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Proposed Residential Development
254 Argyle Avenue, Ottawa

Transportation Impact Assessment

Proposed Residential Development
254 Argyle Avenue

Transportation Impact Assessment

Prepared By:

NOVATECH
Suite 200, 240 Michael Cowpland Drive
Ottawa, Ontario
K2M 1P6

Dated: August 2024
Revised: March 2025

Novatech File: 123062
Ref: R-2024-026

NOVATECH
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March 21, 2025

City of Ottawa
Planning, Development, and Building Services Department
110 Laurier Ave. W., 4th Floor
Ottawa, Ontario K1P 1J1

Attention: **Mr. Wally Dubyk**
Transportation Project Manager, Infrastructure Approvals

Dear Mr. Dubyk:

Reference: **254 Argyle Avenue**
Revised Transportation Impact Assessment
Novatech File No. 123062

We are pleased to submit the following revised Transportation Impact Assessment (TIA), in support of Zoning By-Law Amendment and Site Plan Control applications at 254 Argyle Avenue, for your review and signoff. The structure and format of this report is in accordance with the City of Ottawa's *Revised Transportation Impact Assessment Guidelines* (June 2023).

The initial submission of this TIA was prepared by Novatech in August 2024. This revised TIA reflects updates to the proposed site plan, and addresses City comments.

If you have any questions or comments regarding this report, please feel free to contact Brad Byvelds, or the undersigned.

Yours truly,

NOVATECH

Joshua Audia, P.Eng.
Project Engineer | Transportation

Suite 200, 240 Michael Cowpland Drive, Ottawa ON K2M 1P6 Tel: 613.254.9643 Fax: 613.254.5867 www.novatech-eng.com

Certification Form for Transportation Impact Assessment (TIA) Study Program Manager

TIA Plan Reports

On April 14, 2022, the Province's Bill 109 received Royal Assent providing legislative direction to implement the More Homes for Everyone Act, 2022 aiming to increase the supply of a range of housing options to make housing more affordable. Revisions have been made to the TIA guidelines to comply with Bill 109 and streamline the process for applicants and staff.

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

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

Certification

- ☑ I have reviewed and have a sound understanding of the objectives, needs and requirements of the City of Ottawa's Official Plan, Transportation Master Plan and the Transportation Impact Assessment (2017) Guidelines (Update Effective July 2023);
- ☑ I have a sound knowledge of industry standard practice with respect to the preparation of transportation impact assessment reports, including multi modal level of service review;
- ☑ I have substantial experience (more than 5 years) in undertaking and delivering transportation impact studies (analysis, reporting and geometric design) with strong background knowledge in transportation planning, engineering or traffic operations; and

City of Ottawa
Transportation Engineering Services
Planning, Real Estate and Economic Development
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Ottawa, ON K1P 1J1
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☑ I am either a licensed or registered[1] professional in good standing, whose field of expertise [check ✓ appropriate field(s)]:

- ☑ is either transportation engineering
- ☐ or transportation planning.

Dated at Ottawa (City) this 21st day of March, 20 25.

Name: Brad Byvelds, P.Eng.

Professional Title: Senior Project Manager

B. Byvelds

_____

Signature of Individual certifier that they meet the above four criteria

Office Contact Information (Please Print)	
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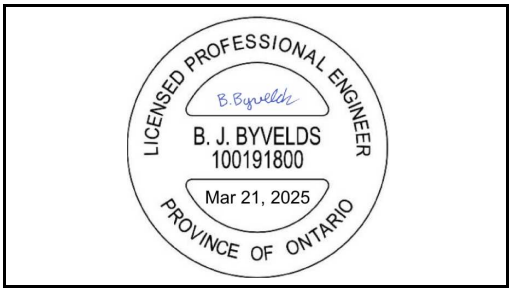
Stamp



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

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EXECUTIVE SUMMARY

This Transportation Impact Assessment (TIA) has been prepared in support of a Zoning By-Law Amendment and Site Plan Control applications for the property located at 254 Argyle Avenue. The subject site is approximately 0.23 acres in size, and is currently occupied by the Holy Korean Martyrs Parish. The subject site does not currently include any private approaches for on-site parking or loading.

The subject site is surrounded by the following:

- Argyle Avenue, followed by mid-rise residences to the north;
- High-rise residences, followed by Catherine Street to the south;
- Low-rise residences or commercial uses, followed by O'Connor Street to the east;
- Mid-rise residences and Centretown United Church, followed by Bank Street to the west.

The proposed development consists of a single nine-storey residential building with 84 dwellings, with ground-floor and rooftop amenity spaces. A total of 35 parking spaces will be provided in an underground parking garage with two levels. Access to the parking garage will be provided through a two-way private approach to Argyle Avenue. The development will be constructed in a single phase, with a buildout year of 2025.

The subject site is designated as 'Evolving Neighbourhood' on Schedule B1 of the City of Ottawa's Official Plan. The implemented zoning for the property is 'Residential Fifth-Density' (R5B), and the site is subject to the *Central and East Downtown Core Secondary Plan* and *Centretown Community Design Plan* areas.

The study area for this report includes the boundary roadway Argyle Avenue, as well as the intersections at Bank Street/Argyle Avenue and O'Connor Street/Argyle Avenue. The selected time periods for this report are the weekday AM and PM peak hours, as they represent the 'worst case' combination of site generated traffic and adjacent street traffic. The buildout year 2025 and horizon year 2030 have been considered.

The conclusions and recommendations of this TIA can be summarized as follows:

Site-Generated Traffic

- The proposed development is estimated to generate 38 person trips (including nine vehicle trips) during each of the AM and PM peak hours.

Access Design

- The proposed development includes one two-way access to Argyle Avenue. Curbs will be depressed and continuous across the proposed access. The design of the proposed access meets most relevant provisions of the City's *Private Approach By-Law* (PABL) and *Zoning By-Law* (ZBL), and the Transportation Association of Canada (TAC)'s *Geometric Design Guide for Canadian Roads*.

- Section 107(1)(c) of the ZBL identifies that any drive aisles serving parking spaces within a parking garage must have a minimum width of 6.0m. This requirement is generally met, however there is a section adjacent to the vestibule accessing the elevators and stairwells are located where the drive aisle is less than 6.0m. Turning movements illustrate that vehicles can circulate between the two parking levels.

- Section 25(1)(p) of the PABL identifies a minimum separation requirement of 3m between a private approach and the nearest property line, as measured at the street line. The proposed access is located approximately 2.1m from the western property line, and therefore it is requested that this requirement be waived. An existing coniferous tree on the neighbouring property at 258 Argyle Avenue will be removed and replaced with a deciduous tree. Maintained pruning of the new deciduous tree will allow for clear sightlines to eastbound pedestrians on the south sidewalk of Argyle Avenue. It should be noted that sightlines to pedestrians will also improve at the existing access to 258 Argyle Avenue.

- Section 25(1)(t) of the PABL identifies a requirement that any private approach serving a parking area with fewer than 50 parking spaces shall not have a grade exceeding 2% for the first 6m inside the property line. The proposed private approach has a maximum grade of 2.3% within the first 6m (descending toward the roadway), which marginally exceeds the requirement. A waiver of this requirement is requested, as this grade is not anticipated to create a traffic hazard or sightline concerns. Beyond the first 6m inside the property line, the proposed parking garage ramp has a grade of 17.1% with 8% transition slopes at either end.

Development Design and Parking

- The existing sidewalk along the subject site's frontage to Argyle Avenue will be widened to 2.0m. Walkways are proposed to connect the main entrance, side entrances, bike room, and ground-floor residences to the existing sidewalk. In effect, this provides pedestrian facilities around the perimeter of the proposed development.

- The main entrance is anticipated to be within 400m walking distance of bus stops on Bank Street, Chamberlain Avenue, and Gladstone Avenue. These stops are served by OC Routes 6, 7, 14, 55, 114, and 405.

- All required measures in the transportation demand management (TDM)-supportive design and infrastructure checklist are met.

- The proposed number of vehicle parking spaces does not meet the requirement as outlined in the City's *Zoning By-Law* (ZBL), as 35 spaces are proposed and 40 spaces are required.

- A total of 84 bicycle parking spaces are proposed within a bike room on the ground floor or within the underground parking garage, which meets the requirement.

- The City's *Accessibility Design Standards* identifies that two accessible parking spaces are required when the total parking supply is between 26 and 50 spaces. The requirement is met, as two accessible spaces will be allocated out of the 35 spaces proposed.

Boundary Streets

- Argyle Avenue meets the target pedestrian level of service (PLOS) and bicycle level of service (BLOS).

Transportation Demand Management

- A review of the City's *TDM Checklist* has been conducted by the proponent. The list of measures to be considered are summarized as follows:
    - Display local area maps with walking/cycling access routes and key destinations at major entrances;
    - Display relevant transit schedules and route maps at entrances;
    - Contract with provider to install on-site carshare vehicles and promote their use by residents;
    - Unbundle parking cost from monthly rent;
    - Provide a multimodal travel option information package to new residents.

- The proposed development is recommended from a transportation perspective.

1.0 SCREENING

1.1 Introduction

This Transportation Impact Assessment (TIA) has been prepared in support of a Zoning By-Law Amendment and Site Plan Control applications for the property located at 254 Argyle Avenue. The subject site is approximately 0.23 acres in size, and is currently occupied by the Holy Korean Martyrs Parish. The subject site does not currently include any private approaches for on-site parking or loading.

The subject site is surrounded by the following:

- Argyle Avenue, followed by mid-rise residences to the north;
- High-rise residences, followed by Catherine Street to the south;
- Low-rise residences or commercial uses, followed by O'Connor Street to the east;
- Mid-rise residences and Centretown United Church, followed by Bank Street to the west.

An aerial of the vicinity around the subject site is provided in **Figure 1**.

Figure 1: View of the Subject Site

1.2 Proposed Development

The proposed development consists of a single nine-storey residential building with 84 dwellings, with ground-floor and rooftop amenity spaces. A total of 35 parking spaces will be provided in an underground parking garage with two levels. Access to the parking garage will be provided through a two-way private approach to Argyle Avenue. The development will be constructed in a single phase, with a buildout year of 2025.

The subject site is designated as 'Evolving Neighbourhood' on Schedule B1 of the City of Ottawa's Official Plan. The implemented zoning for the property is 'Residential Fifth-Density' (R5B), and the site is subject to the *Central and East Downtown Core Secondary Plan* and *Centretown Community Design Plan (CDP)* areas.

A copy of the preliminary site plan is included in **Appendix A**.

1.3 Screening Form

The City's *Revised TIA Guidelines* identify three triggers for completing a TIA report, including trip generation, location, and safety. The criteria for each trigger are outlined in the City's TIA Screening Form, which is included in **Appendix B**. The trigger results are as follows:

- Trip Generation Trigger – The development is anticipated to generate fewer than 60 peak hour person trips; further assessment is **not required** based on this trigger.

- Location Triggers – The development does not propose a new connection to a designated Rapid Transit or Transit Priority (RTTP) corridor or a Crosstown Bikeway, and is not located within a Hub, Protected Major Transit Station Area (PMTSA), or Design Priority Area (DPA); further assessment is **not required** based on this trigger.

- Safety Triggers – The proposed access is within 150m of an adjacent traffic signal at O'Connor Street/Argyle Avenue; further assessment is **required** based on this trigger.

2.0 SCOPING

2.1 Existing Conditions

2.1.1 Roadways

All roadways within the study area fall under the jurisdiction of the City of Ottawa.

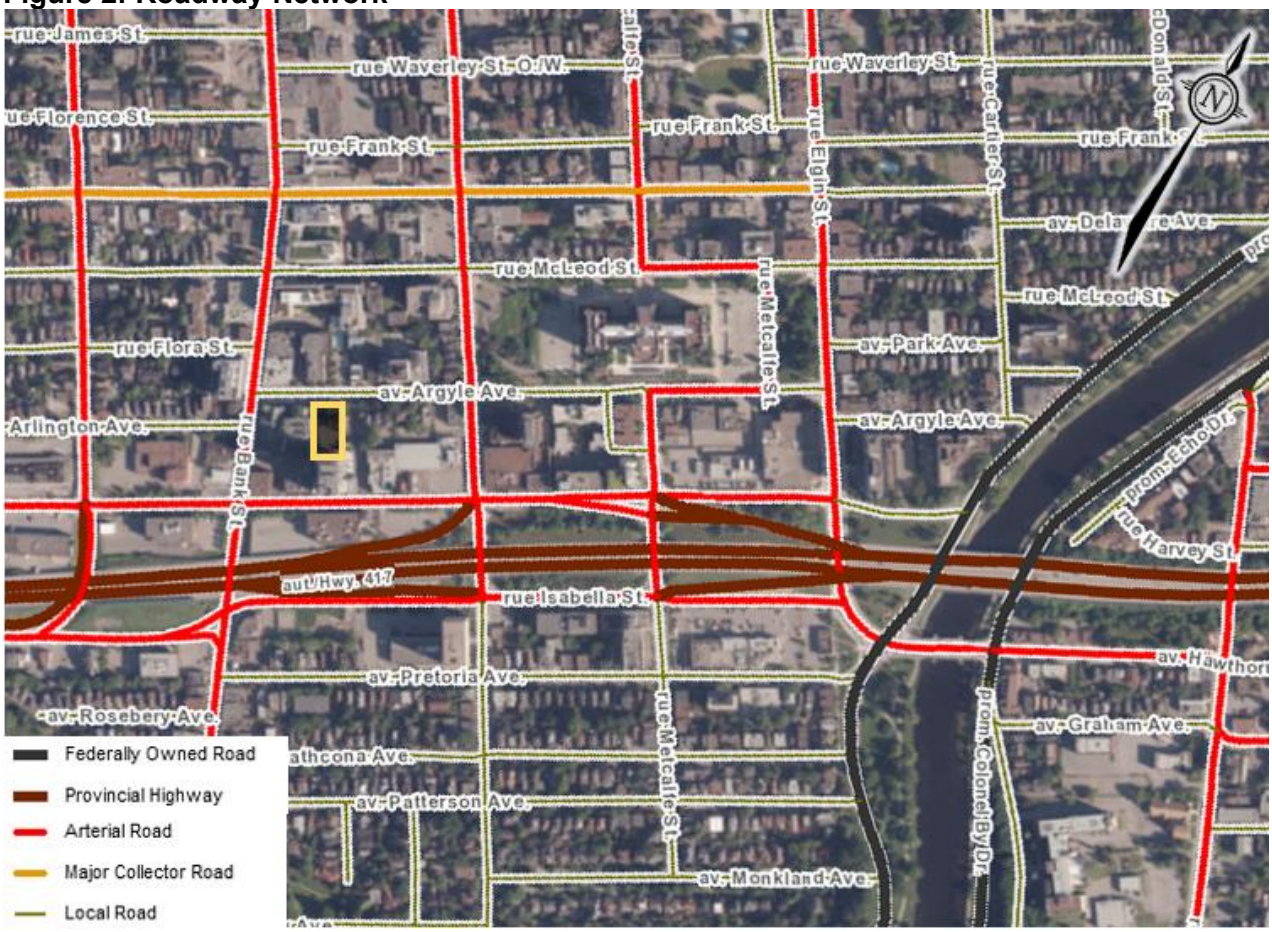
Bank Street is an arterial roadway that generally runs on a north-south alignment between Wellington Street and Belmeade Road/Marionville Road (i.e. the City of Ottawa boundary). South of the City boundary, the roadway continues as County Road 31. In vicinity of the subject site, Bank Street has a four-lane urban cross-section, sidewalks on both sides of the roadway, and a posted speed limit of 50 km/h. Bank Street is classified as a truck route, allowing full loads. Street parking is generally not permitted on Bank Street in vicinity of the subject site. Additionally, the curbside lanes on Bank Street have 'no stopping' restrictions during the weekday AM and PM peak times (7:00am to 9:00am and 3:30pm to 5:30pm). The City's *Official Plan* designates Bank Street as a Mainstreet Corridor and a Design Priority Area, in vicinity of the subject site.

O'Connor Street is a one-way arterial roadway in the southbound direction that runs on a north-south alignment between Wellington Street and Isabella Street. South of Isabella Street, O'Connor Street continues as a local roadway until terminating at Holmwood Avenue. Within the study area, O'Connor Street has a two- or three-lane undivided urban cross-section, sidewalks on both sides of the roadway, a bidirectional physically-separated bikeway on the east side, and an unposted regulatory speed limit of 50 km/h. O'Connor Street is classified as a truck route, allowing full loads. Street parking is permitted north of Argyle Avenue.

Argyle Avenue is a roadway that runs on an east-west alignment, operating as one-way between Bank Street and Elgin Street, and as two-way between Elgin Street and Queen Elizabeth Driveway. Argyle Avenue is generally classified as a local roadway, except for the portion between the two intersections with Metcalfe Street, where it is classified as an arterial roadway. Between Bank Street and O'Connor Street, Argyle Avenue has an urban cross-section with the width to accommodate an eastbound travel lane and a parking lane on the north side. Sidewalks are provided on both sides of the roadway, and it has a posted speed limit of 30 km/h. Argyle Avenue is not classified as a truck route. Street parking is permitted on the north side of the roadway, with a two-hour restriction from 7:00am to 7:00pm on weekdays. The right-of-way (ROW) at the subject site is currently 20m, and a widening is not anticipated.

The roadway of the greater area surrounding the subject site is illustrated in **Figure 2**.

Figure 2: Roadway Network



2.1.2 Intersections

Bank Street/Argyle Avenue

- Unsignalized three-legged intersection
- No control, as Argyle Avenue is a one-way roadway
- North Leg (Bank Street):
  one shared left turn/through lane and one through lane
- South Leg (Bank Street):
  one through lane and one shared through/right turn lane
- East Leg (Argyle Avenue):
  one receiving lane for eastbound traffic
- Textured crosswalk at east approach

O'Connor Street/Argyle Avenue

- Signalized four-legged intersection
- O'Connor Street and Argyle Avenue are both one-way roadways
- North Leg (O'Connor Street):
  one shared left turn/through lane and one through lane
- South Leg (O'Connor Street):
  three receiving lanes for southbound traffic
- East Leg (Argyle Avenue):
  one receiving lane for eastbound traffic
- West Leg (Argyle Avenue):
  one shared through/right turn lane
- Standard crosswalks at all approaches
- Bidirectional crossride on east approach

2.1.3 Driveways

In accordance with the *Revised TIA Guidelines*, a review of the existing adjacent driveways along the boundary roads are provided as follows:

Argyle Avenue, north side

- Eight driveways to residential or commercial uses at 217, 219, 229, 233, 237, 239, and 255 Argyle Avenue

Argyle Avenue, south side

- Six driveways to residential or commercial uses at 220, 222, 226, 234, 238, 240, 252, & 258 Argyle Avenue and 420 O'Connor Street

2.1.4 Pedestrian and Cycling Facilities

Sidewalks are provided on both sides of Bank Street, Argyle Avenue, and O'Connor Street. Bank Street and Argyle Avenue do not include any cycling facilities. To the east of the subject site, O'Connor Street is designated as a Crosstown Bikeway, and includes a bidirectional physically-separated bikeway. Multi-use pathways are provided on both sides of the Rideau Canal (i.e. along Queen Elizabeth Driveway and Colonel By Drive).

The existing pedestrian and cycling facility network in the greater area is shown in **Figure 3**.

Figure 3: Existing Pedestrian and Cyclist Network

2.1.5 Area Traffic Management

Within the study area, there are no Area Traffic Management (ATM) studies that are in progress.

Argyle Avenue currently contains traffic calming measures from Bank Street to O'Connor Street, including curb extensions at both intersections, and on-street parking, flex posts, and pavement markings along the roadway segment.

