1137 Ogilvie Road & 1111 Cummings Avenue

Transportation Impact Assessment

Step 1 Screening Report

Step 2 Scoping Report

Step 3 Strategy Report

Prepared for:

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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.

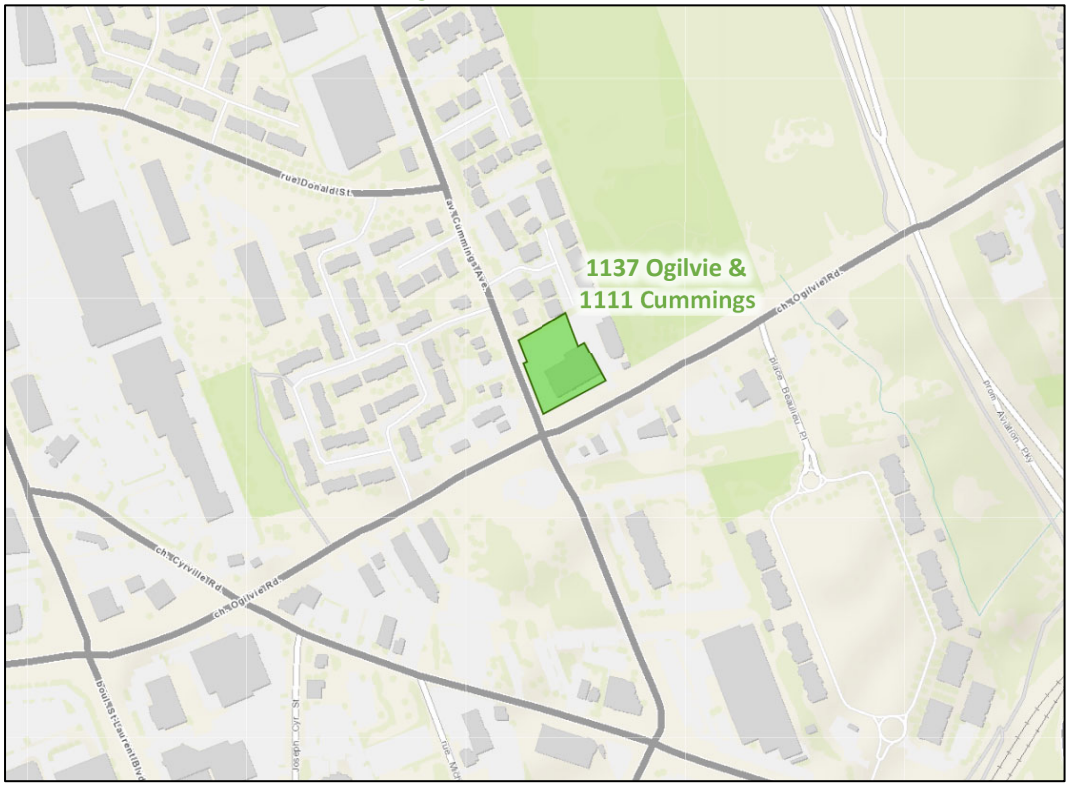
2 Existing and Planned Conditions

2.1 Proposed Development

The existing site, zoned currently as local commercial (LC6) and within the Cyrville TOD Plan area and design priority area, is occupied presently by a commercial building comprising a restaurant and a supermarket, and surrounding surface parking lots. The boundary street of Ogilvie Road is a "Mainstreet within Design Priority Area" corridor. The subject development proposes the construction of a 30-storey mixed-use building comprising 323 residential units and 5,252 ft^2 of ground floor retail, with 186 total vehicle parking spaces and 198 bicycle parking spaces. The proposed access configuration includes a full-movement two-way access at the north end of the Cummings Avenue frontage and a right-in-only one-way inbound access to a drop-off loop between the north access and Ogilvie Road. These access locations are generally located in the same locations as the existing site accesses. The development is anticipated to be built out in a single phase by 2027.

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: October 24, 2023

rla/architecture

1137 Ogilvie Rd

GROUND FLOOR

SCALE: TO FIT PAGE

PLOT DATE: June 27, 2024

Construction Area - 1,524 sq m/ 16,404 sq ft
Commercial Area - 488 sq m/ 5,253 sq ft
Parking - 2 Temp + 4 Short-term Spots

1137 OGILVIE

OTTAWA, ONTARIO

SHEET # **04**

PROJ. # 2317

2.2 Existing Conditions

2.2.1 Area Road Network

Aviation Parkway: Aviation Parkway is a federally owned freeway. North of Ogilvie Road, Aviation Parkway is a divided four-lane rural cross-section and has a semi-urban cross-section to the south as it transitions to Highway 417. A mixed-use path (MUP) is present along the west side of the road. The existing right-of-way is 130.0 metres or greater within the study area, and the posted speed limit is 60 km/h.

Cummings Avenue: Cummings Avenue is a collector road north of Donald Street, and a major collector road between Ogilvie Road and Donald Street, with a two-lane urban cross-section and sidewalks on both sides of the road. South of Ogilvie Road, Cummings Avenue is a City of Ottawa arterial road with a two-lane semi-urban cross-section, with a 1.5-metre-wide gravel shoulder on its west side and curbed with a sidewalk on its east side. The posted speed limit is 50 km/h. The City-protected right-of-way is 24.0 metres north of Donald Street, 26.0 metres between Donald Street and Ogilvie Road, and 37.5 metres south of Ogilvie Road. Cummings Avenue south of Donald Street is a truck route.

Ogilvie Road: Ogilvie Road is a City of Ottawa arterial road with a four-lane, divided urban cross-section with curbside bike lanes and sidewalks on both sides of the road. The posted speed limit is 60 km/h and the City-protected right-of-way is 44.5 metres within the study area. Ogilvie Road is a truck route.

Cyrville Road: Cyrville Road is a City of Ottawa collector road north of Cummings Avenue/Labelle Street and an arterial road south of Cummings Avenue/Labelle Street, each with a two-lane cross-section. North of Ogilvie Road, the cross-section includes a curb with a sidewalk on the east side and is uncurbed on the west side. Between Ogilvie Road and Cummings Avenue/Labelle Street, the cross-section is fully urban and includes a sidewalk and curb-side bike lane on each side of the road. South of Cummings Avenue/Labelle Street, the cross-section transitions to an uncurbed condition and includes a paved shoulder and sidewalk on the west side of the road and a MUP on the east side of the road separated by a concrete rumble strip. The posted speed limit is 60 km/h. The City-protected right-of-way is 26.0 metres north of Cummings Avenue and 37.5 metres south of Cummings Avenue/Labelle Street. Cyrville Road is a truck route.

Donald Street: Donald Street is a City of Ottawa major collector road with a two-lane urban cross-section, with sidewalks on both sides of the road and with curbside bike lanes on both sides of the road west of Belgate Way within the study area. On-street parking is permitted on the south side of the road between Findon Gate and Belgate Way. The posted speed limit is 50 km/h, and the existing right-of-way is 26.0 metres. Donald Street is a truck route within the study area.

Labelle Street: Labelle Street is a City of Ottawa major collector road with a two-lane urban cross-section with sidewalks on both sides of the road east of Michael Street N, and on the north side of the road west of Michael Street N. The unposted speed limit is assumed to be 50 km/h and the right-of-way varies between 20.0 metres and 22.5 metres within the study area.

2.2.2 Existing Intersections

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

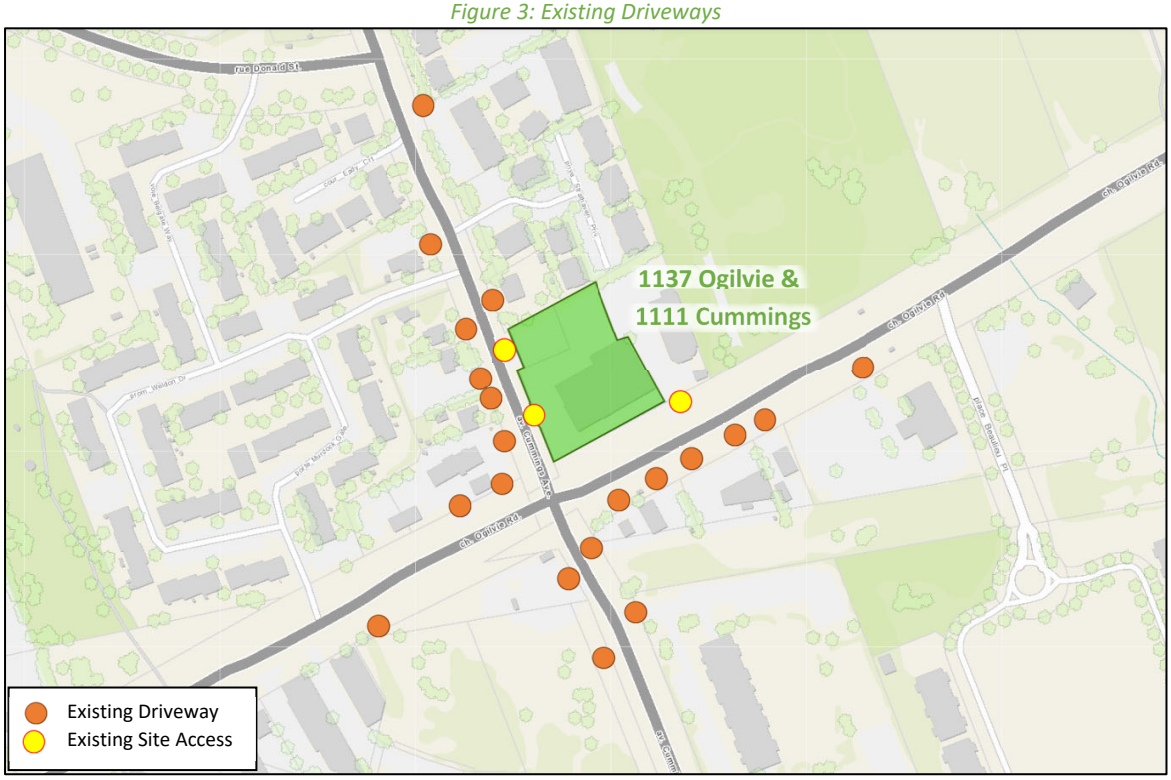
Donald Street at Cummings Avenue	The intersection of Donald Street at Cummings Avenue is a signalized intersection. The northbound approach consists of an auxiliary left-turn lane and a through lane, and the southbound approach consists of a shared through/right-turn lane. The eastbound approach consists

	of an auxiliary left-turn lane, and a right-turn lane. No turn restrictions were noted.
Ogilvie Road at Cyrville Road	The intersection of Ogilvie Road at Cyrville Road is a signalized intersection. The northbound approach of Cyrville Road consists of an auxiliary left-turn lane, a shared through/right-turn lane, and a bike lane and the southbound consists of an auxiliary left-turn lane and a shared through/channelized right-turn lane. The eastbound approach consists of two through lanes, a bike lane, and an auxiliary right-turn lane and the westbound approach consists of an auxiliary left-turn lane, two through lanes, a bike lane, and an auxiliary right-turn lane. Eastbound left turns are restricted at this intersection.
Ogilvie Road at Cummings Avenue	The intersection of Ogilvie Road at Cummings Avenue is a signalized intersection. The northbound approach consists of an auxiliary left-turn lane and a shared through/channelized right-turn lane, and the southbound approach consists of an auxiliary left-turn lane and a shared through/right-turn lane. The eastbound and westbound approaches each consist of an auxiliary left-turn lane, a through lane, a shared through/right-turn lane, and a bike lane. No turn restrictions were noted.
Ogilvie Road at Aviation Parkway	The intersection of Ogilvie Road at Aviation Parkway is a signalized intersection. The northbound and southbound approaches each consist of an auxiliary left-turn lane, a through lane, and a shared through/channelized right-turn lane and the eastbound and westbound approaches each consist of an auxiliary left-turn lane, two through lanes, a bike lane, and an auxiliary channelized right-turn lane. No turn restrictions were noted.
Cyrville Road Labelle at Street / Cummings Avenue	The intersection of Cyrville Road at Labelle Street/Cummings Avenue is a signalized intersection with the northbound and southbound approaches each consisting of an auxiliary left-turn lane and a shared through/right-turn lane, and the eastbound and westbound approaches each consisting of an auxiliary left-turn lane and a shared through/right-turn lane and a bike lane. No turn restrictions were noted.

2.2.3 Existing Driveways

Driveways to residential land uses exist on both sides of Cummings Avenue north of the proposed site access, and to gas stations, and mid-rise residential land uses and a vacant lot south of the site accesses. On Ogilvie Road, driveways to outdoor recreational, funerary and commercial services, and restaurant land uses and driveways to a gas station are present east of the site accesses, and to a vacant lot and a gas station to the west of the site accesses. Figure 3 illustrates the existing driveways.

Figure 3: Existing Driveways



Source: http://maps.ottawa.ca/geoOttawa/ Accessed: October 24, 2023

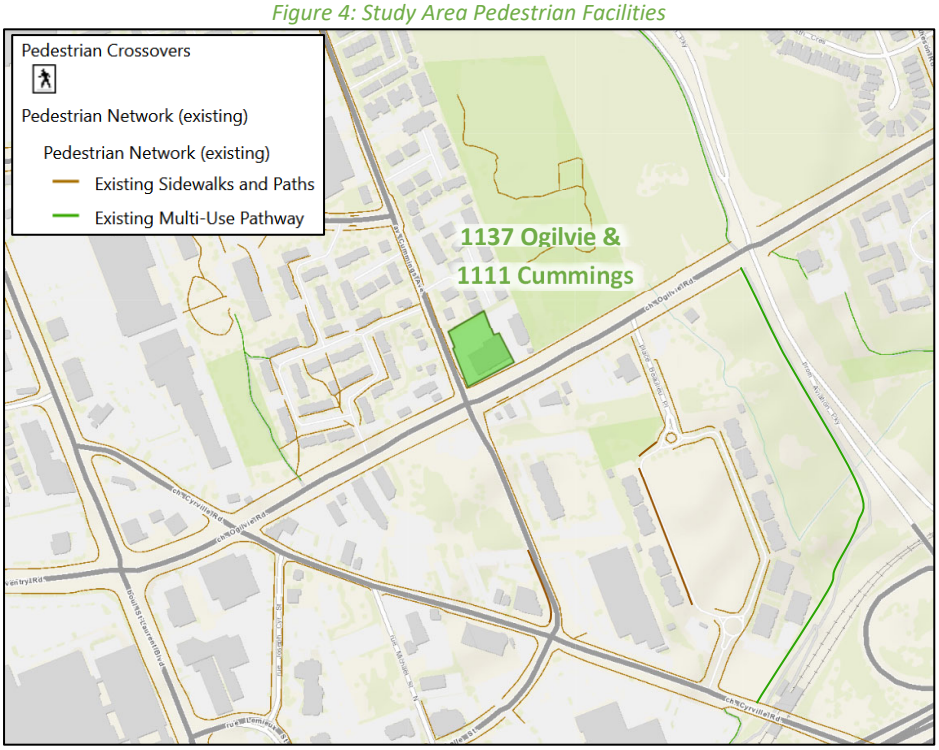
2.2.4 Cycling and Pedestrian Facilities

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

Sidewalks are provided along both sides of Cummings Avenue north of Ogilvie Road, Ogilvie Road, Cyrville Road south of Ogilvie Road, Donald Street, and Labelle Street within the study area. Sidewalks are also provided along the east side of Cyrville Road north of Ogilvie Road, of Cummings Avenue south of Ogilvie Road, and along the 1173 Cyrville Road development boundary street of Cummings Avenue.

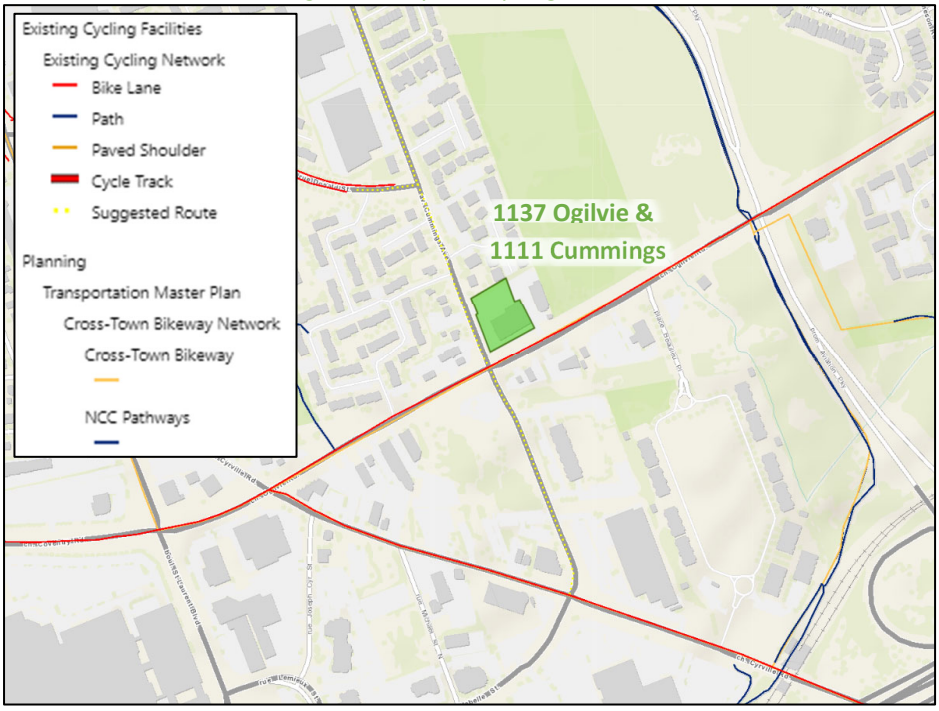
Cycling facilities include bike lanes along Ogilvie Road, Cyrville Road south of Ogilvie Road, and Donald Street. A multi-use path (MUP) is present along the west side of Aviation Parkway and on the east side of Cyrville Road separated by a concrete rumble strip. Donald Street west of St-Laurent Boulevard, St-Laurent Boulevard between Donald Street and Ogilvie Road, Ogilvie Road, Cyrville Road south of Ogilvie Road, the Aviation Pathway, and the pathway between the Aviation Parkway and Blair Station are Cross-Town Bikeways.

Figure 4: Study Area Pedestrian Facilities



Source: http://maps.ottawa.ca/geoOttawa/ Accessed: June 21, 2024

Figure 5: Study Area Cycling Facilities



Source: http://maps.ottawa.ca/geoOttawa/ Accessed: June 21, 2024

Pedestrian and cyclist volumes included in study area intersection counts, presented in Section 2.2.7, have been compiled and are illustrated in Figure 6 and Figure 7, respectively.

Figure 6: Existing Pedestrian Volumes

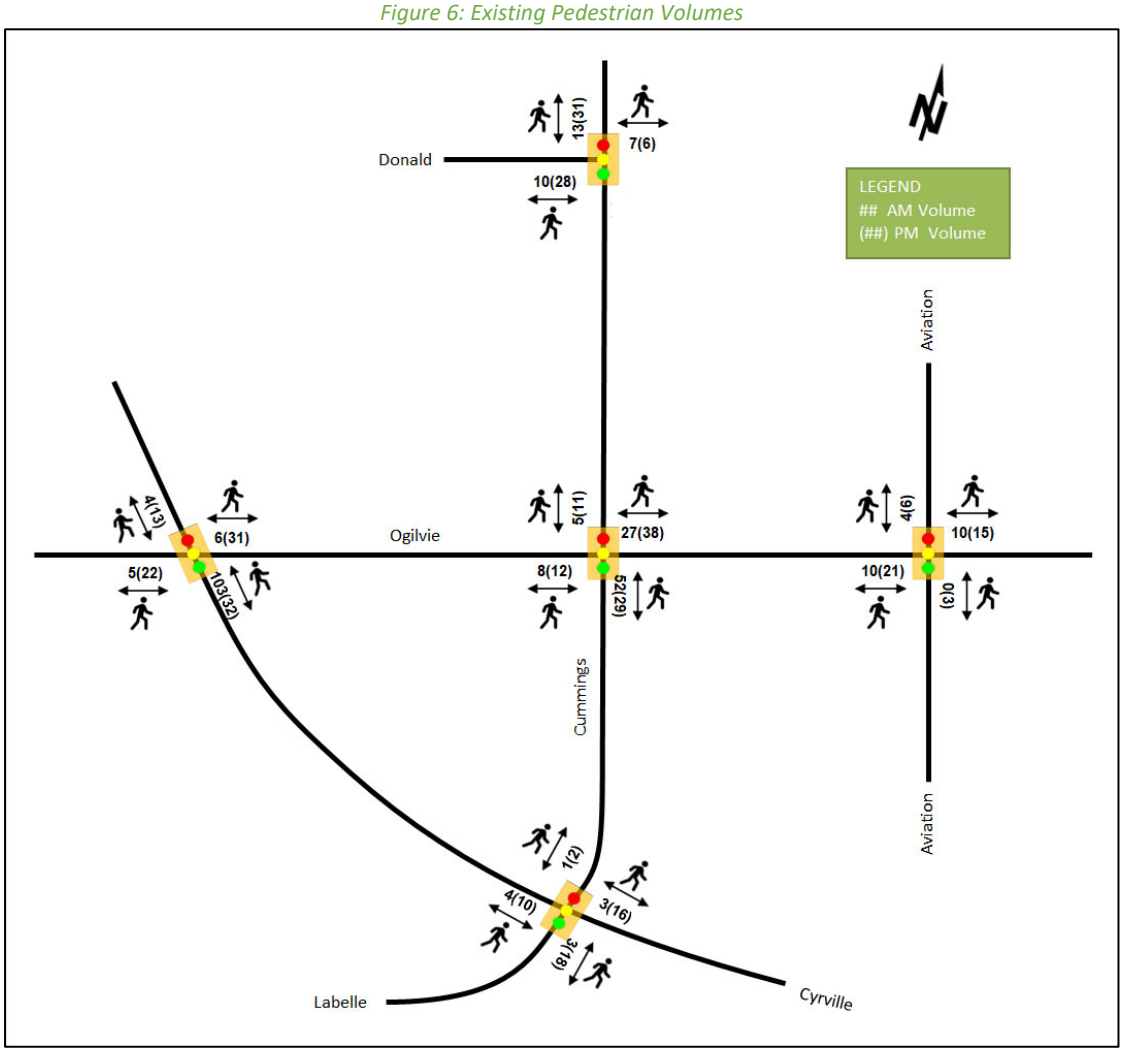
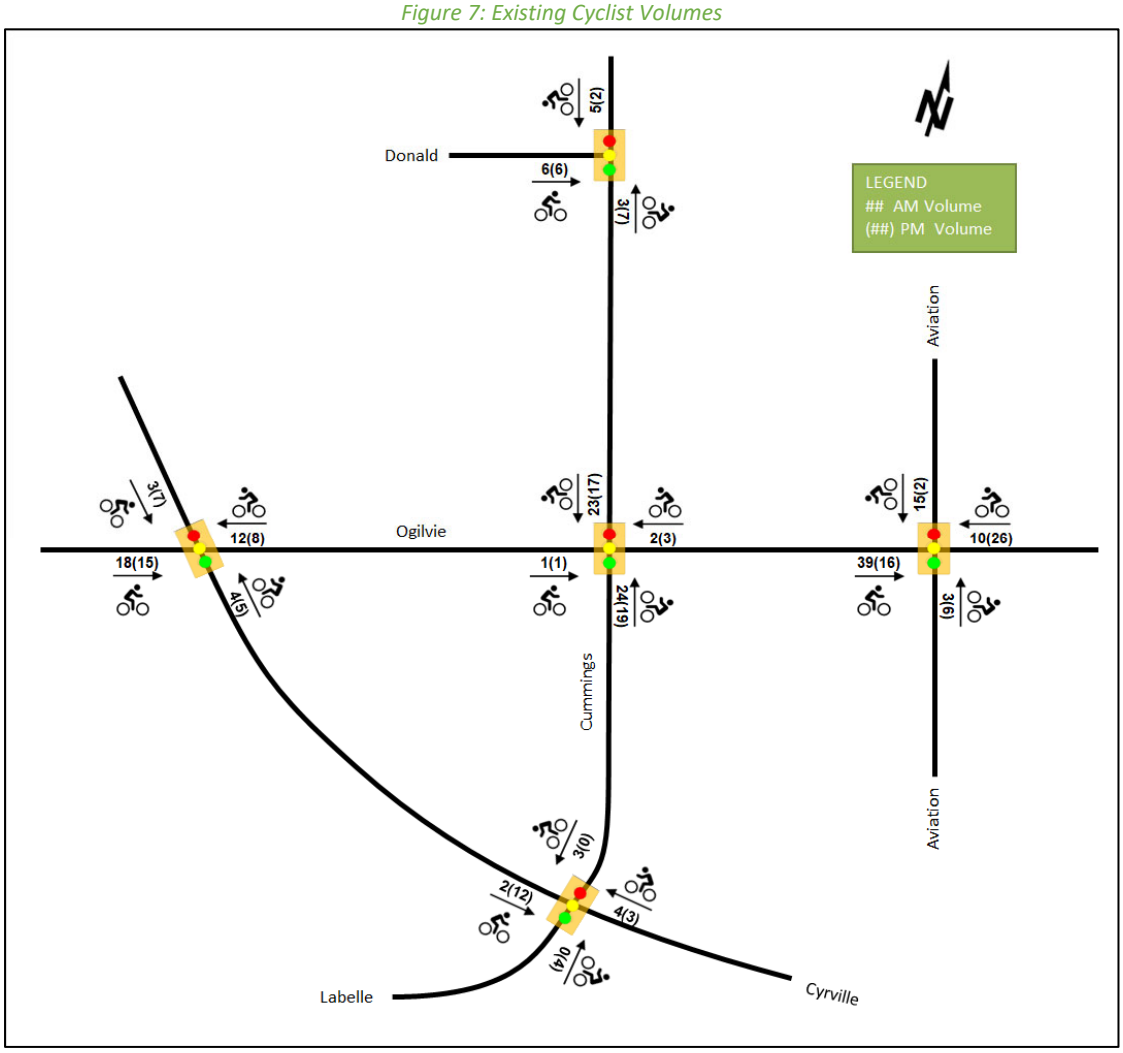


Figure 7: Existing Cyclist Volumes



2.2.5 Existing Transit

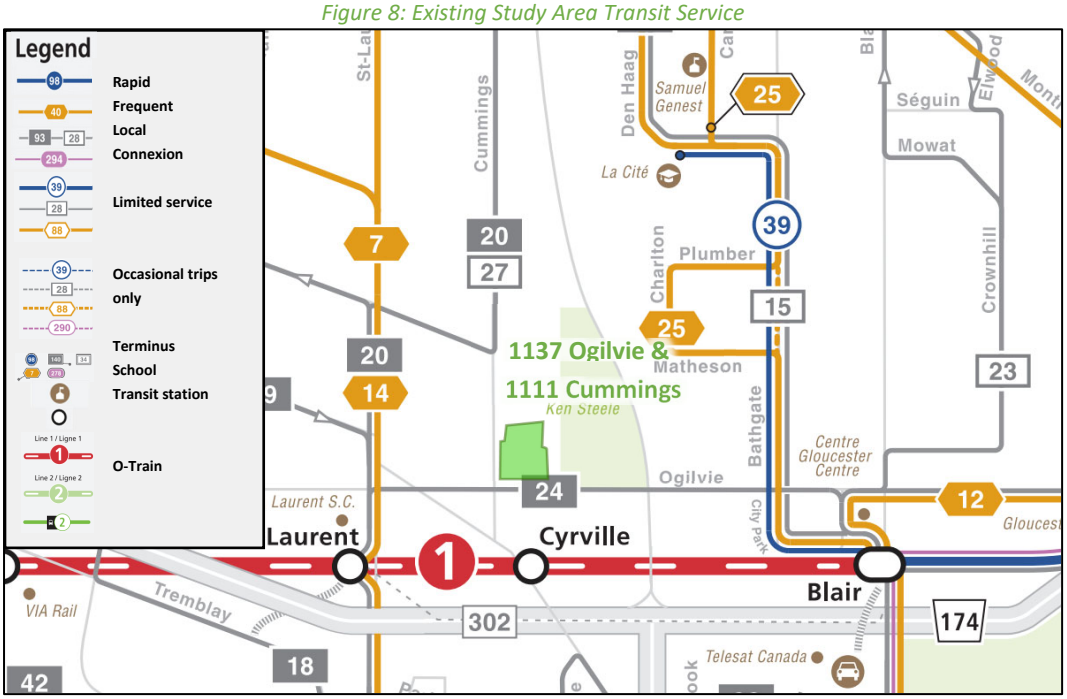
Figure 8 illustrates the transit system map in the study area and Figure 9 illustrates transit stops within 400 metres from the site and transit stations within 800 metres from the site. All transit information is from October 24, 2023 and is included for general information purposes and context to the surrounding area.

Within the study area, route #24 travel along Ogilvie Road, and routes #20 and #27 travel along Donald Street and Cummings Avenue to the north. The frequency of these routes within proximity of the proposed site based on October 24, 2023 service levels are:

- Route #20 – 30-minute service all day
- Route #24 – 15-minute service during peak hours, 30-minute service all day
- Route #27 – 30-35-minute service in the peak period/direction, 2-hr service from 10AM to 3PM

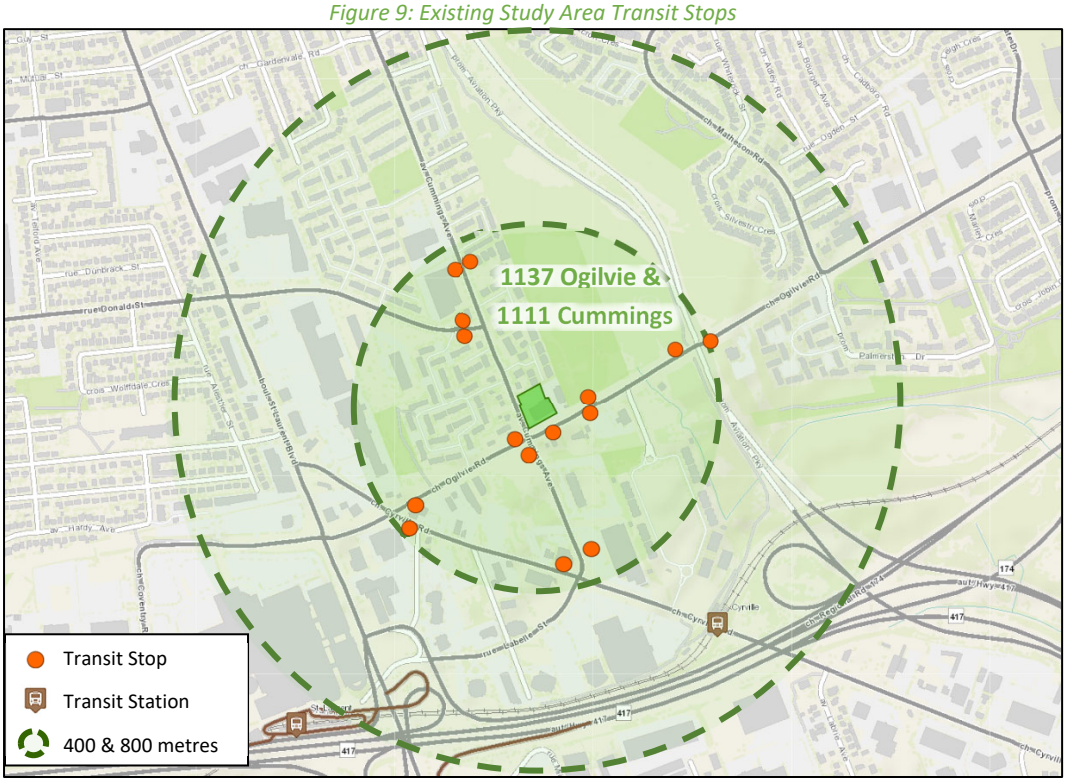
Additionally, the site is approximately 700-metre walking distance of Cyrville Station and approximately 1.1-kilometres walking distance of St. Laurent LRT station, on the Confederation LRT Line. The LRT line provides 5-minute service during the peak periods, and 10–15-minute service outside of peaks.

Figure 8: Existing Study Area Transit Service



Source: http://www.octranspo.com/ Accessed: October 24, 2023

Figure 9: Existing Study Area Transit Stops



Source: http://www.octranspo.com/ Accessed: October 24, 2023

2.2.6 Existing Area Traffic Management Measures

Vertical Centreline Treatments are present on Cummings Avenue north of Donald Street within the study area, and a centre island is present approximately 60.0 metres north of Cummings Avenue at Donald Street intersection.

2.2.7 Existing Peak Hour Travel Demand

Existing turning movement counts were acquired from the City of Ottawa, The Traffic Specialist, and Ontario Traffic Inc. for the existing study area intersections. Table 1 summarizes the intersection count dates.

