

500 Coventry Road

Transportation Impact Assessment

Step 1 Screening Report

Step 2 Scoping Report

Step 3 Strategy Report (Rev#1)

Prepared for:

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PN: 2022-152

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1 Screening

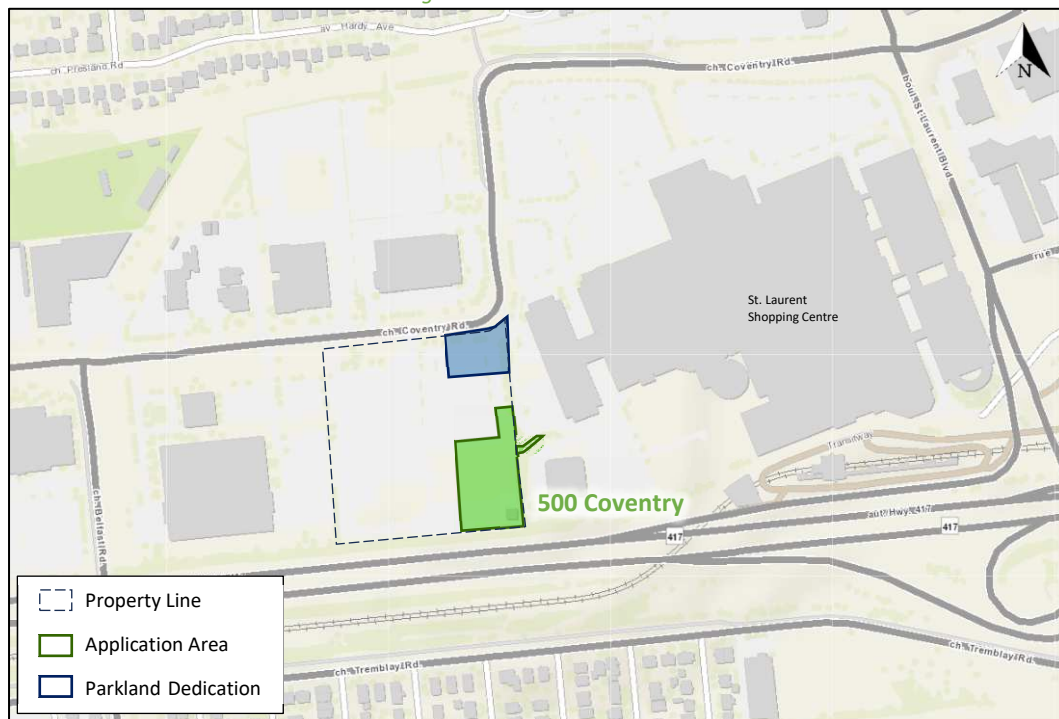
This study has been prepared according to the City of Ottawa's 2017 Transportation Impact Assessment (TIA) Guidelines, incorporating the 2023 Revision to Transportation Impact Assessment Guidelines. Accordingly, a Step 1 Screening Form has been prepared and is included as Appendix A, along with the Certification Form for the TIA Study PM. As shown in the Screening Form, a TIA is required, and this study has been prepared to support a site plan application.

2 Existing and Planned Conditions

2.1 Proposed Development

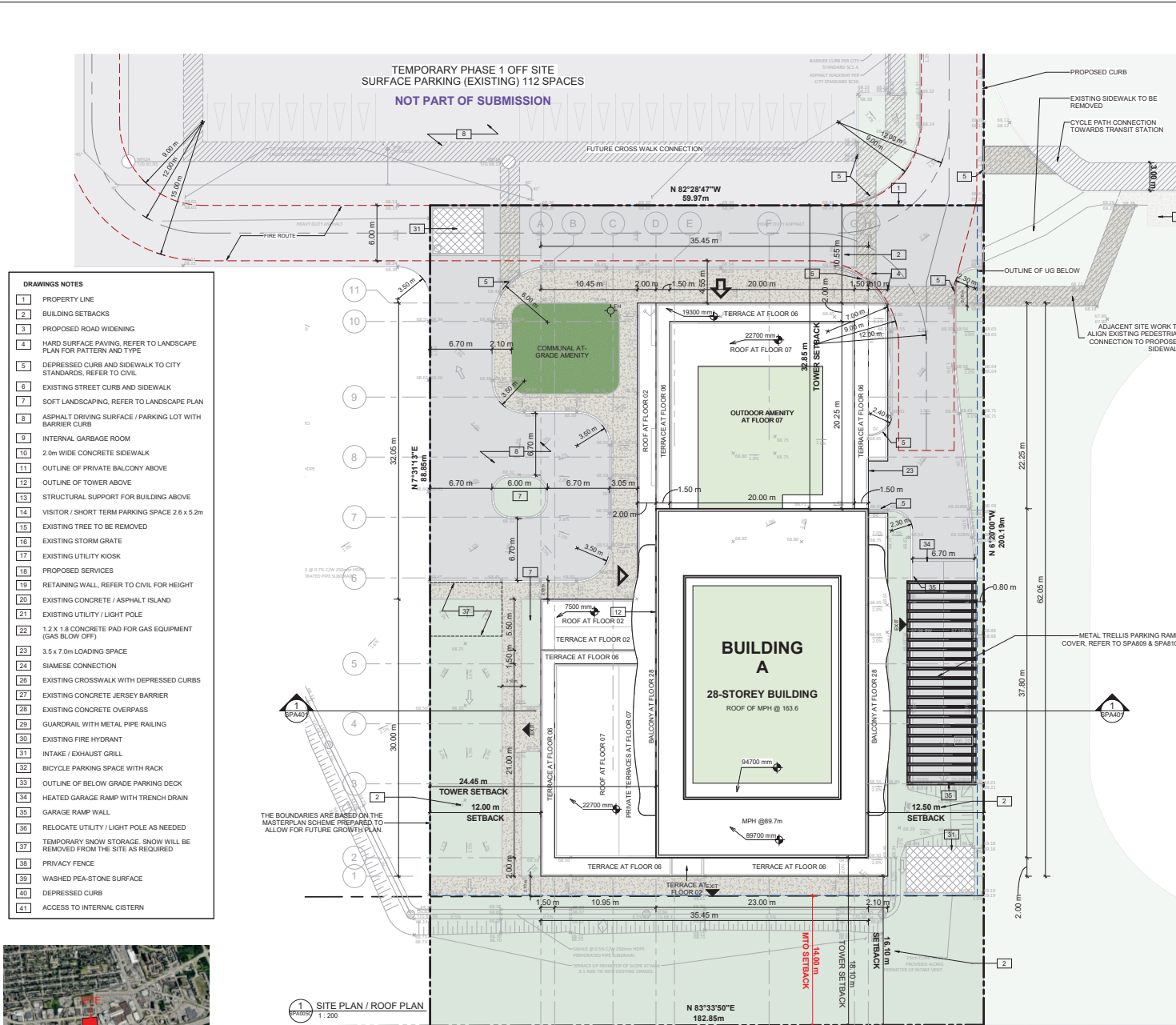
The site plan application includes only Phase 1 of the proposed development, which is part of a total of six planned phases. The proposed phase 1 development is located at 500 Coventry Road within the St. Laurent Protected Major Transit Station Area (PMTSA), design priority area, and Inner East Lines 1 and 3 Stations Secondary Plan area. Phase 1 development is zoned as Transit Oriented Development Zone (TD3[1988] S263-h1). Phase 1 development proposes a high-rise residential tower comprising 309 dwelling units, 309 bicycle parking spaces, 207 underground parking spaces. Future pedestrian connections will connect Phase 1 development to future phases of the site and to the parkland dedication adjacent to Coventry Road. Existing surface parking spaces will retain. The parking lot and future pedestrian connections are not within the boundary of the site plan application. Site access will be provided via the existing private driveway on Coventry Road, and the connection between 500 Coventry Road and 1200 St. Laurent Boulevard will be closed. The westerly access will remain blocked off although the future use will be subject to leasing contracts. The anticipated full build-out and occupancy horizon for Phase 1 is 2028. Figure 1 illustrates the study area context. Figure 2 illustrates the proposed concept plan.

Figure 1: Area Context Plan



Source: <http://maps.ottawa.ca/geoOttawa/> Accessed: January 5, 2024

Figure 2: Concept Plan



- DRAWINGS NOTES**
1. PROPERTY LINE
 2. BUILDING SETBACKS
 3. PROPOSED ROAD WIDENING
 4. HARD SURFACE PAVING, REFER TO LANDSCAPE PLAN FOR PATTERN AND TYPE
 5. DEPRESSED CURB AND SIDEWALK TO CITY STANDARDS, REFER TO CIVIL
 6. EXISTING STREET CURB AND SIDEWALK
 7. SOFT LANDSCAPING, REFER TO LANDSCAPE PLAN
 8. ASPHALT DRIVING SURFACE / PARKING LOT WITH BARRIER CURB
 9. INTERNAL GARBAGE ROOM
 10. 2.0m WIDE CONCRETE SIDEWALK
 11. OUTLINE OF PRIVATE BALCONY ABOVE
 12. OUTLINE OF TOWER ABOVE
 13. STRUCTURAL SUPPORT FOR BUILDING ABOVE
 14. VISITOR / SHORT TERM PARKING SPACE 2.6 x 5.2m
 15. EXISTING TREE TO BE REMOVED
 16. EXISTING STORM GRATE
 17. EXISTING UTILITY KIOSK
 18. PROPOSED SERVICES
 19. RETAINING WALL, REFER TO CIVIL FOR HEIGHT
 20. EXISTING CONCRETE / ASPHALT ISLAND
 21. EXISTING UTILITY / LIGHT POLE
 22. 1.2 x 1.8 CONCRETE PAD FOR GAS EQUIPMENT (GAS BLOW OFF)
 23. 3.5 x 7.0m Loading Space
 24. SIAMESE CONNECTION
 25. EXISTING CROSSWALK WITH DEPRESSED CURBS
 26. EXISTING CONCRETE JERSEY BARRIER
 27. EXISTING CONCRETE OVERPASS
 28. GUARDRAIL WITH METAL PIPE RAILING
 29. EXISTING FIRE HYDRANT
 30. EXISTING FIRE HYDRANT
 31. INTAKE / EXHAUST GRILL
 32. BICYCLE PARKING SPACE WITH RACK
 33. OUTLINE OF BELOW GRADE PARKING DECK
 34. HEATED GARAGE RAMP WITH TRENCH DRAIN
 35. GARAGE RAMP WALL
 36. RELOCATE UTILITY / LIGHT POLE AS NEEDED
 37. TEMPORARY SNOW STORAGE, SNOW WILL BE REMOVED FROM THE SITE AS REQUIRED
 38. PRIVACY FENCE
 39. WASHED PEA-STONE SURFACE
 40. DEPRESSED CURB
 41. ACCESS TO INTERNAL CISTERN



PROJECT INFORMATION			
Zoning By-law 2008-250 Consolidation			TD3
NET OVERALL SITE AREA BREAKDOWN			
AREA TYPE	m ²	ft ²	
SITE AREA - BLDG A	5,325.5	57,323.4	
TOTAL PARKLAND AREA	3,486.0	37,523.0	
TEMPORARY OFF SITE PARKING (PHASE 1)			
PHASE 1 SURFACE PARKING	6,851.7	73,751.1	
ZONING			
BUILDING HEIGHT	REQUIRED	PROVIDED	
30 STOREYS	90.0M	28 STOREYS	89.7M
GRADE (GEODETIC ELEVATION - ASL)			
ALLOWABLE PROJECTION - AMENITY LEVEL			
DENSITY - MINIMUM 350 units/hectare	206 UNITS	309 UNITS	
FRONT YARD SETBACK	3.0M	110.75M	
CORNER YARD SETBACK (East / West)	3.0M/3.0M	134.89M/12.5M	
REAR YARD SETBACK (GROUND TO 6th FLOOR)	0.0M	18.10M	
REAR YARD SETBACK (ABOVE 7th STOREY)	12.0M	18.10M	
AMENITY AREA - TOTAL PER UNIT	6.0M ²	17.4M ²	
AMENITY AREA - 50% COMMUNAL PER UNIT	3.0M ²	4.55M ²	
AMENITY AREA - 2.0% OF LOT EXTERIOR AT GRADE COMMUNAL	117.19M ²	127.8M ²	
VEHICLE PARKING - RESIDENTIAL (AREA 'X' - MIN. 0.1 MAX. 1.7 PER UNIT)	REQUIRED	289	
VEHICLE PARKING - VISITOR ONLY (MAX. 30, AFTER 12 UNITS)	30	30	
BICYCLE PARKING - RESIDENTIAL - 0.5 PER UNIT	165	309	
ASILE & DRIVEWAY MINIMUM / MAXIMUM WIDTH	6.0M/6.7M	6.7M	
GROSS BUILDING FLOOR AREA (OTTAWA ZONING DEFINITION)			
UNIT	m ²	ft ²	
FLOOR 01			
FLOOR 02	1,339.6 m ²	14,419	
FLOOR 03-05	4,018.8 m ²	43,257	
FLOOR 06	1,224.1 m ²	13,176	
FLOOR 07	631.4 m ²	6,795	
FLOOR 08 - FLOOR 28	725.2*21 m ²	15,229.2	163,526
TOTAL	12,443.7	241,882	
TYP. FLOOR PLATE	725.2	7,806	
UNIT STATISTICS			
UNIT	UNITS		
1B	58		
1B+D	82		
2B	77		
2B+D	61		
3B	31		
TOTAL	309		
VEHICULAR PARKING SPACES REQUIRED - AREA 'Z' ON SCHEDULE 1A			
VISITOR	0.1 SPACES PER UNIT AFTER 12 UNITS - MAX 30	30	
RESIDENTIAL	N/A	309	
TOTAL		30	
VEHICULAR PARKING SPACES PROVIDED			
VISITOR	0.1 SPACES PER UNIT (309 UNITS)	30	
RESIDENTIAL	0.56 SPACES PER UNIT (309 UNITS)	177	
TOTAL		207	
EXISTING SURFACE PARKING LOT			
TOTAL	1.05 PER UNIT (309 UNITS)	319	
ACCESSIBLE PARKING SPACES REQUIRED - (NOT INCLUDING SURFACE PARKING)			
TYPE 'A'	3		
TYPE 'B'	4		
TOTAL	7		
ACCESSIBLE PARKING SPACES PROVIDED - (NOT INCLUDING SURFACE PARKING)			
TYPE 'A'	3		
TYPE 'B'	5		
TOTAL	8		
STANDARD PARKING SPACE			
PARALLEL PARKING SPACE	2.6m X 5.2m		
SMALL PARKING SPACE	2.6m X 4.7m		
ACCESSIBLE PARKING SPACE 'TYPE A'	2.4m X 4.6m		
ACCESSIBLE PARKING SPACE 'TYPE A'	3.4m X 5.2m		
ACCESSIBLE PARKING SPACE 'TYPE B'	2.4m X 5.2m		
LOADING SPACE	3.5m X 7.0m		
BICYCLE PARKING SPACES REQUIRED			
RESIDENTIAL	0.5 PER UNIT (309 UNITS)	155	
TOTAL		155	
BICYCLE PARKING SPACES PROVIDED			
RESIDENTIAL	INTERIOR	309	
EXTERIOR		0	
TOTAL	1.0 PER UNIT (309 UNITS)	309	
AMENITY AREA			
	m ²	ft ²	
GRADE EXTERIOR - COMMUNAL	172.8	1,858	
INTERIOR - COMMUNAL	1,085.4	11,791	
OFF EXTERIOR - COMMUNAL	202.1	2,175	
TOTAL	1,460.3	15,824	
BALCONIES / TERRACE - PRIVATE	3,508.2	37,741	
TOTAL	4,978.5	53,565	
REQUIRED (309 UNITS X 6 m ²) = 1,854 sq. m.			
REQUIRED COMMUNAL @ 50% = 927 sq. m.			

TURNER FLEISCHER

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SITE PLAN SYMBOLS

- PRIMARY RESIDENTIAL ENTRANCE
- SECONDARY RESIDENTIAL ENTRANCE
- EXIT
- FIRE HYDRANT
- SIAMESE CONNECTION
- CONVEX MIRROR
- SPOT ELEVATION
- GAS/HYDRO METER

REFER TO LANDSCAPE DRAWINGS FOR SURFACE TREATMENT

MINIMUM PERMITTED PARKING DIMENSIONS

TYPICAL PARKING DIMENSIONS

ASILE WIDTH MIN 6.7m

TYPICAL PARKING SPACE MIN 2.6 x 5.2 x 2.1m HIGH

TYPICAL PARKING FREE SPACE MIN 3.05 x 5.2 x 2.1m HIGH

TYPICAL TYPE 'A' 3.4m x 5.2m

TYPICAL TYPE 'B' 2.4m x 5.2m

PROJECT: 500 COVENTRY ROAD

500 COVENTRY ROAD, OTTAWA, ON

DRAWING: SITE PLAN / ROOF PLAN

PROJECT NO: 18.050 P01

PROJECT DATE: 2024-09-13

DRAWN BY: RYT / DRO

CHECKED BY: AYU / MDM

SCALE: 1:200

DRAWING NO: SPA005C

REV: 2

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2.2 Existing Conditions

2.2.1 Area Road Network

Coventry Road: Coventry Road is a City of Ottawa arterial road with a five-lane urban cross-section west of Belfast Road including a combination of a two-way left-turn and left-turn lanes at/to the west of Lola Street. A three-lane cross section is provided east of Belfast Road with a two-way left-turn lane, and transitioning lane types through the 90-degree bends and the St. Laurent Shopping Centre Access, becoming a four-lane cross-section from the 90-degree bend to St Laurent Boulevard. Sidewalks are typically present on both sides of the road, except for where one of the sidewalks is replaced by a Multi-Use Pathway (MUP) on the north/west side Coventry Road between the St. Laurent Shopping Centre West Access and the St. Laurent Shopping Centre North Access. Cycletracks are present on both sides of the road between Lola Street and Belfast Road and bike lanes are present on both sides of the road between Belfast Road and the St. Laurent Shopping Centre West Access, and on the east/south side of the roadway between the St. Laurent Shopping Centre West Access and St. Laurent Shopping Centre North Access, and on both sides to St. Laurent Boulevard. The posted speed limit is 60 km/h, and the City-protected right of way is 30.0 metres within the study area. Coventry Road is designated as a truck route.

Tremblay Road: Tremblay Road is a City of Ottawa major collector road with a two-lane urban cross-section east of Pickering Place and a divided four-lane urban cross-section west of Pickering Place. East of the Via Rail station access, a sidewalk is present on the south side of the road, and a MUP is present on the north side of the road. The MUP transitions from the roadway to along the LRT corridor at the Via Rail Station signal. The posted speed limit is 50 km/h, and the City-protected right of way is 26.0 metres. Tremblay Road is designated as a truck route.

Belfast Road: Belfast Road is a City of Ottawa major collector road with a two-lane rural cross-section north of Tremblay Road, and a collector road with a two-lane urban cross-section south of Tremblay Road. On the west side of the road, a MUP is provided to the Highway 417 overpass, where a sidewalk is provided on the structure and transitions back to a MUP at Tremblay Road and continues southerly. On the east side of the road, a sidewalk from Coventry Road transitions to a pathway, to the shoulder and before ramping back up to a sidewalk on the Highway 417 overpass and to Tremblay Road. South of Tremblay Road, the sidewalk transitions to a paved shoulder. The shoulder provides a cycling facility on the east side of the road where the sidewalk and pathway are present between Belfast Road and the Highway 417 overpass. The unposted speed limit is assumed to be 50 km/h. The existing right of way is 26.0 metres with additional widenings approaching the Highway 417 overpass embankments and to the south of the Highway. Belfast Road is designated as a truck route.

2.2.2 Existing Intersections

The existing key intersections within 400 metres of the site have been summarized below:

Coventry Road at Belfast Road

The intersection of Coventry Road at Belfast Road is a signalized intersection. The northbound approach consists of a shared left-turn/through lane and an auxiliary right-turn lane, and the private southbound approach consists of a shared all-movement lane. The eastbound approach consists of an auxiliary left-turn lane continuing from a two-way left-turn lane, a through lane, and a right-turn lane, and the westbound approach consists of a two-way left-turn lane and a shared through/right-turn lane. Westbound U-turn movements are restricted at this intersection. A cyclist crossing is provided on the south approach.

Coventry Road at 500 Coventry Road

The intersection of Coventry Road at 500 Coventry Road access is an uncontrolled intersection. The private northbound approach consists

of a left-turn lane and a right-turn lane. The eastbound approach consists of a shared through/right-turn lane and a bike lane, and the westbound approach consists of an auxiliary left-turn lane, a through lane and a bike lane. No turn restrictions are noted

Coventry Road at St. Laurent Shopping Centre West Access

The intersection of Coventry Road at St. Laurent Shopping Centre West Access is a signalized intersection. The northbound approach consists of an auxiliary left-turn lane, a through lane, a shared through/right-turn lane, and a bike lane, and the southbound approach consists of a left-turn lane and a shared through right-turn lane. The private eastbound approach consists of a shared all-movement lane, and the private westbound approach consists of a shared left-turn/through lane and a right-turn lane.

Coventry Road at St. Laurent Shopping Centre North Access

The intersection of Coventry Road at St. Laurent Shopping Centre North Access is a signalized intersection. The private northbound approach consists of a shared left-turn/through lane and a right-turn, and the private southbound approach consists of a shared all-movement lane. The eastbound approach consists of an auxiliary left-turn lane, a through lane, a share through/right-turn lane, and a bike lane, and the westbound approach consists of two auxiliary left-turn lanes, a through lane, a share through/right-turn lane, and a bike lane. Westbound U-turn movements are restricted at this intersection.

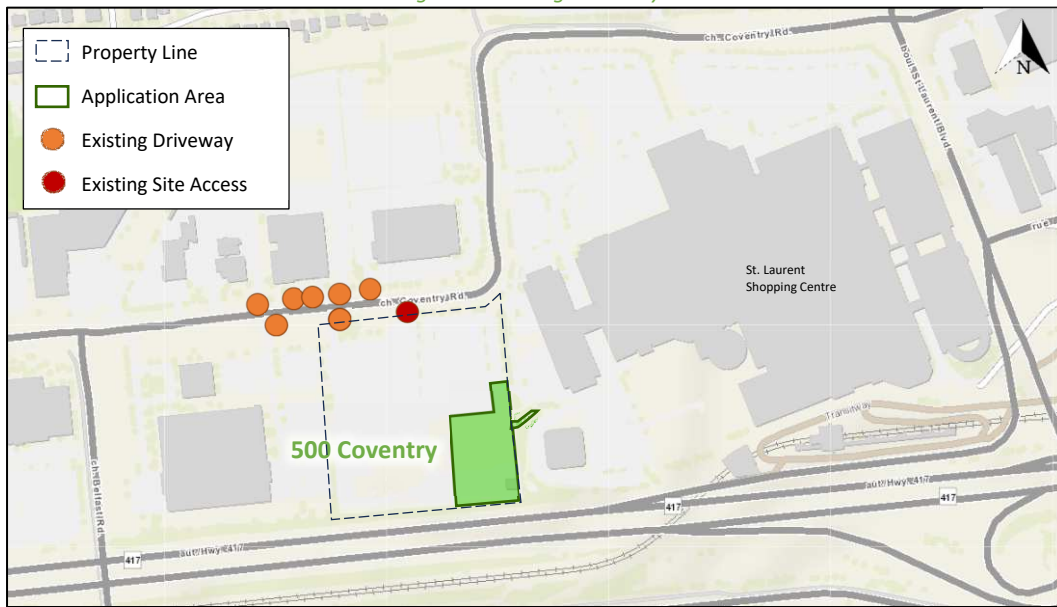
Tremblay Road at Belfast Road

The intersection of Tremblay Road at Belfast Road is a signalized intersection. Each approach consists of an auxiliary left-turn lane and a shared through/right-turn lane. No turn restrictions are noted.

2.2.3 Existing Driveways

Within 200 metres of the proposed site access, two offices, a taxi service, and an auto repair shop are present on the north side of Coventry Road, and driveways to a school bus storage yard and a government office are present on the south side of Coventry Road. Figure 3 illustrates the existing driveways.

Figure 3: Existing Driveways



Source: <http://maps.ottawa.ca/geoOttawa/> Accessed: January 5, 2024

2.2.4 Cycling and Pedestrian Facilities

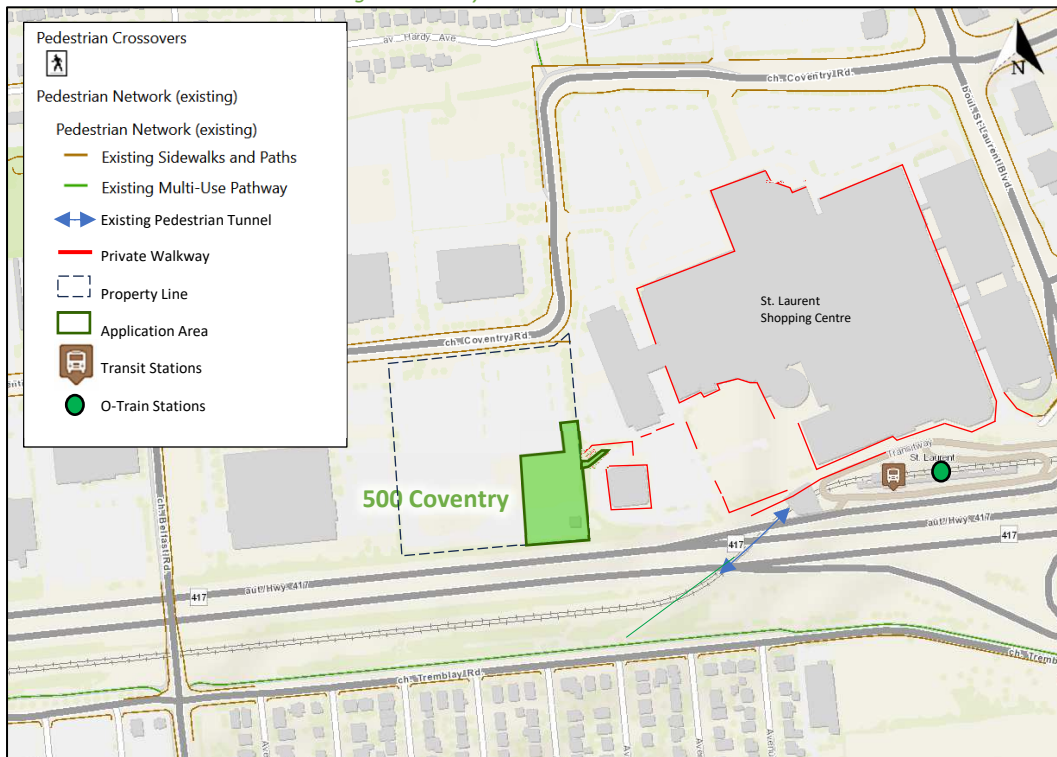
Figure 4 illustrates the pedestrian facilities in the study area and Figure 5 illustrates the cycling facilities.

Within the study area, sidewalks are generally provided along both sides of Coventry Road, except for the segment between the St. Laurent Shopping Centre West Access and the St. Laurent Shopping Centre North Access. Sidewalks are also provided along the east side of Belfast Road as part of mixed facilities and on both sides over the Highway 417 overpass, and on the south side of Tremblay Road. A pedestrian tunnel is also located under Highway 417 connecting Tremblay Road and the St. Laurent Transit Station.

Although the outdoor walkways to the LRT station are discontinuous, the private property network encompasses outdoor walkways and aisles, as well as indoor routes within the adjacent property and St. Laurent Shopping Centre. This network would provide the most direct pedestrian route to and from St. Laurent Station.

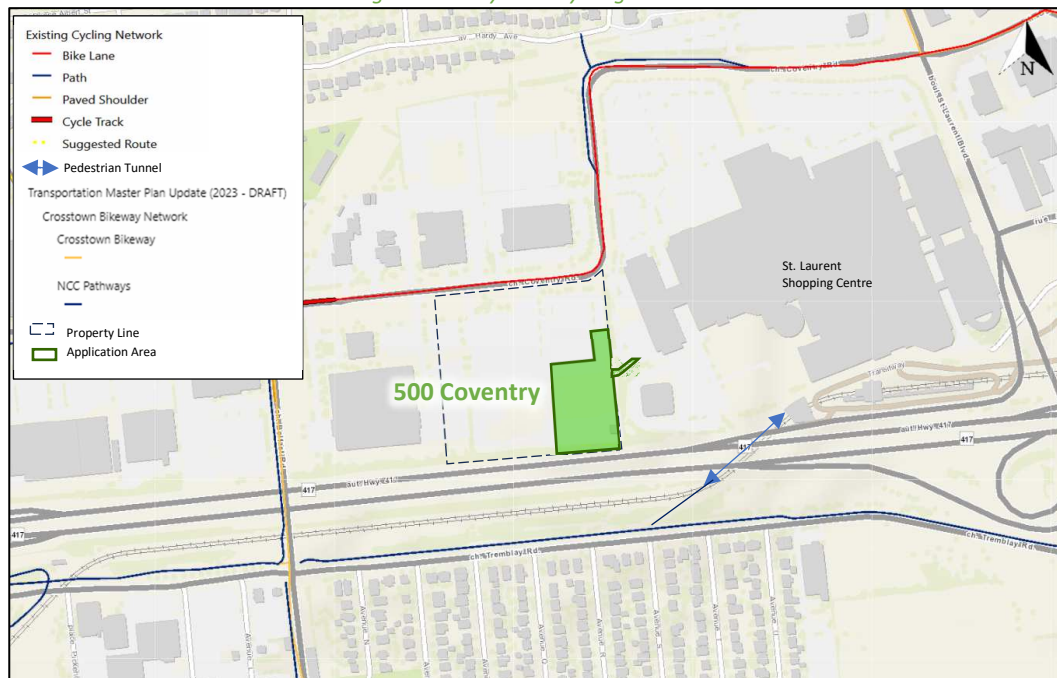
MUPs are present on the north/west side of the Coventry Road between the St. Laurent Shopping Centre West Access and St. Laurent Shopping Centre North Access. MUPs are also present on the north side of Tremblay Road, on the west side of Belfast Road to the Highway 417 overpass. The cycling facilities in the study area include cycletracks on both sides of Coventry Road west of Belfast Road within the study area, bike lanes on both sides of Coventry Road between Belfast Road and the St. Laurent Shopping Centre West Access, on the east/south side of the Coventry Road between the St. Laurent Shopping Centre West Access and St. Laurent Shopping Centre North Access, and on both sides of Coventry Road to St. Laurent Boulevard. The cross-town bikeway continues from Belfast Road and continues to Coventry Road and Lola Street.

Figure 4: Study Area Pedestrian Facilities



Source: <http://maps.ottawa.ca/geoOttawa/> Accessed: January 5, 2024

Figure 5: Study Area Cycling Facilities



Source: <http://maps.ottawa.ca/geoOttawa/> Accessed: January 5, 2024

Pedestrian and cyclist volumes included in study area intersection counts, presented in Section 2.2.7, have been compiled and are illustrated in Figure 6 and Figure 7, respectively. The City of Ottawa notes that the collection data may be lower than summer conditions, although this cannot be confirmed.

Figure 6: Existing Pedestrian Volumes

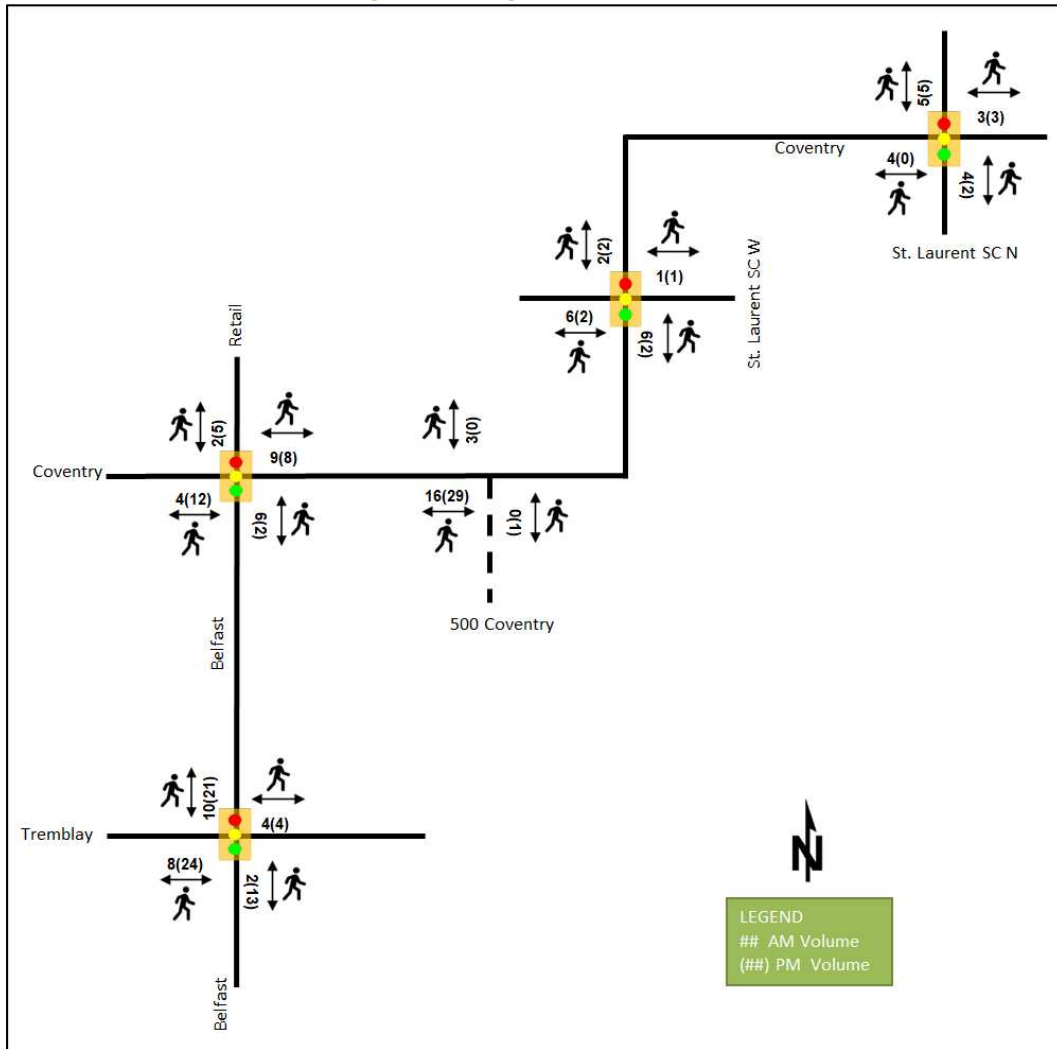
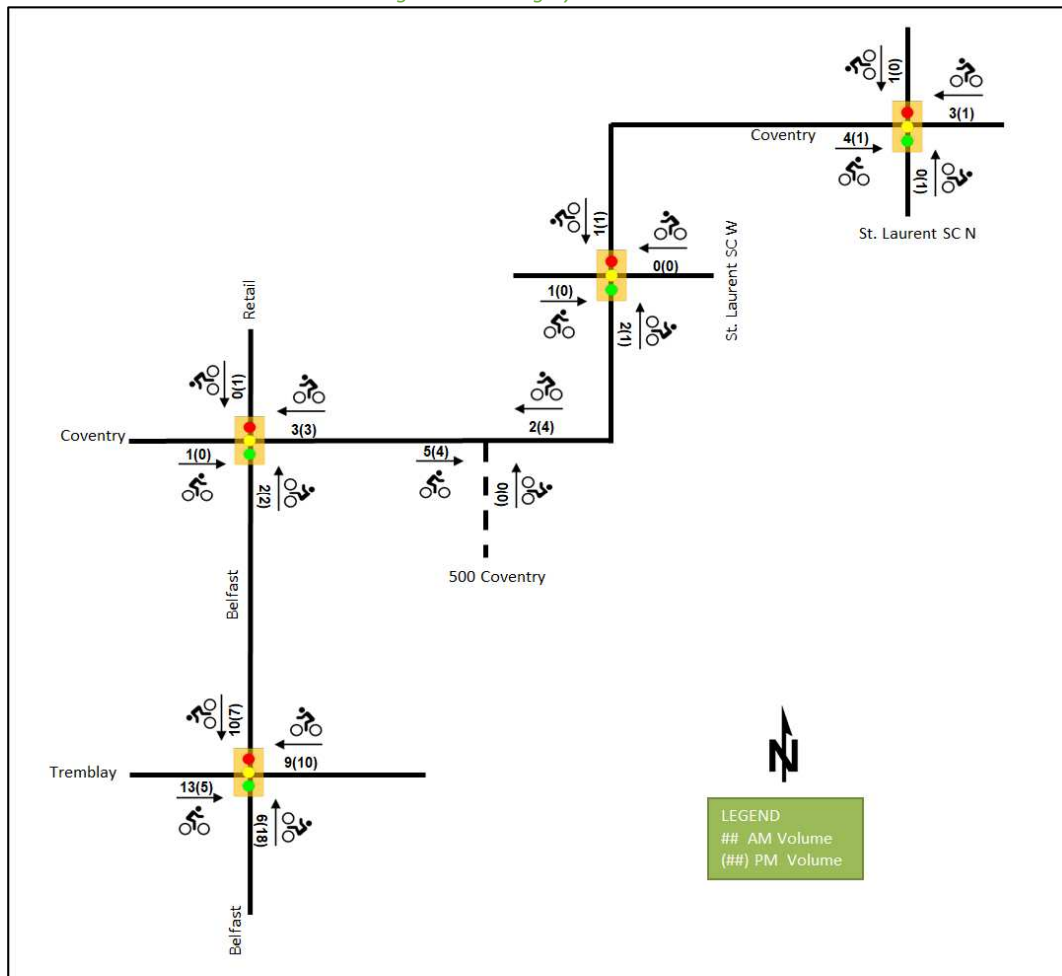


Figure 7: Existing Cyclist Volumes



2.2.5 Existing Transit

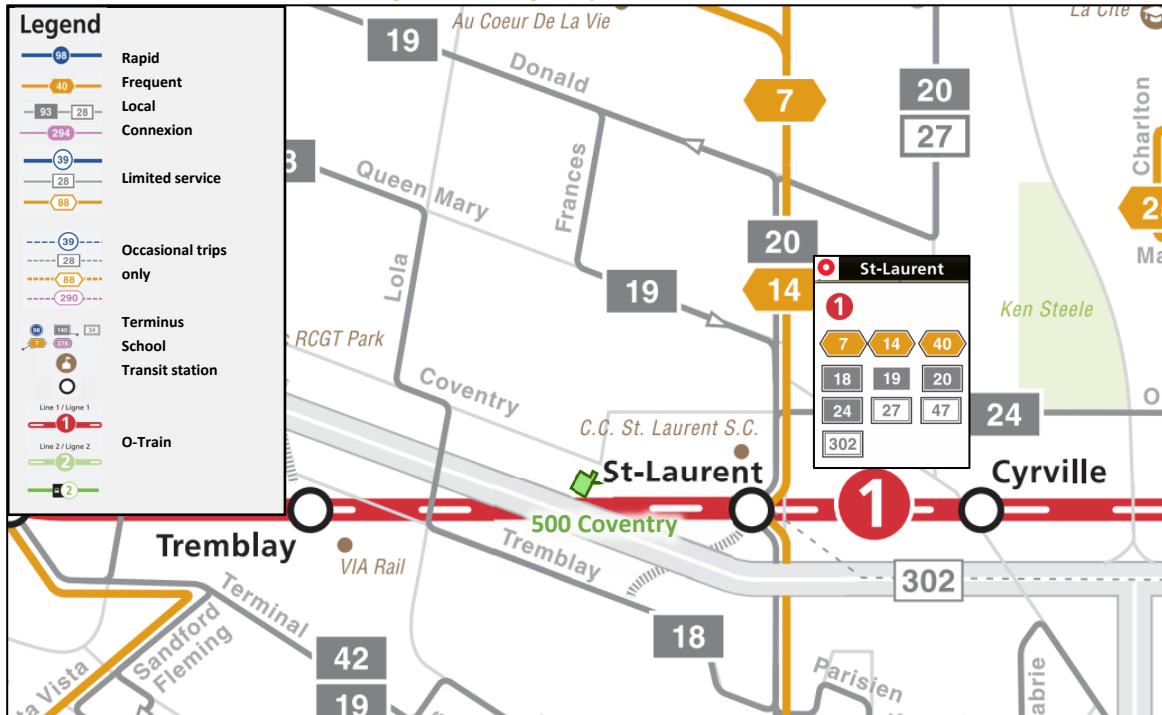
Figure 8 illustrates the transit system map in the study area and Figure 9 illustrates all transit stops within 400 metres of the site and all transit stations within 800 metres of the site. All transit information is from January 5, 2024, and is included for general information purposes and context to the surrounding area.

