1316 Carling Avenue

Transportation Impact Assessment

Step 1 Screening Report

Step 2 Scoping Report

Step 3 Strategy Report

Prepared for:

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PN: 2025-123

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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 zoning by-law amendment application.

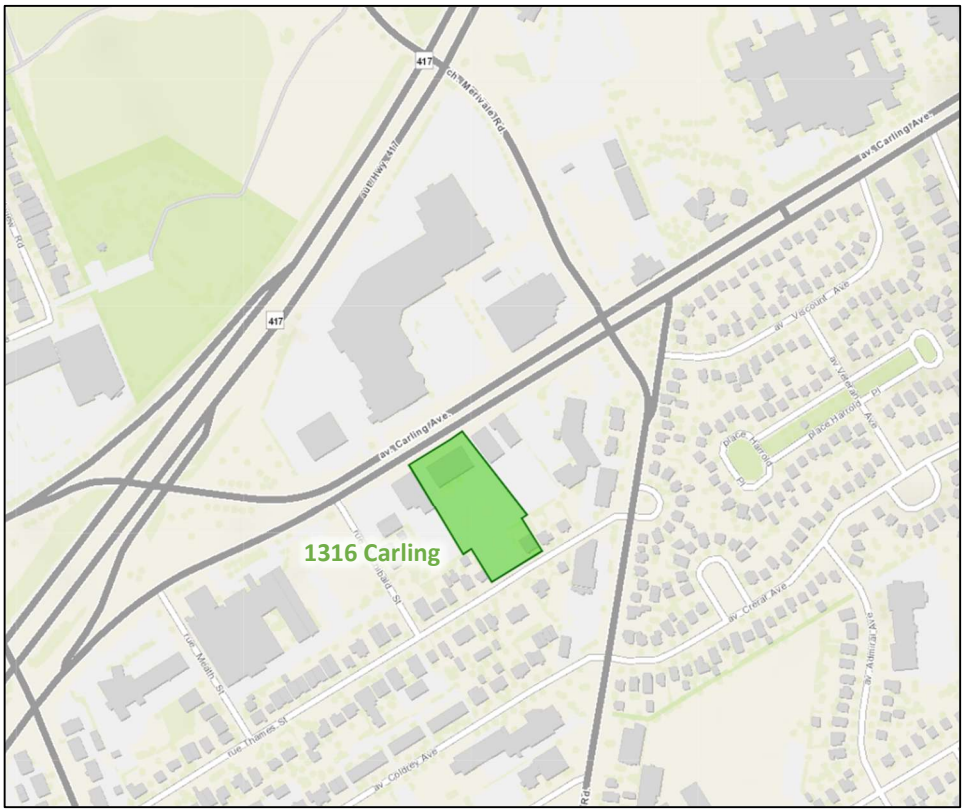
2 Existing and Planned Conditions

2.1 Proposed Development

The development site is located at 1316 Carling Avenue, and it is currently zoned as Arterial Mainstreet Zone (AM10) and Residential Fourth Density Zone (R4UC). The proposed development includes replacing the existing surface parking area with a 20-storey residential building with a total of 201 units. Three levels of underground parking, with a total of 354 parking spaces, 23 surface parking spaces, and 211 bicycle parking spaces. The total parking replaces 169 existing spaces and a total of 208 new parking spaces are proposed.

The existing Carling Avenue accesses are intended to remain with an additional access proposed to Thames Street. The anticipated built-out is 2027 with construction occurring in a single phase. The development is within Carling Arterial Mainstreet Design Priority Area. 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: September 25, 2025

UNIT MIX	
Area	Count
1 BEDROOM	
640 ft²	19
700 ft²	1
710 ft²	27
730 ft²	1
	48
1 BEDROOM + DEN	
800 ft²	10
890 ft²	1
	11
1 BEDROOM BF	
710 ft²	10
	10
2 BEDROOM	
830 ft²	5
960 ft²	18
980 ft²	8
990 ft²	1
1010 ft²	3
1030 ft²	5
1040 ft²	16
1060 ft²	16
1170 ft²	5
1180 ft²	3
1200 ft²	1
1220 ft²	4
1250 ft²	3
	88
2 BEDROOM +DEN	
980 ft²	5
1070 ft²	3
1080 ft²	1
1110 ft²	10
1120 ft²	1
1130 ft²	3
	23
2 BEDROOM BF	
950 ft²	19
960 ft²	2
	21
	201

UNIT MIX/ FLOOR	1 BDRM		1 BDRM +DEN		2 BDRM		2 BDRM +DEN		TOTAL		TOTAL
UNIT AREA	(59-68m²)		(74-83m²)		(77-116m²)		(92-105m²)				
		B.F.		B.F.		B.F.		B.F.		B.F.	
LEVEL 1	1	0	1	0	5	1	2	0	9	1	10
LEVEL 2 -4 (X3 floors)	3 X3=9	0	0	0	7 X3=21	1 X3=3	2 X3=6	0	12 X3=36	1 X3=3	13 X3=39
LEVEL 5 -9 (X5 floors)	3 X5=15	0	0	0	6 X5=30	1 X5=5	1 X5=5	0	10 X5=50	1 X5=5	11 X5=55
LEVEL 10	3	0	0	0	2	2	0	0	5	2	7
LEVEL 11 -20 (X10 floors)	2 X10=20	1 X10=10	1 X10=10	0	3 X10=30	1 X10=10	1 X10=10	0	7 X10=70	2 X10=20	9 X10=90
TOTAL	**48**	**10**	**11**	**0**	**88**	**21**	**23**	**0**	**170**	**31 (15%)**	**201**
TOTAL	**58**		**11**		**109**		**23**		**201**		**201**

LOT COVERAGE		
GROUND FLOOR AREA (Building footprint)	1,332.5 m²	
LANDSCAPE AREA	4,567.5 m² (including 825 m² PARKLAND + 76.75 m² Patios + 531 m² Hardscape + 208 m² Ramp enclosure + 1,463 m² Softscape + 1473.75 m² Asphalt)	
TOTAL DEVELOPED AREA	5,900 m²	
UNDEVELOPED (Existing building) AREA	2,752.8 m²	
TOTAL LOT AREA	8,652.8 m² (including 825 m² PARKLAND)	

BUILDING AREAS				
	GROSS FLOOR AREA	AMENITIES (INDOOR)	BALCONIES	TERRACES (OUTDOOR)
UNDERGROUND PARKING GARAGE L3 & L2	-	-	-	-
UNDERGROUND PARKING GARAGE L1	-	232.25 m² (Communal)	-	-
GROUND FLOOR AREA	924.5 m² (9,951.23 ft²)	-	76.75 m²	600 m² (6458.35 ft²) (Communal)
2ND - 4TH FLOOR AREA (X3 STOREYS)	(1,139 m² X3 =) 3,417 m² (12,260.1 X3 = 36,780.3 ft²)		(91.72m² X 3 =) 275.16 m²	-
5TH FLOOR AREA	867 m² (9,332.3 ft²)		34.23 m²	258 m²
6TH - 9TH FLOOR AREA (X4 STOREYS)	(867 m² X4 =) 3,468 m² (9,332.3 X4 = 37,329.2 ft²)		(76.88 m² X 4 =) 307.52 m²	-
10TH FLOOR AREA	711 m² (7,653.14 ft²)	175.05 m² (Communal)	36.48 m²	193.93 m² (2087.44 ft²) (Communal)
TYPICAL FLOOR AREA (11TH - 20TH) (X10 STOREYS)	(697.45 m² X10 =) 6,974.5 m² (7507.3 X10= 75,073 ft²)		57.12 m²	-
SUM GROSS AREA	16362 m² (176,119.17 ft²)	407.3 m²	780,52m²	1,051.93 m²
SUM AMENITIES (Indoor, Balconies and Terraces)		2,239.75 m² (Including 1,200.93 m² communal)		
NUMBER OF STOREYS (above grade)		20 storeys		

City of Ottawa Zoning By-Law 2008-250			
ZONING MECHANISM	REQUIRED /PERMITTED	PROPOSED	RELIEF REQD
AMENITIES			
Amenity Area for Residential Development (MIN.)	6 m² for every Residential Unit 6 x 201 = 1206 m²	2,238,5 m²	-
Amenity Area Provided as Commonal Space	MIN. 50 % X 1206 m² = 603 m²	1,200.93 m² (99.5%)	-

Parking Schedule		
Level	Type	Count
PARKING P3	Small Space 2400x4600	1
PARKING P3	Small Space 2400x5200	26
PARKING P3	Small Space 2600x4600	5
PARKING P3	Standard Space 2600x5200	66
PARKING P2	Small Space 2400x4600	1
PARKING P2	Small Space 2400x5200	28
PARKING P2	Small Space 2600x4600	5
PARKING P2	Standard Space 2600x5200	84
PARKING P1	BF Space Type A 3400x5200	2
PARKING P1	BF Space Type B 2750x6000	2
PARKING P1	Small Space 2400x4600	1
PARKING P1	Small Space 2400x5200	23
PARKING P1	Small Space 2600x4600	5
PARKING P1	Standard Space 2600x5200	83
GROUND FLOOR	BF Space Type A 3400x5200	3
GROUND FLOOR	BF Space Type B 2750x6000	3
GROUND FLOOR	Standard Space 2600x5200	17
		377

SMALL SPACES : 97
STANDARD SPACES : 270
B.F. SPACES : 10

REQUIRED: TABLE 101 R12 HIGH-RISE AREA X/Y
0,5 RESIDENT / DWELLING + 0,1 VISITOR = 0,6
(No parking for first 12 units)
189 UNITS x 0,6 = 113 SPACES REQUIRED
(19 VISITOR + 94 RESIDENTIAL)

PROPOSED : 377 SPACES
169 SPACES TO REPLACE THE EXISTING SPACES
208 NEW SPACES FOR 201 UNITS = 1,03 PARKING RATE

BARRIER-FREE PARKING
OTTAWA BY-LAW 2017-301
TYPE A: 3400mm WIDE
TYPE B: 2400mm WIDE

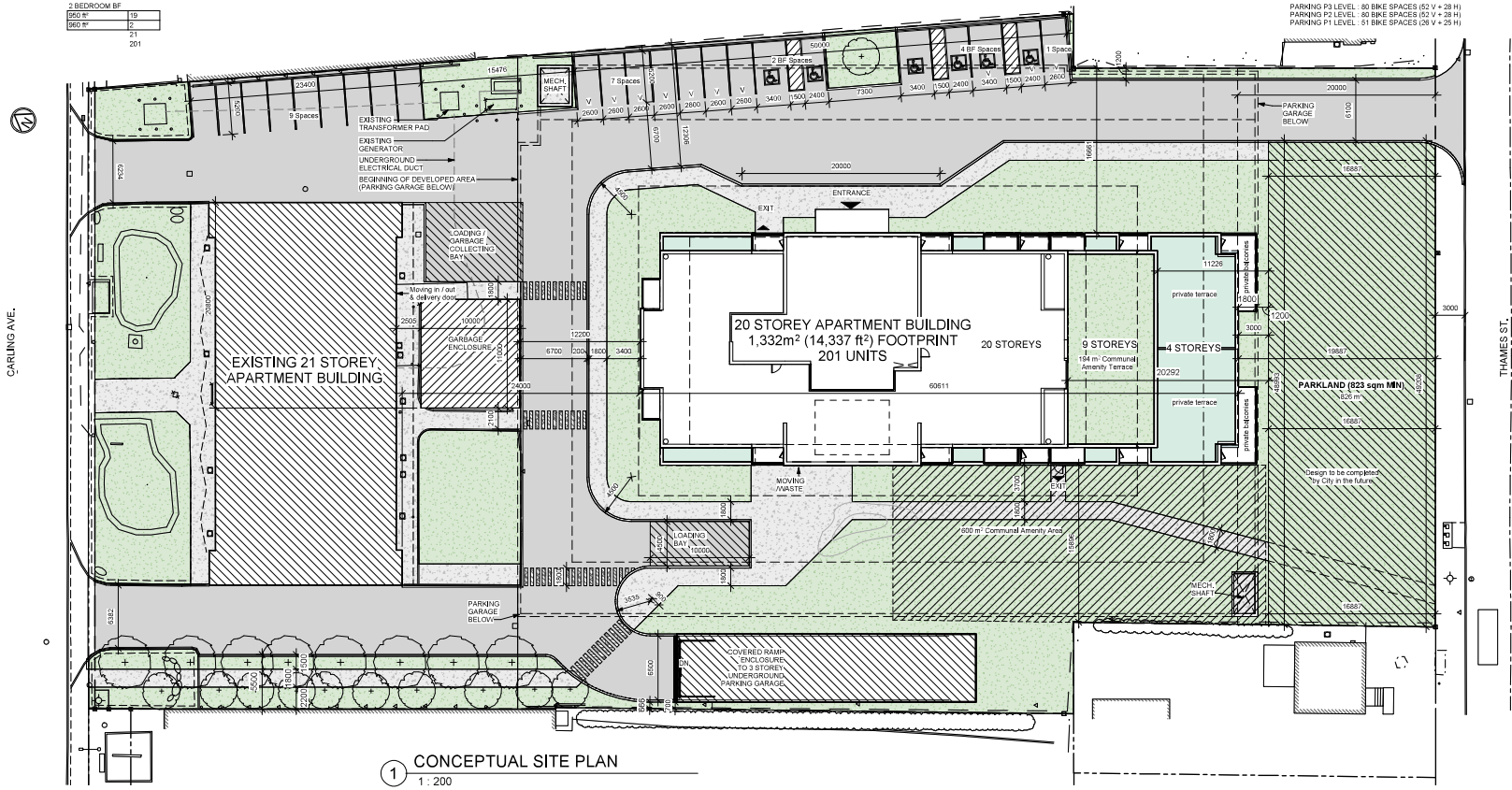
# SPACES	A	B	TOTAL
25-300	4	4	8
30-350	4	5	9
351-400	*5*	*5*	*10*

BICYCLE SPACES :

REQUIRED : 0,5 RESIDENT / DWELLING
201 UNITS x 0,5 = 101 SPACES REQUIRED

PROPOSED : 211 SPACES FOR 201 UNITS = 1,05 PARKING RATE
(130 Vertical spaces + 81 Horizontal spaces)

PARKING P3 LEVEL : 80 BIKE SPACES (52 V + 28 H)
PARKING P2 LEVEL : 80 BIKE SPACES (52 V + 28 H)
PARKING P1 LEVEL : 51 BIKE SPACES (26 V + 25 H)



1 CONCEPTUAL SITE PLAN
1 : 200

DO NOT SCALE DRAWINGS

CHECK AND VERIFY ALL DIMENSIONS BEFORE PROCEEDING WITH THE WORK.

DRAWINGS NOT TO BE USED FOR CONSTRUCTION UNLESS STAMPED AND SIGNED BY THE CONSULTANT.

THESE DRAWINGS HAVE BEEN DESIGNED IN CONFORMANCE WITH THE ONTARIO BUILDING CODE.

Revisions		
No.	Date	Description
1	04-09-2025	Conceptual Design
2	16-10-2025	Issued For Zoning
4	11-02-2026	Re-Issued fro Zoning

HOMESTEAD

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Stamp:

Project
1316 CARLING AVE APARTMENTS

1316 CARLING AVE.,
OTTAWA, ON

Drawing
SITE PLAN

Drawn By: FA/HD/AZ. Checked By: -
Scale: 1 : 200 Date: 09/13/25
Project No.: 2513 Revision: 4
Drawing No.: A010
1:1

2.2 Existing Conditions

2.2.1 Area Road Network

Carling Avenue: Carling Avenue is a City of Ottawa arterial road with a divided six-lane urban cross-section, including sidewalks on both sides of the roadway. Curbside bike lanes are present on both sides of the road west of Merivale Road. The westbound bike lane transitions to a cycletrack approximately 65 meters west of the western Westgate Mall access. The posted speed limit is 60km/h, and the City-protected right-of-way is 44.5 metre. Carling Avenue is a truck route.

Merivale Road: Merivale Road is a City of Ottawa arterial road with a four-lane cross-section, including sidewalks on both sides of the road. A curbside bike lane is present on the east side of the road starting approximately 40 metres south of Carling Avenue continuing north and a bike lane on the west side of the road extends approximately 180 metres north of Carling Avenue. The posted speed limit is 50 km/h. Within the study area, the City-protected right-of-way is 30.0 metres north of Carling Avenue and is 26.0 metres between Carling Avenue and Kirkwood Avenue.

Thames Street: Thames Street is a City of Ottawa local road with two-lane cross-section. The posted speed limit is 40 km/h and the existing right-of-way is 15.0 metres.

Archibald Street: Archibald Street is a City of Ottawa local road with two-lane urban cross-section and on-street parking permitted on the west side of the road. The posted speed limit is 40 km/h and the existing right of way is 15.0 metres.

Coldrey Avenue: Coldrey Avenue is a City of Ottawa local road with a two-lane urban cross-section, including a sidewalk on the south side of the road. The posted speed limit is 40 km/h and the existing right-of-way is 20.0 metres.

Crerar Avenue: Crerar Avenue is a City of Ottawa local road with a two-lane urban cross-section, including sidewalks on both sides of the road. The unposted speed limit is assumed to be 40 km/h and the existing right-of-way is 20.0 metres.

2.2.2 Existing Intersections

The key intersections within one kilometre of the site have been summarized below:

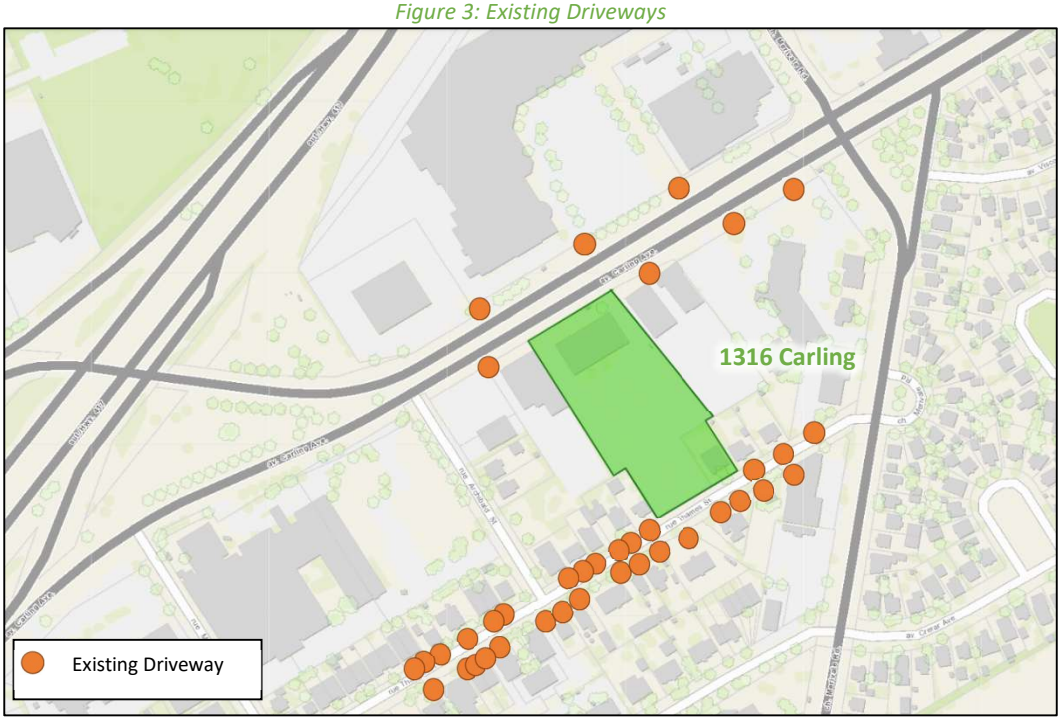
Carling Avenue at Westgate Mall Access W	The intersection of Carling Avenue at the western Westgate Mall access is a signalized T-intersection. The southbound approach consists of a shared left-turn/right-turn lane. The eastbound approach consists of three through lanes and a bike lane, and the westbound approach consists of two through lanes, a shared through/right-turn lane, and a bike lane. Left turns and U-turns are restricted on the eastbound and westbound approaches.
Carling Avenue at Westgate Mall Access E	The intersection of Carling Avenue at the eastern Westgate Mall access is a signalized intersection. The northbound approach consists of a shared all-movement lane, and the southbound approach is assumed to consist of a shared left-turn/through lane and a right-turn lane. The eastbound and westbound approaches consist of an auxiliary left-turn, two through lanes, a shared though/right-turn lane, and a bike lane. No turn restrictions are noted.

Carling Avenue at Merivale Road	The intersection of Carling Avenue at Merivale Road is a signalized intersection. The northbound approach consists of an auxiliary left-turn lane, a through lane, a bike lane, and a channelized right-turn lane. The southbound approach consists of an auxiliary left-turn lane, a through lane, a bike lane, and an auxiliary right-turn lane. The eastbound approach consists of two through lanes, a shared through/right-turn lane, and a bike lane, and the westbound approach consists of an auxiliary left-turn lane, two through lanes, a shared through/right-turn lane. Eastbound left turns are restricted.
Merivale Road at Westgate Mall Access N	The intersection of Merivale Road at the northern Westgate Mall access is a signalized T-intersection. The northbound approach consists of an auxiliary left-turn lane, a through lane, and a bike lane, and the southbound approach consists of a through lane, a bike lane, and an auxiliary right-turn lane. The eastbound approach is assumed to consist of a left-turn lane and a right-turn lane. No turn restrictions are noted.
Merivale Road at Thames Street/Merivale Road	The intersection of Merivale Road at Thames Street is a stop-controlled intersection on the minor approaches of Thames Street. The northbound and southbound approaches each consist of a shared left-turn/through lane and a shared through/right-turn lane. The eastbound and westbound approaches each consist of a shared all-movement lane. Trucks are restricted on the west leg.
Merivale Road at Coldrey Avenue/Crerar Avenue	The intersection of Merivale Road at Coldrey Street/Crerar Street is a signalized intersection. The northbound and southbound approaches each consist of a shared left-turn/though lane and a shared through/right-turn lane. The eastbound and westbound approaches each consist of a shared all-movement lane. Trucks are restricted on the west leg.

2.2.3 Existing Driveways

Within 200 metres, driveways to retail spaces and commercial services exist on the north and south sides of Carling Avenue and driveways to retail spaces and residential land uses are present on the north and south sides of Thames Street. Figure 3 illustrates the existing driveways.

Figure 3: Existing Driveways



Source: http://maps.ottawa.ca/geoOttawa/ Accessed: September 25, 2025

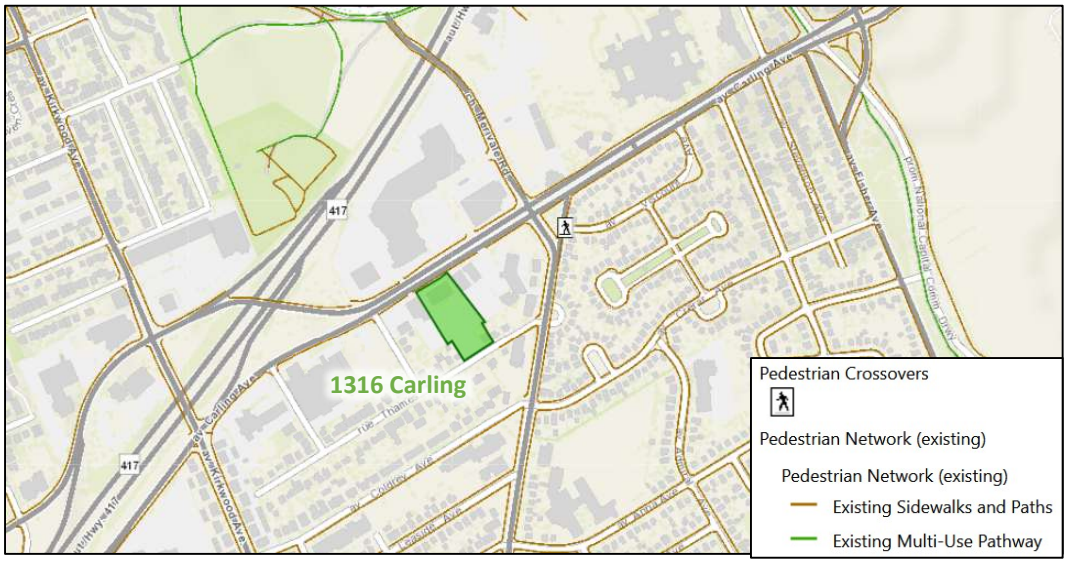
2.2.4 Cycling and Pedestrian Facilities

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

Sidewalks are provided along both sides of Carling Avenue, Merivale Road, Crerar Avenue, and on the south side of Coldrey Avenue and Thames Street approximately 40 metres west of Merivale Road.

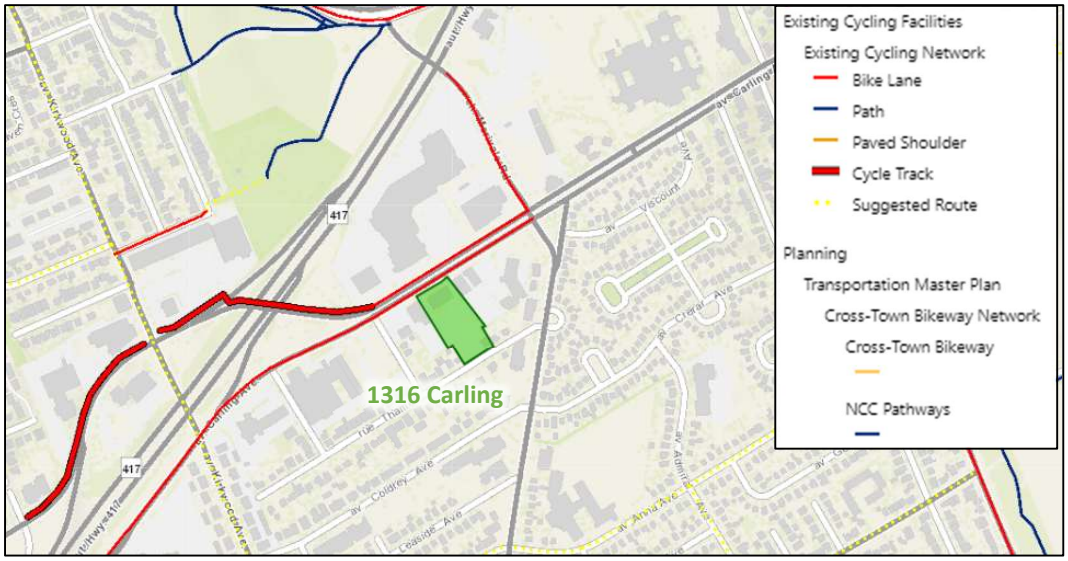
Bike lanes are present on both sides of Carling Avenue west of Merivale Road and on Merivale Road north of Carling Avenue. Cycletracks are also provided on the north side of Carling Avenue approximately 65 metres west of western Westgate Mall access, extending westward.

Figure 4: Study Area Pedestrian Facilities



Source: http://maps.ottawa.ca/geoOttawa/ Accessed: September 25, 2025

Figure 5: Study Area Cycling Facilities



Source: http://maps.ottawa.ca/geoOttawa/ Accessed: September 25, 2025

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.

Figure 6: Existing Pedestrian Volumes

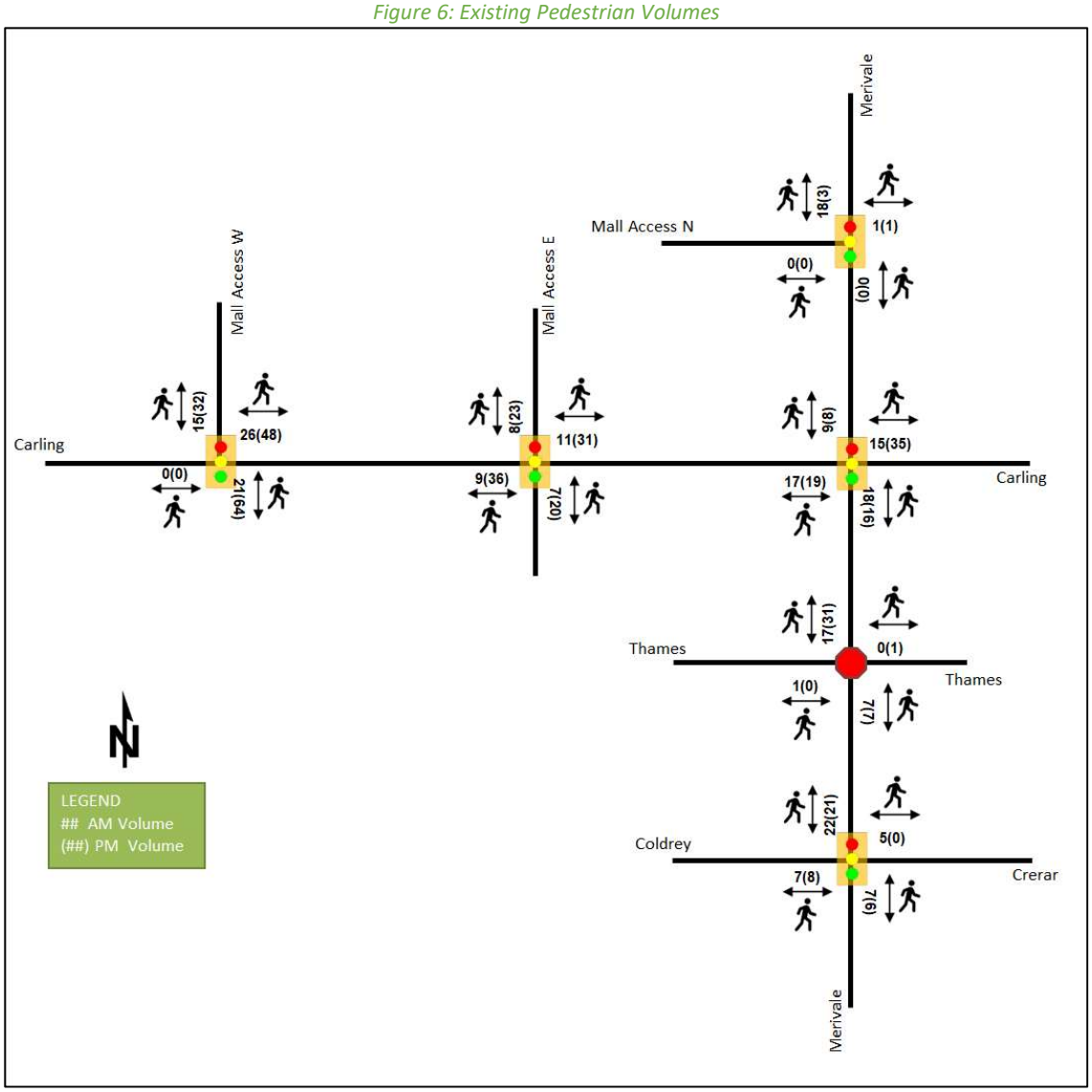
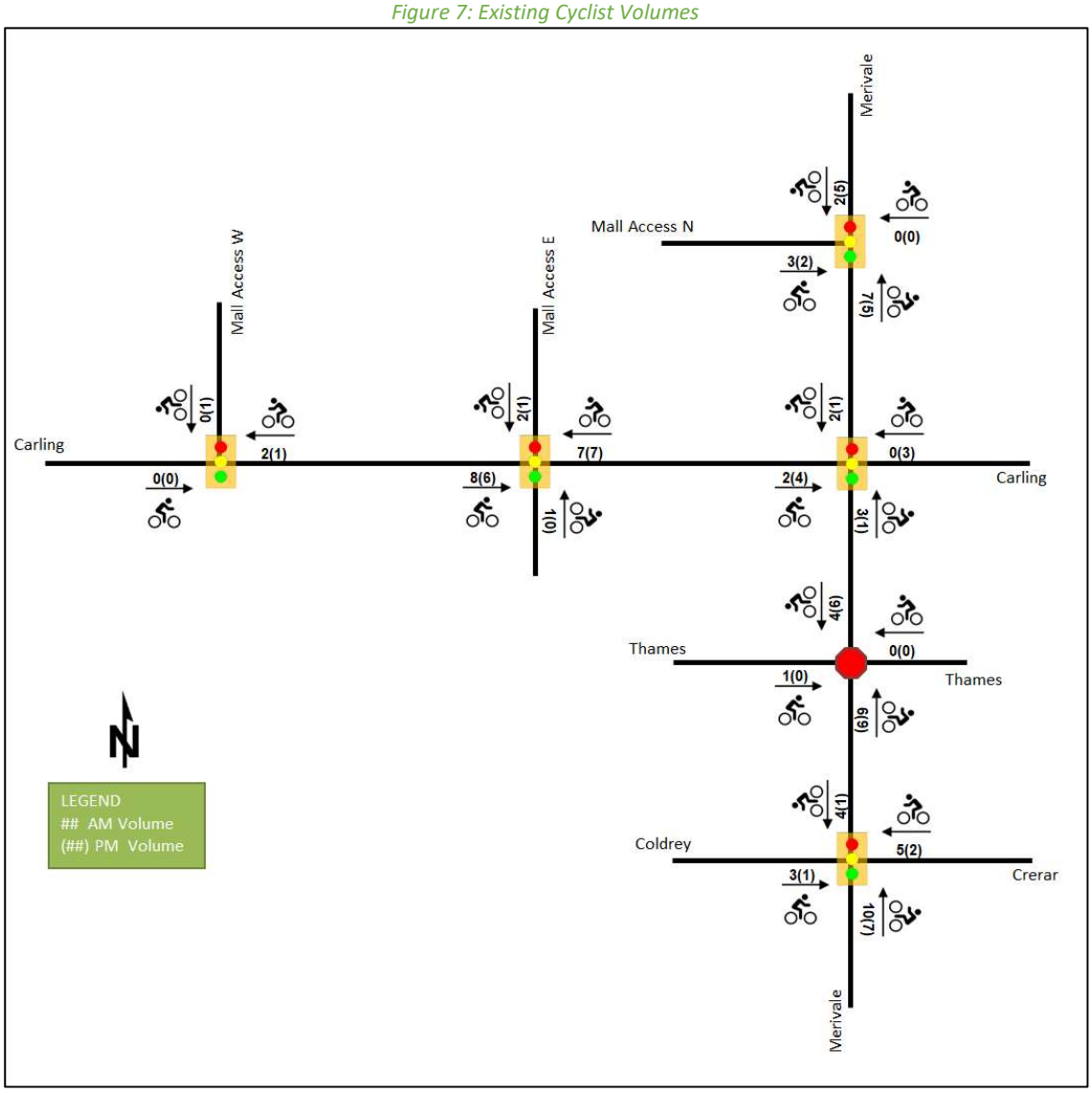


Figure 7: Existing Cyclist Volumes



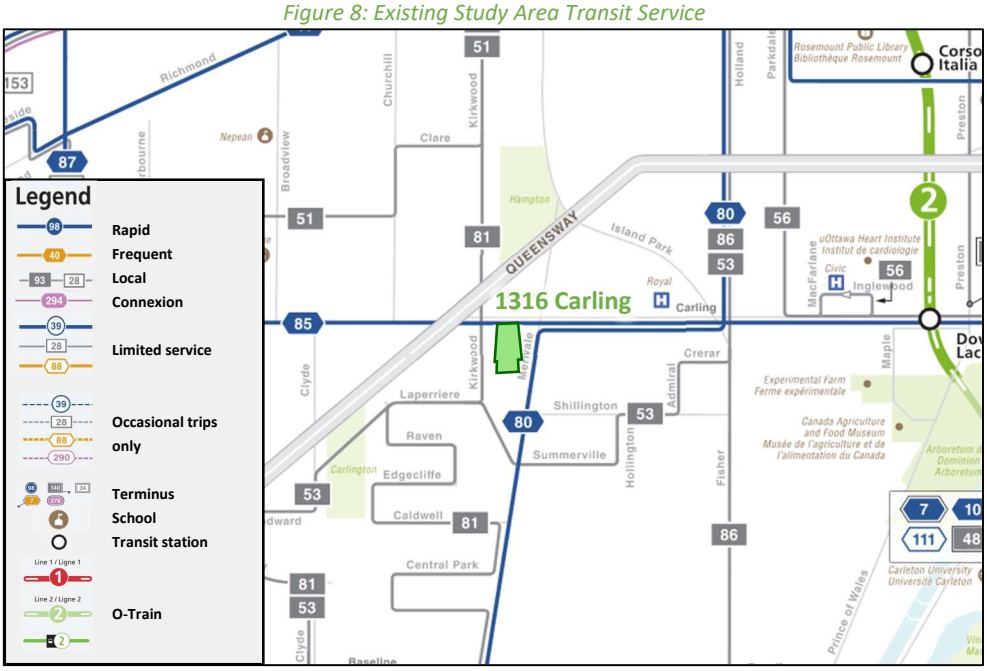
2.2.5 Existing Transit

Figure 8 illustrates the transit system map in the study area and Figure 9 illustrates nearby transit stops. All transit information is from August 8, 2025, and is included for general information purposes and context to the surrounding area.

Within the study area, the route #85 travels along Carling Avenue, route #80 travels along Merivale Road and Carling Avenue. The frequency of these routes within proximity of the proposed site based on August 8, 2025 service levels are:

- Route # 85 – 15-minute service all day, 30-minute service after 7:00 PM
- Route # 80 – 15-minute service all day, 30-minute service after 7:00 PM

Figure 8: Existing Study Area Transit Service



Source: http://www.octranspo.com/ Accessed: August 8, 2025

Figure 9: Existing Study Area Transit Stops

Source: http://www.octranspo.com/ Accessed: September 25, 2025

2.2.6 Existing Area Traffic Management Measures

Archibald Street and Meath Street currently restrict southbound drivers from continuing through to the southern network through signage and physical barriers associated with the construction at the 1354-1376 Carling Avenue. Ultimately, these streets are planned to be permanently separated from the southern network to eliminate the

cut-through route between Carling Avenue and Thames Street. Speed humps are present on Coldrey Avenue and Crerar Avenue within the study area.

2.2.7 Existing Peak Hour Travel Demand

Existing turning movement counts were acquired from the City of Ottawa and J & S Traffic Services for the existing study area intersections. Table 1 summarizes the intersection count dates and sources.

Table 1: Intersection Count Date

Intersection	Count Date	Source
Carling Avenue at Westgate Mall Access W	Tuesday, October 29, 2024	City of Ottawa
Carling Avenue at Westgate Mall Access E	Tuesday, August 05, 2025	J & S Traffic Services
Carling Avenue at Merivale Road	Tuesday, November 14, 2024	City of Ottawa
Merivale Road at Westgate Mall Access N	Wednesday, July 30, 2025	J & S Traffic Services
Merivale Road at Thames Street	Wednesday, July 30, 2025	J & S Traffic Services
Merivale Road at Coldrey Avenue/Crerar Avenue	Wednesday, July 16, 2025	City of Ottawa

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 MMLOS Guidelines weighted v/c methodology for the overall intersection, per direction from Transportation Engineering Services, 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

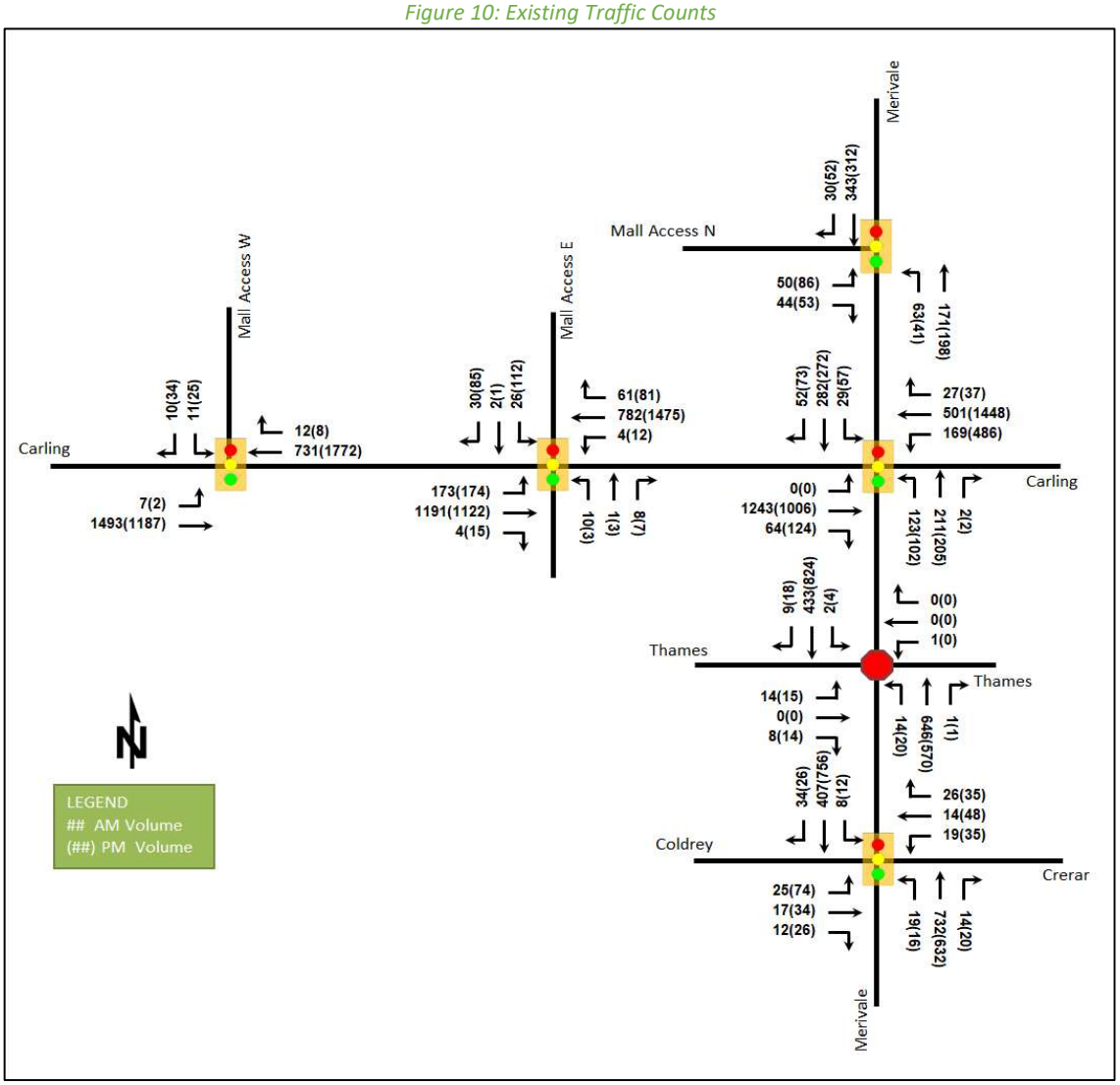


Table 2: Existing Intersection Operations

Intersection	Lane	AM Peak Hour				PM Peak Hour			
		LOS	V/C	Delay (s)	Q (95th)	LOS	V/C	Delay (s)	Q (95th)
Carling Avenue at Westgate Mall Access W *Signalized*	EBT	A	0.46	7.4	92.5	A	0.39	8.1	65.2
	WBT/R	A	0.21	2.2	3.1	A	0.55	3.3	31.1
	SBL/R	A	0.10	27.4	9.2	A	0.26	24.8	18.5
	Overall	**A**	**0.46**	**5.9**	-	**A**	**0.55**	**5.6**	-
Carling Avenue at Westgate Mall Access E *Signalized*	EBL	A	0.47	9.6	16.1	C	0.73	42.7	35.7
	EBT/R	A	0.34	3.5	23.5	A	0.37	3.1	11.8
	WBL	A	0.02	5.5	m0.9	A	0.06	6.8	m1.2
	WBT/R	A	0.25	3.8	25.2	B	0.65	12.0	164.7
	NB	A	0.14	32.6	9.1	A	0.06	28.2	7.0
	SBL/T	A	0.23	50.1	14.4	B	0.64	65.2	49.5
	SBR	A	0.16	6.5	4.9	A	0.31	11.1	14.3
	Overall	**A**	**0.43**	**4.9**	-	**B**	**0.66**	**12.4**	-

Intersection	Lane	AM Peak Hour				PM Peak Hour			
		LOS	V/C	Delay (s)	Q (95th)	LOS	V/C	Delay (s)	Q (95th)
Carling Avenue at Merivale Road *Signalized*	EBT/R	D	0.88	39.0	120.1	E	0.91	57.5	#139.5
	WBL	C	0.78	49.1	#85.5	F	1.28	175.1	#243.2
	WBT/R	A	0.25	17.9	39.1	B	0.63	22.2	125.8
	NBL	C	0.74	81.8	#59.0	D	0.84	101.4	#64.4
	NBT	A	0.43	30.9	46.4	A	0.53	44.7	68.8
	NBR	A	0.00	0.0	m0.0	A	0.01	0.0	0.0
	SBL	A	0.30	59.6	18.1	A	0.53	71.6	31.2
	SBT	D	0.83	64.0	#119.1	D	0.84	73.0	#128.1
	SBR	A	0.13	2.0	1.7	A	0.20	4.2	2.8
	Overall	**D**	**0.85**	**38.9**	-	**E**	**0.99**	**59.5**	-
Merivale Road at Westgate Mall Access N *Signalized*	EBL	A	0.20	23.7	13.8	A	0.36	27.9	21.5
	EBR	A	0.17	9.3	7.4	A	0.21	9.2	8.2
	NBL	A	0.10	1.1	2.0	A	0.07	1.1	m1.4
	NBT	A	0.14	0.9	4.5	A	0.17	1.3	4.8
	SBT	A	0.28	4.5	27.5	A	0.27	5.2	28.2
	SBR	A	0.03	1.7	2.1	A	0.05	1.6	3.2
	Overall	**A**	**0.27**	**4.9**	-	**A**	**0.29**	**6.6**	-
Merivale Road at Thames Street *Unsignalized*	EB	C	0.08	18.0	2.3	D	0.19	31.1	5.3
	WB	C	0.01	24.3	0.0	A	-	0.0	-
	NB	A	0.02	8.5	0.0	B	0.03	10.4	0.8
	SB	A	0.00	9.2	0.0	A	0.01	8.9	0.0
	Overall	**A**	-	**0.5**	-	**A**	-	**0.8**	-
Merivale Road at Coldrey Avenue/Crerar Avenue *Signalized*	EB	A	0.23	19.4	12.1	A	0.60	31.8	29.7
	WB	A	0.24	15.6	11.5	A	0.43	21.2	21.3
	NB	A	0.36	6.1	46.3	A	0.35	6.8	38.7
	SB	A	0.21	2.6	m15.3	A	0.41	7.9	m63.9
	Overall	**A**	**0.35**	**5.9**	-	**A**	**0.44**	**10.3**	-

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

The study area intersections overall operations are acceptable with capacity issues noted at the intersection of Carling Avenue at Merivale Road.

At the intersection of Carling Avenue at Merivale Road, the westbound left movement may exhibit extended queues during the AM peak hour and is over theoretical capacity during the PM peak hour. However, given this movement processed all of the counted vehicles within this hour, additional capacity beyond the theoretical value calculated by Synchro is noted to be available. Signal timing adjustments cannot mitigate this capacity issue if additional capacity is required. The eastbound through/right movement may exhibit extended queues during the PM peak hour, and the northbound left and southbound through movements may exhibit extended queues during both peak hours.

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 (2018-2022). 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		**67**	**100%**
Classification	**Fatality**	1	1%
	Non-Fatal Injury	14	21%
	Property Damage Only	52	78%
Initial Impact Type	**Approaching**	0	0%
	Angle	12	18%
	Rear end	23	34%
	Sideswipe	11	16%
	Turning Movement	11	16%
	SMV Unattended	0	0%
	SMV Other	8	12%
	Other	2	3%
Road Surface Condition	**Dry**	45	67%
	Wet	11	16%
	Loose Snow	6	9%
	Slush	2	3%
	Packed Snow	0	0%
	Ice	3	4%
	Unknown	0	0%
Pedestrian Involved		2	3%
Cyclists Involved		1	1%

Figure 11: Study Area Collision Records

Table 4: Summary of Collision Locations, 2018-2022

Intersections / Segments	Number	%
	67	**100%**
Carling Avenue at Merivale Road	38	57%
Carling Avenue at Westgate SC E	9	13%
Merivale Road at Thames Street loop S	8	12%
Carling Avenue WB between Highway 417 IC124 RAMP67 and 73 east of Archibald Street/Westgate SC W	6	9%
Carling Avenue at Archibald Street	2	3%
Carling Avenue at 73 E of Archibald Street/Westgate SC	4	6%

Within the study area, two pedestrian collisions and one cyclist collisions were noted during the 2018-2022 time period. One pedestrian collision occurred at the intersection of Carling Avenue at Westgate Shopping Mall east access and one fatal pedestrian collision at the intersection of Merivale Road at Thames Street. One angle cyclist collision occurred at the intersection of Carling Avenue at Merivale Road. The pedestrian and cyclist collisions will be further discussed in detailed collision reviews for each location below.

Table 5, Table 6, and Table 7 summarize the collision types and conditions for the intersections of Carling Avenue at Merivale Road, Carling Avenue at Westgate Shopping Mall east access, and Merivale Road at Thames Street, respectively.

Table 5: Carling Avenue at Merivale Road Collision Summary

		Number	%
Total Collisions		**38**	**100%**
Classification	**Fatality**	0	0%
	Non-Fatal Injury	10	26%
	Property Damage Only	28	74%
Initial Impact Type	**Approaching**	0	0%
	Angle	7	18%
	Rear end	16	42%
	Sideswipe	6	16%
	Turning Movement	8	21%
	SMV Unattended	0	0%
	SMV Other	1	3%
	Other	0	0%
Road Surface Condition	**Dry**	24	63%
	Wet	8	21%
	Loose Snow	4	11%
	Slush	2	5%
	Packed Snow	0	0%
	Ice	0	0%
	Unknown	0	0%
Pedestrian Involved		0	0%
Cyclists Involved		1	3%

The Carling Avenue at Merivale Road intersection had a total of 38 collisions during the 2018-2022 time period, with 28 involving property damage only and the remaining ten having non-fatal injuries. The collision types are most represented by the rear end with 16 collisions, followed by turning movement collisions with eight, angle with seven, sideswipe with six, and SMV other collision with one collision. Weather conditions do not affect collisions at this location.