Table 1: Intersection Count Date

Intersection	Count Date	Source
Donald Street at Cummings Avenue	Thursday, October 26, 2023	The Traffic Specialist
Ogilvie Road at Cyrville Road	Thursday, October 26, 2023	The Traffic Specialist
Ogilvie Road at Cummings Avenue	Tuesday, October 31, 2023	Ontario Traffic Inc.
Ogilvie Road at Aviation Parkway	Thursday, September 28, 2023	City of Ottawa
Cyrville Road at Cummings Avenue/Labelle Street	Thursday, October 26, 2023	The Traffic Specialist

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

Figure 10: Existing Traffic Counts

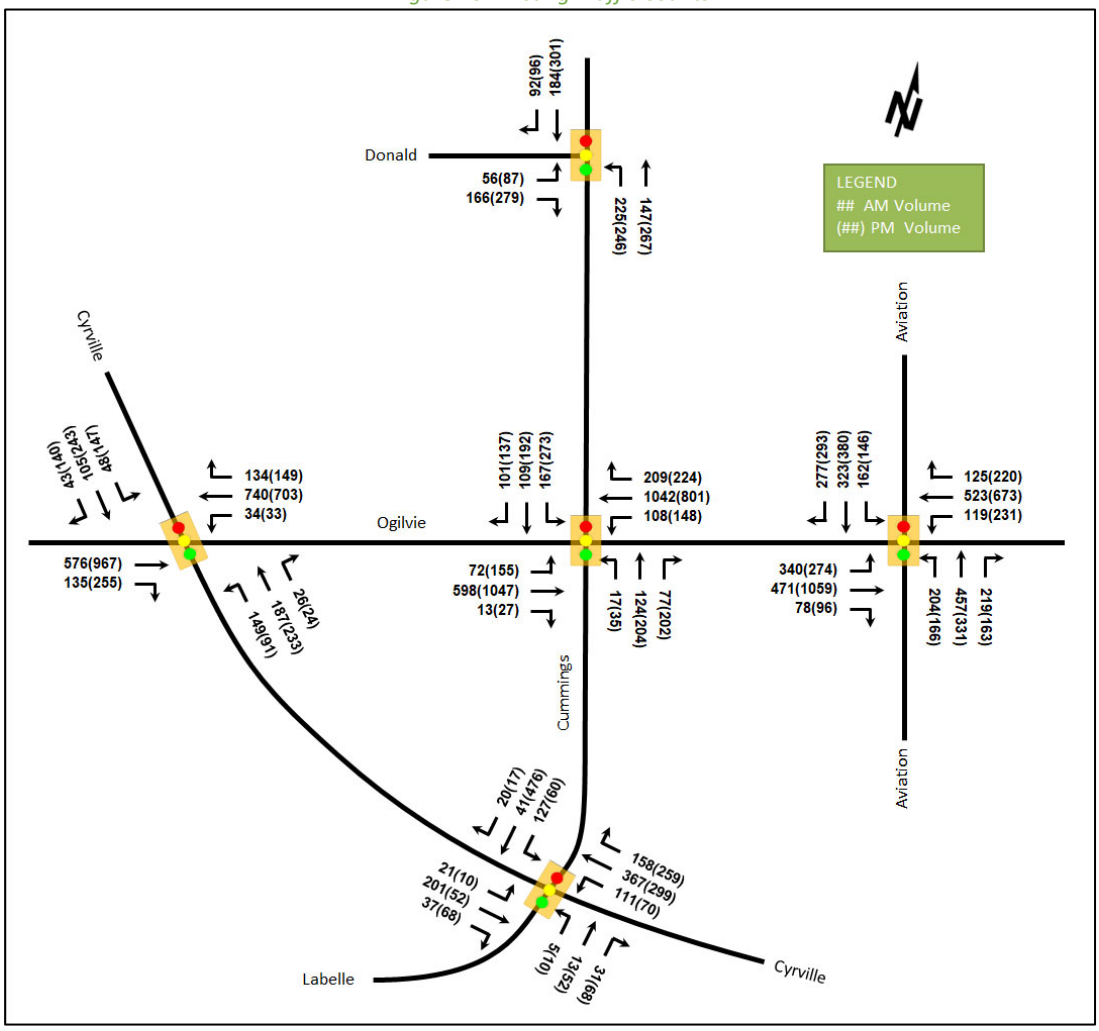


Table 2: Existing Intersection Operations

Intersection	Lane	AM Peak Hour				PM Peak Hour			
		LOS	V/C	Delay	Q (95th)	LOS	V/C	Delay	Q (95th)
Donald Street at Cummings Avenue *Signalized*	EBL	A	0.21	21.5	13.8	A	0.32	22.9	19.4
	EBR	A	0.44	7.7	13.2	A	0.59	8.0	16.4
	NBL	A	0.37	8.2	26.5	A	0.54	12.7	38.6
	NBT	A	0.14	5.6	13.7	A	0.29	7.2	27.9
	SBT	A	0.27	5.2	21.5	A	0.44	7.9	41.6
	Overall	**A**	**0.37**	**7.6**	-	**A**	**0.49**	**9.7**	-
Ogilvie Road at Cyrville Road *Signalized*	EBT	A	0.29	9.2	53.3	A	0.54	16.5	109.4
	EBR	A	0.15	2.0	8.5	A	0.30	2.5	12.6
	WBL	A	0.09	2.2	m1.1	A	0.17	24.3	m6.3
	WBT	A	0.36	1.9	20.3	A	0.39	23.3	m61.2
	WBR	A	0.16	0.3	m0.4	A	0.19	10.1	m10.5
	NBL	D	0.85	**81.9**	60.3	D	0.89	**99.5**	**#50.2**
	NBT	C	0.71	57.0	73.2	A	0.57	39.4	75.7
	SBL	A	0.37	48.6	21.7	C	0.75	59.0	56.2
	SBT/R	A	0.49	43.6	48.4	D	0.87	55.5	118.2
	Overall	**A**	**0.47**	**18.5**	-	**B**	**0.65**	**28.3**	-
Ogilvie Road at Cummings Avenue *Signalized*	EBL	A	0.51	35.1	26.2	D	0.85	68.4	**#64.2**
	EBT	A	0.39	16.7	52.8	**F**	**1.10**	**90.4**	**#211.9**
	WBL	A	0.31	13.8	m19.8	D	0.84	61.9	**m#49.2**
	WBT	D	0.83	29.9	m209.8	**F**	**1.09**	**92.5**	**m#168.7**
	NBL	A	0.09	40.5	10.7	A	0.15	34.6	16.1
	NBT/R	B	0.67	52.2	73.9	E	0.99	**80.5**	**#165.4**
	SBL	C	0.75	55.4	**#58.9**	**F**	**1.01**	**82.8**	**#108.8**
	SBT/R	A	0.47	33.6	63.3	A	0.49	23.6	80.2
	Overall	**D**	**0.81**	**30.0**	-	**F**	**1.07**	**80.1**	-
Ogilvie Road at Aviation Parkway *Signalized*	EBL	E	0.95	71.1	**#127.8**	D	0.82	33.3	m43.9
	EBT	A	0.44	33.3	72.3	E	0.95	37.6	m85.2
	EBR	A	0.13	3.3	m5.0	A	0.17	4.9	m1.6
	WBL	A	0.34	21.7	31.1	E	0.95	76.0	**#96.2**
	WBT	A	0.56	39.7	83.8	A	0.60	32.5	94.1
	WBR	A	0.24	3.9	9.7	A	0.34	4.5	16.2
	NBL	C	0.80	72.5	81.6	**F**	**1.03**	**127.3**	**#90.7**
	NBT	D	0.82	47.8	108.2	D	0.81	50.7	**#79.3**
	SBL	**F**	**1.17**	**175.5**	**#100.5**	**F**	**1.24**	**201.1**	**#89.9**
	SBT	E	0.91	56.6	**#111.2**	**F**	**1.11**	**105.7**	**#129.3**
	Overall	**E**	**0.95**	**52.6**	-	**F**	**1.02**	**58.7**	-
Cyrville Road at Cummings Avenue/Labelle Street *Signalized*	EBL	A	0.07	7.9	4.3	A	0.05	10.7	3.2
	EBT	A	0.28	8.7	29.4	A	0.19	6.5	13.6
	WBL	A	0.25	14.9	25.0	A	0.16	15.8	18.1
	WBT	C	0.72	22.8	**#137.1**	D	0.85	32.6	**#164.7**
	NBL	A	0.02	25.8	3.8	A	0.07	22.7	5.5
	NBT	A	0.16	14.5	10.4	A	0.29	13.4	22.6
	SBL	D	0.84	70.5	**#52.2**	A	0.30	23.9	20.5
	SBT	A	0.21	20.8	16.4	D	0.82	35.8	**#152.6**
	Overall	**C**	**0.73**	**23.7**	-	**D**	**0.88**	**28.5**	-

Notes:
Saturation flow rate of 1800 veh/h/lane
Queue is measured in metres
Peak Hour Factor = 0.90
Delay = average vehicle delay in seconds
m = metered queue
# = volume for the 95th %ile cycle exceeds capacity

During both the AM and PM peak hours, the study area intersections generally operate satisfactorily, outside of the intersections of Ogilvie Road at Cummings Avenue and Ogilvie Road at Aviation Parkway which experience a number of capacity issues during the PM peak hour.

At the intersection of Ogilvie Road at Cyrville Road, the northbound left movement may be subject to high delays during both peak hours as well as extended queues during the PM peak hour.

The Ogilvie Road at Cummings Avenue intersection may be subject to extended queues on the southbound left-turn movement during the AM peak hour, and on the eastbound left, eastbound through, westbound left, westbound through, northbound through/right, and southbound left movements during the PM peak hour. The overall intersection, the eastbound through, westbound through, and southbound left movements are over theoretical capacity and may be subject to high delays during the PM peak hour, and the northbound through/right movement may be subject to high delays during the PM peak hour.

At the intersection of Ogilvie Road and Aviation Parkway during the AM peak hour, the southbound left movement is over theoretical capacity and may be subject to high delays and extended queues, and the eastbound left and southbound through movements may exhibit extended queues. During the PM peak hour, the northbound left, southbound left, and southbound through movements, are all over theoretical capacity and may exhibit high delays and extended queues, and overall intersection is over theoretical capacity. Additionally, the westbound left and northbound through movements may exhibit extended queues during the PM peak hour.

The Cyrville Road at Cummings Avenue/Labelle Street intersection's westbound through and southbound left may exhibit extended queues during the AM peak hour, and the westbound through and southbound through movements may exhibit extended queues during the PM peak hour.

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). The latest detailed collision data on record from the City are for a 5-year period one year earlier than the open data the data range (2017-2021). 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		**80**	**100%**
Classification	**Fatality**	0	0%
	Non-Fatal Injury	20	25%
	Property Damage Only	60	75%
Initial Impact Type	**Angle**	19	24%
	Rear end	21	26%
	Sideswipe	11	14%
	Turning Movement	23	29%
	SMV Other	5	6%
	Other	1	1%
Road Surface Condition	**Dry**	51	64%
	Wet	13	16%
	Loose Snow	3	4%
	Slush	3	4%

		Number	%
Total Collisions		**80**	**100%**
	Packed Snow	5	6%
	Ice	5	6%
Pedestrian Involved		3	4%
Cyclists Involved		5	6%

Figure 11: Study Area Collision Records, 2018-2022

Table 4: Summary of Collision Locations, 2018-2022

	Number	%
Intersections / Segments	**80**	**100%**
Ogilvie Rd at Cummings Ave	47	59%
Donald St at Cummings Ave	13	16%
Cummings Ave between Weldon Dr & Ogilvie Rd	10	13%
Ogilvie Rd between Cummings Ave & Beaulieu Pl	4	5%
Cummings Ave between Donald St & Eady Crt	3	4%
Ogilvie Rd between Murdock Gt & Cummings Ave	2	3%
Cummings Ave between Eady Crt & Strathaven Priv	1	1%

Within the study area, three pedestrian collisions and five cyclist collisions were noted. Three cyclist collisions occurred at the intersection of Ogilvie Road at Cummings Avenue, and one cyclist collision each at the segment of Cummings Avenue between Ogilvie Road and Weldon Drive and of Ogilvie Road between Beaulieu Place Cummings Avenue. Three pedestrian collisions occurred at the intersection of Donald Street at Cummings Avenue. The pedestrian and cyclist collisions at Ogilvie Road at Cummings Avenue, Donald Street at Cummings Avenue, and Cummings Avenue between Ogilvie Road and Weldon Drive will be further discussed in detailed collision reviews for each location below. The cyclist collision, which took place on Ogilvie Road between Beaulieu Place

and Cummings Avenue, was an angled collision that occurred in 2018 during dark and dry conditions. No further collision review is required at this location as part of this study.

Table 5, Table 6, and Table 7 summarize the collision types and conditions for the intersections of Ogilvie Road at Cummings Avenue and Ogilvie Road at Donald Street, and the segment of Cummings Avenue between Weldon Drive and Ogilvie Road, respectively.

Table 5: Ogilvie Road at Cummings Avenue Collision Summary

		Number	%
Total Collisions		**47**	**100%**
Classification	**Fatality**	0	0%
	Non-Fatal Injury	10	21%
	Property Damage Only	37	79%
Initial Impact Type	**Angle**	6	13%
	Rear end	16	34%
	Sideswipe	8	17%
	Turning Movement	16	34%
	Other	1	2%
Road Surface Condition	**Dry**	31	66%
	Wet	6	13%
	Loose Snow	3	6%
	Packed Snow	4	9%
	Ice	3	6%
Pedestrian Involved		0	0%
Cyclists Involved		3	6%

The Ogilvie Road at Cummings Avenue intersection had a total of 47 collisions during the 2018-2022 time period, with 37 involving property damage only and the remaining ten having non-fatal injuries. The collision types are most represented by rear end and turning movement with 16 collisions each, sideswipe with eight, angle with six, and other with one. Rear end collisions and sideswipe collisions are typically associated with congestion. Weather conditions are not considered to affect collisions at this location.

From the 2017-2021 detailed data, turning movement and angle collisions were observed on all approaches at the intersection. A high proportion of the collisions involving eastbound and southbound vehicles were associated with the left-turn on these approaches or the U-turn on the eastbound approach, where eastbound left-turning vehicles were typically in conflict with westbound through vehicles, and southbound left-turning vehicles were typically in conflict with northbound through or right-turning vehicles. The frequency of left turn collisions 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. All sideswipe collisions involved lane changes on the east and west legs. No patterns have been observed for the remaining collision types. Collisions involving cyclist from these data occurred in daylight and in clear conditions and were the exclusive result of westbound right-turning motorists in conflict with cyclists making the westbound through movement.

The City's Cycling Safety Review of High-Volume Intersections (March 2020) completed a review of this intersection for pedestrian and cycling-related observations and movements. This report suggests improvements such as the removal of the northbound right-turn channel, the addition of a westbound right-turn lane, and signal phasing changes. Ultimately a protected intersection configuration was suggested to help address a variety of collisions noted at Ogilvie Road at Cummings Avenue intersection. These improvements are understood to be planned for implementation by 2027 as part of the Cumming Cycling (Donald to Cyrville) active transportation

project. No interim mitigations on Cummings Avenue are required, and no interim changes to the arterial Ogilvie Road are identified or recommended.

Table 6: Donald Street at Cummings Avenue Collision Summary

		Number	%
Total Collisions		**13**	**100%**
Classification	**Fatality**	0	0%
	Non-Fatal Injury	4	31%
	Property Damage Only	9	69%
Initial Impact Type	**Angle**	2	15%
	Rear end	3	23%
	Sideswipe	1	8%
	Turning Movement	3	23%
	SMV Other	4	31%
Road Surface Condition	**Dry**	6	46%
	Wet	4	31%
	Slush	1	8%
	Ice	2	15%
Pedestrian Involved		3	23%
Cyclists Involved		0	0%

The Donald Street at Cummings Avenue intersection had a total of 13 collisions during the 2018-2022 time period, with nine involving property damage only and the remaining four having non-fatal injuries. The collision types are most represented by SMV other with four collisions, which included the three pedestrian collisions, followed by rear end and turning movement with three collisions each, two angle collisions, and one sideswipe collisions.

From the 2017-2021 detailed data, two pedestrian collisions were noted, both in dark conditions. One collision occurred in snow as a driver was making an eastbound right turn and one occurred in rain as a driver was making a northbound left turn. This intersection is included in the planned active transportation infrastructure project entitled Cummings Cycling (Donald to Cyrville) which will be implementing a forthcoming design for upgrades along the Cummings Avenue corridor, including at its intersection with Donald Street. No interim mitigations are required, and no further review of collisions at this location is required as part of this study.

Table 7: Cummings Avenue between Weldon Drive and Ogilvie Road Collision Summary

		Number	%
Total Collisions		**10**	**100%**
Classification	**Fatality**	0	0%
	Non-Fatal Injury	1	10%
	Property Damage Only	9	90%
Initial Impact Type	**Angle**	8	80%
	Turning Movement	2	20%
Road Surface Condition	**Dry**	7	70%
	Wet	2	20%
	Packed Snow	1	10%
Pedestrian Involved		0	0%
Cyclists Involved		1	10%

The segment of Cummings Avenue between Weldon Drive and Ogilvie Road had a total of ten collisions during the 2018-2022 time period, with nine involving property damage only and the remaining one having non-fatal injuries. The collision types are most represented by angle with eight collisions, followed by two turning movement collisions.

From the 2017-2021 detailed data, all angle collisions involved eastbound vehicles, 88% of which were turning left, in conflict with northbound and southbound through vehicles in equal proportions. Based on the collisions' coordinates, these appear to be situated in proximity to the Ogilvie Road intersection and related to the gas station on the corner. As part of the concept plan for the intersection of Cummings Avenue at Ogilvie Road from the Cycling Safety Review of High-Volume Intersections, a median is proposed on the southbound approach of Cummings Avenue, and therefore the eastbound left-turn from the gas station will be physical restricted in the future conditions.

The collision involving a cyclist occurred during daylight hours as a cyclist made an eastbound left-turn movement while an automobile was making the northbound through movement. This collision is related to the gas station and would also be physically restricted in the future conditions. No further review of collisions at this location is required 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 (2013)

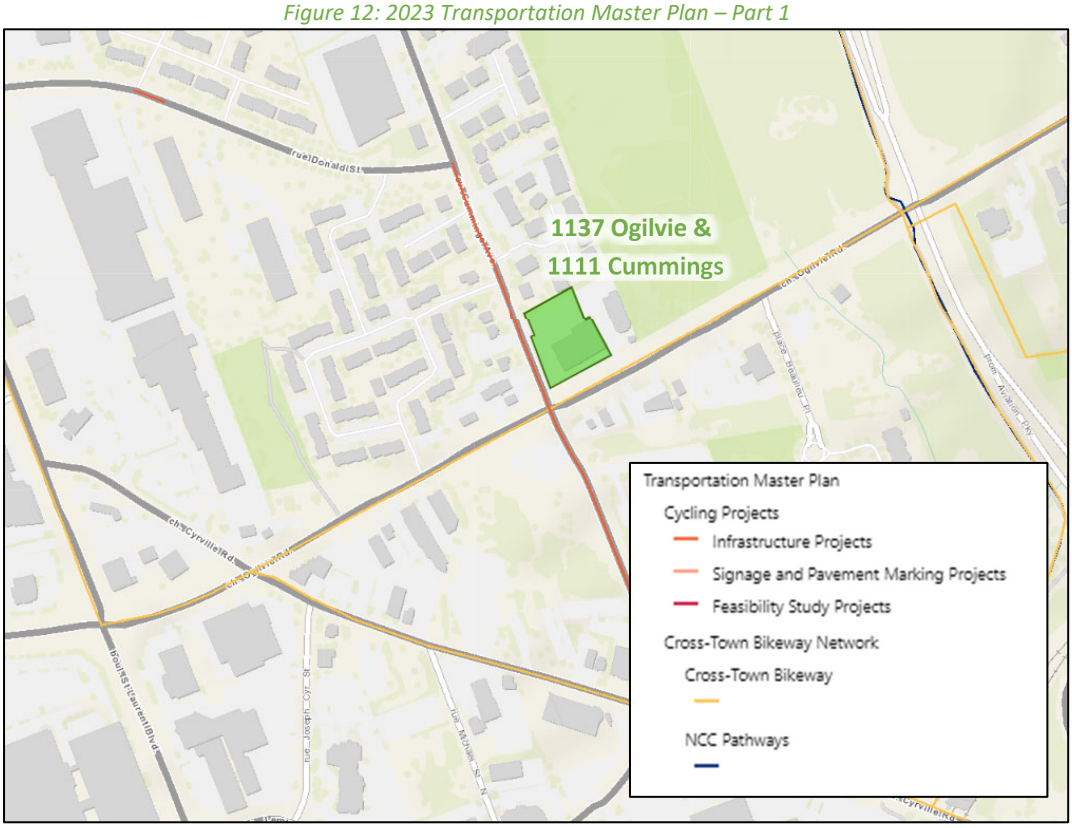
Within the Transportation Master Plan, the Road Network's Network Concept diagram shows Cyrville Road between St Laurent Boulevard and Lemieux Street as a new or widened collector, and Cyrville Road south of Lemieux Street as widened arterials. Within the Affordable Network diagram, these sections are shown as segments for phase 3 widening (2026-2031). The scope of the work per the Affordable Network is the urbanization of the existing two-lane rural cross-section of Cyrville Road between Star Top Road and St Laurent Boulevard, and the widening of Coventry Road from two lanes to four between Belfast Road and the Shopping Centre – outside of the study area.

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

2.3.1.2 2023 Transportation Master Plan (TMP) – Part 1

The 2023 TMP – Part 1 includes cycling facilities on Cummings Avenue from Donald Street to Cyrville Road and missing links on Donald Street at Elaine Drive and signage and pavement marking for bike lanes, where feasible, on Ogilvie Road. Figure 12 illustrates the cycling and pedestrian plans in the 2023 TMP – Part 1.

Figure 12: 2023 Transportation Master Plan – Part 1



Source: http://maps.ottawa.ca/geoOttawa/ Accessed: June 10, 2024

2.3.1.3 Ottawa Cycling Plan (2013)

The Ottawa Cycling Plan P2-11 includes a MUP connection from St. Laurent Station to the Aviation Pathway as part of the TOD projects, and this link is scheduled for implementation between 2020 and 2025.

Additionally, within the Ottawa Cycling Plan, P1-39 includes shared use lanes on Donald Street within the study area and have been completed.

2.3.1.4 Cummings Cycling (Donald to Cyrville)

The City's Cycling Safety Review of High Volume Intersections (2020) included a review of Ogilvie Road at Cummings Avenue intersection for pedestrian and cycling-related observations and movements. The study recommended a variety of improvements, such as the removal of the northbound right-turn channel, the addition of a westbound right-turn lane, signal phasing changes, and ultimately a protected intersection configuration.

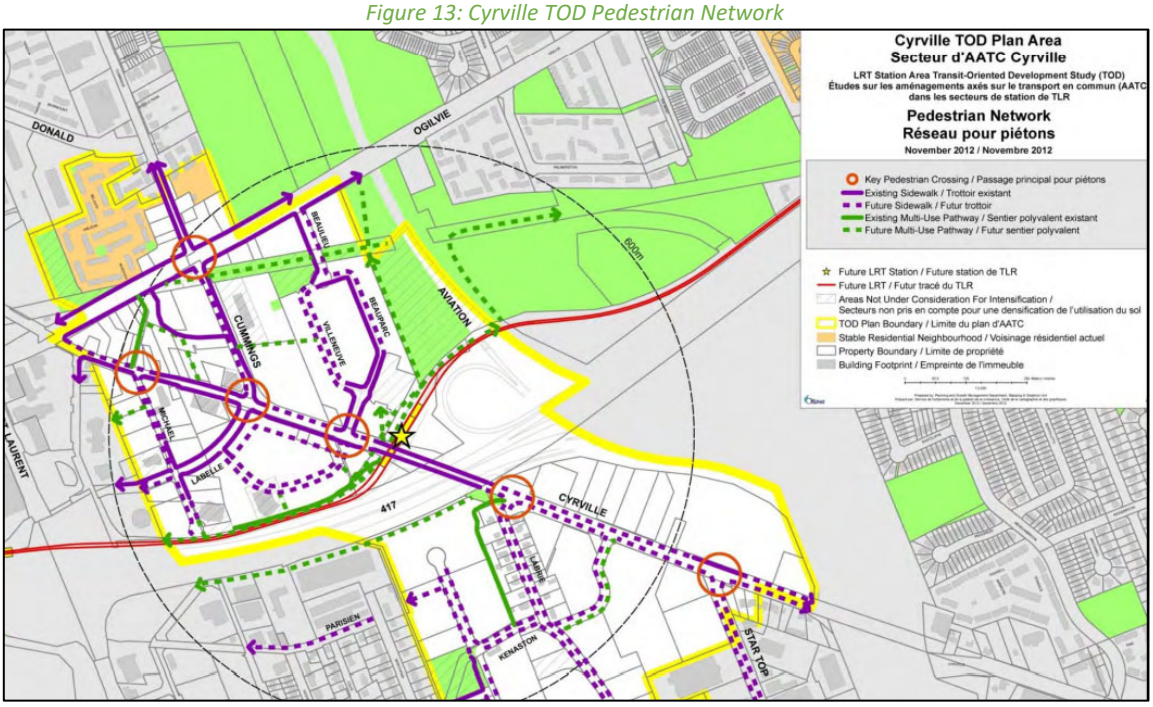
This work has been included in a planned active transportation infrastructure project entitled Cummings Cycling (Donald to Cyrville). The scope of work is the evaluation of dedicated cycling facilities on Cummings Avenue, either as cycletracks or bike lanes. The scope of work at the intersection of Cummings Avenue at Ogilvie Road is a fully-protected intersection, tying into existing bike lanes on Ogilvie Road east and west of the intersection. No designs have been produced as part of this project which is in its early stages. It is anticipated that this active transportation project will be completed by 2027.

2.3.1.5 Cyrville TOD Plan

The Cyrville TOD plan outlines a future sidewalk on the west side of Cummings Avenue south of Ogilvie Road and future shared-use lanes along Cummings Avenue. It is noted that the sidewalk on the west side of Cummings Avenue south of Ogilvie Road will be implemented as part of roadway modifications for the 1098 Ogilvie Road /

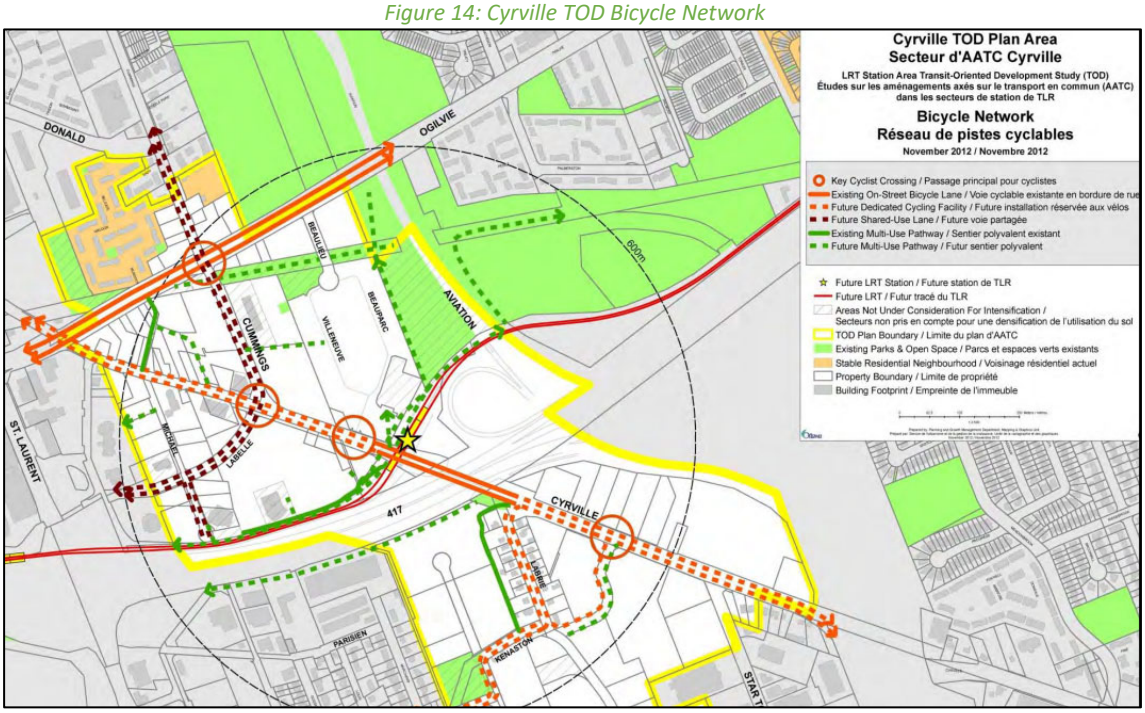
1178 Cummings Avenue development. Figure 13 and Figure 14 illustrate the Cyrville pedestrian and cycling TOD plans, respectively.

Figure 13: Cyrville TOD Pedestrian Network



Source: https://ottawa.ca/en/transit-oriented-development-tod-plans Accessed: October 24, 2023

Figure 14: Cyrville TOD Bicycle Network



Source: https://ottawa.ca/en/transit-oriented-development-tod-plans Accessed: October 24, 2023

2.3.2 Other Study Area Developments

1098 Ogilvie Road, 1178 Cummings Avenue

The proposed development application includes a site plan for a two-phase development, comprising three residential towers and one hotel for 850 residential dwelling units and 175 hotel rooms. The development is expected to generate 148 new AM peak hour two-way auto trips and 130 new PM peak hour two-way auto trips. The development is currently under construction. (Parsons, 2020)

1298 Ogilvie Road

The proposed development application includes a site plan for seven townhome buildings comprising 78 residential units. The development is expected to generate 39 new AM peak hour two-way auto trips and 40 new PM peak hour two-way auto trips. The build-out horizon is assumed to be 2024. (Parsons, 2018)

1155 Joseph Cyr Street, 1082 Cyrville Road

The proposed development application includes a zoning amendment and site plan for the construction of a six-storey mixed-use building comprising 116 residential dwelling units and 1,425 ft^2 of ground floor retail. The development is currently under construction. The development is expected to generate eight new AM and nine new PM two-way peak-hour auto trips. (CGH, 2020)

1209 St Laurent Boulevard, 1200 Lemieux Street

The proposed development includes a site plan application to construct two 30-storey residential buildings including 644 units to be built by 2026. The development is expected to generate 35 new AM peak hour two-way auto trips and 38 new PM peak hour two-way auto trips. (CGH, 2022)

1125 - 1149 Cyrville Road

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

1184-1196 Cummings Avenue

The proposed development application includes a zoning amendment and site plan for redeveloping existing residential units into a mid-rise apartment building totaling 188 units. The development is anticipated to be built out by 2026 and to generate 17 new AM and 17 new PM two-way auto trips. (CGH, 2023)

3 Study Area and Time Periods

3.1 Study Area

The study area will include the intersections of:

- Cyrville Road at:
  - Ogilvie Road
  - Labelle Street/Cummings Avenue
- Ogilvie Road at:
  - Cummings Avenue
  - Aviation Parkway
- Cummings Avenue at:
  - Donald Street
  - Site Access (future conditions)

The boundary roads will be Cummings Avenue and Ogilvie Road and no screenlines are present within proximity to the site.

3.2 Time Periods

As the proposed development is composed primarily 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 Ottawa East have been summarized in Table 8.

Table 8: TRANS Trip Generation Manual Recommended Mode Shares – Ottawa East

Travel Mode	Multi-Unit (High-Rise)		Commercial Generator	
	AM	PM	AM	PM
Auto Driver	40%	40%	57%	55%
Auto Passenger	7%	14%	10%	18%
Transit	38%	28%	15%	11%
Cycling	2%	3%	1%	1%
Walking	13%	15%	17%	15%
Total	**100%**	**100%**	**100%**	**100%**

Being within the Cyrville TOD Plan area, which is approximately 700-metre walking distance from Cyrville Station, a higher transit mode is considered achievable at this location. A 15% shift to the transit mode from the auto mode is proposed for residential land use, and a 5% shift to the transit mode from the auto mode is proposed for commercial land use. The proposed modified mode share targets are summarized in Table 9.

Table 9: Proposed Development Mode Shares

Travel Mode	Multi-Unit (High-Rise)		Commercial Generator	
	AM	PM	AM	PM
Auto Driver	25%	25%	52%	50%
Auto Passenger	7%	14%	10%	18%
Transit	53%	43%	20%	16%
Cycling	2%	3%	1%	1%
Walking	13%	15%	17%	15%
Total	**100%**	**100%**	**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) and the vehicle trip rates and derived person trip rates for commercial component from the ITE Trip Generation Manual 10th Edition (2017) using the City-prescribed conversion factor of 1.28. Table 10 summarizes the person trip rates for the proposed residential land uses for each peak period and the person trip rates for the non-residential land uses by peak hour.

Table 10: Trip Generation Person Trip Rates

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
Land Use	**Land Use Code**	**Peak Hour**	**Vehicle Trip Rate**	**Person Trip Rates**
Strip Retail Plaza (<40k sq. ft.)	822 (ITE)	AM	2.36	3.02
		PM	6.59	8.44

Using the above person trip rates, the total person trip generation has been estimated. Table 11 summarizes the total person trip generation for the residential land uses and for the non-residential land uses.

Table 11: 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)	323	80	178	258	169	122	291
Land Use	**GFA**	**AM Peak Hour**			**PM Peak Hour**		
		In	**Out**	**Total**	**In**	**Out**	**Total**
Strip Retail Plaza (<40k sq. ft.)	5,252 sq. ft	10	6	16	22	22	44

Internal capture rates from the ITE Trip Generation Handbook 3rd Edition have been assigned to the development's retail component for mixed-use developments. The rates summarized in Table 12 represent the percentage of trips to/from the retail use based on the residential component.

Table 12: Internal Capture Rates

Land Use	AM		PM	
	In	Out	In	Out
Residential to/from Shopping Centre	17%	14%	10%	26%

Typical pass-by reductions applied to the retail land use's trip generation are 40%, which is derived from the recommended value presented in the ITE Trip Generation Manual 11th Edition (2021) for the most similar land use with a recommended rate, "Retail (40k – 150k sq. ft)." The subject development is one quadrant of an intersection with an arterial as the major roadway and with a major collector/arterial as the minor roadway. Given this proximity, and that the site access is onto the lower classification roadway, the application of the pass-by percentage to Cummings Avenue would not fully capture the expected pass-by component of the site trips. Due to this context, the analysis will forgo the application of diverted trips and will apply the 40% pass-by from both Ogilvie Road at Cummings Avenue.

Using the above mode share targets for a LRT area, the internal capture and pass-by rates, and the person trip rates, the person trips by mode have been projected. Trip generation by peak hour has been forecasted using the prescribed peak period conversion factors presented in the TRANS Trip Generation Manual (2020) for the residential component. Table 13 summarizes the residential trip generation and the non-residential trip generation by mode and peak hour.

Table 13: 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	**25%**	9	22	31	**25%**	18	14	32
	Auto Passenger	**7%**	3	6	9	**14%**	10	8	18
	Transit	**53%**	23	53	75	**43%**	33	26	59
	Cycling	**2%**	1	2	3	**3%**	2	2	4
	Walking	**13%**	6	14	20	**15%**	13	10	23
	Total	**100%**	**42**	**97**	**138**	**100%**	**76**	**60**	**136**
Strip Retail Plaza (<40k)	Auto Driver	**52%**	1	1	2	**50%**	2	1	3
	Auto Passenger	**10%**	1	0	1	**18%**	4	3	7
	Transit	**20%**	2	1	3	**16%**	3	3	6
	Cycling	**1%**	0	0	0	**1%**	0	0	0
	Walking	**17%**	1	1	2	**15%**	3	3	6
	Internal Capture	*varies*	*-1*	*-1*	*-2*	*varies*	*-1*	*-3*	-4
	Pass-by	*40%*	*-4*	*-2*	*-6*	*40%*	*-9*	*-9*	-18
	Total	**100%**	**5**	**3**	**8**	**100%**	**12**	**10**	**22**
Total	Auto Driver	-	10	23	33	-	20	15	35
	Auto Passenger	-	4	6	10	-	14	11	25
	Transit	-	25	54	78	-	36	29	65
	Cycling	-	1	2	3	-	2	2	4
	Walking	-	7	15	22	-	16	13	29
	Total	**-**	**47**	**100**	**146**	**-**	**88**	**70**	**158**
	Internal Capture	*varies*	*-1*	*-1*	*-2*	*varies*	*-1*	*-3*	*-4*
	Pass-by	*40%*	*-4*	*-2*	*-6*	*40%*	*-9*	*-9*	*-18*

As shown above, a total of 33 AM and 35 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 Ottawa East. Table 14 below summarizes the distributions.

Table 14: OD Survey Distribution – Ottawa East

To/From	Residential % of Trips
North	15%
South	20%
East	15%
West	50%
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 15 summarizes the proportional assignment to the study area roadways. Figure 15 illustrates the new site generated volumes, and Figure 16 illustrates the pass-by volumes.