2.1.6 Transit

The locations of OC Transpo bus stops relevant to the subject site are described in **Table 1**, and are shown in **Figure 4**. A summary of the various routes which serve the study area is included in **Table 2**. Detailed route information and an excerpt from the OC Transpo System Map are included in **Appendix C**.

Table 1: OC Transpo Transit Stops

Stop	Location	Routes Serviced
#2478	North side of Catherine Street, east of Bank Street	55, 405
#6643	North side of Gladstone Avenue, east of Bank Street	14, 114
#6677	On eastbound island of Chamberlain Avenue, west of Bank Street	55
#7666	West side of Bank Street, north of Arlington Avenue	6, 7
#7667	East side of Bank Street, south of Flora Street	6, 7
#8107	South side of Gladstone Avenue, west of Bank Street	14, 114

Table 2: OC Transpo Route Information

Route	From ↔ To	Frequency
6	Greenboro ↔ Rockcliffe	All day service, seven days a week; 7- to 30-min headways
7	Carleton ↔ St-Laurent	All day service, seven days a week; 15- to 30-min headways
14	St-Laurent ↔ Tunney's Pasture	All day service, seven days a week; 15- to 30-min headways
55	Elmvale ↔ Westgate	All day service, seven days a week; 15- to 60-min headways
114	Rideau ↔ Carlington	Service at select times from Monday to Friday
405	Trim ↔ Canadian Tire Centre	Service to/from Canadian Tire Centre during major events (Ottawa Senators games, concerts, etc.)

2.1.7 Existing Traffic Volumes

Weekday traffic counts completed by the City of Ottawa were used to determine the existing pedestrian, cyclist, and vehicular traffic volumes at O'Connor Street/Argyle Avenue. This count was conducted on Tuesday, March 21, 2017. No recent counts are available at the intersection of Bank Street/Argyle Avenue. It is acknowledged that the count is dated and was not conducted during the peak season for cyclists (i.e. during the summer months).

Based on the traffic count, the average annual daily traffic (AADT) of Argyle Avenue is approximately 2,080 vehicles per day (vpd). As Argyle Avenue is a one-way local roadway carrying low traffic volumes, the 2017 traffic count is considered representative of current traffic conditions in proximity of the subject site.

Volumes at O'Connor Street/Argyle Avenue are shown in **Figure 5**, and the count data is included in **Appendix D**.

Figure 4: OC Transpo Bus Stop Locations

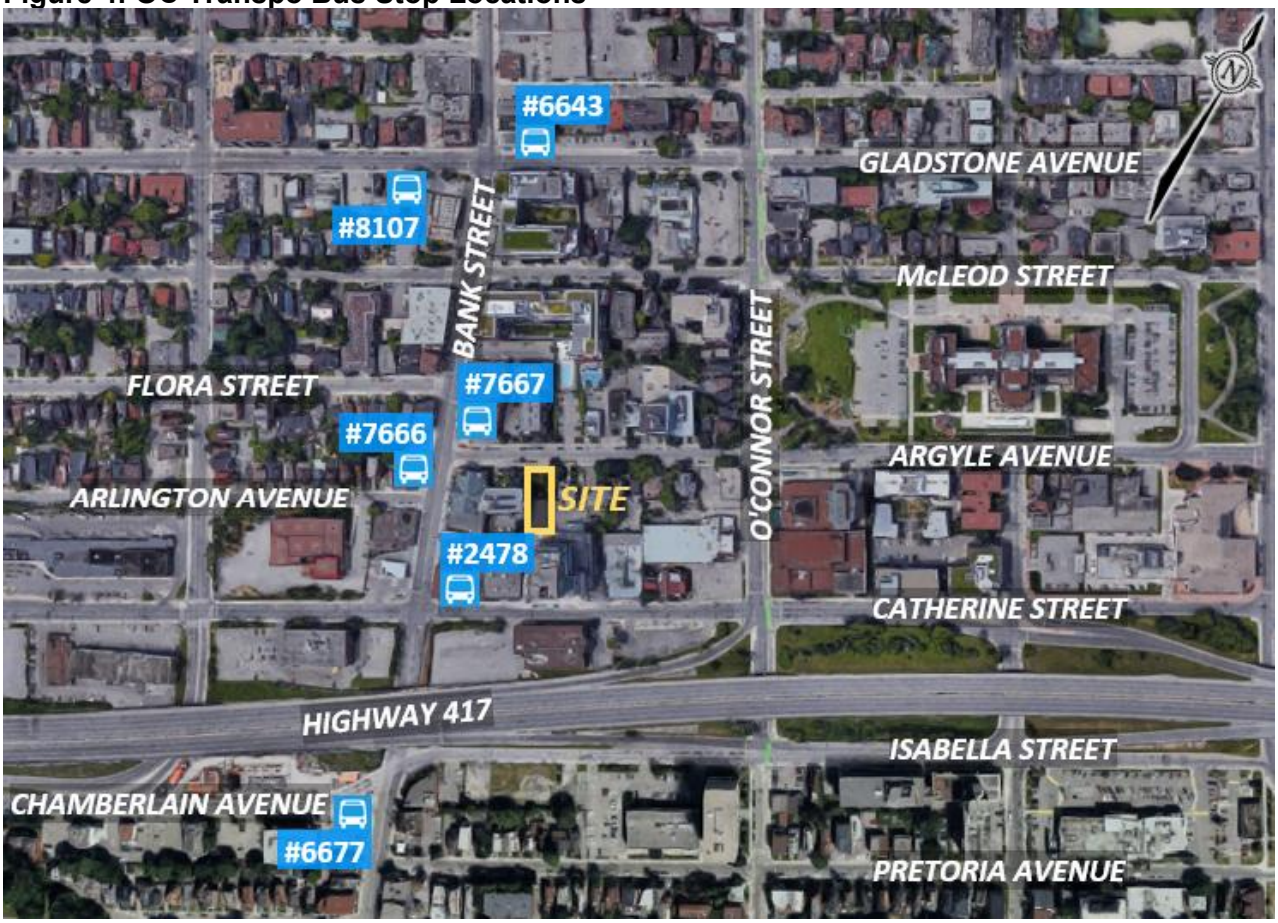
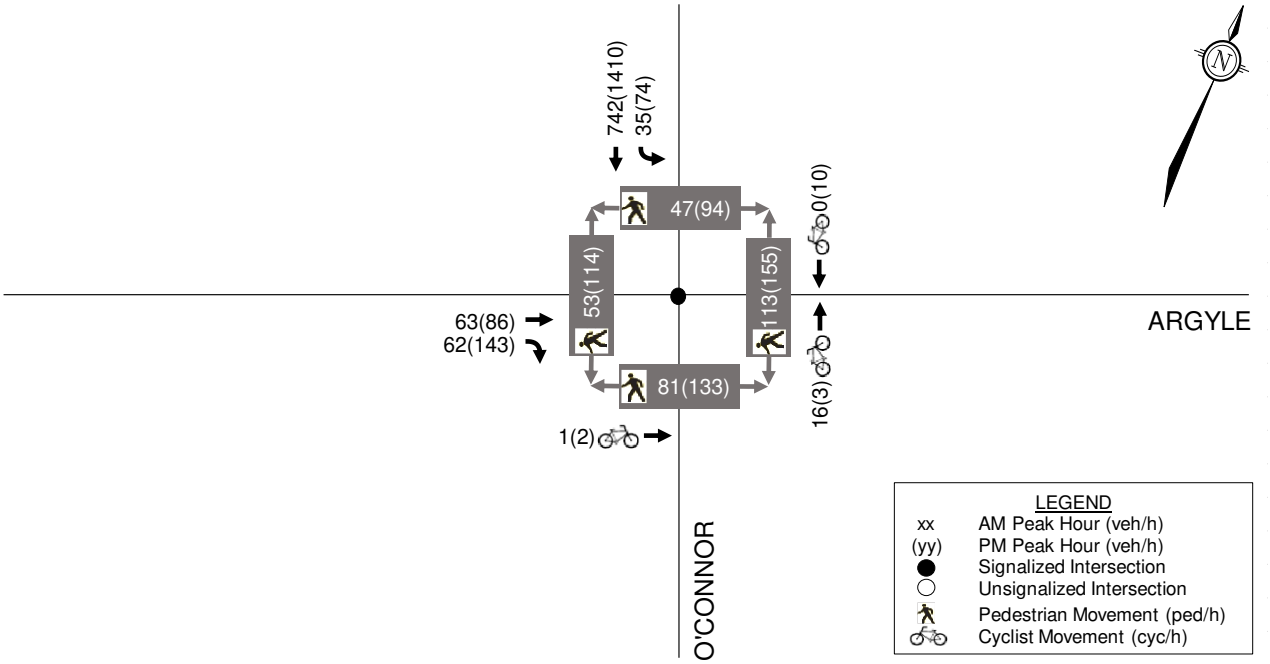


Figure 5: Existing Traffic Volumes



2.1.8 Collision Records

Historical collision data from the last five years available was obtained from the City's Public Works and Service Department for Bank Street/Argyle Avenue, O'Connor Street/Argyle Avenue, and the segment of Argyle Avenue between Bank Street and O'Connor Street. Copies of the collision summary reports are included in **Appendix E**.

The collision data has been evaluated to determine if there are any identifiable collision patterns, which are defined in the *Revised TIA Guidelines* as 'more than six collisions in five years' for any one movement. The number of collisions at each intersection from January 1, 2017 to December 31, 2021 is summarized in **Table 3**.

Table 3: Reported Collisions

Intersection or Segment	Impact Types						Total
	Approach	Angle	Rear End	Sideswipe	Turning Movement	SMV[1]/ Other	
Bank Street/ Argyle Avenue	-	-	-	-	3	-	**3**
O'Connor Street/ Argyle Avenue	-	7	-	5	4	3	**19**
Argyle Avenue btwn Bank Street & O'Connor Street	-	-	-	1	-	-	**1**

1. SMV = Single Motor Vehicle

Bank Street/Argyle Avenue
A total of three collisions were reported at this intersection over the last five years, all of which were turning movement impacts. One collision resulted in injuries, but no collision caused fatalities. One of the three collisions (33%) occurred in poor driving conditions. No collisions involved pedestrians or cyclists.

O'Connor Street/Argyle Avenue
A total of 19 collisions were reported at this intersection over the last five years, of which there were seven angle impacts, five sideswipe impacts, four turning movement impacts, and three single vehicle/other impacts. Five collisions resulted in injuries, but none caused fatalities. Seven of the 19 collisions (37%) occurred in poor driving conditions. One collision involved pedestrians and four collisions involved cyclists.

As O'Connor Street and Argyle Avenue are both one-way streets, all seven angle impacts involved a southbound vehicle and an eastbound vehicle. Four of the seven collisions occurred in poor driving conditions. These angle impacts were likely the result of one vehicle proceeding through the intersection while facing a red light.

All impacts with a cyclist involved a southbound vehicle and a southbound cyclist. One impact was classified as a sideswipe, and both the cyclist and vehicle were travelling through. Three impacts were classified as turning movement impacts, involving a through cyclist and a left-turning vehicle. All three of these impacts occurred after the implementation of bidirectional cycle tracks on the east side of O'Connor Street. There are multiple signs indicating that vehicles making a southbound left turn must yield to cyclists. The impact involving a pedestrian also involved a southbound left turning vehicle.

Argyle Avenue between Bank Street and O'Connor Street
One collision was reported along this segment over the last five years, which was classified as a sideswipe impact. This collision did not result in injury, did not occur in poor driving conditions, and did not involve pedestrians or cyclists.

2.2 Planned Conditions

2.2.1 Planned Transportation Projects

In the City's *2013 Transportation Master Plan (TMP)*, the 2031 Rapid Transit and Transit Priority (RTTP) Network identifies Bank Street as a Transit Priority Corridor with Isolated Measures. In the 2031 Affordable Network, the *2013 TMP* identifies the implementation of queue jump lanes at select intersections and transit signal priority on Bank Street between Wellington Street and Billings Bridge Station, as well as conversion of parking lanes in the immediate vicinity of select intersections. In the 2031 Network Concept, the *2013 TMP* identifies further implementation of transit signal priority and queue jump lanes from Billings Bridge Station to Hunt Club Road. Outside of the study area, the *2013 TMP* identifies Gladstone Avenue and the Catherine Street/ Chamberlain Avenue/Isabella Street corridor as Transit Priority Corridors with Isolated Measures, which will include transit signal priority for both. Gladstone Avenue is included in both the 2031 Affordable Network and Network Concept, while the Catherine Street corridor is included in the 2031 Network Concept only.

The *2013 TMP* does not identify any road network projects in its 2031 Affordable Road Network or 2031 Network Concept.

Approved by City Council in April 2023, the *Transportation Master Plan – Part 1* includes a list of upcoming active transportation projects, and supersedes the City's *2013 Ottawa Cycling Plan* and *2013 Ottawa Pedestrian Plan*. In vicinity of the subject site, the *TMP – Part 1* identifies the following cycling and pedestrian infrastructure projects:

- Sidewalk along Metcalfe Street from Argyle Avenue to McLeod Street;
- Pedestrian crossing of Queen Elizabeth Driveway at Argyle Avenue;
- Feasibility of active transportation facilities on Bank Street from Highway 417 to Lansdowne Park;
- Westbound bike lane on Gilmour Street from Percy Street to Cartier Street.

Section 4.1 of the City's *Centretown CDP* identifies O'Connor Street as a 'pedestrian priority' route, and therefore the O'Connor Street/Argyle Avenue intersection as a potential location for pedestrian crossing improvements. Section 4.4 of the *Centretown CDP* identifies O'Connor Street as a candidate for conversion to two-way traffic, as it currently accommodates southbound traffic only. This conversion would be subject to technical review, as O'Connor Street connects to the Highway 417 ramp system.

2.2.2 Other Area Developments

The City's Development Application Search Tool has been used to review the other developments that are in vicinity of the subject site and have recently been completed, are under construction, approved, or are in the approval process. The developments with the highest impacts from a transportation perspective are described as follows:

30-48 Chamberlain Avenue
A TIA was prepared by CGH in May 2023, in support of a 16-storey mixed-use building. The development will include 160 apartment dwellings and 3,355 ft^2 of ground-floor retail space. The TIA includes an anticipated buildout year of 2024.

100 Argyle Avenue
A TIA was prepared by Novatech in December 2021, in support of a 12-storey residential building with 123 apartment dwellings. The TIA includes an anticipated buildout year of 2023.

178-200 Isabella Street
A TIA was prepared by IBI Group in April 2021 with an addendum prepared in August 2023. These documents were prepared in support of a 16-storey residential building with 234 apartment dwellings. The TIA includes an anticipated buildout year of 2025.

265 Catherine Street
A TIA was prepared by Parsons in May 2023, in support of a mixed-use development including townhouses, a six-storey mid-rise, and 26-, 36-, and 40-storey high-rise buildings. The development includes seven townhouse dwellings, 1,021 apartment dwellings, and 24,230 ft^2 of ground-floor retail space. The TIA includes anticipated buildout years of 2026 for the first phase, and 2031 for the ultimate development.

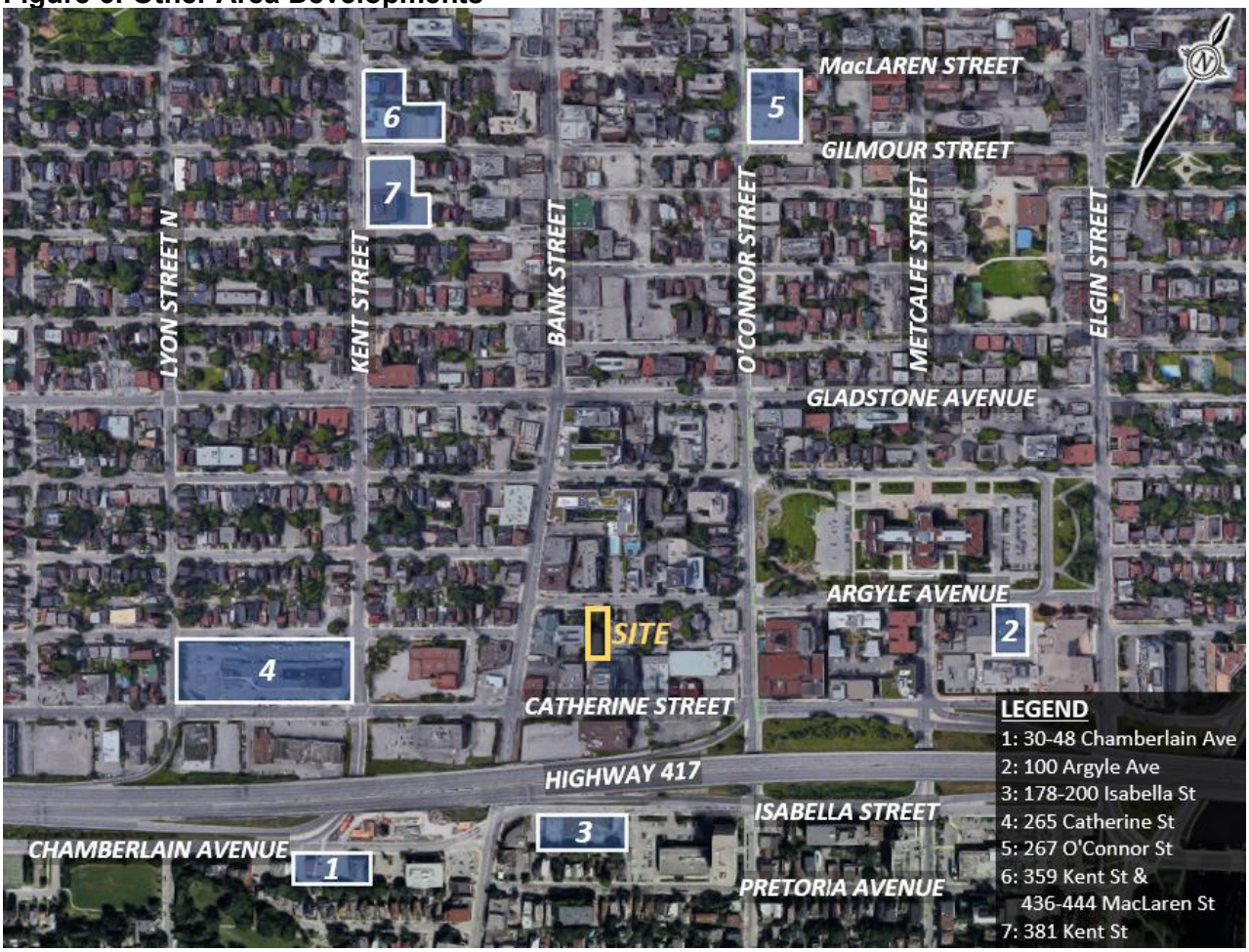
267 O'Connor Street
A TIA was prepared by Parsons in August 2020, in support of two 30-storey residential buildings with a total of 547 apartment dwellings. The TIA includes anticipated buildout years of 2023 for the first phase, and 2025 for the ultimate development.

359 Kent Street and 436-444 MacLaren Street
A TIA was prepared by Parsons in March 2023, in support of a 30-storey mixed-use building. The development will include 322 apartment dwellings and 4,278 ft^2 of ground-floor retail space. The TIA includes an anticipated buildout year of 2024.

381 Kent Street
A TIA was prepared by CGH in September 2023, in support of a mixed-use development including 218 apartment dwellings and 1,841 ft^2 of ground-floor retail space. The TIA includes an anticipated buildout year of 2030.

A figure outlining the location of the developments listed above is included in **Figure 6**.

Figure 6: Other Area Developments



2.3 Study Area and Time Periods

The study area for this report includes the boundary roadway Argyle Avenue, as well as the intersections at Bank Street/Argyle Avenue and O'Connor Street/Argyle Avenue.

The selected time periods for this report are the weekday AM and PM peak hours, as they represent the 'worst case' combination of site generated traffic and adjacent street traffic. The buildout year 2025 and horizon year 2030 have been considered.

