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Proposed Mixed-Use Development
119 Ryan Reynolds Way

Transportation Impact Assessment

Proposed Mixed-Use Development
119 Ryan Reynolds Way

Transportation Impact Assessment

Prepared By:

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

Dated: April 2024

Novatech File: 123050
Ref: R-2023-080

NOVATECH
Engineers, Planners & Landscape Architects

April 22, 2024

City of Ottawa
Planning and Growth Management Department
110 Laurier Ave. W., 4th Floor,
Ottawa, Ontario K1P 1J1

Attention: **Mr. Mike Giampa**
Transportation Project Manager, Transportation Review

Dear Mr. Giampa:

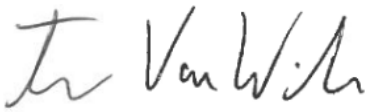
Reference: **119 Ryan Reynolds Way**
Transportation Impact Assessment
Novatech File No. 123050

We are pleased to submit the following Transportation Impact Assessment (TIA), in support of a Site Plan application at 119 Ryan Reynolds Way, for your review and signoff. The structure and format of this report is in accordance with the City of Ottawa Transportation Impact Assessment Guidelines (June 2017).

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

Yours truly,

NOVATECH



Trevor Van Wiechen, M.Eng.
E.I.T. | Transportation

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

TIA Plan Reports

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

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

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

CERTIFICATION

1. 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;
2. 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;
3. 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
4. I am either a licensed[1] or registered[2] professional in good standing, whose field of expertise [check √ appropriate field(s)] is either transportation engineering ☑ or transportation planning ☐.

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

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Dated at Ottawa (City) this 22 day of April, 2024 .

Name: Brad Byvelds
(Please Print)

Professional Title: P. Eng. - Project Manager

B. Byvelds

Signature of Individual certifier that s/he meets the above four criteria

Office Contact Information (Please Print)	
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TABLE OF CONTENTS

Figures

Tables

Appendices

EXECUTIVE SUMMARY

This Transportation Impact Assessment (TIA) has been prepared in support of a Site Plan application for the mixed-use block within the 119 Ryan Reynolds Way subdivision. The subject site is currently occupied by undeveloped land.

The subject site is located in the southeast corner of the Brian Coburn Boulevard/Mer Bleue Road roundabout and is surrounded by the following:

- Brian Coburn Boulevard, followed by a medical facility to the north,
- Residential land use followed by Jerome Jodoin Drive to the east,
- Residential land use followed by Décoeur Drive to the south, and
- Future residential land uses to the west.

A TIA dated March 2021 and Addendum dated June 2021 were prepared in support of Zoning By-law Amendment and Draft Plan of Subdivision applications for 119 Ryan Reynolds Way. This application proposed 123 townhouse units and a mixed-use block containing 170 mid-rise units and 15,000ft^2 of commercial retail. This TIA assumed right-in right-out access to the mixed-use block on Brian Coburn Boulevard.

The proposed development for the mixed-use block is a six-storey building containing 121 residential dwelling units and 4,040ft^2 of commercial medical/office space. Consistent with the previous TIA, access to the development is proposed via a right-in right-out access to Brian Coburn Boulevard. The proposed development is anticipated to be completed in one phase, with buildout occurring in 2025.

The City of Ottawa's Official Plan locates the subject site within the Suburban (East) Transect, with an 'Evolving Neighbourhood' overlay and a 'Corridor - Minor' designation on Schedule B8.

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

Forecasting

- The previous TIA and Addendum prepared for this site proposed a higher density usage and was assumed to generate 128 person trips during the AM peak hour (including 70 vehicle trips), and 202 person trips during the PM peak hour (including 111 vehicle trips).

- The proposed development is anticipated to generate a net decrease of 62 person trips during the AM peak hour (including 32 vehicle trips), and a net decrease of 133 person trips during the PM peak hour (including 71 vehicle trips).

Development Design

- On-site pathways will be provided between the main building entrances and the Mer Bleue Road/Brian Coburn Boulevard roundabout and sidewalk on Mer Bleue Road.

- A total of 66 bicycle parking spaces will be provided within the subject site with 34 being provided with the underground parking lot and 32 provided above ground.

- OC Transpo stops #1052, #1053, #1703, #1708, #1686, #1687, and #5151 are within 400m walking distance of all entrances to the proposed development.

- All required TDM-supportive design and infrastructure measures in the TDM checklist are met.

Parking

- The proposed development includes 155 vehicle parking spaces and is required to provide 154 vehicle parking spaces.

- The proposed development includes 66 bicycle parking spaces, meeting the minimum number of required spaces as outlined in the City's ZBL.

- The development proposes one Type A and one Type B accessible parking spaces meeting the City's Accessibility Design Standards.

Boundary Streets

- Both boundary streets do not meet the target pedestrian level of service (PLOS).

- Both boundary streets do not meet the target bicycle level of service (BLOS).

- No target transit level of service (TLOS) has been identified for either boundary street however both streets achieve a TLOS of D.

- Both boundary streets meet the target truck level of service (TkLOS).

- The east side of Mer Bleue Road does not meet the target PLOS C. Per Exhibit 4 of the *MMLOS Guidelines* a PLOS C cannot be achieved on the east side due to the operating speed and traffic volumes. To achieve the desired PLOS C, a reduced posted speed limit of 50km/hr is required. This is identified for the City's consideration.

- Both sides of Brian Coburn Boulevard do not meet the target PLOS C. To achieve a PLOS C on the north side of the road, a reduced speed limit of 50km/hr is required. A 2m sidewalk and 2m boulevard, combined with a reduced speed limit, are required to achieve the PLOS C on the south side.

- Within the study area neither boundary road meets the target BLOS.

- On Brian Coburn Boulevard a BLOS B can be achieved by either reducing the posted speed to 40km/h and implementing bike lanes or providing a separated cycling facility. Based on the City's Draft 2024 TMP update, a capital infrastructure project will provide an eastbound multi-use pathway along Brian Coburn Boulevard between Mer Bleue Road and Portobello Boulevard, as well as a westbound bike lane from Montmère Avenue to Mer Bleue Road (where feasible). This project will achieve a BLOS A along Brian Coburn Boulevard.

- On Mer Bleue Road a BLOS C can be achieved by either reducing the posted speed to 40km/h or providing a separated cycling facility. This is identified for the City's consideration.

Access Design

- In order to prohibit vehicles making a left turn when entering or exiting the subject site a 'pork chop' island has been proposed limiting turning movements to right-in right-out.

- The proposed accesses adhere to all other provisions of the City's Private Approach By-law.

- The proposed accesses meet the intersection sight distance (ISD) and stopping sight distance (SSD) requirements set by the Transportation Association of Canada (TAC).

- The 18m of available clear throat distance does not meet the required 25m of clear throat distance. The reduced clear throat length is attributable to the large radii required for the pork chop island. As approximately 35m of queuing space is available between Brian Coburn Boulevard and the first on-site parking space, the proposed clear throat will not result in vehicles queuing onto Brian Coburn Boulevard and is considered acceptable.

Based on the foregoing, 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 Site Plan application for the mixed-use block within the 119 Ryan Reynolds Way subdivision. The subject site is currently occupied by undeveloped land.

The subject site is located in the southeast corner of the Brian Coburn Boulevard/Mer Bleue Road roundabout and is surrounded by the following:

- Brian Coburn Boulevard, followed by a medical facility to the north,
- Residential land use followed by Jerome Jodoin Drive to the east,
- Residential land use followed by Décoeur Drive to the south, and
- Future residential land uses to the west.

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

1.2 Proposed Development

A TIA dated March 2021 and Addendum dated June 2021 were prepared in support of Zoning By-law Amendment and Draft Plan of Subdivision applications for 119 Ryan Reynolds Way. This application proposed 123 townhouse units and a mixed-use block containing 170 mid-rise units and 15,000ft^2 of commercial retail. This TIA assumed right-in right-out access to the mixed-use block on Brian Coburn Boulevard.

The proposed development for the mixed-use block is a six-storey building containing 121 residential dwelling units and 4,040ft^2 of commercial medical/office space. Consistent with the previous TIA, access to the development is proposed via a right-in right-out access to Brian Coburn Boulevard. The proposed development is anticipated to be completed in one phase, with buildout occurring in 2025.

The City of Ottawa's Official Plan locates the subject site within the Suburban (East) Transect, with an 'Evolving Neighbourhood' overlay and a 'Corridor - Minor' designation on Schedule B8.

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

1.3 Screening Form

The City's *2017 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 not expected to generate a net additional 60 peak hour person trips compared to land uses assumed in previous TIA studies; further assessment is **not required** based on this trigger.
- Location Triggers – The development proposes access to a roadway on the City's Transit Priority Network; further assessment is **required** based on this trigger.
- Safety Triggers – The development proposes access within 150m of a roundabout; further assessment is **required** based on this trigger.

Figure 1: View of the Subject Site

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.

Brian Coburn Boulevard is an arterial roadway that runs in an east-west direction between Trim Road and Navan Road. It is classified as a truck route allowing full loads. Within the study area it has a two-lane undivided urban cross-section with a posted speed limit of 60 km/h, a sidewalk is provided on the north side of the road. Schedule C16 of the City's Official Plan identifies a ROW protection of 40m for Brian Coburn Boulevard adjacent to the site.

Mer Bleue Road runs in a north-south direction between Innes Road and Navan Road. It is classified as an arterial roadway between Innes Road and Renaud Road and a collector roadway between Renaud Road and Navan Road. It is classified as a truck route allowing full loads north of Brian Coburn Boulevard. Within the study area, it has a four-lane divided urban cross-section with a posted speed limit of 60 km/h, a sidewalk and paved bike lane is provided on both sides of the road. Schedule C16 of the City's Official Plan identifies a ROW protection of 37.5m (subject to varying widening requirements of the Mer Bleue Environmental Study Report) for Mer Bleue Road adjacent to the site.

Jerome Jodoin Drive is a collector roadway that runs in a north-south direction between Brian Coburn Boulevard and Sweetclover Way. It has a two-lane undivided urban cross-section with an unposted speed limit of 50 km/h, and a sidewalk is provided on both sides of the road.

Gerry Lalonde Drive is a collector roadway that runs in a north-south then east-west direction between Brian Coburn Boulevard and Tenth Line Road. It has a two-lane undivided urban cross-section with a posted speed limit of 50 km/h, and a sidewalk is provided on both sides of the road.

2.1.2 Intersections

Brian Coburn Boulevard/Mer Bleue Road

- Four-legged roundabout intersection
- Northbound Approach (Mer Bleue Road): one shared through/left turn lane, and one shared through/right turn lane
- Southbound Approach (Mer Bleue Road): one shared through/left turn lane, and one shared through/right turn lane
- Westbound Approach (Brian Coburn Boulevard): one shared all-movement lane
- Eastbound Approach (Brian Coburn Boulevard): one shared all-movement lane
- Pedestrian crossover (PXO) Type C provided on the north and south approaches and Type D on the east and west approaches

Brian Coburn Boulevard/Jerome Jodoin Drive/ Gerry Lalonde Drive

- Four-legged roundabout intersection
- Northbound Approach (Jerome Jodoin Drive): one shared all-movement lane
- Southbound Approach (Gerry Lalonde Drive): one shared all-movement lane
- Westbound Approach (Brian Coburn Boulevard): one shared all-movement lane
- Eastbound Approach (Brian Coburn Boulevard): one shared all-movement lane
- PXO Type D on all approaches

2.1.3 Driveways

A review of adjacent driveways along the boundary roads are provided as follows:

Mer Bleue Road, West Side:
- Three driveways to undeveloped lands at 1100 Switchback Ridge

Mer Bleue Road, East Side:
- Three driveways to residences at 2903, 2311, and 2319 Mer Bleue Road
- One driveway to an auto-repair center at 2319 Mer Bleue Road

Brian Coburn Boulevard, North Side
- One driveway to the Orleans Health Hub at 2225 Mer Bleue Road

Brian Coburn Boulevard, South Side
- None

2.1.4 Pedestrian and Cycling Facilities

Sidewalks are provided on both sides of Mer Bleue Road, Jeromy Jodoin Drive, and Gerry Lalonde Drive, as well as the north side of Brian Coburn Boulevard.

In the City's primary cycling network, Brian Coburn Boulevard east of Mer Bleue Road is a Local Route and Mer Bleue Road is a Spine Route. Bike lanes are provided on both sides of Mer Bleue Road within the study area. A multi-use pathway is provided on the south side of Brian Coburn Boulevard west of Mer Bleue Road

2.1.5 Transit

The closest OC Transpo bus stops in the vicinity of the subject site are described in **Table 1** and all bus stops within the vicinity of the study area are shown in **Figure 2**. A summary of various routes which serve the study area is included in **Table 2**. Detailed route information is included in **Appendix C**.

Table 1: OC Transpo Transit Stops

Stop	Location	Routes Serviced
#1052	East side of Mer Bleue Rd north of Brian Coburn Blvd	30, 32, 618, 630
#1053	West side of Mer Bleue Rd north of Brian Coburn Blvd	30, 32, 618, 630
#1703	North side of Brian Coburn Blvd mid-block between Mer Bleue Rd and Jerome Jodin Dr/Gerry Lalonde Dr	30, 618, 630
#1708	South side of Brian Coburn Blvd mid-block between Mer Bleue Rd and Jerome Jodin Dr/Gerry Lalonde Dr	30, 618, 630
#1686	Northeast corner of Brian Coburn Blvd/Jerome Jodoin Dr/Gerry Lalonde Dr	30, 234, 618, 630
#1687	Southwest corner of Brian Coburn Blvd/Jerome Jodoin Dr/Gerry Lalonde Dr	30, 618, 630
#5151	West side of Gerry Lalonde Dr north of Brian Coburn Blvd	234

Table 2: OC Transpo Route Information

Route	From ↔ To	Frequency
30	Blair ↔ Millennium	15 to 30-minute headways, all-day service, 7-days per week
32	Blair ↔ Chapel Hill	30 to 60-minute headways, select time periods, 7-days per week. No weekend service within the study area
234	Blair ↔ Tenth Line	30-minute headways peak periods only, Monday to Friday
618	Louis Riel ↔ Millennium	School Bus Route
630	Blair/Colonel By/Gloucester H.S. ↔ Millennium	School Bus Route

Figure 2: OC Transpo Bus Stop Locations

2.1.6 Area Traffic Management

There are no Area Traffic Management (ATM) studies within the study area that have been completed or are currently in progress. 'SLOW' pavement markings and seasonal centerline flex posts are provided along Gerry Lalonde Drive.

2.1.7 Existing Traffic Volumes

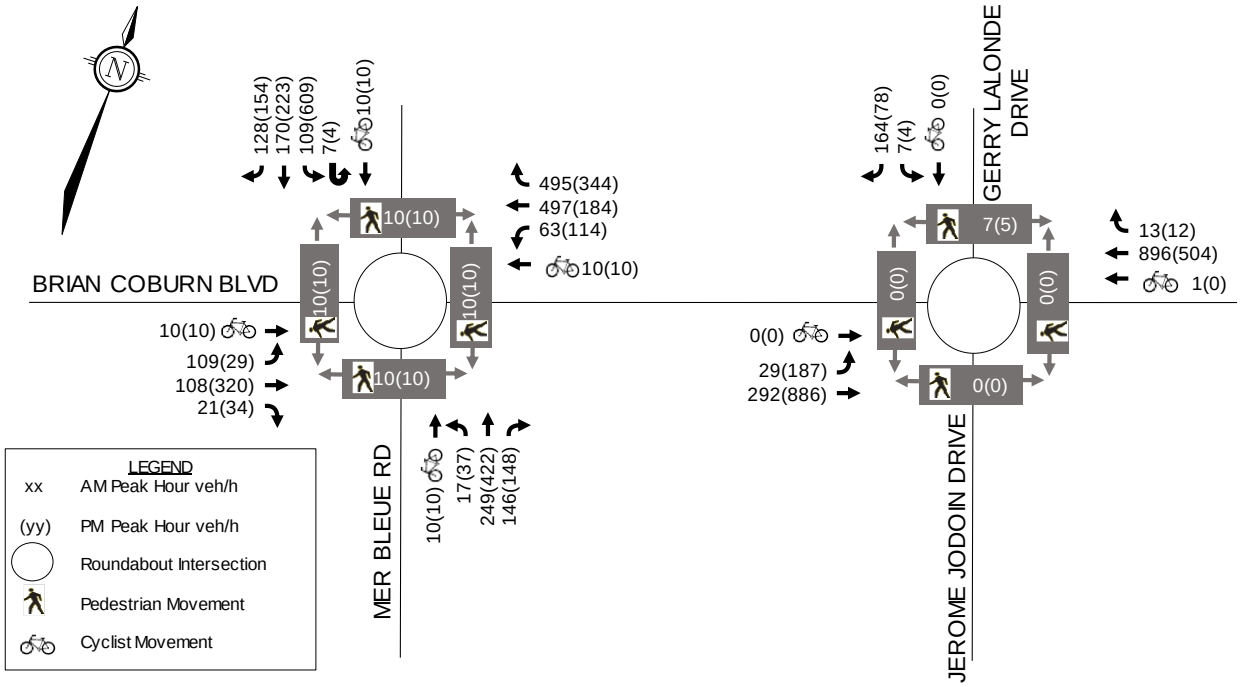
Weekday traffic counts completed for previous TIAs within the study area were used to determine the existing pedestrian, cyclist, and vehicular traffic volumes at the study area intersections. These counts were completed on the following dates:

- Brian Coburn Boulevard/Mer Bleue Road December 2017
- Brian Coburn Boulevard/Gerry Lalonde Drive/Jerome Jodoin Drive December 2018

As pedestrian and cyclist volumes were not available at the Brian Coburn Boulevard/Mer Bleue Road intersection, they have been conservatively assumed in order to be consistent with previous studies.

All traffic count data previously discussed are included in **Appendix D**. Traffic volumes within the study area are shown in **Figure 3**.

Figure 3: Existing Traffic Volumes



2.1.8 Collision Records

Historical collision data from the last five years was obtained from the City's Public Works and Service Department for the study area intersections and road segments between intersections. 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, defined in the *2017 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

Location	Impact Types						Total
	Approach	Angle	Rear End	Sideswipe	Turning Mvmt	SMV[1]/ Other	
Brian Coburn Boulevard/Gerry Lalonde Drive/Jerome Jodoin Drive	-	-	4	-	-	3	**7**
Brian Coburn Boulevard/Mer Bleue Road	-	12	18	3	-	7	**40**
Mer Bleue Road between Brian Coburn Boulevard and Deceoeur Drive	-	-	-	1	-	1	**2**
Brian Coburn Boulevard between Mer Bleue Road and Gerry Lalonde Drive/Jerome Jodoin Drive	-	-	-	-	-	-	**0**

1. SMV = Single Motor Vehicle

Brian Coburn Boulevard/Mer Bleue Road

A total of 40 collisions were reported at this intersection over the last five years, of which there was 12 angle impacts, 18 rear-end impacts, three sideswipe impacts, and seven single vehicle/other impacts. Two collisions resulted in injuries, but none caused fatalities. None of the collisions involved cyclists or pedestrians.

Of the 40 collisions at this location, two of them occurred during rain conditions, six of them occurred during snow conditions, and three occurred during freezing rain conditions, for all other collisions weather was not a factor. Additionally, of the 40 collisions, 24 of them occurred during daylight hours.

Of the 12 angle collisions, four involved northbound and eastbound vehicles, five involved southbound and westbound vehicles, one involved eastbound and southbound vehicles, and two involved westbound and northbound vehicles.

