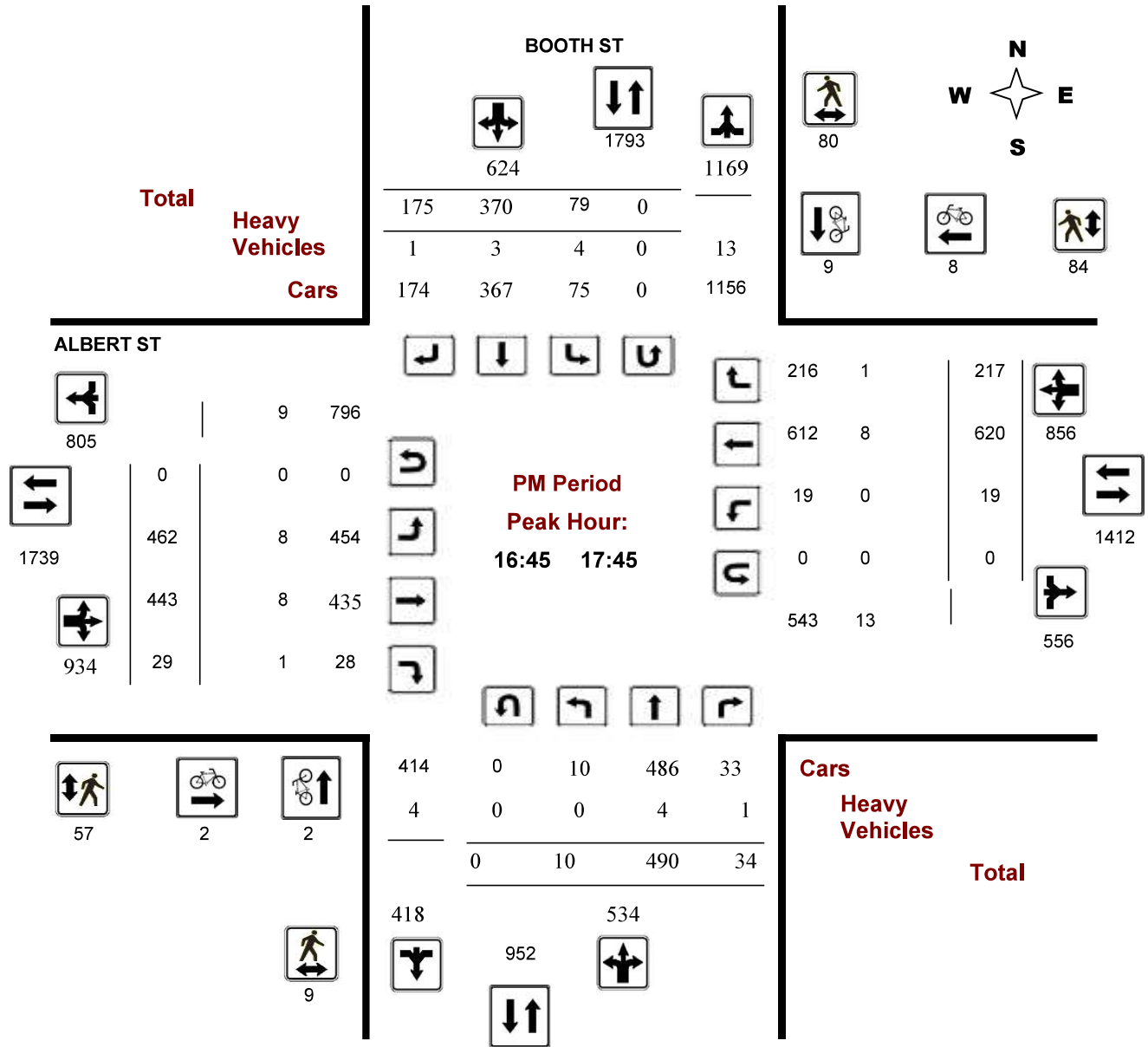
### ALBERT ST @ BOOTH ST

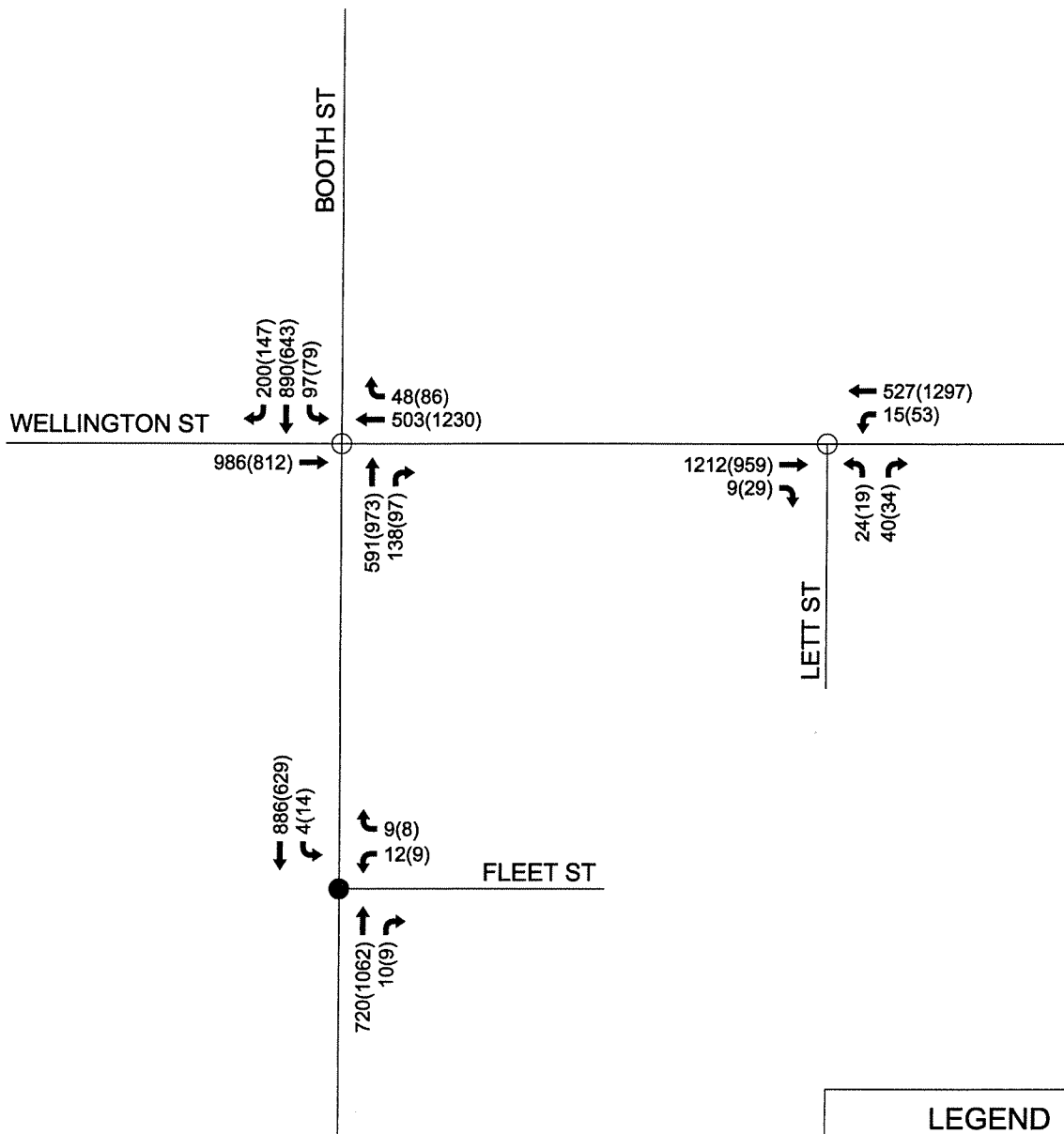
**Survey Date:** Wednesday, April 02, 2014

**Start Time:** 07:00

**WO No:** 1294

**Device:** Miovision





**LEGEND**

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

**NOVATECH**  
**ENGINEERING CONSULTANTS LTD.**  
 ENGINEERS & PLANNERS  
 Suite 200, 240 Michael Cowpland Drive  
 Ottawa, Ontario, Canada  
 K2M 1P6  
 Telephone (613) 254-9643  
 Facsimile (613) 254-5867  
 Email: novainfo@novatech-eng.com

LEBRETON PHASE III, 300 LETT STREET  
**2013 TOTAL TRAFFIC**  
 105006 APRIL 2011 **FIGURE 7**

# Traffic Signal Timing

City of Ottawa, Transportation Services Department

## Traffic Signal Operations Unit

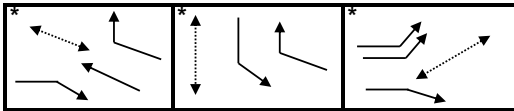
<b>Intersection:</b>	Main: Wellington	Side: Portage Bridge	
<b>Controller:</b>	MS-3200	<b>TSD:</b>	5474
<b>Author:</b>	Matthew Anderson	<b>Date:</b>	06-May-2020

### Existing Timing Plans†

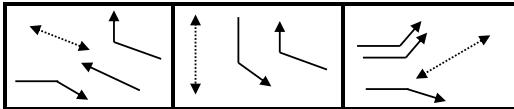
	Plan								Ped Minimum Time		
	Night 4	Evening 9	Weekend AM 10	Morning 16	Weekend 17	AM Peak 28	Off Peak 29	PM Peak 30	Walk	DW	A+R
<b>Cycle</b>	Free	Free	Free	Free	Free	Free	Free	Free			
<b>Offset</b>	X	X	X	X	X	X	X	X			
<b>EB Thru</b>	max=26.5	max=27.5	max=36.5	max=27.5	max=36.5	max=27.5	max=36.5	max=36.5	-	-	3.3+3.2
<b>WB Thru</b>	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
<b>WB Right (fp)</b>	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
<b>SB Thru</b>	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
<b>EB Left (fp)</b>	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		Weekend	
Time	Plan	Time	Plan
0:00	4	0:15	4
6:30	16	7:00	10
7:00	28	10:00	17
9:30	29	22:00	4
14:30	30		
17:00	9		
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

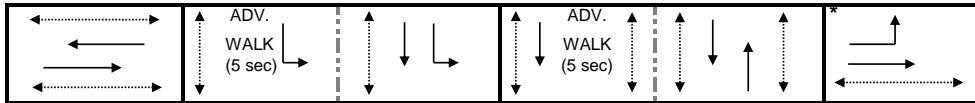
<b>Intersection:</b>	Main: Albert	Side: Booth
<b>Controller:</b>	ATC-3	TSD: 5465
<b>Author:</b>	Matthew Anderson	Date: 09-Aug-2021

### Existing Timing Plans†

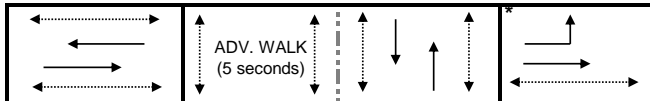
	Plan						Ped Minimum Time		
	AM Peak 1	Off Peak 2	PM Peak 3	Night 4	Weekend 5	AM Heavy 11	Walk	DW	A+R
<b>Cycle</b>	120	85	120	85	85	120			
<b>Offset</b>	104	38	9	3	38	104			
EB Thru	55	50	70	37	50	67	7	23	3.3+3.2
WB Thru	37	37	41	37	37	36	7	23	3.3+3.2
SB Left	25	-	12	13	-	15	-	-	3.3+3.2
NB Thru	40	35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

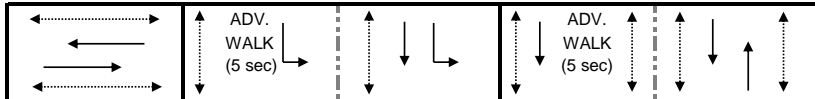
Plan: 1,3 & 11



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

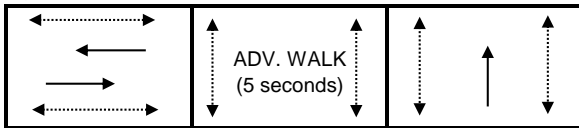
<b>Intersection:</b>	Main: Albert / Slater	Side: Empress
<b>Controller:</b>	ATC3	<b>TSD:</b> 5658
<b>Author:</b>	Matthew Anderson	<b>Date:</b> 09-Aug-2021

### Existing Timing Plans<sup>†</sup>

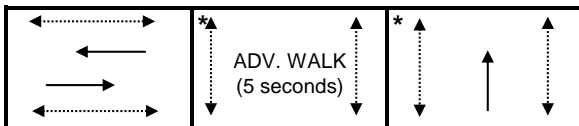
	Plan					Ped Minimum Time		
	AM Peak 1	Off Peak 2	PM Peak 3	Night 4	Weekend 5	Walk	DW	A+R
<b>Cycle</b>	120	75	120	70	75			
<b>Offset</b>	87	6	87	X	6			
EB Thru	81	36	81	31	36	7	15	3.3+3.8
WB Thru	81	36	81	31	36	7	15	3.3+3.8
NB Thru	39	39	39	39	39	10	23	3.3+3.0
SB Thru	39	39	39	39	39	10	23	3.3+3.0

### Phasing Sequence<sup>‡</sup>

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

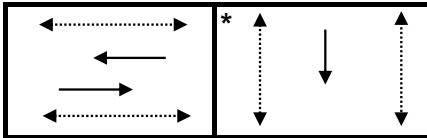
<b>Intersection:</b>	<u>Main: SJAM</u>	<b>Side:</b>	<u>Vimy</u>
<b>Controller:</b>	<u>ATC 3</u>	<b>TSD:</b>	<u>6570</u>
<b>Author:</b>	<u>Matthew Anderson</u>	<b>Date:</b>	<u>11-Aug-2021</u>

### Existing Timing Plans<sup>†</sup>

	Plan					Ped Minimum Time		
	AM Peak 1	Off Peak 2	PM Peak 3	Night 4	Weekend 5	Walk	DW	A+R
<b>Cycle</b>	95	80	120	80	80			
<b>Offset</b>	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<sup>‡</sup>

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

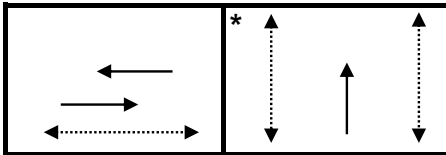
<b>Intersection:</b>	Main: Wellington	Side: Lett
<b>Controller:</b>	MS-3200	TSD: 6565
<b>Author:</b>	Matthew Anderson	Date: 11-Aug-2021

## Existing Timing Plans<sup>†</sup>

	Plan					Ped Minimum Time		
	AM Peak 1	Off Peak 2	PM Peak 3	Night 4	Weekend 5	Walk	DW	A+R
<b>Cycle</b>	95	80	120	70	80			
<b>Offset</b>	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<sup>‡</sup>

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

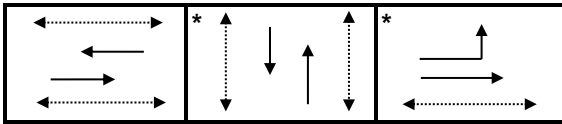
<b>Intersection:</b>	<i>Main:</i> Albert	<i>Side:</i> City Centre
<b>Controller:</b>	<b>ATC 3</b>	<b>TSD: 5661</b>
<b>Author:</b>	Matthew Anderson	<b>Date:</b> 11-Aug-2021

## Existing Timing Plans†

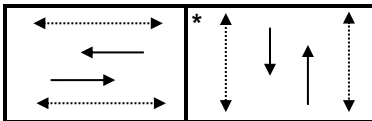
Plan	Ped Minimum Time					Walk	DW	A+R
	AM Peak 1	Off Peak 2	PM Peak 3	Night 4	Weekend 5			
<b>Cycle</b>	120	85	120	65	85			
<b>Offset</b>	80	55	80	X	55			
EB Thru	84	56	84	35	56	7	14	3.3+3.0
WB Thru	67	45	67	35	45	7	14	3.3+3.0
NB Thru	36	29	36	30	29	7	16	3.3+3.0
SB Thru	36	29	36	30	29	7	16	3.3+3.0
EB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

## Phasing Sequence‡

Plan: 1, 2, 3 & 5



Plan: 4



## Schedule

Weekday		Weekend	
Time	Plan	Time	Plan
0:15	4	0:15	4
6:00	1	8:00	2
9:30	2	12:00	5
15:00	3	18:00	2
18:30	2	22:00	4
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

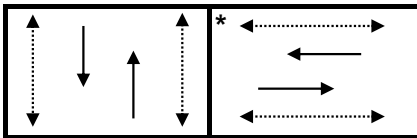
<b>Intersection:</b>	<i>Main:</i> Booth	<i>Side:</i> Perley
<b>Controller:</b>	<b>ATC3</b>	<b>TSD: 5461</b>
<b>Author:</b>	Matthew Anderson	<b>Date:</b> 09-Aug-2021