Within the study area, route #18 travels along Coventry Road, Belfast Road, and Tremblay Road, and route #624 travels along Coventry Road. The frequency of these routes within proximity of the proposed site based on January 5, 2024, service levels is:

- Route # 18 – 30-minute service all day
- Route # 624– One-morning bus and one-afternoon bus (High school)

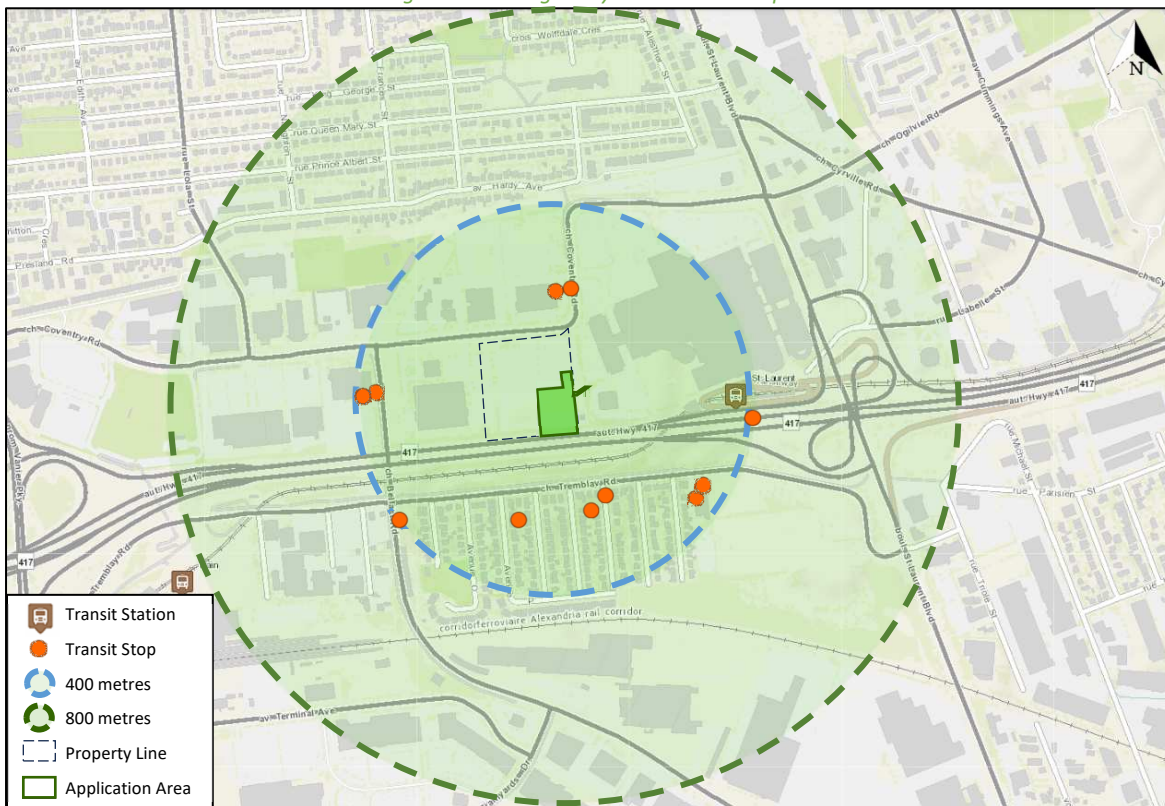
Additionally, the St. Laurent LRT station is within a 500-metre walking distance of the site. Routes #7, #14, #18, #19, #20, #24, #27, #40, #47, and #302 stop at St Laurent Station.

Figure 8: Existing Study Area Transit Service



Source: <http://www.octranspo.com/> Accessed: January 5, 2024

Figure 9: Existing Study Area Transit Stops



Source: <http://www.octranspo.com/> Accessed: January 5, 2024

2.2.6 Existing Area Traffic Management Measures

There are no existing area traffic management measures within the study area.

2.2.7 Existing Peak Hour Travel Demand

Existing turning movement counts were acquired from the City of Ottawa and manual counts were conducted by The Traffic Specialist for the existing study area intersections. Table 1 summarizes the intersection count dates and sources. As per the City's request, the existing traffic counts are unmodified for the existing condition analysis.

Table 1: Intersection Count Date

Intersection	Count Date	Source
Coventry Road at Belfast Road	Wednesday, January 08, 2020	City of Ottawa
Coventry Road at St. Laurent Shopping Centre West Access	Wednesday, January 08, 2020	City of Ottawa
Coventry Road at St. Laurent Shopping Centre North Access	Wednesday, January 08, 2020	City of Ottawa
Tremblay Road at Belfast Road	Wednesday, October 18, 2023	City of Ottawa
Coventry Road at 500 Coventry Road	Tuesday, November 21, 2023	The Traffic Specialist

Figure 10 illustrates the existing traffic counts and Table 2 summarizes the existing intersection operations. The level of service for signalized intersections is based on volume to capacity ratio (v/c) calculations for individual lane movements and HCM 2000 v/c calculations for the overall intersection, and average delay for unsignalized intersections. Detailed turning movement count data is included in Appendix B and the Synchro worksheets are provided in Appendix C.

Figure 10: Existing Traffic Counts

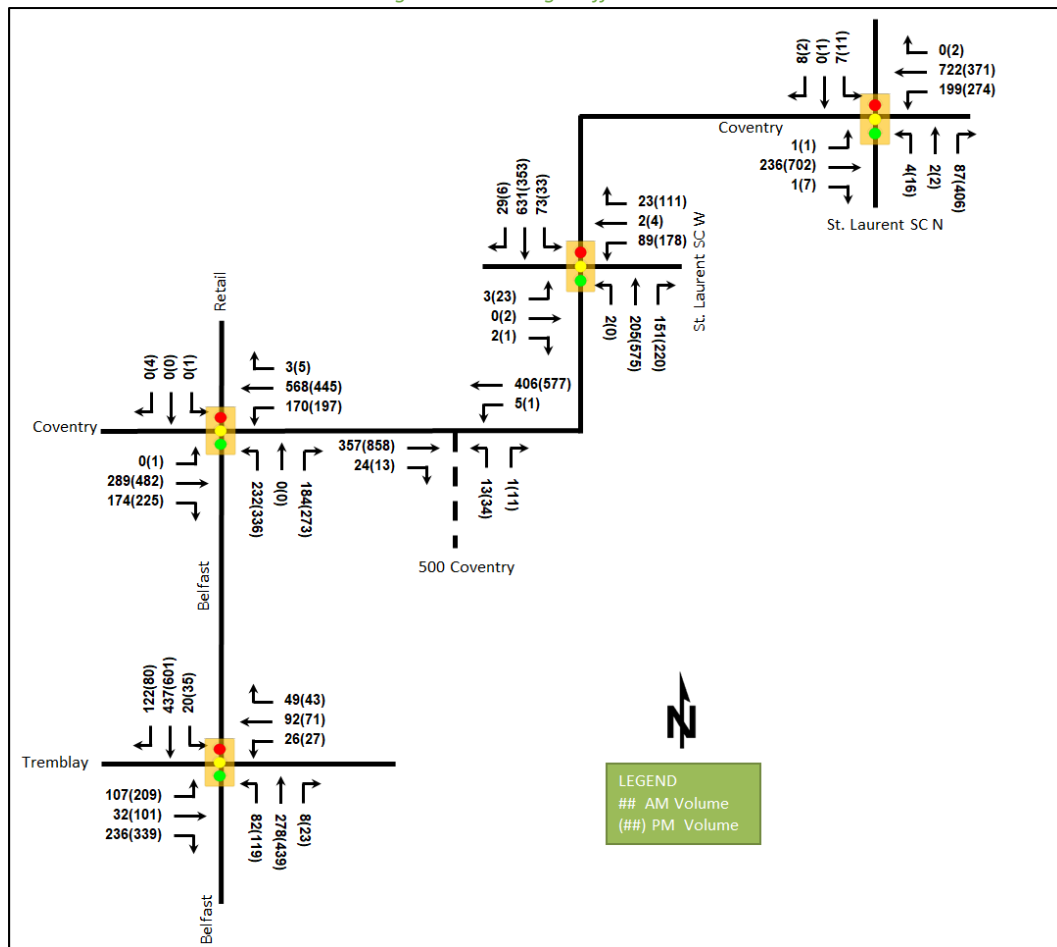


Table 2: Existing Intersection Operations

Intersection	Lane	AM Peak Hour				PM Peak Hour			
		LOS	V/C	Delay (s)	Q (95 th)	LOS	V/C	Delay (s)	Q (95 th)
Coventry Road at Belfast Road <i>Signalized</i>	EBL	-	-	-	-	A	0.00	20.0	1.1
	EBT	A	0.42	20.2	64.4	D	0.83	39.8	#146.5
	EBR	A	0.26	3.7	12.4	A	0.37	4.7	15.2
	WBL	A	0.32	8.8	22.4	B	0.66	22.3	#36.8
	WBT/R	A	0.60	13.9	98.3	A	0.54	17.1	86.4
	NBL/T	D	0.85	58.1	#77.8	D	0.89	54.0	#104.7
	NBR	A	0.45	11.6	24.3	A	0.53	12.8	37.4
	SB	-	-	-	-	A	0.01	0.0	0.0
	Overall	C	0.71	19.5	-	D	0.84	27.4	-
Coventry Road at St. Laurent Shopping Centre West Access <i>Signalized</i>	EB	A	0.02	0.2	0.0	A	0.11	22.1	9.0
	WBL/T	A	0.45	33.1	24.2	C	0.74	43.0	47.0
	WBR	A	0.09	5.6	3.8	A	0.29	6.5	11.3
	NBL	A	0.01	6.5	1.0	-	-	-	-
	NBT/R	A	0.18	3.4	14.2	A	0.44	7.9	46.7
	SBL	A	0.12	6.6	12.0	A	0.12	8.6	7.0
	SBT/R	A	0.59	10.6	123.1	A	0.38	9.3	50.5
	Overall	A	0.60	9.8	-	A	0.51	12.7	-
Coventry Road at St. Laurent Shopping Centre North Access <i>Signalized</i>	EBL	A	0.01	35.0	1.7	A	0.01	38.0	1.8
	EBT/R	A	0.16	12.0	26.0	A	0.56	20.1	91.8
	WBL	A	0.48	31.8	30.2	A	0.35	24.8	38.2
	WBT/R	A	0.30	7.6	75.0	A	0.15	6.4	35.8
	NBL/T	A	0.02	22.6	3.4	A	0.08	25.7	7.8
	NBR	A	0.23	4.4	6.9	D	0.82	29.5	68.5
	SB	A	0.05	0.3	0.0	A	0.06	23.9	6.2
	Overall	A	0.39	12.0	-	B	0.69	20.2	-
Tremblay Road at Belfast Road <i>Signalized</i>	EBL	A	0.30	23.3	27.9	B	0.68	42.1	#73.2
	EBT	A	0.45	6.7	22.0	E	0.92	46.5	#128.1
	WBL	A	0.10	20.7	9.2	A	0.38	44.6	#14.8
	WBT/R	A	0.27	17.3	28.5	A	0.26	21.6	29.0
	NBL	A	0.39	15.5	14.3	A	0.57	25.1	27.1
	NBT/R	A	0.38	14.0	46.2	B	0.61	22.8	110.6
	SBL	A	0.06	19.4	7.4	A	0.11	10.2	7.1
	SBT/R	F	1.03	72.5	#174.8	F	1.08	87.7	#239.1
	Overall	B	0.67	35.9	-	E	0.95	51.0	-
Coventry Road at 500 Coventry Road <i>Unsignalized</i>	EBT/R	-	-	-	-	-	-	-	-
	WBL	A	0.01	8.2	0.0	B	0.00	10.1	0.0
	WBT	-	-	-	-	-	-	-	-
	NBL/R	B	0.03	13.3	0.8	C	0.19	22.0	5.3
	Overall	A	-	0.3	-	A	-	0.7	-

Notes: Saturation flow rate of 1800 veh/h/lane
Queue is measured in metres
Peak Hour Factor = 0.90

Delay = average vehicle delay in seconds
m = metered queue
= volume for the 95th %ile cycle exceeds capacity

During both the AM and PM peak hours, capacity issues are noted at the intersection of Tremblay Road at Belfast Road.

At the intersection of Coventry Road at Belfast Road, extended queues may be exhibited on the northbound left/through movements during both peak hours, and the eastbound through and westbound left movements during the PM peak hour.

At the intersection of Tremblay Road at Belfast Road, the southbound through/right movements during both peak hours are over theoretical capacity and may be subject to high delays and extended queues. The eastbound and westbound left-turn and eastbound through movements during the PM peak hour may exhibit extended queues. One-second shift from the northbound left-turn to southbound during the AM peak hour and five seconds shift from the northbound left-turn to southbound during the PM peak hour may reduce v/c of all movements to 1.00 or below.

It is noted that there is a difference between the 2020 and the 2023 volumes on the network, specifically westbound along Coventry Road for approximately 300 vehicles during the AM peak and southbound on Belfast Road for 230-290 vehicles during both peaks. Should additional traffic operational analysis be required within the TIA, these volumes will be adjusted in the future analysis.

2.2.8 Collision Analysis

Collision data have been acquired from the City of Ottawa open data website (data.ottawa.ca) for five years prior to the commencement of this TIA for the surrounding study area road network. This data will be used as a high-level review to determine if there is a need for additional data collection/specific pattern review. Table 3 summarizes the collision types and conditions in the study area, Figure 11 illustrates the area collisions, and Table 4 summarizes the total collisions for each of the locations analyzed. Collision data are included in Appendix D.

Table 3: Study Area Collision Summary, 2018-2022

		Number	%
Total Collisions		37	100%
Classification	Fatality	0	0%
	Non-Fatal Injury	10	27%
	Property Damage Only	27	73%
Initial Impact Type	Angle	6	16%
	Rear end	6	16%
	Sideswipe	15	41%
	Turning Movement	5	14%
	SMV Other	5	14%
Road Surface Condition	Dry	30	81%
	Wet	3	8%
	Loose Snow	2	5%
	Slush	2	5%
Pedestrian Involved		1	3%
Cyclists Involved		2	5%

Figure 11: Study Area Collision Records, 2018-2022

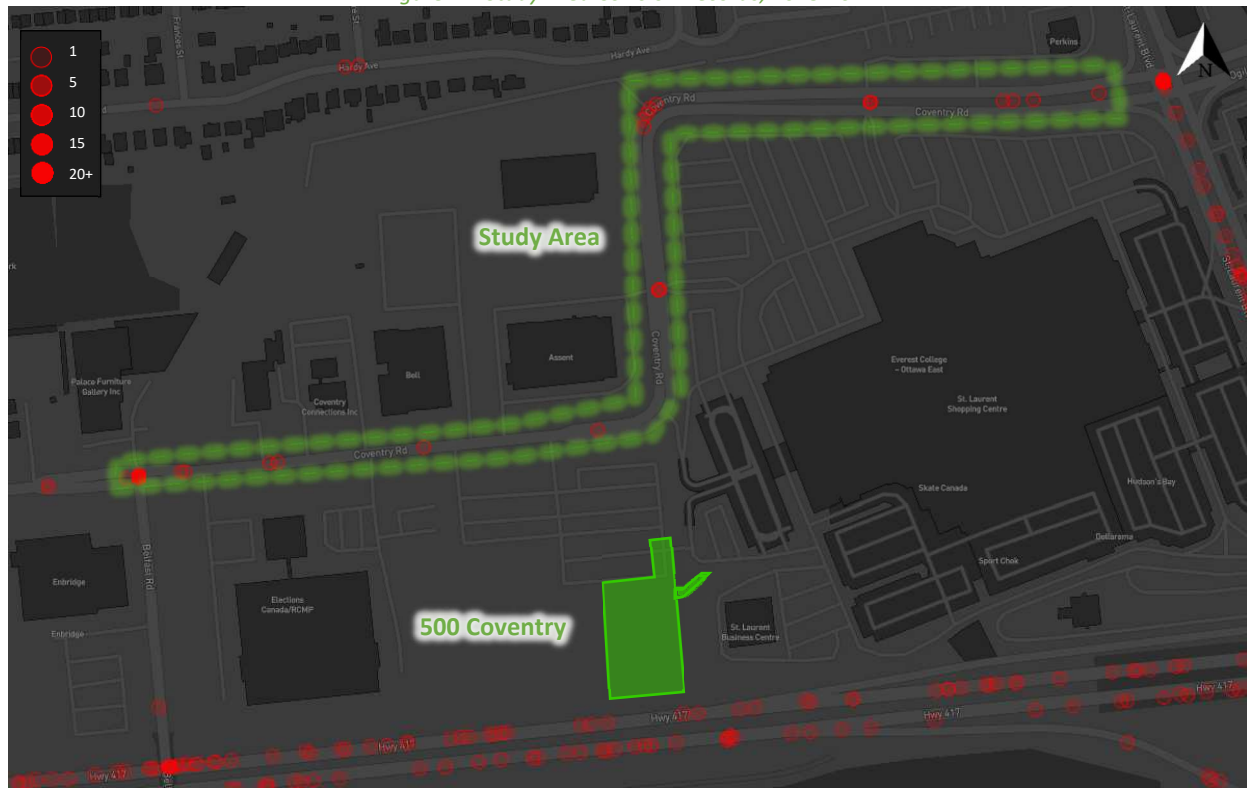


Table 4: Summary of Collision Locations, 2018-2022

Intersections / Segments	Number	%
Intersections / Segments	37	100%
Belfast Rd @ Coventry Rd	14	38%
Coventry Rd btwn Belfast Rd & St. Laurent Sc West	6	16%
Coventry Rd btwn St. Laurent Sc North & St. Laurent Sc West	5	14%
Coventry Rd @ St. Laurent Shopping Centre West Access	4	11%
Coventry Rd @ 230 W Of St. Laurent Blvd/St. La	4	11%
Coventry Rd btwn St. Laurent Blvd & St. Laurent Sc West	4	11%

Within the study area, the intersection of Belfast Road and Coventry Road is noted to have experienced higher collisions than other locations. Table 5 summarizes the collision types and conditions for the location. Two cyclist collisions have been noted, one at Coventry Road at St. Laurent Shopping Centre West Access intersection and one at Belfast Road at Coventry Road intersection. One pedestrian collision has been noted at Belfast Road at Coventry Road intersection. These do not require additional review as part of this study and, if the City desires, can be addressed as part of the City's Coventry Road EA.

Table 5: Belfast Road and Coventry Road Collision Summary

Total Collisions		Number	%
		14	100%
Classification	Fatality	0	0%
	Non-Fatal Injury	3	21%
	Property Damage Only	11	79%
Initial Impact Type	Angle	2	14%
	Rear end	4	29%
	Sideswipe	4	29%

		Number	%
Total Collisions		14	100%
	Turning Movement	2	14%
	SMV Other	2	14%
Road Surface Condition	Dry	10	71%
	Wet	2	14%
	Slush	2	14%
Pedestrian Involved		1	7%
Cyclists Involved		1	7%

The Belfast Road and Coventry Road intersection had a total of 14 collisions during the 2018-2022 time period, with eleven involving property damage only and the remaining three having non-fatal injuries. The collision types are most represented by rear end and sideswipe each with four collisions, and the rest split by angle, turning movement, and SMV other collision types. The rear end and sideswipe may be related to the transition from a four-lane roadway on the west side of the intersection and the two-lane cross-section on the east side of the intersection. Weather conditions do not affect collisions at this location. Given the low vehicular volume anticipated from the proposed development, there is no further collision analysis required as part of this study. The City is recommended to review during the upcoming Coventry Road Widening (Belfast Road to St. Laurent Boulevard) Environmental Assessment Study and as part of any intersection improvements for this intersection.

2.3 Planned Conditions

2.3.1 Changes to the Area Transportation Network

2.3.1.1 Official Plan (2021)

Within the Ultimate Transit Network, St Laurent Boulevard is a transit priority corridor.

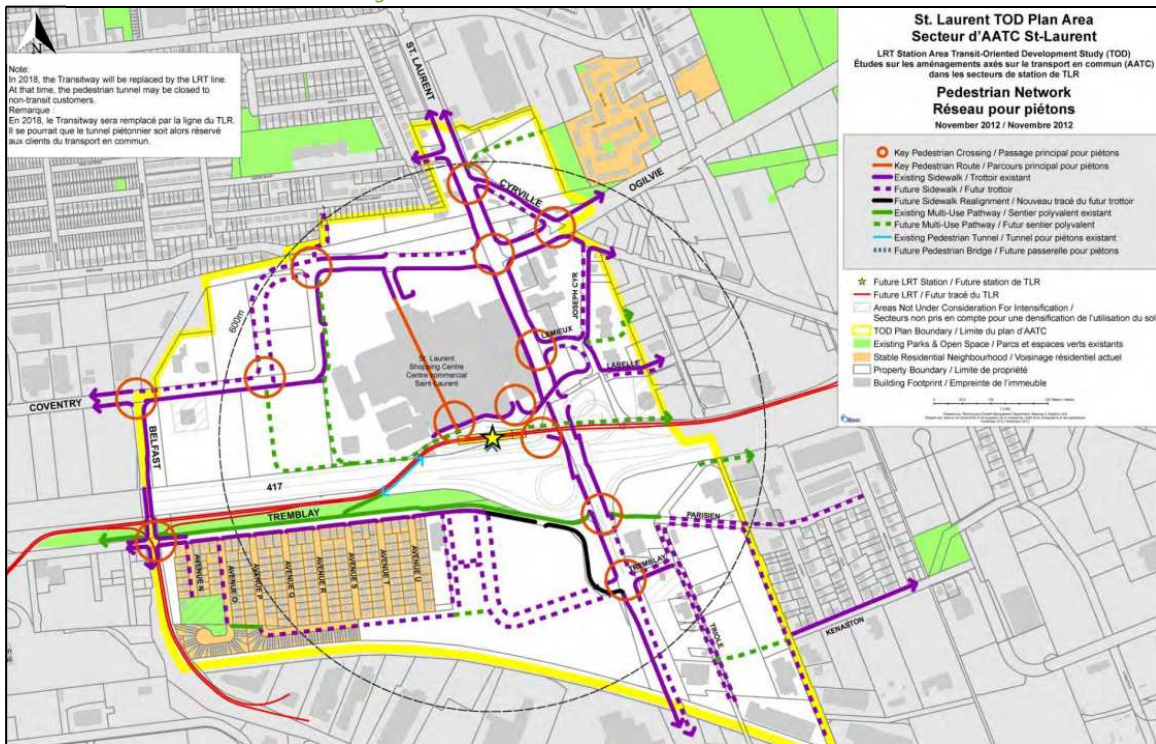
The development is within the St. Laurent Protected Major Transit Station Area (PMTSA), design priority area, and Inner East Lines 1 and 3 Stations Secondary Plan area in the Official Plan. St Laurent Boulevard is a Mainstreet corridor within the design priority area in the Official Plan.

2.3.1.2 St. Laurent Transit-Oriented Development Plan

City Council had established transit-oriented development (TOD) plans for transit-supportive land uses. In the Official Plan (2021), the protected Major Transit Station Area (PMTSA) has been used to establish transit-supportive densities within a designated area that surrounds a rapid transit station area, and it replaced TOD.

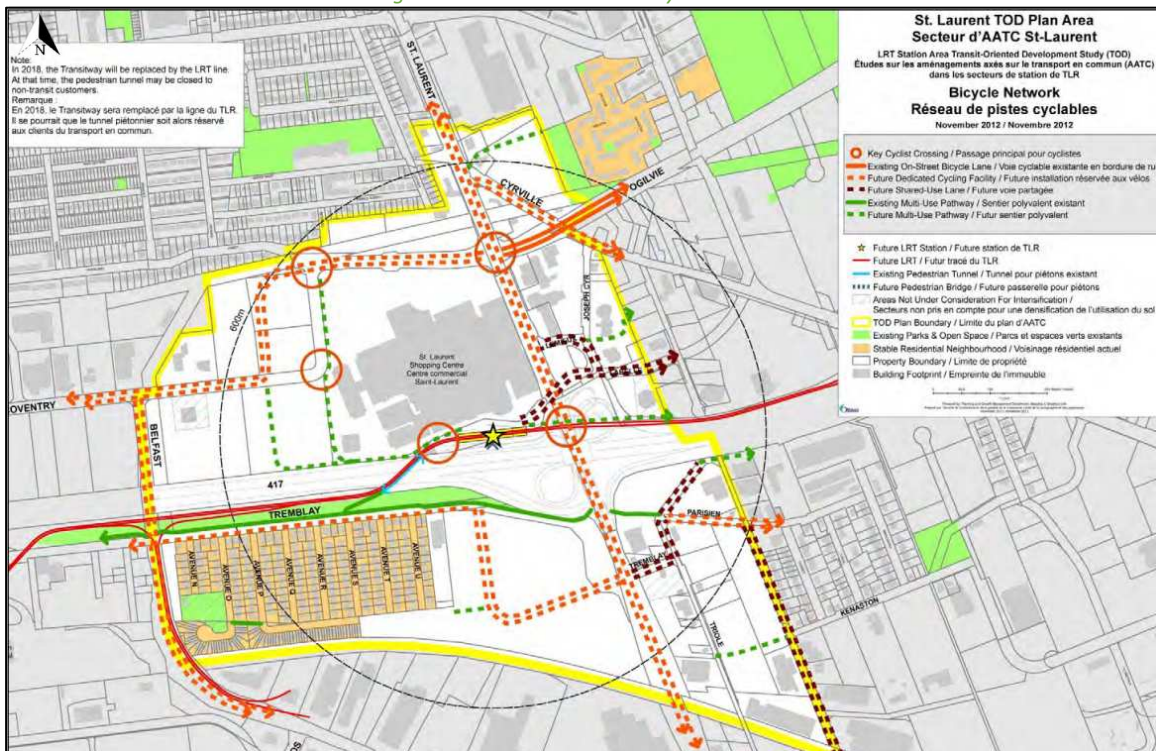
The St. Laurent TOD plan outlines the realignment of Coventry Road and Tremblay Road through the plan area, new area sidewalks, and dedicated cycling facilities along St Laurent Boulevard, Coventry Road, Tremblay Road, and Belfast Road. The St. Laurent TOD plan identifies conceptual MUP connections from the adjacent shopping centre property and LRT to the east through the site to Coventry Road. Figure 12 and Figure 13 illustrate the St. Laurent pedestrian and cycling plans, respectively.

Figure 12: St. Laurent TOD Pedestrian Network



Source: Transit-Oriented Development (TOD) Plans Lees, Hurdman, Tremblay, St. Laurent, Cyrville and Blair (January 2014)

Figure 13: St. Laurent TOD Bicycle Network



Source: Transit-Oriented Development (TOD) Plans Lees, Hurdman, Tremblay, St. Laurent, Cyrville and Blair (January 2014)

2.3.1.3 *Transportation Master Plan (2013)*

Within the 2013 Transportation Master Plan, the Road Network's Network Concept diagram shows Coventry Road as a widened arterial and Tremblay Road as a widened collector. Within the Affordable Network diagram, these sections are shown as segments for Phase Three (2026-2031) widening. The scope of the work per the Affordable Network is the widening of Coventry Road from two lanes to four lanes between Belfast Road and the St Laurent Shopping Centre, the widening of Tremblay Road from two lanes to four lanes between Pickering Place and St. Laurent Boulevard, and the widening of Belfast Road from two lanes to four lanes between Coventry Road and Tremblay Road. Since the project timeline is unknown, it is assumed that the widening of Coventry Road, Tremblay Road, and Belfast Road will be completed beyond 2033.

Within the Rapid Transit and Transit Priority Network's Network Concept diagram, isolated transit priority measures are shown along Ogilvie Road, however, these are not included in the Affordable Network. Both Networks include an isolated measures transit priority corridor along St. Laurent Boulevard.

2.3.1.4 *Transportation Master Plan Part 1 (2023)*

Within the study area, there are no pedestrian and cycling projects in the Active Transportation Project List. Belfast Road continues to Coventry Road and Lola Street are cross-town bikeways in the Transportation Master Plan Part 1.

2.3.1.5 *Coventry Road Widening EA*

The study of Coventry Road widening between St. Laurent Shopping Centre West Access and Belfast Road is planned and will be started. The EA study will offer an opportunity to improve the public realm and enhance connectivity for pedestrians and cyclists. As noted above in Section 2.3.1.1, the project timeline is unknown, and it is assumed that it will be completed beyond 2033.

2.3.1.6 *St-Laurent Boulevard Transit Priority Corridor EA*

The study of the St-Laurent Boulevard Transit Priority Corridor, between Hemlock Road and Innes Road/Industrial Avenue, is ongoing. The EA study will explore options to enhance transit service efficiency and the travel environment for all modes. Since the timing of implementation is currently unknown, it is assumed that it will occur beyond 2033.

2.3.2 *Other Study Area Developments*

453 & 455 Coventry Road

The proposed development application includes a Zoning By-law Amendment to allow 650 residential units and 1,115m² gross floor area (GFA) of commercial space. The development was forecasted to generate 113 new AM and 135 new PM two-way peak hour auto trips. The anticipated build-out horizon is 2027. (Novatech, 2022)

500, 525, 535 Coventry Road & 1200 St. Laurent Boulevard

The proposed development application includes a zoning by-law amendment to permit the construction of freestanding retail buildings with associated surface parking areas. No TIA was included as part of this application, and the file was last updated in 2014.

1209 St Laurent Boulevard & 1200 Lemieux Street

The proposed development application includes a site plan for two 30-storey residential buildings including 640 units. The development was forecasted to generate 35 new AM and 38 new PM peak hour two-way auto trips, and the anticipated build-out horizon is assumed to be 2026. (CGH Transportation, 2022)

1125 – 1149 Cyrville Road

The proposed development application includes a site plan to construct two residential buildings with a total of 354 units. The development was forecasted to generate 22 new AM and 21 new PM two-way peak hour auto trips. The anticipated build-out horizon was 2023, and it is assumed to be 2024. (Stantec, 2021)

599 Tremblay Road

The proposed development application includes a draft plan of subdivision application for the construction of 500 apartment units and 150,000 m² of federal Office in three phases. Phase One is to construct 200 units and 150,000 m² of office space by 2025, Phase Two is 200 units by 2029, and the remaining 100 units by 2033.

Phase One was forecasted to generate 321 new AM and 330 new PM two-way peak-hour auto trips, Phase Two was forecasted to generate 19 new AM and 20 new PM two-way peak-hour auto trips, and Phase Three was forecasted to generate 10 new AM and PM two-way peak-hour auto trips. (WSP, 2021)

1500 St. Laurent Boulevard

The proposed development application includes a site plan to include OC Transpo E-Bus Facility. No TIA was available.

530 Tremblay Road & 2098 Avenue P & 1399 Avenue U

The proposed development application includes a site plan to construct two apartment buildings with a total of 124 units. The development was forecasted to generate 16 new AM and 17 new PM two-way peak-hour auto trips, and the anticipated build-out horizon was to be 2023, and it is assumed to be 2024. (CGH Transportation, 2019)

25 Pickering Place

The proposed development application includes a site plan for a hotel, a senior residence, and four high-rise residential towers. Phase One is to construct a nine-storey hotel with 119 units, a twelve-storey senior residence comprising 164 dwelling units, and a 20-storey tower comprising 211 dwelling units and was estimated to be built out by 2025. Phase Two is to construct three high-rise towers with a total of 849 units and was estimated to be built by 2030. (CIMA+, 2020)

400 Coventry Road

The proposed development application includes a zoning bylaw amendment for constructing seven residential towers comprising 1,768 residential units and 16,340 sq. ft. of commercial space. The development was forecasted to generate 111 new AM and 137 new PM two-way peak-hour auto trips, and the anticipated build-out horizon was assumed to be 2024. (CGH Transportation, 2019)

3 Study Area and Time Periods

3.1 Study Area

The study area will include the intersections of:

- Coventry Road at:
 - Belfast Road
 - St. Laurent Shopping Centre West Access
 - St. Laurent Shopping Centre North Access
 - 500 Coventry Road Access
- Tremblay Road at:
 - Belfast Road

Although 500 Coventry Road westerly access (currently the school bus storage yard) is within the study area, the development has no impact on the 500 Coventry Road westerly access, no changes are proposed to the access, and therefore is not included in the analysis.

The boundary road will be Coventry Road, and no screenlines are present within proximity to the site.

3.2 Time Periods

As the proposed development is composed entirely of residential units the AM and PM peak hours will be examined. No weekend peak hour review is required.

3.3 Horizon Years

The anticipated build-out year is 2028. As a result, the full build-out plus five years horizon year is 2033.

4 Development-Generated Travel Demand

4.1 Mode Shares

Examining the mode shares recommended in the TRANS Trip Generation Manual (2020) for the subject district, derived from the most recent National Capital Region Origin-Destination survey (OD Survey), the existing average district mode shares by land use for Ottawa East have been summarized in Table 6. In addition, the PMTSA area mode shares have been included for reference.

Table 6: TRANS Trip Generation Manual and PMTSA Area Recommended Mode Shares

Travel Mode	Ottawa East Multi-Unit (High-Rise)		PMTSA Areas
	AM	PM	AM & PM
Auto Driver	39%	40%	15%
Auto Passenger	7%	14%	5%
Transit	38%	28%	65%
Cycling	2%	3%	15%
Walking	13%	15%	
Total	100%	100%	100%

Being within 500 metre of walking distance of St. Laurent LRT and bus stations, a higher transit mode is considered achievable at this location and modal shifts towards transit consistent with the PMTSA context are proposed. With the quality of area cycling connections and being within walking distance of the St. Laurent Shopping Centre and the 330 Coventry Road commercial area, a shift from auto mode to transit and active modes is proposed for the site. The modified mode share targets are proposed for the development and are summarized in Table 7.

Table 7: Proposed Development Mode Shares

Travel Mode	Multi-Unit (High-Rise)	
	AM	PM
Auto Driver	16%	19%
Auto Passenger	4%	8%
Transit	58%	48%
Cycling	4%	5%
Walking	18%	20%
Total	100%	100%

4.2 Trip Generation

This TIA has been prepared using the vehicle and person trip rates for the residential dwellings using the TRANS Trip Generation Manual (2020). Table 8 summarizes the person trip rates for the proposed residential land uses for each peak period.

Table 8: Trip Generation Person Trip Rates by Peak Period

Land Use	Land Use Code	Peak Period	Person Trip Rates
Multi-Unit (High-Rise)	221 & 222 (TRANS)	AM	0.80
		PM	0.90

Using the above person trip rates, the total person trip generation has been estimated. Table 9 summarizes the total person trip generation for the residential land uses.

Table 9: Person Trip Generation by Peak Period

Land Use	Units	AM Peak Period			PM Peak Period		
		In	Out	Total	In	Out	Total
Multi-Unit (High-Rise)	309	77	170	247	161	117	278

Using the above mode share targets for a LRT area, and the person trip rates, the person trips by mode have been projected. Trip generation by peak hour has been forecasted using the prescribed peak period conversion factors presented in the TRANS Trip Generation Manual (2020) for the residential component. Table 10 summarizes the residential trip generation by mode and peak hour.

Table 10: Trip Generation by Mode

Travel Mode		AM Peak Hour				PM Peak Hour			
		Mode Share	In	Out	Total	Mode Share	In	Out	Total
Multi-Unit (High-Rise)	Auto Driver	16%	6	13	19	19%	13	10	23
	Auto Passenger	4%	2	4	5	8%	6	4	10
	Transit	58%	24	55	79	48%	35	28	63
	Cycling	4%	2	4	6	5%	4	3	7
	Walking	18%	8	18	26	20%	16	13	29
	Total	100%	42	94	135	100%	74	58	132

As shown above, a total of 19 AM and 23 PM new peak hour two-way vehicle trips are projected for the proposed development.

4.3 Trip Distribution

To understand the travel patterns of the subject development, the OD Survey has been reviewed to determine the travel for the residential component, and these patterns were applied based on the build-out of Ottawa East. Table 11 below summarizes the distributions.

Table 11: OD Survey Distribution – Ottawa East

To/From	Residential % of Trips
North	25%
South	20%
East	25%
West	30%
Total	100%

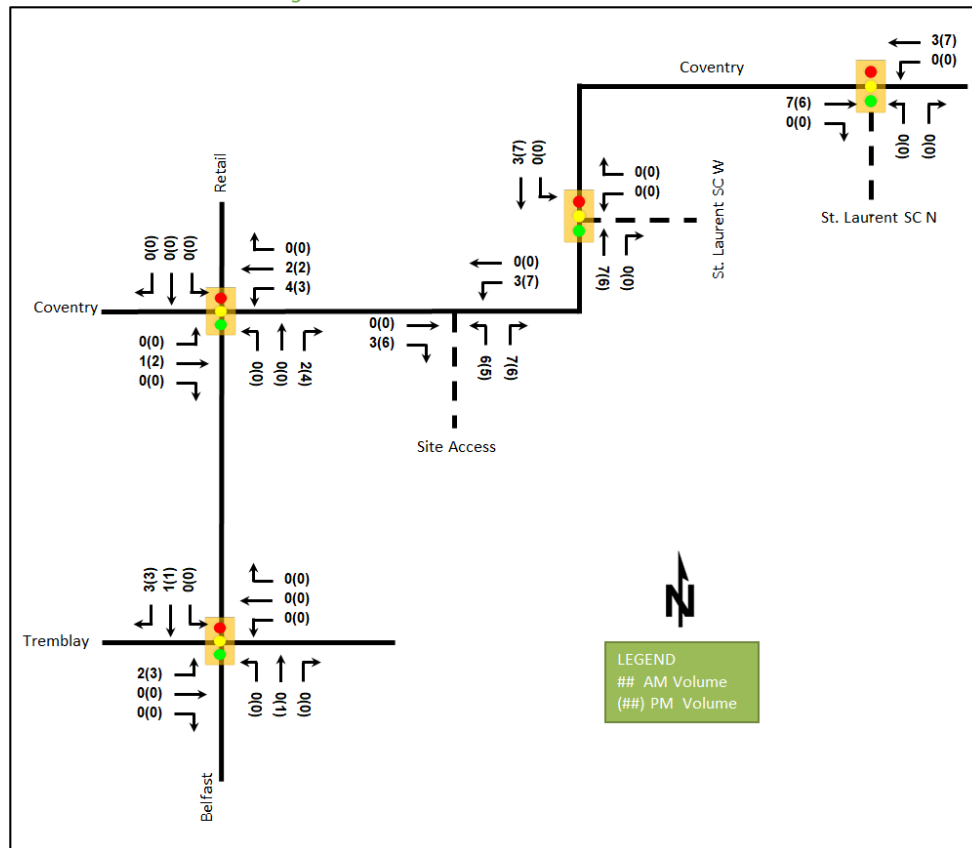
4.4 Trip Assignment

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. Table 12 summarizes the proportional assignment to the study area roadways, and Figure 14 illustrates the new site-generated volumes.

Table 12: Trip Assignment

To/From	Via
North	5% Coventry Road (W) 20% St. Laurent Boulevard (N) via Coventry Road (E)
South	5% Belfast Road (S) 5% Coventry Road (W) 10% St. Laurent Boulevard (S) via Coventry Road (E)
East	15% to/from Highway 417/174 (E) via Coventry Road (E) 10% Coventry Road (E)
West	25% to/from Highway 417/174(W) via Tremblay Road(W) 5% Coventry Road (W)
Total	100%

Figure 14: New Site Generation Auto Volumes



5 Exemption Review

Table 13 summarizes the required modules and exemptions for this TIA.

Table 13: Exemption Review

Module	Element	Explanation	Exempt/Required
Site Design and TDM			
Development Design	4.1.2 Circulation and Access	Only required for site plan and zoning by-law applications	Required
	4.1.3 New Street Networks	Only required for plans of subdivision	Exempt
Parking	4.2.1 Parking Supply	Only required for site plan and zoning by-law applications	Required
Boundary Street Design		All applications	Required
Transportation Demand Management	All Elements	Only required when the development generates more than 60 person-trips	Required
Network Impact			
Background Network Travel Demand	All Elements	Only required when one or more other Network Impact Modules are triggered when the development generates more than 75 auto or transit trips	Required (Transit only)
Demand Rationalization		Only required when one or more other Network Impact Modules when the development generates more than 75 auto trips	Exempt
Neighbourhood Traffic Calming	4.6.1 Adjacent Neighbourhoods	If the development meets all of the following criteria along the route(s) site generated traffic is expected to utilize between an arterial road and the site's access: 1. Access to Collector or Local; 2. "Significant sensitive land use presence" exists, where there is at least two of the following adjacent to the subject street segment: • School (within 250m walking distance); • Park; • Retirement / Older Adult Facility (i.e. long-term care and retirement homes); • Licenced Child Care Centre; • Community Centre; or • 50%, or greater, of adjacent property along the route(s) is occupied by residential lands and a minimum of 10 occupied residential units are present on the route. 3. Application is for Zoning By-Law Amendment or Draft Plan of Subdivision; 4. At least 75 site-generated auto trips; 5. Site Trip Infiltration is expected. Site traffic will increase peak hour vehicle volumes along the route by 50% or more.	Exempt
Transit	4.7.1 Transit Route Capacity	Only required when the development generates more than 75 transit trips	Required

Module	Element	Explanation	Exempt/Required
	4.7.2 Transit Priority Requirements	Only required when the development generates more than 75 auto trips	Exempt
Network Concept		Only required when proposed development generates more than 200 person-trips during the peak hour in excess of equivalent volume permitted by established zoning	Exempt
Intersection Design	4.4.1-2/4.9.1 Intersection Control	Only required when the development generates more than 75 auto trips	Exempt
	4.4.3/4.9.2 Intersection Design	Only required when the development generates more than 75 auto trips	Exempt

6 Development Design

6.1 Design for Sustainable Modes

The proposed Phase 1 development is a residential building with internal bicycle and vehicle parking. The proposed bicycle parking spaces will be located both on the ground floor and underground in the bike rooms. The new proposed vehicle parking spaces will be located underground. The proposed walkways will connect to the existing sidewalk east of the site. This pedestrian connection to the Shopping Centre will serve as the most direct pedestrian route to/from St. Laurent Station. Future pedestrian connections are anticipated to connect Phase 1 development to the future phases of the site.

The infrastructure TDM checklist is provided in Appendix E.

6.2 Circulation and Access

The existing access on Coventry Road and the adjacent parking lot drive aisle will provide the connection to the proposed development. The westerly access will not be impacted by the development and will remain blocked off from the remainder of the site. The existing drive aisle to 1200 St Laurent Boulevard will be closed.

A 6.7 metres internal driveway loop is proposed in front of the residential main entrance for passenger and Para Transpo vehicles, and a 6.7 metre internal driveway is proposed east of the building for trucks to access the loading space and residential vehicles to access the underground parking. Firetrucks will access the building from the north side of the building.

Truck turning movements can be accommodated on site, including garbage vehicles, move-in vehicles, Para Transpo vehicles, and firetrucks, and the turning templates are provided in Appendix F.

7 Parking

7.1 Parking Supply

The site proposes a total of 207 new underground vehicle parking spaces including 177 for residents and 30 for visitors.

According to the parking provisions by-law, within PMTSA, the maximum requirement for the residential parking is 541 vehicle parking spaces, and no minimum residential parking spaces is required. The minimum parking provisions by-law for the visitor parking are 30 spaces. The maximum vehicle parking and minimum visitor parking provisions by-law are satisfied.

The site provides eight accessible parking spaces, including three Type A and five Type B spaces. This exceeds the minimum requirements in the Accessibility Design Standards, which requires for two Type A and three Type B spaces.

A total of 309 bicycle parking spaces are proposed to be located in the bike rooms, including 53 spaces located on the ground floor and 212 spaces located underground. The bylaw requires minimum of 155 bicycle parking, and the proposed bicycle parking exceeds the minimum parking provisions by-law requirements.