Of the 18 rear end collisions, two involved northbound vehicles, four involved southbound vehicles, six involved eastbound vehicles, and six involved westbound vehicles. The rear end collision patterns at this intersection are anticipated to be attributable to high traffic volumes and congestion on the single lane approaches to the roundabout.

Of the seven single motor vehicle or other collisions, two involved northbound vehicles and five involved southbound vehicles. All single-vehicle impacts resulted from vehicles driving too fast for conditions and losing control.

Calculations of the intersection collision rate per Million Entering Vehicles (MEV) for all collision types across the five-year study period showed an intersection collision rate of 1.04/MEV. Based on this analysis, Brian Coburn Boulevard/Mer Bleue Road does not experience an abnormally high rate of collisions.

Other Intersections and Roadway Segments

As all other intersections and roadway segments have less than six collisions of any specific collision type, a further review of collisions is not required.

2.2 Planned Conditions

2.2.1 Planned Roadway and Transit Projects

Within proximity of the study area, the 2013 Ottawa Cycling Plan and the 2013 Ottawa Pedestrian Plan do not identify any improvements.

The City's 2013 Transportation Master Plan (TMP) 2031 Affordable Rapid Transit and Transit Priority (RTTP) Network identifies isolated transit priority measures along Brian Coburn Boulevard within the study area. The RTTP Network concept identifies the Cumberland Transitway which provides Bus Rapid Transit (BRT) between Blair Station and Frank Kenny Road to the north of the study area.

The City of Ottawa's Draft 2024 TMP identifies Brian Coburn Boulevard as a Crosstown Bikeway and identifies a capital infrastructure project to provide an eastbound multi-use pathway along Brian Coburn Boulevard between Mer Bleue Road and Portobello Boulevard, as well as a westbound bike lane from Montmère Avenue to Mer Bleue Road (where feasible). There is currently no timing available for the implementation of this project.

2.2.2 Other Area Developments

In proximity of the proposed development, there are multiple developments that are approved, or in the approval process. Other developments in the area include:

- 2025 Mer-Bleue Road – Phases 1 to 3 of the proposed commercial development contain approximately 183,000 ft^2 GFA of retail space, 30,000 ft^2 GFA of restaurant space and 10,000 ft^2 GFA of bank developments. Full-build-out occurred in 2019.

- 2025 Mer-Bleue Road Future Phase – Future phases of the proposed commercial development contain approximately 42,000 ft^2 GFA of retail space, 14,000 ft^2 GFA of restaurant space and 118,000 ft^2 GFA of industrial space, 1200 apartment units, 350 senior housing units and a 256-bed assisted living building. Full-build-out is expected by 2026.

- 2405 Mer-Bleue Road/2496 Tenth Line Road – Phases 1 to 3 of the proposed residential subdivision contain approximately 810 units consisting of 430 single family detached dwellings, 260 townhouse units and 210 apartment units. Full-build out was expected by 2020.

- 2564 Tenth Line Road – Phases 5 to 6 of the proposed residential subdivision containing approximately 257 single family homes and 236 townhomes. Full build out is expected to be 2024.

- TrailsEdge East – Phase 4 of the subdivision will include 142 single family detached dwellings, 283 townhouse units, 352 apartment units, and commercial space generating roughly 477 jobs. Phase 4 will be built out in 2036.

- TrailsEdge North (EUC Phase 3) - Residential subdivision containing 340 single family detached dwellings, 643 townhouse dwellings, 1,060 apartment units, and commercial space generating roughly 830 jobs. This development will be built out in 2047.

- 2225 Mer-Bleue Road – The proposed Orleans Health Hub is a 6040 ft^2 health services building with approximately 242 parking stalls and two site accesses. Full-build out of this development occurred in 2021.

- 2159 Mer-Bleue Road – Mixed use development with 45,000 square feet of office space, 190,000 ft^2 of recreational space, 100 retirement residence units and 100 residential apartment units. One site access will be provided and full-build out is expected to occur in 2024.

- 2167 Tenth Line Road – A mixed-use development with 231 proposed apartment units and 500 square metres of retail. This property was expected to be built-out in 2021.

- 2503 Mer Bleue/2666 Tenth Line – Residential subdivision containing approximately 274 single family homes and 370 townhomes the development also includes 2,100 m^2 of commercial space. Full build out is expected to be 2025.

- 2275 Mer Bleue – The residential subdivision portion of the site will have 123 townhouse units. Full build out is expected to be 2025.

Excerpts from relevant transportation studies have been attached in **Appendix F**.

2.3 Study Area and Time Periods

The study area for this report includes the boundary roadways Brian Coburn Boulevard and Mer Bleue Road, as well as the following intersection:

- Brian Coburn Boulevard/Mer Bleue Road
- Brian Coburn Boulevard/Gerry Lalonde Drive/Jerome Jodoin Drive

Analysis will be completed for the weekday AM and PM peak hours, as this represents the worst-case combination of site generated traffic and adjacent street traffic.

2.4 Exemptions Review

This module reviews possible exemptions from the final Transportation Impact Assessment, as outlined in the *2017 TIA Guidelines*. The applicable exemptions for this site are shown in **Table 4**.

Table 4: TIA Exemptions

Module	Element	Exemption Criteria	Status
Design Review Component			
4.1 Development Design	*4.1.2* Circulation and Access	• Only required for site plans	Not Exempt
	4.1.3 New Street Networks	• Only required for plans of subdivision	Exempt
4.2 Parking	*4.2.1* Parking Supply	• Only required for site plans	Not Exempt
	4.2.2 Spillover Parking	• Only required for site plans where parking supply is 15% below unconstrained demand	Exempt

Since the trip generation trigger is not met, all Network Impact modules (Modules 4.5 through 4.9) are exempt from further analysis. Therefore, the following modules will be included in the TIA report:

- Module 4.1: Development Design
- Module 4.2: Parking
- Module 4.3: Boundary Streets
- Module 4.4: Access Design

3.0 FORECASTING

3.1 Development-Generated Traffic

The proposed development is a 6-storey mixed-use concept, including a total of 121 dwelling units and 4,040 ft^2 of ground floor commercial medical/office space. Trip generation has been broken up into each of its uses separately and then combined in the following sections.

Proposed Residential Development

Trips generated by the proposed residential development have been estimated using the *2020 TRANS Trip Generation Manual*. The trip generation rates for the residential portion of the development are taken from Table 3 and correspond to High-Rise Residential in the Orleans Area. The directional split between inbound and outbound trips are based on the blended splits presented in Table 9 of the report. The estimated trip generation are summarized in **Table 5**.

Table 5: Residential Person Trip Generation

Land Use	Trip Rate	Units/GFA	AM Peak (ppp)[1]			PM Peak (ppp)[1]		
			IN	OUT	TOT	IN	OUT	TOT
High-Rise Residential, Orleans	AM: 0.80 PM: 0.90	121	30	67	*97*	63	46	*109*

1. ppp: person trips per period

The *2020 TRANS Trip Generation Manual* provides modal shares for residential developments within the Orleans Area. The proposed modal shares for the residential development are consistent with the parent 119 Ryan Reynolds Way TIA. A breakdown of the projected person trips by modal share is shown in **Table 6**.

Table 6: Residential Peak Period Person Trips by Mode

Travel Mode	Mode Share	AM Peak (ppp)[1]			PM Peak (ppp)[1]		
		IN	OUT	TOT	IN	OUT	TOT
TOTAL		**30**	**67**	**97**	**63**	**46**	**109**
Auto Driver	55%	16	37	53	35	25	60
Auto Passenger	15%	4	10	14	10	7	17
Transit	20%	6	14	20	13	9	22
Cyclist	5%	2	3	5	3	2	5
Pedestrian	5%	2	3	5	3	2	5

1. ppp: person trips per period

Table 4 of the *2020 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 7**.

Table 7: Residential Peak Hour Person Trips by Mode

Travel Mode	Adjustment Factor		AM Peak (pph)[1]			PM Peak (pph)[1]		
	AM	PM	IN	OUT	TOT	IN	OUT	TOT
TOTAL			**15**	**34**	**49**	**28**	**21**	**49**
Auto Driver	0.48	0.44	8	18	26	15	11	26
Auto Passenger	0.48	0.44	2	5	7	4	3	7
Transit	0.55	0.47	3	7	10	6	5	11
Cyclist	0.58	0.48	1	2	3	1	1	2
Pedestrian	0.58	0.52	1	2	3	2	1	3

1. pph: person trips per hour

Proposed Commercial Development

Person trips for the commercial uses have been estimated using rates from the Institute of Transportation Engineer's (ITE) Trip Generation Manual, 11th Edition and a 1.28-person trip adjustment factor. Medical-Dental Office Building was assumed for the land use.

Peak hour person trips for the proposed retail development are summarized in the following table:

Table 8: Trips Generated by the Proposed Commercial Development

Land Use	ITE Code	GFA	AM Peak Hour (pph[1])			PM Peak Hour (pph)		
			IN	OUT	TOT	IN	OUT	TOT
Medical Office	720	4,040ft^2	13	4	17	6	14	20

1. PPH=Person Trips per Hour

The *2020 TRANS Trip Generation Manual* provides modal shares for employment generators within the Orleans Area. The manual provides AM peak hour modal shares and assumes employees take the same mode of transportation during the PM peak. As such, the AM modal shares identified in Table 12 of the report have been used in this report and are rounded to the nearest 5%. A breakdown of the projected person trips by modal share is shown in **Table 9**.

Table 9: Proposed Commercial Development – Peak Hour Person Trips

Travel Mode	Mode Share	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Commercial Person Trips		**13**	**4**	**17**	**6**	**14**	**20**
Auto Driver	70%	9	3	12	4	10	14
Auto Passenger	10%	1	1	2	1	1	2
Transit	10%	1	0	1	1	1	2
Cyclist	5%	1	0	1	0	1	1
Pedestrian	5%	1	0	1	0	1	1

Total Trip Generation

A summary of the traffic generated by the proposed development compared to the previously assumed development as part of the parent 119 Ryan Reynolds Way TIA is provided in **Table 10**.

Table 10: Net Person Trip Generation

Travel Mode	AM Peak Hour			PM Peak Hour		
	In	Out	Total	In	Out	Total
Previously Proposed Development						
Auto Driver	20	50	70	66	45	111
Auto Passenger	5	14	19	18	12	30
Transit	7	18	25	24	17	41
Cyclist	3	4	7	6	4	10
Pedestrian	3	4	7	6	4	10
Total	**38**	**90**	**128**	**120**	**82**	**202**
Proposed Development						
Auto Driver	17	21	38	19	21	40
Auto Passenger	3	6	9	5	4	9
Transit	4	7	11	7	6	13
Cyclist	2	2	4	1	2	3
Pedestrian	2	2	4	2	2	4
Total	**28**	**38**	**66**	**34**	**35**	**69**
Net Trips						
Auto Driver	-3	-29	-32	-47	-24	-71
Auto Passenger	-2	-8	-10	-13	-8	-21
Transit	-3	-11	-14	-17	-11	-28
Cyclist	-1	-2	-3	-5	-2	-7
Pedestrian	-1	-2	-3	-4	-2	-6
Total	**-10**	**-52**	**-62**	**-86**	**-47**	**-133**

From the previous table, the proposed development is projected to generate 66 person trips during the AM peak hour and 69 person trips during the PM peak hour. As described in Section 1.3, while this would normally meet the trip generation trigger the TIA previously completed by CGH in March 2021 assumed that the mixed-use commercial block would generate 128 person trips during the AM peak hour and 202 person trips during the PM peak hour. As the currently proposed development represent a decrease in trips generated from the mixed-use commercial block compared to previous studies the development screens in for a limited scope TIA.

3.2 Trip Distribution

As the trip generation trigger is not met, trip distribution assumptions have not been included.

3.3 Background Traffic

3.3.1 Other Area Developments

A review of other area development traffic has been conducted, per the developments listed in Section 2.2.2. Traffic generated by these developments have been considered in this analysis and added to the future background traffic volumes, as the development was completed after the most recent available traffic data. Relevant excerpts of the traffic study associated with the development below are included in **Appendix F**.

2025 Mer Bleue Road Phases 1-3

Phases 1 to 3 of the development is expected to generate 788 and 1187 vehicle trips during the AM and PM peak hours, respectively. Full build out occurred in 2019.

2025 Mer Bleue Road Future Phase
The future phase of the development is expected to generate 402 and 548 vehicle trips during the AM and PM peak hours, respectively. Full build out is expected by 2026.

2405 Mer Bleue Road/2496 Tenth Line Road
Phases 1 to 3 is expected to generate 327 and 531 vehicle trips during the AM and PM peak hours, respectively. Full build out was expected by 2020.

2564 Tenth Line Road
Phases 5 to 6 is expected to generate 306 and 398 vehicle trips during the AM and PM peak hours, respectively. Full build out is expected to be 2024.

TrailsEdge East
Phase 4 of the development is expected to generate 569 and 767 vehicle trips during the AM and PM peak hours, respectively. Full build out is expected by 2036.

TrailsEdge North (EUC Phase 3)
Phase 4 of the development is expected to generate 1,056 and 1,275 vehicle trips during the AM and PM peak hours, respectively. Full build out is expected by 2047.

2225 Mer-Bleue Road
The Orleans Health Hub is expected to generate 145 and 172 vehicle trips during the AM and PM peak hours, respectively. Full build out occurred in 2021.

2159 Mer-Bleue Road
The development is expected to generate 411 and 393 vehicle trips during the AM and PM peak hours, respectively. Full build out is expected by 2024.

2167 Tenth Line Road
The mixed-use development is expected to generate 99 and 121 vehicle trips during the AM and PM peak hours, respectively. Full build out was expected by 2021.

2503 Mer Bleue Road/2666 Tenth Line Road
The residential development is expected to generate 376 and 430 vehicle trips during the AM and PM peak hours, respectively. Full build out is expected by 2025.

119 Ryan Reynolds Way
The residential subdivision portion of the development is expected to generate 121 and 143 vehicle trips during the AM and PM peak hours, respectively. Full build out is expected by 2025.

As a transportation study was not available for the Avalon West Community Phase 5, traffic on the south leg of the Brian Coburn Boulevard/Gerry Lalonde Drive/Jerome Jodoin Drive intersection were taken from the 119 Ryan Reynolds Way TIA.

3.3.2 General Background Growth Rate

A background growth rate of 2% was selected to be conservative and to be consistent with other approved transportation studies in the study area that were completed in recent years.

3.4 Future Traffic Conditions

The figures listed below present the following future traffic conditions:

- Background traffic volumes in 2024 are shown in **Figure 4**;
- Background traffic volumes in 2029 are shown in **Figure 5**;

Figure 4: 2024 Background Traffic

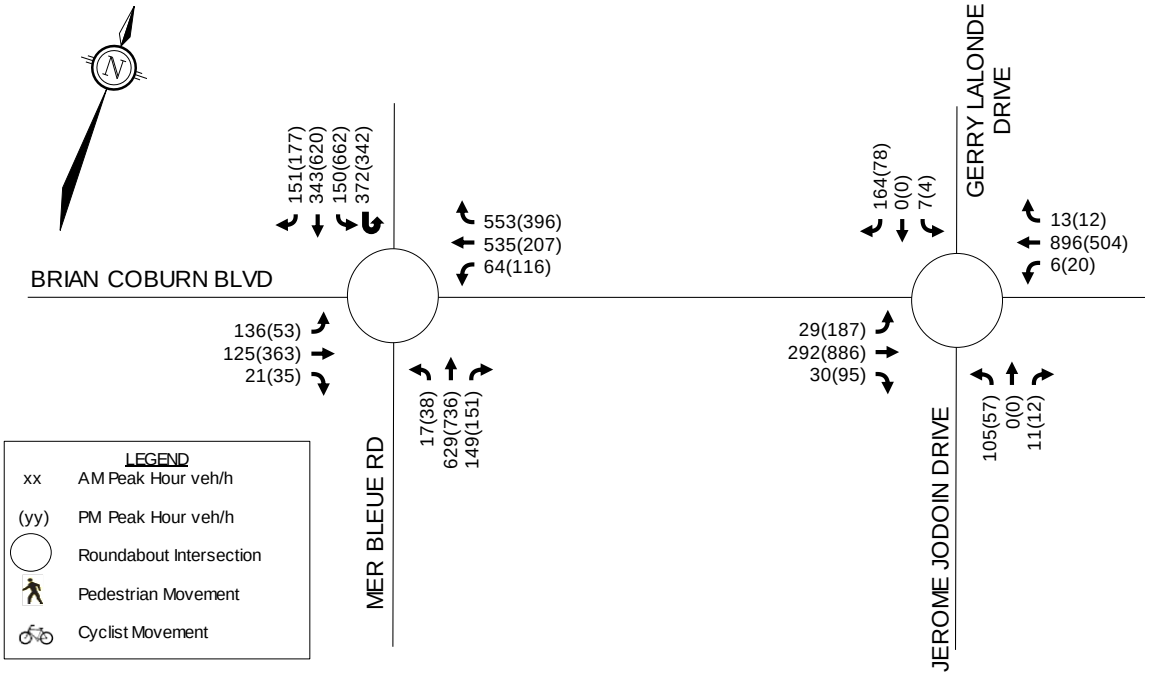
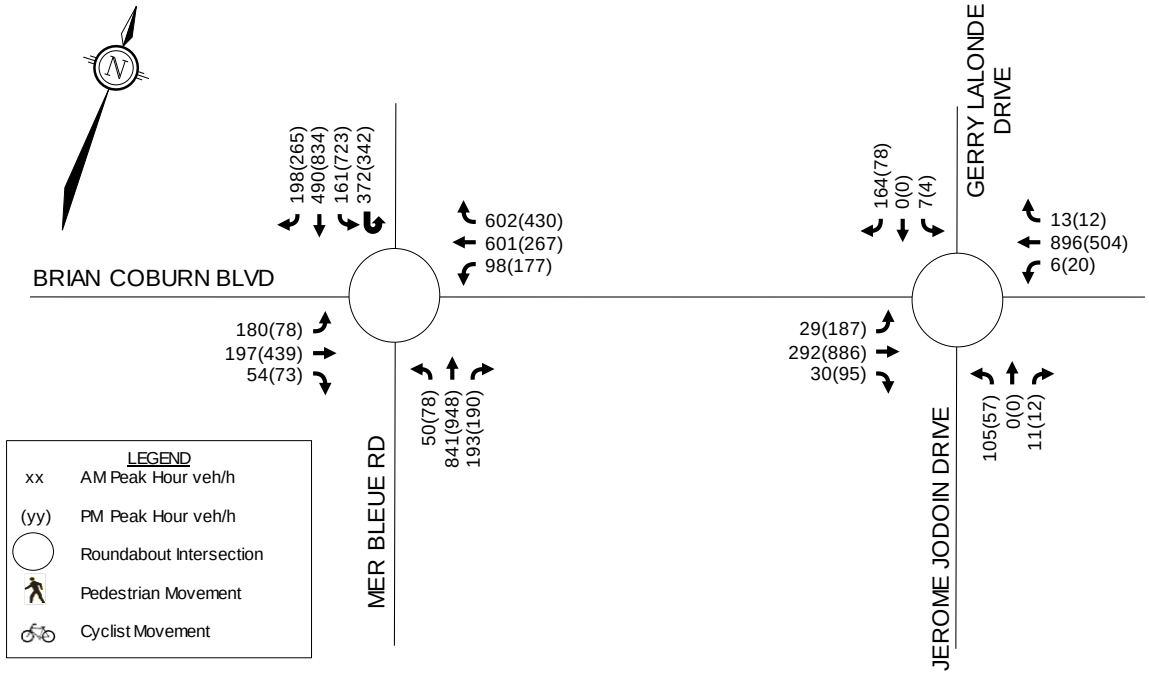


Figure 5: 2029 Background Traffic



3.5 Demand Rationalization

As the trip generation trigger is not met, a detailed review of intersection operations within the study area is not required.