2.4 Access Design

The proposed development includes one two-way access to Argyle Avenue. Curbs will be depressed and continuous across the proposed access. The design of the proposed access has been evaluated using the relevant provisions of the City's *Private Approach By-Law* (PABL) and *Zoning By-Law* (ZBL), and the Transportation Association of Canada (TAC)'s *Geometric Design Guide for Canadian Roads*.

Section 25(1)(a) of the PABL identifies that a maximum of one two-way private approach is permitted for any site with less than 35m of frontage to a given roadway. This requirement is met, as only one private approach to Argyle Avenue is proposed.

Section 25(1)(c) of the PABL identifies a maximum width requirement of 9.0m for any two-way private approach, as measured at the street line. As the proposed development is an apartment building, Section 107(1) of the ZBL applies, and identifies a minimum width of 3.0m for a single traffic lane and a maximum width requirement of 6.7m for a traffic lane that leads to 20 or more parking spaces. This requirement is met, as the proposed width of the private approach to Argyle Avenue is 3.6m.

Section 107(1)(c) of the ZBL identifies that any drive aisles serving parking spaces within a parking garage must have a minimum width of 6.0m. This requirement is generally met, however there is a section adjacent to the vestibule accessing the elevators and stairwells are located where the drive aisle is less than 6.0m.

TAC's *Geometric Design Guide* includes a Passenger Car design vehicle with dimensions of 5.6m overall length, 2.0m overall width (without mirrors), and wheel base of 3.2m. This vehicle represents all standard vehicles that travel on Canadian roadways, and is therefore considered an over-conservative vehicle envelope for parking garage turning movements. For the purposes of this study, the Personenkraftwagen German design vehicle has been selected as a more appropriate vehicle, with dimensions of 4.88m overall length, 1.89m width (without mirrors), and a wheel base of 2.86m. This design vehicle is comparable to mid-size North American SUVs. Turning movements illustrating that vehicles can circulate between the two parking levels are included in **Appendix F**.

Section 25(1)(p) of the PABL identifies a minimum separation requirement of 3m between a private approach and the nearest property line, as measured at the street line. Section 25(1)(p) also indicates that this minimum could be reduced to as little as 0.3m, provided the access is located:

> i) a safe distance from the access serving the adjacent property,
> ii) in such a manner that there are adequate sight lines for vehicles exiting the property, and
> iii) in such a manner that it does not create a traffic hazard.

The proposed access is located approximately 2.1m from the western property line, and therefore it is requested that this requirement be waived. An existing coniferous tree on the neighbouring property at 258 Argyle Avenue will be removed and replaced with a deciduous tree. Maintained pruning of the new deciduous tree will allow for clear sightlines to eastbound pedestrians on the south sidewalk of Argyle Avenue. It should also be noted that sightlines to pedestrians will also improve at the existing access to 258 Argyle Avenue.

Section 25(1)(t) of the PABL identifies a requirement that any private approach serving a parking area with fewer than 50 parking spaces shall not have a grade exceeding 2% for the first 6m inside the property line. The proposed private approach has a maximum grade of 2.3% within the first 6m (descending toward the roadway), which marginally exceeds the requirement. A waiver of this requirement is requested, as this grade is not anticipated to create a traffic hazard or sightline concerns. Beyond the first 6m inside the property line, the proposed parking garage ramp has a grade of 17.1% with 8% transition slopes at either end.

TAC's *Geometric Design Guide* identifies minimum required stopping sight distances and desired intersection sight distances, based on the design speed of a roadway (taken as the posted speed limit plus 10 km/h). For Argyle Avenue, which has a design speed of 40 km/h, the required stopping sight distance (SSD) is 50m, while the desired intersection sight distance (ISD) for drivers looking left to turn right is 75m. These sight distances are anticipated to be provided at the proposed access, as Argyle Avenue is an otherwise straight and level roadway, and the existing neighbouring coniferous tree will be replaced with a deciduous tree.

2.5 Development-Generated Travel Demand

2.5.1 Trip Generation

The number of peak hour person trips generated by the proposed development has been estimated using the *TRANS Trip Generation Manual*, which present peak period trip generation rates and mode shares for different types of housing for the AM and PM peak periods. The data is divided into trip generation rates and mode shares for Single-Family Detached Housing, Low-Rise Multifamily Housing (one or two storeys), and High-Rise Multifamily Housing (three or more storeys). For the High-Rise Multifamily Housing land use, the process of converting the trip generation estimates from peak period to peak hour is shown below.

The *TRANS Trip Generation Manual* identifies the subject site as being located within the Ottawa Inner Area district, which has the following observed mode shares for high-rise multifamily housing during the peak periods:

- Auto Driver: 26% in AM peak, 25% in PM peak;
- Auto Passenger: 6% in AM peak, 8% in PM peak;
- Transit: 28% in AM peak, 21% in PM peak;
- Cyclist: 5% in AM peak, 6% in PM peak;
- Pedestrian: 34% in AM peak, 39% in PM peak.

The mode shares for this proposed development are assumed to generally follow the mode shares observed in the Ottawa Inner Area. A single set of mode shares have been assumed for the purposes of this TIA, and can be summarized as: 25% driver, 5% passenger, 25% transit, 5% cyclist, and 40% pedestrian.

The process of converting the trip generation estimates from peak period to peak hour is shown in the following tables. The estimated number of person trips generated by the proposed development during the AM and PM peak periods are shown in **Table 4**. A breakdown of these trips by mode share is shown in **Table 5**.

Table 4: Proposed Residential – Peak Period Trip Generation

Land Use	TRANS Rate	Units	AM Peak Period (ppp[1])			PM Peak Period (ppp)		
			IN	OUT	TOT	IN	OUT	TOT
High-Rise Multifamily Housing	AM: 0.80 PM: 0.90	84 units	21	46	*67*	44	32	*76*

1. ppp: Person Trips per Peak Period

Table 5: Proposed Residential – Peak Period Trips by Mode Share

Travel Mode	Mode Share	AM Peak Period			PM Peak Period		
		IN	OUT	TOT	IN	OUT	TOT
Residential Person Trips		**21**	**46**	***67***	**44**	**32**	***76***
Auto Driver	25%	5	12	*17*	11	8	*19*
Auto Passenger	5%	1	2	*3*	2	2	*4*
Transit	25%	5	12	*17*	11	8	*19*
Cyclist	5%	1	2	*3*	2	2	*4*
Pedestrian	40%	9	18	*27*	18	12	*30*

Table 4 of the *TRANS Trip Generation Manual* includes adjustment factors to convert the estimated number of trips generated for each mode from peak period to peak hour. A breakdown of the peak hour trips by mode is shown in **Table 6**.

Table 6: Proposed Residential – Peak Hour Trips by Mode Share

Travel Mode	Adj. Factor		AM Peak Hour			PM Peak Hour		
	AM	PM	IN	OUT	TOT	IN	OUT	TOT
Auto Driver	0.48	0.44	3	6	*9*	5	4	*9*
Auto Passenger	0.48	0.44	1	1	*2*	1	1	*2*
Transit	0.55	0.47	3	6	*9*	5	4	*9*
Cyclist	0.58	0.48	1	1	*2*	1	1	*2*
Pedestrian	0.58	0.52	5	11	*16*	9	7	*16*
Peak Hour Person Trips			**13**	**25**	***38***	**21**	**17**	***38***

From the previous table, the proposed development is estimated to generate 38 person trips (including nine vehicle trips) during each of the AM and PM peak hours.

2.5.2 Trip Distribution and Assignment

As the proposed development is projected to generate seven vehicle trips during the peak hours, and no intersection analysis is required per Section 2.6, the site-generated volumes have not been distributed to the road network. All vehicle trips would be assigned to the proposed access to Argyle Avenue.

2.6 Exemptions Review

This module reviews possible exemptions from the final TIA, as outlined in the *2023 Revised TIA Guidelines*. The applicable exemptions for this site are shown in **Table 7**.

Table 7: TIA Exemptions

Module	Element	Exemption Criteria	Status
4.1 Development Design	*4.1.2* Circulation and Access	• Required for site plan control and zoning by-law amendment applications	Not Exempt
	4.1.3 New Street Networks	• Required for draft plan of subdivision applications	Exempt
4.2 Parking	*All elements*	• Required for site plan control and zoning by-law amendment applications	Not Exempt

Module	Element	Exemption Criteria	Status
4.6 Neighbourhood Traffic Calming	*All elements*	• If all of the following criteria are met: 1. Access is provided to a collector or local roadway 2. Application is for zoning by-law amendment or draft plan of subdivision 3. Proposed development generated more than 75 vehicle trips 4. Site trip infiltration is expected, and site-generated traffic will increase peak hour volumes by 50% or more along the route between the site and an arterial roadway 5. The subject street segment is adjacent to two or more of the following significant sensitive land uses: ○ School (within 250m walking distance) ○ Park ○ Retirement/older adult facility ○ Licensed child care centre ○ Community centre ○ 50+% of adjacent properties along the route(s) are occupied by residential lands and at least ten dwellings are occupied	Exempt
4.7 Transit	*4.7.1* Transit Route Capacity	• Required when proposed development generates more than 75 transit trips	Exempt
	4.7.2 Transit Priority Requirements	• Required when proposed development generates more than 75 vehicle trips	Exempt
4.8 Network Concept	*All elements*	• Required when proposed development generates more than 200 person trips during the peak hour in excess of the equivalent volume permitted by the established zoning	Exempt
4.9 Intersection Design	*All elements*	• Required when proposed development generates more than 75 vehicle trips	Exempt

Based on the above, the following modules are included in the TIA report:

- Module 4.1: Development Design
- Module 4.2: Parking
- Module 4.3: Boundary Streets
- Module 4.4: Access Design
- Module 4.5: Transportation Demand Management

3.0 BACKGROUND NETWORK TRAVEL DEMAND

3.1 General Background Growth Rate

A review of the City's *Intersection Traffic Growth Rate (2000-2016)* figures has been conducted, and identifies that intersections in vicinity of the subject site generally have negative traffic volume growth rates (typically between -0.2% and -2.0% per annum). The proposed development is located in a central area of the City, with existing opportunities to travel by active modes or transit, and therefore, no background growth has been assumed on O'Connor Street or Argyle Avenue in future conditions. The *Intersection Traffic Growth Rate* figures are included in **Appendix G**.

3.2 Other Area Developments

Projected traffic volumes generated by the following other area developments have been added to the existing traffic volumes at O'Connor Street/Argyle Avenue directly. Of the list of other area developments included in Section 2.2.2, the following traffic studies identified site-generated traffic to the O'Connor Street/Argyle Avenue intersection, which have been added to the future background traffic volumes. Relevant excerpts of these studies are included in **Appendix H**.

267 O'Connor Street
The TIA estimated that this development would generate a net additional 51 AM peak hour vehicle trips and 29 PM peak hour vehicle trips at O'Connor Street/Argyle Avenue. These trips have been added to the 2025 and 2030 background volumes.

359 Kent Street and 436-444 MacLaren Street
The TIA estimated that this development would generate a net additional seven AM peak hour vehicle trips and a net loss of eight PM peak hour vehicle trips at O'Connor Street/Argyle Avenue. These trips have been added to/subtracted from the 2025 and 2030 background volumes.

The traffic volumes generated by these two developments at O'Connor Street/Argyle Avenue are shown in **Figure 7**. These volumes have been added to the existing traffic volumes to estimate the future background volumes, which are equal in 2025 and 2030, and shown in **Figure 8**.

3.3 Demand Rationalization

The Demand Rationalization module includes identifying any locations and approaches where total auto demand is projected to exceed capacity, and what reduction in peak hour volumes are required for demand to meet capacity. However, determining whether any approach has volumes that exceed capacity requires intersection capacity analysis, which is outside the scope of this TIA (as shown in **Table 7**).

Figure 7: Other Area Development-Generated Traffic Volumes

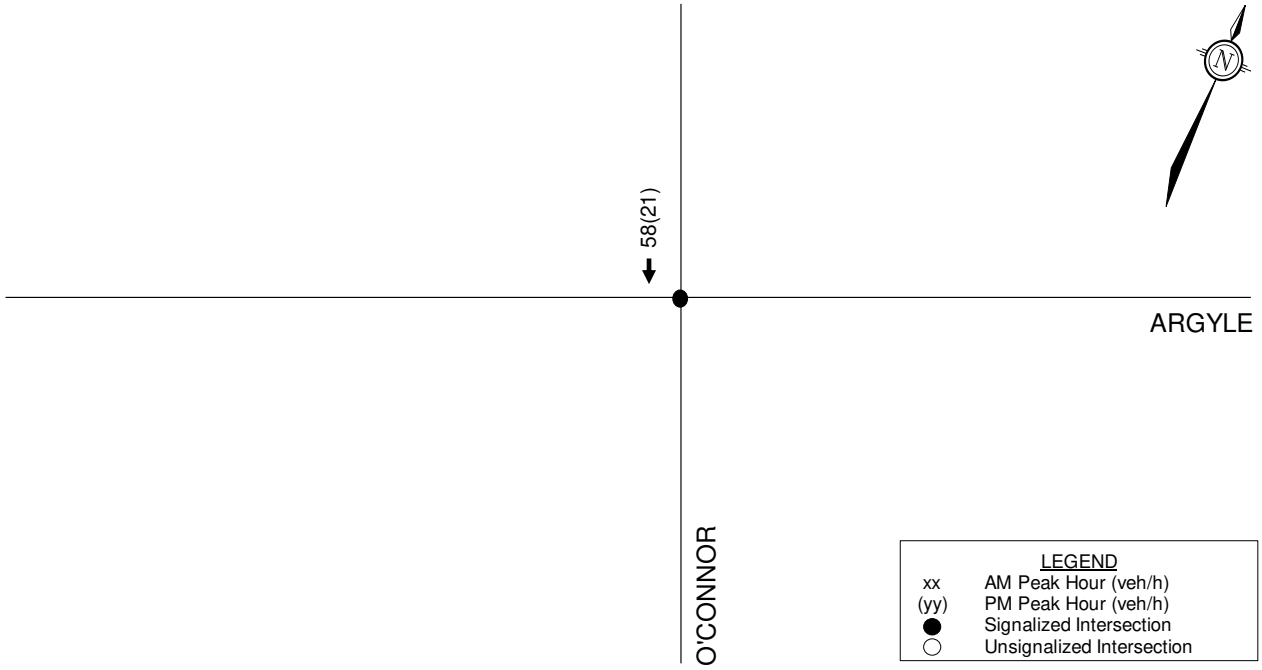
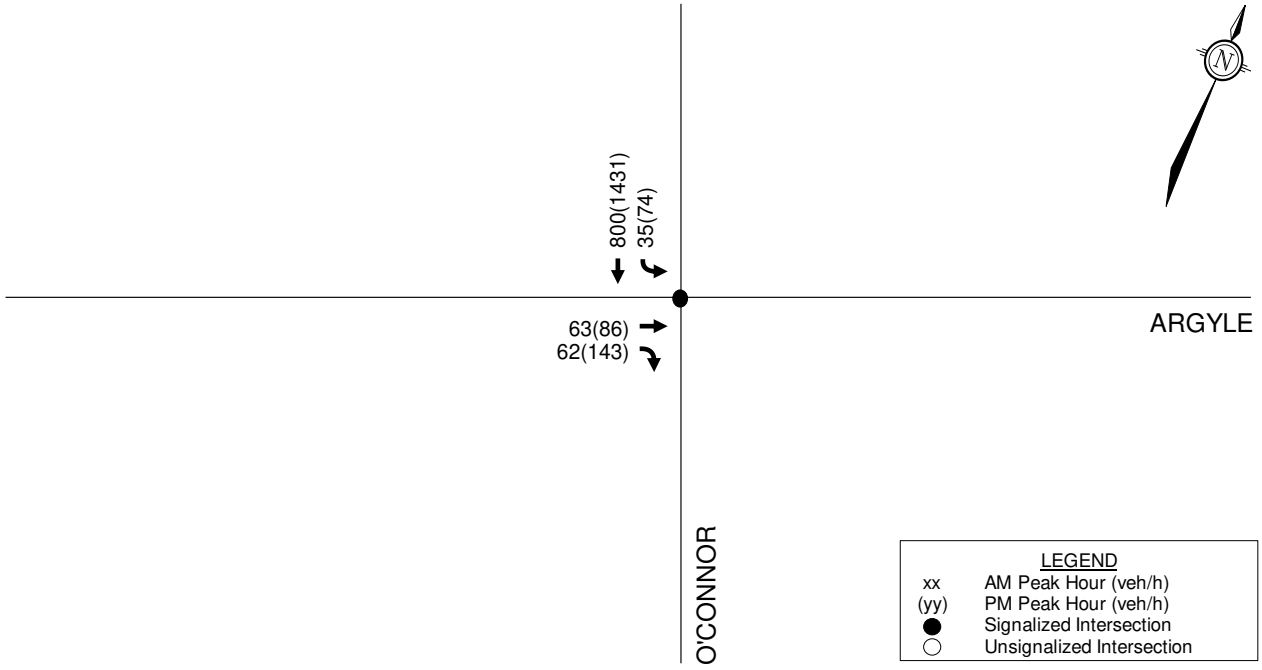


Figure 8: 2025/2030 Background Traffic Volumes



4.0 ANALYSIS

4.1 Development Design

4.1.1 Design for Sustainable Modes

The existing sidewalk along the subject site's frontage to Argyle Avenue will be widened to 2.0m. Walkways are proposed to connect the main entrance, side entrances, bike room, and ground-floor residences to the existing sidewalk. In effect, this provides pedestrian facilities around the perimeter of the proposed development.

A total of 84 bicycle parking spaces are proposed within a bike room that is accessed via an entrance to the eastern side of the building, or within the underground parking garage. The total number of bicycle parking spaces meets the requirement outlined in the City's ZBL, as discussed in Section 4.2.

OC Transpo's service design guidelines for peak period service is to provide service within a five-minute (400m) walk of home, work, or school for 95% of urban residents. The main entrance is anticipated to be within 400m walking distance of all bus stops shown in **Figure 4**, which includes bus stops on Bank Street, Chamberlain Avenue, and Gladstone Avenue. These stops are served by OC Routes 6, 7, 14, 55, 114, and 405.

A review of the *Transportation Demand Management (TDM)-Supportive Development Design and Infrastructure Checklist* has been conducted. A copy of the TDM checklist is included in **Appendix I**. All required TDM-supportive design and infrastructure measures in the TDM checklist are met. In addition to the required measures, the proposed development also meets the following 'basic' or 'better' measures as defined in the *TDM-Supportive Development Design and Infrastructure Checklist*:

- Locate building close to the street, and do not locate parking areas between the street and building entrances;
- Locate building entrances in order to minimize walking distances to sidewalks and transit stops/stations;
- Locate building doors and windows to ensure visibility of pedestrians from the building, for their security and comfort;
- Provide secure bicycle parking spaces equivalent to at least the number of units at multi-family residential developments;
- Provide a permanent bike repair station, with commonly used tools and an air pump, adjacent to the main bicycle parking area (or secure bicycle parking area);
- Provide up to three carshare parking spaces in an R3, R4, or R5 zone for specified residential uses.

4.1.2 Circulation and Access

Garbage collection and loading/deliveries will take place curbside on Argyle Avenue, and no loading space is proposed on-site. Garbage bins will be wheeled out to the curb. The fire route for the proposed development is similarly curbside on Argyle Avenue.

It is acknowledged that, per the City's *Official Plan* policy 4.6.5.3, loading and garbage collection should be internalized when possible, and not detract from the attractiveness of the public realm. Policy 4.1.4.3 outlines that internalized loading and garbage collection may be relaxed on small lots, as long as the site's functionality and public realm are not compromised. Internalization of loading and garbage collection is not feasible for the proposed development, as the subject site does not include enough frontage to accommodate a loading area while also maintaining the width of the proposed development.