Table 15: Trip Assignment

To/From	Via
North	10% Donald St (N) 5% Cummings Ave (N)
South	5% Aviation Pkwy (S) 5% Cummings Ave (S) 10% Ogilvie Rd (W)
East	10% Ogilvie Rd (E) 5% Cyrville Rd (E)
West	50% Ogilvie Rd (W)
Total	**100%**

Figure 15: New Site Generated Auto Volumes

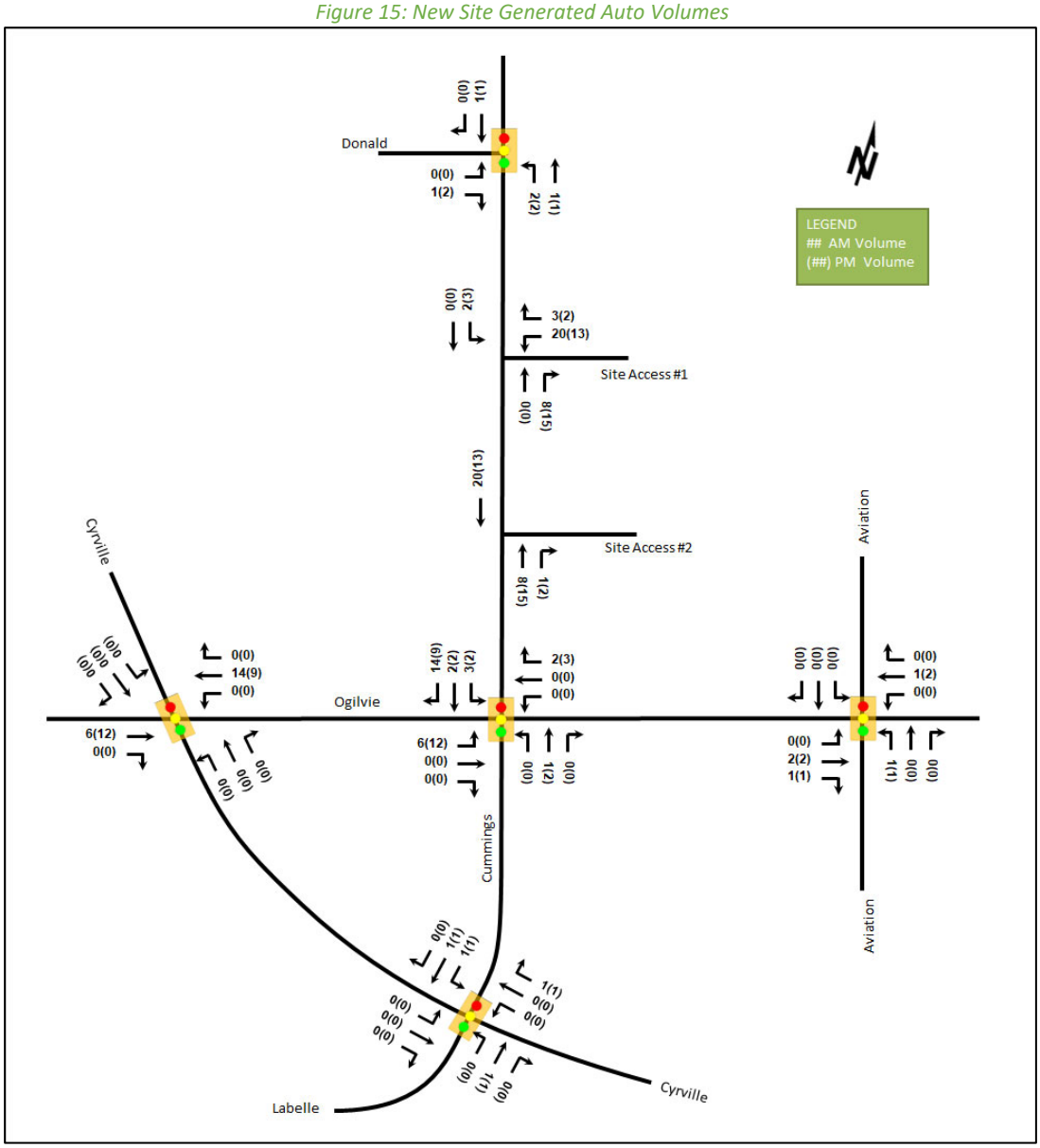
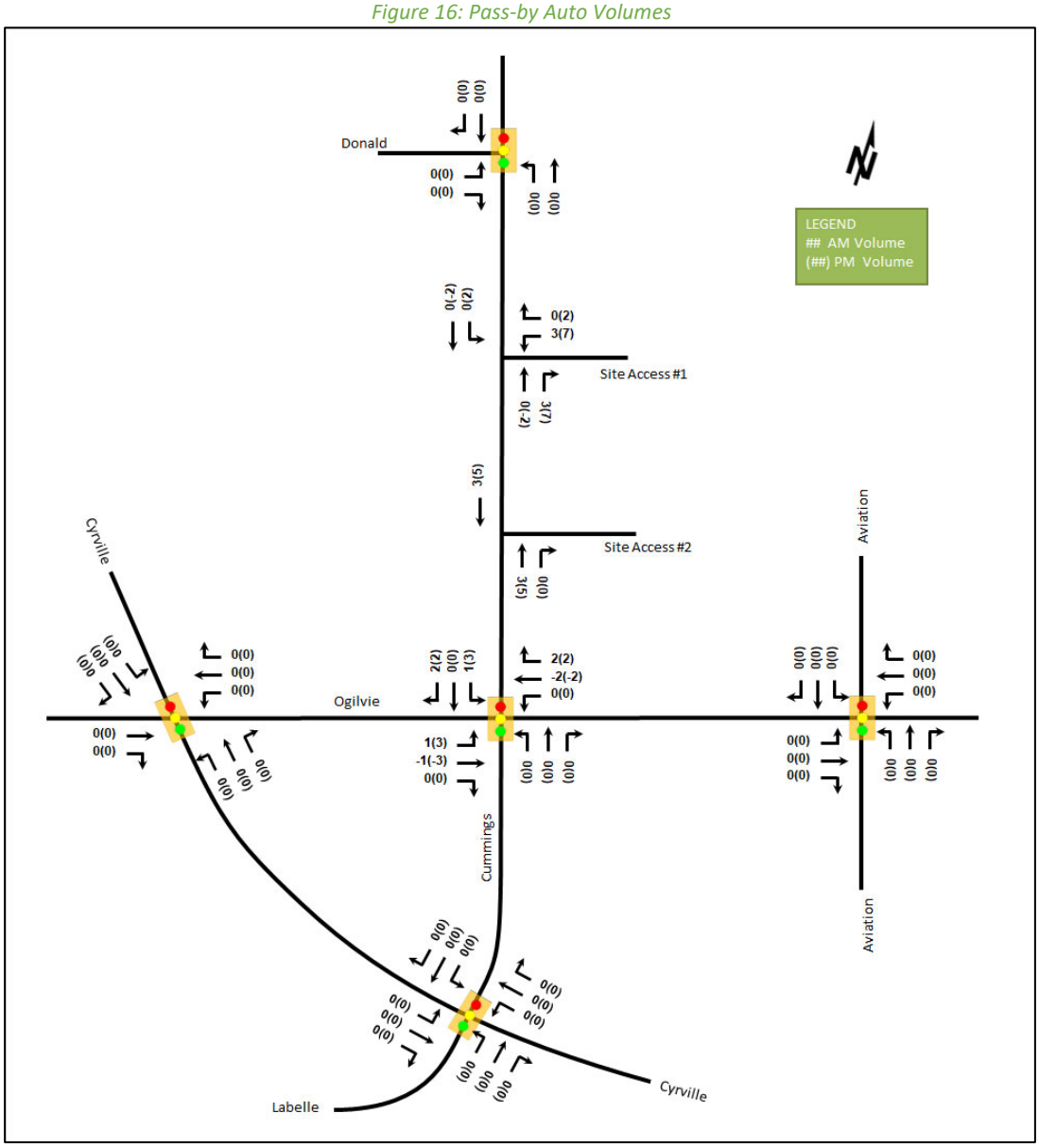


Figure 16: Pass-by Auto Volumes



4.5 Trip Reductions

The existing supermarket is approximately 6,390 sq. ft, and the existing restaurant is approximately 8,855 sq. ft. Both are closed during the AM peak hour. Using the ITE trip generation rates for the land use of Supermarket (ITE 850), High-Turnover (Sit-Down) Restaurant (ITE 932), pass-by rate of 24% for supermarket, pass-by rate of 43% for restaurant, and commercial generator mode shares for Ottawa East, the estimated trip generation of the existing site during the PM peak hour is 40 two-way vehicle trips. The trip assignment of the estimated reduced volumes, based on the commercial land use and the build-out of Ottawa East, is illustrated in Figure 17, and the estimated pass-by adjustment for the existing land use and access configuration on the network is illustrated in Figure 18. Table 16 compares the estimated existing primary auto trips and forecasted site-generated primary auto trips.

Figure 17: Estimated Existing Trip Reductions

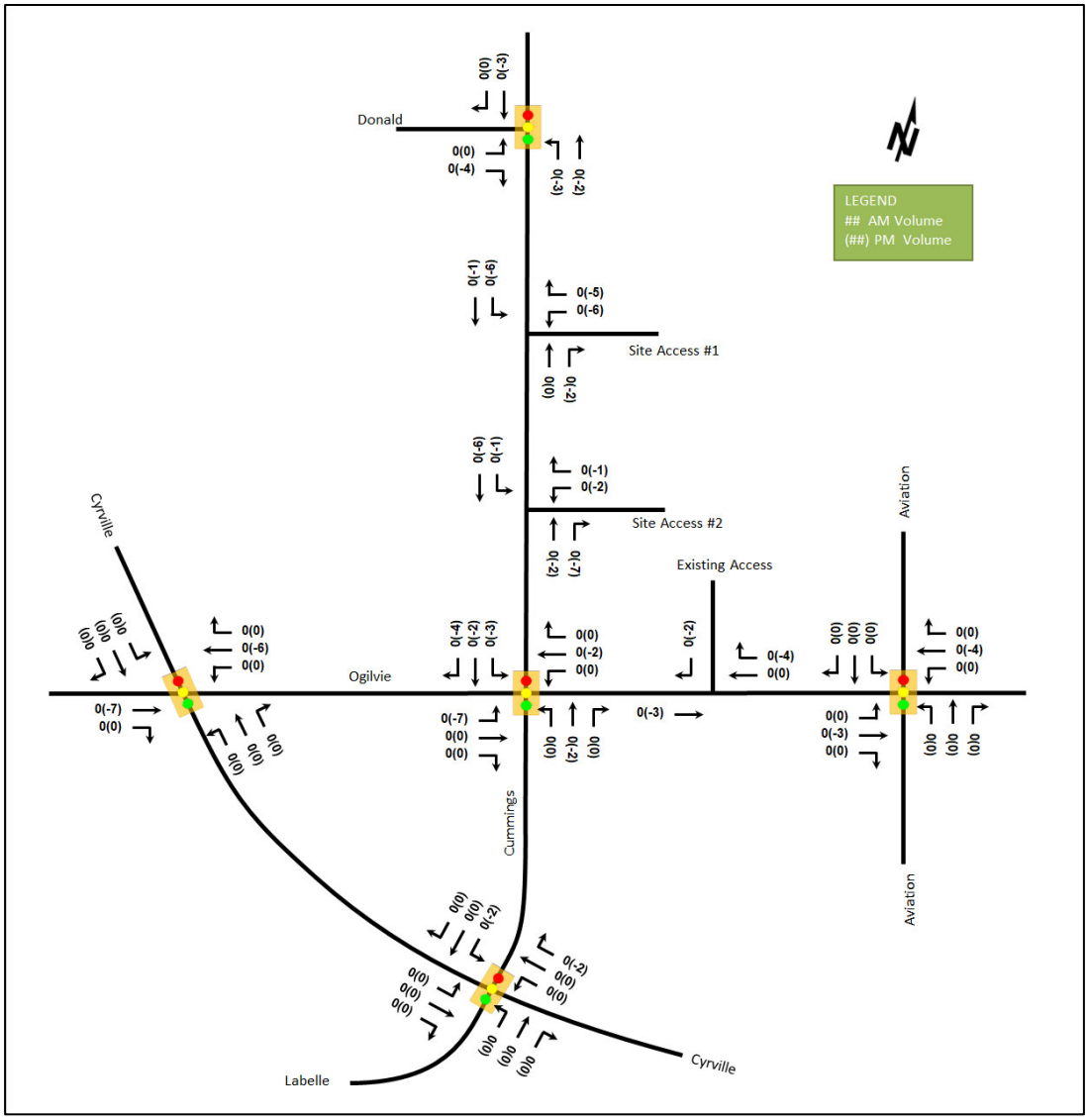


Figure 18: Estimated Existing Pass-By Network Adjustment

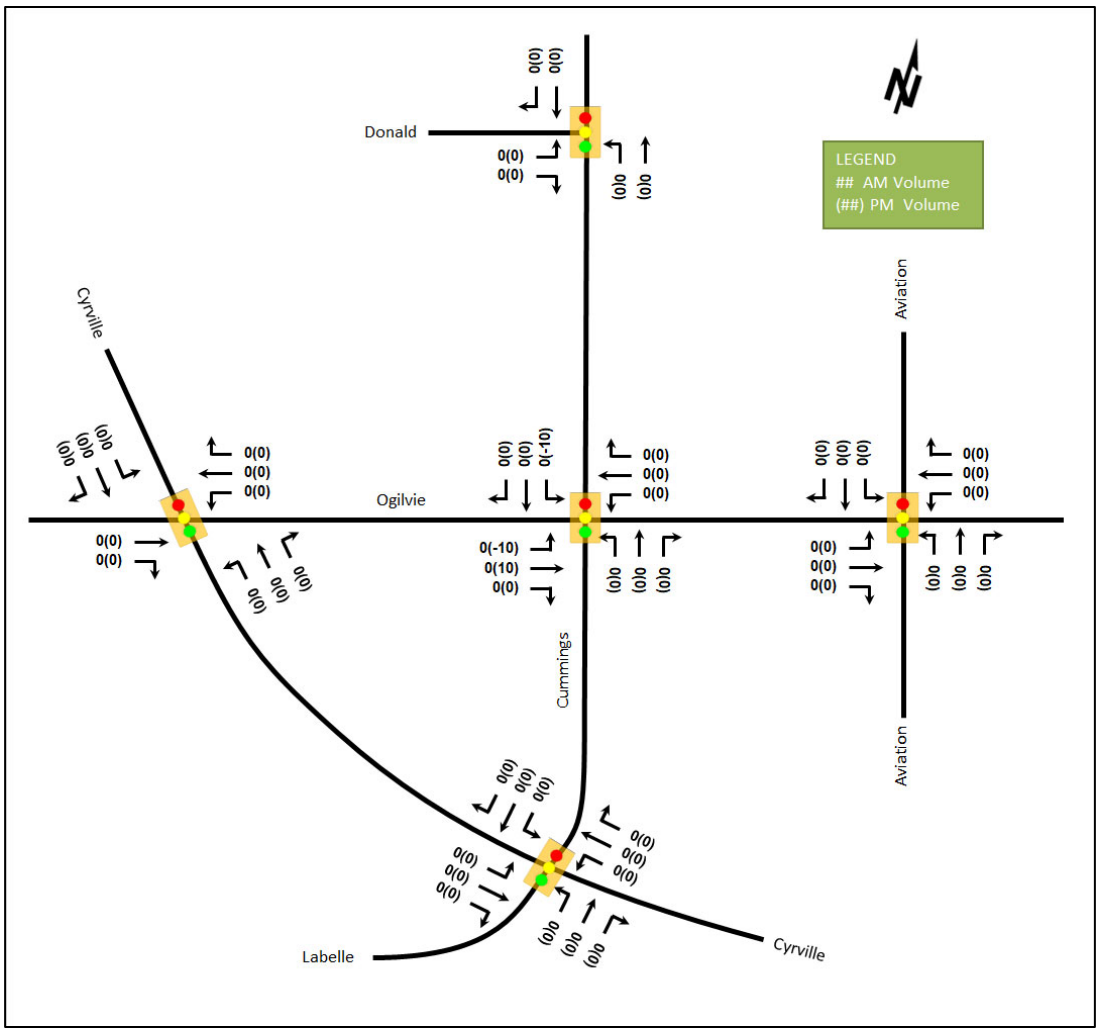
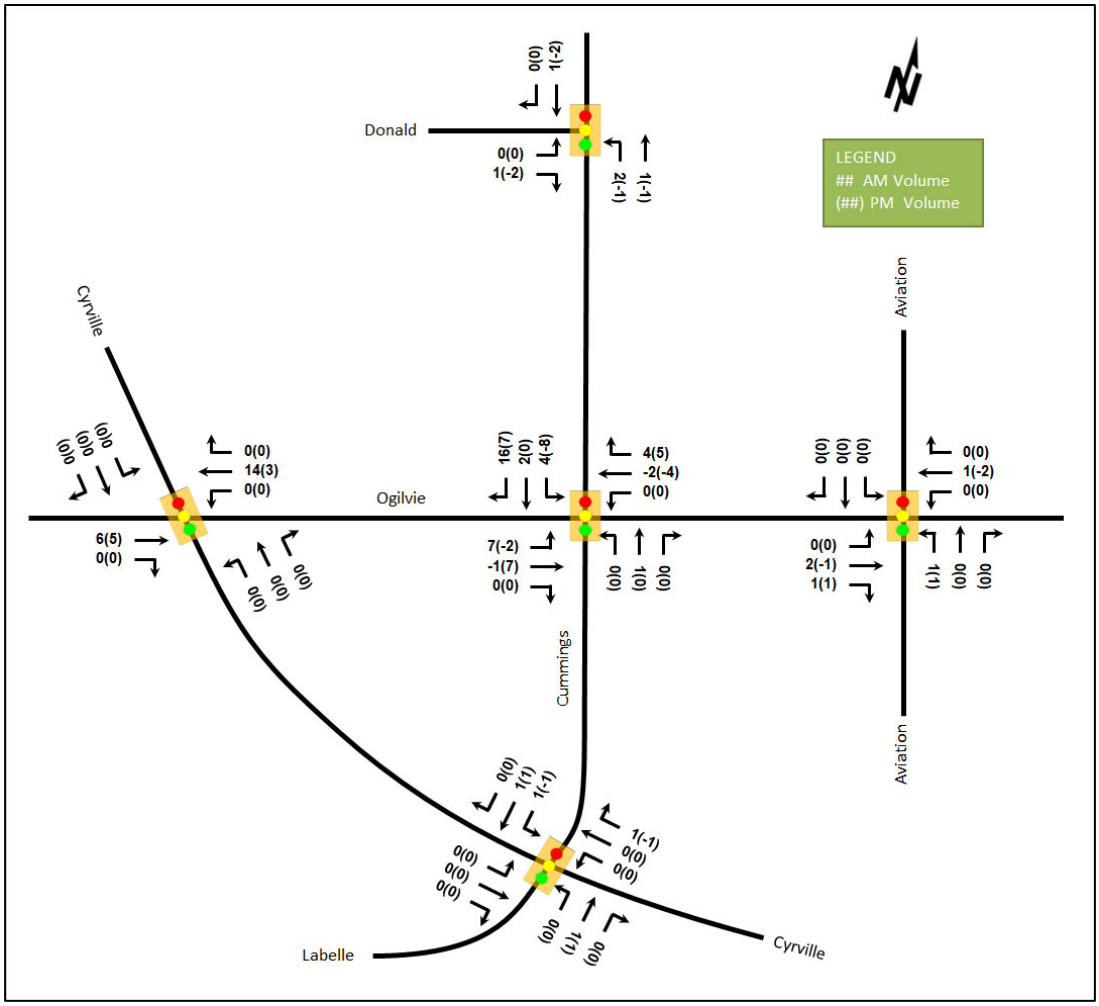


Table 16: Estimated Existing Primary Auto Trips vs Forecasted Primary Auto Trips

Scenario	AM Peak Hour				PM Peak Hour			
	Mode Share	In	Out	Total	Mode Share	In	Out	Total
Existing	**57%**	0	0	0	**55%**	19	16	35
Proposed	**Varies**	10	23	33	**Varies**	20	15	35
Difference	-	**+10**	**+23**	**+33**	-	**+1**	**-1**	**0**

As shown above, the proposed redevelopment is anticipated to generate 33 new additional AM peak hour vehicles and no additional PM peak hour vehicles from the existing use. Figure 19 illustrates the net auto volumes.

Figure 19: Net Auto Volumes



5 Exemption Review

Table 17 summarizes the exemptions for this TIA.

Table 17: 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

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

Module	Element	Explanation	Exempt/Required
		of equivalent volume permitted by established zoning	
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 – Access Intersection Design Element required in all applications

6 Development Design

6.1 Design for Sustainable Modes

The proposed development is a mixed-use residential building with long-term vehicle parking located in two parking levels below grade and with short-term parking located on the surface. Bicycle parking is located within the two parking levels, and within a surface rack. Existing sidewalks are present along Cummings Avenue and Ogilvie Road, and hard surface connections to these facilities from the building entrances and to the privately owned public space on-site are proposed.

The infrastructure TDM checklist is provided in Appendix E.

6.2 Circulation and Access

The main vehicle access is provided via a 6.0-metre-wide two-way full-movement access (Access #1) on Cummings Avenue. A 4.5-metre-wide one-way right-in-only drop-off loop (Access #2) is also proposed on Cummings Avenue south of the main site access. This loop has been proposed to provide ease of use for the transit-oriented development and is oriented towards the main lobby where ride hailing, ridesharing, pick-ups, drop-offs, and deliveries can be accommodated. Two 15-minute parking stalls are proposed within a lay-by accessing the aisle for this purpose.

Access #1 connects to the underground parking ramp, surface parking, and the back-of-house loading area which includes a turnaround. Garbage collection will occur in the loading area, and emergency services can access the site via the two public road rights-of-way.

7 Parking

7.1 Parking Supply

The site proposes a total of 186 vehicle parking spaces, including 180 below grade and six on the surface. The surface parking includes four temporary parking spaces and two care share parking spaces. The Zoning By-Law requires a minimum parking provision is 156 vehicle parking spaces for residents and 30 vehicle parking spaces for visitors. As the retail component is located on the ground floor and is below 500 m^2 in area, no vehicle parking is required for this use. As the site is located within 600 metres of Cyrville Station, the maximum permitted on-site vehicle parking is 565 spaces. The proposed vehicle parking meets the minimum and maximum vehicle parking requirements from the Zoning By-Law.

The site proposes a total of 198 bicycle parking spaces including six spaces within surface racks and 192 spaces within the parking levels below grade. The minimum bicycle parking provision from the Zoning By-Law is 162 residential spaces and one commercial retail space which are satisfied by the proposed parking provision.

8 Boundary Street Design

Table 18 summarizes the MMLOS analysis for the boundary streets of Cummings Avenue and Ogilvie Road. Where segments score the same in the existing and future conditions, they will be presented in one row. As part of the Cummings Cycling (Donald to Cyrville) project, bike lanes will be assumed on Cummings Avenue within the future conditions. The boundary street analysis is based on the policy area of "Within 600m of a rapid transit station," and the MMLOS worksheets has been provided in Appendix F.

Table 18: Boundary Street MMLOS Analysis

Segment		Pedestrian LOS		Bicycle LOS		Transit LOS		Truck LOS	
		PLOS	Target	BLOS	Target	TLOS	Target	TrLOS	Target
Ogilvie Road	Ex./Fut.	**E**	A	C	C	N/A	N/A	A	D
Cummings Avenue	Ex.	**F**	A	**E**	B	N/A	N/A	B	D
	Fut.	**F**	A	**C**	B	N/A	N/A	B	D

Ogilvie Road and Cummings Avenue do not meet the pedestrian LOS targets. To meet the theoretical PLOS targets, the operating speeds on both roadways would need to be reduced to 30 km/h, and Ogilvie Road would require a 2.0-metre-wide sidewalk and Cummings Avenue would require a 2.0-metre-wide sidewalk with a 0.5-metre-wide boulevard.

Cummings Avenue does not meet the bicycle LOS target in the existing conditions and will not meet the bicycle LOS target in the future conditions with curbside bike lanes. To meet theoretical BLOS targets, the recommended treatment by the Cummings Cycling (Donald to Cyrville) project will need to be cycletracks.

Ultimately, the frontage conditions on Cummings Avenue will be determined by the cycling project's forthcoming design and implementation. Given the roadway speeds are not changing and the intersection design is not complete for coordination with the site plan, no changes are proposed to the boundary streets as part of this study.

9 Intersection Design

9.1 Location and Design of Access

The main site access, Access #1, is proposed to be two-way and to permit full movements. South of Access #1, Access #2 is proposed to be one-way and restricted to right-in-only. Given the site frontage of approximately 75.5 metres, per the Private Approach By-Law the site may be permitted one two-way private approach and two one-way private approaches or two two-way private approaches.

9.1.1 Location Criteria

Access #1 is located approximately 13 metres from the northern property line, and approximately 56.5 metres from the Ogilvie Road right-of-way in the existing condition or 52 metres from the widened corridor. It is also located approximately 65 metres from the edge of the curb along Ogilvie Road.

Access #1 meets the minimum offset of 30 metres from the Ogilvie Road right-of-way and three-metre offset from the adjacent property line from the Private Approach By-Law. It also meets the recommended minimum 55 metres of corner clearance from the curb of Ogilvie Road from the Geometric Design Guide for Canadian Roads (TAC, 2017).

Access #2 is located approximately 21 metres from Access #1, and approximately 31 metres from the Ogilvie Road right-of-way in the existing condition or 29 metres from the widened corridor. It is also located approximately 40 metres from the edge of the curb of Ogilvie Road.

Access #2 does not meet the minimum offset of 30 metres from the adjacent access but does meet the minimum 30 metres of offset from the Ogilvie Road right-of-way in the existing conditions and is one metre short of meeting the minimum offset from the Ogilvie Road right-of-way in the future conditions. The access was located to prioritize meeting the offset from the adjacent road right-of-way. Given the right-in-only nature of the access, no interaction is expected between the vehicles entering and exiting these accesses and the 21-metre spacing between the nearest extents of the accesses is considered adequate.

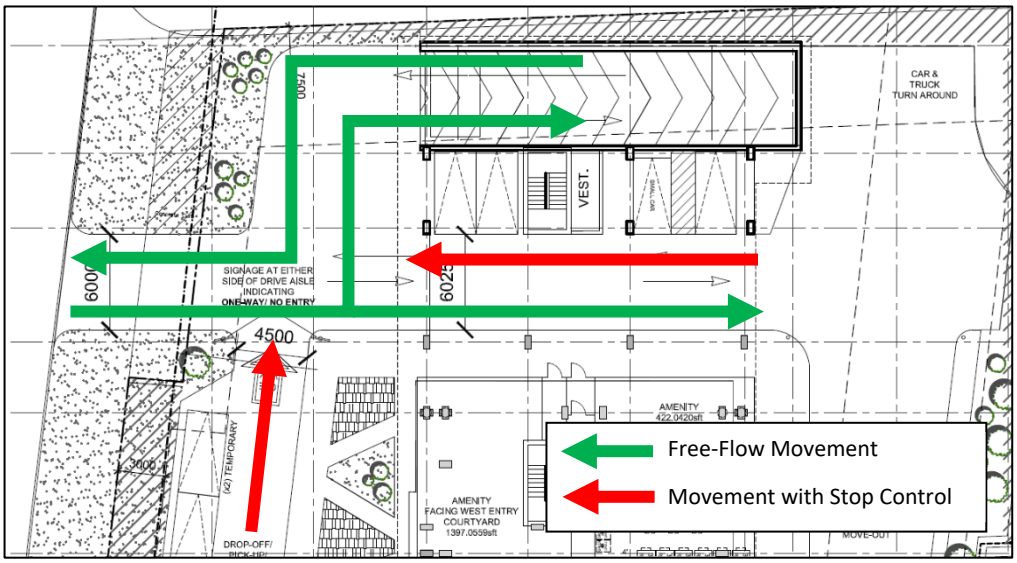
The access also does not meet the suggested minimum 55 metres of corner clearance from the curb per the TAC Geometric Design Guide, but the access is noted to be an inbound only access conveying low volumes, and thus the 40-metre offset will not impact the intersection.

9.1.2 Design Criteria

Access #1 is proposed to be 6.0-metres-wide, permitting full movements. Potential conflict points along the throat of the access are the drop-off loop outlet at 10 metres, the intersection between the driveway and the drive aisle serving the parking ramp at 14 metres, the surface parking south of the ramp structure at 22 metres, and the garage door for the underground ramp at 28 metres along the drive aisle. The suggested minimum throat length per TAC is 25 metres for apartment developments of over 200 units accessing a collector road.

It is proposed that both the drop-off loop outlet and the westbound drive aisle approach at the intersection with the aisle to the underground parking have minor stop control, with movements between the site access and the underground parking ramp operating under free-flow conditions. A flow diagram for these movements is illustrated in Figure 20.

Figure 20: Proposed Drive Aisle Flow



The parking will be signed 15-minutes and is expected to turn over several times per peak hour and the loading at the rear of the site will be only occasional off-peak use. Any queueing resulting from the stop control for these uses will be contained on the drive aisle east of the proposed stop sign, and no impacts to Cummings Avenue are anticipated from the neutralized conflicts with these outbound movements. The site is a transit-oriented development, enabled by its proximity to Cyrville Station, which would support reductions from the typical target throat lengths recommended by TAC. Examining the trip assignment presented in Section 4.4, 11 AM and 22 PM peak hour inbound vehicles are anticipated to use Access #1. This level of use equates to an approximate average of one vehicle every five and a half minutes during the AM peak hour and one vehicle every two and three-quarter

minutes during the PM peak hour. The throat length along the main drive aisle is effectively 22 metres to the first surface parking space, permitting three to four vehicles to queue on the aisle considering the minor stop-control. A total of three vehicles is the expected inbound traffic within eight minutes during the PM peak hour, and thus the proposed throat length is considered adequate to negate impacts of queuing onto Cummings Avenue.

Access #2 is proposed to be 4.5-metres wide, restricted to right-in movements only via curb radii oriented to the south along Cummings Avenue in the interim conditions. The concept design for the intersection of Ogilvie Road at Cummings Avenue included a median along Cummings Avenue on the southern portion of the site frontage, and it is expected that once the Cummings Cycling improvements are constructed, left-in movements will be further restricted via a median. Potential conflict points along the throat of the access are the first short-term parking space at 18 metres and the intersection with the main drive aisle at 34 metres along the one-way aisle. Based on the use of the access for pick-ups, drop-offs, and deliveries, the proposed 18-metre storage space up to the first conflict point, permitting three passenger vehicles to queue, is considered adequate for the entire site's peak hour traffic, and thus adequate to negate impacts of queueing onto Cummings Avenue.

9.2 Access Intersection Design Elements

The accesses are recommended to comply with City Standard SC7.1 with a continuous depressed sidewalk across the access.

Based on the foregoing analysis and discussion within this section, it is recommended that the proposed access configurations be approved.

10 Transportation Demand Management

10.1 Context for TDM

The mode shares used within the TIA represent a shift from auto modes to transit modes based on its proximity to Cyrville Station. Overall, the modal shares are likely to be achieved and supporting TDM measures should be provided.

The subject site is within the Cyrville TOD design priority area.

The total bedroom count within the development is 366, including 123 studio, 133 one-bedroom units, 64 two-bedroom units, and three three-bedroom units. No age restrictions are noted.

10.2 Need and Opportunity

The subject site has been assumed to rely predominantly on transit ridership with the proximity to the Cyrville Station, and those assumptions have been carried through the analysis.

10.3 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
- Contract with providers to install carshare spaces
- Inclusion of a 1-year Presto card for first time apartment rental, with a set time frame for this offer (e.g. 6-months) from the initial opening of the site
- Unbundle parking cost from purchase/rental costs

11 Background Network Travel Demands

11.1 Transportation Network Plans

The transportation network plans were discussed in Section 2.3. The widening of Cyrville Road is assumed to be beyond 2031, and none of the proposed changes are considered to have any notable impact on the study area traffic volumes and travel patterns.

11.2 Other Developments

The background developments are listed in Section 2.3.2. The area developments are anticipated to rely on the Cyrville rapid transit station for the majority of transit needs. It is estimated that 30% of the total background transit trips would rely on the route #24 and #27, which subject to the associated TIA reports would represent a ridership increases of 150 to 210 riders in the peak hour/direction. These additional trips are equivalent to approximately three to four additional standard busloads.

12 Transit

12.1 Route Capacity

In Section 5.1 the trip generation by mode was estimated, including an estimate of the number of transit trips that will be generated by the proposed development. Table 19 summarizes the transit trip generation.

Table 19: Trip Generation by Transit Mode

Travel Mode	Mode Share	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Transit	Varies	25	54	78	36	29	65

The proposed development is anticipated to generate an additional 78 AM and 65 PM peak hour two-way transit trips. From the trip distribution found in section 5.3, these values can be further broken down. Table 20 summarizes forecasted site-generated transit ridership trips by direction and the equivalent bus loads.

Table 20: Forecasted Site-Generated Transit Ridership

Direction	AM Peak Hour		PM Peak Hour		Service Type	Approximate Equivalent Peak Hour/Direction Bus Loads
	In	Out	In	Out		
North	4	8	5	4	Bus	Negligible
South	4	11	8	6	Bus	One fifth of a standard bus
East	4	8	5	4	Bus, LRT	Negligible
West	13	27	18	15	Bus, LRT	Half of a standard bus

13 Summary of Improvements Indicated and Modifications Options

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

Proposed Site and Screening

- The existing site is within the Cyrville TOD Plan area and design priority area
- The subject development proposes the construction of a 30-storey mixed-use building comprising 323 residential units, 5,252 ft^2 of ground floor retail, with 186 total vehicle parking spaces and 198 bicycle parking spaces
- The proposed access configuration includes a full-movement two-way access at the north end of the Cummings Avenue frontage and a right-in-only one-way inbound access to a drop-off loop between the

north access and Ogilvie Road and these access locations are generally located in the same locations as the existing site accesses
- The development is proposed to be completed as a single phase by 2027
- The trip generation, location, and safety triggers were met for the TIA Screening

Existing Conditions

- Sidewalks are provided along both sides of Cummings Avenue north of Ogilvie Road, Ogilvie Road, Cyrville Road south of Ogilvie Road, Donald Street, and Labelle Street within the study area
- Sidewalks are also provided along the east side of Cyrville Road north of Ogilvie Road, of Cummings Avenue south of Ogilvie Road, and along the 1173 Cyrville Road development boundary street of Cummings Avenue
- Bike lanes are present along Ogilvie Road, Cyrville Road south of Ogilvie Road, and Donald Street
- A multi-use path (MUP) is present along the west side of Aviation Parkway and on the east side of Cyrville Road separated by a concrete rumble strip
- During both the AM and PM peak hours, the study area intersections generally operate satisfactorily, outside of the intersections of Ogilvie Road at Cummings Avenue and Ogilvie Road at Aviation Parkway which experience a number of capacity issues during the PM peak hour
- Three turning movement collisions involving cyclists were noted at the intersection of Ogilvie Road at Cummings Avenue between 2018 and 2022 and conditions are expected to be improved with the fully-protected intersection upgrades planned for implementation by 2027
- Three collisions involving pedestrians were noted at the intersection of Donald Street at Cummings between 2018 and 2022, and this intersection is included in the planned Cummings Cycling (Donald to Cyrville) active transportation infrastructure project

Planned Conditions

- Cycling facilities on Cummings Avenue from Donald Street to Cyrville Road, missing links on Donald Street at Elaine Drive, and signage and pavement marking for bike lanes, where feasible, on Ogilvie Road are identified in the 2023 TMP – Part 1
- The construction of the Cummings Cycling project including the protected intersection of Ogilvie Road at Cummings Avenue is anticipated to be completed by 2027

Development Generated Travel Demand

- The proposed development is forecasted produce 146 two-way people trips during the AM peak hour and 158 two-way people trips during the PM peak hour
- Of the forecasted people trips, 33 two-way trips will be vehicle trips during the AM peak hour and 35 two-way trips will be vehicle trips during the PM peak hour
- Of the forecasted people trips, 78 two-way transit trips during the AM peak hour and 65 two-way transit trips during the PM peak hour were noted
- Of the forecasted trips, 15% are anticipated to travel north and the east, 20% to the south, and 50% to the west

Development Design

- Short-term parking vehicle parking is provided within six surface stalls accessing the drive aisles and long-term parking is located in parking levels below grade
- A total of six bicycle parking spaces are located external to the building and the remainder of bicycle parking spaces are located in the parking levels below grade
- Existing sidewalks are present along Cummings Avenue and Ogilvie Road, and hard surface connections are proposed between these facilities and the building entrances and the privately-owned public space
- Vehicle access is provided via a two-way access and a right-in-only access on Cummings Avenue
- The main site access connects to the underground parking ramp, surface parking, and the back-of-house loading area which includes a turnaround
- A right-in-only drop-off loop with its outlet on the main drive aisle has been proposed to provide ease of use for the transit-oriented development and is oriented towards the main lobby where ride hailing, ridesharing, pick-ups, drop-offs, and deliveries can be accommodated
- Garbage collection will occur in the loading area, and emergency services can access the site via the two public road rights-of-way

Parking

- The site provides a total of 180 underground vehicle parking spaces and six surface vehicle parking spaces
- The site provides a total of 198 bicycle parking spaces including six spaces external to the building and 192 spaces within the parking levels below grade
- The proposed bicycle parking meets the minimum vehicle and bicycle parking and maximum vehicle parking provisions from the Zoning By-Law

Boundary Street Design

- Ogilvie Road and Cummings Avenue do not meet the pedestrian LOS targets
- To meet theoretical PLOS targets, the operating speeds on both roadways would need to be reduced to 30 km/h, and Ogilvie Road would require a 2.0-metre-wide sidewalk and Cummings Avenue would require a 2.0-metre-wide sidewalk with a 0.5-metre-wide boulevard
- Cummings Avenue does not meet the bicycle MMLOS target in the existing conditions and will not meet these targets assuming on-road bike lanes in the future conditions
- To meet theoretical BLOS targets, the recommended treatment by the Cummings Cycling (Donald to Cyrville) project will need to be cycletracks
- Given the roadway speeds are not changing and the intersection design is not complete for coordination with the site plan, no changes are proposed to the boundary streets as part of this study

Intersection Design

- The main site access meets the Private Approach By-Law property and road offset requirements and TAC minimum corner clearance
- The right-in-only drop-off loop access does not meet these provisions and suggested minimum values, nor does it meet minimum spacing between accesses from the Private Approach By-Law
- Given the drop-off loop access is anticipated to be low volume and restricts permitted movements to the inbound right-turn, no impacts to Cummings Avenue or its intersection with Ogilvie Road are anticipated from the location and design of this access

- Stop-control measures are proposed on movements intersecting the main drive aisle, permitting free-flow between the main site access and the underground parking
- A conflict on this free-flow movement is noted at the first parking space on the main drive aisle at 22 metres of throat, and given the TOD nature of the site and anticipated volumes at the access, this throat length would permit approximately eight minutes of expected inbound volumes to queue on the site, and is thus adequate to negate impacts of queueing onto Cummings Avenue
- A conflict is noted on the right-in-only one-way drop-off loop at 18 metres of throat, which would be considered adequate for the entire site's peak hour traffic, and thus adequate to negate impacts of queueing onto Cummings Avenue
- The site accesses are recommended to comply with City Standard SC7.1 and it is recommended that the proposed site access configurations be approved based on the foregoing analysis

TDM

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

Background Conditions

- The area developments are anticipated to rely on the Cyrville rapid transit station for the majority of transit needs
- A ridership increases of 150 to 210 riders from the background developments in the peak direction are anticipated to utilize local bus service, based on an estimated 30% use of local service and 70% use of rapid transit
- These additional trips are equivalent to approximately three to four additional standard busloads

Transit

- The proposed development is anticipated to generate an additional 78 AM and 65 PM peak hour two-way transit trips
- Peak hour increases in local bus service transit ridership resulting from the site are on the order of a fifth of a standard busload in the peak direction

14 Conclusion

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

Prepared By:

John Kingsley
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: 27-Jun-24
Project Number: 2023-139
Project Reference: 1137 Ogilvie

1.1 Description of Proposed Development	
Municipal Address	1137 Ogilvie Road, 1111 Cummings Avenue
Description of Location	Northeast quadrant of Ogilvie Rd @ Cummings Ave intersection
Land Use Classification	Local Commercial (LC6)
Development Size	323 apartment units
Accesses	One full moves onto Cummings Avenue, one RIO onto Cummings Avenue
Phase of Development	One phase
Buildout Year	2027
TIA Requirement	Full TIA Required

1.2 Trip Generation Trigger		
Land Use Type	Multi-Family (High-Rise)	
Development Size	323	Units
Trip Generation Trigger	Yes	