4.0 ANALYSIS

4.1 Development Design

4.1.1 Design for Sustainable Modes

On-site pathways will be provided between the main building entrances and the Mer Bleue Road/Brian Coburn Boulevard roundabout and sidewalk on Mer Bleue Road.

Bicycle parking for the development will be in accordance with the City's *Zoning By-Law* (ZBL). A total of 66 bicycle parking spaces will be provided within the subject site with 34 being provided with the underground parking lot and 32 provided above ground.

All bus stops discussed in Section 2.1.5 (and shown in **Figure 2**) are within 400m walking distance of the entrances to the proposed development. These stops are served by Routes 30, 32, 234, 618, and 630. A 400m walking distance is equivalent to a five-minute walk, per OC Transpo's service design guidelines.

A review of the City's *Transportation Demand Management (TDM)-Supportive Development Design and Infrastructure Checklist* has been conducted. All required TDM-supportive design and infrastructure measures in the TDM checklist are met. A copy of this checklist is included in **Appendix G**.

In order to encourage the use of sustainable modes, the following 'basic' and 'better' design measures from the City's TDM Infrastructure Checklist will be implemented for the proposed redevelopment:

- The building will be located near the street and have no parking areas between the street and building entrances;
- The location of the building entrances will minimize the walking distance to sidewalks and transit stops/stations;
- Building doors and windows will ensure visibility of pedestrians from the building;
- Walking routes from the development to nearby transit stops will be safe, direct, and attractive;
- Walking routes from the development to nearby transit stops will be secure, visible, lighted, shaded, and wind protected whenever possible; and
- As the site features more than one use parking the cumulative number of parking spaces will be reduced as per ZBL Section 104.

4.1.2 Circulation and Access

Garbage collection will occur within the development at the southeast corner of the subject site. The vehicular access and drive aisles will form the fire route for the subject site. A hammerhead fire truck turnaround area is provided near the garbage collection area.

A review of turning movements for a fire truck and a Heavy Single Unit (HSU)/garbage truck has been completed at the Brian Coburn Boulevard right-in right-out access and within the site in **Figures 6**, **7**, and **8**.

4.2 Parking

The subject site is located in Area C of Schedule 1 and Schedule 1A of the City's ZBL. Per Section 104(1) where more than one land use listed in Table 104 are located on the same lot the total parking required based on Section 101 may be reduced.

An evaluation of the proposed parking versus the requirements are summarized in **Table 11**.

Table 11: Parking Requirements

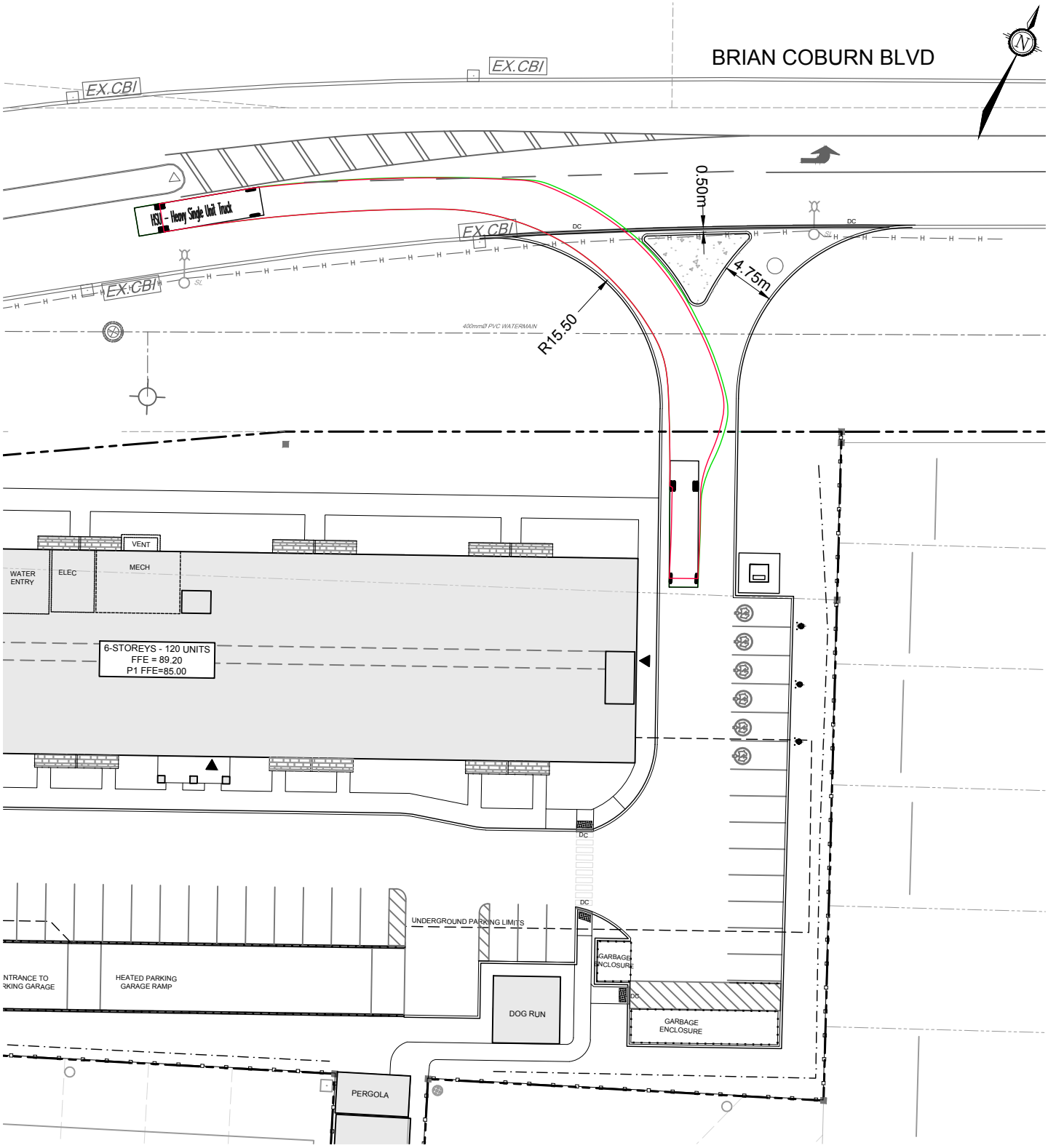
Land Use	Rate	Units/GFA	Required
Minimum Vehicle Parking Requirements			
Dwelling Units within Mixed-Use Building	1.0 per dwelling unit	121	121
Dwelling Units within Mixed-Use Building (visitor parking)	0.2 per dwelling unit		24
Medical Facility	4 per 100m^2 of GFA	375m^2	15
		Total	**154**[1]
Minimum Bicycle Parking Requirements			
Mid-High Rise Apartment	0.5 per dwelling unit	121	61
Medical Facility	1.0 per 1000m^2 of GFA	375m^2	1
		Total	**62**

1: Total parking spaces reduced by six parking spaces per Section 104(1) of the City's ZBL

The proposed development includes 155 vehicle parking spaces and is required to provide 154 vehicle parking spaces.

A total of 66 bicycle parking spaces are proposed, exceeding the requirements of the Zoning By-law.

The development proposes 24 visitor parking spaces and 11 parking spaces for the medical office space. For parking lots with 26-50 parking spaces the City's Accessibility Design Standards require one Type A and one Type B accessible parking spaces. The development proposes one Type A and one Type B accessible parking spaces meeting the City's Accessibility Design Standards.



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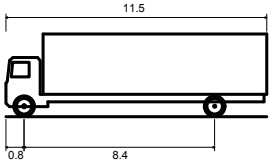

HSU - Heavy Single Unit Truck

Overall Length	11.500m
Overall Width	2.600m
Overall Body Height	3.650m
Min Body Ground Clearance	0.445m
Track Width	2.600m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	14.100m

119 RYAN REYNOLDS WAY

TURNING MOVEMENT (HSU)

SCALE 1 : 500 (0, 5m, 10m, 20m)

DATE APR 2024 | JOB 123050 | FIGURE FIGURE 6

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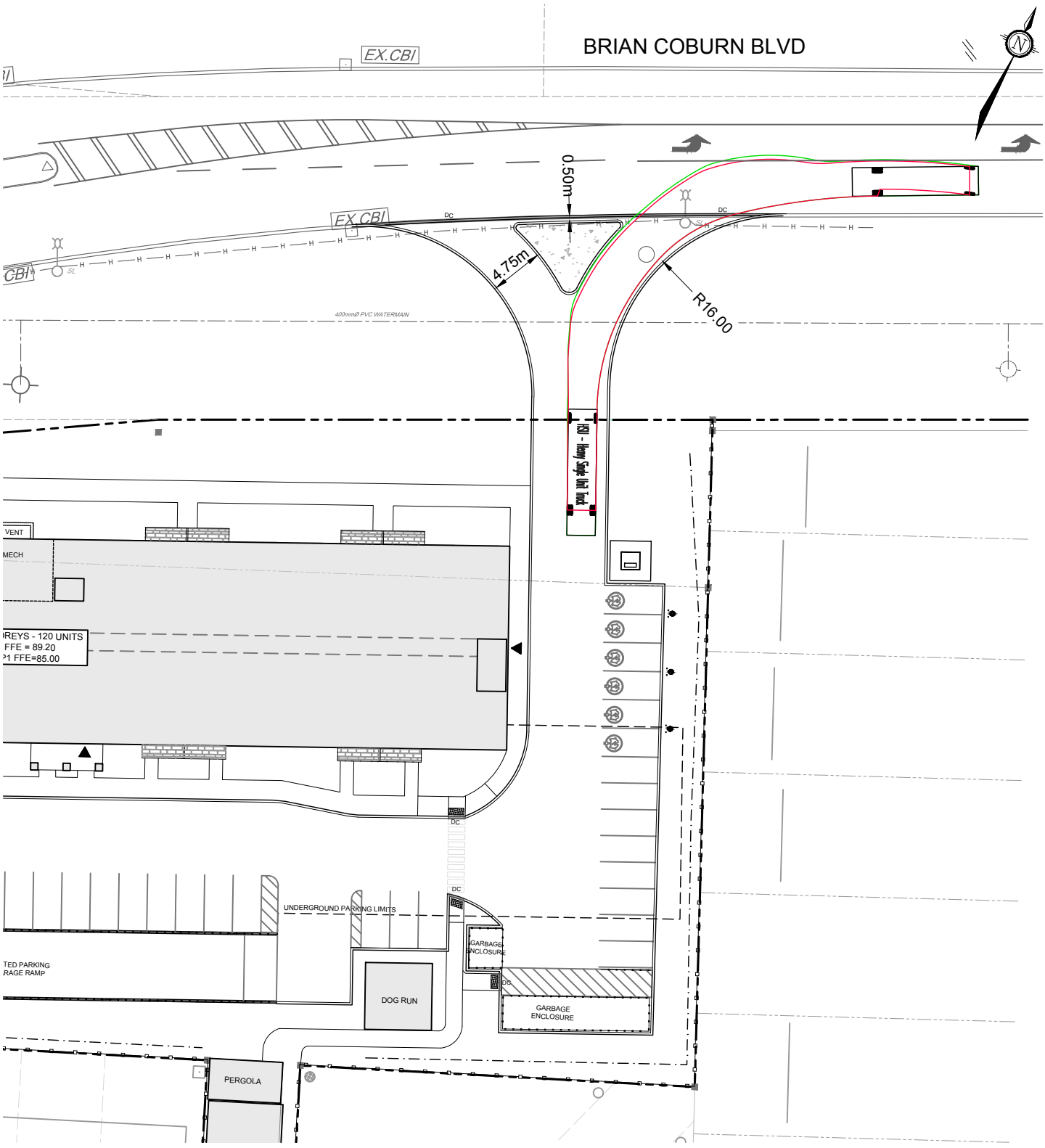

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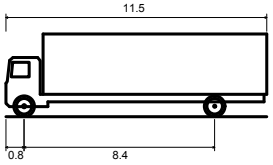

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Min Body Ground Clearance	0.445m
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Curb to Curb Turning Radius	14.100m

119 RYAN REYNOLDS WAY

TURNING MOVEMENT (HSU)

SCALE 1 : 500 (0, 5m, 10m, 20m)

DATE APR 2024 | JOB 123050 | FIGURE FIGURE 7

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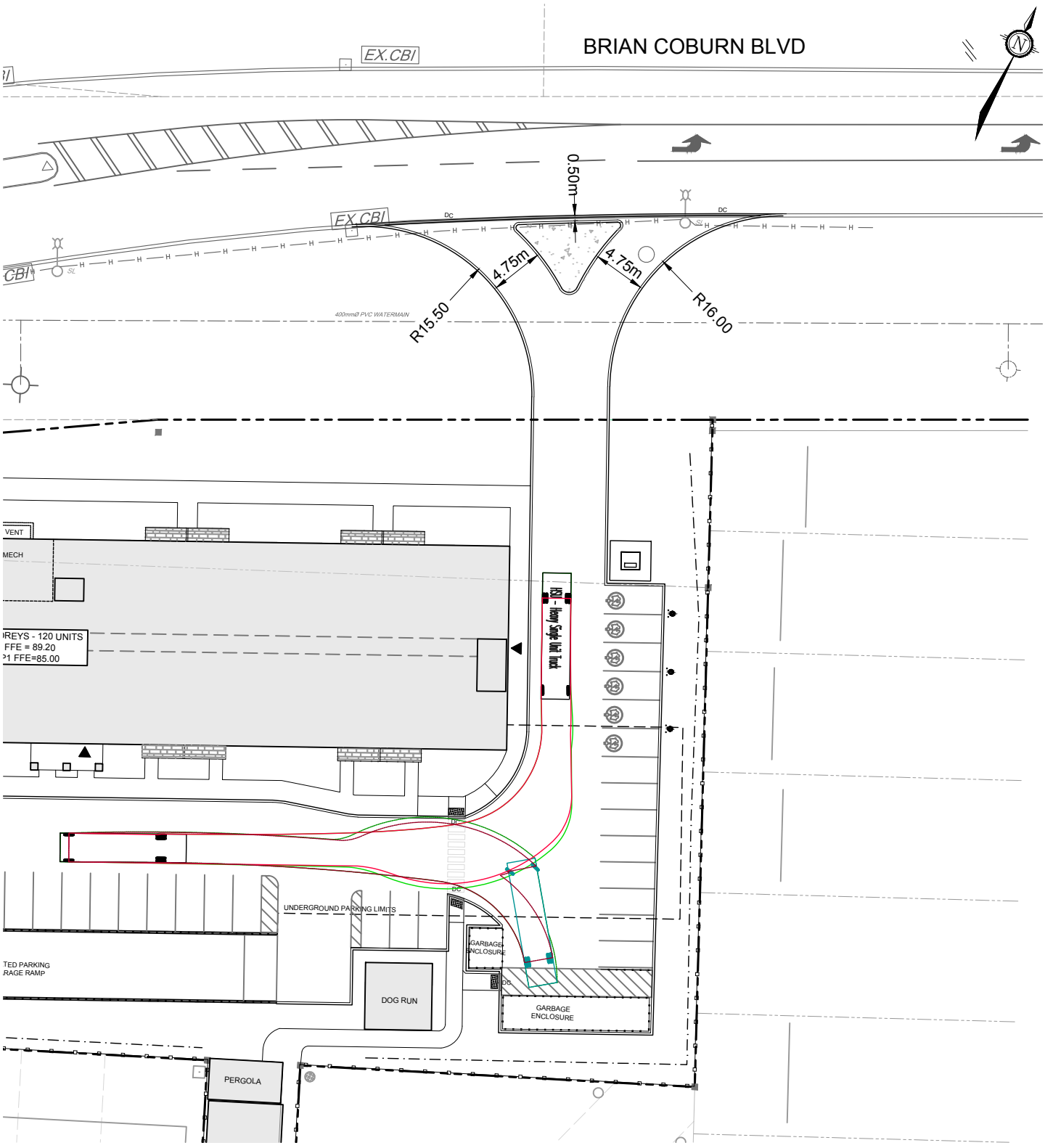

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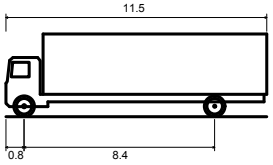

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119 RYAN REYNOLDS WAY

TURNING MOVEMENT (HSU)

SCALE 1 : 500 (0, 5m, 10m, 20m)

DATE APR 2024 | JOB 123050 | FIGURE FIGURE 8

SHT8X11.DWG - 216mmx279mm

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4.3 Boundary Street Design

This section provides a review of the boundary streets Brian Coburn Boulevard and Mer Bleue Road 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. The subject site is located within a General Urban Area (per Schedule B of the City's previous Official Plan, which is referenced by the MMLOS Guidelines).

A detailed segment MMLOS review of the boundary streets is included in **Appendix H**. A summary of the segment MMLOS analysis is provided below in **Table 12**.

Table 12: Segment MMLOS Summary

Segment	PLOS		BLOS		TLOS		TkLOS	
	Actual	Target	Actual	Target	Actual	Target	Actual	Target
Brian Coburn Boulevard	**F**	C	**F**	B	D	-	B	D
Mer Bleue Road	**D**	C	**F**	C	D	-	A	E

The results of the segment MMLOS analysis can be summarized as follows:

- Both boundary streets do not meet the target pedestrian level of service (PLOS);
- Both boundary streets do not meet the target bicycle level of service (BLOS);
- No target transit level of service (TLOS) has been identified for either boundary street however both streets achieve a TLOS of D; and
- Both boundary streets meet the target truck level of service (TkLOS).

Pedestrian Level of Service

The east side of Mer Bleue Road does not meet the target PLOS C. Per Exhibit 4 of the *MMLOS Guidelines* a PLOS C cannot be achieved on the east side due to the operating speed and traffic volumes. To achieve the desired PLOS C, a reduced posted speed limit of 50km/hr is required. This is identified for the City's consideration.

Both sides of Brian Coburn Boulevard do not meet the target PLOS C. To achieve a PLOS C on the north side of the road, a reduced speed limit of 50km/hr is required. A 2m sidewalk and 2m boulevard, combined with a reduced speed limit, are required to achieve the PLOS C on the south side.

Bicycle Level of Service

Within the study area neither boundary road meets the target BLOS. On Brian Coburn Boulevard a BLOS B can be achieved by either reducing the posted speed to 40km/h and implementing bike lanes or providing a separated cycling facility. Based on the City's Draft 2024 TMP update, a capital infrastructure project will provide an eastbound multi-use pathway along Brian Coburn Boulevard between Mer Bleue Road and Portobello Boulevard, as well as a westbound bike lane from Montmère Avenue to Mer Bleue Road (where feasible). This project will achieve a BLOS A along Brian Coburn Boulevard.

On Mer Bleue Road a BLOS C can be achieved by either reducing the posted speed to 40km/h or providing a separated cycling facility. This is identified for the City's consideration.

4.4 Access Design

In order to prohibit vehicles making a left turn when entering or exiting the subject site a 'pork chop' island has been proposed limiting turning movements to right-in right-out.

The proposed access to the subject site has been evaluated based on the relevant requirements of the City's *Private Approach By-Law* (PABL), ZBL and the Transportation Association of Canada.