4.2 Parking

The subject site is located in Area B of Schedule 1 and Area X of Schedule 1A of the City of Ottawa's ZBL. Minimum parking rates for vehicles and bicycles are summarized in **Table 8**.

Table 8: Required and Proposed Parking

Land Use	Rate	Units	Required	Provided
Minimum Vehicle Parking (Section 101/102 of ZBL)				
Dwelling, Mid-Rise	Resident: 0.5 spaces per unit minus the first 12 units, and reduced by 10% as all parking is below grade	84 units	33	27
	Visitor: 0.1 spaces per unit minus the first 12 units, up to a maximum of 30 spaces per building		7	8
Minimum Bicycle Parking (Section 111 of ZBL)				
Apartment Dwelling	0.5 spaces per dwelling	84 units	42	84

Based on the previous table, the proposed number of vehicle parking spaces does not meet the requirement as outlined in the City's ZBL, as 35 spaces are proposed and 40 spaces are required. The City's *Accessibility Design Standards* identifies that two accessible parking spaces are required when the total parking supply is between 26 and 50 spaces. The requirement is met, as two accessible spaces will be allocated out of the 35 spaces proposed.

4.3 Boundary Streets

This section provides a review of the boundary street Argyle Avenue, using complete streets principles. The *Multi-Modal Level of Service (MMLOS) Guidelines*, produced by IBI Group in October 2015, were used to evaluate the levels of service for each alternative mode of transportation on the boundary streets. Using Exhibit 22 of the *MMLOS Guidelines*, Argyle Avenue has been evaluated against the targets for roadways within the General Urban Area.

A detailed segment MMLOS review of the boundary streets is included in **Appendix J**. A summary of the segment MMLOS analysis is provided below in **Table 9**.

Table 9: Segment MMLOS Summary

Segment	PLOS		BLOS		TLOS		TkLOS	
	Actual	Target	Actual	Target	Actual	Target	Actual	Target
Argyle Avenue	B	C	A	D	-	-	-	-

From the previous table, Argyle Avenue meets the target pedestrian level of service (PLOS) and bicycle level of service (BLOS). As Argyle Avenue is not a transit route or truck route, the transit level of service (TLOS) and truck level of service (TkLOS) has not been evaluated.

4.4 Transportation Demand Management

4.4.1 Context for TDM

The proposed residential building is nine storeys, and will include 84 dwellings. These dwellings are broken down by unit type as follows:

- 41 studio units;
- 32 one-bedroom units;
- 9 two-bedroom units;
- 2 three-bedroom units.

4.4.2 Need and Opportunity

The subject site is designated as 'Evolving Neighbourhood' on Schedule B1 of the City of Ottawa's Official Plan. The implemented zoning for the property is 'Residential Fifth-Density' (R5B), and the site is subject to the *Central and East Downtown Core Secondary Plan* and *Centretown Community Design Plan* areas. As first discussed in Section 2.5.1, the assumed mode shares for the subject application are generally consistent with the surveyed residential mode shares of the Ottawa Inner Area district (as outlined in the *TRANS Trip Generation Manual*).

The assumed driver share of 25% is considered appropriate, as the immediate vicinity surrounding the subject site includes a high number of sidewalks, higher order cycling facilities on O'Connor Street, and is served by multiple frequent OC Transpo routes. Additionally, the site is in close proximity to many amenities, including commercial and retail along Bank Street, parks, recreational facilities, museums, and multi-use pathways.

4.4.3 TDM Program

A review of the City's *TDM Checklist* has been conducted by the proponent. A copy of the completed residential checklist is included in **Appendix I**. The list of measures to be considered are summarized as follows:

- Display local area maps with walking/cycling access routes and key destinations at major entrances;
- Display relevant transit schedules and route maps at entrances;
- Contract with provider to install on-site carshare vehicles and promote their use by residents;
- Unbundle parking cost from monthly rent;
- Provide a multimodal travel option information package to new residents.

5.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the foregoing, the conclusions and recommendations of this TIA can be summarized as follows:

Site-Generated Traffic

- The proposed development is estimated to generate 38 person trips (including nine vehicle trips) during each of the AM and PM peak hours.

Access Design

- The proposed development includes one two-way access to Argyle Avenue. Curbs will be depressed and continuous across the proposed access. The design of the proposed access meets most relevant provisions of the City's *Private Approach By-Law* (PABL) and *Zoning By-Law* (ZBL), and the Transportation Association of Canada (TAC)'s *Geometric Design Guide for Canadian Roads*.

- Section 107(1)(c) of the ZBL identifies that any drive aisles serving parking spaces within a parking garage must have a minimum width of 6.0m. This requirement is generally met, however there is a section adjacent to the vestibule accessing the elevators and stairwells are located where the drive aisle is less than 6.0m. Turning movements illustrate that vehicles can circulate between the two parking levels.

- Section 25(1)(p) of the PABL identifies a minimum separation requirement of 3m between a private approach and the nearest property line, as measured at the street line. The proposed access is located approximately 2.1m from the western property line, and therefore it is requested that this requirement be waived. An existing coniferous tree on the neighbouring property at 258 Argyle Avenue will be removed and replaced with a deciduous tree. Maintained pruning of the new deciduous tree will allow for clear sightlines to eastbound pedestrians on the south sidewalk of Argyle Avenue. It should be noted that sightlines to pedestrians will also improve at the existing access to 258 Argyle Avenue.

- Section 25(1)(t) of the PABL identifies a requirement that any private approach serving a parking area with fewer than 50 parking spaces shall not have a grade exceeding 2% for the first 6m inside the property line. The proposed private approach has a maximum grade of 2.3% within the first 6m (descending toward the roadway), which marginally exceeds the requirement. A waiver of this requirement is requested, as this grade is not anticipated to create a traffic hazard or sightline concerns. Beyond the first 6m inside the property line, the proposed parking garage ramp has a grade of 17.1% with 8% transition slopes at either end.

Development Design and Parking

- The existing sidewalk along the subject site's frontage to Argyle Avenue will be widened to 2.0m. Walkways are proposed to connect the main entrance, side entrances, bike room, and ground-floor residences to the existing sidewalk. In effect, this provides pedestrian facilities around the perimeter of the proposed development.

- The main entrance is anticipated to be within 400m walking distance of bus stops on Bank Street, Chamberlain Avenue, and Gladstone Avenue. These stops are served by OC Routes 6, 7, 14, 55, 114, and 405.

- All required measures in the transportation demand management (TDM)-supportive design and infrastructure checklist are met.

- The proposed number of vehicle parking spaces does not meet the requirement as outlined in the City's *Zoning By-Law* (ZBL), as 35 spaces are proposed and 40 spaces are required.

- A total of 84 bicycle parking spaces are proposed within a bike room on the ground floor or within the underground parking garage, which meets the requirement.

- The City's *Accessibility Design Standards* identifies that two accessible parking spaces are required when the total parking supply is between 26 and 50 spaces. The requirement is met, as two accessible spaces will be allocated out of the 35 spaces proposed.

Boundary Streets

- Argyle Avenue meets the target pedestrian level of service (PLOS) and bicycle level of service (BLOS).

Transportation Demand Management

- A review of the City's *TDM Checklist* has been conducted by the proponent. The list of measures to be considered are summarized as follows:
  - Display local area maps with walking/cycling access routes and key destinations at major entrances;
  - Display relevant transit schedules and route maps at entrances;
  - Contract with provider to install on-site carshare vehicles and promote their use by residents;
  - Unbundle parking cost from monthly rent;
  - Provide a multimodal travel option information package to new residents.

Based on the foregoing, the proposed development is recommended from a transportation perspective.

NOVATECH

Prepared by:

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Project Engineer | Transportation

Reviewed by:

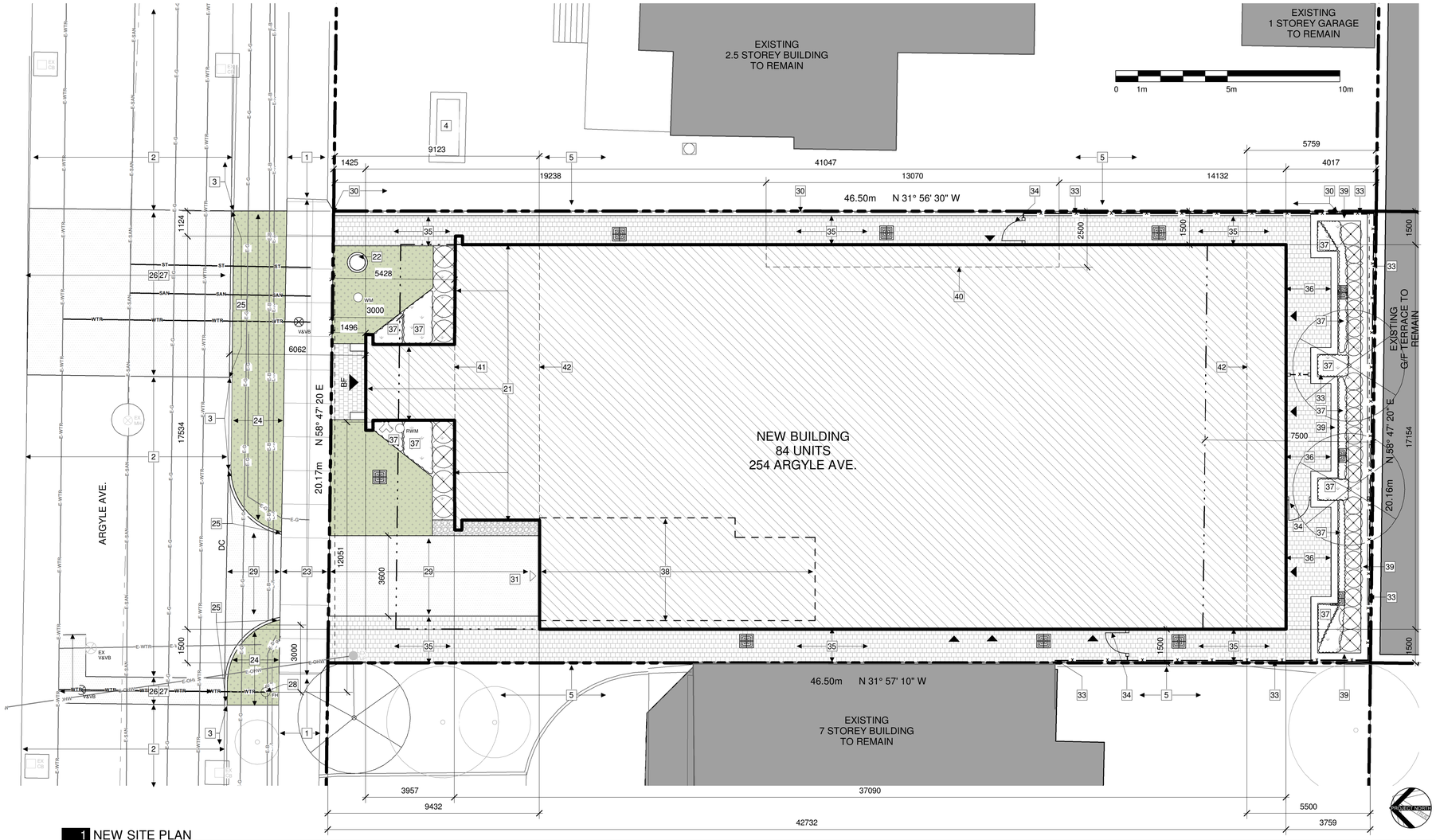
Brad Byvelds, P.Eng.
Senior Project Manager | Transportation

APPENDIX A

Preliminary Site Plan

SITE PLAN KEYNOTES:

1. EXISTING SIDEWALK TO REMAIN
2. EXISTING ASPHALT PAVING TO REMAIN
3. EXISTING CURB TO REMAIN
4. EXISTING SIGN TO REMAIN
5. EXISTING LANDSCAPING TO REMAIN.
21. RELOCATE EXISTING CHURCH FACADE TO NEW LOCATION
22. VENTED CISTERN LID
23. NEW CONCRETE SIDEWALK PER CIVIL
24. REINSTATE TOP SOIL AND GRASS IN BETWEEN ROAD AND SIDEWALK AT AREAS EFFECTED BY CONSTRUCTION
25. NEW CURB PER CIVIL
26. REINSTATE EXISTING ROAD ASSEMBLY PER CIVIL AT AREAS EFFECTED BY DEMOLITION AND CONSTRUCTIONS. PROVIDE SMOOTH TRANSITION TO EXISTING PAVING.
27. BACKFILL TRENCHES AS REQUIRED PER CIVIL AND GEOTECHNICAL.
28. RELOCATE EXISTING FIRE HYDRANT PER CIVIL.
29. NEW DRIVEWAY PER CIVIL
30. NEW CURB WALL PER CIVIL
31. OVERHEAD DOOR TO UNDERGROUND PARKING
32. WOOD PRIVACY FENCE PER LANDSCAPING
33. TERMINATE WOOD PRIVACY FENCE FLUSH TO THE RETAINING WALL PER LANDSCAPING
34. PEDESTRIAN GATE
35. WALKWAY PER LANDSCAPING
36. PATIO PER LANDSCAPING
37. PLANTS PER LANDSCAPING
38. VAULT
39. RAISED PLANTER WALL PER LANDSCAPING
40. STEPBACK AT LEVELS 2 TO ROOF
41. SETBACK AT LEVEL 1B
42. SETBACK AT LEVELS 1C TO ROOF



1 NEW SITE PLAN
A100 | 1 : 100

LEGAL DESCRIPTION
LOT 16 (SOUTH ARGYLE AVENUE)
REGISTERED PLAN 30
CITY OF OTTAWA

REFERENCE SURVEY
DRAFT OF TOPOGRAPHIC PLAN OF SURVEY OF
LOT 16 (SOUTH ARGYLE AVENUE)
REGISTERED PLAN 30
CITY OF OTTAWA
PREPARED BY SURVEYED BY ANNIS, O'SULLIVAN, VOLLEBEKK LTD.

MUNICIPAL ADDRESS
254 ARGYLE AVE. OTTAWA, ON

SITE AREA	937.6m²
BUILDING AREA	633.56m²
GROSS FLOOR AREA	3,810.12m²
BUILDING HEIGHT	35m 9 STOREYS
ZONE:	R5B H(19)
SCHEDULE 1:	AREA B
SCHEDULE 1A:	AREA X

ZONING PROVISION	REQUIRED	PROVIDED
MIN. LOT WIDTH	22.5m	20.17m
MIN. LOT AREA	675m²	937.05m²
MIN. FRONT YARD SETBACK	3m	1.42m
MIN. REAR YARD SETBACK	7.5m	3.759m
MIN. INTERIOR YARD SETBACK	1.5m (6m past 21m)	1.5m
MAX. HEIGHT	19m	34.5m
AMENITY AREA	504m² (6m²/unit)	582.5m²
LANDSCAPED AREA	281.12m²	270.94m²

PARKING QUEUING + LOADING	REQUIRED	PROVIDED
RESIDENTIAL SPACES	42	27
VISITOR SPACES	8	8
ACCESSIBLE PARKING	0	2
BICYCLE PARKING	42 (.5/UNIT)	84

UNIT TYPES	PROVIDED
STUDIO	41
1 BEDROOM	32
2 BEDROOM	9
3 BEDROOM	2
TOTAL	84

GFA BREAKDOWN	PROVIDED
RESIDENTIAL	3718.81m²
WINE BAR	91.31m²
TOTAL	3810.12m²

SITE PLAN GENERAL NOTES:

1. ALL GENERAL SITE INFORMATION AND CONDITIONS COMPILED FROM EXISTING PLANS AND SURVEYS
2. DO NOT SCALE THIS DRAWING
3. REPORT ANY DISCREPANCIES PRIOR TO COMMENCING WORK. NO RESPONSIBILITY IS BORN BY THE CONSULTANT FOR UNKNOWN SUBSURFACE CONDITIONS
4. CONTRACTOR TO CHECK AND VERIFY ALL DIMENSIONS ON SITE AND REPORT ANY ERRORS AND/OR OMISSIONS TO THE CONSULTANT
5. REINSTATE ALL AREAS AND ITEMS DAMAGED AS A RESULT OF CONSTRUCTION ACTIVITIES TO THE SATISFACTION OF THE CONSULTANT
6. CONTRACTOR TO LAYOUT PLANTING BEDS, PATHWAYS ETC. TO APPROVAL OF CONSULTANT PRIOR TO ANY JOB EXCAVATION
7. THE ACCURACY OF THE POSITION OF UTILITIES IS NOT GUARANTEED - CONTRACTOR TO VERIFY PRIOR TO EXCAVATION
8. INDIVIDUAL UTILITY COMPANY MUST BE CONTACTED FOR CONFIRMATION OF UTILITY EXISTENCE AND LOCATION PRIOR TO DIGGING
9. ALL DISTURBED AREAS TO BE RESTORED TO ORIGINAL CONDITION OR BETTER UNLESS OTHERWISE NOTED

SITE PLAN LEGEND:

- EXISTING BUILDING & SITE ELEMENTS
- NEW BUILDING
- NEW ASPHALT PAVING
- NEW GRASS
- NEW PLANTING BEDS / PLANTS PER LANDSCAPING
- NEW CONCRETE SIDEWALK
- NEW CONCRETE PAD
- NEW RIVER STONE PER LANDSCAPING
- NEW PAVER PER LANDSCAPING
- PROPERTY LINE
- SET BACK LINE
- EXTENT OF PARKING BELOW GRADE
- NEW FENCE PER LANDSCAPE
- EXISTING WATER MAIN TO REMAIN
- NEW WATER MAIN PER CIVIL
- EXISTING SANITARY SEWAGE TO REMAIN
- NEW SANITARY SEWAGE PER CIVIL
- EXISTING STORM SEWAGE TO REMAIN
- NEW STORM SEWAGE PER CIVIL
- EXISTING ELECTRICAL OVERHEAD SERVICE TO REMAIN
- NEW ELECTRICAL OVERHEAD SERVICE PER ELECTRICAL
- EXISTING GAS LINE TO REMAIN
- NEW GAS LINE PER CIVIL
- EXISTING BELL LINE TO REMAIN
- EXISTING ROGER LINE TO REMAIN
- ENTRANCE/ BARRIER-FREE ENTRANCE
- MAIN ENTRANCE
- VEHICLE ACCESS
- NEW AREA DRAIN PER CIVIL
- CATCH BASIN: EXISTING TO REMAIN / NEW PER CIVIL
- MAINTENANCE HOLE: EXISTING TO REMAIN / NEW PER CIVIL
- UTILITY POLE: EXISTING TO REMAIN / NEW PER CIVIL
- VALVE AND VALVE BOX : EXISTING TO REMAIN / NEW PER CIVIL
- LIGHT STANDARD
- NEW FIRE HYDRANT PER CIVIL
- NEW WATER METER PER CIVIL
- NEW REMOTE WATER METER PER CIVIL
- NEW SIAMESE CONNECTION
- NEW DROPPED CURB
- NEW TREE PER LANDSCAPING
- EXISTING TREE TO REMAIN
- SHRUB: EXISTING TO REMAIN / NEW PER LANDSCAPING

ARCHITECT OF RECORD
CSV ARCHITECTS
sustainable design · conception écologique
613.564.8118 www.csv.ca
190 O'Connor Street, Suite 100 Ottawa, Ontario,K2P 2R3

DESIGN CONCEPT ARCHITECT
SPICE Design
Level 4, 22 Bishopsgate
London, England EC2N 4BQ
www.spice.design

STRUCTURAL ENGINEER
GOODEVE STRUCTURAL INC.
Suite 18, 77 Auriga Drive
Ottawa, Ontario, Canada K2E 7Z7
(613) 226-4558
www.goodevestructural.ca

MECHANICAL + ELECTRICAL ENGINEER
QUASAR CONSULTING GROUP
Suite 400, 150 Isabella Street
Ottawa, Ontario, Canada K1S 5H3
(613) 518-8344
www.quasarcg.com

CIVIL ENGINEER
NOVATECH
Engineers, Planners & Landscape Architects
Suite 200, 240 Michael Cowpland Drive
Ottawa, Ontario, Canada K2M 1P6
(613) 254-9643
www.novatech-eng.com

LANDSCAPE ARCHITECT
NOVATECH
Engineers, Planners & Landscape Architects
Suite 200, 240 Michael Cowpland Drive
Ottawa, Ontario, Canada K2M 1P6
(613) 254-9643
www.novatech-eng.com

ONTARIO ASSOCIATION OF ARCHITECTS
DARRYL J. HOOD
LICENCE
6165

STAMP

REV	DATE	ISSUE
4	2024.12.20	ISSUED FOR SPC AND REZONING COMMENT RESPONSE 01
3	2024.10.25	REISSUED FOR SPC AND REZONING
2	2024.08.29	ISSUED FOR SPC AND REZONING
1	2024.05.08	ISSUED FOR PHASE 2 PRECONSULT

NOTES

3. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER PROJECT DRAWINGS AND SPECIFICATIONS.
4. DO NOT SCALE DRAWINGS. CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY DIMENSIONS ON SITE.
5. ALL WORK SHALL BE IN ACCORDANCE WITH THE ONTARIO BUILDING CODE AND ALL SUPPLEMENTS AND APPLICABLE MUNICIPAL REGULATIONS.