Based on detailed collision records from 2019-2022 and 2024 (representing a different analysis period than the publicly available data), rear end collisions were observed on all approaches at the intersection, including eastbound (5 of 15), northbound (4 of 15), and southbound and westbound movements (3 of 15 each). Sideswipe collisions were predominantly in the westbound (4 of 9) and eastbound (3 of 9) directions. Both types of collisions may be associated with congestion and sideswipe collisions are often associated with congestion in the presence of multiple lanes on approaches.

Turning movement collisions were predominantly involved westbound left-turning vehicles conflicting with eastbound through (3 of 6). Left-turning vehicles were typically in conflict with permitted opposing movements, which may be indicative of drivers pushing gaps in the traffic stream in congested conditions, especially given these collisions cluster around the AM, PM, and mid-day peaks. Angle collisions predominantly involved eastbound through/right-turn traffic conflicting with southbound through traffic (3 of 4), given that these phases are conflicting, it is expected that these collisions were associated with drivers failing to obey traffic control. Note that one angle collision involved cyclist.

The cycling collision occurred during daylight and clear conditions. The collision involved a cyclist travelling westbound through in conflict with a northbound through motorist. No further collision review is required at this location as part of this study.

Table 6: Carling Avenue at Westgate Shopping Mall east access Collision Summary

		Number	%
Total Collisions		**9**	**100%**
Classification	**Fatality**	0	0%
	Non-Fatal Injury	2	22%
	Property Damage Only	7	78%
Initial Impact Type	**Approaching**	0	0%
	Angle	3	33%
	Rear end	1	11%
	Sideswipe	1	11%
	Turning Movement	1	11%
	SMV Unattended	0	0%
	SMV Other	2	22%
	Other	1	11%
Road Surface Condition	**Dry**	7	78%
	Wet	1	11%
	Loose Snow	1	11%
	Slush	0	0%
	Packed Snow	0	0%
	Ice	0	0%
	Unknown	0	0%
Pedestrian Involved		1	11%
Cyclists Involved		0	0%

The Carling Avenue at Westgate Shopping Mall east access intersection had a total of nine collisions during the 2018-2022 time period, with seven involving property damage only and the remaining two having non-fatal injuries. The collision types are most represented by the angle collisions with three, SMV other with two, rear end, sideswipe, turning movement, and other with one collision each. Weather conditions do not affect collisions at this location.

Based on detailed collision records from 2019-2022 and 2024, turning movement and angle collisions were observed on all approaches at the intersection, primarily associated with the left-turn movements. Two collisions involved left-turning vehicles in conflict with permitted opposing through movements on the eastbound and westbound approaches (one each). These may be indicative of drivers pushing gaps in the traffic stream in congested conditions. Three additional collisions involved left-turning vehicles in conflict with protected movements (3 of 5). Given that these phases are conflicting, it is expected that these collisions were associated with drivers failing to obey traffic control.

One rear end collision involved the eastbound movement (1 of 2), and another involved the westbound movement (1 of 2). A sideswipe collision occurred in the eastbound direction.

The pedestrian collision was related to the southbound vehicle turning left in daylight and clear condition. No discernable patterns are identified in this pedestrian collision, and no further collision review is required at this location as part of this study.

Table 7: Merivale Road at Thames Street Collision Summary

		Number	%
Total Collisions		**8**	**100%**
Classification	**Fatality**	1	13%
	Non-Fatal Injury	1	13%
	Property Damage Only	6	75%
Initial Impact Type	**Approaching**	0	0%
	Angle	0	0%
	Rear end	3	38%
	Sideswipe	2	25%
	Turning Movement	1	13%
	SMV Unattended	0	0%
	SMV Other	1	13%
	Other	1	13%
Road Surface Condition	**Dry**	7	88%
	Wet	1	13%
	Loose Snow	0	0%
	Slush	0	0%
	Packed Snow	0	0%
	Ice	0	0%
	Unknown	0	0%
Pedestrian Involved		1	13%
Cyclists Involved		0	0%

The Merivale Road at Thames Street intersection had a total of eight collisions during the 2018-2022 time period, with six involving property damage only, one resulting in a fatal injury and one having non-fatal injury. The collision types are most represented by the rear end collisions with three, sideswipe with two, turning movement, SMV other and other with one collision each. Weather conditions do not affect collisions at this location.

From the detailed collisions records from 2019-2022 and 2024, two sideswipe collisions occurred in the southbound direction (2 of 2) and a rear end collision involved northbound movement (1 of 1).

The pedestrian collision occurred in dark and dry conditions and involved two drivers making northbound and southbound through movements, resulting in a fatal injury. The collision took place while pedestrian was crossing

Merivale Road at a location with no designated crossing. No further collision review is required at this location as part of this study.

2.3 Planned Conditions

2.3.1 Changes to the Area Transportation Network

2.3.1.1 Transportation Master Plan (2025)

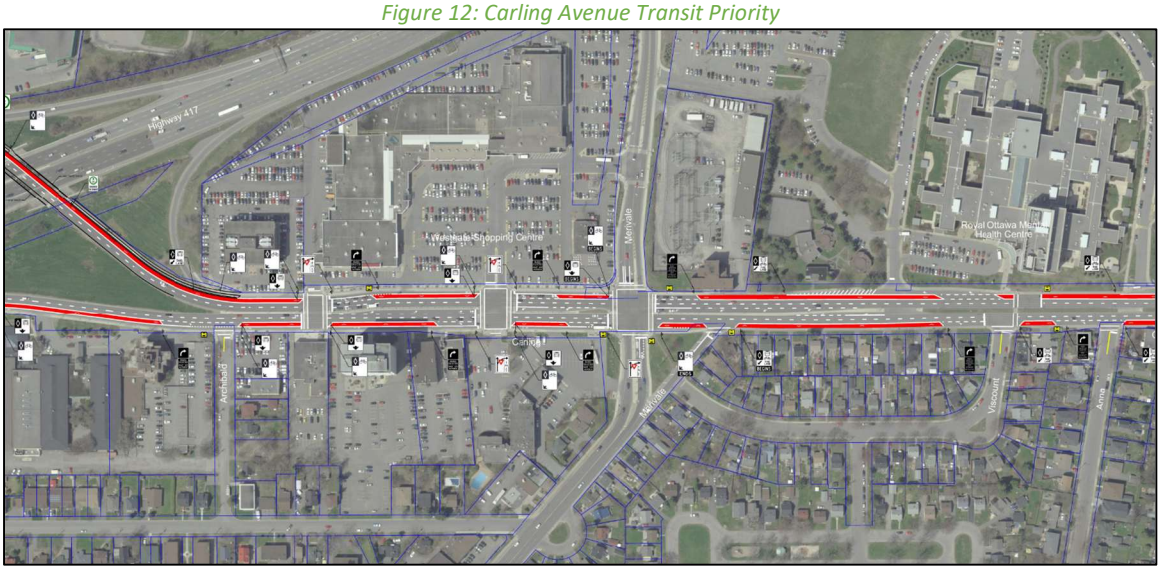
The Transportation Master Plan (2025) includes a Capital Infrastructure Plan identifying transportation investment to support the forecasted growth and strategic connectivity and livability targets for the City. It also identifies committed projects, and a subset of priority projects that are expected to be implemented by 2046 based on current affordability assumptions. Area projects anticipated to impact travel in the study area that are included within the Capital Infrastructure Plan are:

- Active Transportation Network
  - Priority
    - Sidewalk along Coldrey Avenue from Kirkwood Avenue to Laperriere Avenue
- Transit Network
  - Priority
    - Carling Avenue continuous bus lanes from Lincoln Fields Station to Sherwood Drive
    - Merivale Road transit priority corridor
    - Fisher Avenue transit priority corridor
  - Needs-Based
    - Carling Transitway median BRT from Lincoln Fields Station to Dow's Lake Station
- Road Network
  - Priority
    - Merivale Road urbanization and Mainstreet improvement from Carling Avenue to Kirkwood Road (Planned within 2-3 years)

2.3.1.2 Carling Avenue Transit Priority Study

The study of Carling Avenue Transit Priority between Lincoln Fields and Bronson Avenue includes converting the existing outside lane to a transit-only lane in both sides of the road. Figure 12 illustrates the modifications within the study area. Since the timing of implementation is currently unknown, it is assumed that it will occur beyond the study horizon years.

Figure 12: Carling Avenue Transit Priority



Source: https://documents.ottawa.ca/carling_churchill_bronson_en.pdf Accessed: August 13, 2025

2.3.1.3 Merivale Road Transit Priority Study

The preliminary study for Merivale Road Transit Priority from Carling Avenue to Baseline Road, includes peak period curbside transit-only lanes, on-street parking during off-peak periods, and signal timing modifications. Since the timing of implementation is currently unknown, it is assumed that it will occur beyond the study horizon years.

2.3.2 Other Study Area Developments

1330 Carling Avenue & 815 Archibald Street

The proposed development application includes a zoning amendment application for the construction of a 24-storey mixed-use building, comprising a total of 175 units and approximately 792 m² of ground floor retail space. The development was initially anticipated to be built out in 2023 but is yet to be constructed and will be assumed to be built out by 2032. The development is forecasted to generate 54 new AM and 69 new PM two-way peak-hour auto trips. (CGH Transportation, 2020)

1376 Carling Avenue

The proposed development includes a site plan application for the construction of two high-rise mixed-use towers and an eight-storey residential building, comprising a total of 592 units and 6,200 ft² ground floor commercial space. The development is forecasted to generate 64 new AM and 78 new PM two-way peak-hour auto trips. The development is currently under construction. (Parsons, 2021)

1309 Carling Avenue

The proposed development includes a site plan application for the redevelopment of the existing shopping mall excluding the portion occupied by the existing Shopping Drug Mart, and the construction of a one-storey 2,527 m² retail food store. No TIA is available as part of this application.

1240 Carling Avenue

The proposed development includes a site plan application for the construction of a three-storey low-rise apartment building with 18 units. No TIA is available as part of this application.

1160 Carling Avenue & 16 Anna Avenue
The proposed development includes a zoning amendment application for the conversion of the existing detached dwelling into a 62 m^2 day care. No TIA is available as part of this application.

917 Merivale Road
The proposed development includes a site plan application for the construction of a six-storey building comprising a total of 20 units. No TIA is available as part of this application.

3 Study Area and Time Periods

3.1 Study Area

The study area will include the intersections of:

- Carling Avenue at
  - Westgate Mall Access W
  - Westgate Mall Access E
  - Merivale Road
- Merivale Road at
  - Westgate Mall Access N
  - Thames Street
  - Coldrey Avenue/Crerar Avenue

The boundary road will be Carling Avenue and Thames Street and screenline 27 is beyond 1km from the site and will not be analyzed as part of this study.

3.2 Time Periods

As the proposed development is composed entirely of residential units the AM and PM peak hours will be examined.

3.3 Horizon Years

The anticipated build-out year is 2027. As a result, the full build-out plus five years horizon year is 2032.

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 Merivale have been summarized in Table 8.

Table 8: TRANS Trip Generation Manual Recommended Mode Shares – Merivale

Travel Mode	Multi-Unit (High-Rise)	
	AM	PM
Auto Driver	41%	41%
Auto Passenger	6%	11%
Transit	42%	33%
Cycling	2%	2%
Walking	8%	13%
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 9 summarizes the person trip rates for the proposed residential land use for each peak period.

Table 9: Trip Generation Person Trip Rates by Peak Period

Land Use	Land Use Code	Peak Period	Vehicle Trip Rate	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 10 summarizes the total person trip generation for the residential land uses and for the non-residential land uses.

Table 10: Person Trip Generation by Peak Period/Hour

Land Use	Units	AM Peak Period			PM Peak Period		
		In	Out	Total	In	Out	Total
Multi-Unit High-Rise	201	50	111	161	105	76	181

Using the above mode share targets, 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 11 summarizes the residential trip generation by mode and peak hour.

Table 11: 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	41%	10	22	32	41%	18	15	33
	Auto Passenger	6%	2	4	5	11%	5	4	9
	Transit	42%	11	26	37	33%	16	12	28
	Cycling	2%	1	1	2	2%	1	1	2
	Walking	8%	2	6	8	13%	7	5	12
	Total	**100%**	**26**	**59**	**84**	**100%**	**47**	**37**	**84**

As shown above, a total of 32 AM and 33 PM new peak hour two-way vehicle trips are projected as a result of 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 Merivale. Table 12 below summarizes the distributions.

Table 12: OD Survey Distribution – Merivale

To/From	Residential % of Trips
North	10%
South	30%
East	35%
West	25%
Total	**100%**

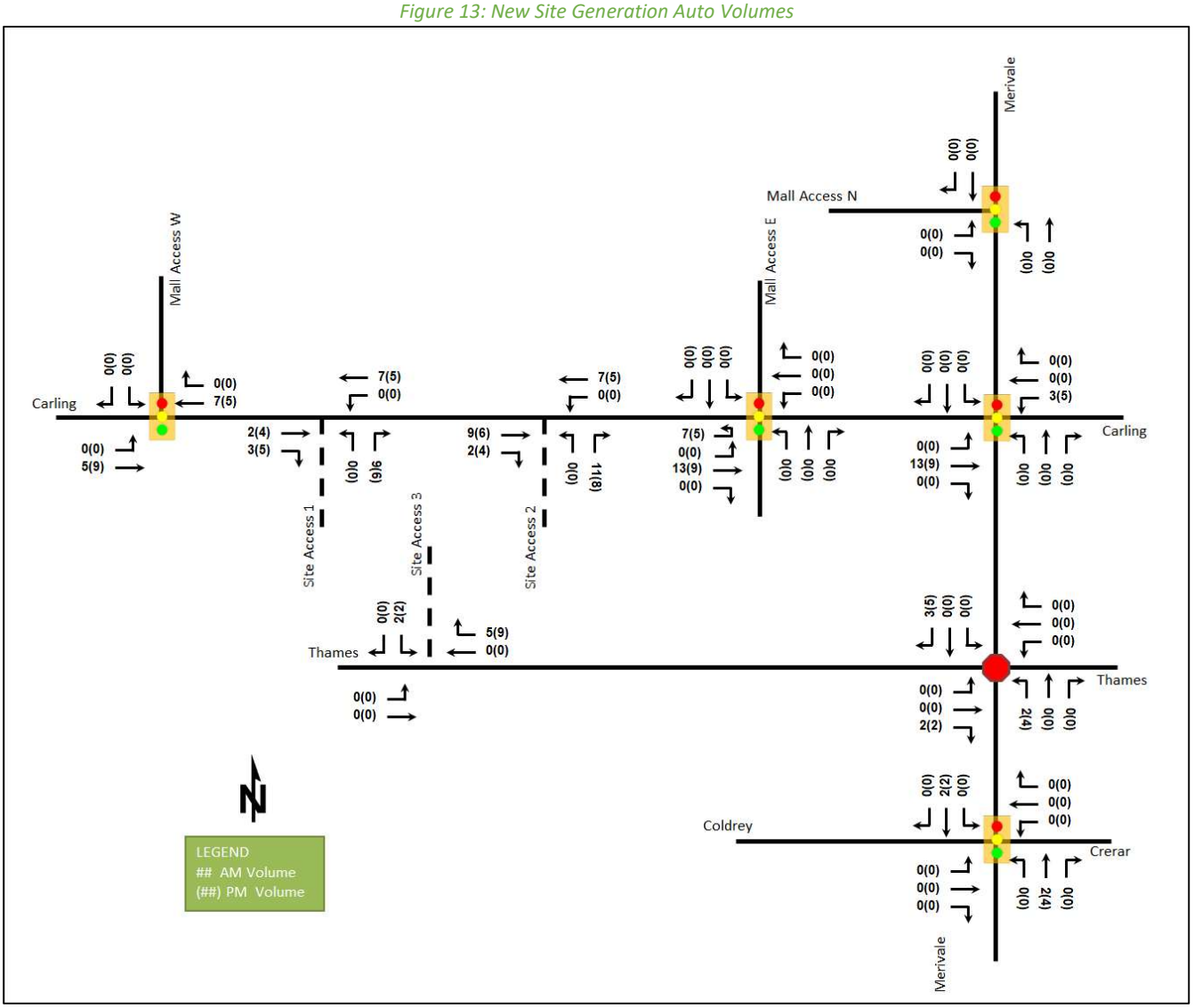
4.4 Trip Assignment

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 13 summarizes the proportional assignment to the study area roadways, and Figure 13 illustrates the new site generated volumes.

Table 13: Trip Assignment

To/From	Inbound Via	Outbound Via
North	5% Carling Ave (W), 5% Carling Ave (E)	10% Carling Ave (E)
South	10% Carling Ave (W), 20% Merivale Rd (S)	5% Carling Ave (W), 15% Carling Ave (E), 10% Merivale Rd (S)
East	10% Carling Ave (W), 25% Carling Ave (E)	35% Carling Ave (E)
West	25% Carling Ave (W)	25% Carling Ave (W)
Total	**100%**	**100%**

Figure 13: New Site Generation Auto Volumes



5 Exemption Review

Table 14 summarizes the exemptions for this TIA.

Table 14: 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	Exempt
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

Module	Element	Explanation	Exempt/Required
Transit	4.7.1 Transit Route Capacity	Only required when the development generates more than 75 transit trips	Exempt
	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 development is a 20-storey residential building. Vehicle parking is located in three parking levels below grade and 23 surface parking spaces. Bicycle parking is located within the parking levels accessed via a ramp with a maximum 10% grade. Elevators are additionally provided from the parking levels for cyclists' ease of use. The main building entrance is located on the east side of the building.

Park area has been proposed along the Thames Street frontage and hard surface connections to this facility are proposed from the building. A hard surface connection is also proposed from the building to Carling Avenue, which together with the existing drive aisles on either side of the existing building, provides access to Carling Avenue. Pedestrian crossings are proposed along the drive aisle connecting the proposed development to the existing building and internal walkways.

Bus stops are located on the east leg of the intersection of Carling Avenue at the western Westgate Mall access, within a 200-metre walk of the building entrance.

The infrastructure TDM checklist is provided in Appendix E.

6.2 Circulation and Access

Vehicular access is provided via a new 6.1-metre wide two-way full-movement access on Thames Street as well as two existing 6.3-metre wide two-way right-in/right-out accesses on Carling Avenue. These accesses connect to internal drive aisles accessing surface parking and the underground parking ramp. Garbage collection will occur at the southeast corner of the existing building within a designated loading/garbage collection bay and emergency services can access the site drive aisles. Turning templates are provided in Appendix F.

7 Parking

7.1 Parking Supply

The site is proposed to include a total of 377 vehicle parking spaces, including 23 spaces at grade, and 211 bicycle parking spaces. A total of 169 existing spaces are being replaced within this total count and 208 spaces are being provided for the proposed building.

According to the parking provisions in the Zoning By-Law for Area X, the minimum vehicle parking requirement for the site is 95 vehicle parking spaces for residents and 19 parking spaces for visitors, for a total of 114 parking spaces, and the minimum bicycle parking requirement is 101 bicycle parking spaces.

The below-grade parking levels and surface parking lot will serve both the existing and proposed residential buildings, replacing a large portion of the surface parking for the existing building. It is noted that the existing building includes approximately 200 units, which would typically require 94 parking spaces for residents and 19 parking spaces for visitors, for a total of 113 vehicle parking spaces. Therefore, the combined site exceeds the minimum vehicle parking requirements from the Zoning By-Law. No change to the bicycle parking for the existing site is proposed, and the proposed building exceeds the minimum bicycle parking requirements.

Within the total parking spaces for the overall site, 10 accessible parking spaces are provided, meeting the minimum requirement of eight spaces in accordance with the Zoning By-Law.

8 Boundary Street Design

Table 15 summarizes the MMLOS analysis for the boundary streets of Carling Avenue and Thames Street. The existing and future conditions for Thames Street will be the same and are considered in one row. The proposed design for the Carling Avenue Transit Priority project has been included in the future conditions. The boundary street analysis is based on the policy area of "Arterial Mainstreet" for Carling Avenue and "General Urban Area" for Thames Street. The MMLOS worksheets has been provided in Appendix G.

Table 15: Boundary Street MMLOS Analysis

Segment		Pedestrian LOS		Bicycle LOS		Transit LOS		Truck LOS	
		PLOS	Target	BLOS	Target	TLOS	Target	TrLOS	Target
Carling Avenue	Ex.	F	C	D	D	D	B	C	D
	Fut.	D	C	A	D	B	B	C	D
Thames Street	Ex./Fut.	F	C	A	D	-	-	-	-

Carling Avenue and Thames Street will not meet the pedestrian LOS targets in the existing and future conditions. To meet the theoretical pedestrian LOS target on Carling Road, the operating speed would need to be reduced to 50-60 km/h. The improvement can be reviewed as part of the implementation of the Carling Avenue Transit Priority project to help achieve the City's desired pedestrian MMLOS objectives for the boundary street.

To meet the theoretical pedestrian LOS target on Thames Street, the operating speed would need to be reduced to 30 km/h or a sidewalk with a boulevard greater than 0.5 metres.

Carling Avenue and Thames Street meet the bicycle LOS target in the existing and future conditions.

Carling Avenue does not meet the transit LOS target in the existing conditions, although this boundary street is anticipated to meet the TLOS target in the future conditions once the Carling Avenue Transit Priority is completed.

9 Transportation Demand Management

9.1 Context for TDM

The mode shares used within the TIA represent the unmodified district mode shares. Overall, the modal shares are likely to be achieved and supporting TDM measures should be provided.

The subject site is within Carling Arterial Mainstreet Design Priority Area.

Total bedrooms within the development is subject to the final unit count and layout selections by purchasers. No age restrictions are noted.

9.2 Need and Opportunity

The subject site has been assumed to rely predominantly on auto travel and transit, and those assumptions have been carried through the analysis. Most study area intersections are anticipated to have residual capacity and as the unmodified district mode shares have been applied, risks to other network users from failing to meet mode share targets are low.

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-month 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 purchase/rental costs

10 Access Intersections Design

10.1 Location and Design of Access

The subject development includes the existing right-in/right-out accesses on Carling Avenue and proposes a new two-way full-movement access on Thames Street. The accesses on Carling Avenue are located approximately 163 metres and 208 metres from Carling Avenue's intersection with Merivale Road, approximately 63 metres and 108 metres from its intersection with the Westgate Mall eastern access, and approximately 56 metres and 10 metres from its intersection with the Westgate Mall western access. No changes are proposed for the existing accesses, and this was confirmed as acceptable by City Staff in the pre-consultation meeting feedback from January 2025. Parking spaces along the drive aisle on the west side of the existing building are replaced with a pedestrian walkway.

The proposed access on Thames Street is located 1.2 metres from the eastern property line, and approximately 91 metres from its intersection with Merivale Road, and approximately 129 metres from its intersection with Archibald Street. The Private Approach By-Law (PABL) requires a 3.0-metre offset from the adjacent property line. As the access does not impact the adjacent driveway, approval is recommended under PABL Section 25(1)(r) for spacing less than 3.0 metres from an adjoining property. The access meets the 45-metre offset requirement from the adjacent road right-of-way to both Merivale Road and Archibald Street, as required by the Private Approach By-Law.

The Geometric Design Guide for Canadian Roads (TAC, 2017) suggests minimum corner clearance values for driveways of 70.0 metres along arterial road and 15.0 metres along local road. Therefore, the site accesses meet this guideline given the distances to the adjacent intersecting roads.

The geometry of the site accesses include:

- The existing eastern access on Carling Avenue is 6.3-meter wide at its typical width and 14.3 the curb line, corner radii of 4.0 metres.

- The existing western access on Carling Avenue is 6.3-meter wide at its typical width and 12.3 the curb line, corner radii of 3.0 metres.
- The proposed access on Thames Street is proposed to be 6.1-meter wide at its typical width and 15.1 at the curb line, corner radii of 4.5 metres.

The maximum width of a two-way access from the Private Approach By-Law is 9.0 metres. This width is noted within the By-Law to apply to both the street (right-of-way) line as well as the roadway edge, however its application at the roadway edge is not possible to meet given the minimum driveway width of 6.0 metres from the Zoning By-Law, combined with City Standard SC7.1. Therefore, the proposed driveway widths are recommended to be approved.

According to the TAC Geometric Design Guidelines, for the apartment units between 100 and 200, the suggested minimum throat length is 25 metres for access onto arterial roads. No value is provided by TAC as a suggested minimum clear throat length for accesses onto local roads.

The throat length at the existing eastern access on Carling Avenue to the first on-site conflict is approximately 8.3 metres, and the throat length at the western access is approximately 42.0 metres. Based on the forecasted trip generation for both the existing and proposed residential buildings, 18 inbound auto trips are expected during the AM peak hour and 35 inbound auto trips during the PM peak hour. Assuming all the site trips used a single access, this equates to an average of approximately one vehicle arriving every three minutes during the AM peak and one vehicle arriving every two minutes during the PM peak. Given this, the current throat length on the eastern access is considered sufficient to limit spillback onto Carling Avenue. The throat length on the western access meets the suggested minimum throat length.

The throat length from the proposed access on Thames Street to the first on-site conflict is approximately 36.0 metres and is considered adequate.

11 Summary of Improvements Indicated and Modifications Options

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

Proposed Site and Screening

- The proposed site includes replacing the existing surface parking area with a 20-storey residential building with a total of 201 units
- The existing Carling Avenue accesses are intended to remain with an additional access proposed to Thames Street
- The development is proposed to be completed as a single phase by 2027
- The development is within Carling Arterial Mainstreet Design Priority Area
- This study has been prepared to support a zoning by-law amendment application
- The trip generation, location, and safety triggers were met for the TIA Screening

Existing Conditions

- Carling Avenue and Merivale Road are arterial roads, and Thames Street, Archibald Street, Coldrey Avenue, and Crerar Avenue are local roads in the study area
- Sidewalks are provided along both sides of Carling Avenue, Merivale Road, Crerar Avenue, and on the south side of Coldrey Avenue and Thames Street approximately 40 metres west of Merivale Road

- Bike lanes are present on both sides of Carling Avenue west of Merivale Road and on Merivale Road north of Carling Avenue
- Cycletracks are also provided on the north side of Carling Avenue approximately 65 metres west of western Westgate Mall access, extending westward
- During both the AM and PM peak hours, the study area intersections overall operations are acceptable with capacity issues noted at the intersection of Carling Avenue at Merivale Road
- One angle collision involving cyclist was noted at the intersection of Carling Avenue at Merivale Road and one pedestrian collision occurred at the intersection of Carling Avenue at Westgate Shopping Mall east access
- One fatal pedestrian collision at the intersection of Merivale Road at Thames Street occurred at a location with no designated crossing

Planned Conditions

- Sidewalk along Coldrey Avenue from Kirkwood Avenue to Laperriere Avenue is identified as a priority project within the TMP Active Transportation Network
- Carling Avenue continuous bus lanes from Lincoln Fields Station to Sherwood Drive, Merivale Road transit priority corridor, and Fisher Avenue transit priority corridor are identified as transit priority projects, and Carling Transitway median BRT from Lincoln Fields Station to Dow's Lake Station is identified as a needs-based project within the TMP Transit Network
- Merivale Road urbanization and Mainstreet improvement from Carling Avenue to Kirkwood Road is identified as a priority project within the TMP Road Network

Development Generated Travel Demand

- The proposed development is forecasted produce 84 two-way people trips during the AM peak hour and 84 two-way people trips during the PM peak hour
- Of the forecasted people trips, 32 two-way trips will be vehicle trips during the AM peak hour, and 33 two-way trips will be vehicle trips during the PM peak hour
- Of the forecasted trips, 10% are anticipated to travel north, 30% to the south, 35% to the east, and 25% to the west

Development Design

- The proposed development is a 20-storey residential building
- Vehicle parking is located in three parking levels below grade and 23 surface parking spaces
- Bicycle parking is located within the parking levels accessed via a ramp with a maximum 10% grade
- Park area has been proposed along the Thames Street frontage and hard surface connections to this facility are proposed from the building
- Pedestrian access to the sidewalk on Carling Avenue is proposed via a new hard surface connection along with the existing drive aisles on either side of the existing building
- Bus stops are located on the east leg of the intersection of Carling Avenue at the western Westgate Mall access, within a 200-metre walk of the building entrance
- Vehicular access is provided via a new 6.1-metre wide two-way full-movement access on Thames Street as well as two existing 6.3-metre wide two-way right-in/right-out accesses on Carling Avenue
- The accesses connect to internal drive aisles accessing surface parking and the underground parking ramp

- Garbage collection will occur at the southeast corner of the existing building within a designated loading/garbage collection bay and emergency services can access the site drive aisles

Parking

- The site is proposed to include a total of 377 vehicle parking spaces, including 23 spaces at grade, and 211 bicycle parking spaces
- The parking total includes replacing 169 parking spaces that would be removed on site, with 208 total parking spaces allocated for the proposed building
- The existing and proposed developments meet the minimum vehicle parking requirements from the Zoning By-Law
- No change to the bicycle parking for the existing site is proposed, and the proposed building meets the minimum bicycle parking requirements

Boundary Street Design

- Carling Avenue and Thames Street will not meet the pedestrian LOS targets in the existing and future conditions
- To meet the theoretical pedestrian LOS target on Carling Road, the operating speed would need to be reduced to 50-60 km/h
- To meet the theoretical pedestrian LOS target on Thames Street either a speed reduction to 30 km/h, or sidewalk with a boulevard greater than 0.5 metres would be required
- Carling Avenue and Thames Street meet the bicycle LOS target in the existing and future conditions
- Carling Avenue does not meet the transit LOS target in the existing conditions, although this boundary street is anticipated to meet the TLOS target in the future conditions once the Carling Avenue Transit Priority is completed

TDM

- Supportive TDM measures to be included within the proposed development should 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-month 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 purchase/rental costs

Intersection Design

- The existing eastern access on Carling Avenue is 6.3-meter wide at its typical width and 14.3 the curb line, corner radii of 4.0 metres and the existing western access is 6.3-meter wide at its typical width and 12.3 the curb line, corner radii of 3.0 metres
- The proposed access on Thames Street is proposed to be 6.1-meter wide at its typical width and 15.1 at the curb line, corner radii of 4.5 metres
- The proposed access meets the offset requirement from the adjacent road right-of-way from the Private Approach By-Law and is recommended for approval with a spacing of less than 3.0 metres from the adjoining property
- Throat lengths are considered adequate, and corner clearance meets the TAC suggested minimum values

12 Conclusion

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

Prepared By:

Reihaneh Azhdar

Reihaneh Azhdar
Transportation Engineering, Intern

Reviewed By:

Andrew Harte, P.Eng.
Senior Transportation Engineer

Appendix A

TIA Screening Form and PM Certification Form

6 Plaza Court
Ottawa, ON K2H 7W1

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

Date: 2025-08-19
Project Number: 2025-123
Project Reference: 1316 Carling

1.1 Description of Proposed Development	
Municipal Address	1316 Carling Avenue
Description of Location	West of Merivale Road bounded by Carling Avenue to the north and Thames Street to the south
Land Use Classification	Arterial Mainstreet Zone (AM10), Residential Fourth Density Zone (R4UC)
Development Size	Replacing the surface parking area with a 20-storey residential building
Accesses	Existing accesses on Carling Avenue along with an additional access proposed to Thames Street
Phase of Development	Single
Buildout Year	2027
TIA Requirement	Full TIA Required

1.2 Trip Generation Trigger		
Land Use Type	Multi-Family (High-Rise)	
Development Size	183	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	Existing driveway
Is the development in a Hub, a Protected Major Transit Station Area (PMTSA), or a Design Priority Area (DPA)?	Yes	Development is in a Hub and Carling Ave is Mainstreet Corridor within 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	Existing driveway
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?	Yes	One fatal pedestrian collision at the intersection of Merivale Road at Thames Street
Does the development include a drive-thru facility?	No	
Safety Trigger	Yes	

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 registered[1] 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.

City Of Ottawa
Planning, Real Estate and Economic Development
110 Laurier Avenue West, 4th fl.
Ottawa, ON
K1P 1J1
Tel. : 613-580-2424
Fax: 613-560-6006

Revision Date: June 2023

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

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: 6 Plaza Court
City / Postal Code: Ottawa, K2H 7W1
Telephone / Extension: 613-697-3797
Email Address: andrew.harte@cghtransportation.com

Stamp

Revision Date: June 2023

Appendix B

Turning Movement Counts

Turning Movement Count

Summary Report Including Peak Hours, AADT and Expansion Factors

All Vehicles Except Bicycles and Personal E-Transportation

Carling Avenue & Westgate Shopping Centre East Access — Ottawa, ON

Survey Date: Tuesday, August 05, 2025 **Start Time:** 0700 **AADT Factor:** 0.9

Weather AM: Cloudy 17° C **Survey Duration:** 8 Hrs. **Survey Hours:** 0700-1000, 1130-1330 & 1500-1800

Weather PM: Mostly Sunny 25° C **Surveyor(s):** J. Mousseau

	Carling Ave. Eastbound					Carling Ave. Westbound						Best Western Northbound					Westgate SC East Southbound						
Time Period	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	58	1077	8	36	1179	3	637	30	1	671	1850	2	1	8	0	11	20	2	18	0	40	51	1901
0800-0900	90	1191	4	52	1337	2	793	49	3	847	2184	10	1	7	0	18	31	0	26	0	57	75	2259
0900-1000	113	983	6	60	1162	3	754	92	0	849	2011	6	1	16	0	23	52	2	45	0	99	122	2133
1130-1230	141	611	6	40	798	2	856	97	0	955	1753	7	2	6	0	15	82	0	86	0	168	183	1936
1230-1330	132	709	6	53	900	5	822	96	0	923	1823	5	0	3	0	8	78	1	63	0	142	150	1973
1500-1600	142	1110	16	61	1329	6	1367	103	0	1476	2805	4	2	5	0	11	98	2	88	0	188	199	3004
1600-1700	132	1126	15	46	1319	12	1479	82	0	1573	2892	7	2	6	0	15	104	1	72	0	177	192	3084
1700-1800	116	1081	3	40	1240	18	1146	82	3	1249	2489	5	1	11	0	17	74	3	44	0	121	138	2627
Totals	924	7888	64	388	9264	51	7854	631	7	8543	17807	46	10	62	0	118	539	11	442	0	992	1110	18917

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	1284	10964	89	539	12877	71	10917	877	10	11875	24752	64	14	86	0	164	749	15	614	0	1379	1543	26295

Average daily 12-hour vehicle volumes. These volumes are calculated by multiplying the equivalent 12-hour totals by the AADT factor of: 0.9

AADT 12-hr	1156	9868	80	485	11589	64	9825	789	9	10687	22277	58	13	78	0	148	674	14	553	0	1241	1389	23665

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	1514	12927	105	636	15182	84	12871	1034	11	14000	29182	75	16	102	0	193	883	18	724	0	1626	1819	31001

AADT and expansion factors provided by the City of Ottawa

AM Peak Hour Factor ➡ 0.94												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.	Gr. Tot.
0815-0915	113	1191	4	60	1368	2	782	61	2	847	2215	10	1	8	0	19	26	2	30	0	58	77	2292
OFF Peak Hour Factor ➡ 0.97												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.	Gr. Tot.
1230-1330	132	709	6	53	900	5	822	96	0	923	1823	5	0	3	0	8	78	1	63	0	142	150	1973
PM Peak Hour Factor ➡ 0.95												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.	Gr. Tot.
1545-1645	130	1122	15	44	1311	12	1475	81	0	1568	2879	3	3	7	0	13	112	1	85	0	198	211	3090

Comments:

OC Transpo and Para Transpo buses, private buses and school buses comprise 20.20% of the heavy vehicle traffic. Eastbound traffic backs up from Merivale Road to west of the Westgate access, primarily during the P.M. time period.

Notes:

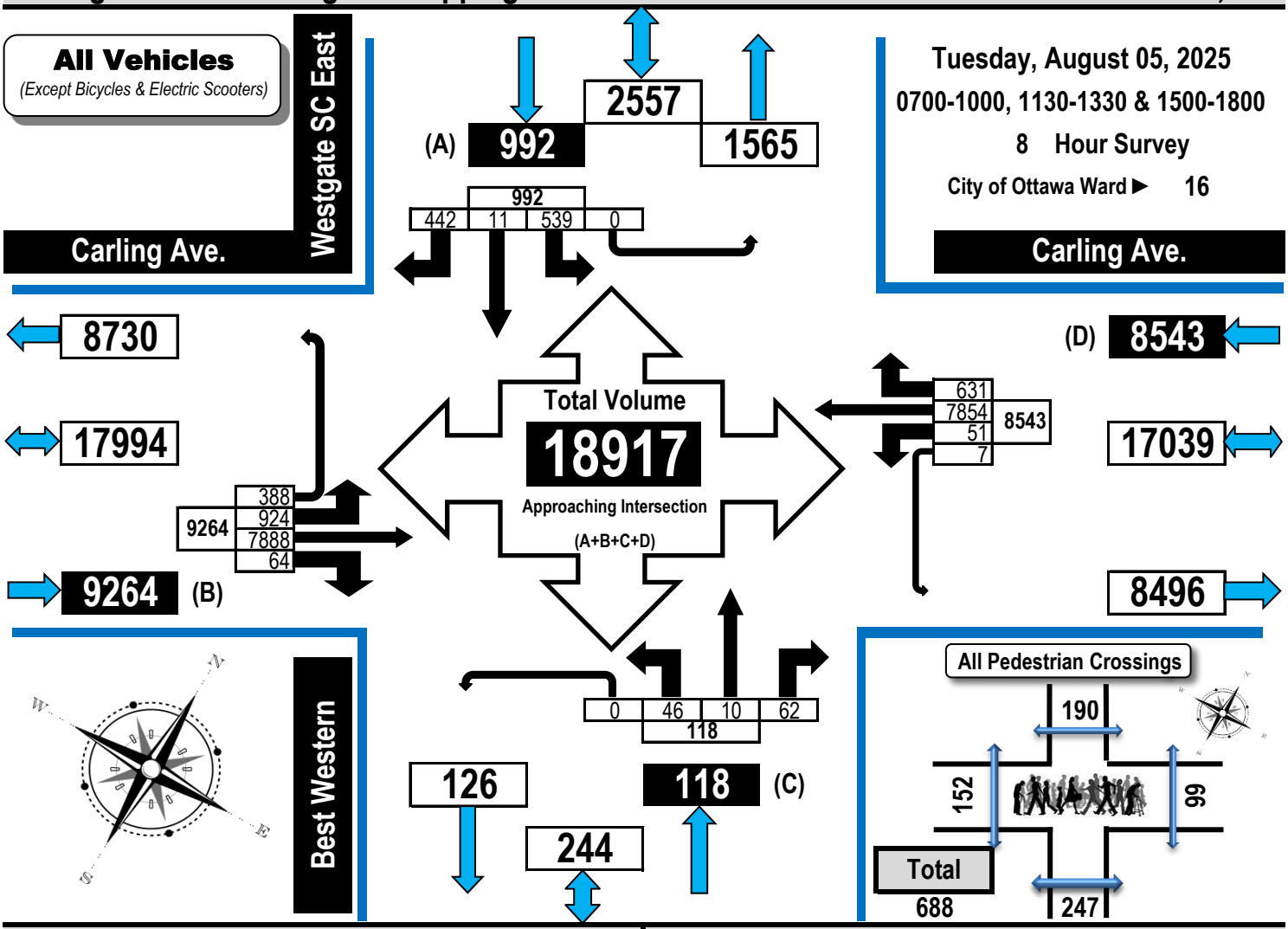
1. Includes all vehicle types except bicycles, electric bicycles, and electric scooters.
2. When expansion and AADT factors are applied, the results will differ slightly due to rounding.

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

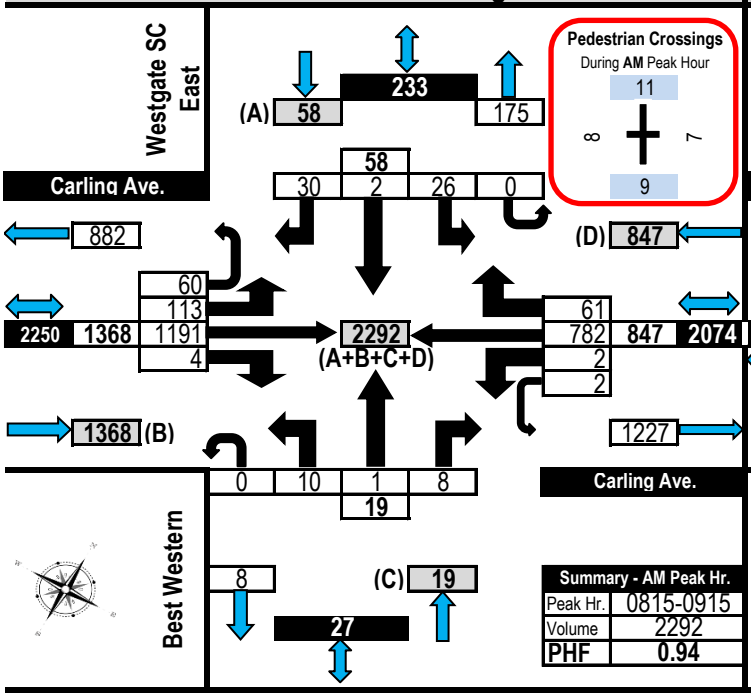
Carling Avenue & Westgate Shopping Centre East Access — Ottawa, ON

All Vehicles
(Except Bicycles & Electric Scooters)

Tuesday, August 05, 2025
0700-1000, 1130-1330 & 1500-1800
8 Hour Survey
City of Ottawa Ward ▶ 16



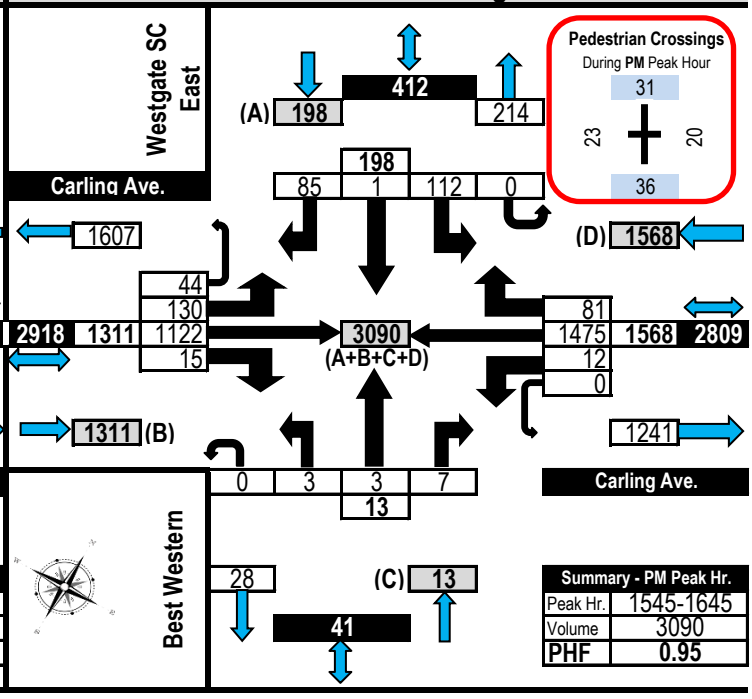
AM Peak Hour Flow Diagram



Summary - AM Peak Hr.

Peak Hr.	0815-0915
Volume	2292
PHF	0.94

PM Peak Hour Flow Diagram



Summary - PM Peak Hr.