1.3 Location Triggers		
Does the development propose a new driveway to a boundary street that is designated as part of the Transit Priority Network, Rapid Transit network or Cross-Town Bikeways?	No	
Is the development in a Hub, a Protected Major Transit Station Area (PMTSA), or a Design Priority Area (DPA)?	Yes	Cyrville TOD
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)?	Yes	
Is the proposed driveway within auxiliary lanes of an intersection?	Yes	
Does the proposed driveway make use of an existing median break that serves an existing site?	Yes	
Is there is a documented history of traffic operations or safety concerns on the boundary streets within 500 m of the development?	Yes	Collisions at the intersection of Ogilvie Rd at Cummings Ave
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

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
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Telephone / Extension: 613-697-3797
Email Address: andrew.harte@cghtransportation.com

Stamp

Revision Date: June 2023

Appendix B

Turning Movement Counts

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Project #23-352 - CGH Transportation

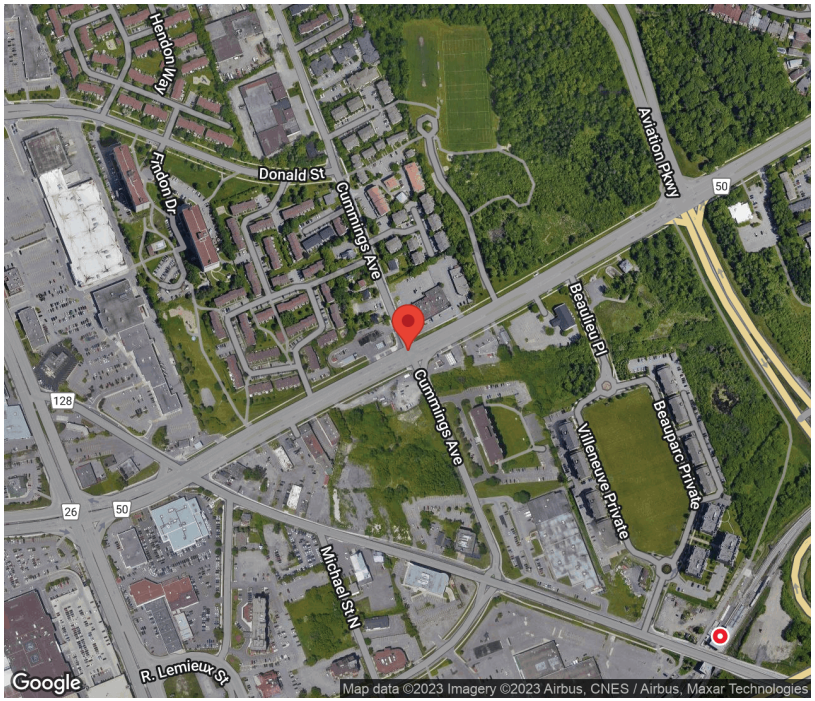
Intersection Count Report

Intersection:	Ogilvie Rd & Cummings Ave
Municipality:	Ottawa
Count Date:	Tuesday, Oct 31, 2023
Site Code:	2335200001
Count Categories:	Cars, Trucks, Bicycles, Pedestrians
Count Period:	07:00-10:00, 11:30-13:30, 15:00-18:00
Weather:	Clear
Comments:	

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Map

Intersection:	Ogilvie Rd & Cummings Ave
Site Code:	2335200001
Municipality:	Ottawa
Count Date:	Oct 31, 2023



Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Summary

Intersection: Ogilvie Rd & Cummings Ave
Site Code: 2335200001
Municipality: Ottawa
Count Date: Oct 31, 2023

Cummings Ave - Traffic Summary

Hour	North Approach Totals (Includes Cars, Trucks, Bicycles)						South Approach Totals (Includes Cars, Trucks, Bicycles)						Total
	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds	
07:00 - 08:00	129	96	105	0	330	7	17	78	51	0	146	6	476
08:00 - 09:00	167	109	101	0	377	27	17	124	77	0	218	8	595
09:00 - 10:00	191	111	120	0	422	13	30	112	84	0	226	9	648
BREAK													
11:30 - 12:00	84	76	40	0	200	5	20	79	66	0	165	3	365
12:00 - 13:00	236	145	93	0	474	13	46	149	144	0	339	20	813
13:00 - 13:30	104	56	31	0	191	5	17	53	70	0	140	4	331
BREAK													
15:00 - 16:00	278	168	119	0	565	10	54	195	173	0	422	15	987
16:00 - 17:00	273	192	137	0	602	38	35	204	202	0	441	12	1043
17:00 - 18:00	247	144	77	0	468	12	52	195	139	0	386	19	854
GRAND TOTAL	**1709**	**1097**	**823**	**0**	**3629**	**130**	**288**	**1189**	**1006**	**0**	**2483**	**96**	**6112**

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Summary

Intersection: Ogilvie Rd & Cummings Ave
Site Code: 2335200001
Municipality: Ottawa
Count Date: Oct 31, 2023

Ogilvie Rd - Traffic Summary

Hour	East Approach Totals (Includes Cars, Trucks, Bicycles)						West Approach Totals (Includes Cars, Trucks, Bicycles)						Total
	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds	
07:00 - 08:00	77	575	112	3	767	29	57	512	9	0	578	1	1345
08:00 - 09:00	108	1042	209	0	1359	52	71	598	13	1	683	5	2042
09:00 - 10:00	78	617	172	0	867	25	81	517	16	4	618	8	1485
BREAK													
11:30 - 12:00	64	304	82	2	452	7	39	321	16	1	377	5	829
12:00 - 13:00	114	630	184	7	935	20	85	685	27	9	806	13	1741
13:00 - 13:30	61	277	92	0	430	7	36	321	14	6	377	3	807
BREAK													
15:00 - 16:00	99	736	249	6	1090	68	116	915	29	12	1072	17	2162
16:00 - 17:00	144	801	224	4	1173	29	144	1047	27	11	1229	11	2402
17:00 - 18:00	94	561	222	2	879	26	127	971	24	5	1127	16	2006
GRAND TOTAL	**839**	**5543**	**1546**	**24**	**7952**	**263**	**756**	**5887**	**175**	**49**	**6867**	**79**	**14819**

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Data

Intersection: Ogilvie Rd & Cummings Ave
Site Code: 2335200001
Municipality: Ottawa
Count Date: Oct 31, 2023

North Approach - Cummings Ave

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↩	Total	↰	↑	↱	↩	Total	↰	↑	↱	↩	Total	
07:00	28	22	15	0	65	1	0	0	0	1	0	0	0	0	0	0
07:15	20	24	25	0	69	1	0	0	0	1	0	0	0	0	0	1
07:30	37	19	28	0	84	2	1	0	0	3	1	0	0	0	1	3
07:45	36	30	37	0	103	2	0	0	0	2	1	0	0	0	1	3
08:00	32	25	24	0	81	1	0	0	0	1	0	0	0	0	0	8
08:15	47	27	26	0	100	1	1	0	0	2	0	1	0	0	1	10
08:30	42	24	28	0	94	0	0	1	0	1	1	0	0	0	1	7
08:45	40	31	22	0	93	3	0	0	0	3	0	0	0	0	0	2
09:00	59	25	32	0	116	2	1	0	0	3	0	0	0	0	0	3
09:15	51	28	26	0	105	1	1	1	0	3	1	0	1	0	2	2
09:30	36	24	36	0	96	1	1	1	0	3	1	0	0	0	1	3
09:45	39	31	23	0	93	0	0	0	0	0	0	0	0	0	0	5
SUBTOTAL	467	310	322	0	1099	15	5	3	0	23	5	1	1	0	7	47

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Data

Intersection: Ogilvie Rd & Cummings Ave
Site Code: 2335200001
Municipality: Ottawa
Count Date: Oct 31, 2023

North Approach - Cummings Ave

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↩	Total	↰	↑	↱	↩	Total	↰	↑	↱	↩	Total	
11:30	35	41	17	0	93	4	0	2	0	6	0	0	0	0	0	1
11:45	43	35	20	0	98	0	0	1	0	1	2	0	0	0	2	4
12:00	59	46	18	0	123	2	1	0	0	3	0	0	0	0	0	4
12:15	64	27	24	0	115	0	1	0	0	1	0	0	0	0	0	4
12:30	50	37	27	0	114	0	2	0	0	2	0	0	0	0	0	4
12:45	61	31	22	0	114	0	0	2	0	2	0	0	0	0	0	1
13:00	50	22	11	0	83	0	1	1	0	2	0	0	0	0	0	2
13:15	54	32	19	0	105	0	1	0	0	1	0	0	0	0	0	3
SUBTOTAL	416	271	158	0	845	6	6	6	0	18	2	0	0	0	2	23

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Data

Intersection: Ogilvie Rd & Cummings Ave
Site Code: 2335200001
Municipality: Ottawa
Count Date: Oct 31, 2023

North Approach - Cummings Ave

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	
15:00	60	41	32	0	133	1	0	2	0	3	0	0	0	0	0	3
15:15	75	35	31	0	141	0	2	2	0	4	0	0	0	0	0	2
15:30	70	36	26	0	132	2	0	0	0	2	0	0	0	0	0	0
15:45	68	54	26	0	148	2	0	0	0	2	0	0	0	0	0	5
16:00	60	48	32	0	140	3	0	0	0	3	0	0	0	0	0	4
16:15	76	48	35	0	159	1	1	1	0	3	0	1	0	0	1	20
16:30	54	46	32	0	132	1	0	0	0	1	0	0	0	0	0	7
16:45	77	48	37	0	162	1	0	0	0	1	0	0	0	0	0	7
17:00	78	40	23	0	141	1	0	0	0	1	0	0	0	0	0	4
17:15	64	33	25	0	122	1	0	0	0	1	0	0	0	0	0	6
17:30	49	42	17	0	108	0	0	1	0	1	0	0	0	0	0	0
17:45	54	29	11	0	94	0	0	0	0	0	0	0	0	0	0	2
SUBTOTAL	785	500	327	0	1612	13	3	6	0	22	0	1	0	0	1	60
GRAND TOTAL	1668	1081	807	0	3556	34	14	15	0	63	7	2	1	0	10	130

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Data

Intersection: Ogilvie Rd & Cummings Ave
Site Code: 2335200001
Municipality: Ottawa
Count Date: Oct 31, 2023

South Approach - Cummings Ave

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	
07:00	5	11	14	0	30	0	0	3	0	3	0	0	1	0	1	1
07:15	5	21	11	0	37	1	3	2	0	6	0	0	0	0	0	3
07:30	2	19	6	0	27	0	3	0	0	3	0	1	0	0	1	0
07:45	4	20	14	0	38	0	0	0	0	0	0	0	0	0	0	2
08:00	1	35	12	0	48	0	1	0	0	1	0	0	0	0	0	1
08:15	4	24	14	0	42	0	0	0	0	0	0	0	0	0	0	5
08:30	4	33	26	0	63	0	1	1	0	2	0	0	0	0	0	1
08:45	8	28	22	0	58	0	2	2	0	4	0	0	0	0	0	1
09:00	14	21	22	0	57	0	1	2	0	3	0	0	0	0	0	3
09:15	4	29	22	0	55	0	0	1	0	1	0	0	0	0	0	2
09:30	8	32	17	0	57	0	1	4	0	5	0	0	0	0	0	2
09:45	3	27	16	0	46	1	1	0	0	2	0	0	0	0	0	2
SUBTOTAL	62	300	196	0	558	2	13	15	0	30	0	1	1	0	2	23

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Data

Intersection: Ogilvie Rd & Cummings Ave
Site Code: 2335200001
Municipality: Ottawa
Count Date: Oct 31, 2023

South Approach - Cummings Ave

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	
11:30	8	43	34	0	85	0	3	1	0	4	0	0	0	0	0	2
11:45	12	32	31	0	75	0	0	0	0	0	0	1	0	0	1	1
12:00	14	42	37	0	93	0	3	0	0	3	0	0	0	0	0	5
12:15	9	30	40	0	79	0	0	0	0	0	0	0	0	0	0	3
12:30	16	37	37	0	90	0	1	0	0	1	0	0	0	0	0	6
12:45	7	36	30	0	73	0	0	0	0	0	0	0	0	0	0	6
13:00	6	24	26	0	56	0	0	0	0	0	1	0	0	0	1	1
13:15	10	29	40	0	79	0	0	4	0	4	0	0	0	0	0	3
SUBTOTAL	82	273	275	0	630	0	7	5	0	12	1	1	0	0	2	27

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Data

Intersection: Ogilvie Rd & Cummings Ave
Site Code: 2335200001
Municipality: Ottawa
Count Date: Oct 31, 2023

South Approach - Cummings Ave

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	↰	↑	↱	↻	Total	
15:00	8	58	36	0	102	1	0	0	0	1	0	0	0	0	0	6
15:15	22	61	38	0	121	0	0	0	0	0	0	0	0	0	0	4
15:30	9	42	58	0	109	0	1	0	0	1	0	0	0	0	0	2
15:45	12	33	39	0	84	1	0	2	0	3	1	0	0	0	1	3
16:00	9	48	52	0	109	0	0	0	0	0	0	0	0	0	0	1
16:15	10	55	50	0	115	0	1	0	0	1	0	0	0	0	0	7
16:30	7	42	54	0	103	0	1	0	0	1	0	0	0	0	0	3
16:45	9	57	46	0	112	0	0	0	0	0	0	0	0	0	0	1
17:00	11	50	45	0	106	0	0	0	0	0	0	0	0	0	0	5
17:15	12	49	45	0	106	0	0	0	0	0	0	0	0	0	0	5
17:30	12	48	30	0	90	0	1	0	0	1	0	0	0	0	0	5
17:45	17	47	19	0	83	0	0	0	0	0	0	0	0	0	0	4
SUBTOTAL	138	590	512	0	1240	2	4	2	0	8	1	0	0	0	1	46
GRAND TOTAL	282	1163	983	0	2428	4	24	22	0	50	2	2	1	0	5	96

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Data

Intersection: Ogilvie Rd & Cummings Ave
Site Code: 2335200001
Municipality: Ottawa
Count Date: Oct 31, 2023

East Approach - Ogilvie Rd

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	
07:00	14	71	20	1	106	0	2	0	0	2	0	1	0	0	1	7
07:15	22	136	32	0	190	0	4	0	0	4	0	1	0	0	1	3
07:30	14	144	23	1	182	1	1	2	0	4	0	3	0	0	3	13
07:45	25	203	34	1	263	1	6	1	0	8	0	3	0	0	3	6
08:00	22	255	42	0	319	0	6	3	0	9	0	0	0	0	0	16
08:15	30	240	50	0	320	0	6	1	0	7	0	2	0	0	2	12
08:30	28	256	55	0	339	1	5	0	0	6	0	2	0	0	2	16
08:45	25	261	57	0	343	2	6	1	0	9	0	3	0	0	3	8
09:00	20	141	35	0	196	0	5	1	0	6	0	0	0	0	0	9
09:15	19	171	49	0	239	0	11	1	0	12	0	0	0	0	0	7
09:30	17	143	42	0	202	0	4	1	0	5	0	1	0	0	1	7
09:45	22	139	41	0	202	0	2	2	0	4	0	0	0	0	0	2
SUBTOTAL	258	2160	480	3	2901	5	58	13	0	76	0	16	0	0	16	106

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Data

Intersection: Ogilvie Rd & Cummings Ave
Site Code: 2335200001
Municipality: Ottawa
Count Date: Oct 31, 2023

East Approach - Ogilvie Rd

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	
11:30	31	152	36	0	219	0	2	1	0	3	0	0	0	0	0	4
11:45	32	147	44	2	225	1	3	1	0	5	0	0	0	0	0	3
12:00	28	169	52	1	250	2	1	1	0	4	0	0	0	0	0	8
12:15	27	166	46	1	240	2	3	1	0	6	0	0	0	0	0	2
12:30	21	144	42	2	209	3	3	0	0	6	0	2	0	0	2	6
12:45	30	139	42	3	214	1	3	0	0	4	0	0	0	0	0	4
13:00	24	133	39	0	196	0	2	0	0	2	0	0	0	0	0	2
13:15	34	141	52	0	227	3	1	1	0	5	0	0	0	0	0	5
SUBTOTAL	227	1191	353	9	1780	12	18	5	0	35	0	2	0	0	2	34

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Data

Intersection: Ogilvie Rd & Cummings Ave
Site Code: 2335200001
Municipality: Ottawa
Count Date: Oct 31, 2023

East Approach - Ogilvie Rd

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↩	Total	↰	↑	↱	↩	Total	↰	↑	↱	↩	Total	
15:00	20	170	60	3	253	0	3	1	0	4	0	0	1	0	1	33
15:15	29	185	57	1	272	1	5	2	0	8	0	3	0	0	3	13
15:30	19	190	70	1	280	1	0	0	0	1	0	1	0	0	1	12
15:45	28	171	58	1	258	1	7	0	0	8	0	1	0	0	1	10
16:00	38	213	52	2	305	1	5	3	0	9	0	2	2	0	4	6
16:15	37	185	49	1	272	3	4	0	0	7	0	4	0	0	4	9
16:30	30	197	64	0	291	3	3	0	0	6	0	2	0	0	2	10
16:45	32	176	54	1	263	0	6	0	0	6	0	4	0	0	4	4
17:00	25	152	69	1	247	0	2	0	0	2	0	3	1	0	4	5
17:15	27	127	60	0	214	1	2	1	0	4	0	5	1	0	6	6
17:30	23	144	43	1	211	0	2	0	0	2	0	1	1	0	2	7
17:45	18	122	46	0	186	0	0	0	0	0	0	1	0	0	1	8
SUBTOTAL	326	2032	682	12	3052	11	39	7	0	57	0	27	6	0	33	123
GRAND TOTAL	811	5383	1515	24	7733	28	115	25	0	168	0	45	6	0	51	263

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Data

Intersection: Ogilvie Rd & Cummings Ave
Site Code: 2335200001
Municipality: Ottawa
Count Date: Oct 31, 2023

West Approach - Ogilvie Rd

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↩	Total	↰	↑	↱	↩	Total	↰	↑	↱	↩	Total	
07:00	16	79	2	0	97	0	7	0	0	7	0	0	0	0	0	0
07:15	13	118	1	0	132	0	2	2	0	4	0	0	0	0	0	1
07:30	10	135	2	0	147	0	3	0	0	3	0	0	0	0	0	0
07:45	17	163	2	0	182	1	3	0	0	4	0	2	0	0	2	0
08:00	19	124	1	1	145	1	2	0	0	3	0	1	0	0	1	1
08:15	16	128	7	0	151	2	5	1	0	8	0	2	0	0	2	2
08:30	19	148	3	0	170	1	3	0	0	4	0	11	0	0	11	1
08:45	12	163	1	0	176	1	9	0	0	10	0	2	0	0	2	1
09:00	22	150	0	1	173	1	7	1	0	9	0	6	0	0	6	1
09:15	19	130	2	2	153	0	3	0	0	3	0	3	0	0	3	2
09:30	22	98	4	0	124	1	5	1	0	7	0	2	0	0	2	4
09:45	14	113	8	1	136	2	0	0	0	2	0	0	0	0	0	1
SUBTOTAL	199	1549	33	5	1786	10	49	5	0	64	0	29	0	0	29	14

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Data

Intersection: Ogilvie Rd & Cummings Ave
Site Code: 2335200001
Municipality: Ottawa
Count Date: Oct 31, 2023

West Approach - Ogilvie Rd

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	
11:30	17	151	5	1	174	1	4	1	0	6	0	2	0	0	2	0
11:45	20	160	9	0	189	1	4	1	0	6	0	0	0	0	0	5
12:00	30	159	7	1	197	0	1	0	0	1	0	0	0	0	0	6
12:15	19	181	5	0	205	0	1	0	0	1	0	0	0	0	0	1
12:30	14	160	7	2	183	0	4	1	0	5	0	0	0	0	0	5
12:45	21	172	7	6	206	1	6	0	0	7	0	1	0	0	1	1
13:00	17	145	6	2	170	0	3	0	0	3	0	0	0	0	0	2
13:15	19	172	8	4	203	0	1	0	0	1	0	0	0	0	0	1
SUBTOTAL	157	1300	54	16	1527	3	24	3	0	30	0	3	0	0	3	21

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Data

Intersection: Ogilvie Rd & Cummings Ave
Site Code: 2335200001
Municipality: Ottawa
Count Date: Oct 31, 2023

West Approach - Ogilvie Rd

Start Time	Cars					Trucks					Bicycles					Total Peds
	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	↰	↑	↱	↶	Total	
15:00	27	202	6	7	242	1	8	1	0	10	0	2	0	0	2	6
15:15	31	220	5	3	259	0	5	0	0	5	0	0	0	0	0	1
15:30	28	257	9	2	296	1	5	0	0	6	0	0	0	0	0	2
15:45	28	210	8	0	246	0	4	0	0	4	0	2	0	0	2	8
16:00	35	249	7	0	291	0	6	0	0	6	0	0	0	0	0	1
16:15	30	224	5	5	264	0	1	1	0	2	0	2	0	0	2	7
16:30	45	289	5	3	342	0	8	0	0	8	0	2	0	0	2	2
16:45	34	263	9	3	309	0	2	0	0	2	0	1	0	0	1	1
17:00	32	292	10	1	335	2	2	0	0	4	0	0	0	0	0	0
17:15	24	228	7	2	261	0	2	0	0	2	0	3	0	0	3	8
17:30	34	233	3	0	270	0	3	0	0	3	0	3	0	0	3	3
17:45	34	203	4	2	243	1	1	0	0	2	0	1	0	0	1	5
SUBTOTAL	382	2870	78	28	3358	5	47	2	0	54	0	16	0	0	16	44
GRAND TOTAL	738	5719	165	49	6671	18	120	10	0	148	0	48	0	0	48	79

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Peak Hour Diagram

Specified Period
From: 07:00:00
To: 10:00:00

One Hour Peak
From: 08:00:00
To: 09:00:00

Intersection: Ogilvie Rd & Cummings Ave
Site Code: 2335200001
Count Date: Oct 31, 2023

Weather conditions: Clear

**** Signalized Intersection ****

Major Road: Ogilvie Rd runs E/W

North Approach

	Out	In	Total
Cars	368	390	758
Trucks	7	14	21
Bicycles	2	0	2
	377	404	781

Cummings Ave

Bicycles	0	1	1	0
Trucks	1	1	5	0
Cars	100	107	161	0
Totals	101	109	167	0

Peds: 27

East Approach

	Out	In	Total
Cars	1321	798	2119
Trucks	31	27	58
Bicycles	7	17	24
	1359	842	2201

Ogilvie Rd

Bicycles	Trucks	Cars	Totals	
0	0	1	1	↰
0	5	66	71	↑
16	19	563	598	→
0	1	12	13	↓

Peds: 5

Peds: 52

Ogilvie Rd

Totals	Cars	Trucks	Bicycles	
0	0	0	0	↶
209	204	5	0	↑
1042	1012	23	7	←
108	105	3	0	↓

Peds: 8

West Approach

	Out	In	Total
Cars	642	1130	1772
Trucks	25	24	49
Bicycles	16	7	23
	683	1161	1844

Cummings Ave

Totals	17	124	77	0
Cars	17	120	74	0
Trucks	0	4	3	0
Bicycles	0	0	0	0

South Approach

	Out	In	Total
Cars	211	224	435
Trucks	7	5	12
Bicycles	0	1	1
	218	230	448

Cars - Trucks - Bicycles

Comments

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Peak Hour Summary

Intersection: Ogilvie Rd & Cummings Ave
Site Code: 2335200001
Count Date: Oct 31, 2023
Period: 07:00 - 10:00

Peak Hour Data (08:00 - 09:00)

Start Time	North Approach Cummings Ave						South Approach Cummings Ave						East Approach Ogilvie Rd						West Approach Ogilvie Rd						Total Vehicles
	↰	↑	↱	↶	Peds	Total	↰	↑	↱	↶	Peds	Total	↰	↑	↱	↶	Peds	Total	↰	↑	↱	↶	Peds	Total	
08:00	33	25	24	0	8	82	1	36	12	0	1	49	22	261	45	0	16	328	20	127	1	1	1	149	608
08:15	48	29	26	0	10	103	4	24	14	0	5	42	30	248	51	0	12	329	18	135	8	0	2	161	635
08:30	43	24	29	0	7	96	4	34	27	0	1	65	29	263	55	0	16	347	20	162	3	0	1	185	693
08:45	43	31	22	0	2	96	8	30	24	0	1	62	27	270	58	0	8	355	13	174	1	0	1	188	701
Grand Total	**167**	**109**	**101**	**0**	**27**	**377**	**17**	**124**	**77**	**0**	**8**	**218**	**108**	**1042**	**209**	**0**	**52**	**1359**	**71**	**598**	**13**	**1**	**5**	**683**	**2637**
Approach %	44.3	28.9	26.8	0		-	7.8	56.9	35.3	0		-	7.9	76.7	15.4	0		-	10.4	87.6	1.9	0.1		-	
Totals %	6.3	4.1	3.8	0		14.3	0.6	4.7	2.9	0		8.3	4.1	39.5	7.9	0		51.5	2.7	22.7	0.5	0		25.9	
PHF	**0.87**	**0.88**	**0.87**	**0**		**0.92**	**0.53**	**0.86**	**0.71**	**0**		**0.84**	**0.9**	**0.96**	**0.9**	**0**		**0.96**	**0.89**	**0.86**	**0.41**	**0.25**		**0.91**	**0.94**
Cars	161	107	100	0		368	17	120	74	0		211	105	1012	204	0		1321	66	563	12	1		642	2542
% Cars	96.4	98.2	99	0		97.6	100	96.8	96.1	0		96.8	97.2	97.1	97.6	0		97.2	93	94.1	92.3	100		94	96.4
Trucks	5	1	1	0		7	0	4	3	0		7	3	23	5	0		31	5	19	1	0		25	70
% Trucks	3	0.9	1	0		1.9	0	3.2	3.9	0		3.2	2.8	2.2	2.4	0		2.3	7	3.2	7.7	0		3.7	2.7
Bicycles	1	1	0	0		2	0	0	0	0		0	0	7	0	0		7	0	16	0	0		16	25
% Bicycles	0.6	0.9	0	0		0.5	0	0	0	0		0	0	0.7	0	0		0.5	0	2.7	0	0		2.3	0.9
Peds					27	-					8	-					52	-					5	-	92
% Peds					29.3	-					8.7	-					56.5	-					5.4	-	

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Peak Hour Diagram

Specified Period		One Hour Peak	
From:	11:30:00	From:	12:00:00
To:	13:30:00	To:	13:00:00

Intersection: Ogilvie Rd & Cummings Ave
Site Code: 2335200001
Count Date: Oct 31, 2023

Weather conditions: Clear

**** Signalized Intersection ****

Major Road: Ogilvie Rd runs E/W

North Approach

	Out	In	Total
Cars	466	411	877
Trucks	8	7	15
Bicycles	0	0	0
	474	418	892

Cummings Ave

Bicycles	0	0	0	0
Trucks	2	4	2	0
Cars	91	141	234	0
Totals	93	145	236	0

Peds: 13

East Approach

	Out	In	Total
Cars	913	1057	1970
Trucks	20	14	34
Bicycles	2	1	3
	935	1072	2007

Ogilvie Rd

			Totals	
0	0	9	9	
0	1	84	85	
1	12	672	685	
0	1	26	27	

Peds: 13

Peds: 20

Ogilvie Rd

Totals			
7	7	0	0
184	182	2	0
630	618	10	2
114	106	8	0

West Approach

	Out	In	Total
Cars	791	764	1555
Trucks	14	12	26
Bicycles	1	2	3
	806	778	1584

Totals	46	149	144	0
Cars	46	145	144	0
Trucks	0	4	0	0
Bicycles	0	0	0	0

Peds: 20

Cummings Ave

South Approach

	Out	In	Total
Cars	335	273	608
Trucks	4	13	17
Bicycles	0	0	0
	339	286	625

Cars - Trucks - Bicycles

Comments

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Peak Hour Summary

Intersection: Ogilvie Rd & Cummings Ave
Site Code: 2335200001
Count Date: Oct 31, 2023
Period: 11:30 - 13:30

Peak Hour Data (12:00 - 13:00)

Start Time	North Approach Cummings Ave						South Approach Cummings Ave						East Approach Ogilvie Rd						West Approach Ogilvie Rd						Total Vehicles
					Peds	Total					Peds	Total					Peds	Total					Peds	Total	
12:00	61	47	18	0	4	126	14	45	37	0	5	96	30	170	53	1	8	254	30	160	7	1	6	198	674
12:15	64	28	24	0	4	116	9	30	40	0	3	79	29	169	47	1	2	246	19	182	5	0	1	206	647
12:30	50	39	27	0	4	116	16	38	37	0	6	91	24	149	42	2	6	217	14	164	8	2	5	188	612
12:45	61	31	24	0	1	116	7	36	30	0	6	73	31	142	42	3	4	218	22	179	7	6	1	214	621
Grand Total	**236**	**145**	**93**	**0**	**13**	**474**	**46**	**149**	**144**	**0**	**20**	**339**	**114**	**630**	**184**	**7**	**20**	**935**	**85**	**685**	**27**	**9**	**13**	**806**	**2554**
Approach %	49.8	30.6	19.6	0		-	13.6	44	42.5	0		-	12.2	67.4	19.7	0.7		-	10.5	85	3.3	1.1		-	
Totals %	9.2	5.7	3.6	0		18.6	1.8	5.8	5.6	0		13.3	4.5	24.7	7.2	0.3		36.6	3.3	26.8	1.1	0.4		31.6	
PHF	**0.92**	**0.77**	**0.86**	**0**		**0.94**	**0.72**	**0.83**	**0.9**	**0**		**0.88**	**0.92**	**0.93**	**0.87**	**0.58**		**0.92**	**0.71**	**0.94**	**0.84**	**0.38**		**0.94**	**0.95**
Cars	234	141	91	0		466	46	145	144	0		335	106	618	182	7		913	84	672	26	9		791	2505
% Cars	99.2	97.2	97.8	0		98.3	100	97.3	100	0		98.8	93	98.1	98.9	100		97.6	98.8	98.1	96.3	100		98.1	98.1
Trucks	2	4	2	0		8	0	4	0	0		4	8	10	2	0		20	1	12	1	0		14	46
% Trucks	0.8	2.8	2.2	0		1.7	0	2.7	0	0		1.2	7	1.6	1.1	0		2.1	1.2	1.8	3.7	0		1.7	1.8
Bicycles	0	0	0	0		0	0	0	0	0		0	0	2	0	0		2	0	1	0	0		1	3
% Bicycles	0	0	0	0		0	0	0	0	0		0	0	0.3	0	0		0.2	0	0.1	0	0		0.1	0.1
Peds					13	-					20	-					20	-					13	-	66
% Peds					19.7	-					30.3	-					30.3	-					19.7	-	

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Peak Hour Diagram

Specified Period		One Hour Peak	
From:	15:00:00	From:	16:00:00
To:	18:00:00	To:	17:00:00

Intersection: Ogilvie Rd & Cummings Ave
Site Code: 2335200001
Count Date: Oct 31, 2023

Weather conditions: Clear

**** Signalized Intersection ****

Major Road: Ogilvie Rd runs E/W

North Approach

	Out	In	Total
Cars	593	565	1158
Trucks	8	5	13
Bicycles	1	2	3
	602	572	1174

Cummings Ave

Bicycles	0	1	0	0
Trucks	1	1	6	0
Cars	136	190	267	0
Totals	137	192	273	0

Peds: 38

East Approach

	Out	In	Total
Cars	1131	1498	2629
Trucks	28	23	51
Bicycles	14	5	19
	1173	1526	2699

Ogilvie Rd

Bicycles	Trucks	Cars	Totals	
0	0	11	11	
0	0	144	144	
5	17	1025	1047	
0	1	26	27	

Peds: 11

Peds: 29

Ogilvie Rd

	Totals	Cars	Trucks	Bicycles
	4	4	0	0
	224	219	3	2
	801	771	18	12
	144	137	7	0

Peds: 12

West Approach

	Out	In	Total
Cars	1206	953	2159
Trucks	18	19	37
Bicycles	5	12	17
	1229	984	2213

Cummings Ave

Totals	35	204	202	0
Cars	35	202	202	0
Trucks	0	2	0	0
Bicycles	0	0	0	0

South Approach

	Out	In	Total
Cars	439	353	792
Trucks	2	9	11
Bicycles	0	1	1
	441	363	804

- Cars - Trucks - Bicycles

Comments

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Peak Hour Summary

Intersection: Ogilvie Rd & Cummings Ave
Site Code: 2335200001
Count Date: Oct 31, 2023
Period: 15:00 - 18:00

Peak Hour Data (16:00 - 17:00)

Start Time	North Approach Cummings Ave						South Approach Cummings Ave						East Approach Ogilvie Rd						West Approach Ogilvie Rd						Total Vehicles
					Peds	Total					Peds	Total					Peds	Total					Peds	Total	
16:00	63	48	32	0	4	143	9	48	52	0	1	109	39	220	57	2	6	318	35	255	7	0	1	297	867
16:15	77	50	36	0	20	163	10	56	50	0	7	116	40	193	49	1	9	283	30	227	6	5	7	268	830
16:30	55	46	32	0	7	133	7	43	54	0	3	104	33	202	64	0	10	299	45	299	5	3	2	352	888
16:45	78	48	37	0	7	163	9	57	46	0	1	112	32	186	54	1	4	273	34	266	9	3	1	312	860
Grand Total	**273**	**192**	**137**	**0**	**38**	**602**	**35**	**204**	**202**	**0**	**12**	**441**	**144**	**801**	**224**	**4**	**29**	**1173**	**144**	**1047**	**27**	**11**	**11**	**1229**	**3445**
Approach %	45.3	31.9	22.8	0		-	7.9	46.3	45.8	0		-	12.3	68.3	19.1	0.3		-	11.7	85.2	2.2	0.9		-	
Totals %	7.9	5.6	4	0		17.5	1	5.9	5.9	0		12.8	4.2	23.3	6.5	0.1		34	4.2	30.4	0.8	0.3		35.7	
PHF	**0.88**	**0.96**	**0.93**	**0**		**0.92**	**0.88**	**0.89**	**0.94**	**0**		**0.95**	**0.9**	**0.91**	**0.88**	**0.5**		**0.92**	**0.8**	**0.88**	**0.75**	**0.55**		**0.87**	**0.97**
Cars	267	190	136	0		593	35	202	202	0		439	137	771	219	4		1131	144	1025	26	11		1206	3369
% Cars	97.8	99	99.3	0		98.5	100	99	100	0		99.5	95.1	96.3	97.8	100		96.4	100	97.9	96.3	100		98.1	97.8
Trucks	6	1	1	0		8	0	2	0	0		2	7	18	3	0		28	0	17	1	0		18	56
% Trucks	2.2	0.5	0.7	0		1.3	0	1	0	0		0.5	4.9	2.2	1.3	0		2.4	0	1.6	3.7	0		1.5	1.6
Bicycles	0	1	0	0		1	0	0	0	0		0	0	12	2	0		14	0	5	0	0		5	20
% Bicycles	0	0.5	0	0		0.2	0	0	0	0		0	0	1.5	0.9	0		1.2	0	0.5	0	0		0.4	0.6
Peds					38	-					12	-					29	-					11	-	90
% Peds					42.2	-					13.3	-					32.2	-					12.2	-	