CLIENT
AZURE URBAN DEVELOPMENTS
OTTAWA
ONTARIO, CANADA

PROJECT
254 ARGYLE

254 Argyle Avenue, Ottawa, Ontario

TITLE
SITE PLAN

PROJECT NO:	2023-0250
DRAWN:	EF / IK
APPROVED:	DH
SCALE:	As indicated
DATE PRINTED:	12/20/2024 3:04:06 PM

REV 4 DRAWING NO. A100

APPENDIX B

TIA Screening Form

City of Ottawa 2017 TIA Guidelines TIA Screening

1. Description of Proposed Development

Municipal Address	254 Argyle Avenue
Description of Location	South side of Argyle, between Bank and O'Connor
Land Use Classification	High-Rise Multifamily
Development Size (units)	84 dwellings
Development Size square metre (m^2)	-
Number of Accesses and Locations	1 proposed access to Argyle Ave
Phase of Development	1
Buildout Year	2025

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.

Table notes:

1. Table 2, Table 3 & Table 4 TRANS Trip Generation Manual
2. Institute of Transportation Engineers (ITE) Trip Generation Manual 11.1 Ed.

Land Use Type	Minimum Development Size
Single-family homes	**60 units**
Multi-Use Family (Low-Rise)[1]	**90 units**
Multi-Use Family (High-Rise)[1]	**150 units**
Office[2]	**1,400 m^2**
Industrial[2]	**7,000 m^2**
Fast-food restaurant or coffee shop[2]	**110 m^2**
Destination retail[2]	**1,800 m^2**
Gas station or convenience market[2]	**90 m^2**

If the proposed development size is equal to or 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 Transit Priority Network, Rapid Transit network or Cross-Town Bikeways?	☐	☑
Is the development in a Hub, a Protected Major Transit Station Area (PMTSA), or a Design Priority Area (DPA)?[2]	☐	☑

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 kilometers per hour (km/h) or greater?	☐	☑
Are there any horizontal/vertical curvatures on a boundary street limits sight lines at a proposed driveway?	☐	☑
Is the proposed driveway within the area of influence of an adjacent traffic signal or roundabout (i.e. within 300 metre [m] of intersection in rural conditions, or within 150 m of intersection in urban/ suburban conditions)?	☑	☐
Is the proposed driveway within auxiliary lanes of an intersection?	☐	☑
Does the proposed driveway make use of an existing median break that serves an existing site?	☐	☑

[2] Hubs are identified in Schedules B1 to B8 of the City of Ottawa Official Plan. PMTSAs are identified in Schedule C1 of the Official Plan. DPAs are identified in Schedule C7A and C7B of the Official. See Chapter 4 for a list of City of Ottawa Planning and Engineering documents that support the completion of TIA.

	Yes	No
Is there is a documented history of traffic operations or safety concerns on the boundary streets within 500 m of the development?	☐	☑
Does the development include a drive-thru facility?	☐	☑

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

5. Summary

Results of Screening	Yes	No
Does the development satisfy the Trip Generation Trigger?	☐	☑
Does the development satisfy the Location Trigger?	☐	☑
Does the development satisfy the Safety Trigger?	☑	☐

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

APPENDIX C

OC Transpo Route Maps

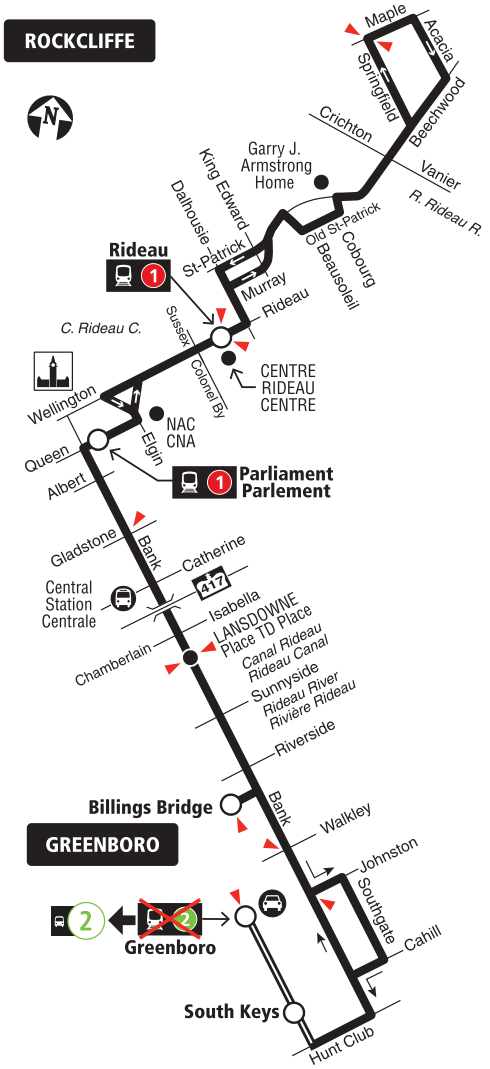
6 ROCKCLIFFE / GREENBORO

Fréquent

7 days a week / 7 jours par semaine

All day service

Service toute la journée



2023/09

Transitway & Station

Park & Ride / Parc-o-Bus

Timepoint / Heures de passage

2023.09

Schedule / Horaire 613-560-1000

Text / Texto* 560560

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

*Standard message rates may apply / Les tarifs réguliers de messagerie texte peuvent s'appliquer

Customer Service
Service à la clientèle **613-560-5000**

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

Security / Sécurité **613-741-2478**

Effective Fall 2020

En vigueur automne 2020

OC Transpo

INFO 613-560-5000
octranspo.com

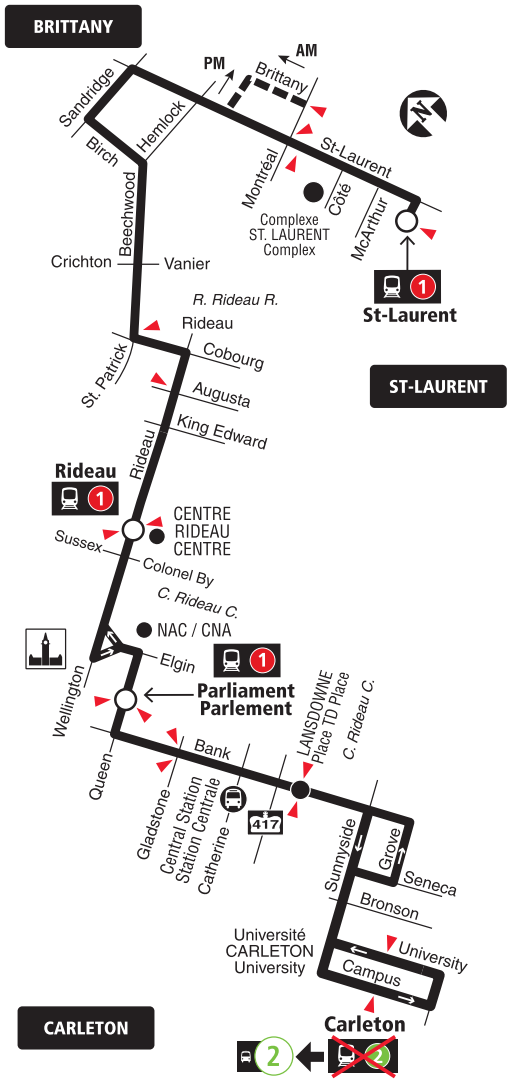
7 CARLETON / ST-LAURENT

Fréquent

7 days a week / 7 jours par semaine

All day service

Service toute la journée



2020.08

Schedule / Horaire 613-560-1000

Text / Texto* 560560

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

*Standard message rates may apply / Les tarifs réguliers de messagerie texte peuvent s'appliquer

Customer Service
Service à la clientèle **613-560-5000**

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

Security / Sécurité **613-741-2478**

Effective Fall 2020

En vigueur automne 2020

OC Transpo

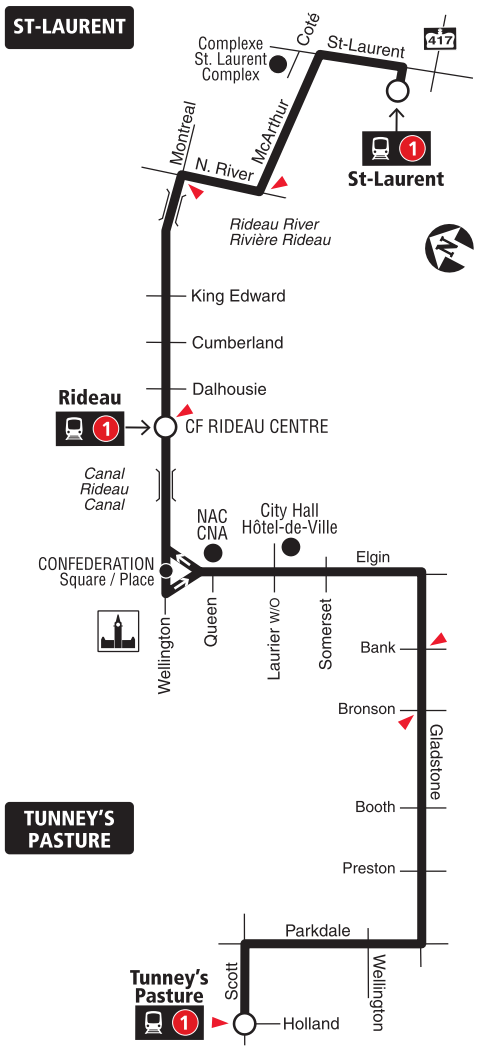
INFO 613-560-5000
octranspo.com

14 ST-LAURENT
TUNNEY'S PASTURE

Fréquent

7 days a week / 7 jours par semaine

All day service
Service toute la journée



2020.09

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**

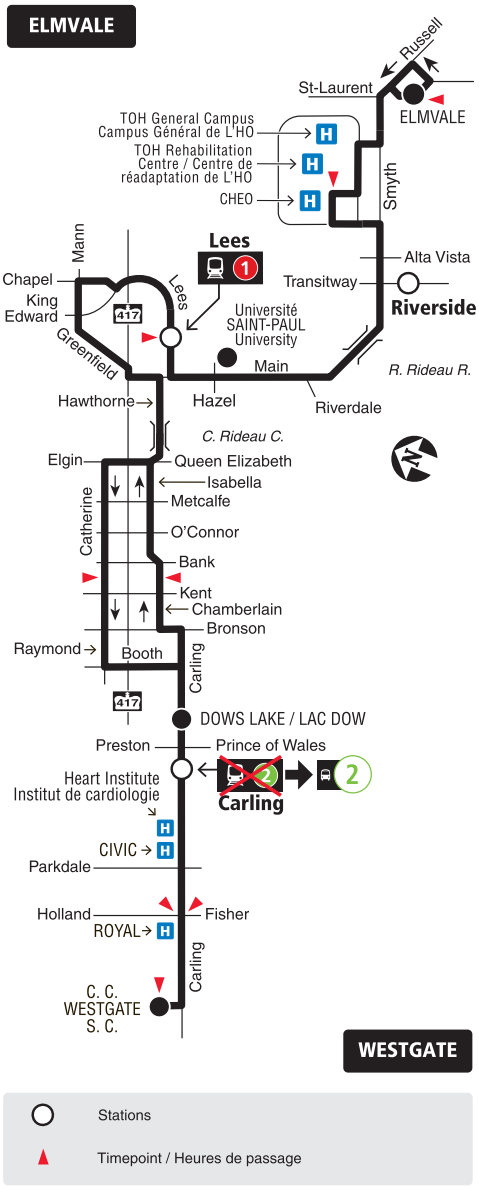
Fall 2020
Automne 2020

OC Transpo
INFO 613-741-4390
octranspo.com

55 ELMVALE / WESTGATE

Local

7 days a week / 7 jours par semaine



2021.06

Schedule / Horaire 613-560-1000
Text / Texto* 560560
plus your four digit bus stop number / *plus* votre numéro d'arrêt à quatre chiffres
*Standard message rates may apply / Les tarifs réguliers de messagerie texte peuvent s'appliquer

Customer Service
Service à la clientèle **613-741-4390**
Lost and Found / Objets perdus..... **613-563-4011**
Security / Sécurité **613-741-2478**