8 Boundary Street Design

Table 14 summarizes the Multi-Modal Level of Service (MMLOS) analysis for the boundary street of Coventry Road. The existing and future conditions within the study horizons for Coventry Road will be the same and are considered in one row. The boundary street analysis is based on the policy area of “Within 600m of a rapid transit station”. The MMLOS worksheets have been provided in Appendix G.

Table 14: Boundary Street MMLOS Analysis

Segment	Pedestrian LOS		Bicycle LOS		Transit LOS		Truck LOS	
	PLOS	Target	BLOS	Target	TLOS	Target	TrLOS	Target
Coventry Road	D	A	C	B	N/A	N/A	C	D

Coventry Road does not meet the pedestrian MMLOS target. Traffic volumes and speed (> 60 km/h) are the primary influences on the LOS D level of service. To meet the theoretical pedestrian LOS targets, the operating speed would need to be less than 30 km/h or the curb lane vehicle volumes would need to be reduced to below 3000 AADT.

Coventry Road does not meet the bicycle MMLOS target. To meet the theoretical bicycle LOS targets, the operating speed would need to be less or equal to 50 km/h or physically separated cycling facilities would be needed.

Since the Coventry Road Widening EA is underway, it is expected that the City will review and propose improvements along Coventry Road to meet the pedestrian and bicycle MMLOS targets.

9 Transportation Demand Management

9.1 Context for TDM

The subject site is within the St. Laurent PMTSA area, the mode shares used within the TIA represent a shift from auto mode to transit mode. Overall, the modal shares are likely to be achieved and supporting TDM measures should be provided.

There is a total of 509-bedrooms proposed in the building, including 140 one-bedroom units, 138 two-bedroom units, and 31 three-bedroom units. No age restrictions are noted.

9.2 Need and Opportunity

The subject site has been assumed to rely predominantly on transit due to its proximity to the St. Laurent LRT Station. The proximity of the transit station should provide the opportunity to reach the forecasted transit mode share, and the risks of not meeting targets may be increased volumes on the southbound shared through/right-turn movement at the intersection of Tremblay Road at Belfast Road during both peak hours.

9.3 TDM Program

The “suite of post occupancy TDM measures” has been summarized in the TDM checklists for the residential land uses. The checklist is provided in Appendix E. The key TDM measures recommended include:

- Display local area maps with walking and cycling routes, and transit route information and schedules at major entrances
- Provide a multimodal travel option information package to new residents
- Inclusion of a 1-year Presto card for first time apartment rental, with a set time frame for this offer (e.g. 6-months) from the initial opening of the site
- Unbundle parking cost from rental/purchase price

10 Background Network Travel Demands

10.1 Transportation Network Plans

The transportation network plans discussed in Section 2.3 did not identify any transit improvements in proximity to the site and no changes are anticipated for future travel patterns.

10.2 Other Developments

The background developments are listed in Section 2.3.2. The area developments are anticipated to rely on the St. Laurent and Tremblay rapid transit stations for the majority of transit needs. It is expected that 5% of the total background transit trips would rely on the route #18, which subject to the associated TIA reports would represent a ridership increases of 50 to 60 riders in the peak direction of route #18. These additional trips may be accommodated by the existing service with the additional capacity of a single bus (55 passengers) possible being needed during the PM peak hours.

11 Transit

11.1 Route Capacity

In Section 5.1 the trip generation by mode was estimated, including an estimate of the number of transit trips that will be generated by the proposed development. Table 15 summarizes the transit trip generation.

Table 15: Trip Generation by Transit Mode

Travel Mode	Mode Share AM (PM)	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Transit	58% (48%)	24	55	79	35	28	63

The proposed development is anticipated to generate an additional 79 AM and 63 PM peak hour two-way transit trips. From the trip distribution found in section 5.3, these values can be further broken down. Table 16 summarizes forecasted site-generated transit ridership trips by direction and the equivalent bus loads.

Table 16: Forecasted Site-Generated Transit Ridership

Direction	AM Peak Hour		PM Peak Hour		Service Type	Approximate Equivalent Peak Hour/Direction Bus Loads
	In	Out	In	Out		
North	6	14	9	7	Bus	A quarter of a standard bus
South	5	11	7	6	Bus	One-fifth of a standard bus
East	6	14	9	7	Bus, LRT	Negligible
West	7	16	10	8	Bus, LRT	Negligible

The transit ridership in the area was provided by OC Transpo for the study area routes, including peak period boarding and alighting numbers, and average departure loads per bus, and it is included in Appendix J. All routes are from the St Laurent Station except for route #624.

It is anticipated that the existing service can accommodate site-generated transit trips. With the inclusion of the background transit ridership growth, the additional capacity of a single bus (55 passengers) during the PM peak hours to accommodate the background development demands. No service changes are required as part of the subject development.

12 Access Intersection Design

12.1 Location and Design of Access

Site access will be via the existing private driveway on Coventry Road, with no new access proposed.

The current driveway is approximately 13 meters wide and includes a 1.5-meter-wide median dividing a single inbound lane and two outbound lanes. The private approach by-law requires a minimum access width of 2.4 metres and a maximum access width of 9.0 metres access. The existing access does not meet the private approach by-law requirements for access width due to the two outbound lanes originally designed and approved when it was constructed. Once the future phases of development proceed, the access should be reviewed to determine if the divided access and two outbound lanes are required. The reconstructed access must comply with the City of Ottawa standard drawing SC7.1, or the current standard at the time.

The throat length for the existing access is approximately 27.0 metres. The TAC Geometric Design Guidelines requires a throat length of 40 metres for apartment land use more than 200 units on a collector road. Once the future phases of development proceed, the throat length should be revised to meet the TAC requirements of 40 metres.

13 Summary of Improvements Indicated and Modifications Options

The following summarizes the analysis and results presented in this TIA report:

Proposed Site

- The site plan application includes only Phase 1 of the proposed development, which is part of a total of six planned phases
- The phase 1 development is located within the St. Laurent PMTSA, design priority area, and Inner East Lines 1 and 3 Stations Secondary Plan area
- The phase 1 development proposes a high-rise residential tower comprising 309 dwelling units, a public park, 309 bicycle parking spaces, and 207 underground parking spaces
- Future pedestrian connections will connect Phase 1 development to future phases of the site and to the parkland dedication adjacent to Coventry Road
- The parking lot and future pedestrian connections are not within the boundary of the site plan application
- Site access will be via the existing private driveway on Coventry Road
- The existing driveway between 500 Coventry Road and 1200 St. Laurent Boulevard is proposed to be closed
- The westerly access will remain blocked off although the future use will be subject to leasing contracts
- The anticipated full build-out and occupancy horizon for Phase 1 is 2028

TIA Screening and Exemptions

- The TIA Screening form indicated a full TIA was required due to trip generation and location in both a design priority area and PMTSA
- The exemption review for the TIA did not require new street networks, background network travel demand for auto modes, demand rationalization for travel modes, neighbourhood traffic calming transit priority review, network concept review, intersection control review or intersection design review.

Existing Conditions

- Coventry Road is an arterial road, and Tremblay Road and Belfast Road are major collector roads in the study area
- Sidewalks are provided along both sides of St Laurent Boulevard, Coventry Road except for the segment between the St. Laurent Shopping Centre West Access and the St. Laurent Shopping Centre North Access, the east side of Belfast Road as part of mixed facilities, and on both sides over the Highway 417 overpass, and on the south side of Tremblay Road
- The private property network includes outdoor walkways and aisles, as well as indoor routes within the adjacent property and St Laurent Shopping Centre, which would serve as the most direct pedestrian route to/from St. Laurent Station
- MUPs are present on Coventry Road between St. Laurent Shopping Centre West Access and St. Laurent Shopping Centre North Access, on Tremblay Road, and on Belfast Road to the Highway 417 overpass
- Cycletracks are present on Coventry Road west of Belfast Road within the study area
- Bike lanes are present on Coventry Road between Belfast Road and St. Laurent Boulevard
- The cross-town bikeway continues from Belfast Road and continues to Coventry Road and Lola Street
- One cyclist collision and one pedestrian collision have been noted at Belfast Road at Coventry Road intersection, and one cyclist collision have been noted at Coventry Road at St. Laurent Shopping Centre West Access intersection
- The intersection of Belfast Road and Coventry Road is noted to have experienced higher collisions than other locations within the study area
- Given the low vehicular volume anticipated from the proposed development, there is no further collision analysis is required as part of this study
- The City is recommended to review during the upcoming Coventry Road Widening (Belfast Road to St. Laurent Boulevard) Environmental Assessment Study and as part of any intersection improvements for this intersection
- Capacity issues are noted at the intersection of Tremblay Road at Belfast Road during both peak hours in the existing condition
- One second shift from the northbound left turn to southbound during the AM peak hour and five seconds shift from the northbound left-turn to southbound during the PM peak hour may reduce v/c of all movements to 1.00 or below at the intersection of Tremblay Road at Belfast Road

Planned Conditions

- Belfast Road continues to Coventry Road and Lola Street are cross-town bikeways in the Transportation Master Plan Part 1

- The Coventry Road widening between St. Laurent Shopping Centre West Access and Belfast Road and St-Laurent Boulevard Transit Priority Corridor are assumed to be completed beyond 2033

Development Generated Travel Demand

- The proposed development is forecasted to produce 135 two-way people trips during the AM peak hour and 132 two-way people trips during the PM peak hour
- Of the forecasted people trips, 19 two-way trips will be vehicle trips during the AM peak hour and 23 two-way trips will be vehicle trips during the PM peak hour based on a 58% (48%) modal share targets
- Of the forecasted trips, 25% are anticipated to travel to the north and east, 20% to the south, and 30% to the west

Development Design

- The proposed bicycle parking spaces will be located both on the ground floor and underground in the bike rooms
- The proposed walkways will connect to the existing sidewalk east of the site
- The existing access on Coventry Road and the adjacent parking lot drive aisle will provide the connection to the proposed development
- The existing drive aisle to 1200 St Laurent Boulevard will be closed
- The westerly access will not be impacted by the development and will remain blocked off from the remainder of the site
- A 6.7 metres internal driveway loop is proposed in front of the residential main entrance for passenger and Para Transpo vehicles
- A 6.7 metres internal driveway is proposed east of the building for trucks to access the loading space and residential vehicles to access the underground parking
- Fire trucks will access the building from the north side of the site
- Truck turning movements can be accommodated on site

Parking

- The site proposes a total of 207 new underground vehicle parking spaces and 309 bicycle parking spaces
- The maximum vehicle parking and minimum visitor parking meet the parking provisions by-law requirements
- The site provides eight accessible parking spaces, and it exceeds the minimum requirements in the Accessibility Design Standards
- The proposed bicycle parking exceeds the minimum parking provisions by-law requirements

Boundary Street Design

- Coventry Road does not meet the pedestrian MMLOS targets, and less than 30 km/h operating speed or the curb lane vehicle volumes below 3000 AADT would need to meet the targets
- Coventry Road does not meet the bicycle MMLOS target, and less or equal to 50 km/h operating speed or physically separated cycling facilities would need to meet the targets
- It is expected that the City will review and propose improvements along Coventry Road to meet the pedestrian and bicycle MMLOS targets since the Coventry Road Widening EA is underway

TDM

- Supportive TDM measures recommended to be included within the proposed development include:
 - Display local area maps with walking and cycling routes, and transit route information and schedules at major entrances
 - Provide a multimodal travel option information package to new residents
 - Inclusion of a 1-year Presto card for first time apartment rental, with a set time frame for this offer (e.g. 6-months) from the initial opening of the site
 - Unbundle parking cost from rental/purchase price

Background Network Travel Demands

- No changes are anticipated to the transit network in proximity to the site
- Most of the developments are anticipated to rely on the St. Laurent and Tremblay rapid transit stations for the majority of transit needs
- Ridership increases of 50 to 60 are anticipated in the peak direction of route #18 based on the number of units proposed by the background developments
- It is anticipated that ridership increases by the background developments may be accommodated by the existing service with the additional capacity of a single bus (55 passengers) possibly being needed during the PM peak hours

Transit

- The proposed development is anticipated to generate an additional 79 AM and 63 PM peak hour two-way transit trips
- It is anticipated that the existing service can accommodate site-generated transit trips based on transit ridership in the area, and no service changes are required as part of the subject development

Access Intersection Design

- Site access will be via the existing private driveway on Coventry Road, with no new access proposed
- The existing access does not meet the private approach by-law requirements for access width due to the two outbound lanes originally designed and approved when it was constructed
- The reconstructed access must comply with the City of Ottawa standard drawing SC7.1, or the current standard at the time
- Once the future phases of development proceed, the throat length should be revised to meet the TAC requirements of 40 metres

14 Conclusion

It is recommended that, from a transportation perspective, the proposed development applications proceed.

Prepared By:



Yu-Chu Chen
Transportation Engineering-Intern

Reviewed By:



Andrew Harte, P.Eng.
Senior Transportation Engineer

Appendix A

TIA Screening Form and PM Certification Form

City of Ottawa 2023 Revisions to 2017 TIA Guidelines
Step 1 - Screening Form

Date: 12-Dec-23
Project Number: 2022-152
Project Reference: 500 Coventry

1.1 Description of Proposed Development	
Municipal Address	500 Coventry Road
Description of Location	South of Coventry Road and west of St. Laurent Shopping Centre
Land Use Classification	Transit Oriented Development Zone TD3[1988] S263-h1
Development Size	A high-rise residential tower comprising 309 dwelling units
Accesses	Existing driveway on Coventry Road
Phase of Development	Single
Buildout Year	2028
TIA Requirement	Full TIA Required

1.2 Trip Generation Trigger	
Land Use Type	Multi-Family (High-Rise)
Development Size	309 Units
Trip Generation Trigger	Yes

1.3 Location Triggers		
Does the development propose a new driveway to a boundary street that is designated as part of the Transit Priority Network, Rapid Transit network or Cross-Town Bikeways?	No	
Is the development in a Hub, a Protected Major Transit Station Area (PMTSA), or a Design Priority Area (DPA)?	Yes	St. Laurent Protected Major Transit Station Area (PMTSA), design priority area
Location Trigger	Yes	

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



Certification Form for TIA Study PM

TIA Plan Reports

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

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

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

CERTIFICATION



I have reviewed and have a sound understanding of the objectives, needs and requirements of the City of Ottawa's Official Plan, Transportation Master Plan and the Transportation Impact Assessment (2017) Guidelines; (Update effective July 2023)



I have a sound knowledge of industry standard practice with respect to the preparation of transportation impact assessment reports, including multi modal level of service review;



I have substantial experience (more than 5 years) in undertaking and delivering transportation impact studies (analysis, reporting and geometric design) with strong background knowledge in transportation planning, engineering or traffic operations; and



I am either a licensed or registered¹ professional in good standing, whose field of expertise



is either transportation engineering



or transportation planning.

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

Dated at Ottawa this 17 day of August, 20 23.
(City)

Name : Andrew Harte

Professional title: Senior Transportation Engineer / Vice-President Ottawa



Signature of individual certifier that s/he/they meet the above criteria

Office Contact Information (Please Print)
Address: <u>6 Plaza Court</u>
City / Postal Code: <u>Ottawa, K2H 7W1</u>
Telephone / Extension: <u>613-697-3797</u>
Email Address: <u>andrew.harte@cghtransportation.com</u>

Stamp



Revision Date: June 2023

Appendix B

Turning Movement Counts



Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

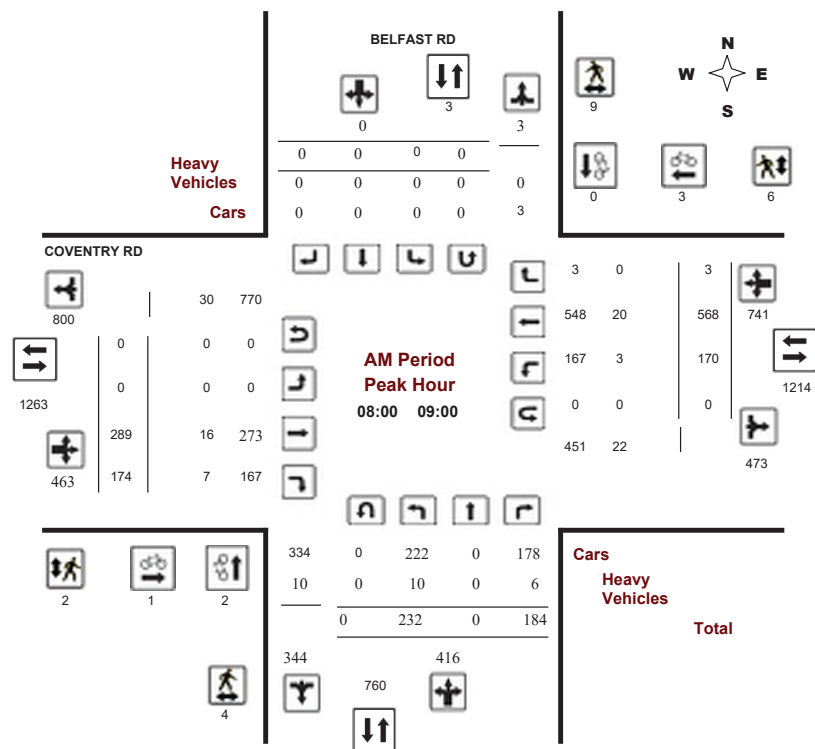
BELFAST RD @ COVENTRY RD

Survey Date: Wednesday, January 08, 2020

Start Time: 07:00

WO No: 39278

Device: Miovision



Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

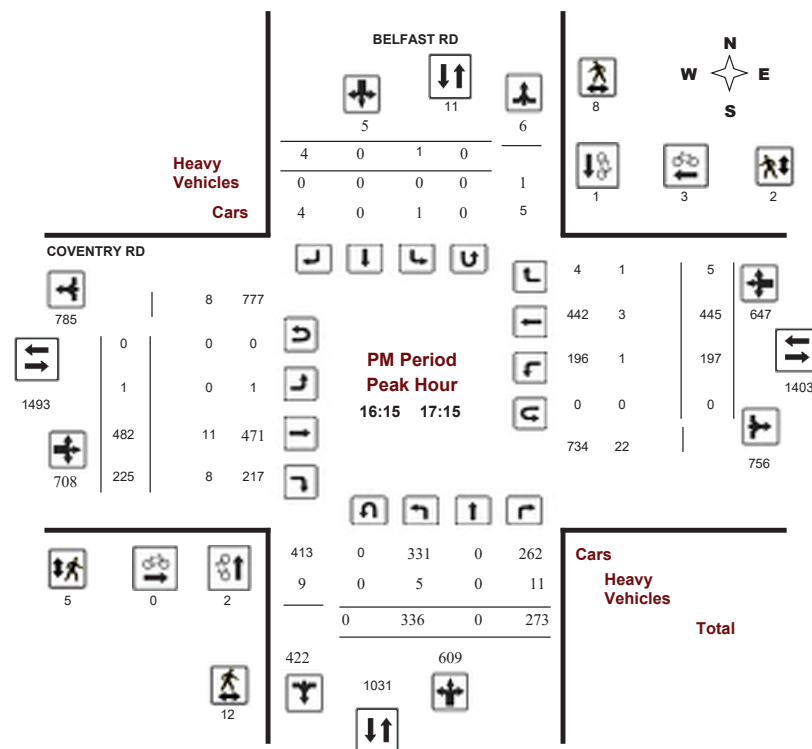
BELFAST RD @ COVENTRY RD

Survey Date: Wednesday, January 08, 2020

Start Time: 07:00

WO No: 39278

Device: Miovision





Transportation Services - Traffic Services

Turning Movement Count - Study Results

BELFAST RD @ COVENTRY RD

Survey Date: Wednesday, January 08, 2020

WO No: 39278

Start Time: 07:00

Device: Miovision

Full Study Cyclist Volume

		BELFAST RD			COVENTRY RD			Grand Total
Time Period		Northbound	Southbound	Street Total	Eastbound	Westbound	Street Total	
07:00 07:15		0	0	0	0	0	0	0
07:15 07:30		0	0	0	0	0	0	0
07:30 07:45		0	0	0	0	0	0	0
07:45 08:00		0	0	0	2	0	2	2
08:00 08:15		0	0	0	0	0	0	0
08:15 08:30		1	0	1	0	2	2	3
08:30 08:45		1	0	1	0	1	1	2
08:45 09:00		0	0	0	1	0	1	1
09:00 09:15		0	0	0	0	0	0	0
09:15 09:30		0	0	0	0	0	0	0
09:30 09:45		0	0	0	0	0	0	0
09:45 10:00		0	0	0	1	0	1	1
11:30 11:45		0	0	0	0	0	0	0
11:45 12:00		0	0	0	1	0	1	1
12:00 12:15		0	0	0	0	0	0	0
12:15 12:30		0	0	0	0	0	0	0
12:30 12:45		0	0	0	0	1	1	1
12:45 13:00		0	0	0	0	0	0	0
13:00 13:15		0	0	0	1	0	1	1
13:15 13:30		0	0	0	0	0	0	0
15:00 15:15		0	0	0	1	2	3	3
15:15 15:30		0	0	0	0	1	1	1
15:30 15:45		0	0	0	0	0	0	0
15:45 16:00		0	0	0	0	0	0	0
16:00 16:15		0	0	0	0	0	0	0
16:15 16:30		0	1	1	0	1	1	2
16:30 16:45		0	0	0	0	1	1	1
16:45 17:00		2	0	2	0	1	1	3
17:00 17:15		0	0	0	0	0	0	0
17:15 17:30		0	0	0	0	0	0	0
17:30 17:45		0	0	0	1	1	2	2
17:45 18:00		0	0	0	1	0	1	1
Total		4	1	5	9	11	20	25



Transportation Services - Traffic Services

Turning Movement Count - Study Results

BELFAST RD @ COVENTRY RD

Survey Date: Wednesday, January 08, 2020

WO No: 39278

Start Time: 07:00

Device: Miovision

Full Study Pedestrian Volume

		BELFAST RD			COVENTRY RD			Grand Total
Time Period		NB Approach (E or W Crossing)	SB Approach (E or W Crossing)	Total	EB Approach (N or S Crossing)	WB Approach (N or S Crossing)	Total	
07:00 07:15		2	1	3	0	0	0	3
07:15 07:30		2	1	3	0	0	0	3
07:30 07:45		2	3	5	1	1	2	7
07:45 08:00		2	1	3	1	2	3	6
08:00 08:15		1	3	4	0	2	2	6
08:15 08:30		0	4	4	1	2	3	7
08:30 08:45		3	1	4	0	1	1	5
08:45 09:00		0	1	1	1	1	2	3
09:00 09:15		1	0	1	0	0	0	1
09:15 09:30		1	2	3	0	1	1	4
09:30 09:45		1	0	1	1	0	1	2
09:45 10:00		6	1	7	0	1	1	8
11:30 11:45		5	3	8	1	1	2	10
11:45 12:00		1	8	9	2	2	4	13
12:00 12:15		4	4	8	3	2	5	13
12:15 12:30		3	7	10	3	0	3	13
12:30 12:45		6	4	10	2	2	4	14
12:45 13:00		10	6	16	0	2	2	18
13:00 13:15		2	9	11	6	1	7	18
13:15 13:30		7	1	8	2	4	6	14
15:00 15:15		0	3	3	0	1	1	4
15:15 15:30		2	1	3	0	0	0	3
15:30 15:45		9	5	14	3	1	4	18
15:45 16:00		5	0	5	2	1	3	8
16:00 16:15		2	1	3	1	1	2	5
16:15 16:30		3	1	4	0	0	0	4
16:30 16:45		2	5	7	3	1	4	11
16:45 17:00		2	1	3	0	0	0	3
17:00 17:15		5	1	6	2	1	3	9
17:15 17:30		3	2	5	2	0	2	7
17:30 17:45		2	2	4	1	1	2	6
17:45 18:00		2	1	3	0	0	0	3
Total		96	83	179	38	32	70	249

5469219 - WED JAN 08, 2020 - 8HRS - LORETTA

Transportation Services - Traffic Services

Turning Movement Count - Study Results

BELFAST RD @ COVENTRY RD

Survey Date: Wednesday, January 08, 2020

WO No: 39278

Start Time: 07:00

Device: Miovision

Full Study Heavy Vehicles

BELFAST RD										COVENTRY RD										
Northbound					Southbound					Eastbound					Westbound					
Time Period	LT	ST	RT	N TOT	LT	ST	RT	S TOT	STR TOT	LT	ST	RT	E TOT	LT	ST	RT	W TOT	STR TOT	Grand Total	
07:00	07:15	4	0	1	8	0	0	0	0	8	0	1	1	7	2	1	0	5	12	10
07:15	07:30	3	0	1	6	0	0	0	0	6	0	4	1	15	1	7	0	13	28	17
07:30	07:45	7	0	0	9	0	0	0	0	9	0	2	2	19	0	8	0	10	29	19
07:45	08:00	4	0	1	5	0	0	0	0	5	0	2	0	9	0	3	0	6	15	10
08:00	08:15	2	0	2	5	0	0	0	0	5	0	2	1	10	0	5	0	9	19	12
08:15	08:30	1	0	1	3	0	0	0	0	3	0	4	0	11	1	6	0	12	23	13
08:30	08:45	4	0	3	13	0	0	0	0	13	0	3	5	17	1	5	0	12	29	21
08:45	09:00	3	0	0	5	0	0	0	0	5	0	7	1	15	1	4	0	12	27	16
09:00	09:15	6	0	5	13	0	0	0	0	13	0	9	2	19	0	2	0	16	35	24
09:15	09:30	4	0	8	15	0	0	0	0	15	0	3	3	11	0	1	0	12	23	19
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09:45	10:00	4	0	1	9	0	0	0	0	9	0	2	4	12	0	2	0	5	17	13
11:30	11:45	4	0	0	9	0	0	0	0	9	0	2	4	15	1	5	0	8	23	16
11:45	12:00	5	0	1	7	0	0	0	0	7	0	3	1	10	0	1	0	5	15	11
12:00	12:15	1	0	0	5	0	0	0	0	5	0	2	1	5	3	1	0	6	11	8
12:15	12:30	1	0	2	4	0	0	0	0	4	0	3	0	7	1	3	0	9	16	10
12:30	12:45	4	0	0	7	0	0	0	0	7	0	0	3	10	0	3	0	3	13	10
12:45	13:00	4	0	0	6	0	0	0	0	6	0	1	1	6	1	0	0	2	8	7
13:00	13:15	3	0	2	7	0	0	0	0	7	0	2	1	11	1	5	0	10	21	14
13:15	13:30	1	0	1	7	0	0	0	0	7	0	0	3	13	2	9	0	12	25	16
15:00	15:15	3	0	1	9	1	0	0	1	10	0	2	2	11	3	4	0	11	22	16
15:15	15:30	8	0	1	12	0	0	0	0	12	0	4	2	17	1	3	0	9	26	19
15:30	15:45	1	0	1	4	0	0	0	0	4	0	0	2	4	0	1	0	2	6	5
15:45	16:00	2	0	4	9	0	0	0	0	9	0	3	3	9	0	1	0	8	17	13
16:00	16:15	2	0	3	8	0	0	0	0	8	0	3	3	10	0	2	0	8	18	13
16:15	16:30	1	0	3	4	0	0	0	0	4	0	4	0	7	0	2	0	9	16	10
16:30	16:45	1	0	4	9	0	0	0	0	9	0	2	4	8	0	1	0	7	15	12
16:45	17:00	3	0	2	7	0	0	0	0	7	0	1	1	5	1	0	0	4	9	8
17:00	17:15	0	0	2	5	0	0	0	1	6	0	4	3	7	0	0	1	7	14	10
17:15	17:30	1	0	1	3	0	0	0	0	3	0	2	1	5	0	1	0	4	9	6
17:30	17:45	0	0	0	1	0	0	0	0	1	0	0	1	2	0	1	0	1	3	2
17:45	18:00	2	0	0	4	0	0	0	0	4	0	1	2	7	0	0	2	3	10	7
Total: None	91	0	53	233	1	0	0	2	235	0	80	69	332	20	92	1	247	579	407	



Transportation Services - Traffic Services

Turning Movement Count - Study Results

COVENTRY RD @ 230 W OF ST. LAURENT BLVD/ST. LA

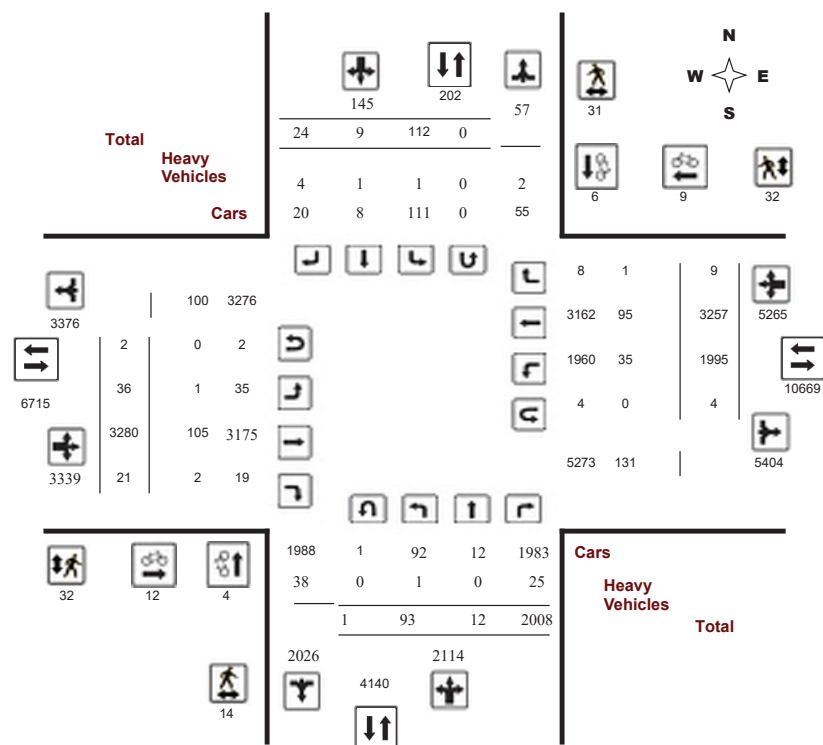
Survey Date: Wednesday, January 08, 2020

WO No: 39275

Start Time: 07:00

Device: Miovision

Full Study Diagram



5469216 - WED JAN 08, 2020 - 8HRS - LORETTA



Transportation Services - Traffic Services

Turning Movement Count - Study Results

COVENTRY RD @ 230 W OF ST. LAURENT BLVD/ST. LA

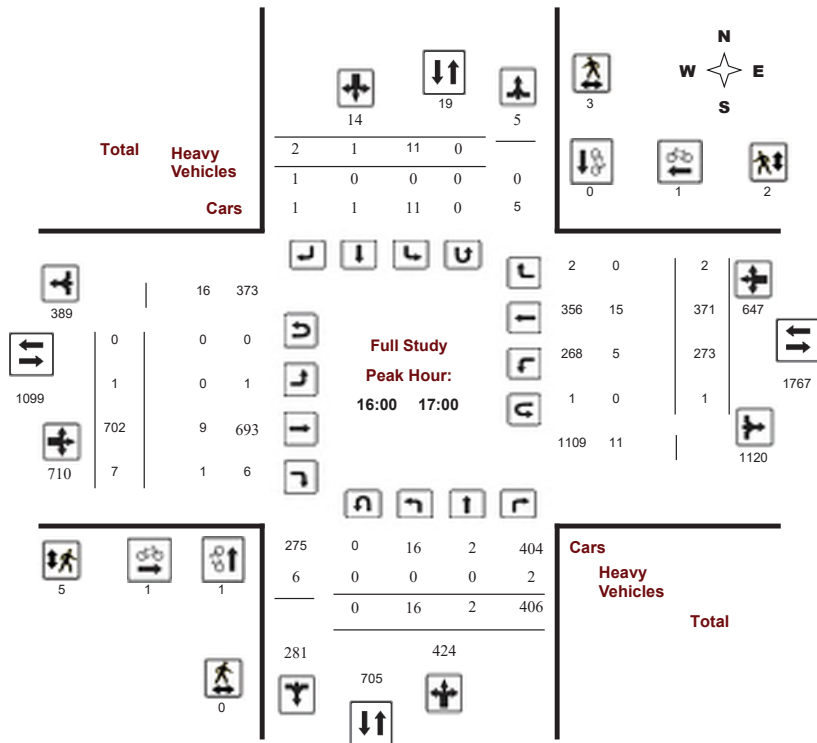
Survey Date: Wednesday, January 08, 2020

WO No: 39275

Start Time: 07:00

Device: Miovision

Full Study Peak Hour Diagram



5469216 - WED JAN 08, 2020 - 8HRS - LORETTA



Transportation Services - Traffic Services

Turning Movement Count - Study Results

COVENTRY RD @ 230 W OF ST. LAURENT BLVD/ST. LA

Survey Date: Wednesday, January 08, 2020

WO No: 39275

Start Time: 07:00

Device: Miovision

Full Study Summary (8 HR Standard)

Survey Date: Wednesday, January 08, 2020

Total Observed U-Turns

AADT Factor

Northbound: 1 Southbound: 0
Eastbound: 2 Westbound: 4

1.00

Period	Northbound				Southbound				Eastbound				Westbound				WB TOT	STR TOT	Grand Total
	LT	ST	RT	NB TOT	LT	ST	RT	SB TOT	STR TOT	LT	ST	RT	EB TOT	LT	ST	RT			
07:00 08:00	2	0	69	71	2	1	1	4	75	1	201	1	203	158	530	0	688	891	966
08:00 09:00	4	2	87	93	7	0	8	15	108	1	236	1	238	198	722	0	920	1158	1266
09:00 10:00	5	1	113	119	12	0	0	12	131	9	263	1	273	216	314	1	531	804	935
11:30 12:30	10	2	305	317	29	2	6	37	354	9	414	4	427	335	314	0	649	1076	1430
12:30 13:30	16	0	351	367	21	2	2	25	392	5	376	5	386	289	352	2	643	1029	1421
15:00 16:00	17	2	299	318	21	2	3	26	344	5	543	1	549	259	323	2	584	1133	1477
16:00 17:00	16	2	406	424	11	1	2	14	438	1	702	7	710	273	371	2	646	1356	1794
17:00 18:00	23	3	378	404	9	1	2	12	416	5	545	1	551	267	331	2	600	1151	1567
Sub Total	93	12	2008	2113	112	9	24	145	2258	36	3280	21	3337	1995	3257	9	5261	8598	10856
U Turns	1				0				1	2				4				6	7
Total	93	12	2008	2114	112	9	24	145	2259	36	3280	21	3339	1995	3257	9	5265	8604	10863
EQ 12Hr	129	17	2791	2938	156	13	33	202	3140	50	4559	29	4641	2773	4527	13	7318	11960	15100
Note: These values are calculated by multiplying the totals by the appropriate expansion factor.														1.39					
AVG 12Hr	129	17	2791	2938	156	16	44	202	3140	50	4559	29	4641	2773	4527	13	7318	11960	15100
Note: These volumes are calculated by multiplying the equivalent 12 hr. totals by the AADT factor.														1.00					
AVG 24Hr	169	22	3656	3849	204	21	58	265	4113	66	5972	38	6080	3633	5930	17	9587	15668	19781

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

1.39

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

1.00

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

1.31

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



Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

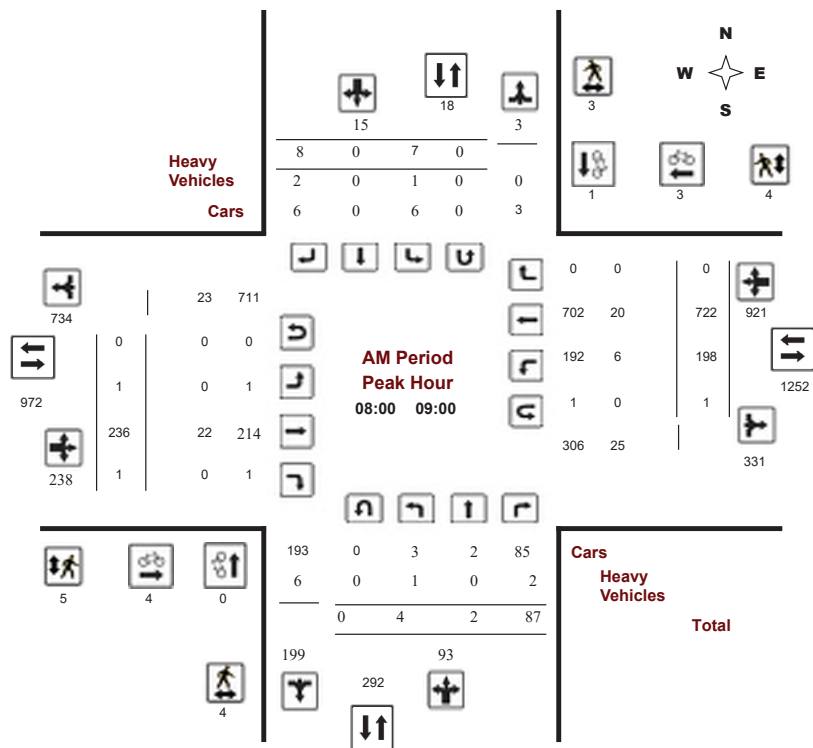
COVENTRY RD @ 230 W OF ST. LAURENT BLVD/ST. LA

Survey Date: Wednesday, January 08, 2020

Start Time: 07:00

WO No: 39275

Device: Miovision



Comments 5469216 - WED JAN 08, 2020 - 8HRS - LORETTA



Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

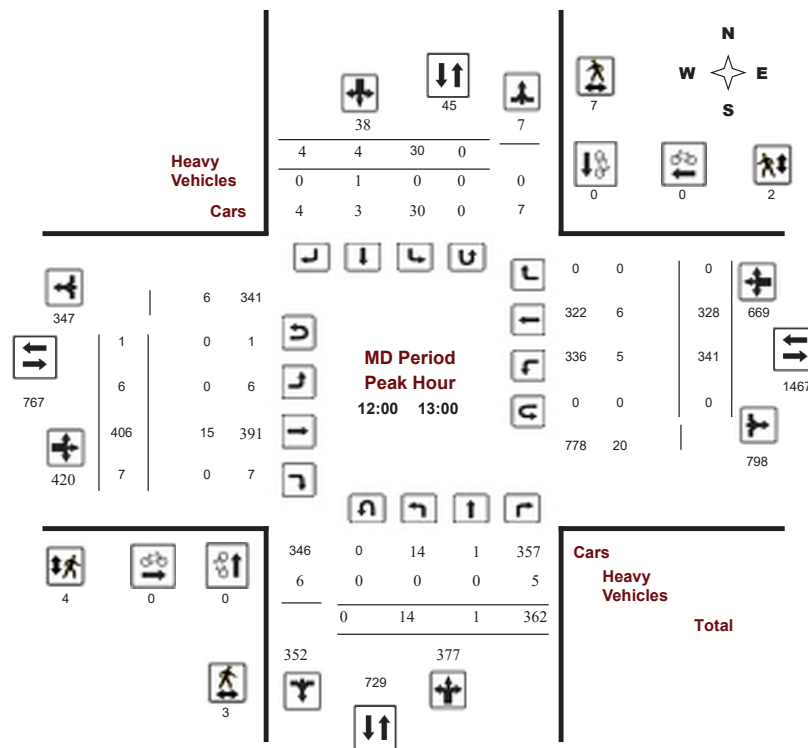
COVENTRY RD @ 230 W OF ST. LAURENT BLVD/ST. LA

Survey Date: Wednesday, January 08, 2020

Start Time: 07:00

WO No: 39275

Device: Miovision



Comments 5469216 - WED JAN 08, 2020 - 8HRS - LORETTA



Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

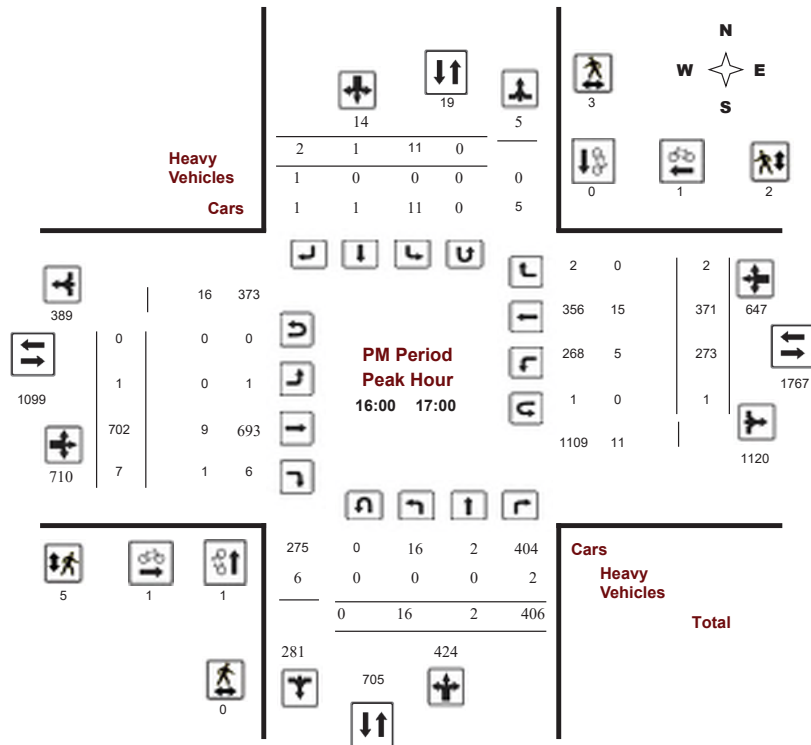
COVENTRY RD @ 230 W OF ST. LAURENT BLVD/ST. LA

Survey Date: Wednesday, January 08, 2020

Start Time: 07:00

WO No: 39275

Device: Miovision



Comments 5469216 - WED JAN 08, 2020 - 8HRS - LORETTA



Transportation Services - Traffic Services

Turning Movement Count - Study Results

COVENTRY RD @ 230 W OF ST. LAURENT BLVD/ST. LA

Survey Date: Wednesday, January 08, 2020

Start Time: 07:00

WO No: 39275

Device: Miovision

Full Study 15 Minute Increments

		Northbound				Southbound				Eastbound				Westbound						
Time Period		LT	ST	RT	N TOT	LT	ST	RT	S TOT	STR TOT	LT	ST	RT	E TOT	LT	ST	RT	W TOT	STR TOT	Grand Total
07:00	07:15	0	0	10	10	0	1	1	2	12	0	49	0	49	18	105	0	123	172	184
07:15	07:30	0	0	20	20	1	0	0	1	21	0	50	0	50	32	116	0	148	198	219
07:30	07:45	1	0	22	23	0	0	0	0	23	0	49	0	49	40	157	0	197	246	269
07:45	08:00	1	0	17	18	1	0	0	1	19	1	53	1	55	68	152	0	220	275	294
08:00	08:15	0	1	32	33	0	0	1	1	34	1	46	0	47	51	199	0	250	297	331
08:15	08:30	0	0	13	13	2	0	3	5	18	0	61	0	61	45	187	0	232	293	311
08:30	08:45	1	0	13	14	2	0	2	4	18	0	62	1	63	58	187	0	245	308	326
08:45	09:00	3	1	29	33	3	0	2	5	38	0	67	0	67	44	149	0	194	261	299
09:00	09:15	1	0	29	30	2	0	0	2	32	2	76	0	79	59	91	1	151	230	262
09:15	09:30	0	0	28	28	4	0	0	4	32	2	71	1	74	50	90	0	140	214	246
09:30	09:45	2	1	20	23	5	0	0	5	28	4	48	0	52	55	71	0	126	178	206
09:45	10:00	2	0	36	38	1	0	0	1	39	1	68	0	69	52	62	0	114	183	222
11:30	11:45	1	0	83	84	7	0	0	7	91	1	92	0	93	59	68	0	127	220	311
11:45	12:00	3	1	54	58	4	0	2	6	64	4	103	2	109	74	76	0	150	259	323
12:00	12:15	4	1	77	82	9	1	2	12	94	3	97	1	101	109	94	0	203	304	398
12:15	12:30	2	0	91	93	9	1	2	12	105	1	122	1	124	93	76	0	169	293	398
12:30	12:45	4	0	96	100	9	1	0	10	110	0	102	1	103	69	72	0	141	244	354
12:45	13:00	4	0	98	102	3	1	0	4	106	2	85	4	92	70	86	0	156	248	354
13:00	13:15	4	0	82	86	5	0	1	6	92	2	97	0	99	71	97	1	169	268	360
13:15	13:30	4	0	75	79	4	0	1	5	84	1	92	0	93	79	97	1	177	270	354
15:00	15:15	6	0	67	73	5	2	1	8	81	1	110	0	111	59	84	2	145	256	337
15:15	15:30	6	0	67	74	9	0	1	10	84	2	147	0	149	67	92	0	159	308	392
15:30	15:45	2	1	78	81	6	0	0	6	87	2	127	0	129	74	67	0	141	270	357
15:45	16:00	3	1	87	91	1	0	1	2	93	0	159	1	160	59	80	0	140	300	393
16:00	16:15	5	0	87	92	2	0	0	2	94	0	171	2	173	77	94	0	171	344	438
16:15	16:30	3	1	94	98	2	1	2	5	103	0	182	2	184	64	105	1	170	354	457
16:30	16:45	4	0	116	120	2	0	0	2	122	0	197	2	199	56	91	0	147	346	468
16:45	17:00	4	1	109	114	5	0	0	5	119	1	152	1	154	76	81	1	159	313	432
17:00	17:15	8	0	90	98	2	0	1	3	101	1	153	0	154	67	88	0	155	309	410
17:15	17:30	5	1	91	97	1	1	1	3	100	1	143	0	144	71	84	1	156	300	400
17:30	17:45	7	1	102	110	3	0	0	3	113	1	136	0	137	69	83	0	152	289	402
17:45	18:00	3	1	95	99	3	0	0	3	102	2	113	1	116	60	76	1	138	254	356
Total:		93	12	2008	2114	112	9	24	145	2259	36	3280	21	3339	1995	3257	9	5265	8604	10,863

Note: U-Turns are included in Totals.