Section 25(a) of the PABL identifies that a property with 46-150m of frontage may have a maximum of two two-way private approaches. This requirement is met, as the subject site has approximately 49m of frontage to Brian Coburn Boulevard and is proposing one right-in right-out access.

Section 25(c) of the PABL identifies a maximum width requirement of 9.0m for any two-way private approach, as measured at the street line. Section 107(1)(a) of the City's ZBL identifies a minimum width of 6m and maximum width of 6.7m for a double traffic lane for an apartment use. Since the proposed access is approximately 6.7m in width, this requirement is met.

Section 25(m) of the PABL identifies a minimum space requirement of 30m for a private approach and the nearest intersecting street line. As the proposed access is roughly 100m from the nearest intersecting street line this requirement is met.

Section 25(p) of the PABL identifies a minimum separation requirement of 3.0m between the nearest edge of a private approach and the closest property line, as measured at the street line. Since the nearest edge of the access is proposed to be approximately 9.0m from the eastern property line, this requirement is not met.

Section 25(u) of the PABL identifies a maximum driveway grade of 2% for a distance of 9m within the property, for driveways serving more than 50 parking spaces. As a grade of 2% is proposed for 9m within the property, this requirement is met.

Intersection sight distance (ISD) at the proposed accesses have been determined using the TAC *Geometric Design Guidelines for Canadian Roads.* The ISD requirements for the Brian Coburn Boulevard access, based on a design speed of 70km/h, is as follows:

- Right Turn from Minor Road 130 metres

As the access is proposed to be right out only the left turn sight distance was not studied. Clear sight lines will be available to the Brian Coburn Boulevard/Mer Bleue Road roundabout, meeting the TAC requirements.

The TAC Geometric Design Guide for Canadian Roads identifies minimum clear throat lengths based on road classification and land use. For an Apartment land use with 100 to 200 units a minimum clear throat length of 25m is required for arterial roads. A clear throat length of 18m is available between the end of the access radii and the first on-site parking space. The reduced clear throat length is attributable to the large radii required for the pork chop island. As approximately 35m of queuing space is available between Brian Coburn Boulevard and the first on-site parking space, the proposed clear throat will not result in vehicles queuing onto Brian Coburn Boulevard and is considered acceptable.

5.0 CONCLUSIONS AND RECOMMENDATIONS

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

Forecasting

- The previous TIA and Addendum prepared for this site proposed a higher density usage and was assumed to generate 128 person trips during the AM peak hour (including 70 vehicle trips), and 202 person trips during the PM peak hour (including 111 vehicle trips).

- The proposed development is anticipated to generate a net decrease of 62 person trips during the AM peak hour (including 32 vehicle trips), and a net decrease of 133 person trips during the PM peak hour (including 71 vehicle trips).

Development Design

- On-site pathways will be provided between the main building entrances and the Mer Bleue Road/Brian Coburn Boulevard roundabout and sidewalk on Mer Bleue Road.

- A total of 66 bicycle parking spaces will be provided within the subject site with 34 being provided with the underground parking lot and 32 provided above ground.

- OC Transpo stops #1052, #1053, #1703, #1708, #1686, #1687, and #5151 are within 400m walking distance of all entrances to the proposed development.

- All required TDM-supportive design and infrastructure measures in the TDM checklist are met.

Parking

- The proposed development includes 155 vehicle parking spaces and is required to provide 154 vehicle parking spaces.

- The proposed development includes 66 bicycle parking spaces, meeting the minimum number of required spaces as outlined in the City's ZBL.

- The development proposes one Type A and one Type B accessible parking spaces meeting the City's Accessibility Design Standards.

Boundary Streets

- Both boundary streets do not meet the target pedestrian level of service (PLOS).

- Both boundary streets do not meet the target bicycle level of service (BLOS).

- No target transit level of service (TLOS) has been identified for either boundary street however both streets achieve a TLOS of D.

- Both boundary streets meet the target truck level of service (TkLOS).

- The east side of Mer Bleue Road does not meet the target PLOS C. Per Exhibit 4 of the *MMLOS Guidelines* a PLOS C cannot be achieved on the east side due to the operating

speed and traffic volumes. To achieve the desired PLOS C, a reduced posted speed limit of 50km/hr is required. This is identified for the City's consideration.

- Both sides of Brian Coburn Boulevard do not meet the target PLOS C. To achieve a PLOS C on the north side of the road, a reduced speed limit of 50km/hr is required. A 2m sidewalk and 2m boulevard, combined with a reduced speed limit, are required to achieve the PLOS C on the south side.

- Within the study area neither boundary road meets the target BLOS.

- On Brian Coburn Boulevard a BLOS B can be achieved by either reducing the posted speed to 40km/h and implementing bike lanes or providing a separated cycling facility. Based on the City's Draft 2024 TMP update, a capital infrastructure project will provide an eastbound multi-use pathway along Brian Coburn Boulevard between Mer Bleue Road and Portobello Boulevard, as well as a westbound bike lane from Montmère Avenue to Mer Bleue Road (where feasible). This project will achieve a BLOS A along Brian Coburn Boulevard.

- On Mer Bleue Road a BLOS C can be achieved by either reducing the posted speed to 40km/h or providing a separated cycling facility. This is identified for the City's consideration.

Access Design

- In order to prohibit vehicles making a left turn when entering or exiting the subject site a 'pork chop' island has been proposed limiting turning movements to right-in right-out.

- The proposed accesses adhere to all other provisions of the City's Private Approach By-law.

- The proposed accesses meet the intersection sight distance (ISD) and stopping sight distance (SSD) requirements set by the Transportation Association of Canada (TAC).

- The 18m of available clear throat distance does not meet the required 25m of clear throat distance. The reduced clear throat length is attributable to the large radii required for the pork chop island. As approximately 35m of queuing space is available between Brian Coburn Boulevard and the first on-site parking space, the proposed clear throat will not result in vehicles queuing onto Brian Coburn Boulevard and is considered acceptable.

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

NOVATECH

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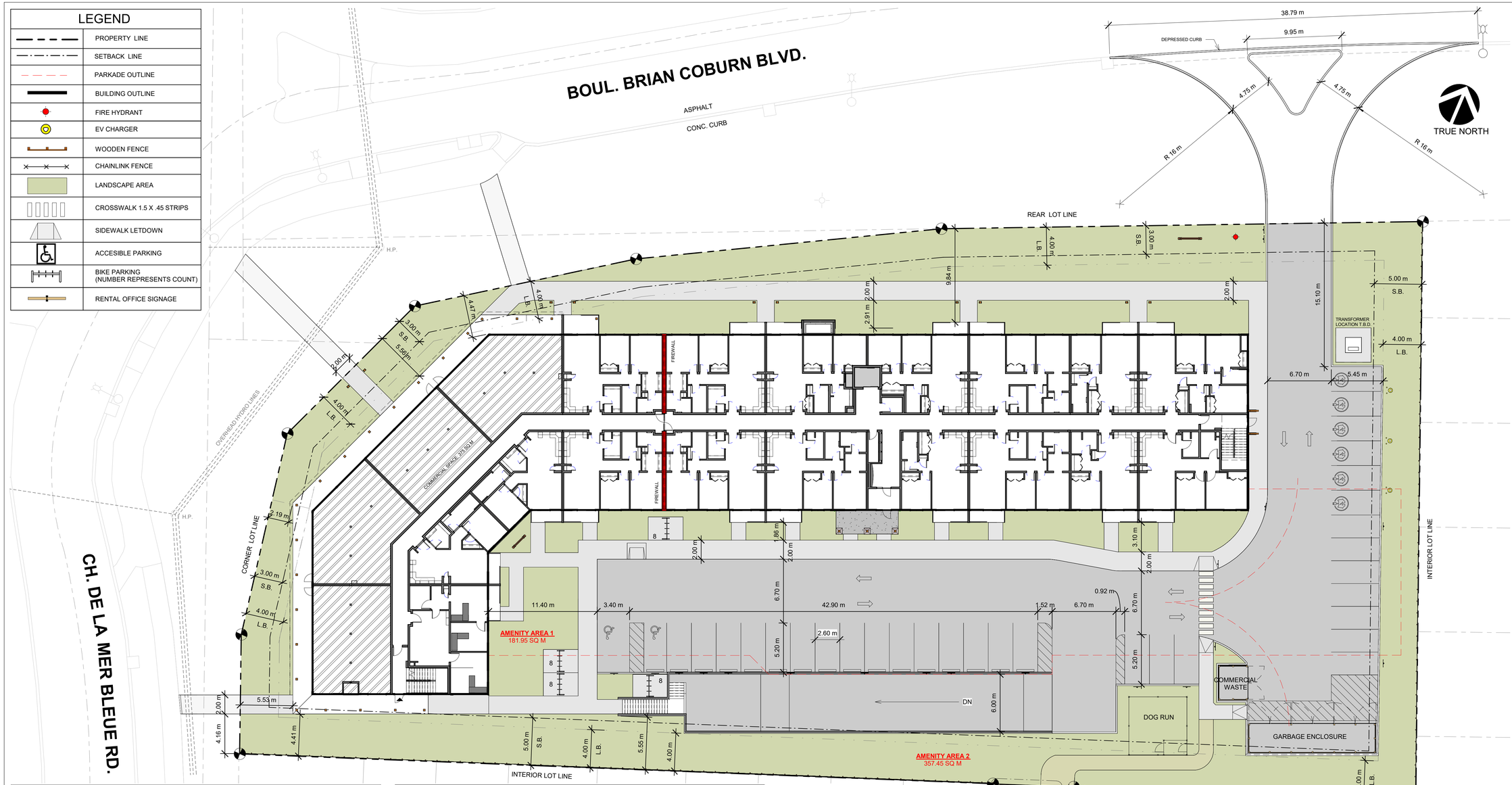
E.I.T. | Transportation

Reviewed by:

Brad Byvelds, P.Eng.
Project Manager | Transportation

APPENDIX A

Site Plan



1 SITE PLAN
1 : 200

PROPERTY BOUNDARY & TOPOGRAPHIC INFORMATION PROVIDED BY ANNIS, O'SULLIVAN, VOLLEBEKK LTD.

SITE INFORMATION

PROJECT DESCRIPTION	1-MULTIFAMILY RESIDENTIAL APARTMENT (6 STOREY)	
TOTAL UNITS	121 RESIDENTIAL UNITS	
CIVIC ADDRESS	119 RYAN REYNOLDS WAY, OTTAWA, ONT	
MUNICIPALITY	CITY OF OTTAWA	
ZONING	GM15 [2156]	
LEGAL DESCRIPTION	PT LT 3 CON 11 CUMBERLAND PT 1, 50R5735 S&E PT 9, 4R28677; SUBJECT TO AN EASEMENT IN GROSS OVER PT 1, 4R30222 AS IN OC1886169	
LOT AREA	6799.02	m^2
DENSITY	71.42 DU/ACRE	
FLOOR SPACE INDEX (FSI)	1.80	

ZONING SUMMARY

	REQUIRED		PROPOSED	
MAX. BUILDING HEIGHT	18 m		17.95 m	
MIN. FRONT YARD S.B.	3	m	3	m
MIN. REAR YARD S.B.	3	m	3	m
MIN. INTERIOR SIDE YARD S.B.	5	m	5	m
MIN. CORNER SIDE YARD S.B.	3	m	3	m
MIN. LOT AREA	No Minimum	m^2	6799	m^2
MIN. LOT WIDTH	No Minimum	m	---	m
MIN. WIDTH OF LAND. BUFFER	4	m	4	m

LANDSCAPE

	REQUIRED	PROPOSED
PERCENTAGE OF LOT AREA	30%	32%
m^2	2,039.71 m^2	2178.11 m^2

VEHICULAR PARKING

	REQUIRED	UNITS/AREA	REQUIRED	PROPOSED
APARTMENT - MIXED USE	1 / UNIT	121	121	122
VISITORS	0.2 / UNIT	121	24	24
MEDICAL	4 / 100 m^2	375 m^2	15	9*
SHARED PARKING REDUCTION			-6	
TOTAL PARKING STALLS			**154**	**155**
OTHER PARKING PROVISIONS				
SMALL CAR	MAX 50%		MAX 68	68
ACCESSIBLE TYPE A			1	1
ACCESSIBLE TYPE B			1	1

*** INCLUSIVE OF SHARED PARKING REDUCTION**

BICYCLE PARKING

	RATE	UNITS/AREA	REQUIRED	PROPOSED
APARTMENT BUILDING	0.5 / UNIT	-	61	64
MEDICAL FACILITY	1 / 1000 m^2	375 m^2	1	2
TOTAL BICYCLE			**62**	**66**
OTHER BICYCLE PROVISIONS				
MAX BIKE STALLS IN LANDSCAPED AREA	50%	-	31	32
MIN HORIZONTAL BIKE STALL	50%	-	31	36
MIN SECURED BIKE STALLS	25%	-	16	34

BUILDING INFORMATION

BUILDING	STOREYS	UNIT #	OTHER	FOOTPRINT	GROSS BUILDING AREA	COMMERCIAL
A	**6**	**121**	**RENTAL**	2027.17 m^2	12305.9 m^2	375 m^2

UNIT BREAKDOWN

	BUILDING A
1 BEDROOM / 1 BATH	24 UNITS
2 BEDROOM / 1 BATH	7 UNITS
2 BEDROOM / 2 BATH	69 UNITS
3 BEDROOM / 2 BATH	21 UNITS
TOTAL	**121 UNITS**

AMENITY

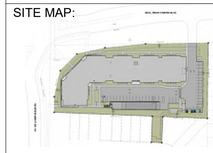
	RATE	REQUIRED	PROPOSED
TOTAL AMENITY SPACE	**6** m^2 / DU	**720** m^2	**1485.3 m^2**
COMMUNAL AMENITY AREA (MIN. 50% OF TOTAL)		**360** m^2	**592.8 m^2**

WASTE CALCULATIONS

		REQUIRED	PROPOSED
GARBAGE	(0.110 y^3 / UNIT)	13.31 y^3	14 y^3
GMP	(0.018 y^3 / UNIT)	2.18 y^3	2 y^3
FIBRE	(0.038 y^3 / UNIT)	4.59 y^3	6 y^3
ORGANICS	(240L / 50 UNITS)	580.8 L	720L

SEYMOUR PACIFIC DEVELOPMENTS LTD
100 St Anns Street, Campbell River, B.C.
(T)250.286.8045 (F)250.286.8046
www.seymourpacific.ca

SITE MAP:



PROJECT STATUS:

ISSUED FOR PLAN CONTROL

Revision Schedule

No.	Description	Revision Date
A	ISSUED FOR SCP	07/25/2023
B	RE-ISSUED FOR SCP	12/18/2023
C	ISSUED FOR PRE-CONSULTATION	04/12/2024

SEAL: **ABELE**ARCHITECTURE
THOMAS C. ABELE, ARCHITECT OAA, T: 604.682-6818

PROJECT NAME:
CASSETTE COMMONS

PROJECT NUMBER:
VP2207

ADDRESS:
2275 MER BLEUE
OTTAWA, ONTARIO

DRAWING TITLE:
SITE PLAN

DRAWN BY:	EC
CHECKED BY:	CG
DATE:	APRIL 12,2024
SCALE:	As indicated
DRAWING #:	A1.00
REV #:	C

04/19/2024 8:51:32 AM

APPENDIX B

TIA Screening Form

City of Ottawa 2017 TIA Guidelines Screening Form

1. Description of Proposed Development

Municipal Address	**2275 Mer Bleue Road**
Description of Location	**Southeast corner of Brian Coburn Boulevard and Mer Bleue Road roundabout**
Land Use Classification	**Residential/Commercial**
Development Size (units)	**119 residential units**
Development Size (m^2)	**362.5m^2 of commercial medical/office space**
Number of Accesses and Locations	**One to Brian Coburn Boulevard**
Phase of Development	
Buildout Year	

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

2. Trip Generation Trigger

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

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

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

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

3. Location Triggers

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

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

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

4. Safety Triggers

	Yes	No
Are posted speed limits on a boundary street are 80 km/hr or greater?		X
Are there any horizontal/vertical curvatures on a boundary street limits sight lines at a proposed driveway?		X
Is the proposed driveway within the area of influence of an adjacent traffic signal or roundabout (i.e. within 300 m of intersection in rural conditions, or within 150 m of intersection in urban/ suburban conditions)?	✓	
Is the proposed driveway within auxiliary lanes of an intersection?		X
Does the proposed driveway make use of an existing median break that serves an existing site?		X
Is there is a documented history of traffic operations or safety concerns on the boundary streets within 500 m of the development?		X
Does the development include a drive-thru facility?		X

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

5. Summary

	Yes	No
Does the development satisfy the Trip Generation Trigger?		X
Does the development satisfy the Location Trigger?	✓	
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).

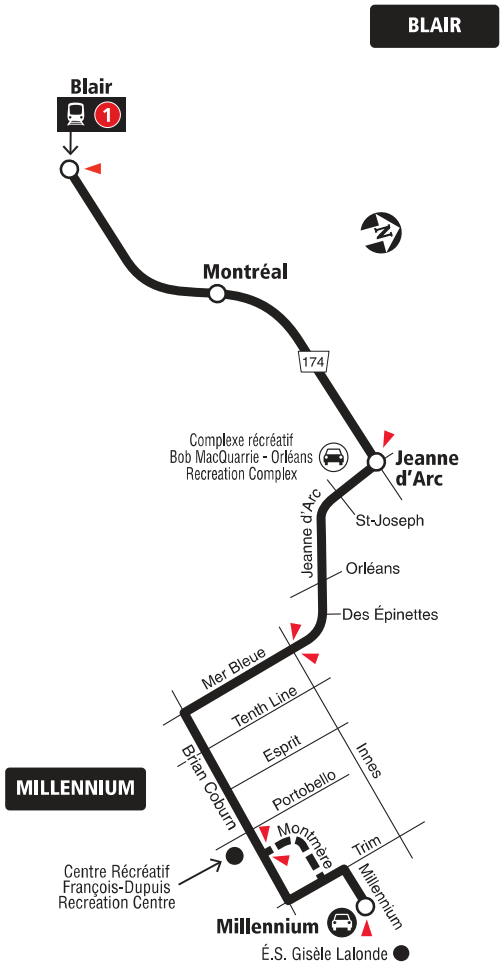
APPENDIX C

OC Transpo Route Maps

30 MILLENNIUM / BLAIR

Local

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



Station
Peak periods / Périodes de pointe
Park & Ride / Parc-o-bus
Timepoint / Heures de passage

2019.07

Future route after O-Train Line 1 is open
Trajet du circuit après l'ouverture de la Ligne 1 de l'O-Train

Lost and Found / Objets perdus..... **613-563-4011**
Security / Sécurité..... **613-741-2478**