### Existing Timing Plans<sup>†</sup>

	Plan					Ped Minimum Time		
	AM Peak 1	Off Peak 2	PM Peak 3	Night 4	Weekend 5	Walk	DW	A+R
<b>Cycle</b>	75	80	75	70	80			
<b>Offset</b>	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<sup>‡</sup>

Plan: All



### Schedule

Weekday		Weekend	
Time	Plan	Time	Plan
0:15	4	0:15	4
6:00	1	8:00	2
9:30	2	12:00	5
15:00	3	18:00	2
18:00	2	22:00	4
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

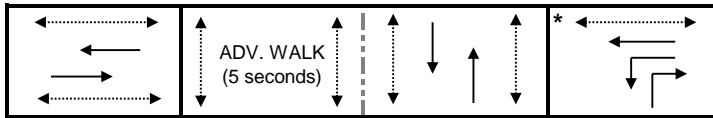
<b>Intersection:</b>	<i>Main:</i> Albert	<i>Side:</i> Preston
<b>Controller:</b>	<b>Ms 3200</b>	<b>TSD: 5009</b>
<b>Author:</b>	Matthew Anderson	<b>Date:</b> 11-Aug-2021

### Existing Timing Plans†

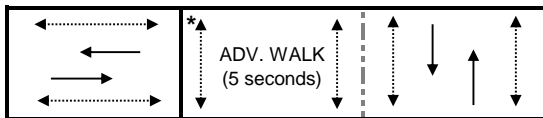
	Plan					Ped Minimum Time		
	AM Peak 1	Off Peak 2	PM Peak 3	Night 4	Weekend 5	Walk	DW	A+R
<b>Cycle</b>	120	80	120	70	80			
<b>Offset</b>	55	75	65	X	75			
EB Thru	65	35	61	41	35	7	18	3.3+3.5
WB Thru	90	48	77	41	48	7	18	3.3+3.5
NB Thru	30	32	43	29	32	7	16	3.3+3.0
NB Thru	30	32	43	29	32	7	16	3.3+3.0
WB 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		Weekend	
Time	Plan	Time	Plan
0:15	4	0:15	4
6:00	1	8:00	2
9:30	2	12:00	5
15:00	3	18:00	2
18:30	2	22:00	4
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

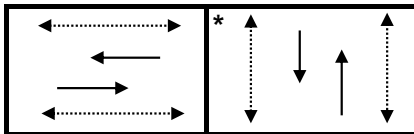
<b>Intersection:</b>	<u>Main: Albert / Scott</u>	<b>Side:</b>	<u>Bayview Station</u>
<b>Controller:</b>	<u>MS 3200</u>	<b>TSD:</b>	<u>5613</u>
<b>Author:</b>	<u>Matthew Anderson</u>	<b>Date:</b>	<u>11-Aug-2021</u>

### 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
<b>Cycle</b>	95	65	100	70	65	100			
<b>Offset</b>	40	54	65	X	54	40			
<b>EB Thru</b>	63	33	68	38	33	68	7	19	3.3+3.2
<b>WB Thru</b>	63	33	68	38	33	68	7	19	3.3+3.2
<b>NB Thru</b>	32	32	32	32	32	32	7	19	3.3+3.1
<b>SB Thru</b>	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

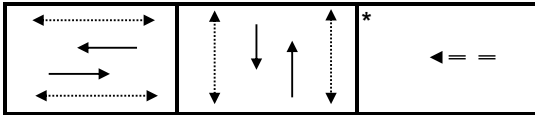
<b>Intersection:</b>	<i>Main:</i> Scott	<i>Side:</i> Parkdale
<b>Controller:</b>	<b>ATC 3</b>	<b>TSD: 5310</b>
<b>Author:</b>	Matthew Anderson	<b>Date:</b> 11-Aug-2021

### Existing Timing Plans†

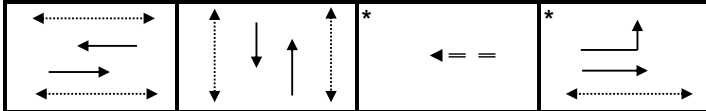
	Plan						Ped Minimum Time		
	AM Peak 1	Off Peak 2	PM Peak 3	Night 4	Weekend 5	AM Heavy 21	Walk	DW	A+R
<b>Cycle</b>	95	75	100	70	75	100			
<b>Offset</b>	91	33	8	61	33	91			
EB Thru	46	34	49	29	34	51	7	15	3.3+2.8
WB Thru	46	34	34	29	34	51	7	15	3.3+2.8
NB Thru	43	35	45	35	35	43	10	19	3.0+3.3
SB Thru	43	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		Saturday		Sunday	
Time	Plan	Time	Plan	Time	Plan
0:15	4	0:15	4	0:15	4
6:30	1	6:30	2	6:30	2
7:45	21	9:00	5	9:00	5
9:30	2	18:30	2	18:00	2
15:00	3	22:30	4	22:30	4
18:30	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

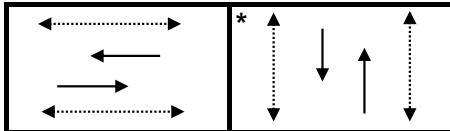
<b>Intersection:</b>	<i>Main:</i> SJAM	<i>Side:</i> Slidell
<b>Controller:</b>	<b>ATC 3</b>	<b>TSD: 5890</b>
<b>Author:</b>	Matthew Anderson	<b>Date:</b> 11-Aug-2021

## Existing Timing Plans†

	Plan				Ped Minimum Time		
	AM Peak 1	Off Peak 2	PM Peak 3	Night 4	Walk	DW	A+R
<b>Cycle</b>	95	Free	95	Free			
<b>Offset</b>	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		Weekend	
Time	Plan	Time	Plan
0:15	4	0:10	4
6:30	1	7:00	2
9:00	2	19:00	4
15:00	3		
18:30	2		
21:00	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

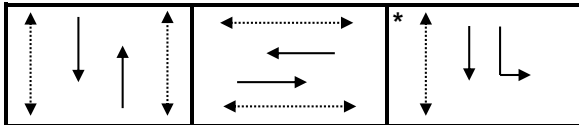
<b>Intersection:</b>	Main: Booth	Side: SJAM / Wellington
<b>Controller:</b>	MS 3200	<b>TSD:</b> 6567
<b>Author:</b>	Matthew Anderson	<b>Date:</b> 09-Aug-2021

## Existing Timing Plans<sup>†</sup>

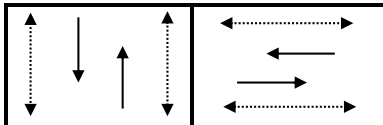
	Plan					Ped Minimum Time		
	AM Peak 1	Off Peak 2	PM Peak 3	Night 4	Weekend 5	Walk	DW	A+R
<b>Cycle</b>	95	85	120	75	85			
<b>Offset</b>	31	58	3	23	58			
NB Thru	35	35	48	35	35	10	15	3.3+3.5
SB Thru	35	35	48	35	35	10	15	3.3+3.6
EB Thru	48	38	60	40	38	10	19	3.7+3.1
WB Thru	48	38	60	40	38	10	19	3.7+3.1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

## Phasing Sequence<sup>‡</sup>

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

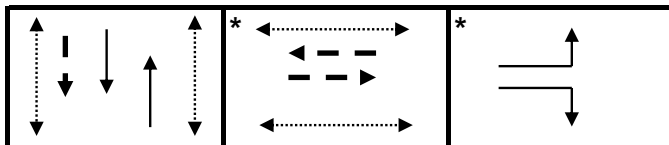
<b>Intersection:</b>	Main: Booth	Side: War museum
<b>Controller:</b>	MS 3200	<b>TSD:</b> 6564
<b>Author:</b>	Matthew Anderson	<b>Date:</b> 09-Aug-2021

## Existing Timing Plans†

	Plan					Ped Minimum Time		
	AM Peak 1	Off Peak 2	PM Peak 3	Night 4	Weekend 5	Walk	DW	A+R
<b>Cycle</b>	95	85	95	85	95			
<b>Offset</b>	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)

# Traffic Signal Timing

City of Ottawa, Public Works Department

Traffic Signal Operations Unit

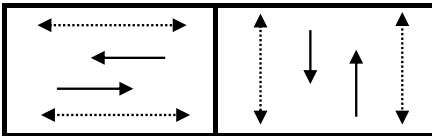
<b>Intersection:</b>	<i>Main:</i> Somerset	<i>Side:</i>	Booth
<b>Controller:</b>	<b>MS3200</b>	<b>TSD:</b>	<b>5017</b>
<b>Author:</b>	Hamadoun Issabre	<b>Date:</b>	07-Mar-2024

## Existing Timing Plans<sup>†</sup>

	Plan					Ped Minimum Time		
	AM Peak 1	Off Peak 2	PM Peak 3	Night 4	Weekend 5	Walk	DW	A+R
<b>Cycle</b>	80	75	75	55	65			
<b>Offset</b>	0	16	1	42	42			
<b>EB Thru</b>	42	43	38	27	35	7	8	3.3+2.1
<b>WB Thru</b>	42	43	38	27	35	7	8	3.3+2.1
<b>NB Thru</b>	38	32	37	28	30	7	11	3.3+2.3
<b>SB Thru</b>	38	32	37	28	30	7	11	3.3+2.3

## Phasing Sequence<sup>‡</sup>

Plan: All



## Schedule

Weekday		Weekend	
Time	Plan	Time	Plan
0:15	4	0:15	4
6:00	1	8:00	2
9:30	2	12:00	5
15:00	3	18:00	2
18:00	2	22:00	4
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 \$62.38 (\$55.20 + HST)



# Traffic Signal Timing

City of Ottawa, Public Works Department

Traffic Signal Operations Unit

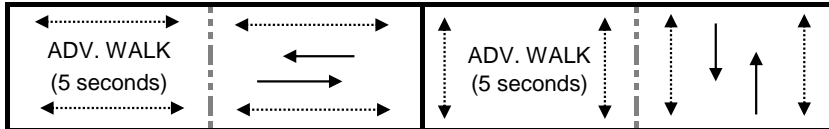
<b>Intersection:</b>	<i>Main:</i> Somerset	<i>Side:</i> Preston
<b>Controller:</b>	ATC3	<b>TSD:</b> 5079
<b>Author:</b>	Hamadoun Issabre	<b>Date:</b> 07-May-2024

## Existing Timing Plans<sup>†</sup>

	Plan					Ped Minimum Time		
	AM Peak 1	Off Peak 2	PM Peak 3	Night 4	Weekend 5	Walk	DW	A+R
<b>Cycle</b>	80	75	75	60	65			
<b>Offset</b>	58	73	32	28	28			
EB Thru	43	42	41	30	31	7	12	3.3+2.3
WB Thru	43	42	41	30	31	7	12	3.3+2.3
NB Thru	37	33	34	30	34	7	14	3.3+2.4
SB Thru	37	33	34	30	34	7	14	3.3+2.4

## Phasing Sequence<sup>‡</sup>

Plan:



**Notes:** 1) All movements have a No Right-turn on Red restriction between 7:00 - 19:00, Mon to Fri

## Schedule

### Weekday

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

### Saturday

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 \$62.38 (\$55.20 + HST)