Transportation Services - Traffic Services

Turning Movement Count - Study Results

COVENTRY RD @ 230 W OF ST. LAURENT BLVD/ST. LA

Survey Date: Wednesday, January 08, 2020

WO No: 39275

Start Time: 07:00

Device: Miovision

Full Study Cyclist Volume

Time Period	Northbound	Southbound	Street Total	Eastbound	Westbound	Street Total	Grand Total
07:00 07:15	0	0	0	1	0	1	1
07:15 07:30	0	1	1	0	1	1	2
07:30 07:45	0	2	2	1	1	2	4
07:45 08:00	0	0	0	1	0	1	1
08:00 08:15	0	0	0	1	1	2	2
08:15 08:30	0	0	0	0	0	0	0
08:30 08:45	0	0	0	2	2	4	4
08:45 09:00	0	1	1	1	0	1	2
09:00 09:15	0	0	0	0	0	0	0
09:15 09:30	0	0	0	1	0	1	1
09:30 09:45	2	0	2	0	1	1	3
09:45 10:00	0	1	1	0	1	1	2
10:00 10:15	0	0	0	0	0	0	0
10:15 10:30	0	0	0	0	0	0	0
11:30 11:45	1	0	1	0	0	0	1
12:00 12:15	0	0	0	0	0	0	0
12:15 12:30	0	0	0	0	0	0	0
12:30 12:45	0	0	0	0	0	0	0
12:45 13:00	0	0	0	0	0	0	0
13:00 13:15	0	0	0	0	0	0	0
13:15 13:30	0	0	0	0	0	0	0
15:00 15:15	0	0	0	0	0	0	0
15:15 15:30	0	0	0	0	0	0	0
15:30 15:45	0	0	0	1	0	1	1
15:45 16:00	0	0	0	0	0	0	0
16:00 16:15	0	0	0	0	1	1	1
16:15 16:30	0	0	0	0	0	0	0
16:30 16:45	0	0	0	0	0	0	0
16:45 17:00	1	0	1	1	0	1	2
17:00 17:15	0	0	0	0	0	0	0
17:15 17:30	0	0	0	0	0	0	0
17:30 17:45	0	1	1	2	0	2	3
17:45 18:00	0	0	0	0	1	1	1
Total	4	6	10	12	9	21	31



Transportation Services - Traffic Services

Turning Movement Count - Study Results

COVENTRY RD @ 230 W OF ST. LAURENT BLVD/ST. LA

Survey Date: Wednesday, January 08, 2020

WO No: 39275

Start Time: 07:00

Device: Miovision

Full Study Pedestrian Volume

Time Period	NB Approach (E or W Crossing)	SB Approach (E or W Crossing)	Total	EB Approach (N or S Crossing)	WB Approach (N or S Crossing)	Total	Grand Total
07:00 07:15	0	0	0	0	0	0	0
07:15 07:30	0	0	0	0	0	0	0
07:30 07:45	0	0	0	0	0	0	0
07:45 08:00	2	4	6	2	2	4	10
08:00 08:15	2	1	3	2	2	4	7
08:15 08:30	0	1	1	0	0	0	1
08:30 08:45	0	1	1	0	1	1	2
08:45 09:00	2	0	2	3	1	4	6
09:00 09:15	1	0	1	1	0	1	2
09:15 09:30	0	4	4	0	5	5	9
09:30 09:45	0	0	0	0	0	0	0
09:45 10:00	0	0	0	0	0	0	0
11:30 11:45	0	1	1	4	0	4	5
11:45 12:00	1	1	2	0	3	3	5
12:00 12:15	2	4	6	2	0	2	8
12:15 12:30	0	0	0	0	0	0	0
12:30 12:45	1	3	4	2	2	4	8
12:45 13:00	0	0	0	0	0	0	0
13:00 13:15	0	0	0	0	0	0	0
13:15 13:30	0	2	2	0	3	3	5
15:00 15:15	2	1	3	0	2	2	5
15:15 15:30	0	0	0	4	1	5	5
15:30 15:45	1	0	1	3	1	4	5
15:45 16:00	0	2	2	1	3	4	6
16:00 16:15	0	0	0	2	0	2	2
16:15 16:30	0	0	0	1	1	2	2
16:30 16:45	0	1	1	1	0	1	2
16:45 17:00	0	2	2	1	1	2	4
17:00 17:15	0	0	0	1	1	2	2
17:15 17:30	0	0	0	0	0	0	0
17:30 17:45	0	2	2	0	2	2	4
17:45 18:00	0	1	1	2	1	3	4
Total	14	31	45	32	32	64	109

5469216 - WED JAN 08, 2020 - 8HRS - LORETTA



Transportation Services - Traffic Services

Turning Movement Count - Study Results

COVENTRY RD @ 230 W OF ST. LAURENT BLVD/ST. LA

Survey Date: Wednesday, January 08, 2020

WO No: 39275

Start Time: 07:00

Device: Miovision

Full Study Heavy Vehicles

Northbound					Southbound					Eastbound					Westbound					
Time Period	LT	ST	RT	N TOT	LT	ST	RT	S TOT	STR TOT	LT	ST	RT	E TOT	LT	ST	RT	W TOT	STR TOT	Grand Total	
07:00	07:15	0	0	0	0	0	0	1	1	1	0	11	0	13	0	1	0	12	25	13
07:15	07:30	0	0	1	2	0	0	0	0	2	0	9	0	11	1	2	0	13	24	13
07:30	07:45	0	0	2	2	0	0	0	0	2	0	5	0	11	0	6	0	13	24	13
07:45	08:00	0	0	3	4	0	0	0	0	4	0	4	0	7	1	3	0	11	18	11
08:00	08:15	0	0	0	0	0	0	1	1	1	0	4	0	9	0	4	0	8	17	9
08:15	08:30	0	0	0	1	0	0	1	1	2	0	4	0	12	1	7	0	12	24	13
08:30	08:45	1	0	2	4	0	0	0	0	4	0	12	0	17	1	4	0	19	36	20
08:45	09:00	0	0	0	4	1	0	0	1	5	0	2	0	7	4	5	0	12	19	12
09:00	09:15	0	0	0	0	0	0	0	0	0	0	4	0	6	0	2	0	6	12	6
09:15	09:30	0	0	3	4	0	0	0	0	4	0	2	0	8	1	6	0	12	20	12
09:30	09:45	0	0	0	2	0	0	0	0	2	0	2	0	4	2	2	0	6	10	6
09:45	10:00	0	0	0	4	0	0	0	0	4	0	1	0	2	4	1	0	6	8	6
11:30	11:45	0	0	0	1	0	0	0	0	1	0	7	0	11	1	4	0	12	23	12
11:45	12:00	0	0	0	3	0	0	0	0	3	0	2	1	5	2	2	0	6	11	7
12:00	12:15	0	0	3	4	0	0	0	0	4	0	5	0	7	1	2	0	11	18	11
12:15	12:30	0	0	0	1	0	0	0	0	1	0	8	0	10	1	2	0	11	21	11
12:30	12:45	0	0	1	3	0	0	0	0	3	0	1	0	3	2	2	0	6	9	6
12:45	13:00	0	0	1	3	0	1	0	1	4	0	1	0	1	1	0	0	3	4	4
13:00	13:15	0	0	1	1	0	0	0	0	1	0	2	0	9	0	7	0	10	19	10
13:15	13:30	0	0	2	4	0	0	0	1	5	0	0	0	5	2	5	1	10	15	10
15:00	15:15	0	0	0	0	0	0	0	0	0	0	2	0	5	0	3	0	5	10	5
15:15	15:30	0	0	0	1	0	0	0	0	1	0	3	0	5	1	2	0	6	11	6
15:30	15:45	0	0	1	1	0	0	0	0	1	0	3	0	4	0	1	0	5	9	5
15:45	16:00	0	0	0	1	0	0	0	0	1	0	1	0	3	1	2	0	4	7	4
16:00	16:15	0	0	0	2	0	0	0	0	2	0	1	0	9	2	8	0	11	20	11
16:15	16:30	0	0	1	2	0	0	1	1	3	0	5	0	7	1	1	0	8	15	9
16:30	16:45	0	0	0	3	0	0	0	0	3	0	2	1	8	2	5	0	9	17	10
16:45	17:00	0	0	1	1	0	0	0	0	1	0	1	0	2	0	1	0	3	5	3
17:00	17:15	0	0	2	3	0	0	0	0	3	0	1	0	3	1	2	0	6	9	6
17:15	17:30	0	0	0	2	0	0	0	0	2	0	0	0	1	2	1	0	3	4	3
17:30	17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	18:00	0	0	1	1	0	0	0	1	2	1	0	0	3	0	2	0	3	6	4
Total: None		1	0	25	64	1	1	4	8	72	1	105	2	208	35	95	1	262	470	271



Transportation Services - Traffic Services

Turning Movement Count - Study Results

COVENTRY RD @ 230 W OF ST. LAURENT BLVD/ST. LA

Survey Date: Wednesday, January 08, 2020

WO No: 39275

Start Time: 07:00

Device: Miovision

Full Study 15 Minute U-Turn Total

Time Period	Northbound U-Turn Total	Southbound U-Turn Total	Eastbound U-Turn Total	Westbound U-Turn Total	Total
07:00	07:15	0	0	0	0
07:15	07:30	0	0	0	0
07:30	07:45	0	0	0	0
07:45	08:00	0	0	0	0
08:00	08:15	0	0	0	0
08:15	08:30	0	0	0	0
08:30	08:45	0	0	0	0
08:45	09:00	0	0	0	1
09:00	09:15	0	0	1	0
09:15	09:30	0	0	0	0
09:30	09:45	0	0	0	0
09:45	10:00	0	0	0	0
11:30	11:45	0	0	0	0
11:45	12:00	0	0	0	0
12:00	12:15	0	0	0	0
12:15	12:30	0	0	0	0
12:30	12:45	0	0	0	0
12:45	13:00	0	0	1	0
13:00	13:15	0	0	0	0
13:15	13:30	0	0	0	0
15:00	15:15	0	0	0	0
15:15	15:30	1	0	0	0
15:30	15:45	0	0	0	0
15:45	16:00	0	0	0	1
16:00	16:15	0	0	0	0
16:15	16:30	0	0	0	0
16:30	16:45	0	0	0	0
16:45	17:00	0	0	0	1
17:00	17:15	0	0	0	0
17:15	17:30	0	0	0	0
17:30	17:45	0	0	0	0
17:45	18:00	0	0	0	1
Total		1	0	2	4

Survey Date: Wednesday, January 08, 2020
Start Time: 07:00

WO No: 39274
Device: Miovision

5469215 - WED JAN 08, 2020 - 8HRS - LORETTA

Survey Date: Wednesday, January 08, 2020
Start Time: 07:00

WO No: 39274
Device: Miovision

5469215 - WED JAN 08, 2020 - 8HRS - LORETTA



Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

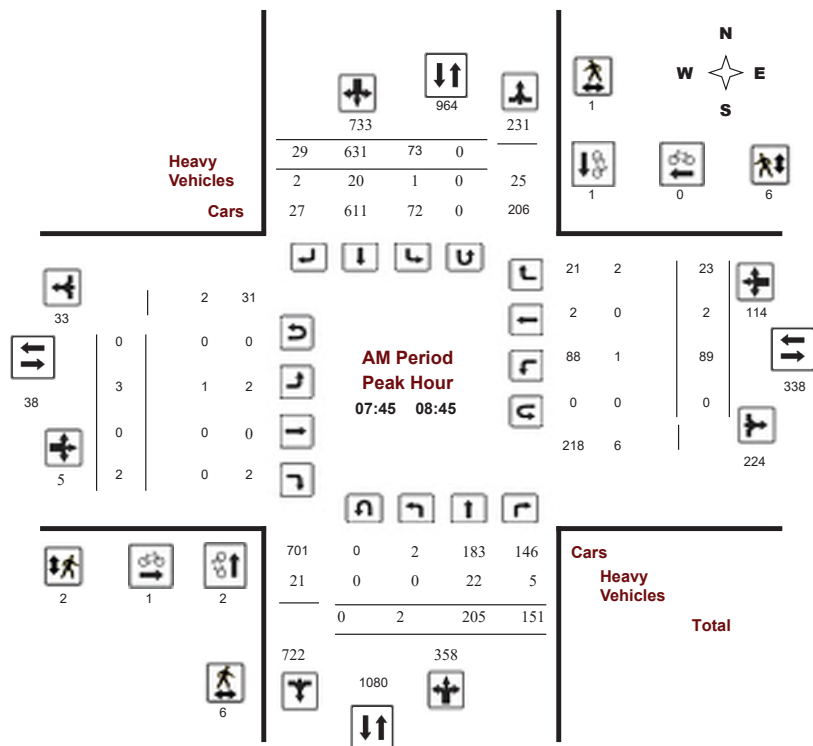
COVENTRY RD @ ST. LAURENT SC WEST

Survey Date: Wednesday, January 08, 2020

Start Time: 07:00

WO No: 39274

Device: Miovision



Comments 5469215 - WED JAN 08, 2020 - 8HRS - LORETTA



Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

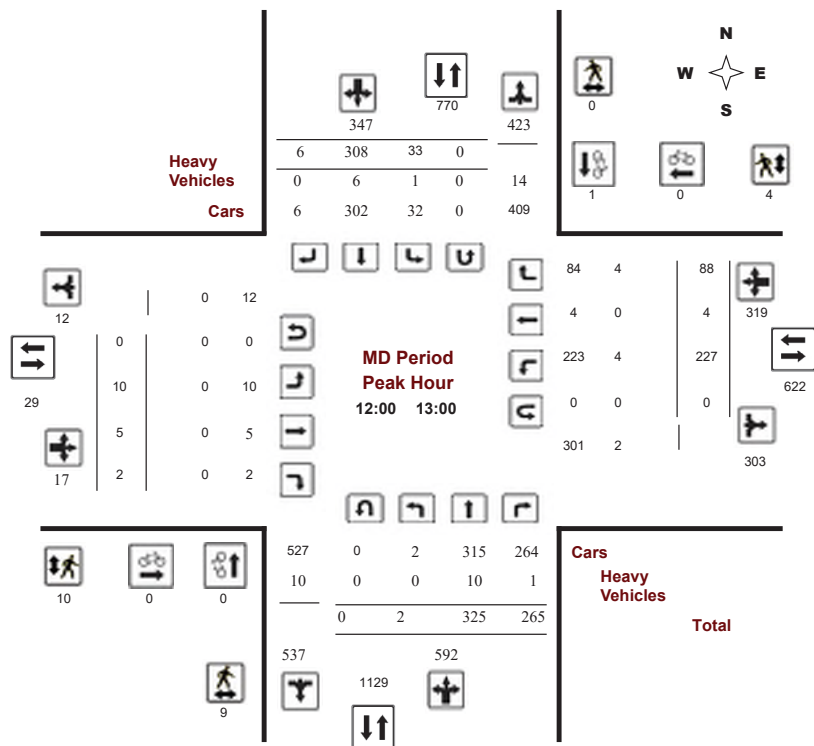
COVENTRY RD @ ST. LAURENT SC WEST

Survey Date: Wednesday, January 08, 2020

Start Time: 07:00

WO No: 39274

Device: Miovision



Comments 5469215 - WED JAN 08, 2020 - 8HRS - LORETTA



Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

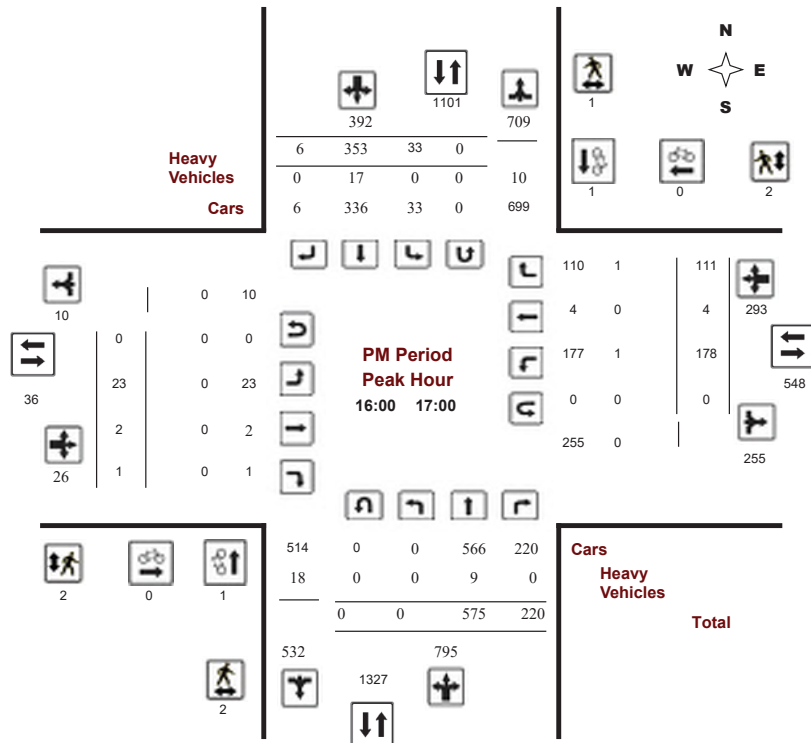
COVENTRY RD @ ST. LAURENT SC WEST

Survey Date: Wednesday, January 08, 2020

Start Time: 07:00

WO No: 39274

Device: Miovision



Comments 5469215 - WED JAN 08, 2020 - 8HRS - LORETTA



Transportation Services - Traffic Services

Turning Movement Count - Study Results

COVENTRY RD @ ST. LAURENT SC WEST

Survey Date: Wednesday, January 08, 2020

Start Time: 07:00

WO No: 39274

Device: Miovision

Full Study Summary (8 HR Standard)

Survey Date: Wednesday, January 08, 2020

Total Observed U-Turns

AADT Factor

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

1.00

Period	Northbound				Southbound				Eastbound				Westbound				STR TOT	Grand Total	
	LT	ST	RT	NB TOT	LT	ST	RT	SB TOT	STR TOT	LT	ST	RT	EB TOT	LT	ST	RT			WB TOT
07:00 08:00	0	185	113	298	55	482	7	544	842	1	0	1	2	66	1	14	81	83	925
08:00 09:00	2	214	142	358	64	623	35	722	1080	3	1	1	5	82	3	19	104	109	1189
09:00 10:00	2	257	124	383	41	278	9	328	711	1	10	4	15	51	4	14	69	84	795
11:30 12:30	1	331	248	580	35	289	4	328	908	18	2	2	22	193	2	81	276	298	1206
12:30 13:30	1	297	228	526	33	317	19	369	895	4	5	1	10	209	3	85	297	307	1202
15:00 16:00	0	494	199	693	33	318	1	352	1045	5	1	0	6	190	1	63	254	260	1305
16:00 17:00	0	575	220	795	33	353	6	392	1187	23	2	1	26	178	4	111	293	319	1506
17:00 18:00	1	442	202	645	36	319	2	357	1002	24	3	1	28	191	3	95	289	317	1319
Sub Total	7	2795	1476	4278	330	2979	83	3392	7670	79	24	11	114	1160	21	482	1663	1777	9447
U Turns	2				0				2	1				0				1	3
Total	7	2795	1476	4280	330	2979	83	3392	7672	79	24	11	115	1160	21	482	1663	1778	9450
EQ 12Hr	10	3885	2052	5949	459	4141	115	4715	10664	110	33	15	160	1612	29	670	2312	2471	13135
Note: These values are calculated by multiplying the totals by the appropriate expansion factor.													1.39						
AVG 12Hr	10	3885	2052	5949	459	5424	151	4715	10664	110	33	15	160	1612	29	670	2312	2471	13135
Note: These volumes are calculated by multiplying the equivalent 12 hr. totals by the AADT factor.													1.00						
AVG 24Hr	13	5089	2688	7793	601	7105	198	6177	13970	144	43	20	210	2112	38	878	3029	3237	17207

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

1.39

AVG 12Hr 10 3885 2052 5949 459 4141 115 4715 10664 110 33 15 160 1612 29 670 2312 2471 13135

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

1.00

AVG 24Hr 13 5089 2688 7793 601 7105 198 6177 13970 144 43 20 210 2112 38 878 3029 3237 17207

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

1.31

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



Transportation Services - Traffic Services

Turning Movement Count - Study Results COVENTRY RD @ ST. LAURENT SC WEST

Survey Date: Wednesday, January 08, 2020

WO No: 39274

Start Time: 07:00

Device: Miovision

Full Study 15 Minute Increments

		Northbound				Southbound				Eastbound				Westbound						
Time Period		LT	ST	RT	N TOT	LT	ST	RT	S TOT	STR TOT	LT	ST	RT	E TOT	LT	ST	RT	W TOT	STR TOT	Grand Total
07:00	07:15	0	51	20	71	4	103	2	109	180	0	0	0	0	14	0	3	17	17	197
07:15	07:30	0	42	22	64	12	101	2	115	179	0	0	0	0	11	1	2	14	14	193
07:30	07:45	0	42	28	70	15	142	2	159	229	0	0	0	0	17	0	4	21	21	250
07:45	08:00	0	50	43	93	24	136	1	161	254	1	0	1	2	24	0	5	29	31	285
08:00	08:15	0	45	43	88	19	174	4	197	285	0	0	1	1	21	2	5	28	29	314
08:15	08:30	1	51	30	82	11	167	14	192	274	1	0	0	1	28	0	8	36	37	311
08:30	08:45	1	59	35	95	19	154	10	183	278	1	0	0	1	16	0	5	21	22	300
08:45	09:00	0	59	34	93	15	128	7	150	243	1	1	0	2	17	1	1	19	21	264
09:00	09:15	2	76	24	103	11	79	2	92	195	1	1	2	4	13	3	4	20	24	219
09:15	09:30	0	67	32	99	13	76	3	92	191	0	3	0	3	9	1	2	12	15	206
09:30	09:45	0	51	30	81	5	75	3	83	164	0	3	1	4	10	0	5	15	19	183
09:45	10:00	0	63	38	101	12	48	1	61	162	0	3	1	4	19	0	3	22	26	188
11:30	11:45	0	82	49	131	7	62	1	70	201	2	0	0	2	39	0	15	54	56	257
11:45	12:00	0	75	59	135	10	67	1	78	213	10	1	1	12	44	0	23	67	79	292
12:00	12:15	0	76	74	150	10	90	1	101	251	3	0	0	3	55	1	21	77	80	331
12:15	12:30	1	98	66	165	8	70	1	79	244	3	1	1	5	55	1	22	78	83	327
12:30	12:45	0	76	65	141	3	73	1	77	218	2	2	0	4	64	1	24	89	93	311
12:45	13:00	1	75	60	136	12	75	3	90	226	2	2	1	5	53	1	21	75	80	306
13:00	13:15	0	68	54	122	12	83	4	99	221	0	1	0	2	49	1	23	73	75	296
13:15	13:30	0	78	49	127	6	86	11	103	230	0	0	0	0	43	0	17	60	60	290
15:00	15:15	0	108	35	143	7	102	0	109	252	2	1	0	3	58	0	10	68	71	323
15:15	15:30	0	132	54	186	12	74	0	86	272	1	0	0	1	46	1	12	59	60	332
15:30	15:45	0	113	50	163	8	64	1	73	236	2	0	0	2	51	0	18	69	71	307
15:45	16:00	0	141	60	201	6	78	0	84	285	0	0	0	0	35	0	23	58	58	343
16:00	16:15	0	142	51	193	10	93	0	103	296	5	0	0	5	43	1	30	74	79	375
16:15	16:30	0	159	71	230	10	97	1	108	338	6	1	0	7	37	0	23	60	67	405
16:30	16:45	0	147	43	190	4	87	3	94	284	6	0	0	6	41	2	31	74	80	364
16:45	17:00	0	127	55	182	9	76	2	87	269	6	1	1	8	57	1	27	85	93	362
17:00	17:15	0	122	62	184	2	94	0	96	280	5	1	0	6	53	1	29	83	89	369
17:15	17:30	0	108	52	160	10	78	2	90	250	12	1	0	13	55	0	21	76	89	339
17:30	17:45	1	108	48	157	11	78	0	89	246	4	0	1	5	45	0	29	74	79	325
17:45	18:00	0	104	40	144	13	69	0	82	226	3	1	0	4	38	2	16	56	60	286
Total:		7	2795	1476	4280	330	2979	83	3392	7672	79	24	11	115	1160	21	482	1663	1778	9,450

Note: U-Turns are included in Totals.



Transportation Services - Traffic Services

Turning Movement Count - Study Results COVENTRY RD @ ST. LAURENT SC WEST

Survey Date: Wednesday, January 08, 2020

WO No: 39274

Start Time: 07:00

Device: Miovision

Full Study Cyclist Volume

Time Period	Northbound	Southbound	Street Total	Eastbound	Westbound	Street Total	Grand Total
07:00 07:15	0	0	0	0	0	0	0
07:15 07:30	0	0	0	0	0	0	0
07:30 07:45	0	0	0	0	0	0	0
07:45 08:00	1	0	1	1	0	1	2
08:00 08:15	0	0	0	0	0	0	0
08:15 08:30	0	0	0	0	0	0	0
08:30 08:45	1	1	2	0	0	0	2
08:45 09:00	0	0	0	0	0	0	0
09:00 09:15	0	0	0	0	0	0	0
09:15 09:30	0	0	0	0	0	0	0
09:30 09:45	0	0	0	0	0	0	0
09:45 10:00	0	0	0	0	0	0	0
11:30 11:45	0	0	0	0	0	0	0
11:45 12:00	0	0	0	0	0	0	0
12:00 12:15	0	1	1	0	0	0	1
12:15 12:30	0	0	0	0	0	0	0
12:30 12:45	0	0	0	0	0	0	0
12:45 13:00	0	0	0	0	0	0	0
13:00 13:15	0	0	0	0	0	0	0
13:15 13:30	0	0	0	0	0	0	0
15:00 15:15	1	0	1	0	1	1	2
15:15 15:30	0	0	0	0	0	0	0
15:30 15:45	0	0	0	0	0	0	0
15:45 16:00	0	0	0	0	0	0	0
16:00 16:15	0	1	1	0	0	0	1
16:15 16:30	0	0	0	0	0	0	0
16:30 16:45	0	0	0	0	0	0	0
16:45 17:00	1	0	1	0	0	0	1
17:00 17:15	0	0	0	0	0	0	0
17:15 17:30	0	0	0	0	0	0	0
17:30 17:45	0	1	1	0	0	0	1
17:45 18:00	0	0	0	0	0	0	0
Total	4	4	8	1	1	2	10



Transportation Services - Traffic Services

Turning Movement Count - Study Results

COVENTRY RD @ ST. LAURENT SC WEST

Survey Date: Wednesday, January 08, 2020

WO No: 39274

Start Time: 07:00

Device: Miovision

Full Study Pedestrian Volume

Time Period	NB Approach (E or W Crossing)	SB Approach (E or W Crossing)	Total	EB Approach (N or S Crossing)	WB Approach (N or S Crossing)	Total	Grand Total
07:00 07:15	0	1	1	0	1	1	2
07:15 07:30	1	0	1	1	0	1	2
07:30 07:45	0	0	0	0	0	0	0
07:45 08:00	0	0	0	1	1	2	2
08:00 08:15	1	1	2	0	4	4	6
08:15 08:30	1	0	1	0	1	1	2
08:30 08:45	4	0	4	1	0	1	5
08:45 09:00	0	1	1	1	1	2	3
09:00 09:15	2	0	2	0	0	0	2
09:15 09:30	1	0	1	1	0	1	2
09:30 09:45	2	0	2	0	0	0	2
09:45 10:00	1	0	1	1	0	1	2
11:30 11:45	2	0	2	1	0	1	3
11:45 12:00	0	2	2	1	1	2	4
12:00 12:15	1	0	1	4	2	6	7
12:15 12:30	3	0	3	0	0	0	3
12:30 12:45	2	0	2	5	1	6	8
12:45 13:00	3	0	3	1	1	2	5
13:00 13:15	3	0	3	1	0	1	4
13:15 13:30	1	0	1	0	0	0	1
15:00 15:15	3	0	3	1	0	1	4
15:15 15:30	0	0	0	0	2	2	2
15:30 15:45	3	1	4	0	0	0	4
15:45 16:00	0	0	0	1	1	2	2
16:00 16:15	0	0	0	1	0	1	1
16:15 16:30	0	1	1	0	2	2	3
16:30 16:45	1	0	1	1	0	1	2
16:45 17:00	1	0	1	0	0	0	1
17:00 17:15	1	0	1	0	0	0	1
17:15 17:30	2	0	2	0	0	0	2
17:30 17:45	0	1	1	1	0	1	2
17:45 18:00	0	0	0	0	0	0	0
Total	39	8	47	24	18	42	89

5469215 - WED JAN 08, 2020 - 8HRS - LORETTA



Transportation Services - Traffic Services

Turning Movement Count - Study Results

COVENTRY RD @ ST. LAURENT SC WEST

Survey Date: Wednesday, January 08, 2020

WO No: 39274

Start Time: 07:00

Device: Miovision

Full Study Heavy Vehicles

Time Period	Northbound				Southbound				Eastbound				Westbound				Grand Total			
	LT	ST	RT	N TOT	LT	ST	RT	S TOT	STR TOT	LT	ST	RT	E TOT	LT	ST	RT		W TOT	STR TOT	
07:00	07:15	0	10	0	13	0	3	0	13	26	0	0	0	0	0	0	0	0	13	
07:15	07:30	0	11	0	14	0	2	0	13	27	0	0	0	0	1	0	0	1	14	
07:30	07:45	0	4	0	9	0	5	0	9	18	0	0	0	0	0	0	0	0	9	
07:45	08:00	0	4	1	8	0	3	0	7	15	0	0	0	0	0	0	1	1	8	
08:00	08:15	0	4	0	10	0	6	0	10	20	0	0	0	0	0	0	0	0	10	
08:15	08:30	0	3	2	12	1	6	2	13	25	1	0	0	3	1	0	0	4	7	16
08:30	08:45	0	11	2	18	0	5	0	18	36	0	0	0	0	0	0	2	4	4	20
08:45	09:00	0	2	0	7	0	5	0	7	14	0	0	0	0	0	0	0	0	7	
09:00	09:15	0	3	0	7	0	2	0	6	13	0	0	0	0	0	0	1	1	1	7
09:15	09:30	0	2	0	7	1	5	0	8	15	0	0	0	0	0	0	0	1	1	8
09:30	09:45	0	2	1	5	0	2	0	4	9	0	0	0	0	0	0	0	1	1	5
09:45	10:00	0	1	1	3	0	1	0	3	6	0	0	0	0	0	0	1	2	2	4
11:30	11:45	0	6	0	10	0	3	0	10	20	0	0	0	0	1	0	1	2	2	11
11:45	12:00	0	4	0	7	0	2	0	6	13	0	0	0	0	1	0	0	1	1	7
12:00	12:15	0	3	0	6	0	1	0	6	12	0	0	0	0	2	0	2	4	4	8
12:15	12:30	0	6	0	10	0	3	0	10	20	0	0	0	0	1	0	1	2	2	11
12:30	12:45	0	1	0	3	1	1	0	3	6	0	0	0	0	1	0	0	2	2	4
12:45	13:00	0	0	1	2	0	1	0	2	4	0	0	0	0	0	0	1	2	2	3
13:00	13:15	0	2	0	9	1	6	0	9	18	0	1	0	1	1	0	0	3	4	11
13:15	13:30	0	0	0	5	0	5	0	5	10	0	0	0	0	0	0	0	0	0	5
15:00	15:15	0	2	0	6	1	2	0	5	11	0	0	0	0	2	0	0	3	3	7
15:15	15:30	0	2	1	7	0	3	0	5	12	0	0	0	0	1	0	0	2	2	7
15:30	15:45	0	2	1	5	0	1	0	4	9	0	0	0	0	1	0	1	3	3	6
15:45	16:00	0	1	0	3	0	2	0	3	6	0	0	0	0	0	0	0	0	0	3
16:00	16:15	0	1	0	9	0	8	0	9	18	0	0	0	0	0	0	0	0	0	9
16:15	16:30	0	6	0	9	0	3	0	9	18	0	0	0	0	0	0	0	0	0	9
16:30	16:45	0	2	0	7	0	5	0	7	14	0	0	0	0	0	0	0	0	0	7
16:45	17:00	0	0	0	2	0	1	0	2	4	0	0	0	0	1	0	1	2	2	3
17:00	17:15	0	2	2	7	0	2	0	4	11	0	0	0	0	1	0	0	3	3	7
17:15	17:30	0	2	1	4	0	1	0	3	7	0	0	0	0	0	0	0	1	1	4
17:30	17:45	0	0	0	1	0	0	0	0	1	0	0	0	0	1	0	0	1	1	1
17:45	18:00	0	1	0	3	0	2	0	3	6	0	0	0	0	0	0	0	0	0	3
Total:	None	0	100	13	228	5	97	2	216	444	1	1	0	4	16	0	11	46	50	247



Transportation Services - Traffic Services

Turning Movement Count - Study Results COVENTRY RD @ ST. LAURENT SC WEST

Survey Date: Wednesday, January 08, 2020

WO No: 39274

Start Time: 07:00

Device: Miovision

Full Study 15 Minute U-Turn Total

Time Period	Northbound U-Turn Total	Southbound U-Turn Total	Eastbound U-Turn Total	Westbound U-Turn Total	Total
07:00 07:15	0	0	0	0	0
07:15 07:30	0	0	0	0	0
07:30 07:45	0	0	0	0	0
07:45 08:00	0	0	0	0	0
08:00 08:15	0	0	0	0	0
08:15 08:30	0	0	0	0	0
08:30 08:45	0	0	0	0	0
08:45 09:00	0	0	0	0	0
09:00 09:15	1	0	0	0	1
09:15 09:30	0	0	0	0	0
09:30 09:45	0	0	0	0	0
09:45 10:00	0	0	0	0	0
11:30 11:45	0	0	0	0	0
11:45 12:00	1	0	0	0	1
12:00 12:15	0	0	0	0	0
12:15 12:30	0	0	0	0	0
12:30 12:45	0	0	0	0	0
12:45 13:00	0	0	0	0	0
13:00 13:15	0	0	1	0	1
13:15 13:30	0	0	0	0	0
15:00 15:15	0	0	0	0	0
15:15 15:30	0	0	0	0	0
15:30 15:45	0	0	0	0	0
15:45 16:00	0	0	0	0	0
16:00 16:15	0	0	0	0	0
16:15 16:30	0	0	0	0	0
16:30 16:45	0	0	0	0	0
16:45 17:00	0	0	0	0	0
17:00 17:15	0	0	0	0	0
17:15 17:30	0	0	0	0	0
17:30 17:45	0	0	0	0	0
17:45 18:00	0	0	0	0	0
Total	2	0	1	0	3



Transportation Services - Traffic Services

Turning Movement Count - Study Results BELFAST RD @ TREMBLAY RD

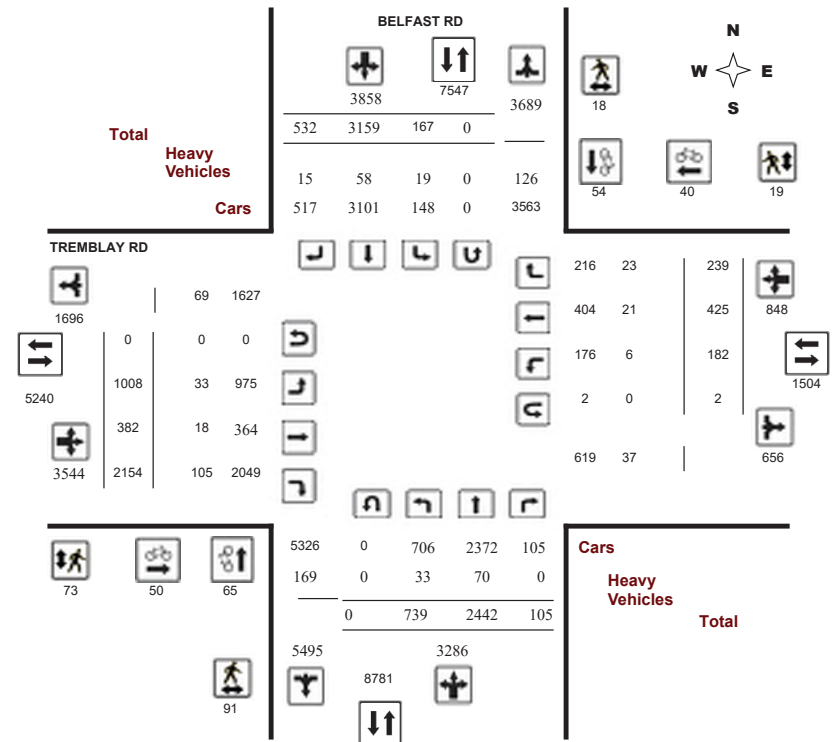
Survey Date: Wednesday, October 18, 2023

WO No: 41242

Start Time: 07:00

Device: Miovision

Full Study Diagram





Transportation Services - Traffic Services

Turning Movement Count - Study Results

BELFAST RD @ TREMBLAY RD

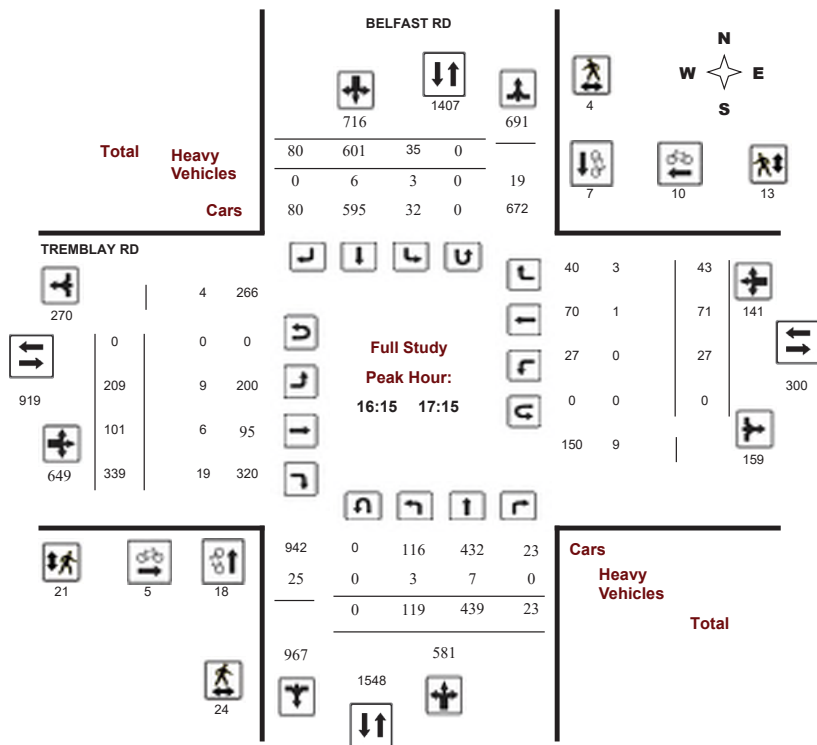
Survey Date: Wednesday, October 18, 2023