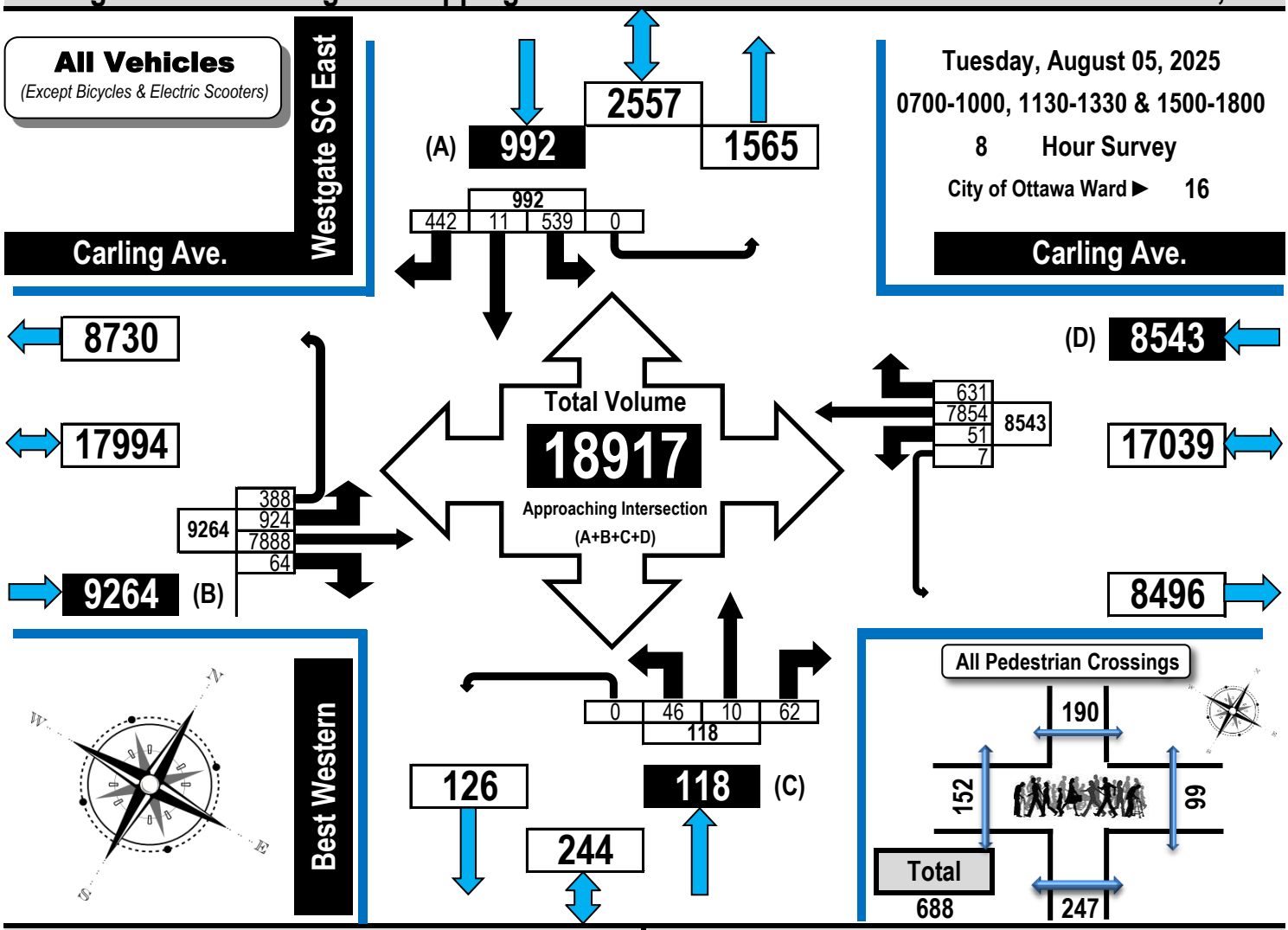
Peak Hr.	1545-1645
Volume	3090
PHF	0.95

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

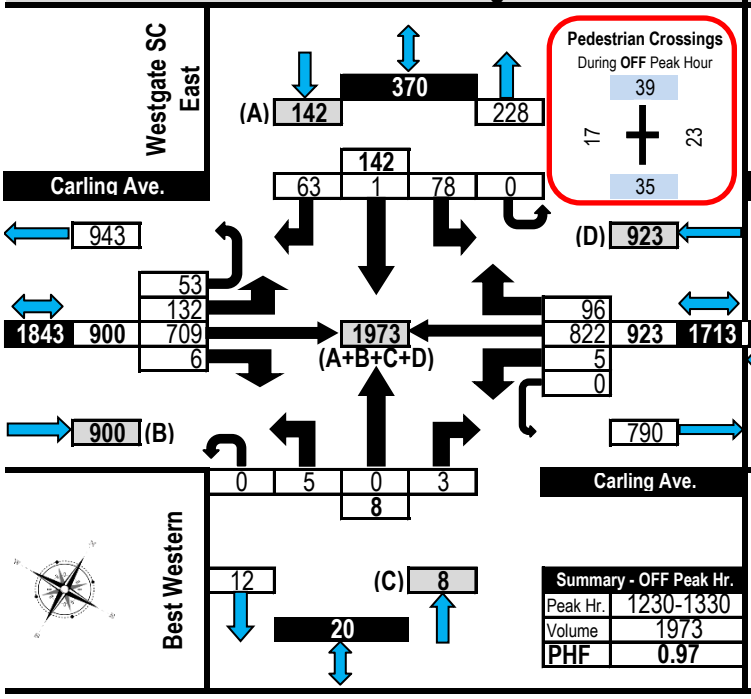
Carling Avenue & Westgate Shopping Centre East Access — Ottawa, ON

All Vehicles
(Except Bicycles & Electric Scooters)

Tuesday, August 05, 2025
0700-1000, 1130-1330 & 1500-1800
8 Hour Survey
City of Ottawa Ward ▶ 16

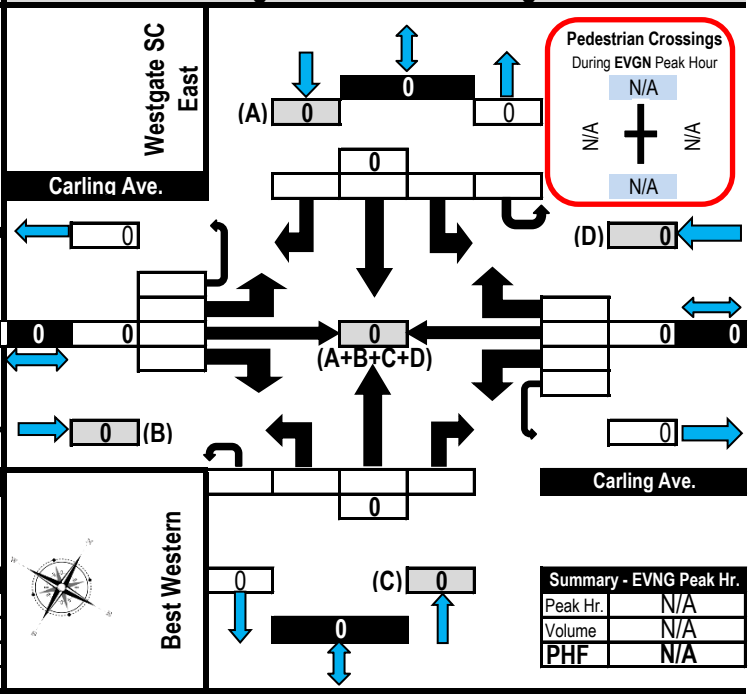


Off Peak Hour Flow Diagram



Summary - OFF Peak Hr.	
Peak Hr.	1230-1330
Volume	1973
PHF	0.97

Evening Peak Hour Flow Diagram



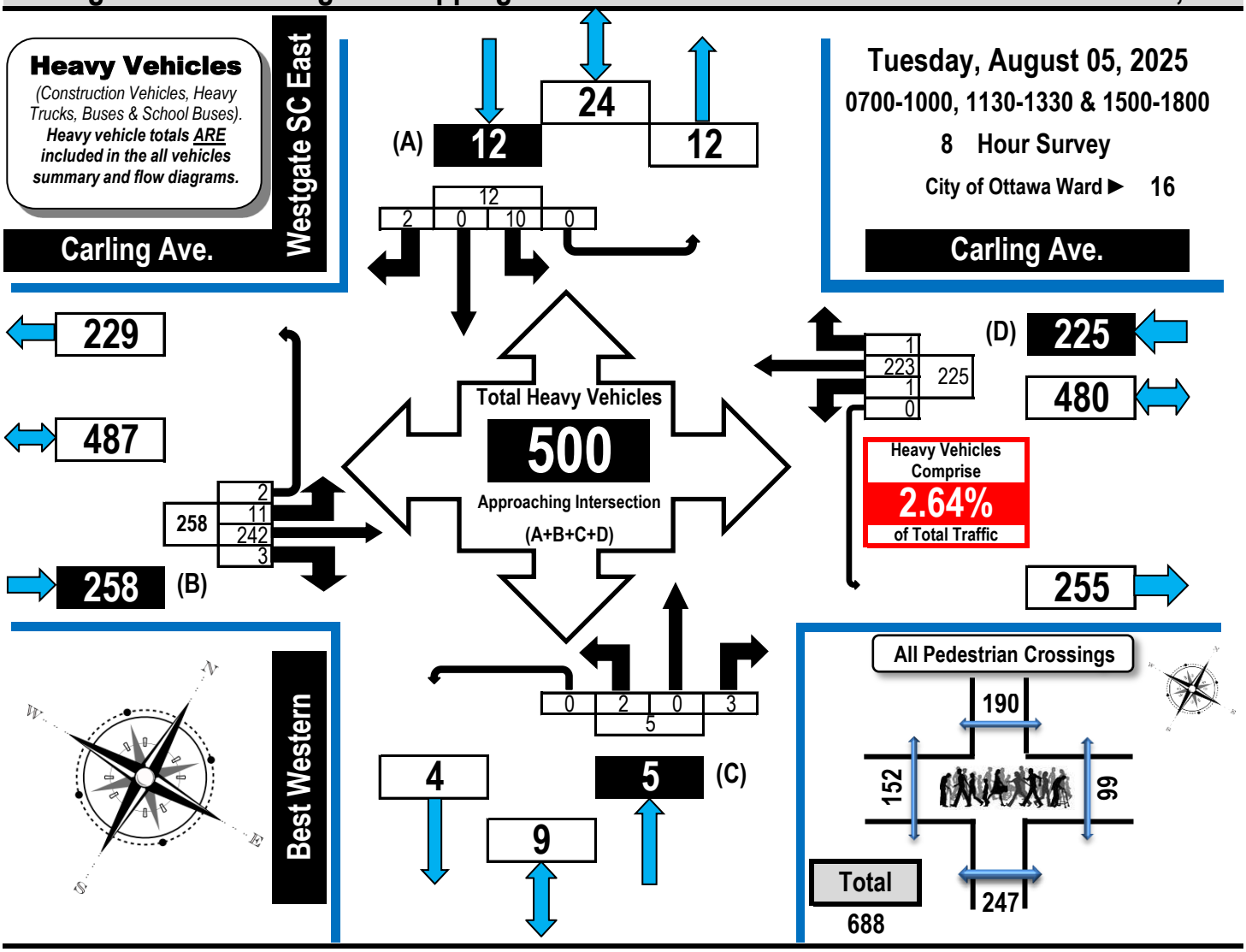
Summary - EVNG Peak Hr.	
Peak Hr.	N/A
Volume	N/A
PHF	N/A

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

Carling Avenue & Westgate Shopping Centre East Access — **Ottawa, ON**

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

Tuesday, August 05, 2025
0700-1000, 1130-1330 & 1500-1800
8 Hour Survey
City of Ottawa Ward ► 16



	Carling Ave.					Carling Ave.					Best Western					Westgate SC East					
	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	2	34	0	0	36	0	27	0	0	27	0	0	0	0	0	0	0	0	0	0	63
0800-0900	3	34	0	0	37	0	32	1	0	33	0	0	1	0	1	2	0	0	0	2	73
0900-1000	2	35	1	0	38	0	31	0	0	31	1	0	1	0	2	1	0	0	0	1	72
1130-1230	2	31	0	0	33	0	40	0	0	40	0	0	0	0	0	2	0	0	0	2	75
1230-1330	0	32	1	1	34	1	36	0	0	37	1	0	1	0	2	3	0	1	0	4	77
1500-1600	1	28	1	1	31	0	27	0	0	27	0	0	0	0	0	1	0	1	0	2	60
1600-1700	0	27	0	0	27	0	18	0	0	18	0	0	0	0	0	0	0	0	0	0	45
1700-1800	1	21	0	0	22	0	12	0	0	12	0	0	0	0	0	1	0	0	0	1	35
Totals	11	242	3	2	258	1	223	1	0	225	2	0	3	0	5	10	0	2	0	12	500

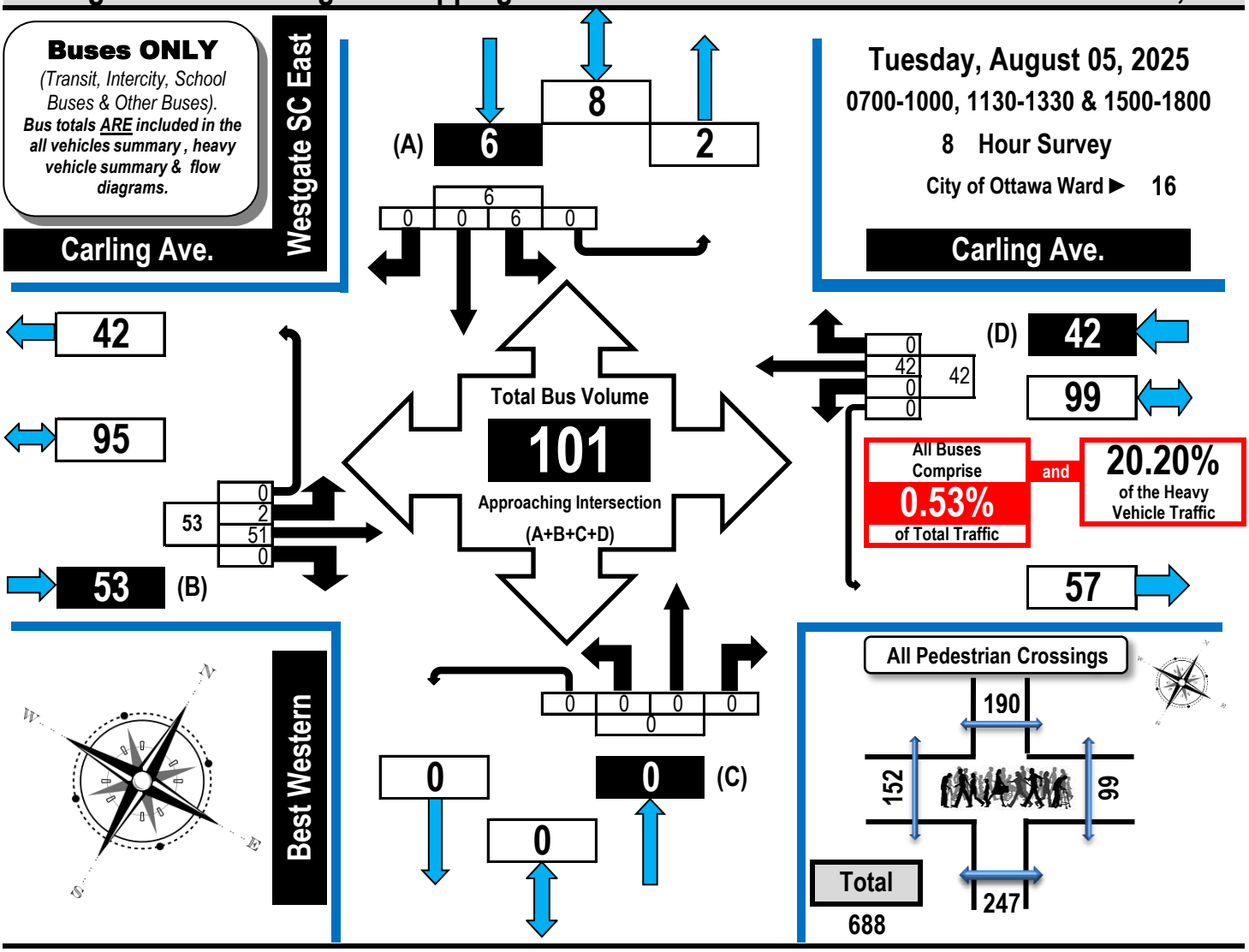
Comments:
OC Transpo and Para Transpo buses, private buses and school buses comprise 20.20% of the heavy vehicle traffic.
Eastbound traffic backs up from Merivale Road to west of the Westgate access, primarily during the P.M. time period.

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

Carling Avenue & Westgate Shopping Centre East Access — Ottawa, ON

Buses ONLY
(Transit, Intercity, School Buses & Other Buses).
Bus totals ARE included in the all vehicles summary , heavy vehicle summary & flow diagrams.

Tuesday, August 05, 2025
0700-1000, 1130-1330 & 1500-1800
8 Hour Survey
City of Ottawa Ward ► 16



	Carling Ave. Eastbound					Carling Ave. Westbound					Best Western Northbound					Westgate SC East 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	0	6	0	0	6	0	7	0	0	7	0	0	0	0	0	0	0	0	0	0	13
0800-0900	1	6	0	0	7	0	5	0	0	5	0	0	0	0	0	1	0	0	0	1	13
0900-1000	0	6	0	0	6	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	10
1130-1230	0	4	0	0	4	0	3	0	0	3	0	0	0	0	0	2	0	0	0	2	9
1230-1330	0	7	0	0	7	0	8	0	0	8	0	0	0	0	0	2	0	0	0	2	17
1500-1600	0	5	0	0	5	0	6	0	0	6	0	0	0	0	0	0	0	0	0	0	11
1600-1700	0	7	0	0	7	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	11
1700-1800	1	10	0	0	11	0	5	0	0	5	0	0	0	0	0	1	0	0	0	1	17
Totals	**2**	**51**	**0**	**0**	**53**	**0**	**42**	**0**	**0**	**42**	**0**	**0**	**0**	**0**	**0**	**6**	**0**	**0**	**0**	**6**	**101**

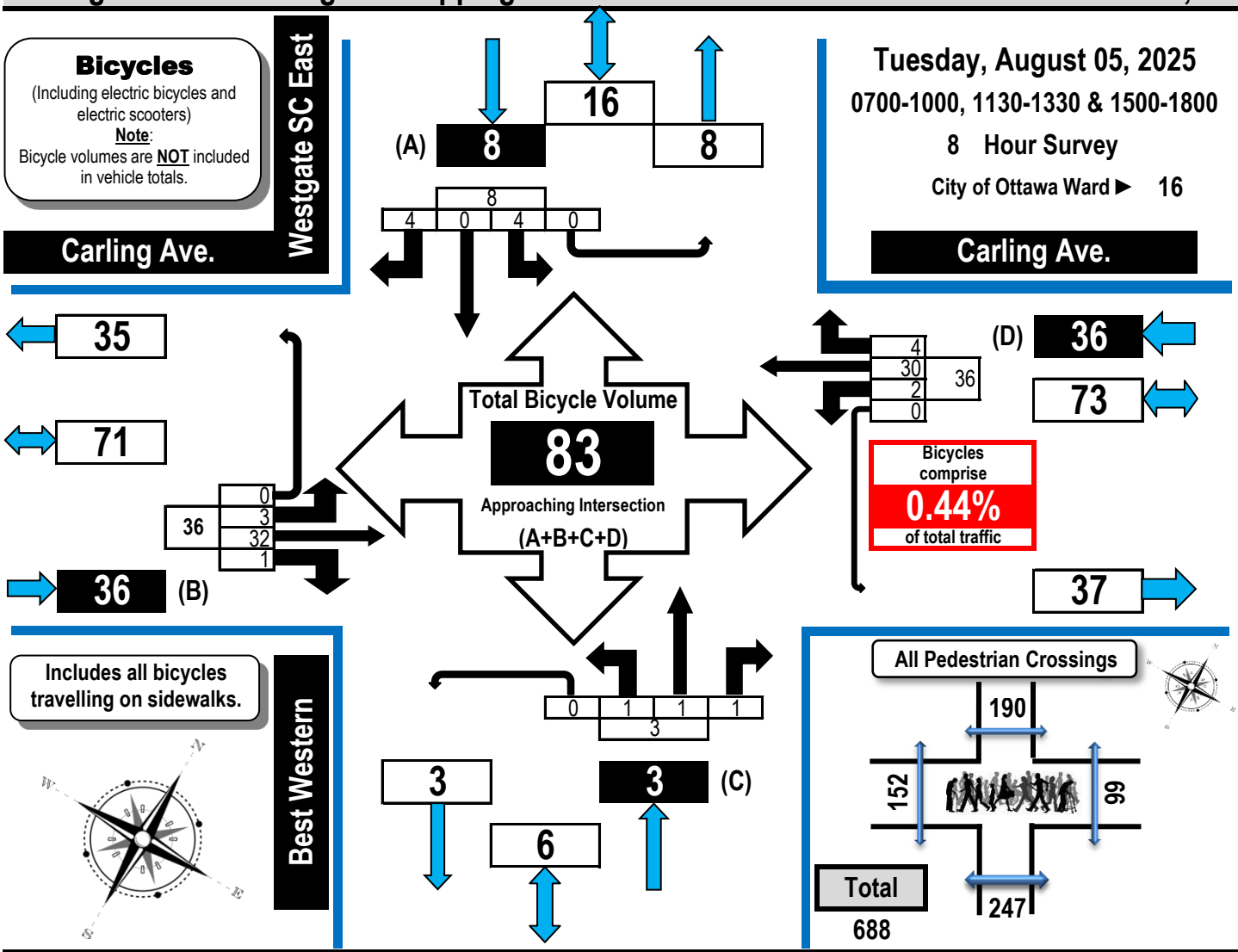
Comments:
OC Transpo and Para Transpo buses, private buses and school buses comprise 20.20% of the heavy vehicle traffic.
Eastbound traffic backs up from Merivale Road to west of the Westgate access, primarily during the P.M. time period.

Turning Movement Count
Bicycles and Personal E-Transportation Summary
Flow Diagram

Carling Avenue & Westgate Shopping Centre East Access — Ottawa, ON

Bicycles
(Including electric bicycles and electric scooters)
Note:
Bicycle volumes are **NOT** included in vehicle totals.

Tuesday, August 05, 2025
0700-1000, 1130-1330 & 1500-1800
8 Hour Survey
City of Ottawa Ward ► 16



	Carling Ave. Eastbound					Carling Ave. Westbound					Best Western Northbound					Westgate SC East 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	1	3	0	0	4	0	4	0	0	4	0	0	0	0	0	0	0	1	0	1	9
0800-0900	0	8	0	0	8	1	6	0	0	7	0	1	0	0	1	1	0	1	0	2	18
0900-1000	0	1	0	0	1	0	3	1	0	4	0	0	1	0	1	1	0	0	0	1	7
1130-1230	0	1	0	0	1	0	2	1	0	3	0	0	0	0	0	1	0	1	0	2	6
1230-1330	0	5	1	0	6	0	3	0	0	3	0	0	0	0	0	0	0	1	0	1	10
1500-1600	1	5	0	0	6	1	5	1	0	7	0	0	0	0	0	1	0	0	0	1	14
1600-1700	1	3	0	0	4	0	5	1	0	6	0	0	0	0	0	0	0	0	0	0	10
1700-1800	0	6	0	0	6	0	2	0	0	2	1	0	0	0	1	0	0	0	0	0	9
Totals	3	32	1	0	36	2	30	4	0	36	1	1	1	0	3	4	0	4	0	8	83

Comments:

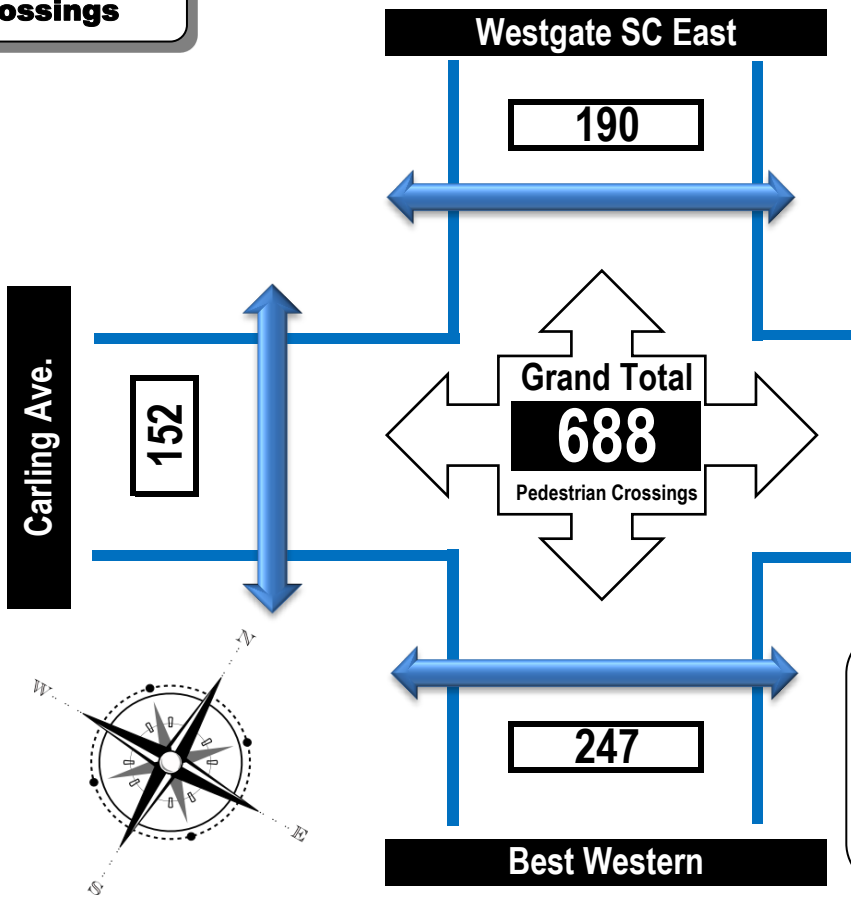
OC Transpo and Para Transpo buses, private buses and school buses comprise 20.20% of the heavy vehicle traffic.
Eastbound traffic backs up from Merivale Road to west of the Westgate access, primarily during the P.M. time period.

Turning Movement Count
Pedestrian Crossings Summary and Flow Diagram

Carling Avenue & Westgate Shopping Centre East Access — Ottawa, ON

Pedestrian Crossings

Tuesday, August 05, 2025
0700-1000, 1130-1330 & 1500-1800
8 Hour Survey
City of Ottawa Ward ► 16



Note
*The values in the summary table below and the flow diagram represent the number of pedestrian crossing**s** **NOT** the number of individual pedestrian**s** crossing. 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 Carling Ave.	East Side Crossing Carling Ave.	Street Total	South Side Crossing Best Western	North Side Crossing Westgate SC East	Street Total	Grand Total
0700-0800	5	0	5	32	7	39	44
0800-0900	8	8	16	17	9	26	42
0900-1000	17	7	24	18	25	43	67
1130-1230	23	13	36	29	30	59	95
1230-1330	17	23	40	35	39	74	114
1500-1600	28	19	47	43	31	74	121
1600-1700	26	16	42	41	28	69	111
1700-1800	28	13	41	32	21	53	94
Totals	**152**	**99**	**251**	**247**	**190**	**437**	**688**

Comments:
OC Transpo and Para Transpo buses, private buses and school buses comprise 20.20% of the heavy vehicle traffic.
Eastbound traffic backs up from Merivale Road to west of the Westgate access, primarily during the P.M. time period.

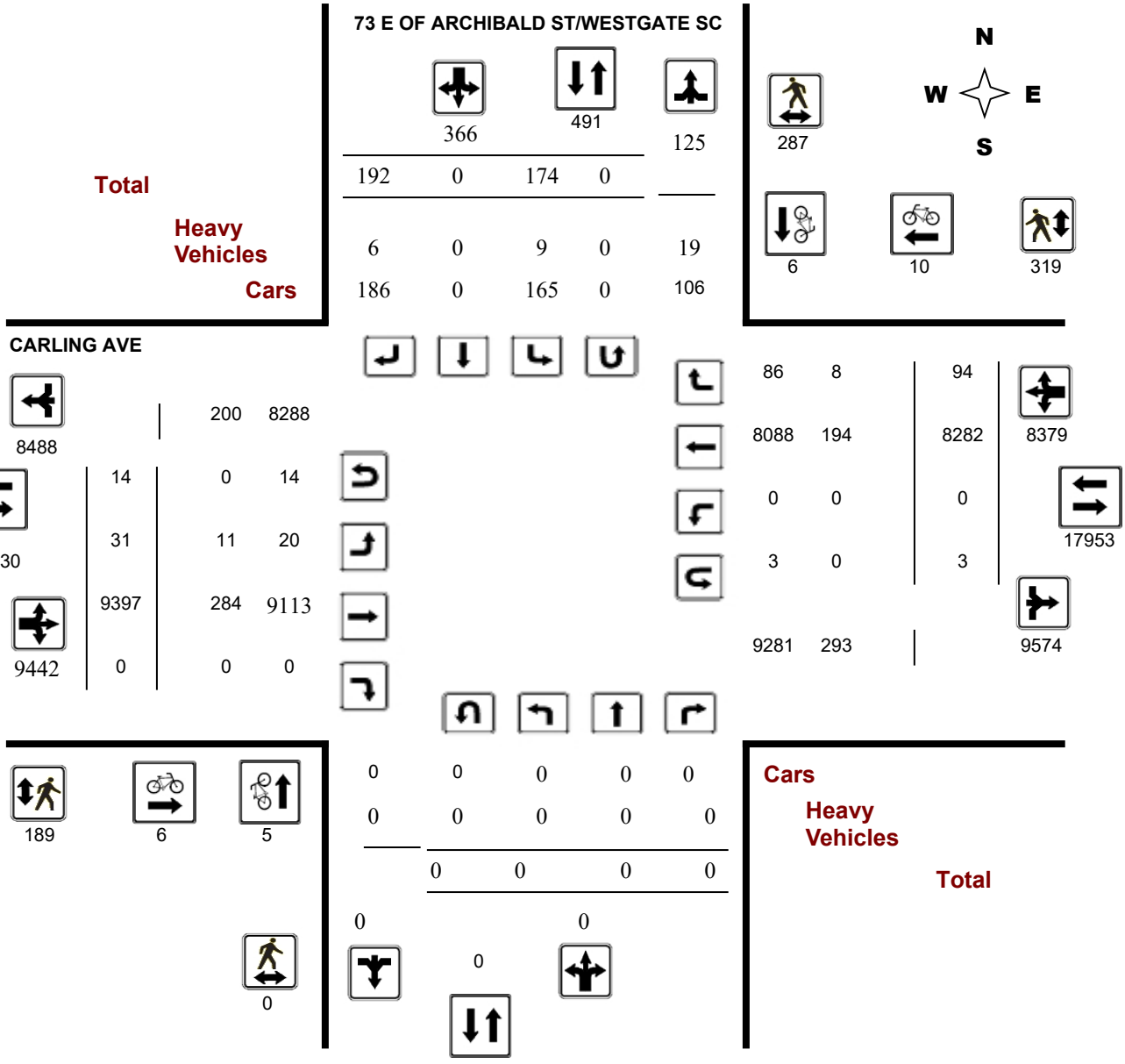
Transportation Services - Traffic Services

Turning Movement Count - Study Results

CARLING AVE @ 73 E OF ARCHIBALD ST/WESTGATE SC

Survey Date: Tuesday, October 29, 2024
Start Time: 07:00
WO No: 42361
Device: Miovision

Full Study Diagram



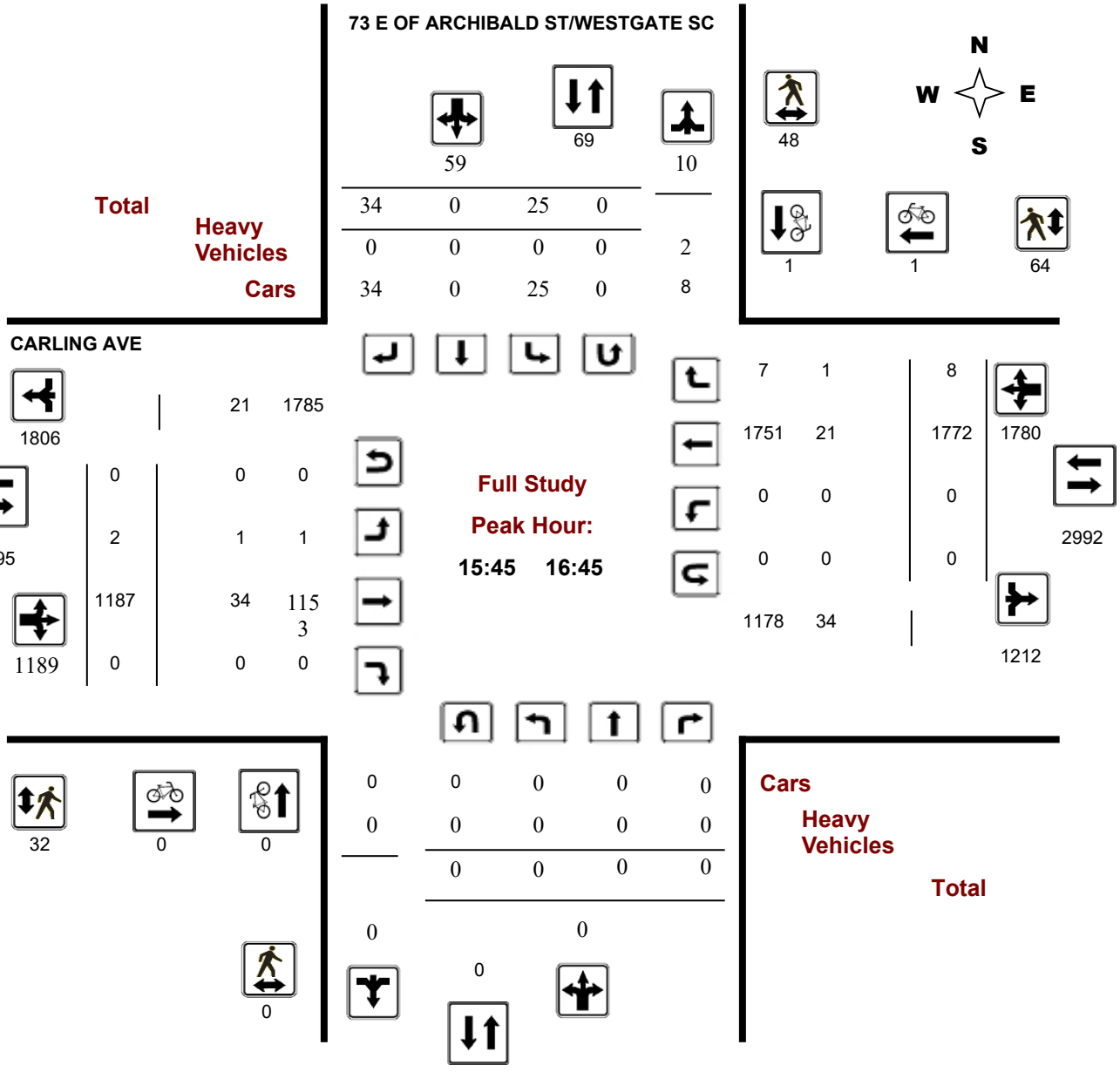
Transportation Services - Traffic Services

Turning Movement Count - Study Results

CARLING AVE @ 73 E OF ARCHIBALD ST/WESTGATE SC

Survey Date: Tuesday, October 29, 2024
Start Time: 07:00
WO No: 42361
Device: Miovision

Full Study Peak Hour Diagram



Transportation Services - Traffic Services

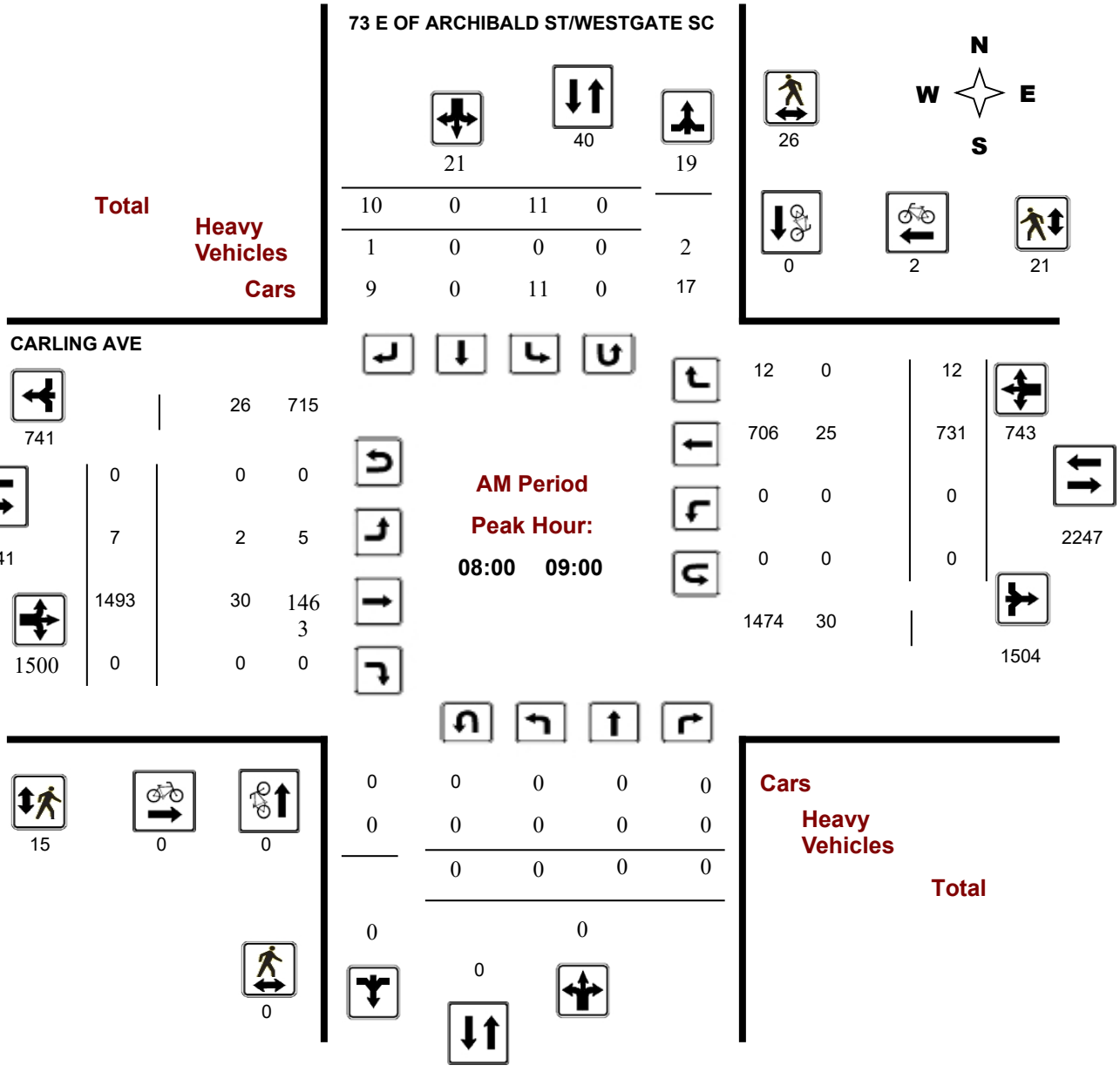
Turning Movement Count - Study Results

CARLING AVE @ 73 E OF ARCHIBALD ST/WESTGATE SC

Survey Date: Tuesday, October 29, 2024 **WO No:** 42361

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

AM Period Peak Hour Diagram



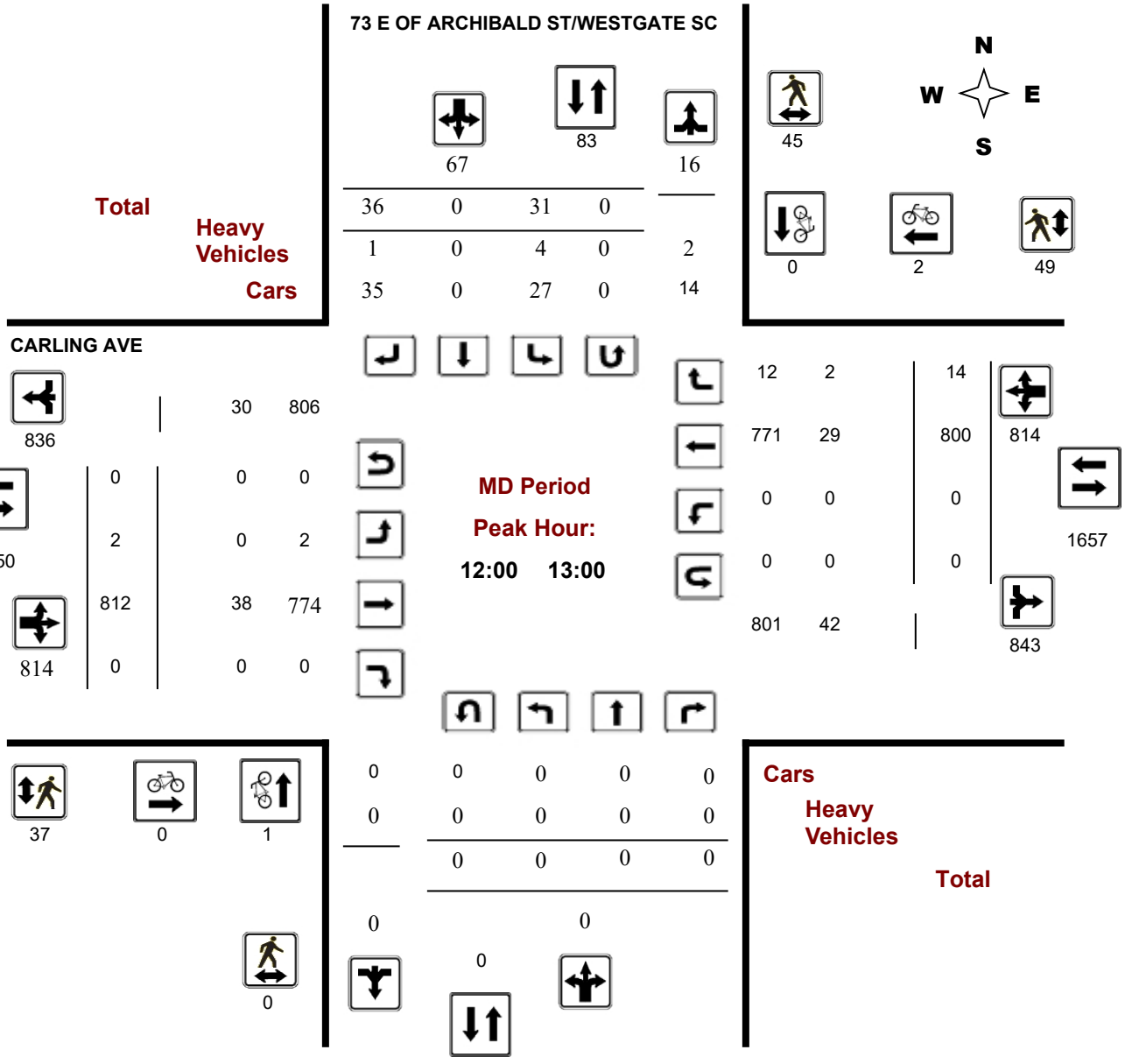
Transportation Services - Traffic Services

Turning Movement Count - Study Results

CARLING AVE @ 73 E OF ARCHIBALD ST/WESTGATE SC

Survey Date: Tuesday, October 29, 2024
Start Time: 07:00
WO No: 42361
Device: Miovision

MD Period Peak Hour Diagram



Transportation Services - Traffic Services

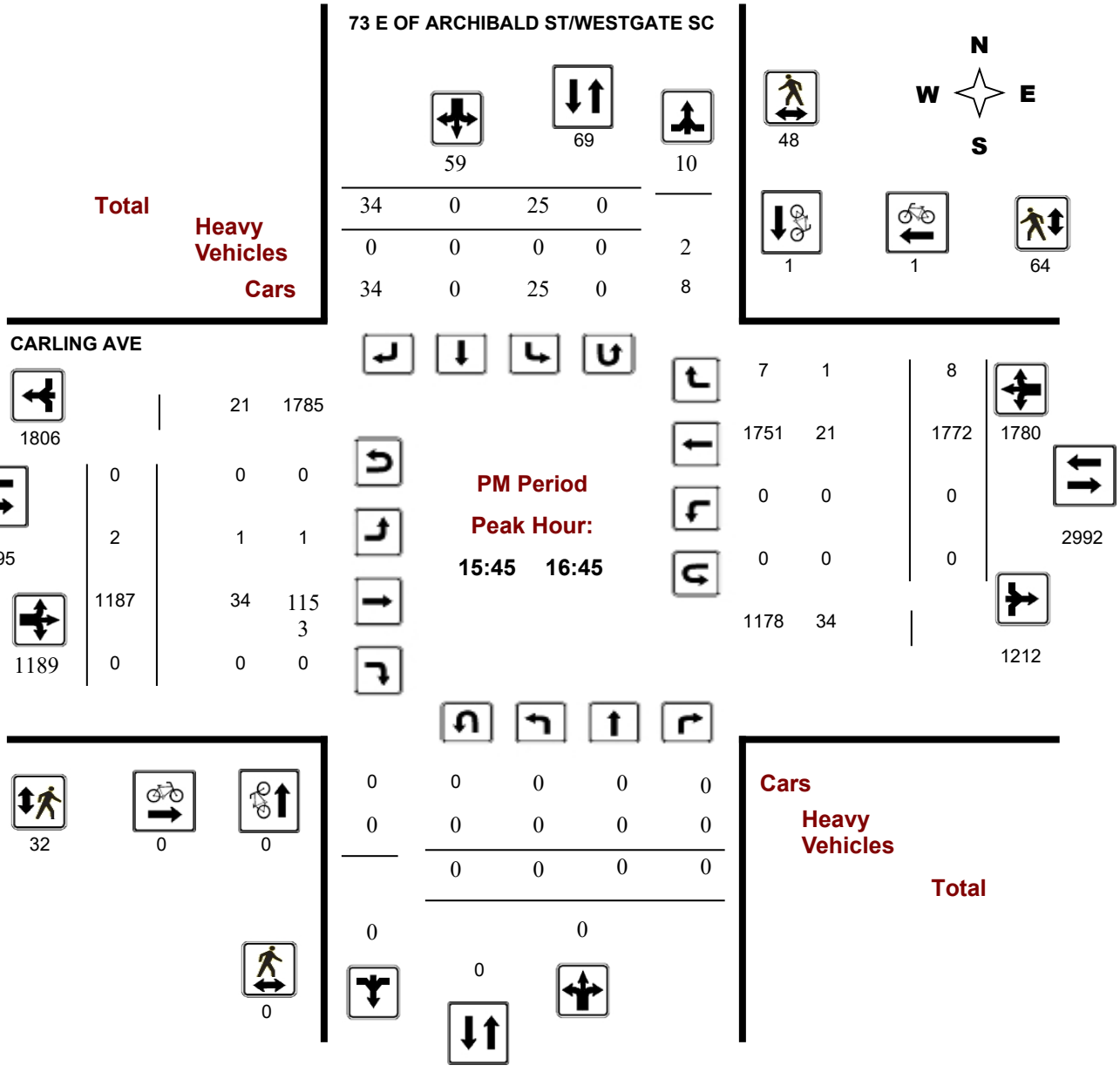
Turning Movement Count - Study Results

CARLING AVE @ 73 E OF ARCHIBALD ST/WESTGATE SC

Survey Date: Tuesday, October 29, 2024 **WO No:** 42361

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

PM Period Peak Hour Diagram



Transportation Services - Traffic Services

Turning Movement Count - Study Results

CARLING AVE @ 73 E OF ARCHIBALD ST/WESTGATE SC

Survey Date: Tuesday, October 29, 2024 **WO No:** 42361

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

Full Study Summary (8 HR Standard)

Survey Date: Tuesday, October 29, 2024

Total Observed U-Turns

Northbound: 0 Southbound: 0

Eastbound: 14 Westbound: 3

AADT Factor

.90

	73 E OF ARCHIBALD ST/WESTGATE SC									CARLING AVE									
	Northbound				Southbound					Eastbound				Westbound					
Period	LT	ST	RT	**NB TOT**	LT	ST	RT	**SB TOT**	**STR TOT**	LT	ST	RT	**EB TOT**	LT	ST	RT	**WB TOT**	**STR TOT**	**Grand Total**
07:00 08:00	0	0	0	**0**	4	0	2	**6**	**6**	3	1586	0	**1589**	0	444	15	**459**	**2048**	**2054**
08:00 09:00	0	0	0	**0**	11	0	10	**21**	**21**	7	1493	0	**1500**	0	731	12	**743**	**2243**	**2264**
09:00 10:00	0	0	0	**0**	18	0	23	**41**	**41**	5	1239	0	**1244**	0	688	17	**705**	**1949**	**1990**
11:30 12:30	0	0	0	**0**	21	0	35	**56**	**56**	4	778	0	**782**	0	815	13	**828**	**1610**	**1666**
12:30 13:30	0	0	0	**0**	24	0	36	**60**	**60**	1	799	0	**800**	0	753	19	**772**	**1572**	**1632**
15:00 16:00	0	0	0	**0**	42	0	35	**77**	**77**	7	1205	0	**1212**	0	1572	5	**1577**	**2789**	**2866**
16:00 17:00	0	0	0	**0**	27	0	32	**59**	**59**	1	1184	0	**1185**	0	1765	8	**1773**	**2958**	**3017**
17:00 18:00	0	0	0	**0**	27	0	19	**46**	**46**	3	1113	0	**1116**	0	1514	5	**1519**	**2635**	**2681**
Sub Total	0	0	0	**0**	174	0	192	**366**	**366**	31	9397	0	**9428**	0	8282	94	**8376**	**17804**	**18170**
U Turns				**0**				**0**	**0**				**14**				**3**	**17**	**17**
Total	0	0	0	**0**	174	0	192	**366**	**366**	31	9397	0	**9442**	0	8282	94	**8379**	**17821**	**18187**
EQ 12Hr	0	0	0	**0**	242	0	267	**509**	**509**	43	13062	0	**13124**	0	11512	131	**11647**	**24771**	**25280**
Note: These values are calculated by multiplying the totals by the appropriate expansion factor.													**1.39**						
AVG 12Hr	0	0	0	**0**	218	0	315	**458**	**458**	39	11756	0	**11812**	0	10361	118	**10482**	**22294**	**22752**
Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor.													**.90**						
AVG 24Hr	0	0	0	**0**	286	0	413	**600**	**600**	51	15400	0	**15474**	0	13573	155	**13731**	**29205**	**29805**
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

CARLING AVE @ 73 E OF ARCHIBALD ST/WESTGATE SC

Survey Date: Tuesday, October 29, 2024 **WO No:** 42361

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

Full Study 15 Minute Increments

		73 E OF ARCHIBALD ST/WESTGATE SC									CARLING AVE									
		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
12:15	12:30	0	0	0	0	11	0	14	25	25	0	177	0	177	0	215	4	219	396	421
12:30	12:45	0	0	0	0	8	0	8	16	16	0	206	0	206	0	190	6	196	402	418
12:45	13:00	0	0	0	0	9	0	6	15	15	0	221	0	221	0	172	2	174	395	410
13:00	13:15	0	0	0	0	2	0	9	11	11	0	187	0	188	0	199	6	205	393	404
15:00	15:15	0	0	0	0	9	0	7	16	16	3	286	0	289	0	402	0	402	691	707
15:30	15:45	0	0	0	0	13	0	7	20	20	1	324	0	325	0	359	2	361	686	706
16:30	16:45	0	0	0	0	4	0	9	13	13	1	284	0	285	0	457	0	457	742	755
16:45	17:00	0	0	0	0	9	0	7	16	16	0	300	0	301	0	420	3	423	724	740
07:15	07:30	0	0	0	0	1	0	0	1	1	0	431	0	433	0	97	2	99	532	533
07:45	08:00	0	0	0	0	0	0	1	1	1	0	354	0	354	0	151	3	154	508	509
08:00	08:15	0	0	0	0	1	0	1	2	2	1	339	0	340	0	182	4	186	526	528
08:15	08:30	0	0	0	0	5	0	1	6	6	1	395	0	396	0	168	0	168	564	570
09:00	09:15	0	0	0	0	3	0	6	9	9	0	265	0	267	0	183	1	184	451	460
09:15	09:30	0	0	0	0	2	0	4	6	6	1	321	0	323	0	183	8	191	514	520
09:30	09:45	0	0	0	0	5	0	8	13	13	1	326	0	329	0	167	3	172	501	514
09:45	10:00	0	0	0	0	8	0	5	13	13	3	327	0	330	0	155	5	160	490	503
11:45	12:00	0	0	0	0	5	0	7	12	12	0	188	0	188	0	191	4	196	384	396
17:00	17:15	0	0	0	0	13	0	9	22	22	2	310	0	312	0	370	1	371	683	705
17:30	17:45	0	0	0	0	2	0	5	7	7	1	283	0	284	0	408	3	411	695	702
17:45	18:00	0	0	0	0	3	0	3	6	6	0	237	0	237	0	314	0	314	551	557
13:15	13:30	0	0	0	0	5	0	13	18	18	1	185	0	187	0	192	5	197	384	402
15:15	15:30	0	0	0	0	13	0	12	25	25	2	292	0	296	0	384	0	384	680	705
15:45	16:00	0	0	0	0	7	0	9	16	16	1	303	0	304	0	427	3	430	734	750
16:00	16:15	0	0	0	0	9	0	10	19	19	0	291	0	291	0	442	1	443	734	753
16:15	16:30	0	0	0	0	5	0	6	11	11	0	309	0	309	0	446	4	450	759	770
17:15	17:30	0	0	0	0	9	0	2	11	11	0	283	0	283	0	422	1	423	706	717
07:00	07:15	0	0	0	0	2	0	0	2	2	0	472	0	472	0	78	4	82	554	556
08:45	09:00	0	0	0	0	2	0	5	7	7	2	390	0	392	0	197	6	203	595	602
07:30	07:45	0	0	0	0	1	0	1	2	2	3	329	0	334	0	118	6	124	458	460
08:30	08:45	0	0	0	0	3	0	3	6	6	3	369	0	372	0	184	2	186	558	564
11:30	11:45	0	0	0	0	2	0	6	8	8	2	205	0	207	0	186	3	189	396	404
12:00	12:15	0	0	0	0	3	0	8	11	11	2	208	0	210	0	223	2	225	435	446
Total:		0	0	0	0	174	0	192	366	366	31	9397	0	9442	0	8282	94	8379	17821	18,187

Note: U-Turns are included in Totals, cyclist volume is not included in totals. For cycliste volumes reffer to Cyclist Volume report.