## APPENDIX C: City of Ottawa - Collision Data

STUDY AREA	YEAR	DATE	TIME	COLLUSION_ID	LOCATION	X	Y	LONGITUDE	LATITUDE	ENVIRONMENT	LIGHT	SURFACE_CONDITION	TRAFFIC_CONTROL	TRAFFIC_CONTROL_CONDITION	COLLUSION_CLASSIFICATION	IMPACT_TYPE	NO_OF_PEDESTRIANS	FID	
Y	2015	2015/07/05 04:00:00-00	1899/12/1 22:34:00-00	15-7466	ALBERT ST @ BRINSON AVE	3667295.7188	5031015	-75.70895928	45.41612803	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	1899/12/1 01:55:00-00	15-12026	ALBERT ST @ BRINSON AVE	3667338.9688	5031015	-75.70861051	45.41622101	Rain	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	02 - Angle	02 - Angle	0	12980	
Y	2015	2015/12/08 05:00:00-00	1899/12/1 20:16:00-00	15-12682	ALBERT ST @ COMMISSIONER ST	366713.6875	5030970	-75.7089386	45.41592780	Clear	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	1899/12/1 13:33:00-00	15-1314	ALBERT ST @ EMPRESS AVE	366677.125	5030722	-75.71071625	45.41370773	Strong wind	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	02 - Non-fatal injury	03 - Rear end	0	234	
Y	2015	2015/01/16 05:00:00-00	1899/12/1 05:50:00-00	15-1653	ALBERT ST @ EMPRESS/6563	3665073.0563	5030722	-75.70701626	45.41370773	Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	03 - P.D. only	03 - Rear end	0	11258	
Y	2015	2015/02/20 05:00:00-00	1899/12/1 11:16:00-00	15-2852	ALBERT ST @ EMPRESS AVE	366673.8125	5030720	-75.71075439	45.41388864	Clear	07 - Dark	02 - Wet	01 - Traffic signal	01 - Functioning	03 - P.D. only	07 - SMV other	0	2556	
Y	2015	2015/01/29 05:00:00-00	1899/12/1 13:55:00-00	15-1510	ALBERT ST @ PRESTON ST	366160.375	5030465	-75.71607208	45.41143799	Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	03 - P.D. only	03 - Rear end	0	1329	
Y	2015	2015/02/04 05:00:00-00	1899/12/1 15:00:00-00	15-1958	ALBERT ST @ PRESTON ST	3666158.6785	5030465	-75.71608734	45.41144562	Snow	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	02 - Non-fatal injury	03 - Rear end	0	1693	
Y	2015	2015/02/17 05:00:00-00	1899/12/1 15:00:00-00	15-1700	ALBERT ST @ PRESTON ST	366160.375	5030465	-75.71607208	45.41143799	Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	03 - P.D. only	03 - Rear end	0	1329	
Y	2015	2015/03/03 05:00:00-00	1899/12/1 21:15:00-00	15-3451	ALBERT ST @ PRESTON ST	366158.6785	5030465	-75.71608734	45.41143030	Snow	01 - Daylight	01 - Packed snow	01 - Traffic signal	01 - Functioning	03 - P.D. only	03 - Rear end	0	3940	
Y	2015	2015/07/19 04:00:00-00	1899/12/1 22:55:00-00	15-7872	ALBERT ST @ PRESTON ST	366160.0625	5030465	-75.71607208	45.41143030	Clear	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	1899/12/1 23:30:00-00	15-1596	ALBERT ST @ PRESTON ST	366161.4063	5030463	-75.71605682	45.41141293	Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	03 - P.D. only	03 - Rear end	0	7443	
Y	2015	2015/07/29 04:00:00-00	1899/12/1 21:25:00-00	15-1234	ALBERT ST @ PRESTON ST	366161.4063	5030464	-75.71605682	45.41141293	Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	03 - P.D. only	01 - Functioning	03 - Rear end	0	11258
Y	2015	2015/12/21 05:00:00-00	1899/12/1 12:20:00-00	15-13146	ALBERT ST @ PRESTON ST	366160.6875	5030464	-75.71606445	45.41141801	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	1899/12/1 21:30:00-00	15-13635	ALBERT ST @ PRESTON ST	366161.4375	5030463	-75.71605682	45.41141129	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	1899/12/1 19:32:00-00	15-7540	ALBERT ST bwn Continuation of ALBERT ST & BOOTH ST	366342.1188	50305715	-75.71372986	45.41239166	Clear	01 - Daylight	01 - Dry	01 - No control	01 - No control	03 - P.D. only	04 - Sideswipe	0	7384	
Y	2015	2015/07/09 04:00:00-00	1899/12/1 05:40:00-00	15-7394	ALBERT ST bwn PRESTON ST & CONTINUATION OF ALBERT ST	3662089	5020545	-75.7146453	45.41212171	Clear	07 - Dark	01 - Dry	01 - No control	01 - No control	03 - P.D. only	04 - Sideswipe	0	7100	
Y	2015	2015/08/23 04:00:00-00	1900/01/01 02:16:00-00	15-8954	ALBERT ST bwn PRESTON ST & Continuation of ALBERT ST	366179.375	5030476	-75.71582794	45.41152954	Clear	07 - Dark	01 - Dry	01 - No control	01 - No control	02 - Non-fatal injury	05 - Turning movement	0	8601	
Y	2015	2015/10/20 04:00:00-00	1899/12/1 21:56:00-00	15-10904	ALBERT ST bwn PRESTON ST & Continuation of ALBERT ST	366178.4063	5030476	-75.71583557	45.41152573	Clear	01 - Daylight	01 - Dry	01 - No control	01 - No control	03 - P.D. only	04 - Sideswipe	0	10122	
Y	2015	2015/12/29 05:00:00-00	1899/12/1 19:54:00-00	15-13391	ALBERT ST bwn SCOTT ST & CITY CENTRE AVE (2)	365882.9688	5030034	-75.71998876	45.41001129	Snow	01 - Daylight	03 - Loose snow	01 - Traffic signal	01 - Functioning	03 - P.D. only	07 - SMV other	0	13989	
Y	2015	2015/01/07 05:00:00-00	1899/12/1 15:53:00-00	15-1244	BAYVIEW RD @ SCOTT ST/ALBERT ST	365519.0113	5030071	-75.72431383	45.40794373	Clear	05 - Dusk	05 - Packed snow	01 - Traffic signal	01 - Functioning	02 - Angle	05 - Turning movement	0	2107	
Y	2015	2015/02/13 05:00:00-00	1899/12/1 14:25:00-00	15-2476	BAYVIEW RD @ SCOTT ST/ALBERT ST	365520	5030071	-75.72429657	45.40794373	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	1899/12/1 21:48:00-00	15-3848	BAYVIEW RD @ SCOTT ST/ALBERT ST	365518.0625	5030071	-75.72431946	45.40794373	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	15-1734	BAYVIEW RD @ SCOTT ST/ALBERT ST	365520.4888	5030070	-75.72428894	45.40793220	Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	02 - Non-fatal injury	07 - SMV other	0	17040	
Y	2015	2015/06/29 04:00:00-00	1899/12/1 15:53:00-00	15-1784	BAYVIEW RD @ SCOTT ST/ALBERT ST	365519.0113	5030070	-75.72431946	45.40794373	Clear	01 - Daylight	02 - Wet	01 - Traffic signal	01 - Functioning	02 - Angle	02 - Angle	0	7100	
Y	2015	2015/08/28 04:00:00-00	1899/12/1 12:30:00-00	15-8120	BAYVIEW RD @ SCOTT ST/ALBERT ST	365519.0113	5030072	-75.72431183	45.40795131	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	1899/12/1 22:51:00-00	15-4000	BOOTH ST @ 148 N OF MIDDLE ST/E. EDDY S	366015.5313	5031415	-75.71754546	45.41999004	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	1899/12/1 22:45:00-00	15-7192	BOOTH ST @ 148 N OF MIDDLE ST/E. EDDY S	366036.25	5031415	-75.71752693	45.41999401	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	1900/01/01 19:08:00-00	15-1517	BOOTH ST @ OTTAWA RIVER PKWY/ WELLINGTON ST	366263.2813	5031005	-75.71468353	45.41622801	Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	03 - P.D. only	07 - SMV other	0	1517	
Y	2015	2015/01/21 05:00:00-00	1900/01/01 09:19:00-00	15-1129	BOOTH ST @ OTTAWA RIVER PKWY/ WELLINGTON ST	366263.2813	5031005	-75.71468353	45.41622801	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	1899/12/1 15:07:00-00	15-1437	BOOTH ST @ OTTAWA RIVER PKWY/ WELLINGTON ST	366262.9375	5031007	-75.71469116	45.41620504	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	1899/12/1 15:12:00-00	15-1422	BOOTH ST @ OTTAWA RIVER PKWY/ WELLINGTON ST	366263.9693	5031007	-75.71467959	45.41620504	Clear	01 - Daylight	01 - Slush	01 - Traffic signal	01 - Functioning	03 - P.D. only	03 - Rear end	0	2589	
Y	2015	2015/02/13 05:00:00-00	1899/12/1 18:13:00-00	15-2400	BOOTH ST @ OTTAWA RIVER PKWY/ WELLINGTON ST	366265.2188	5031006	-75.71466064	45.41620504	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	1899/12/1 13:52:00-00	15-4013	BOOTH ST @ OTTAWA RIVER PKWY/ WELLINGTON ST	366264.0313	5031005	-75.71467959	45.41622801	Snow	01 - Daylight	03 - Loose snow	01 - Traffic signal	01 - Functioning	03 - P.D. only	03 - Rear end	0	4642	
Y	2015	2015/03/28 04:00:00-00	1899/12/1 21:14:00-00	15-6074	BOOTH ST @ OTTAWA RIVER PKWY/ WELLINGTON ST	366263.9398	5031008	-75.71468353	45.41620936	Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	02 - Non-fatal injury	05 - Turning movement	0	6191	
Y	2015	2015/07/02 04:00:00-00	1899/12/1 21:15:00-00	15-1895	BOOTH ST @ OTTAWA RIVER PKWY/ WELLINGTON ST	366264.4788	5031005	-75.71467959	45.41620936	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	1899/12/1 06:38:00-00	15-8776	BOOTH ST @ OTTAWA RIVER PKWY/ WELLINGTON ST	366263.9398	5031007	-75.71468353	45.41620714	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	1899/12/1 13:20:00-00	15-8819	BOOTH ST @ OTTAWA RIVER PKWY/ WELLINGTON ST	366263.5313	5031005	-75.71468353	45.41627801	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	1899/12/1 14:48:00-00	15-8297	BOOTH ST @ OTTAWA RIVER PKWY/ WELLINGTON ST	366264.25	5031006	-75.71467959	45.41629401	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	1899/12/1 21:15:00-00	15-1148	BOOTH ST @ OTTAWA RIVER PKWY/ WELLINGTON ST	366264.25	5031005	-75.71467959	45.41620504	Clear	05 - Dusk	04 - Slush	01 - Traffic signal	01 - Functioning	02 - Angle	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	-75.71467959	45.41629208	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 04:23:00-00	15-12279	BOOTH ST @ OTTAWA RIVER PKWY/ WELLINGTON ST	366262.8125	5031006	-75.71469116	45.41629208	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	1899/12/1 10:40:00-00	15-12432	BOOTH ST @ OTTAWA RIVER PKWY/ WELLINGTON ST	366264.25	5031005	-75.71467959	45.41629208	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	1899/12/1 22:00:00-00	15-13721	BOOTH ST @ OTTAWA RIVER PKWY/ WELLINGTON ST	366263.8125	5031005	-75.71466302	45.41620504	Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	02 - Non-fatal injury	03 - P.D. only	07 - SMV other	0	1589
Y	2015	2015/10/02 04:00:00-00	1899/12/1 13:00:00-00	15-13734	BOOTH ST @ OTTAWA RIVER PKWY/ WELLINGTON ST	366263.0625	5031004	-75.71469116	45.41627121	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	1899/12/1 23:15:00-00	15-2913	366078.25	5031346.5	-75.7170105	45.419372											

STUDY 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	RID	
Y	2016/01/04 00:00:00	1899/12/31 22:03:00	16-7288	105 S OF COMMISSIONER ST @ ALBERT ST	365666.2813	5030078.5	-75.705562	45.4126087	Clear	01	Daylight	01	Functioning	03	P-D only	0	7300	
Y	2016/01/03 05:00:00	1899/12/31 21:30:00	16-6131	ALBERT ST @ BOOTH ST	366428.0313	5030026.5	-75.7126312	45.4128687	01	Daylight	02	Wet	01	Functioning	03	P-D only	0	831
Y	2016/01/02 07:00:00	1900/01/01 00:31:00	16-1906	ALBERT ST @ BOOTH ST	366429.0398	5030026.5	-75.7126159	45.4128687	01	Dark	03	Loose snow	01	Functioning	03	P-D only	0	1711
Y	2016/01/02 05:00:00	1900/01/01 00:28:00	16-2963	ALBERT ST @ BOOTH ST	366427.9398	5030026.5	-75.7126312	45.4128687	01	Dark	02	Wet	01	Functioning	03	P-D only	0	2600
Y	2016/01/07 06:00:00	1899/12/31 15:21:00	16-8786	ALBERT ST @ BOOTH ST	366428.0313	5030026.5	-75.7126312	45.4128687	01	Daylight	01	Daylight	01	Functioning	03	P-D only	0	6133
Y	2016/01/07 06:00:00	1899/12/31 12:25:00	16-6429	ALBERT ST @ BOOTH ST	366428.2813	5030025	-75.7126236	45.4128484	01	Daylight	01	Daylight	01	Functioning	02	Non-fatal Injury	05	16089
Y	2016/01/07 10:00:00	1899/12/31 16:55:00	16-6550	ALBERT ST @ BOOTH ST	366429.0398	5030026.5	-75.7126284	45.4128324	01	Daylight	01	Daylight	01	Functioning	02	Non-fatal Injury	04	16483
Y	2016/01/07 10:00:00	1899/12/31 06:56:00	16-7183	ALBERT ST @ BOOTH ST	366428.0313	5030026.5	-75.7126236	45.4128687	01	Daylight	01	Daylight	01	Functioning	03	P-D only	0	7337
Y	2016/01/08 18:00:00	1899/12/31 15:28:00	16-5885	ALBERT ST @ BOOTH ST	366429.25	5030027	-75.7126159	45.4128687	01	Daylight	01	Daylight	01	Functioning	03	P-D only	0	8398
Y	2016/01/11 06:00:00	1900/01/01 04:30:00	16-1077	ALBERT ST @ BOOTH ST	366427.9398	5030027.5	-75.7126312	45.4127273	01	Dark	01	Daylight	01	Functioning	02	Non-fatal Injury	02	10639
Y	2016/01/12 05:00:00	1899/12/31 17:20:00	16-1184	ALBERT ST @ BOOTH ST	366429.5313	5030026.5	-75.7126284	45.4128484	01	Daylight	02	Wet	01	Functioning	03	P-D only	0	11691
Y	2016/01/02 16:00:00	1899/12/31 19:33:00	16-1782	ALBERT ST @ BRONSON AVE	366741.0938	5031017.5	-75.7082800	45.4165151	03	Daylight	03	Loose snow	01	Functioning	02	Non-fatal Injury	01	Approaching
Y	2016/01/03 05:00:00	1899/12/31 19:55:00	16-7187	ALBERT ST @ BRONSON AVE	366739.0398	5031017.5	-75.7082800	45.4165151	03	Daylight	01	Daylight	01	Functioning	03	P-D only	0	917
Y	2016/01/09 03:00:00	1900/01/01 02:47:00	16-8161	ALBERT ST @ BRONSON AVE	366739.0311	5031016.5	-75.7086105	45.4163987	01	Dark	01	Daylight	01	Functioning	02	Non-fatal Injury	02	1862
Y	2016/01/10 11:00:00	1899/12/31 19:34:00	16-8288	ALBERT ST @ BRONSON AVE	366739.0311	5031017	-75.7086105	45.4163987	01	Daylight	01	Daylight	01	Functioning	03	P-D only	0	9479
Y	2016/01/05 04:00:00	1899/12/31 12:47:00	16-9098	ALBERT ST @ COMMISSIONER ST	366713.9063	5030071.5	-75.7089197	45.4153933	01	Daylight	01	Daylight	01	Functioning	05	Turning movement	0	1287
Y	2016/01/06 04:00:00	1899/12/31 23:41:00	16-5718	ALBERT ST @ EMPRESS AVE	366577.375	5030720.5	-75.7107062	45.4136927	01	Daylight	01	Daylight	01	Functioning	03	P-D only	0	5727
Y	2016/01/06 04:00:00	1899/12/31 15:45:00	16-6251	ALBERT ST @ PERKINS ST	366534.5625	5030095	-75.7112579	45.4136471	01	Daylight	01	Daylight	01	Functioning	03	P-D only	0	6945
Y	2016/01/04 05:00:00	1899/12/31 23:13:00	16-9595	ALBERT ST @ PRESTON ST	366161.0625	5030044.5	-75.7160562	45.4112624	01	Daylight	03	Loose snow	01	Functioning	03	P-D only	0	851
Y	2016/01/02 05:00:00	1899/12/31 17:15:00	16-1731	ALBERT ST @ PRESTON ST	366160.3438	5030044.5	-75.7160708	45.4112624	01	Daylight	06	Ice	01	Functioning	03	P-D only	0	1001
Y	2016/01/02 05:00:00	1899/12/31 15:51:00	16-2077	ALBERT ST @ PRESTON ST	366161.1875	5030044.5	-75.7160562	45.4112624	01	Daylight	01	Daylight	01	Functioning	03	P-D only	0	2877
Y	2016/01/04 05:00:00	1899/12/31 15:44:00	16-5596	ALBERT ST @ PRESTON ST	366161.0625	5030044.5	-75.7160562	45.4112624	01	Daylight	01	Daylight	01	Functioning	02	Non-fatal Injury	07	2519
Y	2016/01/07 04:00:00	1899/12/31 20:46:00	16-6478	ALBERT ST @ PRESTON ST	366159.9063	5030046	-75.7160708	45.4114306	01	Daylight	01	Daylight	01	Functioning	03	P-D only	0	6533
Y	2016/01/08 01:00:00	1899/12/31 15:37:00	16-7196	ALBERT ST @ PRESTON ST	366160.1875	5030044.5	-75.7160708	45.4112624	01	Daylight	01	Daylight	01	Functioning	02	Non-fatal Injury	04	16282
Y	2016/01/09 03:00:00	1899/12/31 12:36:00	16-8170	ALBERT ST @ PRESTON ST	366160.7813	5030044.5	-75.7160645	45.4112624	02	Daylight	02	Wet	01	Functioning	03	P-D only	0	8761
Y	2016/01/09 04:00:00	1899/12/31 17:24:00	16-8460	ALBERT ST @ PRESTON ST	366161.0625	5030046	-75.7160562	45.4114306	01	Daylight	01	Daylight	01	Functioning	03	P-D only	0	8262
Y	2016/01/05 01:20:00	1900/01/01 02:33:00	16-4177	ALBERT ST @ NEW CITY CENTRE AVE @ PRESTON ST	366161.4063	5030043.5	-75.7160366	45.4112624	01	Daylight	01	Daylight	01	Functioning	02	Non-fatal Injury	02	1644
Y	2016/01/08 05:00:00	1899/12/31 16:40:00	16-7181	ALBERT ST @ NEW PERKINS ST & TRACY	366556.4063	5030070.5	-75.7097565	45.4137803	01	Daylight	01	Daylight	01	Functioning	03	P-D only	0	424
Y	2016/01/07 21:00:00	1899/12/31 12:05:00	16-6884	ALBERT ST @ NEW SCOTT ST @ CITY CENTRE AVE (2)	365873.8125	5030070.5	-75.7197945	45.4103797	01	Daylight	01	Daylight	01	Functioning	04	SideSwipe	0	6789
Y	2016/01/02 10:00:00	1899/12/31 16:49:00	16-9149	ALBERT ST @ NEW SCOTT ST @ CITY CENTRE AVE (2)	365873.9398	5030070.5	-75.7198415	45.4103797	01	Daylight	01	Daylight	01	Functioning	02	Non-fatal Injury	02	1760
Y	2016/01/02 10:00:00	1899/12/31 13:11:00	16-1493	BARVIEW RD @ SCOTT ST/ALBERT ST	365518.8438	5030072	-75.7243183	45.4079474	03	Daylight	04	Wet	01	Functioning	02	Non-fatal Injury	05	Turning movement
Y	2016/01/03 02:00:00	1900/01/01 23:24:00	16-2609	BARVIEW RD @ SCOTT ST/ALBERT ST	365520.5313	5030072	-75.7242894	45.4079153	01	Dark	02	Wet	01	Functioning	02	Non-fatal Injury	07	SMV other
Y	2016/01/06 07:00:00	1899/12/31 13:38:00	16-7190	BARVIEW RD @ SCOTT ST/ALBERT ST	365518.8438	5030072	-75.7243183	45.4079474	01	Daylight	01	Daylight	01	Functioning	03	P-D only	0	8923
Y	2016/01/08 18:00:00	1899/12/31 12:50:00	16-7677	BARVIEW RD @ SCOTT ST/ALBERT ST	365518.125	5030072	-75.7243184	45.4079474	01	Daylight	01	Daylight	01	Functioning	03	P-D only	0	7388
Y	2016/01/08 02:00:00	1900/01/01 00:13:00	16-7236	BARVIEW RD @ SCOTT ST/ALBERT ST	365519.1563	5030071.5	-75.7243183	45.4079474	01	Daylight	01	Daylight	01	Functioning	02	Non-fatal Injury	05	Turning movement
Y	2016/01/08 02:00:00	1899/12/31 18:14:00	16-8487	BARVIEW RD @ SCOTT ST/ALBERT ST	365518.8438	5030072	-75.7243183	45.4079474	01	Daylight	01	Daylight	01	Functioning	03	P-D only	0	7589
Y	2016/01/12 05:00:00	1899/12/31 22:07:00	16-11845	BARVIEW RD @ SCOTT ST/ALBERT ST	365518.8125	5030071.5	-75.7243183	45.4079474	01	Dark	03	Loose snow	01	Functioning	03	P-D only	0	11666
Y	2016/01/12 02:00:00	1899/12/31 14:07:00	16-12093	BARVIEW RD @ SCOTT ST/ALBERT ST	365519.875	5030071	-75.7242867	45.4079474	01	Daylight	04	Wet	01	Functioning	03	P-D only	0	12429
Y	2016/01/04 07:00:00	1899/12/31 18:14:00	16-5182	BOOTH ST @ 208 N OF MIDDLE ST & E. EDY S	366267.9243	5030047	-75.7187836	45.4200211	01	Daylight	01	Daylight	01	Functioning	03	P-D only	0	8169
Y	2016/01/07 07:00:00	1899/12/31 20:05:00	16-6477	BOOTH ST @ 208 N OF MIDDLE ST & E. EDY N	366010.4063	5031471.5	-75.7187836	45.4200211	01	Daylight	01	Daylight	01	Functioning	03	P-D only	0	8512
Y	2016/01/05 01:00:00	1899/12/31 14:30:00	16-6481	BOOTH ST @ FLEET ST	366296.4888	5030093	-75.7142755	45.4154941	01	Daylight	01	Daylight	01	Functioning	03	P-D only	0	6931
Y	2016/01/03 07:00:00	1899/12/31 18:40:00	16-6688	BOOTH ST @ OTTAWA RIVER PKWY/WELLINGTON ST	366262.7318	5030085.5	-75.7146916	45.4162928	01	Daylight	01	Daylight	01	Functioning	03	P-D only	0	8622
Y	2016/01/03 07:00:00	1900/01/01 03:21:00	16-3288	BOOTH ST @ OTTAWA RIVER PKWY/WELLINGTON ST	366262.8438	5030036	-75.7146916	45.4162928	01	Dark	01	Daylight	01	Functioning	03	P-D only	0	3805
Y	2016/01/05 03:00:00	1899/12/31 23:30:00	16-7406	BOOTH ST @ OTTAWA RIVER PKWY/WELLINGTON ST	366264.5	5031007.5	-75.7146687	45.4162931	01	Daylight	01	Daylight	01	Functioning	03	P-D only	0	4127
Y	2016/01/03 07:00:00	1899/12/31 18:40:00	16-6061	BOOTH ST @ OTTAWA RIVER PKWY/WELLINGTON ST	366264.1875	5031007	-75.7146916	45.4162931	01	Daylight	01	Daylight	01	Functioning	03	P-D only	0	4611
Y	2016/01/09 04:00:00	1899/12/31 18:30:00	16-8170	BOOTH ST @ OTTAWA RIVER PKWY/WELLINGTON ST	366264.4375	5031007	-75.7146687	45.4162931	01	Daylight	01	Daylight	01	Functioning	03	P-D only	0	8123
Y	2016/01/03 03:00:00	1899/12/31 17:15:00	16-9042	BOOTH ST @ OTTAWA RIVER PKWY/WELLINGTON ST	366264.8125	5031008	-75.7146687	45.4162931	01	Daylight	01	Daylight	01	Functioning	03	P-D only	0	9239
Y	2016/01/03 07:00:00	1899/12/31 13:45:00	16-11862	BOOTH ST @ OTTAWA RIVER PKWY/WELLINGTON ST	366264.0313	5031009	-75.7146759	45.4162931	01	Daylight	01	Daylight	01	Functioning	03	P-D only	0	8568
Y	2016/01/03 05:00:00	1899/12/31 23:43:00	16-12663	BOOTH ST @ OTTAWA RIVER PKWY/WELLINGTON ST	366263.9375	5031005	-75.7146759	45.4162926	01	Dark	01	Daylight	01	Functioning	03	P-D only	0	12047
Y	2016/01/09 04:00:00	1899/12/31 18:30:00	16-1257	BOOTH ST @ OTTAWA RIVER PKWY/WELLINGTON ST	366263.7388	5031008	-75.7146833	45.4160544	01	Daylight	01	Daylight	01	Functioning	02	Non-fatal Injury	03	12651
Y	2016/01/08 19:00:00	1899/12/31 22:11:00	16-1250	BOOTH ST @ OTTAWA RIVER PKWY/WELLINGTON ST	366264.4063	5031007	-75.7146759	45.4162931	01	Daylight	01	Daylight	01	Functioning	03	P-D only	0	12642