WO No: 41242

Start Time: 07:00

Device: Miovision

Full Study Peak Hour Diagram



Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

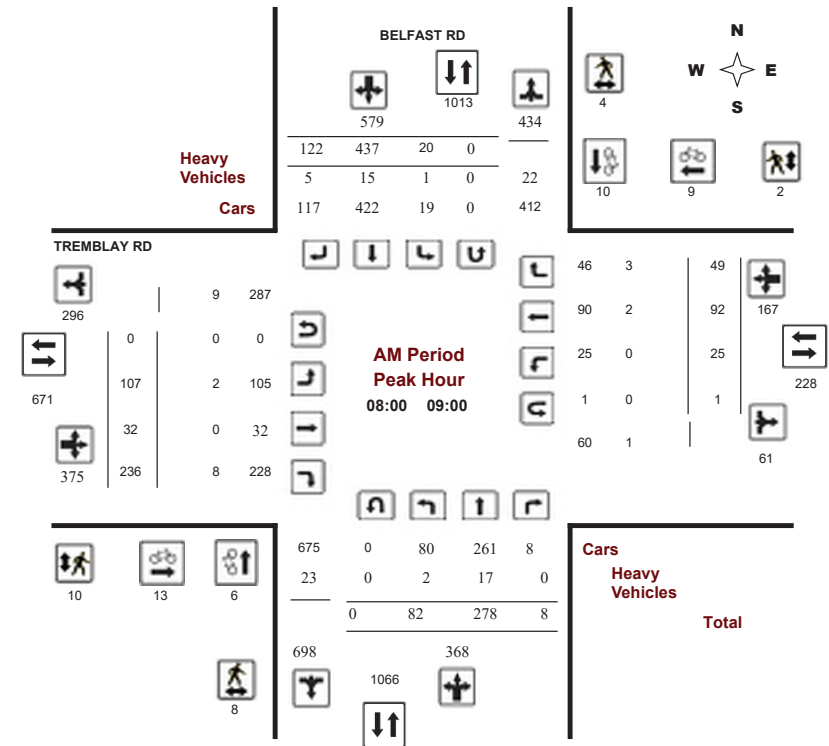
BELFAST RD @ TREMBLAY RD

Survey Date: Wednesday, October 18, 2023

WO No: 41242

Start Time: 07:00

Device: Miovision



Comments



Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

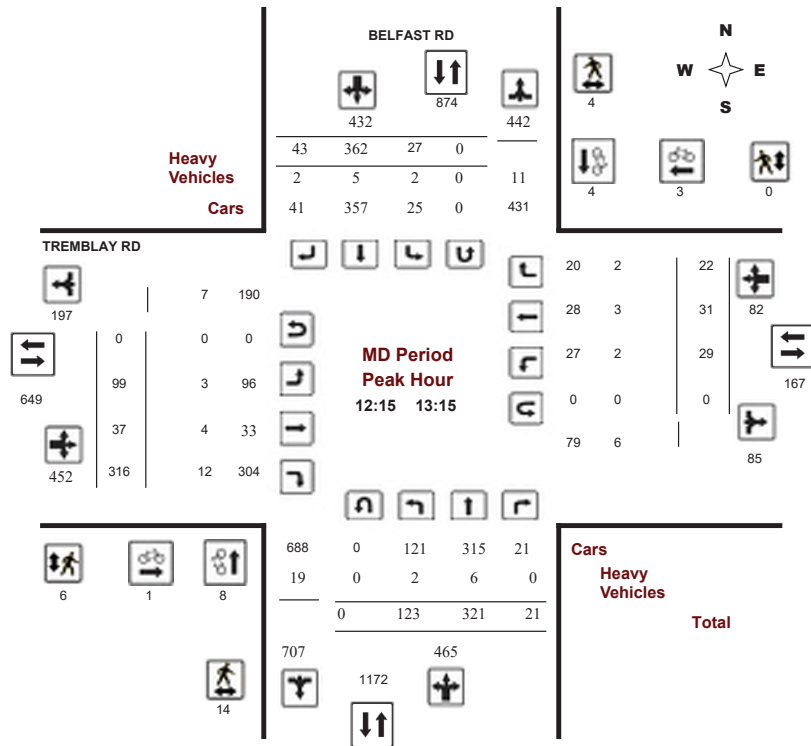
BELFAST RD @ TREMBLAY RD

Survey Date: Wednesday, October 18, 2023

Start Time: 07:00

WO No: 41242

Device: Miovision



Comments



Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

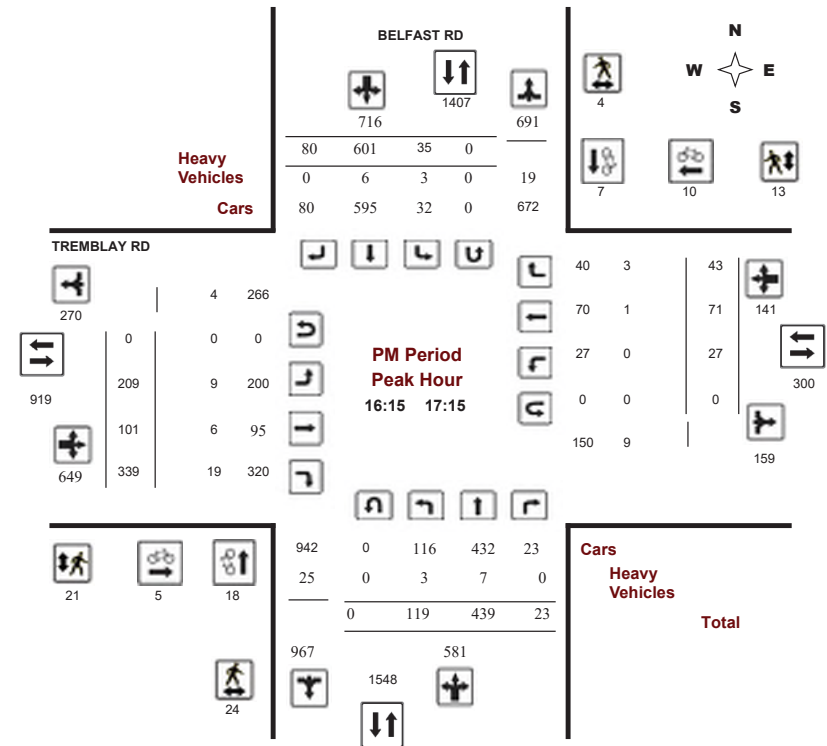
BELFAST RD @ TREMBLAY RD

Survey Date: Wednesday, October 18, 2023

Start Time: 07:00

WO No: 41242

Device: Miovision



Comments



Transportation Services - Traffic Services

Turning Movement Count - Study Results

BELFAST RD @ TREMBLAY RD

Survey Date: Wednesday, October 18, 2023

WO No: 41242

Start Time: 07:00

Device: Miovision

Full Study Summary (8 HR Standard)

Survey Date: Wednesday, October 18, 2023

Total Observed U-Turns

AADT Factor

Northbound: 0 Southbound: 0

Eastbound: 0 Westbound: 2

.90

BELFAST RD										TREMBLAY RD											
Northbound					Southbound					Eastbound					Westbound						
Period	LT	ST	RT	NB TOT	LT	ST	RT	SB TOT	STR TOT	LT	ST	RT	EB TOT	LT	ST	RT	WB TOT	STR TOT	Grand Total		
07:00 08:00	64	134	8	206	11	180	28	219	425	102	24	221	347	22	65	19	106	453	878		
08:00 09:00	82	278	8	368	20	437	122	579	947	107	32	236	375	25	92	49	166	541	1488		
09:00 10:00	76	232	6	314	11	283	52	346	660	104	30	160	294	17	48	23	88	382	1042		
11:30 12:30	73	274	13	360	18	388	42	448	808	97	33	292	422	20	30	26	76	498	1306		
12:30 13:30	123	305	21	449	29	337	48	414	863	95	40	314	449	29	37	20	86	535	1398		
15:00 16:00	108	417	10	535	19	507	85	611	1146	119	71	344	534	18	42	30	90	624	1770		
16:00 17:00	107	428	19	554	37	628	66	731	1285	211	97	329	637	25	60	47	132	769	2054		
17:00 18:00	106	374	20	500	22	399	89	510	1010	173	55	258	486	26	51	25	102	588	1598		
Sub Total	739	2442	105	3286	167	3159	532	3858	7144	1008	382	2154	3544	182	425	239	846	4390	11534		
U Turns	0				0				0	0				0				2	2	2	
Total	739	2442	105	3286	167	3159	532	3858	7144	1008	382	2154	3544	182	425	239	848	4392	11536		
EQ 12Hr	1027	3394	146	4568	232	4391	739	5363	9930	1401	531	2994	4926	253	591	332	1179	6105	16035		
Note: These values are calculated by multiplying the totals by the appropriate expansion factor.														1.39							
AVG 12Hr	924	3055	131	4111	209	5177	872	4827	8937	1261	478	2695	4433	228	532	299	1061	5494	14432		
Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor.														.90							
AVG 24Hr	1210	4002	172	5385	274	6782	1142	6323	11707	1652	626	3530	5807	299	697	392	1390	7197	18906		
Note: These volumes are calculated by multiplying the Average Daily 12 hr. totals by 12 to 24 expansion factor.														1.31							
Note: U-Turns provided for approach totals. Refer to 'U-Turn' Report for specific breakdown.																					



Transportation Services - Traffic Services

Turning Movement Count - Study Results

BELFAST RD @ TREMBLAY RD

Survey Date: Wednesday, October 18, 2023

WO No: 41242

Start Time: 07:00

Device: Miovision

Full Study 15 Minute Increments

BELFAST RD										TREMBLAY RD									
Northbound					Southbound					Eastbound					Westbound				
Time Period	LT	ST	RT	N TOT	LT	ST	RT	S TOT	STR TOT	LT	ST	RT	E TOT	LT	ST	RT	W TOT	STR TOT	Grand Total
07:00 07:15	14	26	1	41	0	42	7	49	90	14	5	39	58	4	10	3	17	75	165
07:15 07:30	14	30	3	47	3	39	4	46	93	21	3	49	73	3	19	5	27	100	193
07:30 07:45	13	36	1	50	5	49	5	59	109	29	5	69	103	8	9	5	22	125	234
07:45 08:00	23	42	3	68	3	50	12	65	133	38	11	64	113	7	27	6	40	153	286
08:00 08:15	19	57	2	78	4	78	13	95	173	22	7	75	104	7	19	11	37	141	314
08:15 08:30	22	67	2	91	6	110	29	145	236	30	9	63	102	9	23	10	42	144	380
08:30 08:45	19	86	0	105	5	114	39	158	263	26	5	50	81	2	22	20	45	126	389
08:45 09:00	22	68	4	94	5	135	41	181	275	29	11	48	88	7	28	8	43	131	406
09:00 09:15	28	62	1	91	3	82	22	107	198	26	11	26	63	10	18	11	39	102	300
09:15 09:30	19	49	1	69	4	71	11	86	155	27	7	36	70	2	8	3	13	83	238
09:30 09:45	17	56	2	75	0	57	15	72	147	21	5	48	74	2	9	5	16	90	237
09:45 10:00	12	65	2	79	4	73	4	81	160	30	7	50	87	3	13	4	20	107	267
11:30 11:45	15	71	4	90	2	88	10	100	190	22	10	78	110	2	9	6	18	128	318
11:45 12:00	14	64	4	82	4	92	11	107	189	25	7	90	122	7	8	5	20	142	331
12:00 12:15	20	58	3	81	8	101	11	120	201	22	8	48	78	8	8	8	24	102	303
12:15 12:30	24	81	2	107	4	107	10	121	228	28	8	76	112	3	5	7	15	127	355
12:30 12:45	30	80	4	114	8	85	6	99	213	22	9	72	103	12	11	4	27	130	343
12:45 13:00	38	85	10	133	7	84	13	104	237	19	8	65	92	8	6	6	20	112	349
13:00 13:15	31	75	5	111	8	86	14	108	219	30	12	103	145	6	9	5	20	165	384
13:15 13:30	24	65	2	91	6	82	15	103	194	24	11	74	109	3	11	5	19	128	322
15:00 15:15	32	96	1	129	3	107	17	127	256	22	10	80	112	6	8	6	20	132	388
15:15 15:30	27	104	1	132	5	131	25	161	293	30	11	92	133	4	15	5	24	157	450
15:30 15:45	24	110	5	139	7	126	27	160	299	32	28	86	146	5	13	15	33	179	478
15:45 16:00	25	107	3	135	4	143	16	163	298	35	22	86	143	3	6	4	13	156	454
16:00 16:15	28	103	1	132	13	156	17	186	318	43	18	86	147	5	10	11	26	173	491
16:15 16:30	32	110	6	148	9	154	16	179	327	50	21	88	159	8	15	11	34	193	520
16:30 16:45	23	107	8	138	12	159	18	189	327	60	21	66	147	8	20	9	37	184	511
16:45 17:00	24	108	4	136	3	159	15	177	313	58	37	89	184	4	15	16	35	219	532
17:00 17:15	40	114	5	159	11	129	31	171	330	41	22	96	159	7	21	7	35	194	524
17:15 17:30	35	108	3	146	4	120	29	153	299	63	14	61	138	11	15	5	31	169	468
17:30 17:45	16	80	8	104	1	93	20	114	218	44	8	49	101	4	11	6	21	122	340
17:45 18:00	15	72	4	91	6	57	9	72	163	25	11	52	88	4	4	7	15	103	266
Total:	739	2442	105	3286	167	3159	532	3858	7144	1008	382	2154	3544	182	425	239	848	4392	11,536

Note: U-Turns are included in Totals.



Transportation Services - Traffic Services

Turning Movement Count - Study Results

BELFAST RD @ TREMBLAY RD

Survey Date: Wednesday, October 18, 2023

WO No: 41242

Start Time: 07:00

Device: Miovision

Full Study Cyclist Volume

Time Period	BELFAST RD			TREMBLAY RD			Grand Total
	Northbound	Southbound	Street Total	Eastbound	Westbound	Street Total	
07:00 07:15	0	0	0	1	0	1	1
07:15 07:30	0	4	4	7	0	7	11
07:30 07:45	1	4	5	2	1	3	8
07:45 08:00	3	2	5	1	1	2	7
08:00 08:15	2	4	6	2	2	4	10
08:15 08:30	3	2	5	2	1	3	8
08:30 08:45	0	3	3	6	4	10	13
08:45 09:00	1	1	2	3	2	5	7
09:00 09:15	0	1	1	2	1	3	4
09:15 09:30	0	1	1	1	2	3	4
09:30 09:45	2	1	3	1	0	1	4
09:45 10:00	1	2	3	1	0	1	4
11:30 11:45	2	2	4	1	0	1	5
11:45 12:00	2	0	2	0	0	0	2
12:00 12:15	1	0	1	2	0	2	3
12:15 12:30	2	0	2	0	1	1	3
12:30 12:45	2	0	2	0	0	0	2
12:45 13:00	2	0	2	1	2	3	5
13:00 13:15	2	4	6	0	0	0	6
13:15 13:30	2	1	3	0	1	1	4
15:00 15:15	1	1	2	1	0	1	3
15:15 15:30	0	1	1	1	0	1	2
15:30 15:45	1	1	2	2	1	3	5
15:45 16:00	5	3	8	2	3	5	13
16:00 16:15	4	2	6	3	4	7	13
16:15 16:30	6	0	6	1	1	2	8
16:30 16:45	4	4	8	3	4	7	15
16:45 17:00	6	2	8	0	2	2	10
17:00 17:15	2	1	3	1	3	4	7
17:15 17:30	3	2	5	1	1	2	7
17:30 17:45	4	1	5	1	2	3	8
17:45 18:00	1	4	5	1	1	2	7
Total	65	54	119	50	40	90	209



Transportation Services - Traffic Services

Turning Movement Count - Study Results

BELFAST RD @ TREMBLAY RD

Survey Date: Wednesday, October 18, 2023

WO No: 41242

Start Time: 07:00

Device: Miovision

Full Study Pedestrian Volume

Time Period	BELFAST RD			TREMBLAY RD			Grand Total
	NB Approach (E or W Crossing)	SB Approach (E or W Crossing)	Total	EB Approach (N or S Crossing)	WB Approach (N or S Crossing)	Total	
07:00 07:15	1	1	2	1	0	1	3
07:15 07:30	4	0	4	1	1	2	6
07:30 07:45	3	1	4	1	2	3	7
07:45 08:00	4	1	5	2	0	2	7
08:00 08:15	2	0	2	3	2	5	7
08:15 08:30	2	2	4	3	0	3	7
08:30 08:45	0	1	1	0	0	0	1
08:45 09:00	4	1	5	4	0	4	9
09:00 09:15	0	0	0	0	0	0	0
09:15 09:30	2	0	2	1	0	1	3
09:30 09:45	0	1	1	5	0	5	6
09:45 10:00	3	1	4	1	0	1	5
11:30 11:45	4	0	4	1	1	2	6
11:45 12:00	1	0	1	0	0	0	1
12:00 12:15	3	0	3	2	0	2	5
12:15 12:30	4	0	4	1	0	1	5
12:30 12:45	6	1	7	1	0	1	8
12:45 13:00	1	0	1	2	0	2	3
13:00 13:15	3	3	6	2	0	2	8
13:15 13:30	0	0	0	2	0	2	2
15:00 15:15	0	0	0	3	0	3	3
15:15 15:30	1	1	2	1	0	1	3
15:30 15:45	3	0	3	3	0	3	6
15:45 16:00	4	0	4	3	0	3	7
16:00 16:15	6	0	6	2	0	2	8
16:15 16:30	9	1	10	7	3	10	20
16:30 16:45	6	2	8	9	8	17	25
16:45 17:00	4	0	4	4	1	5	9
17:00 17:15	5	1	6	1	1	2	8
17:15 17:30	1	0	1	2	0	2	3
17:30 17:45	3	0	3	1	0	1	4
17:45 18:00	2	0	2	4	0	4	6
Total	91	18	109	73	19	92	201



Transportation Services - Traffic Services

Turning Movement Count - Study Results

BELFAST RD @ TREMBLAY RD

Survey Date: Wednesday, October 18, 2023

WO No: 41242

Start Time: 07:00

Device: Miovision

Full Study Heavy Vehicles

BELFAST RD										TREMBLAY RD										Grand Total
Northbound					Southbound					Eastbound					Westbound					
Time Period	LT	ST	RT	N TOT	LT	ST	RT	S TOT	STR TOT	LT	ST	RT	E TOT	LT	ST	RT	W TOT	STR TOT		
07:00	07:15	2	1	0	4	0	1	0	3	7	0	0	0	3	0	1	1	2	5	6
07:15	07:30	1	2	0	5	1	1	1	8	13	2	0	1	8	0	3	1	5	13	13
07:30	07:45	2	2	0	11	0	0	0	3	14	0	0	6	8	1	0	1	2	10	12
07:45	08:00	4	1	0	8	1	0	0	4	12	1	0	3	11	0	3	1	5	16	14
08:00	08:15	1	2	0	9	0	4	3	10	19	0	0	2	8	0	2	1	3	11	15
08:15	08:30	1	5	0	11	0	3	0	9	20	0	0	2	3	0	0	1	1	4	12
08:30	08:45	0	7	0	12	1	2	2	13	25	0	0	3	5	0	0	1	2	7	16
08:45	09:00	0	3	0	10	0	6	0	11	21	2	0	1	3	0	0	0	0	3	12
09:00	09:15	2	5	0	8	1	0	0	9	17	2	0	0	5	1	1	1	4	9	13
09:15	09:30	3	6	0	13	1	4	0	14	27	3	0	0	7	0	1	0	2	9	18
09:30	09:45	1	1	0	6	0	2	1	6	12	1	0	2	5	0	0	1	1	6	9
09:45	10:00	2	4	0	9	0	1	0	10	19	4	0	2	10	0	2	1	3	13	16
11:30	11:45	0	2	0	6	1	0	0	3	9	0	0	4	4	0	0	0	1	5	7
11:45	12:00	0	1	0	7	0	2	0	4	11	0	0	4	4	0	0	1	1	5	8
12:00	12:15	3	1	0	11	2	2	0	6	17	1	0	5	9	0	0	0	2	11	14
12:15	12:30	0	0	0	6	0	2	0	4	10	1	1	3	8	1	3	1	6	14	12
12:30	12:45	2	2	0	9	1	2	0	7	16	2	2	3	9	0	0	0	3	12	14
12:45	13:00	0	2	0	4	0	1	1	5	9	0	1	1	3	0	0	1	2	5	7
13:00	13:15	0	2	0	8	1	0	1	4	12	0	0	5	6	1	0	0	2	8	10
13:15	13:30	0	1	0	7	0	1	1	5	12	0	2	5	9	0	1	2	5	14	13
15:00	15:15	3	4	0	21	2	4	0	11	32	0	1	9	15	1	2	1	7	22	27
15:15	15:30	2	3	0	17	0	4	0	7	24	0	0	7	9	1	0	0	1	10	17
15:30	15:45	0	0	0	10	1	4	1	9	19	1	1	6	10	0	1	2	5	15	17
15:45	16:00	1	0	0	5	1	2	1	5	10	0	1	2	5	0	0	1	3	8	9
16:00	16:15	0	2	0	10	1	3	0	8	18	2	1	5	8	0	0	0	2	10	14
16:15	16:30	0	0	0	8	1	2	0	5	13	1	1	6	9	0	1	1	4	13	13
16:30	16:45	0	2	0	8	1	0	0	8	16	5	3	6	14	0	0	0	4	18	17
16:45	17:00	1	3	0	9	0	2	0	9	18	2	2	3	8	0	0	2	4	12	15
17:00	17:15	2	2	0	10	1	2	0	6	16	1	0	4	7	0	0	0	1	8	12
17:15	17:30	0	3	0	6	0	0	1	4	10	0	1	3	5	0	0	0	1	6	8
17:30	17:45	0	1	0	3	0	1	2	5	8	1	1	1	5	0	0	0	1	6	7
17:45	18:00	0	0	0	1	1	0	0	3	4	1	0	1	2	0	0	1	2	4	4
Total: None		33	70	0	272	19	58	15	218	490	33	18	105	225	6	21	23	87	312	401



Transportation Services - Traffic Services

Turning Movement Count - Study Results

BELFAST RD @ TREMBLAY RD

Survey Date: Wednesday, October 18, 2023

WO No: 41242

Start Time: 07:00

Device: Miovision

Full Study 15 Minute U-Turn Total

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



Turning Movement Count Summary, AM and PM Peak Hour Flow Diagrams All Vehicles Except Bicycles

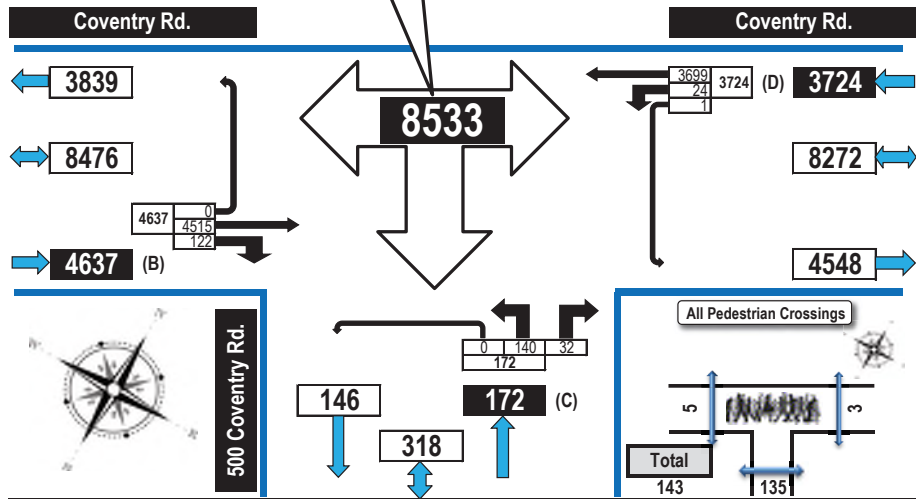


Coventry Road & 500 Coventry Road Ottawa, ON

All Vehicles
(Except Bicycles & Electric Scooters)

Total vehicle volume,
all approaches.
(B + C + D)

Tuesday, November 21, 2023
0700-1000, 1130-1330 & 1500-1800
8 Hour Survey
City of Ottawa Ward 13



Printed on: 11/30/2023

Prepared by: thetrafficsspecialist@gmail.com

Flow Diagrams: AM PM Peak



Turning Movement Count Summary, OFF and EVENING Peak Hour Flow Diagrams All Vehicles Except Bicycles

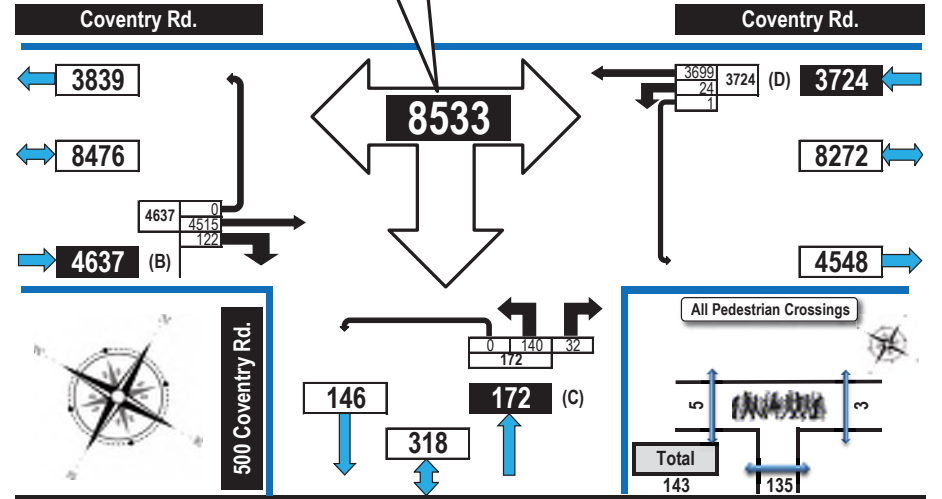


Coventry Road & 500 Coventry Road Ottawa, ON

All Vehicles
(Except Bicycles & Electric Scooters)

Total vehicle volume,
all approaches.
(B + C + D)

Tuesday, November 21, 2023
0700-1000, 1130-1330 & 1500-1800
8 Hour Survey
City of Ottawa Ward 13



Printed on: 11/30/2023

Prepared by: thetrafficsspecialist@gmail.com

Flow Diagrams: OFF EVNG Peak



Turning Movement Count Summary Report Including Peak Hours, AADT and Expansion Factors All Vehicles Except Bicycles



Coventry Road & 500 Coventry Road Ottawa, ON

Survey Date: Tuesday, November 21, 2023 Start Time: 0700 AADT Factor: 1.0
Weather AM: Clear -8° C Survey Duration: 8 Hrs. Survey Hours: 0700-1000, 1130-1330 & 1500-1800
Weather PM: Cloudy -1° C Surveyor(s): T. Carmody

Time Period	Coventry Rd. Eastbound					Coventry Rd. Westbound					500 Coventry Rd. Northbound					N/A Southbound							
	LT	ST	RT	UT	E/B Tot	LT	ST	RT	UT	W/B Tot	Street Total	LT	ST	RT	UT	N/B Tot	LT	ST	RT	UT	S/B Tot	Street Total	Grand Total
0700-0800		311	44	0	355	11	283		0	294	649	14		0	0	14						14	663
0800-0900		336	10	0	346	2	433		0	435	781	14		1	0	15						15	796
0900-1000		399	10	0	409	5	332		0	337	746	6		0	0	6						6	752
1130-1230		619	13	0	632	2	525		1	528	1160	23		8	0	31						31	1191
1230-1330		610	9	0	619	2	575		0	577	1196	10		2	0	12						12	1208
1500-1600		783	7	0	790	1	581		0	582	1372	30		14	0	44						44	1416
1600-1700		869	14	0	883	0	516		0	516	1399	28		4	0	32						32	1431
1700-1800		588	15	0	603	1	454		0	455	1058	15		3	0	18						18	1076
Totals		4515	122	0	4637	24	3699		1	3724	8361	140		32	0	172						172	8533

Equivalent 12 & 24-hour Vehicle Volumes Including the Annual Average Daily Traffic (AADT) Factor

Applicable to the Day and Month of the Turning Movement Count

Expansion factors are applied exclusively to standard weekday 8-hour turning movement counts conducted during the hours of 0700h - 1000h, 1130h - 1330h and 1500h - 1800h

Equivalent 12-hour vehicle volumes. These volumes are calculated by multiplying the 8-hour totals by the 8 → 12 expansion factor of 1.39																								
Equ. 12 Hr	0	6276	170	0	6445	33	5142	0	1	5176	11622	195	0	44	0	239	0	0	0	0	0	239	11861	

Average daily 12-hour vehicle volumes. These volumes are calculated by multiplying the equivalent 12-hour totals by the AADT factor of: 1.0																								
AADT 12-hr	0	6276	170	0	6445	33	5142	0	1	5176	11622	195	0	44	0	239	0	0	0	0	0	239	11861	

24-Hour AADT. These volumes are calculated by multiplying the average daily 12-hour vehicle volumes by the 12 → 24 expansion factor of 1.31																								
AADT 24 Hr	0	8221	222	0	8444	44	6736	0	2	6781	15225	255	0	58	0	313	0	0	0	0	0	313	15538	

AADT and expansion factors provided by the City of Ottawa

AM Peak Hour Factor ➡ 0.89											Highest Hourly Vehicle Volume Between 0700h & 1000h																	
AM Peak Hr	LT	ST	RT	UT	Total	LT	ST	RT	UT	Total	Str. Tot.	LT	ST	RT	UT	Total	LT	ST	RT	UT	Total	Str. Tot.	LT	ST	RT	UT	Total	Gr. Tot.
0745-0845	0	357	24	0	381	5	406	0	0	411	792	13	0	1	0	14	0	0	0	0	0	14	806	0	0	0	0	806
OFF Peak Hour Factor ➡ 0.98											Highest Hourly Vehicle Volume Between 1130h & 1330h																	
OFF Peak Hr	LT	ST	RT	UT	Total	LT	ST	RT	UT	Total	Str. Tot.	LT	ST	RT	UT	Total	LT	ST	RT	UT	Total	Str. Tot.	LT	ST	RT	UT	Total	Gr. Tot.
1200-1300	0	658	14	0	672	4	559	0	0	563	1235	16	0	6	0	22	0	0	0	0	0	22	1257	0	0	0	0	1257
PM Peak Hour Factor ➡ 0.96											Highest Hourly Vehicle Volume Between 1500h & 1800h																	
PM Peak Hr	LT	ST	RT	UT	Total	LT	ST	RT	UT	Total	Str. Tot.	LT	ST	RT	UT	Total	LT	ST	RT	UT	Total	Str. Tot.	LT	ST	RT	UT	Total	Gr. Tot.
1530-1630	0	858	13	0	871	1	577	0	0	578	1449	34	0	11	0	45	0	0	0	0	0	45	1494	0	0	0	0	1494

Comments:

OC Transpo and Para Transpo buses, private buses and school buses comprise 47.74% of the heavy vehicle traffic.

Notes:

1. Includes all vehicle types except bicycles, electric bicycles, and electric scooters.
2. When expansion and AADT factors are applied, the results will differ slightly due to rounding.

Printed on: 11/30/2023

Prepared by: thetrafficspecialist@gmail.com

Summary: All Vehicles



Turning Movement Count Heavy Vehicle Summary (FHWA Class 4 to 13) Flow Diagram



Coventry Road & 500 Coventry Road Ottawa, ON

Heavy Vehicles
(Construction Vehicles, Heavy Trucks, Buses & School Buses).
Heavy vehicle totals **ARE** included in the all vehicles summary and flow diagrams.

Total heavy vehicle volume, all approaches.
(B + C + D)

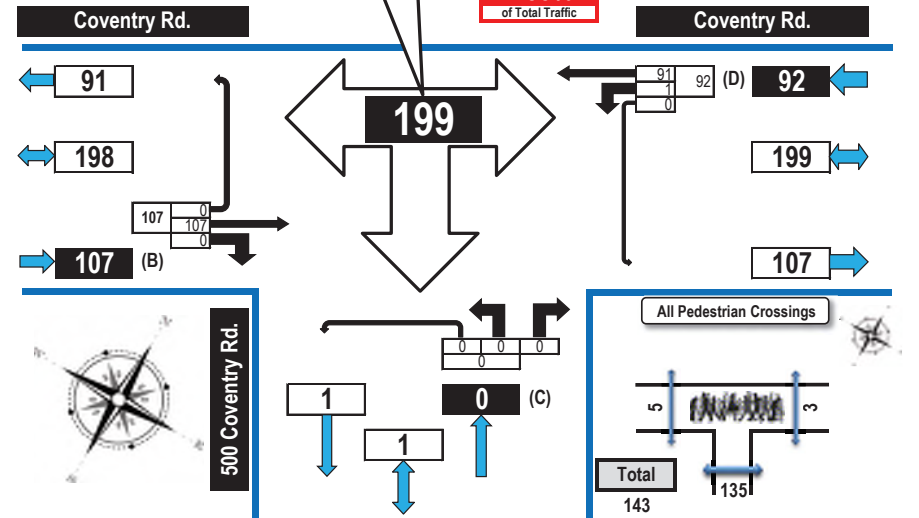
Heavy Vehicles Comprise
2.33%
of Total Traffic

Tuesday, November 21, 2023

0700-1000, 1130-1330 & 1500-1800

8 Hour Survey

City of Ottawa Ward ► 13



	Coventry Rd.					Coventry Rd.					500 Coventry Rd.					N/A						
	Eastbound					Westbound					Northbound					Southbound						
Time Period	LT	ST	RT	UT	EB Tot	LT	ST	RT	UT	WB Tot	LT	ST	RT	UT	NB Tot	LT	ST	RT	UT	SB Tot	GR Tot	
0700-0800		22	0	0	22	0	9		0	9	0		0	0	0	0						31
0800-0900		12	0	0	12	0	15		0	15	0		0	0	0	0						27
0900-1000		13	0	0	13	1	15		0	16	0		0	0	0	0						29
1130-1230		9	0	0	9	0	11		0	11	0		0	0	0	0						20
1230-1330		19	0	0	19	0	11		0	11	0		0	0	0	0						30
1500-1600		12	0	0	12	0	13		0	13	0		0	0	0	0						25
1600-1700		11	0	0	11	0	9		0	9	0		0	0	0	0						20
1700-1800		9	0	0	9	0	8		0	8	0		0	0	0	0						17
Totals		107	0	0	107	1	91		0	92	0		0	0	0	0						199

Comments:

OC Transpo and Para Transpo buses, private buses and school buses comprise 47.74% of the heavy vehicle traffic.

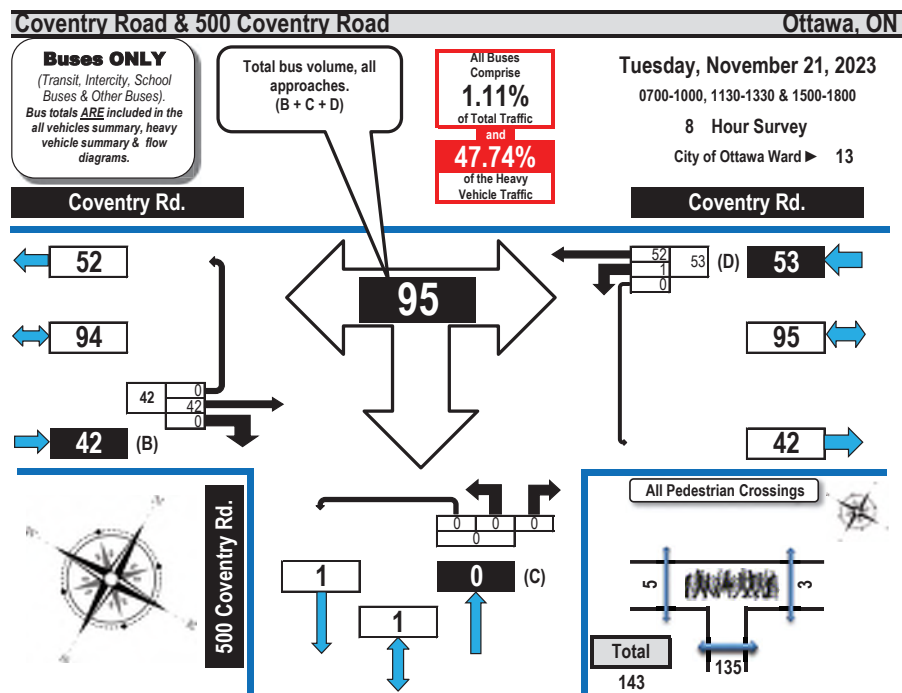
Printed on: 11/30/2023

Prepared by: thetrafficspecialist@gmail.com

Summary: Heavy Vehicles



Turning Movement Count All Buses Summary (FHWA Class 4 ONLY) Flow Diagram

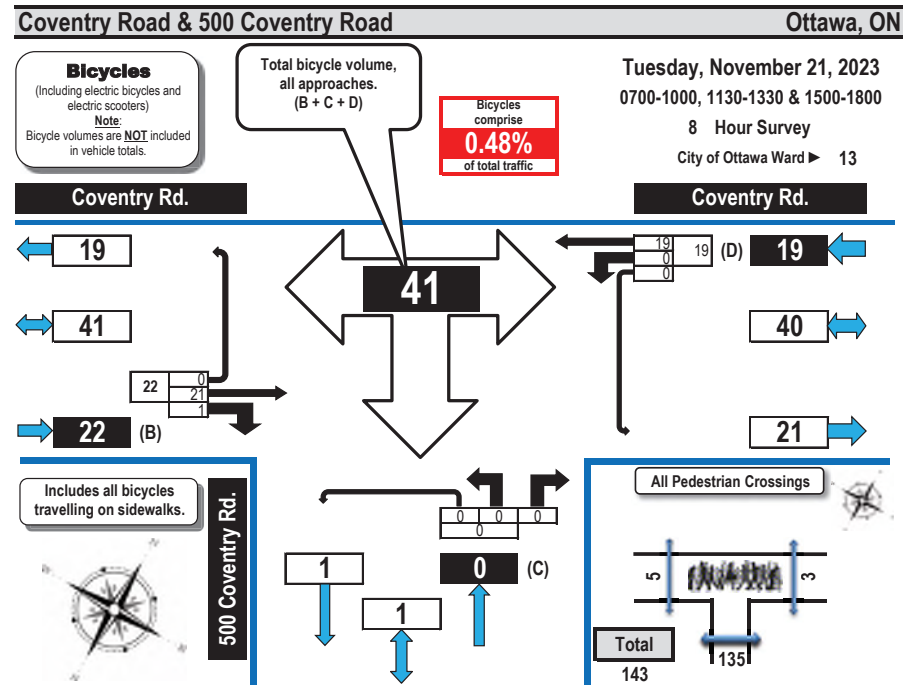


Time Period	Coventry Rd. Eastbound				Coventry Rd. Westbound				500 Coventry Rd. Northbound				N/A Southbound				GR Tot
	LT	ST	RT	UT	LT	ST	RT	UT	LT	ST	RT	UT	LT	ST	RT	UT	
0700-0800		15	0	0		15	0	7		7	0	0					22
0800-0900		3	0	0		3	0	5		5	0	0					8
0900-1000		5	0	0		5	1	10		11	0	0					16
1130-1230		3	0	0		3	0	8		8	0	0					11
1230-1330		9	0	0		9	0	4		4	0	0					13
1500-1600		2	0	0		2	0	7		7	0	0					9
1600-1700		1	0	0		1	0	7		7	0	0					8
1700-1800		4	0	0		4	0	4		4	0	0					8
Totals		42	0	0		42	1	52		53	0	0					95

Comments:
OC Transpo and Para Transpo buses, private buses and school buses comprise 47.74% of the heavy vehicle traffic.



Turning Movement Count Bicycle Summary Flow Diagram



Time Period	Coventry Rd. Eastbound				Coventry Rd. Westbound				500 Coventry Rd. Northbound				N/A Southbound				GR Tot
	LT	ST	RT	UT	LT	ST	RT	UT	LT	ST	RT	UT	LT	ST	RT	UT	
0700-0800		2	0	0		2	0	3		3	0	0					5
0800-0900		5	0	0		5	0	2		2	0	0					7
0900-1000		6	0	0		6	0	1		1	0	0					7
1130-1230		1	0	0		1	0	1		1	0	0					2
1230-1330		0	0	0		0	0	1		1	0	0					1
1500-1600		3	1	0		4	0	4		4	0	0					8
1600-1700		4	0	0		4	0	4		4	0	0					8
1700-1800		0	0	0		0	0	3		3	0	0					3
Totals		21	1	0		22	0	19		19	0	0					41

Comments:
OC Transpo and Para Transpo buses, private buses and school buses comprise 47.74% of the heavy vehicle traffic.



Turning Movement Count
Pedestrian Crossings Summary
and Flow Diagram



Coventry Road & 500 Coventry Road Ottawa, ON

Pedestrian
Crossings

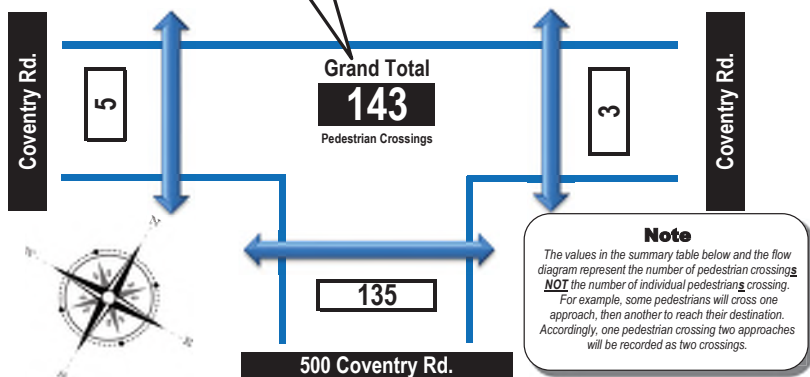
Tuesday, November 21, 2023

0700-1000, 1130-1330 & 1500-1800

8 Hour Survey

City of Ottawa Ward ► 13

Total number of
all pedestrian
crossings



Note

The values in the summary table below and the flow diagram represent the number of pedestrian crossings. **NOT** the number of individual pedestrian crossings. For example, some pedestrians will cross one approach, then another to reach their destination. Accordingly, one pedestrian crossing two approaches will be recorded as two crossings.

