

Transportation Impact Assessment – Step 1 & 2: Screening & Scoping

# 4639 Bank Street

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# Document Control Page

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<b>HISTORY:</b>	TIA Step 1 & 2 Submitted for City Review – May 20, 2020

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# 1 Introduction

IBI Group (IBI) was retained by Glenview Homes to undertake a Transportation Impact Assessment (TIA) in support of a combined Zoning By-law Amendment and Site Plan Control application for a proposed residential development to be located at 4639 Bank Street, Ottawa.

In accordance with the City of Ottawa's Transportation Impact Assessment Guidelines, published in June 2017, the following report is divided into four major components:

- **Screening** – Prior to the commencement of a TIA, an initial assessment of the proposed development is undertaken to establish the need for a comprehensive review of the site based on three triggers: Trip Generation, Location and Safety.
- **Scoping** – This component of the TIA report describes both the existing and planned conditions in the vicinity of the development and defines study parameters such as the study area, analysis periods and analysis years of the development. It also provides an opportunity to identify any scope exemptions that would eliminate elements of scope described in the TIA Guidelines that are not relevant to the development proposal, based on consultation with City staff.
- **Forecasting** – The Forecasting component of the TIA is intended to review both the development-generated travel demand and the background network travel demand, and provides an opportunity to rationalize this demand to ensure projections are within the capacity constraints of the transportation network.
- **Analysis** – This component documents the results of any analyses undertaken to ensure that the transportation related features of the proposed development are in conformance with prescribed technical standards and that its impacts on the transportation network are both sustainable and effectively managed. It also identifies a development strategy to ensure that what is being proposed is aligned with the City of Ottawa's city-building objectives, targets and policies.

Throughout the development of a TIA report, each of the four study components above are submitted in draft form to the City of Ottawa and undergo a review by a designated Transportation Project Manager. Any comments received are addressed to the satisfaction of the City's Transportation Project Manager before proceeding with subsequent components of the study. All technical comments and responses throughout this process are included in **Appendix A**.

Dependent on the findings of this report, the complete submission of this Transportation Impact Assessment may also require Functional Design Drawings of recommended roadway improvements to support a Roadway Modification Application (RMA). The submission may also require a post-development Monitoring Plan to track performance of the planned TIA Strategy. The need for these two elements will be confirmed through the analysis undertaken for this report.

## 2 TIA Screening

An initial screening was completed to confirm the need for a Transportation Impact Assessment by reviewing the following three triggers:

- **Trip Generation:** Based on the proposed number of stacked townhome units, the minimum development size threshold has been exceeded and therefore the Trip Generation trigger is satisfied.
- **Location:** The proposed development is located adjacent to Bank Street which is a spine bicycle route and, as such, the Location trigger is satisfied.
- **Safety:** Boundary street conditions were reviewed to determine if there is an elevated potential for safety concerns adjacent the site. Based on this review, there may be an elevated potential for safety concerns adjacent to the site due to the location of the proposed Bank Street access and therefore the Safety trigger is satisfied.

As the proposed development meets the Trip Generation, Location and Safety triggers, the need to undertake a Transportation Impact Assessment is confirmed.

A copy of the Screening Form is provided in **Appendix B**.

## 3 Project Scoping

### 3.1 Description of Proposed Development

#### 3.1.1 Site Location

The proposed development is within the Leitrim Community and is approximately 1.2 hectares in size. It is bound by Bank Street to the west, Rotary Way to the north, the Ottawa Rotary Home to the east and residential dwellings to the south.

The site location is illustrated in **Exhibit 1**.

#### 3.1.2 Land Use Details

**Table 1** summarizes the proposed land uses included in this development.

Table 1 - Land Use Statistics

LAND USE	SIZE
Stacked Townhomes	96 units

The site will provide 134 vehicle parking spaces, including 19 visitor parking spaces, and **xx** bicycle parking spaces. The configuration of the proposed development is illustrated in **Exhibit 2**. Access to the site will be provided via a right-in/right-out (ri/ro) access on Bank Street and a full-movement access on Rotary Way.

The subject site is currently an undeveloped greenfield site and is zoned DR – Development Reserve, based on geoOttawa.

#### 3.1.3 Development Phasing & Date of Occupancy

It has been assumed that the proposed development will be fully built out and occupied in a single phase by the end of 2022.



**LEGEND**

- |  |  |
|--|--|
|  Future Road             |  Existing Collector/<br>Signalized Access |
|  Signalized Intersection |  Existing Arterial                        |





ROTARY WAY

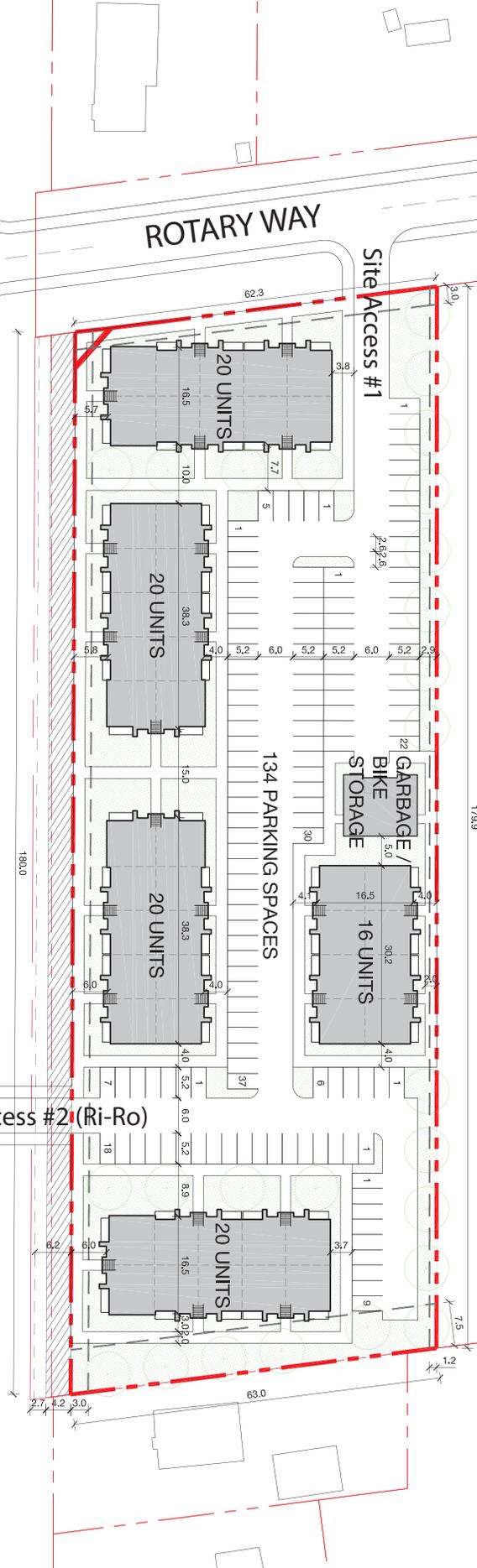
Site Access #1

BANK ST

Access #2 (Ri-Ro)

The Ottawa Rotary Home

Hope Cemetery Access



## 3.2 Existing Conditions

### 3.2.1 Existing Road Network

#### 3.2.1.1 Roadways

The proposed development is bound by the following street(s):

- **Bank Street** is an arterial road under the jurisdiction of the City of Ottawa that extends north-south through Ottawa from Wellington Street in the north to the urban boundary, where it becomes County Road 31. In the vicinity of the proposed development, Bank Street has a 2-lane rural cross-section with a posted speed limit of 70 km/h and a right-of-way protection of 44.5m.
- **Rotary Way** is an urban collector road under the jurisdiction of the City of Ottawa that extends from Bank Street to Fernside Street. It has a 26m right-of-way and an unposted speed limit of 50 km/h.

Other streets within the context area of the proposed development are as follows:

- **Leitrim Road** is an arterial road under the jurisdiction of the City of Ottawa that extends east-west from River Road to east of Hall Road. Leitrim Road has a 2-lane rural cross-section with a posted speed limit of 60 km/h and a right-of-way protection of 35.5m with an additional 5.0m reserved on the rural side to accommodate a rural cross-section.
- **Analdea Drive** is identified in the Official Plan as urban collector road under the jurisdiction of the City of Ottawa that extends east from Bank Street to a dead-end at Fernside Street. Although designated an urban collector road with a right-of-way protection of 24m, Analdea Drive is currently configured as a two-lane rural road with a 20m right-of-way and a posted speed limit of 50 km/h.
- **White Alder Avenue** is an urban local road under the jurisdiction of the City of Ottawa that extends from Bank Street to Findlay Creek Drive. It has 24m right-of-way and an unposted speed limit of 50 km/h.
- **Findlay Creek Drive** is an urban collector road under the jurisdiction of the City of Ottawa that runs east-west from Albion Road to Bank Street. It has a 30m right-of-way and a posted speed limit of 50 km/h.

#### 3.2.1.2 Driveways Adjacent to Development Access

The only driveway within 200m of the proposed Rotary Way access is the driveway for the Ottawa Rotary Home. Within 200m of the proposed Bank Street access are the driveways associated with the following locations:

- Hope Cemetery;
- Stinson Gas Station;
- Stinson Propane Refill Station; and
- Driveways associated with residential dwellings.

### 3.2.1.3 Intersections

The following intersections have the greatest potential to be impacted by the proposed development:



- **Bank Street & Leintrim Road** is a four-legged signalized intersection with left-turn lanes on the northbound, southbound and westbound approaches and right-turn lanes on the southbound and westbound approaches. The intersection is located 520m north of the proposed development and has documented capacity issues during weekday peak periods.



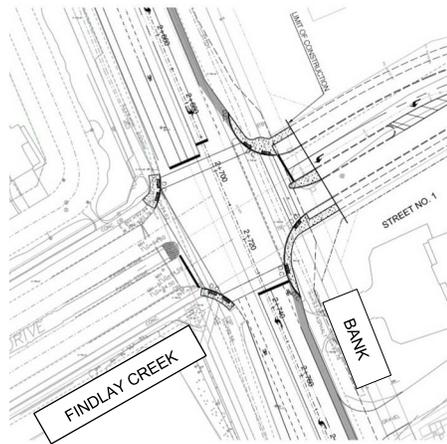
- **Bank Street & Rotary Way** is a 3-legged signalized intersection with auxiliary left-turn lanes on the southbound and westbound approaches, and an auxiliary right-turn lane on the northbound approach. The intersection is located immediately adjacent to the subject site and will be most impacted by the addition of site-generated traffic. The intersection will ultimately be reconfigured as a 4-legged intersection with the planned extension of Barrett Farm Drive.



- **Bank Street & Analdea Drive / White Alder Avenue** is a 4-legged signalized intersection with auxiliary left-turn lanes on all approaches and an auxiliary right-turn lane on the southbound approach. The intersection is located approximately 350m south of the proposed development and may only experience a nominal increase in traffic associated with the proposed development.

The intersection control and lane configurations for the intersections described above are shown in **Exhibit 3**.

One other intersection of significance is located within the context area of the proposed development:



- **Bank Street & Findlay Creek Drive** has recently been reconstructed to accommodate the Lilythorne subdivision via a new road on the east approach which was opened to the public as a signalized intersection in fall 2019. The intersection has auxiliary left-turn lanes on all approaches and an auxiliary right-turn lane on the southbound approach. The intersection is located 730m south of the proposed development.

#### **3.2.1.4 Traffic Management Measures**

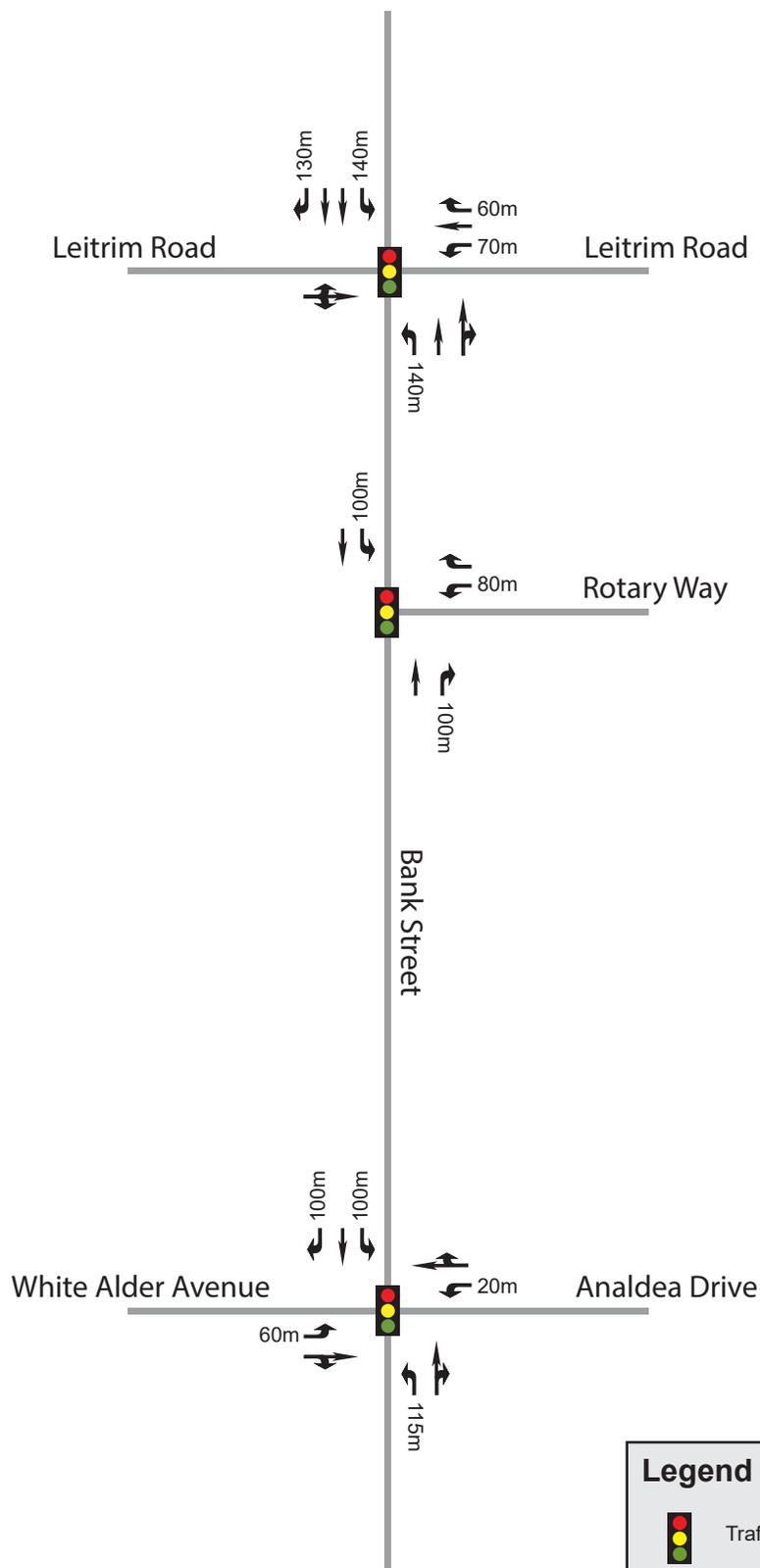
On-road speed limit pavement markings and flexible centreline signs are currently installed on Rotary Way. These traffic management measures are located east of Fairweather Private, 240m east of Bank Street. There are currently no existing traffic management or traffic calming measures located on Bank Street or at any of the intersections within the context area.