OC Transpo
INFO 613-741-4390
octranspo.com

32

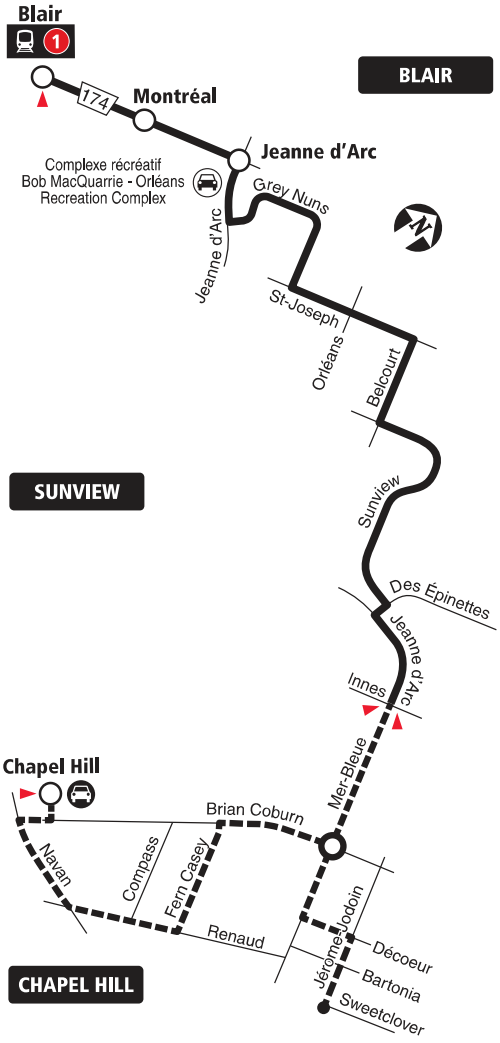
SUNVIEW CHAPEL HILL
BLAIR

Local

7 days a week / 7 jours par semaine

Selected time periods only

Périodes sélectionnées seulement



Station

No weekend service
Aucun service la fin de semaine

Park & Ride / Parc-o-bus

Timepoint / Postes d'attente

2021.09

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 September 5, 2021

En vigueur 5 septembre 2021

OC Transpo

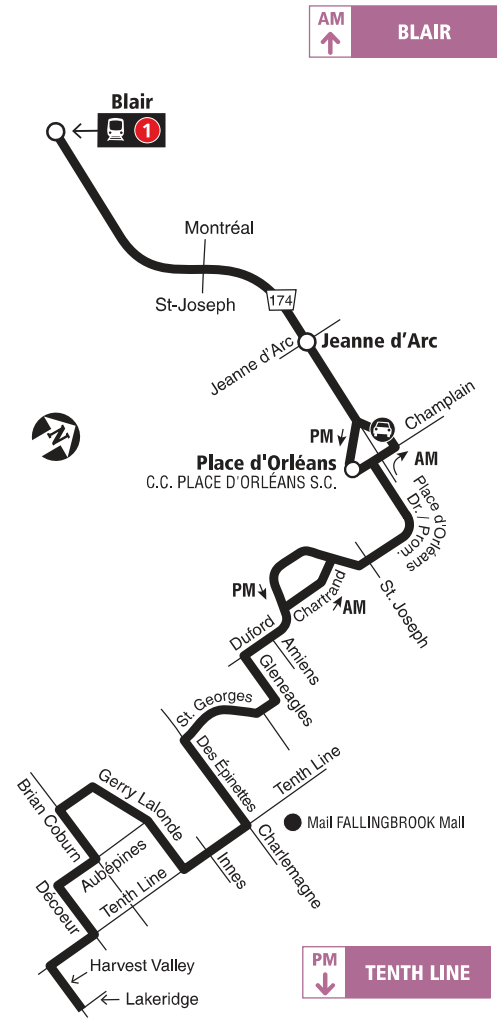
INFO 613-560-5000
octranspo.com

234 Connexion

TENTH LINE
BLAIR

Monday to Friday / Lundi au vendredi

Peak periods only
Périodes de pointe seulement

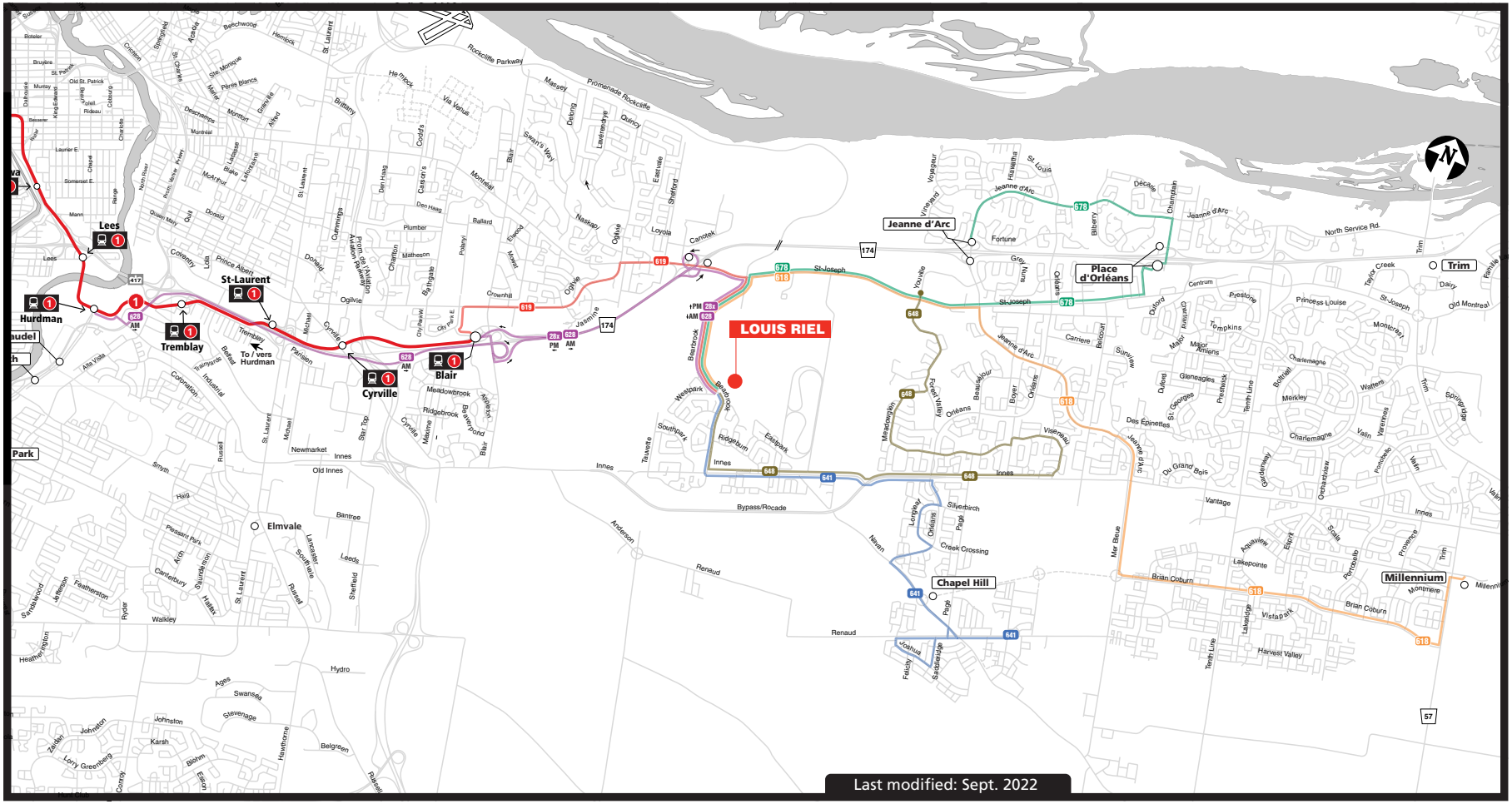


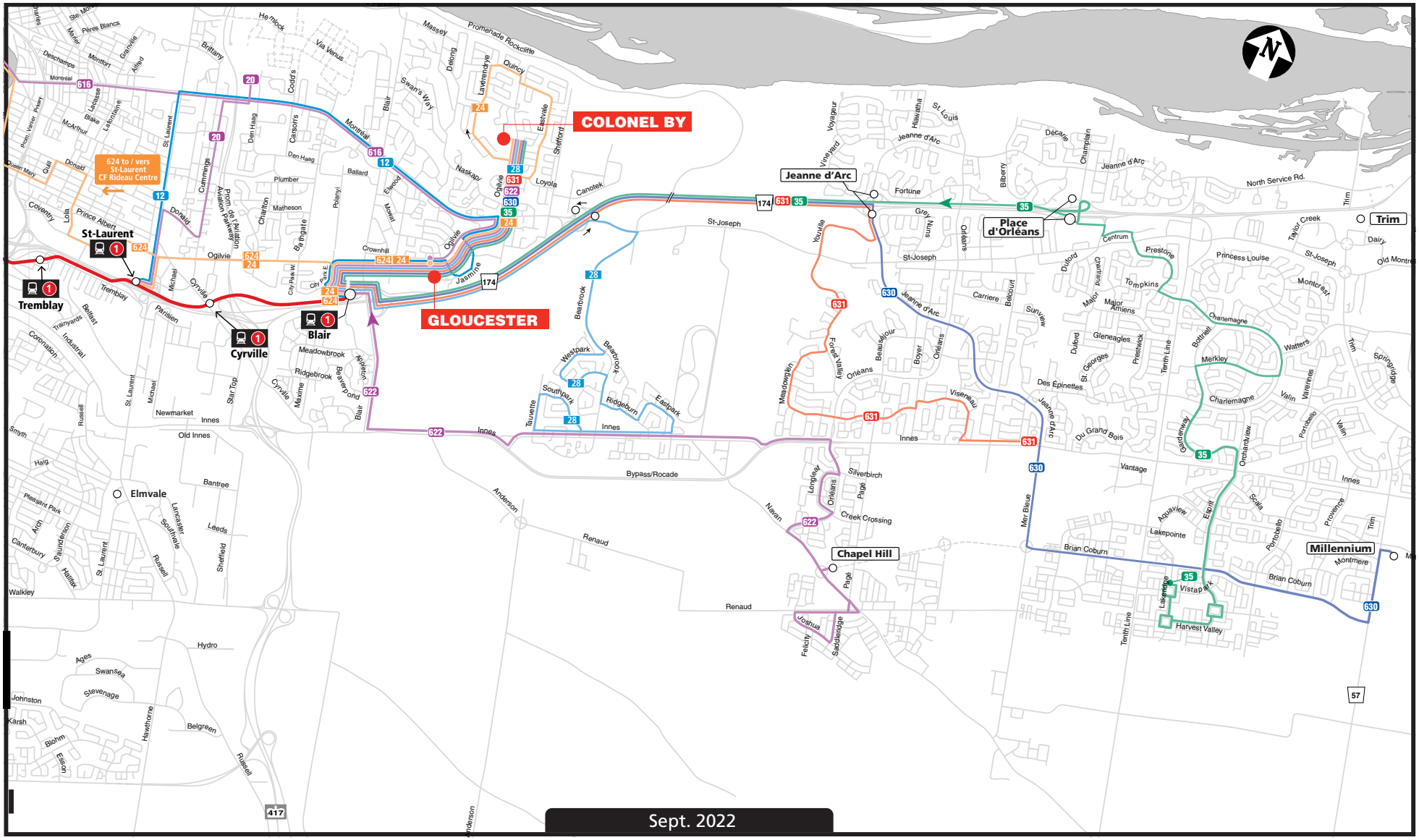
2019.09

Future route after O-Train Line 1 is open
Trajet du circuit après l'ouverture de la Ligne 1 de l'O-Train

Lost and Found / Objets perdus..... **613-563-4011**
Security / Sécurité..... **613-741-2478**

OC Transpo
INFO 613-741-4390
octranspo.com


LOUIS RIEL
Lees
Hurdman
St-Laurent
Tremblay
Cyrville
Blair
Jeanne d'Arc
Place d'Orléans
Trim
Millennium
Chapel Hill
Elmvale
Park
Rockcliffe Parkway
Promenade Rockcliffe
North Service Rd.
Bypass/Rocade
Last modified: Sept. 2022


COLONEL BY
GLOUCESTER
Jeanne d'Arc
Place d'Orléans
St-Laurent
Tremblay
Cyrville
Blair
Elmvale
Chapel Hill
Millennium
Trim
624 to / vers St-Laurent CF Rideau Centre
Sept. 2022

APPENDIX D

Traffic Count Data

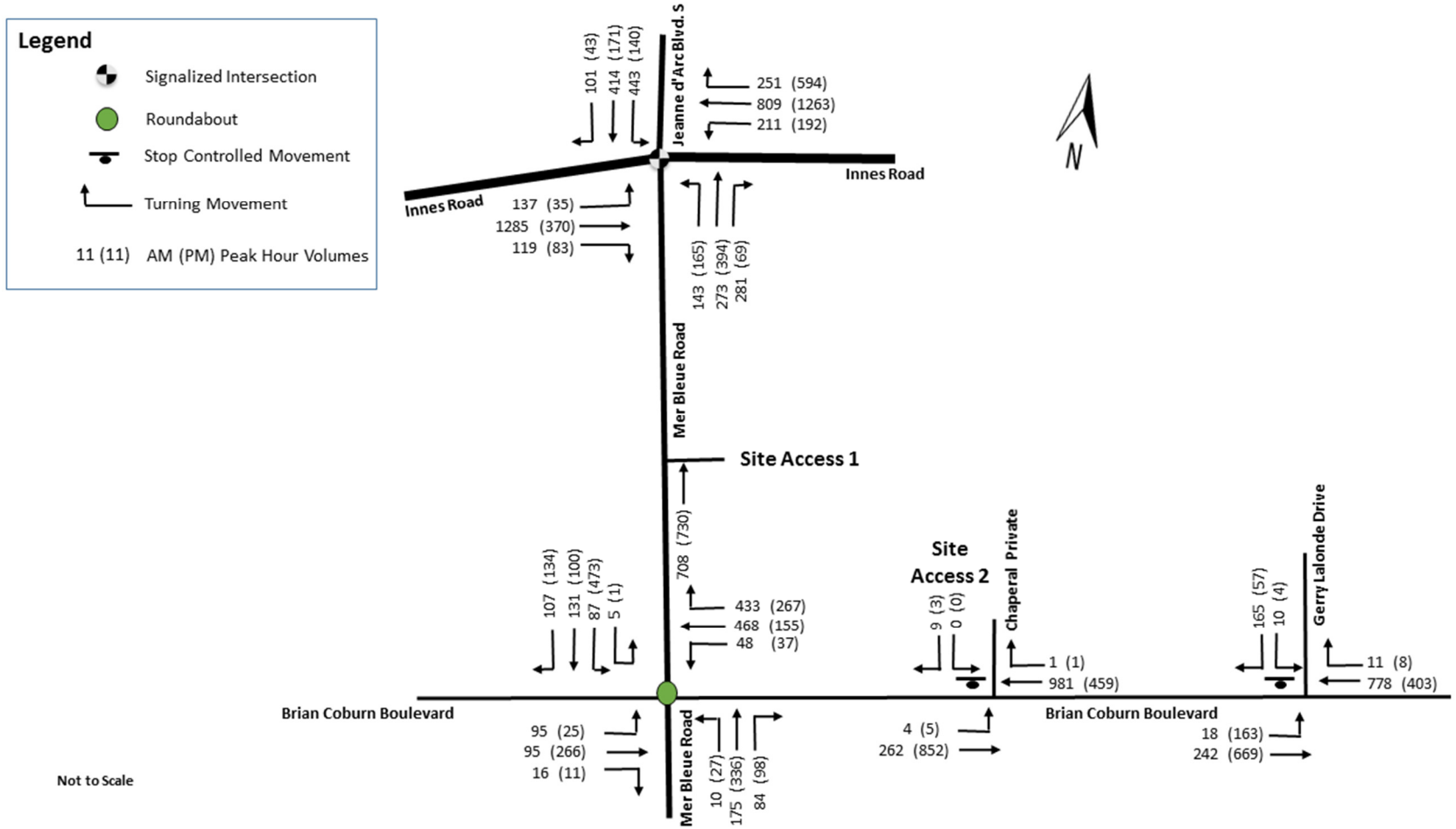


Exhibit 6: Existing 2017 Traffic Volumes

APPENDIX E

Collision Records

Transportation Services - Traffic Services

Collision Details Report - Public Version

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

Location: BRIAN COBURN BLVD @ GERRY LALONDE DR/JEROME JODOIN DR

Traffic Control: Stop sign **Total Collisions:** 7

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2017-May-08, Mon,23:21	Clear	SMV other	P.D. only	Dry	East	Going ahead	Pick-up truck	Curb	0
2018-Oct-10, Wed,06:30	Fog, mist, smoke, dust	Rear end	P.D. only	Wet	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Oct-31, Thu,18:07	Rain	Rear end	Non-fatal injury	Wet	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2020-Jan-16, Thu,06:25	Snow	SMV other	P.D. only	Packed snow	South	Pulling onto shoulder or toward curb	Automobile, station wagon	Snowbank/drift	0
2021-Apr-22, Thu,20:50	Clear	SMV other	P.D. only	Dry	West	Reversing	Police vehicle	Pole (sign, parking meter)	0
2021-Sep-08, Wed,19:21	Clear	Rear end	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Stopped	Pick-up truck	Other motor vehicle	
2021-Nov-17, Wed,18:45	Rain	Rear end	Non-fatal injury	Wet	East	Unknown	Unknown	Other motor vehicle	0
					East	Stopped	Pick-up truck	Other motor vehicle	

Location: BRIAN COBURN BLVD @ MER BLEUE RD

Traffic Control: Roundabout **Total Collisions:** 40

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2017-Feb-07, Tue,22:38	Snow	SMV other	P.D. only	Loose snow	South	Going ahead	Automobile, station wagon	Skidding/sliding	0
2017-Mar-08, Wed,07:20	Freezing Rain	SMV other	P.D. only	Ice	South	Slowing or stopping	Automobile, station wagon	Pole (utility, power)	0
2017-Mar-30, Thu,20:52	Clear	Angle	P.D. only	Dry	North	Going ahead	Pick-up truck	Other motor vehicle	0
					East	Going ahead	Passenger van	Other motor vehicle	
2017-Sep-27, Wed,18:30	Clear	Rear end	P.D. only	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Slowing or stopping	Automobile, station wagon	Other motor vehicle	

Transportation Services - Traffic Services

Collision Details Report - Public Version

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

Location: BRIAN COBURN BLVD @ MER BLEUE RD

Traffic Control: Roundabout **Total Collisions:** 40

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2018-Jun-22, Fri,10:17	Clear	Rear end	P.D. only	Dry	East	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Jan-01, Tue,05:09	Snow	SMV other	P.D. only	Loose snow	South	Going ahead	Automobile, station wagon	Pole (sign, parking meter)	0
2019-Feb-20, Wed,18:00	Clear	Rear end	P.D. only	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2019-Feb-24, Sun,07:57	Freezing Rain	SMV other	P.D. only	Ice	North	Changing lanes	Automobile, station wagon	Curb	0
2019-Feb-27, Wed,18:20	Clear	Angle	P.D. only	Ice	North	Merging	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Mar-11, Mon,20:43	Clear	SMV other	Non-fatal injury	Ice	South	Going ahead	Automobile, station wagon	Skidding/sliding	0
2019-Mar-11, Mon,21:40	Snow	SMV other	P.D. only	Ice	North	Going ahead	Pick-up truck	Ran off road	0
2019-Mar-17, Sun,19:00	Clear	Angle	P.D. only	Dry	South	Merging	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Mar-31, Sun,07:41	Freezing Rain	SMV other	P.D. only	Slush	South	Going ahead	Automobile, station wagon	Skidding/sliding	0
2019-Apr-27, Sat,11:32	Clear	Angle	P.D. only	Dry	West	Merging	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-May-03, Fri,16:35	Clear	Rear end	P.D. only	Wet	South	Going ahead	Pick-up truck	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Jul-03, Wed,07:50	Clear	Rear end	P.D. only	Dry	West	Slowing or stopping	Passenger van	Other motor vehicle	0
					West	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Sep-23, Mon,07:45	Clear	Rear end	P.D. only	Dry	West	Slowing or stopping	Pick-up truck	Other motor vehicle	0
					West	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Oct-09, Wed,09:15	Clear	Angle	P.D. only	Dry	South	Merging	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Pick-up truck	Other motor vehicle	