Transportation Services - Traffic Services

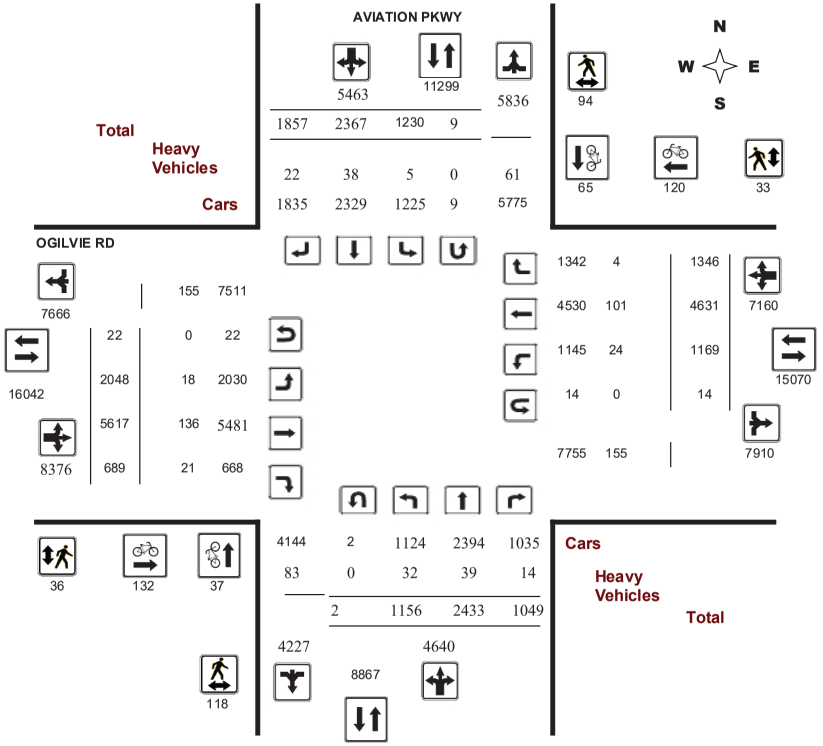
Turning Movement Count - Study Results

AVIATION PKWY @ OGILVIE RD

Survey Date: Thursday, September 28, 2023 **WO No:** 41205

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

Full Study Diagram



Transportation Services - Traffic Services

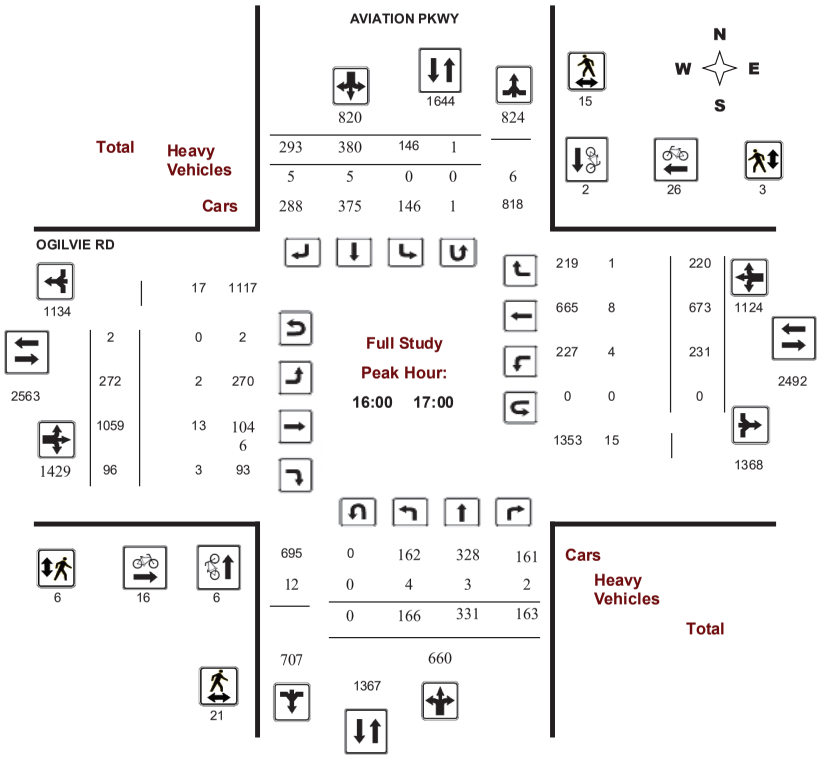
Turning Movement Count - Study Results

AVIATION PKWY @ OGILVIE RD

Survey Date: Thursday, September 28, 2023 **WO No:** 41205

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

Full Study Peak Hour Diagram



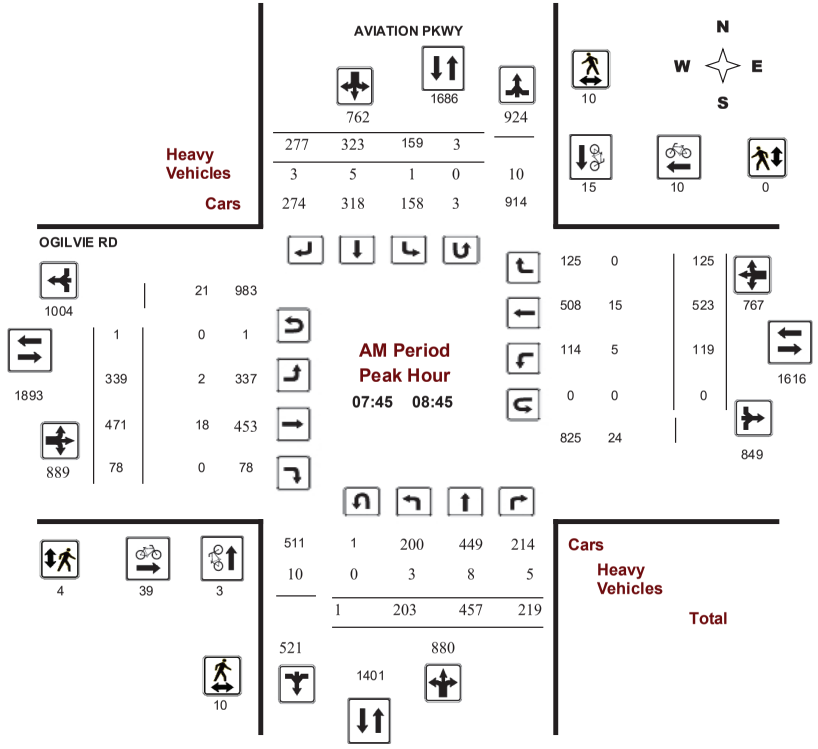
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

AVIATION PKWY @ OGILVIE RD

Survey Date: Thursday, September 28, 2023 **WO No:** 41205

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



Comments

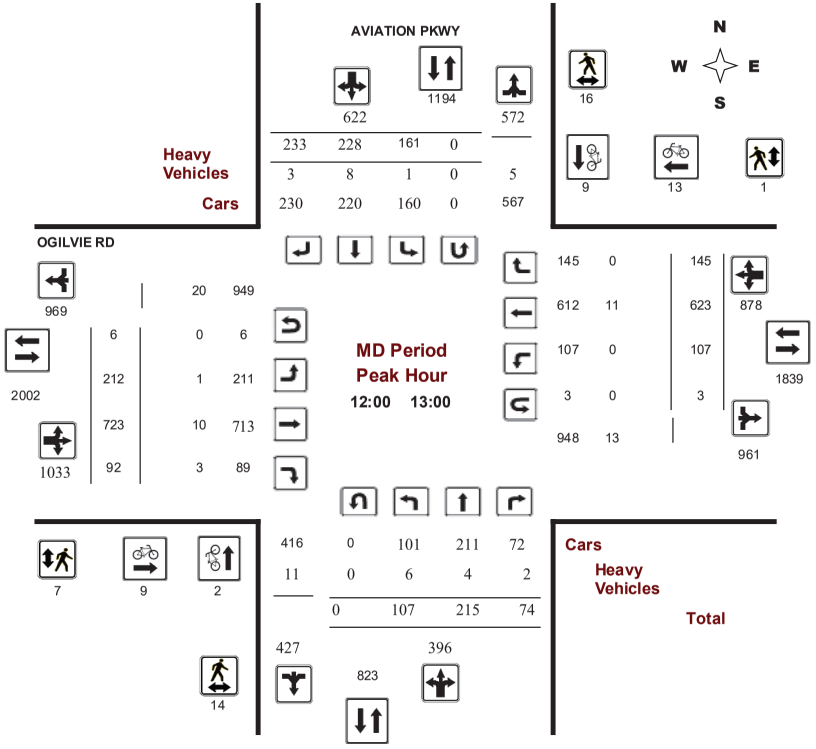
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

AVIATION PKWY @ OGILVIE RD

Survey Date: Thursday, September 28, 2023 **WO No:** 41205

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



Comments

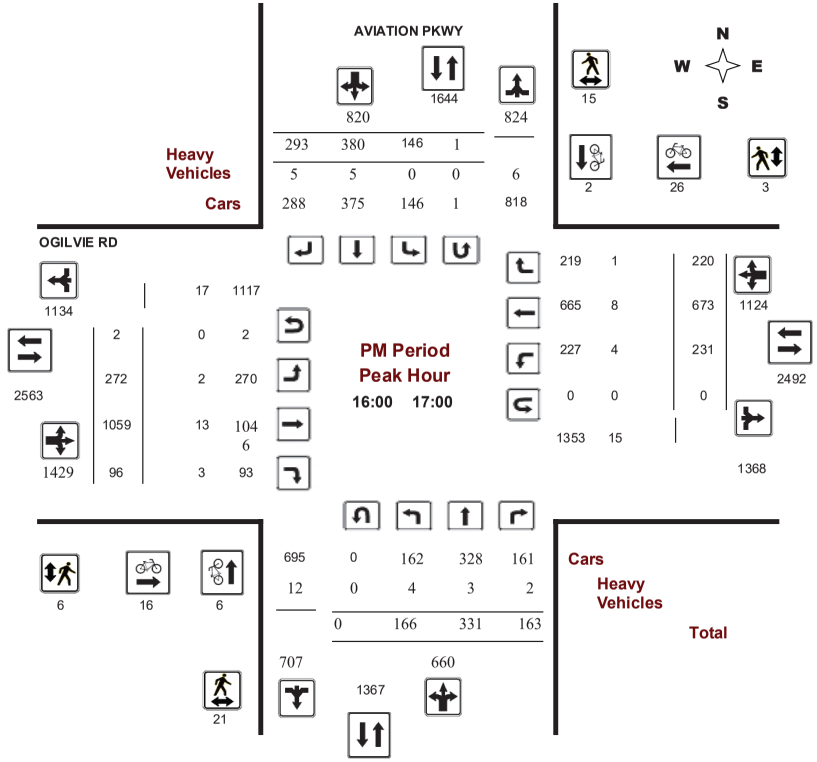
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

AVIATION PKWY @ OGILVIE RD

Survey Date: Thursday, September 28, 2023 **WO No:** 41205

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



Comments

Transportation Services - Traffic Services

Turning Movement Count - Study Results

AVIATION PKWY @ OGILVIE RD

Survey Date: Thursday, September 28, 2023 **WO No:** 41205

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

Full Study Summary (8 HR Standard)

Survey Date: Thursday, September 28, 2023

Total Observed U-Turns

Northbound: 2 Southbound: 9

Eastbound: 22 Westbound: 14

AADT Factor 1.00

	AVIATION PKWY								OGILVIE RD									
	Northbound				Southbound				Eastbound				Westbound					
Period	LT	ST	RT	NB TOT	LT	ST	RT	SB TOT	STR TOT	LT	ST	RT	EB TOT	LT	ST	RT	WB TOT	STR TOT	Grand Total
07:00 08:00	150	404	186	**740**	122	247	205	**574**	**1314**	317	321	67	**705**	107	409	116	**632**	**1337**	**2651**
08:00 09:00	200	416	204	**820**	175	306	242	**723**	**1543**	320	510	67	**897**	109	540	137	**786**	**1683**	**3226**
09:00 10:00	134	257	105	**496**	148	238	176	**562**	**1058**	229	479	62	**770**	93	490	102	**685**	**1455**	**2513**
11:30 12:30	110	204	85	**399**	158	223	246	**627**	**1026**	199	724	77	**1000**	105	624	156	**885**	**1885**	**2911**
12:30 13:30	108	230	74	**412**	135	227	206	**568**	**980**	224	665	87	**976**	111	559	155	**825**	**1801**	**2781**
15:00 16:00	152	324	94	**570**	191	427	294	**912**	**1482**	240	892	110	**1242**	232	732	262	**1226**	**2468**	**3950**
16:00 17:00	166	331	163	**660**	146	380	293	**819**	**1479**	272	1059	96	**1427**	231	673	220	**1124**	**2551**	**4030**
17:00 18:00	136	267	138	**541**	155	319	195	**669**	**1210**	247	967	123	**1337**	181	604	198	**983**	**2320**	**3530**
Sub Total	1156	2433	1049	**4638**	1230	2367	1857	**5454**	**10092**	2048	5617	689	**8354**	1169	4631	1346	**7146**	**15500**	**25592**
U Turns				**2**				**9**	**11**				**22**				**14**	**36**	**47**
Total	1156	2433	1049	**4640**	1230	2367	1857	**5463**	**10103**	2048	5617	689	**8376**	1169	4631	1346	**7160**	**15536**	**25639**
EQ 12Hr	1607	3382	1458	**6450**	1710	3290	2581	**7594**	**14043**	2847	7808	958	**11643**	1625	6437	1871	**9952**	**21595**	**35638**
Note: These values are calculated by multiplying the totals by the appropriate expansion factor.														**1.39**					
AVG 12Hr	1607	3382	1458	**6450**	1710	4310	3381	**7594**	**14043**	2847	7808	958	**11643**	1625	6437	1871	**9952**	**21595**	**35638**
Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor.														**1.00**					
AVG 24Hr	2105	4430	1910	**8450**	2240	5646	4429	**9948**	**18396**	3730	10228	1255	**15252**	2129	8432	2451	**13037**	**28289**	**46686**
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

AVIATION PKWY @ OGILVIE RD

Survey Date: Thursday, September 28, 2023 **WO No:** 41205

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

Full Study 15 Minute Increments

		AVIATION PKWY									OGILVIE RD									
		Northbound				Southbound					Eastbound				Westbound					
Time Period		LT	ST	RT	N TOT	LT	ST	RT	S TOT	STR TOT	LT	ST	RT	E TOT	LT	ST	RT	W TOT	STR TOT	Grand Total
07:00	07:15	32	93	45	170	24	45	32	101	271	63	64	12	139	23	73	25	121	260	531
07:15	07:30	40	75	48	163	28	55	41	124	287	64	63	11	138	14	95	29	138	276	563
07:30	07:45	29	111	37	177	36	64	55	155	332	89	95	21	206	37	104	37	179	385	717
07:45	08:00	49	125	56	231	34	83	77	194	425	101	99	23	223	33	137	25	195	418	843
08:00	08:15	47	113	56	216	40	78	68	187	403	71	90	24	185	36	135	40	211	396	799
08:15	08:30	52	107	53	212	37	99	66	203	415	94	138	15	248	23	133	26	182	430	845
08:30	08:45	55	112	54	221	48	63	66	178	399	73	144	16	233	27	118	34	179	412	811
08:45	09:00	46	84	41	171	50	66	42	158	329	82	138	12	232	23	154	37	214	446	775
09:00	09:15	40	70	37	147	41	77	59	177	324	66	137	14	218	24	123	33	181	399	723
09:15	09:30	39	70	27	136	37	55	34	126	262	62	106	20	188	19	130	20	169	357	619
09:30	09:45	33	67	23	123	42	57	40	139	262	48	131	15	194	29	118	28	176	370	632
09:45	10:00	22	50	18	90	28	49	43	120	210	53	105	13	171	21	119	21	162	333	543
11:30	11:45	26	55	24	105	36	44	48	128	233	49	175	19	243	23	149	42	214	457	690
11:45	12:00	28	52	24	104	39	64	60	164	268	52	164	15	231	25	152	43	220	451	719
12:00	12:15	27	45	22	94	47	60	69	176	270	44	195	18	259	26	152	31	209	468	738
12:15	12:30	29	52	15	96	36	55	69	160	256	54	190	25	272	31	171	40	243	515	771
12:30	12:45	29	61	18	108	33	50	47	130	238	43	169	21	233	31	163	34	229	462	700
12:45	13:00	22	57	19	98	45	63	48	156	254	71	169	28	269	19	137	40	197	466	720
13:00	13:15	29	59	15	103	29	58	51	138	241	61	163	17	242	33	136	37	207	449	690
13:15	13:30	28	53	22	103	28	56	60	144	247	49	164	21	234	28	123	44	195	429	676
15:00	15:15	37	86	15	138	44	101	75	220	358	56	183	25	265	63	185	64	313	578	936
15:15	15:30	48	68	24	140	47	85	71	205	345	65	245	38	349	59	215	60	335	684	1029
15:30	15:45	31	96	22	149	51	124	79	254	403	52	199	28	280	64	164	61	290	570	973
15:45	16:00	36	74	33	143	49	117	69	236	379	67	265	19	351	46	168	77	291	642	1021
16:00	16:15	34	77	27	138	40	109	82	231	369	58	243	16	318	51	172	58	281	599	968
16:15	16:30	35	79	42	156	43	87	77	207	363	63	275	23	362	66	163	45	274	636	999
16:30	16:45	42	86	49	177	31	91	76	199	376	68	264	29	361	70	169	55	294	655	1031
16:45	17:00	55	89	45	189	32	93	58	183	372	83	277	28	388	44	169	62	275	663	1035
17:00	17:15	33	85	36	154	36	91	57	184	338	72	258	33	363	62	143	48	253	616	954
17:15	17:30	40	61	26	127	37	84	44	165	292	65	255	32	357	48	179	53	281	638	930
17:30	17:45	28	64	39	131	35	79	46	161	292	65	224	33	322	41	147	49	237	559	851
17:45	18:00	35	57	37	130	47	65	48	160	290	45	230	25	302	30	135	48	215	517	807
Total:		1156	2433	1049	4640	1230	2367	1857	5463	10103	2048	5617	689	8376	1169	4631	1346	7160	15536	25,639

Note: U-Turns are included in Totals.

Transportation Services - Traffic Services

Turning Movement Count - Study Results

AVIATION PKWY @ OGILVIE RD

Survey Date: Thursday, September 28, 2023 **WO No:** 41205

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

Full Study Cyclist Volume

		AVIATION PKWY			OGILVIE RD			
Time Period		Northbound	Southbound	Street Total	Eastbound	Westbound	Street Total	Grand Total
07:00	07:15	0	3	3	1	1	2	5
07:15	07:30	2	4	6	3	5	8	14
07:30	07:45	0	2	2	4	6	10	12
07:45	08:00	0	1	1	12	3	15	16
08:00	08:15	2	5	7	11	1	12	19
08:15	08:30	0	4	4	6	2	8	12
08:30	08:45	1	5	6	10	4	14	20
08:45	09:00	3	0	3	8	3	11	14
09:00	09:15	0	3	3	10	1	11	14
09:15	09:30	0	0	0	3	2	5	5
09:30	09:45	1	0	1	5	1	6	7
09:45	10:00	0	0	0	3	0	3	3
11:30	11:45	0	2	2	1	0	1	3
11:45	12:00	0	1	1	1	2	3	4
12:00	12:15	0	2	2	0	3	3	5
12:15	12:30	2	3	5	5	2	7	12
12:30	12:45	0	4	4	2	4	6	10
12:45	13:00	0	0	0	2	4	6	6
13:00	13:15	0	0	0	3	0	3	3
13:15	13:30	0	1	1	1	3	4	5
15:00	15:15	1	1	2	0	7	7	9
15:15	15:30	4	0	4	1	6	7	11
15:30	15:45	5	1	6	3	4	7	13
15:45	16:00	1	3	4	3	1	4	8
16:00	16:15	1	0	1	4	3	7	8
16:15	16:30	2	1	3	5	2	7	10
16:30	16:45	1	1	2	4	11	15	17
16:45	17:00	2	0	2	3	10	13	15
17:00	17:15	5	6	11	4	12	16	27
17:15	17:30	1	3	4	4	7	11	15
17:30	17:45	0	7	7	6	5	11	18
17:45	18:00	3	2	5	4	5	9	14
Total		37	65	**102**	132	120	252	354

Transportation Services - Traffic Services

Turning Movement Count - Study Results

AVIATION PKWY @ OGILVIE RD

Survey Date: Thursday, September 28, 2023 **WO No:** 41205

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

Full Study Pedestrian Volume

		AVIATION PKWY			OGILVIE RD			
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	1	1	**2**	0	0	**0**	**2**
07:15	07:30	2	1	**3**	1	0	**1**	**4**
07:30	07:45	5	2	**7**	1	1	**2**	**9**
07:45	08:00	3	0	**3**	1	0	**1**	**4**
08:00	08:15	1	3	**4**	2	0	**2**	**6**
08:15	08:30	3	3	**6**	0	0	**0**	**6**
08:30	08:45	3	4	**7**	1	0	**1**	**8**
08:45	09:00	5	1	**6**	1	0	**1**	**7**
09:00	09:15	3	1	**4**	0	1	**1**	**5**
09:15	09:30	10	1	**11**	2	0	**2**	**13**
09:30	09:45	5	2	**7**	2	0	**2**	**9**
09:45	10:00	1	2	**3**	1	1	**2**	**5**
11:30	11:45	0	3	**3**	1	9	**10**	**13**
11:45	12:00	3	2	**5**	0	1	**1**	**6**
12:00	12:15	1	4	**5**	2	0	**2**	**7**
12:15	12:30	1	5	**6**	2	0	**2**	**8**
12:30	12:45	6	4	**10**	1	0	**1**	**11**
12:45	13:00	6	3	**9**	2	1	**3**	**12**
13:00	13:15	5	4	**9**	0	0	**0**	**9**
13:15	13:30	4	4	**8**	2	2	**4**	**12**
15:00	15:15	3	3	**6**	2	1	**3**	**9**
15:15	15:30	2	4	**6**	0	1	**1**	**7**
15:30	15:45	6	3	**9**	0	5	**5**	**14**
15:45	16:00	1	2	**3**	2	5	**7**	**10**
16:00	16:15	3	3	**6**	0	0	**0**	**6**
16:15	16:30	5	7	**12**	3	3	**6**	**18**
16:30	16:45	6	0	**6**	1	0	**1**	**7**
16:45	17:00	7	5	**12**	2	0	**2**	**14**
17:00	17:15	6	5	**11**	0	1	**1**	**12**
17:15	17:30	5	3	**8**	2	1	**3**	**11**
17:30	17:45	4	4	**8**	2	0	**2**	**10**
17:45	18:00	2	5	**7**	0	0	**0**	**7**
Total	.....	118	94	**212**	36	33	**69**	**281**

Transportation Services - Traffic Services

Turning Movement Count - Study Results

AVIATION PKWY @ OGILVIE RD

Survey Date: Thursday, September 28, 2023 **WO No:** 41205

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

Full Study Heavy Vehicles

		AVIATION PKWY									OGILVIE RD									
		Northbound				Southbound					Eastbound				Westbound					
Time Period		LT	ST	RT	N TOT	LT	ST	RT	S TOT	STR TOT	LT	ST	RT	E TOT	LT	ST	RT	W TOT	STR TOT	Grand Total
07:00	07:15	1	1	0	**3**	0	1	0	**4**	**7**	2	7	0	**12**	0	2	0	**9**	**21**	**14**
07:15	07:30	0	0	0	**0**	0	0	0	**0**	**0**	0	3	0	**8**	0	5	0	**8**	**16**	**8**
07:30	07:45	0	1	0	**3**	0	0	0	**2**	**5**	1	7	0	**9**	2	1	0	**10**	**19**	**12**
07:45	08:00	2	2	0	**9**	1	2	0	**5**	**14**	0	3	0	**8**	3	3	0	**10**	**18**	**16**
08:00	08:15	0	2	2	**8**	0	3	2	**8**	**16**	1	1	0	**11**	1	7	0	**11**	**22**	**19**
08:15	08:30	1	3	2	**7**	0	0	1	**5**	**12**	1	7	0	**13**	1	3	0	**13**	**26**	**19**
08:30	08:45	0	1	1	**2**	0	0	0	**1**	**3**	0	7	0	**9**	0	2	0	**10**	**19**	**11**
08:45	09:00	2	2	0	**4**	0	0	2	**4**	**8**	0	9	0	**15**	0	2	0	**11**	**26**	**17**
09:00	09:15	0	3	1	**7**	0	0	0	**4**	**11**	1	4	2	**15**	1	8	0	**14**	**29**	**20**
09:15	09:30	0	5	0	**11**	1	2	0	**9**	**20**	1	5	2	**13**	2	5	0	**13**	**26**	**23**
09:30	09:45	5	0	1	**8**	0	2	2	**5**	**13**	1	8	0	**19**	0	3	0	**12**	**31**	**22**
09:45	10:00	1	0	0	**2**	0	0	2	**3**	**5**	0	5	1	**13**	0	4	1	**10**	**23**	**14**
11:30	11:45	0	1	0	**1**	0	0	0	**5**	**6**	2	7	0	**12**	0	3	2	**12**	**24**	**15**
11:45	12:00	1	1	0	**6**	0	3	1	**6**	**12**	1	4	1	**10**	0	2	0	**6**	**16**	**14**
12:00	12:15	2	1	0	**6**	0	3	1	**5**	**11**	0	3	0	**13**	0	7	0	**10**	**23**	**17**
12:15	12:30	0	0	0	**3**	0	1	0	**1**	**4**	0	1	2	**5**	0	2	0	**3**	**8**	**6**
12:30	12:45	3	2	1	**7**	0	1	1	**5**	**12**	1	2	0	**7**	0	0	0	**3**	**10**	**11**
12:45	13:00	1	1	1	**7**	1	3	1	**6**	**13**	0	4	1	**9**	0	2	0	**8**	**17**	**15**
13:00	13:15	1	3	0	**9**	0	1	0	**5**	**14**	1	5	1	**10**	3	2	0	**10**	**20**	**17**
13:15	13:30	1	1	0	**5**	0	1	1	**5**	**10**	2	2	0	**11**	2	5	0	**9**	**20**	**15**
15:00	15:15	1	2	0	**7**	0	0	2	**5**	**12**	1	10	3	**20**	1	3	0	**14**	**34**	**23**
15:15	15:30	0	1	1	**5**	0	1	0	**2**	**7**	0	6	1	**15**	1	8	0	**16**	**31**	**19**
15:30	15:45	0	1	0	**3**	0	1	0	**2**	**5**	0	2	0	**4**	1	2	0	**5**	**9**	**7**
15:45	16:00	1	0	0	**3**	2	0	0	**2**	**5**	0	4	0	**11**	2	6	0	**14**	**25**	**15**
16:00	16:15	0	3	2	**9**	0	2	2	**8**	**17**	0	5	1	**11**	1	3	1	**12**	**23**	**20**
16:15	16:30	0	0	0	**3**	0	1	1	**2**	**5**	0	3	0	**6**	2	2	0	**7**	**13**	**9**
16:30	16:45	2	0	0	**4**	0	0	1	**1**	**5**	0	2	1	**8**	1	2	0	**5**	**13**	**9**
16:45	17:00	2	0	0	**5**	0	2	1	**5**	**10**	2	3	1	**10**	0	1	0	**4**	**14**	**12**
17:00	17:15	3	0	1	**7**	0	3	1	**4**	**11**	0	3	0	**8**	0	1	0	**5**	**13**	**12**
17:15	17:30	1	2	0	**5**	0	0	0	**2**	**7**	0	2	2	**7**	0	2	0	**4**	**11**	**9**
17:30	17:45	1	0	0	**5**	0	2	0	**2**	**7**	0	1	2	**5**	0	1	0	**2**	**7**	**7**
17:45	18:00	0	0	1	**4**	0	3	0	**3**	**7**	0	1	0	**3**	0	2	0	**4**	**7**	**7**
Total:	None	32	39	14	**168**	5	38	22	**126**	**294**	18	136	21	**330**	24	101	4	**284**	**614**	**454**

Transportation Services - Traffic Services

Turning Movement Count - Study Results

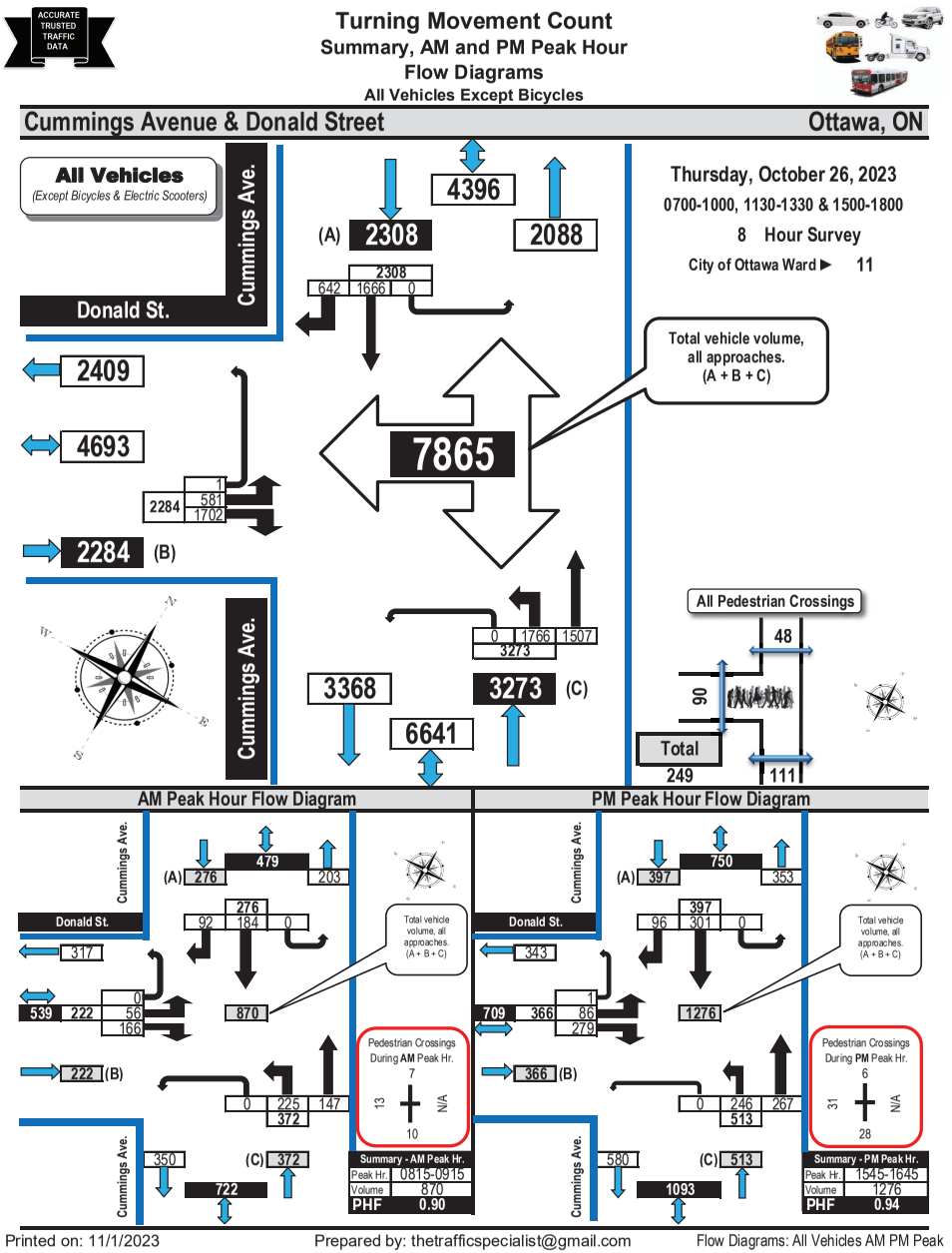
AVIATION PKWY @ OGILVIE RD

Survey Date: Thursday, September 28, 2023 **WO No:** 41205

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

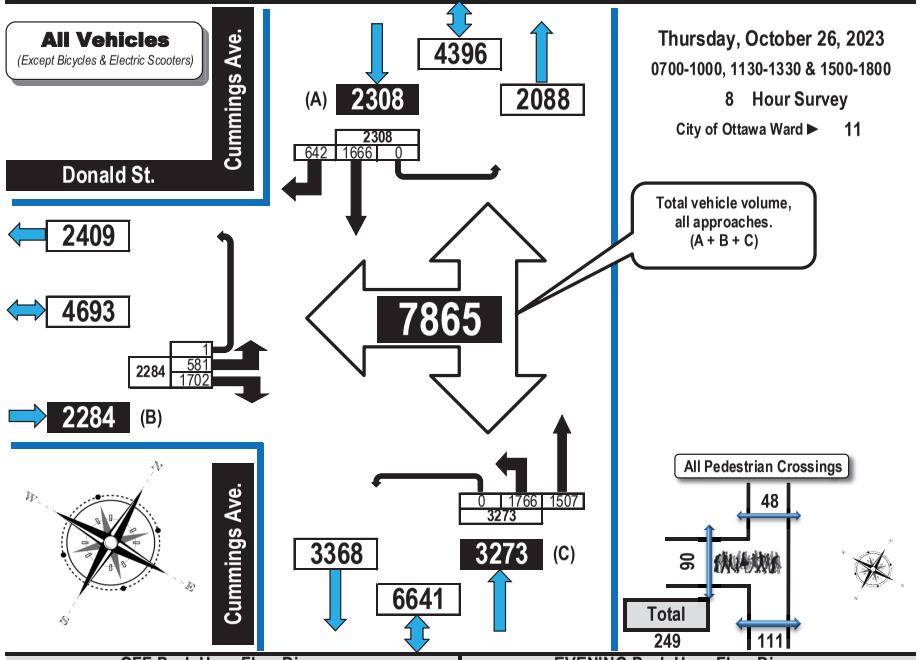
Full Study 15 Minute U-Turn Total

		AVIATION PKWY		OGILVIE RD		
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	1	1	2
07:45	08:00	1	0	0	0	1
08:00	08:15	0	1	0	0	1
08:15	08:30	0	1	1	0	2
08:30	08:45	0	1	0	0	1
08:45	09:00	0	0	0	0	0
09:00	09:15	0	0	1	1	2
09:15	09:30	0	0	0	0	0
09:30	09:45	0	0	0	1	1
09:45	10:00	0	0	0	1	1
11:30	11:45	0	0	0	0	0
11:45	12:00	0	1	0	0	1
12:00	12:15	0	0	2	0	2
12:15	12:30	0	0	3	1	4
12:30	12:45	0	0	0	1	1
12:45	13:00	0	0	1	1	2
13:00	13:15	0	0	1	1	2
13:15	13:30	0	0	0	0	0
15:00	15:15	0	0	1	1	2
15:15	15:30	0	2	1	1	4
15:30	15:45	0	0	1	1	2
15:45	16:00	0	1	0	0	1
16:00	16:15	0	0	1	0	1
16:15	16:30	0	0	1	0	1
16:30	16:45	0	1	0	0	1
16:45	17:00	0	0	0	0	0
17:00	17:15	0	0	0	0	0
17:15	17:30	0	0	5	1	6
17:30	17:45	0	1	0	0	1
17:45	18:00	1	0	2	2	5
Total		2	9	22	14	47



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

Cummings Avenue & Donald Street — Ottawa, ON



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

Cummings Avenue & Donald Street — Ottawa, ON

Survey Date: Thursday, October 26, 2023 **Start Time:** 0700 **AADT Factor:** 0.9
Weather AM: Overcast 14° C **Survey Duration:** 8 Hrs. **Survey Hours:** 0700-1000, 1130-1330 & 1500-1800
Weather PM: Overcast 17° C **Surveyor(s):** T. Carmody

	Donald St.					N/A					Cummings Ave.					Cummings Ave.					
	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	42		104	0	146						146	107	114		0	221		202	47	0	249	470	616
0800-0900	54		160	0	214						214	224	154		0	378		186	89	0	275	653	867
0900-1000	60		180	0	240						240	202	124		0	326		177	79	0	256	582	822
1130-1230	57		236	0	293						293	231	156		0	387		175	82	0	257	644	937
1230-1330	72		228	0	300						300	201	172		0	373		150	82	0	232	605	905
1500-1600	87		268	0	355						355	287	241		0	528		242	92	0	334	862	1217
1600-1700	89		269	1	359						359	227	284		0	511		285	92	0	377	888	1247
1700-1800	120		257	0	377						377	287	262		0	549		249	79	0	328	877	1254
Totals	581		1702	1	2284						2284	1766	1507		0	3273		1666	642	0	2308	5581	7865

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	808	0	2366	1	3175	0	0	0	0	0	3175	2455	2095	0	0	4549	0	2316	892	0	3208	7758	10932
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	727	0	2129	1	2857	0	0	0	0	0	2857	2209	1885	0	0	4095	0	2084	803	0	2887	6982	9839
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	952	0	2789	2	3743	0	0	0	0	0	3743	2894	2470	0	0	5364	0	2730	1052	0	3782	9146	12889

AADT and expansion factors provided by the City of Ottawa

AM Peak Hour Factor ➡ 0.91												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	56	0	166	0	222	0	0	0	0	0	222	225	147	0	0	372	0	184	92	0	276	648	870
OFF Peak Hour Factor ➡ 0.90												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.
1145-1245	66	0	241	0	307	0	0	0	0	0	307	228	161	0	0	389	0	183	79	0	262	651	958
PM Peak Hour Factor ➡ 0.94												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	279	1	366	0	0	0	0	0	366	246	267	0	0	513	0	301	96	0	397	910	1276

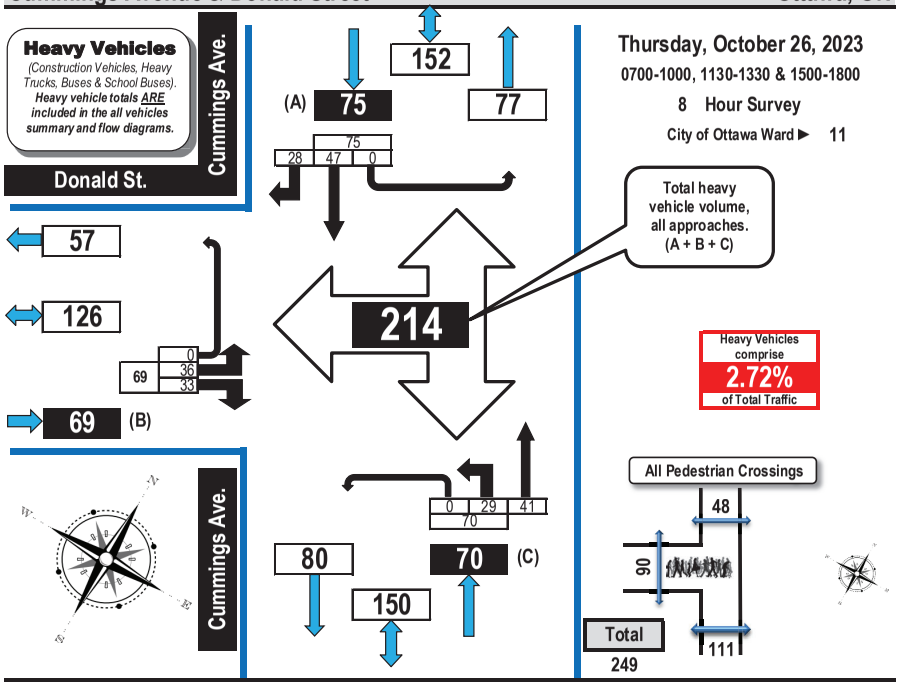
Comments:
OC Transpo and Para Transpo buses, private buses and school buses comprise 44.86% of the heavy vehicle traffic.