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	366428.3458	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	-75.7126236	45.41286087	1.49648E+12	-2.2090E+12 01	Clear	01 - Dry	01 - Traffic signal	03 - At intersection related	01 - Daylight	03 - P.D. only	04 - Sideswipe	52
Y	2017	152 ALBERT ST @ BOOTH ST	366427.6875	5030626	-75.7126123	45.41285706	1.49975E+12	-2.209E+12 01	Clear	01 - Dry	01 - Traffic signal	02 - 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	-2.0897E+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	-2.0897E+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	5030621.5	-75.71260834	45.41286265	1.49538E+12	-2.2090E+12 01	Clear	01 - Dry	01 - Traffic signal	02 - Intersection related	01 - Daylight	03 - P.D. only	04 - Sideswipe	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	-2.2090E+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	-2.2088E+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	5030626.5	-75.71261597	45.41284943	1.51262E+12	-2.0898E+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	5030621.5	-75.71260834	45.41287231	1.48613E+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	-2.2090E+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	5030626.5	-75.71260834	45.41284943	1.48662E+12	-2.2090E+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	45.41286885	1.48713E+12	-2.2090E+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	366428.3458	5030628	-75.7126236	45.41287231	1.48946E+12	-2.2090E+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	1.4919E+12	-2.2090E+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	45.41285234	1.51401E+12	-2.2090E+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	-2.2090E+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	1.49855E+12	-2.2090E+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	-2.2090E+12 03	Snow	03 - Loose snow	01 - Traffic signal	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	-2.2090E+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	-2.2090E+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	-75.71070862	45.41370011	1.48938E+12	-2.2090E+12 01	Clear	01 - Dry	01 - Traffic signal	03 - At Intersection	01 - Daylight	03 - P.D. only	03 - Rear end	89
Y	2017	205 ALBERT ST @ BERKINS ST	366534.0313	5030967	-75.71126556	45.41486648	1.51012E+12	-2.2090E+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	-2.0899E+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	1.49944E+12	-2.0899E+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	366163.375	5030464	-75.71605682	45.41144148	1.49666E+12	-2.209E+12 01	Clear	01 - Dry	01 - Traffic signal	02 - Intersection related	07 - Dark	02 - Non-fatal injury	03 - Rear end	209
Y	2017	210 ALBERT ST @ PRESTON ST	366162.4063	5030465.5	-75.71604156	45.41144148	1.48355E+12	-2.2089E+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	-2.0899E+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 bwn CITY CENTRE AVE & PRESTON ST	366132.9375	5030447	-75.71642303	45.41127396	1.48904E+12	-2.2090E+12 01	Clear	01 - Dry	01 - Non intersection	01 - Non intersection	01 - Daylight	03 - P.D. only	04 - Sideswipe	219
Y	2017	222 ALBERT ST bwn LORNE AVE & PERKINS ST	366519.3438	5030687	-75.71145653	45.41339493	1.48765E+12	-2.0899E+12 02	Rain	02 - Wet	01 - No control	01 - Non intersection	05 - Dusk	03 - P.D. only	04 - Sideswipe	222
Y	2017	227 ALBERT ST bwn PRINCE ALBERT ST & CITY CENTRE AVE (1)	366525.4313	5030952	-75.71609879	45.41597566	1.49092E+12	-2.209E+12 01	Clear	01 - Dry	01 - No control	01 - Non intersection	01 - Daylight	03 - P.D. only	04 - Sideswipe	227
Y	2017	228 ALBERT ST bwn SCOTT ST & CITY CENTRE AVE (1)	366564.5313	5030150.5	-75.72257233	45.40864563	1.48955E+12	-2.2090E+12 05	Drifting Snow	03 - Loose snow	01 - Non intersection	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	-2.0899E+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	-2.0899E+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	-75.72429657	45.40794754	1.5064E+12	-2.2090E+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	-2.2089E+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	-2.2090E+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	-2.0899E+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	45.41620173	1.49776E+12	-2.2090E+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	-2.0899E+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	5031006.5	-75.71468353	45.41629028	1.50176E+12	-2.2090E+12 01	Clear	01 - Dry	01 - Traffic signal	02 - Intersection related	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	-2.2089E+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	-2.2090E+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</			

Y	2017	11265	PARKDALE AVE @ SCOTT ST	364950.0313	5029727	-75.73162079	45.40489996	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	GEOD_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	-75.71262358	45.41286317	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	5030625.817	-75.71262434	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	03 - P.D. only	05 - Turning movement	01 - Clear	03 - Dawn	01 - Dry	01 - Traffic signal	01 - Functioning	0	366428.6235	5030626.715	-75.71262177	45.41286288	4447
Y	2018/2018/05/21 00:00:00-00	18-4633	9:51:00 PM	ALBERT ST @ BOOTH ST (0002162)		2162 03 - At intersection	03 - P.D. only	02 - Angle	01 - Clear	07 - Dark	01 - Dry	01 - Traffic signal	01 - Functioning	0	366428.6933	5030626.566	-75.71262029	45.41286133	4751
Y	2018/2018/06/10 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	-75.71262588	45.41286289	5224
Y	2018/2018/08/10 00:00:00-00	18-7283	5:52:00 PM	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	366428.6927	5030626.567	-75.71262029	45.41286134	8009
Y	2018/2018/09/20 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	-75.71262029	45.41286133	8011
Y	2018/2018/09/14 00:00:00-00	18-8647	2:45:00 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	366428.7812	5030626.688	-75.71262588	45.41286289	8424
Y	2018/2018/10/20 00:00:00-00	18-9657	5:00:00 PM	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	366428.6933	5030626.567	-75.71262029	45.41286134	8409
Y	2018/2018/11/02 00:00:00-00	18-10104	7:47:00 AM	ALBERT ST @ PRESTON ST (0002217)		2162 02 - Intersection related	03 - P.D. only	03 - Rear end	02 - Rain	01 - Daylight	02 - Wet	01 - Traffic signal	01 - Functioning	0	366428.6931	5030626.567	-75.71262029	45.41286134	10134
Y	2018/2018/04/06 00:00:00-00	18-3499	4:02:00 PM	ALBERT ST @ BRONSON AVE (0002160)		2162 02 - Intersection related	03 - P.D. only	04 - Sideswipe	01 - Clear	01 - Daylight	01 - Slush	01 - Traffic signal	01 - Functioning	0	366427.7049	5030616.575	-75.70987873	45.41363896	3633
Y	2018/2018/05/15 00:00:00-00	18-4553	6:30:00 AM	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	366578.8856	5030720.754	-75.70715594	45.41369574	4702
Y	2018/2018/04/01 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	366593.6983	5030905.574	-75.71124527	45.41347281	3504
Y	2018/2018/08/28 00:00:00-00	18-6312	7:41:00 PM	ALBERT ST @ PRESTON ST (0002217)		2217 01 - Non intersection	03 - P.D. only	01 - Snow	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	0	366561.3486	5030845.667	-75.71060495	45.41427734	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	03 - P.D. only	07 - SMV other	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	0	366561.6974	5030844.571	-75.71060471	45.41427734	1602
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	366561.7063	5030844.569	-75.71060494	45.41427728	1606
Y	2018/2018/10/01 00:00:00-00	18-9027	4:51:00 PM	ALBERT ST @ PRESTON ST (0002217)		2217 01 - Non intersection	03 - P.D. only	01 - Snow	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	0	366561.7061	5030844.571	-75.71060495	45.41427734	1678
Y	2018/2018/10/20 00:00:00-00	18-10238	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	366561.6966	5030844.571	-75.71060471	45.41427734	1876
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	366561.7182	5030844.564	-75.71060444	45.41427731	19254
Y	2018/2018/12/10 00:00:00-00	18-11380	10:10:00 AM	ALBERT ST @ brwn COMMISSIONER ST & BRONSON AVE ( _32A23H)		_32A237 01 - Non intersection	03 - P.D. only	04 - Sideswipe	01 - Clear	01 - Daylight	02 - Wet	01 - Traffic signal	01 - Functioning	0	366575.9139	5030131.568	-75.70864788	45.41628025	12135
Y	2018/2018/10/10 00:00:00-00	18-9205	1:48:00 AM	ALBERT ST brwn Continuation of ALBERT ST & BOOTH ST ( _32A26G)		_32A262 01 - Non intersection	03 - P.D. only	03 - Rear end	01 - Clear	07 - Dark	01 - Dry	01 - Traffic signal	01 - Functioning	0	366421.7915	503022.282	-75.71270966	45.41282339	11060
Y	2018/2018/12/03 00:00:00-00	18-11475	7:09:00 PM	ALBERT ST @ brwn PRESTON ST & Continuation of ALBERT ST ( _32A33O)		_32A330 01 - Non intersection	03 - P.D. only	99 - Other	01 - Clear	07 - Dark	01 - Dry	01 - No control	01 - Functioning	0	366228.6777	5030808.138	-75.71519086	45.41381333	11727
Y	2018/2018/02/20 00:00:00-00	18-1149	9:33:00 AM	ALBERT ST @ brwn SCOTT ST & CITY CENTRE AVE ( _32A32WB)		_32A32WB 01 - Non intersection	03 - P.D. only	07 - SMV other	01 - Clear	07 - Dark	02 - Wet	01 - No control	01 - Functioning	0	365992.9405	5030214.138	-75.71932172	45.40103539	1365
Y	2018/2018/02/02 00:00:00-00	18-1397	4:30:00 PM	ALBERT ST @ brwn SCOTT ST & CITY CENTRE AVE ( _32A32WB)		_32A32WB 01 - Non intersection	03 - P.D. only	05 - Turning movement	01 - Clear	01 - Daylight	01 - Dry	01 - No control	01 - Functioning	0	365991.5833	5030338.003	-75.71887948	45.40207674	1811
Y	2018/2018/07/10 00:00:00-00	18-3676	11:22:00 PM	BAVVIEW @ 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	503071.525	-75.72430961	45.40796477	6767
Y	2018/2018/10/20 00:00:00-00	18-9596	1:48:00 PM	BAVVIEW @ 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	365519.0389	503071.564	-75.72431011	45.40796708	5102
Y	2018/2018/11/22 00:00:00-00	18-10993	12:42:00 PM	BAVVIEW @ 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	365513.1445	503071.453	-75.72430875	45.40796708	10229
Y	2018/2018/11/02 00:00:00-00	18-10109	8:54:00 AM	BAVVIEW @ 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	365513.0372	503071.565	-75.72431011	45.40796709	10721
Y	2018/2018/06/27 00:00:00-00	18-6050	3:22:00 PM	BOOTH ST @ 148 N OF MIDDLE ST/E/EDDY S (0011289)		12189 02 - Intersection related	03 - P.D. only	04 - Sideswipe	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	0	366035.5050	5031616.336	-75.71974450	45.40200377	6280
Y	2018/2018/10/20 00:00:00-00	18-9802	8:10:00 PM	BOOTH ST @ OTTAWA RIVER PKWY/WELLINGTON ST (0012253)		12252 01 - Non intersection	03 - P.D. only	01 - Snow	01 - Clear	01 - Daylight	01 - Slush	01 - Traffic signal	01 - Functioning	0	366263.2117	5031782.991	-75.71467876	45.41629084	10270
Y	2018/2018/04/21 00:00:00-00	18-3931	6:20:00 PM	BOOTH ST @ OTTAWA RIVER PKWY/WELLINGTON ST (0012253)		12252 02 - Intersection related	03 - P.D. only	04 - Sideswipe	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	0	366264.2671	5031026.688	-75.71467416	45.41629083	3380
Y	2018/2018/04/09 00:00:00-00	18-3973	5:57:00 PM	BOOTH ST @ OTTAWA RIVER PKWY/WELLINGTON ST (0012253)		12252 02 - Intersection related	03 - P.D. only	03 - Rear end	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	0	366264.2674	5031027.385	-75.71466982	45.41629082	3386
Y	2018/2018/03/21 00:00:00-00	18-1616	11:43:00 AM	BOOTH ST @ OTTAWA RIVER PKWY/WELLINGTON ST (0012253)		12252 01 - Non intersection	03 - P.D. only	05 - Turning movement	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	0	366264.2051	5031026.688	-75.71467416	45.41629084	3390
Y	2018/2018/12/16 00:00:00-00	18-10670	6:30:00 AM	BOOTH ST @ OTTAWA RIVER PKWY/WELLINGTON ST (0012253)		12252 02 - Intersection related	03 - P.D. only	03 - Rear end	01 - Snow	07 - Dark	01 - Loose snow	01 - Traffic signal	01 - Functioning	0	366264.2082	5031026.688	-75.71467416	45.41629084	11554
Y	2018/2018/12/09 00:00:00-00	18-11710	10:32:00 PM	BOOTH ST @ OTTAWA RIVER PKWY/WELLINGTON ST (0012253)		12252 01 - Non intersection	03 - P.D. only	05 - Turning movement	03 - Snow	07 - Dark	03 - Packed snow	01 - Traffic signal	01 - Functioning	0	366264.455	5031026.711	-75.71467103	45.41629081	10341
Y	2018/2018/12/11 00:00:00-00	18-12621	9:00:00 AM	BOOTH ST @ OTTAWA RIVER PKWY/WELLINGTON ST (0012253)		12252 02 - At intersection	03 - P.D. only	07 - SMV other	01 - Clear	07 - Dark	04 - Slush	01 - Traffic signal	01 - Functioning	0	366264.2197	5031026.688	-75.71467416	45.41629084	12455
Y	2018/2018/12/01 00:00:00-00	18-12819	5:01:00 PM	BOOTH ST @ OTTAWA RIVER PKWY/WELLINGTON ST (0012253)		12252 02 - At intersection	03 - P.D. only	03 - Rear end	01 - Clear	07 - Dark	01 - Dry	01 - Traffic signal	01 - Functioning	0	366264.2599	5031026.689	-75.71467416	45.41629083	12609
Y	2018/2018/02/28 00:00:00-00	18-12819	6:30:00 AM	BOOTH ST @ brwn MIDDLE ST/E/EDDY S (0011289)		12819 07 - Overpass or bridge	03 - P.D. only	07 - SMV other	02 - Rain	03 - Dawn	02 - Wet	01 - No control	01 - Functioning	0	366075.1822	5031344.406	-75.71704773	45.41951513	2479
Y	2018/2018/12/05 00:00:00-00	18-12825	10:00:00 AM	BOOTH ST @ brwn MIDDLE ST/E/EDDY S (0011289)		_32BPMPC 01 - Non intersection	03 - P.D. only	04 - Sideswipe	01 - Clear	01 - Daylight	01 - Dry	01 - No control	01 - Functioning	0	366535.2042	5031259.619	-75.71625309	45.41802389	12615
Y	2018/2018/01/07 00:00:00-00	18-278	10:30:00 AM	BOOTH ST @ brwn PROVINCIAL BOUNDARY & 208 N OF MIDDLE ST/E/EDDY S (0011289)		_32BPMPPA 01 - Non intersection	03 - P.D. only	03 - Rear end	01 - Clear	01 - Daylight	01 - Dry	01 - No control	01 - Functioning	0	366001.6988	5031489.73	-75.71798854	45.42065632	12679
Y	2018/2018/07/16 00:00:00-00	18-6570	7:13:00 AM	BOOTH ST @ brwn VIMY PLACE PRV & OTTAWA RIVER PKWY ( _32VHXZ)		_32VHXZ 01 - Non intersection	03 - P.D. only	03 - Rear end	01 - Clear	01 - Daylight	01 - Dry	01 - No control	01 - Functioning	0	366256.8775	5031305.669	-75.71704773	45.41646746	685
Y	2018/2018/01/11 00:00:00-00	18-564	7:46:00 PM	BRONSON AVE @ COMMISSIONER ST/LATER ST (0001679)		1679 02 - Intersection related	03 - P.D. only	04 - Sideswipe	02 - Rain	07 - Dark	02 - Wet	01 - Traffic signal	01 - Functioning	0	366768.7058	5030948.568	-75.70823677	45.41572858	520
Y	2018/2018/01/08 00:00:00-00	18-320	8:40:00 AM	BRONSON AVE @ COMMISSIONER ST/LATER 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	36				