Transportation Services - Traffic Services

Turning Movement Count - Study Results

CARLING AVE @ 73 E OF ARCHIBALD ST/WESTGATE SC

Survey Date: Tuesday, October 29, 2024 **WO No:** 42361

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

Full Study Cyclist Volume

Time Period		73 E OF ARCHIBALD ST/WESTGATE SC			CARLING AVE			
		Northbound	Southbound	Street Total	Eastbound	Westbound	Street Total	Grand Total
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	1	1	1	1	2	3
15:00	15:15	0	0	0	1	0	1	1
15:30	15:45	0	0	0	0	0	0	0
16:30	16:45	0	1	1	0	0	0	1
16:45	17:00	1	1	2	2	3	5	7
07:15	07:30	0	0	0	0	0	0	0
07:45	08:00	0	0	0	0	0	0	0
08:00	08:15	0	0	0	0	0	0	0
08:15	08:30	0	0	0	0	2	2	2
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	1	1	1
09:45	10:00	0	0	0	0	0	0	0
11:45	12:00	0	0	0	0	0	0	0
17:00	17:15	0	0	0	0	0	0	0
17:30	17:45	0	0	0	0	0	0	0
17:45	18:00	0	1	1	0	0	0	1
13:15	13:30	0	2	2	0	0	0	2
15:15	15:30	1	0	1	0	0	0	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
17:15	17:30	0	0	0	0	0	0	0
07:00	07:15	0	0	0	0	0	0	0
08:45	09:00	0	0	0	0	0	0	0
07:30	07:45	0	0	0	0	0	0	0
08:30	08:45	0	0	0	0	0	0	0
11:30	11:45	2	0	2	2	0	2	4
12:00	12:15	1	0	1	0	1	1	2
Total		5	6	**11**	6	10	16	27

Transportation Services - Traffic Services

Turning Movement Count - Study Results

CARLING AVE @ 73 E OF ARCHIBALD ST/WESTGATE SC

Survey Date: Tuesday, October 29, 2024 **WO No:** 42361

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

Full Study Pedestrian Volume

	73 E OF ARCHIBALD ST/WESTGATE SC			CARLING AVE			
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
12:15 12:30	0	11	**11**	12	12	**24**	**35**
12:30 12:45	0	15	**15**	12	6	**18**	**33**
12:45 13:00	0	11	**11**	6	14	**20**	**31**
13:00 13:15	0	12	**12**	10	7	**17**	**29**
15:00 15:15	0	26	**26**	7	16	**23**	**49**
15:30 15:45	0	12	**12**	6	9	**15**	**27**
16:30 16:45	0	12	**12**	7	11	**18**	**30**
16:45 17:00	0	9	**9**	4	18	**22**	**31**
07:15 07:30	0	1	**1**	1	2	**3**	**4**
07:45 08:00	0	5	**5**	3	3	**6**	**11**
08:00 08:15	0	6	**6**	2	4	**6**	**12**
08:15 08:30	0	4	**4**	2	5	**7**	**11**
09:00 09:15	0	7	**7**	1	13	**14**	**21**
09:15 09:30	0	4	**4**	3	10	**13**	**17**
09:30 09:45	0	7	**7**	1	10	**11**	**18**
09:45 10:00	0	1	**1**	2	8	**10**	**11**
11:45 12:00	0	8	**8**	4	9	**13**	**21**
17:00 17:15	0	5	**5**	7	6	**13**	**18**
17:30 17:45	0	7	**7**	10	14	**24**	**31**
17:45 18:00	0	7	**7**	6	13	**19**	**26**
13:15 13:30	0	6	**6**	7	4	**11**	**17**
15:15 15:30	0	26	**26**	13	8	**21**	**47**
15:45 16:00	0	7	**7**	5	17	**22**	**29**
16:00 16:15	0	14	**14**	9	26	**35**	**49**
16:15 16:30	0	15	**15**	11	10	**21**	**36**
17:15 17:30	0	8	**8**	6	14	**20**	**28**
07:00 07:15	0	2	**2**	4	2	**6**	**8**
08:45 09:00	0	7	**7**	3	7	**10**	**17**
07:30 07:45	0	5	**5**	2	4	**6**	**11**
08:30 08:45	0	9	**9**	8	5	**13**	**22**
11:30 11:45	0	10	**10**	8	15	**23**	**33**
12:00 12:15	0	8	**8**	7	17	**24**	**32**
Total	0	287	**287**	189	319	**508**	**795**

Transportation Services - Traffic Services

Turning Movement Count - Study Results

CARLING AVE @ 73 E OF ARCHIBALD ST/WESTGATE SC

Survey Date: Tuesday, October 29, 2024 **WO No:** 42361

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

Full Study Heavy Vehicles

		73 E OF ARCHIBALD ST/WESTGATE SC									CARLING AVE									
		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
12:15	12:30	0	0	0	**0**	0	0	0	**0**	**0**	0	9	0	**9**	0	9	0	**9**	**18**	**18**
12:30	12:45	0	0	0	**0**	1	0	0	**1**	**1**	0	7	0	**7**	0	7	2	**9**	**16**	**17**
12:45	13:00	0	0	0	**0**	2	0	0	**2**	**2**	0	11	0	**11**	0	7	0	**7**	**18**	**20**
13:00	13:15	0	0	0	**0**	0	0	1	**1**	**1**	0	9	0	**9**	0	6	1	**7**	**16**	**17**
15:00	15:15	0	0	0	**0**	0	0	0	**0**	**0**	1	9	0	**10**	0	11	0	**11**	**21**	**21**
15:30	15:45	0	0	0	**0**	0	0	0	**0**	**0**	1	8	0	**9**	0	6	0	**6**	**15**	**15**
16:30	16:45	0	0	0	**0**	0	0	0	**0**	**0**	1	10	0	**11**	0	6	0	**6**	**17**	**17**
16:45	17:00	0	0	0	**0**	2	0	0	**2**	**2**	0	12	0	**12**	0	5	0	**5**	**17**	**19**
07:15	07:30	0	0	0	**0**	0	0	0	**0**	**0**	0	8	0	**8**	0	2	0	**2**	**10**	**10**
07:45	08:00	0	0	0	**0**	0	0	0	**0**	**0**	0	7	0	**7**	0	11	0	**11**	**18**	**18**
08:00	08:15	0	0	0	**0**	0	0	0	**0**	**0**	0	4	0	**4**	0	11	0	**11**	**15**	**15**
08:15	08:30	0	0	0	**0**	0	0	0	**0**	**0**	0	4	0	**4**	0	1	0	**1**	**5**	**5**
09:00	09:15	0	0	0	**0**	0	0	0	**0**	**0**	0	9	0	**9**	0	4	0	**4**	**13**	**13**
09:15	09:30	0	0	0	**0**	0	0	0	**0**	**0**	0	15	0	**15**	0	9	1	**10**	**25**	**25**
09:30	09:45	0	0	0	**0**	0	0	1	**1**	**1**	0	10	0	**10**	0	7	0	**7**	**17**	**18**
09:45	10:00	0	0	0	**0**	0	0	0	**0**	**0**	0	15	0	**15**	0	12	1	**13**	**28**	**28**
11:45	12:00	0	0	0	**0**	0	0	1	**1**	**1**	0	7	0	**7**	0	7	1	**8**	**15**	**16**
17:00	17:15	0	0	0	**0**	1	0	1	**2**	**2**	1	5	0	**6**	0	5	0	**5**	**11**	**13**
17:30	17:45	0	0	0	**0**	0	0	0	**0**	**0**	1	6	0	**7**	0	2	0	**2**	**9**	**9**
17:45	18:00	0	0	0	**0**	0	0	0	**0**	**0**	0	10	0	**10**	0	2	0	**2**	**12**	**12**
13:15	13:30	0	0	0	**0**	0	0	0	**0**	**0**	1	8	0	**9**	0	6	0	**6**	**15**	**15**
15:15	15:30	0	0	0	**0**	2	0	0	**2**	**2**	0	11	0	**11**	0	4	0	**4**	**15**	**17**
15:45	16:00	0	0	0	**0**	0	0	0	**0**	**0**	0	9	0	**9**	0	2	1	**3**	**12**	**12**
16:00	16:15	0	0	0	**0**	0	0	0	**0**	**0**	0	9	0	**9**	0	8	0	**8**	**17**	**17**
16:15	16:30	0	0	0	**0**	0	0	0	**0**	**0**	0	6	0	**6**	0	5	0	**5**	**11**	**11**
17:15	17:30	0	0	0	**0**	0	0	0	**0**	**0**	0	6	0	**6**	0	4	0	**4**	**10**	**10**
07:00	07:15	0	0	0	**0**	0	0	0	**0**	**0**	0	6	0	**6**	0	3	0	**3**	**9**	**9**
08:45	09:00	0	0	0	**0**	0	0	1	**1**	**1**	1	15	0	**16**	0	5	0	**5**	**21**	**22**
07:30	07:45	0	0	0	**0**	0	0	0	**0**	**0**	1	9	0	**10**	0	5	0	**5**	**15**	**15**
08:30	08:45	0	0	0	**0**	0	0	0	**0**	**0**	1	7	0	**8**	0	8	0	**8**	**16**	**16**
11:30	11:45	0	0	0	**0**	0	0	0	**0**	**0**	2	12	0	**14**	0	8	1	**9**	**23**	**23**
12:00	12:15	0	0	0	**0**	1	0	1	**2**	**2**	0	11	0	**11**	0	6	0	**6**	**17**	**19**
Total:	None	0	0	0	**0**	9	0	6	**15**	**15**	11	284	0	**295**	0	194	8	**202**	**497**	**512**

Transportation Services - Traffic Services

Turning Movement Count - Study Results

CARLING AVE @ 73 E OF ARCHIBALD ST/WESTGATE SC

Survey Date: Tuesday, October 29, 2024 **WO No:** 42361

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

Full Study 15 Minute U-Turn Total

Time Period		73 E OF ARCHIBALD ST/WESTGATE SC		CARLING AVE		
		Northbound U-Turn Total	Southbound U-Turn Total	Eastbound U-Turn Total	Westbound U-Turn Total	Total
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
15:00	15:15	0	0	0	0	0
15:30	15:45	0	0	0	0	0
16:30	16:45	0	0	0	0	0
16:45	17:00	0	0	1	0	1
07:15	07:30	0	0	2	0	2
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
09:00	09:15	0	0	2	0	2
09:15	09:30	0	0	1	0	1
09:30	09:45	0	0	2	2	4
09:45	10:00	0	0	0	0	0
11:45	12:00	0	0	0	1	1
17:00	17:15	0	0	0	0	0
17:30	17:45	0	0	0	0	0
17:45	18:00	0	0	0	0	0
13:15	13:30	0	0	1	0	1
15:15	15:30	0	0	2	0	2
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
17:15	17:30	0	0	0	0	0
07:00	07:15	0	0	0	0	0
08:45	09:00	0	0	0	0	0
07:30	07:45	0	0	2	0	2
08:30	08:45	0	0	0	0	0
11:30	11:45	0	0	0	0	0
12:00	12:15	0	0	0	0	0
Total		0	0	14	3	17

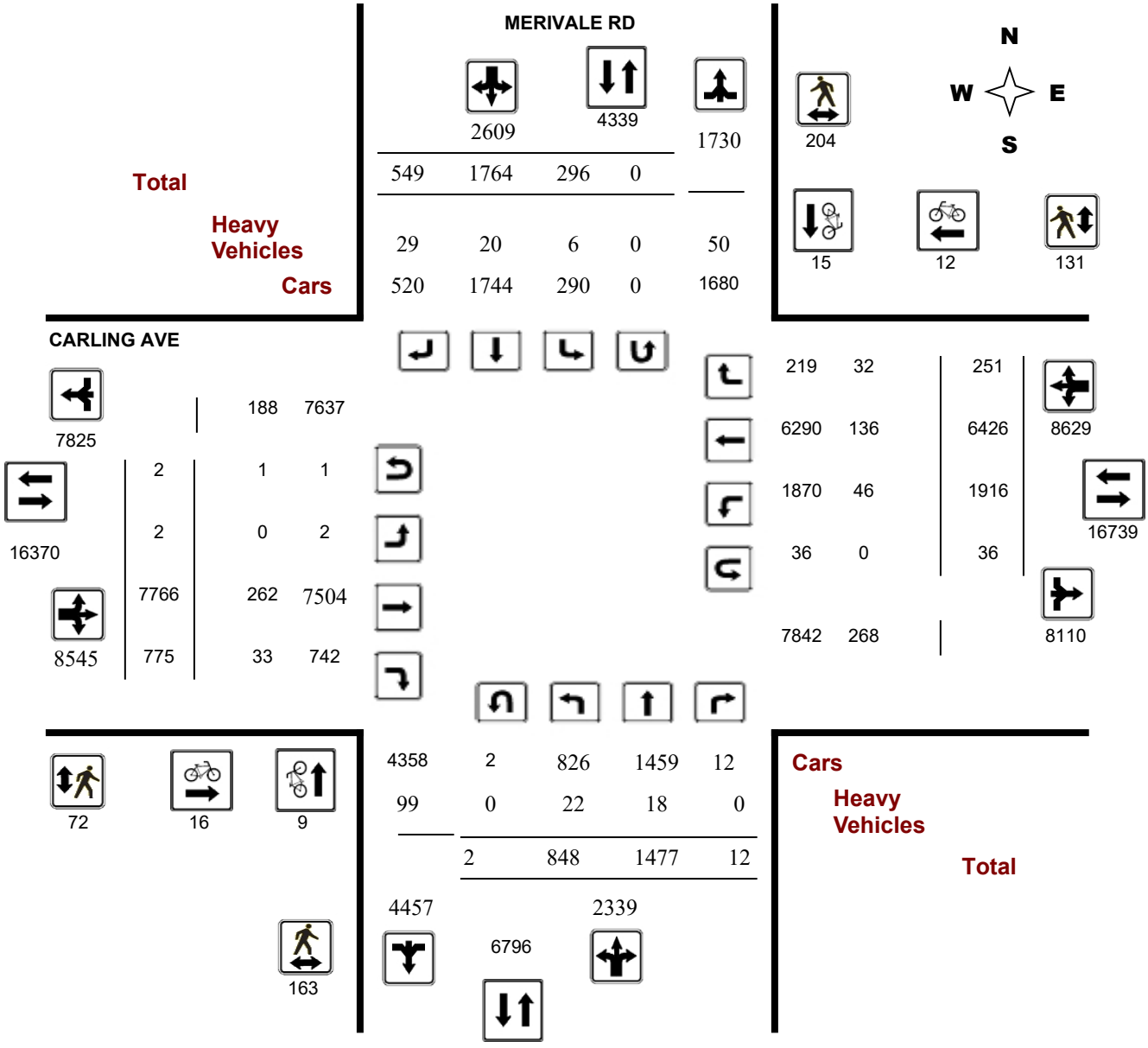
Transportation Services - Traffic Services

Turning Movement Count - Study Results

CARLING AVE @ MERIVALE RD

Survey Date: Thursday, November 14, 2024
Start Time: 07:00
WO No: 42885
Device: Miovision

Full Study Diagram



Transportation Services - Traffic Services

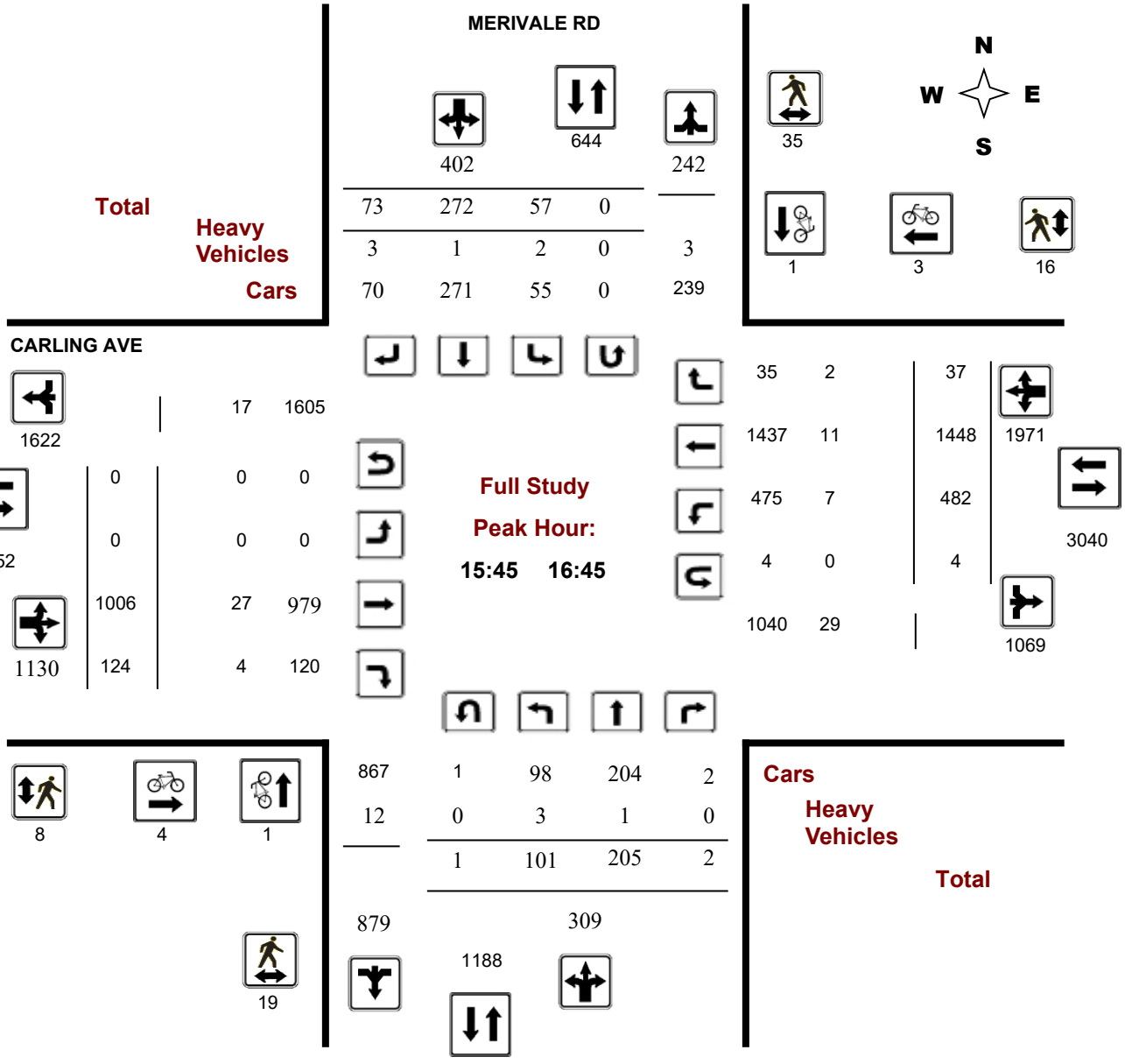
Turning Movement Count - Study Results

CARLING AVE @ MERIVALE RD

Survey Date: Thursday, November 14, 2024 **WO No:** 42885

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

Full Study Peak Hour Diagram



Transportation Services - Traffic Services

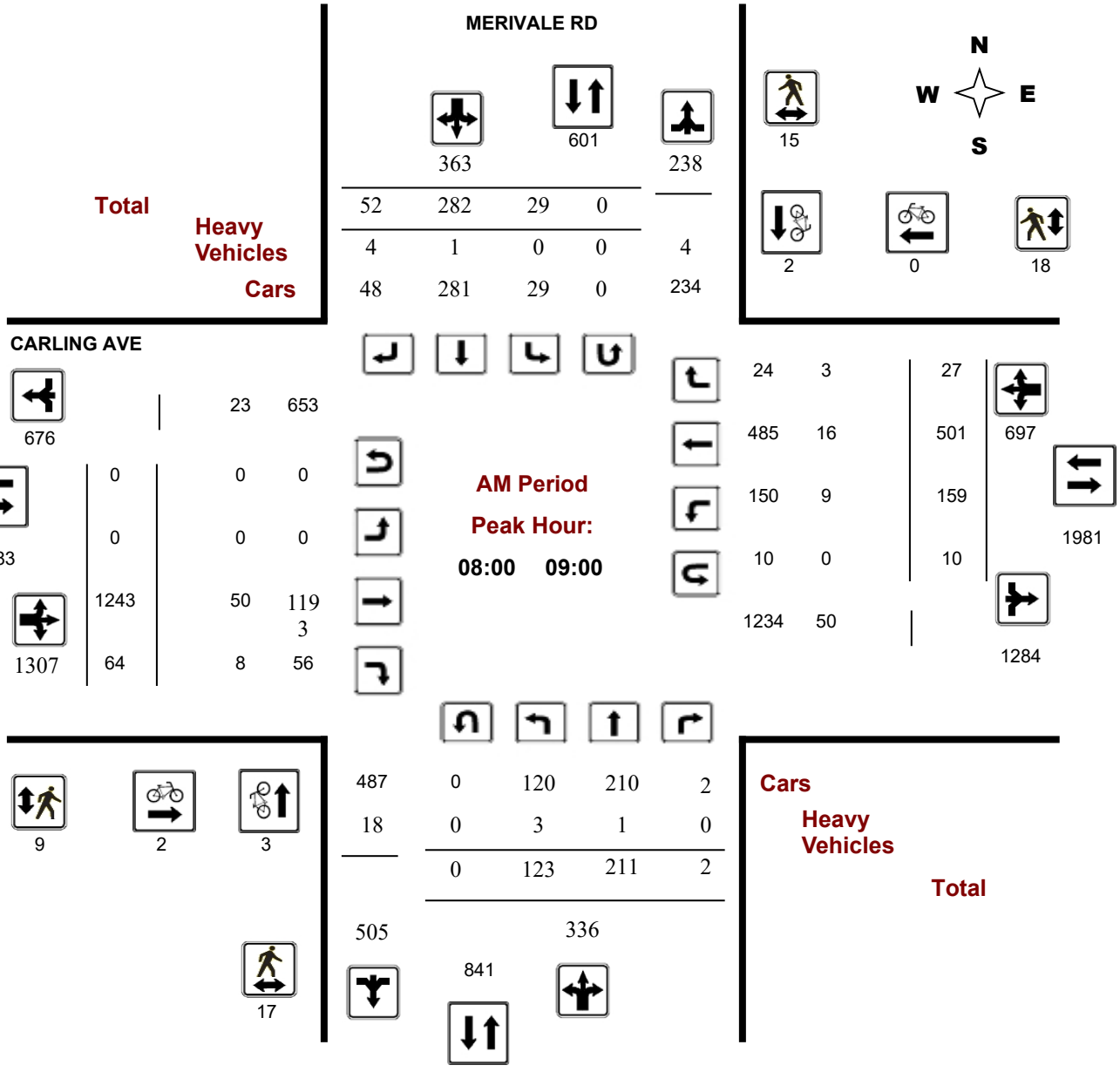
Turning Movement Count - Study Results

CARLING AVE @ MERIVALE RD

Survey Date: Thursday, November 14, 2024 **WO No:** 42885

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

AM Period Peak Hour Diagram



Transportation Services - Traffic Services

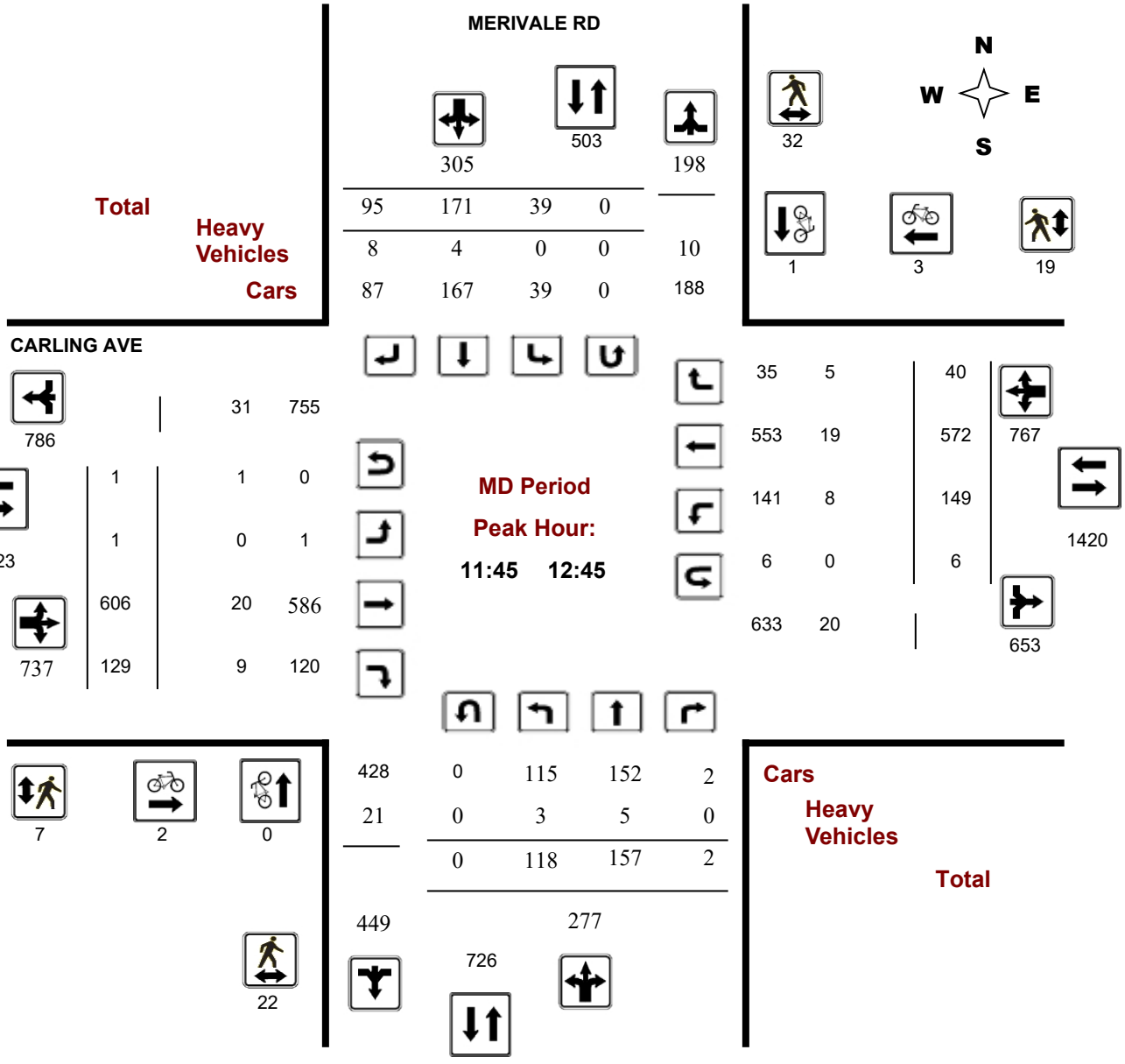
Turning Movement Count - Study Results

CARLING AVE @ MERIVALE RD

Survey Date: Thursday, November 14, 2024 **WO No:** 42885

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

MD Period Peak Hour Diagram



Transportation Services - Traffic Services

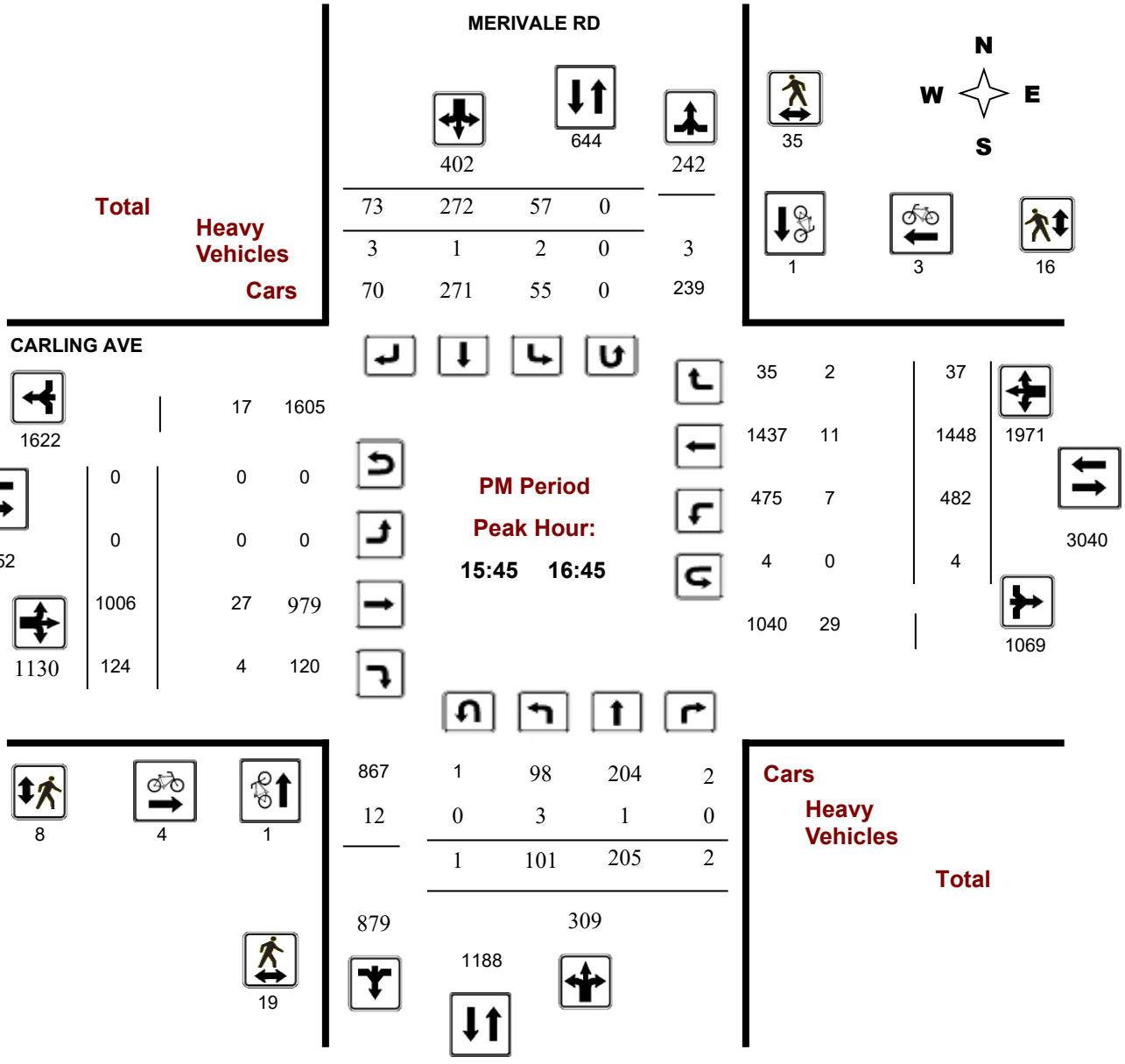
Turning Movement Count - Study Results

CARLING AVE @ MERIVALE RD

Survey Date: Thursday, November 14, 2024 **WO No:** 42885

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

PM Period Peak Hour Diagram



Transportation Services - Traffic Services

Turning Movement Count - Study Results

CARLING AVE @ MERIVALE RD

Survey Date: Thursday, November 14, 2024 **WO No:** 42885

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

Full Study Summary (8 HR Standard)

Survey Date: Thursday, November 14, 2024

Total Observed U-Turns

Northbound: 2 Southbound: 0

Eastbound: 2 Westbound: 36

AADT Factor

.90

	MERIVALE RD									CARLING AVE									
	Northbound				Southbound					Eastbound				Westbound					
Period	LT	ST	RT	**NB TOT**	LT	ST	RT	**SB TOT**	**STR TOT**	LT	ST	RT	**EB TOT**	LT	ST	RT	**WB TOT**	**STR TOT**	**Grand Total**
07:00 08:00	93	148	3	**244**	21	200	51	**272**	**516**	1	1227	54	**1282**	120	307	13	**440**	**1722**	**2238**
08:00 09:00	123	211	2	**336**	29	282	52	**363**	**699**	0	1243	64	**1307**	159	501	27	**687**	**1994**	**2693**
09:00 10:00	102	167	0	**269**	25	212	59	**296**	**565**	0	984	74	**1058**	128	504	22	**654**	**1712**	**2277**
11:30 12:30	120	154	2	**276**	43	176	88	**307**	**583**	1	591	127	**719**	133	553	43	**729**	**1448**	**2031**
12:30 13:30	92	154	1	**247**	30	154	84	**268**	**515**	0	617	101	**718**	158	523	39	**720**	**1438**	**1953**
15:00 16:00	103	234	2	**339**	56	239	110	**405**	**744**	0	1012	137	**1149**	349	1281	40	**1670**	**2819**	**3563**
16:00 17:00	105	198	0	**303**	48	285	64	**397**	**700**	0	1021	113	**1134**	469	1420	35	**1924**	**3058**	**3758**
17:00 18:00	110	211	2	**323**	44	216	41	**301**	**624**	0	1071	105	**1176**	400	1337	32	**1769**	**2945**	**3569**
Sub Total	848	1477	12	**2337**	296	1764	549	**2609**	**4946**	2	7766	775	**8543**	1916	6426	251	**8593**	**17136**	**22082**
U Turns				**2**				**0**	**2**				**2**				**36**	**38**	**40**
Total	848	1477	12	**2339**	296	1764	549	**2609**	**4948**	2	7766	775	**8545**	1916	6426	251	**8629**	**17174**	**22122**
EQ 12Hr	1179	2053	17	**3251**	411	2452	763	**3627**	**6878**	3	10795	1077	**11878**	2663	8932	349	**11994**	**23872**	**30750**
Note: These values are calculated by multiplying the totals by the appropriate expansion factor.														**1.39**					
AVG 12Hr	1061	1848	15	**2926**	370	2891	900	**3264**	**6190**	3	9716	969	**10690**	2397	8039	314	**10795**	**21485**	**27675**
Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor.														**.90**					
AVG 24Hr	1390	2421	20	**3833**	485	3787	1179	**4276**	**8109**	4	12728	1269	**14004**	3140	10531	411	**14141**	**28145**	**36254**
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

CARLING AVE @ MERIVALE RD

Survey Date: Thursday, November 14, 2024 **WO No:** 42885

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

Full Study 15 Minute Increments

		MERIVALE RD									CARLING AVE									
		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	11	27	0	39	4	47	8	59	98	0	292	8	300	32	68	2	102	402	500
07:15	07:30	25	29	1	55	3	42	11	56	111	1	266	16	283	25	55	2	82	365	476
07:30	07:45	26	33	0	59	4	52	8	64	123	0	338	16	354	40	89	5	134	488	611
07:45	08:00	31	59	2	92	10	59	24	93	185	0	331	14	345	23	95	4	122	467	652
08:00	08:15	31	38	0	69	7	69	11	87	156	0	362	13	375	36	109	8	157	532	688
08:15	08:30	28	64	2	94	8	76	13	97	191	0	324	15	339	34	125	4	164	503	694
08:30	08:45	32	61	0	93	8	66	11	85	178	0	278	10	288	48	131	7	190	478	656
08:45	09:00	32	48	0	80	6	71	17	94	174	0	279	26	305	41	136	8	186	491	665
09:00	09:15	25	49	0	74	13	42	14	69	143	0	286	14	300	43	141	7	192	492	635
09:15	09:30	27	38	0	65	4	57	13	74	139	0	216	19	235	34	106	5	146	381	520
09:30	09:45	22	38	0	60	5	60	10	75	135	0	249	15	264	21	137	5	165	429	564
09:45	10:00	28	42	0	70	3	53	22	78	148	0	233	26	259	30	120	5	155	414	562
11:30	11:45	26	38	0	64	12	45	20	77	141	0	136	27	163	29	122	11	165	328	469
11:45	12:00	40	38	0	78	12	40	28	80	158	1	173	35	209	28	149	10	187	396	554
12:00	12:15	30	42	1	73	9	52	17	78	151	0	138	27	165	32	156	14	206	371	522
12:15	12:30	24	36	1	61	10	39	23	72	133	0	144	38	182	44	126	8	178	360	493
12:30	12:45	24	41	0	65	8	40	27	75	140	0	151	29	181	45	141	8	196	377	517
12:45	13:00	20	40	0	60	7	29	25	61	121	0	170	25	195	30	125	10	166	361	482
13:00	13:15	22	39	1	62	10	40	16	66	128	0	135	26	161	35	112	10	158	319	447
13:15	13:30	26	34	0	60	5	45	16	66	126	0	161	21	183	48	145	11	205	388	514
15:00	15:15	27	54	0	81	12	53	38	103	184	0	237	35	272	65	281	8	354	626	810
15:15	15:30	29	66	0	95	18	68	32	118	213	0	277	30	307	69	294	10	373	680	893
15:30	15:45	24	64	0	88	9	62	20	91	179	0	236	38	274	93	337	9	439	713	892
15:45	16:00	23	50	2	75	17	56	20	93	168	0	262	34	296	122	369	13	505	801	969
16:00	16:15	34	50	0	84	16	71	24	111	195	0	252	25	277	118	353	11	484	761	956
16:15	16:30	25	67	0	93	15	73	16	104	197	0	262	32	294	127	363	4	494	788	985
16:30	16:45	19	38	0	57	9	72	13	94	151	0	230	33	263	115	363	9	488	751	902
16:45	17:00	27	43	0	70	8	69	11	88	158	0	277	23	300	109	341	11	462	762	920
17:00	17:15	31	46	0	77	17	58	10	85	162	0	276	31	307	110	381	12	504	811	973
17:15	17:30	32	61	1	94	9	47	10	66	160	0	273	34	307	84	370	12	467	774	934
17:30	17:45	21	52	1	74	11	48	7	66	140	0	272	15	287	109	310	3	423	710	850
17:45	18:00	26	52	0	78	7	63	14	84	162	0	250	25	275	97	276	5	380	655	817
Total:		848	1477	12	2339	296	1764	549	2609	4948	2	7766	775	8545	1916	6426	251	8629	17174	22,122

Note: U-Turns are included in Totals, cyclist volume is not included in totals. For cycliste volumes reffer to Cyclist Volume report.

Transportation Services - Traffic Services

Turning Movement Count - Study Results

CARLING AVE @ MERIVALE RD

Survey Date: Thursday, November 14, 2024 **WO No:** 42885

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

Full Study Cyclist Volume

Time Period		MERIVALE RD			CARLING AVE			
		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	0	0	1
07:30	07:45	0	1	1	0	1	1	2
07:45	08:00	0	1	1	0	0	0	1
08:00	08:15	1	1	2	0	0	0	2
08:15	08:30	1	1	2	2	0	2	4
08:30	08:45	0	0	0	0	0	0	0
08:45	09:00	1	0	1	0	0	0	1
09:00	09:15	0	1	1	0	0	0	1
09:15	09:30	0	0	0	0	1	1	1
09:30	09:45	0	0	0	0	0	0	0
09:45	10:00	0	0	0	0	0	0	0
11:30	11:45	2	0	2	1	1	2	4
11:45	12:00	0	1	1	0	0	0	1
12:00	12:15	0	0	0	0	2	2	2
12:15	12:30	0	0	0	0	1	1	1
12:30	12:45	0	0	0	2	0	2	2
12:45	13:00	1	1	2	0	0	0	2
13:00	13:15	1	1	2	1	1	2	4
13:15	13:30	0	0	0	1	0	1	1
15:00	15:15	0	2	2	0	0	0	2
15:15	15:30	0	1	1	2	0	2	3
15:30	15:45	0	0	0	1	0	1	1
15:45	16:00	0	0	0	1	0	1	1
16:00	16:15	1	1	2	1	0	1	3
16:15	16:30	0	0	0	0	2	2	2
16:30	16:45	0	0	0	2	1	3	3
16:45	17:00	0	1	1	0	0	0	1
17:00	17:15	0	0	0	0	1	1	1
17:15	17:30	0	0	0	1	0	1	1
17:30	17:45	0	0	0	0	0	0	0
17:45	18:00	1	1	2	0	1	1	3
Total		9	15	**24**	16	12	28	52

Transportation Services - Traffic Services

Turning Movement Count - Study Results

CARLING AVE @ MERIVALE RD

Survey Date: Thursday, November 14, 2024 **WO No:** 42885

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

Full Study Pedestrian Volume

	MERIVALE RD			CARLING AVE			
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	4	4	**8**	1	3	**4**	**12**
07:15 07:30	4	3	**7**	0	1	**1**	**8**
07:30 07:45	3	6	**9**	0	1	**1**	**10**
07:45 08:00	4	2	**6**	3	3	**6**	**12**
08:00 08:15	3	2	**5**	0	2	**2**	**7**
08:15 08:30	5	3	**8**	2	4	**6**	**14**
08:30 08:45	2	9	**11**	3	7	**10**	**21**
08:45 09:00	7	1	**8**	4	5	**9**	**17**
09:00 09:15	8	2	**10**	3	2	**5**	**15**
09:15 09:30	10	3	**13**	5	2	**7**	**20**
09:30 09:45	2	5	**7**	1	2	**3**	**10**
09:45 10:00	8	4	**12**	1	3	**4**	**16**
11:30 11:45	2	8	**10**	0	2	**2**	**12**
11:45 12:00	8	8	**16**	1	7	**8**	**24**
12:00 12:15	1	9	**10**	0	3	**3**	**13**
12:15 12:30	5	11	**16**	3	3	**6**	**22**
12:30 12:45	8	4	**12**	3	6	**9**	**21**
12:45 13:00	6	6	**12**	6	3	**9**	**21**
13:00 13:15	5	12	**17**	5	6	**11**	**28**
13:15 13:30	5	9	**14**	2	4	**6**	**20**
15:00 15:15	1	8	**9**	0	3	**3**	**12**
15:15 15:30	5	7	**12**	1	7	**8**	**20**
15:30 15:45	3	11	**14**	4	7	**11**	**25**
15:45 16:00	5	6	**11**	2	3	**5**	**16**
16:00 16:15	3	13	**16**	2	5	**7**	**23**
16:15 16:30	5	11	**16**	3	5	**8**	**24**
16:30 16:45	6	5	**11**	1	3	**4**	**15**
16:45 17:00	11	7	**18**	1	13	**14**	**32**
17:00 17:15	7	5	**12**	4	2	**6**	**18**
17:15 17:30	4	5	**9**	2	1	**3**	**12**
17:30 17:45	2	6	**8**	2	2	**4**	**12**
17:45 18:00	11	9	**20**	7	11	**18**	**38**
Total	163	204	**367**	72	131	**203**	**570**

Transportation Services - Traffic Services

Turning Movement Count - Study Results

CARLING AVE @ MERIVALE RD

Survey Date: Thursday, November 14, 2024 **WO No:** 42885

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

Full Study Heavy Vehicles

		MERIVALE RD									CARLING AVE									
		Northbound				Southbound					Eastbound				Westbound					
Time Period		LT	ST	RT	**N TOT**	LT	ST	RT	**S TOT**	**STR TOT**	LT	ST	RT	**E TOT**	LT	ST	RT	**W TOT**	**STR TOT**	**Grand Total**
07:00	07:15	0	0	0	**0**	0	0	0	**0**	**0**	0	7	1	**8**	2	6	1	**9**	**17**	**17**
07:15	07:30	1	0	0	**1**	0	0	0	**0**	**1**	0	4	0	**4**	0	1	1	**2**	**6**	**7**
07:30	07:45	2	0	0	**2**	0	0	0	**0**	**2**	0	13	3	**16**	2	4	1	**7**	**23**	**25**
07:45	08:00	2	0	0	**2**	2	0	0	**2**	**4**	0	9	0	**9**	1	1	2	**4**	**13**	**17**
08:00	08:15	3	0	0	**3**	0	1	2	**3**	**6**	0	11	1	**12**	1	7	1	**9**	**21**	**27**
08:15	08:30	0	1	0	**1**	0	0	1	**1**	**2**	0	14	3	**17**	3	4	0	**7**	**24**	**26**
08:30	08:45	0	0	0	**0**	0	0	0	**0**	**0**	0	12	2	**14**	2	4	1	**7**	**21**	**21**
08:45	09:00	0	0	0	**0**	0	0	1	**1**	**1**	0	13	2	**15**	3	1	1	**5**	**20**	**21**
09:00	09:15	2	1	0	**3**	0	0	0	**0**	**3**	0	7	2	**9**	1	6	0	**7**	**16**	**19**
09:15	09:30	0	1	0	**1**	0	1	1	**2**	**3**	0	9	0	**9**	2	3	2	**7**	**16**	**19**
09:30	09:45	0	0	0	**0**	0	1	1	**2**	**2**	0	12	1	**13**	0	9	2	**11**	**24**	**26**
09:45	10:00	1	3	0	**4**	0	3	2	**5**	**9**	0	13	0	**13**	1	7	1	**9**	**22**	**31**
11:30	11:45	0	1	0	**1**	0	1	1	**2**	**3**	0	7	0	**7**	1	7	1	**9**	**16**	**19**
11:45	12:00	2	1	0	**3**	0	0	3	**3**	**6**	0	6	3	**9**	1	5	1	**7**	**16**	**22**
12:00	12:15	1	0	0	**1**	0	2	0	**2**	**3**	0	4	1	**5**	1	3	2	**6**	**11**	**14**
12:15	12:30	0	2	0	**2**	0	1	2	**3**	**5**	0	4	2	**6**	2	4	1	**7**	**13**	**18**
12:30	12:45	0	2	0	**2**	0	1	3	**4**	**6**	0	6	3	**10**	4	7	1	**12**	**22**	**28**
12:45	13:00	1	0	0	**1**	0	1	1	**2**	**3**	0	10	0	**10**	2	8	2	**12**	**22**	**25**
13:00	13:15	1	2	0	**3**	0	1	0	**1**	**4**	0	9	1	**10**	2	3	3	**8**	**18**	**22**
13:15	13:30	1	1	0	**2**	0	0	3	**3**	**5**	0	11	1	**12**	1	3	0	**4**	**16**	**21**
15:00	15:15	0	0	0	**0**	0	2	1	**3**	**3**	0	4	2	**6**	0	7	1	**8**	**14**	**17**
15:15	15:30	1	2	0	**3**	0	0	2	**2**	**5**	0	14	0	**14**	1	4	0	**5**	**19**	**24**
15:30	15:45	0	0	0	**0**	0	1	0	**1**	**1**	0	5	1	**6**	0	4	2	**6**	**12**	**13**
15:45	16:00	3	0	0	**3**	2	0	1	**3**	**6**	0	7	1	**8**	2	0	0	**2**	**10**	**16**
16:00	16:15	0	1	0	**1**	0	1	1	**2**	**3**	0	8	0	**8**	1	2	2	**5**	**13**	**16**
16:15	16:30	0	0	0	**0**	0	0	0	**0**	**0**	0	7	2	**9**	2	5	0	**7**	**16**	**16**
16:30	16:45	0	0	0	**0**	0	0	1	**1**	**1**	0	5	1	**6**	2	4	0	**6**	**12**	**13**
16:45	17:00	0	0	0	**0**	0	1	0	**1**	**1**	0	3	0	**3**	1	7	1	**9**	**12**	**13**
17:00	17:15	0	0	0	**0**	1	0	0	**1**	**1**	0	12	0	**12**	1	4	1	**6**	**18**	**19**
17:15	17:30	1	0	0	**1**	1	2	2	**5**	**6**	0	8	0	**8**	1	1	0	**2**	**10**	**16**
17:30	17:45	0	0	0	**0**	0	0	0	**0**	**0**	0	1	0	**1**	1	4	0	**5**	**6**	**6**
17:45	18:00	0	0	0	**0**	0	0	0	**0**	**0**	0	7	0	**7**	2	1	1	**4**	**11**	**11**
Total:	None	22	18	0	**40**	6	20	29	**55**	**95**	0	262	33	**296**	46	136	32	**214**	**510**	**605**

Transportation Services - Traffic Services

Turning Movement Count - Study Results

CARLING AVE @ MERIVALE RD

Survey Date: Thursday, November 14, 2024 **WO No:** 42885

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

Full Study 15 Minute U-Turn Total

Time Period		MERIVALE RD Northbound U-Turn Total	MERIVALE RD Southbound U-Turn Total	CARLING AVE Eastbound U-Turn Total	CARLING AVE Westbound U-Turn Total	Total
07:00	07:15	1	0	0	0	1
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	4	4
08:15	08:30	0	0	0	1	1
08:30	08:45	0	0	0	4	4
08:45	09:00	0	0	0	1	1
09:00	09:15	0	0	0	1	1
09:15	09:30	0	0	0	1	1
09:30	09:45	0	0	0	2	2
09:45	10:00	0	0	0	0	0
11:30	11:45	0	0	0	3	3
11:45	12:00	0	0	0	0	0
12:00	12:15	0	0	0	4	4
12:15	12:30	0	0	0	0	0
12:30	12:45	0	0	1	2	3
12:45	13:00	0	0	0	1	1
13:00	13:15	0	0	0	1	1
13:15	13:30	0	0	1	1	2
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	1	1
16:00	16:15	0	0	0	2	2
16:15	16:30	1	0	0	0	1
16:30	16:45	0	0	0	1	1
16:45	17:00	0	0	0	1	1
17:00	17:15	0	0	0	1	1
17:15	17:30	0	0	0	1	1
17:30	17:45	0	0	0	1	1
17:45	18:00	0	0	0	2	2
Total		2	0	2	36	40

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

Merivale Road & Thames Street — Ottawa, ON

Survey Date: Wednesday, July 30, 2025 **Start Time:** 0700 **AADT Factor:** 0.9
Weather AM: Partly Cloudy 20° C **Survey Duration:** 8 Hrs. **Survey Hours:** 0700-1000, 1130-1330 & 1500-1800
Weather PM: Mostly Cloudy 27° C **Surveyor(s):** J. Mousseau

	Thames St.					Merivale Rd. (Loop S)						Merivale Rd.					Merivale Rd.						
	Eastbound					Westbound						Northbound					Southbound						
Time Period	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	9	0	12	0	**21**	0	0	0	0	**0**	**21**	4	494	2	0	**500**	0	338	10	0	**348**	**848**	**869**
0800-0900	16	0	5	0	**21**	0	0	0	0	**0**	**21**	9	663	0	0	**672**	2	421	6	0	**429**	**1101**	**1122**
0900-1000	10	0	17	0	**27**	1	0	0	0	**1**	**28**	6	448	1	0	**455**	3	413	10	0	**426**	**881**	**909**
1130-1230	15	0	21	0	**36**	0	0	0	0	**0**	**36**	13	466	2	0	**481**	2	451	19	0	**472**	**953**	**989**
1230-1330	24	0	20	0	**44**	1	0	1	0	**2**	**46**	23	469	1	0	**493**	4	422	20	0	**446**	**939**	**985**
1500-1600	19	0	25	0	**44**	0	0	0	0	**0**	**44**	12	555	2	0	**569**	3	624	15	0	**642**	**1211**	**1255**
1600-1700	19	0	12	0	**31**	0	0	0	0	**0**	**31**	20	564	1	0	**585**	3	824	13	0	**840**	**1425**	**1456**
1700-1800	12	0	17	0	**29**	0	0	0	0	**0**	**29**	17	569	1	0	**587**	5	717	33	0	**755**	**1342**	**1371**
Totals	**124**	**0**	**129**	**0**	**253**	**2**	**0**	**1**	**0**	**3**	**256**	**104**	**4228**	**10**	**0**	**4342**	**22**	**4210**	**126**	**0**	**4358**	**8700**	**8956**

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	172	0	179	0	**352**	3	0	1	0	**4**	**356**	145	5877	14	0	**6035**	31	5852	175	0	**6058**	**12093**	**12449**

Average daily 12-hour vehicle volumes. These volumes are calculated by multiplying the equivalent 12-hour totals by the AADT factor of: 0.9																							
AADT 12-hr	155	0	161	0	**317**	3	0	1	0	**4**	**320**	130	5289	13	0	**5432**	28	5267	158	0	**5452**	**10884**	**11204**

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	203	0	211	0	**415**	3	0	2	0	**5**	**420**	170	6929	16	0	**7116**	36	6899	206	0	**7142**	**14258**	**14677**

AADT and expansion factors provided by the City of Ottawa

AM Peak Hour Factor ➡ 0.86												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.	Gr. Tot.
0815-0915	14	0	8	0	**22**	1	0	0	0	**1**	**23**	14	646	1	0	**661**	2	433	9	0	**444**	**1105**	**1128**
OFF Peak Hour Factor ➡ 0.93												**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.	Gr. Tot.
1200-1300	22	0	22	0	**44**	0	0	1	0	**1**	**45**	20	479	3	0	**502**	4	443	20	0	**467**	**969**	**1014**
PM Peak Hour Factor ➡ 0.92												**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.	Gr. Tot.
1615-1715	15	0	14	0	**29**	0	0	0	0	**0**	**29**	20	570	1	0	**591**	4	824	18	0	**846**	**1437**	**1466**

Comments:

OC Transpo, Para Transpo and private buses comprise 35.24% of the heavy vehicle traffic.