#### **3.2.1.5 Existing Traffic Volumes**

As the proposed development will consist of residential land uses, the weekday peak hour traffic conditions will be most affected by any associated increase in traffic. Weekday morning and afternoon peak hour turning movement counts were therefore obtained from the City of Ottawa at the following intersections:

- Bank Street & Leirim Road (City of Ottawa, December 2019)
- Bank Street & Rotary Way (City of Ottawa, December 2019)
- Bank Street & Analea Drive / White Alder Avenue (City of Ottawa, December 2019)

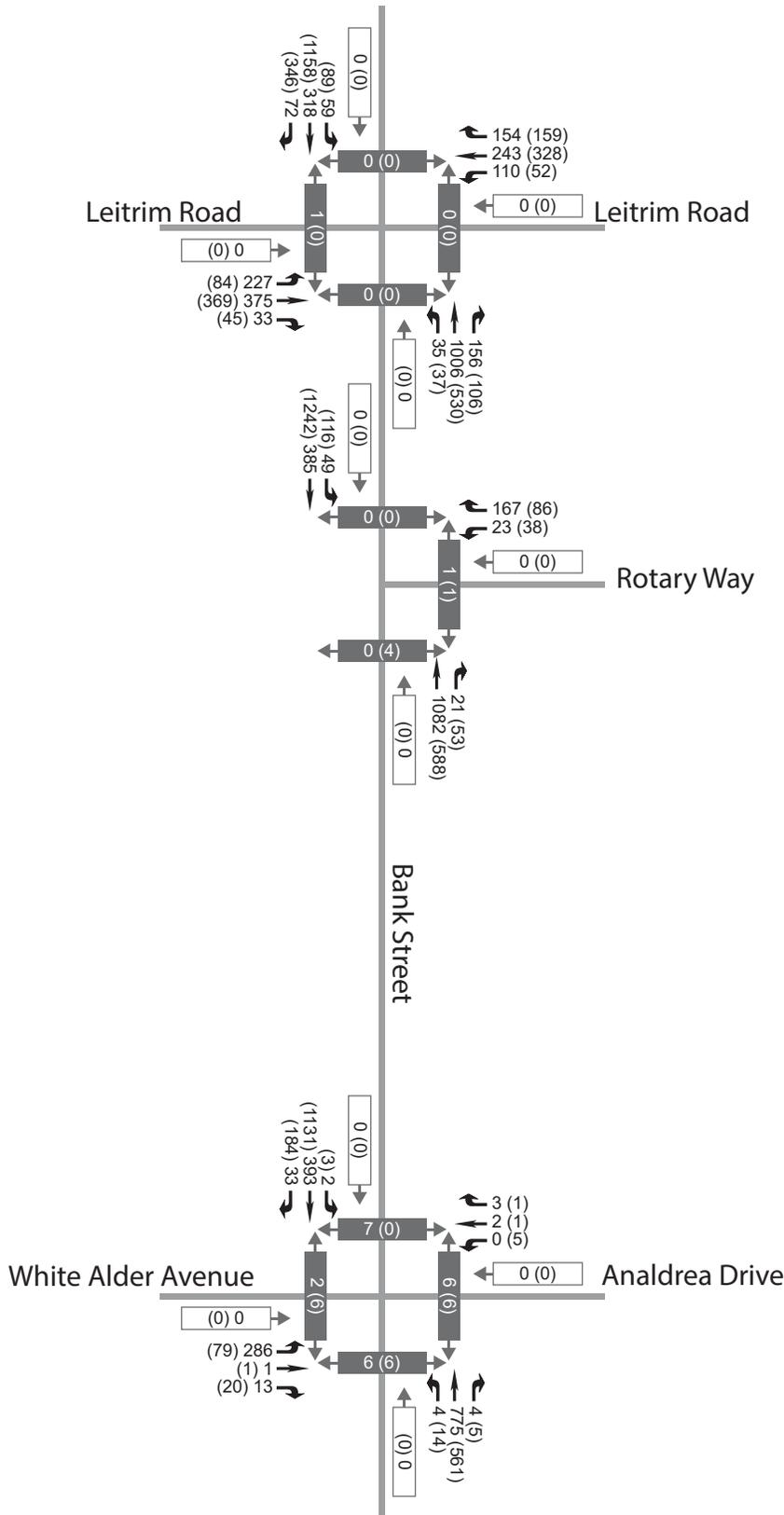
Peak hour traffic volumes representative of existing conditions are shown in **Exhibit 4**. Weekday morning and afternoon peak hour turning movement counts have been provided in **Appendix C**.



**Legend**

-  Traffic Signal
-  Lane Configurations
-  Storage Lengths





### 3.2.2 Existing Bicycle and Pedestrian Facilities

Pedestrian facilities are presently limited to concrete sidewalks on both sides Rotary Way, White Alder Avenue and Findlay Creek Drive. Along Bank Street, pedestrian facilities are only present at signalized intersections.

Cycling facilities along Bank Street are also limited, with pocket bike lanes at the following locations:

- Northbound approach of the Bank Street & Rotary Way intersection;
- Southbound approach of the Bank Street & Analdea Drive / White Alder Avenue intersection; and
- Southbound approach of the Bank Street & Findlay Creek Drive intersection.

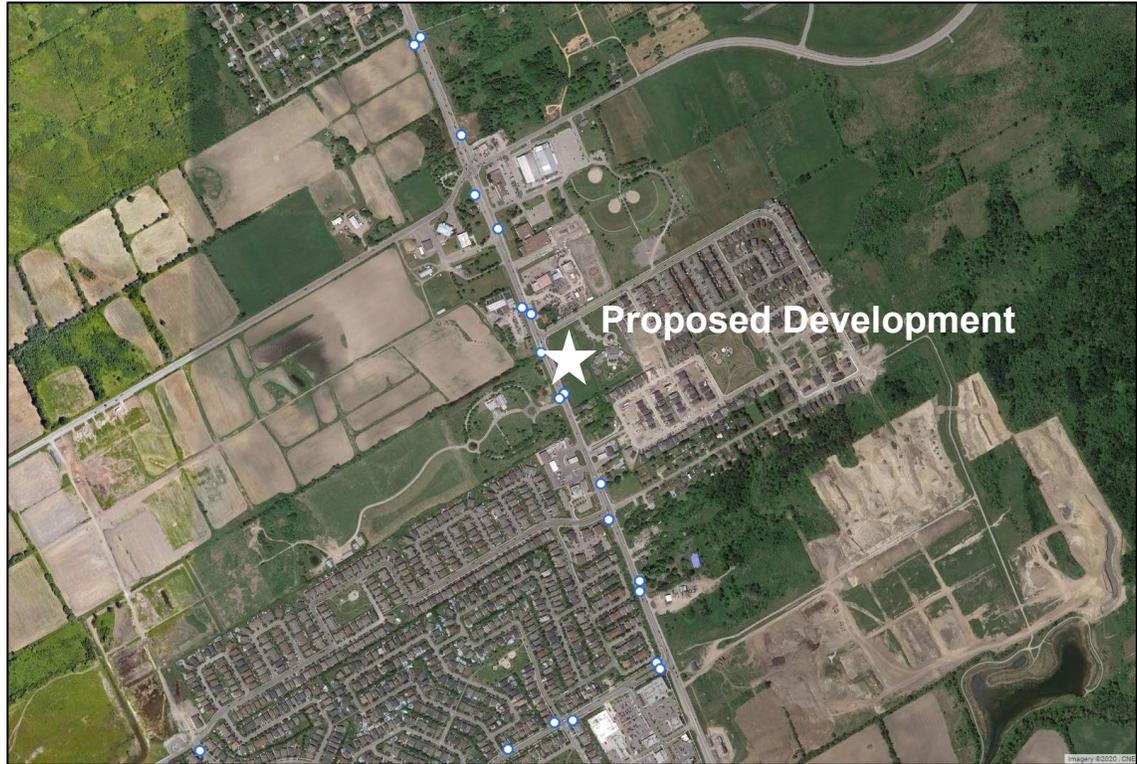
### 3.2.3 Existing Transit Facilities and Service

The following transit routes, operated by OC Transpo, exist within the vicinity of the site:

- **Route #93** provides regular, all-day service between Leitrim Station and Greenboro Station and operates on 15- to 30-minute headways during peak periods. On weekends service is reduced to 30-minute headways.
- **Route #294** provides weekday peak period service between Hurdman Station and the Findlay Creek community and operates on 30-minute headways.
- **Route #304** provides Thursday-only service between Metcalfe, Greely and Osgoode, and Billing's Bridge shopping centre.

Transit service maps for the individual routes above are provided in **Appendix D**. The bus stops located within the vicinity of the proposed development are shown below in **Figure 1**. The nearest bus stops are presently located immediately adjacent to the proposed development near the Hope Cemetery and at the Bank Street & Rotary Way intersection.

Figure 1 - Bus Stops



Source: OC Transpo

### 3.2.4 Collision History

A review of historical collision data has been undertaken for the boundary streets with the vicinity of the proposed development. The TIA Guidelines require a safety review if at least six collisions for any one movement or of a discernible pattern, over a five-year period have occurred. **Table 2** summarizes all reported collisions between January 1, 2014 and December 31, 2018.

Table 2 – Reported Collisions within Vicinity of Proposed Development

LOCATION	# OF REPORTED COLLISIONS
<b>INTERSECTIONS</b>	
Bank Street & Leitrim Road	58
Bank Street & Rotary Way	9
Bank Street & Analdea Drive / White Alder Avenue	23
<b>SEGMENTS</b>	
Bank Street – Leitrim Road to Rotary Way	35
Bank Street – Rotary Way to Analdea Drive / White Alder Avenue	1

Based on a preliminary review of the collision history noted above, intersection and road segments with more than six collisions over the five-year period may require further review.

Detailed collision records are provided in **Appendix E**.

Another method of evaluating the relative magnitude of collision frequency at one intersection compared to another is to quantify the average historical number of collisions against the daily volume of traffic entering the intersection. This is commonly expressed in terms of Million Vehicles Entering (MVE) and a rate of greater than 1.0 is considered significant.

The above noted intersections are therefore calculated as having average collision frequencies per MVE values:

- Bank Street & Leitrim Road – 0.94
- Bank Street & Rotary Way – 0.22
- Bank Street & Analdea Drive / White Alder Avenue – 0.60

Of the three intersections evaluated above, none have a collision frequency in excess of 1.0 and therefore are not considered significant. The road segment of Bank Street between Leitrim Road and Rotary Way has experienced a significant amount of collisions and therefore will require further review.

### 3.3 Planned Conditions

#### 3.3.1 Transportation Network

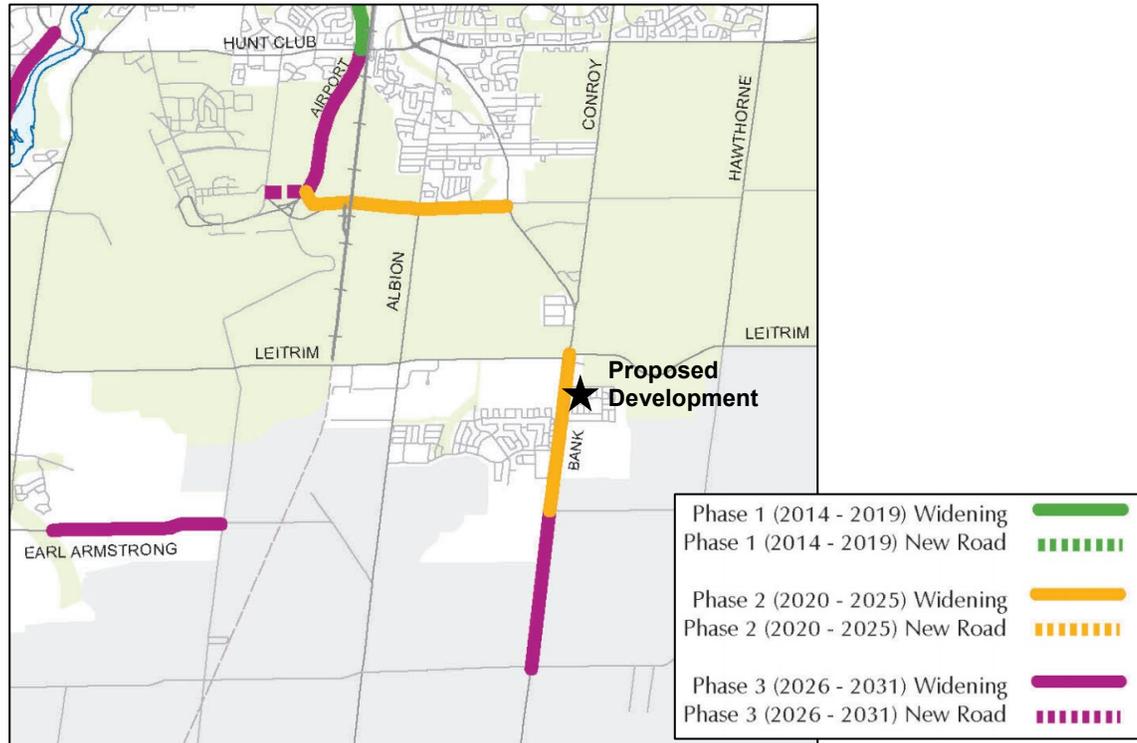
##### 3.3.1.1 Future Road Network Projects

The 2013 Transportation Master Plan (TMP) outlines future road network modifications required in the 2031 'Affordable Network'. The following project was noted that may have an impact on area traffic within the vicinity of the site:

- **Bank Street** – Planned widening from two to four lanes between Leitrim Road and Blais Road by 2025 (Phase 2: 2020-2025) and from two to four lanes between Blais Road and Rideau Road by 2031 (Phase 3: 2026-2031).

**Figure 2** illustrates the planned changes to the arterial road network in the broader area, as per the TMP Affordable Plan, however it should be noted that the timelines and phasing limits indicated in the TMP have since been refined.

Figure 2 - Future Road Network Projects



Source: 2013 Transportation Master Plan – Map 11 ‘2031 Affordable Network’

The Bank Street widening project timeline and extents have been updated several times since the TMP was published. Based on recent discussions with City of Ottawa staff, the current staging plan for the Bank Street widening in the vicinity of the proposed development is as follows:

- Widening of Bank Street from two to four lanes from south of Leitrin Road to Dun Skipper Drive is scheduled to be completed by end of 2022.
- The reconstruction of the Bank Street & Leitrin Road intersection is scheduled to be completed by end of 2023.