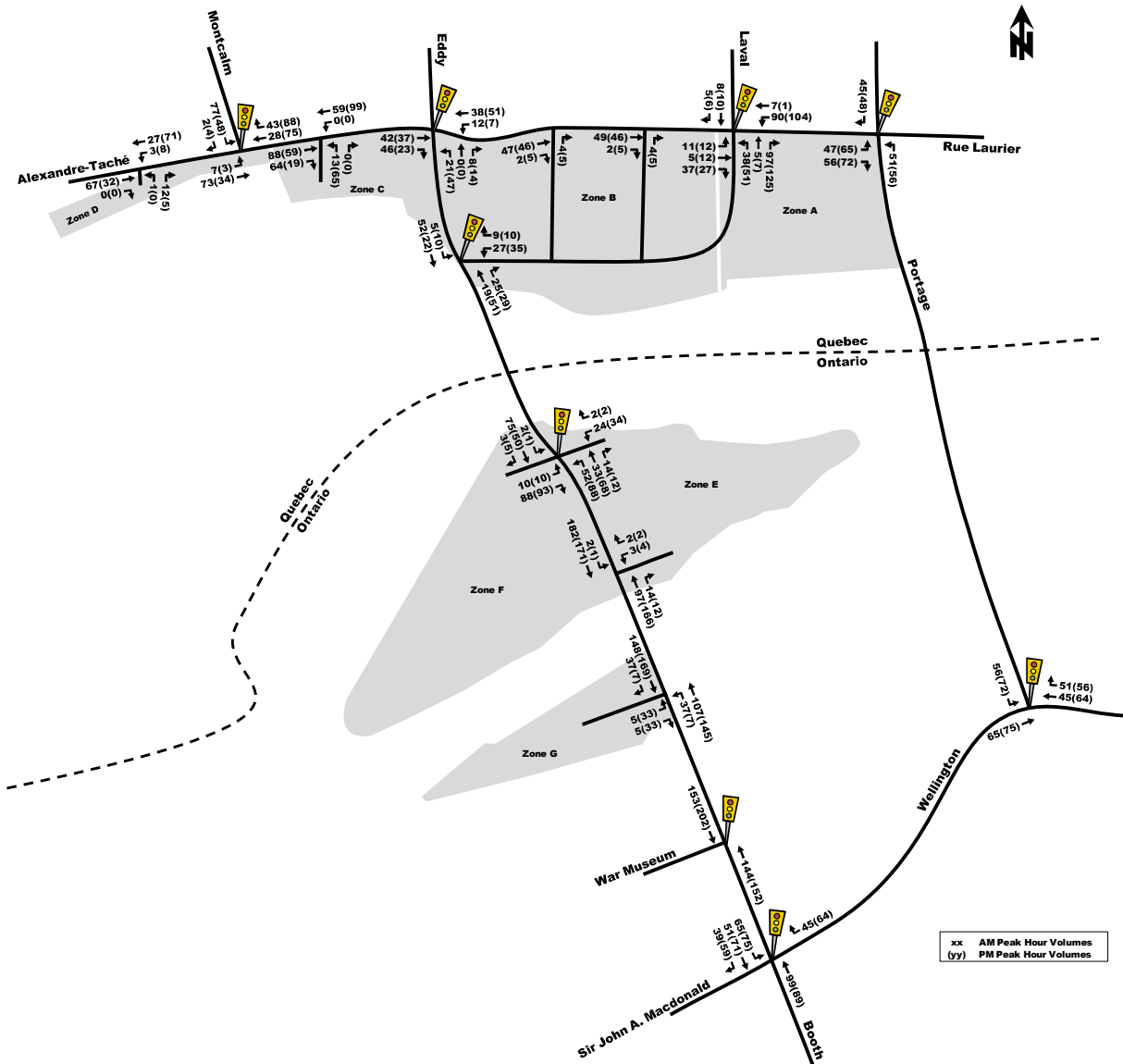
Study Area	Year	Accident_Date	Accident_Time	Location	Geo_ID	Accident_Location	Classification	Initial_Impact_Type	Environment	Light	Road_Surface	Traffic_Control	Traffic_Control_Condition	Number_of_Pedestrians	X	Y	Latitude	Longitude	FID
Y	2019	2019/07/19 10:56:00	2019/07/19 10:56:00	105 S OF COMMISSIONER 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	5030978.415	45.41911543	-75.70955407	7631
Y	2019	2019/01/11 14:25:00	2019/01/11 14:25:00	ALBERT ST @ BOOTH ST (0002163)	2162 02	Intersection related	03 - P.D. only	03 - Rear end	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	0	366628.7192	5030268.722	45.41286251	-75.71262095	815
Y	2019	2019/01/14 16:14:00	2019/01/14 16:14:00	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	366628.7517	5030268.628	45.41286188	-75.71262014	963
Y	2019	2019/01/29 19:45:00	2019/01/29 19:45:00	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	366628.7587	5030268.706	45.41286258	-75.71262004	1826
Y	2019	2019/02/25 12:36:00	2019/02/25 12:36:00	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	366628.6932	5030268.567	45.41286134	-75.71262049	2049
Y	2019	2019/02/14 15:30:00	2019/02/14 15:30:00	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	366628.6918	5030268.699	45.41286255	-75.71262103	2386
Y	2019	2019/02/11 14:03:00	2019/02/11 14:03:00	ALBERT ST @ BOOTH ST (0002162)	2162 03	At Intersection	02 - Non-fatal injury	02 - Angle	01 - Clear	01 - Daylight	01 - Ice	01 - Traffic signal	01 - Functioning	0	366628.6929	5030268.567	45.41286134	-75.71262099	2715
Y	2019	2019/03/13 20:22:00	2019/03/13 20:22:00	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	366628.5996	5030268.621	45.41286184	-75.71262209	3743
Y	2019	2019/03/13 17:15:00	2019/03/13 17:15:00	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	366628.6928	5030268.567	45.41286134	-75.71262099	3976
Y	2019	2019/04/07 07:00:00	2019/04/07 07:00:00	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	366628.6596	5030268.503	45.41286076	-75.71262134	4084
Y	2019	2019/06/21 18:26:00	2019/06/21 18:26:00	ALBERT ST @ BOOTH ST (0002162)	2162 03	Intersection related	03 - P.D. only	03 - Rear end	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	0	366628.6519	5030268.511	45.41286134	-75.71262103	4296
Y	2019	2019/04/12 21:40:00	2019/04/12 21:40:00	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	366628.7026	5030268.698	45.41286252	-75.71262076	4664
Y	2019	2019/05/21 08:30:00	2019/05/21 08:30:00	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	366628.7056	5030268.587	45.41286252	-75.71262074	5533
Y	2019	2019/05/14 09:33:00	2019/05/14 09:33:00	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	366628.6454	5030268.795	45.41286003	-75.71262148	5620
Y	2019	2019/05/17 14:45:00	2019/05/17 14:45:00	ALBERT ST @ BOOTH ST (0002162)	2162 02	Intersection related	03 - P.D. only	03 - Rear end	01 - Clear	02 - Angle	01 - Clear	01 - Traffic signal	01 - Functioning	0	366628.7653	5030268.586	45.41286185	-75.71261999	5786
Y	2019	2019/07/14 4:53:00	2019/07/14 4:53:00	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	366628.6593	5030268.515	45.41286088	-75.71262134	7099
Y	2019	2019/08/30 13:00:00	2019/08/30 13:00:00	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	366628.5725	5030268.691	45.41286246	-75.71262242	9850
Y	2019	2019/10/16 15:08:00	2019/10/16 15:08:00	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	366628.6226	5030268.641	45.41286201	-75.71262179	10674
Y	2019	2019/11/20 23:34:00	2019/11/20 23:34:00	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	366628.8509	5030268.299	45.41285992	-75.71261832	12312
Y	2019	2019/11/09 04:30:00	2019/11/09 04:30:00	ALBERT ST @ BOOTH ST (0002162)	2162 02	Intersection related	02 - Non-fatal injury	07 - SMV other	01 - Clear	01 - Daylight	01 - Dry	01 - Traffic signal	01 - Functioning	0	366628.6845	5030268.586	45.41286151	-75.71262101	12480
Y	2019	2019/11/14 09:00:00	2019/11/14 09:00:00	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	5030268.093	45.41287491	-75.71259713	12967
Y	2019	2019/12/14 17:23:00	2019/12/14 17:23:00	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	366628.8187	5030268.661	45.41286218	-75.71261928	13679
Y	2019	2019/12/05 19:00:00	2019/12/05 19:00:00	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	366628.5005	5030268.394	45.4128598	-75.71262338	13922
Y	2019	2019/02/12 12:23:00	2019/02/12 12:23:00	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	36679.8248	5031016.629	45.41634169	-75.70859721	2758
Y	2019	2019/04/12 12:58:00	2019/04/12 12:58:00	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	36679.6611	5031016.819	45.41634169	-75.70859721	2825
Y	2019	2019/07/14 16:10:00	2019/07/14 16:10:00	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	36679.7744	5031016.629	45.41634355	-75.70859822	7104
Y	2019	2019/02/12 18:00:00	2019/02/12 18:00:00	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	36995.5448	5030384.518	45.41036504	-75.71870035	2774
Y	2019	2019/08/06 11:22:00	2019/08/06 11:22:00	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	36995.4853	5030384.657	45.4103663	-75.71870099	8688
Y	2019	2019/08/29 15:49:00	2019/08/29 15:49:00	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	36995.4654	5030384.657	45.41036633	-75.71870099	9220
Y	2019	2019/06/13 20:01:00	2019/06/13 20:01:00	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	2019/06/12 22:03:00	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	2019/04/26 20:11:00	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	36675.5109	5030720.742	45.41395957	-75.71072073	4166
Y	2019	2019/05/10 15:36:00	2019/05/10 15:36:00	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	36675.792	5030720.592	45.41396429	-75.71071719	5079
Y	2019	2019/06/05 15:13:00	2019/06/05 15:13:00	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	36675.8112	5030720.473	45.41396322	-75.71071923	5193
Y	2019	2019/10/15 09:38:00	2019/10/15 09:38:00	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	36675.6376	5030720.594	45.41396432	-75.71071913	10345
Y	2019	2019/07/26 10:24:00	2019/07/26 10:24:00	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	2019/01/03 22:00:00	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	366160.7315	5030464.526	45.41142889	-75.71066402	328
Y	2019	2019/07/19 16:14:00	2019/07/19 16:14:00	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	366160.5661	5030464.583	45.41142874	-75.71066538	1634
Y	2019	2019/02/18 16:57:00	2019/02/18 16:57:00	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	366160.3704	5030464.573	45.41142733	-75.71066707	2279
Y	2019	2019/02/15 19:58:00	2019/02/15 19:58:00	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	-75.71066282	2852
Y	2019	2019/04/06 15:29:00	2019/04/06 15:29:00	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	-75.71066375	4451
Y	2019	2019/03/13 11:30:00	2019/03/13 11:30:00	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	-75.71066413	7451
Y	2019	2019/03/13 18:43:00	2019/03/13 18:43:00	ALBERT ST @ PERKINS ST & COMMISSIONER ST (32A2G2)	32A2G2 01	Non Intersection	03 - P.D. only	03 - Rear end	03 - Snow	05 - Dusk	04 - Slush	10 - No control	01 - Functioning	0	366719.4299	5030265.335	45.41588861	-75.70893922	3993
Y	2019	2019/04/05 01:40:00	2019/04/05 01:40:00	ALBERT ST @ PERKINS ST & COMMISSIONER ST (32A2G2)	32A2G2 01	Non Intersection	03 - P.D. only	07 - SMV other	01 - Clear	07 - Dark	01 - Dry								



Y	2019/01/16 00:00:00-00	2019/01/16 00:00:00-00	PARKDALE AVE btwn BURNSIDE AVE & LYNDAL 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	2019/01/24 22:00:00-00	2019/01/24 22:00:00-00	PARKDALE AVE btwn BURNSIDE AVE & LYNDAL 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	5030086.209	45.40814135	-75.73357453	1418
Y	2019/07/18 11:57:00-00	2019/07/18 11:57:00-00	PARKDALE AVE btwn LYNDAL 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	5028982.617	45.40539229	-75.73252359	7600
Y	2019/08/06 10:25:00-00	2019/08/06 10:25:00-00	PARKDALE AVE btwn LYNDAL 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	364916.9779	5028981.718	45.40557103	-75.73203365	8687
Y	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	2019/12/31 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	2019/06/25 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	0	366355.3951	5031111.272	45.41722903	-75.71349674	6753
Y	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	2019/05/21 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