Notes:

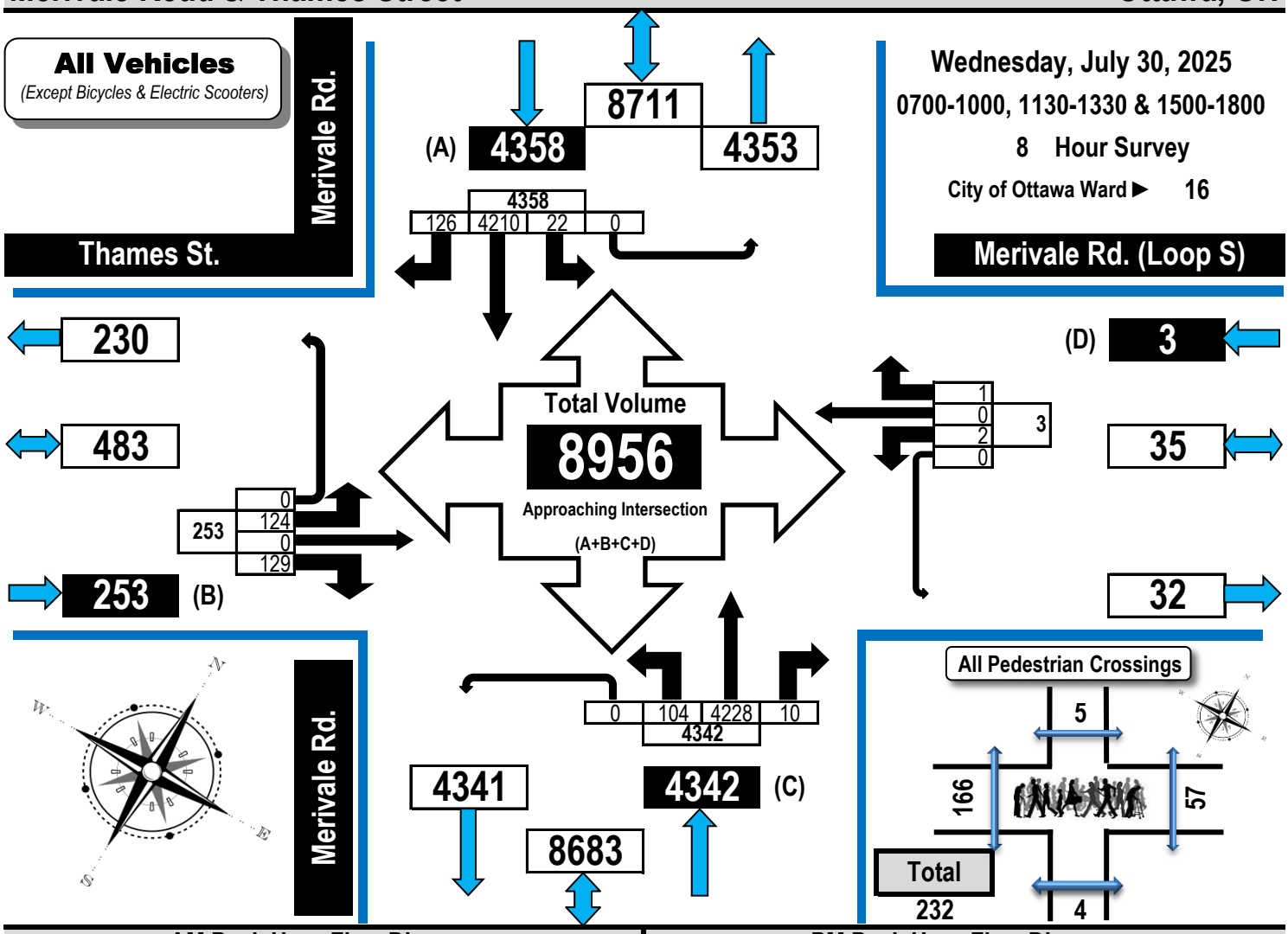
1. Includes all vehicle types except bicycles, electric bicycles, and electric scooters.
2. When expansion and AADT factors are applied, the results will differ slightly due to rounding.

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

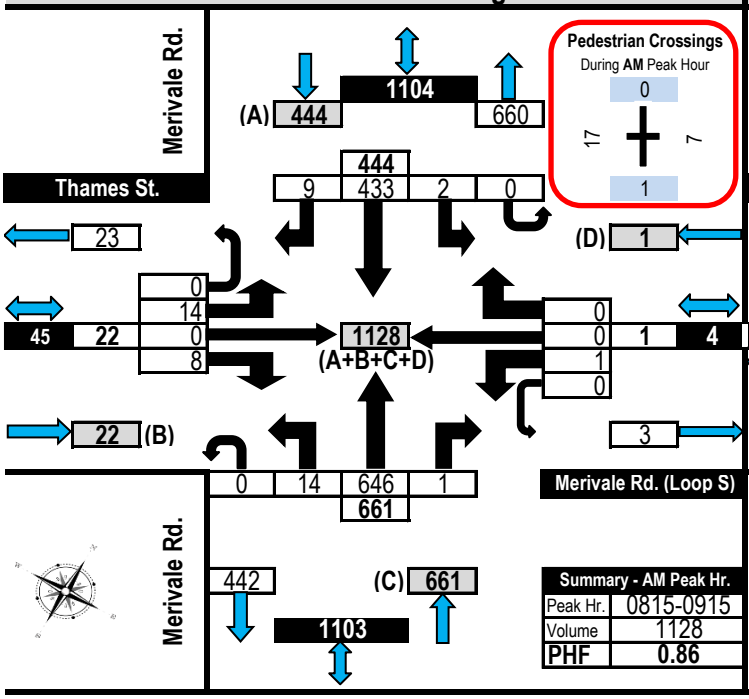
Merivale Road & Thames Street — Ottawa, ON

All Vehicles
(Except Bicycles & Electric Scooters)

Wednesday, July 30, 2025
0700-1000, 1130-1330 & 1500-1800
8 Hour Survey
City of Ottawa Ward ► 16

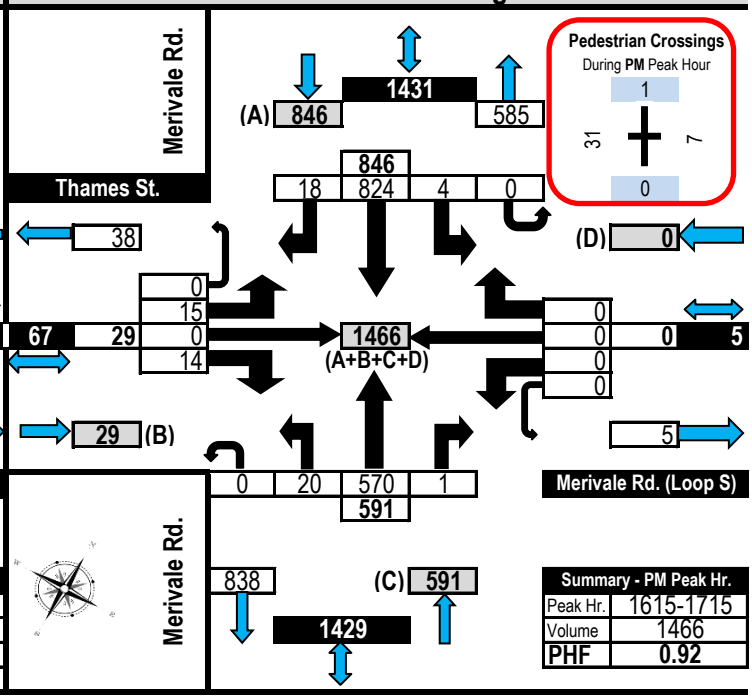


AM Peak Hour Flow Diagram



Summary - AM Peak Hr.	
Peak Hr.	0815-0915
Volume	1128
PHF	0.86

PM Peak Hour Flow Diagram



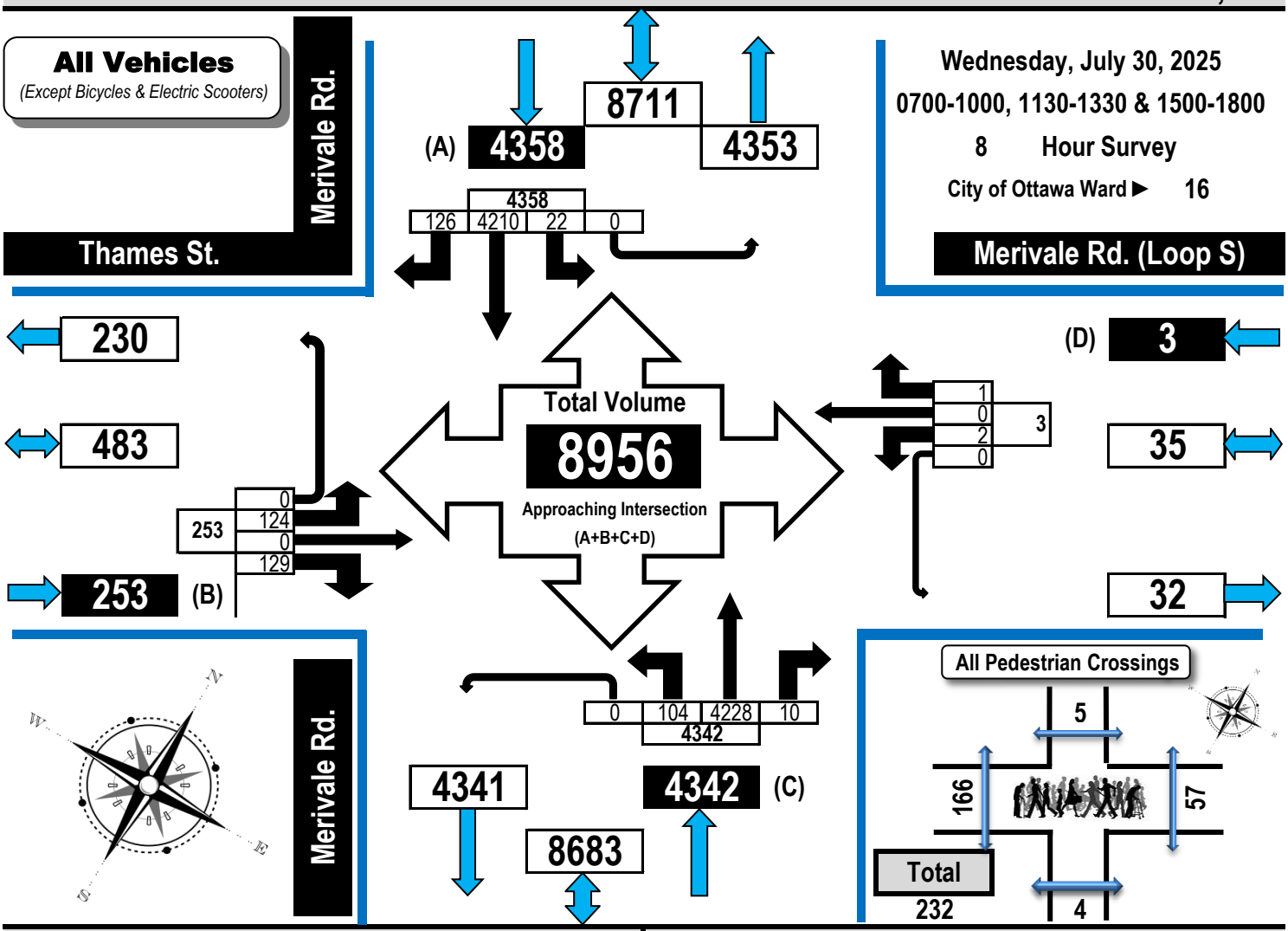
Summary - PM Peak Hr.	
Peak Hr.	1615-1715
Volume	1466
PHF	0.92

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

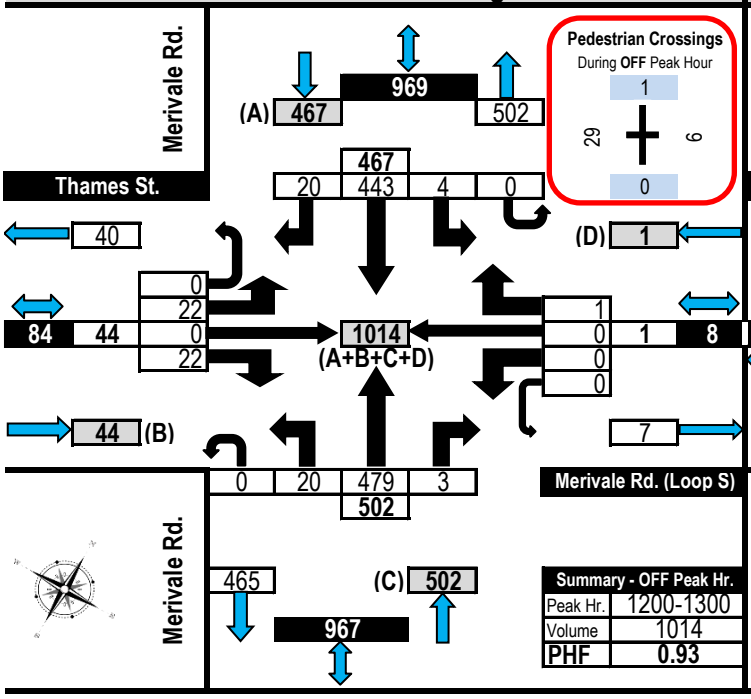
Merivale Road & Thames Street — Ottawa, ON

All Vehicles
(Except Bicycles & Electric Scooters)

Wednesday, July 30, 2025
0700-1000, 1130-1330 & 1500-1800
8 Hour Survey
City of Ottawa Ward ▶ 16

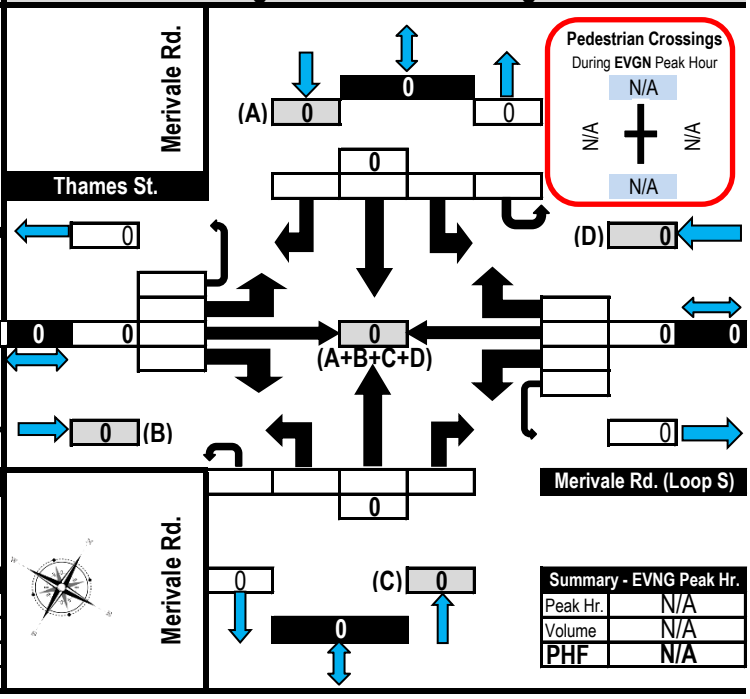


Off Peak Hour Flow Diagram



Summary - OFF Peak Hr.	
Peak Hr.	1200-1300
Volume	1014
PHF	0.93

Evening Peak Hour Flow Diagram



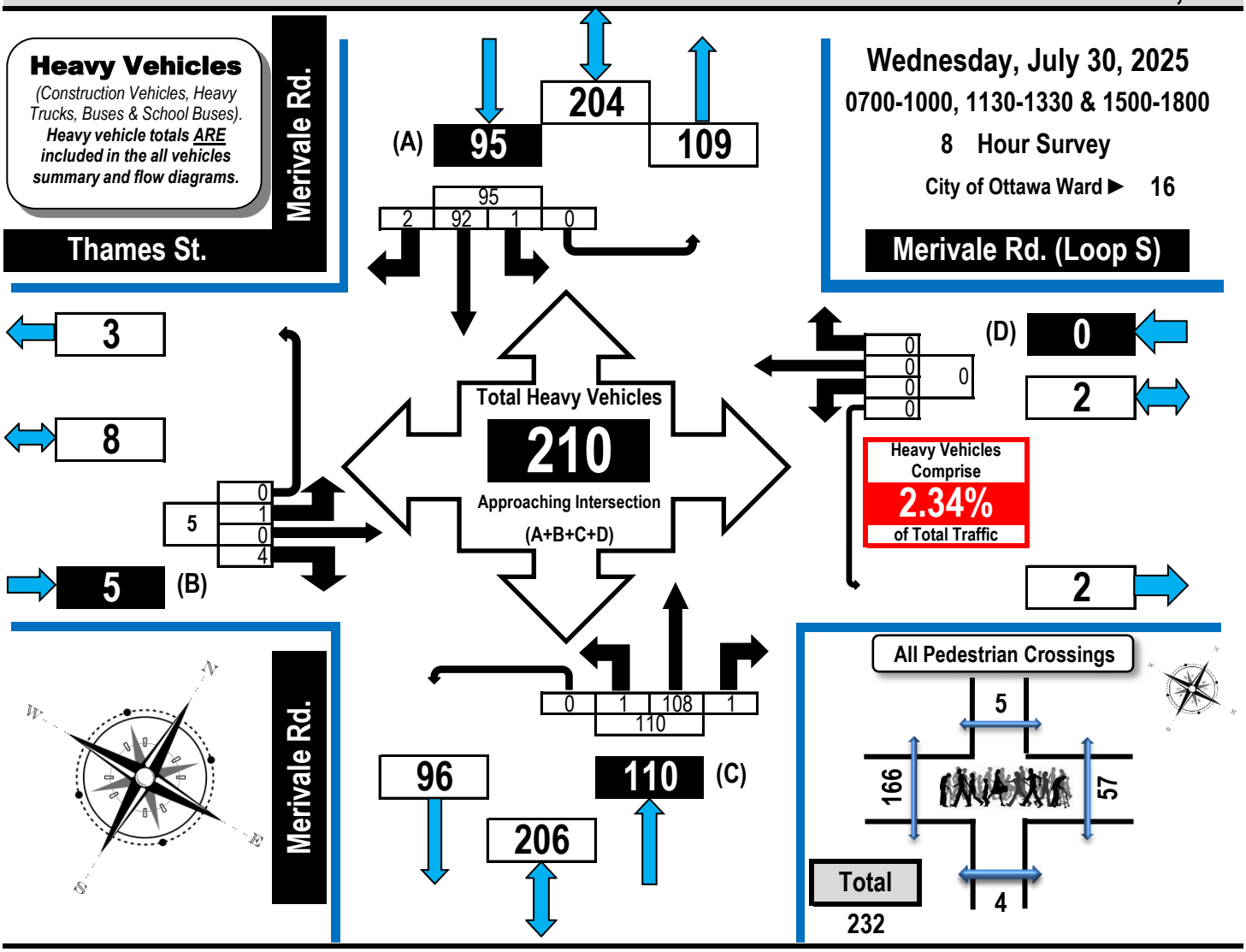
Summary - EVNG Peak Hr.	
Peak Hr.	N/A
Volume	N/A
PHF	N/A

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

Merivale Road & Thames Street — Ottawa, ON

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

Wednesday, July 30, 2025
0700-1000, 1130-1330 & 1500-1800
8 Hour Survey
City of Ottawa Ward ► 16



	Thames St.					Merivale Rd. (Loop S)					Merivale Rd.					Merivale Rd.					
	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	0	0	0	0	0	0	0	0	0	0	0	12	0	0	12	0	8	0	0	8	20
0800-0900	0	0	1	0	1	0	0	0	0	0	0	15	0	0	15	0	11	1	0	12	28
0900-1000	0	0	1	0	1	0	0	0	0	0	0	19	0	0	19	0	21	0	0	21	41
1130-1230	1	0	0	0	1	0	0	0	0	0	0	11	0	0	11	0	8	1	0	9	21
1230-1330	0	0	1	0	1	0	0	0	0	0	1	16	1	0	18	0	15	0	0	15	34
1500-1600	0	0	1	0	1	0	0	0	0	0	0	14	0	0	14	0	6	0	0	6	21
1600-1700	0	0	0	0	0	0	0	0	0	0	0	13	0	0	13	0	14	0	0	14	27
1700-1800	0	0	0	0	0	0	0	0	0	0	0	8	0	0	8	1	9	0	0	10	18
Totals	1	0	4	0	5	0	0	0	0	0	1	108	1	0	110	1	92	2	0	95	210

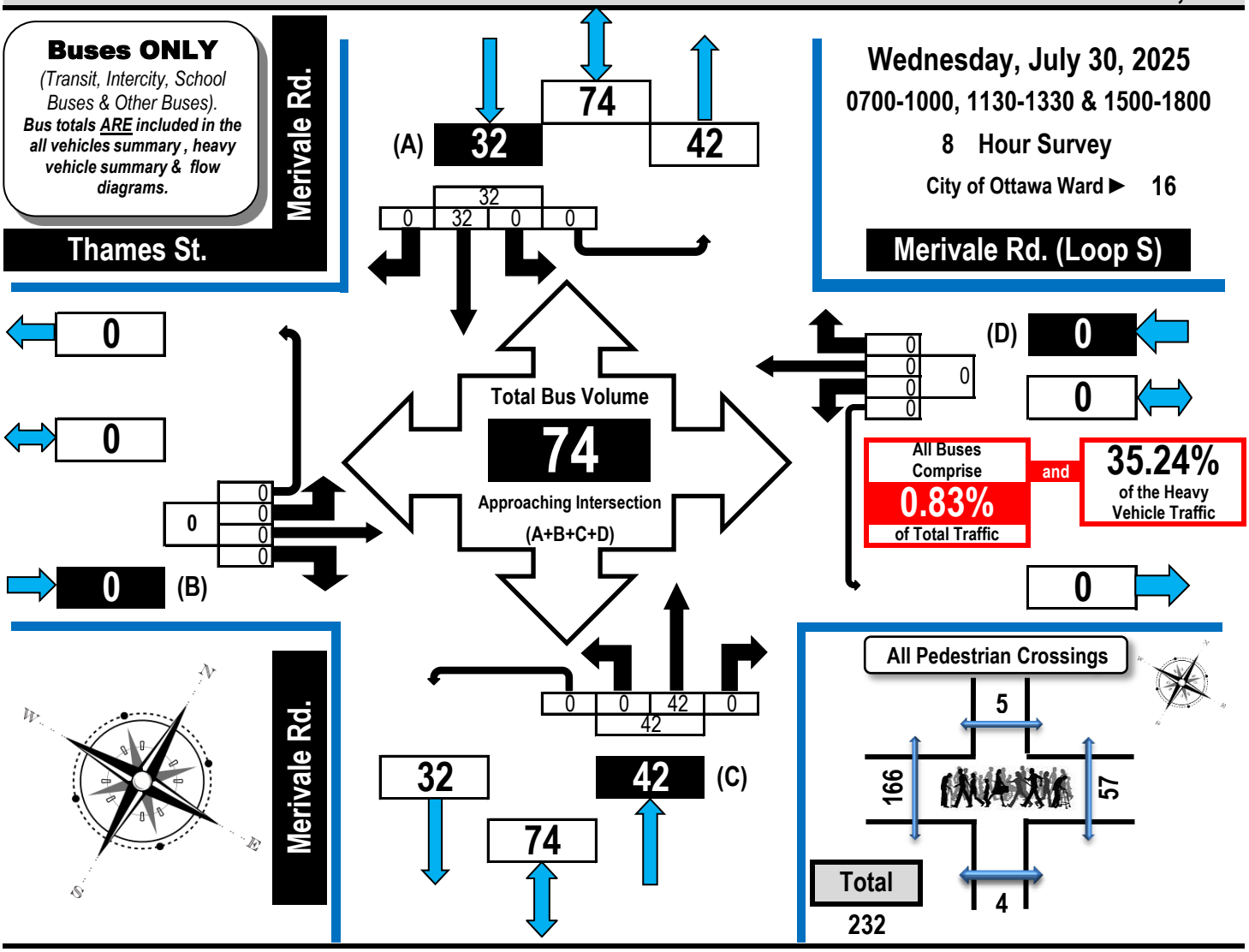
Comments:
OC Transpo, Para Transpo and private buses comprise 35.24% of the heavy vehicle traffic.

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

Merivale Road & Thames Street — Ottawa, ON

Buses ONLY
(Transit, Intercity, School Buses & Other Buses).
Bus totals ARE included in the all vehicles summary , heavy vehicle summary & flow diagrams.

Wednesday, July 30, 2025
0700-1000, 1130-1330 & 1500-1800
8 Hour Survey
City of Ottawa Ward ► 16



	Thames St.					Merivale Rd. (Loop S)					Merivale Rd.					Merivale Rd.					
	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	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	0	2	0	0	2	6
0800-0900	0	0	0	0	0	0	0	0	0	0	0	7	0	0	7	0	4	0	0	4	11
0900-1000	0	0	0	0	0	0	0	0	0	0	0	7	0	0	7	0	5	0	0	5	12
1130-1230	0	0	0	0	0	0	0	0	0	0	0	6	0	0	6	0	3	0	0	3	9
1230-1330	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	0	5	0	0	5	9
1500-1600	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	0	3	0	0	3	7
1600-1700	0	0	0	0	0	0	0	0	0	0	0	6	0	0	6	0	4	0	0	4	10
1700-1800	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	0	6	0	0	6	10
Totals	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**42**	**0**	**0**	**42**	**0**	**32**	**0**	**0**	**32**	**74**

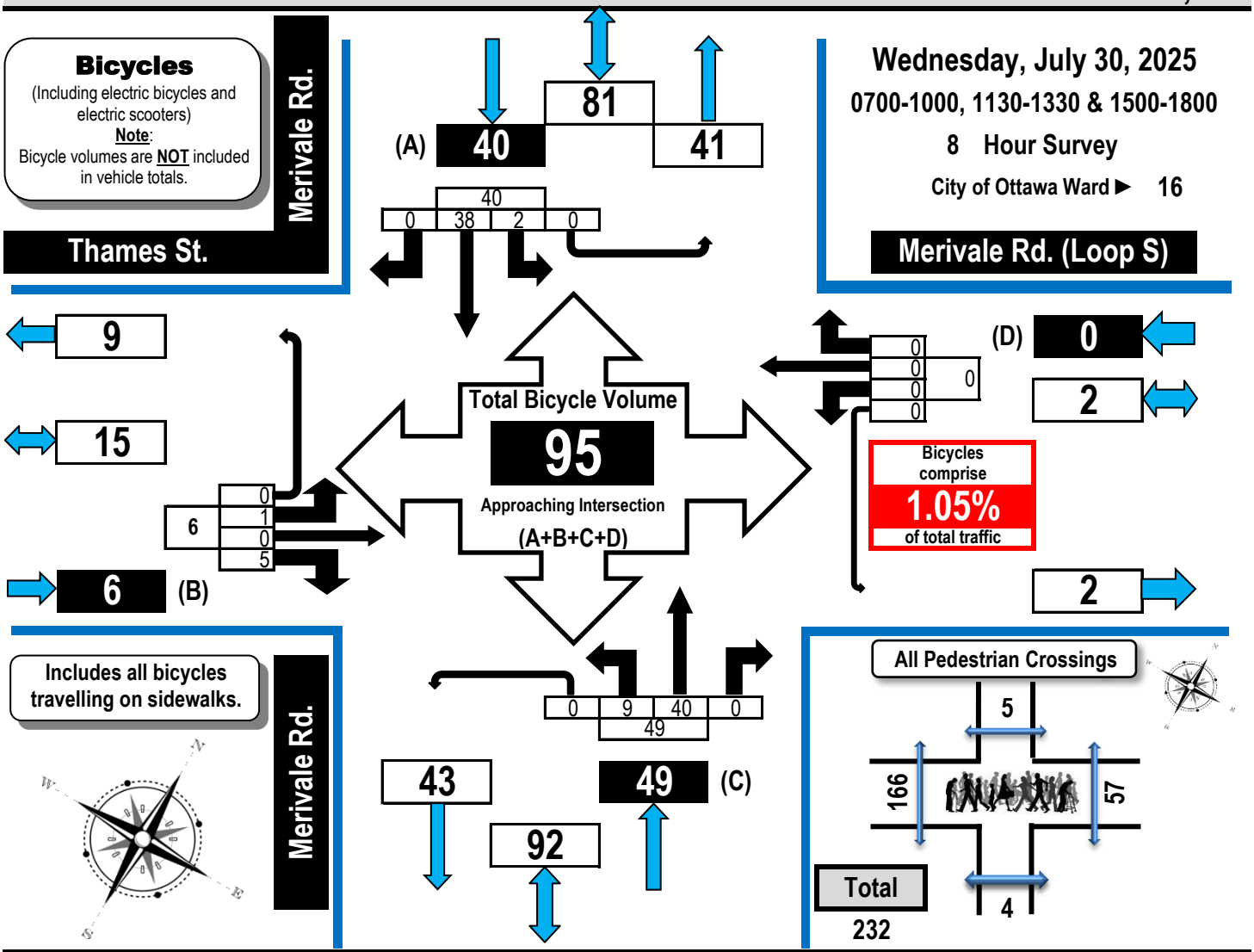
Comments:
OC Transpo, Para Transpo and private buses comprise 35.24% of the heavy vehicle traffic.

Turning Movement Count
Bicycles and Personal E-Transportation Summary
Flow Diagram

Merivale Road & Thames Street — Ottawa, ON

Bicycles
(Including electric bicycles and electric scooters)
Note:
Bicycle volumes are **NOT** included in vehicle totals.

Wednesday, July 30, 2025
0700-1000, 1130-1330 & 1500-1800
8 Hour Survey
City of Ottawa Ward ► 16



	Thames St.				Eastbound	Merivale Rd. (Loop S)				Westbound	Merivale Rd.				Northbound	Merivale Rd.				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	0	0	2	0	2	0	0	0	0	0	1	7	0	0	8	0	6	0	0	6	16
0800-0900	0	0	1	0	1	0	0	0	0	0	0	6	0	0	6	0	4	0	0	4	11
0900-1000	0	0	1	0	1	0	0	0	0	0	0	3	0	0	3	0	5	0	0	5	9
1130-1230	0	0	1	0	1	0	0	0	0	0	2	4	0	0	6	0	5	0	0	5	12
1230-1330	1	0	0	0	1	0	0	0	0	0	0	2	0	0	2	0	2	0	0	2	5
1500-1600	0	0	0	0	0	0	0	0	0	0	2	5	0	0	7	0	4	0	0	4	11
1600-1700	0	0	0	0	0	0	0	0	0	0	0	9	0	0	9	0	6	0	0	6	15
1700-1800	0	0	0	0	0	0	0	0	0	0	4	4	0	0	8	2	6	0	0	8	16
Totals	1	0	5	0	6	0	0	0	0	0	9	40	0	0	49	2	38	0	0	40	95

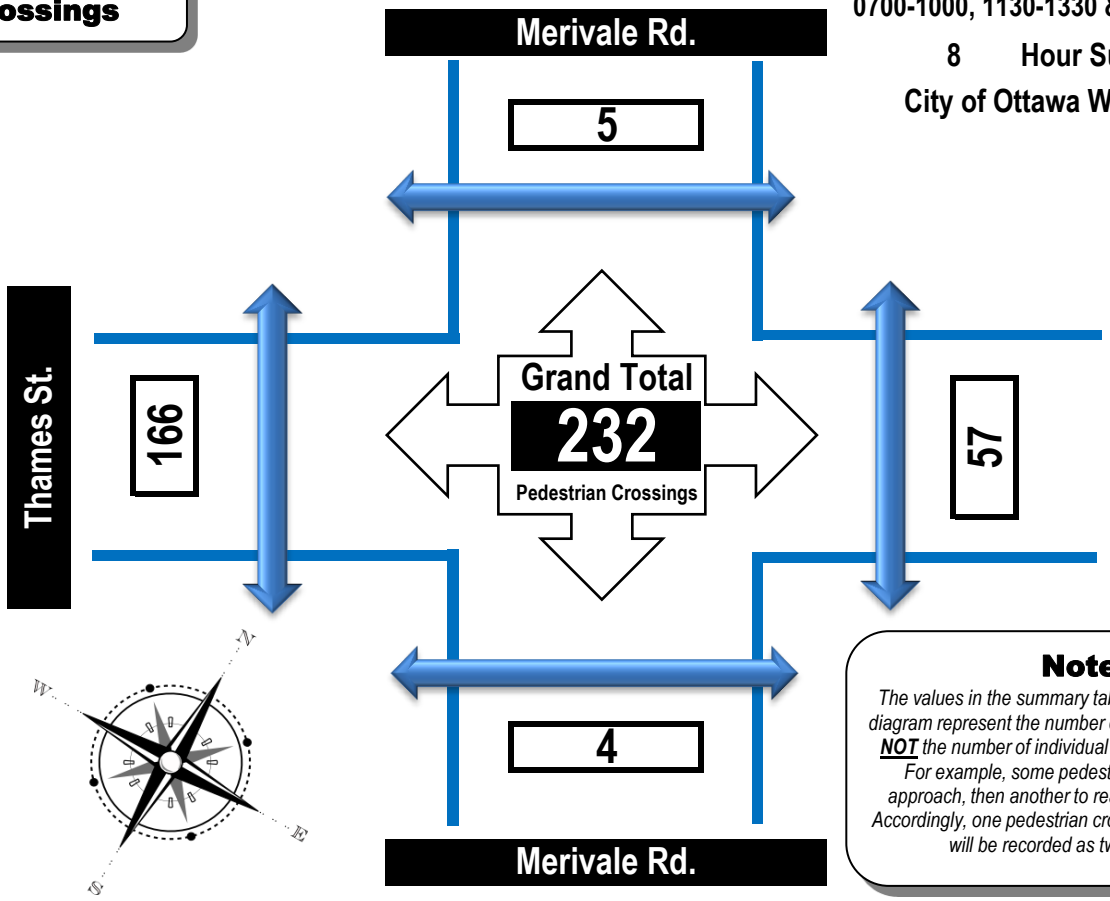
Comments:
OC Transpo, Para Transpo and private buses comprise 35.24% of the heavy vehicle traffic.

Turning Movement Count
Pedestrian Crossings Summary and Flow Diagram

Merivale Road & Thames Street — Ottawa, ON

Pedestrian Crossings

Wednesday, July 30, 2025
0700-1000, 1130-1330 & 1500-1800
8 Hour Survey
City of Ottawa Ward ► 16



Note
*The values in the summary table below and the flow diagram represent the number of pedestrian crossing**s** **NOT** the number of individual pedestrian**s** crossing. 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 Thames St.	East Side Crossing Merivale Rd. (Loop S)	Street Total	South Side Crossing Merivale Rd.	North Side Crossing Merivale Rd.	Street Total	Grand Total
0700-0800	14	7	21	0	0	0	21
0800-0900	14	5	19	2	1	3	22
0900-1000	23	14	37	0	0	0	37
1130-1230	22	5	27	0	1	1	28
1230-1330	26	6	32	0	0	0	32
1500-1600	12	8	20	1	2	3	23
1600-1700	30	6	36	1	1	2	38
1700-1800	25	6	31	0	0	0	31
Totals	**166**	**57**	**223**	**4**	**5**	**9**	**232**

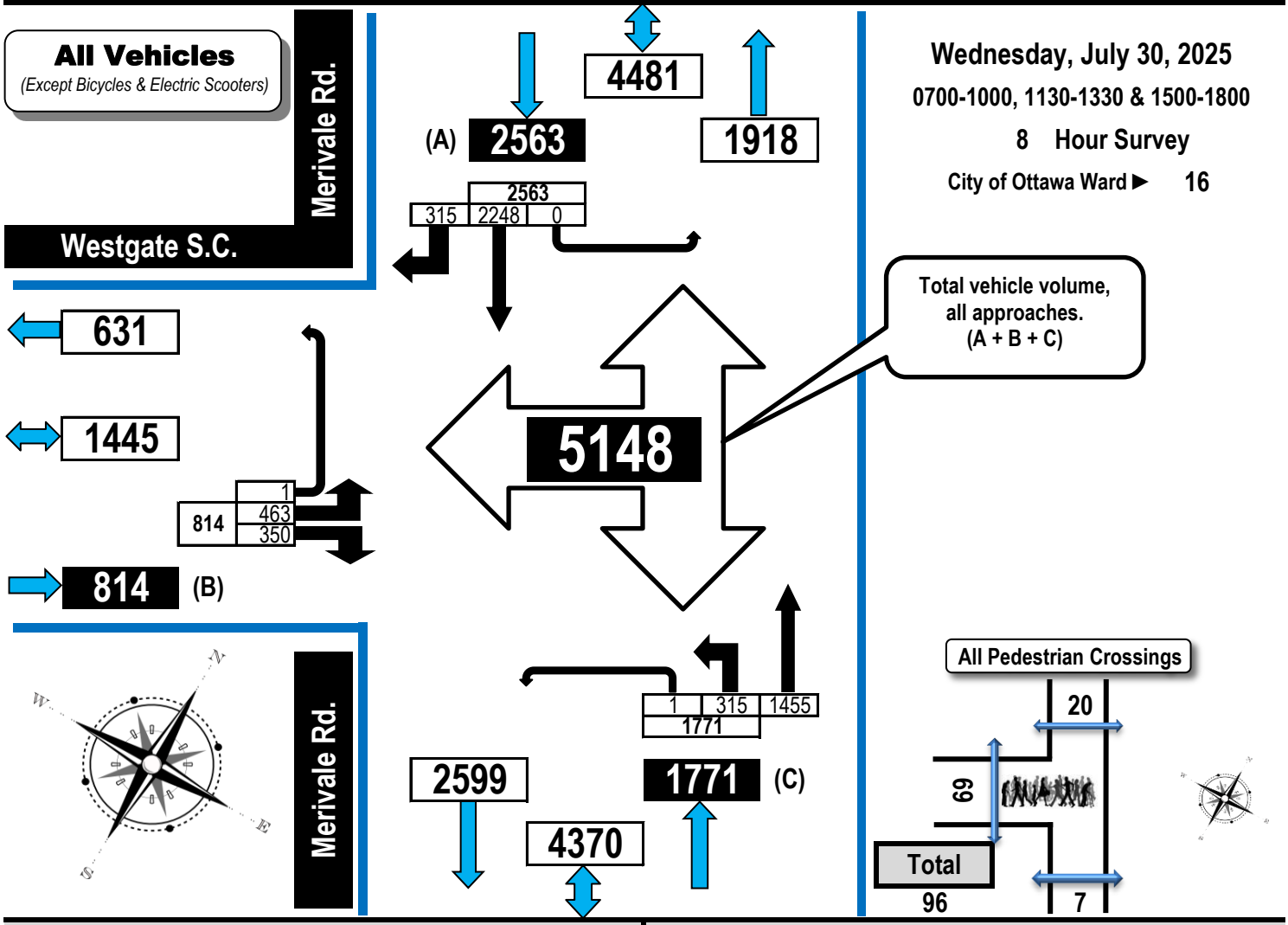
Comments:
OC Transpo, Para Transpo and private buses comprise 35.24% of the heavy vehicle traffic.

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

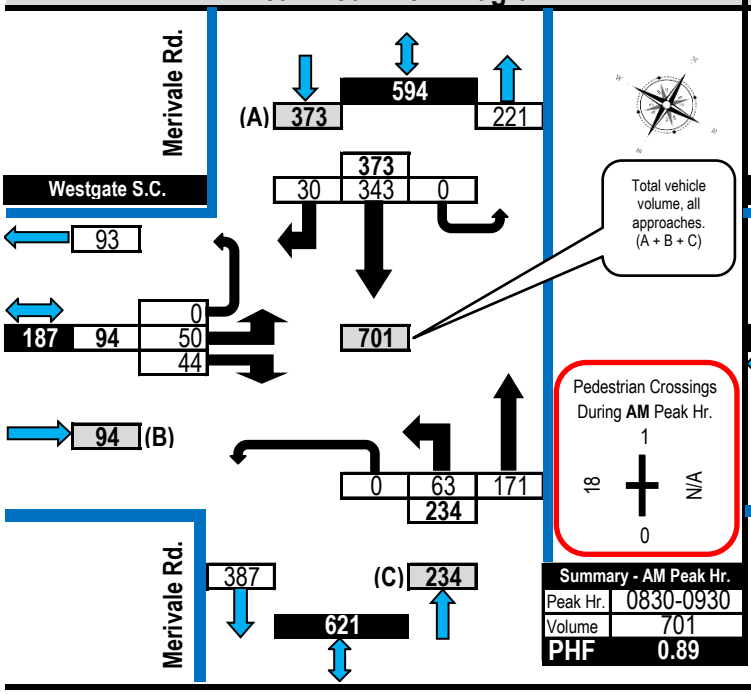
Merivale Road & Westgate Shopping Centre — Ottawa, ON

All Vehicles
(Except Bicycles & Electric Scooters)

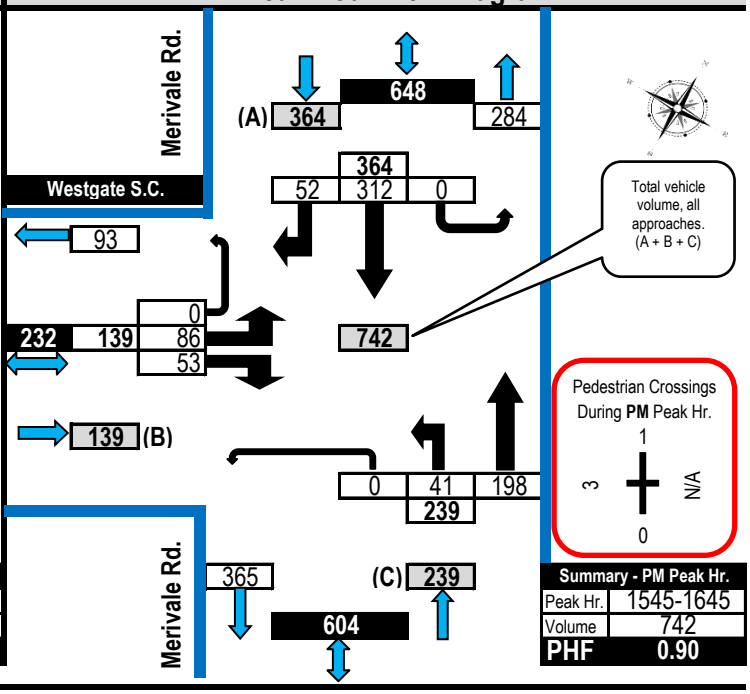
Wednesday, July 30, 2025
0700-1000, 1130-1330 & 1500-1800
8 Hour Survey
City of Ottawa Ward ▶ 16



AM Peak Hour Flow Diagram



PM Peak Hour Flow Diagram

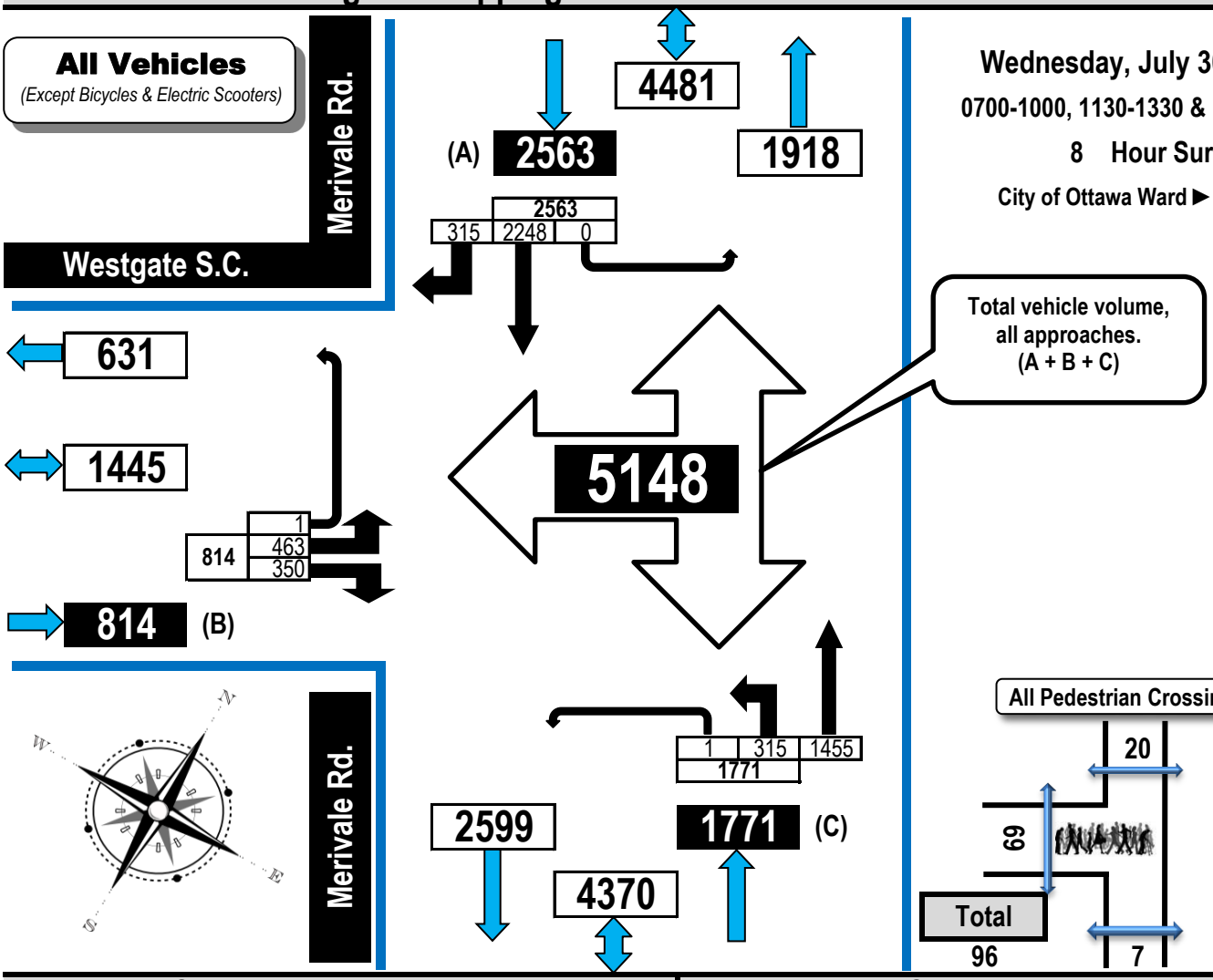


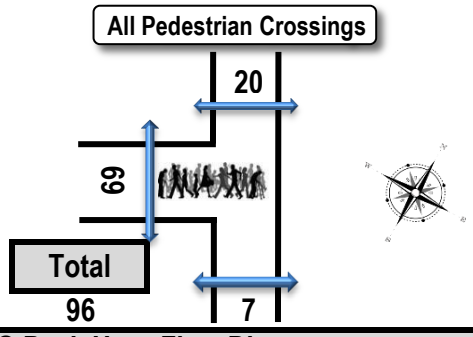
Turning Movement Count
Summary, OFF and EVGN Peak Hour Flow Diagrams
All Vehicles Except Bicycles and Personal E-Transportation

Merivale Road & Westgate Shopping Centre — Ottawa, ON

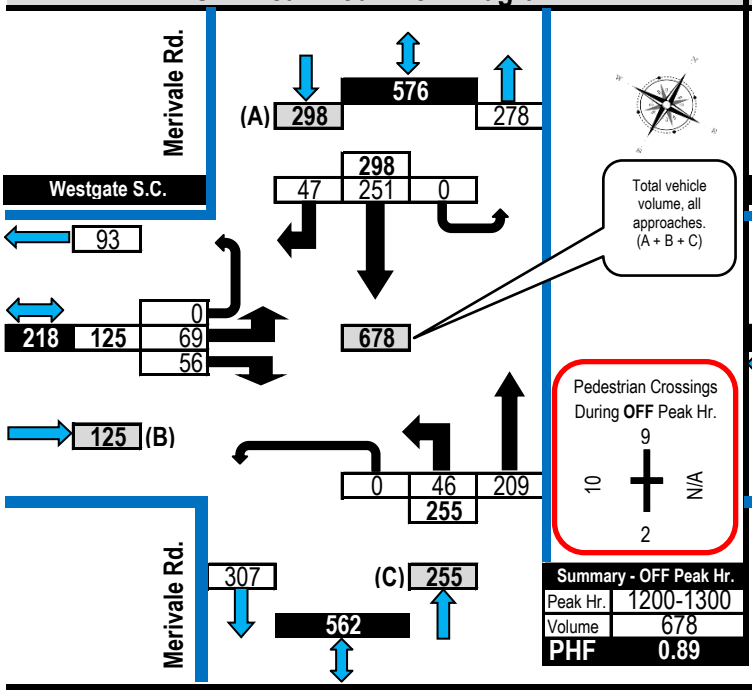
All Vehicles
(Except Bicycles & Electric Scooters)

Wednesday, July 30, 2025
0700-1000, 1130-1330 & 1500-1800
8 Hour Survey
City of Ottawa Ward ▶ 16

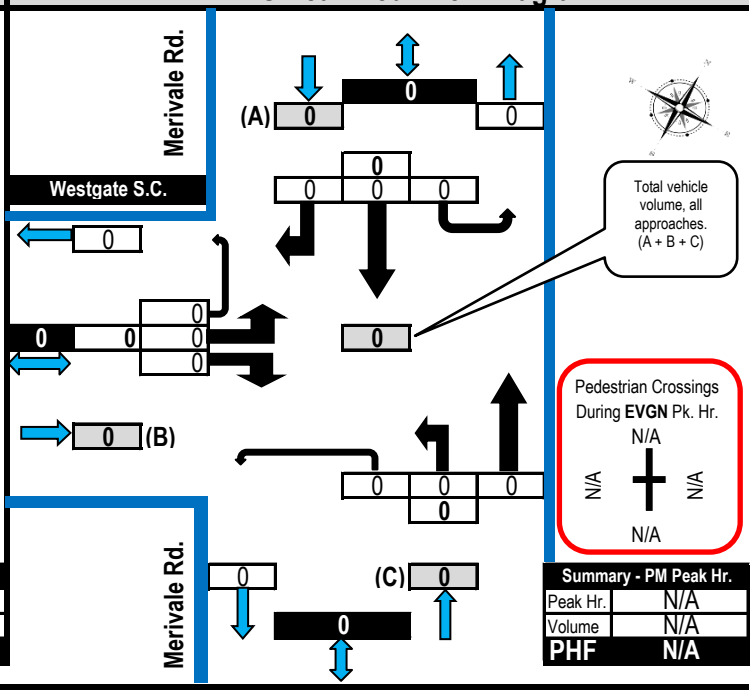




OFF Peak Hour Flow Diagram



EVENING Peak Hour Flow Diagram



Turning Movement Count

Summary Report Including Peak Hours, AADT and Expansion Factors

All Vehicles Except Bicycles and Personal E-Transportation

Merivale Road & Westgate Shopping Centre — Ottawa, ON

Survey Date: Wednesday, July 30, 2025 **Start Time:** 0700 **AADT Factor:** 0.9

Weather AM: Partly Cloudy 20° C **Survey Duration:** 8 Hrs. **Survey Hours:** 0700-1000, 1130-1330 & 1500-1800

Weather PM: Mostly Cloudy 27° C **Surveyor(s):** J. Mousseau

	Westgate S.C.					N/A						Merivale Rd.					Merivale Rd.						
	Eastbound					Westbound						Northbound					Southbound						
Time Period	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	21		12	0	33						33	13	139		0	152		227	16	0	243	395	428
0800-0900	46		29	0	75						75	45	179		1	225		309	33	0	342	567	642
0900-1000	51		51	0	102						102	50	140		0	190		285	36	0	321	511	613
1130-1230	59		59	0	118						118	52	195		0	247		254	41	0	295	542	660
1230-1330	66		53	0	119						119	39	204		0	243		247	50	0	297	540	659
1500-1600	72		49	0	121						121	57	185		0	242		311	59	0	370	612	733
1600-1700	86		51	0	137						137	32	197		0	229		330	45	0	375	604	741
1700-1800	62		46	1	109						109	27	216		0	243		285	35	0	320	563	672
Totals	463		350	1	814						814	315	1455		1	1771		2248	315	0	2563	4334	5148

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	644	0	487	1	1131	0	0	0	0	0	1131	438	2022	0	1	2462	0	3125	438	0	3563	6024	7156

Average daily 12-hour vehicle volumes. These volumes are calculated by multiplying the equivalent 12-hour totals by the AADT factor of: 0.9

AADT 12-hr	579	0	438	1	1018	0	0	0	0	0	1018	394	1820	0	1	2216	0	2812	394	0	3206	5422	6440

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	759	0	574	2	1334	0	0	0	0	0	1334	516	2384	0	2	2902	0	3684	516	0	4200	7103	8437

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.	Gr. Tot.
0830-0930	50	0	44	0	94	0	0	0	0	0	94	63	171	0	0	234	0	343	30	0	373	607	701
OFF Peak Hour Factor ➡ 0.92												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.	Gr. Tot.
1200-1300	69	0	56	0	125	0	0	0	0	0	125	46	209	0	0	255	0	251	47	0	298	553	678
PM Peak Hour Factor ➡ 0.90												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.	Gr. Tot.
1545-1645	86	0	53	0	139	0	0	0	0	0	139	41	198	0	0	239	0	312	52	0	364	603	742

Comments:

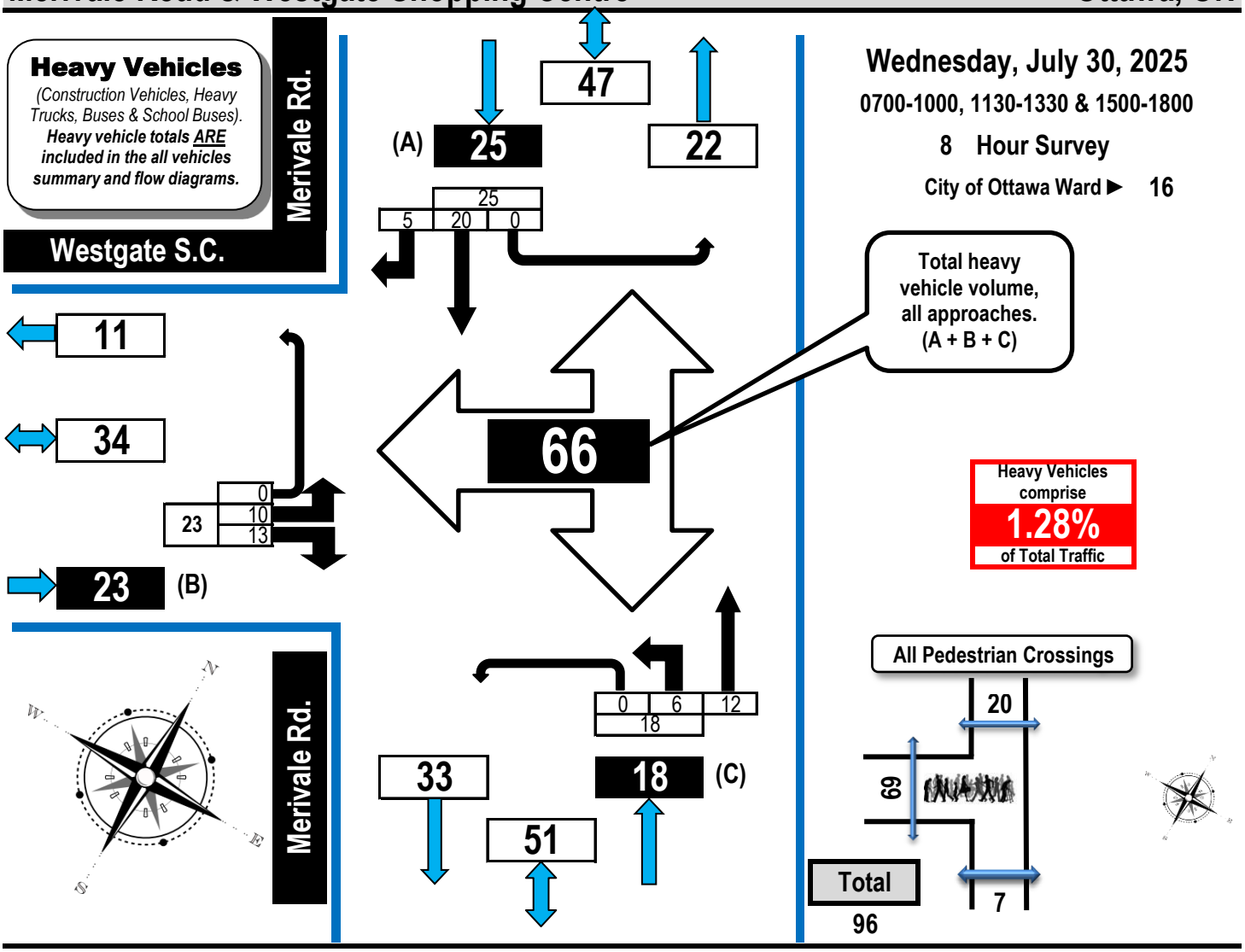
Para Transpo buses comprise 6.06% of the heavy vehicle traffic. Occasional backup southbound occurred during the PM time period between the traffic signal at Carling Avenue and the Westgate access. At 1715H, southbound traffic backed up to The Royal parking lot access.