It is understood that the Bank Street widening and the reconstruction of the Bank Street & Leitrin Road intersection will be completed in accordance with the complete streets philosophy to accommodate all travel modes within the vicinity of the proposed development.

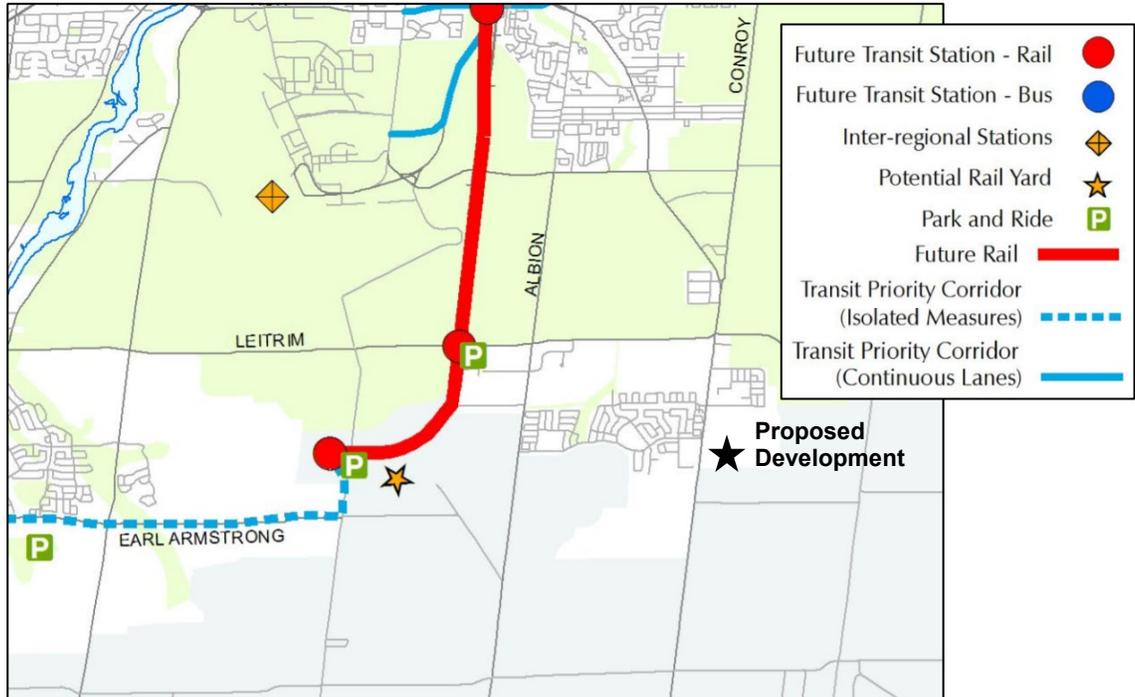
### 3.3.1.2 Future Transit Facilities and Services

The 2013 TMP outlines the future rapid transit and transit priority (RTTP) network. The following projects were noted in the ‘Affordable RTTP Network’ that may have a future impact on study area traffic:

- **Trillium Line Extension** – Extension of the Trillium Line from its current terminus at Greenboro Station to Bowesville Station. The *Trillium Line Extension Planning and Environmental Assessment (EA) Study (January 2016)* and the *Trillium Line Light Rail Transit Extension Addendum (September 2018)* both expand upon the TMP. The Trillium Line will now extend to Limebank Road with a spur line to the Ottawa International Airport. Based on the official City of Ottawa Stage 2 LRT website, the Trillium Line extension is expected to begin revenue service by the end of 2022.

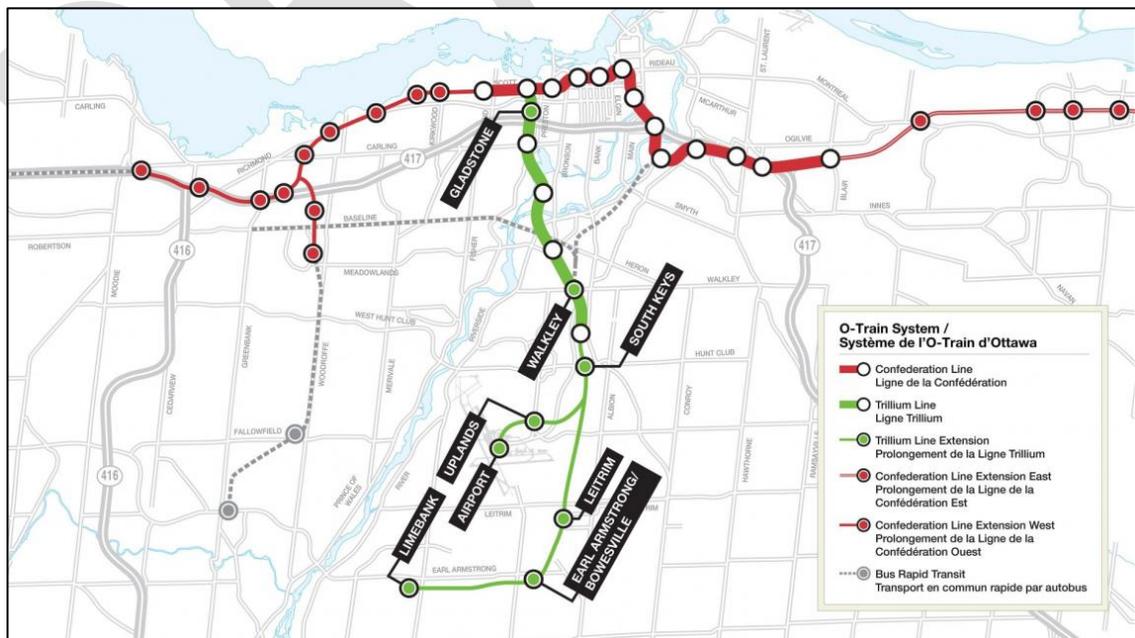
**Figure 3** shows the transit infrastructure projects in the vicinity of the proposed development that are part of the TMP's 2031 Affordable Network. **Figure 4** below illustrates the proposed Trillium Line extension, including the recommendations from the EA study and the Addendum.

Figure 3 - Future 'Affordable RTPP Network Projects'



Source: 2013 Transportation Master Plan – Map 5 '2031 Affordable Network'

Figure 4 - Stage 2 LRT - Trillium Line Extension



Source: City of Ottawa Stage 2 LRT Project Website – Trillium Line South Extension

### **3.3.1.3 Future Cycling and Pedestrian Facilities**

The 2013 Ottawa Cycling Plan (OCP) designates Bank Street and Leitrim Road as ‘Spine Routes’. Spine Routes form the primary cycling network, linking the commercial, employment, institutional, residential and educational nodes throughout the City of Ottawa. Additionally, the OCP designates Findlay Creek Drive as a ‘Local Route’. Local Routes are implemented at a neighbourhood level to connect residential and commercial areas to Spine routes.

The Bank Street EA recommended the implementation of sidewalks and cycle tracks on both sides of Bank Street within the urban area, multi-use pathways (MUP) within the Greenbelt and paved shoulders separated from the travel lane by a rumble strip within the rural area. The detailed design for the four-lane widening of Bank Street includes concrete sidewalks and cycle tracks on both sides of Bank Street as well as protected intersections.

### **3.3.2 Future Adjacent Developments**

The City of Ottawa Transportation Impact Assessment (TIA) Guidelines specify that all significant developments proposed within the surrounding area which are likely to occur within the study’s horizon year must be identified and taken into consideration in the development of future background traffic projections.

All current development applications within the context area of the proposed development have been identified. With the exception of the Cowan’s Grove Mid-Density Residential Block (4791 Bank Street), all of these developments were either accounted for explicitly in the Leitrim Master Transportation Study (MTS), undertaken by IBI Group in March 2017, or would contribute a negligible volume of traffic to the adjacent road network. **Table 3** summarizes all developments noted in the MTS.

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Table 3 - Leitrim Master Transportation Study Developments

DEVELOPMENT	LAND USE	SIZE
Remaining Findlay Creek	Residential	152 units
Remaining Lemay and Sundance	Residential	158 units
Barrett Lands	Residential	797 units
Barrett Extension Lands	Residential	150 units
OPA Areas 9A & 9B	Residential	1,319 units
	Commercial	15,450 m <sup>2</sup>
Findlay Creek Stage 2 Phase 4C	Residential	240
Transport Canada Lands	Residential	231
Remer and Idone	Residential	1,155
	Commercial	24,187 m <sup>2</sup>

In addition to the developments in the Leitrim MTS, IBI Group recently completed a Transportation Impact Assessment for the Cowan’s Grove Mid-Density residential development at 4791 Bank Street, located approximately 870m south of the subject site and consisting of 102 stacked townhome dwellings.

### 3.3.3 Network Concept Screenline

A network screenline analysis is not expected to be necessary for this development, as it does not trigger the threshold prescribed by the TIA of 200 person-trips during the peak hour beyond what is otherwise permitted by the current zoning. Detailed trip generation will be provided in the Forecasting section of this report.

## 3.4 Study Area

With consideration of the information presented thus far, the following intersections have been identified as being most impacted by the proposed development and will be assessed for vehicular capacity as part of this study:

- Bank Street & Leitrim Road
- Bank Street & Rotary Way
- Rotary Way & Site Access #1
- Bank Street & Site Access #2
- Bank Street & Analdea Drive / White Alder Avenue

Multi-Modal Level of Service (MMLOS) will be conducted for all intersections listed above with the exception of the stop-controlled intersections as no methodology currently exists for evaluating MMLOS at unsignalized intersections. The need to provide alternative means of traffic control (i.e. signals) at the stop-controlled intersections will be reviewed in the Analysis component of this study to determine whether traffic signals are warranted or required operationally within the study horizon year.

Segment-based MMLOS analysis is required for boundary roadways which do not currently have a ‘Complete Street’ design concept. A detailed design following the ‘Complete Street’ philosophy

has been prepared for the segment of Bank Street adjacent to the subject site therefore a review of the proposed development's impact on the design will be completed instead. Segment-based MMLOS analysis will therefore be limited to the segment of Rotary Way adjacent to the proposed development.

### 3.5 Time Periods

Based on the proposed residential land use, traffic generated during the weekday morning and afternoon peak hours is expected to result in the most significant impact to traffic operations on the adjacent road network in terms of combined development-generated and background traffic. These two time periods will therefore be considered for operational analysis in this study.

### 3.6 Study Horizon Year

Based on the anticipated build-out year of the proposed development, the following two analysis years will be considered in this TIA:

- Year 2022 – Full Build-Out of the Proposed Development
- Year 2027 – 5 Years Beyond Full Build-out / Occupancy

### 3.7 Exemptions Review

The TIA Guidelines provide exemption considerations for elements of the Design Review and Network Impact components. **Table 4** summarizes the TIA modules that are not applicable to this study.

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Table 4 - Exemptions Review

TIA MODULE	ELEMENT	EXEMPTION CONSIDERATIONS	REQUIRED
<b>DESIGN REVIEW COMPONENT</b>			
4.1 Development Design	4.1.2 Circulation and Access	<ul style="list-style-type: none"> <li>Only required for site plans</li> </ul>	✓
	4.1.3 New Street Networks	<ul style="list-style-type: none"> <li>Only required for plans of subdivision</li> </ul>	✗
4.2 Parking	4.2.1 Parking Supply	<ul style="list-style-type: none"> <li>Only required for site plans</li> </ul>	✓
	4.2.2 Spillover Parking	<ul style="list-style-type: none"> <li>Only required for site plans where parking supply is 15% below unconstrained demand</li> </ul>	✗
<b>NETWORK IMPACT COMPONENT</b>			
4.5 Transportation Demand Management	All Elements	<ul style="list-style-type: none"> <li>Not required for site plans expected to have fewer than 60 employees and/or students on location at any given time</li> </ul>	✓
4.6 Neighbourhood Traffic Management	4.6.1 Adjacent Neighbourhoods	<ul style="list-style-type: none"> <li>Only required when the development relies on local or collector streets for access and total volumes exceed ATM capacity thresholds</li> </ul>	✓
4.8 Network Concept	n/a	<ul style="list-style-type: none"> <li>Only required when proposed development generates more than 200 person-trips during the peak hour in excess of the equivalent volume permitted by established zoning</li> </ul>	✗

## Appendix A – City Circulation Comments

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## Pre-Consultation Comments & Response

Comments Received: September 12, 2019

Transportation Project Manager: Josiane Gervais

- Follow Traffic Impact Assessment Guidelines
  - Traffic Impact Assessment will be required due to number of proposed units.
  - The process is iterative and should be commenced asap. An application cannot be deemed complete until the submission of the draft step 1-4, including the functional draft RMA package (if applicable) and/or monitoring report (if applicable).
  - Request base mapping asap if RMA is required. Contact Engineering Services (<https://ottawa.ca/en/city-hall/planning-and-development/engineering-services>)
  - IBI Response: The Transportation Impact Assessment (TIA) has been completed in accordance with City of Ottawa TIA Guidelines. Base mapping will be requested if an RMA is determined to be required.
- Noise Impact Study would be required for the following:
  - Road
  - Stationary, if there will be any exposed mechanical equipment due to the proximity to neighboring noise sensitive land uses.
  - IBI Response: Acknowledged.

As a follow-up to the questions raised:

- There is no defined construction year for the Bank Street widening project as of yet. As was mentioned at the meeting, the widening is identified for the 2020-2025 horizon as part of the TMP.
  - IBI Response: Based on discussions with City of Ottawa staff it was determined that the Bank Street widening would occur in 2022 and the reconstruction of the Bank Street & Leitrim Road intersection would occur in 2023.
- The plans for the widening project are not yet finalized.
  - IBI Response: Its been assumed that Bank Street and Leitrim Road will be widened to four lanes, that cycle tracks and concrete sidewalks would be provided on both sides of Bank Street and all intersections will be reconstructed as protected intersections.
- Note that if the proposed site is planned to be constructed before the widening of Bank Street takes place, the RI/RO access off Bank Street proposed on the concept plan would require modification to only allow RI/RO movements. If opening day of the proposed site is after Bank Street widening takes place, this would be a non-issue, as the new Bank Street cross-section would provide for a raised median.
  - IBI Response: It is expected that the proposed development will be fully built out by the end of 2022, coinciding with the planned widening of Bank Street to four lanes. As Bank Street will include a concrete median, the access driveway will be physically restricted to right-in/right-out movements only.
- The approved 'typical' cross-sections for City arterials are located at the following link: [https://documents.ottawa.ca/sites/documents/files/arterial\\_road\\_xsections\\_en.pdf](https://documents.ottawa.ca/sites/documents/files/arterial_road_xsections_en.pdf)
  - IBI Response: Noted.