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

Cummings Avenue & Donald 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.



Thursday, October 26, 2023
0700-1000, 1130-1330 & 1500-1800
8 Hour Survey
City of Ottawa Ward ► 11

Heavy Vehicles comprise **2.72%** of Total Traffic

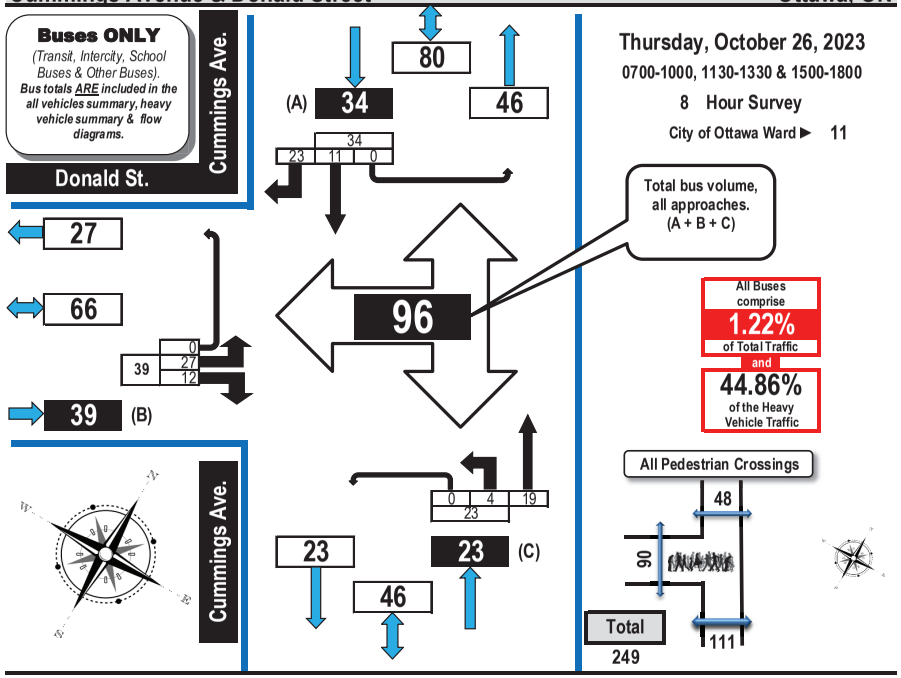
	Donald St.					N/A					Cummings Ave.					Cummings Ave.					
	Eastbound					Westbound					Northbound					Southbound					
Time Period	LT	ST	RT	UT	EB Tot	LT	ST	RT	UT	WB Tot	LT	ST	RT	UT	NB Tot	LT	ST	RT	UT	SB Tot	GR Tot
0700-0800	6		3	0	9						8	5		0	13		4	5	0	9	31
0800-0900	2		7	0	9						5	8		0	13		3	6	0	9	31
0900-1000	5		2	0	7						3	8		0	11		10	4	0	14	32
1130-1230	5		4	0	9						3	4		0	7		5	3	0	8	24
1230-1330	3		5	0	8						3	0		0	3		8	2	0	10	21
1500-1600	5		3	0	8						2	6		0	8		8	3	0	11	27
1600-1700	5		7	0	12						4	7		0	11		7	3	0	10	33
1700-1800	5		2	0	7						1	3		0	4		2	2	0	4	15
Totals	36		33	0	69						29	41		0	70		47	28	0	75	214

Comments:
OC Transpo and Para Transpo buses, private buses and school buses comprise 44.86% of the heavy vehicle traffic.

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

Cummings Avenue & Donald 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.



Thursday, October 26, 2023
0700-1000, 1130-1330 & 1500-1800
8 Hour Survey
City of Ottawa Ward ► 11

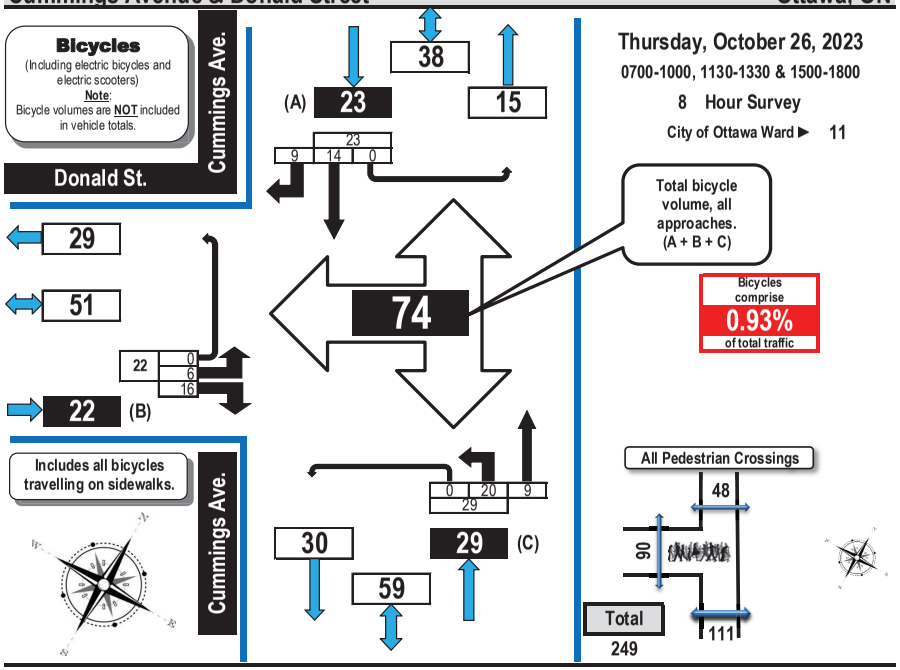
All Buses comprise **1.22%** of Total Traffic and **44.86%** of the Heavy Vehicle Traffic

	Donald St.					N/A					Cummings Ave.					Cummings Ave.					
	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	5		1	0	6						3	3		0	6		1	4	0	5	17
0800-0900	2		5	0	7						0	3		0	3		0	4	0	4	14
0900-1000	2		1	0	3						0	1		0	1		4	3	0	7	11
1130-1230	4		0	0	4						0	1		0	1		0	3	0	3	8
1230-1330	2		1	0	3						0	0		0	0		2	2	0	4	7
1500-1600	4		2	0	6						1	5		0	6		2	3	0	5	17
1600-1700	4		2	0	6						0	6		0	6		1	2	0	3	15
1700-1800	4		0	0	4						0	0		0	0		1	2	0	3	7
Totals	27		12	0	39						4	19		0	23		11	23	0	34	96

Comments:
OC Transpo and Para Transpo buses, private buses and school buses comprise 44.86% of the heavy vehicle traffic.

Turning Movement Count
Bicycle Summary
Flow Diagram

Cummings Avenue & Donald Street — **Ottawa, ON**



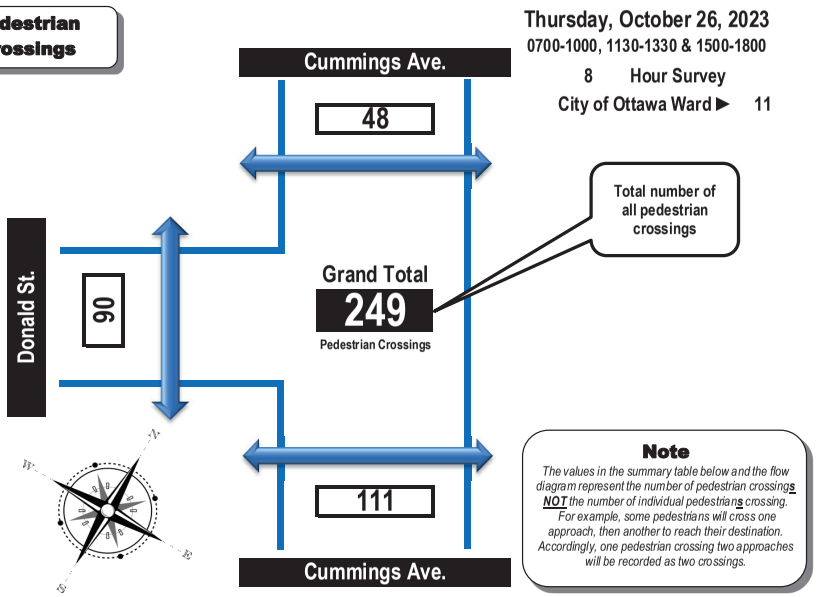
Thursday, October 26, 2023
0700-1000, 1130-1330 & 1500-1800
8 Hour Survey
City of Ottawa Ward ► 11

	Donald St. Eastbound					N/A Westbound					Cummings Ave. Northbound					Cummings Ave. 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	6						3	0		0	3		4	0	0	4	13
0800-0900	1		4	0	5						3	0		0	3		4	1	0	5	13
0900-1000	0		0	0	0						1	2		0	3		1	1	0	2	5
1130-1230	0		0	0	0						0	2		0	2		1	3	0	4	6
1230-1330	0		0	0	0						0	1		0	1		0	1	0	1	2
1500-1600	1		3	0	4						3	1		0	4		2	0	0	2	10
1600-1700	3		3	0	6						4	3		0	7		0	2	0	2	15
1700-1800	1		0	0	1						6	0		0	6		2	1	0	3	10
Totals	6		16	0	22						20	9		0	29		14	9	0	23	74

Comments:
OC Transpo and Para Transpo buses, private buses and school buses comprise 44.86% of the heavy vehicle traffic.

Turning Movement Count
Pedestrian Crossings Summary
and Flow Diagram

Cummings Avenue & Donald Street — **Ottawa, ON**



Thursday, October 26, 2023
0700-1000, 1130-1330 & 1500-1800
8 Hour Survey
City of Ottawa Ward ► 11

Time Period	West Side Crossing Donald St.	East Side Crossing N/A	Street Total	South Side Crossing Cummings Ave.	North Side Crossing Cummings Ave.	Street Total	Grand Total
0700-0800	6		6	3	5	8	14
0800-0900	11		11	8	6	14	25
0900-1000	5		5	11	5	16	21
1130-1230	7		7	7	2	9	16
1230-1330	8		8	12	3	15	23
1500-1600	20		20	21	9	30	50
1600-1700	24		24	28	6	34	58
1700-1800	9		9	21	12	33	42
Totals	90		90	111	48	159	249

Comments:
OC Transpo and Para Transpo buses, private buses and school buses comprise 44.86% of the heavy vehicle traffic.

ACCURATE TRUSTED TRAFFIC DATA

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

Cummings Avenue/Labelle Street & Cyrville Road — Ottawa, ON

Survey Date: Thursday, October 26, 2023 | **Start Time:** 0700 | **AADT Factor:** 0.9
Weather AM: Overcast 14° C | **Survey Duration:** 8 Hrs. | **Survey Hours:** 0700-1000, 1130-1330 & 1500-1800
Weather PM: Overcast 17° C | **Surveyor(s):** T. Carmody

	Cyrville Rd. Eastbound					Cyrville Rd. Westbound						Labelle St. Northbound					Cummings Ave. 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	11	155	24	0	190	71	228	106	0	405	595	1	8	31	0	40	113	21	8	0	142	182	777
0800-0900	20	205	39	0	264	104	359	155	0	618	882	6	14	26	0	46	125	43	21	0	189	235	1117
0900-1000	17	210	25	0	252	40	227	152	0	419	671	1	16	29	0	46	155	20	18	0	193	239	910
1130-1230	48	295	21	0	364	54	244	203	0	501	865	11	28	41	0	80	180	37	30	0	247	327	1192
1230-1330	46	315	19	0	380	45	223	188	0	456	836	8	16	22	0	46	180	37	35	0	252	298	1134
1500-1600	71	404	13	0	488	72	238	229	0	539	1027	7	45	45	0	97	223	42	27	0	292	389	1416
1600-1700	60	476	17	0	553	70	299	259	0	628	1181	10	52	68	0	130	215	46	32	0	293	423	1604
1700-1800	81	367	14	0	462	71	241	232	0	544	1006	3	23	29	0	55	168	27	18	0	213	268	1274
Totals	354	2427	172	0	2953	527	2059	1524	0	4110	7063	47	202	291	0	540	1359	273	189	0	1821	2361	9424

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	492	3374	239	0	4105	733	2862	2118	0	5713	9818	65	281	404	0	751	1889	379	263	0	2531	3282	13099

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	443	3036	215	0	3694	659	2576	1907	0	5142	8836	59	253	364	0	676	1700	342	236	0	2278	2954	11789

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	580	3977	282	0	4839	864	3374	2498	0	6736	11575	77	331	477	0	885	2227	447	310	0	2984	3869	15444

AADT and expansion factors provided by the City of Ottawa

AM Peak Hour Factor ➡ 0.91												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.
0745-0845	21	201	37	0	259	111	367	158	0	636	895	5	13	31	0	49	127	41	20	0	188	237	1132
OFF Peak Hour Factor ➡ 0.95												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	51	317	22	0	390	53	237	192	0	482	872	11	24	41	0	76	190	35	34	0	259	335	1207
PM Peak Hour Factor ➡ 0.96												Highest Hourly Vehicle Volume Between 1500h & 1800h											
PM Peak Hr	LT	ST	RT	UT	Total	LT	ST	RT	UT	Total	Str. Tot.	LT	ST	RT	UT	Total	LT	ST	RT	UT	Total	Str. Tot.	Gr. Tot.
1600-1700	60	476	17	0	553	70	299	259	0	628	1181	10	52	68	0	130	215	46	32	0	293	423	1604

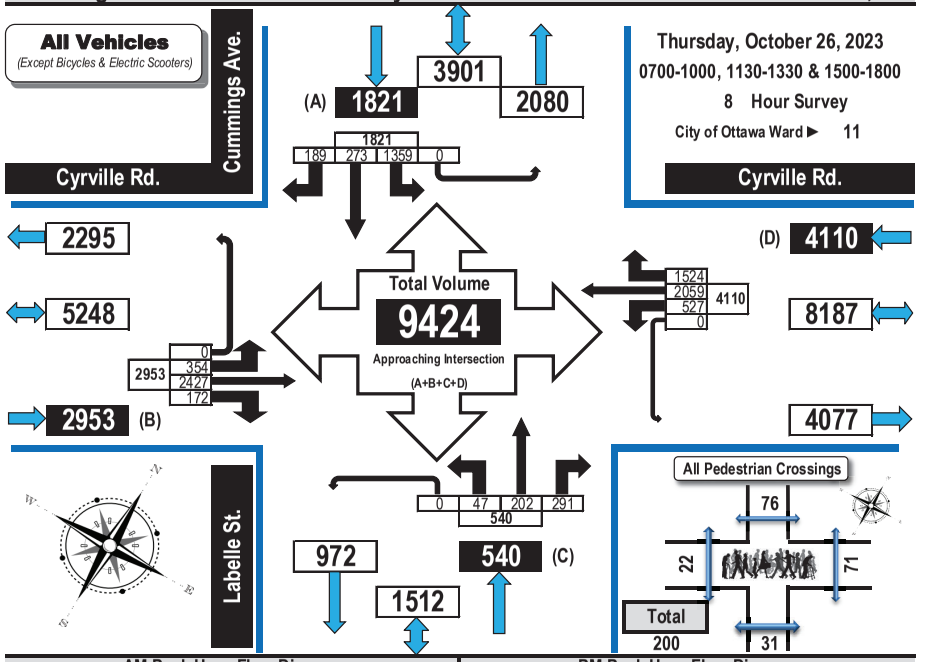
Comments:
OC Transpo and Para Transpo buses, private buses and school buses comprise 12.22% of the heavy vehicle traffic.

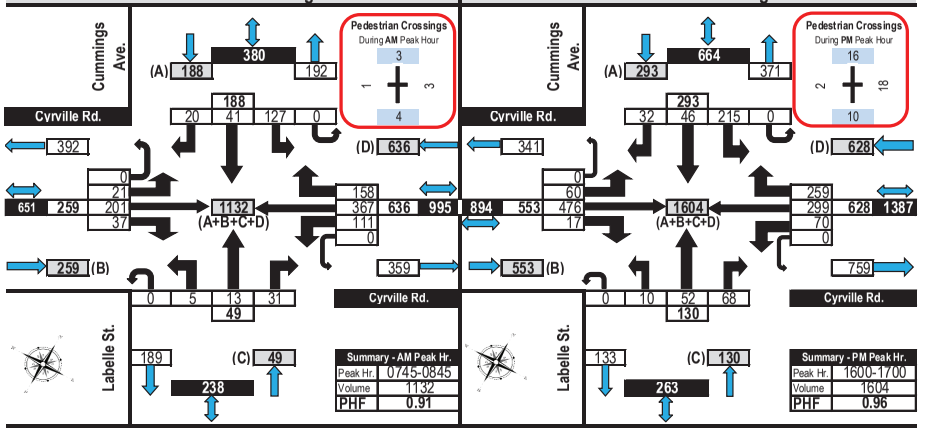
Notes:
1. Includes all vehicle types except bicycles, electric bicycles, and electric scooters.
2. When expansion and AADT factors are applied, the results will differ slightly due to rounding.

ACCURATE TRUSTED TRAFFIC DATA

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

Cummings Avenue/Labelle Street & Cyrville Road — Ottawa, ON





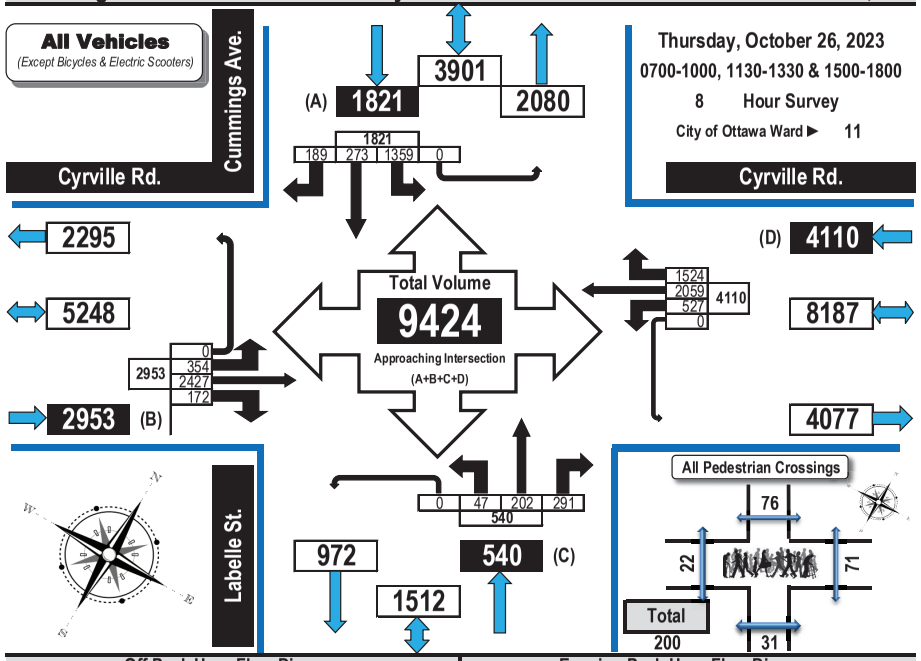
ACCURATE TRUSTED TRAFFIC DATA

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

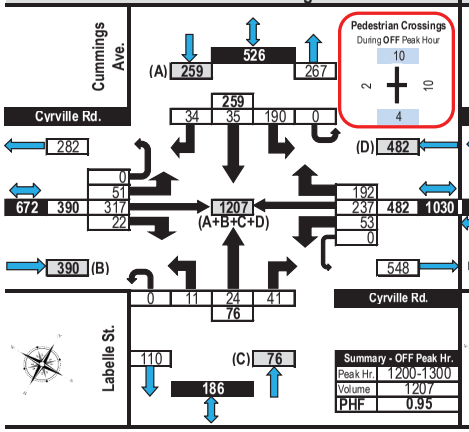
Cummings Avenue/Labelle Street & Cyrville Road — Ottawa, ON

All Vehicles
(Except Bicycles & Electric Scooters)

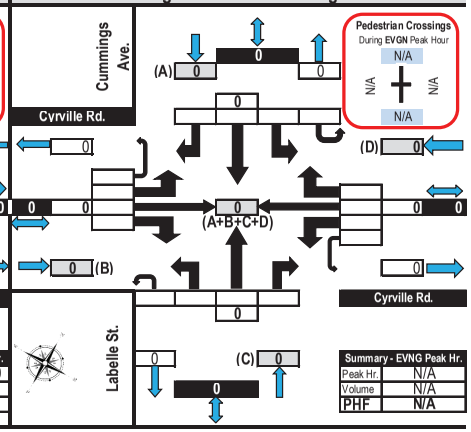
Thursday, October 26, 2023
0700-1000, 1130-1330 & 1500-1800
8 Hour Survey
City of Ottawa Ward ► 11



Off Peak Hour Flow Diagram



Evening Peak Hour Flow Diagram



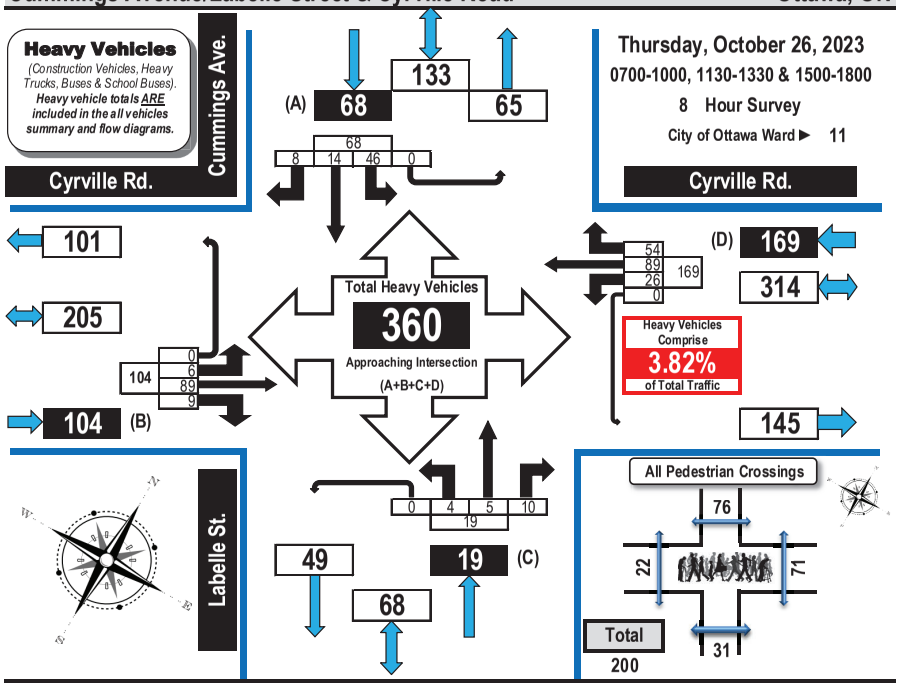
ACCURATE TRUSTED TRAFFIC DATA

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

Cummings Avenue/Labelle Street & Cyrville Road — Ottawa, ON

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

Thursday, October 26, 2023
0700-1000, 1130-1330 & 1500-1800
8 Hour Survey
City of Ottawa Ward ► 11



	Cyrville Rd. Eastbound					Cyrville Rd. Westbound					Labelle St. Northbound					Cummings Ave. 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	4	1	0	6	3	16	12	0	31	1	3	1	0	5	2	1	0	0	3	45
0800-0900	2	13	1	0	16	5	20	10	0	35	0	0	2	0	2	6	3	3	0	12	65
0900-1000	2	10	4	0	16	2	19	9	0	30	1	1	1	0	3	7	2	0	0	9	58
1130-1230	0	7	2	0	9	5	12	9	0	26	0	0	4	0	4	5	6	1	0	12	51
1230-1330	0	16	0	0	16	2	8	9	0	19	1	0	0	0	1	8	1	2	0	11	47
1500-1600	1	14	0	0	15	4	8	2	0	14	1	1	0	0	2	6	1	2	0	9	40
1600-1700	0	15	1	0	16	4	2	1	0	7	0	0	1	0	1	10	0	0	0	10	34
1700-1800	0	10	0	0	10	1	4	2	0	7	0	0	1	0	1	2	0	0	0	2	20
Totals	6	89	9	0	104	26	89	54	0	169	4	5	10	0	19	46	14	8	0	68	360

Comments:
OC Transpo and Para Transpo buses, private buses and school buses comprise 12.22% of the heavy vehicle traffic.

ACCURATE TRUSTED TRAFFIC DATA

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

Cummings Avenue/Labelle Street & Cyrville Road — Ottawa, ON

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

Thursday, October 26, 2023
0700-1000, 1130-1330 & 1500-1800
8 Hour Survey
City of Ottawa Ward ► 11

Cummings Ave. | Cyrville Rd. | Labelle St.

(A) 10 | 22 | 12
(B) 14 | 22 | 8
(C) 4 | 4 | 8
(D) 16 | 36 | 20

Total Bus Volume
44
Approaching Intersection
(A+B+C+D)

All Buses Comprise **0.47%** of Total Traffic
and
12.22% of the Heavy Vehicle Traffic

All Pedestrian Crossings
76 | 22 | 71 | 31
Total 200

	Cyrville Rd. Eastbound					Cyrville Rd. Westbound					Labelle St. Northbound					Cummings Ave. 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	2	4	0	6	0	3	0	0	3	0	0	0	0	0	9
0800-0900	2	1	0	0	3	0	4	0	0	4	0	0	0	0	0	1	0	0	0	1	8
0900-1000	0	4	0	0	4	0	1	0	0	1	0	0	0	0	0	1	0	0	0	1	6
1130-1230	0	0	0	0	0	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	2
1230-1330	0	1	0	0	1	2	0	1	0	3	0	0	0	0	0	2	0	0	0	2	6
1500-1600	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	1	1	0	2	5
1600-1700	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	6
1700-1800	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	2
Totals	2	12	0	0	14	3	7	6	0	16	0	4	0	0	4	8	1	1	0	10	44

Comments:
OC Transpo and Para Transpo buses, private buses and school buses comprise 12.22% of the heavy vehicle traffic.

ACCURATE TRUSTED TRAFFIC DATA

Turning Movement Count
Bicycle Summary
Flow Diagram

Cummings Avenue/Labelle Street & Cyrville Road — Ottawa, ON

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

Thursday, October 26, 2023
0700-1000, 1130-1330 & 1500-1800
8 Hour Survey
City of Ottawa Ward ► 11

Cummings Ave. | Cyrville Rd. | Labelle St.

(A) 7 | 12 | 5
(B) 30 | 44 | 14
(C) 3 | 6 | 9
(D) 19 | 59 | 40

Total Bicycle Volume
62
Approaching Intersection
(A+B+C+D)

Bicycles comprise **0.65%** of total traffic

Includes all bicycles travelling on sidewalks.

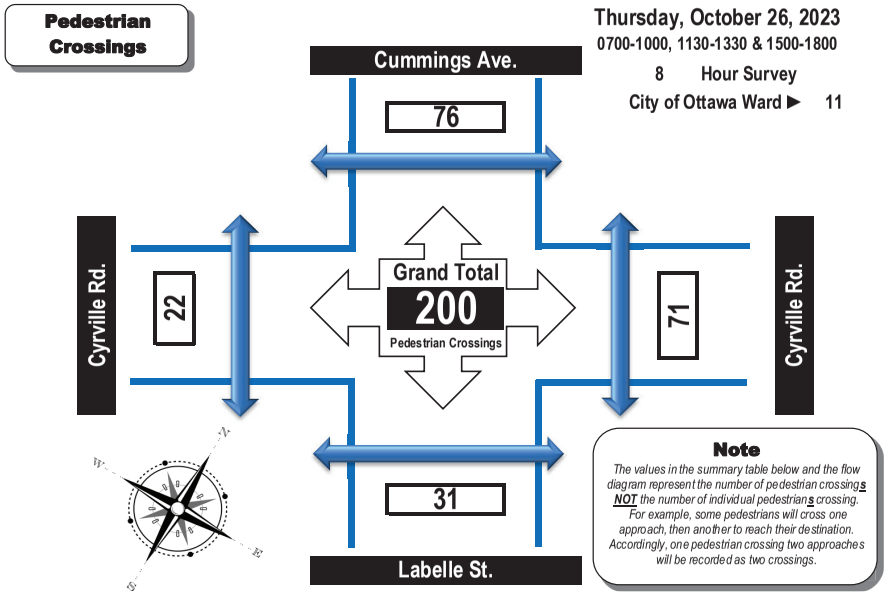
All Pedestrian Crossings
76 | 22 | 71 | 31
Total 200

	Cyrville Rd. Eastbound					Cyrville Rd. Westbound					Labelle St. Northbound					Cummings Ave. 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	4	1	0	5	1	0	0	0	1	0	0	1	0	1	1	0	0	0	1	8
0800-0900	0	2	0	0	2	0	3	1	0	4	0	0	0	0	0	3	0	0	0	3	9
0900-1000	0	2	0	0	2	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	4
1130-1230	0	4	0	0	4	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	5
1230-1330	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	2
1500-1600	0	2	0	0	2	0	2	1	0	3	0	0	1	0	1	1	0	0	0	1	7
1600-1700	0	12	0	0	12	1	2	0	0	3	1	1	2	0	4	0	0	0	0	0	19
1700-1800	0	2	0	0	2	0	2	2	0	4	0	0	0	0	0	2	0	0	0	2	8
Totals	0	29	1	0	30	2	13	4	0	19	1	1	4	0	6	7	0	0	0	7	62

Comments:
OC Transpo and Para Transpo buses, private buses and school buses comprise 12.22% of the heavy vehicle traffic.

Turning Movement Count
Pedestrian Crossings Summary and Flow Diagram

Cummings Avenue/Labelle Street & Cyrville Road — Ottawa, ON



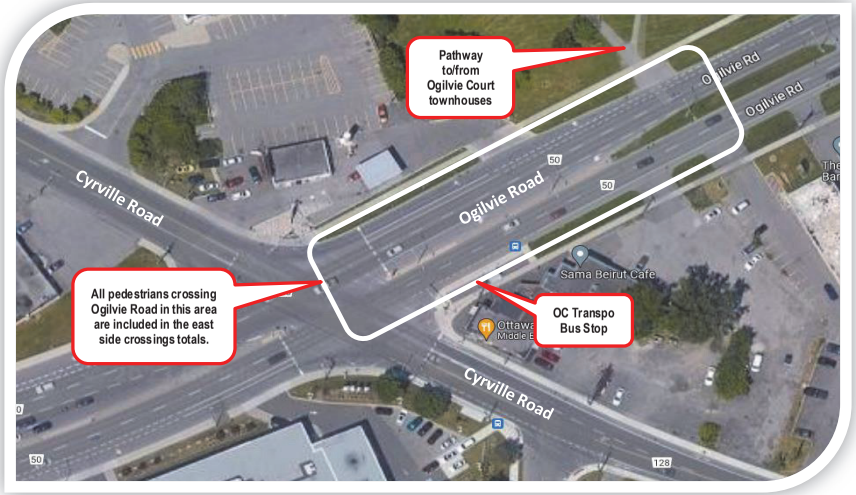
Time Period	West Side Crossing Cyrville Rd.	East Side Crossing Cyrville Rd.	Street Total	South Side Crossing Labelle St.	North Side Crossing Cummings Ave.	Street Total	Grand Total
0700-0800	0	4	4	1	2	3	7
0800-0900	2	2	4	4	4	8	12
0900-1000	2	0	2	2	6	8	10
1130-1230	3	8	11	1	10	11	22
1230-1330	5	9	14	8	7	15	29
1500-1600	0	15	15	0	10	10	25
1600-1700	2	18	20	10	16	26	46
1700-1800	8	15	23	5	21	26	49
Totals	22	71	93	31	76	107	200

Comments:
OC Transpo and Para Transpo buses, private buses and school buses comprise 12.22% of the heavy vehicle traffic.

Diagrams, Maps and Photographs

Cyrville Road & Ogilvie Road

Thursday, October 26, 2023



ACCURATE TRUSTED TRAFFIC DATA

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

Cyrville Road & Ogilvie Road — Ottawa, ON

Survey Date: Thursday, October 26, 2023 **Start Time:** 0700 **AADT Factor:** 0.9
Weather AM: Overcast 14° C **Survey Duration:** 8 Hrs. **Survey Hours:** 0700-1000, 1130-1330 & 1500-1800
Weather PM: Overcast 17° C **Surveyor(s):** T. Carmody

	Ogilvie Rd. Eastbound					Ogilvie Rd. Westbound						Cyrville Rd. Northbound					Cyrville Rd. 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	0	476	87	0	563	23	587	71	1	682	1245	72	126	16	0	214	26	91	26	0	143	357	1602
0800-0900	0	576	135	0	711	34	740	134	0	908	1619	149	187	26	0	362	47	105	43	1	196	558	2177
0900-1000	1	512	139	0	652	24	493	106	0	623	1275	87	139	12	0	238	69	121	74	1	265	503	1778
1130-1230	2	646	184	0	832	26	590	149	0	765	1597	101	152	31	0	284	112	136	131	0	379	663	2260
1230-1330	0	654	202	1	857	32	539	128	2	701	1558	85	151	32	0	268	99	145	146	0	390	658	2216
1500-1600	0	779	203	0	982	41	707	183	1	932	1914	84	173	28	0	285	122	196	134	0	452	737	2651
1600-1700	0	923	254	0	1177	31	709	156	2	898	2075	111	235	26	0	372	147	237	149	0	533	905	2980
1700-1800	1	879	208	0	1088	33	666	152	1	852	1940	64	193	38	0	295	146	178	148	0	472	767	2707
Totals	4	5445	1412	1	6862	244	5031	1079	7	6361	13223	753	1356	209	0	2318	768	1209	851	2	2830	5148	18371

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	6	7569	1963	1	9538	339	6993	1500	10	8842	18380	1047	1885	291	0	3222	1068	1681	1183	3	3934	7156	25536
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	5	6812	1766	1	8584	305	6294	1350	9	7958	16542	942	1696	261	0	2900	961	1512	1065	3	3540	6440	22982
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	7	8923	2314	2	11246	400	8245	1768	11	10424	21670	1234	2222	343	0	3799	1259	1981	1395	3	4638	8437	30107

AADT and expansion factors provided by the City of Ottawa

AM Peak Hour Factor ➡ 0.93												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.
0800-0900	0	576	135	0	711	34	740	134	0	908	1619	149	187	26	0	362	47	105	43	1	196	558	2177
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.
1200-1300	2	668	207	0	877	41	589	151	0	781	1658	94	151	36	0	281	105	145	136	0	386	667	2325
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.
1615-1715	1	966	255	0	1222	32	703	149	1	885	2107	91	233	24	0	348	147	243	140	0	530	878	2985

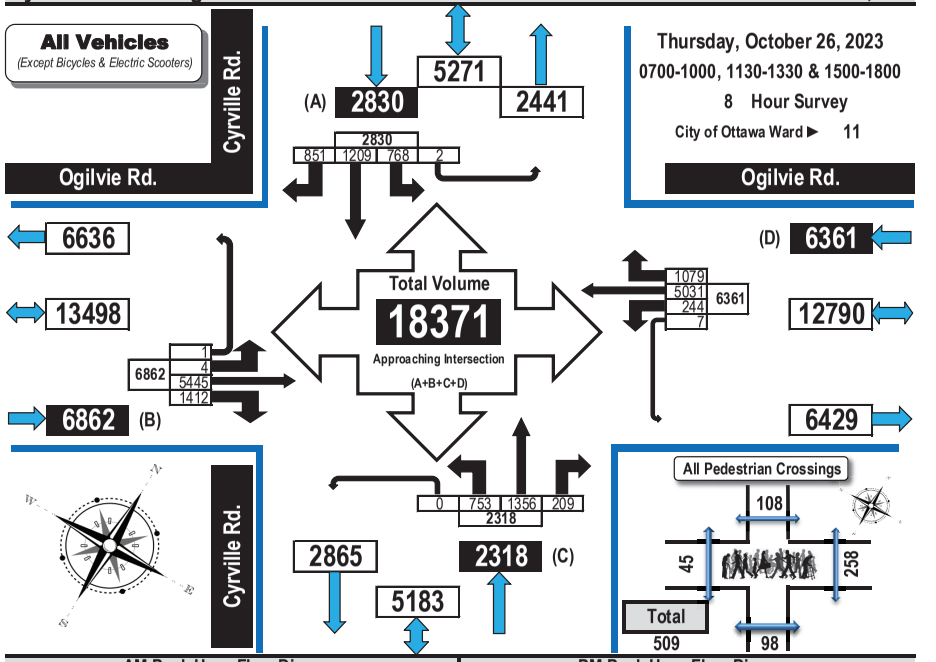
Comments:
OC Transpo and Para Transpo buses, private buses and school buses comprise 33.16% of the heavy vehicle traffic. The east side pedestrian crossings totals include all pedestrians crossing Ogilvie Road between Cyrville Road & the pedestrian pathway to the Ogilvie Court townhouses as the origin & destination of all pedestrians crossings to and from this pathway is the OC Transpo bus stop on the southeast corner of Cyrville Road & Ogilvie Road.