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.

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

Merivale Road & Westgate Shopping Centre — Ottawa, ON



	Westgate S.C.					N/A					Merivale Rd.					Merivale Rd.					
	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	1		1	0	2						0	2		0	2		2	0	0	2	6
0800-0900	3		1	0	4						1	1		0	2		1	1	0	2	8
0900-1000	1		3	0	4						0	2		0	2		4	1	0	5	11
1130-1230	1		2	0	3						3	1		0	4		1	1	0	2	9
1230-1330	4		3	0	7						1	3		0	4		6	1	0	7	18
1500-1600	0		1	0	1						0	1		0	1		2	0	0	2	4
1600-1700	0		2	0	2						1	2		0	3		4	1	0	5	10
1700-1800	0		0	0	0						0	0		0	0		0	0	0	0	0
Totals	10		13	0	23						6	12		0	18		20	5	0	25	66

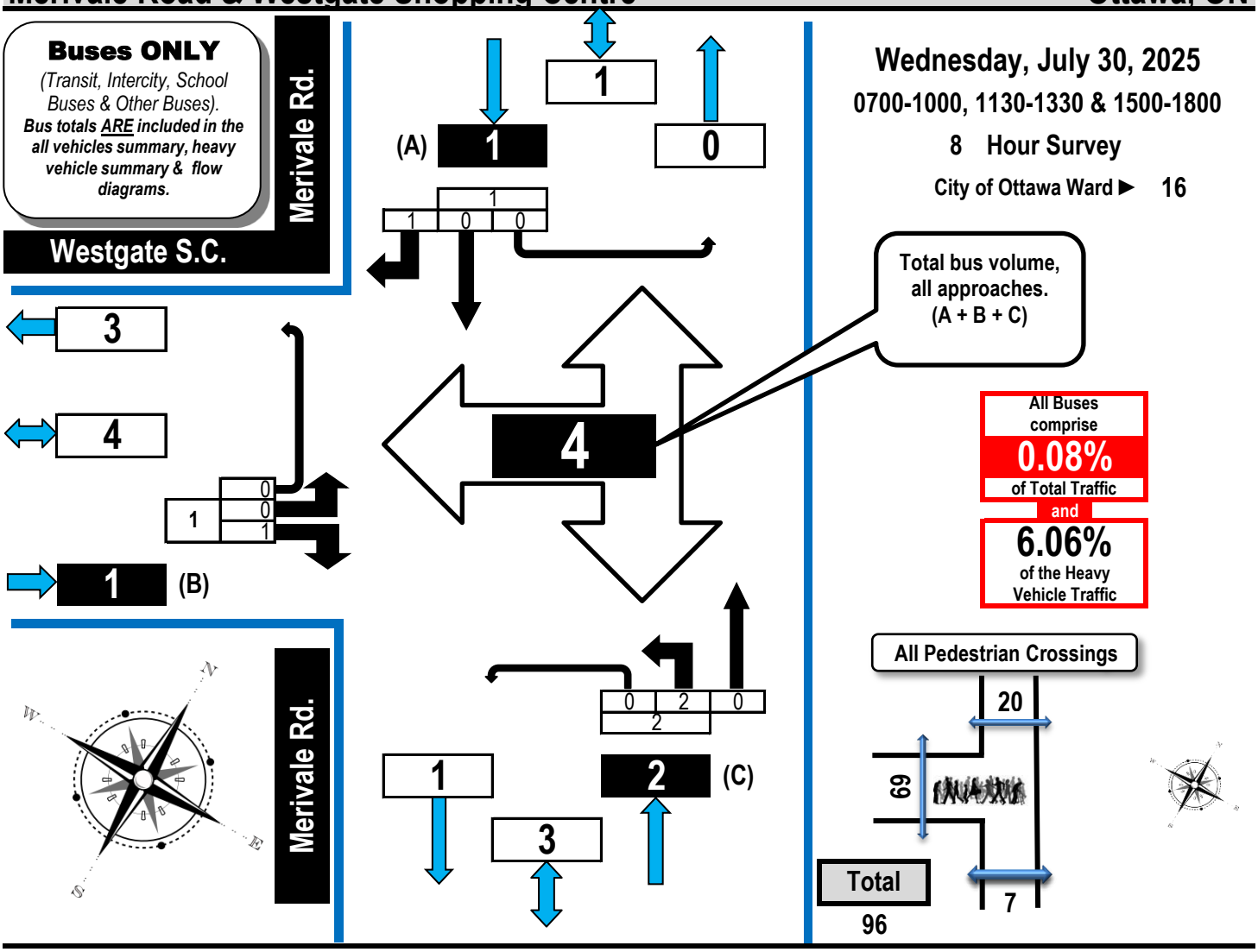
Comments:

Para Transpo buses comprise 6.06% of the heavy vehicle traffic. Occasional backup southbound occurred during the PM time period between the traffic signal at Carling Avenue and the Westgate access. At 1715H, southbound traffic backed up to The Royal parking lot access.

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

Merivale Road & Westgate Shopping Centre — Ottawa, ON

Buses ONLY
(Transit, Intercity, School Buses & Other Buses).
Bus totals ARE included in the all vehicles summary, heavy vehicle summary & flow diagrams.



Wednesday, July 30, 2025
0700-1000, 1130-1330 & 1500-1800
8 Hour Survey
City of Ottawa Ward ► 16

All Buses comprise **0.08%** of Total Traffic and **6.06%** of the Heavy Vehicle Traffic

	Westgate S.C.					N/A					Merivale Rd.					Merivale Rd.					
	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	0		0	0	0						0	0		0	0		0	0	0	0	0
0800-0900	0		0	0	0						0	0		0	0		0	0	0	0	0
0900-1000	0		0	0	0						0	0		0	0		0	1	0	1	1
1130-1230	0		0	0	0						1	0		0	1		0	0	0	0	1
1230-1330	0		1	0	1						0	0		0	0		0	0	0	0	1
1500-1600	0		0	0	0						0	0		0	0		0	0	0	0	0
1600-1700	0		0	0	0						1	0		0	1		0	0	0	0	1
1700-1800	0		0	0	0						0	0		0	0		0	0	0	0	0
Totals	**0**		**1**	**0**	**1**						**2**	**0**		**0**	**2**		**0**	**1**	**0**	**1**	**4**

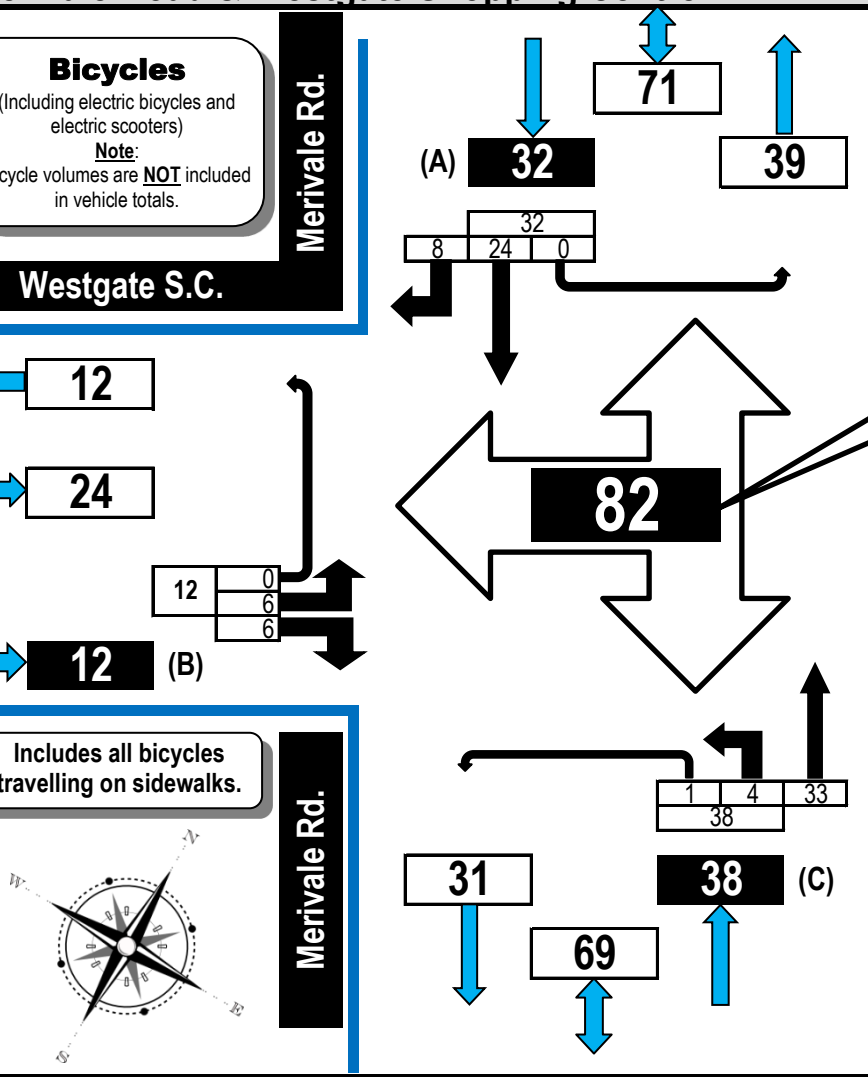
Comments:
Para Transpo buses comprise 6.06% of the heavy vehicle traffic. Occasional backup southbound occurred during the PM time period between the traffic signal at Carling Avenue and the Westgate access. At 1715H, southbound traffic backed up to The Royal parking lot access.

Turning Movement Count
Bicycles and All Forms of Personal E-Transportation
Summary Flow Diagram

Merivale Road & Westgate Shopping Centre — Ottawa, ON

Bicycles
(Including electric bicycles and electric scooters)
Note:
Bicycle volumes are **NOT** included in vehicle totals.

Includes all bicycles travelling on sidewalks.



Wednesday, July 30, 2025
0700-1000, 1130-1330 & 1500-1800
8 Hour Survey
City of Ottawa Ward ► 16

Total bicycle volume, all approaches. (A + B + C)

Bicycles comprise **1.57%** of total traffic

	Westgate S.C.					N/A					Merivale Rd.					Merivale Rd.					
	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	0		1	0	1						1	2		0	3		5	0	0	5	9
0800-0900	2		1	0	3						0	7		0	7		2	0	0	2	12
0900-1000	0		1	0	1						1	2		0	3		5	1	0	6	10
1130-1230	0		1	0	1						0	4		0	4		2	0	0	2	7
1230-1330	0		0	0	0						1	1		0	2		0	1	0	1	3
1500-1600	2		0	0	2						1	3		0	4		3	1	0	4	10
1600-1700	2		0	0	2						0	5		0	5		3	2	0	5	12
1700-1800	0		2	0	2						0	9		1	10		4	3	0	7	19
Totals	6		6	0	12						4	33		1	38		24	8	0	32	82

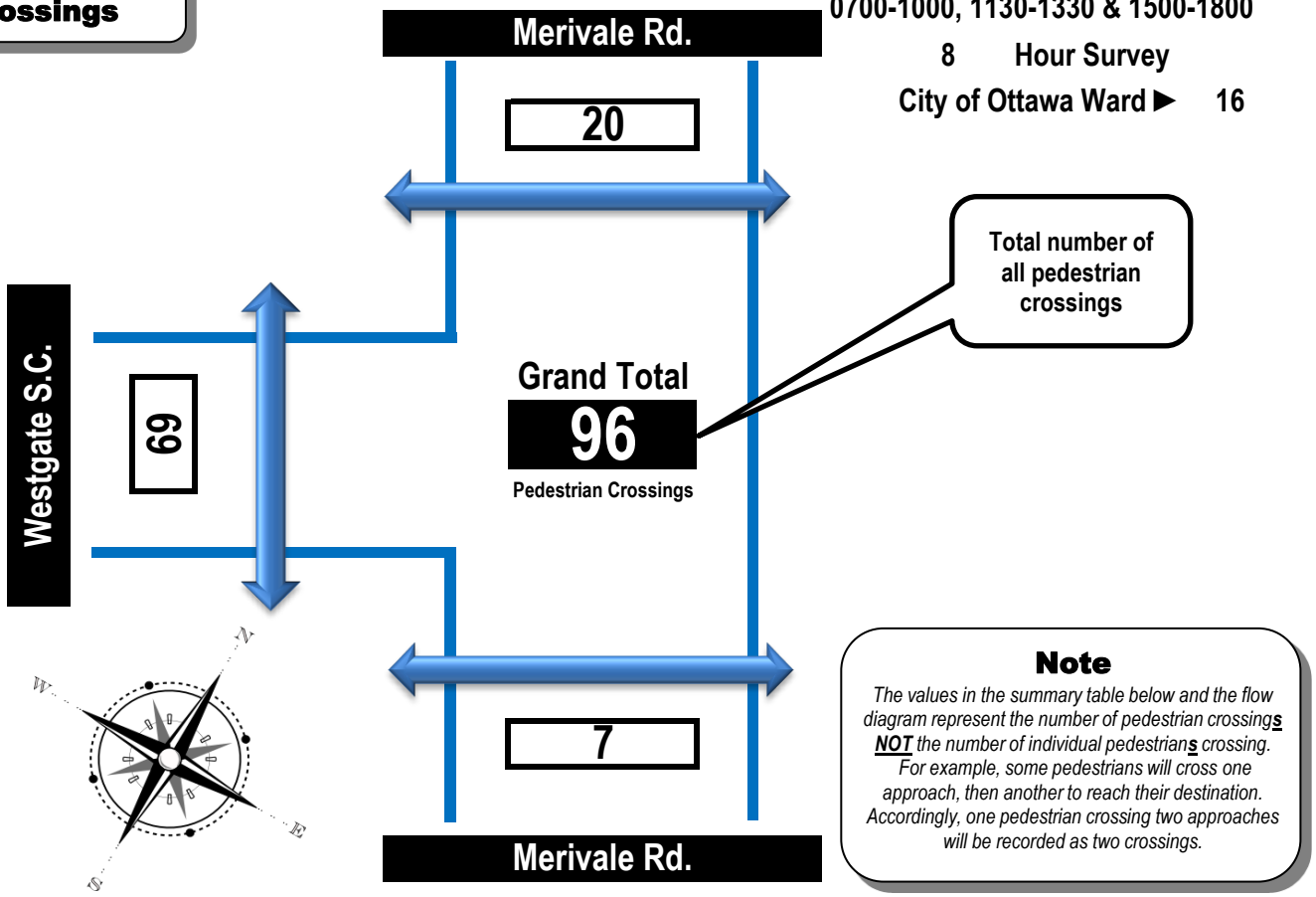
Comments:
Para Transpo buses comprise 6.06% of the heavy vehicle traffic. Occasional backup southbound occurred during the PM time period between the traffic signal at Carling Avenue and the Westgate access. At 1715H, southbound traffic backed up to The Royal parking lot access.

Turning Movement Count
Pedestrian Crossings Summary and Flow Diagram

Merivale Road & Westgate Shopping Centre — Ottawa, ON

Pedestrian Crossings

Wednesday, July 30, 2025
0700-1000, 1130-1330 & 1500-1800
8 Hour Survey
City of Ottawa Ward ► 16



Note
*The values in the summary table below and the flow diagram represent the number of pedestrian crossing**s** **NOT** the number of individual pedestrian**s** crossing. 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 Westgate S.C.	East Side Crossing N/A	Street Total	South Side Crossing Merivale Rd.	North Side Crossing Merivale Rd.	Street Total	Grand Total
0700-0800	7		7	1	0	1	8
0800-0900	11		11	0	0	0	11
0900-1000	18		18	1	2	3	21
1130-1230	13		13	4	7	11	24
1230-1330	5		5	0	4	4	9
1500-1600	1		1	1	0	1	2
1600-1700	5		5	0	4	4	9
1700-1800	9		9	0	3	3	12
Totals	**69**		**69**	**7**	**20**	**27**	**96**

Comments:
Para Transpo buses comprise 6.06% of the heavy vehicle traffic. Occasional backup southbound occurred during the PM time period between the traffic signal at Carling Avenue and the Westgate access. At 1715H, southbound traffic backed up to The Royal parking lot access.

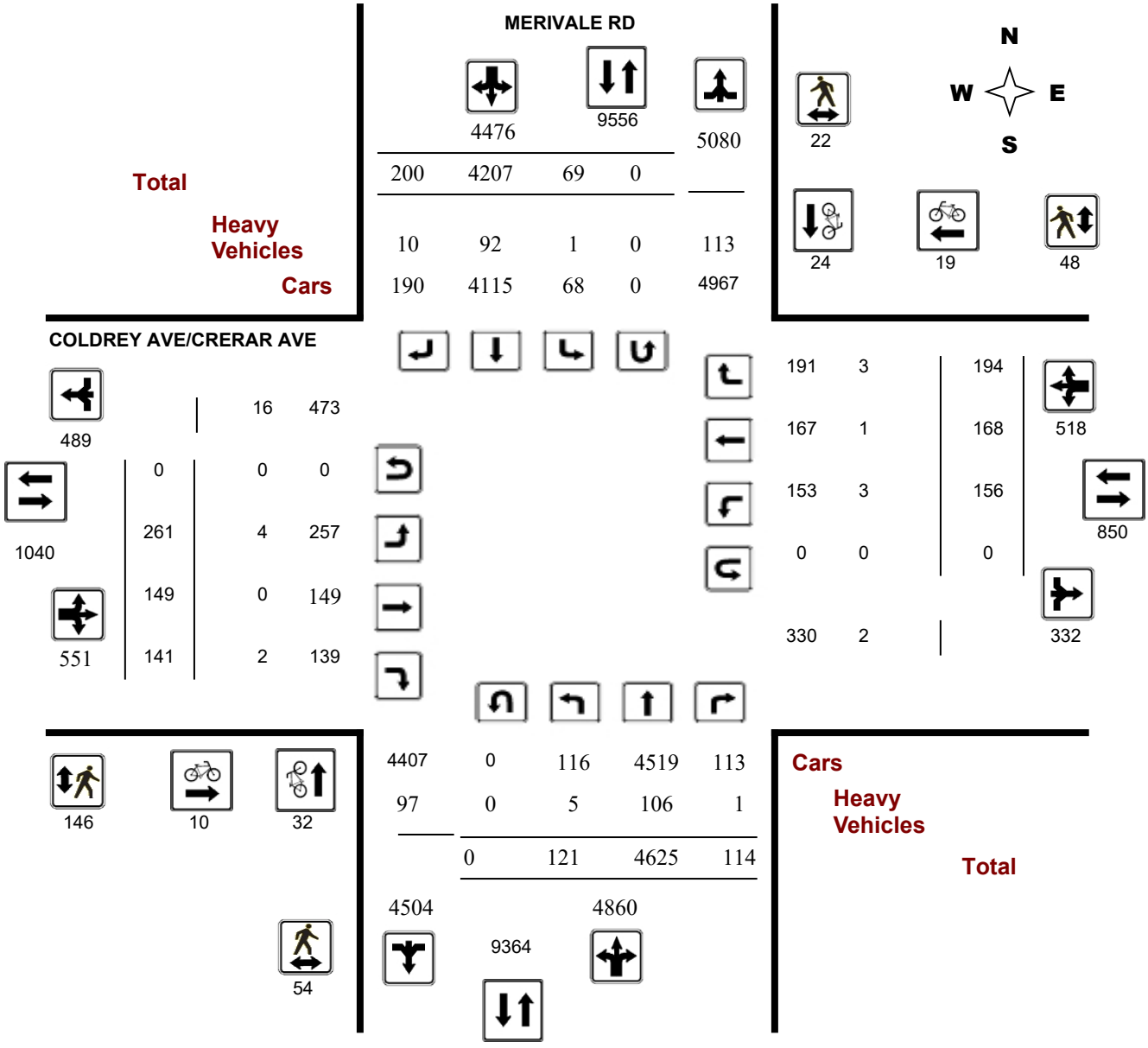
Transportation Services - Traffic Services

Turning Movement Count - Study Results

MERIVALE RD @ COLDREY AVE/CRERAR AVE

Survey Date: Wednesday, July 16, 2025
Start Time: 07:00
WO No: 42886
Device: Miovision

Full Study Diagram



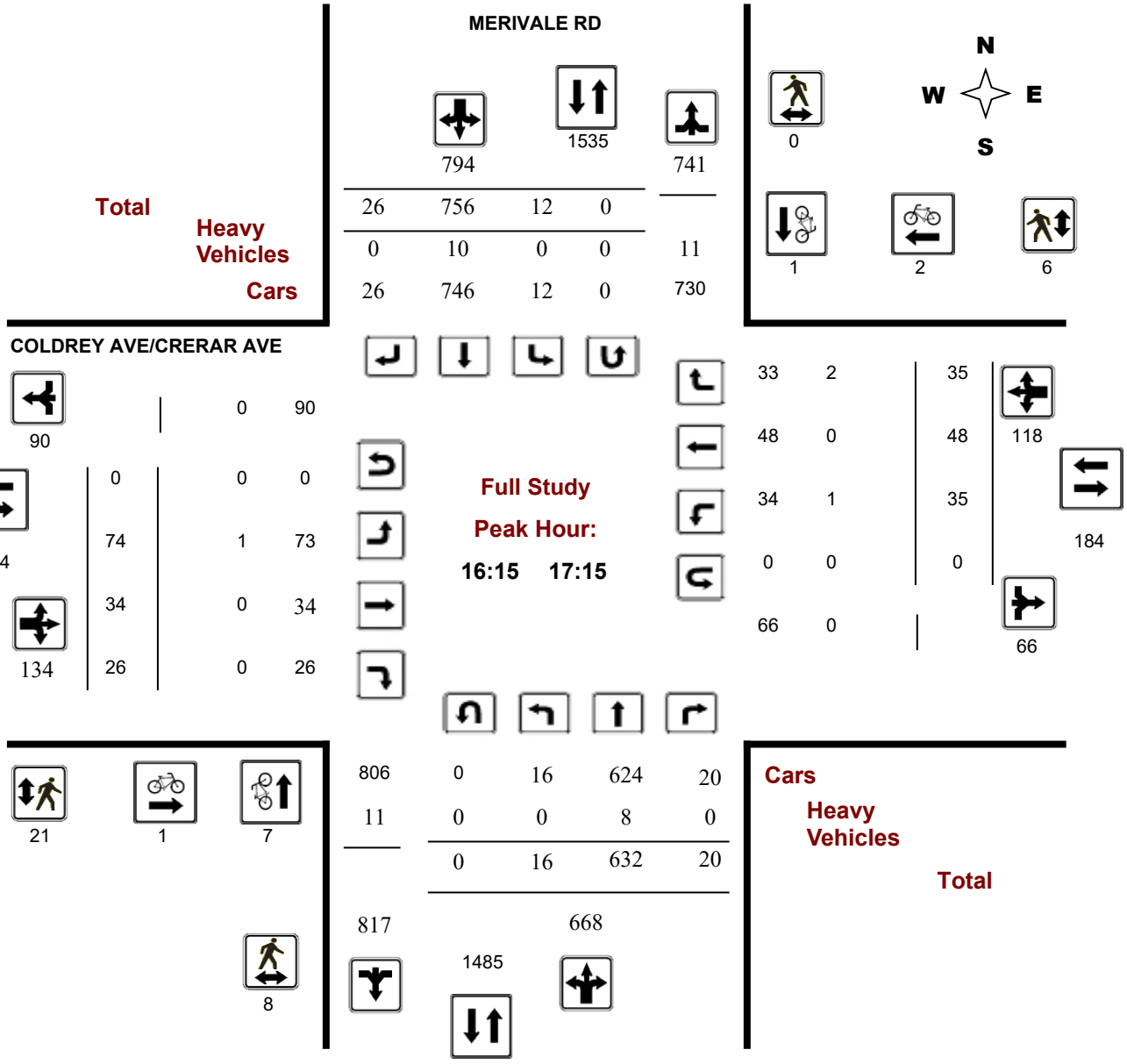
Transportation Services - Traffic Services

Turning Movement Count - Study Results

MERIVALE RD @ COLDREY AVE/CRERAR AVE

Survey Date: Wednesday, July 16, 2025
Start Time: 07:00
WO No: 42886
Device: Miovision

Full Study Peak Hour Diagram



Transportation Services - Traffic Services

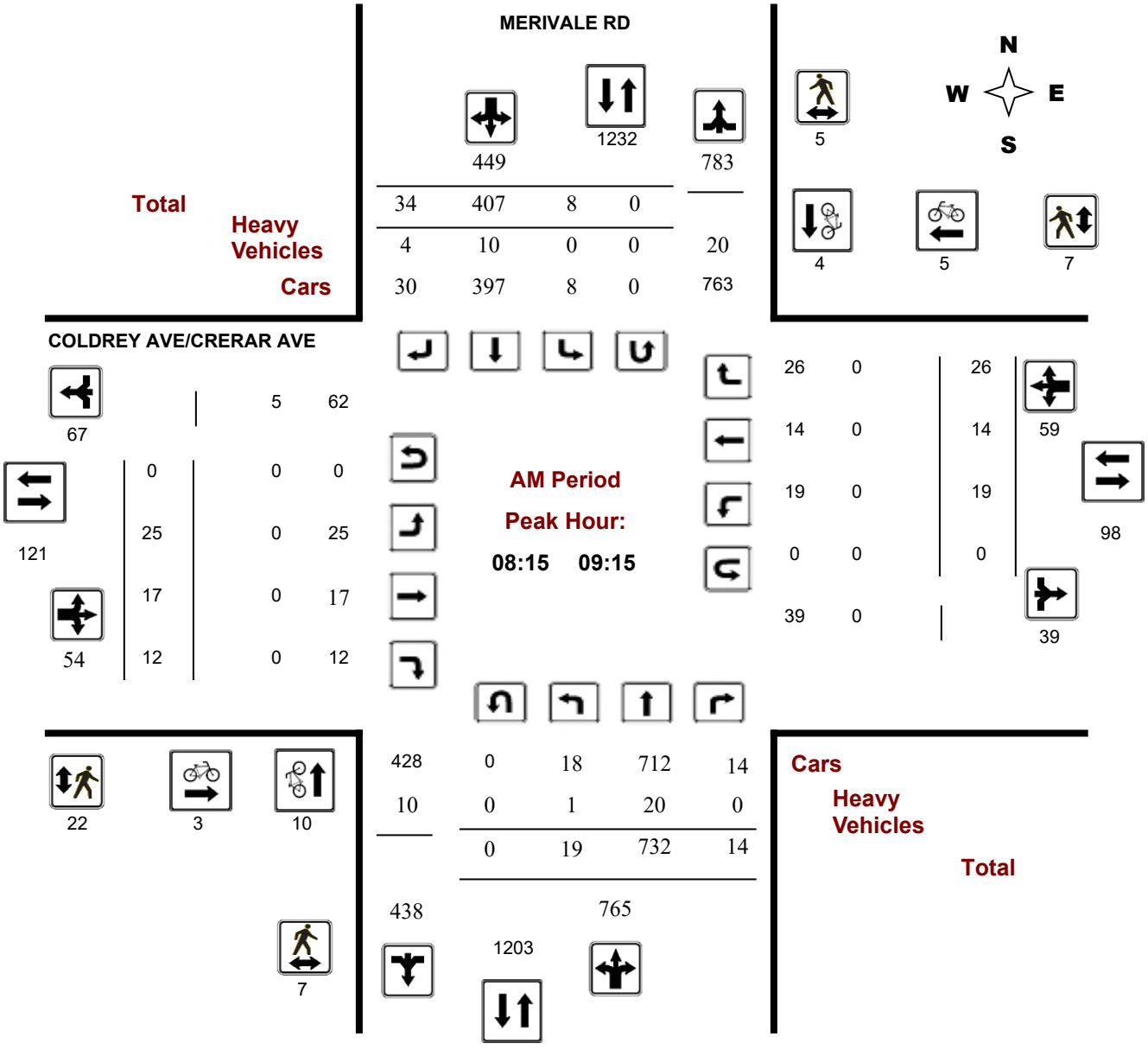
Turning Movement Count - Study Results

MERIVALE RD @ COLDREY AVE/CRERAR AVE

Survey Date: Wednesday, July 16, 2025 **WO No:** 42886

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

AM Period Peak Hour Diagram



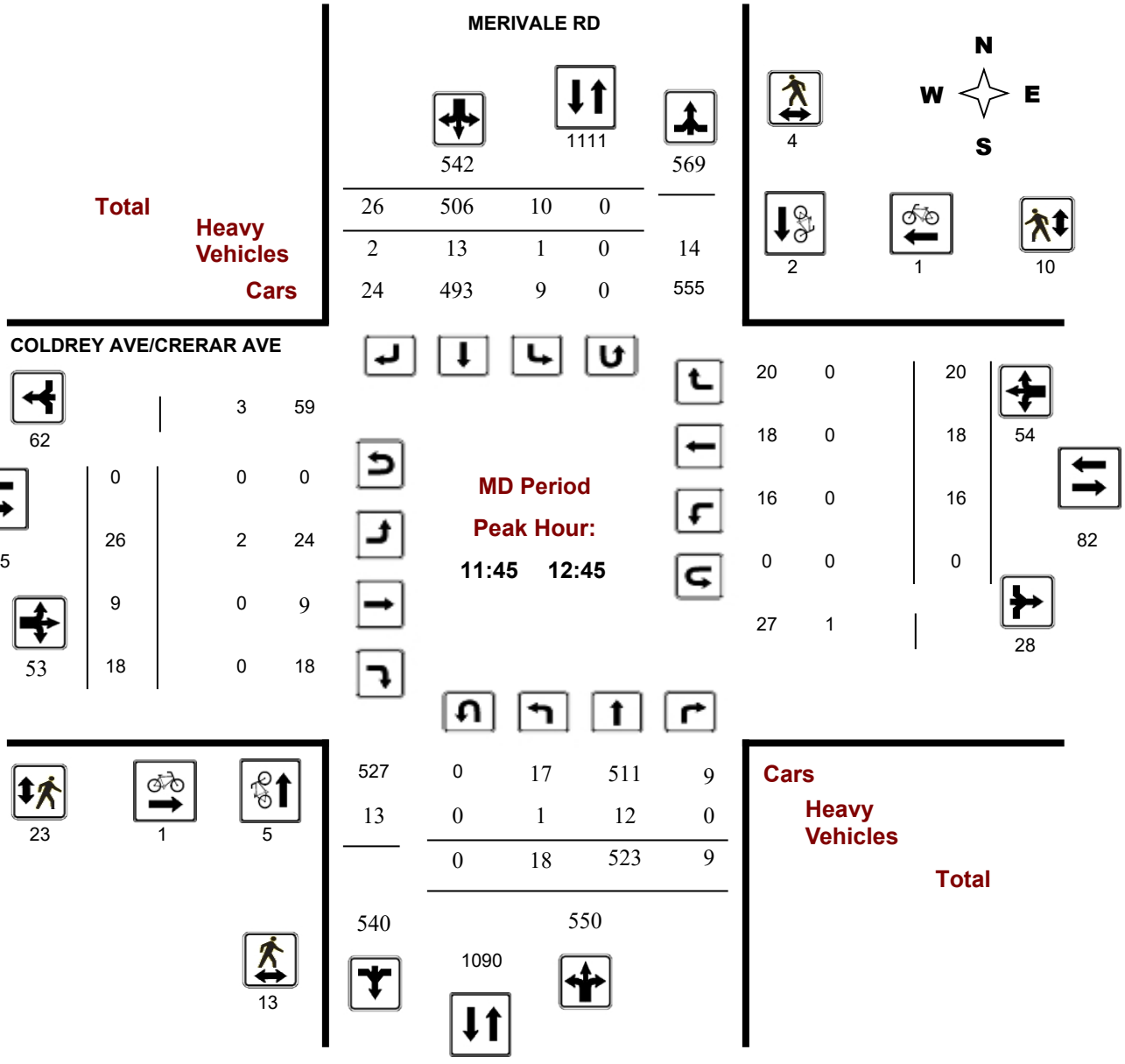
Transportation Services - Traffic Services

Turning Movement Count - Study Results

MERIVALE RD @ COLDREY AVE/CRERAR AVE

Survey Date: Wednesday, July 16, 2025
Start Time: 07:00
WO No: 42886
Device: Miovision

MD Period Peak Hour Diagram



Transportation Services - Traffic Services

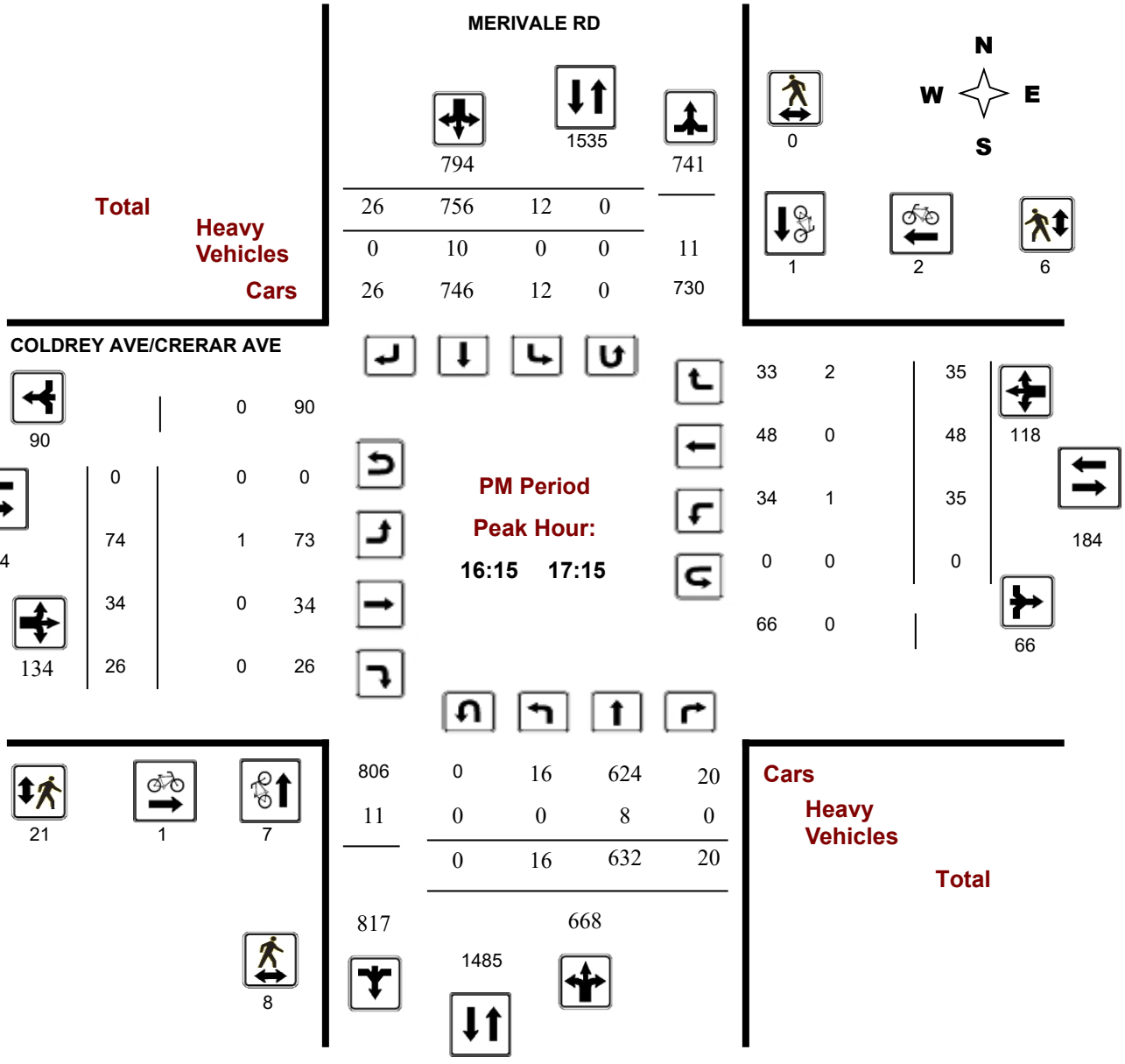
Turning Movement Count - Study Results

MERIVALE RD @ COLDREY AVE/CRERAR AVE

Survey Date: Wednesday, July 16, 2025 **WO No:** 42886

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

PM Period Peak Hour Diagram



Transportation Services - Traffic Services

Turning Movement Count - Study Results

MERIVALE RD @ COLDREY AVE/CRERAR AVE

Survey Date: Wednesday, July 16, 2025 **WO No:** 42886

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

Full Study Summary (8 HR Standard)

Survey Date: Wednesday, July 16, 2025

Total Observed U-Turns

Northbound: 0 Southbound: 0

Eastbound: 0 Westbound: 0

AADT Factor

.90

	MERIVALE RD									COLDREY AVE/CRERAR AVE									
	Northbound				Southbound					Eastbound				Westbound					
Period	LT	ST	RT	**NB TOT**	LT	ST	RT	**SB TOT**	**STR TOT**	LT	ST	RT	**EB TOT**	LT	ST	RT	**WB TOT**	**STR TOT**	**Grand Total**
07:00 08:00	6	556	6	**568**	8	325	14	**347**	**915**	21	4	4	**29**	9	13	17	**39**	**68**	**983**
08:00 09:00	19	716	13	**748**	10	366	28	**404**	**1152**	23	17	14	**54**	14	15	30	**59**	**113**	**1265**
09:00 10:00	27	604	13	**644**	8	431	24	**463**	**1107**	31	7	17	**55**	16	15	12	**43**	**98**	**1205**
11:30 12:30	18	505	11	**534**	9	513	27	**549**	**1083**	19	9	16	**44**	17	17	26	**60**	**104**	**1187**
12:30 13:30	11	538	11	**560**	5	478	24	**507**	**1067**	32	11	16	**59**	23	16	17	**56**	**115**	**1182**
15:00 16:00	14	558	21	**593**	6	595	33	**634**	**1227**	30	32	28	**90**	19	23	27	**69**	**159**	**1386**
16:00 17:00	16	641	21	**678**	14	765	19	**798**	**1476**	72	31	25	**128**	30	31	35	**96**	**224**	**1700**
17:00 18:00	10	507	18	**535**	9	734	31	**774**	**1309**	33	38	21	**92**	28	38	30	**96**	**188**	**1497**
Sub Total	121	4625	114	**4860**	69	4207	200	**4476**	**9336**	261	149	141	**551**	156	168	194	**518**	**1069**	**10405**
U Turns				**0**				**0**	**0**				**0**				**0**	**0**	**0**
Total	121	4625	114	**4860**	69	4207	200	**4476**	**9336**	261	149	141	**551**	156	168	194	**518**	**1069**	**10405**
EQ 12Hr	168	6429	158	**6755**	96	5848	278	**6222**	**12977**	363	207	196	**766**	217	234	270	**720**	**1486**	**14463**
Note: These values are calculated by multiplying the totals by the appropriate expansion factor.														**1.39**					
AVG 12Hr	151	5786	142	**6080**	86	6894	328	**5600**	**11679**	327	186	176	**689**	195	211	243	**648**	**1337**	**13017**
Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor.														**.90**					
AVG 24Hr	198	7580	186	**7965**	113	9031	430	**7336**	**15299**	428	244	231	**903**	255	276	318	**849**	**1751**	**17052**
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

MERIVALE RD @ COLDREY AVE/CRERAR AVE

Survey Date: Wednesday, July 16, 2025 **WO No:** 42886

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

Full Study 15 Minute Increments

		MERIVALE RD									COLDREY AVE/CRERAR AVE									
		Northbound				Southbound					Eastbound				Westbound					
Time Period		LT	ST	RT	N TOT	LT	ST	RT	S TOT	STR TOT	LT	ST	RT	E TOT	LT	ST	RT	W TOT	STR TOT	Grand Total
07:00	07:15	2	100	0	102	2	89	3	94	196	1	1	0	2	1	0	5	6	8	204
07:15	07:30	0	140	2	142	1	78	5	84	226	10	2	1	13	3	4	4	11	24	250
07:30	07:45	3	161	2	166	4	81	3	88	254	4	0	2	6	3	3	4	10	16	270
07:45	08:00	1	155	2	158	1	77	3	81	239	6	1	1	8	2	6	4	12	20	259
08:00	08:15	6	172	1	179	4	79	3	86	265	5	2	3	10	2	5	7	14	24	289
08:15	08:30	4	182	1	187	3	98	5	106	293	4	4	2	10	4	5	8	17	27	320
08:30	08:45	8	185	5	198	2	112	9	123	321	5	6	3	14	4	0	11	15	29	350
08:45	09:00	1	177	6	184	1	77	11	89	273	9	5	6	20	4	5	4	13	33	306
09:00	09:15	6	188	2	196	2	120	9	131	327	7	2	1	10	7	4	3	14	24	351
09:15	09:30	8	123	1	132	2	91	3	96	228	8	0	5	13	6	4	0	10	23	251
09:30	09:45	6	160	4	170	2	109	10	121	291	9	3	5	17	1	3	4	8	25	316
09:45	10:00	7	133	6	146	2	111	2	115	261	7	2	6	15	2	4	5	11	26	287
11:30	11:45	4	115	3	122	1	125	5	131	253	4	2	1	7	7	3	8	18	25	278
11:45	12:00	6	121	3	130	1	139	7	147	277	4	4	7	15	3	7	9	19	34	311
12:00	12:15	2	125	3	130	3	126	7	136	266	7	2	6	15	3	3	5	11	26	292
12:15	12:30	6	144	2	152	4	123	8	135	287	4	1	2	7	4	4	4	12	19	306
12:30	12:45	4	133	1	138	2	118	4	124	262	11	2	3	16	6	4	2	12	28	290
12:45	13:00	2	133	6	141	1	122	7	130	271	7	2	3	12	6	8	5	19	31	302
13:00	13:15	2	143	3	148	1	123	4	128	276	5	2	5	12	5	2	5	12	24	300
13:15	13:30	3	129	1	133	1	115	9	125	258	9	5	5	19	6	2	5	13	32	290
15:00	15:15	4	157	2	163	2	112	6	120	283	8	5	6	19	5	4	7	16	35	318
15:15	15:30	2	133	6	141	1	142	11	154	295	7	9	8	24	4	6	5	15	39	334
15:30	15:45	4	134	7	145	2	180	9	191	336	9	11	6	26	5	4	7	16	42	378
15:45	16:00	4	134	6	144	1	161	7	169	313	6	7	8	21	5	9	8	22	43	356
16:00	16:15	4	157	5	166	4	201	1	206	372	12	8	5	25	6	5	8	19	44	416
16:15	16:30	5	158	6	169	5	174	5	184	353	25	10	5	40	10	3	9	22	62	415
16:30	16:45	4	152	5	161	3	206	5	214	375	15	3	9	27	7	7	9	23	50	425
16:45	17:00	3	174	5	182	2	184	8	194	376	20	10	6	36	7	16	9	32	68	444
17:00	17:15	4	148	4	156	2	192	8	202	358	14	11	6	31	11	22	8	41	72	430
17:15	17:30	2	113	5	120	2	184	8	194	314	5	12	5	22	9	6	13	28	50	364
17:30	17:45	1	120	5	126	2	184	7	193	319	8	5	5	18	3	3	4	10	28	347
17:45	18:00	3	126	4	133	3	174	8	185	318	6	10	5	21	5	7	5	17	38	356
Total:		121	4625	114	4860	69	4207	200	4476	9336	261	149	141	551	156	168	194	518	1069	10,405

Note: U-Turns are included in Totals, cyclist volume is not included in totals. For cycliste volumes reffer to Cyclist Volume report.