Technical requirements to keep in mind while preparing the site plan:

- ROW protection on Bank between Leitrim and Analdea is 44.5m even. (Official Plan Annex 1)
  - IBI Response: This has been noted in Section 3.2.1.1.
- Corner triangles as per OP Annex 1 - Road Classification and Rights-of-Way at the following locations on the final plan will be required (no structure above or below this triangle):
  - Collector Road to Arterial Road: 5 m x 5 m, measured on the property line/ROW protected line
    - IBI Response: This will be accounted for in the final site plan.
- Sight triangle as per Zoning by-law (Section 57) is 6 m x 6 m, measured on the curb line.
  - IBI Response: This will be accounted for in the final site plan.
- Clear throat requirements for apartments that are <100 units are:
  - For an arterial (i.e. Bank Street): 15m, if providing the access off Bank Street as a right-in/right-out, this requirement must still be met. The throat length for the access on Bank Street would be measured from the widened roadway property line.
  - For a collector (i.e. Rotary Way): 8m.
    - IBI Response: These requirements will be verified in Step 4 Analysis.
- On site plan:
  - Show all details of the roads abutting the site up to and including the opposite curb; include such items as pavement markings, accesses and/or sidewalks.
  - Turning templates will be required for all accesses showing the largest vehicle to access the site; required for internal movements and at all access (entering and exiting and going in both directions).
  - Show all curb radii measurements; ensure that all curb radii are reduced as much as possible
  - Show lane/aisle widths.
  - Sidewalk is to be continuous across access as per City Specification 7.1.
  - Grey out any area that will not be impacted by this application.
    - IBI Response: These details will be provided on the final site plan. Turning templates will be provided in Step 4 Analysis.

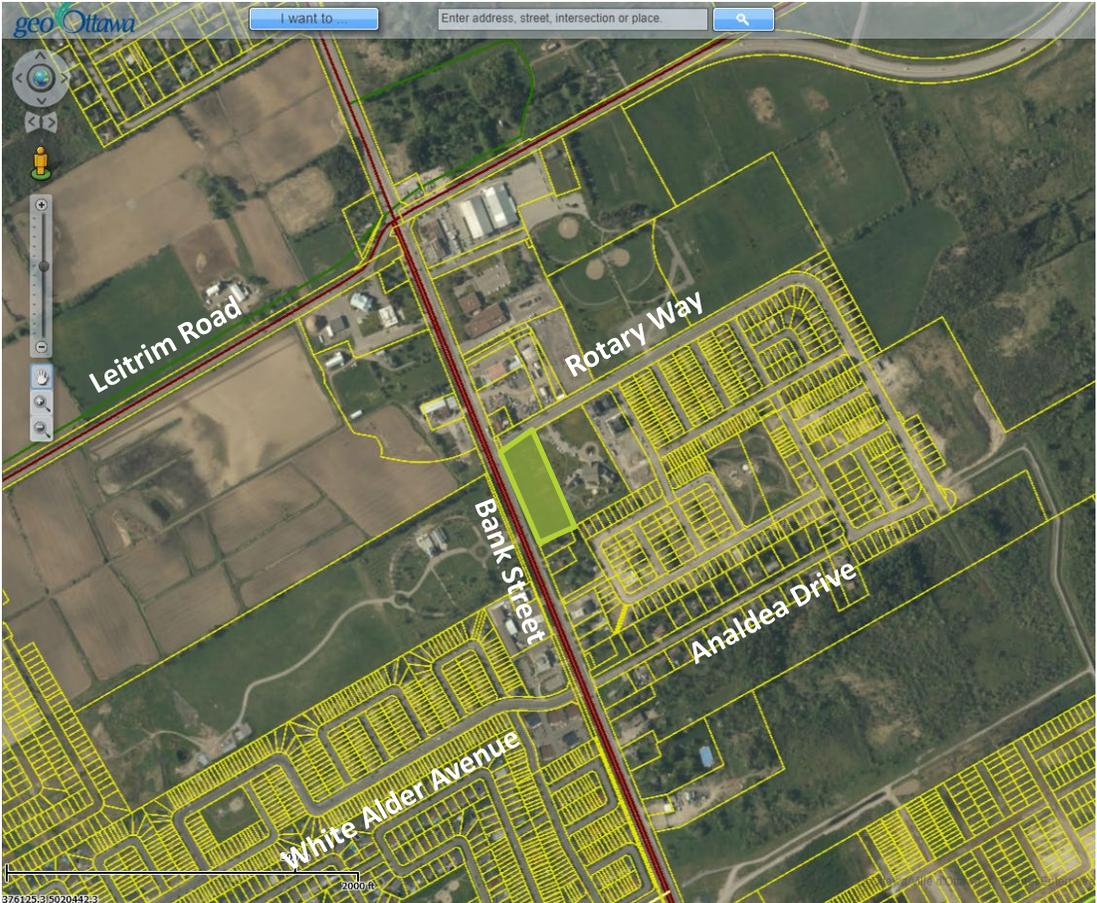
## Appendix B – Screening Form

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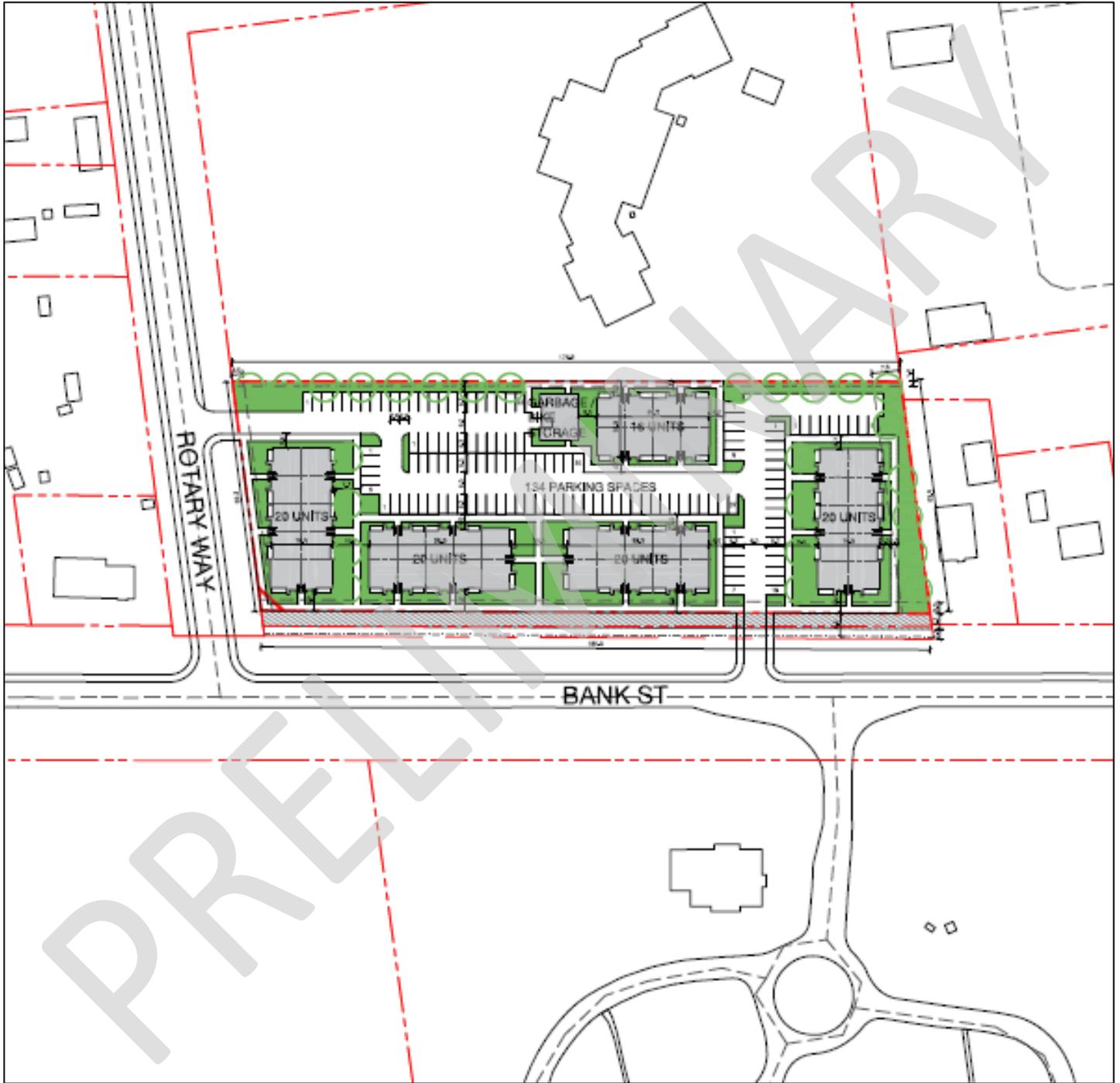
City of Ottawa 2017 TIA Guidelines Screening Form

1. Description of Proposed Development

Municipal Address	4639 Bank Street
Description of Location	Leitrim – East of Bank Street and south of Rotary Way 
Land Use Classification	Residential
Development Size (units)	96 Stacked Townhouses
Development Size (m <sup>2</sup> )	N/A
Number of Accesses and Locations	One (1) right-in/right-out access via Bank Street One (1) access via Rotary Way
Phase of Development	Single Phase
Buildout Year	2022

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

Proposed Development:



## 2. Trip Generation Trigger

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

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

**Based on the results above, the Trip Generation Trigger is satisfied.**

## 3. Location Triggers

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

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

**Based on the results above, the Location Trigger is satisfied.**

#### 4. Safety Triggers

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

Based on the results above, the Safety Trigger is satisfied.

#### 5. Summary

	Yes	No
Does the development satisfy the Trip Generation Trigger?	<input checked="" type="checkbox"/>	
Does the development satisfy the Location Trigger?	<input checked="" type="checkbox"/>	
Does the development satisfy the Safety Trigger?	<input checked="" type="checkbox"/>	

CONCLUSION: One or more of the above triggers was satisfied, therefore a TIA will be required.

## Appendix C – Turning Movement Counts

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## Turning Movement Count - Peak Hour Diagram