Transportation Services - Traffic Services

Collision Details Report - Public Version

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

Location: MER BLEUE RD btwn BRIAN COBURN BLVD & DECOEUR DR

Traffic Control: No control

Total Collisions: 2

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2019-Aug-20, Tue,23:03	Clear	SMV other	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Curb	0
2020-Feb-19, Wed,16:17	Clear	Sideswipe	Non-fatal injury	Loose snow	South	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	

Transportation Services - Traffic Services

Collision Details Report - Public Version

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

Location: BRIAN COBURN BLVD @ MER BLEUE RD

Traffic Control: Roundabout **Total Collisions:** 40

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2019-Nov-15, Fri,07:30	Clear	Rear end	P.D. only	Slush	West	Going ahead	Unknown	Other motor vehicle	0
					West	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Dec-01, Sun,12:21	Clear	Angle	P.D. only	Dry	South	Merging	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Dec-09, Mon,08:38	Rain	Rear end	P.D. only	Wet	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2019-Dec-09, Mon,19:11	Rain	Angle	P.D. only	Wet	West	Merging	Pick-up truck	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2020-Jan-10, Fri,18:17	Clear	Angle	P.D. only	Wet	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2020-Feb-18, Tue,16:00	Clear	Rear end	P.D. only	Slush	North	Slowing or stopping	Pick-up truck	Skidding/sliding	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2020-Feb-25, Tue,18:30	Clear	Rear end	P.D. only	Wet	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					North	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2020-Mar-06, Fri,08:09	Snow	Angle	P.D. only	Wet	South	Merging	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Passenger van	Other motor vehicle	
2020-Mar-07, Sat,10:29	Clear	Angle	P.D. only	Dry	East	Merging	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2020-May-07, Thu,12:53	Clear	Sideswipe	P.D. only	Dry	South	Changing lanes	Pick-up truck	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2020-Jul-15, Wed,17:30	Clear	Rear end	P.D. only	Dry	East	Unknown	Unknown	Other motor vehicle	0
					East	Stopped	Pick-up truck	Other motor vehicle	

Transportation Services - Traffic Services

Collision Details Report - Public Version

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

Location: BRIAN COBURN BLVD @ MER BLEUE RD

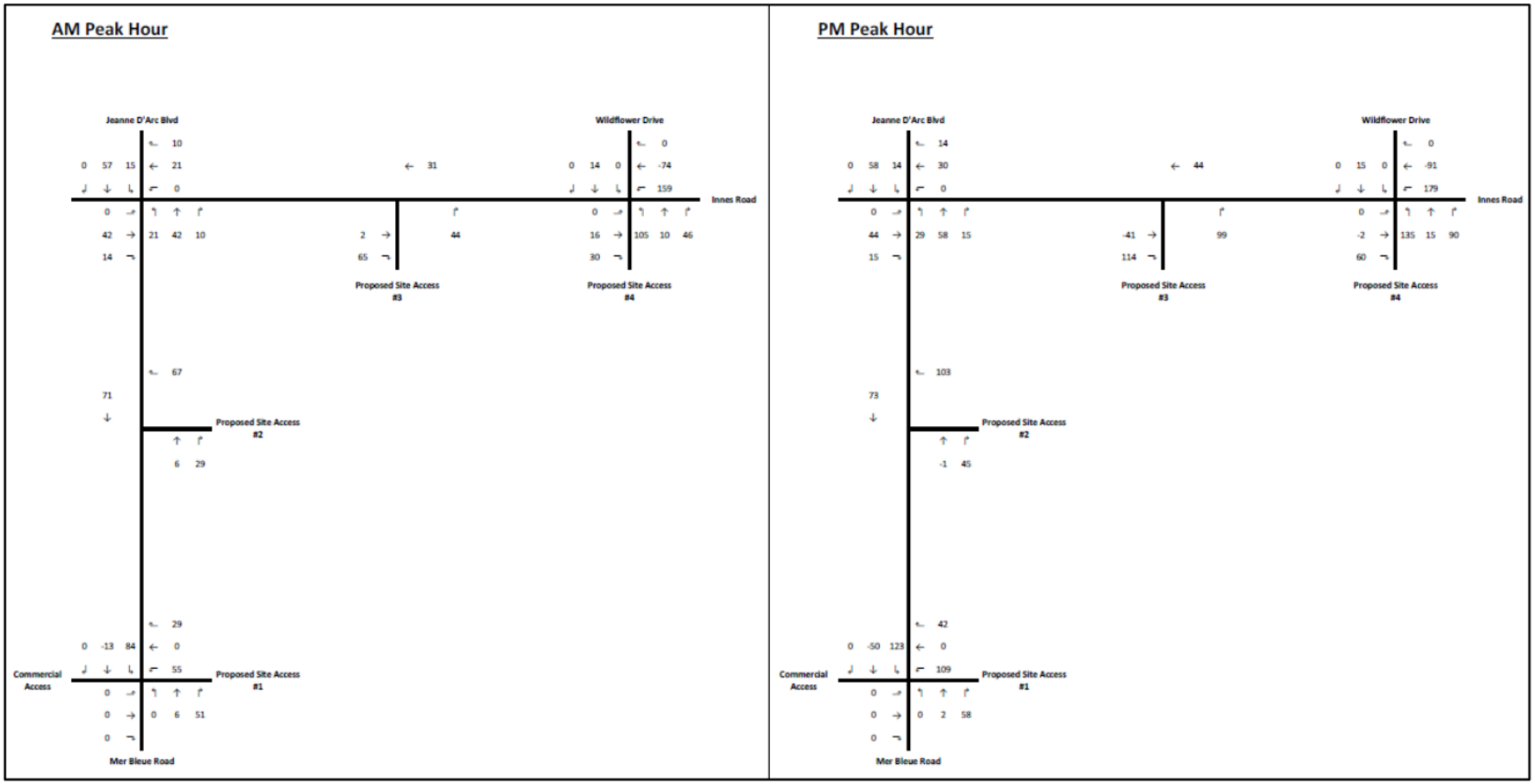
Traffic Control: Roundabout **Total Collisions:** 40

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2020-Sep-02, Wed,15:28	Clear	Rear end	Non-fatal injury	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
					South	Slowing or stopping	Pick-up truck	Other motor vehicle	
					South	Slowing or stopping	Passenger van	Other motor vehicle	
2020-Sep-03, Thu,13:17	Clear	Angle	P.D. only	Dry	North	Merging	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2020-Oct-31, Sat,09:49	Clear	Rear end	P.D. only	Wet	South	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					South	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2020-Nov-02, Mon,21:00	Snow	Angle	P.D. only	Loose snow	North	Merging	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2020-Nov-04, Wed,12:50	Clear	Sideswipe	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Passenger van	Other motor vehicle	
2020-Nov-22, Sun,16:43	Snow	Rear end	P.D. only	Slush	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2021-Jan-09, Sat,17:15	Clear	Rear end	P.D. only	Dry	East	Unknown	Unknown	Other motor vehicle	0
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2021-Mar-17, Wed,17:10	Clear	Rear end	P.D. only	Dry	East	Slowing or stopping	Pick-up truck	Other motor vehicle	0
					East	Stopped	Pick-up truck	Other motor vehicle	
2021-May-01, Sat,14:03	Clear	Rear end	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Stopped	Pick-up truck	Other motor vehicle	
2021-Jul-07, Wed,22:55	Clear	Sideswipe	P.D. only	Dry	East	Overtaking	Automobile, station wagon	Other motor vehicle	0
					East	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2021-Oct-08, Fri,11:58	Clear	Rear end	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Stopped	Pick-up truck	Other motor vehicle	

APPENDIX F

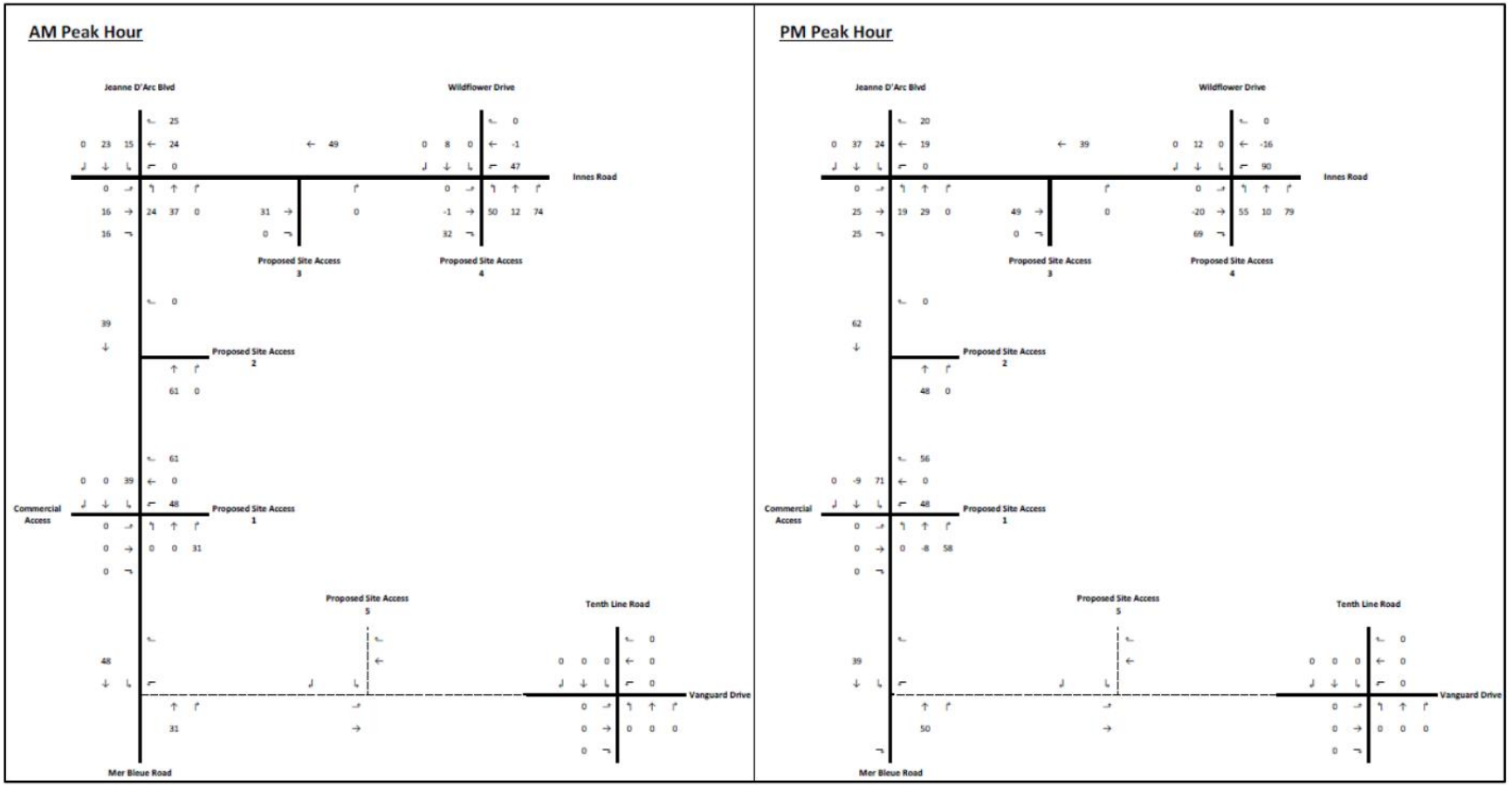
Background Reports

2025 Mer Bleue Road Phases 1-3



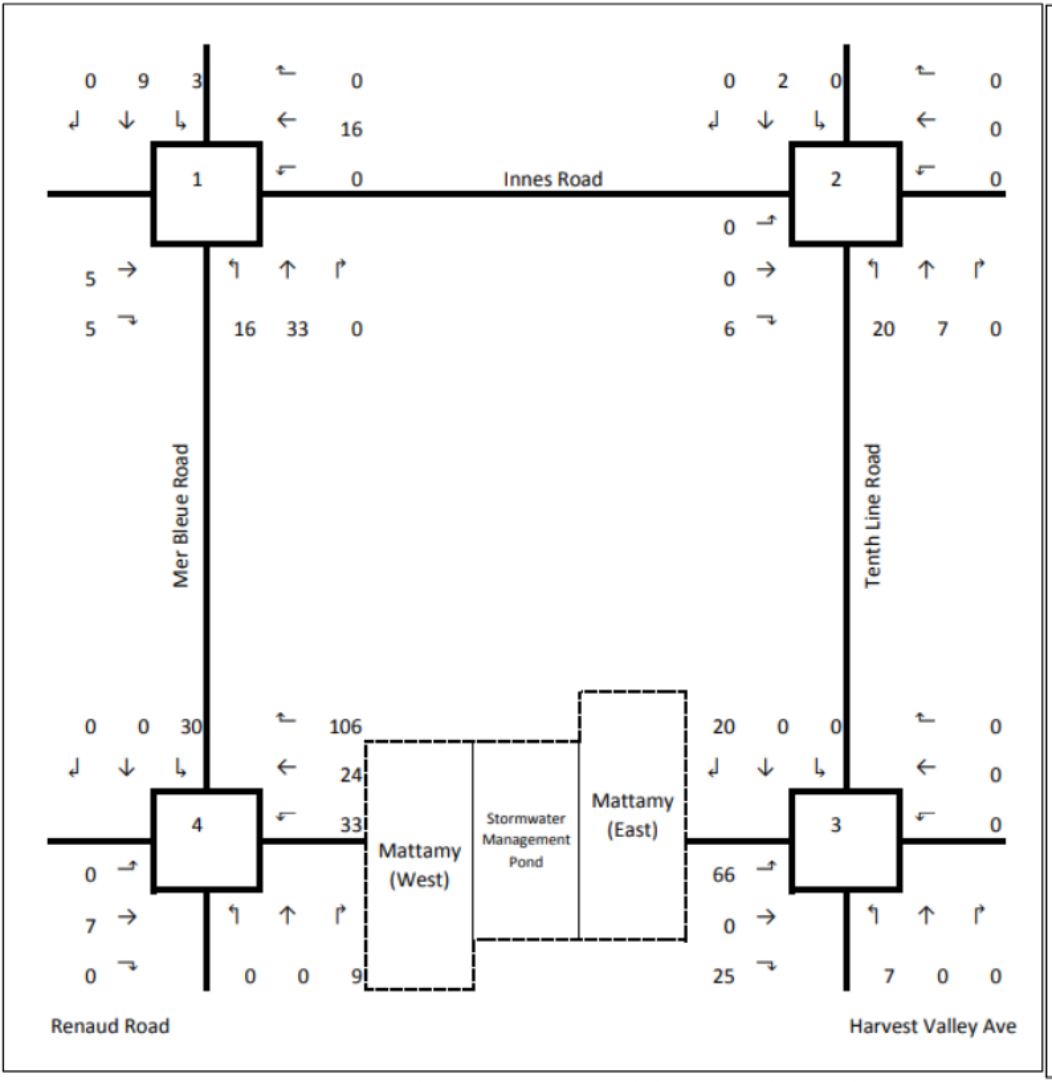
Source: Orleans Commercial Development Transportation Impact Study (Stantec Consulting, 2016)

2025 Mer Bleue Road Future Phases

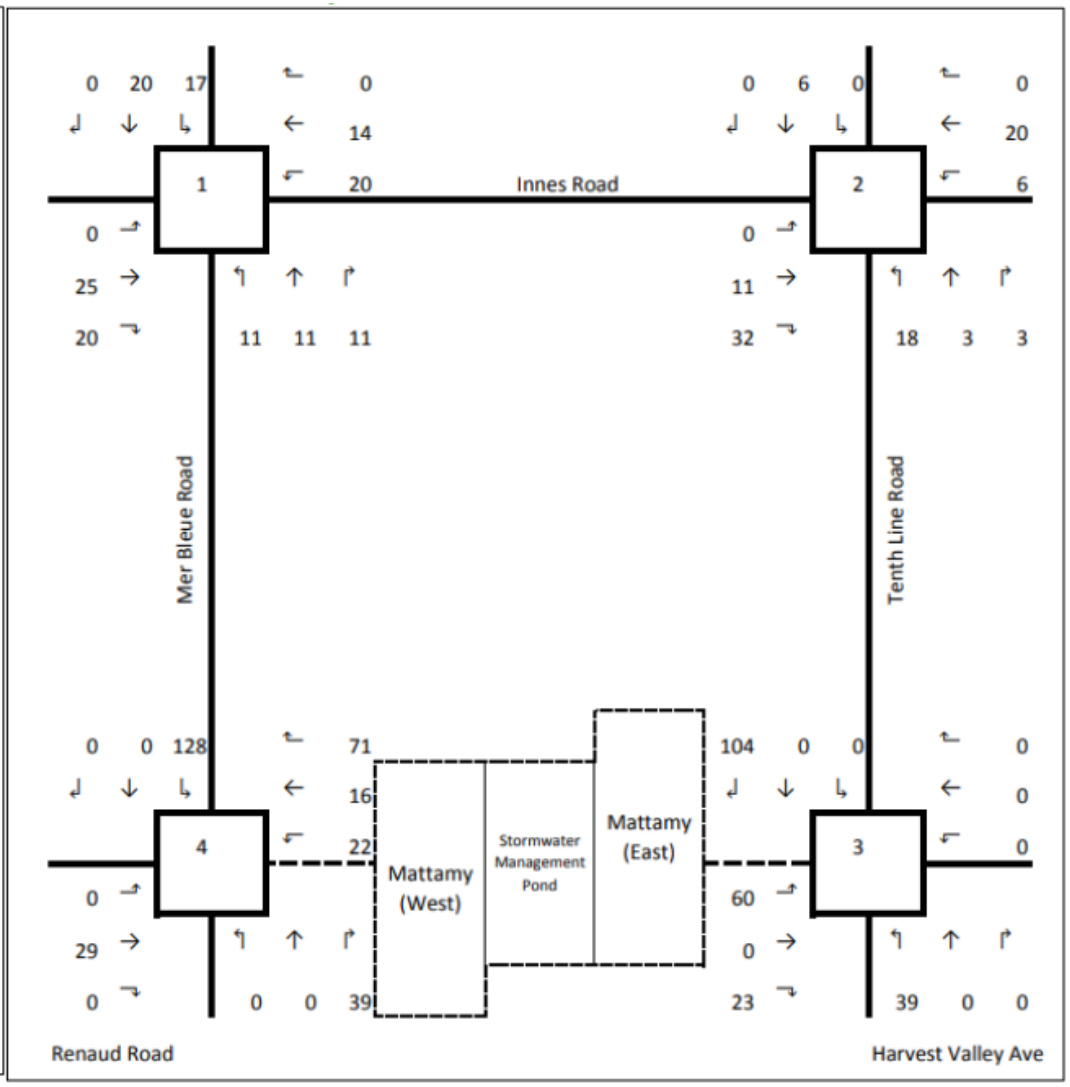


Source: 2025 Mer-Bleue Road Community Transportation Study (Stantec Consulting, 2017)