Time Period	West Side Crossing Coventry Rd.	East Side Crossing Coventry Rd.	Street Total	South Side Crossing 500 Coventry Rd.	North Side Crossing N/A	Street Total	Grand Total
0700-0800	0	2	2	21		21	23
0800-0900	4	0	4	8		8	12
0900-1000	0	0	0	5		5	5
1130-1230	0	0	0	15		15	15
1230-1330	0	0	0	25		25	25
1500-1600	0	1	1	19		19	20
1600-1700	0	0	0	27		27	27
1700-1800	1	0	1	15		15	16
Totals	5	3	8	135		135	143

Comments:

OC Transpo and Para Transpo buses, private buses and school buses comprise 47.74% of the heavy vehicle traffic.

Appendix C

Synchro Intersection Worksheets – Existing Conditions

Lanes, Volumes, Timings
1: Belfast/Retail & Coventry

Existing
AM Peak Hour

	↖	→	↗	↖	←	↖	↖	↑	↗	↖	↓	↖
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑	↗	↖	↖			↖	↗		↖	
Traffic Volume (vph)	0	289	174	170	568	3	232	0	184	0	0	0
Future Volume (vph)	0	289	174	170	568	3	232	0	184	0	0	0
Satd. Flow (prot)	1745	1679	1455	1658	1710	0	0	1626	1469	0	1745	0
Flt Permitted				0.453				0.757				
Satd. Flow (perm)	1745	1679	1413	787	1710	0	0	1293	1419	0	1745	0
Satd. Flow (RTOR)			193						155			
Lane Group Flow (vph)	0	321	193	189	634	0	0	258	204	0	0	0
Turn Type	Perm	NA	Perm	pm+pt	NA		Perm	NA	Perm			
Protected Phases		2		1	6			8			4	
Permitted Phases	2		2	6			8		8	4		
Detector Phase	2	2	2	1	6		8	8	8	4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	5.0	10.0		10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	29.5	29.5	29.5	10.4	29.5		29.5	29.5	29.5	29.5	29.5	
Total Split (s)	40.0	40.0	40.0	20.0	60.0		30.0	30.0	30.0	30.0	30.0	
Total Split (%)	44.4%	44.4%	44.4%	22.2%	66.7%		33.3%	33.3%	33.3%	33.3%	33.3%	
Yellow Time (s)	3.7	3.7	3.7	3.3	3.7		3.3	3.3	3.3	3.3	3.3	
All-Red Time (s)	2.8	2.8	2.8	1.7	2.8		3.2	3.2	3.2	3.2	3.2	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.5	6.5	6.5	5.0	6.5		6.5	6.5	6.5	6.5	6.5	
Lead/Lag	Lag	Lag	Lag	Lead								
Lead-Lag Optimize?	Yes	Yes	Yes	Yes								
Recall Mode	C-Max	C-Max	C-Max	None	C-Max		None	None	None	None	None	
Act Effct Green (s)	40.9	40.9	57.3	55.8			21.2	21.2				
Actuated g/C Ratio	0.45	0.45	0.64	0.62			0.24	0.24				
v/c Ratio	0.42	0.26	0.32	0.60			0.85	0.45				
Control Delay	20.2	3.7	8.8	13.9			58.1	11.6				
Queue Delay	0.0	0.0	0.0	0.0			0.0	0.0				
Total Delay	20.2	3.7	8.8	13.9			58.1	11.6				
LOS	C	A	A	B			E	B				
Approach Delay	14.0			12.8			37.6					
Approach LOS	B			B			D					
Queue Length 50th (m)	38.1	0.0	13.1	65.0			41.2	6.5				
Queue Length 95th (m)	64.4	12.4	22.4	98.3			#77.8	24.3				
Internal Link Dist (m)	235.6			287.2			248.0				26.2	
Turn Bay Length (m)				75.0				20.0				
Base Capacity (vph)	762	747	646	1060			337	485				
Starvation Cap Reductn	0	0	0	0			0	0				
Spillback Cap Reductn	0	0	0	0			0	0				
Storage Cap Reductn	0	0	0	0			0	0				
Reduced v/c Ratio	0.42	0.26	0.29	0.60			0.77	0.42				

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 70

Control Type: Actuated-Coordinated

Scenario 1 500 Coventry Road 11:59 pm 11/24/2023 Existing

Synchro 11 Report
Page 1

Lanes, Volumes, Timings
1: Belfast/Retail & Coventry

Existing
AM Peak Hour

Maximum v/c Ratio: 0.85

Intersection Signal Delay: 19.5

Intersection LOS: B

Intersection Capacity Utilization 76.6%

ICU Level of Service D

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 1: Belfast/Retail & Coventry



Scenario 1 500 Coventry Road 11:59 pm 11/24/2023 Existing

Synchro 11 Report
Page 2

Lanes, Volumes, Timings
2: Coventry & St. Laurent SC W

Existing
AM Peak Hour

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group												
Lane Configurations		↔			↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	3	0	2	89	2	23	2	205	151	73	631	29
Future Volume (vph)	3	0	2	89	2	23	2	205	151	73	631	29
Satd. Flow (prot)	0	1339	0	0	1663	1388	1658	2900	0	1658	1711	0
Fit Permitted		0.836			0.727		0.315			0.518		
Satd. Flow (perm)	0	1152	0	0	1256	1370	549	2900	0	897	1711	0
Satd. Flow (RTOR)		40				40		168			5	
Lane Group Flow (vph)	0	5	0	0	101	26	2	396	0	81	733	0
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		4				8		2			6	
Permitted Phases	4			8			8			6		
Detector Phase	4	4		8	8	8	2	2		6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0	10.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	28.9	28.9		28.9	28.9	28.9	24.9	24.9		24.9	24.9	
Total Split (s)	29.0	29.0		29.0	29.0	29.0	51.0	51.0		51.0	51.0	
Total Split (%)	36.3%	36.3%		36.3%	36.3%	36.3%	63.8%	63.8%		63.8%	63.8%	
Yellow Time (s)	3.3	3.3		3.3	3.3	3.3	3.7	3.7		3.7	3.7	
All-Red Time (s)	2.6	2.6		2.6	2.6	2.6	2.2	2.2		2.2	2.2	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.9			5.9	5.9	5.9	5.9		5.9	5.9	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None	None	Max	Max		Max	Max	
Act Effct Green (s)		13.3			13.3	13.3	53.9	53.9		53.9	53.9	
Actuated g/C Ratio		0.18			0.18	0.18	0.73	0.73		0.73	0.73	
v/c Ratio		0.02			0.45	0.09	0.01	0.18		0.12	0.59	
Control Delay		0.2			33.1	5.6	6.5	3.4		6.6	10.6	
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		0.2			33.1	5.6	6.5	3.4		6.6	10.6	
LOS		A			C	A	A	A		A	B	
Approach Delay		0.3			27.4			3.4			10.2	
Approach LOS		A			C			A			B	
Queue Length 50th (m)		0.0			13.0	0.0	0.1	4.6		3.2	45.5	
Queue Length 95th (m)		0.0			24.2	3.8	1.0	14.2		12.0	123.1	
Internal Link Dist (m)		23.1			41.6			152.6			273.9	
Turn Bay Length (m)						50.0	28.0					
Base Capacity (vph)		388			393	457	398	2153		652	1244	
Starvation Cap Reductn		0			0	0	0	0		0	0	
Spillback Cap Reductn		0			0	0	0	0		0	0	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		0.01			0.26	0.06	0.01	0.18		0.12	0.59	
Intersection Summary												
Cycle Length: 80												
Actuated Cycle Length: 74.1												
Natural Cycle: 70												
Control Type: Actuated-Uncoordinated												
Maximum v/c Ratio: 0.59												

Scenario 1 500 Coventry Road 11:59 pm 11/24/2023 Existing

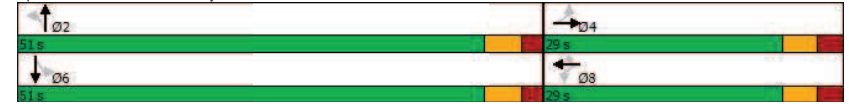
Synchro 11 Report
Page 3

Lanes, Volumes, Timings
2: Coventry & St. Laurent SC W

Existing
AM Peak Hour

Intersection Signal Delay: 9.8	Intersection LOS: A
Intersection Capacity Utilization 70.3%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 2: Coventry & St. Laurent SC W



Scenario 1 500 Coventry Road 11:59 pm 11/24/2023 Existing

Synchro 11 Report
Page 4

Lanes, Volumes, Timings
3: St. Laurent SC N & Coventry

Existing
AM Peak Hour

	↖	→	↗	↖	←	↖	↖	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↗		↖↗	↖↗			↖	↖		↖↗	
Traffic Volume (vph)	1	236	1	199	722	0	4	2	87	7	0	8
Future Volume (vph)	1	236	1	199	722	0	4	2	87	7	0	8
Satd. Flow (prot)	1658	3100	0	3185	3283	0	0	1468	1483	0	1336	0
Flt Permitted	0.950			0.950				0.789			0.847	
Satd. Flow (perm)	1655	3100	0	3167	3283	0	0	1193	1460	0	1156	0
Satd. Flow (RTOR)								97			114	
Lane Group Flow (vph)	1	263	0	221	802	0	0	6	97	0	17	0
Turn Type	Prot	NA		Prot	NA		Perm	NA	pm+ov	Perm	NA	
Protected Phases	5	2		1	6			8	1		4	
Permitted Phases							8		8	4		
Detector Phase	5	2		1	6		8	8	1	4	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		10.0	10.0	5.0	10.0	10.0	
Minimum Split (s)	11.3	28.1		11.3	28.1		35.6	35.6	11.3	35.6	35.6	
Total Split (s)	17.0	37.4		17.0	37.4		35.6	35.6	17.0	35.6	35.6	
Total Split (%)	18.9%	41.6%		18.9%	41.6%		39.6%	39.6%	18.9%	39.6%	39.6%	
Yellow Time (s)	3.7	3.7		3.7	3.7		3.3	3.3	3.7	3.3	3.3	
All-Red Time (s)	2.6	2.4		2.6	2.4		3.3	3.3	2.6	3.3	3.3	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.3	6.1		6.3	6.1		6.6	6.3	6.3	6.6	6.6	
Lead/Lag	Lead	Lag		Lead	Lag			Lead				
Lead-Lag Optimize?	Yes	Yes		Yes	Yes			Yes				
Recall Mode	None	Max		None	Max		None	None	None	None	None	
Act Effct Green (s)	5.8	34.4		9.3	52.9		13.2	15.4			13.2	
Actuated g/C Ratio	0.09	0.53		0.14	0.82		0.20	0.24			0.20	
v/c Ratio	0.01	0.16		0.48	0.30		0.02	0.23			0.05	
Control Delay	35.0	12.0		31.8	7.6		22.6	4.4			0.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Total Delay	35.0	12.0		31.8	7.6		22.6	4.4			0.3	
LOS	C	B		C	A		C	A			A	
Approach Delay		12.1			12.8			5.4			0.3	
Approach LOS		B			B			A			A	
Queue Length 50th (m)	0.1	4.8		9.7	0.0		0.5	0.0			0.0	
Queue Length 95th (m)	1.7	26.0		30.2	75.0		3.4	6.9			0.0	
Internal Link Dist (m)		273.9			130.6			46.6			5.7	
Turn Bay Length (m)	65.0			55.0								
Base Capacity (vph)	285	1645		548	2680		557	464			600	
Starvation Cap Reductn	0	0		0	0		0	0			0	
Spillback Cap Reductn	0	0		0	0		0	0			0	
Storage Cap Reductn	0	0		0	0		0	0			0	
Reduced v/c Ratio	0.00	0.16		0.40	0.30		0.01	0.21			0.03	

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 64.8

Natural Cycle: 75

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.48

Scenario 1 500 Coventry Road 11:59 pm 11/24/2023 Existing

Synchro 11 Report
Page 5

Lanes, Volumes, Timings
3: St. Laurent SC N & Coventry

Existing
AM Peak Hour

Intersection Signal Delay: 12.0

Intersection LOS: B

Intersection Capacity Utilization 51.8%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 3: St. Laurent SC N & Coventry



Scenario 1 500 Coventry Road 11:59 pm 11/24/2023 Existing

Synchro 11 Report
Page 6

Lanes, Volumes, Timings
4: Belfast & Tremblay

Existing
AM Peak Hour

	↖	→	↗	↖	←	↖	↖	↖	↖	↖	↖	↖
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖		↖	↖		↖	↖		↖	↖	
Traffic Volume (vph)	107	32	236	26	92	49	82	278	8	20	437	122
Future Volume (vph)	107	32	236	26	92	49	82	278	8	20	437	122
Satd. Flow (prot)	1658	1425	0	1658	1620	0	1658	1673	0	1610	1650	0
Flt Permitted	0.658			0.498			0.114			0.568		
Satd. Flow (perm)	1144	1425	0	857	1620	0	199	1673	0	959	1650	0
Satd. Flow (RTOR)		262			34			3			18	
Lane Group Flow (vph)	119	298	0	29	156	0	91	318	0	22	622	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		2			6		3	8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		3	8		4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		5.0	10.0		10.0	10.0	
Minimum Split (s)	24.8	24.8		29.8	29.8		10.9	23.9		28.9	28.9	
Total Split (s)	35.0	35.0		35.0	35.0		15.0	50.0		35.0	35.0	
Total Split (%)	41.2%	41.2%		41.2%	41.2%		17.6%	58.8%		41.2%	41.2%	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	3.5	3.5		3.5	3.5		2.6	2.6		2.6	2.6	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.8	6.8		6.8	6.8		5.9	5.9		5.9	5.9	
Lead/Lag							Lead			Lag		Lag
Lead-Lag Optimize?							Yes			Yes		Yes
Recall Mode	Max	Max		Max	Max		None	None		None	None	
Act Effct Green (s)	28.3	28.3		28.3	28.3		40.1	40.1		29.2	29.2	
Actuated g/C Ratio	0.35	0.35		0.35	0.35		0.49	0.49		0.36	0.36	
v/c Ratio	0.30	0.45		0.10	0.27		0.39	0.38		0.06	1.03	
Control Delay	23.3	6.7		20.7	17.3		15.5	14.0		19.4	72.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	23.3	6.7		20.7	17.3		15.5	14.0		19.4	72.5	
LOS	C	A		C	B		B	B		B	E	
Approach Delay		11.4			17.9			14.4			70.7	
Approach LOS		B			B			B			E	
Queue Length 50th (m)	13.9	3.9		3.2	13.8		7.1	28.7		2.3	~109.1	
Queue Length 95th (m)	27.9	22.0		9.2	28.5		14.3	46.2		7.4	#174.8	
Internal Link Dist (m)		133.2			135.9			210.0			31.1	
Turn Bay Length (m)	98.0			35.0			45.0			16.5		
Base Capacity (vph)	399	667		299	587		262	914		345	605	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.30	0.45		0.10	0.27		0.35	0.35		0.06	1.03	

Intersection Summary

Cycle Length: 85

Actuated Cycle Length: 81.2

Natural Cycle: 80

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 1.03

Scenario 1 500 Coventry Road 11:59 pm 11/24/2023 Existing

Synchro 11 Report
Page 7

Lanes, Volumes, Timings
4: Belfast & Tremblay

Existing
AM Peak Hour

Intersection Signal Delay: 35.9

Intersection LOS: D

Intersection Capacity Utilization 85.8%

ICU Level of Service E

Analysis Period (min) 15

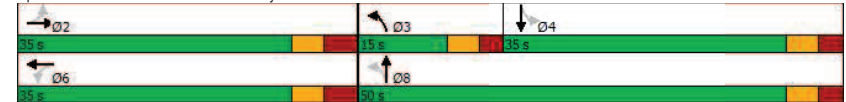
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 4: Belfast & Tremblay



Scenario 1 500 Coventry Road 11:59 pm 11/24/2023 Existing

Synchro 11 Report
Page 8

HCM 2010 TWSC
5: 500 Coventry Road & Coventry

Existing
AM Peak Hour

Intersection						
Int Delay, s/veh	0.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	357	24	5	406	13	1
Future Vol, veh/h	357	24	5	406	13	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	60	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	3	2	2	4	2	2
Mvmt Flow	397	27	6	451	14	1
Major/Minor	Major1	Major2		Minor1		
Conflicting Flow All	0	0	424	0	874	411
Stage 1	-	-	-	-	411	-
Stage 2	-	-	-	-	463	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1135	-	320	641
Stage 1	-	-	-	-	669	-
Stage 2	-	-	-	-	634	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1135	-	318	641
Mov Cap-2 Maneuver	-	-	-	-	441	-
Stage 1	-	-	-	-	669	-
Stage 2	-	-	-	-	631	-
Approach	EB	WB		NB		
HCM Control Delay, s	0	0.1		13.3		
HCM LOS	B					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	451	-	-	1135	-	
HCM Lane V/C Ratio	0.034	-	-	0.005	-	
HCM Control Delay (s)	13.3	-	-	8.2	-	
HCM Lane LOS	B	-	-	A	-	
HCM 95th %tile Q(veh)	0.1	-	-	0	-	

Scenario 1 500 Coventry Road 11:59 pm 11/24/2023 Existing

Synchro 11 Report
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Lanes, Volumes, Timings
1: Belfast/Retail & Coventry

Existing
PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↰	↰	↰	↰	↰			↰	↰	↰	↰
Traffic Volume (vph)	1	482	225	197	445	5	336	0	273	1	0
Future Volume (vph)	1	482	225	197	445	5	336	0	273	1	0
Satd. Flow (prot)	1658	1745	1455	1658	1737	0	0	1658	1455	0	1518
Fit Permitted	0.480			0.194				0.754			0.948
Satd. Flow (perm)	831	1745	1392	339	1737	0	0	1308	1417	0	1453
Satd. Flow (RTOR)			250		1				182		103
Lane Group Flow (vph)	1	536	250	219	500	0	0	373	303	0	5
Turn Type	Perm	NA	Perm	pm+pt	NA		Perm	NA	Perm	Perm	NA
Protected Phases		2		1	6			8			4
Permitted Phases	2		2	6			8		8	4	
Detector Phase	2	2	2	1	6		8	8	8	4	4
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	5.0	10.0		10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	29.5	29.5	29.5	10.4	29.5		29.5	29.5	29.5	29.5	29.5
Total Split (s)	37.0	37.0	37.0	15.0	52.0		38.0	38.0	38.0	38.0	38.0
Total Split (%)	41.1%	41.1%	41.1%	16.7%	57.8%		42.2%	42.2%	42.2%	42.2%	42.2%
Yellow Time (s)	3.7	3.7	3.7	3.3	3.7		3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	2.8	2.8	2.8	1.7	2.8		3.2	3.2	3.2	3.2	3.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	5.0	6.5		6.5	6.5	6.5	6.5	6.5
Lead/Lag	Lag	Lag	Lag	Lead							
Lead-Lag Optimize?	Yes	Yes	Yes	Yes							
Recall Mode	C-Max	C-Max	C-Max	None	C-Max		None	None	None	None	None
Act Effct Green (s)	33.5	33.5	33.5	49.8	48.3		28.7	28.7	28.7	28.7	28.7
Actuated g/C Ratio	0.37	0.37	0.37	0.55	0.54		0.32	0.32	0.32	0.32	0.32
v/c Ratio	0.00	0.83	0.37	0.66	0.54		0.89	0.53	0.01	0.01	0.01
Control Delay	20.0	39.8	4.7	22.3	17.1		54.0	12.8	0.0	0.0	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay	20.0	39.8	4.7	22.3	17.1		54.0	12.8	0.0	0.0	0.0
LOS	B	D	A	C	B		D	B	A	A	A
Approach Delay	28.6				18.6		35.6				
Approach LOS	C				B		D				
Queue Length 50th (m)	0.1	87.4	0.0	19.7	57.0		57.8	14.7	0.0	0.0	0.0
Queue Length 95th (m)	1.1	#146.5	15.2	#36.8	86.4		#104.7	37.4	0.0	0.0	0.0
Internal Link Dist (m)	235.6				287.2		248.0		26.2		
Turn Bay Length (m)	54.0			75.0				20.0			
Base Capacity (vph)	309	649	675	335	931		457	614	575	575	575
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0
Reduced v/c Ratio	0.00	0.83	0.37	0.65	0.54		0.82	0.49	0.01	0.01	0.01
Intersection Summary											
Cycle Length: 90											
Actuated Cycle Length: 90											
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green											
Natural Cycle: 90											
Control Type: Actuated-Coordinated											

Scenario 1 500 Coventry Road 11:59 pm 08/26/2022 Existing

Synchro 11 Report
Page 1

Lanes, Volumes, Timings
1: Belfast/Retail & Coventry

Existing
PM Peak Hour

Maximum v/c Ratio: 0.89

Intersection Signal Delay: 27.4

Intersection LOS: C

Intersection Capacity Utilization 79.6%

ICU Level of Service D

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 1: Belfast/Retail & Coventry



Lanes, Volumes, Timings
2: Coventry & St. Laurent SC W

Existing
PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	23	2	1	178	4	111	0	575	220	33	353	6
Future Volume (vph)	23	2	1	178	4	111	0	575	220	33	353	6
Satd. Flow (prot)	0	1660	0	0	1663	1483	1745	3158	0	1658	1690	0
Fit Permitted		0.693			0.709					0.294		
Satd. Flow (perm)	0	1202	0	0	1233	1464	1745	3158	0	513	1690	0
Satd. Flow (RTOR)		1				123		114			2	
Lane Group Flow (vph)	0	29	0	0	202	123	0	883	0	37	399	0
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		4			8		2			6		
Permitted Phases	4			8		8	2				6	
Detector Phase	4	4		8	8	8	2	2		6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0	10.0	10.0			10.0	10.0	
Minimum Split (s)	28.9	28.9		28.9	28.9	24.9	24.9			24.9	24.9	
Total Split (s)	29.0	29.0		29.0	29.0	29.0	51.0	51.0		51.0	51.0	
Total Split (%)	36.3%	36.3%		36.3%	36.3%	36.3%	63.8%	63.8%		63.8%	63.8%	
Yellow Time (s)	3.3	3.3		3.3	3.3	3.3	3.7	3.7		3.7	3.7	
All-Red Time (s)	2.6	2.6		2.6	2.6	2.6	2.2	2.2		2.2	2.2	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.9			5.9	5.9	5.9	5.9		5.9	5.9	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None	None	Max	Max		Max	Max	
Act Effct Green (s)		16.9			16.9			47.1		47.1		
Actuated g/C Ratio		0.22			0.22	0.22		0.62		0.62	0.62	
v/c Ratio		0.11			0.74	0.29		0.44		0.12	0.38	
Control Delay		22.1			43.0	6.5		7.9		8.6	9.3	
Queue Delay		0.0			0.0	0.0		0.0		0.0	0.0	
Total Delay		22.1			43.0	6.5		7.9		8.6	9.3	
LOS		C			D	A		A		A	A	
Approach Delay		22.1			29.2			7.9			9.3	
Approach LOS		C			C			A			A	
Queue Length 50th (m)		3.1			26.0	0.0		26.1		1.9	25.1	
Queue Length 95th (m)		9.0			47.0	11.3		46.7		7.0	50.5	
Internal Link Dist (m)		23.1			41.6			152.6			273.9	
Turn Bay Length (m)						50.0						
Base Capacity (vph)		367			376	532		2004		318	1050	
Starvation Cap Reductn		0			0	0		0		0	0	
Spillback Cap Reductn		0			0	0		0		0	0	
Storage Cap Reductn		0			0	0		0		0	0	
Reduced v/c Ratio		0.08			0.54	0.23		0.44		0.12	0.38	
Intersection Summary												
Cycle Length: 80												
Actuated Cycle Length: 75.8												
Natural Cycle: 55												
Control Type: Actuated-Uncoordinated												
Maximum v/c Ratio: 0.74												

Lanes, Volumes, Timings
2: Coventry & St. Laurent SC W

Existing
PM Peak Hour

Intersection Signal Delay: 12.7	Intersection LOS: B
Intersection Capacity Utilization 56.7%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 2: Coventry & St. Laurent SC W

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Lanes, Volumes, Timings
3: St. Laurent SC N & Coventry

Existing
PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	702	7	274	371	2	16	2	406	11	1	2
Future Volume (vph)	1	702	7	274	371	2	16	2	406	11	1	2
Satd. Flow (prot)	1658	3305	0	3216	3249	0	0	1670	1483	0	1548	0
Flt Permitted	0.950			0.950				0.737			0.755	
Satd. Flow (perm)	1652	3305	0	3216	3249	0	0	1281	1462	0	1213	0
Satd. Flow (RTOR)		1			1				36		2	
Lane Group Flow (vph)	1	788	0	304	414	0	0	20	451	0	15	0
Turn Type	Prot	NA		Prot	NA		Perm	NA	pm+ov	Perm	NA	
Protected Phases	5	2		1	6			8	1		4	
Permitted Phases												
Detector Phase	5	2		1	6		8	8	1	4	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		10.0	10.0	5.0	10.0	10.0	
Minimum Split (s)	11.3	28.1		11.3	28.1		35.6	35.6	11.3	35.6	35.6	
Total Split (s)	15.0	34.4		25.0	44.4		35.6	35.6	25.0	35.6	35.6	
Total Split (%)	15.8%	36.2%		26.3%	46.7%		37.5%	37.5%	26.3%	37.5%	37.5%	
Yellow Time (s)	3.7	3.7		3.7	3.7		3.3	3.3	3.7	3.3	3.3	
All-Red Time (s)	2.6	2.4		2.6	2.4		3.3	3.3	2.6	3.3	3.3	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)	6.3	6.1		6.3	6.1			6.6	6.3		6.6	
Lead/Lag	Lead	Lag		Lead	Lag			Lead				
Lead-Lag Optimize?	Yes	Yes		Yes	Yes			Yes				
Recall Mode	None	Max		None	Max		None	None	None	None	None	
Act Effct Green (s)	5.8	29.5		18.4	57.0			13.2	24.5		13.2	
Actuated g/C Ratio	0.08	0.43		0.27	0.83			0.19	0.36		0.19	
v/c Ratio	0.01	0.56		0.35	0.15			0.08	0.82		0.06	
Control Delay	38.0	20.1		24.8	6.4			25.7	29.5		23.9	
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay	38.0	20.1		24.8	6.4			25.7	29.5		23.9	
LOS	D	C		C	A			C	C		C	
Approach Delay		20.2			14.2			29.3			23.9	
Approach LOS		C			B			C			C	
Queue Length 50th (m)	0.1	28.8		12.6	0.0			1.9	43.0		1.2	
Queue Length 95th (m)	1.8	91.8		38.2	35.8			7.8	68.5		6.2	
Internal Link Dist (m)		273.9			130.6			46.6			5.7	
Turn Bay Length (m)	65.0			55.0								
Base Capacity (vph)	217	1413		908	2686			561	571		532	
Starvation Cap Reductn	0	0		0	0			0	0		0	
Spillback Cap Reductn	0	0		0	0			0	0		0	
Storage Cap Reductn	0	0		0	0			0	0		0	
Reduced v/c Ratio	0.00	0.56		0.33	0.15			0.04	0.79		0.03	

Intersection Summary

Cycle Length: 95
Actuated Cycle Length: 69
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.82

Lanes, Volumes, Timings 3: St. Laurent SC N & Coventry

Existing
PM Peak Hour

Intersection Signal Delay: 20.2	Intersection LOS: C
Intersection Capacity Utilization 74.1%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 3: St. Laurent SC N & Coventry

 Ø1	 Ø2	 Ø4
25 s	34.4 s	35.6 s
 Ø5	 Ø6	 Ø8
15 s	44.4 s	35.6 s

Scenario 1 500 Coventry Road 11:59 pm 08/26/2022 Existing

Synchro 11 Report
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Lanes, Volumes, Timings 4: Belfast & Tremblay

Existing
PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	209	101	339	27	71	43	119	439	23	35	601	80
Future Volume (vph)	209	101	339	27	71	43	119	439	23	35	601	80
Satd. Flow (prot)	1626	1396	0	1658	1600	0	1642	1724	0	1551	1694	0
Flt Permitted	0.676			0.155			0.085			0.368		
Satd. Flow (perm)	1152	1396	0	266	1600	0	147	1724	0	601	1694	0
Satd. Flow (RTOR)		169			30			3			8	
Lane Group Flow (vph)	232	489	0	30	127	0	132	514	0	39	757	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		2			6			3			7	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		3	8		7	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		5.0	10.0		5.0	10.0	
Minimum Split (s)	29.8	29.8		29.8	29.8		10.9	23.9		10.9	28.9	
Total Split (s)	35.0	35.0		35.0	35.0		20.0	45.0		20.0	45.0	
Total Split (%)	35.0%	35.0%		35.0%	35.0%		20.0%	45.0%		20.0%	45.0%	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	3.5	3.5		3.5	3.5		2.6	2.6		2.6	2.6	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.8	6.8		6.8	6.8		5.9	5.9		5.9	5.9	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	Max	Max		Max	Max		None	None		None	None	
Act Effct Green (s)	28.2	28.2		28.2	28.2		53.2	46.8		45.7	39.1	
Actuated g/C Ratio	0.30	0.30		0.30	0.30		0.56	0.49		0.48	0.41	
v/c Ratio	0.68	0.92		0.38	0.26		0.57	0.61		0.11	1.08	
Control Delay	42.1	46.5		44.6	21.6		25.1	22.8		10.2	87.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	42.1	46.5		44.6	21.6		25.1	22.8		10.2	87.7	
LOS	D	D		D	C		C	C		B	F	
Approach Delay		45.1			26.0			23.3			83.9	
Approach LOS		D			C			C			F	
Queue Length 50th (m)	37.3	59.9		4.4	13.2		10.6	72.8		3.0	~155.3	
Queue Length 95th (m)	#73.2	#128.1		#14.8	29.0		27.1	110.6		7.1	#239.1	
Internal Link Dist (m)		133.2			135.9			210.0			31.1	
Turn Bay Length (m)	98.0			35.0			45.0			16.5		
Base Capacity (vph)	340	532		78	494		304	846		473	699	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.68	0.92		0.38	0.26		0.43	0.61		0.08	1.08	
Intersection Summary												
Cycle Length: 100												
Actuated Cycle Length: 95.4												
Natural Cycle: 90												
Control Type: Actuated-Uncoordinated												
Maximum v/c Ratio: 1.08												

Scenario 1 500 Coventry Road 11:59 pm 08/26/2022 Existing

Synchro 11 Report
Page 7

Lanes, Volumes, Timings
4: Belfast & Tremblay

Existing
PM Peak Hour

Intersection Signal Delay: 51.0	Intersection LOS: D
Intersection Capacity Utilization 90.6%	ICU Level of Service E
Analysis Period (min) 15	
~ Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles.	
# 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.	

Splits and Phases: 4: Belfast & Tremblay



HCM 2010 TWSC
5: 500 Coventry Road & Coventry

Existing
PM Peak Hour

Intersection						
Int Delay, s/veh	0.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↰		↰	↰	↰	↰
Traffic Vol, veh/h	858	13	1	577	34	11
Future Vol, veh/h	858	13	1	577	34	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	60	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	953	14	1	641	38	12

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	1603
Stage 1	-	-	960
Stage 2	-	-	643
Critical Hdwy	-	4.12	6.42
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	-	2.218	3.318
Pot Cap-1 Maneuver	-	712	116
Stage 1	-	-	372
Stage 2	-	-	523
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	712	116
Mov Cap-2 Maneuver	-	-	249
Stage 1	-	-	372
Stage 2	-	-	522

Approach	EB	WB	NB
HCM Control Delay, s	0	0	22
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	262	-	-	712	-
HCM Lane V/C Ratio	0.191	-	-	0.002	-
HCM Control Delay (s)	22	-	-	10.1	-
HCM Lane LOS	C	-	-	B	-
HCM 95th %tile Q(veh)	0.7	-	-	0	-

Appendix D

Collision Data

Accident Date	Accident Year	Accident Time	Location	Environment Condition	Light	Traffic Control	Traffic Control Condition	Classification Of Accident	Initial Impact Type	Road Surface Condition	# Vehicles	# Motorcycles	# Bicycles	# Pedestrians
1/13/2018	2018	16:08	BELFAST RD @ COVENTRY RD (0002646)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	05 - Turning movement	04 - Slush	0	0	0	0
2/16/2018	2018	21:05	BELFAST RD @ COVENTRY RD (0002646)	01 - Clear	07 - Dark	01 - Traffic signal	0	03 - P.D. only	04 - Sideswipe	02 - Wet	0	0	0	0
6/4/2018	2018	15:07	BELFAST RD @ COVENTRY RD (0002646)	02 - Rain	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	02 - Wet	0	0	0	0
7/12/2018	2018	16:28	BELFAST RD @ COVENTRY RD (0002646)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	01 - Dry	0	0	0	0
7/24/2018	2018	19:10	BELFAST RD @ COVENTRY RD (0002646)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	02 - Angle	01 - Dry	0	0	0	0
11/8/2019	2019	13:45	BELFAST RD @ COVENTRY RD (0002646)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	04 - Sideswipe	01 - Dry	0	0	0	0
11/22/2019	2019	20:47	BELFAST RD @ COVENTRY RD (0002646)	01 - Clear	07 - Dark	01 - Traffic signal	0	02 - Non-fatal injury	03 - Rear end	01 - Dry	0	0	0	0
2/25/2020	2020	15:36	BELFAST RD @ COVENTRY RD (0002646)	01 - Clear	01 - Daylight	01 - Traffic signal	0	02 - Non-fatal injury	07 - SMV other	01 - Dry	0	0	0	1
11/23/2020	2020	17:14	BELFAST RD @ COVENTRY RD (0002646)	03 - Snow	07 - Dark	01 - Traffic signal	0	03 - P.D. only	05 - Turning movement	04 - Slush	0	0	0	0
1/8/2021	2021	10:51	BELFAST RD @ COVENTRY RD (0002646)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	04 - Sideswipe	01 - Dry	0	0	0	0
5/30/2021	2021	9:30	BELFAST RD @ COVENTRY RD (0002646)	00 - Unknown	00 - Unknown	01 - Traffic signal	0	03 - P.D. only	07 - SMV other	01 - Dry	0	0	0	0
10/13/2021	2021	17:00	BELFAST RD @ COVENTRY RD (0002646)	01 - Clear	05 - Dusk	01 - Traffic signal	0	03 - P.D. only	04 - Sideswipe	01 - Dry	0	0	0	0
9/7/2022	2022	15:49	BELFAST RD @ COVENTRY RD (0002646)	01 - Clear	01 - Daylight	01 - Traffic signal	0	02 - Non-fatal injury	02 - Angle	01 - Dry	0	0	1	0
9/10/2022	2022	17:45	BELFAST RD @ COVENTRY RD (0002646)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	01 - Dry	0	0	0	0
6/14/2018	2018	0:20	COVENTRY RD btwn BELFAST RD & ST. LAURENT SC WEST (__32A2CAA)	01 - Clear	07 - Dark	10 - No control	0	03 - P.D. only	07 - SMV other	01 - Dry	0	0	0	0
8/30/2018	2018	8:52	COVENTRY RD btwn BELFAST RD & ST. LAURENT SC WEST (__32A2CAA)	01 - Clear	01 - Daylight	10 - No control	0	03 - P.D. only	02 - Angle	01 - Dry	0	0	0	0
11/24/2018	2018	12:44	COVENTRY RD btwn BELFAST RD & ST. LAURENT SC WEST (__32A2CAA)	01 - Clear	01 - Daylight	10 - No control	0	02 - Non-fatal injury	05 - Turning movement	01 - Dry	0	0	0	0
6/6/2019	2019	8:18	COVENTRY RD btwn BELFAST RD & ST. LAURENT SC WEST (__32A2CAA)	01 - Clear	01 - Daylight	10 - No control	0	02 - Non-fatal injury	03 - Rear end	01 - Dry	0	0	0	0
11/10/2019	2019	11:39	COVENTRY RD btwn BELFAST RD & ST. LAURENT SC WEST (__32A2CAA)	01 - Clear	01 - Daylight	10 - No control	0	03 - P.D. only	04 - Sideswipe	01 - Dry	0	0	0	0
12/15/2020	2020	15:36	COVENTRY RD btwn BELFAST RD & ST. LAURENT SC WEST (__32A2CAA)	01 - Clear	01 - Daylight	10 - No control	0	03 - P.D. only	05 - Turning movement	01 - Dry	0	0	0	0
11/21/2018	2018	9:26	COVENTRY RD btwn ST. LAURENT SC EAST & ST. LAURENT SC WEST (__32A2CAB)	01 - Clear	01 - Daylight	10 - No control	0	03 - P.D. only	04 - Sideswipe	03 - Loose snow	0	0	0	0
1/16/2019	2019	20:03	COVENTRY RD btwn ST. LAURENT SC EAST & ST. LAURENT SC WEST (__32A2CAB)	01 - Clear	07 - Dark	10 - No control	0	03 - P.D. only	04 - Sideswipe	01 - Dry	0	0	0	0
9/26/2020	2020	12:00	COVENTRY RD btwn ST. LAURENT SC EAST & ST. LAURENT SC WEST (__32A2CAB)	01 - Clear	01 - Daylight	10 - No control	0	03 - P.D. only	04 - Sideswipe	01 - Dry	0	0	0	0
10/25/2020	2020	22:41	COVENTRY RD btwn ST. LAURENT SC EAST & ST. LAURENT SC WEST (__32A2CAB)	01 - Clear	07 - Dark	10 - No control	0	03 - P.D. only	07 - SMV other	01 - Dry	0	0	0	0
4/30/2022	2022	14:53	COVENTRY RD btwn ST. LAURENT SC EAST & ST. LAURENT SC WEST (__32A2CAB)	01 - Clear	01 - Daylight	10 - No control	0	02 - Non-fatal injury	07 - SMV other	01 - Dry	0	1	0	0
12/26/2018	2018	11:08	COVENTRY RD @ ST. LAURENT SC WEST (0008973)	01 - Clear	01 - Daylight	01 - Traffic signal	0	02 - Non-fatal injury	02 - Angle	01 - Dry	0	0	0	0
6/20/2019	2019	7:25	COVENTRY RD @ ST. LAURENT SC WEST (0008973)	01 - Clear	01 - Daylight	01 - Traffic signal	0	02 - Non-fatal injury	05 - Turning movement	01 - Dry	0	0	1	0
2/14/2021	2021	12:21	COVENTRY RD @ ST. LAURENT SC WEST (0008973)	03 - Snow	01 - Daylight	01 - Traffic signal	0	02 - Non-fatal injury	02 - Angle	03 - Loose snow	0	0	0	0
5/20/2021	2021	17:06	COVENTRY RD @ ST. LAURENT SC WEST (0008973)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	04 - Sideswipe	01 - Dry	0	0	0	0
12/13/2018	2018	9:08	COVENTRY RD @ 230 W OF ST. LAURENT BLVD/ST. LA (0008535)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	04 - Sideswipe	01 - Dry	0	0	0	0
8/26/2019	2019	12:05	COVENTRY RD @ 230 W OF ST. LAURENT BLVD/ST. LA (0008535)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	02 - Angle	01 - Dry	0	0	0	0
9/25/2019	2019	15:30	COVENTRY RD @ 230 W OF ST. LAURENT BLVD/ST. LA (0008535)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	04 - Sideswipe	01 - Dry	0	0	0	0
10/5/2022	2022	17:31	COVENTRY RD @ 230 W OF ST. LAURENT BLVD/ST. LA (0008535)	01 - Clear	01 - Daylight	01 - Traffic signal	0	02 - Non-fatal injury	04 - Sideswipe	01 - Dry	0	1	0	0
7/27/2018	2018	17:30	COVENTRY RD btwn ST. LAURENT BLVD & ST. LAURENT SC WEST (__32A2CAC)	01 - Clear	01 - Daylight	10 - No control	0	03 - P.D. only	04 - Sideswipe	01 - Dry	0	0	0	0
5/23/2019	2019	18:00	COVENTRY RD btwn ST. LAURENT BLVD & ST. LAURENT SC WEST (__32A2CAC)	02 - Rain	01 - Daylight	10 - No control	0	03 - P.D. only	04 - Sideswipe	02 - Wet	0	0	0	0
12/7/2019	2019	18:50	COVENTRY RD btwn ST. LAURENT BLVD & ST. LAURENT SC WEST (__32A2CAC)	01 - Clear	07 - Dark	10 - No control	0	03 - P.D. only	04 - Sideswipe	01 - Dry	0	0	0	0
3/6/2021	2021	14:01	COVENTRY RD btwn ST. LAURENT BLVD & ST. LAURENT SC WEST (__32A2CAC)	01 - Clear	01 - Daylight	10 - No control	0	03 - P.D. only	03 - Rear end	01 - Dry	0	0	0	0

Appendix E

TDM 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: <i>Residential developments</i>		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 (<i>see Official Plan policy 4.3.3</i>)	☒
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 (<i>see Official Plan policy 4.3.12</i>)	☒

TDM-supportive design & infrastructure measures: <i>Residential developments</i>		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 (<i>see Official Plan policy 4.3.10</i>)	☒
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 (<i>see Official Plan policy 4.3.10</i>)	☒
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 (<i>see Official Plan policy 4.3.11</i>)	☒
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: <i>Residential developments</i>		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 (<i>see Official Plan policy 4.3.6</i>)	☒
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 (<i>see Zoning By-law Section 111</i>)	☒
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 (<i>see Zoning By-law Section 111</i>)	☒
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 (<i>see Zoning By-law Section 111</i>)	☒
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: <i>Residential developments</i>		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 (<i>see Zoning By-law Section 94</i>)	☐
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 (<i>see Zoning By-law Section 104</i>)	☐
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 (<i>see Zoning By-law Section 111</i>)	☐
6.2 Separate long-term & short-term parking areas		
BETTER	6.2.1 Provide separate areas for short-term and long-term parking (using signage or physical barriers) to permit access controls and simplify enforcement (i.e. to discourage residents from parking in visitor spaces, and vice versa)	☐