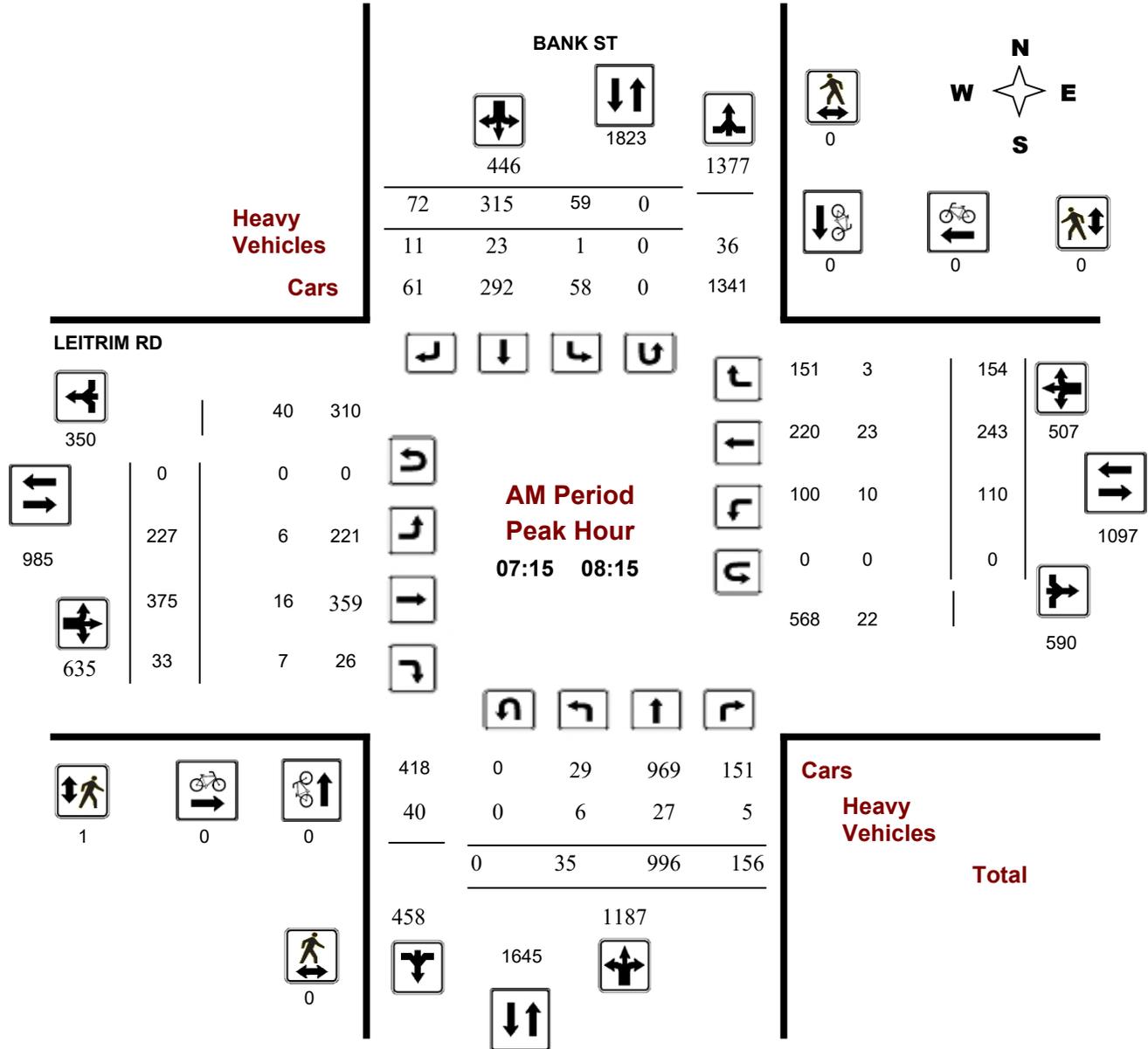
### BANK ST @ LEITRIM RD

**Survey Date:** Wednesday, December 04, 2019

**Start Time:** 07:00

**WO No:** 39159

**Device:** Miovision



## Turning Movement Count - Peak Hour Diagram

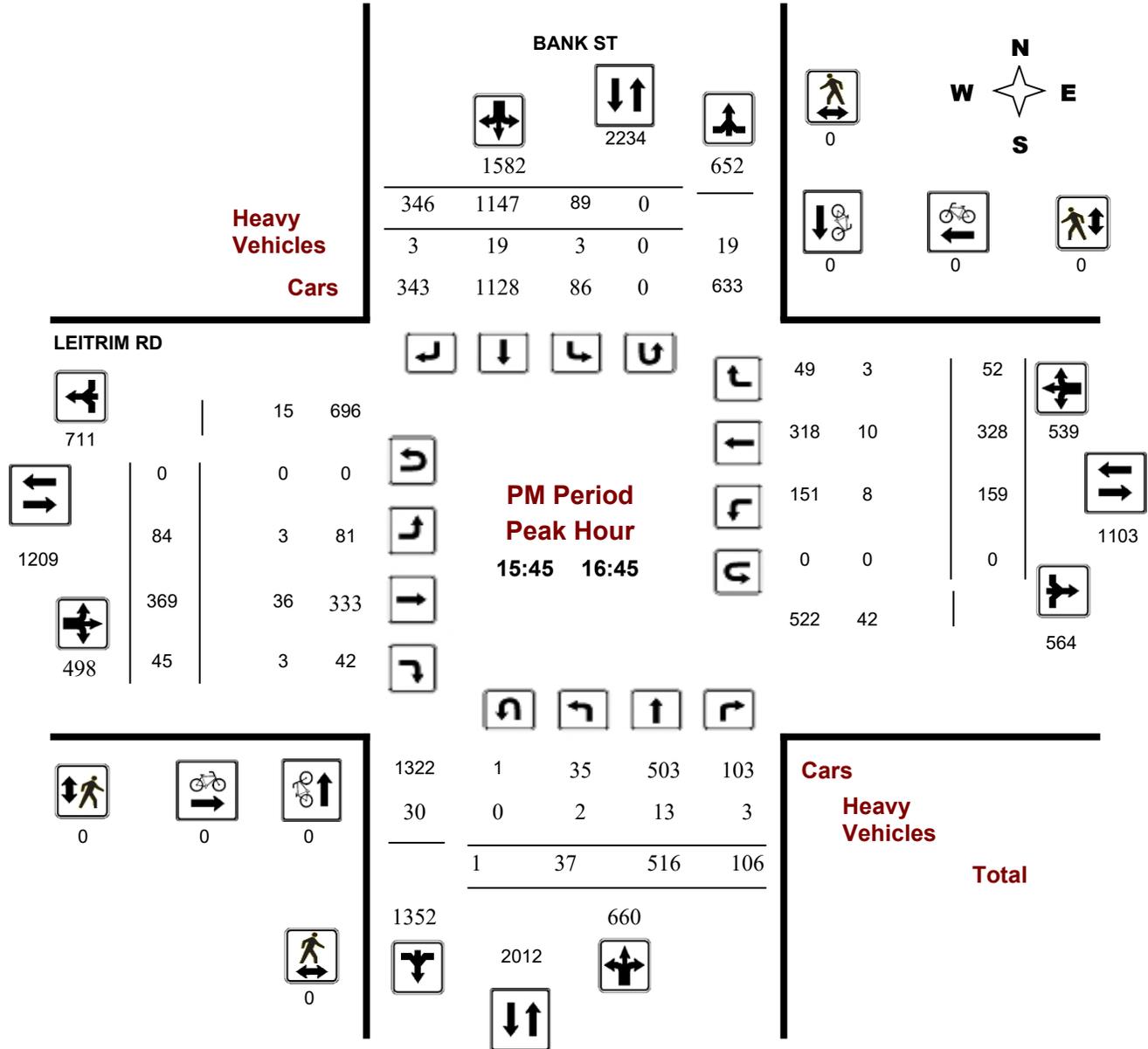
### BANK ST @ LEITRIM RD

**Survey Date:** Wednesday, December 04, 2019

**Start Time:** 07:00

**WO No:** 39159

**Device:** Miovision



## Turning Movement Count - Peak Hour Diagram

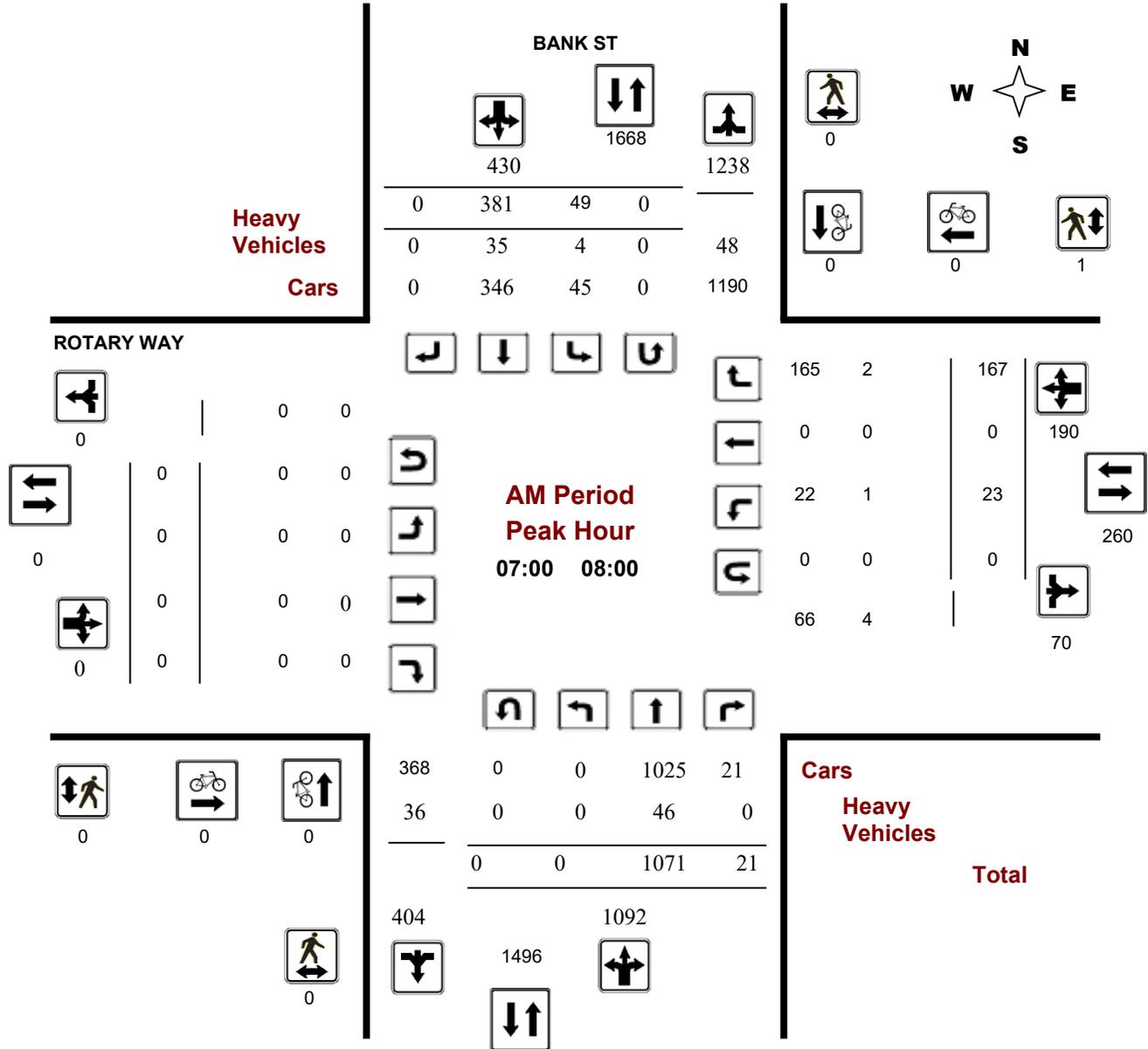
### BANK ST @ ROTARY WAY

**Survey Date:** Wednesday, December 04, 2019

**Start Time:** 07:00

**WO No:** 39158

**Device:** Miovision



**Comments**

## Turning Movement Count - Peak Hour Diagram

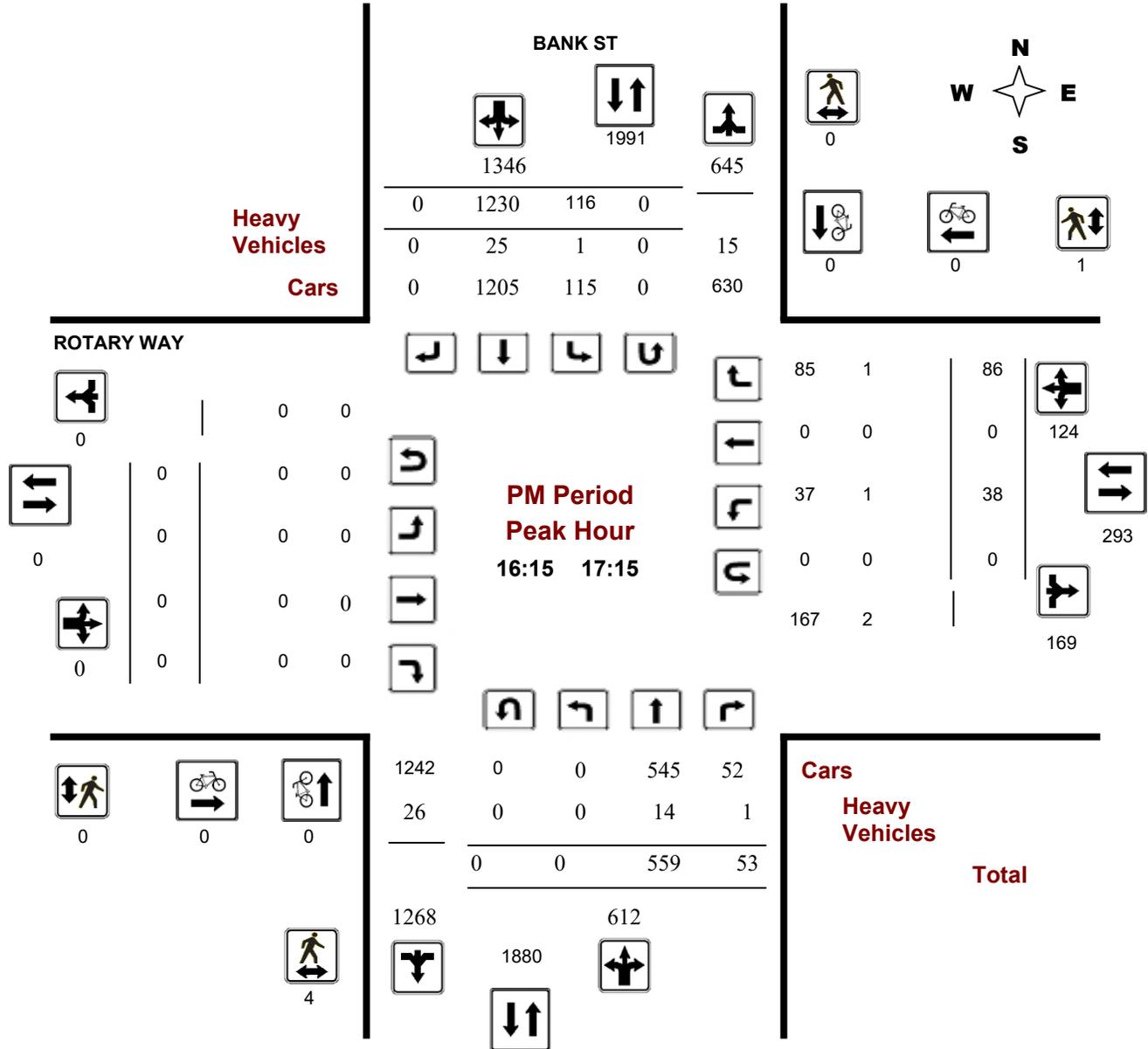
### BANK ST @ ROTARY WAY

**Survey Date:** Wednesday, December 04, 2019

**Start Time:** 07:00

**WO No:** 39158

**Device:** Miovision



**Comments**



# Transportation Services - Traffic Services

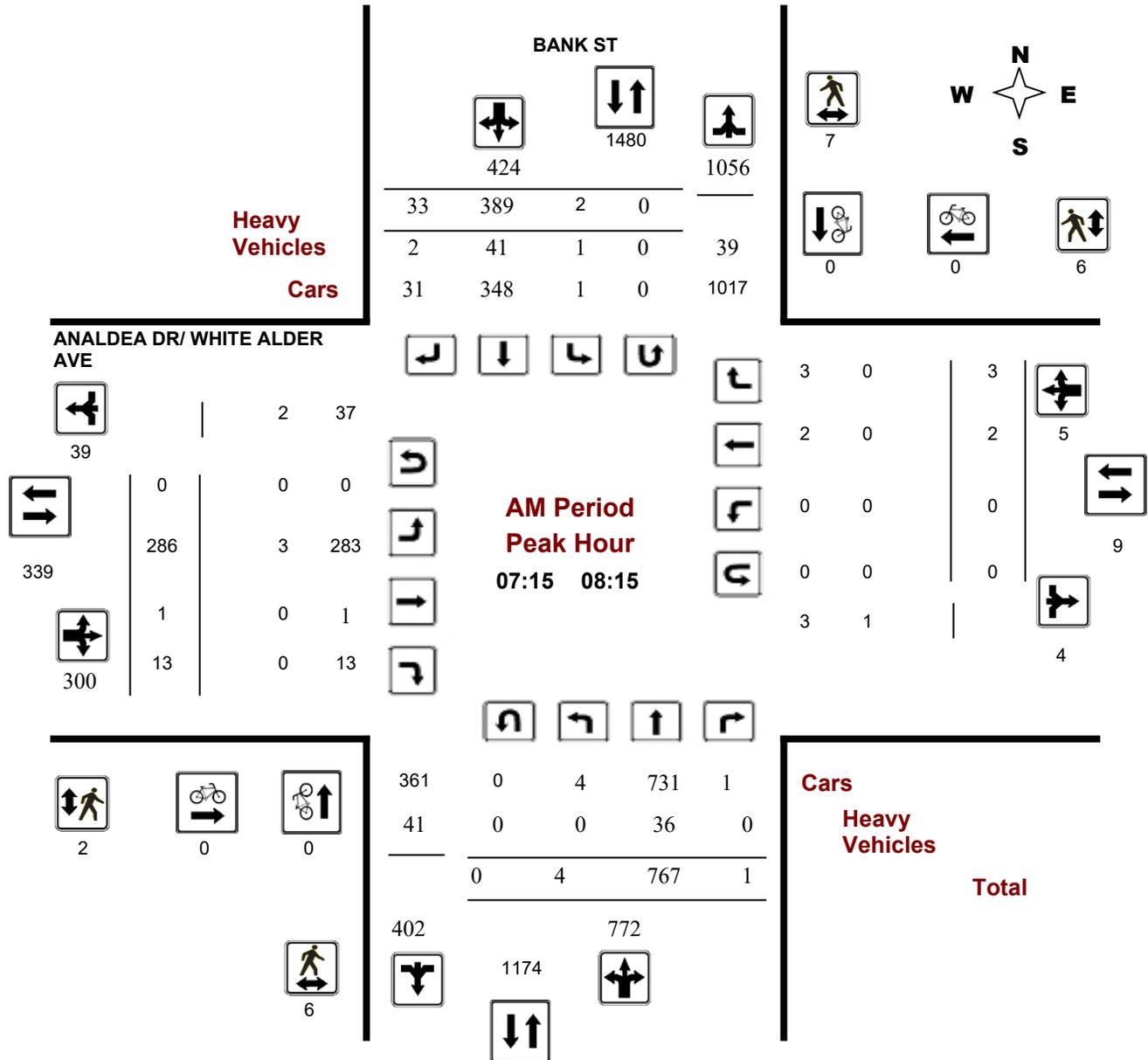
## Turning Movement Count - Peak Hour Diagram ANALDEA DR/ WHITE ALDER AVE @ BANK ST