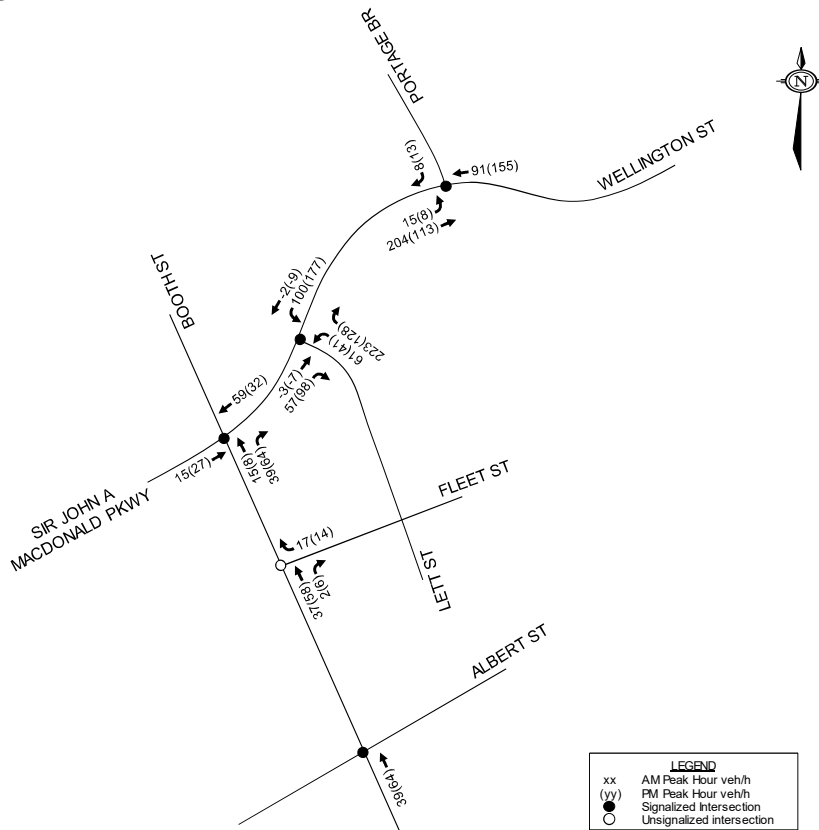


Figure 10: 2031 Total Traffic Volumes

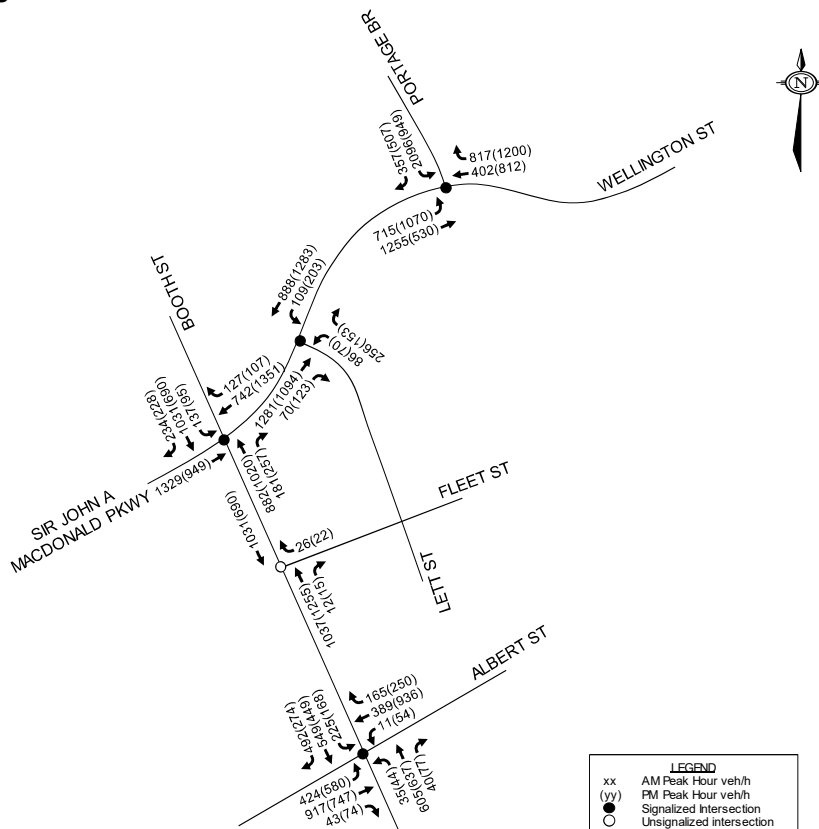
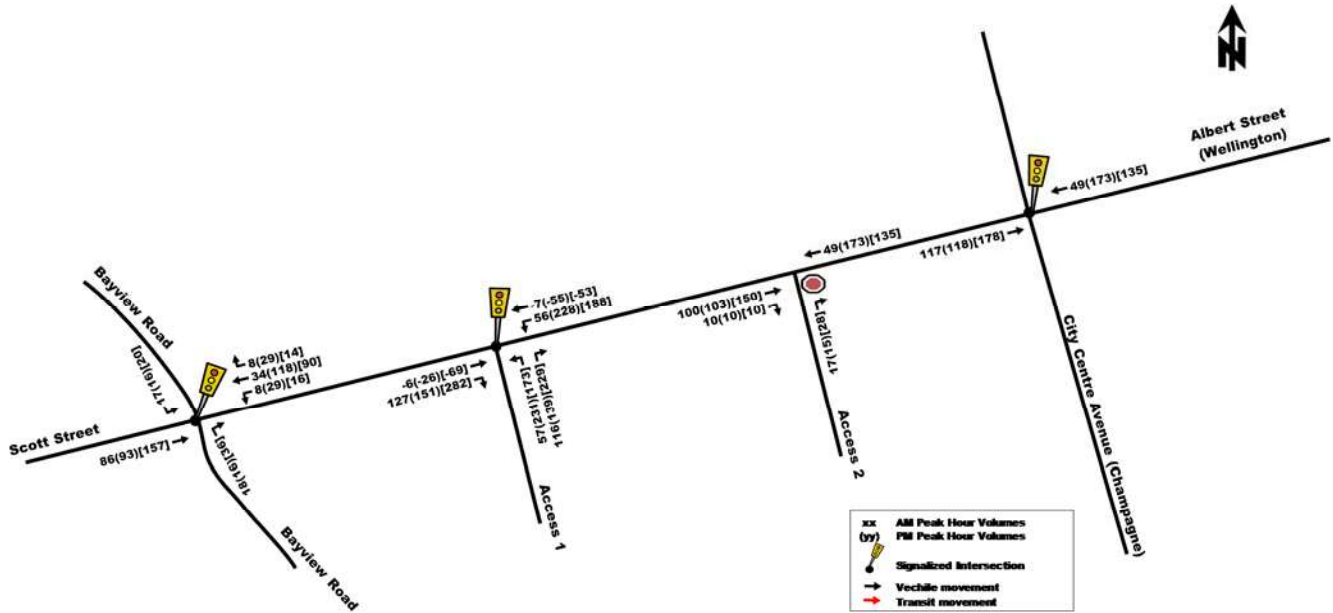


Figure 11: New and Pass-by Site-Generated Traffic Volumes - 2025

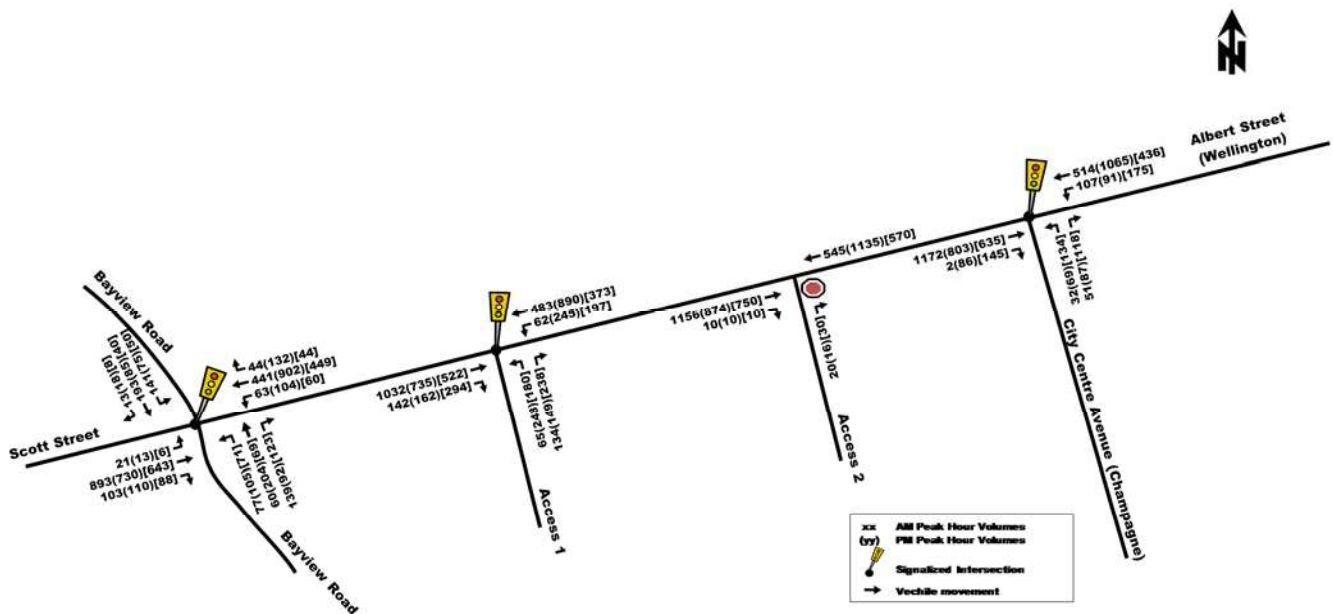


**FUTURE TRAFFIC OPERATIONS**

**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: 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**:

<p><b><i>TDM program management</i></b></p> <ul style="list-style-type: none"><li>▪ Program coordinator</li><li>▪ Travel surveys</li></ul> <p><b><i>Parking</i></b></p> <ul style="list-style-type: none"><li>▪ Priced parking</li></ul> <p><b><i>Walking &amp; cycling</i></b></p> <ul style="list-style-type: none"><li>▪ Information on walking/cycling routes &amp; destinations</li><li>▪ Bicycle skills training</li><li>▪ Valet bike parking</li></ul> <p><b><i>Transit</i></b></p> <ul style="list-style-type: none"><li>▪ Transit information</li><li>▪ Transit fare incentives</li><li>▪ Enhanced public transit service</li><li>▪ Private transit service</li></ul> <p><b><i>Ridesharing</i></b></p> <ul style="list-style-type: none"><li>▪ Ridematching service</li><li>▪ Carpool parking price incentives</li><li>▪ Vanpool service</li></ul> <p><b><i>Carsharing &amp; bikesharing</i></b></p> <ul style="list-style-type: none"><li>▪ Bikeshare stations &amp; memberships</li><li>▪ Carshare vehicles &amp; memberships</li></ul> <p><b><i>TDM marketing &amp; communications</i></b></p> <ul style="list-style-type: none"><li>▪ Multimodal travel information</li><li>▪ Personalized trip planning</li><li>▪ Promotions</li></ul> <p><b><i>Other incentives &amp; amenities</i></b></p> <ul style="list-style-type: none"><li>▪ Emergency ride home</li><li>▪ Alternative work arrangements</li><li>▪ Local business travel options</li><li>▪ Commuter incentives</li><li>▪ On-site amenities</li></ul>
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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](http://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](http://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.
- *Ridesharing*—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)*

<b>Legend</b>	
<b>BASIC</b>	The measure is generally feasible and effective, and in most cases would benefit the development and its users
<b>BETTER</b>	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: <i>Non-residential developments</i>		Check if proposed & add descriptions
<b>1. TDM PROGRAM MANAGEMENT</b>		
<b>1.1 Program coordinator</b>		
BASIC	★	1.1.1 Designate an internal coordinator, or contract with an external coordinator
		<input type="checkbox"/> To be determined by individual developers
<b>1.2 Travel surveys</b>		
BETTER		1.2.1 Conduct periodic surveys to identify travel-related behaviours, attitudes, challenges and solutions, and to track progress
		<input type="checkbox"/> The NCC could commission a travel survey every 5 years during the development to gauge the effectiveness of measures.
<b>2. WALKING AND CYCLING</b>		
<b>2.1 Information on walking/cycling routes &amp; destinations</b>		
BASIC		2.1.1 Display local area maps with walking/cycling access routes and key destinations at major entrances
		<input type="checkbox"/> This could be made to be a requirement of all developments in the LeBreton Flats area.
<b>2.2 Bicycle skills training</b>		
<i>Commuter travel</i>		
BETTER	★	2.2.1 Offer on-site cycling courses for commuters, or subsidize off-site courses
		<input type="checkbox"/> To be determined by individual developers
<b>2.3 Valet bike parking</b>		
<i>Visitor travel</i>		
BETTER		2.3.1 Offer secure valet bike parking during public events when demand exceeds fixed supply (e.g. for festivals, concerts, games)
		<input type="checkbox"/> To be determined by individual developers

TDM measures: <i>Non-residential developments</i>		Check if proposed & add descriptions
<b>3. TRANSIT</b>		
<b>3.1 Transit information</b>		
BASIC	3.1.1 Display relevant transit schedules and route maps at entrances	<input type="checkbox"/> 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	<input type="checkbox"/> To be determined by individual developers
BETTER	3.1.3 Provide real-time arrival information display at entrances	<input type="checkbox"/> This could be made to be a requirement of all developments in the LeBreton Flats area.
<b>3.2 Transit fare incentives</b>		
<i>Commuter travel</i>		
BETTER	3.2.1 Offer preloaded PRESTO cards to encourage commuters to use transit	<input type="checkbox"/> To be determined by individual developers
BETTER	★ 3.2.2 Subsidize or reimburse monthly transit pass purchases by employees	<input type="checkbox"/> To be determined by individual developers
<i>Visitor travel</i>		
BETTER	3.2.3 Arrange inclusion of same-day transit fare in price of tickets (e.g. for festivals, concerts, games)	<input type="checkbox"/> To be determined by individual developers
<b>3.3 Enhanced public transit service</b>		
<i>Commuter travel</i>		
BETTER	3.3.1 Contract with OC Transpo to provide enhanced transit services (e.g. for shift changes, weekends)	<input type="checkbox"/> Given the existing OC Transpo service in the area, it is assumed this will be ongoing throughout the development of LeBreton Flats.
<i>Visitor travel</i>		
BETTER	3.3.2 Contract with OC Transpo to provide enhanced transit services (e.g. for festivals, concerts, games)	<input type="checkbox"/> Given the existing OC Transpo service in the area, it is assumed this will be ongoing throughout the development of LeBreton Flats.
<b>3.4 Private transit service</b>		
<i>Commuter travel</i>		
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)	<input type="checkbox"/> To be determined by individual developers
<i>Visitor travel</i>		
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)	<input type="checkbox"/> To be determined by individual developers

TDM measures: <i>Non-residential developments</i>		Check if proposed & add descriptions
<b>4. RIDESHARING</b>		
<b>4.1 Ridematching service</b>		
<i>Commuter travel</i>		
BASIC ★	4.1.1 Provide a dedicated ridematching portal at OttawaRideMatch.com	<input type="checkbox"/> To be determined by individual developers
<b>4.2 Carpool parking price incentives</b>		
<i>Commuter travel</i>		
BETTER	4.2.1 Provide discounts on parking costs for registered carpools	<input type="checkbox"/> This could be made to be a requirement of all developments in the LeBreton Flats area.
<b>4.3 Vanpool service</b>		
<i>Commuter travel</i>		
BETTER	4.3.1 Provide a vanpooling service for long-distance commuters	<input type="checkbox"/> To be determined by individual developers
<b>5. CARSHARING &amp; BIKESHARING</b>		
<b>5.1 Bikeshare stations &amp; memberships</b>		
BETTER	5.1.1 Contract with provider to install on-site bikeshare station for use by commuters and visitors	<input type="checkbox"/> This could be made to be a requirement of all developments in the LeBreton Flats area.
<i>Commuter travel</i>		
BETTER	5.1.2 Provide employees with bikeshare memberships for local business travel	<input type="checkbox"/> To be determined by individual developers
<b>5.2 Carshare vehicles &amp; memberships</b>		
<i>Commuter travel</i>		
BETTER	5.2.1 Contract with provider to install on-site carshare vehicles and promote their use by tenants	<input type="checkbox"/> To be determined by individual developers
BETTER	5.2.2 Provide employees with carshare memberships for local business travel	<input type="checkbox"/> To be determined by individual developers
<b>6. PARKING</b>		
<b>6.1 Priced parking</b>		
<i>Commuter travel</i>		
BASIC ★	6.1.1 Charge for long-term parking (daily, weekly, monthly)	<input type="checkbox"/>
BASIC	6.1.2 Unbundle parking cost from lease rates at multi-tenant sites	<input type="checkbox"/> This could be made to be a requirement of all developments in the LeBreton Flats area.
<i>Visitor travel</i>		
BETTER	6.1.3 Charge for short-term parking (hourly)	<input type="checkbox"/>