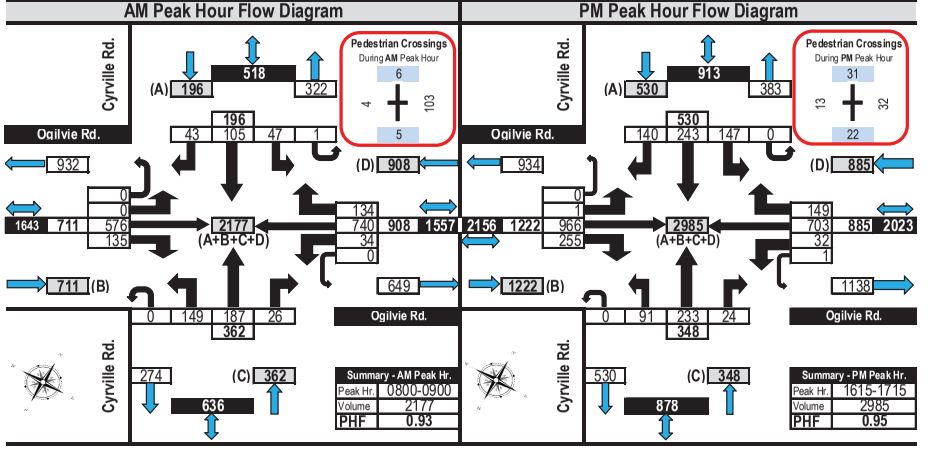
Notes:
1. Includes all vehicle types except bicycles, electric bicycles, and electric scooters.
2. When expansion and AADT factors are applied, the results will differ slightly due to rounding.

ACCURATE TRUSTED TRAFFIC DATA

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

Cyrville Road & Ogilvie Road — Ottawa, ON





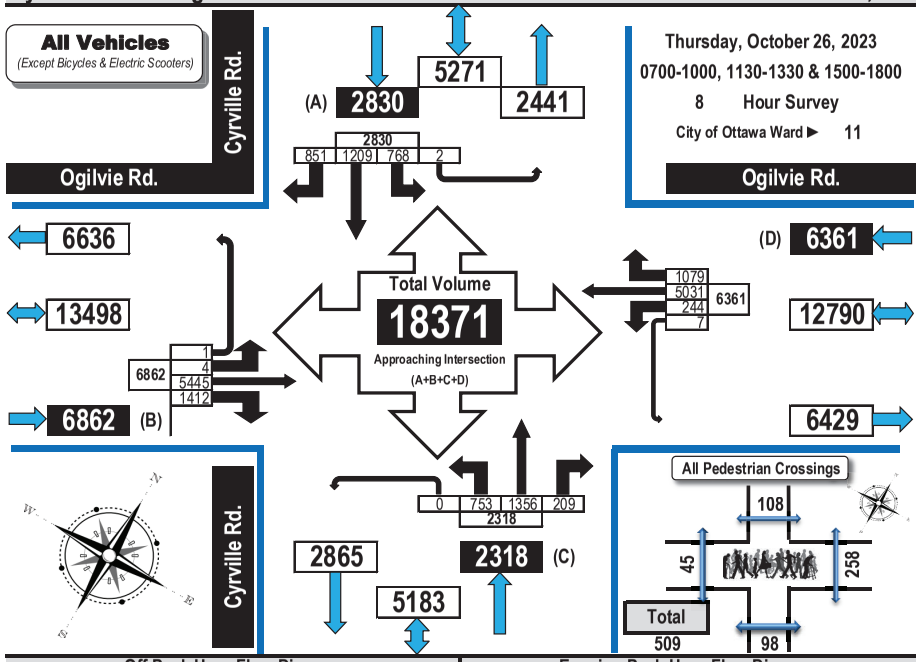
ACCURATE TRUSTED TRAFFIC DATA

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

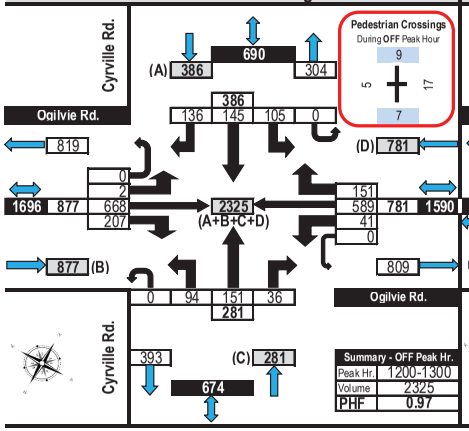
Cyrville Road & Ogilvie Road — **Ottawa, ON**

All Vehicles
(Except Bicycles & Electric Scooters)

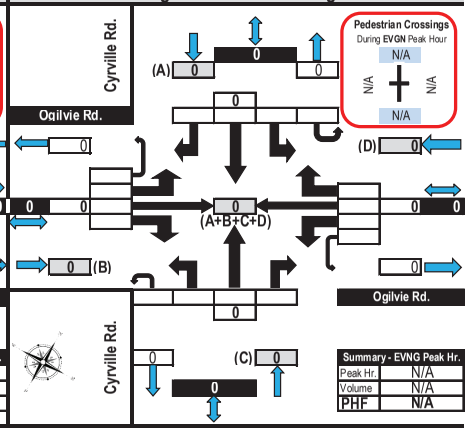
Thursday, October 26, 2023
0700-1000, 1130-1330 & 1500-1800
8 Hour Survey
City of Ottawa Ward ► 11



Off Peak Hour Flow Diagram



Evening Peak Hour Flow Diagram



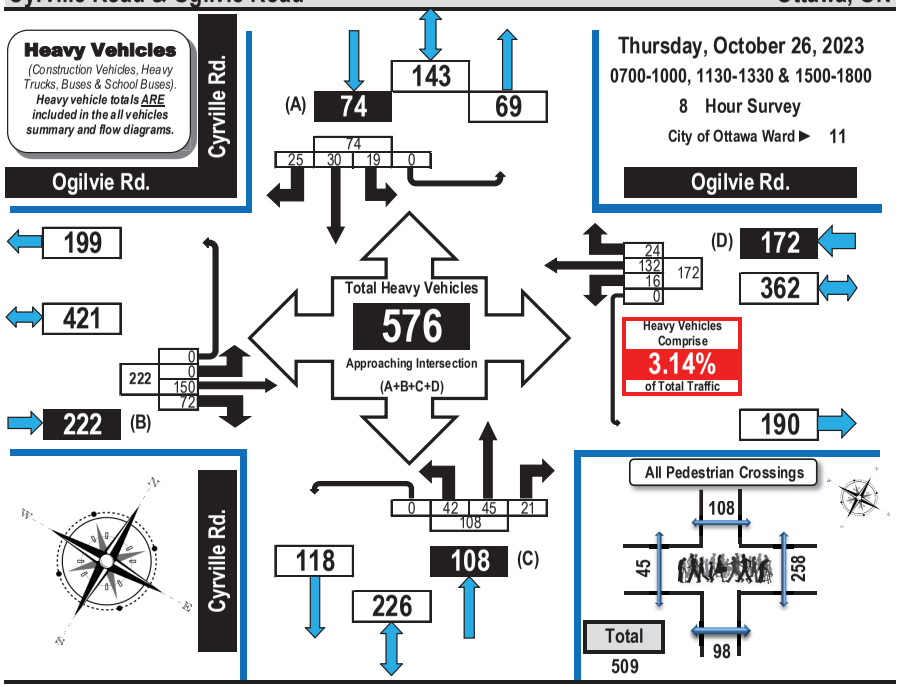
ACCURATE TRUSTED TRAFFIC DATA

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

Cyrville Road & Ogilvie Road — **Ottawa, ON**

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

Thursday, October 26, 2023
0700-1000, 1130-1330 & 1500-1800
8 Hour Survey
City of Ottawa Ward ► 11



	Ogilvie Rd. Eastbound					Ogilvie Rd. Westbound					Cyrville Rd. Northbound					Cyrville 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	17	3	0	20	4	17	6	0	27	8	6	3	0	17	1	5	5	0	11	75
0800-0900	0	23	8	0	31	3	14	5	0	22	10	9	11	0	30	4	5	6	0	15	98
0900-1000	0	20	9	0	29	1	13	2	0	16	5	10	0	0	15	1	4	6	0	11	71
1130-1230	0	24	10	0	34	2	21	2	0	25	5	7	4	0	16	3	3	3	0	9	84
1230-1330	0	19	12	0	31	3	16	4	0	23	7	3	1	0	11	5	4	2	0	11	76
1500-1600	0	24	8	0	32	2	25	3	0	30	5	5	2	0	12	4	3	1	0	8	82
1600-1700	0	13	11	0	24	0	15	1	0	16	1	3	0	0	4	1	4	1	0	6	50
1700-1800	0	10	11	0	21	1	11	1	0	13	1	2	0	0	3	0	2	1	0	3	40
Totals	0	150	72	0	222	16	132	24	0	172	42	45	21	0	108	19	30	25	0	74	576

Comments:
OC Transpo and Para Transpo buses, private buses and school buses comprise 33.16% of the heavy vehicle traffic. The east side pedestrian crossings totals include all pedestrians crossing Ogilvie Road between Cyrville Road & the pedestrian pathway to the Ogilvie Court townhouses as the origin & destination of all pedestrians crossings to and from this pathway is the OC Transpo bus stop on the southeast corner of Cyrville Road & Ogilvie Road.

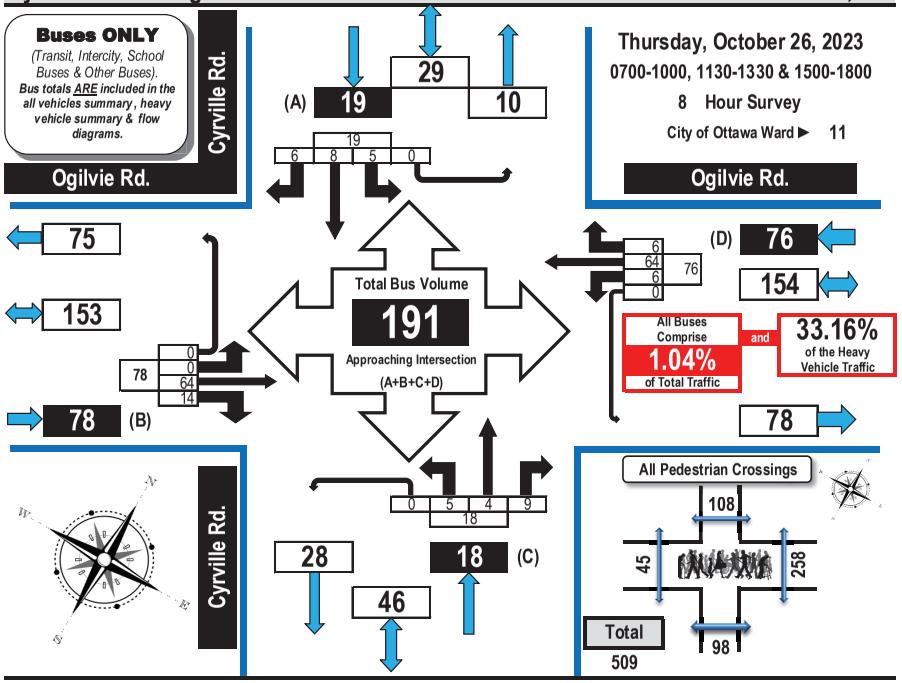
ACCURATE TRUSTED TRAFFIC DATA

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

Cyrville Road & Ogilvie Road — **Ottawa, ON**

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

Thursday, October 26, 2023
0700-1000, 1130-1330 & 1500-1800
8 Hour Survey
City of Ottawa Ward ► 11



	Ogilvie Rd. Eastbound					Ogilvie Rd. Westbound					Cyrville Rd. Northbound					Cyrville 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	8	1	0	9	2	6	2	0	10	1	1	0	0	2	1	0	1	0	2	23
0800-0900	0	8	3	0	11	3	10	1	0	14	3	1	8	0	12	1	1	1	0	3	40
0900-1000	0	4	0	0	4	0	7	0	0	7	0	1	0	0	1	0	3	2	0	5	17
1130-1230	0	7	3	0	10	1	8	1	0	10	1	0	0	0	1	1	1	0	0	2	23
1230-1330	0	5	1	0	6	0	4	0	0	4	0	0	0	0	0	1	0	1	0	2	12
1500-1600	0	16	2	0	18	0	14	1	0	15	0	0	1	0	1	1	0	0	0	1	35
1600-1700	0	9	1	0	10	0	8	0	0	8	0	1	0	0	1	0	2	0	0	2	21
1700-1800	0	7	3	0	10	0	7	1	0	8	0	0	0	0	0	0	1	1	0	2	20
Totals	0	64	14	0	78	6	64	6	0	76	5	4	9	0	18	5	8	6	0	19	191

Comments:
OC Transpo and Para Transpo buses, private buses and school buses comprise 33.16% of the heavy vehicle traffic. The east side pedestrian crossings totals include all pedestrians crossing Ogilvie Road between Cyrville Road & the pedestrian pathway to the Ogilvie Court townhouses as the origin & destination of all pedestrians crossings to and from this pathway is the OC Transpo bus stop on the southeast corner of Cyrville Road & Ogilvie Road.

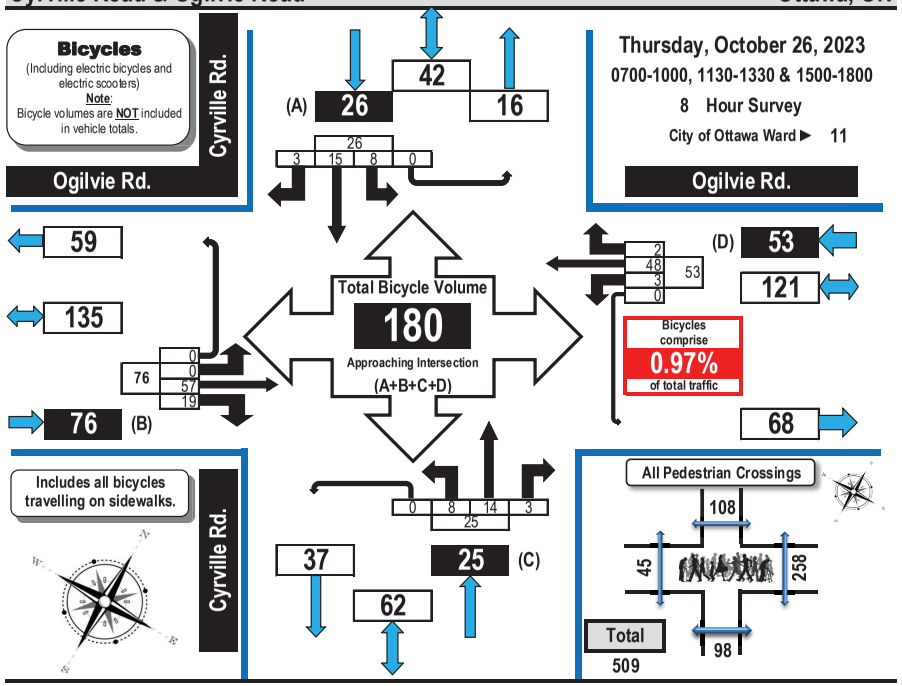
ACCURATE TRUSTED TRAFFIC DATA

Turning Movement Count
Bicycle Summary
Flow Diagram

Cyrville Road & Ogilvie Road — **Ottawa, ON**

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

Thursday, October 26, 2023
0700-1000, 1130-1330 & 1500-1800
8 Hour Survey
City of Ottawa Ward ► 11



	Ogilvie Rd. Eastbound					Ogilvie Rd. Westbound					Cyrville Rd. Northbound					Cyrville 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	9	2	0	11	0	7	0	0	7	0	1	1	0	2	1	3	2	0	6	26
0800-0900	0	15	3	0	18	0	12	0	0	12	2	1	1	0	4	1	1	1	0	3	37
0900-1000	0	6	1	0	7	0	1	0	0	1	0	1	1	0	2	1	1	0	0	2	12
1130-1230	0	2	1	0	3	0	4	1	0	5	1	0	0	0	1	3	2	0	0	5	14
1230-1330	0	4	1	0	5	2	4	1	0	7	0	2	0	0	2	1	0	0	0	1	15
1500-1600	0	3	3	0	6	0	7	0	0	7	1	1	0	0	2	0	1	0	0	1	16
1600-1700	0	8	7	0	15	0	8	0	0	8	3	2	0	0	5	0	7	0	0	7	35
1700-1800	0	10	1	0	11	1	5	0	0	6	1	6	0	0	7	1	0	0	0	1	25
Totals	0	57	19	0	76	3	48	2	0	53	8	14	3	0	25	8	15	3	0	26	180

Comments:
OC Transpo and Para Transpo buses, private buses and school buses comprise 33.16% of the heavy vehicle traffic. The east side pedestrian crossings totals include all pedestrians crossing Ogilvie Road between Cyrville Road & the pedestrian pathway to the Ogilvie Court townhouses as the origin & destination of all pedestrians crossings to and from this pathway is the OC Transpo bus stop on the southeast corner of Cyrville Road & Ogilvie Road.

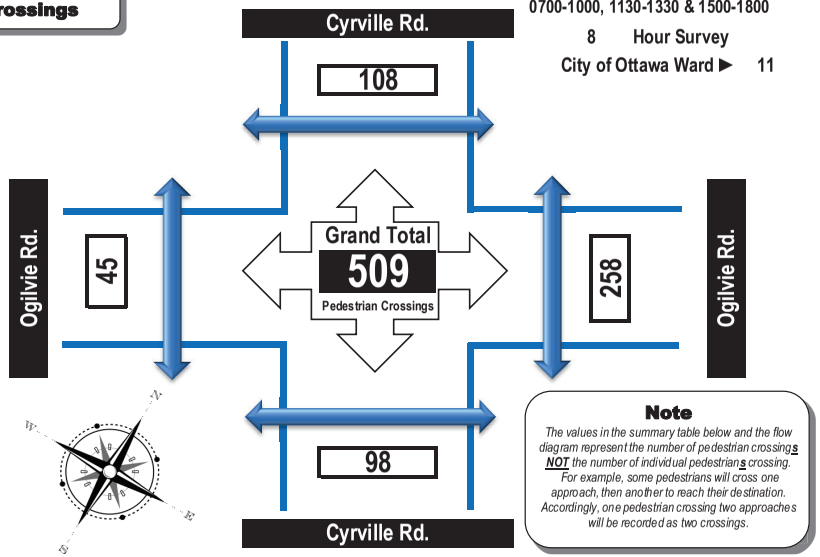
ACCURATE TRUSTED TRAFFIC DATA

Turning Movement Count
Pedestrian Crossings Summary and Flow Diagram

Cyrville Road & Ogilvie Road — **Ottawa, ON**

Pedestrian Crossings

Thursday, October 26, 2023
0700-1000, 1130-1330 & 1500-1800
8 Hour Survey
City of Ottawa Ward ▶ 11



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 Ogilvie Rd.	East Side Crossing Ogilvie Rd.	Street Total	South Side Crossing Cyrville Rd.	North Side Crossing Cyrville Rd.	Street Total	Grand Total
0700-0800	3	24	27	10	10	20	47
0800-0900	4	103	107	5	6	11	118
0900-1000	2	16	18	3	7	10	28
1130-1230	3	18	21	7	6	13	34
1230-1330	10	16	26	13	12	25	51
1500-1600	5	19	24	21	10	31	55
1600-1700	14	26	40	18	38	56	96
1700-1800	4	36	40	21	19	40	80
Totals	**45**	**258**	**303**	**98**	**108**	**206**	**509**

Comments:
OC Transpo and Para Transpo buses, private buses and school buses comprise 33.16% of the heavy vehicle traffic. The east side pedestrian crossings totals include all pedestrians crossing Ogilvie Road between Cyrville Road & the pedestrian pathway to the Ogilvie Court townhouses as the origin & destination of all pedestrians crossings to and from this pathway is the OC Transpo bus stop on the southeast corner of Cyrville Road & Ogilvie Road.

Appendix C

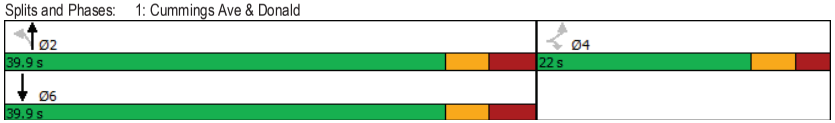
Synchro Intersection Worksheets – Existing Conditions

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	56	166	225	147	184	92
Future Volume (vph)	56	166	225	147	184	92
Satd. Flow (prot)	1626	1455	1658	1695	1640	0
Flt Permitted	0.950		0.574			
Satd. Flow (perm)	1626	1455	1002	1695	1640	0
Satd. Flow (RTOR)		184			62	
Lane Group Flow (vph)	62	184	250	163	306	0
Turn Type	Perm	Perm	Perm	NA	NA	
Protected Phases				2	6	
Permitted Phases	4	4	2			
Detector Phase	4	4	2	2	6	
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	22.0	22.0	39.9	39.9	39.9	
Total Split (s)	22.0	22.0	39.9	39.9	39.9	
Total Split (%)	35.5%	35.5%	64.5%	64.5%	64.5%	
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	
All-Red Time (s)	2.7	2.7	3.6	3.6	3.6	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.9	6.9	6.9	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	Max	Max	Max	
Act Effct Green (s)	10.2	10.2	37.5	37.5	37.5	
Actuated g/C Ratio	0.18	0.18	0.67	0.67	0.67	
v/c Ratio	0.21	0.44	0.37	0.14	0.27	
Control Delay	21.5	7.7	8.2	5.6	5.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	21.5	7.7	8.2	5.6	5.2	
LOS	C	A	A	A	A	
Approach Delay	11.2			7.2	5.2	
Approach LOS	B			A	A	
Queue Length 50th (m)	5.4	0.0	11.9	6.5	10.2	
Queue Length 95th (m)	13.8	13.2	26.5	13.7	21.5	
Internal Link Dist (m)	296.9			237.9	259.3	
Turn Bay Length (m)	60.0		60.0			
Base Capacity (vph)	465	547	671	1135	1119	
Starvation Cap Reductn	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	
Reduced v/c Ratio	0.13	0.34	0.37	0.14	0.27	

Intersection Summary
Cycle Length: 61.9
Actuated Cycle Length: 55.9
Natural Cycle: 65
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.44

Intersection Signal Delay: 7.6 Intersection LOS: A
Intersection Capacity Utilization 54.1% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 1: Cummings Ave & Donald

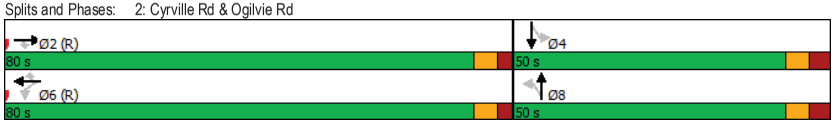


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	576	135	34	740	134	149	187	26	48	105	43
Future Volume (vph)	0	576	135	34	740	134	149	187	26	48	105	43
Satd. Flow (prot)	0	3252	1427	1551	3316	1455	1580	1592	0	1566	1570	0
Flt Permitted				0.395			0.573			0.418		
Satd. Flow (perm)	0	3252	1338	638	3316	1301	947	1592	0	687	1570	0
Satd. Flow (RTOR)			150			149		6			17	
Lane Group Flow (vph)	0	640	150	38	822	149	166	237	0	53	165	0
Turn Type		NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases			2	6		6	8			4		
Detector Phase		2	2	6	6	6	8	8		4	4	
Switch Phase												
Minimum Initial (s)		10.0	10.0	10.0	10.0	10.0	10.0	10.0		10.0	10.0	
Minimum Split (s)		32.2	32.2	32.2	32.2	32.2	47.1	47.1		47.1	47.1	
Total Split (s)		80.0	80.0	80.0	80.0	80.0	50.0	50.0		50.0	50.0	
Total Split (%)		61.5%	61.5%	61.5%	61.5%	61.5%	38.5%	38.5%		38.5%	38.5%	
Yellow Time (s)		3.7	3.7	3.7	3.7	3.7	3.7	3.7		3.7	3.7	
All-Red Time (s)		2.5	2.5	2.5	2.5	2.5	3.4	3.4		3.4	3.4	
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.2	6.2	6.2	6.2	6.2	7.1	7.1		7.1	7.1	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode		C-Max	C-Max	C-Max	C-Max	C-Max	None	None		None	None	
Act Effct Green (s)		89.7	89.7	89.7	89.7	89.7	27.0	27.0		27.0	27.0	
Actuated g/C Ratio		0.69	0.69	0.69	0.69	0.69	0.21	0.21		0.21	0.21	
v/c Ratio		0.29	0.15	0.09	0.36	0.16	0.85	0.71		0.37	0.49	
Control Delay		9.2	2.0	2.2	1.9	0.3	81.9	57.0		48.6	43.6	
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		9.2	2.0	2.2	1.9	0.3	81.9	57.0		48.6	43.6	
LOS		A	A	A	A	A	F	E		D	D	
Approach Delay		7.9			1.7			67.3			44.8	
Approach LOS		A			A			E			D	
Queue Length 50th (m)		29.8	0.0	0.4	3.9	0.0	41.5	55.9		11.8	33.9	
Queue Length 95th (m)		53.3	8.5	m1.1	20.3	m0.4	60.3	73.2		21.7	48.4	
Internal Link Dist (m)		113.5			313.9			407.2			190.6	
Turn Bay Length (m)				62.0		71.0				82.0		
Base Capacity (vph)		2244	970	440	2288	944	312	529		226	529	
Starvation Cap Reductn		0	0	0	0	0	0	0		0	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		0.29	0.15	0.09	0.36	0.16	0.53	0.45		0.23	0.31	

Intersection Summary
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 10 (8%), Referenced to phase 2:EBT and 6:WBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.85
Intersection Signal Delay: 18.5 Intersection LOS: B
Intersection Capacity Utilization 70.1% ICU Level of Service C
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Cyrville Rd & Ogilvie Rd

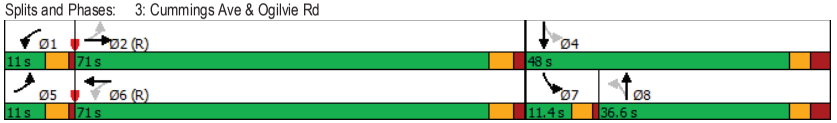


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	72	598	13	108	1042	209	17	124	77	167	109	101
Future Volume (vph)	72	598	13	108	1042	209	17	124	77	167	109	101
Satd. Flow (prot)	1580	3265	0	1642	3168	0	1658	1545	0	1642	1602	0
Flt Permitted	0.091			0.339			0.613			0.373		
Satd. Flow (perm)	151	3265	0	577	3168	0	1065	1545	0	619	1602	0
Satd. Flow (RTOR)		2			26			22			38	
Lane Group Flow (vph)	80	678	0	120	1390	0	19	224	0	186	233	0
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		pm+pt	NA	
Protected Phases	5	2		1	6			8		7	4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2		1	6		8	8		7	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		10.0	10.0		5.0	10.0	
Minimum Split (s)	9.7	24.7		9.7	24.7		36.6	36.6		9.3	36.6	
Total Split (s)	11.0	71.0		11.0	71.0		36.6	36.6		11.4	48.0	
Total Split (%)	8.5%	54.6%		8.5%	54.6%		28.2%	28.2%		8.8%	36.9%	
Yellow Time (s)	3.7	3.7		3.7	3.7		3.3	3.3		3.3	3.3	
All-Red Time (s)	1.0	2.0		1.0	2.0		3.3	3.3		1.0	3.3	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.7	5.7		4.7	5.7		6.6	6.6		4.3	6.6	
Lead/Lag	Lead	Lag		Lead	Lag		Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes		
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	
Act Effct Green (s)	75.7	68.5		75.9	68.6		26.8	26.8		40.5	38.2	
Actuated g/C Ratio	0.58	0.53		0.58	0.53		0.21	0.21		0.31	0.29	
v/c Ratio	0.51	0.39		0.31	0.83		0.09	0.67		0.75	0.47	
Control Delay	35.1	16.7		13.8	29.9		40.5	52.2		55.4	33.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	35.1	16.7		13.8	29.9		40.5	52.2		55.4	33.6	
LOS	D	B		B	C		D	D		E	C	
Approach Delay		18.7			28.7			51.3			43.3	
Approach LOS		B			C			D			D	
Queue Length 50th (m)	7.7	45.3		13.6	180.2		3.9	46.6		35.6	39.3	
Queue Length 95th (m)	26.2	52.8		m19.8	m209.8		10.7	73.9		#58.9	63.3	
Internal Link Dist (m)		313.9			393.6			302.0			237.9	
Turn Bay Length (m)	80.0			100.0			34.0			153.0		
Base Capacity (vph)	157	1720		388	1683		245	373		248	536	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.51	0.39		0.31	0.83		0.08	0.60		0.75	0.43	

Intersection Summary
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 110 (85%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 105
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.83
Intersection Signal Delay: 30.0 Intersection LOS: C
Intersection Capacity Utilization 92.5% ICU Level of Service F
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: Cummings Ave & Ogilvie Rd

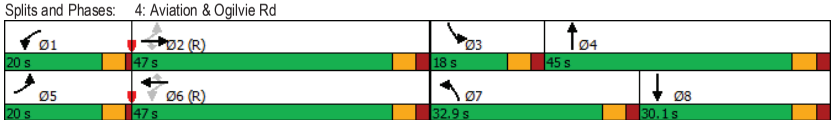


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	340	471	78	119	523	125	204	457	219	162	323	277
Future Volume (vph)	340	471	78	119	523	125	204	457	219	162	323	277
Satd. Flow (prot)	1658	3252	1483	1626	3283	1483	1658	3153	0	1658	3087	0
Flt Permitted	0.273			0.435			0.950			0.950		
Satd. Flow (perm)	476	3252	1483	745	3283	1483	1658	3153	0	1658	3087	0
Satd. Flow (RTOR)			164			164		63			147	
Lane Group Flow (vph)	378	523	87	132	581	139	227	751	0	180	667	0
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2		2	6		6						
Detector Phase	5	2	2	1	6	6	7	4		3	8	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0		5.0	10.0	
Minimum Split (s)	9.7	34.1	34.1	9.7	34.1	34.1	10.9	30.1		10.9	30.1	
Total Split (s)	20.0	47.0	47.0	20.0	47.0	47.0	32.9	45.0		18.0	30.1	
Total Split (%)	15.4%	36.2%	36.2%	15.4%	36.2%	36.2%	25.3%	34.6%		13.8%	23.2%	
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7		3.7	3.7	
All-Red Time (s)	1.0	2.4	2.4	1.0	2.4	2.4	2.2	2.4		2.2	2.4	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.7	6.1	6.1	4.7	6.1	6.1	5.9	6.1		5.9	6.1	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None		None	None	
Act Effct Green (s)	63.5	47.7	47.7	53.7	40.9	40.9	22.2	36.1		12.1	26.0	
Actuated g/C Ratio	0.49	0.37	0.37	0.41	0.31	0.31	0.17	0.28		0.09	0.20	
v/c Ratio	0.95	0.44	0.13	0.34	0.56	0.24	0.80	0.82		1.17	0.91	
Control Delay	71.1	33.3	3.3	21.7	39.7	3.9	72.5	47.8		175.5	56.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	71.1	33.3	3.3	21.7	39.7	3.9	72.5	47.8		175.5	56.6	
LOS	E	C	A	C	D	A	E	D		F	E	
Approach Delay		45.1			31.0			53.5			81.9	
Approach LOS		D			C			D			F	
Queue Length 50th (m)	~91.1	52.5	0.8	18.7	65.1	0.0	56.1	84.7		~54.7	69.4	
Queue Length 95th (m)	#127.8	72.3	m5.0	31.1	83.8	9.7	81.6	108.2		#100.5	#111.2	
Internal Link Dist (m)		393.6			270.9			298.0			298.9	
Turn Bay Length (m)	80.0		65.0	50.0		60.0	100.0			110.0		
Base Capacity (vph)	397	1192	647	433	1032	578	344	987		154	735	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.95	0.44	0.13	0.30	0.56	0.24	0.66	0.76		1.17	0.91	

Intersection Summary
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 105 (81%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 105
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.17
Intersection Signal Delay: 52.6 Intersection LOS: D
Intersection Capacity Utilization 84.9% ICU Level of Service E
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: Aviation & Ogilvie Rd



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	201	37	111	367	158	5	13	31	127	41	20
Future Volume (vph)	21	201	37	111	367	158	5	13	31	127	41	20
Satd. Flow (prot)	1537	1635	0	1610	1586	0	1658	1358	0	1610	1534	0
Flt Permitted	0.237			0.596			0.713			0.560		
Satd. Flow (perm)	380	1635	0	994	1586	0	1236	1358	0	834	1534	0
Satd. Flow (RTOR)		19			31			34			22	
Lane Group Flow (vph)	23	264	0	123	584	0	6	48	0	141	68	0
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases	5	2			6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	11.3	34.3		34.3	34.3		22.5	22.5		22.5	22.5	
Total Split (s)	15.0	42.0		42.0	42.0		23.0	23.0		23.0	23.0	
Total Split (%)	17.6%	49.4%		49.4%	49.4%		27.1%	27.1%		27.1%	27.1%	
Yellow Time (s)	3.7	3.7		3.7	3.7		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.6	2.6		2.6	2.6		2.2	2.2		2.2	2.2	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.3	6.3		6.3	6.3		5.5	5.5		5.5	5.5	
Lead/Lag	Lead			Lag	Lag		Lag	Lag		Lag	Lag	
Lead-Lag Optimize?	Yes			Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	Max		Max	Max		None	None		None	None	
Act Effct Green (s)	40.9	40.9		36.2	36.2		14.5	14.5		14.5	14.5	
Actuated g/C Ratio	0.56	0.56		0.50	0.50		0.20	0.20		0.20	0.20	
v/c Ratio	0.07	0.28		0.25	0.72		0.02	0.16		0.84	0.21	
Control Delay	7.9	8.7		14.9	22.8		25.8	14.5		70.5	20.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	7.9	8.7		14.9	22.8		25.8	14.5		70.5	20.8	
LOS	A	A		B	C		C	B		E	C	
Approach Delay		8.7			21.4			15.7			54.3	
Approach LOS		A			C			B			D	
Queue Length 50th (m)	1.4	16.9		8.2	50.8		0.6	1.4		16.7	4.7	
Queue Length 95th (m)	4.3	29.4		25.0	#137.1		3.8	10.4		#52.2	16.4	
Internal Link Dist (m)		407.2			322.8			177.3			302.0	
Turn Bay Length (m)	98.0			67.0			35.0			38.0		
Base Capacity (vph)	355	1166		496	808		303	358		204	392	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.06	0.23		0.25	0.72		0.02	0.13		0.69	0.17	

Intersection Summary
Cycle Length: 85
Actuated Cycle Length: 72.5
Natural Cycle: 75
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.84

Lane Group	Ø3	Ø7
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Satd. Flow (RTOR)		
Lane Group Flow (vph)		
Turn Type		
Protected Phases	3	7
Permitted Phases		
Detector Phase		
Switch Phase		
Minimum Initial (s)	1.0	1.0
Minimum Split (s)	3.0	3.0
Total Split (s)	5.0	5.0
Total Split (%)	6%	6%
Yellow Time (s)	2.0	2.0
All-Red Time (s)	0.0	0.0
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes
Recall Mode	Max	Max
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
Queue Length 50th (m)		
Queue Length 95th (m)		
Internal Link Dist (m)		
Turn Bay Length (m)		
Base Capacity (vph)		
Starvation Cap Reductn		
Spillback Cap Reductn		
Storage Cap Reductn		
Reduced v/c Ratio		

Intersection Summary

Lanes, Volumes, Timings
5: Labelle St/Cummings Ave & Cyrville Rd

06-27-2024

Intersection Signal Delay: 23.7	Intersection LOS: C
Intersection Capacity Utilization 64.6%	ICU Level of Service C
Analysis Period (min) 15	

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: Labelle St/Cummings Ave & Cyrville Rd