**Survey Date:** Wednesday, December 04, 2019

**Start Time:** 07:00

**WO No:** 39157

**Device:** Miovision



**Comments**

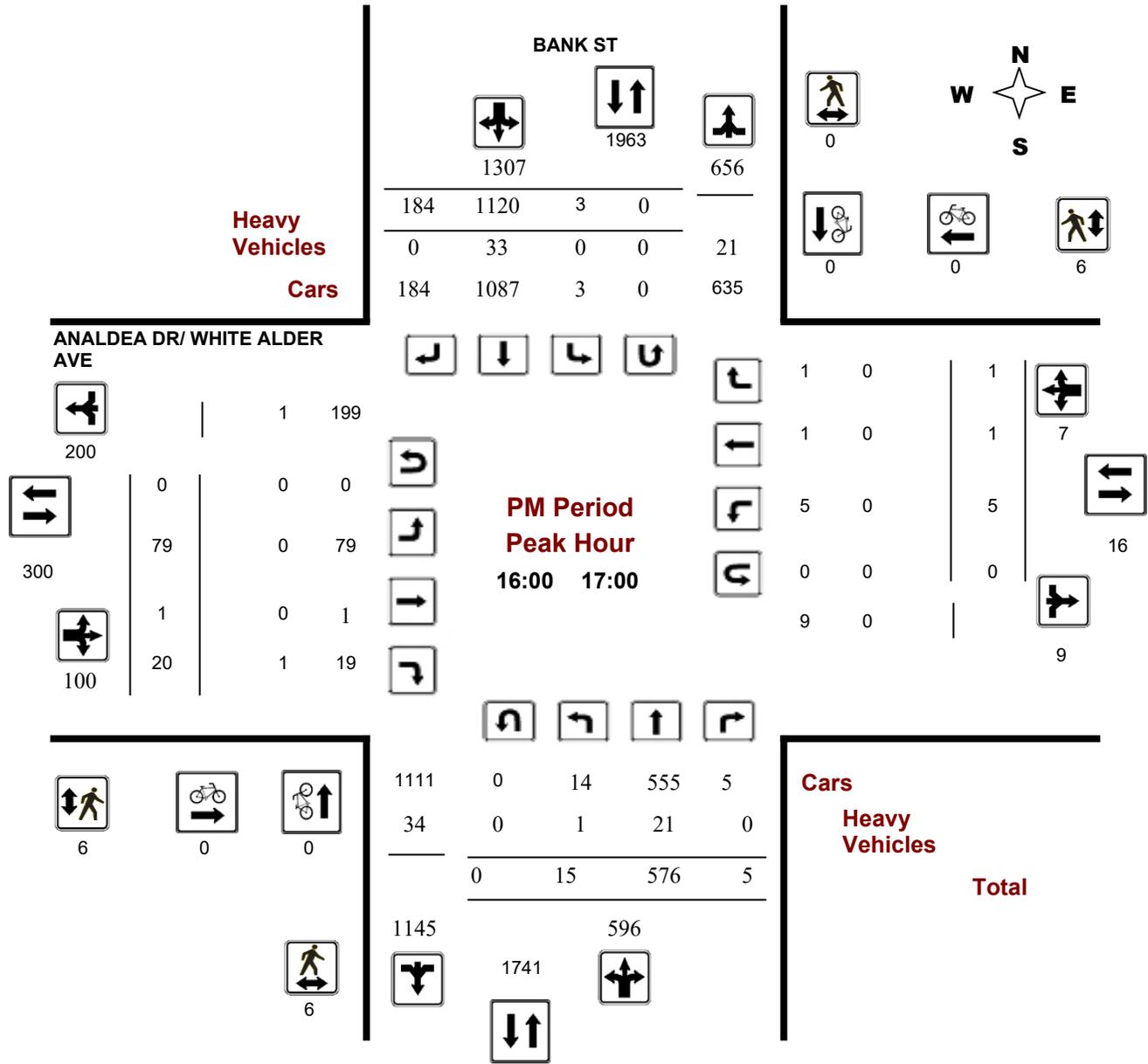
## Turning Movement Count - Peak Hour Diagram ANALDEA DR/ WHITE ALDER AVE @ BANK ST

**Survey Date:** Wednesday, December 04, 2019

**Start Time:** 07:00

**WO No:** 39157

**Device:** Miovision



## Appendix D – OC Transpo Routes

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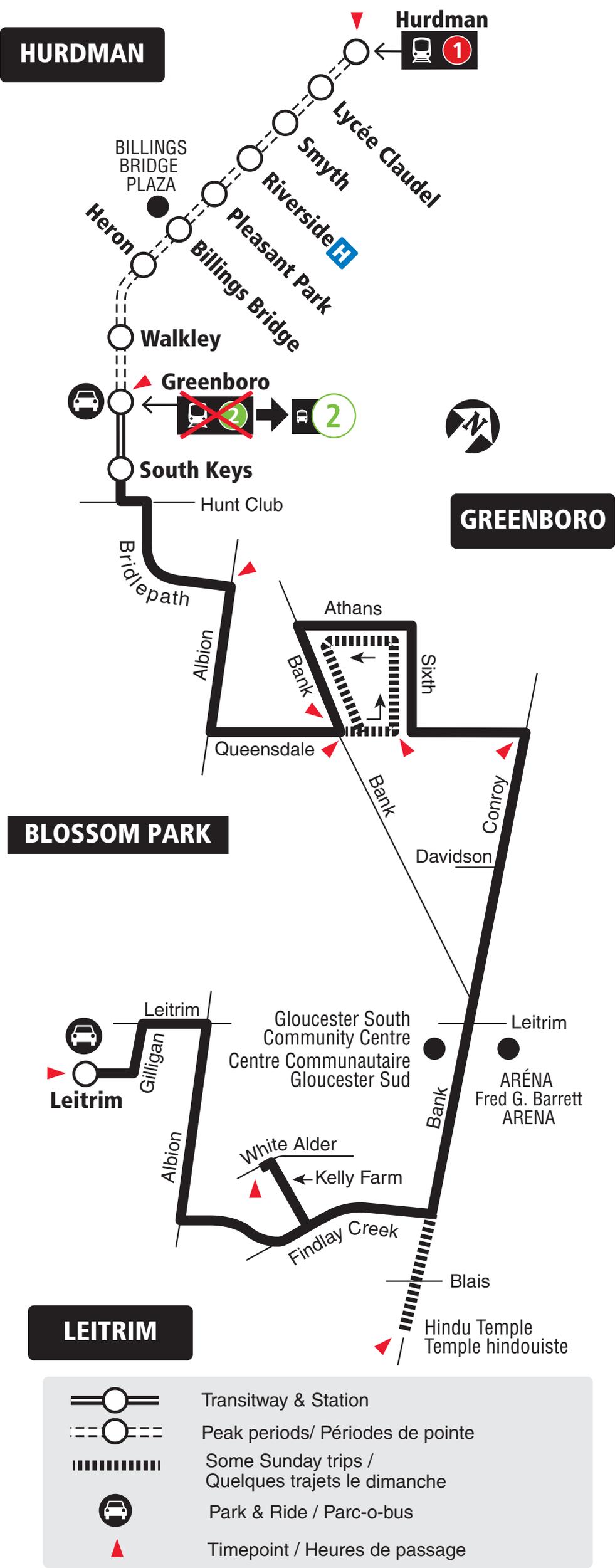
# 93

## Local

### LEITRIM BLOSSOM PARK

### GREENBORO HURDMAN

**7 days a week / 7 jours par semaine**  
All day service  
Service toute la journée



2020.04



**Schedule / Horaire.....613-560-1000**

**Text / Texto .....560560**

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

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

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

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

**Effective May 3, 2020**  
**En vigueur 3 mai 2020**



**INFO 613-741-4390**  
**octranspo.com**



# 294

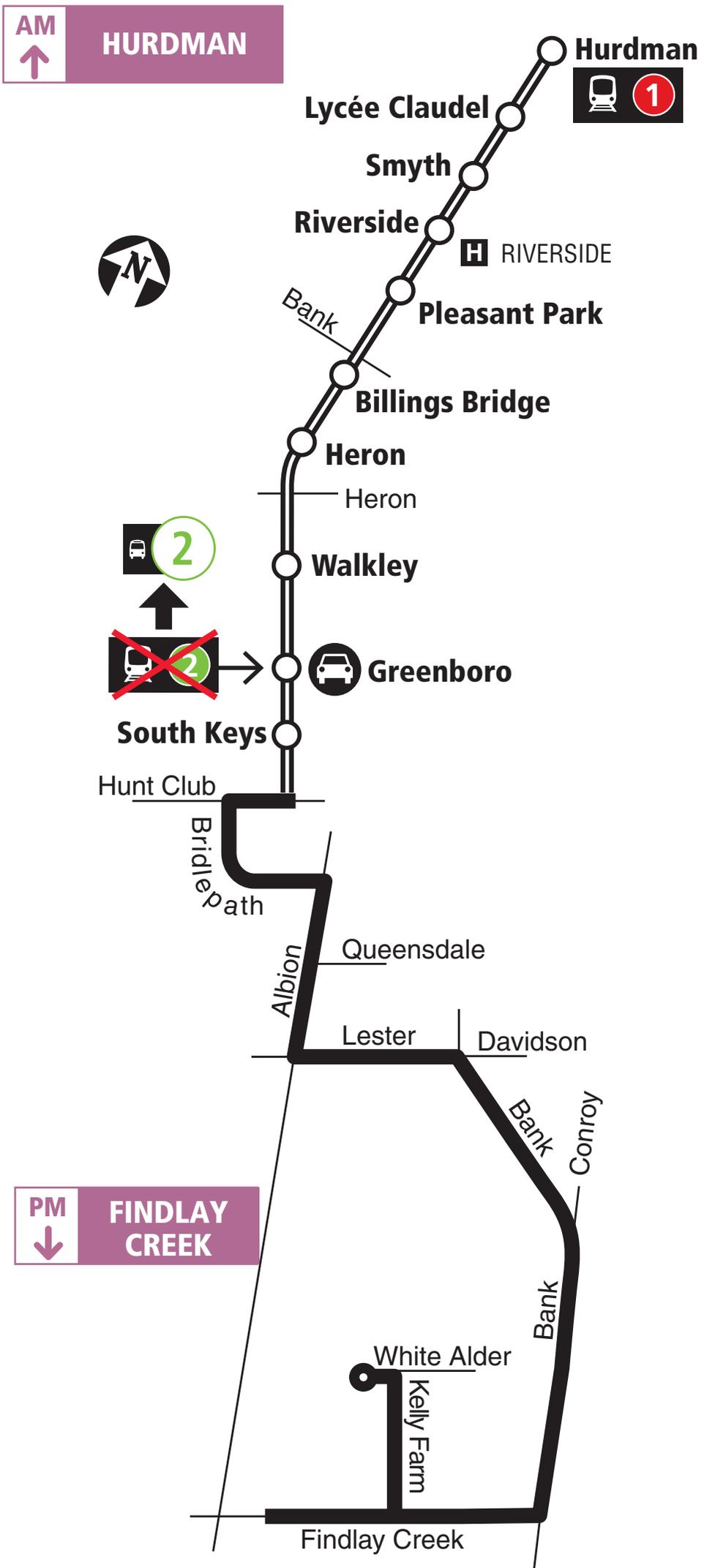
## HURDMAN FINDLAY CREEK

### Connexion

#### Monday to Friday / Lundi au vendredi

Peak periods only

Périodes de pointe seulement



2020.04



**Schedule / Horaire.....613-560-1000**

**Text / Texto .....560560**

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

Customer Relations

Service à la clientèle ..... **613-842-3600**

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

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

**Effective May 3, 2020**

**En vigueur 3 mai 2020**



**INFO 613-741-4390**  
**octranspo.com**



# 304

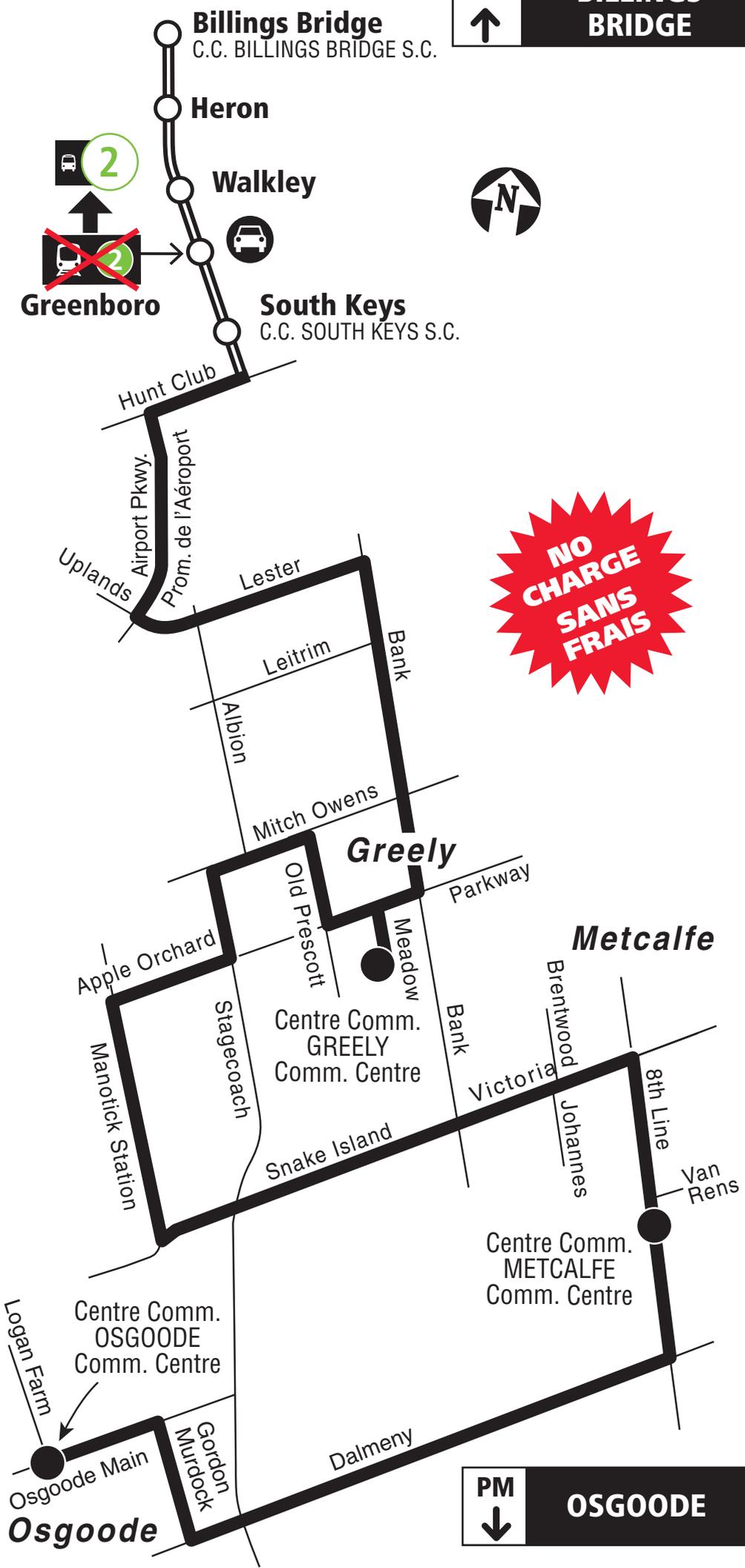
## BILLINGS BRIDGE METCALFE, GREELY OSGOODE