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

<b>Legend</b>	
<b>BASIC</b>	The measure is generally feasible and effective, and in most cases would benefit the development and its users
<b>BETTER</b>	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

<b>TDM measures: Residential developments</b>		<b>Check if proposed &amp; add descriptions</b>	
<b>1. TDM PROGRAM MANAGEMENT</b>			
<b>1.1 Program coordinator</b>			
<b>BASIC</b>	★	1.1.1 Designate an internal coordinator, or contract with an external coordinator	<input type="checkbox"/> To be determined by individual developers
<b>1.2 Travel surveys</b>			
<b>BETTER</b>		1.2.1 Conduct periodic surveys to identify travel-related behaviours, attitudes, challenges and solutions, and to track progress	<input type="checkbox"/> The NCC could commission a travel survey every 5 years during the development to gauge the effectiveness of measures.
<b>2. WALKING AND CYCLING</b>			
<b>2.1 Information on walking/cycling routes &amp; destinations</b>			
<b>BASIC</b>		2.1.1 Display local area maps with walking/cycling access routes and key destinations at major entrances ( <i>multi-family, condominium</i> )	<input type="checkbox"/> This could be made to be a requirement of all developments in the LeBreton Flats area.
<b>2.2 Bicycle skills training</b>			
<b>BETTER</b>		2.2.1 Offer on-site cycling courses for residents, or subsidize off-site courses	<input type="checkbox"/> To be determined by individual developers

TDM measures: <i>Residential developments</i>		Check if proposed & add descriptions
<b>3. TRANSIT</b>		
<b>3.1 Transit information</b>		
BASIC	3.1.1 Display relevant transit schedules and route maps at entrances ( <i>multi-family, condominium</i> )	<input type="checkbox"/> 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 ( <i>multi-family, condominium</i> )	<input type="checkbox"/> This could be made to be a requirement of all developments in the LeBreton Flats area.
<b>3.2 Transit fare incentives</b>		
BASIC ★	3.2.1 Offer PRESTO cards preloaded with one monthly transit pass on residence purchase/move-in, to encourage residents to use transit	<input type="checkbox"/> 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	<input type="checkbox"/> To be determined by individual developers
<b>3.3 Enhanced public transit service</b>		
BETTER ★	3.3.1 Contract with OC Transpo to provide early transit services until regular services are warranted by occupancy levels ( <i>subdivision</i> )	<input type="checkbox"/> Given the existing OC Transpo service in the area, it is assumed this will be ongoing throughout the development of LeBreton Flats.
<b>3.4 Private transit service</b>		
BETTER	3.4.1 Provide shuttle service for seniors homes or lifestyle communities (e.g. scheduled mall or supermarket runs)	<input type="checkbox"/> To be determined by individual developers
<b>4. CARSHARING &amp; BIKESHARING</b>		
<b>4.1 Bikeshare stations &amp; memberships</b>		
BETTER	4.1.1 Contract with provider to install on-site bikeshare station ( <i>multi-family</i> )	<input type="checkbox"/> 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 ( <i>multi-family</i> )	<input type="checkbox"/> To be determined by individual developers
<b>4.2 Carshare vehicles &amp; memberships</b>		
BETTER	4.2.1 Contract with provider to install on-site carshare vehicles and promote their use by residents	<input type="checkbox"/> To be determined by individual developers
BETTER	4.2.2 Provide residents with carshare memberships, either free or subsidized	<input type="checkbox"/> To be determined by individual developers
<b>5. PARKING</b>		
<b>5.1 Priced parking</b>		
BASIC ★	5.1.1 Unbundle parking cost from purchase price ( <i>condominium</i> )	<input type="checkbox"/> 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 ( <i>multi-family</i> )	<input type="checkbox"/> This could be made to be a requirement of all developments in the LeBreton Flats area.

<b>TDM measures: Residential developments</b>		<b>Check if proposed &amp; add descriptions</b>	
<b>6. TDM MARKETING &amp; COMMUNICATIONS</b>			
<b>6.1 Multimodal travel information</b>			
<b>BASIC</b> ★	6.1.1	Provide a multimodal travel option information package to new residents	<input type="checkbox"/> To be determined by individual developers
<b>6.2 Personalized trip planning</b>			
<b>BETTER</b> ★	6.2.1	Offer personalized trip planning to new residents	<input type="checkbox"/> To be determined by individual developers

# APPENDIX F: MMLOS Analysis

**Multi-Modal Level of Service - Segments Form**

Project: LeBreton Flats TIA  
 Consultant: Morrison Hershfield now Stantec  
 Date: Oct 25, 2024  
 Scenario: Wellington Street - Future Background, Conceptual

Segment Name		Wellington - Vimy to Lett, Future Background				Wellington - Vimy to Lett, Proposed			
OP Transect / Policy Area		Within 600m of a rapid transit station				Within 600m of a rapid transit station			
Segment Component		Majority (>50%)		Critical		Majority (>50%)		Critical	
Side of Street		W or N	E or S	W or N	E or S	W or N	E or S	W or N	E or S
Pedestrian	<b>PLOS Inputs</b>								
	Posted Speed (km/h)	60 km/h		60 km/h		50 km/h		50 km/h	
	Two-Way ADT	25,000		25,000		30,000		30,000	
	Pedestrian Facility	Sidewalk	Sidewalk			Sidewalk	Sidewalk		
	Does the facility meet the TMP Sidewalk or MUP Policy? If not, for MUPs, is it outside of an anticipated high-volume area and does it have a low-to-moderate volume of pedestrians relative to cyclists (< 20%)?	Yes	Yes			Yes	Yes		
	Facility Width (m)	4.00m	4.00m			4.00m	4.00m		
	Offset from Motor Vehicle Travel Lanes (m)	≥ 3.0m	≥ 3.0m			≥ 3.0m	≥ 3.0m		
	Presence of Adjacent Parking?	Yes	Yes			No	No		
	General Purpose Curb Lane ADT	> 3000	> 3000			-	-		
	Max. Distance between Controlled Crossings (m)	≤ 200m	≤ 200m			≤ 200m	≤ 200m		
<b>PLOS</b>	<b>B</b>	<b>B</b>	-	-	<b>A</b>	<b>A</b>	-	-	
<b>Target PLOS</b>	<b>A</b>				<b>A</b>				
<b>BLOS Inputs</b>									
<b>Cycling Route Classification</b>	<b>Elsewhere</b>				<b>Elsewhere</b>				
Cycling Facility	Shared Operating Space	Shared Operating Space	Input PLOS First	Input PLOS First	Cycle Track	Cycle Track	Input PLOS First	Input PLOS First	
Is the minimum level of separation provided according to OTM Book 18 Pre-Selection Nomograph - Rural Context (Figure 5.617 (for paved shoulders))?	-	-			-	-			
Facility Operation	-	-			Unidirectional	Unidirectional			
Pedestrian/Cyclist Volume	-	-			-	-			
Facility Width	-	-			2.1-2.5m	2.1-2.5m			
Boulevard/Buffer Width (excluding curb)	-	-			0.6-0.99m	0.6-0.99m			
Unsignalized Roadway Crossing Type (where cyclists are required to yield)	None	None			None	None			
Number of Travel Lanes at Crossing	-	-			-	-			
Crossing includes Median Refuge (> 2.7m)	-	-			-	-			
Cross-street Posted Speed (km/h)	-	-			-	-			
Cycling Path Blockages (e.g. bus stops and/or loading zones)	Rare	Rare			Rare	Rare			
<b>BLOS</b>	<b>E</b>	<b>E</b>	-	-	<b>A</b>	<b>A</b>	-	-	
<b>Target BLOS</b>	<b>B</b>				<b>B</b>				
<b>TLOS Inputs</b>									
<b>Transit Facility</b>	<b>Select Transit Designation</b>				<b>Select Transit Designation</b>				
Facility Type									
Transit Travel Speed (Mixed Traffic Only)									
<b>TLOS</b>									
<b>Target TLOS</b>									
<b>PRLOS Inputs</b>									
Context	Mainstreet or active frontage street within a Hub, Special District, or Village	Mainstreet or active frontage street within a Hub, Special District, or Village			Mainstreet or active frontage street within a Hub, Special District, or Village	Mainstreet or active frontage street within a Hub, Special District, or Village			
Inner Boulevard Width	2.0-3.99m	2.0-3.99m			0.6-1.19m	0.6-1.19m			
Middle Boulevard Width	≤ 0.5m	≤ 0.5m			0.5-1.49m	0.5-1.49m			
Outer Boulevard (Frontage) Width	-	-			-	-			
Transit Route on Segment?	No	No			No	No			
Bus Stop Elements	-	-			-	-			
Number of Midblock Traffic Lanes (both travel directions)	4				4				
Design Speed (km/h)	70 km/h				60 km/h				
<b>PRLOS</b>	<b>C</b>	<b>C</b>			<b>B</b>	<b>B</b>			
	<b>C</b>				<b>B</b>				

Multi-Modal Level of Service - Intersections Form

Project: LeBreton Flats TIA  
 Consultant: Morrison Hershfield now Stantec  
 Date: Oct 25, 2024  
 Scenario: Existing Conditions

Intersection Name		Wellington / Vimy				Wellington / Broad				Wellington / Booth				Wellington / Lett				
OP Transect / 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				
Pedestrian	PLOS Inputs																	
	Pedestrians Crossing the	North Leg	South Leg	East Leg	West Leg	North Leg	South Leg	East Leg	West Leg	North Leg	South Leg	East Leg	West Leg	North Leg	South Leg	East Leg	West Leg	
	Number of Travel Lanes Crossed	1-3	1-3	4	5	No Crosswalk	1-3	4	4	6	4	5	4	No Crosswalk	1-3	5	4	
	Median Refuge (> 7m)	No	No	No	No	-	No	No	No	No	No	No	No	-	No	No	No	
	Crosswalk Treatment	Std Transverse Markings	Std Transverse Markings	Std Transverse Markings	Std Transverse Markings	-	Std Transverse Markings	Std Transverse Markings	Std Transverse Markings	Zebra Stripe H-Vis Markings	Zebra Stripe H-Vis Markings	Zebra Stripe H-Vis Markings	Zebra Stripe H-Vis Markings	-	Std Transverse Markings	Std Transverse Markings	Std Transverse Markings	
	Signal Cycle Length (sec)	106-120				106-120				106-120				106-120				
	Conflict with Right-Turn Vehicles (For PLOS & BLOS)	WBR	EBR	NBR	SBR	WBR	EBR	NBR	SBR	WBR	EBR	NBR	SBR	WBR	EBR	NBR	SBR	
	Right-Turn Geometry	Right-Turn With No Channel	No Right-Turn / Prohib.	No Right-Turn / Prohib.	Right-Turn With No Channel	No Right-Turn / Prohib.	No Right-Turn / Prohib.	No Right-Turn / Prohib.	No Right-Turn / Prohib.	Right-Turn With No Channel	No Right-Turn / Prohib.	Right-Turn With No Channel	Right-Turn With No Channel	No Right-Turn / Prohib.	Right-Turn With No Channel	Right-Turn With No Channel	Right-Turn With No Channel	No Right-Turn / Prohib.
	Right-Turn Signal Phasing	Permissive	-	-	Permissive	-	-	-	-	Permissive	-	Permissive	Permissive	-	Permissive	Permissive	-	-
	Right-Turn Volume	≤ 150 veh/h	-	-	≤ 150 veh/h	-	-	-	-	≤ 150 veh/h	-	> 300 veh/h	≤ 150 veh/h	-	≤ 150 veh/h	≤ 150 veh/h	-	-
Right-Turn Effective Corner Radius	> 8m	-	-	> 8m	-	-	-	-	> 8m	-	≤ 8m	> 8m	-	≤ 8m	≤ 8m	-	-	
Cross-Street Posted Speed (km/h)	60 km/h	-	-	40 km/h	-	-	-	-	60 km/h	-	-	50 km/h	-	60 km/h	-	-	30 km/h	
Conflict with Left-Turn Vehicles (For PLOS & BLOS)	EBL	WBL	SBL	NBL	EBL	WBL	SBL	NBL	EBL	WBL	SBL	NBL	EBL	WBL	SBL	NBL		
Left-Turn Signal Phasing	Perm or Prot-Perm	No Left-Turn / Prohib.	Perm or Prot-Perm	No Left-Turn / Prohib.	No Left-Turn / Prohib.	No Left-Turn / Prohib.	No Left-Turn / Prohib.	No Left-Turn / Prohib.	No Left-Turn / Prohib.	No Left-Turn / Prohib.	Perm or Prot-Perm	No Left-Turn / Prohib.	No Left-Turn / Prohib.	Perm or Prot-Perm	No Left-Turn / Prohib.	No Left-Turn / Prohib.	Perm or Prot-Perm	
Left-Turn Volume	≤ 50 veh/h	-	≤ 50 veh/h	-	-	-	-	-	-	-	> 50 to 100 veh/h	-	-	≤ 50 veh/h	-	≤ 50 veh/h	-	
Left-Turn Opposing Lanes	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	
Score	3.60	3.90	3.40	2.75	-	3.90	-	-	2.15	3.40	2.90	3.30	-	3.75	2.75	3.40		
PLOS	B	B	C	C	-	B	-	-	D	C	D	C	-	B	C	C		
Target PLOS	A				A				A				A					
Bicycle	BLOS Inputs																	
	Cycling Route Classification	Elsewhere				Elsewhere				Elsewhere				Elsewhere				
	Cyclists Crossing the	North Leg	South Leg	East Leg	West Leg	North Leg	South Leg	East Leg	West Leg	North Leg	South Leg	East Leg	West Leg	North Leg	South Leg	East Leg	West Leg	
	Type of Cycling Facility Across Leg	Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic	Crossside	Crossside	Crossside	Crossside	Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic	
	Two-Way ADT on Adjacent Roadway	25,000	-	-	500	25,000	-	1	-	21,324	-	7,586	-	28,789	-	872	-	
	Floating Bike Lane or Right-Turn Lane, Approaching the Crossroad?	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	
	Crossroad Operation	-	-	-	-	-	-	-	-	Unidirectional	Unidirectional	Unidirectional	Unidirectional	-	-	-	-	
	Target Crossroad Selfback Met?	-	-	-	-	-	-	-	-	Yes	-	Yes	Yes	-	-	-	-	
	Right-Turn Vehicle Volume from Adjacent Roadway (> 100 veh/h?)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Cyclist Left-Turn Operation	WBL	EBL	NBL	SBL	WBL	EBL	NBL	SBL	WBL	EBL	NBL	SBL	WBL	EBL	NBL	SBL	
Cyclist Left-Turn Treatment Type	No Left-Turn	General Purpose Through-Left or Single Left-Turn Lane	No Left-Turn	General Purpose Through-Left or Single Left-Turn Lane	No Left-Turn	No Left-Turn	No Left-Turn	No Left-Turn	Protected Corner	Protected Corner	Protected Corner	Protected Corner	General Purpose Through-Left or Single Left-Turn Lane	No Left-Turn	General Purpose Through-Left or Single Left-Turn Lane	No Left-Turn		
Vehicle Lanes Crossed by Cyclists	-	One Lane Crossed	-	No Lane Crossed	-	-	-	-	-	-	-	-	One Lane Crossed	-	No Lane Crossed	-		
Score	80	60	-	130	100	100	150	150	140	150	60	140	60	90	130	150		
BLOS	C	D	-	A	B	B	A	A	A	A	D	A	D	C	A	A		
Target BLOS	B				B				B				B					
Transit	TLOS Inputs																	
	Transit Facility	Select Transit Designation				Select Transit Designation				Mixed Traffic				Select Transit Designation				
	Vehicles Travelling	Southbound	Northbound	Westbound	Eastbound	Southbound	Northbound	Westbound	Eastbound	Southbound	Northbound	Westbound	Eastbound	Southbound	Northbound	Westbound	Eastbound	
	Average Transit Delay	-	-	-	-	-	-	-	-	21-35 sec	36-55 sec	-	-	-	-	-	-	
	Example Transit Priority Treatment	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
TLOS	-	-	-	-	-	-	-	-	C	D	-	-	-	-	-	-		
Target TLOS	E				E				E				E					
Auto	AutoLOS Inputs																	
	Overall Intersection Volume to Capacity Ratio	0 to 0.60				0 to 0.60				0.71 to 0.80				0 to 0.60				
	AutoLOS	A				A				C				A				
Target AutoLOS	E				E				E				E					