Transportation Services - Traffic Services

Turning Movement Count - Study Results

MERIVALE RD @ COLDREY AVE/CRERAR AVE

Survey Date: Wednesday, July 16, 2025 **WO No:** 42886

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

Full Study Cyclist Volume

Time Period		MERIVALE RD			COLDREY AVE/CRERAR AVE			
		Northbound	Southbound	Street Total	Eastbound	Westbound	Street Total	Grand Total
07:00	07:15	2	0	2	0	0	0	2
07:15	07:30	0	2	2	0	2	2	4
07:30	07:45	1	0	1	0	1	1	2
07:45	08:00	2	0	2	0	2	2	4
08:00	08:15	0	1	1	0	3	3	4
08:15	08:30	1	1	2	1	0	1	3
08:30	08:45	4	1	5	1	2	3	8
08:45	09:00	3	1	4	0	2	2	6
09:00	09:15	2	1	3	1	1	2	5
09:15	09:30	0	0	0	1	0	1	1
09:30	09:45	0	3	3	0	1	1	4
09:45	10:00	0	0	0	0	1	1	1
11:30	11:45	0	0	0	2	0	2	2
11:45	12:00	1	0	1	0	0	0	1
12:00	12:15	1	0	1	1	1	2	3
12:15	12:30	1	2	3	0	0	0	3
12:30	12:45	2	0	2	0	0	0	2
12:45	13:00	0	2	2	0	0	0	2
13:00	13:15	0	2	2	0	0	0	2
13:15	13:30	0	1	1	0	0	0	1
15:00	15:15	1	2	3	0	0	0	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	1	0	1	0	0	0	1
16:00	16:15	3	1	4	2	0	2	6
16:15	16:30	1	0	1	0	0	0	1
16:30	16:45	2	0	2	0	1	1	3
16:45	17:00	1	1	2	1	0	1	3
17:00	17:15	3	0	3	0	1	1	4
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	2	2	0	0	0	2
Total		32	24	**56**	10	19	29	85

Transportation Services - Traffic Services

Turning Movement Count - Study Results

MERIVALE RD @ COLDREY AVE/CRERAR AVE

Survey Date: Wednesday, July 16, 2025 **WO No:** 42886

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

Full Study Pedestrian Volume

	MERIVALE RD			COLDREY AVE/CRERAR AVE			
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**	3	2	**5**	**5**
07:15 07:30	1	1	**2**	0	4	**4**	**6**
07:30 07:45	0	0	**0**	2	0	**2**	**2**
07:45 08:00	1	2	**3**	3	1	**4**	**7**
08:00 08:15	1	0	**1**	5	0	**5**	**6**
08:15 08:30	1	0	**1**	2	0	**2**	**3**
08:30 08:45	2	0	**2**	6	2	**8**	**10**
08:45 09:00	4	2	**6**	12	1	**13**	**19**
09:00 09:15	0	3	**3**	2	4	**6**	**9**
09:15 09:30	1	0	**1**	6	3	**9**	**10**
09:30 09:45	3	0	**3**	4	1	**5**	**8**
09:45 10:00	0	1	**1**	2	1	**3**	**4**
11:30 11:45	1	2	**3**	4	0	**4**	**7**
11:45 12:00	10	3	**13**	4	2	**6**	**19**
12:00 12:15	2	0	**2**	5	1	**6**	**8**
12:15 12:30	1	0	**1**	5	2	**7**	**8**
12:30 12:45	0	1	**1**	9	5	**14**	**15**
12:45 13:00	3	0	**3**	7	2	**9**	**12**
13:00 13:15	0	0	**0**	3	1	**4**	**4**
13:15 13:30	2	1	**3**	1	1	**2**	**5**
15:00 15:15	2	1	**3**	3	2	**5**	**8**
15:15 15:30	1	2	**3**	10	3	**13**	**16**
15:30 15:45	2	0	**2**	1	0	**1**	**3**
15:45 16:00	3	1	**4**	6	1	**7**	**11**
16:00 16:15	1	0	**1**	4	1	**5**	**6**
16:15 16:30	3	0	**3**	6	3	**9**	**12**
16:30 16:45	0	0	**0**	4	1	**5**	**5**
16:45 17:00	4	0	**4**	5	1	**6**	**10**
17:00 17:15	1	0	**1**	6	1	**7**	**8**
17:15 17:30	1	1	**2**	7	1	**8**	**10**
17:30 17:45	3	1	**4**	3	0	**3**	**7**
17:45 18:00	0	0	**0**	6	1	**7**	**7**
Total	54	22	**76**	146	48	**194**	**270**

Transportation Services - Traffic Services

Turning Movement Count - Study Results

MERIVALE RD @ COLDREY AVE/CRERAR AVE

Survey Date: Wednesday, July 16, 2025 **WO No:** 42886

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

Full Study Heavy Vehicles

		MERIVALE RD									COLDREY AVE/CRERAR AVE									
		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	2	0	**2**	0	2	0	**2**	**4**	0	0	0	**0**	0	0	0	**0**	**0**	**4**
07:15	07:30	0	7	0	**7**	0	2	0	**2**	**9**	0	0	0	**0**	0	0	0	**0**	**0**	**9**
07:30	07:45	0	3	0	**3**	0	5	0	**5**	**8**	0	0	0	**0**	1	0	0	**1**	**1**	**9**
07:45	08:00	0	3	0	**3**	0	3	1	**4**	**7**	0	0	1	**1**	0	0	0	**0**	**1**	**8**
08:00	08:15	1	6	0	**7**	0	2	0	**2**	**9**	0	0	0	**0**	0	0	0	**0**	**0**	**9**
08:15	08:30	0	7	0	**7**	0	3	1	**4**	**11**	0	0	0	**0**	0	0	0	**0**	**0**	**11**
08:30	08:45	0	4	0	**4**	0	4	2	**6**	**10**	0	0	0	**0**	0	0	0	**0**	**0**	**10**
08:45	09:00	0	3	0	**3**	0	2	0	**2**	**5**	0	0	0	**0**	0	0	0	**0**	**0**	**5**
09:00	09:15	1	6	0	**7**	0	1	1	**2**	**9**	0	0	0	**0**	0	0	0	**0**	**0**	**9**
09:15	09:30	0	4	0	**4**	0	2	0	**2**	**6**	0	0	0	**0**	0	0	0	**0**	**0**	**6**
09:30	09:45	1	6	0	**7**	0	3	0	**3**	**10**	0	0	0	**0**	0	0	0	**0**	**0**	**10**
09:45	10:00	0	4	0	**4**	0	1	0	**1**	**5**	0	0	0	**0**	0	0	0	**0**	**0**	**5**
11:30	11:45	0	8	0	**8**	0	3	1	**4**	**12**	0	0	0	**0**	1	0	0	**1**	**1**	**13**
11:45	12:00	0	2	0	**2**	0	7	1	**8**	**10**	1	0	0	**1**	0	0	0	**0**	**1**	**11**
12:00	12:15	0	5	0	**5**	0	3	0	**3**	**8**	1	0	0	**1**	0	0	0	**0**	**1**	**9**
12:15	12:30	1	1	0	**2**	0	1	0	**1**	**3**	0	0	0	**0**	0	0	0	**0**	**0**	**3**
12:30	12:45	0	4	0	**4**	1	2	1	**4**	**8**	0	0	0	**0**	0	0	0	**0**	**0**	**8**
12:45	13:00	0	4	0	**4**	0	6	0	**6**	**10**	0	0	0	**0**	0	1	0	**1**	**1**	**11**
13:00	13:15	0	2	0	**2**	0	5	1	**6**	**8**	0	0	0	**0**	0	0	0	**0**	**0**	**8**
13:15	13:30	0	2	0	**2**	0	3	0	**3**	**5**	0	0	0	**0**	0	0	0	**0**	**0**	**5**
15:00	15:15	0	2	0	**2**	0	2	1	**3**	**5**	1	0	0	**1**	0	0	0	**0**	**1**	**6**
15:15	15:30	0	6	0	**6**	0	3	0	**3**	**9**	0	0	0	**0**	0	0	0	**0**	**0**	**9**
15:30	15:45	0	0	0	**0**	0	2	0	**2**	**2**	0	0	0	**0**	0	0	0	**0**	**0**	**2**
15:45	16:00	0	3	0	**3**	0	5	0	**5**	**8**	0	0	0	**0**	0	0	0	**0**	**0**	**8**
16:00	16:15	1	1	0	**2**	0	2	0	**2**	**4**	0	0	1	**1**	0	0	1	**1**	**2**	**6**
16:15	16:30	0	4	0	**4**	0	1	0	**1**	**5**	0	0	0	**0**	0	0	1	**1**	**1**	**6**
16:30	16:45	0	1	0	**1**	0	4	0	**4**	**5**	1	0	0	**1**	1	0	0	**1**	**2**	**7**
16:45	17:00	0	1	0	**1**	0	2	0	**2**	**3**	0	0	0	**0**	0	0	1	**1**	**1**	**4**
17:00	17:15	0	2	0	**2**	0	3	0	**3**	**5**	0	0	0	**0**	0	0	0	**0**	**0**	**5**
17:15	17:30	0	1	0	**1**	0	1	0	**1**	**2**	0	0	0	**0**	0	0	0	**0**	**0**	**2**
17:30	17:45	0	1	1	**2**	0	5	0	**5**	**7**	0	0	0	**0**	0	0	0	**0**	**0**	**7**
17:45	18:00	0	1	0	**1**	0	2	0	**2**	**3**	0	0	0	**0**	0	0	0	**0**	**0**	**3**
Total:	None	5	106	1	**112**	1	92	10	**103**	**215**	4	0	2	**6**	3	1	3	**7**	**13**	**228**

Transportation Services - Traffic Services

Turning Movement Count - Study Results

MERIVALE RD @ COLDREY AVE/CRERAR AVE

Survey Date: Wednesday, July 16, 2025 **WO No:** 42886

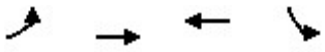
Start Time: 07:00 **Device:** Miovision

Full Study 15 Minute U-Turn Total

		MERIVALE RD		COLDREY AVE/CRERAR AVE		
Time Period		Northbound U-Turn Total	Southbound U-Turn Total	Eastbound U-Turn Total	Westbound U-Turn Total	Total
07:00	07:15	0	0	0	0	0
07:15	07:30	0	0	0	0	0
07:30	07:45	0	0	0	0	0
07:45	08:00	0	0	0	0	0
08:00	08:15	0	0	0	0	0
08:15	08:30	0	0	0	0	0
08:30	08:45	0	0	0	0	0
08:45	09:00	0	0	0	0	0
09:00	09:15	0	0	0	0	0
09:15	09:30	0	0	0	0	0
09:30	09:45	0	0	0	0	0
09:45	10:00	0	0	0	0	0
11:30	11:45	0	0	0	0	0
11:45	12:00	0	0	0	0	0
12:00	12:15	0	0	0	0	0
12:15	12:30	0	0	0	0	0
12:30	12:45	0	0	0	0	0
12:45	13:00	0	0	0	0	0
13:00	13:15	0	0	0	0	0
13:15	13:30	0	0	0	0	0
15:00	15:15	0	0	0	0	0
15:15	15:30	0	0	0	0	0
15:30	15:45	0	0	0	0	0
15:45	16:00	0	0	0	0	0
16:00	16:15	0	0	0	0	0
16:15	16:30	0	0	0	0	0
16:30	16:45	0	0	0	0	0
16:45	17:00	0	0	0	0	0
17:00	17:15	0	0	0	0	0
17:15	17:30	0	0	0	0	0
17:30	17:45	0	0	0	0	0
17:45	18:00	0	0	0	0	0
Total		0	0	0	0	0

Appendix C

Synchro Intersection Worksheets – Existing Conditions

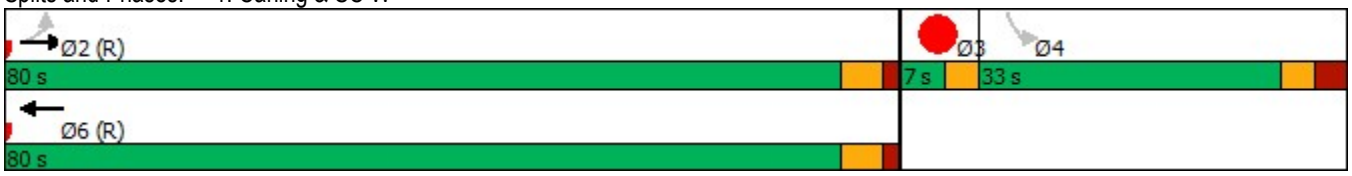


Lane Group	EBL	EBT	WBT	SBL	Ø3
Lane Configurations					
Traffic Volume (vph)	7	1493	731	11	
Future Volume (vph)	7	1493	731	11	
Lane Group Flow (vph)	0	1667	825	23	
Turn Type	Perm	NA	NA	Perm	
Protected Phases		2	6		3
Permitted Phases	2			4	
Detector Phase	2	2	6	4	
Switch Phase					
Minimum Initial (s)	10.0	10.0	10.0	10.0	1.0
Minimum Split (s)	15.3	15.3	44.3	32.1	7.0
Total Split (s)	80.0	80.0	80.0	33.0	7.0
Total Split (%)	66.7%	66.7%	66.7%	27.5%	6%
Maximum Green (s)	74.7	74.7	74.7	26.9	4.0
Yellow Time (s)	3.7	3.7	3.7	3.0	3.0
All-Red Time (s)	1.6	1.6	1.6	3.1	0.0
Lost Time Adjust (s)		0.0	0.0	0.0	
Total Lost Time (s)		5.3	5.3	6.1	
Lead/Lag				Lag	Lead
Lead-Lag Optimize?				Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Max	C-Max	C-Max	None	None
Walk Time (s)			32.0	3.0	4.0
Flash Dont Walk (s)			7.0	23.0	0.0
Pedestrian Calls (#/hr)			26	15	15
Act Effct Green (s)		98.0	98.0	16.4	
Actuated g/C Ratio		0.82	0.82	0.14	
v/c Ratio		0.46	0.21	0.10	
Control Delay		7.4	2.2	27.4	
Queue Delay		0.0	0.0	0.0	
Total Delay		7.4	2.2	27.4	
LOS		A	A	C	
Approach Delay		7.4	2.2	27.4	
Approach LOS		A	A	C	
Queue Length 50th (m)		31.7	1.1	2.7	
Queue Length 95th (m)		92.5	3.1	9.2	
Internal Link Dist (m)		47.2	110.0	71.3	
Turn Bay Length (m)					
Base Capacity (vph)		3636	3878	354	
Starvation Cap Reductn		0	0	0	
Spillback Cap Reductn		0	0	0	
Storage Cap Reductn		0	0	0	
Reduced v/c Ratio		0.46	0.21	0.06	

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 38 (32%), Referenced to phase 2:EBTL and 6:WBT, Start of Green
Natural Cycle: 85

Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.46
Intersection Signal Delay: 5.9 Intersection LOS: A
Intersection Capacity Utilization 58.6% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 1: Carling & SC W

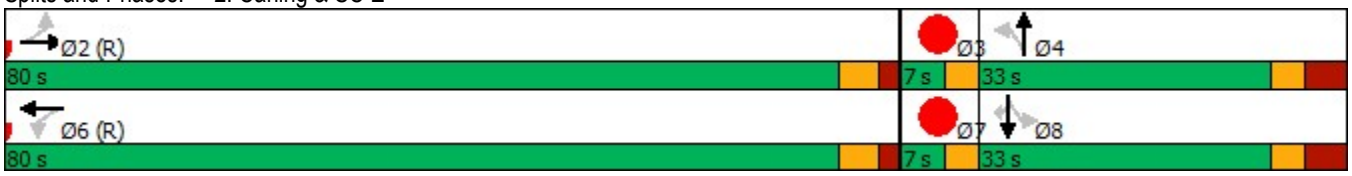


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR	Ø3	Ø7
Lane Configurations											
Traffic Volume (vph)	173	1191	4	782	10	1	26	2	30		
Future Volume (vph)	173	1191	4	782	10	1	26	2	30		
Lane Group Flow (vph)	192	1327	4	937	0	21	0	31	33		
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA	Perm		
Protected Phases		2		6		4		8		3	7
Permitted Phases	2		6		4		8		8		
Detector Phase	2	2	6	6	4	4	8	8	8		
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	1.0	1.0
Minimum Split (s)	29.6	29.6	29.6	29.6	33.0	33.0	33.0	33.0	33.0	7.0	7.0
Total Split (s)	80.0	80.0	80.0	80.0	33.0	33.0	33.0	33.0	33.0	7.0	7.0
Total Split (%)	66.7%	66.7%	66.7%	66.7%	27.5%	27.5%	27.5%	27.5%	27.5%	6%	6%
Maximum Green (s)	74.4	74.4	74.4	74.4	26.0	26.0	26.0	26.0	26.0	4.0	4.0
Yellow Time (s)	3.7	3.7	3.7	3.7	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.9	1.9	1.9	1.9	4.0	4.0	4.0	4.0	4.0	0.0	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0		
Total Lost Time (s)	5.6	5.6	5.6	5.6		7.0		7.0	7.0		
Lead/Lag					Lag	Lag	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None	None	None	None	None	None
Walk Time (s)	10.0	10.0	10.0	10.0	0.0	0.0	0.0	0.0	0.0	4.0	4.0
Flash Dont Walk (s)	14.0	14.0	14.0	14.0	26.0	26.0	26.0	26.0	26.0	0.0	0.0
Pedestrian Calls (#/hr)	9	9	11	11	7	7	8	8	8	7	8
Act Effct Green (s)	97.3	97.3	97.3	97.3		13.2		13.2	13.2		
Actuated g/C Ratio	0.81	0.81	0.81	0.81		0.11		0.11	0.11		
v/c Ratio	0.47	0.34	0.02	0.25		0.14		0.23	0.16		
Control Delay	9.6	3.4	5.5	3.7		32.6		50.1	6.5		
Queue Delay	0.0	0.1	0.0	0.1		0.0		0.0	0.0		
Total Delay	9.6	3.5	5.5	3.8		32.6		50.1	6.5		
LOS	A	A	A	A		C		D	A		
Approach Delay		4.2		3.8		32.6		27.6			
Approach LOS		A		A		C		C			
Queue Length 50th (m)	8.2	20.8	0.0	16.3		2.7		7.0	0.0		
Queue Length 95th (m)	16.1	23.5	m0.9	25.2		9.1		14.4	4.9		
Internal Link Dist (m)		110.0		86.9		34.0		62.5			
Turn Bay Length (m)	75.0		35.0								
Base Capacity (vph)	408	3863	261	3810		295		271	353		
Starvation Cap Reductn	0	703	0	1327		0		0	0		
Spillback Cap Reductn	0	716	0	0		0		0	0		
Storage Cap Reductn	0	0	0	0		0		0	0		
Reduced v/c Ratio	0.47	0.42	0.02	0.38		0.07		0.11	0.09		

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 26 (22%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 90

Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.47
Intersection Signal Delay: 4.9 Intersection LOS: A
Intersection Capacity Utilization 59.3% ICU Level of Service B
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Carling & SC E

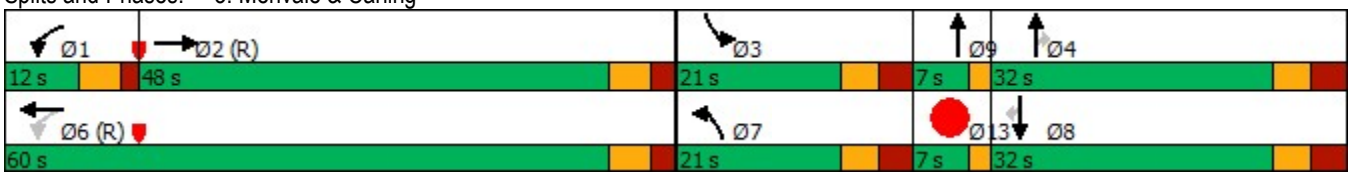


Lane Group	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR	Ø9	Ø13
Lane Configurations											
Traffic Volume (vph)	1243	169	501	123	211	2	29	282	52		
Future Volume (vph)	1243	169	501	123	211	2	29	282	52		
Lane Group Flow (vph)	1452	188	587	137	234	2	32	313	58		
Turn Type	NA	pm+pt	NA	Prot	NA	custom	Prot	NA	Perm		
Protected Phases	2	1	6	7	4 9		3	8		9	13
Permitted Phases		6				4			8		
Detector Phase	2	1	6	7	4 9	4	3	8	8		
Switch Phase											
Minimum Initial (s)	10.0	5.0	10.0	5.0		10.0	5.0	10.0	10.0	1.0	1.0
Minimum Split (s)	29.0	10.4	29.0	11.3		31.7	11.3	31.7	31.7	7.0	7.0
Total Split (s)	48.0	12.0	60.0	21.0		32.0	21.0	32.0	32.0	7.0	7.0
Total Split (%)	40.0%	10.0%	50.0%	17.5%		26.7%	17.5%	26.7%	26.7%	6%	6%
Maximum Green (s)	42.0	6.6	54.0	14.7		25.3	14.7	25.3	25.3	5.0	5.0
Yellow Time (s)	3.7	3.7	3.7	3.3		3.3	3.3	3.3	3.3	2.0	2.0
All-Red Time (s)	2.3	1.7	2.3	3.0		3.4	3.0	3.4	3.4	0.0	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		
Total Lost Time (s)	6.0	5.4	6.0	6.3		6.7	6.3	6.7	6.7		
Lead/Lag	Lag	Lead		Lead			Lead			Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes			Yes			Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Max	None	C-Max	None		None	None	None	None	None	None
Walk Time (s)	7.0		7.0			0.0		0.0	0.0	5.0	5.0
Flash Dont Walk (s)	16.0		16.0			25.0		25.0	25.0	0.0	0.0
Pedestrian Calls (#/hr)	17		15			18		9	9	18	9
Act Effct Green (s)	42.0	61.0	60.4	13.3	37.7	23.9	7.8	25.9	25.9		
Actuated g/C Ratio	0.35	0.51	0.50	0.11	0.31	0.20	0.06	0.22	0.22		
v/c Ratio	0.88	0.78	0.25	0.74	0.43	0.00	0.30	0.83	0.13		
Control Delay	34.9	49.1	17.9	81.8	30.9	0.0	59.6	60.9	2.0		
Queue Delay	4.1	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0		
Total Delay	39.0	49.1	17.9	81.8	30.9	0.0	59.6	64.0	2.0		
LOS	D	D	B	F	C	A	E	E	A		
Approach Delay	39.0		25.5		49.4			54.7			
Approach LOS	D		C		D			D			
Queue Length 50th (m)	116.6	28.3	28.3	34.6	37.2	0.0	7.5	69.7	0.0		
Queue Length 95th (m)	120.1	#85.5	39.1	#59.0	46.4	m0.0	18.1	#119.1	1.7		
Internal Link Dist (m)	86.9		165.5		160.0			84.1			
Turn Bay Length (m)		95.0		50.0			30.0		50.0		
Base Capacity (vph)	1657	241	2375	203	573	423	203	394	444		
Starvation Cap Reductn	144	0	0	0	0	0	0	30	0		
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0		
Storage Cap Reductn	0	0	0	0	0	0	0	0	0		
Reduced v/c Ratio	0.96	0.78	0.25	0.67	0.41	0.00	0.16	0.86	0.13		

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 52 (43%), Referenced to phase 2:EBT and 6:WBTL, Start of Green
Natural Cycle: 110

Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.88
Intersection Signal Delay: 38.9 Intersection LOS: D
Intersection Capacity Utilization 81.4% 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.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Merivale & Carling

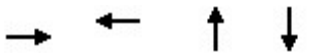


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	50	44	63	171	343	30
Future Volume (vph)	50	44	63	171	343	30
Lane Group Flow (vph)	56	49	70	190	381	33
Turn Type	Perm	Perm	Perm	NA	NA	Perm
Protected Phases				2	6	
Permitted Phases	4	4	2			6
Detector Phase	4	4	2	2	6	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	23.6	23.6	15.9	15.9	35.9	35.9
Total Split (s)	24.0	24.0	36.0	36.0	36.0	36.0
Total Split (%)	40.0%	40.0%	60.0%	60.0%	60.0%	60.0%
Maximum Green (s)	18.4	18.4	30.1	30.1	30.1	30.1
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	2.3	2.3	2.6	2.6	2.6	2.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.6	5.6	5.9	5.9	5.9	5.9
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	C-Max	C-Max	C-Max	C-Max
Walk Time (s)	7.0	7.0			19.0	19.0
Flash Dont Walk (s)	11.0	11.0			11.0	11.0
Pedestrian Calls (#/hr)	0	0			18	18
Act Effct Green (s)	10.0	10.0	47.1	47.1	47.1	47.1
Actuated g/C Ratio	0.17	0.17	0.78	0.78	0.78	0.78
v/c Ratio	0.20	0.17	0.10	0.14	0.28	0.03
Control Delay	23.7	9.3	1.1	0.9	4.5	1.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.7	9.3	1.1	0.9	4.5	1.7
LOS	C	A	A	A	A	A
Approach Delay	17.0			1.0	4.3	
Approach LOS	B			A	A	
Queue Length 50th (m)	5.4	0.0	1.2	3.3	16.0	0.0
Queue Length 95th (m)	13.8	7.4	2.0	4.5	27.5	2.1
Internal Link Dist (m)	69.8			84.1	76.3	
Turn Bay Length (m)			35.0			50.0
Base Capacity (vph)	507	478	727	1369	1369	1126
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	2	0	0	88	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.11	0.10	0.10	0.14	0.30	0.03

Intersection Summary
Cycle Length: 60
Actuated Cycle Length: 60
Offset: 8 (13%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
Natural Cycle: 60

Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.28
Intersection Signal Delay: 4.9 Intersection LOS: A
Intersection Capacity Utilization 56.2% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 4: Merivale & SC N



Lane Group	EBT	WBT	NBT	SBT
Lane Configurations				
Traffic Volume (vph)	0	0	646	433
Future Volume (vph)	0	0	646	433
Lane Group Flow (vph)	25	1	735	493
Sign Control	Stop	Stop	Free	Free

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization 39.8%		ICU Level of Service A	
Analysis Period (min) 15			

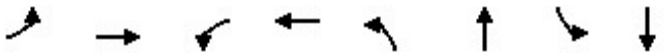
Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	14	0	8	1	0	0	14	646	1	2	433	9
Future Vol, veh/h	14	0	8	1	0	0	14	646	1	2	433	9
Conflicting Peds, #/hr	0	0	1	1	0	0	17	0	7	7	0	17
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	0	9	1	0	0	16	718	1	2	481	10

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	898	1265	264	1004	1270	367	508	0	0	726	0	0
Stage 1	507	507	-	758	758	-	-	-	-	-	-	-
Stage 2	391	758	-	246	512	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	234	168	734	196	167	630	1053	-	-	873	-	-
Stage 1	516	538	-	365	413	-	-	-	-	-	-	-
Stage 2	605	413	-	736	535	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	226	160	724	188	159	627	1039	-	-	868	-	-
Mov Cap-2 Maneuver	226	160	-	188	159	-	-	-	-	-	-	-
Stage 1	496	529	-	354	400	-	-	-	-	-	-	-
Stage 2	589	400	-	724	526	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	18	24.3	0.3	0
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1039	-	-	301	188	868	-	-
HCM Lane V/C Ratio	0.015	-	-	0.081	0.006	0.003	-	-
HCM Control Delay (s)	8.5	0.1	-	18	24.3	9.2	0	-
HCM Lane LOS	A	A	-	C	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0	0	-	-

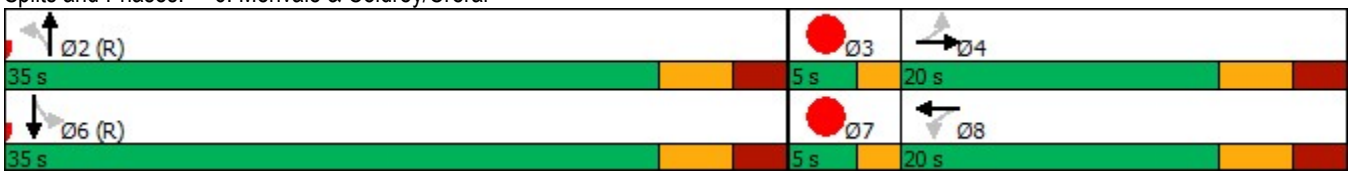


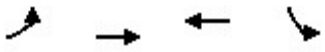
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	Ø3	Ø7
Lane Configurations										
Traffic Volume (vph)	25	17	19	14	19	732	8	407		
Future Volume (vph)	25	17	19	14	19	732	8	407		
Lane Group Flow (vph)	0	60	0	66	0	850	0	499		
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA		
Protected Phases		4		8		2		6	3	7
Permitted Phases	4		8		2		6			
Detector Phase	4	4	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	1.0	1.0
Minimum Split (s)	19.8	19.8	19.8	19.8	33.8	33.8	33.8	33.8	5.0	5.0
Total Split (s)	20.0	20.0	20.0	20.0	35.0	35.0	35.0	35.0	5.0	5.0
Total Split (%)	33.3%	33.3%	33.3%	33.3%	58.3%	58.3%	58.3%	58.3%	8%	8%
Maximum Green (s)	14.2	14.2	14.2	14.2	29.2	29.2	29.2	29.2	3.0	3.0
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	2.0	2.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	0.0	0.0
Lost Time Adjust (s)		0.0		0.0		0.0		0.0		
Total Lost Time (s)		5.8		5.8		5.8		5.8		
Lead/Lag	Lag	Lag	Lag	Lag					Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes					Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max	None	None
Walk Time (s)	2.0	2.0	2.0	2.0	16.0	16.0	16.0	16.0	3.0	3.0
Flash Dont Walk (s)	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	0.0	0.0
Pedestrian Calls (#/hr)	7	7	5	5	7	7	22	22	7	5
Act Effct Green (s)		10.8		10.8		45.2		45.2		
Actuated g/C Ratio		0.18		0.18		0.75		0.75		
v/c Ratio		0.23		0.24		0.36		0.21		
Control Delay		19.4		15.6		6.1		2.6		
Queue Delay		0.0		0.0		0.0		0.0		
Total Delay		19.4		15.6		6.1		2.6		
LOS		B		B		A		A		
Approach Delay		19.4		15.6		6.1		2.6		
Approach LOS		B		B		A		A		
Queue Length 50th (m)		4.5		3.5		20.1		7.1		
Queue Length 95th (m)		12.1		11.5		46.3		m15.3		
Internal Link Dist (m)		79.4		91.0		78.5		120.7		
Turn Bay Length (m)										
Base Capacity (vph)		335		356		2337		2321		
Starvation Cap Reductn		0		0		0		0		
Spillback Cap Reductn		0		0		0		0		
Storage Cap Reductn		0		0		0		0		
Reduced v/c Ratio		0.18		0.19		0.36		0.21		

Intersection Summary
Cycle Length: 60
Actuated Cycle Length: 60
Offset: 42 (70%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 60

Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.36
Intersection Signal Delay: 5.9 Intersection LOS: A
Intersection Capacity Utilization 55.0% ICU Level of Service A
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 6: Merivale & Coldrey/Crerar



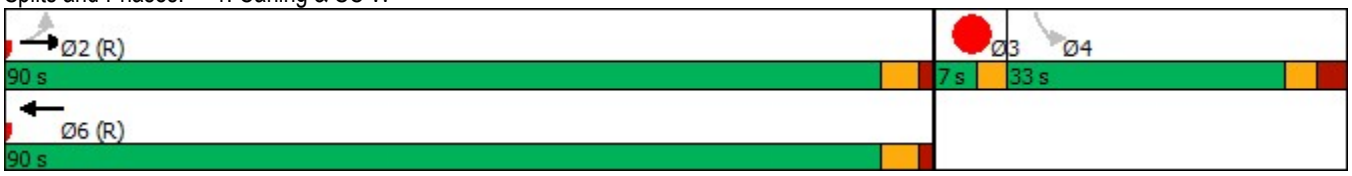


Lane Group	EBL	EBT	WBT	SBL	Ø3
Lane Configurations					
Traffic Volume (vph)	2	1187	1772	25	
Future Volume (vph)	2	1187	1772	25	
Lane Group Flow (vph)	0	1321	1978	66	
Turn Type	Perm	NA	NA	Perm	
Protected Phases		2	6		3
Permitted Phases	2			4	
Detector Phase	2	2	6	4	
Switch Phase					
Minimum Initial (s)	10.0	10.0	10.0	10.0	1.0
Minimum Split (s)	15.3	15.3	44.3	32.1	7.0
Total Split (s)	90.0	90.0	90.0	33.0	7.0
Total Split (%)	69.2%	69.2%	69.2%	25.4%	5%
Maximum Green (s)	84.7	84.7	84.7	26.9	4.0
Yellow Time (s)	3.7	3.7	3.7	3.0	3.0
All-Red Time (s)	1.6	1.6	1.6	3.1	0.0
Lost Time Adjust (s)		0.0	0.0	0.0	
Total Lost Time (s)		5.3	5.3	6.1	
Lead/Lag				Lag	Lead
Lead-Lag Optimize?				Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Max	C-Max	C-Max	None	None
Walk Time (s)			32.0	3.0	4.0
Flash Dont Walk (s)			7.0	23.0	0.0
Pedestrian Calls (#/hr)			48	32	32
Act Effct Green (s)		99.1	99.1	19.6	
Actuated g/C Ratio		0.76	0.76	0.15	
v/c Ratio		0.39	0.55	0.26	
Control Delay		8.1	3.3	24.8	
Queue Delay		0.0	0.0	0.0	
Total Delay		8.1	3.3	24.8	
LOS		A	A	C	
Approach Delay		8.1	3.3	24.8	
Approach LOS		A	A	C	
Queue Length 50th (m)		55.7	19.0	5.9	
Queue Length 95th (m)		65.2	31.1	18.5	
Internal Link Dist (m)		47.2	110.0	71.3	
Turn Bay Length (m)					
Base Capacity (vph)		3402	3625	332	
Starvation Cap Reductn		0	41	0	
Spillback Cap Reductn		0	0	0	
Storage Cap Reductn		0	0	0	
Reduced v/c Ratio		0.39	0.55	0.20	

Intersection Summary
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 107 (82%), Referenced to phase 2:EBTL and 6:WBT, Start of Green
Natural Cycle: 85

Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.55
Intersection Signal Delay: 5.6 Intersection LOS: A
Intersection Capacity Utilization 62.9% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 1: Carling & SC W



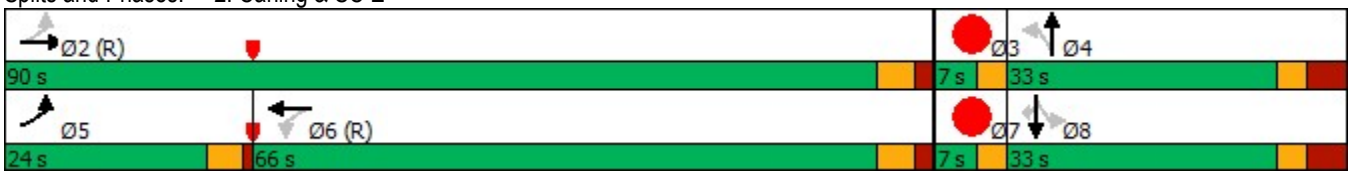
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR	Ø3	Ø7
Lane Configurations											
Traffic Volume (vph)	174	1122	12	1475	3	3	112	1	85		
Future Volume (vph)	174	1122	12	1475	3	3	112	1	85		
Lane Group Flow (vph)	193	1264	13	1729	0	14	0	125	94		
Turn Type	pm+pt	NA	Perm	NA	Perm	NA	Perm	NA	Perm		
Protected Phases	5	2		6		4		8		3	7
Permitted Phases	2		6		4		8		8		
Detector Phase	5	2	6	6	4	4	8	8	8		
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	1.0	1.0
Minimum Split (s)	9.5	29.6	29.6	29.6	33.0	33.0	33.0	33.0	33.0	7.0	7.0
Total Split (s)	24.0	90.0	66.0	66.0	33.0	33.0	33.0	33.0	33.0	7.0	7.0
Total Split (%)	18.5%	69.2%	50.8%	50.8%	25.4%	25.4%	25.4%	25.4%	25.4%	5%	5%
Maximum Green (s)	19.5	84.4	60.4	60.4	26.0	26.0	26.0	26.0	26.0	4.0	4.0
Yellow Time (s)	3.5	3.7	3.7	3.7	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.9	1.9	1.9	4.0	4.0	4.0	4.0	4.0	0.0	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0		
Total Lost Time (s)	4.5	5.6	5.6	5.6		7.0		7.0	7.0		
Lead/Lag	Lead		Lag	Lag	Lag	Lag	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	C-Max	C-Max	C-Max	None	None	None	None	None	None	None
Walk Time (s)		10.0	10.0	10.0	0.0	0.0	0.0	0.0	0.0	4.0	4.0
Flash Dont Walk (s)		14.0	14.0	14.0	26.0	26.0	26.0	26.0	26.0	0.0	0.0
Pedestrian Calls (#/hr)		36	31	31	20	20	23	23	23	20	23
Act Effct Green (s)	93.5	92.4	73.6	73.6		20.8		20.8	20.8		
Actuated g/C Ratio	0.72	0.71	0.57	0.57		0.16		0.16	0.16		
v/c Ratio	0.73	0.37	0.06	0.65		0.06		0.64	0.31		
Control Delay	42.7	3.0	6.8	11.9		28.2		65.2	11.1		
Queue Delay	0.0	0.2	0.0	0.1		0.0		0.0	0.0		
Total Delay	42.7	3.1	6.8	12.0		28.2		65.2	11.1		
LOS	D	A	A	B		C		E	B		
Approach Delay		8.4		12.0		28.2		41.9			
Approach LOS		A		B		C		D			
Queue Length 50th (m)	19.7	10.0	0.7	135.5		1.3		28.8	0.0		
Queue Length 95th (m)	35.7	11.8	m1.2	164.7		7.0		49.5	14.3		
Internal Link Dist (m)		110.0		86.9		34.0		62.5			
Turn Bay Length (m)	75.0		35.0								
Base Capacity (vph)	324	3374	201	2663		300		243	358		
Starvation Cap Reductn	0	469	0	193		0		0	0		
Spillback Cap Reductn	0	1004	0	0		0		0	0		
Storage Cap Reductn	0	0	0	0		0		0	0		
Reduced v/c Ratio	0.60	0.53	0.06	0.70		0.05		0.51	0.26		

Intersection Summary
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 3 (2%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 90

Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.73	
Intersection Signal Delay: 12.4	Intersection LOS: B
Intersection Capacity Utilization 78.8%	ICU Level of Service D
Analysis Period (min) 15	

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Carling & SC E



Lane Group	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR	Ø9	Ø13
Lane Configurations											
Traffic Volume (vph)	1006	486	1448	102	205	2	57	272	73		
Future Volume (vph)	1006	486	1448	102	205	2	57	272	73		
Lane Group Flow (vph)	1256	540	1650	113	228	2	63	302	81		
Turn Type	NA	pm+pt	NA	Prot	NA	custom	Prot	NA	Perm		
Protected Phases	2	1	6	7	4 9		3	8		9	13
Permitted Phases		6				4			8		
Detector Phase	2	1	6	7	4 9	4	3	8	8		
Switch Phase											
Minimum Initial (s)	10.0	5.0	10.0	5.0		10.0	5.0	10.0	10.0	1.0	1.0
Minimum Split (s)	29.0	10.4	29.0	11.3		31.7	11.3	31.7	31.7	7.0	7.0
Total Split (s)	44.0	30.0	74.0	17.0		32.0	17.0	32.0	32.0	7.0	7.0
Total Split (%)	33.8%	23.1%	56.9%	13.1%		24.6%	13.1%	24.6%	24.6%	5%	5%
Maximum Green (s)	38.0	24.6	68.0	10.7		25.3	10.7	25.3	25.3	5.0	5.0
Yellow Time (s)	3.7	3.7	3.7	3.3		3.3	3.3	3.3	3.3	2.0	2.0
All-Red Time (s)	2.3	1.7	2.3	3.0		3.4	3.0	3.4	3.4	0.0	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		
Total Lost Time (s)	6.0	5.4	6.0	6.3		6.7	6.3	6.7	6.7		
Lead/Lag	Lag	Lead		Lead			Lead			Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes			Yes			Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Max	None	C-Max	None		None	None	None	None	None	None
Walk Time (s)	7.0		7.0			0.0		0.0	0.0	5.0	5.0
Flash Dont Walk (s)	16.0		16.0			25.0		25.0	25.0	0.0	0.0
Pedestrian Calls (#/hr)	19		35			16		8	8	16	8
Act Effct Green (s)	38.0	72.7	72.1	10.6	32.1	23.0	9.3	26.9	26.9		
Actuated g/C Ratio	0.29	0.56	0.55	0.08	0.25	0.18	0.07	0.21	0.21		
v/c Ratio	0.91	1.28	0.63	0.84	0.53	0.01	0.53	0.84	0.20		
Control Delay	48.6	175.1	21.7	101.4	44.7	0.0	71.6	66.1	4.2		
Queue Delay	8.9	0.0	0.5	0.0	0.0	0.0	0.0	6.9	0.0		
Total Delay	57.5	175.1	22.2	101.4	44.7	0.0	71.6	73.0	4.2		
LOS	E	F	C	F	D	A	E	E	A		
Approach Delay	57.5		59.9		63.1			60.3			
Approach LOS	E		E		E			E			
Queue Length 50th (m)	114.3	~164.8	103.9	29.8	46.6	0.0	15.7	62.7	0.0		
Queue Length 95th (m)	#139.5	#243.2	125.8	#64.4	68.8	m0.0	31.2	#128.1	2.8		
Internal Link Dist (m)	86.9		165.5		160.0			84.1			
Turn Bay Length (m)		95.0		50.0			30.0		50.0		
Base Capacity (vph)	1375	423	2627	136	460	390	136	371	418		
Starvation Cap Reductn	112	0	0	0	0	0	0	40	0		
Spillback Cap Reductn	0	0	498	0	0	0	0	0	14		
Storage Cap Reductn	0	0	0	0	0	0	0	0	0		
Reduced v/c Ratio	0.99	1.28	0.78	0.83	0.50	0.01	0.46	0.91	0.20		

Intersection Summary
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 15 (12%), Referenced to phase 2:EBT and 6:WBTL, Start of Green
Natural Cycle: 150

Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.28
Intersection Signal Delay: 59.5 Intersection LOS: E
Intersection Capacity Utilization 94.8% ICU Level of Service F
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.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Merivale & Carling

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	86	53	41	198	312	52
Future Volume (vph)	86	53	41	198	312	52
Lane Group Flow (vph)	96	59	46	220	347	58
Turn Type	Perm	Perm	Perm	NA	NA	Perm
Protected Phases				2	6	
Permitted Phases	4	4	2			6
Detector Phase	4	4	2	2	6	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	23.6	23.6	15.9	15.9	35.9	35.9
Total Split (s)	24.0	24.0	41.0	41.0	41.0	41.0
Total Split (%)	36.9%	36.9%	63.1%	63.1%	63.1%	63.1%
Maximum Green (s)	18.4	18.4	35.1	35.1	35.1	35.1
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	2.3	2.3	2.6	2.6	2.6	2.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.6	5.6	5.9	5.9	5.9	5.9
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	C-Max	C-Max	C-Max	C-Max
Walk Time (s)	7.0	7.0			19.0	19.0
Flash Dont Walk (s)	11.0	11.0			11.0	11.0
Pedestrian Calls (#/hr)	0	0			3	3
Act Effct Green (s)	10.6	10.6	47.2	47.2	47.2	47.2
Actuated g/C Ratio	0.16	0.16	0.73	0.73	0.73	0.73
v/c Ratio	0.36	0.21	0.07	0.17	0.27	0.05
Control Delay	27.9	9.2	1.1	1.3	5.2	1.6
Queue Delay	0.0	0.1	0.0	0.0	0.0	0.0
Total Delay	27.9	9.2	1.1	1.3	5.2	1.6
LOS	C	A	A	A	A	A
Approach Delay	20.8			1.2	4.7	
Approach LOS	C			A	A	
Queue Length 50th (m)	10.5	0.0	0.7	3.4	14.2	0.0
Queue Length 95th (m)	21.5	8.2	m1.4	4.8	28.2	3.2
Internal Link Dist (m)	69.8			84.1	76.3	
Turn Bay Length (m)			35.0			50.0
Base Capacity (vph)	468	452	699	1266	1266	1064
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	61	0	0	52	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.21	0.15	0.07	0.17	0.29	0.05

Intersection Summary
Cycle Length: 65
Actuated Cycle Length: 65
Offset: 27 (42%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
Natural Cycle: 60

Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.36
Intersection Signal Delay: 6.6 Intersection LOS: A
Intersection Capacity Utilization 53.9% ICU Level of Service A
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: Merivale & SC N

Lane Group	EBT	NBT	SBT
Lane Configurations			
Traffic Volume (vph)	0	570	824
Future Volume (vph)	0	570	824
Lane Group Flow (vph)	33	656	940
Sign Control	Stop	Free	Free

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	42.3%	ICU Level of Service A
Analysis Period (min)	15	

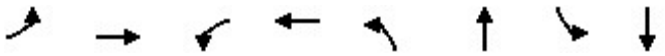
Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	15	0	14	0	0	0	20	570	1	4	824	18
Future Vol, veh/h	15	0	14	0	0	0	20	570	1	4	824	18
Conflicting Peds, #/hr	1	0	0	0	0	1	31	0	7	7	0	31
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	17	0	16	0	0	0	22	633	1	4	916	20

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1327	1650	499	1151	1660	325	967	0	0	641	0	0
Stage 1	965	965	-	685	685	-	-	-	-	-	-	-
Stage 2	362	685	-	466	975	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	113	98	517	153	96	671	708	-	-	939	-	-
Stage 1	274	331	-	404	447	-	-	-	-	-	-	-
Stage 2	629	447	-	546	328	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	105	90	505	141	88	667	691	-	-	934	-	-
Mov Cap-2 Maneuver	105	90	-	141	88	-	-	-	-	-	-	-
Stage 1	254	320	-	382	423	-	-	-	-	-	-	-
Stage 2	598	423	-	524	317	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	31.1	0	0.5	0
HCM LOS	D	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	691	-	-	170	-	934	-	-
HCM Lane V/C Ratio	0.032	-	-	0.19	-	0.005	-	-
HCM Control Delay (s)	10.4	0.2	-	31.1	0	8.9	0	-
HCM Lane LOS	B	A	-	D	A	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.7	-	0	-	-



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	Ø3	Ø7
Lane Configurations										
Traffic Volume (vph)	74	34	35	48	16	632	12	756		
Future Volume (vph)	74	34	35	48	16	632	12	756		
Lane Group Flow (vph)	0	149	0	131	0	742	0	882		
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA		
Protected Phases		4		8		2		6	3	7
Permitted Phases	4		8		2		6			
Detector Phase	4	4	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	1.0	1.0
Minimum Split (s)	19.8	19.8	19.8	19.8	33.8	33.8	33.8	33.8	5.0	5.0
Total Split (s)	20.0	20.0	20.0	20.0	40.0	40.0	40.0	40.0	5.0	5.0
Total Split (%)	30.8%	30.8%	30.8%	30.8%	61.5%	61.5%	61.5%	61.5%	8%	8%
Maximum Green (s)	14.2	14.2	14.2	14.2	34.2	34.2	34.2	34.2	3.0	3.0
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	2.0	2.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	0.0	0.0
Lost Time Adjust (s)		0.0		0.0		0.0		0.0		
Total Lost Time (s)		5.8		5.8		5.8		5.8		
Lead/Lag	Lag	Lag	Lag	Lag					Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes					Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max	None	None
Walk Time (s)	2.0	2.0	2.0	2.0	16.0	16.0	16.0	16.0	3.0	3.0
Flash Dont Walk (s)	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	0.0	0.0
Pedestrian Calls (#/hr)	8	8	0	0	6	6	21	21	8	0
Act Effct Green (s)		11.9		12.9		44.8		44.8		
Actuated g/C Ratio		0.18		0.20		0.69		0.69		
v/c Ratio		0.60		0.43		0.35		0.41		
Control Delay		31.8		21.2		6.8		7.9		
Queue Delay		0.0		0.0		0.0		0.0		
Total Delay		31.8		21.2		6.8		7.9		
LOS		C		C		A		A		
Approach Delay		31.8		21.2		6.8		7.9		
Approach LOS		C		C		A		A		
Queue Length 50th (m)		14.7		10.9		18.4		24.1		
Queue Length 95th (m)		29.7		21.3		38.7		m63.9		
Internal Link Dist (m)		79.4		91.0		78.5		120.7		
Turn Bay Length (m)										
Base Capacity (vph)		293		354		2110		2141		
Starvation Cap Reductn		0		0		0		0		
Spillback Cap Reductn		0		0		0		0		
Storage Cap Reductn		0		0		0		0		
Reduced v/c Ratio		0.51		0.37		0.35		0.41		

Intersection Summary
Cycle Length: 65
Actuated Cycle Length: 65
Offset: 9 (14%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 60

Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.60	
Intersection Signal Delay: 10.3	Intersection LOS: B
Intersection Capacity Utilization 56.0%	ICU Level of Service B
Analysis Period (min) 15	

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 6: Merivale & Coldrey/Crerar