Effective June 20, 2021
En vigueur 20 juin 2021

OC Transpo
INFO 613-741-4390
octranspo.com

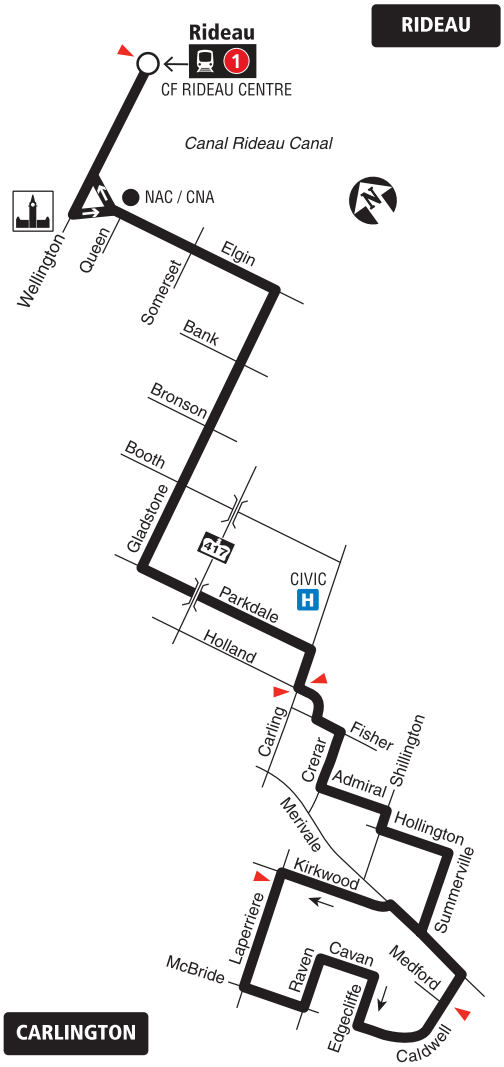
114 CARLINGTON RIDEAU

Local

Monday to Friday / Lundi au vendredi

Selected trips only

Trajets sélectionnés seulement



Station

Timepoint / Heures de passage

2020.08

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 **613-560-5000**

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

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

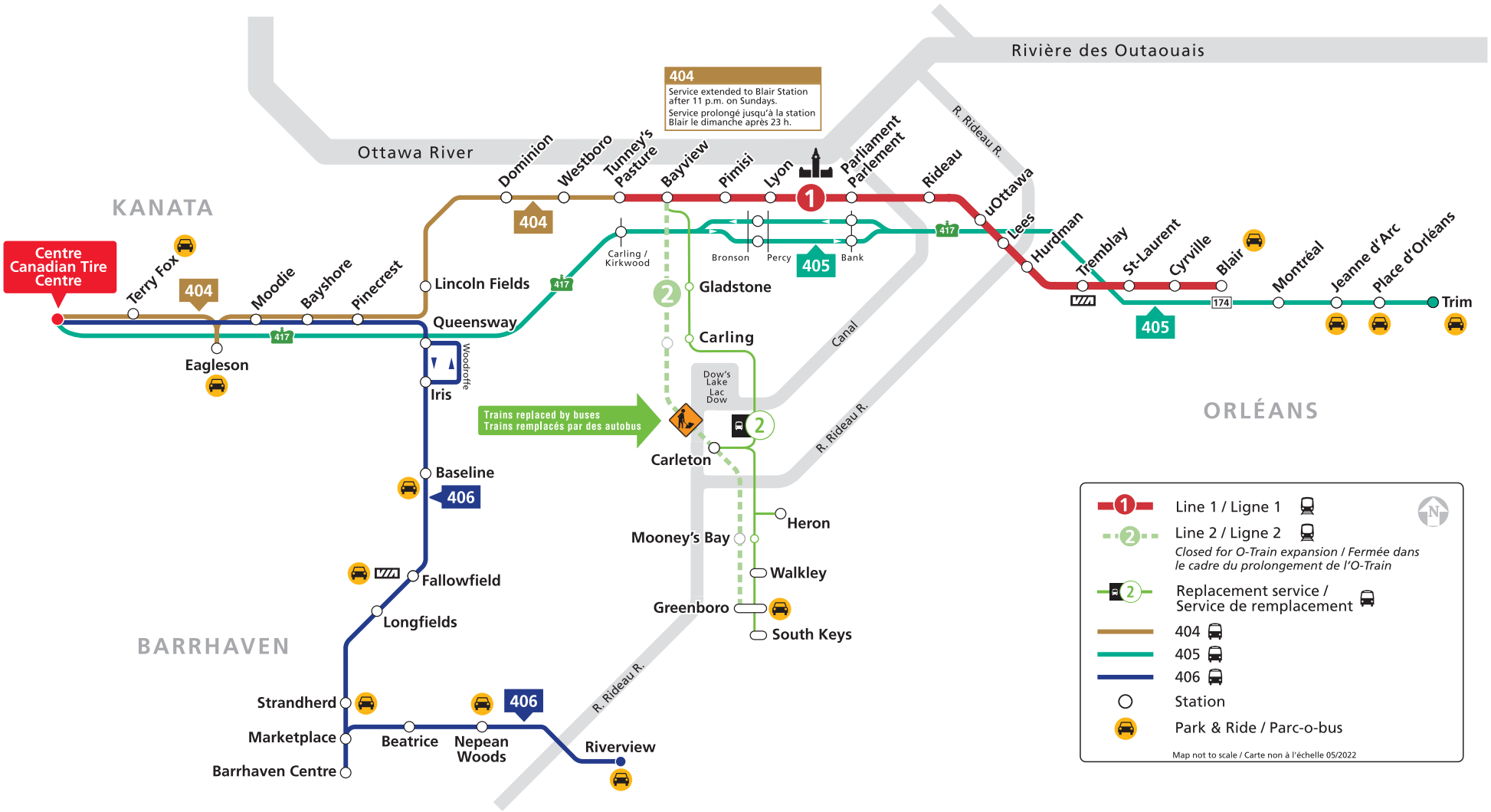
Effective Fall 2020

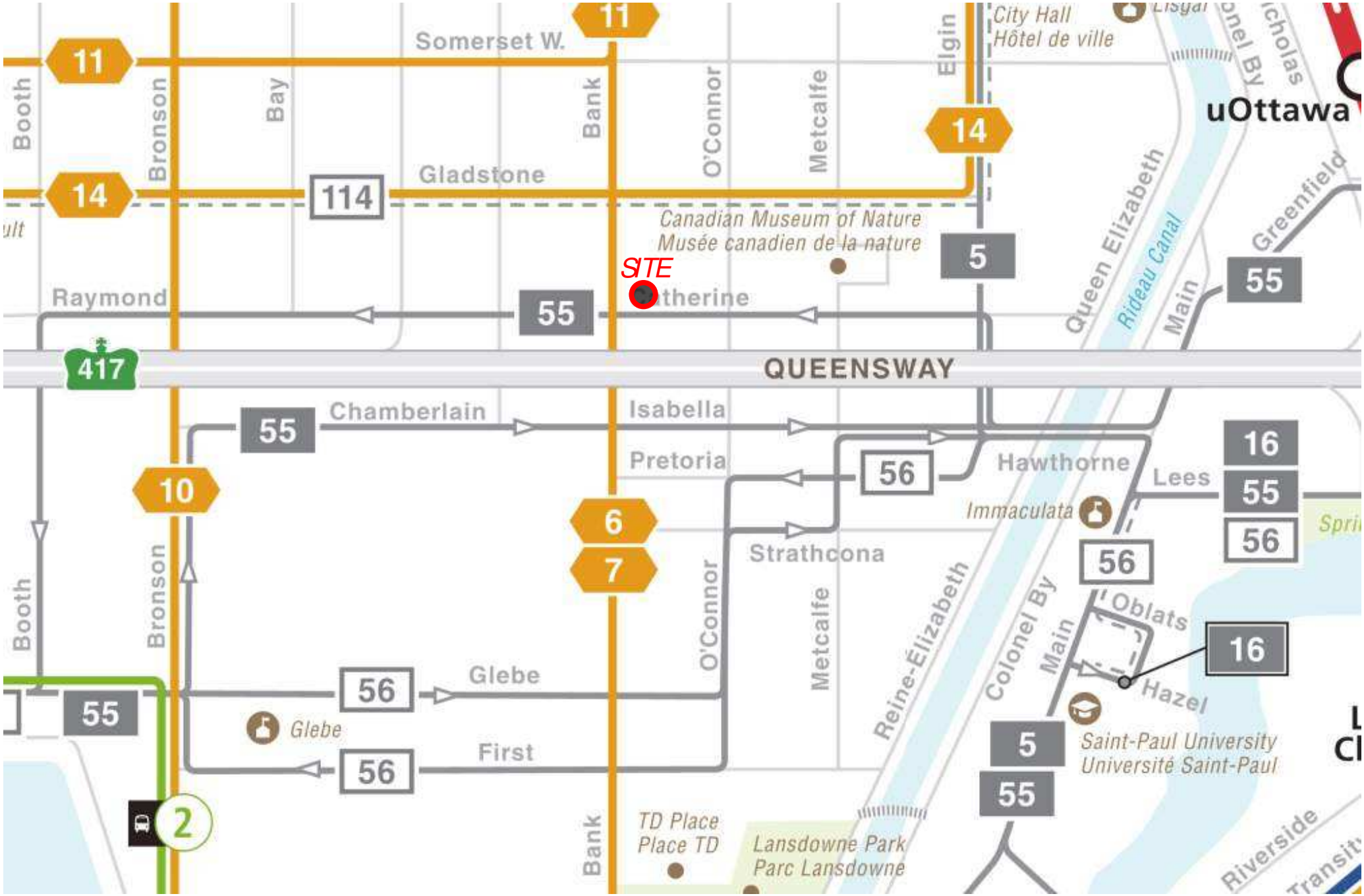
En vigueur automne 2020

OC Transpo

INFO 613-560-5000

octranspo.com


Rivière des Outaouais
Ottawa River
R. Rideau R.
404
Service extended to Blair Station after 11 p.m. on Sundays.
Service prolongé jusqu'à la station Blair le dimanche après 23 h.
KANATA
Centre Canadian Tire Centre
Terry Fox
404
Moodie
Bayshore
Pinecrest
Eagleson
Lincoln Fields
Queensway
Woodroffe
Iris
Baseline
406
Fallowfield
Longfields
BARRHAVEN
Strandherd
Marketplace
Barrhaven Centre
Beatrice
Nepean Woods
406
Riverview
Dominion
Westboro
Tunney's Pasture
Bayview
Pimisi
Lyon
Parliament Parlement
Rideau
uOttawa
Lees
Hurdman
Carling / Kirkwood
Bronson
Percy
405
Bank
Gladstone
Carling
Dow's Lake Lac Dow
Trains replaced by buses
Trains remplacés par des autobus
Carleton
Canal
R. Rideau R.
Heron
Mooney's Bay
Walkley
Greenboro
South Keys
ORLÉANS
Tremblay
St-Laurent
Cyrville
Blair
Montréal
Jeanne d'Arc
Place d'Orléans
Trim
174
Line 1 / Ligne 1
Line 2 / Ligne 2
Closed for O-Train expansion / Fermée dans le cadre du prolongement de l'O-Train
Replacement service / Service de remplacement
404
405
406
Station
Park & Ride / Parc-o-bus
Map not to scale / Carte non à l'échelle 05/2022


Somerset W.
11
Booth
Bronson
Bay
Bank
O'Connor
Metcalfe
Elgin
City Hall
Hôtel de ville
uOttawa
14
Gladstone
114
Canadian Museum of Nature
Musée canadien de la nature
SITE
5
Queen Elizabeth
Rideau Canal
Main
Greenfield
55
Raymond
417
QUEENSWAY
Chamberlain
Isabella
Pretoria
56
Hawthorne
Lees
16
Immaculata
10
6
7
Strathcona
Oblats
Glebe
First
Hazel
Saint-Paul University
Université Saint-Paul
Reine-Élizabeth
Colonel By
TD Place
Place TD
Lansdowne Park
Parc Lansdowne
Riverside
2

APPENDIX D

Traffic Count Data

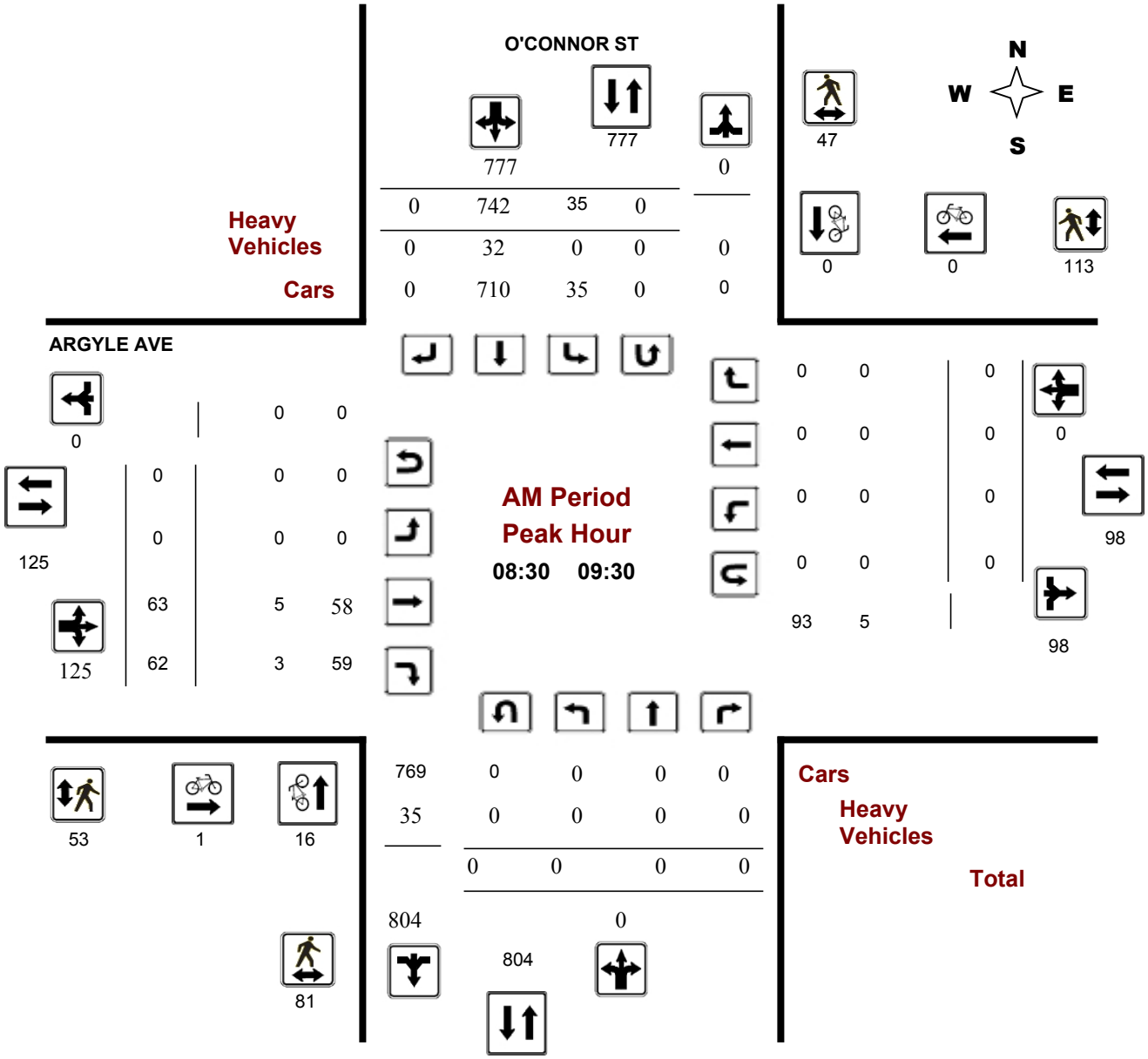
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

ARGYLE AVE @ O'CONNOR ST

Survey Date: Tuesday, March 21, 2017 **WO No:** 36790

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



Comments

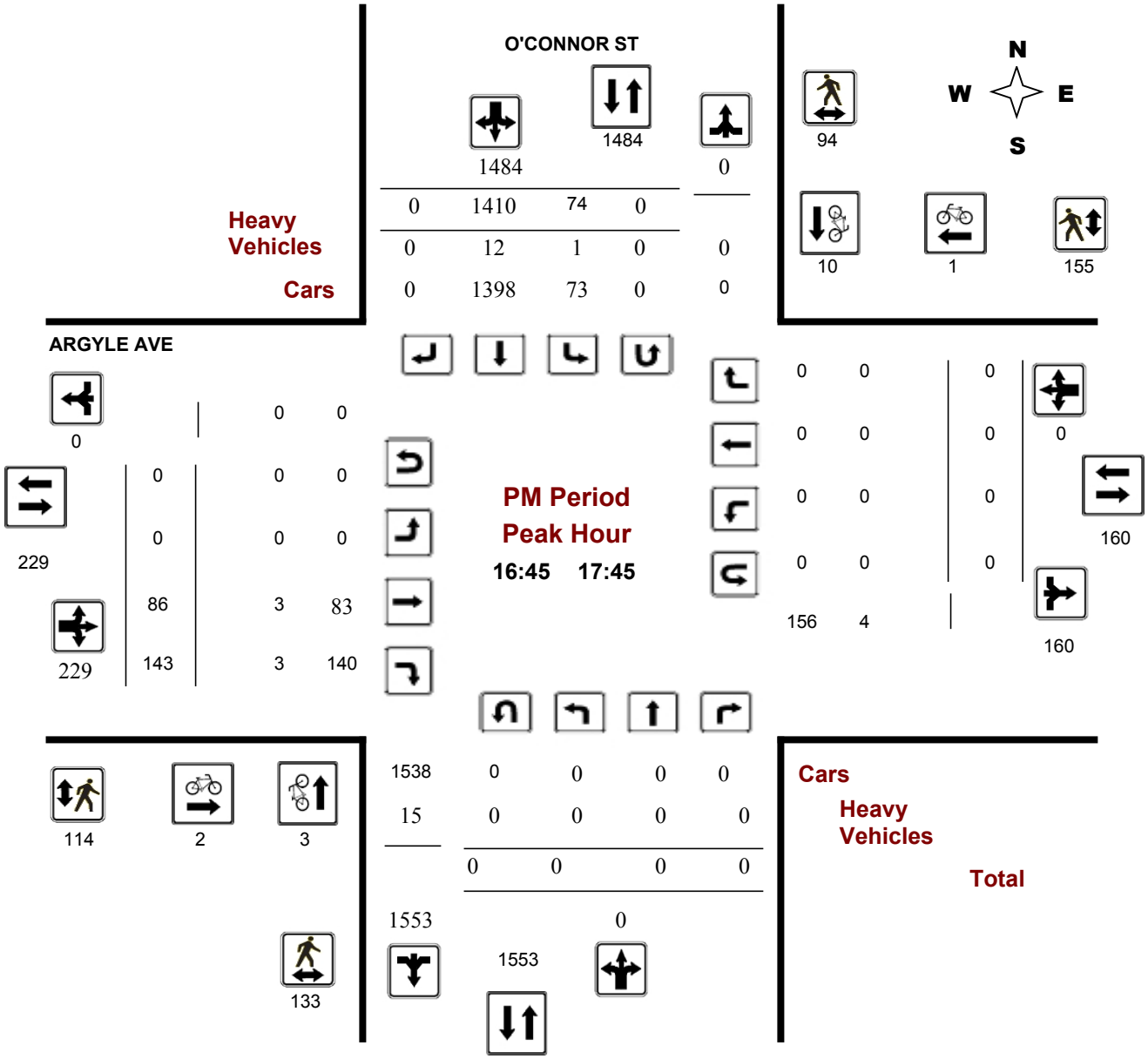
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

ARGYLE AVE @ O'CONNOR ST

Survey Date: Tuesday, March 21, 2017 **WO No:** 36790

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



Comments

Transportation Services - Traffic Services

Work Order
36790

Turning Movement Count - Full Study Summary Report

ARGYLE AVE @ O'CONNOR ST

Survey Date: Tuesday, March 21, 2017

Total Observed U-Turns

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

AADT Factor
1.00

Full Study

	O'CONNOR ST									ARGYLE AVE									
	Northbound				Southbound					Eastbound				Westbound					
Period	LT	ST	RT	**NB TOT**	LT	ST	RT	**SB TOT**	**STR TOT**	LT	ST	RT	**EB TOT**	LT	ST	RT	**WB TOT**	**STR TOT**	**Grand Total**
07:00 08:00	0	0	0	**0**	20	605	0	**625**	**625**	0	34	47	**81**	0	0	0	**0**	**81**	**706**
08:00 09:00	0	0	0	**0**	32	718	0	**750**	**750**	0	71	63	**134**	0	0	0	**0**	**134**	**884**
09:00 10:00	0	0	0	**0**	34	750	0	**784**	**784**	0	53	62	**115**	0	0	0	**0**	**115**	**899**
11:30 12:30	0	0	0	**0**	42	837	0	**879**	**879**	0	50	61	**111**	0	0	0	**0**	**111**	**990**
12:30 13:30	0	0	0	**0**	44	784	0	**828**	**828**	0	53	76	**129**	0	0	1	**1**	**130**	**958**
15:00 16:00	0	0	0	**0**	50	1359	0	**1409**	**1409**	0	46	125	**171**	0	0	0	**0**	**171**	**1580**
16:00 17:00	0	0	0	**0**	54	1399	0	**1453**	**1453**	0	67	133	**200**	0	0	0	**0**	**200**	**1653**
17:00 18:00	0	0	0	**0**	78	1391	0	**1469**	**1469**	0	73	130	**203**	0	0	0	**0**	**203**	**1672**
Sub Total	0	0	0	**0**	354	7843	0	**8197**	**8197**	0	447	697	**1144**	0	0	1	**1**	**1145**	**9342**
U Turns				**0**				**0**	**0**				**0**				**0**	**0**	**0**
Total	0	0	0	**0**	354	7843	0	**8197**	**8197**	0	447	697	**1144**	0	0	1	**1**	**1145**	**9342**
EQ 12Hr	0	0	0	**0**	492	10902	0	**11394**	**11394**	0	621	969	**1590**	0	0	1	**1**	**1591**	**12985**
Note: These values are calculated by multiplying the totals by the appropriate expansion factor.													**1.39**						
AVG 12Hr	0	0	0	**0**	492	10902	0	**11394**	**11394**	0	621	969	**1590**	0	0	1	**1**	**1591**	**12985**
Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor.													**1.00**						
AVG 24Hr	0	0	0	**0**	645	14281	0	**14926**	**14926**	0	814	1269	**2083**	0	0	2	**2**	**2085**	**17011**
Note: These volumes are calculated by multiplying the Average Daily 12 hr. totals by 12 to 24 expansion factor.													**1.31**						

Comments:

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

APPENDIX E

Collision Records

Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2017 **To:** December 31, 2021

Location: ARGYLE AVE @ BANK ST

Traffic Control: No control **Total Collisions:** 3

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2019-Jan-25, Fri,09:10	Clear	Turning movement	P.D. only	Slush	South	Turning left	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Aug-15, Thu,12:54	Clear	Turning movement	Non-fatal injury	Dry	South	Turning left	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Motorcycle	Other motor vehicle	
2020-Dec-19, Sat,13:27	Clear	Turning movement	P.D. only	Dry	South	Turning left	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	

Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2017 **To:** December 31, 2021

Location: ARGYLE AVE @ O'CONNOR ST

Traffic Control: Traffic signal **Total Collisions:** 19

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2017-Apr-27, Thu,15:10	Clear	Turning movement	Non-fatal injury	Dry	South	Turning left	Automobile, station wagon	Cyclist	0
					South	Going ahead	Bicycle	Other motor vehicle	
2017-May-05, Fri,20:47	Rain	Angle	P.D. only	Wet	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2017-Sep-01, Fri,00:00	Clear	SMV unattended vehicle	P.D. only	Dry	Unknown	Unknown	Unknown	Unattended vehicle	0
2017-Nov-13, Mon,17:30	Clear	Turning movement	Non-fatal injury	Dry	South	Turning left	Automobile, station wagon	Cyclist	0
					South	Going ahead	Bicycle	Other motor vehicle	
2018-Jan-28, Sun,14:00	Clear	Sideswipe	P.D. only	Dry	South	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2018-May-14, Mon,10:18	Clear	Angle	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2018-Aug-03, Fri,11:25	Clear	Angle	P.D. only	Dry	North	Going ahead	Passenger van	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2018-Aug-30, Thu,11:03	Clear	Sideswipe	Non-fatal injury	Dry	South	Going ahead	Bicycle	Other motor vehicle	0
					South	Going ahead	Pick-up truck	Cyclist	
2018-Sep-04, Tue,05:35	Clear	SMV unattended vehicle	P.D. only	Dry	East	Going ahead	Police vehicle	Unattended vehicle	0
2018-Nov-18, Sun,11:00	Clear	Sideswipe	P.D. only	Dry	South	Unknown	Unknown	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Jan-11, Fri,09:32	Clear	Sideswipe	P.D. only	Dry	South	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Feb-04, Mon,19:19	Snow	Sideswipe	P.D. only	Slush	East	Going ahead	Ambulance	Other motor vehicle	0
					East	Unknown	Unknown	Other motor vehicle	

Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2017 **To:** December 31, 2021

Location: ARGYLE AVE @ O'CONNOR ST

Traffic Control: Traffic signal **Total Collisions:** 19

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2019-Feb-18, Mon,01:10	Clear	Angle	P.D. only	Ice	South	Turning left	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Passenger van	Other motor vehicle	
2019-Mar-21, Thu,13:45	Clear	Angle	P.D. only	Wet	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Sep-17, Tue,17:16	Clear	Turning movement	P.D. only	Dry	South	Turning left	Automobile, station wagon	Cyclist	0
					South	Going ahead	Bicycle	Other motor vehicle	
2020-Feb-28, Fri,08:30	Clear	Turning movement	P.D. only	Loose snow	South	Turning right	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2020-Nov-29, Sun,16:30	Clear	Angle	Non-fatal injury	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Turning right	Pick-up truck	Other motor vehicle	
2020-Dec-18, Fri,21:11	Clear	Angle	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2021-Nov-22, Mon,16:05	Clear	SMV other	Non-fatal injury	Dry	South	Turning left	Pick-up truck	Pedestrian	1

Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2017 **To:** December 31, 2021

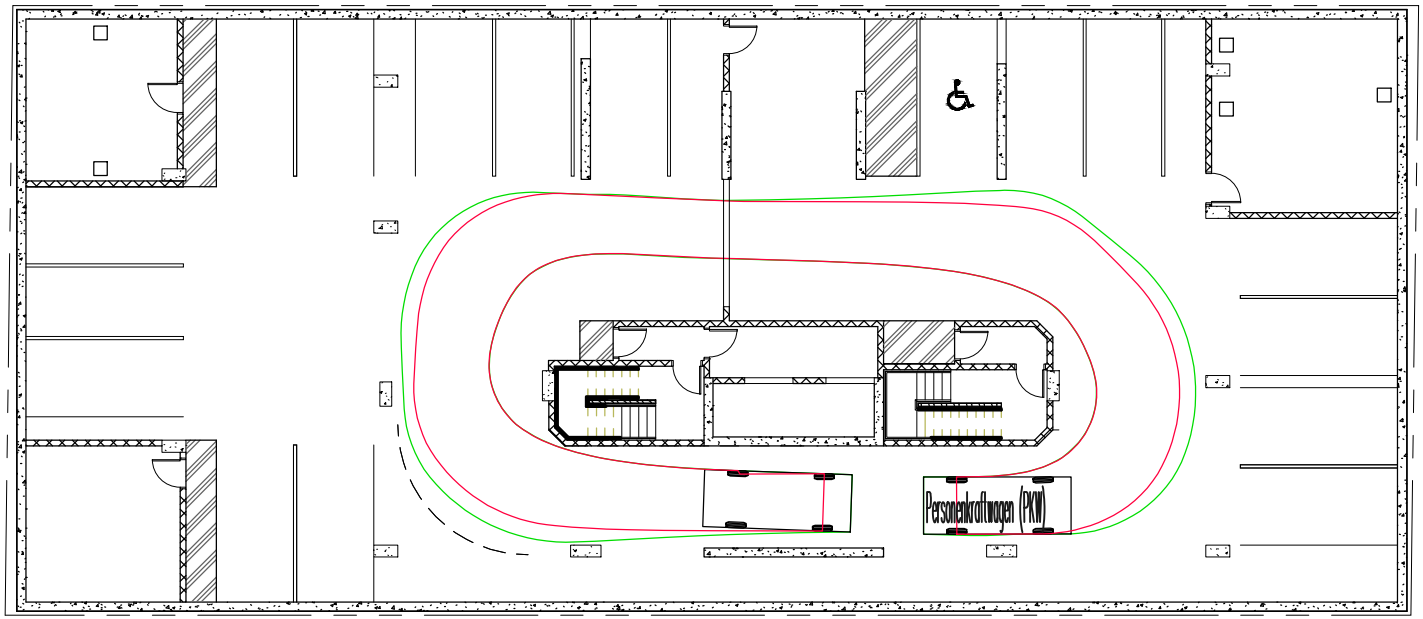
Location: ARGYLE AVE btwn BANK ST & O'CONNOR ST

Traffic Control: No control **Total Collisions:** 1

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2020-Mar-04, Wed,10:40	Clear	Sideswipe	P.D. only	Dry	East	Pulling onto shoulder or toward curb	Truck - closed	Other motor vehicle	0
					East	Stopped	Automobile, station wagon	Other motor vehicle	

APPENDIX F

Parking Garage Turning Movements



NOVATECH
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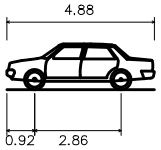
Ottawa, Ontario, Canada K2M 1P6

Telephone (613) 254-9643
Facsimile (613) 254-5867
Website www.novatech-eng.com



Personenkraftwagen (PKW)

Overall Length	4.880m
Overall Width	1.890m
Overall Body Height	1.519m
Min Body Ground Clearance	0.280m
Track Width	1.890m
Lock-to-lock time	4.00s
Wall to Wall Turning Radius	5.850m

254 ARGYLE AVENUE

TURNING MOVEMENT (PASSENGER CAR)

SCALE 1 : 250 (0 2 4 6 8 10)

DATE MAR 2025 | JOB 123062 | FIGURE TM-1

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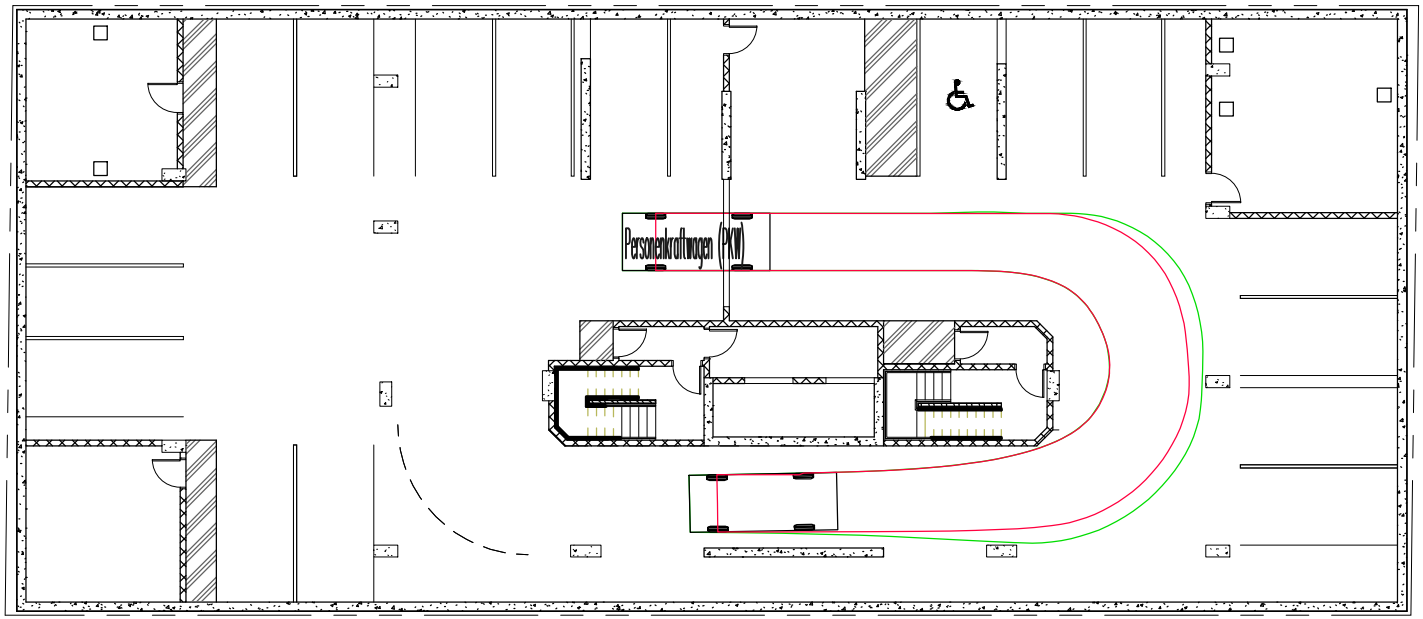

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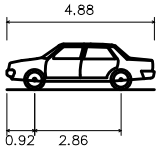

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254 ARGYLE AVENUE

TURNING MOVEMENT (PASSENGER CAR)

SCALE 1 : 250 (0 2 4 6 8 10)

DATE MAR 2025 | JOB 123062 | FIGURE TM-2

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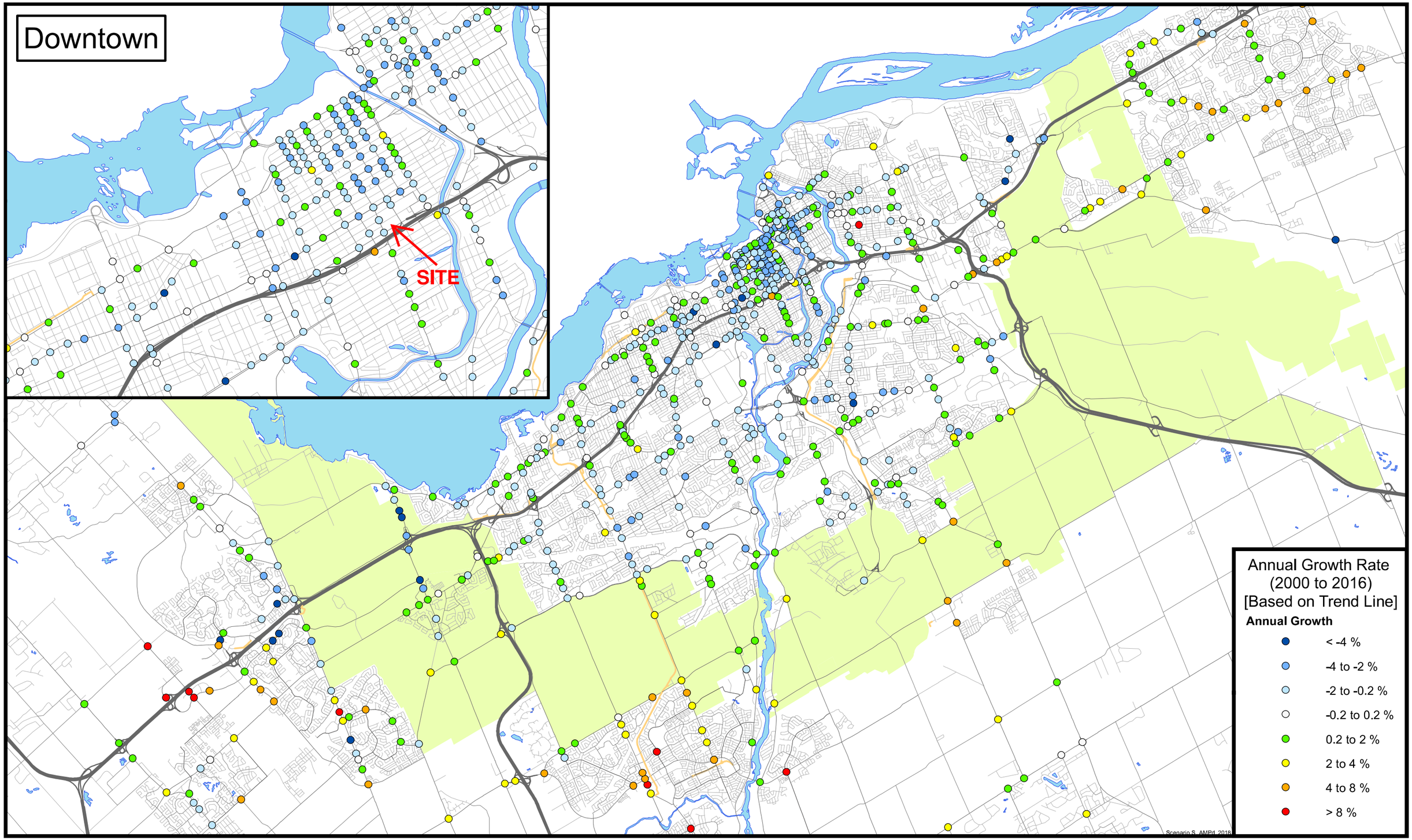
APPENDIX G

Intersection Traffic Growth Rate Figures

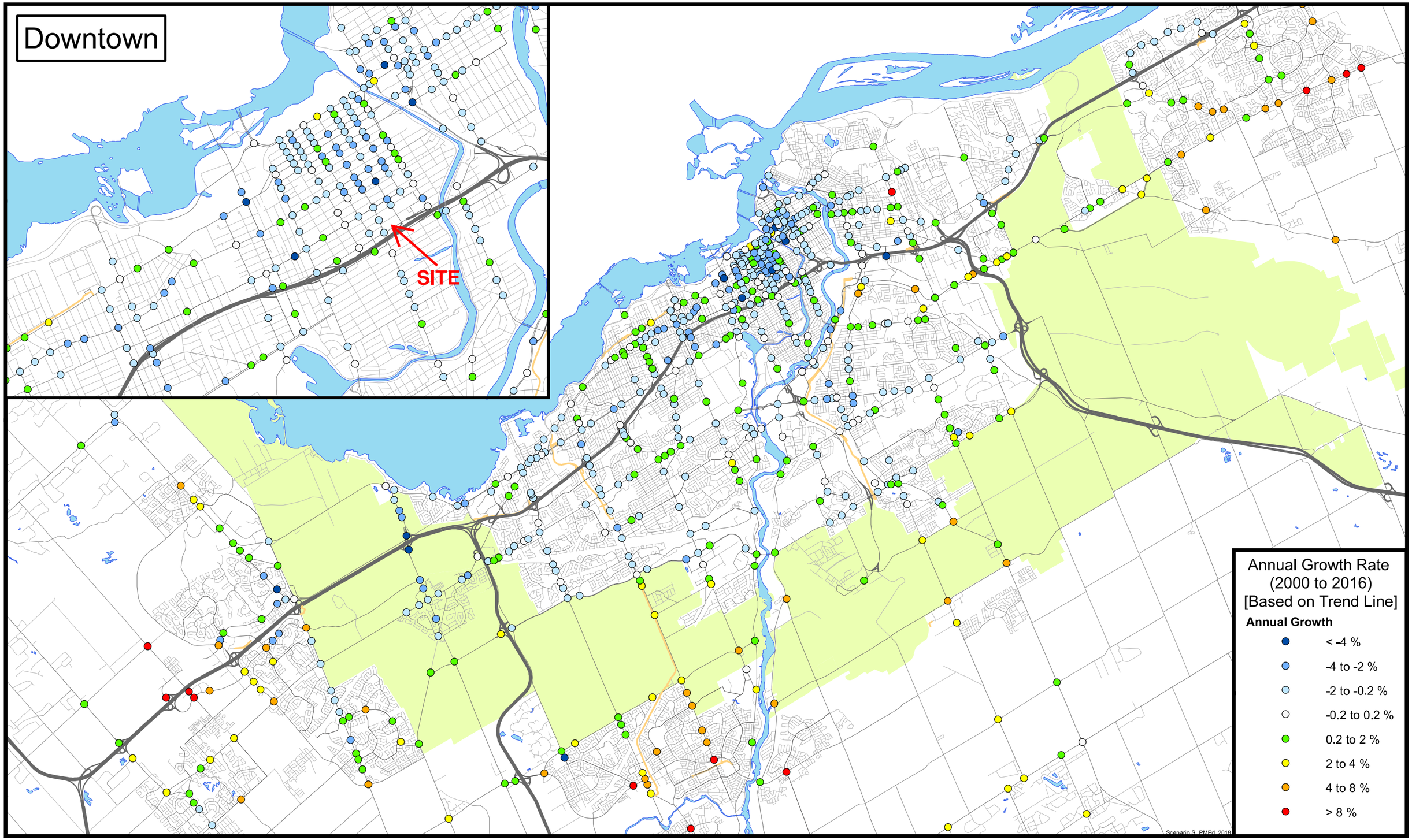
INTERSECTION TRAFFIC GROWTH RATE, AM PEAK PERIOD

Total Vehicular Volume Entering the Intersection, 2000 to 2016



INTERSECTION TRAFFIC GROWTH RATE, PM PEAK PERIOD

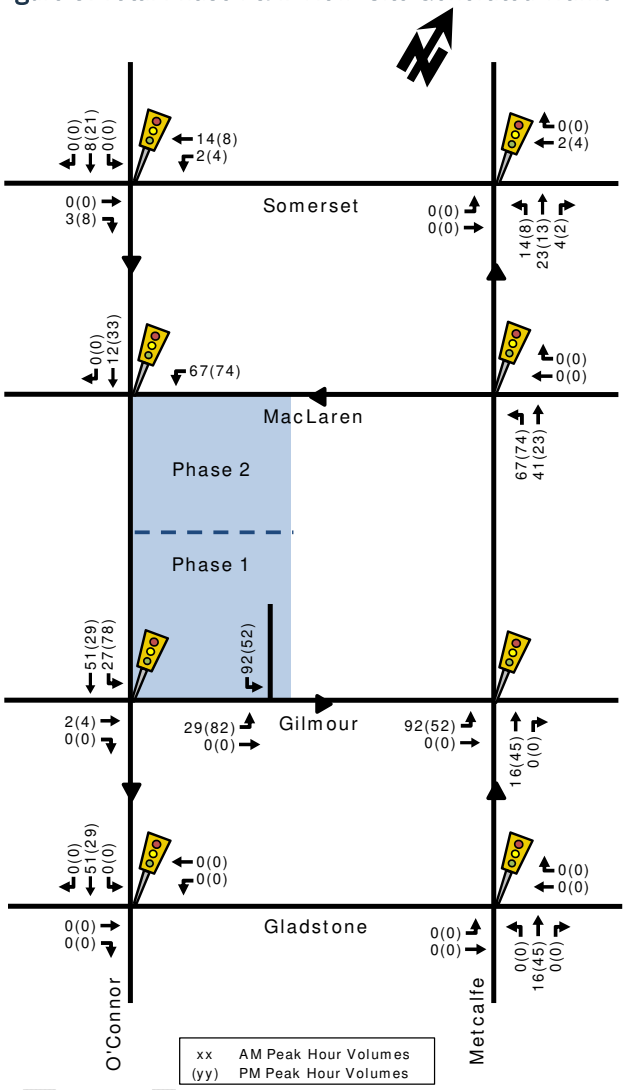
Total Vehicular Volume Entering the Intersection, 2000 to 2016



APPENDIX H

Other Area Developments

Figure 9: Total Phase I & II 'New' Site Generated Traffic



3.2.3. Other Developments

See Section 2.1.4.

3.3. Demand Rationalization

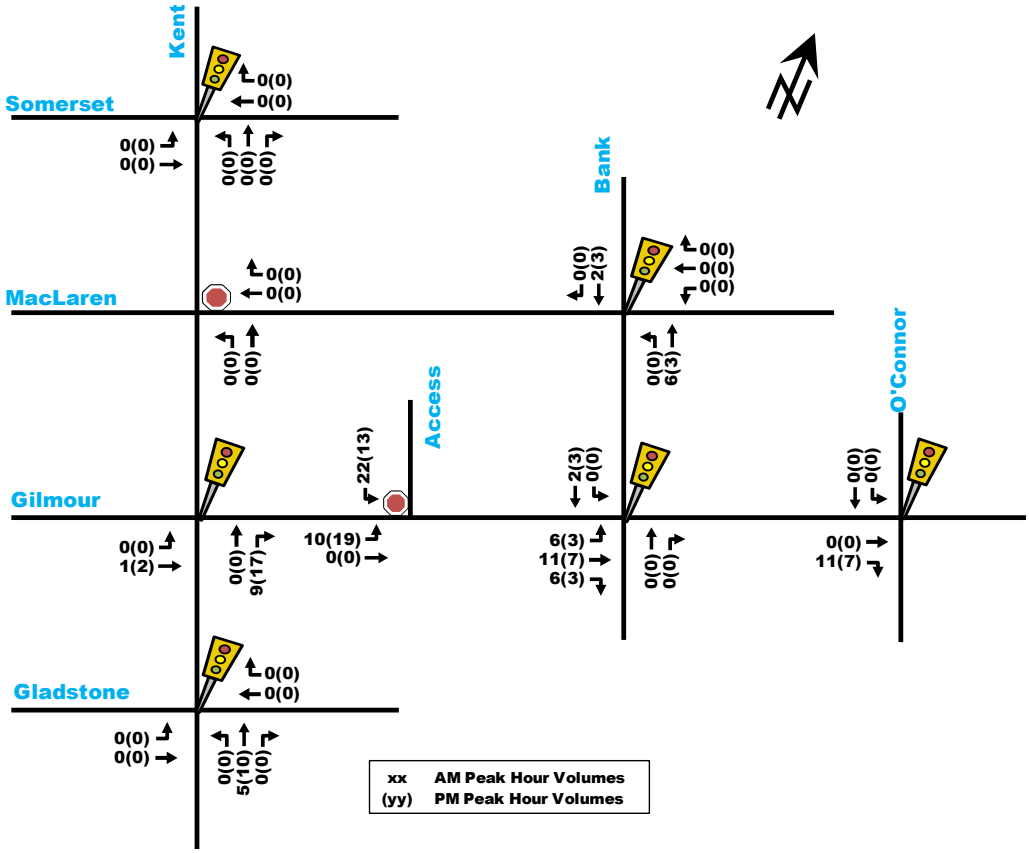
The 2022 and 2025 total projected volumes are composed of the existing traffic volumes (Figure 4) combined with the anticipated site generated vehicle volumes. Figure 10 displays the 2023 total projected volumes and Figure 11 illustrates the total 2025 projected volumes. As there is no projected background traffic growth, the 2030 horizon year traffic volumes are anticipated to be similar to the 2025 horizon year.