### Local

### Thursday only / Jeudi seulement

Selected time periods  
Périodes sélectionnées

**AM**  
↑  
**BILLINGS BRIDGE**



Transitway & Station



Park & Ride / Parc-o-bus

2020.04



**Schedule / Horaire.....613-560-1000**

**Text / Texto .....560560**

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

Customer Relations

Service à la clientèle ..... **613-842-3600**

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

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

**Effective May 3, 2020**

**En vigueur 3 mai 2020**



**INFO 613-741-4390**  
**octranspo.com**

## Appendix E – Collision Data

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# City Operations - Transportation Services

## Collision Details Report - Public Version

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

**Location:** ANALDEA DR/ WHITE ALDER AVE @ BANK ST

**Traffic Control:** Stop sign

**Total Collisions:** 23

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
2014-Feb-18, Tue,10:30	Clear	Angle	P.D. only	Ice	South	Turning right	Pick-up truck	Other motor vehicle	
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2014-Apr-23, Wed,07:44	Clear	Rear end	Non-fatal injury	Dry	North	Going ahead	Pick-up truck	Other motor vehicle	
					North	Slowing or stopping	Pick-up truck	Other motor vehicle	
2014-Oct-04, Sat,16:04	Rain	Rear end	P.D. only	Wet	South	Going ahead	Automobile, station wagon	Other motor vehicle	
					South	Slowing or stopping	Pick-up truck	Other motor vehicle	
2014-Sep-15, Mon,17:46	Clear	Rear end	P.D. only	Dry	South	Going ahead	Pick-up truck	Other motor vehicle	
					South	Slowing or stopping	Pick-up truck	Other motor vehicle	
					South	Slowing or stopping	Passenger van	Other motor vehicle	
2014-Oct-07, Tue,09:58	Rain	Rear end	P.D. only	Wet	South	Going ahead	Automobile, station wagon	Other motor vehicle	
					South	Slowing or stopping	Delivery van	Other motor vehicle	

2014-Oct-25, Sat,18:43	Freezing Rain	Rear end	P.D. only	Wet	South	Slowing or stopping	Automobile, station wagon	Skidding/sliding
					South	Slowing or stopping	Pick-up truck	Other motor vehicle
2014-Sep-03, Wed,12:00	Clear	Rear end	Non-fatal injury	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle
					North	Slowing or stopping	Pick-up truck	Other motor vehicle
					North	Stopped	Automobile, station wagon	Other motor vehicle
					North	Stopped	Automobile, station wagon	Other motor vehicle
2014-Dec-01, Mon,16:20	Snow	Rear end	P.D. only	Wet	South	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					South	Slowing or stopping	Automobile, station wagon	Other motor vehicle
2016-Jan-08, Fri,18:04	Clear	Sideswipe	P.D. only	Loose snow	North	Unknown	Unknown	Other motor vehicle
					North	Turning right	Automobile, station wagon	Other motor vehicle
2016-Oct-18, Tue,20:18	Rain	Rear end	P.D. only	Wet	South	Going ahead	Automobile, station wagon	Other motor vehicle
					South	Going ahead	Automobile, station wagon	Other motor vehicle
2015-Jun-14, Sun,10:37	Clear	Rear end	P.D. only	Dry	South	Slowing or stopping	Pick-up truck	Other motor vehicle
					South	Slowing or stopping	Automobile, station wagon	Other motor vehicle
2015-Dec-02, Wed,11:20	Unknown	Rear end	Non-fatal injury	Wet	North	Slowing or stopping	Automobile, station wagon	Other motor vehicle

					North	Slowing or stopping	Automobile, station wagon	Other motor vehicle
2016-Sep-27, Tue,15:30	Clear	Rear end	P.D. only	Dry	South	Turning left	Automobile, station wagon	Other motor vehicle
					South	Turning left	Automobile, station wagon	Other motor vehicle
2017-Aug-25, Fri,17:00	Clear	Angle	P.D. only	Dry	East	Turning left	Automobile, station wagon	Other motor vehicle
					South	Going ahead	Automobile, station wagon	Other motor vehicle
2017-Sep-01, Fri,08:24	Clear	Rear end	Non-fatal injury	Dry	North	Slowing or stopping	Pick-up truck	Other motor vehicle
					North	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					North	Slowing or stopping	Automobile, station wagon	Other motor vehicle
2016-Dec-18, Sun,19:17	Clear	Rear end	Non-fatal injury	Ice	North	Slowing or stopping	Unknown	Other motor vehicle
					North	Stopped	Automobile, station wagon	Other motor vehicle
2017-Mar-18, Sat,16:13	Clear	SMV other	P.D. only	Dry	North	Going ahead	Unknown	Ran off road
2017-Mar-18, Sat,10:31	Clear	Rear end	Non-fatal injury	Dry	North	Going ahead	Pick-up truck	Other motor vehicle
					North	Stopped	Automobile, station wagon	Other motor vehicle
2017-May-27, Sat,13:30	Clear	Rear end	P.D. only	Dry	South	Going ahead	Pick-up truck	Other motor vehicle

					South	Going ahead	Automobile, station wagon	Other motor vehicle
2017-Jun-23, Fri,17:53	Rain	Rear end	P.D. only	Wet	South	Going ahead	Automobile, station wagon	Other motor vehicle
					South	Stopped	Automobile, station wagon	Other motor vehicle
2017-Sep-08, Fri,17:30	Rain	Rear end	P.D. only	Wet	East	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					East	Stopped	Pick-up truck	Other motor vehicle
2017-Dec-12, Tue,18:34	Snow	Sideswipe	P.D. only	Loose snow	South	Changing lanes	Automobile, station wagon	Other motor vehicle
					South	Turning right	Automobile, station wagon	Other motor vehicle
2017-Nov-08, Wed,10:48	Clear	Rear end	P.D. only	Dry	North	Going ahead	Pick-up truck	Other motor vehicle
					North	Stopped	Automobile, station wagon	Other motor vehicle
					North	Stopped	Automobile, station wagon	Other motor vehicle

**Location:** ARENA PL @ BANK ST

**Traffic Control:** Stop sign

**Total Collisions:** 6

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
2014-Apr-23, Wed,08:50	Clear	Turning movement	P.D. only	Dry	South	Turning left	Automobile, station wagon	Other motor vehicle	
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2016-Mar-10, Thu,09:10	Clear	Angle	P.D. only	Wet	West	Turning left	Delivery van	Other motor vehicle	

					North	Going ahead	Automobile, station wagon	Other motor vehicle
					North	Stopped	Pick-up truck	Other motor vehicle
2015-Sep-07, Mon,13:34	Clear	Angle	Non-fatal injury	Dry	West	Turning left	Automobile, station wagon	Other motor vehicle
					North	Going ahead	Passenger van	Other motor vehicle
2017-Jan-19, Thu,07:39	Clear	Angle	P.D. only	Wet	West	Turning left	Police vehicle	Other motor vehicle
					North	Overtaking	Automobile, station wagon	Other motor vehicle
2017-Oct-11, Wed,07:00	Clear	Angle	Non-fatal injury	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle
					West	Turning left	Automobile, station wagon	Other motor vehicle
2016-Nov-19, Sat,16:02	Clear	SMV other	P.D. only	Dry	South	Unknown	Unknown	Other

**Location:** BANK ST @ LEITRIM RD

**Traffic Control:** Traffic signal

**Total Collisions:** 58

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2014-Jan-03, Fri,09:12	Freezing Rain	SMV other	P.D. only	Ice	North	Slowing or stopping	Automobile, station wagon	Skidding/sliding	
2014-Aug-13, Wed,21:39	Rain	Rear end	P.D. only	Wet	South	Going ahead	Automobile, station wagon	Other motor vehicle	
					South	Slowing or stopping	Automobile, station wagon	Other motor vehicle	

2014-Aug-21, Thu,08:14	Rain	Rear end	P.D. only	Wet	North	Going ahead	Pick-up truck	Other motor vehicle
					North	Stopped	Pick-up truck	Other motor vehicle

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2014-Aug-13, Wed,07:47	Rain	Turning movement	Non-fatal injury	Wet	South	Turning left	Automobile, station wagon	Other motor vehicle
					North	Going ahead	Automobile, station wagon	Other motor vehicle

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2014-Aug-22, Fri,13:00	Clear	Sideswipe	P.D. only	Dry	West	Unknown	Automobile, station wagon	Other motor vehicle
					West	Unknown	Automobile, station wagon	Other motor vehicle

---

2014-Oct-21, Tue,21:31	Clear	Rear end	P.D. only	Dry	West	Turning left	Automobile, station wagon	Other motor vehicle
					West	Turning left	Automobile, station wagon	Other motor vehicle

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2014-Dec-01, Mon,23:10	Clear	Angle	Non-fatal injury	Dry	South	Going ahead	Pick-up truck	Other motor vehicle
					West	Going ahead	Automobile, station wagon	Other motor vehicle

---

2014-Nov-04, Tue,16:30	Clear	Turning movement	P.D. only	Dry	West	Turning left	Automobile, station wagon	Other motor vehicle
					East	Going ahead	Automobile, station wagon	Other motor vehicle

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2014-Oct-20, Mon,16:15	Clear	Angle	P.D. only	Dry	East	Going ahead	Pick-up truck	Other motor vehicle
					North	Going ahead	Pick-up truck	Other motor vehicle

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2014-Nov-20, Thu,15:52	Clear	Rear end	P.D. only	Dry	South	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					South	Stopped	Automobile, station wagon	Other motor vehicle
2015-Apr-18, Sat,09:22	Clear	Rear end	Non-fatal injury	Dry	South	Slowing or stopping	Passenger van	Other motor vehicle
					South	Going ahead	Automobile, station wagon	Other motor vehicle
2015-Feb-18, Wed,08:37	Strong wind	Rear end	P.D. only	Wet	North	Going ahead	Automobile, station wagon	Other motor vehicle
					North	Slowing or stopping	Automobile, station wagon	Other motor vehicle
2015-Sep-29, Tue,16:20	Rain	Rear end	P.D. only	Wet	South	Going ahead	Automobile, station wagon	Skidding/sliding
					South	Stopped	Pick-up truck	Other motor vehicle
2015-Jan-06, Tue,18:00	Clear	Rear end	Non-fatal injury	Wet	South	Changing lanes	Automobile, station wagon	Other motor vehicle
					South	Slowing or stopping	Automobile, station wagon	Other motor vehicle
2015-Feb-12, Thu,06:50	Snow	SMV other	P.D. only	Loose snow	South	Going ahead	Pick-up truck	Curb
2015-Jan-09, Fri,10:51	Clear	Angle	Non-fatal injury	Wet	South	Going ahead	Automobile, station wagon	Other motor vehicle
					West	Going ahead	Pick-up truck	Other motor vehicle
					East	Turning left	Truck - closed	Other motor vehicle

2015-Jan-06, Tue,05:46	Other	Turning movement	Non-fatal injury	Wet	South	Turning left	Automobile, station wagon	Other motor vehicle
					North	Going ahead	Pick-up truck	Other motor vehicle

2015-Feb-21, Sat,14:19	Snow	Rear end	P.D. only	Loose snow	North	Unknown	Automobile, station wagon	Other motor vehicle
					North	Stopped	Automobile, station wagon	Other motor vehicle

2015-Aug-31, Mon,17:30	Clear	Turning movement	P.D. only	Dry	North	Turning right	Automobile, station wagon	Other motor vehicle
					North	Going ahead	Pick-up truck	Other motor vehicle

2015-Jun-09, Tue,18:29	Clear	Rear end	P.D. only	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle
					East	Stopped	Pick-up truck	Other motor vehicle

2015-Aug-26, Wed,17:15	Rain	Rear end	Non-fatal injury	Wet	West	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					West	Stopped	Automobile, station wagon	Other motor vehicle
					West	Stopped	Automobile, station wagon	Other motor vehicle

2015-Jun-30, Tue,11:19	Clear	Rear end	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle
					South	Stopped	Pick-up truck	Other motor vehicle

2015-Jun-26, Fri,15:41	Clear	Rear end	P.D. only	Dry	East	Going ahead	Truck - dump	Other motor vehicle
					East	Stopped	Automobile, station wagon	Other motor vehicle

2015-Jan-13, Tue,16:20	Clear	Rear end	P.D. only	Ice	South	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					South	Stopped	Passenger van	Other motor vehicle
2016-Mar-09, Wed,10:46	Clear	Turning movement	Non-fatal injury	Wet	North	Turning left	Delivery van	Other motor vehicle
					South	Going ahead	Automobile, station wagon	Other motor vehicle
2016-Sep-22, Thu,10:44	Clear	Angle	Non-fatal injury	Dry	North	Going ahead	Passenger van	Other motor vehicle
					West	Going ahead	Pick-up truck	Other motor vehicle
2016-Jun-15, Wed,08:22	Clear	Turning movement	Non-fatal injury	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle
					South	Turning left	Automobile, station wagon	Other motor vehicle
2015-Dec-14, Mon,07:08	Rain	Rear end	P.D. only	Wet	West	Turning left	Passenger van	Skidding/sliding
					West	Turning left	Automobile, station wagon	Other motor vehicle
2015-Nov-20, Fri,17:10	Clear	Rear end	P.D. only	Dry	South	Going ahead	Pick-up truck	Other motor vehicle
					South	Stopped	Automobile, station wagon	Other motor vehicle
					South	Stopped	Pick-up truck	Other motor vehicle
2016-Jan-20, Wed,16:15	Clear	Rear end	P.D. only	Dry	North	Turning left	Unknown	Other motor vehicle
					North	Turning left	Automobile, station wagon	Other motor vehicle

2016-Jan-07, Thu,14:17	Clear	Rear end	P.D. only	Ice	South	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					South	Stopped	Automobile, station wagon	Other motor vehicle

---

2015-Dec-22, Tue,17:52	Rain	Turning movement	P.D. only	Wet	South	Turning left	Automobile, station wagon	Other motor vehicle
					North	Going ahead	Automobile, station wagon	Other motor vehicle