Appendix D

Collision Data

CGH TRANSPORTATION

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
2019-02-05	2019	8:55	ARCHIBALD ST @ CARLING AVE (0006989)	01 - Clear	01 - Daylight	02 - Stop sign	0	03 - P.D. only	03 - Rear end	06 - Ice	2	0	0	0
2020-05-08	2020	23:05	ARCHIBALD ST @ CARLING AVE (0006989)	01 - Clear	07 - Dark	02 - Stop sign	0	03 - P.D. only	07 - SMV other	01 - Dry	1	0	0	0
2019-04-09	2019	9:41	CARLING AVE @ 73 E OF ARCHIBALD ST/WESTGATE SC (0008216)	03 - Snow	01 - Daylight	01 - Traffic signal	0	02 - Non-fatal injury	02 - Angle	03 - Loose snow	2	0	0	0
2019-10-19	2019	16:30	CARLING AVE @ 73 E OF ARCHIBALD ST/WESTGATE SC (0008216)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	01 - Dry	2	0	0	0
2021-05-07	2021	17:09	CARLING AVE @ 73 E OF ARCHIBALD ST/WESTGATE SC (0008216)	02 - Rain	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	02 - Angle	02 - Wet	2	0	0	0
2022-04-25	2022	12:06	CARLING AVE @ 73 E OF ARCHIBALD ST/WESTGATE SC (0008216)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	04 - Sideswipe	01 - Dry	2	0	0	0
2018-01-14	2018	2:04	CARLING AVE WB btwn HWY417 IC124 RAMP67 & 73 E OF ARCHIBALD ST/WESTGATE SC W (__3Z0BONA)	01 - Clear	07 - Dark	10 - No control	0	03 - P.D. only	07 - SMV other	06 - Ice	1	0	0	0
2018-09-12	2018	18:15	CARLING AVE WB btwn HWY417 IC124 RAMP67 & 73 E OF ARCHIBALD ST/WESTGATE SC W (__3Z0BONA)	01 - Clear	01 - Daylight	10 - No control	0	03 - P.D. only	04 - Sideswipe	01 - Dry	2	0	0	0
2018-09-14	2018	2:44	CARLING AVE WB btwn HWY417 IC124 RAMP67 & 73 E OF ARCHIBALD ST/WESTGATE SC W (__3Z0BONA)	01 - Clear	07 - Dark	10 - No control	0	03 - P.D. only	07 - SMV other	01 - Dry	1	0	0	0
2019-02-11	2019	9:44	CARLING AVE WB btwn HWY417 IC124 RAMP67 & 73 E OF ARCHIBALD ST/WESTGATE SC W (__3Z0BONA)	01 - Clear	01 - Daylight	10 - No control	0	03 - P.D. only	03 - Rear end	01 - Dry	2	0	0	0
2019-12-28	2019	5:16	CARLING AVE WB btwn HWY417 IC124 RAMP67 & 73 E OF ARCHIBALD ST/WESTGATE SC W (__3Z0BONA)	02 - Rain	07 - Dark	10 - No control	0	03 - P.D. only	07 - SMV other	06 - Ice	1	0	0	0
2020-07-13	2020	14:16	CARLING AVE WB btwn HWY417 IC124 RAMP67 & 73 E OF ARCHIBALD ST/WESTGATE SC W (__3Z0BONA)	01 - Clear	01 - Daylight	10 - No control	0	03 - P.D. only	05 - Turning movement	01 - Dry	2	0	0	0
2018-01-09	2018	9:17	CARLING AVE @ MERIVALE RD (0002148)	01 - Clear	01 - Daylight	01 - Traffic signal	0	02 - Non-fatal injury	03 - Rear end	03 - Loose snow	2	0	0	0
2018-01-13	2018	10:42	CARLING AVE @ MERIVALE RD (0002148)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	02 - Angle	03 - Loose snow	2	0	0	0
2018-01-13	2018	14:14	CARLING AVE @ MERIVALE RD (0002148)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	04 - Slush	2	0	0	0
2018-04-04	2018	20:31	CARLING AVE @ MERIVALE RD (0002148)	01 - Clear	07 - Dark	01 - Traffic signal	0	03 - P.D. only	05 - Turning movement	01 - Dry	2	0	0	0
2018-05-24	2018	17:37	CARLING AVE @ MERIVALE RD (0002148)	01 - Clear	01 - Daylight	01 - Traffic signal	0	02 - Non-fatal injury	02 - Angle	01 - Dry	2	0	0	0
2018-07-19	2018	16:33	CARLING AVE @ MERIVALE RD (0002148)	01 - Clear	01 - Daylight	01 - Traffic signal	0	02 - Non-fatal injury	02 - Angle	01 - Dry	2	1	0	0
2018-09-14	2018	17:21	CARLING AVE @ MERIVALE RD (0002148)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	05 - Turning movement	01 - Dry	2	0	0	0
2018-10-13	2018	11:55	CARLING AVE @ MERIVALE RD (0002148)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	05 - Turning movement	01 - Dry	2	0	0	0
2018-10-30	2018	7:25	CARLING AVE @ MERIVALE RD (0002148)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	05 - Turning movement	01 - Dry	2	0	0	0
2018-11-19	2018	11:39	CARLING AVE @ MERIVALE RD (0002148)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	05 - Turning movement	02 - Wet	2	0	0	0
2019-02-02	2019	19:00	CARLING AVE @ MERIVALE RD (0002148)	03 - Snow	07 - Dark	01 - Traffic signal	0	03 - P.D. only	04 - Sideswipe	03 - Loose snow	3	0	0	0
2019-02-15	2019	11:50	CARLING AVE @ MERIVALE RD (0002148)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	04 - Sideswipe	04 - Slush	2	0	0	0
2019-03-30	2019	10:18	CARLING AVE @ MERIVALE RD (0002148)	02 - Rain	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	02 - Wet	3	0	0	0
2019-06-12	2019	18:30	CARLING AVE @ MERIVALE RD (0002148)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	04 - Sideswipe	01 - Dry	2	0	0	0
2019-08-30	2019	22:23	CARLING AVE @ MERIVALE RD (0002148)	01 - Clear	07 - Dark	01 - Traffic signal	0	03 - P.D. only	02 - Angle	01 - Dry	2	0	0	0
2019-10-11	2019	15:00	CARLING AVE @ MERIVALE RD (0002148)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	01 - Dry	2	0	0	0
2019-11-01	2019	11:30	CARLING AVE @ MERIVALE RD (0002148)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	05 - Turning movement	01 - Dry	2	0	0	0
2019-11-27	2019	9:33	CARLING AVE @ MERIVALE RD (0002148)	02 - Rain	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	04 - Sideswipe	02 - Wet	2	0	0	0
2020-01-15	2020	20:10	CARLING AVE @ MERIVALE RD (0002148)	01 - Clear	07 - Dark	01 - Traffic signal	0	02 - Non-fatal injury	03 - Rear end	02 - Wet	3	0	0	0
2020-09-07	2020	17:34	CARLING AVE @ MERIVALE RD (0002148)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	02 - Wet	2	0	0	0
2020-09-14	2020	16:20	CARLING AVE @ MERIVALE RD (0002148)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	01 - Dry	2	0	0	0
2021-03-26	2021	13:48	CARLING AVE @ MERIVALE RD (0002148)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	05 - Turning movement	01 - Dry	2	0	0	0
2021-05-20	2021	13:00	CARLING AVE @ MERIVALE RD (0002148)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	01 - Dry	3	0	0	0
2021-06-03	2021	8:35	CARLING AVE @ MERIVALE RD (0002148)	02 - Rain	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	04 - Sideswipe	02 - Wet	2	0	0	0
2021-06-11	2021	8:19	CARLING AVE @ MERIVALE RD (0002148)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	04 - Sideswipe	01 - Dry	2	0	0	0
2021-07-15	2021	16:00	CARLING AVE @ MERIVALE RD (0002148)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	01 - Dry	2	0	0	0
2021-07-27	2021	7:02	CARLING AVE @ MERIVALE RD (0002148)	02 - Rain	01 - Daylight	01 - Traffic signal	0	02 - Non-fatal injury	02 - Angle	02 - Wet	2	0	0	0
2021-08-31	2021	8:29	CARLING AVE @ MERIVALE RD (0002148)	01 - Clear	01 - Daylight	01 - Traffic signal	0	02 - Non-fatal injury	03 - Rear end	01 - Dry	3	0	0	0
2021-09-03	2021	14:54	CARLING AVE @ MERIVALE RD (0002148)	01 - Clear	01 - Daylight	01 - Traffic signal	0	02 - Non-fatal injury	02 - Angle	01 - Dry	2	0	1	0
2021-12-07	2021	5:30	CARLING AVE @ MERIVALE RD (0002148)	01 - Clear	07 - Dark	01 - Traffic signal	0	03 - P.D. only	02 - Angle	01 - Dry	2	0	0	0
2022-01-05	2022	17:08	CARLING AVE @ MERIVALE RD (0002148)	01 - Clear	05 - Dusk	01 - Traffic signal	0	02 - Non-fatal injury	05 - Turning movement	01 - Dry	2	0	0	0
2022-02-24	2022	14:30	CARLING AVE @ MERIVALE RD (0002148)	01 - Clear	01 - Daylight	01 - Traffic signal	0	02 - Non-fatal injury	03 - Rear end	02 - Wet	2	0	0	0
2022-03-07	2022	20:43	CARLING AVE @ MERIVALE RD (0002148)	03 - Snow	07 - Dark	01 - Traffic signal	0	03 - P.D. only	07 - SMV other	03 - Loose snow	1	0	0	0
2022-03-10	2022	15:30	CARLING AVE @ MERIVALE RD (0002148)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	01 - Dry	2	0	0	0
2018-04-05	2018	8:12	CARLING AVE @ MERIVALE RD (0002148)	01 - Clear	01 - Daylight	02 - Stop sign	0	03 - P.D. only	03 - Rear end	01 - Dry	2	0	0	0
2019-11-05	2019	18:30	CARLING AVE @ MERIVALE RD (0002148)	01 - Clear	07 - Dark	02 - Stop sign	0	03 - P.D. only	03 - Rear end	01 - Dry	2	0	0	0
2020-08-28	2020	9:00	CARLING AVE @ MERIVALE RD (0002148)	01 - Clear	01 - Daylight	02 - Stop sign	0	03 - P.D. only	03 - Rear end	01 - Dry	2	0	0	0
2021-06-10	2021	19:40	CARLING AVE @ MERIVALE RD (0002148)	01 - Clear	01 - Daylight	02 - Stop sign	0	02 - Non-fatal injury	03 - Rear end	01 - Dry	2	1	0	0
2018-03-10	2018	19:47	MERIVALE RD @ THAMES STMERIVALE RD LOOP S (0006168)	01 - Clear	07 - Dark	02 - Stop sign	0	03 - P.D. only	03 - Rear end	01 - Dry	2	0	0	0
2018-04-29	2018	8:15	MERIVALE RD @ THAMES STMERIVALE RD LOOP S (0006168)	01 - Clear	01 - Daylight	02 - Stop sign	0	03 - P.D. only	05 - Turning movement	01 - Dry	2	0	0	0
2018-12-05	2018	8:10	MERIVALE RD @ THAMES STMERIVALE RD LOOP S (0006168)	01 - Clear	01 - Daylight	02 - Stop sign	0	03 - P.D. only	03 - Rear end	01 - Dry	2	0	0	0
2019-10-31	2019	17:15	MERIVALE RD @ THAMES STMERIVALE RD LOOP S (0006168)	02 - Rain	05 - Dusk	02 - Stop sign	0	03 - P.D. only	04 - Sideswipe	02 - Wet	2	0	0	0
2020-06-29	2020	17:54	MERIVALE RD @ THAMES STMERIVALE RD LOOP S (0006168)	01 - Clear	01 - Daylight	02 - Stop sign	0	03 - P.D. only	03 - Rear end	01 - Dry	3	0	0	0
2021-10-15	2021	17:58	MERIVALE RD @ THAMES STMERIVALE RD LOOP S (0006168)	01 - Clear	05 - Dusk	02 - Stop sign	0	02 - Non-fatal injury	04 - Sideswipe	01 - Dry	2	0	0	0
2022-03-15	2022	4:50	MERIVALE RD @ THAMES STMERIVALE RD LOOP S (0006168)	01 - Clear	07 - Dark	02 - Stop sign	0	03 - P.D. only	07 - SMV other	01 - Dry	1	0	0	0
2022-11-02	2022	18:44	MERIVALE RD @ THAMES STMERIVALE RD LOOP S (0006168)	01 - Clear	07 - Dark	02 - Stop sign	0	01 - Fatal injury	99 - Other	01 - Dry	2	0	0	1
2018-06-19	2018	10:14	CARLING AVE @ WESTGATE SC E (0008795)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	02 - Angle	01 - Dry	2	0	0	0
2019-02-07	2019	6:10	CARLING AVE @ WESTGATE SC E (0008795)	01 - Clear	07 - Dark	01 - Traffic signal	0	03 - P.D. only	02 - Angle	03 - Loose snow	2	0	0	0
2019-03-06	2019	12:53	CARLING AVE @ WESTGATE SC E (0008795)	01 - Clear	01 - Daylight	01 - Traffic signal	0	02 - Non-fatal injury	03 - Rear end	01 - Dry	2	0	0	0
2019-08-03	2019	15:00	CARLING AVE @ WESTGATE SC E (0008795)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	99 - Other	02 - Wet	2	0	0	0
2019-10-08	2019	9:16	CARLING AVE @ WESTGATE SC E (0008795)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	02 - Angle	01 - Dry	2	0	0	0
2021-05-21	2021	15:18	CARLING AVE @ WESTGATE SC E (0008795)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	07 - SMV other	01 - Dry	1	0	0	0
2021-06-21	2021	17:28	CARLING AVE @ WESTGATE SC E (0008795)	01 - Clear	01 - Daylight	01 - Traffic signal	0	02 - Non-fatal injury	07 - SMV other	01 - Dry	1	0	0	1
2021-10-23	2021	14:29	CARLING AVE @ WESTGATE SC E (0008795)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	04 - Sideswipe	01 - Dry	2	0	0	0
2022-08-13	2022	16:00	CARLING AVE @ WESTGATE SC E (0008795)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	05 - Turning movement	01 - Dry	2	0	0	0

Appendix E

TDM Checklist

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

Legend

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

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

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

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

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

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

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

Legend

REQUIRED	The Official Plan or Zoning By-law provides related guidance that must be followed
BASIC	The measure is generally feasible and effective, and in most cases would benefit the development and its users
BETTER	The measure could maximize support for users of sustainable modes, and optimize development performance

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

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

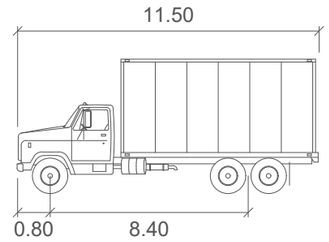
		TDM-supportive design & infrastructure measures: *Residential developments*	Check if completed & add descriptions, explanations or plan/drawing references
	2.	**WALKING & CYCLING: END-OF-TRIP FACILITIES**	
	2.1	**Bicycle parking**	
REQUIRED	2.1.1	Provide bicycle parking in highly visible and lighted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

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

Appendix F

Turning Templates

Notes:



HSU

	meters
Width	: 2.60
Track	: 2.60
Lock to Lock Time	: 6.0
Steering Angle	: 40.0

Legend:

Forward Movement

Reverse Movement

REV:	DESCRIPTION:	BY:	DATE:
03	Issued for Review:	EA	2026-02-25
02	Issued for Review:	IVG	2025-10-17
01	Issued for Review:	IVG	2025-10-07

STATUS:

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

CLIENT: HOMESTEAD

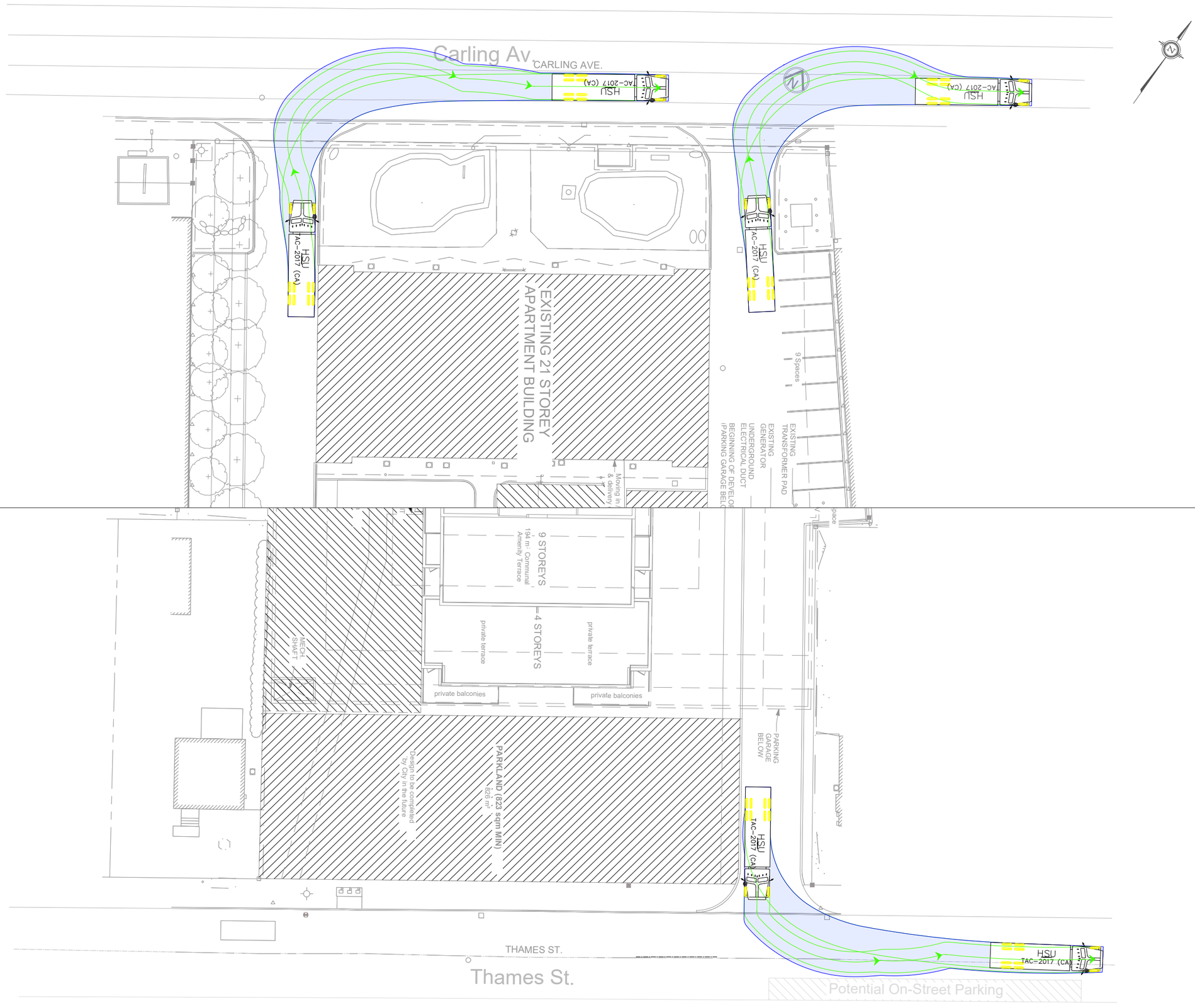
ARCHITECT:

SITE: 1316 Carling Avenue

TITLE: Inbound Turning Movements HSU

SCALE AT A3:	DATE:	DRAWN:	CHECKED:
NTS	2026-02-25	EA	AL

PROJECT NO:	DRAWING NO:	REVISION:
2025-123	001	03



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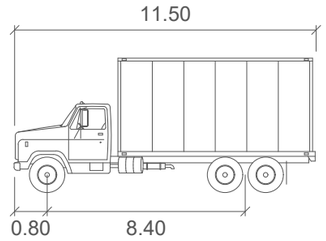


HSU

	meters
Width	: 2.60
Track	: 2.60
Lock to Lock Time	: 6.0
Steering Angle	: 40.0

Legend:

Forward Movement

Reverse Movement

REV:	DESCRIPTION:	BY:	DATE:
03	Issued for Review:	EA	2026-02-25
02	Issued for Review:	IVG	2025-10-17
01	Issued for Review:	IVG	2025-10-07

STATUS:

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

CLIENT: HOMESTEAD

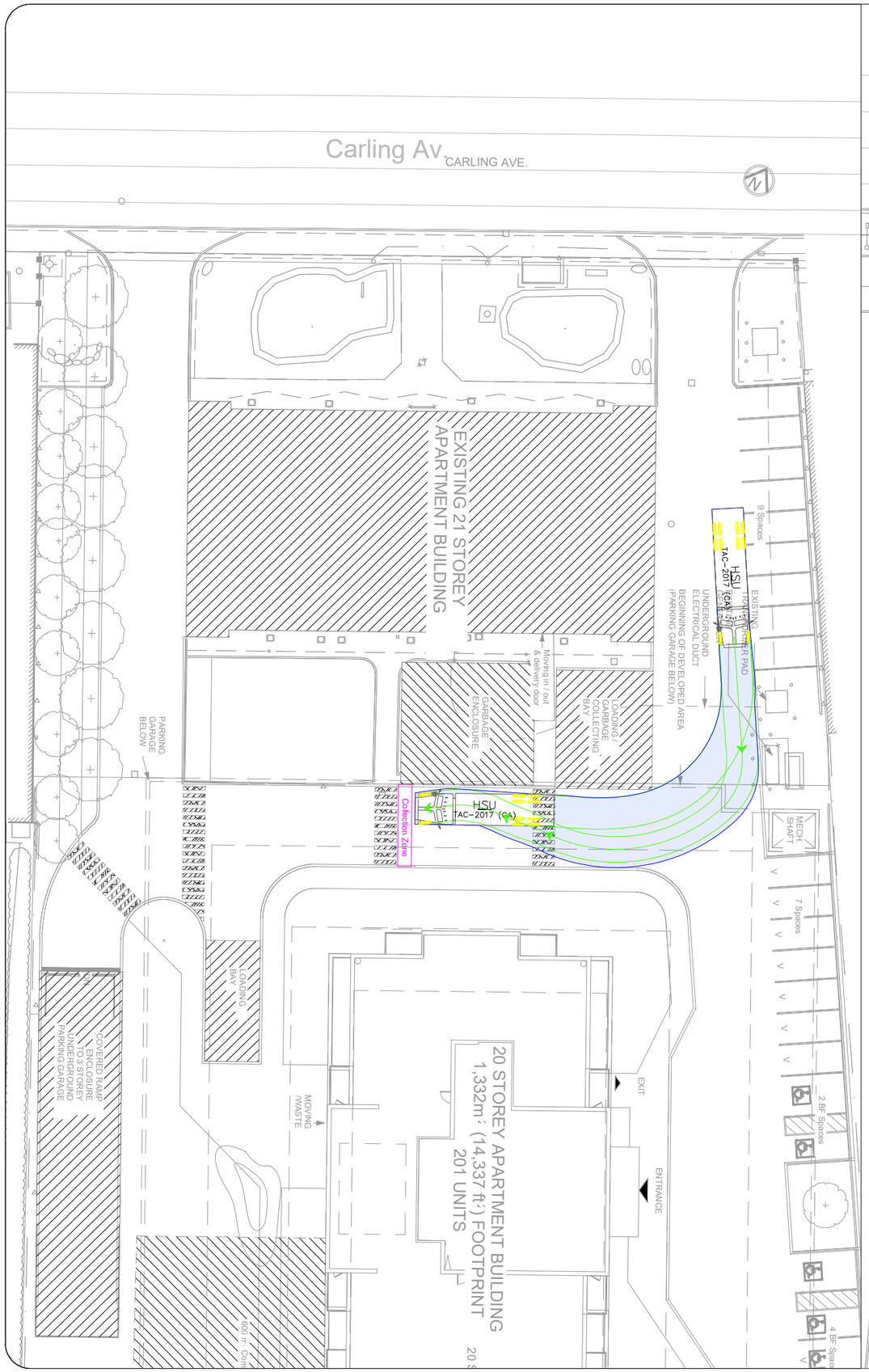
ARCHITECT:

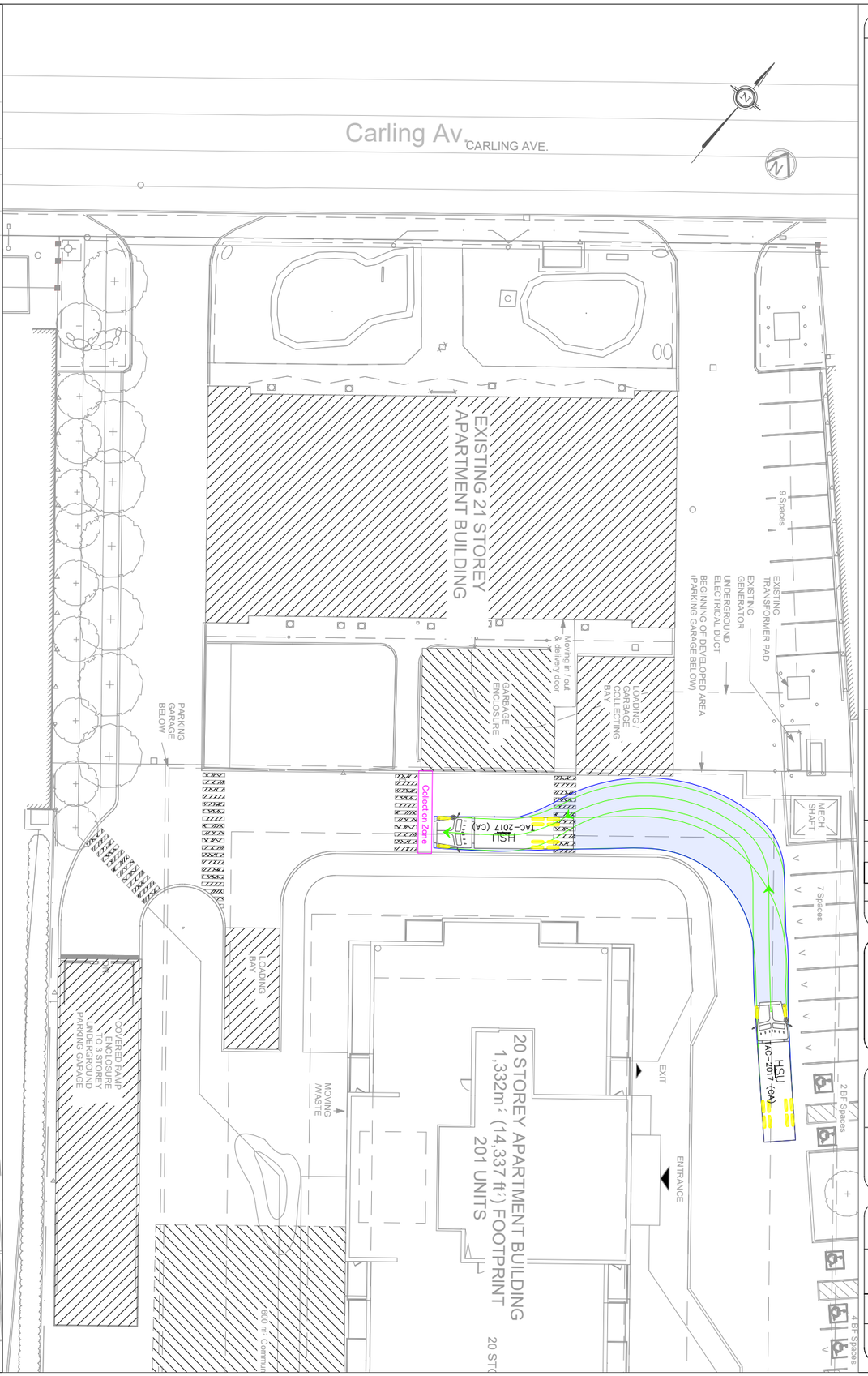
SITE: 1316 Carling Avenue

TITLE: Outbound Turning Movements HSU

SCALE AT A3:	DATE:	DRAWN:	CHECKED:
NTS	2026-02-25	EA	AL

PROJECT NO:	DRAWING NO:	REVISION:
2025-123	002	02





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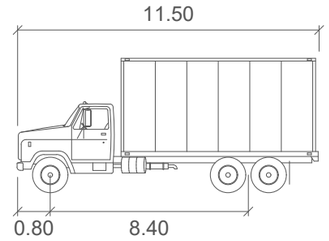


HSU

	meters
Width	: 2.60
Track	: 2.60
Lock to Lock Time	: 6.0
Steering Angle	: 40.0

Legend:

Forward Movement

Reverse Movement

REV:	DESCRIPTION:	BY:	DATE:
03	Issued for Review:	EA	2026-02-25
02	Issued for Review:	IVG	2025-10-17
01	Issued for Review:	IVG	2025-10-07

STATUS:

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

CLIENT: HOMESTEAD

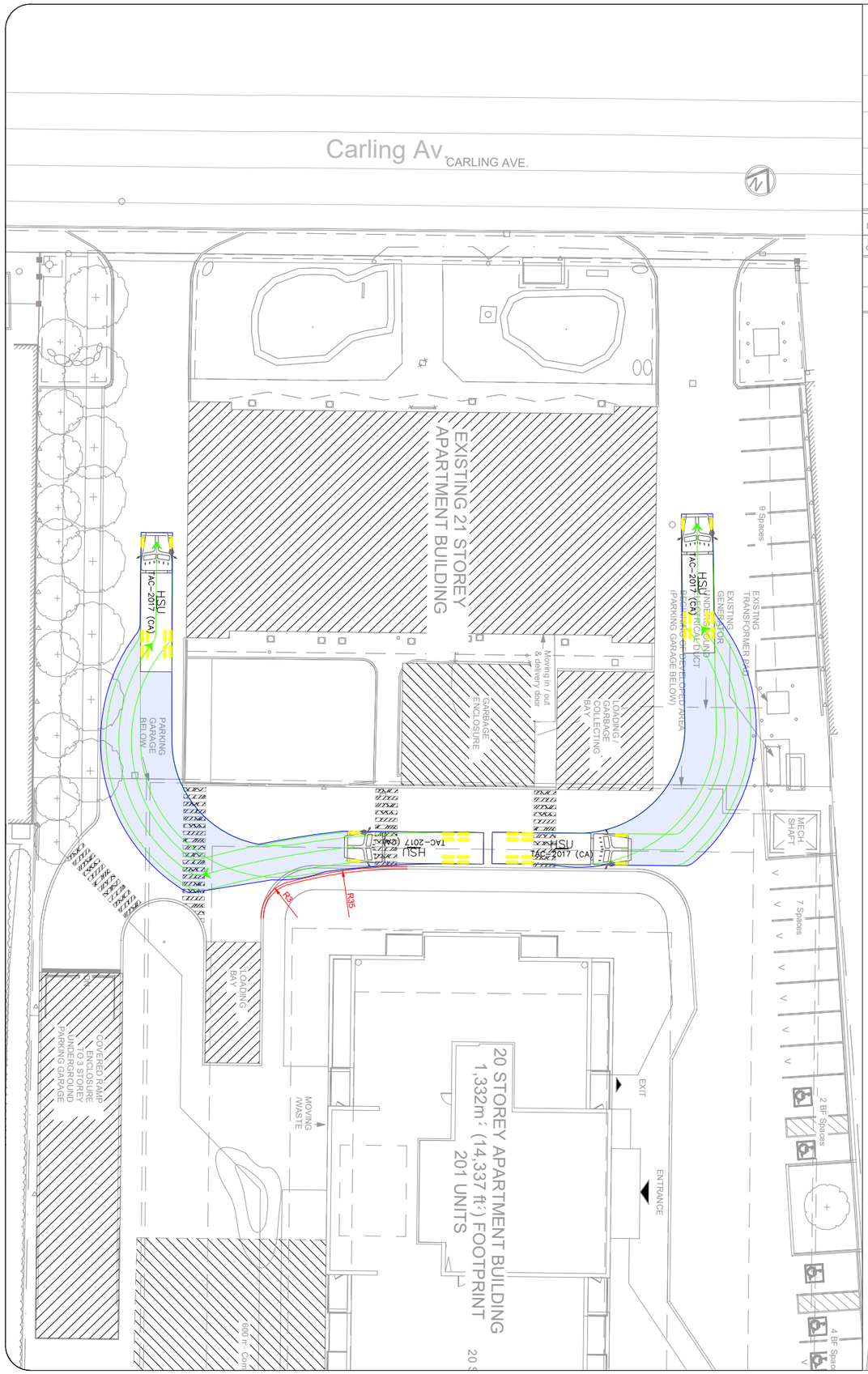
ARCHITECT:

SITE: 1316 Carling Avenue

TITLE: Garbage Collection Inbound

SCALE AT A3:	DATE:	DRAWN:	CHECKED:
NTS	2026-02-25	EA	AL

PROJECT NO:	DRAWING NO:	REVISION:
2025-123	003	02



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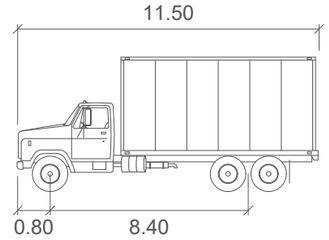


HSU

	meters
Width	: 2.60
Track	: 2.60
Lock to Lock Time	: 6.0
Steering Angle	: 40.0

Legend:

Forward Movement

Reverse Movement

REV:	DESCRIPTION:	BY:	DATE:
03	Issued for Review:	EA	2026-02-24
02	Issued for Review:	IVG	2025-10-17
01	Issued for Review:	IVG	2025-10-07

STATUS:

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

CLIENT: HOMESTEAD

ARCHITECT:

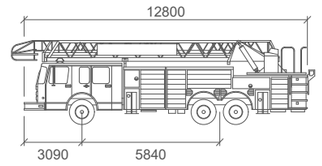
SITE: 1316 Carling Avenue

TITLE: Garbage Collection Outbound

SCALE AT A3:	DATE:	DRAWN:	CHECKED:
NTS	2026-02-25	EA	AL

PROJECT NO:	DRAWING NO:	REVISION:
2025-123	004	02

Notes:



Aerial Fire

		mm
Width	:	2540
Track	:	2540
Lock to Lock Time	:	6.0
Steering Angle	:	37.0

Legend:

- Forward Movement
- Reverse Movement

REV:	DESCRIPTION:	BY:	DATE:
03	Issued for Review:	EA	2026-02-25
02	Issued for Review:	IVG	2025-10-17
01	Issued for Review:	IVG	2025-10-07

STATUS:

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

CLIENT: HOMESTEAD

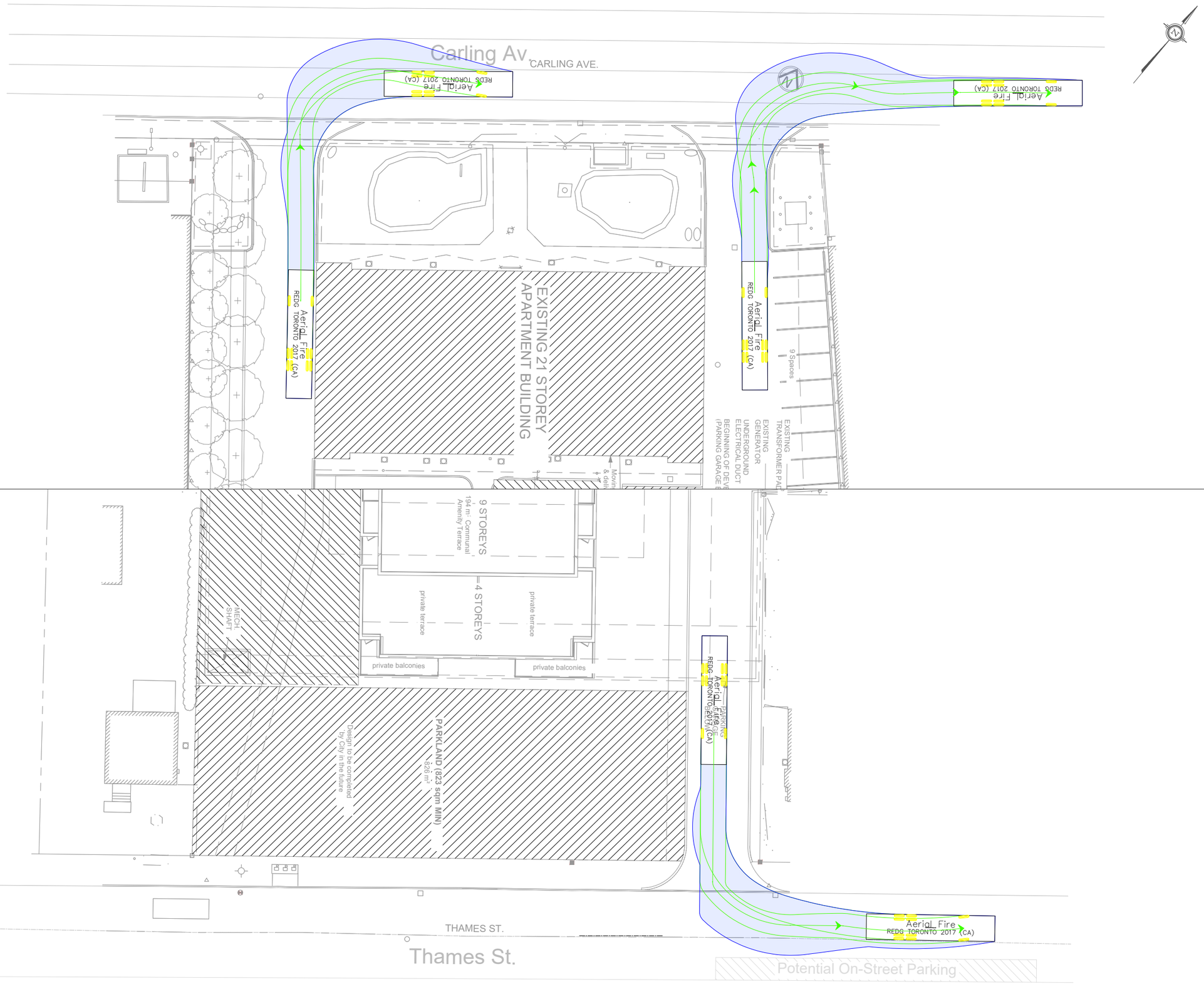
ARCHITECT:

SITE: 1316 Carling Avenue

TITLE: Inbound Turning Movements Fire Truck

SCALE AT A3:	DATE:	DRAWN:	CHECKED:
NTS	2026-02-25	EA	AL

PROJECT NO:	DRAWING NO:	REVISION:
2025-123	005	02



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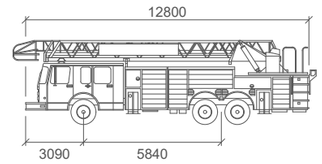


Aerial Fire

	mm
Width	: 2540
Track	: 2540
Lock to Lock Time	: 6.0
Steering Angle	: 37.0

Legend:

Forward Movement

Reverse Movement

REV:	DESCRIPTION:	BY:	DATE:
03	Issued for Review:	EA	2026-02-25
02	Issued for Review:	IVG	2025-10-17
01	Issued for Review:	IVG	2025-10-07

STATUS:

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

CLIENT: HOMESTEAD

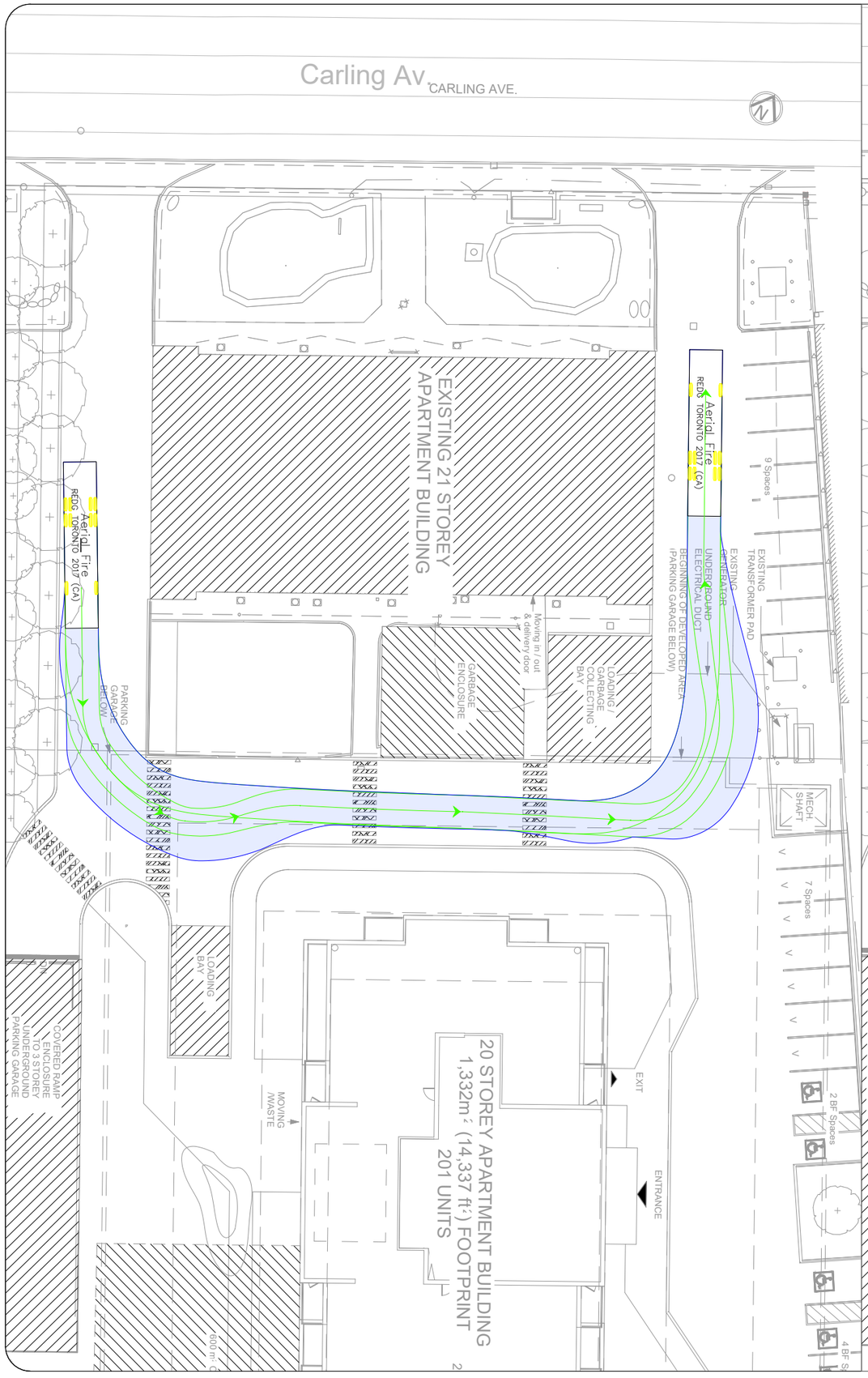
ARCHITECT:

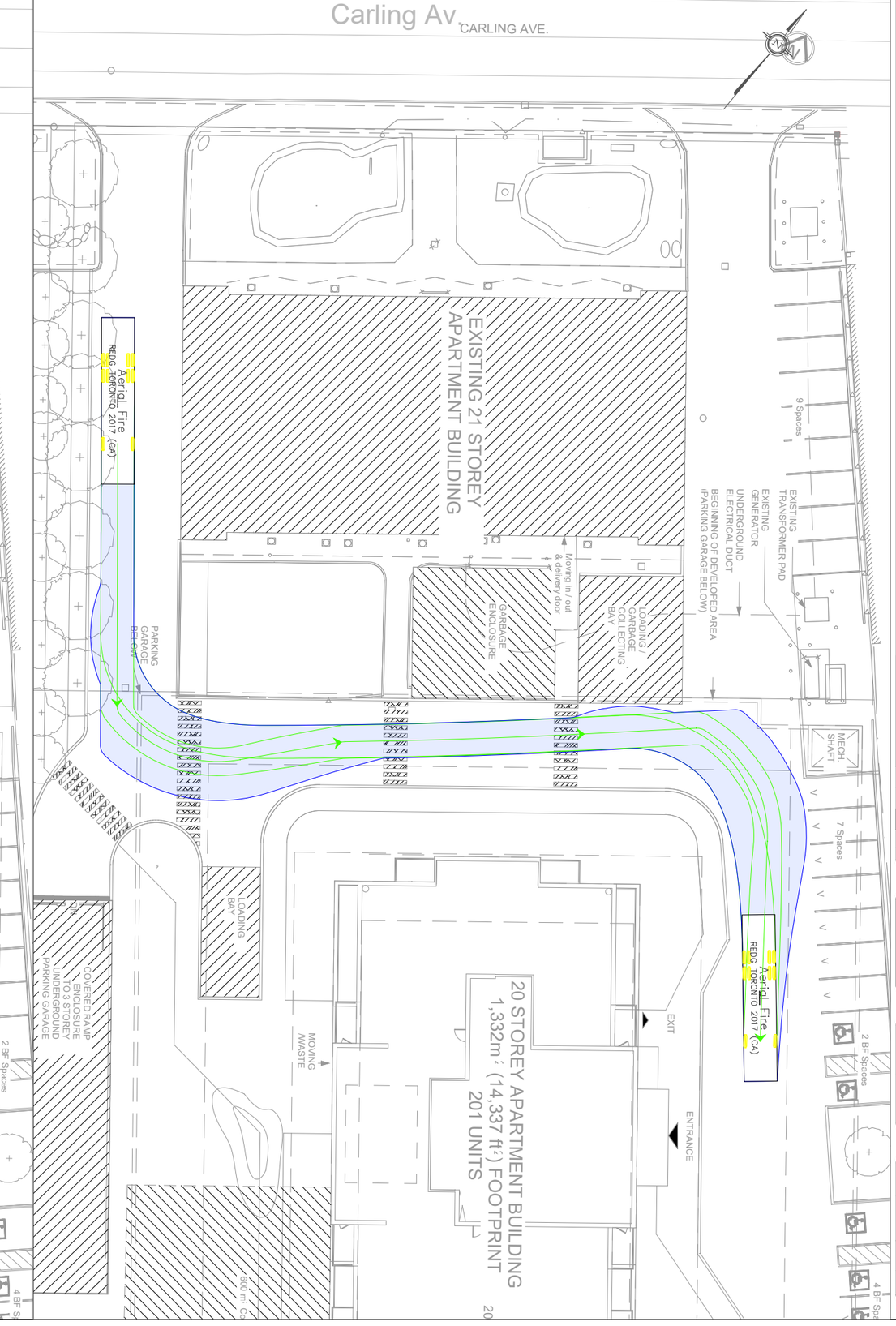
SITE: 1316 Carling Avenue

TITLE: Outbound Turning Movements Fire Truck

SCALE AT A3:	DATE:	DRAWN:	CHECKED:
NTS	2026-02-25	EA	AL

PROJECT NO:	DRAWING NO:	REVISION:
2025-123	006	02





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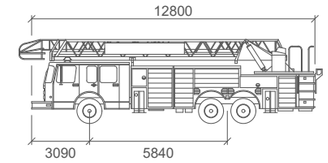


Aerial Fire

		mm
Width	:	2540
Track	:	2540
Lock to Lock Time	:	6.0
Steering Angle	:	37.0

Legend:

Forward Movement

Reverse Movement

REV:	DESCRIPTION:	BY:	DATE:
03	Issued for Review:	EA	2026-02-25
02	Issued for Review:	IVG	2025-10-17
01	Issued for Review:	IVG	2025-10-07

STATUS:

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

CLIENT: HOMESTEAD

ARCHITECT:

SITE: 1316 Carling Avenue

TITLE: Internal Circuit Movements Fire Truck

SCALE AT A3:	DATE:	DRAWN:	CHECKED:
NTS	2026-02-25	EA	AL

PROJECT NO:	DRAWING NO:	REVISION:
2025-123	007	02

Carling Av
CARLING AVE.

EXISTING 21 STORY APARTMENT BUILDING

20 STOREY APARTMENT BUILDING
1,332m² (14,337 ft²) FOOTPRINT
201 UNITS

Aerial Fire
REDS TORONTO 2017 (CA)

PARKING GARAGE FLOW

MOVING IN / OUT & delivery door

GARBAGE ENCLOSURE

LOADING / GARBAGE COLLECTING BAY

EXISTING GENERATOR

EXISTING TRANSFORMER PAD

UNDERGROUND ELECTRICAL DUCT

BEGINNING OF DEVELOPED AREA (PARKING GARAGE BELOW)

9 Spaces

MECH SHAFT

7 Spaces

2 BF Spaces

4 BF Spaces

LOADING BAY

COVERED RAMP ENCLOSURE TO 3 STOREY UNDERGROUND PARKING GARAGE

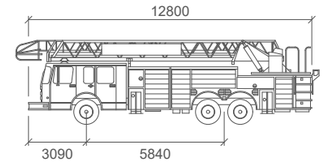
MOVING /WASTE

EXIT

ENTRANCE

600 m² GREEN SPACE

Notes:



Aerial Fire

		mm
Width	:	2540
Track	:	2540
Lock to Lock Time	:	6.0
Steering Angle	:	37.0

Legend:

Forward Movement

Reverse Movement

REV:	DESCRIPTION:	BY:	DATE:
03	Issued for Review:	EA	2026-02-25
02	Issued for Review:	IVG	2025-10-17
01	Issued for Review:	IVG	2025-10-07

STATUS:

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

CLIENT: HOMESTEAD

ARCHITECT:

SITE: 1316 Carling Avenue

TITLE: Internal Circuit Movements Fire Truck

SCALE AT A3:	DATE:	DRAWN:	CHECKED:
NTS	2026-02-25	EA	AL

PROJECT NO:	DRAWING NO:	REVISION:
2025-123	008	03

Appendix G

MMLOS Sheets

Multi-Modal Level of Service - Segments Form

Consultant	**CGH Transportation Inc**	**Project**	**2025-123**
Scenario	**Existing/Future**	**Date**	**2025-09-24**
Comments			

SEGMENTS			Carling Ex	Carling Fut	Thames Ex/Fut	Section 4
Pedestrian	Sidewalk Width Boulevard Width	**F**	1.8 m < 0.5 m	1.8 m < 0.5 m	no sidewalk n/a	
	Avg Daily Curb Lane Traffic Volume		> 3000	≤ 3000	≤ 3000	
	Operating Speed On-Street Parking		> 60 km/h no	> 60 km/h no	> 30 to 50 km/h no	
	Exposure to Traffic PLoS		**F**	**D**	**F**	**-**
	Effective Sidewalk Width					
	Pedestrian Volume					
	Crowding PLoS		**-**	**-**	**-**	**-**
	Level of Service		**-**	**-**	**-**	**-**
Bicycle	Type of Cycling Facility	**D**	Curbside Bike Lane	Physically Separated	Mixed Traffic	
	Number of Travel Lanes		≥ 3 each direction		≤ 2 (no centreline)	
	Operating Speed		>50 to 70 km/h		≤ 40 km/h	
	# of Lanes & Operating Speed LoS		**D**	**-**	**A**	**-**
	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)					
	No. of Lanes at Unsignalized Crossing					
	Sidestreet Operating Speed					
	Unsignalized Crossing - Lowest LoS		**-**	**A**	**-**	**-**
	Level of Service		**-**	**A**	**-**	**-**
Transit	Facility Type	**D**	Mixed Traffic	Bus lane		
	Friction or Ratio Transit:Posted Speed		Vt/Vp ≥ 0.8	Cf ≤ 60		
	Level of Service		**D**	**B**	**-**	**-**
Truck	Truck Lane Width	**C**	≤ 3.3 m	≤ 3.3 m		
	Travel Lanes per Direction		> 1	> 1		
	Level of Service		**C**	**C**	**-**	**-**