TDM Measures Checklist:

Residential Developments (multi-family, condominium or subdivision)

Legend	
BASIC	The measure is generally feasible and effective, and in most cases would benefit the development and its users
BETTER	The measure could maximize support for users of sustainable modes, and optimize development performance
★	The measure is one of the most dependably effective tools to encourage the use of sustainable modes

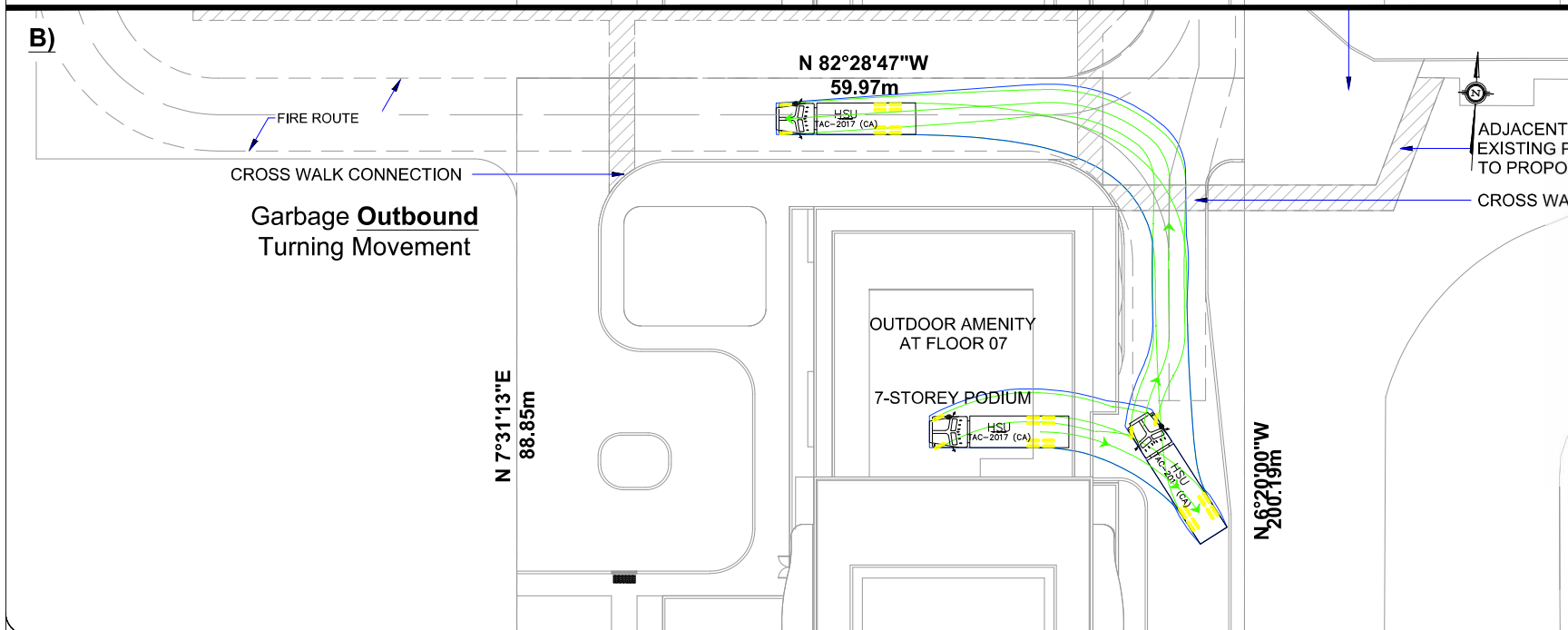
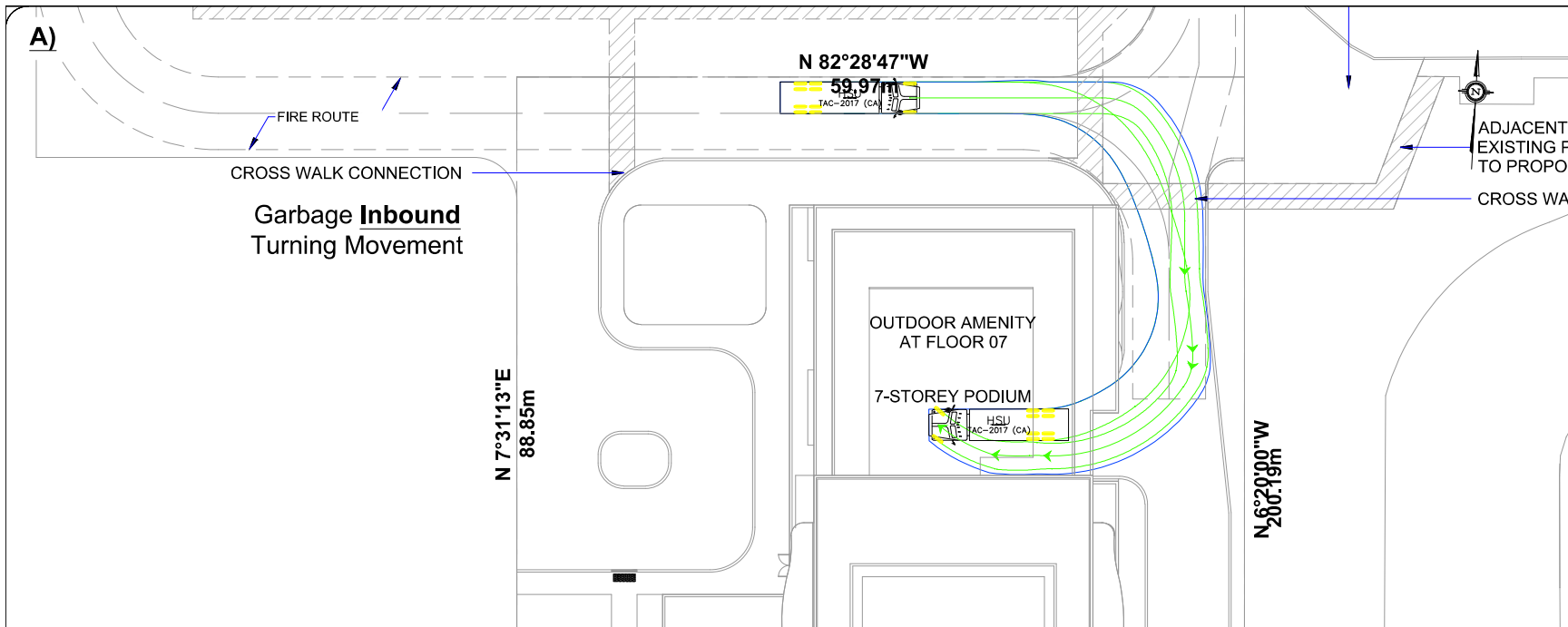
TDM measures: Residential developments		Check if proposed & add descriptions
1. TDM PROGRAM MANAGEMENT		
1.1 Program coordinator		
BASIC ★	1.1.1 Designate an internal coordinator, or contract with an external coordinator	☐
1.2 Travel surveys		
BETTER	1.2.1 Conduct periodic surveys to identify travel-related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

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

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

Appendix F

Turning Templates



Notes:

Key Plan:

PHASE 1 PHASE 2

HWY

11500

800 8400

HSU

mm

Width : 2600

Track : 2600

Lock to Lock Time : 6.0

Steering Angle : 40.0

03	Updated Site Plan	AN	2024-08-26
REV	DESCRIPTION	BY	DATE
STATUS:			

CGH Transportation

6 Plaza Court
Ottawa, ON
K2H 7W1
(343) 999-9117

CLIENT: Morguard Corporation

ARCHITECT:

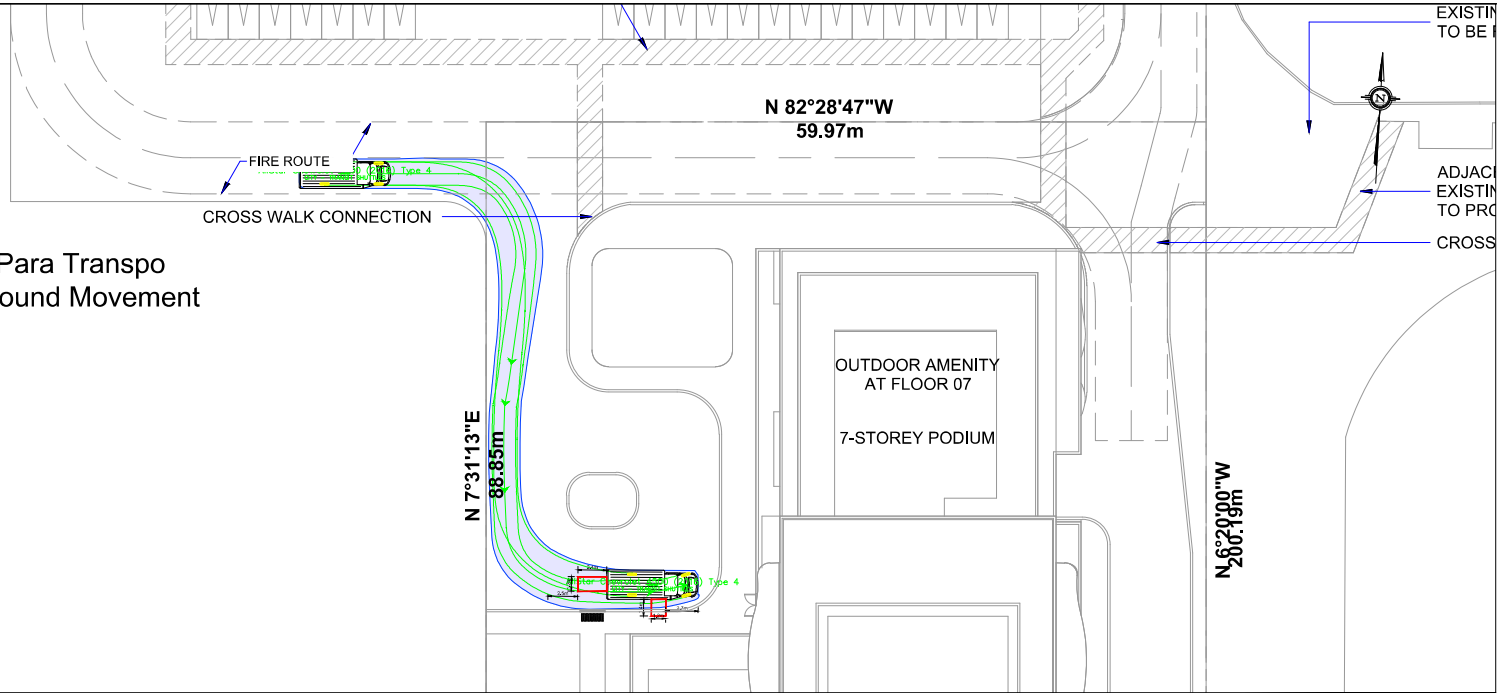
SITE: 500 Coventry

TITLE: Turning Movement Analysis
Garbage Turning Movements

SCALE AT A3:	DATE:	DRAWN:	CHECKED:
NTS	2024-08-26	AN	AH
PROJECT NO:	DRAWING NO:	REVISION:	
2022-152	001	03	

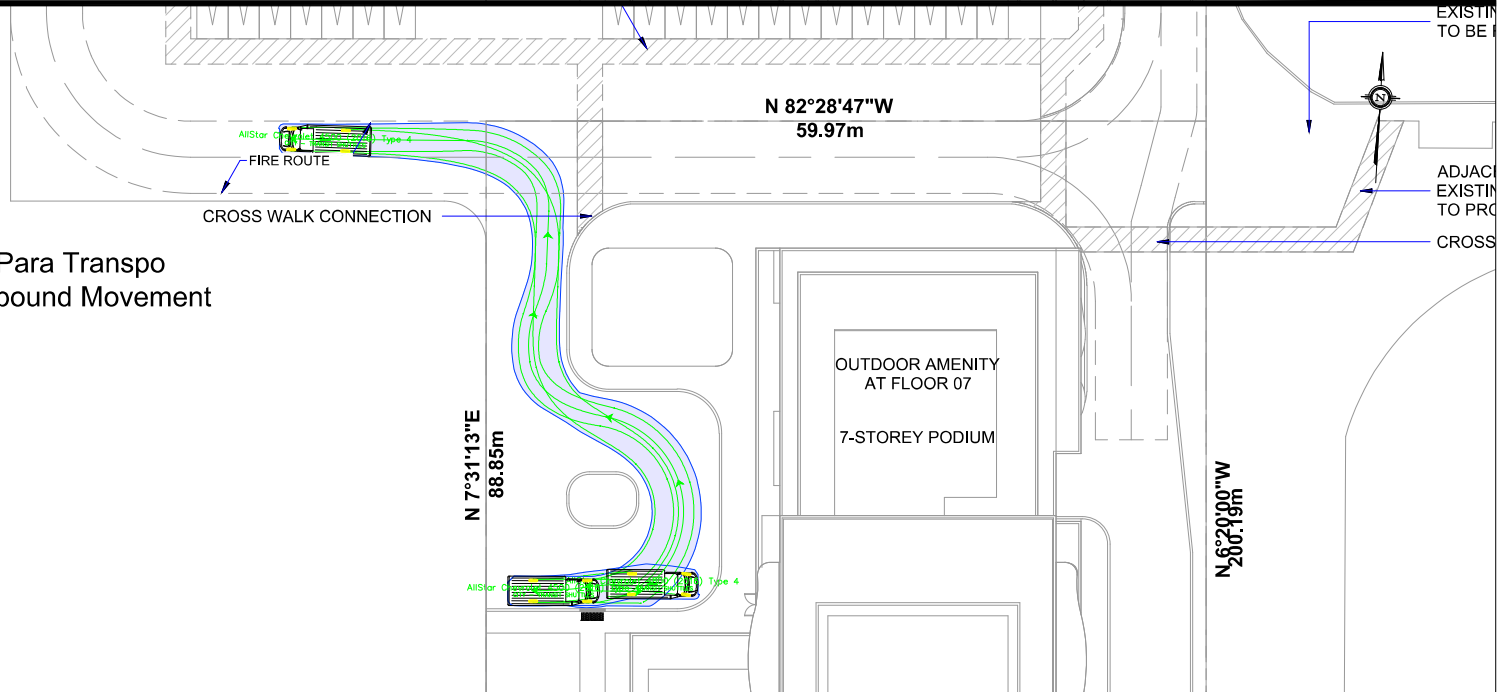
A)

Para Transpo
Inbound Movement



B)

Para Transpo
Outbound Movement



Notes:

Key Plan:

PHASE 2 PHASE 1

HWY

AllStar Chevrolet 4500 (2016) Type 4

mm

Width : 2438

Track : 1957

Lock to Lock Time : 6.0

Steering Angle : 34.2

03	Updated Site Plan	AN	2024-08-26
REV:	DESCRIPTION:	BY:	DATE:
STATUS:			

CGH Transportation

6 Plaza Court
Ottawa, ON
K2H 7W1
(343) 999-9117

CLIENT: Morguard Corporation

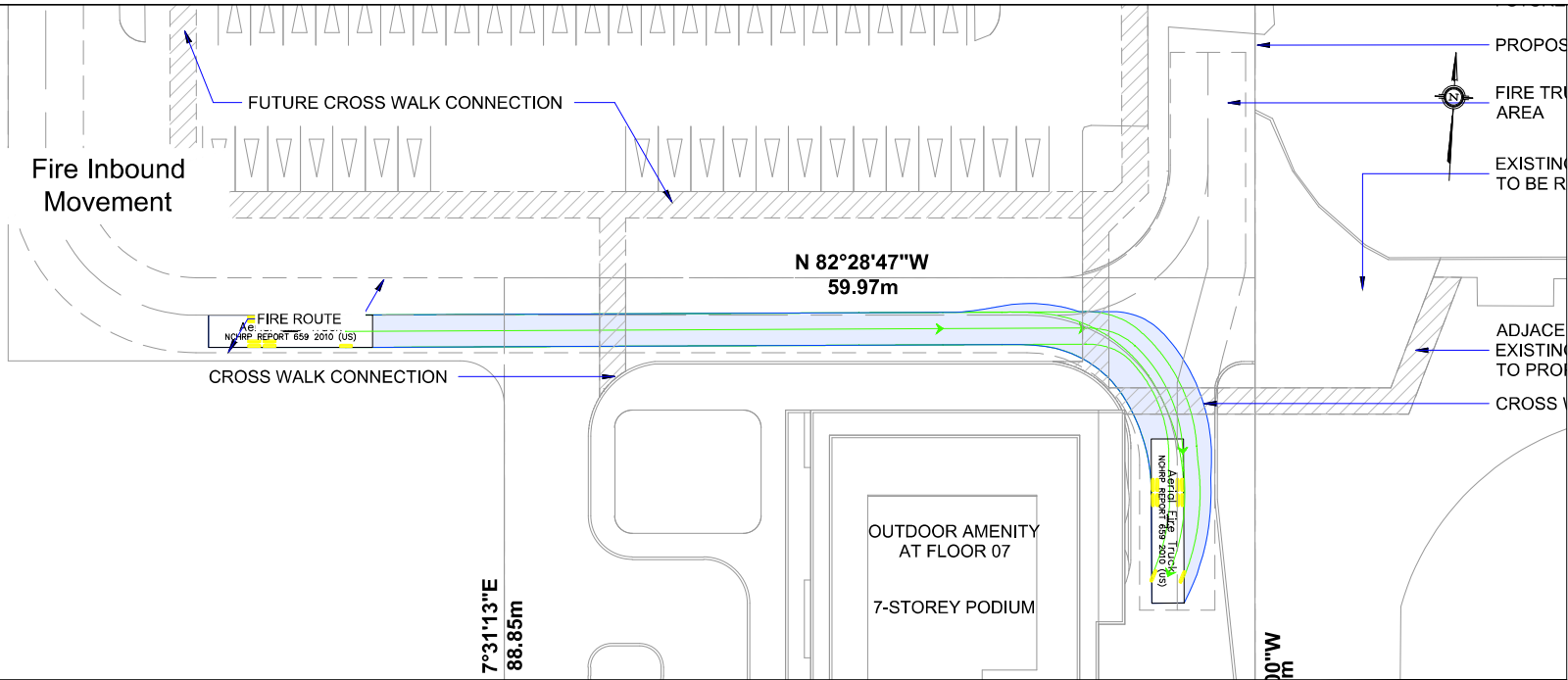
ARCHITECT:

SITE: 500 Coventry

TITLE: Turning Movement Analysis
Para Transp Movements

SCALE AT A3:	DATE:	DRAWN:	CHECKED:
NTS	2024-08-26	AN	AH
PROJECT NO:	DRAWING NO:	REVISION:	
2022-152	002	03	

A)



Notes:

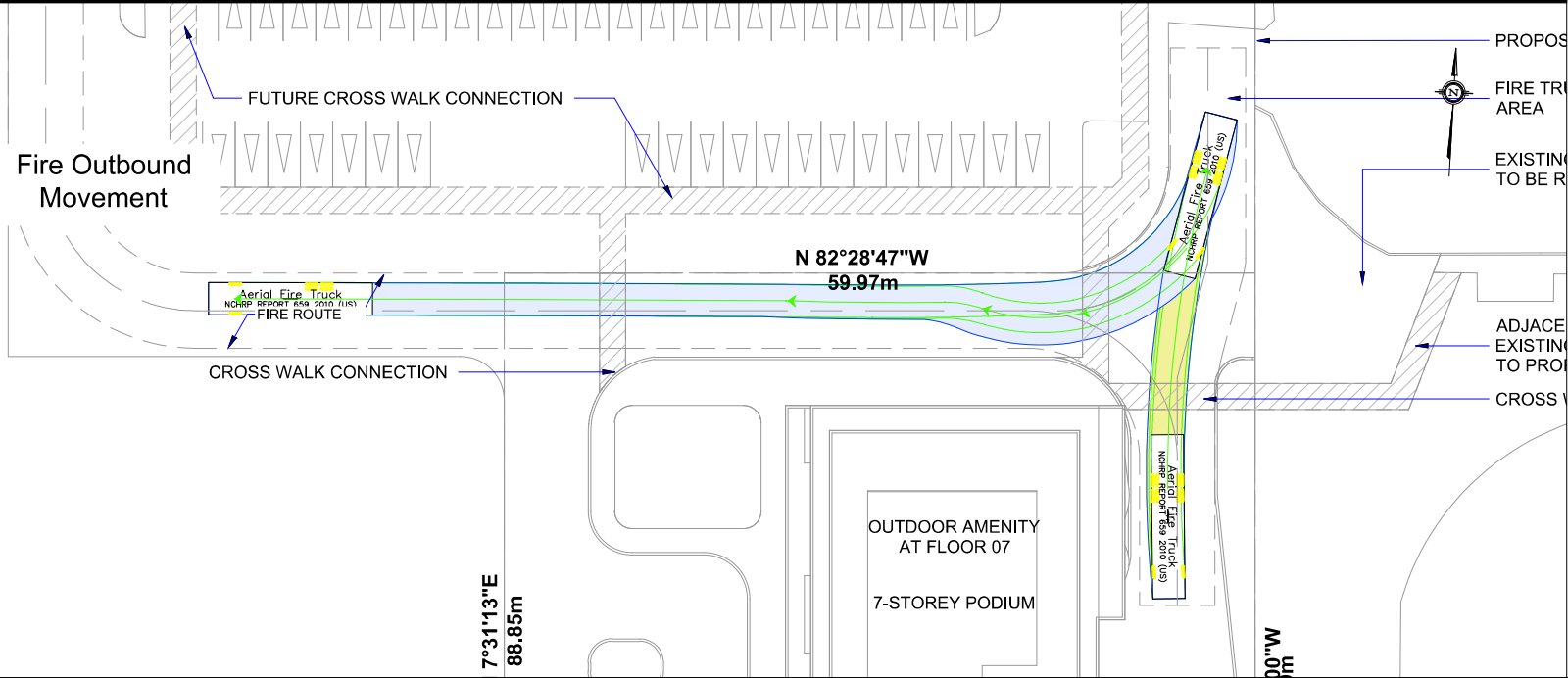
Key Plan:

PHASE 1: PHASE 1

Aerial Fire Truck

	mm
Width	: 2591
Track	: 2591
Lock to Lock Time	: 6.0
Steering Angle	: 33.3

B)



03	Updated Site Plan	AN	2024-08-26
REV.	DESCRIPTION:	BY:	DATE:
STATUS:			



CGH Transportation
6 Plaza Court
Ottawa, ON
K2H 7W1
(343) 999-9117

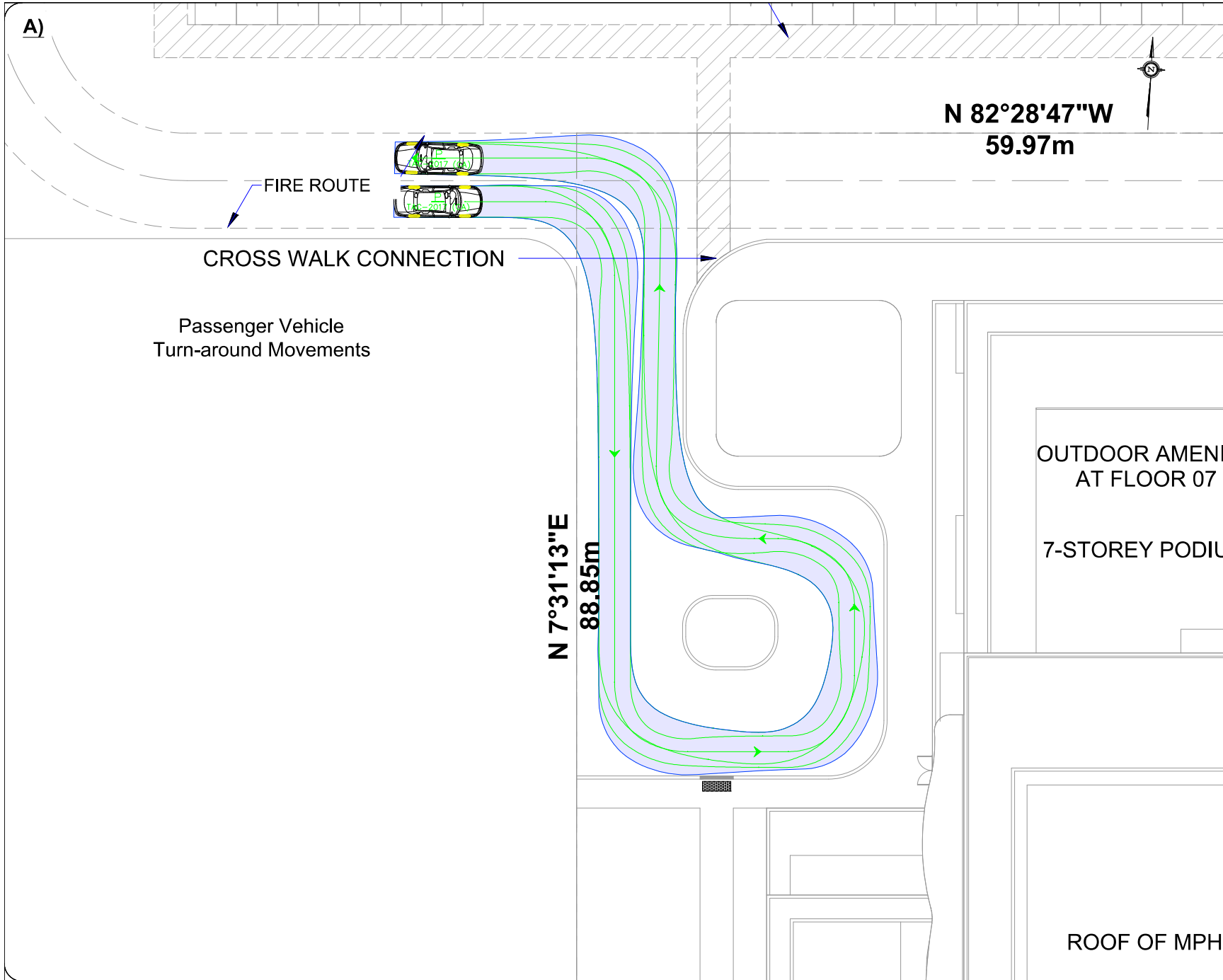
CLIENT: Morguard Corporation

ARCHITECT:

SITE: 500 Coventry

TITLE: Turning Movement Analysis
Fire Turning Movements

SCALE AT A3:	DATE:	DRAWN:	CHECKED:
NTS	2024-08-26	AN	AH
PROJECT NO:	DRAWING NO:	REVISION:	
2022-152	003	03	



Notes:

Key Plan:

HWY

5600

1100 3200

P

Width : 2000 mm
Track : 2000 mm
Lock to Lock Time : 6.0
Steering Angle : 35.9

03	Updated Site Plan	AN	2024-08-26
REV.	DESCRIPTION:	BY:	DATE:
STATUS:			

CGH Transportation
6 Plaza Court
Ottawa, ON
K2H 7W1
(343) 999-9117

CLIENT: Morguard Corporation

ARCHITECT:

SITE: 500 Coventry

TITLE: Turning Movement Analysis
Turnaround Movements

SCALE AT A3:	DATE:	DRAWN:	CHECKED:
NTS	2024-08-26	AN	AH
PROJECT NO:	DRAWING NO:	REVISION:	
2022-152	004	03	

Appendix G

MMLOS Worksheets

Multi-Modal Level of Service - Segments Form

Consultant	CGH Transportation Inc.	Project	2022-152
Scenario	Existing/Future Within Study Horizons	Date	8/23/2024
Comments			

SEGMENTS			Coventry Ex/Fu	Section 2	Section 3
Pedestrian	Sidewalk Width	-	≥ 2 m		
	Boulevard Width		> 2 m		
	Avg Daily Curb Lane Traffic Volume		> 3000		
	Operating Speed		> 60 km/h		
	On-Street Parking		no		
	Exposure to Traffic PLoS		D	-	-
	Effective Sidewalk Width				
	Pedestrian Volume				
	Crowding PLoS		-	-	-
	Level of Service		-	-	-
Bicycle	Type of Cycling Facility	C	Curbside Bike Lane		
	Number of Travel Lanes		≤ 1 each direction		
	Operating Speed		>50 to 70 km/h		
	# of Lanes & Operating Speed LoS		C	-	-
	Bike Lane (+ Parking Lane) Width		≥ 1.8 m		
	Bike Lane Width LoS		A	-	-
	Bike Lane Blockages		Rare		
	Blockage LoS		A	-	-
	Median Refuge Width (no median = < 1.8 m)		< 1.8 m refuge		
	No. of Lanes at Unsignalized Crossing		≤ 3 lanes		
	Sidestreet Operating Speed		≤ 40 km/h		
	Unsignalized Crossing - Lowest LoS		A	-	-
	Level of Service		C	-	-
Transit	Facility Type	-			
	Friction or Ratio Transit:Posted Speed				
	Level of Service		-	-	-
Truck	Truck Lane Width	C	≤ 3.5 m		
	Travel Lanes per Direction		1		
	Level of Service		C	-	-

Appendix H

TRANS Model Plots

TRANS Regional Model

Version 2.15 - Assigned June 16, 2020

AM Peak Hour Total Traffic Volume

Coventry Road

2011 Model - Basecase

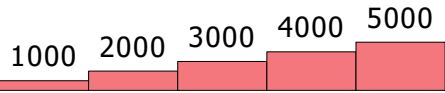
N/A

User Initials: KN
Plot Prepared: Aug 18, 2022
EMME Scenario: 21713



Legend

AM Peak Hour Total Traffic Volume



The TRANS model is continuously refined & maintained, and all information is provided in good faith. However, model outputs are provided "as is", and no warranty or guarantee is provided as to the accuracy, reliability or reasonableness of the results. In using this data, you agree to accept any and all risks arising from any incorrect, incomplete, or misleading information.

Recipients are required to use caution and professional judgement in using and interpreting model outputs. In particular, caution should be used when focusing on a geographically limited area (such as a single road or intersection), as the model is primarily designed to simulate regional-scale phenomena and has been calibrated at a regional level.

As general good practice, it is recommended that the user confirm the network coding within the area of interest, and compare base year forecasts against traffic count data to assess the extent to which the model may be over- or under-estimating the travel demand.

TRANS Regional Model

Version 2.15 - Assigned June 16, 2020

AM Peak Hour Total Traffic Volume

Coventry Road

2031 Model - Basecase

N/A

User Initials: KN

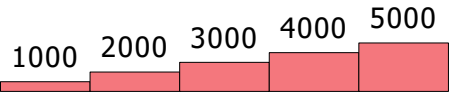
Plot Prepared: Aug 18, 2022

EMME Scenario: 21715

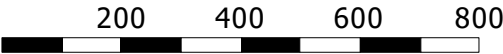


Legend

AM Peak Hour Total Traffic Volume



Distance (m)



The TRANS model is continuously refined & maintained, and all information is provided in good faith. However, model outputs are provided "as is", and no warranty or guarantee is provided as to the accuracy, reliability or reasonableness of the results. In using this data, you agree to accept any and all risks arising from any incorrect, incomplete, or misleading information.

Recipients are required to use caution and professional judgement in using and interpreting model outputs. In particular, caution should be used when focusing on a geographically limited area (such as a single road or intersection), as the model is primarily designed to simulate regional-scale phenomena and has been calibrated at a regional level.

As a general good practice, it is recommended that the user confirm the network coding within the area of interest, and compare base year forecasts against traffic count data to assess the extent to which the model may be over- or under-estimating the travel demand.

Appendix I

Background Development Volumes

Figure 6: Net Assignment of Trips with Redevelopment

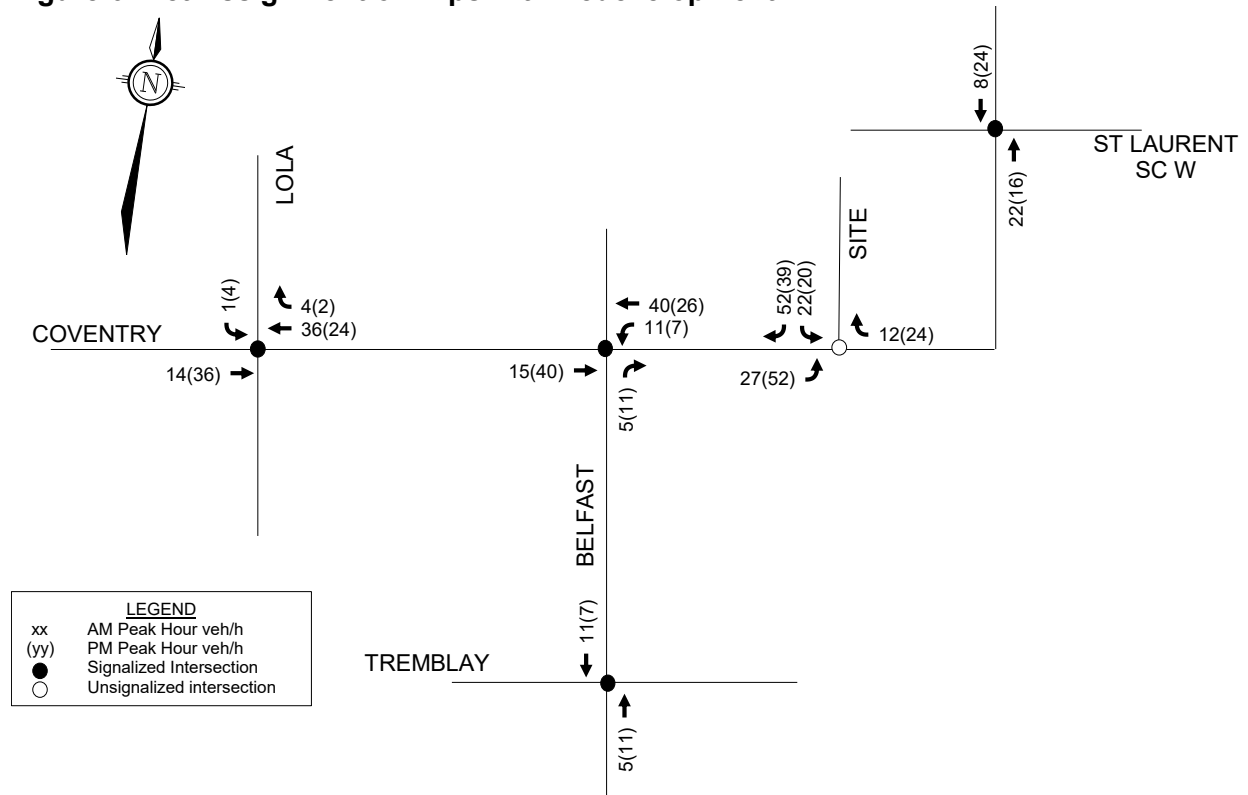


Figure 14: New Site Generation Auto Volumes

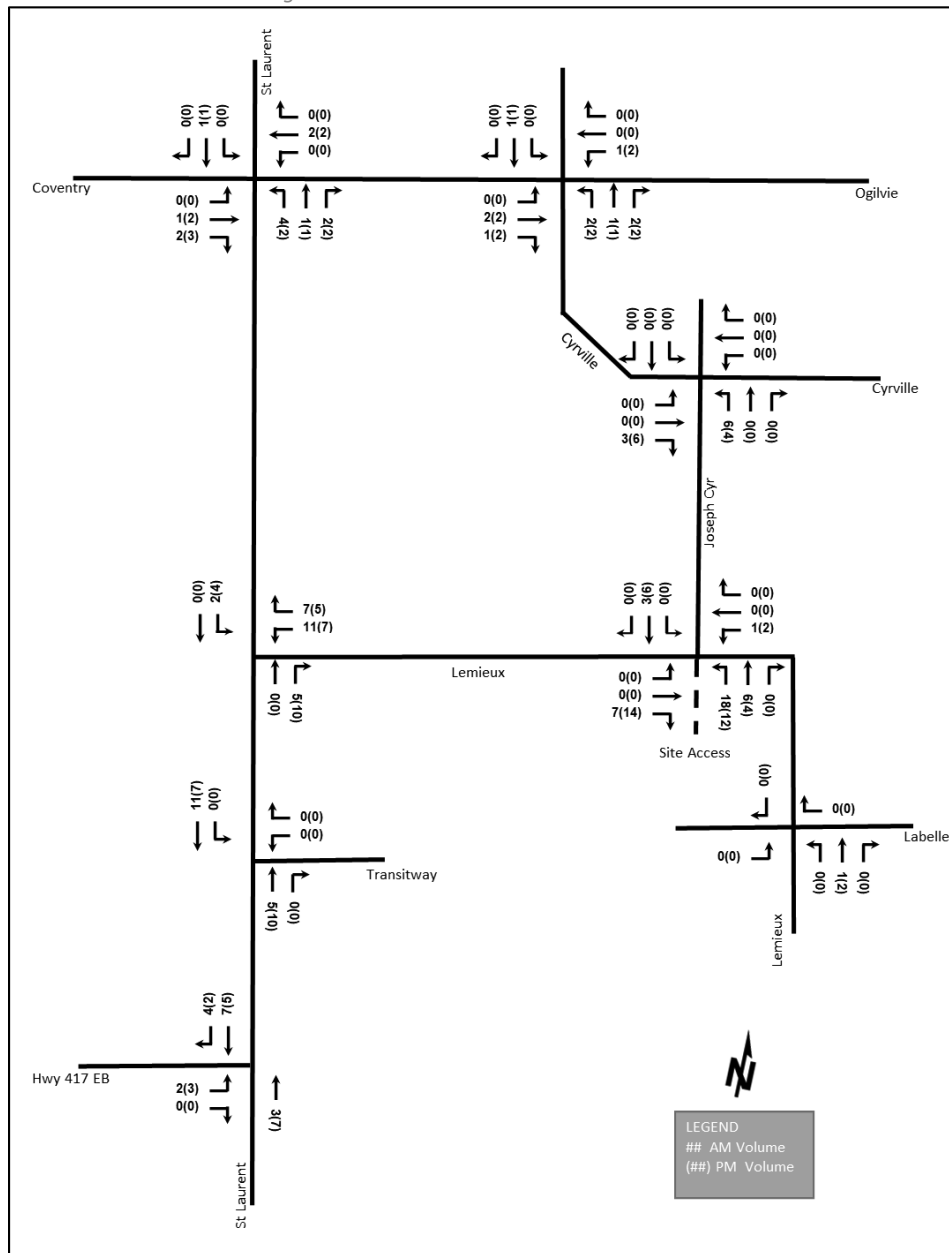
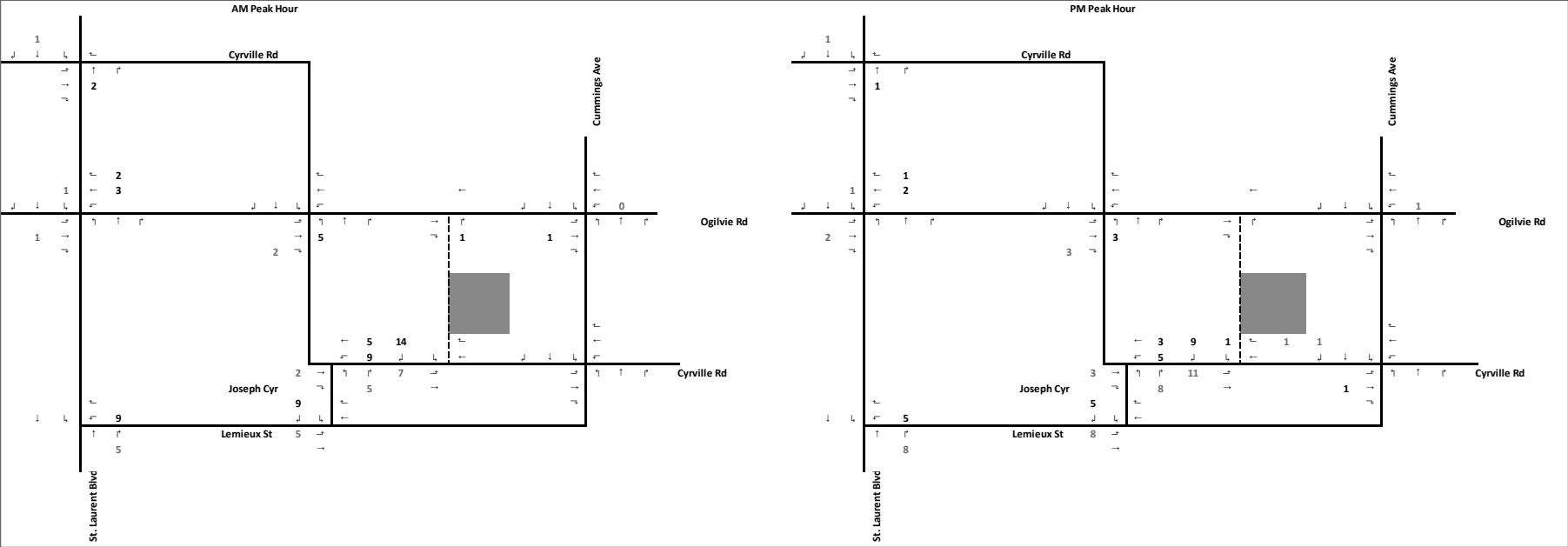
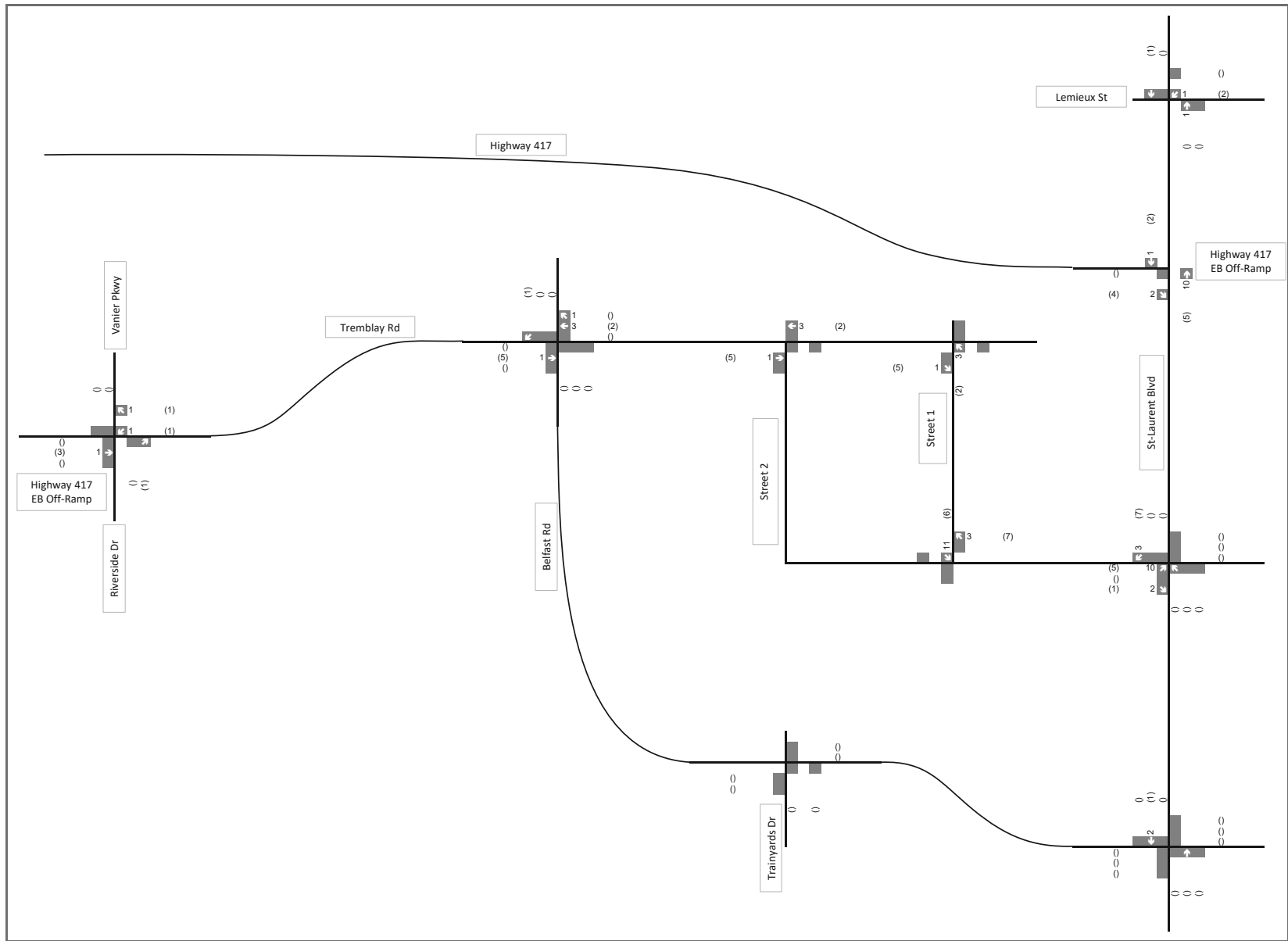
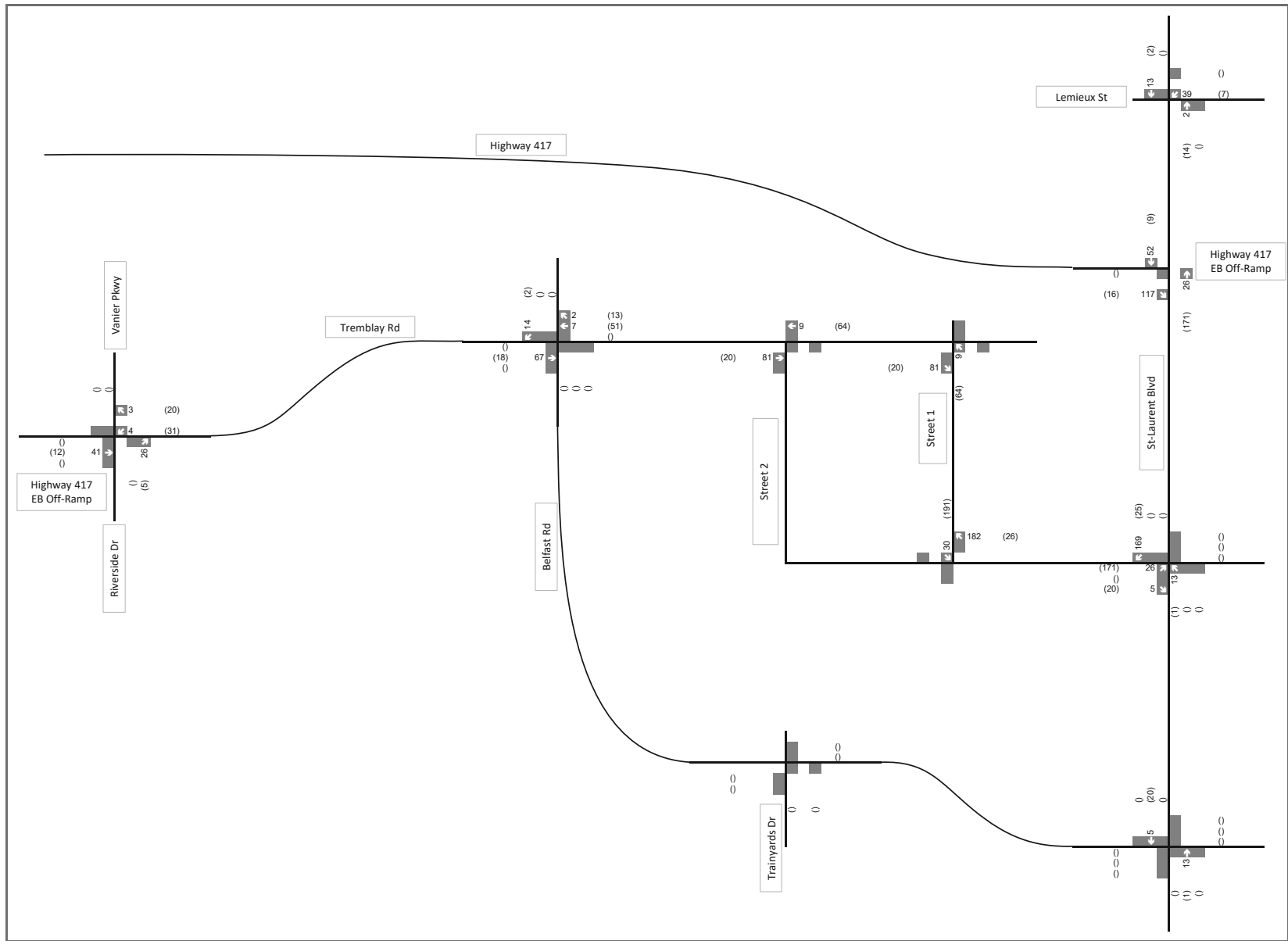