The TAC Guide for Signalized Intersection (2008) identifies the typical saturation flow rate for through lanes and left turn lanes as approximately 1,800 veh/h/ln and 1,750 veh/h/ln, respectively. While there are not any movements at study area intersections reaching this threshold. This will be further explored in Section 4.9 of the Strategy Report.

- Departing traffic will travel east on Gilmour St away from the site driveway and turn left onto Bank St to head north.

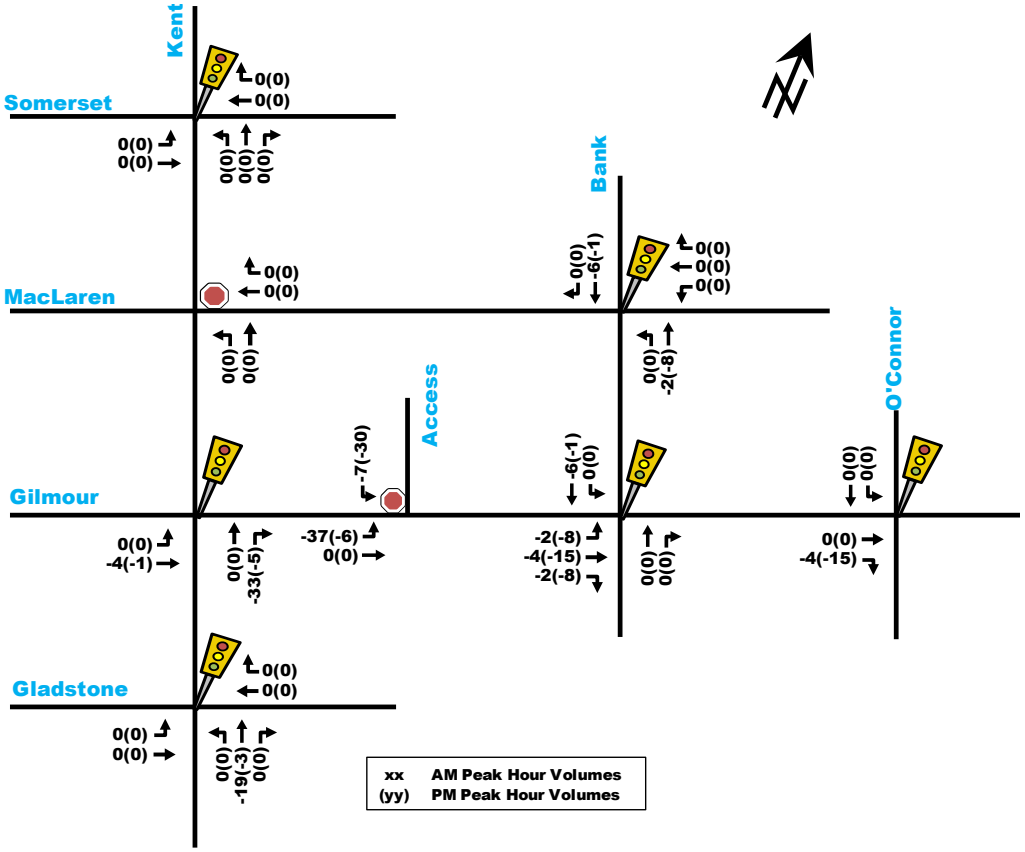
- Traffic to/from the south:
  - Arriving traffic may use Bank St to travel northbound turn left and head westbound on James St, then turn right on Kent St, where traffic can head northbound to turn right onto Gilmour St and finally turn left into the site's driveway.
  - Departing traffic will travel east on Gilmour St away from the site driveway and turn right onto Bank St to head south.
- Traffic to/from the east:
  - Arriving traffic is assumed to use Hwy 417 WB primarily and take the Metcalfe St exit, travelling westbound on Catherine St, then northbound on Kent St to turn right onto Gilmour St and finally turn left into the site's driveway.
  - Departing traffic is assumed to use Hwy 417 EB primarily by travelling east on Gilmour St away from the site driveway and turning right on O'Connor St to travel southbound to Isabella St and travel eastbound to access the highway.
- Traffic to/from the west:
  - Arriving traffic is assumed to use Hwy 417 EB primarily and take the Kent St exit to travel northbound, then turn right onto Gilmour St and finally turn left into the site's driveway.
  - Departing traffic is assumed to use Hwy 417 WB primarily by travelling east on Gilmour St away from the site driveway and turning right on O'Connor St to travel southbound to Catherine St, then turning right onto the highway ramp.

Figure 14: 2024 Site-Generated Traffic



Based on the site-generated vehicle trips of the existing office building (provided in Table 4), study area traffic volumes are expected to decrease as shown in Figure 15. A similar trip distribution and assignment has been assumed for the existing office building's vehicle trips as the proposed residential development. This reduction in traffic volumes will be applied to the total projected traffic volumes for horizon years 2024 and 2029.

Figure 15: Existing Office Building Study Area Traffic Reductions



3.2. Background Network Traffic

3.2.1. Transportation network plans

Refer to Section 2.1.3: Planned Study Area Transportation Network Changes.

3.2.2. Background Growth

Historically, traffic within the study area has seen a decline in growth, as illustrated by the growth rates map obtained from the City of Ottawa in Figure 16.

APPENDIX I

Transportation Demand Management

TDM-Supportive Development Design and Infrastructure Checklist:
Residential Developments (multi-family or condominium)

Legend

REQUIRED	The Official Plan or Zoning By-law provides related guidance that must be followed
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

		TDM-supportive design & infrastructure measures: *Residential developments*	Check if completed & add descriptions, explanations or plan/drawing references
	1.	**WALKING & CYCLING: ROUTES**	
	1.1	**Building location & access points**	
BASIC	1.1.1	Locate building close to the street, and do not locate parking areas between the street and building entrances	☑
BASIC	1.1.2	Locate building entrances in order to minimize walking distances to sidewalks and transit stops/stations	☑
BASIC	1.1.3	Locate building doors and windows to ensure visibility of pedestrians from the building, for their security and comfort	☑
	1.2	**Facilities for walking & cycling**	
REQUIRED	1.2.1	Provide convenient, direct access to stations or major stops along rapid transit routes within 600 metres; minimize walking distances from buildings to rapid transit; provide pedestrian-friendly, weather-protected (where possible) environment between rapid transit accesses and building entrances; ensure quality linkages from sidewalks through building entrances to integrated stops/stations *(see Official Plan policy 4.3.3)*	☐ - N/A
REQUIRED	1.2.2	Provide safe, direct and attractive pedestrian access from public sidewalks to building entrances through such measures as: reducing distances between public sidewalks and major building entrances; providing walkways from public streets to major building entrances; within a site, providing walkways along the front of adjoining buildings, between adjacent buildings, and connecting areas where people may congregate, such as courtyards and transit stops; and providing weather protection through canopies, colonnades, and other design elements wherever possible *(see Official Plan policy 4.3.12)*	☑

TDM-supportive design & infrastructure measures: *Residential developments*			Check if completed & add descriptions, explanations or plan/drawing references
REQUIRED	1.2.3	Provide sidewalks of smooth, well-drained walking surfaces of contrasting materials or treatments to differentiate pedestrian areas from vehicle areas, and provide marked pedestrian crosswalks at intersection sidewalks *(see Official Plan policy 4.3.10)*	☑
REQUIRED	1.2.4	Make sidewalks and open space areas easily accessible through features such as gradual grade transition, depressed curbs at street corners and convenient access to extra-wide parking spaces and ramps *(see Official Plan policy 4.3.10)*	☑
REQUIRED	1.2.5	Include adequately spaced inter-block/street cycling and pedestrian connections to facilitate travel by active transportation. Provide links to the existing or planned network of public sidewalks, multi-use pathways and on-road cycle routes. Where public sidewalks and multi-use pathways intersect with roads, consider providing traffic control devices to give priority to cyclists and pedestrians *(see Official Plan policy 4.3.11)*	☐ - N/A
BASIC	1.2.6	Provide safe, direct and attractive walking routes from building entrances to nearby transit stops	☐
BASIC	1.2.7	Ensure that walking routes to transit stops are secure, visible, lighted, shaded and wind-protected wherever possible	☐
BASIC	1.2.8	Design roads used for access or circulation by cyclists using a target operating speed of no more than 30 km/h, or provide a separated cycling facility	☐
	1.3	**Amenities for walking & cycling**	
BASIC	1.3.1	Provide lighting, landscaping and benches along walking and cycling routes between building entrances and streets, sidewalks and trails	☐
BASIC	1.3.2	Provide wayfinding signage for site access (where required, e.g. when multiple buildings or entrances exist) and egress (where warranted, such as when directions to reach transit stops/stations, trails or other common destinations are not obvious)	☐

		TDM-supportive design & infrastructure measures: *Residential developments*	Check if completed & add descriptions, explanations or plan/drawing references
	2.	**WALKING & CYCLING: END-OF-TRIP FACILITIES**	
	2.1	**Bicycle parking**	
REQUIRED	2.1.1	Provide bicycle parking in highly visible and lighted areas, sheltered from the weather wherever possible *(see Official Plan policy 4.3.6)*	☑
REQUIRED	2.1.2	Provide the number of bicycle parking spaces specified for various land uses in different parts of Ottawa; provide convenient access to main entrances or well-used areas *(see Zoning By-law Section 111)*	☑
REQUIRED	2.1.3	Ensure that bicycle parking spaces and access aisles meet minimum dimensions; that no more than 50% of spaces are vertical spaces; and that parking racks are securely anchored *(see Zoning By-law Section 111)*	☑
BASIC	2.1.4	Provide bicycle parking spaces equivalent to the expected number of resident-owned bicycles, plus the expected peak number of visitor cyclists	☐
	2.2	**Secure bicycle parking**	
REQUIRED	2.2.1	Where more than 50 bicycle parking spaces are provided for a single residential building, locate at least 25% of spaces within a building/structure, a secure area (e.g. supervised parking lot or enclosure) or bicycle lockers *(see Zoning By-law Section 111)*	☐ - N/A; all bike spaces within building
BETTER	2.2.2	Provide secure bicycle parking spaces equivalent to at least the number of units at condominiums or multi-family residential developments	☑
	2.3	**Bicycle repair station**	
BETTER	2.3.1	Provide a permanent bike repair station, with commonly used tools and an air pump, adjacent to the main bicycle parking area (or secure bicycle parking area, if provided)	☑
	3.	**TRANSIT**	
	3.1	**Customer amenities**	
BASIC	3.1.1	Provide shelters, lighting and benches at any on-site transit stops	☐
BASIC	3.1.2	Where the site abuts an off-site transit stop and insufficient space exists for a transit shelter in the public right-of-way, protect land for a shelter and/or install a shelter	☐
BETTER	3.1.3	Provide a secure and comfortable interior waiting area by integrating any on-site transit stops into the building	☐

		TDM-supportive design & infrastructure measures: *Residential developments*	Check if completed & add descriptions, explanations or plan/drawing references
	4.	**RIDESHARING**	
	4.1	**Pick-up & drop-off facilities**	
BASIC	4.1.1	Provide a designated area for carpool drivers (plus taxis and ride-hailing services) to drop off or pick up passengers without using fire lanes or other no-stopping zones	☐
	5.	**CARSHARING & BIKESHARING**	
	5.1	**Carshare parking spaces**	
BETTER	5.1.1	Provide up to three carshare parking spaces in an R3, R4 or R5 Zone for specified residential uses *(see Zoning By-law Section 94)*	☑
	5.2	**Bikeshare station location**	
BETTER	5.2.1	Provide a designated bikeshare station area near a major building entrance, preferably lighted and sheltered with a direct walkway connection	☐
	6.	**PARKING**	
	6.1	**Number of parking spaces**	
REQUIRED	6.1.1	Do not provide more parking than permitted by zoning, nor less than required by zoning, unless a variance is being applied for	☑
BASIC	6.1.2	Provide parking for long-term and short-term users that is consistent with mode share targets, considering the potential for visitors to use off-site public parking	☐
BASIC	6.1.3	Where a site features more than one use, provide shared parking and reduce the cumulative number of parking spaces accordingly *(see Zoning By-law Section 104)*	☐
BETTER	6.1.4	Reduce the minimum number of parking spaces required by zoning by one space for each 13 square metres of gross floor area provided as shower rooms, change rooms, locker rooms and other facilities for cyclists in conjunction with bicycle parking *(see Zoning By-law Section 111)*	☐
	6.2	**Separate long-term & short-term parking areas**	
BETTER	6.2.1	Provide separate areas for short-term and long-term parking (using signage or physical barriers) to permit access controls and simplify enforcement (i.e. to discourage residents from parking in visitor spaces, and vice versa)	☐

TDM Measures Checklist:
Residential Developments (multi-family, condominium or subdivision)

Legend

BASIC — The measure is generally feasible and effective, and in most cases would benefit the development and its users

BETTER — The measure could maximize support for users of sustainable modes, and optimize development performance

★ — The measure is one of the most dependably effective tools to encourage the use of sustainable modes

			TDM measures: *Residential developments*	Check if proposed & add descriptions
		1.	**TDM PROGRAM MANAGEMENT**	
		1.1	**Program coordinator**	
BASIC	★	1.1.1	Designate an internal coordinator, or contract with an external coordinator	☐
		1.2	**Travel surveys**	
BETTER		1.2.1	Conduct periodic surveys to identify travel-related behaviours, attitudes, challenges and solutions, and to track progress	☐
		2.	**WALKING AND CYCLING**	
		2.1	**Information on walking/cycling routes & destinations**	
BASIC		2.1.1	Display local area maps with walking/cycling access routes and key destinations at major entrances *(multi-family, condominium)*	☑
		2.2	**Bicycle skills training**	
BETTER		2.2.1	Offer on-site cycling courses for residents, or subsidize off-site courses	☐

			TDM measures: *Residential developments*	Check if proposed & add descriptions
		3.	**TRANSIT**	
		3.1	**Transit information**	
BASIC		3.1.1	Display relevant transit schedules and route maps at entrances *(multi-family, condominium)*	☑
BETTER		3.1.2	Provide real-time arrival information display at entrances *(multi-family, condominium)*	☐
		3.2	**Transit fare incentives**	
BASIC	★	3.2.1	Offer PRESTO cards preloaded with one monthly transit pass on residence purchase/move-in, to encourage residents to use transit	☐
BETTER		3.2.2	Offer at least one year of free monthly transit passes on residence purchase/move-in	☐
		3.3	**Enhanced public transit service**	
BETTER	★	3.3.1	Contract with OC Transpo to provide early transit services until regular services are warranted by occupancy levels *(subdivision)*	☐
		3.4	**Private transit service**	
BETTER		3.4.1	Provide shuttle service for seniors homes or lifestyle communities (e.g. scheduled mall or supermarket runs)	☐
		4.	**CARSHARING & BIKESHARING**	
		4.1	**Bikeshare stations & memberships**	
BETTER		4.1.1	Contract with provider to install on-site bikeshare station (*multi-family)*	☐
BETTER		4.1.2	Provide residents with bikeshare memberships, either free or subsidized *(multi-family)*	☐
		4.2	**Carshare vehicles & memberships**	
BETTER		4.2.1	Contract with provider to install on-site carshare vehicles and promote their use by residents	☑
BETTER		4.2.2	Provide residents with carshare memberships, either free or subsidized	☐
		5.	**PARKING**	
		5.1	**Priced parking**	
BASIC	★	5.1.1	Unbundle parking cost from purchase price *(condominium)*	☐
BASIC	★	5.1.2	Unbundle parking cost from monthly rent *(multi-family)*	☑

			TDM measures: *Residential developments*	Check if proposed & add descriptions
		6.	**TDM MARKETING & COMMUNICATIONS**	
		6.1	**Multimodal travel information**	
BASIC	★	6.1.1	Provide a multimodal travel option information package to new residents	☑
		6.2	**Personalized trip planning**	
BETTER	★	6.2.1	Offer personalized trip planning to new residents	☐

APPENDIX J

MMLOS Analysis

Segment MMLOS Analysis

This section provides a review of the boundary street Argyle Avenue, using complete streets principles. The *Multi-Modal Level of Service (MMLOS) Guidelines*, produced by IBI Group in October 2015, were used to evaluate the levels of service for each alternative mode of transportation on the boundary streets. Using Exhibit 22 of the *MMLOS Guidelines*, Argyle Avenue has been evaluated against the targets for roadways within the General Urban Area.

Exhibit 4 of the *MMLOS Guidelines* has been used to evaluate the segment pedestrian level of service (PLOS) of the boundary streets. Exhibit 22 of the *MMLOS Guidelines* identifies a target PLOS C for all roadways in the General Urban Area. The results of the segment PLOS analysis are summarized in **Table 1**.

Exhibit 11 of the *MMLOS Guidelines* has been used to evaluate the segment bicycle level of service (BLOS) of the boundary streets. Exhibit 22 of the *MMLOS Guidelines* identifies a target BLOS D for roadways in the General Urban Area with no cycling route designation. The results of the segment BLOS analysis are summarized in **Table 2**.

Exhibit 15 of the *MMLOS Guidelines* has been used to evaluate the segment transit level of service (TLOS) of the boundary streets. Within the General Urban Area, Exhibit 22 of the *MMLOS Guidelines* identifies no target TLOS for roadways without a RTTP designation, and Argyle Avenue is not served by transit. Therefore, the TLOS of Argyle Avenue has not been reviewed.

Exhibit 20 of the *MMLOS Guidelines* has been used to evaluate the segment truck level of service (TkLOS) of the boundary streets. Within the General Urban Area, Exhibit 22 identifies no target TkLOS for collector and local roadways with no truck route designation. Therefore, the TkLOS of Argyle Avenue has not been reviewed.

Table 1: PLOS Segment Analysis

Sidewalk Width	Boulevard Width	Avg. Daily Curb Lane Traffic Volume	Presence of On-Street Parking	Operating Speed[1]	PLOS
Argyle Avenue (Bank Street to O'Connor Street, north side)					
1.8m	0m	≤ 3,000 vpd	N/A	40 km/h	B
Argyle Avenue (Bank Street to O'Connor Street, south side)					
1.8m	> 2.0m	≤ 3,000 vpd	N/A	40 km/h	A

1. Operating speed taken as the speed limit plus 10 km/h

Table 2: BLOS Segment Analysis

Road Class	Route Type	Bikeway Type	Travel Lanes	Operating Speed	BLOS
Argyle Avenue (Bank Street to O'Connor Street)					
Local	No Class	Mixed Traffic	1	40 km/h	A