2405 Mer Bleue Road/2496 Tenth Line Road Phases 1-3 AM and PM Peak Hours

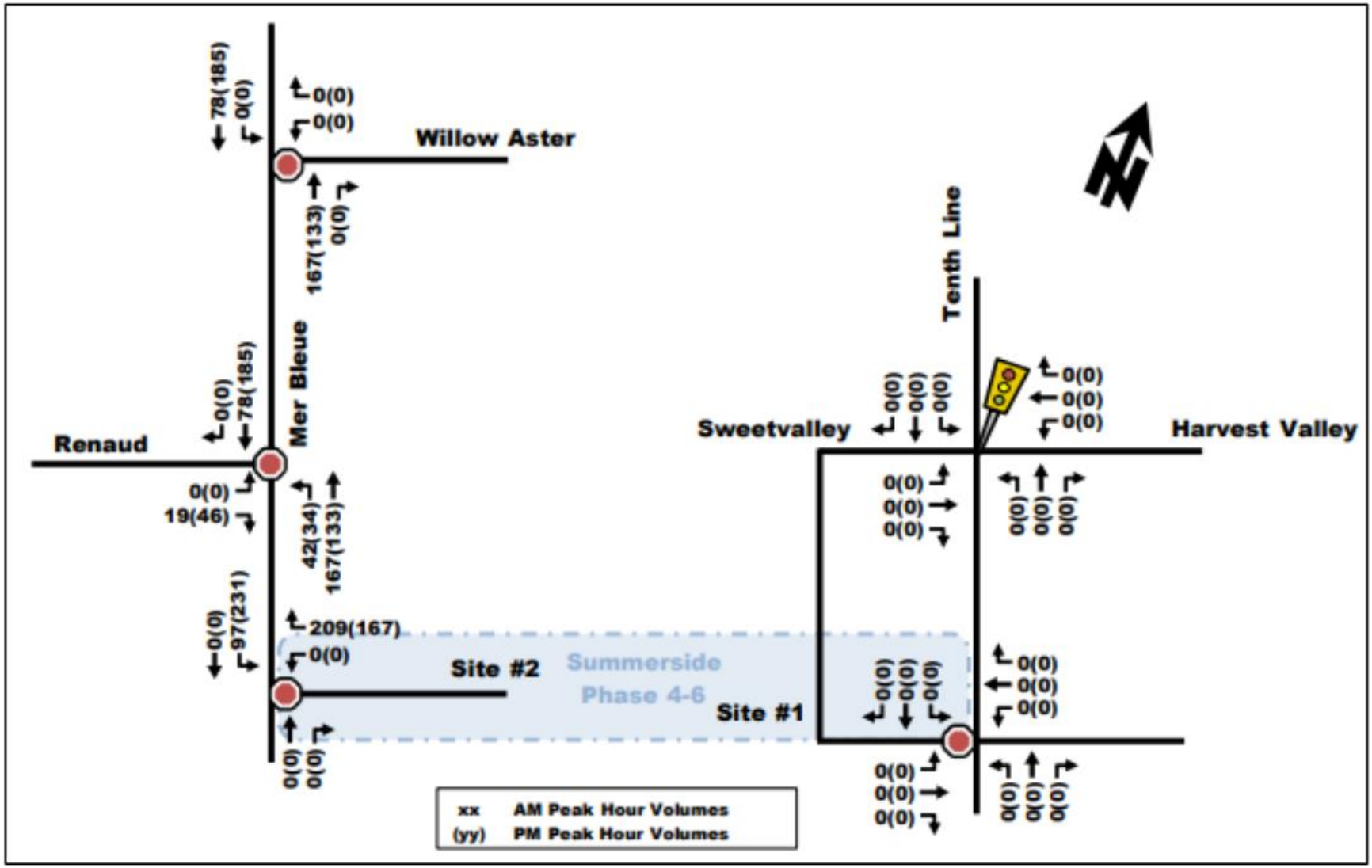


Source: 2405 Mer-Bleue Road Transportation Impact Study (Stantec Consulting, 2014)

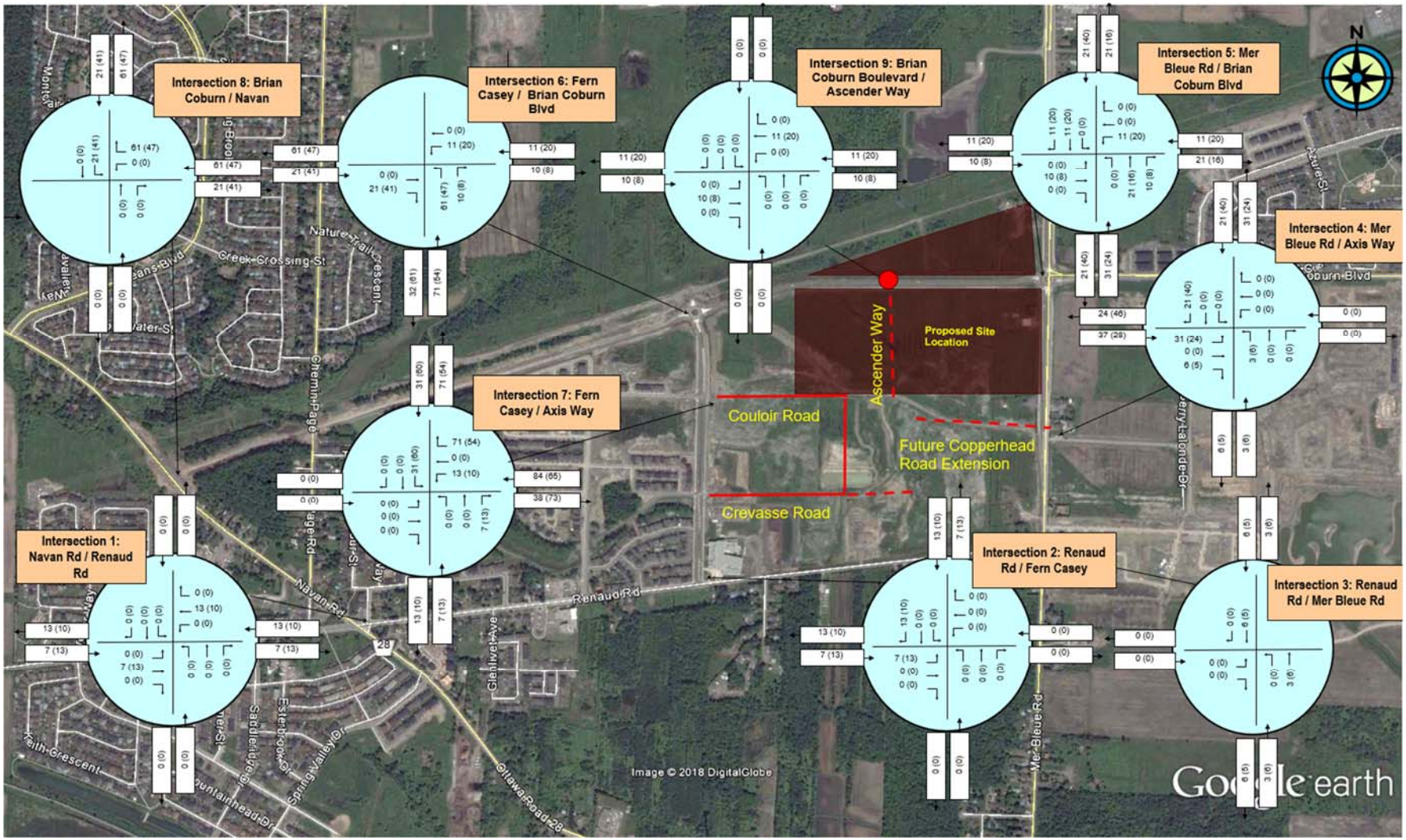


Source: 2405 Mer-Bleue Road Transportation Impact Study (Stantec Consulting, 2014)

2564 Tenth Line Road Phases 5 and 6

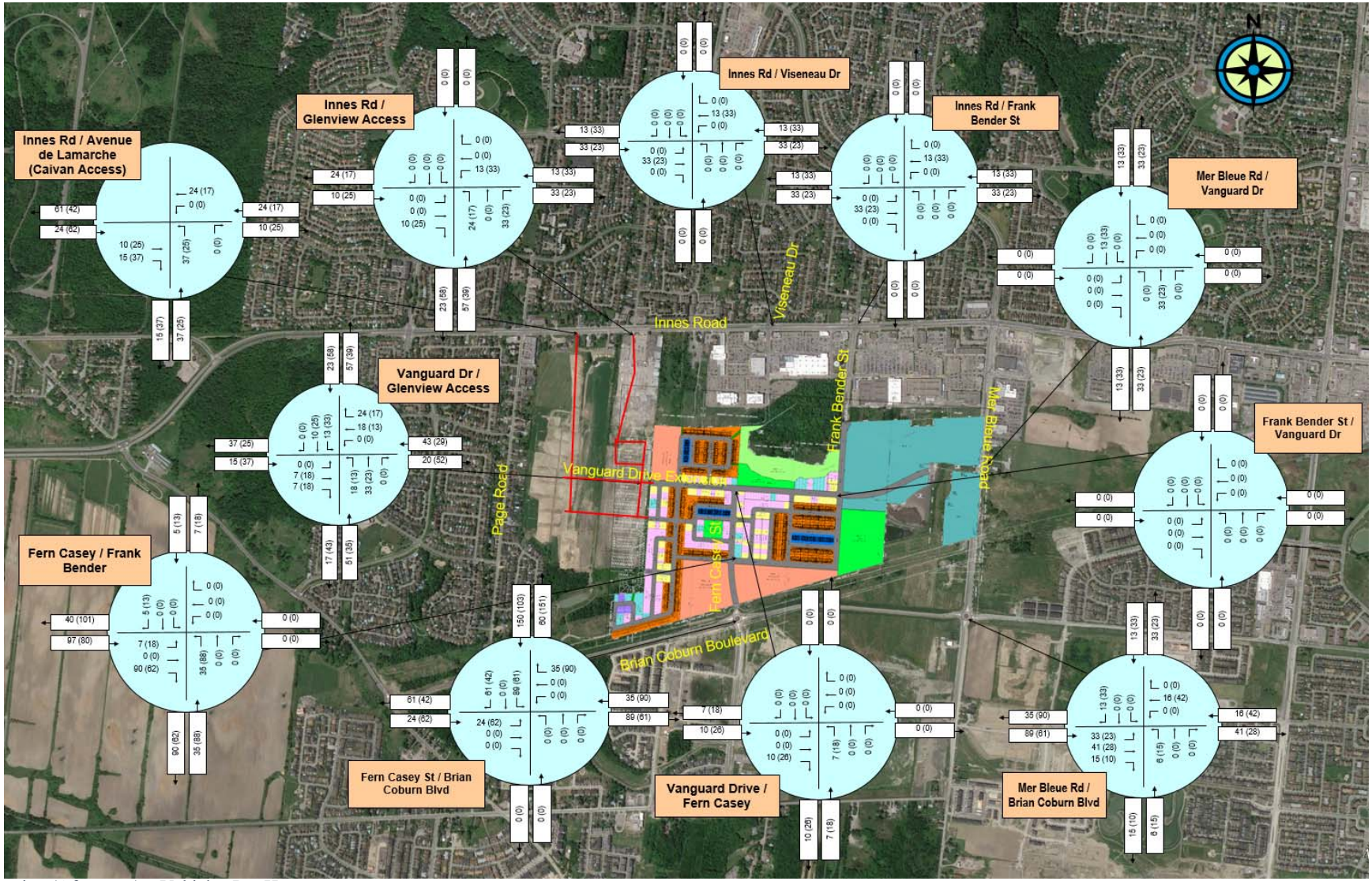


Source: Summerside West Phase 4-6 TIA Strategy Report (Parsons, 2018)



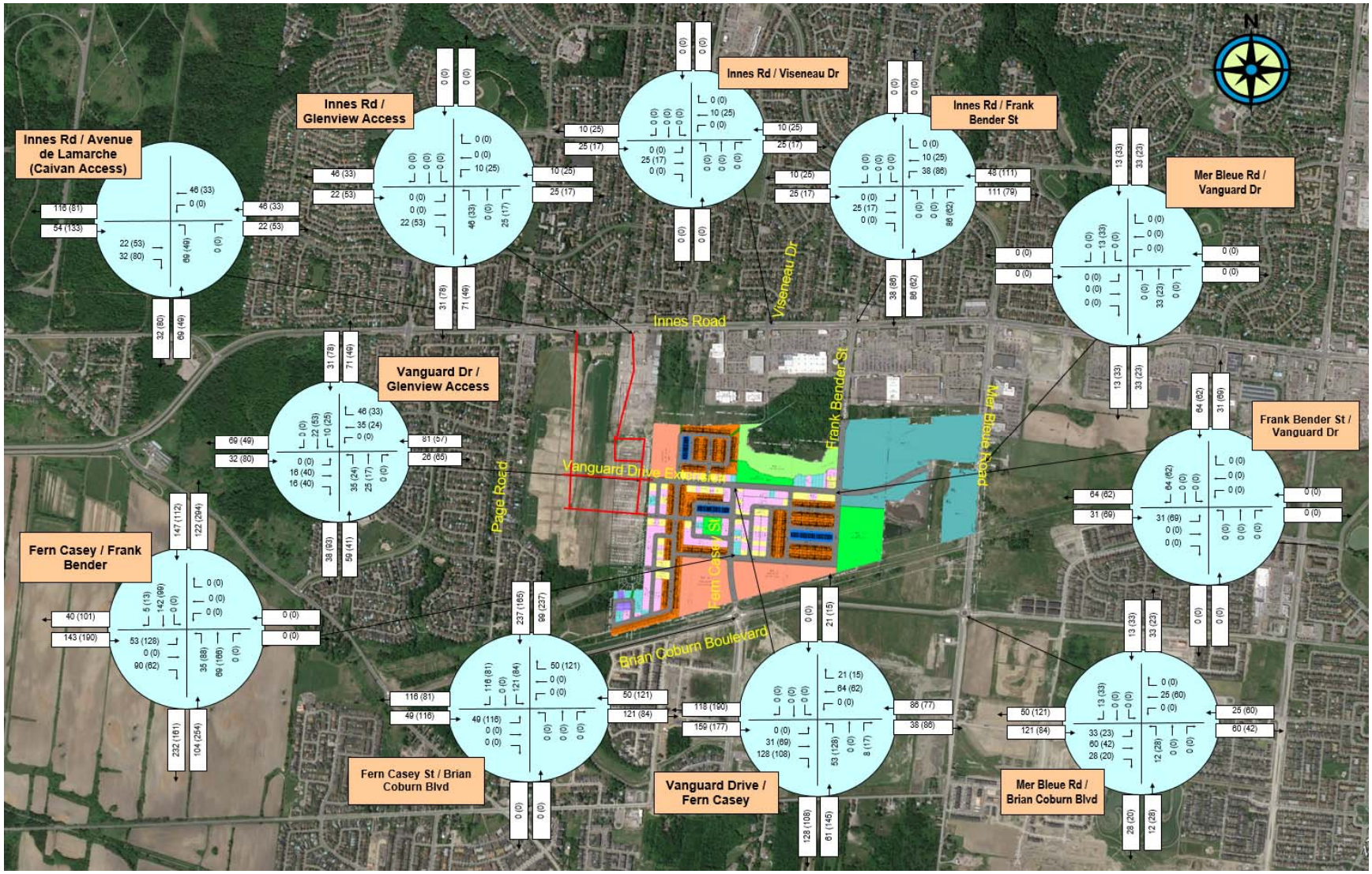
Morning (Afternoon) – Vehicles-Per-Hour

Exhibit 4-1: Phase 4-1 (2031) Site Traffic Volumes



Morning (Afternoon) – Vehicles-Per-Hour

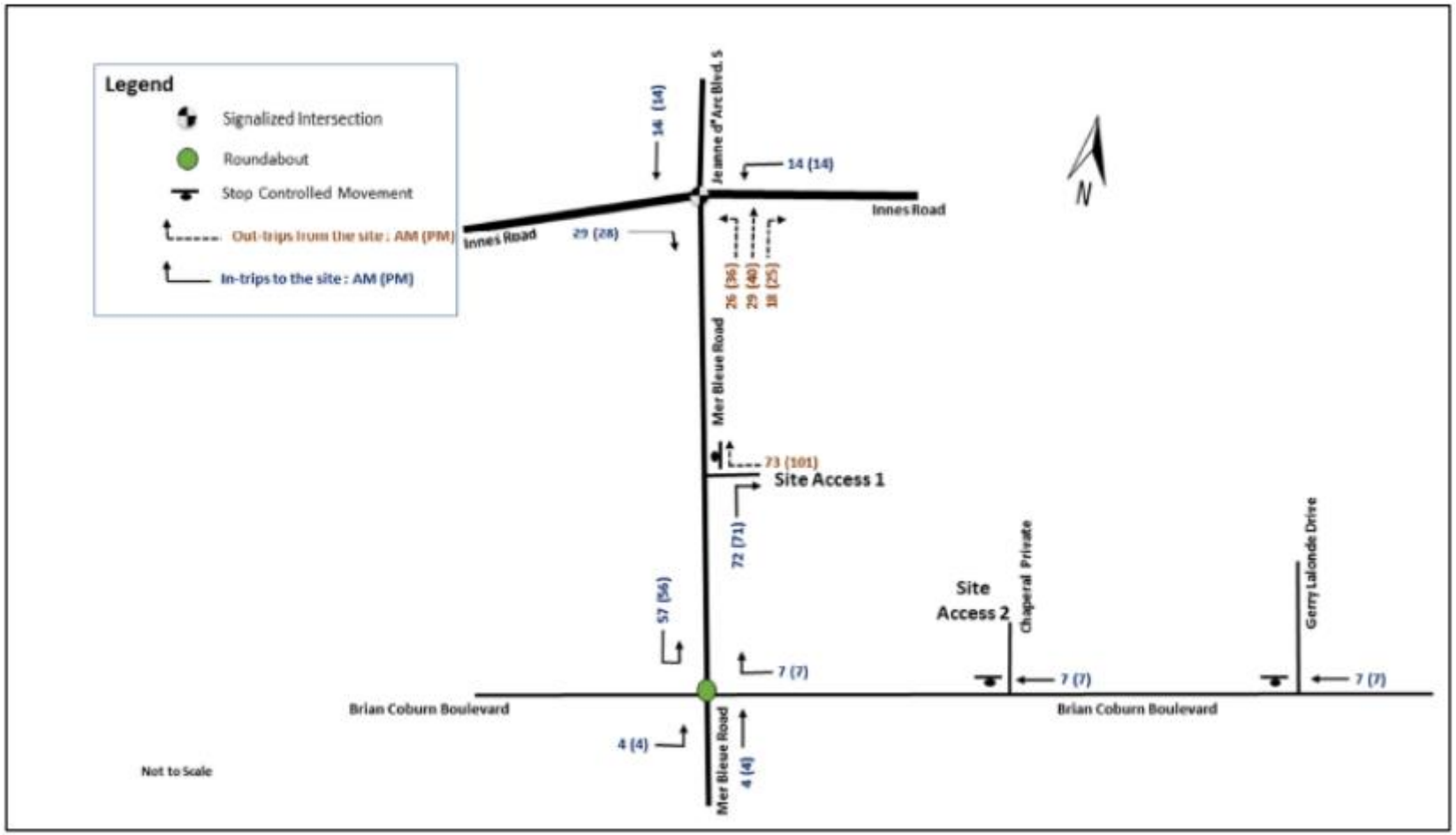
Exhibit 4-1: Trailsedge North Site Generated Traffic: Phase 1 (2037)