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2016-Jun-28, Tue,21:31	Rain	Angle	Non-fatal injury	Wet	North	Going ahead	Automobile, station wagon	Other motor vehicle
					East	Going ahead	Pick-up truck	Other motor vehicle

---

2016-May-29, Sun,18:48	Clear	Turning movement	P.D. only	Dry	South	Going ahead	Pick-up truck	Other motor vehicle
					North	Turning left	Pick-up truck	Other motor vehicle

---

2017-Jan-09, Mon,07:15	Clear	Rear end	P.D. only	Wet	North	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					North	Stopped	Pick-up truck	Other motor vehicle

---

2017-Jan-11, Wed,09:37	Clear	Angle	P.D. only	Wet	South	Going ahead	Automobile, station wagon	Other motor vehicle
					East	Going ahead	Automobile, station wagon	Other motor vehicle

---

2016-Dec-30, Fri,17:03	Clear	Rear end	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle
					South	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					South	Slowing or stopping	Automobile, station wagon	Other motor vehicle

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2017-Jan-06, Fri,07:55	Clear	Turning movement	Non-fatal injury	Wet	North	Going ahead	Automobile, station wagon	Other motor vehicle
					South	Turning left	Pick-up truck	Other motor vehicle
					West	Stopped	Passenger van	Other motor vehicle
					West	Stopped	Automobile, station wagon	Other motor vehicle
2016-Oct-31, Mon,21:19	Clear	Turning movement	P.D. only	Dry	West	Turning left	Automobile, station wagon	Other motor vehicle
					East	Going ahead	Pick-up truck	Other motor vehicle
2016-Nov-25, Fri,05:20	Clear	SMV other	P.D. only	Dry	East	Going ahead	Automobile, station wagon	Animal - wild
2016-Dec-05, Mon,07:54	Snow	Turning movement	P.D. only	Packed snow	East	Going ahead	Pick-up truck	Other motor vehicle
					East	Turning left	Truck - tractor	Other motor vehicle
2017-Mar-14, Tue,12:36	Snow	Sideswipe	P.D. only	Loose snow	North	Changing lanes	Automobile, station wagon	Other motor vehicle
					North	Going ahead	Automobile, station wagon	Other motor vehicle
2017-Jul-12, Wed,21:09	Rain	Sideswipe	P.D. only	Wet	South	Going ahead	Pick-up truck	Other motor vehicle
					South	Going ahead	Automobile, station wagon	Other motor vehicle
2017-May-05, Fri,15:54	Rain	Rear end	P.D. only	Wet	South	Going ahead	Automobile, station wagon	Other motor vehicle
					South	Stopped	Pick-up truck	Other motor vehicle

2017-May-18, Thu,20:30	Rain	Rear end	P.D. only	Wet	West	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					West	Stopped	Automobile, station wagon	Other motor vehicle

2017-Oct-04, Wed,12:25	Rain	Rear end	P.D. only	Wet	North	Going ahead	Automobile, station wagon	Other motor vehicle
					North	Stopped	Automobile, station wagon	Other motor vehicle

2018-Apr-05, Thu,09:38	Clear	Sideswipe	P.D. only	Dry	South	Changing lanes	Automobile, station wagon	Other motor vehicle
					South	Going ahead	Automobile, station wagon	Other motor vehicle

2017-Sep-27, Wed,16:07	Clear	Turning movement	P.D. only	Wet	North	Turning left	Truck - tractor	Other motor vehicle
					South	Going ahead	Automobile, station wagon	Other motor vehicle

2018-Feb-07, Wed,15:21	Snow	Rear end	P.D. only	Slush	South	Going ahead	Passenger van	Other motor vehicle
					South	Stopped	School bus	Other motor vehicle

2018-May-07, Mon,08:25	Clear	Rear end	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle
					North	Stopped	Automobile, station wagon	Other motor vehicle

2018-May-04, Fri,16:12	Clear	Rear end	P.D. only	Wet	South	Going ahead	Pick-up truck	Other motor vehicle
					South	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					South	Slowing or stopping	Automobile, station wagon	Other motor vehicle

2018-May-11, Fri,22:47	Clear	Turning movement	P.D. only	Dry	North	Turning left	Pick-up truck	Other motor vehicle
					South	Going ahead	Automobile, station wagon	Other motor vehicle
2018-Jun-01, Fri,16:26	Clear	Rear end	Non-fatal injury	Dry	North	Going ahead	Bicycle	Other motor vehicle
					North	Slowing or stopping	Automobile, station wagon	Other motor vehicle
2018-Jul-10, Tue,14:50	Clear	Rear end	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle
					North	Stopped	Passenger van	Other motor vehicle
2018-Oct-18, Thu,16:40	Clear	Other	P.D. only	Dry	North	Reversing	Pick-up truck	Other motor vehicle
					South	Stopped	Automobile, station wagon	Other motor vehicle
2018-Sep-15, Sat,18:27	Clear	Sideswipe	P.D. only	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle
					East	Going ahead	Automobile, station wagon	Other motor vehicle
2018-Oct-30, Tue,14:30	Clear	Rear end	P.D. only	Dry	South	Going ahead	Pick-up truck	Other motor vehicle
					South	Stopped	Automobile, station wagon	Other motor vehicle
2018-Aug-16, Thu,21:00	Clear	Turning movement	P.D. only	Dry	East	Turning left	Automobile, station wagon	Other motor vehicle
					West	Going ahead	Automobile, station wagon	Other motor vehicle

**Location:** BANK ST @ ROTARY WAY

**Traffic Control:** Traffic signal

**Total Collisions:** 9

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2015-Jan-22, Thu,04:13	Clear	SMV other	P.D. only	Ice	South	Going ahead	Automobile, station wagon	Pole (sign, parking meter)	
2015-Apr-09, Thu,09:16	Clear	Angle	P.D. only	Dry	West	Turning right	Automobile, station wagon	Other motor vehicle	
					North	Stopped	Municipal transit bus	Other motor vehicle	
2015-Jul-29, Wed,17:22	Clear	Rear end	Non-fatal injury	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle	
					South	Stopped	Pick-up truck	Other motor vehicle	
					South	Going ahead	Pick-up truck	Other motor vehicle	
2016-Sep-14, Wed,07:25	Clear	Turning movement	Non-fatal injury	Dry	South	Turning left	School bus	Other motor vehicle	
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2016-Dec-09, Fri,08:43	Snow	Rear end	P.D. only	Ice	West	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
					West	Stopped	School bus	Other motor vehicle	
2017-Nov-17, Fri,07:45	Clear	Rear end	P.D. only	Dry	South	Going ahead	Passenger van	Other motor vehicle	
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2017-Dec-11, Mon,16:40	Clear	Rear end	P.D. only	Wet	North	Slowing or stopping	Automobile, station wagon	Other motor vehicle	

					North	Stopped	Automobile, station wagon	Other motor vehicle
					North	Going ahead	Unknown	Other motor vehicle
2018-May-16, Wed,15:23	Clear	Rear end	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle
					South	Stopped	Automobile, station wagon	Other motor vehicle
					South	Stopped	Pick-up truck	Other motor vehicle
					South	Stopped	Automobile, station wagon	Other motor vehicle
2018-Jul-05, Thu,00:18	Clear	SMV other	P.D. only	Dry	North	Turning left	Passenger van	Curb

**Location:** BANK ST btwn ANALDEA DR/ WHITE ALDER AVE & ROTARY WAY

**Traffic Control:** No control

**Total Collisions:** 1

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2015-Feb-26, Thu,17:41	Clear	Rear end	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle	
					South	Stopped	Pick-up truck	Other motor vehicle	

**Location:** BANK ST btwn ARENA PL & WHITE ALDER AVE

**Traffic Control:** No control

**Total Collisions:** 28

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2014-Mar-29, Sat,03:12	Clear	SMV other	P.D. only	Dry	South	Going ahead	Pick-up truck	Ran off road	
2014-Aug-12, Tue,17:35	Rain	Rear end	P.D. only	Wet	South	Going ahead	Automobile, station wagon	Other motor vehicle	
					South	Stopped	Automobile, station wagon	Other motor vehicle	

2014-Sep-18, Thu,12:25	Clear	Approaching	Non-fatal injury	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle
					North	Going ahead	Truck - dump	Other motor vehicle
2015-Feb-19, Thu,16:42	Clear	Turning movement	Non-fatal injury	Dry	South	Overtaking	Automobile, station wagon	Other motor vehicle
					North	Turning left	Automobile, station wagon	Other motor vehicle
2014-Nov-10, Mon,07:34	Clear	Rear end	P.D. only	Dry	North	Slowing or stopping	Delivery van	Other motor vehicle
					North	Slowing or stopping	Pick-up truck	Other motor vehicle
2014-Oct-03, Fri,11:33	Clear	Other	P.D. only	Dry	North	Going ahead	Pick-up truck	Other
					South	Going ahead	Automobile, station wagon	Debris falling off vehicle
2015-Apr-13, Mon,08:12	Clear	Turning movement	P.D. only	Dry	South	Making "U" turn	Automobile, station wagon	Other motor vehicle
					North	Going ahead	School bus	Other motor vehicle
2015-May-14, Thu,14:05	Clear	Rear end	Non-fatal injury	Dry	North	Going ahead	Pick-up truck	Other motor vehicle
					North	Slowing or stopping	Pick-up truck	Other motor vehicle
					North	Slowing or stopping	Automobile, station wagon	Other motor vehicle
2015-May-23, Sat,15:01	Clear	Angle	Non-fatal injury	Dry	East	Turning left	Automobile, station wagon	Other motor vehicle
					South	Going ahead	Pick-up truck	Other motor vehicle

2016-Oct-29, Sat,16:08	Clear	Rear end	P.D. only	Wet	South	Going ahead	Automobile, station wagon	Other motor vehicle
					South	Slowing or stopping	Automobile, station wagon	Other motor vehicle
2015-Oct-19, Mon,06:24	Clear	Angle	P.D. only	Dry	East	Turning left	Pick-up truck	Other motor vehicle
					South	Turning right	Pick-up truck	Other motor vehicle
2015-Oct-10, Sat,15:55	Clear	Rear end	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle
					South	Stopped	Pick-up truck	Other motor vehicle
2016-Jan-06, Wed,17:24	Clear	Rear end	P.D. only	Wet	South	Going ahead	Automobile, station wagon	Other motor vehicle
					South	Slowing or stopping	Automobile, station wagon	Other motor vehicle
2016-Nov-11, Fri,13:18	Clear	Sideswipe	P.D. only	Dry	South	Changing lanes	Truck-other	Other motor vehicle
					South	Going ahead	Automobile, station wagon	Other motor vehicle
2016-Sep-30, Fri,07:42	Clear	Rear end	Non-fatal injury	Dry	North	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					North	Stopped	Automobile, station wagon	Other motor vehicle
2017-Feb-02, Thu,18:03	Clear	Angle	P.D. only	Dry	South	Overtaking	Automobile, station wagon	Other motor vehicle
					East	Turning left	Automobile, station wagon	Other motor vehicle

2017-Mar-08, Wed,16:03	Rain	Rear end	P.D. only	Wet	North	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					North	Stopped	Automobile, station wagon	Other motor vehicle
2017-Apr-27, Thu,16:25	Clear	Angle	P.D. only	Dry	East	Turning left	Automobile, station wagon	Other motor vehicle
					South	Going ahead	Automobile, station wagon	Other motor vehicle
2017-Jun-07, Wed,15:44	Clear	Angle	P.D. only	Dry	East	Turning left	Pick-up truck	Other motor vehicle
					South	Going ahead	Automobile, station wagon	Other motor vehicle
2017-Sep-10, Sun,00:58	Clear	SMV other	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Ran off road
2017-Sep-18, Mon,16:10	Clear	Rear end	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle
					South	Slowing or stopping	Automobile, station wagon	Other motor vehicle
2017-Dec-24, Sun,13:16	Clear	Rear end	P.D. only	Wet	South	Going ahead	Automobile, station wagon	Other motor vehicle
					South	Stopped	Automobile, station wagon	Other motor vehicle
					South	Stopped	Automobile, station wagon	Other motor vehicle
2017-Nov-25, Sat,00:46	Clear	SMV other	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Animal - wild
2018-Jan-06, Sat,14:25	Clear	Angle	Non-fatal injury	Dry	East	Turning left	Pick-up truck	Other motor vehicle

					South	Going ahead	Automobile, station wagon	Other motor vehicle
2018-Feb-03, Sat, 14:05	Clear	Angle	Non-fatal injury	Wet	West	Turning left	Automobile, station wagon	Other motor vehicle
					South	Going ahead	Automobile, station wagon	Other motor vehicle
					North	Going ahead	Automobile, station wagon	Other motor vehicle
2018-Jun-19, Tue, 15:35	Clear	Rear end	P.D. only	Dry	South	Changing lanes	Automobile, station wagon	Other motor vehicle
					South	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					South	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					South	Slowing or stopping	Automobile, station wagon	Other motor vehicle
2018-Jun-15, Fri, 16:08	Clear	Angle	P.D. only	Dry	East	Turning left	Automobile, station wagon	Other motor vehicle
					South	Going ahead	Automobile, station wagon	Other motor vehicle
2018-Jul-27, Fri, 16:25	Rain	SMV other	P.D. only	Wet	South	Going ahead	Automobile, station wagon	Curb

**Location:** BANK ST btwn LEITRIM RD & ARENA PL

**Traffic Control:** No control

**Total Collisions:** 7

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2014-Jan-08, Wed, 16:09	Clear	Rear end	P.D. only	Wet	South	Going ahead	Automobile, station wagon	Skidding/sliding	
					South	Slowing or stopping	Automobile, station wagon	Other motor vehicle	

2014-May-16, Fri, 16:37	Rain	Rear end	Non-fatal injury	Wet	South	Going ahead	Pick-up truck	Other motor vehicle
					South	Stopped	Pick-up truck	Other motor vehicle

2014-Aug-25, Mon, 15:15	Clear	Rear end	P.D. only	Dry	South	Going ahead	Pick-up truck	Other motor vehicle
					South	Stopped	Pick-up truck	Other motor vehicle

2015-Apr-02, Thu, 17:30	Clear	Rear end	P.D. only	Dry	South	Going ahead	Pick-up truck	Other motor vehicle
					South	Stopped	Automobile, station wagon	Other motor vehicle

2016-Oct-21, Fri, 16:00	Rain	Sideswipe	P.D. only	Wet	South	Changing lanes	Pick-up truck	Other motor vehicle
					South	Changing lanes	Automobile, station wagon	Other motor vehicle

2017-Oct-25, Wed, 16:12	Clear	Angle	P.D. only	Dry	West	Turning left	Automobile, station wagon	Other motor vehicle
					North	Going ahead	Automobile, station wagon	Other motor vehicle

2018-May-15, Tue, 17:29	Clear	Sideswipe	P.D. only	Dry	South	Changing lanes	Pick-up truck	Other motor vehicle
					South	Slowing or stopping	Automobile, station wagon	Other motor vehicle