Multi-Modal Level of Service - Intersections Form

Project: LeBreton Flats TIA  
 Consultant: Morrison Hershfield now Stantec  
 Date: Oct 25, 2024  
 Scenario: Future Conditions

Intersection Name		Wellington / Vimy				Wellington / Broad				Wellington / Booth				Wellington / Lett				
OP Transect / 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				
Pedestrian	PLOS Inputs																	
	Pedestrians Crossing the	North Leg	South Leg	East Leg	West Leg	North Leg	South Leg	East Leg	West Leg	North Leg	South Leg	East Leg	West Leg	North Leg	South Leg	East Leg	West Leg	
	Number of Travel Lanes Crossed	1-3	1-3	5	5	No Crosswalk	1-3	5	4	6	4	5	4	No Crosswalk	1-3	5	4	
	Median Refuge (>7m)	No	No	No	No	-	No	No	No	No	No	No	No	-	No	No	No	
	Crosswalk Treatment	Std Transverse Markings	Std Transverse Markings	Std Transverse Markings	Std Transverse Markings	-	Std Transverse Markings	Std Transverse Markings	Std Transverse Markings	Zebra Stripe Hi-Vis Markings	Zebra Stripe Hi-Vis Markings	Zebra Stripe Hi-Vis Markings	Zebra Stripe Hi-Vis Markings	-	Std Transverse Markings	Std Transverse Markings	Std Transverse Markings	
	Signal Cycle Length (sec)	106-120				106-120				106-120				106-120				
	Conflict with Right-Turn Vehicles (For PLOS & BLOS)	WBR	EBR	NBR	SBR	WBR	EBR	NBR	SBR	WBR	EBR	NBR	SBR	WBR	EBR	NBR	SBR	
	Right-Turn Geometry	Right-Turn With No Channel	Right-Turn With No Channel	Right-Turn With No Channel	Right-Turn With No Channel	No Right-Turn / Prohib.	Right-Turn With No Channel	Right-Turn With No Channel	No Right-Turn / Prohib.	Right-Turn With No Channel	No Right-Turn / Prohib.	Right-Turn With No Channel	Right-Turn With No Channel	No Right-Turn / Prohib.	Right-Turn With No Channel	Right-Turn With No Channel	Right-Turn With No Channel	No Right-Turn / Prohib.
	Right-Turn Signal Phasing	Permissive	Permissive	Permissive	Permissive	-	Permissive	Permissive	-	Permissive	-	Permissive	Permissive	-	Permissive	Permissive	Permissive	-
	Right-Turn Volume	≤ 150 veh/h	≤ 150 veh/h	≤ 150 veh/h	≤ 150 veh/h	-	≤ 150 veh/h	≤ 150 veh/h	-	≤ 150 veh/h	-	> 150 to 300 veh/h	≤ 150 veh/h	-	≤ 150 veh/h	≤ 150 veh/h	≤ 150 veh/h	-
Right-Turn Effective Corner Radius	≤ 8m	≤ 8m	≤ 8m	≤ 8m	-	≤ 8m	≤ 8m	-	> 8m	-	≤ 8m	> 8m	-	≤ 8m	≤ 8m	≤ 8m	-	
Cross-Street Posted Speed (km/h)	50 km/h				50 km/h				50 km/h				50 km/h					
Conflict with Left-Turn Vehicles (For PLOS & BLOS)	EBL	WBL	SBL	NBL	EBL	WBL	SBL	NBL	EBL	WBL	SBL	NBL	EBL	WBL	SBL	NBL		
Left-Turn Signal Phasing	Perm or Proh-Perm (with centreline hardening and/or LPI)	Perm or Proh-Perm (with centreline hardening and/or LPI)	Perm or Proh-Perm (with centreline hardening and/or LPI)	Perm or Proh-Perm (with centreline hardening and/or LPI)	No Left-Turn / Prohib.	Fully Protected	No Left-Turn / Prohib.	Perm or Proh-Perm (with centreline hardening and/or LPI)	No Left-Turn / Prohib.	No Left-Turn / Prohib.	No Left-Turn / Prohib.	Perm or Proh-Perm	No Left-Turn / Prohib.	No Left-Turn / Prohib.	Perm or Proh-Perm	No Left-Turn / Prohib.	Perm or Proh-Perm	
Left-Turn Volume	≤ 50 veh/h	> 50 to 100 veh/h	≤ 50 veh/h	≤ 50 veh/h	-	-	-	≤ 50 veh/h	-	-	> 100 veh/h	-	-	> 50 to 100 veh/h	-	≤ 50 veh/h	-	
Left-Turn Opposing Lanes	-	2-2	-	-	-	-	-	-	-	-	-	-	-	2-2	-	-	-	
Score	3.75	3.60	2.75	2.75	-	3.75	2.75	3.40	3.30	3.46	2.45	3.30	-	3.66	2.75	3.40		
PLOS	B	B	C	C	-	B	C	C	D	C	D	C	-	B	C	C		
Target PLOS	A				A				A				A					
Bicycle	BLOS Inputs																	
	Cycling Route Classification	Elsewhere				Elsewhere				Elsewhere				Elsewhere				
	Cyclists Crossing the	North Leg	South Leg	East Leg	West Leg	North Leg	South Leg	East Leg	West Leg	North Leg	South Leg	East Leg	West Leg	North Leg	South Leg	East Leg	West Leg	
	Type of Cycling Facility Across Leg	Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic	Crossside	Crossside	Crossside	Crossside	Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic	
	Two-Way ADT on Adjacent Roadway	31,608	-	1,392	-	31,392	-	1,000	-	30,324	-	25,800	-	31,932	-	1,308	-	
	Floating Bike Lane or Right-Turn Lane, Crossover Approaching the Crossroad?	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	
	Crossroad Operation	-	-	-	-	-	-	-	-	Unidirectional	Unidirectional	Unidirectional	Unidirectional	-	-	-	-	
	Target Crossroad Selfback Met?	-	-	-	-	-	-	-	-	Yes	-	Yes	Yes	-	-	-	-	
	Right-Turn Vehicle Volume from Adjacent Roadway (> 100 veh/h?)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Cyclist Left-Turn Operation	WBL	EBL	NBL	SBL	WBL	EBL	NBL	SBL	WBL	EBL	NBL	SBL	WBL	EBL	NBL	SBL	
Cyclist Left-Turn Treatment Type	General Purpose Through/Left or Single Left-Turn Lane	General Purpose Through/Left or Single Left-Turn Lane	General Purpose Through/Left or Single Left-Turn Lane	General Purpose Through/Left or Single Left-Turn Lane	General Purpose Through/Left or Single Left-Turn Lane	General Purpose Through/Left or Single Left-Turn Lane	General Purpose Through/Left or Single Left-Turn Lane	General Purpose Through/Left or Single Left-Turn Lane	General Purpose Through/Left or Single Left-Turn Lane	Protected Corner	Protected Corner	Protected Corner	Protected Corner	General Purpose Through/Left or Single Left-Turn Lane	No Left-Turn	General Purpose Through/Left or Single Left-Turn Lane	No Left-Turn	
Vehicle Lanes Crossed by Cyclists	One Lane Crossed	One Lane Crossed	No Lane Crossed	No Lane Crossed	One Lane Crossed	One Lane Crossed	No Lane Crossed	No Lane Crossed	One Lane Crossed	One Lane Crossed	No Lane Crossed	No Lane Crossed	One Lane Crossed	One Lane Crossed	No Lane Crossed	No Lane Crossed		
Score	90	20	130	130	60	50	130	150	140	150	90	140	60	50	130	150		
BLOS	D	E	A	A	D	D	A	A	A	A	C	A	D	D	A	A		
Target BLOS	C				B				A				B					
Transit	TLOS Inputs																	
	Transit Facility	Select Transit Designation				Select Transit Designation				Mixed Traffic				Select Transit Designation				
	Vehicles Travelling	Southbound	Northbound	Westbound	Eastbound	Southbound	Northbound	Westbound	Eastbound	Southbound	Northbound	Westbound	Eastbound	Southbound	Northbound	Westbound	Eastbound	
	Average Transit Delay	-	-	-	-	-	-	-	-	21-35 sec	> 90 sec	-	-	-	-	-	-	
	Example Transit Priority Treatment	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	TLOS	-	-	-	-	-	-	-	-	C	F	-	-	-	-	-	-	
Target TLOS	-	-	-	-	-	-	-	-	-	-	D	-	-	-	-	-		
Auto	AutoLOS Inputs																	
	Overall Intersection Volume to Capacity Ratio	0 to 0.60				0 to 0.60				0.81 to 0.90				0 to 0.60				
	AutoLOS	A				A				D				A				
	Target AutoLOS	E				E				E				E				



Multi-Modal Level of Service - Intersections Form

Project: LeBreton Flats TIA  
 Consultant: Morrison Hershfield now Stantec  
 Date: Oct 25, 2024  
 Scenario: Proposed Conditions

Intersection Name		Wellington / Vimy				Wellington / Broad				Wellington / Booth				Wellington / Lett				
OP Transect / 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				
Pedestrian	PLOS Inputs																	
	Pedestrians Crossing the	North Leg	South Leg	East Leg	West Leg	North Leg	South Leg	East Leg	West Leg	North Leg	South Leg	East Leg	West Leg	North Leg	South Leg	East Leg	West Leg	
	Number of Travel Lanes Crossed	1-3	1-3	5	5	No Crosswalk	1-3	5	4	6	4	5	4	No Crosswalk	1-3	5	4	
	Median Refuge (>7m)	No	No	No	No	-	No	No	No	No	No	No	No	-	No	No	No	
	Crosswalk Treatment	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	
	Signal Cycle Length (sec)	106-120				106-120				106-120				106-120				
	Conflict With Right-Turn Vehicles (For PLOS & BLOS)	WBR	EBR	NBR	SBR	WBR	EBR	NBR	SBR	WBR	EBR	NBR	SBR	WBR	EBR	NBR	SBR	
	Right-Turn Geometry	Right-Turn With No Channel	Right-Turn With No Channel	Right-Turn With No Channel	Right-Turn With No Channel	No Right-Turn / Prohib.	Right-Turn With No Channel	Right-Turn With No Channel	No Right-Turn / Prohib.	Right-Turn With No Channel	No Right-Turn / Prohib.	Right-Turn With No Channel	Right-Turn With No Channel	No Right-Turn / Prohib.	Right-Turn With No Channel	Right-Turn With No Channel	Right-Turn With No Channel	No Right-Turn / Prohib.
	Right-Turn Signal Phasing	Permissive (with LP/LBI)	Permissive (with LP/LBI)	Permissive (with LP/LBI)	Permissive (with LP/LBI)	-	Protected-Permissive (with LP/LBI)	Protected-Permissive (with LP/LBI)	-	Permissive (with LP/LBI)	-	Permissive (with LP/LBI)	Permissive (with LP/LBI)	-	Permissive (with LP/LBI)	Permissive (with LP/LBI)	-	
	Right-Turn Volume	≤ 150 veh/h	≤ 150 veh/h	≤ 150 veh/h	≤ 150 veh/h	-	≤ 150 veh/h	≤ 150 veh/h	-	≤ 150 veh/h	-	> 150 to 300 veh/h	≤ 150 veh/h	-	≤ 150 veh/h	≤ 150 veh/h	≤ 300 veh/h	
Right-Turn Effective Corner Radius	≤ 8m	≤ 8m	≤ 8m	≤ 8m	-	≤ 8m	≤ 8m	-	≤ 8m	-	> 8m	≤ 8m	-	≤ 8m	≤ 8m	-		
Cross-Street Posted Speed (km/h)	50 km/h				40 km/h				50 km/h				30 km/h					
Conflict With Left-Turn Vehicles (For PLOS & BLOS)	EBL	WBL	SBL	NBL	EBL	WBL	SBL	NBL	EBL	WBL	SBL	NBL	EBL	WBL	SBL	NBL		
Left-Turn Signal Phasing	Perm or Proh-Perm (with centreline hardening and/or LPI)	Perm or Proh-Perm (with centreline hardening and/or LPI)	Perm or Proh-Perm (with centreline hardening and/or LPI)	Perm or Proh-Perm (with centreline hardening and/or LPI)	No Left-Turn / Prohib.	Fully Protected	No Left-Turn / Prohib.	Perm or Proh-Perm (with centreline hardening and/or LPI)	No Left-Turn / Prohib.	No Left-Turn / Prohib.	Perm or Proh-Perm (with centreline hardening and/or LPI)	No Left-Turn / Prohib.	No Left-Turn / Prohib.	Perm or Proh-Perm (with centreline hardening and/or LPI)	No Left-Turn / Prohib.	Perm or Proh-Perm (with centreline hardening and/or LPI)		
Left-Turn Volume	≤ 50 veh/h	> 50 to 100 veh/h	≤ 50 veh/h	≤ 50 veh/h	-	-	-	≤ 50 veh/h	-	-	> 100 veh/h	-	-	> 50 to 100 veh/h	-	≤ 50 veh/h		
Left-Turn Opposing Lanes	-	2-2	-	-	-	-	-	-	-	-	-	-	-	2-2	-	-		
Score	3.95	3.90	2.95	2.95	-	3.95	2.95	3.45	2.45	3.45	2.45	3.45	-	3.90	2.95	3.45		
PLOS	B	B	C	C	-	B	C	C	D	C	C	C	-	B	C	C		
Target PLOS	A				A				A				A					
Bicycle	BLOS Inputs																	
	Cycling Route Classification	Elsewhere				Elsewhere				Elsewhere				Elsewhere				
	Cyclists Crossing the	North Leg	South Leg	East Leg	West Leg	North Leg	South Leg	East Leg	West Leg	North Leg	South Leg	East Leg	West Leg	North Leg	South Leg	East Leg	West Leg	
	Type of Cycling Facility Across Leg	Crossside	Crossside	Crossside	Crossside	Crossside	Crossside	Crossside	Crossside	Crossside	Crossside	Crossside	Crossside	Crossside	Crossside	Mixed Traffic	Mixed Traffic	
	Two-Way ADT on Adjacent Roadway	31,608	-	-	1,392	31,392	-	-	1,000	30,324	-	-	25,800	31,932	-	-	1,308	
	Floating Bike Lane or Right-Turn Lane, Approaching the Crossings?	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	
	Crossside Operation	Unidirectional	Unidirectional	Unidirectional	Unidirectional	Unidirectional	Unidirectional	Unidirectional	Unidirectional	Unidirectional	Unidirectional	Unidirectional	Unidirectional	Unidirectional	Unidirectional	-	-	
	Target Crossside Setback Met?	Yes	Yes	No	No	-	Yes	No	-	Yes	-	Yes	Yes	-	Yes	-	-	
	Right-Turn Vehicle Volume from Adjacent Roadway (> 100 veh/h?)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Cyclist Left-Turn Operation	WBL	EBL	NBL	SBL	WBL	EBL	NBL	SBL	WBL	EBL	NBL	SBL	WBL	EBL	NBL	SBL	
Cyclist Left-Turn Treatment Type	Protected Corner	Protected Corner	Protected Corner	Protected Corner	Protected Corner	Protected Corner	Protected Corner	Protected Corner	Protected Corner	Protected Corner	Protected Corner	Protected Corner	Protected Corner	Protected Corner	Protected Corner	Protected Corner		
Vehicle Lanes Crossed by Cyclists	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Score	145	115	145	145	150	150	150	150	145	150	110	145	150	115	145	150		
BLOS	A	B	A	A	A	A	A	A	A	A	B	A	A	B	A	A		
Target BLOS	A				A				A				A					
Transit	TLOS Inputs																	
	Transit Facility	Select Transit Designation				Select Transit Designation				Mixed Traffic				Select Transit Designation				
	Vehicles Travelling	Southbound	Northbound	Westbound	Eastbound	Southbound	Northbound	Westbound	Eastbound	Southbound	Northbound	Westbound	Eastbound	Southbound	Northbound	Westbound	Eastbound	
	Average Transit Delay	-	-	-	-	-	-	-	-	21-35 sec	> 90 sec	-	-	-	-	-	-	
	Example Transit Priority Treatment	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	TLOS	-	-	-	-	-	-	-	-	C	F	-	-	-	-	-	-	
Target TLOS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Auto	AutoLOS Inputs																	
	Overall Intersection Volume to Capacity Ratio	0 to 0.60				0 to 0.60				0.81 to 0.90				0 to 0.60				
	AutoLOS	A				A				D				A				
Target AutoLOS	E				E				E				E					