Morning (Afternoon) – Vehicles-Per-Hour

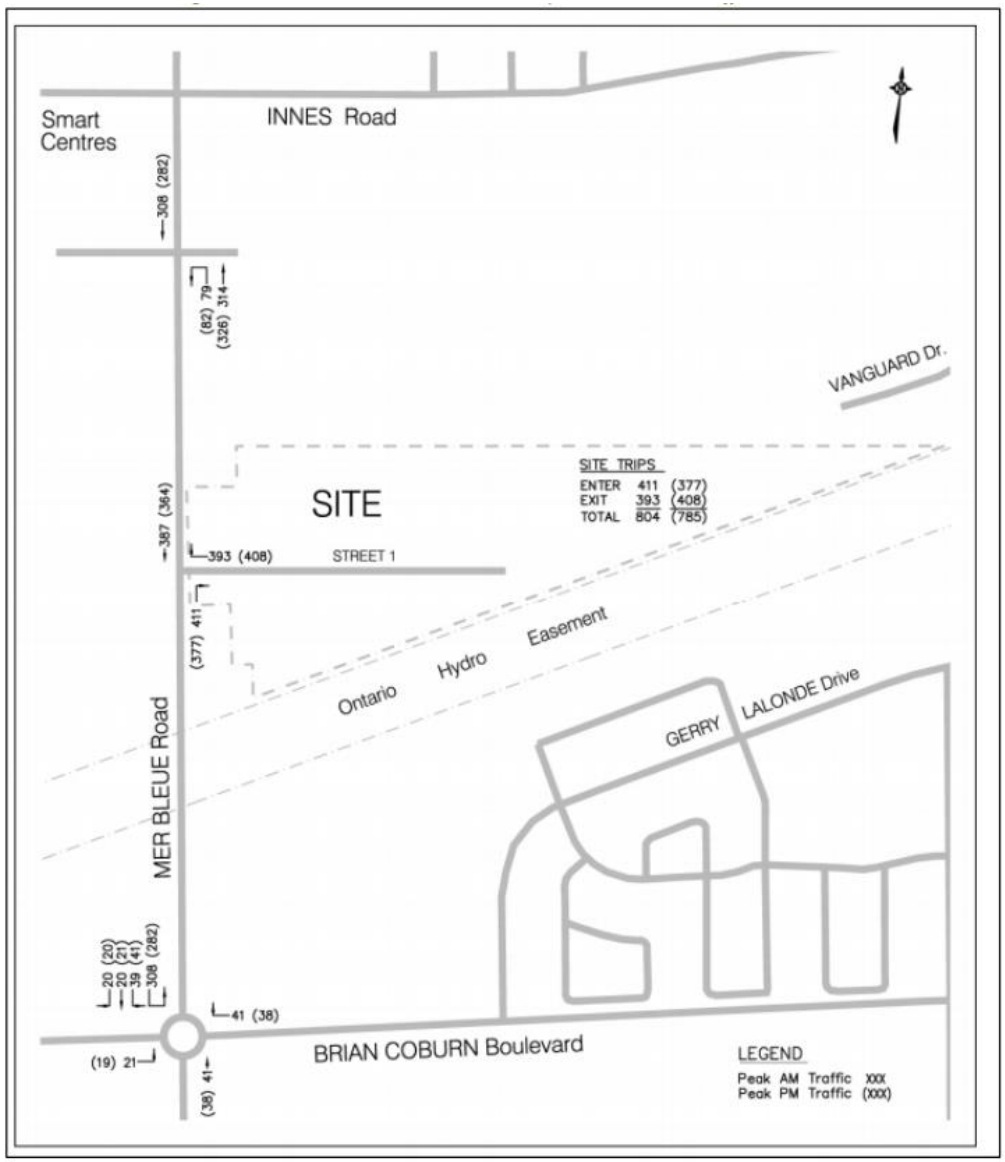
Exhibit 4-2: Trailsedge North Site Generated Traffic: Phase 1 & 2 (2042)

2225 Mer Bleue Road



Source: 2225 Mer-Bleue Road Transportation Impact Study (HDR, 2018)

2159 Mer-Bleue Road



Source: 2159 Mer-Bleue Road Transportation Impact Assessment (D.J. Halpenny & Associates Ltd., 2018)

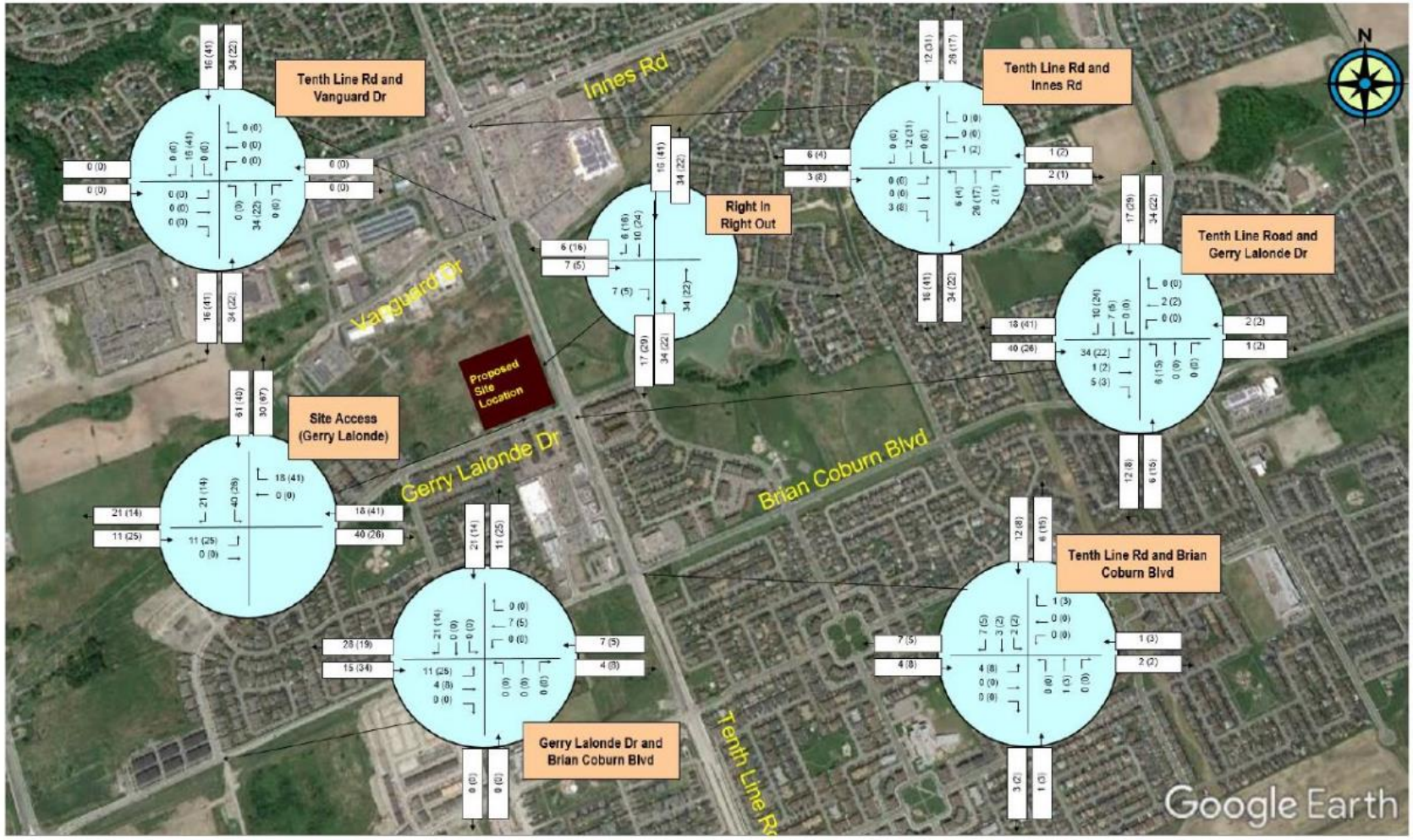
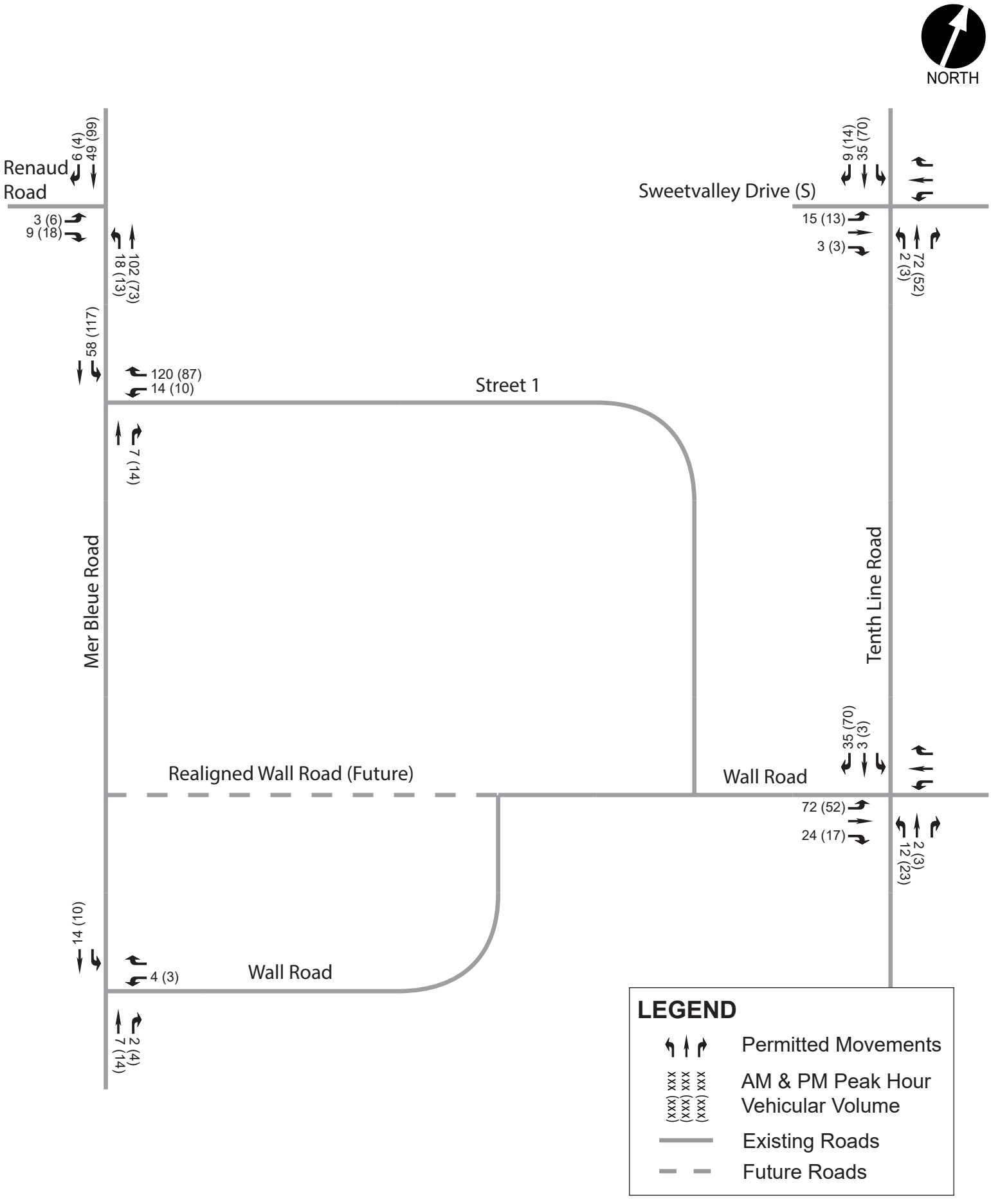


Exhibit 4-4: Net Site Auto Generated Travel Demand – Full Build Out [AM (PM)]

Source: 2167 Tenth Line Road Traffic Impact Assessment Final Draft (Castleglenn, 2020)



IBI

Mer Bleue Phase 1
Transportation Impact Assessment

Exhibit 6:
Site Generated
AM & PM Peak Hour
Traffic Volumes

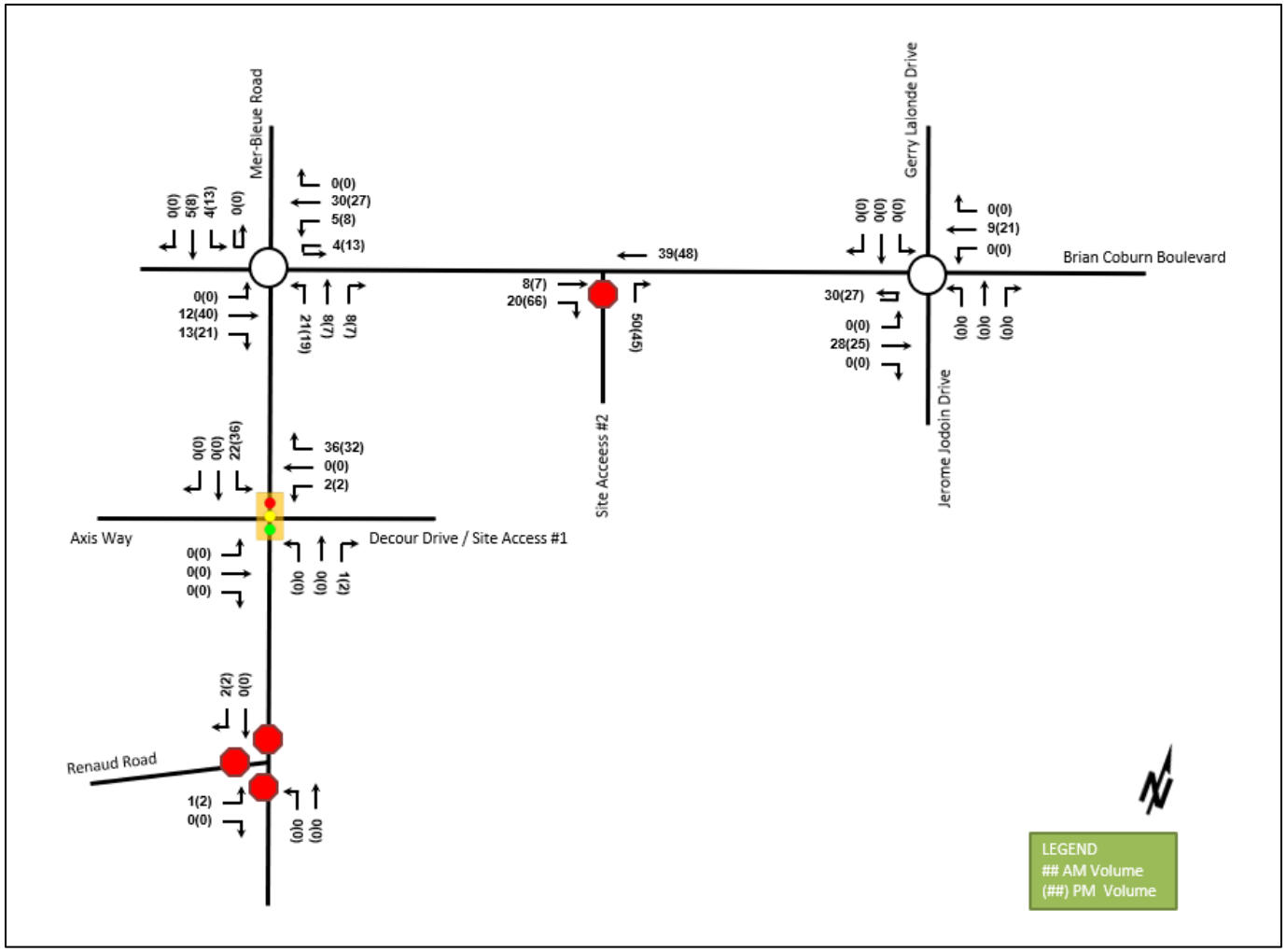
PROJECT No. 116761

SCALE: N.T.S.

5.3 Trip Assignment

Using the distribution outlined above, turning movement splits, and access to major transportation infrastructure, the trips generated by the site have been assigned to the Study Area road network. Figure 23 illustrates the new site generated volumes.

Figure 23: New Site Generated Auto Volumes



6 Background Network Travel Demands

6.1 Transportation Network Plans

The transportation network plans were discussed in Section 2.3.1. As a result of background developments, the intersection of Mer-Bleue Road and Axis Way / Decoeur Drive will be signalised, and the intersection of Brian Coburn Boulevard at Gerry Lalonde Drive / Jerome Jodoin Drive will be a one-lane roundabout. These changes will be coded in Synchro and Sidra in all Future Background and Future Total scenarios for operational analysis purposes only and the intersections ae required to be designed by others.

6.2 Background Growth and Other Developments

Surrounding development Traffic Impact Assessments have used a 2% traffic growth within the Study Area of this report. As such, an annual background growth of 2% will be used in order to remain consistent with these studies.

APPENDIX G

Transportation Demand Management Checklists

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)*	☒
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)*	☒
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)*	☒
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)	☐

APPENDIX H

MMLOS Review

Segment MMLOS Analysis

This section provides a review of the boundary street Brian Coburn Boulevard and Mer Bleue Road 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 Brian Coburn Boulevard and Mer Bleue Road, based on the targets for areas within 'General Urban Area'. Segments have been analyzed based on existing conditions.

Exhibit 4 of the *MMLOS Guidelines* has been used to evaluate the segment pedestrian level of service (PLOS) of Brian Coburn Boulevard and Mer Bleue Road. Exhibit 22 suggests a target PLOS C for all roadways within general urban areas. 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 Brian Coburn Boulevard and Mer Bleue Road. Within general urban areas, Exhibit 22 suggests a target BLOS B for arterial roadways with a Local Route designation (Brian Coburn Boulevard) and a target BLOS C for arterial roadways with a Spine Route designation (Mer Bleue Road). 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 Brian Coburn Boulevard and Mer Bleue Road. Within general urban areas, Exhibit 22 does not identify a target TLOS for roadways that are not in the City's Transit Priority Network.

Exhibit 20 of the *MMLOS Guidelines* has been used to evaluate the segment truck level of service (TkLOS) of Brian Coburn Boulevard and Mer Bleue Road. Within general urban areas, Exhibit 22 suggests a target TkLOS D for arterial roadways with a truck route designation (Brian Coburn Boulevard) and target TkLOS E for arterial roadways with no truck route designation (Mer Bleue Road). The results of the segment TkLOS analysis are summarized in **Table 3**.

Table 1: PLOS Segment Analysis

Sidewalk Width	Boulevard Width	Avg. Daily Curb Lane Traffic Volume	Presence of On-Street Parking	Operating Speed[1]	PLOS
Brian Coburn Boulevard (north side, Mer Bleue Road to Gerry Lalonde Drive)					
2.0m	2.0m	> 3,000 vpd	No	70 km/h	D
Brian Coburn Boulevard (south side, Mer Bleue Road to Jerome Jodoin Drive)					
-	-	> 3,000 vpd	No	70 km/h	F
Mer Bleue Road (east side, Brian Coburn Boulevard to Decoeur Drive)					
2.0m	> 2.0m	> 3,000 vpd	No	70 km/h	D
Mer Bleue Road (west side, Brian Coburn Boulevard to Decoeur Drive)					
2.0m	> 2.0m	< 3,000 vpd	No	70 km/h	B

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

Table 2: BLOS Segment Analysis

Road Class	Type of Route	Type of Bikeway	Travel Lanes	Operating Speed	BLOS
Brian Coburn Boulevard (both sides, Mer Bleue Road to Gerry Lalonde Drive)					
Arterial	Local	Mixed Traffic	1	70 km/h	F
Mer Bleue Road (both sides, Brian Coburn Boulevard to Decoeur Drive)					
Arterial	Spine	Bike Lane	2	70 km/h	F

Table 3: TkLOS Segment Analysis

Curb Lane Width	Number of Travel Lanes Per Direction	TkLOS
Brian Coburn Boulevard (Mer Bleue Road to Gerry Lalonde Drive/ Jerome Jodoin Drive)		
> 3.7m	1	B
Mer Bleue Road (east side, Brian Coburn Boulevard to Decoeur Drive)		
≤ 3.5m	2	A