Figure 10 - Site Traffic Assignment

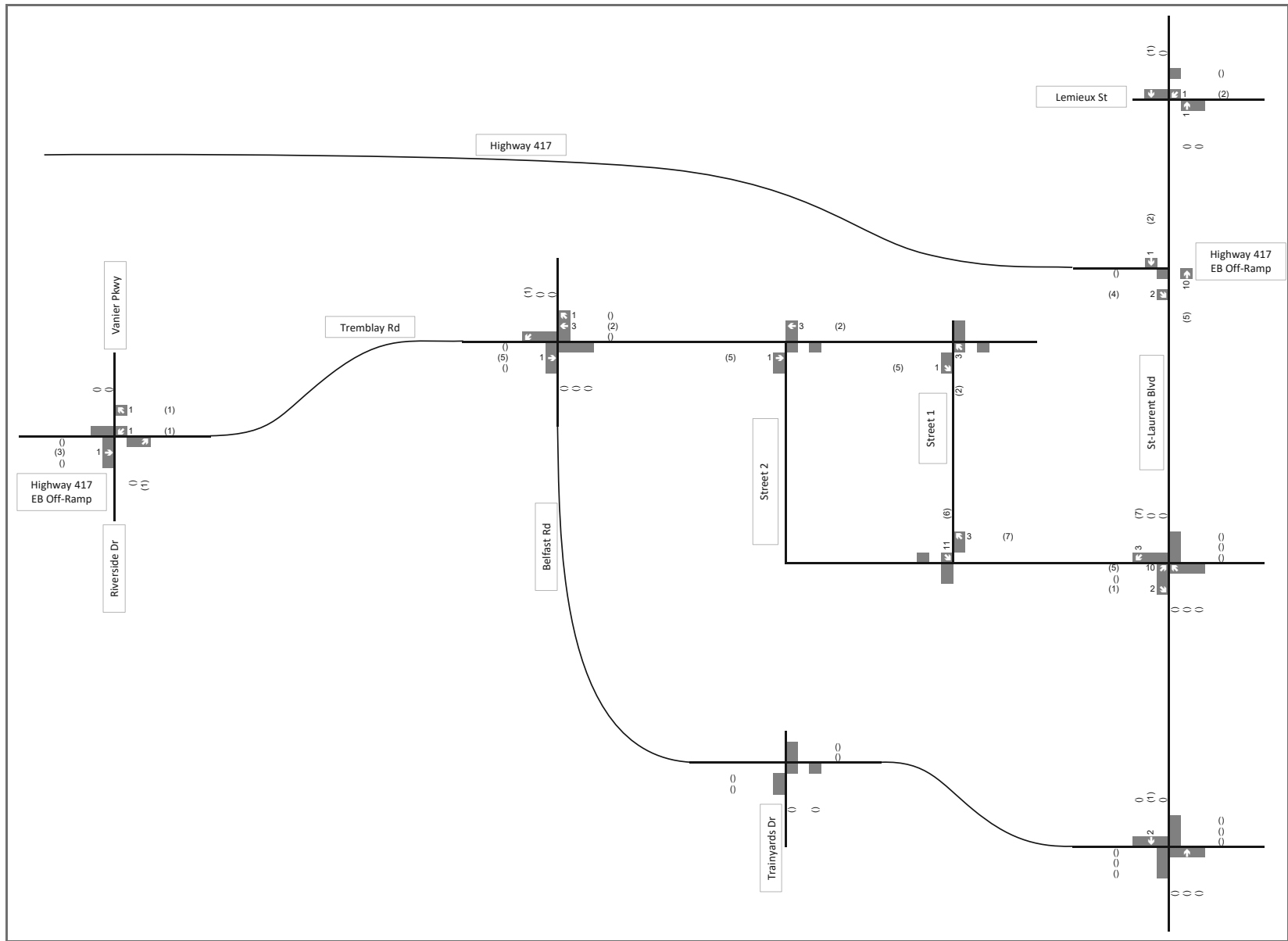






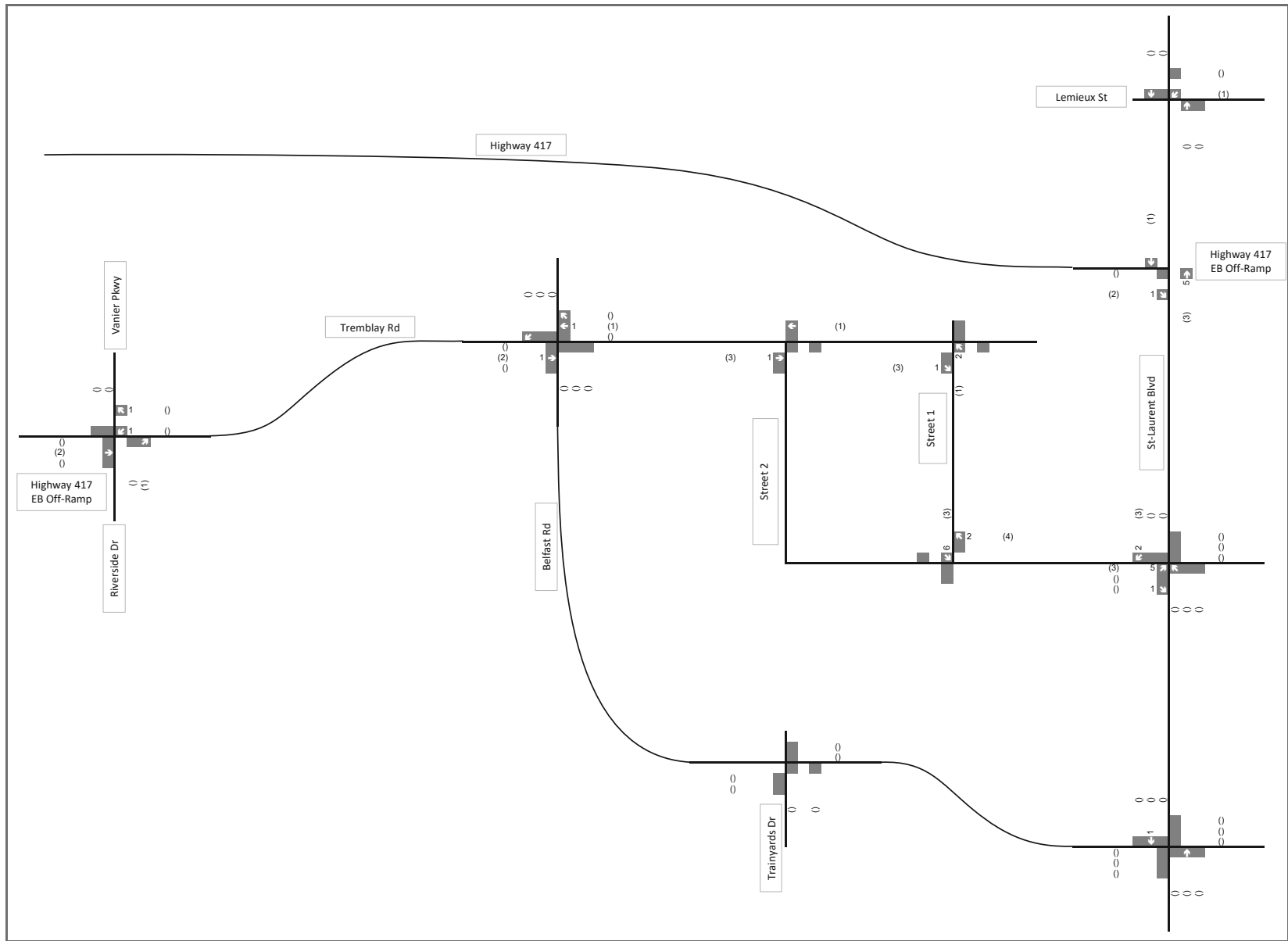
Legend
 xx A.M. Peak Hour Traffic Volumes
 (xx) P.M. Peak Hour Traffic Volumes

Figure 3-3
 2025 Office Trips
 Generated



Legend
 xx A.M. Peak Hour Traffic Volumes
 (xx) P.M. Peak Hour Traffic Volumes

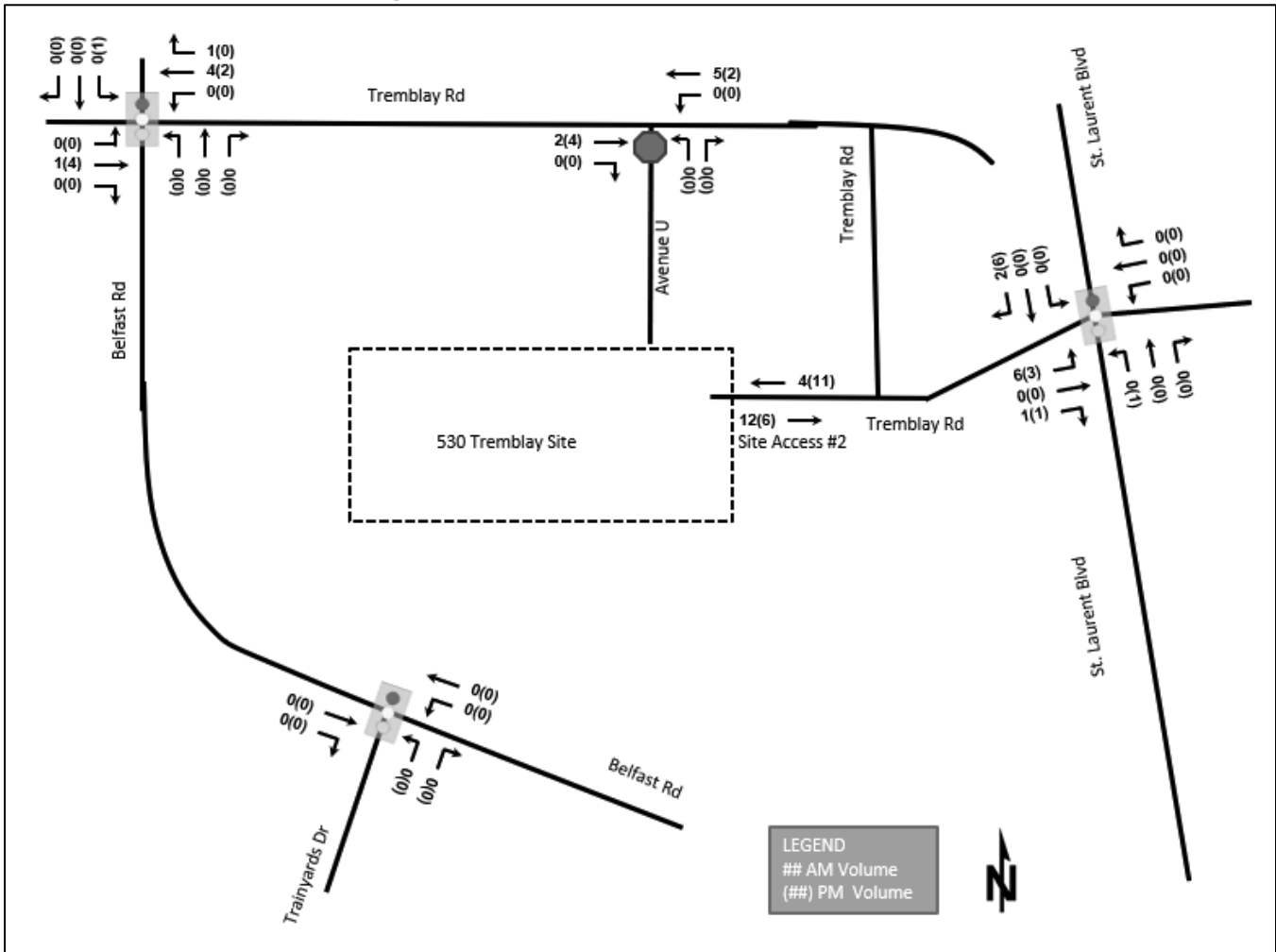
Figure 3-4
 2029 Residential Trip Generation



Legend
 xx A.M. Peak Hour Traffic Volumes
 (xx) P.M. Peak Hour Traffic Volumes

Figure 3-5
 2033 Residential
 Trips Generated

Figure 20: New Site Generation Auto Volumes Scenario 2



Trip Distribution

The projected distribution of site-generated traffic was derived based on existing travel patterns, the site's connections to/from the surrounding road network, and our local area knowledge. (e.g. the location and proximity of other area shopping, communities, recreational opportunities, etc.). For analysis purposes, the following approximate distribution of projected site-generated traffic was assumed:

70%	to/from the west via HWY 417 (via Tremblay);
10%	to/from the east via Tremblay Road;
10%	to/from the north via Belfast Road; and
+ 10%	to/from the south via Belfast Road.
<u>100%</u>	

Trip Assignment

Based on the above assumed distribution, projected 'new' site-generated traffic was assigned to the study area network and is depicted in the following **Figure 12** and **Figure 14** for phase 1 and phase 2, respectively. Similarly, projected 'pass-by' site-generated traffic, which represents existing traffic temporarily diverted to/from the subject site, is depicted in the following **Figure 13** and **Figure 15** for phase 1 and phase 2, respectively.

It should be noted that Avenue J is a private driveway owned by PIPSC (Professional Institute of the Public Service Canada) and there are currently no plans for this to be a connection to/from the subject development.

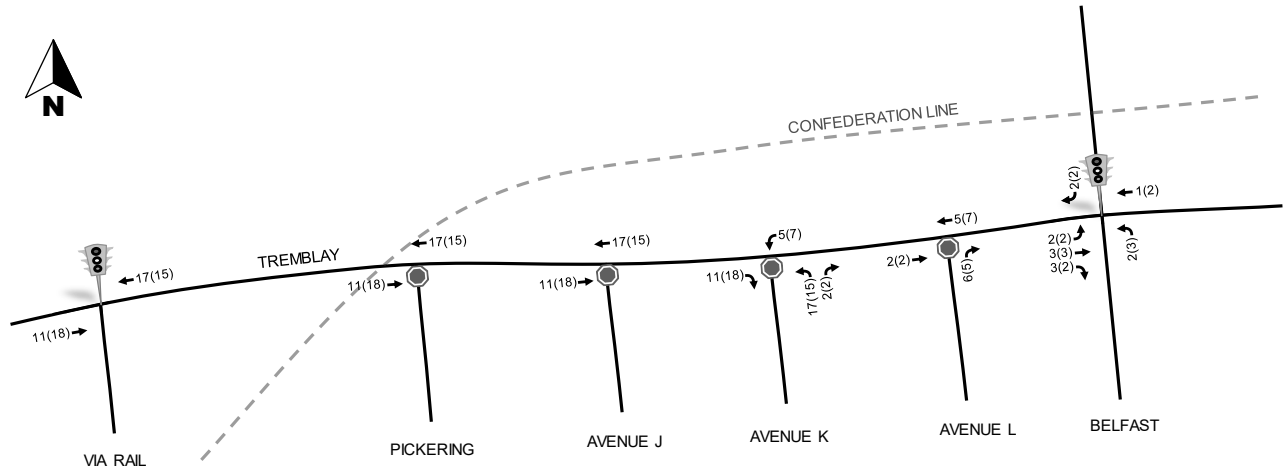


Figure 13: 'New' Projected Site-Generated Traffic - Phase 1

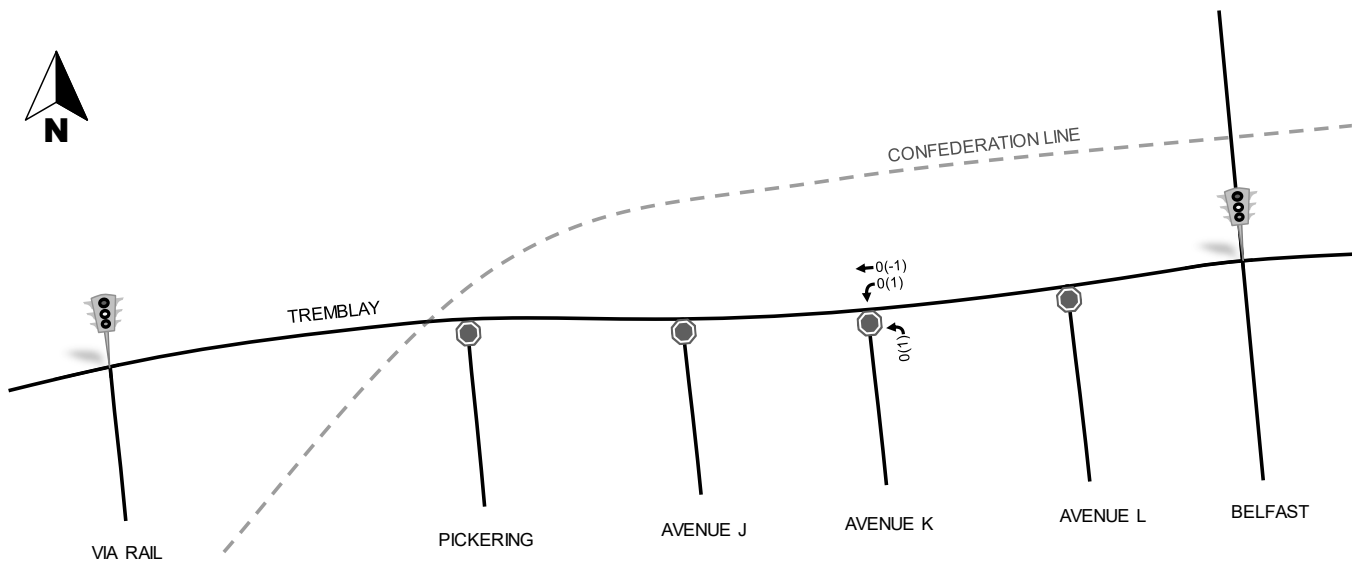


Figure 14: 'Pass-by' Projected Site-Generated Traffic - Phase 1

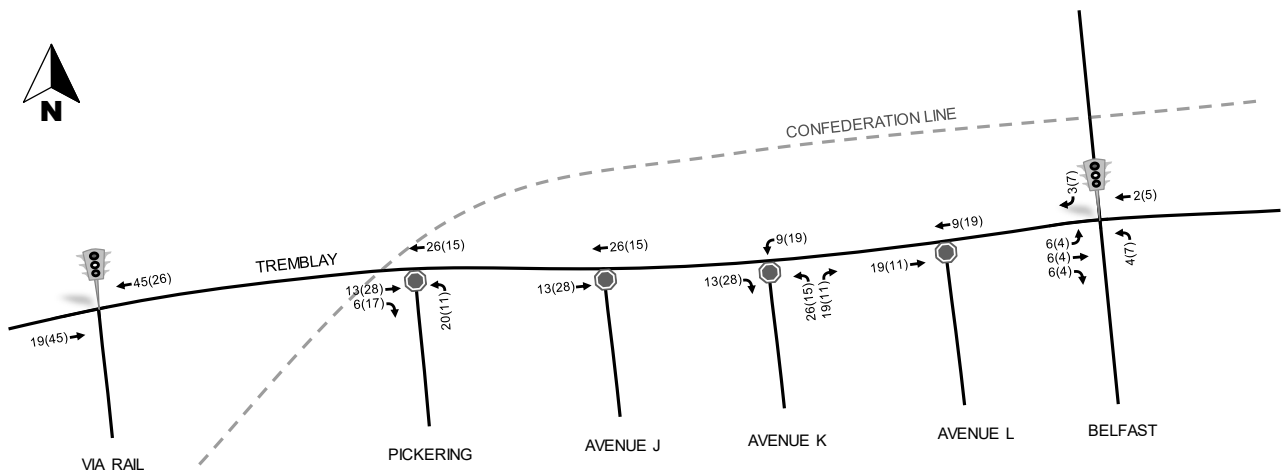


Figure 15: 'New' Projected Site-Generated Traffic - Phase 2

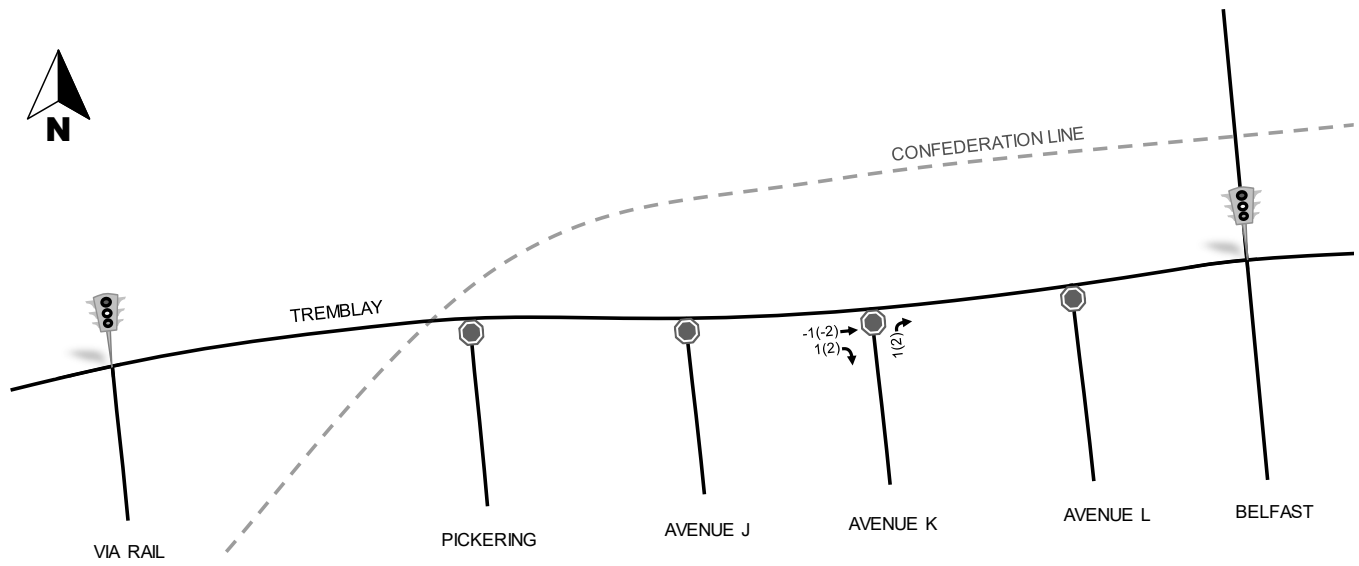


Figure 16: 'Pass-by' Projected Site-Generated Traffic - Phase 2

Given a 0% growth rate for general background traffic and given all area development is assumed to be fully built-out by the horizon year 2025, projected background traffic volumes for the horizon years 2030 and 2035 will be the same as the background traffic volumes for the 2025 horizon year. Therefore, the following **Figure 17** depicts projected background traffic volumes for the 2025 horizon year and beyond.

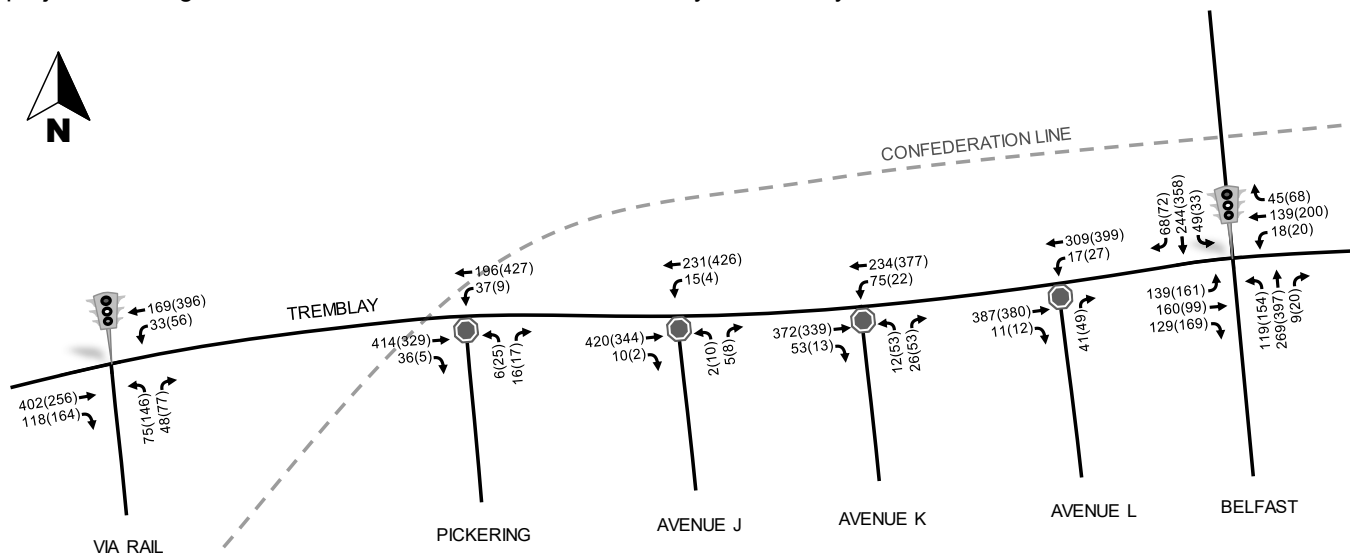


Figure 17: Background Traffic Volumes (2025, 2030, 2035)

5.4 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. Table 14 summarizes the proportional assignment to the study area roadways, Figure 18 and Figure 19 illustrate the new site-generated volumes and pass-by volumes, respectively.

Table 14: Trip Assignment

To/From	Via
North	5% Vanier Parkway (N)
	5% Lola Street (N)
	15% St. Laurent Boulevard (N)
South	5% Belfast Road (S)
	5% Riverside Drive (S)
	10% St. Laurent Boulevard (S)
East	15% to/from Highway 417/174 (E) 10% Ogilvie Road (E)
West	25% to/from Highway 417 (W) 5% Vanier Parkway (N)
Total	100%

Figure 18: New Site-Generated Auto Volumes

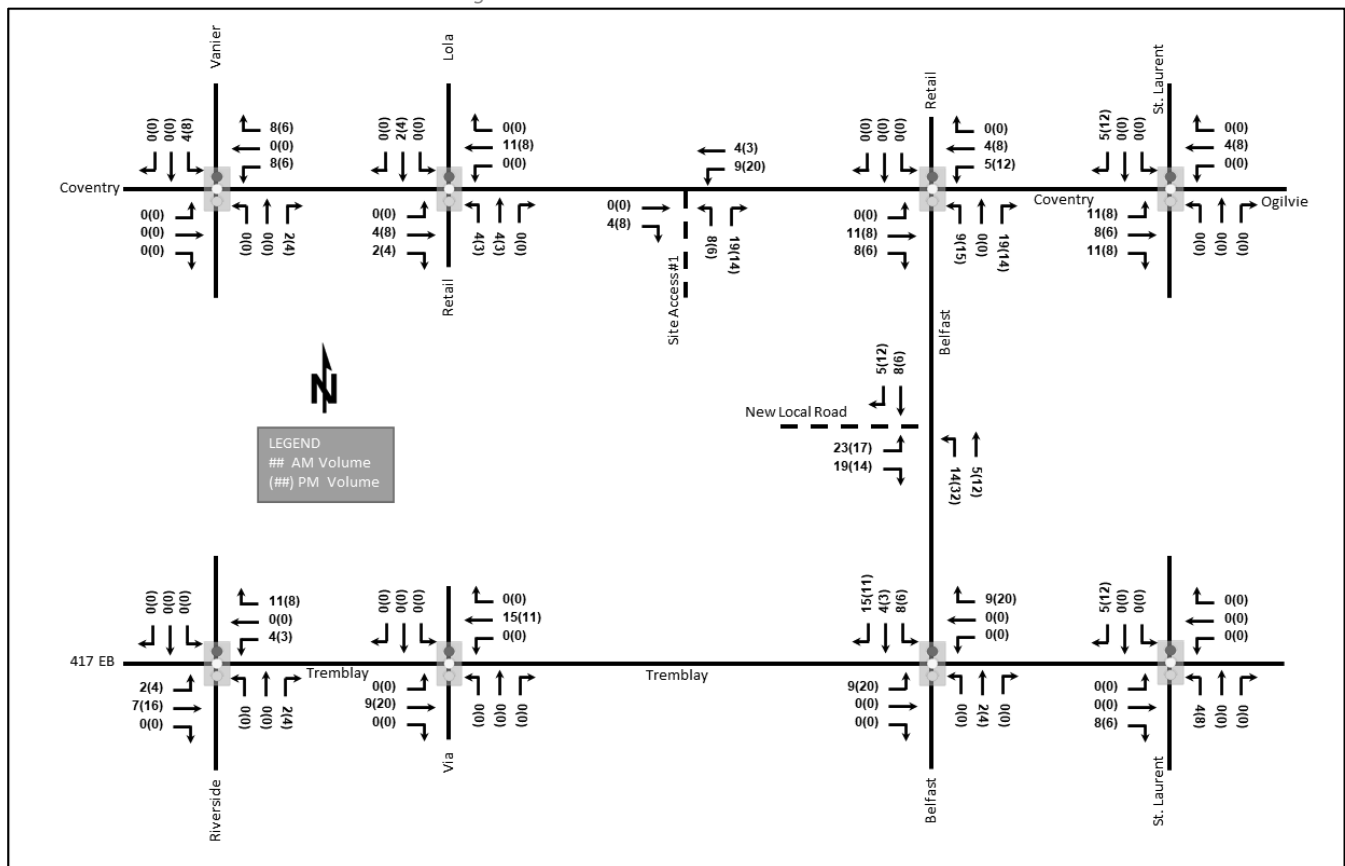
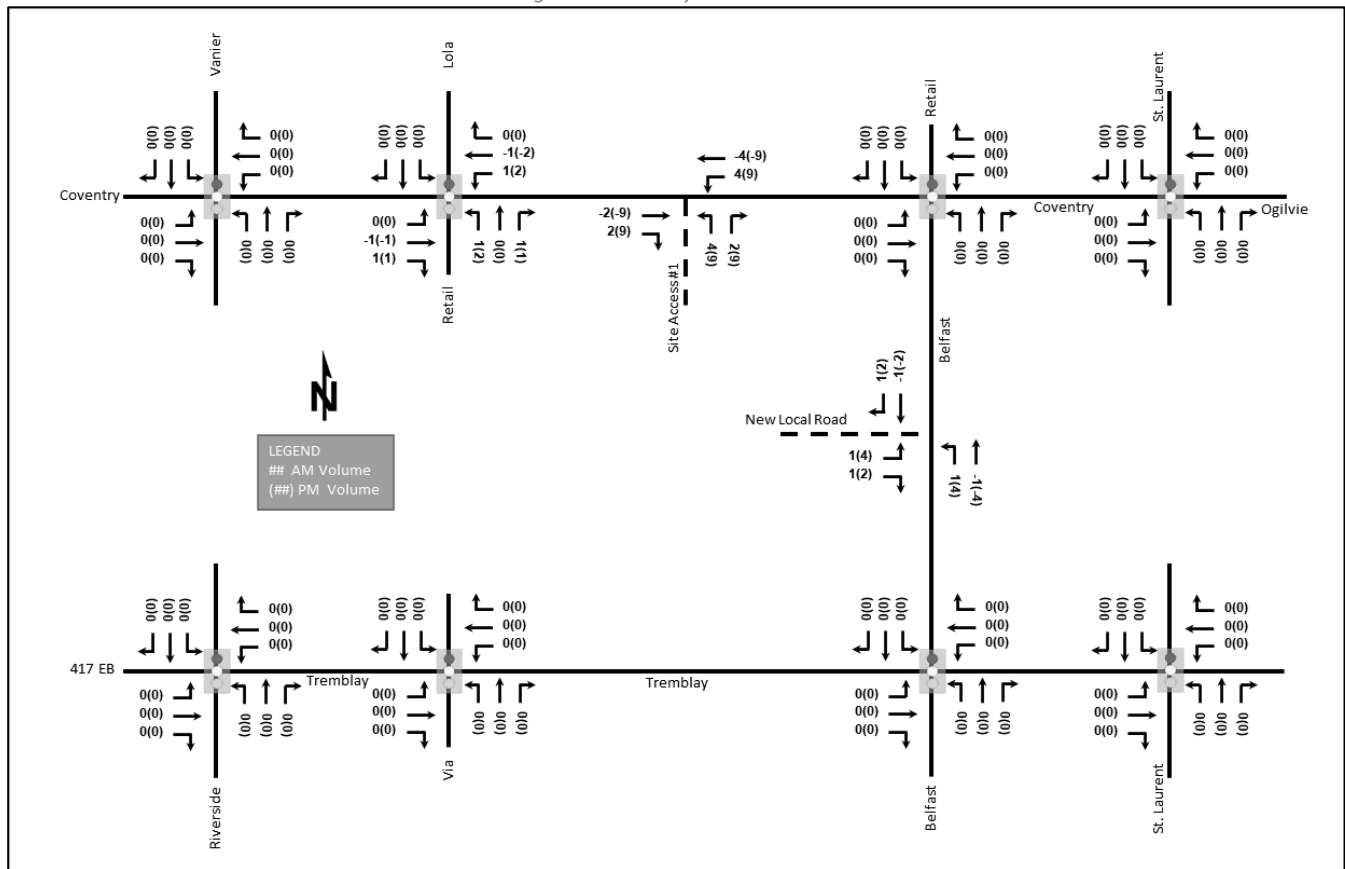


Figure 19: Pass-By Auto Volumes



Appendix J

OC Transpo Peak Ridership Summary

Table J1: OC Transpo Peak Ridership Summary

Routes/Locations			AM Peak Period			PM Peak Period		
Intersection	Stop	Route	Total Boardings	Total Alighting	Average Load at Departure	Total Boardings	Total Alighting	Average Load at Departure
St-Laurent / Cyrville	6697	7WB	2	3	9	5	23	30
		14WB	3	1	7	5	20	27
		19WB	0	0	9	4	13	30
		20WB	0	0	6	4	7	27
		27NB	-	-	-	1	3	16
St-Laurent / Coventry	6696	7EB	2	11	20	0	3	13
		14EB	4	3	16	4	1	13
		19EB	1	2	23	5	9	17
		20EB	1	0	15	6	0	13
		27SB	2	0	17	-	-	-
		620SB	-	-	-	0	2	24
St-Laurent / Ogilvie	6698	7WB	1	0	9	9	2	31
		14WB	0	0	7	9	1	28
		19WB	0	0	11	6	2	31
		20WB	1	0	6	5	0	28
		24WB	6	0	5	4	0	7
		27NB	-	-	-	0	0	17
		39EB	-	-	-	-	-	-
		624EB	0	0	23	-	-	-
St-Laurent / Lemieux	1049	633EB	3	0	12	-	-	-
		7EB	0	22	19	0	20	11
		14EB	0	16	16	0	11	12
		19EB	1	4	23	0	5	16
		20EB	0	9	14	0	7	12
		24EB	0	8	5	0	11	4
		27SB	0	3	16	-	-	-
		39EB	-	-	-	0	0	24
		624EB	0	0	20	-	-	-
		624WB	-	-	-	0	0	16
Ogilvie / Cummings	6699	633WB	-	-	-	0	2	13
		24WB	3	3	6	1	100	5
		624WB				0	10	16
Ogilvie / Ad. 1195	8424	633WB				1	30	15
		24WB	0	0	6	0	2	13
		39WB	-	-	-	-	-	-
		624WB	-	-	-	0	0	26
Ogilvie / Cummings	3711	633WB	-	-	-	0	0	44
		24EB	58	0	15	9	5	8
		39EB	-	-	-	-	-	-
		624EB	4	0	37	-	-	-
Donald / Cummings	2502	633EB	9	0	32	-	-	-
		20EB	3	1	13	0	3	13
		27SB	0	0	11	-	-	-
	2504	20WB	3	0	9	1	6	23

Routes/Locations			AM Peak Period			PM Peak Period		
Intersection	Stop	Route	Total Boardings	Total Alighting	Average Load at Departure	Total Boardings	Total Alighting	Average Load at Departure
Donald / Cummings		27NB	-	-	-	8	7	15