Lanes, Volumes, Timings
1: Cummings Ave & Donald

11/10/2023

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	87	279	246	267	301	96
Future Volume (vph)	87	279	246	267	301	96
Satd. Flow (prot)	1595	1469	1658	1728	1684	0
Flt Permitted	0.950		0.495			
Satd. Flow (perm)	1595	1469	864	1728	1684	0
Satd. Flow (RTOR)		310			40	
Lane Group Flow (vph)	97	310	273	297	441	0
Turn Type	Perm	Perm	Perm	NA	NA	
Protected Phases				2	6	
Permitted Phases	4	4	2			
Detector Phase	4	4	2	2	6	
Switch Phase						
Minimum Initial (s)	10.0	10.0	1.0	1.0	10.0	
Minimum Split (s)	22.0	22.0	7.9	7.9	39.9	
Total Split (s)	22.0	22.0	39.9	39.9	39.9	
Total Split (%)	35.5%	35.5%	64.5%	64.5%	64.5%	
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	
All-Red Time (s)	2.7	2.7	3.6	3.6	3.6	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.9	6.9	6.9	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	Max	Max	Max	
Act Effct Green (s)	10.8	10.8	33.0	33.0	33.0	
Actuated g/C Ratio	0.19	0.19	0.58	0.58	0.58	
v/c Ratio	0.32	0.59	0.54	0.29	0.44	
Control Delay	22.9	8.0	12.7	7.2	7.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	22.9	8.0	12.7	7.2	7.9	
LOS	C	A	B	A	A	
Approach Delay	11.6			9.8	7.9	
Approach LOS	B			A	A	
Queue Length 50th (m)	8.7	0.0	14.3	12.8	18.8	
Queue Length 95th (m)	19.4	16.4	38.6	27.9	41.6	
Internal Link Dist (m)	296.3			237.9	259.3	
Turn Bay Length (m)	60.0		60.0			
Base Capacity (vph)	450	637	503	1007	997	
Starvation Cap Reductn	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	
Reduced v/c Ratio	0.22	0.49	0.54	0.29	0.44	

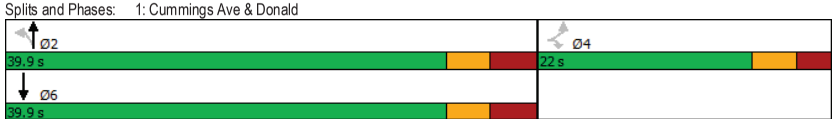
Intersection Summary
Cycle Length: 61.9
Actuated Cycle Length: 56.7
Natural Cycle: 65
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.59

Lanes, Volumes, Timings
1: Cummings Ave & Donald

11/10/2023

Intersection Signal Delay: 9.7 — Intersection LOS: A
Intersection Capacity Utilization 62.1% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 1: Cummings Ave & Donald



Lanes, Volumes, Timings
2: Cyrville Rd & Ogilvie Rd

11/10/2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	967	255	33	703	149	91	233	24	147	243	140
Future Volume (vph)	0	967	255	33	703	149	91	233	24	147	243	140
Satd. Flow (prot)	0	3316	1455	1658	3316	1483	1658	1718	0	1658	1635	0
Flt Permitted				0.208			0.227			0.433		
Satd. Flow (perm)	0	3316	1366	361	3316	1333	395	1718	0	754	1635	0
Satd. Flow (RTOR)			283			166		5			27	
Lane Group Flow (vph)	0	1074	283	37	781	166	101	286	0	163	426	0
Turn Type		NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases			2	6		6	8			4		
Detector Phase		2	2	6	6	6	8	8		4	4	
Switch Phase												
Minimum Initial (s)		10.0	10.0	10.0	10.0	10.0	10.0	10.0		10.0	10.0	
Minimum Split (s)		32.2	32.2	32.2	32.2	32.2	47.1	47.1		47.1	47.1	
Total Split (s)		70.0	70.0	70.0	70.0	70.0	50.0	50.0		50.0	50.0	
Total Split (%)		58.3%	58.3%	58.3%	58.3%	58.3%	41.7%	41.7%		41.7%	41.7%	
Yellow Time (s)		3.7	3.7	3.7	3.7	3.7	3.7	3.7		3.7	3.7	
All-Red Time (s)		2.5	2.5	2.5	2.5	2.5	3.4	3.4		3.4	3.4	
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.2	6.2	6.2	6.2	6.2	7.1	7.1		7.1	7.1	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode		C-Max	C-Max	C-Max	C-Max	C-Max	None	None		None	None	
Act Effct Green (s)		72.0	72.0	72.0	72.0	72.0	34.7	34.7		34.7	34.7	
Actuated g/C Ratio		0.60	0.60	0.60	0.60	0.60	0.29	0.29		0.29	0.29	
v/c Ratio		0.54	0.30	0.17	0.39	0.19	0.89	0.57		0.75	0.87	
Control Delay		16.5	2.5	24.3	23.3	10.1	99.5	39.4		59.0	55.5	
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		16.5	2.5	24.3	23.3	10.1	99.5	39.4		59.0	55.5	
LOS		B	A	C	C	B	F	D		E	E	
Approach Delay		13.6			21.1			55.1			56.5	
Approach LOS		B			C			E			E	
Queue Length 50th (m)		75.4	0.0	5.4	62.1	10.1	22.5	55.9		34.5	89.1	
Queue Length 95th (m)		109.4	12.6	m6.3	m61.2	m10.5	#50.2	75.7		56.2	118.2	
Internal Link Dist (m)		113.8			313.9			407.0			190.4	
Turn Bay Length (m)				62.0		71.0				82.0		
Base Capacity (vph)		1990	932	216	1990	866	141	617		269	601	
Starvation Cap Reductn		0	0	0	0	0	0	0		0	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		0.54	0.30	0.17	0.39	0.19	0.72	0.46		0.61	0.71	

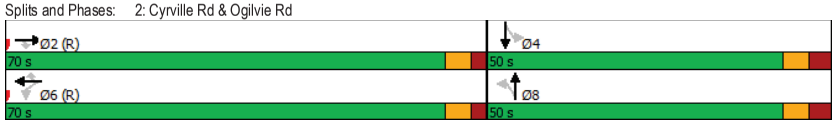
Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 20 (17%), Referenced to phase 2:EBT and 6:WBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.89

Intersection Signal Delay: 28.3	Intersection LOS: C
Intersection Capacity Utilization 79.6%	ICU Level of Service D
Analysis Period (min) 15	

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Cyrville Rd & Ogilvie Rd



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	155	1047	27	148	801	224	35	204	202	273	192	137
Future Volume (vph)	155	1047	27	148	801	224	35	204	202	273	192	137
Satd. Flow (prot)	1658	3294	0	1610	3120	0	1658	1526	0	1658	1623	0
Flt Permitted	0.102			0.102			0.544			0.147		
Satd. Flow (perm)	178	3294	0	173	3120	0	946	1526	0	252	1623	0
Satd. Flow (RTOR)		2			32			41			39	
Lane Group Flow (vph)	172	1193	0	164	1139	0	39	451	0	303	365	0
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		pm+pt	NA	
Protected Phases	5	2		1	6			8		7	4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2		1	6		8	8		7	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		10.0	10.0		5.0	10.0	
Minimum Split (s)	9.7	24.7		9.7	24.7		36.6	36.6		9.3	36.6	
Total Split (s)	15.0	45.0		15.0	45.0		40.0	40.0		20.0	60.0	
Total Split (%)	12.5%	37.5%		12.5%	37.5%		33.3%	33.3%		16.7%	50.0%	
Yellow Time (s)	3.7	3.7		3.7	3.7		3.3	3.3		3.3	3.3	
All-Red Time (s)	1.0	2.0		1.0	2.0		3.3	3.3		1.0	3.3	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.7	5.7		4.7	5.7		6.6	6.6		4.3	6.6	
Lead/Lag	Lead	Lag		Lead	Lag		Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes		
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	
Act Effct Green (s)	50.6	39.3		50.6	39.3		33.4	33.4		55.7	53.4	
Actuated g/C Ratio	0.42	0.33		0.42	0.33		0.28	0.28		0.46	0.44	
v/c Ratio	0.85	1.10		0.84	1.09		0.15	0.99		1.01	0.49	
Control Delay	68.4	90.4		61.9	92.5		34.6	80.5		82.8	23.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	68.4	90.4		61.9	92.5		34.6	80.5		82.8	23.6	
LOS	E	F		E	F		C	F		F	C	
Approach Delay		87.6			88.7			76.8			50.5	
Approach LOS		F			F			E			D	
Queue Length 50th (m)	20.7	~169.6		31.7	~148.7		6.9	98.3		~51.6	53.2	
Queue Length 95th (m)	#64.2	#211.9		m#49.2	m#168.7		16.1	#165.4		#108.8	80.2	
Internal Link Dist (m)		313.9			393.6			302.0			237.9	
Turn Bay Length (m)	80.0			100.0			34.0			153.0		
Base Capacity (vph)	202	1080		196	1043		263	454		300	743	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.85	1.10		0.84	1.09		0.15	0.99		1.01	0.49	

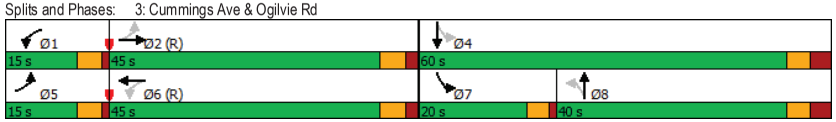
Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 46 (38%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 105
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.10

Intersection Signal Delay: 80.1	Intersection LOS: F
Intersection Capacity Utilization 100.6%	ICU Level of Service G
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: Cummings Ave & Ogilvie Rd



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	274	1059	96	231	673	220	166	331	163	146	380	293
Future Volume (vph)	274	1059	96	231	673	220	166	331	163	146	380	293
Satd. Flow (prot)	1658	3316	1469	1658	3316	1483	1658	3153	0	1658	3100	0
Flt Permitted	0.250			0.088			0.950			0.950		
Satd. Flow (perm)	436	3316	1469	154	3316	1483	1658	3153	0	1658	3100	0
Satd. Flow (RTOR)			136			244		63			142	
Lane Group Flow (vph)	304	1177	107	257	748	244	184	549	0	162	748	0
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2		2	6		6						
Detector Phase	5	2	2	1	6	6	7	4		3	8	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0		5.0	10.0	
Minimum Split (s)	9.7	34.1	34.1	9.7	34.1	34.1	10.9	30.1		12.2	30.1	
Total Split (s)	20.0	51.0	51.0	20.0	51.0	51.0	18.9	30.1		18.9	30.1	
Total Split (%)	16.7%	42.5%	42.5%	16.7%	42.5%	42.5%	15.8%	25.1%		15.8%	25.1%	
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7		3.5	3.7	
All-Red Time (s)	1.0	2.4	2.4	1.0	2.4	2.4	2.2	2.4		3.7	2.4	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		2.2	2.4	
Total Lost Time (s)	4.7	6.1	6.1	4.7	6.1	6.1	5.9	6.1		9.4	8.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None		None	None	
Act Effct Green (s)	61.2	44.9	44.9	62.0	45.3	45.3	13.0	24.0		9.5	21.6	
Actuated g/C Ratio	0.51	0.37	0.37	0.52	0.38	0.38	0.11	0.20		0.08	0.18	
v/c Ratio	0.82	0.95	0.17	0.95	0.60	0.34	1.03	0.81		1.24	1.11	
Control Delay	33.3	37.6	4.9	76.0	32.5	4.5	127.3	50.7		201.1	105.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	33.3	37.6	4.9	76.0	32.5	4.5	127.3	50.7		201.1	105.7	
LOS	C	D	A	E	C	A	F	D		F	F	
Approach Delay		34.6			36.0			69.9			122.7	
Approach LOS		C			D			E			F	
Queue Length 50th (m)	49.2	91.2	1.9	45.6	74.1	0.0	~46.2	58.3		~47.2	~90.7	
Queue Length 95th (m)	m43.9	m85.2	m1.6	#96.2	94.1	16.2	#90.7	#79.3		#89.9	#129.3	
Internal Link Dist (m)		393.6			260.7			297.6			298.7	
Turn Bay Length (m)	80.0		65.0	50.0		60.0	100.0			110.0		
Base Capacity (vph)	379	1240	634	271	1252	712	179	681		131	674	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.80	0.95	0.17	0.95	0.60	0.34	1.03	0.81		1.24	1.11	

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 50 (42%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 120
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.24

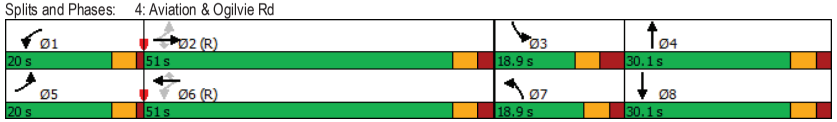
Intersection Signal Delay: 58.7	Intersection LOS: E
Intersection Capacity Utilization 96.1%	ICU Level of Service F
Analysis Period (min) 15	

~ 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: 4: Aviation & Ogilvie Rd



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	52	68	70	299	259	10	52	68	60	476	17
Future Volume (vph)	10	52	68	70	299	259	10	52	68	60	476	17
Satd. Flow (prot)	1658	1387	0	1595	1573	0	1658	1442	0	1445	1735	0
Flt Permitted	0.172			0.671			0.312			0.433		
Satd. Flow (perm)	300	1387	0	1102	1573	0	544	1442	0	575	1735	0
Satd. Flow (RTOR)		76			49			69			2	
Lane Group Flow (vph)	11	134	0	78	620	0	11	134	0	67	548	0
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases	5	2			6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	11.3	34.3		34.3	34.3		22.5	22.5		22.5	22.5	
Total Split (s)	15.0	43.0		43.0	43.0		37.0	37.0		37.0	37.0	
Total Split (%)	15.0%	43.0%		43.0%	43.0%		37.0%	37.0%		37.0%	37.0%	
Yellow Time (s)	3.7	3.7		3.7	3.7		3.3	3.3		3.3	3.3	
All-Red Time (s)	1.0	2.6		2.6	2.6		2.2	2.2		2.2	2.2	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.7	6.3		6.3	6.3		5.5	5.5		5.5	5.5	
Lead/Lag	Lead			Lag	Lag		Lag	Lag		Lag	Lag	
Lead-Lag Optimize?	Yes			Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	Max		Max	Max		None	None		None	None	
Act Effct Green (s)	40.5	38.9		36.8	36.8		23.2	23.2		31.6	31.6	
Actuated g/C Ratio	0.49	0.47		0.45	0.45		0.28	0.28		0.38	0.38	
v/c Ratio	0.05	0.19		0.16	0.85		0.07	0.29		0.30	0.82	
Control Delay	10.7	6.5		15.8	32.6		22.7	13.4		23.9	35.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	10.7	6.5		15.8	32.6		22.7	13.4		23.9	35.8	
LOS	B	A		B	C		C	B		C	D	
Approach Delay		6.8			30.8			14.1			34.5	
Approach LOS		A			C			B			C	
Queue Length 50th (m)	0.8	4.8		6.6	73.3		1.1	6.8		6.8	71.7	
Queue Length 95th (m)	3.2	13.6		18.1	#164.7		5.5	22.6		20.5	#152.6	
Internal Link Dist (m)		407.0			322.8			177.5			302.0	
Turn Bay Length (m)	98.0			67.0			35.0			38.0		
Base Capacity (vph)	318	902		492	730		209	596		220	667	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.03	0.15		0.16	0.85		0.05	0.22		0.30	0.82	

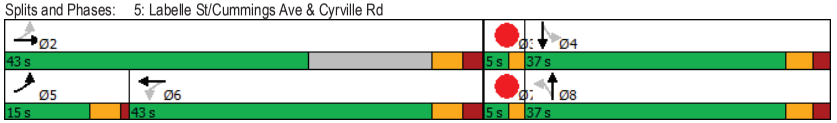
Intersection Summary
Cycle Length: 100
Actuated Cycle Length: 82.3
Natural Cycle: 90
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.85

Lane Group	Ø3	Ø7
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Satd. Flow (RTOR)		
Lane Group Flow (vph)		
Turn Type		
Protected Phases	3	7
Permitted Phases		
Detector Phase		
Switch Phase		
Minimum Initial (s)	1.0	1.0
Minimum Split (s)	3.0	3.0
Total Split (s)	5.0	5.0
Total Split (%)	5%	5%
Yellow Time (s)	2.0	2.0
All-Red Time (s)	0.0	0.0
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes
Recall Mode	None	Max
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
Queue Length 50th (m)		
Queue Length 95th (m)		
Internal Link Dist (m)		
Turn Bay Length (m)		
Base Capacity (vph)		
Starvation Cap Reductn		
Spillback Cap Reductn		
Storage Cap Reductn		
Reduced v/c Ratio		

Intersection Summary	

Intersection Signal Delay: 28.5 Intersection LOS: C
Intersection Capacity Utilization 71.8% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: Labelle St/Cummings Ave & Cyrville Rd



Appendix D

Collision Data

Accident Date	Accident Year	Accident Time	Location	Environment Condition	Light	Traffic Control	Traffic Control Condition	Classification Of Accident	Initial Impact Type	Road Surface Condition	# Vehicles	# Motorcycles	# Bicycles	# Pedestrians
2018-03-24	2018	18:25	CUMMINGS AVE @ OGILVIE RD (0009923)	01 - Clear	05 - Dusk	01 - Traffic signal	0	02 - Non-fatal injury	03 - Rear end	01 - Dry	0	0	0	0
2018-04-12	2018	11:01	CUMMINGS AVE @ OGILVIE RD (0009923)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	04 - Sideswipe	01 - Dry	0	0	0	0
2018-05-05	2018	18:14	CUMMINGS AVE @ OGILVIE RD (0009923)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	02 - Angle	01 - Dry	0	0	0	0
2018-05-25	2018	15:00	CUMMINGS AVE @ OGILVIE RD (0009923)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	04 - Sideswipe	01 - Dry	0	0	0	0
2018-06-11	2018	18:00	CUMMINGS AVE @ OGILVIE RD (0009923)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	05 - Turning movement	01 - Dry	0	0	0	0
2018-07-23	2018	9:30	CUMMINGS AVE @ OGILVIE RD (0009923)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	01 - Dry	0	0	0	0
2018-08-20	2018	17:00	CUMMINGS AVE @ OGILVIE RD (0009923)	01 - Clear	01 - Daylight	01 - Traffic signal	0	02 - Non-fatal injury	05 - Turning movement	01 - Dry	0	0	1	0
2018-09-19	2018	17:07	CUMMINGS AVE @ OGILVIE RD (0009923)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	05 - Turning movement	01 - Dry	0	0	1	0
2018-10-10	2018	15:15	CUMMINGS AVE @ OGILVIE RD (0009923)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	05 - Turning movement	01 - Dry	0	0	0	0
2018-11-21	2018	16:10	CUMMINGS AVE @ OGILVIE RD (0009923)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	05 - Turning movement	05 - Packed snow	0	0	0	0
2018-12-08	2018	18:00	CUMMINGS AVE @ OGILVIE RD (0009923)	03 - Snow	07 - Dark	01 - Traffic signal	0	03 - P.D. only	04 - Sideswipe	03 - Loose snow	0	0	0	0
2019-01-11	2019	16:08	CUMMINGS AVE @ OGILVIE RD (0009923)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	04 - Sideswipe	01 - Dry	0	0	0	0
2019-01-23	2019	12:30	CUMMINGS AVE @ OGILVIE RD (0009923)	03 - Snow	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	04 - Sideswipe	05 - Packed snow	0	0	0	0
2019-01-28	2019	9:30	CUMMINGS AVE @ OGILVIE RD (0009923)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	99 - Other	02 - Wet	0	0	0	0
2019-02-09	2019	16:15	CUMMINGS AVE @ OGILVIE RD (0009923)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	06 - Ice	0	0	0	0
2019-03-06	2019	9:59	CUMMINGS AVE @ OGILVIE RD (0009923)	01 - Clear	01 - Daylight	01 - Traffic signal	0	02 - Non-fatal injury	03 - Rear end	02 - Wet	0	0	0	0
2019-03-13	2019	18:40	CUMMINGS AVE @ OGILVIE RD (0009923)	03 - Snow	07 - Dark	01 - Traffic signal	0	03 - P.D. only	02 - Angle	05 - Packed snow	0	0	0	0
2019-03-25	2019	11:00	CUMMINGS AVE @ OGILVIE RD (0009923)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	01 - Dry	0	0	0	0
2019-05-12	2019	13:19	CUMMINGS AVE @ OGILVIE RD (0009923)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	05 - Turning movement	01 - Dry	0	0	0	0
2019-06-27	2019	12:51	CUMMINGS AVE @ OGILVIE RD (0009923)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	02 - Angle	01 - Dry	0	0	0	0
2019-07-20	2019	13:47	CUMMINGS AVE @ OGILVIE RD (0009923)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	01 - Dry	0	0	0	0
2019-07-30	2019	12:30	CUMMINGS AVE @ OGILVIE RD (0009923)	02 - Rain	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	02 - Angle	02 - Wet	0	0	0	0
2019-08-01	2019	18:04	CUMMINGS AVE @ OGILVIE RD (0009923)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	01 - Dry	0	0	0	0
2019-08-11	2019	15:12	CUMMINGS AVE @ OGILVIE RD (0009923)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	01 - Dry	0	0	0	0
2019-11-16	2019	21:55	CUMMINGS AVE @ OGILVIE RD (0009923)	01 - Clear	07 - Dark	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	06 - Ice	0	0	0	0
2019-11-25	2019	9:53	CUMMINGS AVE @ OGILVIE RD (0009923)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	01 - Dry	0	0	0	0
2020-01-06	2020	7:45	CUMMINGS AVE @ OGILVIE RD (0009923)	03 - Snow	03 - Dawn	01 - Traffic signal	0	03 - P.D. only	05 - Turning movement	06 - Ice	0	0	0	0
2020-01-10	2020	12:23	CUMMINGS AVE @ OGILVIE RD (0009923)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	01 - Dry	0	0	0	0
2020-01-11	2020	14:55	CUMMINGS AVE @ OGILVIE RD (0009923)	03 - Snow	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	05 - Turning movement	03 - Loose snow	0	0	0	0
2020-02-07	2020	17:45	CUMMINGS AVE @ OGILVIE RD (0009923)	03 - Snow	07 - Dark	01 - Traffic signal	0	03 - P.D. only	04 - Sideswipe	03 - Loose snow	0	0	0	0
2020-03-06	2020	7:38	CUMMINGS AVE @ OGILVIE RD (0009923)	03 - Snow	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	02 - Wet	0	0	0	0
2020-07-13	2020	18:04	CUMMINGS AVE @ OGILVIE RD (0009923)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	05 - Turning movement	01 - Dry	0	0	0	0
2020-08-01	2020	15:22	CUMMINGS AVE @ OGILVIE RD (0009923)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	05 - Turning movement	01 - Dry	0	0	0	0
2020-10-11	2020	15:40	CUMMINGS AVE @ OGILVIE RD (0009923)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	01 - Dry	0	0	0	0
2020-12-11	2020	18:16	CUMMINGS AVE @ OGILVIE RD (0009923)	01 - Clear	07 - Dark	01 - Traffic signal	0	03 - P.D. only	04 - Sideswipe	01 - Dry	0	0	0	0
2021-02-24	2021	17:58	CUMMINGS AVE @ OGILVIE RD (0009923)	03 - Snow	07 - Dark	01 - Traffic signal	0	02 - Non-fatal injury	05 - Turning movement	05 - Packed snow	0	0	0	0
2021-06-06	2021	17:47	CUMMINGS AVE @ OGILVIE RD (0009923)	01 - Clear	01 - Daylight	01 - Traffic signal	0	02 - Non-fatal injury	02 - Angle	01 - Dry	0	0	0	0
2021-06-08	2021	18:01	CUMMINGS AVE @ OGILVIE RD (0009923)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	01 - Dry	0	0	0	0
2021-08-20	2021	19:40	CUMMINGS AVE @ OGILVIE RD (0009923)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	05 - Turning movement	01 - Dry	0	0	0	0
2021-09-30	2021	23:10	CUMMINGS AVE @ OGILVIE RD (0009923)	01 - Clear	07 - Dark	01 - Traffic signal	0	02 - Non-fatal injury	02 - Angle	01 - Dry	0	0	0	0
2021-11-06	2021	14:42	CUMMINGS AVE @ OGILVIE RD (0009923)	01 - Clear	01 - Daylight	01 - Traffic signal	0	02 - Non-fatal injury	05 - Turning movement	01 - Dry	0	0	0	0
2021-12-02	2021	12:19	CUMMINGS AVE @ OGILVIE RD (0009923)	02 - Rain	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	05 - Turning movement	02 - Wet	0	0	0	0
2022-04-07	2022	16:30	CUMMINGS AVE @ OGILVIE RD (0009923)	02 - Rain	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	05 - Turning movement	02 - Wet	0	0	1	0
2022-05-01	2022	8:38	CUMMINGS AVE @ OGILVIE RD (0009923)	01 - Clear	01 - Daylight	01 - Traffic signal	0	02 - Non-fatal injury	04 - Sideswipe	01 - Dry	0	1	0	0
2022-06-25	2022	18:40	CUMMINGS AVE @ OGILVIE RD (0009923)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	01 - Dry	0	0	0	0
2022-07-18	2022	16:51	CUMMINGS AVE @ OGILVIE RD (0009923)	01 - Clear	01 - Daylight	01 - Traffic signal	0	02 - Non-fatal injury	03 - Rear end	01 - Dry	0	0	0	0
2022-10-24	2022	18:29	CUMMINGS AVE @ OGILVIE RD (0009923)	01 - Clear	07 - Dark	01 - Traffic signal	0	02 - Non-fatal injury	05 - Turning movement	01 - Dry	0	0	0	0
2018-02-25	2018	10:00	CUMMINGS AVE @ DONALD ST (0009936)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	02 - Angle	06 - Ice	0	0	0	0
2018-04-30	2018	14:37	CUMMINGS AVE @ DONALD ST (0009936)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	01 - Dry	0	0	0	0
2018-09-17	2018	10:12	CUMMINGS AVE @ DONALD ST (0009936)	01 - Clear	01 - Daylight	01 - Traffic signal	0	02 - Non-fatal injury	05 - Turning movement	01 - Dry	0	0	0	0
2018-11-25	2018	2:45	CUMMINGS AVE @ DONALD ST (0009936)	04 - Freezing Rain	07 - Dark	01 - Traffic signal	0	03 - P.D. only	07 - SMV other	06 - Ice	0	0	0	0
2019-07-13	2019	10:30	CUMMINGS AVE @ DONALD ST (0009936)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	01 - Dry	0	0	0	0
2019-07-22	2019	15:16	CUMMINGS AVE @ DONALD ST (0009936)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	02 - Angle	01 - Dry	0	0	0	0
2020-01-10	2020	20:54	CUMMINGS AVE @ DONALD ST (0009936)	03 - Snow	07 - Dark	01 - Traffic signal	0	02 - Non-fatal injury	07 - SMV other	02 - Wet	0	0	0	1
2020-01-11	2020	14:44	CUMMINGS AVE @ DONALD ST (0009936)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	01 - Dry	0	0	0	0
2020-06-12	2020	21:14	CUMMINGS AVE @ DONALD ST (0009936)	01 - Clear	05 - Dusk	01 - Traffic signal	0	03 - P.D. only	04 - Sideswipe	01 - Dry	0	0	0	0
2021-10-15	2021	5:56	CUMMINGS AVE @ DONALD ST (0009936)	02 - Rain	07 - Dark	01 - Traffic signal	0	02 - Non-fatal injury	07 - SMV other	02 - Wet	0	0	0	1
2021-12-02	2021	15:35	CUMMINGS AVE @ DONALD ST (0009936)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	05 - Turning movement	02 - Wet	0	0	0	0
2021-12-20	2021	16:59	CUMMINGS AVE @ DONALD ST (0009936)	03 - Snow	07 - Dark	01 - Traffic signal	0	03 - P.D. only	05 - Turning movement	04 - Slush	0	0	0	0
2022-01-13	2022	22:25	CUMMINGS AVE @ DONALD ST (0009936)	01 - Clear	07 - Dark	01 - Traffic signal	0	02 - Non-fatal injury	07 - SMV other	02 - Wet	0	0	0	1
2018-02-21	2018	16:40	CUMMINGS AVE btwn OGILVIE RD & WELDON DR (__3ZA7UQ)	01 - Clear	01 - Daylight	10 - No control	0	03 - P.D. only	02 - Angle	05 - Packed snow	0	0	0	0
2018-06-16	2018	14:44	CUMMINGS AVE btwn OGILVIE RD & WELDON DR (__3ZA7UQ)	01 - Clear	01 - Daylight	10 - No control	0	03 - P.D. only	02 - Angle	01 - Dry	0	0	0	0
2019-10-25	2019	21:38	CUMMINGS AVE btwn OGILVIE RD & WELDON DR (__3ZA7UQ)	01 - Clear	07 - Dark	10 - No control	0	03 - P.D. only	02 - Angle	01 - Dry	0	0	0	0
2019-11-05	2019	18:55	CUMMINGS AVE btwn OGILVIE RD & WELDON DR (__3ZA7UQ)	01 - Clear	07 - Dark	10 - No control	0	03 - P.D. only	02 - Angle	01 - Dry	0	0	0	0
2019-11-27	2019	17:40	CUMMINGS AVE btwn OGILVIE RD & WELDON DR (__3ZA7UQ)	02 - Rain	07 - Dark	10 - No control	0	03 - P.D. only	05 - Turning movement	02 - Wet	0	0	0	0
2020-02-24	2020	16:11	CUMMINGS AVE btwn OGILVIE RD & WELDON DR (__3ZA7UQ)	01 - Clear	01 - Daylight	10 - No control	0	03 - P.D. only	02 - Angle	02 - Wet	0	0	0	0
2020-07-07	2020	15:00	CUMMINGS AVE btwn OGILVIE RD & WELDON DR (__3ZA7UQ)	01 - Clear	01 - Daylight	10 - No control	0	03 - P.D. only	02 - Angle	01 - Dry	0	0	0	0
2021-01-10	2021	11:53	CUMMINGS AVE btwn OGILVIE RD & WELDON DR (__3ZA7UQ)	01 - Clear	01 - Daylight	10 - No control	0	02 - Non-fatal injury	05 - Turning movement	01 - Dry	0	0	0	0
2021-05-20	2021	14:25	CUMMINGS AVE btwn OGILVIE RD & WELDON DR (__3ZA7UQ)	01 - Clear	01 - Daylight	10 - No control	0	03 - P.D. only	02 - Angle	01 - Dry	0	0	1	0
2021-08-05	2021	17:29	CUMMINGS AVE btwn OGILVIE RD & WELDON DR (__3ZA7UQ)	01 - Clear	01 - Daylight	10 - No control	0	03 - P.D. only	02 - Angle	01 - Dry	0	0	0	0
2018-10-25	2018	6:50	OGILVIE RD btwn BEAULIEU PL & CUMMINGS AVE (__54PO0D)	01 - Clear	07 - Dark	10 - No control	0	02 - Non-fatal injury	02 - Angle	01 - Dry	0	0	1	0
2019-04-09	2019	14:14	OGILVIE RD btwn BEAULIEU PL & CUMMINGS AVE (__54PO0D)	03 - Snow	01 - Daylight	10 - No control	0	03 - P.D. only	03 - Rear end	04 - Slush	0	0	0	0
2021-09-14	2021	Unknown	OGILVIE RD btwn BEAULIEU PL & CUMMINGS AVE (__54PO0D)	01 - Clear	00 - Unknown	10 - No control	0	03 - P.D. only	07 - SMV other	01 - Dry	0	0	0	0
2022-05-28	2022	22:38	OGILVIE RD btwn BEAULIEU PL & CUMMINGS AVE (__54PO0D)	01 - Clear	07 - Dark	10 - No control	0	02 - Non-fatal injury	03 - Rear end	01 - Dry	0	0	0	0
2018-02-09	2018	10:14	CUMMINGS AVE btwn EADY CRT & STRATHAVEN PRIV (__5J9TPH)	01 - Clear	01 - Daylight	10 - No control	0	02 - Non-fatal injury	05 - Turning movement	04 - Slush	0	0	0	0
2019-03-01	2019	19:30	CUMMINGS AVE btwn EADY CRT & STRATHAVEN PRIV (__5J9TPH)	01 - Clear	07 - Dark	10 - No control	0	03 - P.D. only	04 - Sideswipe	02 - Wet	0	0	0	0
2019-08-17	2019	15:42	CUMMINGS AVE btwn EADY CRT & STRATHAVEN PRIV (__5J9TPH)	01 - Clear	01 - Daylight	10 - No control	0	03 - P.D. only	05 - Turning movement	01 - Dry	0	0	0	0
2020-01-10	2020	18:00	OGILVIE RD btwn CUMMINGS AVE & MURDOCK GT (__3ZBN9A)	01 - Clear	07 - Dark	10 - No control	0	03 - P.D. only	04 - Sideswipe	01 - Dry	0	0	0	0
2020-08-06	2020	17:14	OGILVIE RD btwn CUMMINGS AVE & MURDOCK GT (__3ZBN9A)	01 - Clear	01 - Daylight	10 - No control	0	02 - Non-fatal injury	02 - Angle	01 - Dry	0	0	0	0
2018-09-16	2018	17:44	CUMMINGS AVE btwn DONALD ST & EADY CRT (__3ZBO9T)	01 - Clear	01 - Daylight	10 - No control	0	02 - Non-fatal injury	02 - Angle	01 - Dry	0	0	0	0

Transportation Services - Traffic Services

Collision Details Report - Public Version

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

Location: CUMMINGS AVE @ DONALD ST

Traffic Control: Traffic signal

Total Collisions: 17

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2017-Jan-09, Mon,19:20	Clear	Turning movement	P.D. only	Dry	North	Turning left	Unknown	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2017-Apr-20, Thu,13:05	Clear	Turning movement	Non-fatal injury	Dry	North	Turning left	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2017-Aug-07, Mon,16:06	Clear	Rear end	Non-fatal injury	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2017-Aug-08, Tue,13:20	Clear	Rear end	P.D. only	Dry	South	Going ahead	Passenger van	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2017-Nov-26, Sun,21:00	Drifting Snow	Angle	P.D. only	Ice	North	Unknown	Tow truck	Other motor vehicle	0
					East	Unknown	Automobile, station wagon	Other motor vehicle	
2018-Feb-25, Sun,10:00	Clear	Angle	P.D. only	Ice	South	Turning right	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2018-Apr-30, Mon,14:37	Clear	Rear end	P.D. only	Dry	East	Turning right	Pick-up truck	Other motor vehicle	0
					East	Turning right	Automobile, station wagon	Other motor vehicle	
2018-Sep-17, Mon,10:12	Clear	Turning movement	Non-fatal injury	Dry	North	Turning left	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2018-Nov-25, Sun,02:45	Freezing Rain	SMV other	P.D. only	Ice	East	Turning right	Automobile, station wagon	Skidding/sliding	0
2019-Jul-13, Sat,10:30	Clear	Rear end	P.D. only	Dry	East	Unknown	Unknown	Other motor vehicle	0
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Jul-22, Mon,15:16	Clear	Angle	P.D. only	Dry	East	Turning right	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2020-Jan-10, Fri,20:54	Snow	SMV other	Non-fatal injury	Wet	East	Turning right	Automobile, station wagon	Pedestrian	1
2020-Jan-11, Sat,14:44	Clear	Rear end	P.D. only	Dry	North	Unknown	Automobile, station wagon	Other motor vehicle	0
					North	Unknown	Automobile, station wagon	Other motor vehicle	

Transportation Services - Traffic Services

Collision Details Report - Public Version

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

Location: CUMMINGS AVE @ DONALD ST

Traffic Control: Traffic signal

Total Collisions: 17

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2020-Jun-12, Fri,21:14	Clear	Sideswipe	P.D. only	Dry	South	Overtaking	Automobile, station wagon	Other motor vehicle	0
					South	Stopped	Pick-up truck	Other motor vehicle	
					North	Stopped	Automobile, station wagon	Other motor vehicle	
2021-Oct-15, Fri,05:56	Rain	SMV other	Non-fatal injury	Wet	North	Turning left	Pick-up truck	Pedestrian	1
2021-Dec-02, Thu,15:35	Clear	Turning movement	P.D. only	Wet	North	Turning left	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Passenger van	Other motor vehicle	
2021-Dec-20, Mon,16:59	Snow	Turning movement	P.D. only	Slush	South	Turning right	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	

Transportation Services - Traffic Services

Collision Details Report - Public Version

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

Location: CUMMINGS AVE @ OGILVIE RD

Traffic Control: Traffic signal

Total Collisions: 54

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2017-Jan-30, Mon,19:00	Clear	Rear end	P.D. only	Dry	West	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					West	Stopped	Automobile, station wagon	Other motor vehicle	
2017-Feb-08, Wed,16:20	Clear	Rear end	P.D. only	Loose snow	South	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					South	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
					South	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2017-Feb-15, Wed,08:17	Snow	Turning movement	P.D. only	Loose snow	East	Making "U" turn	Automobile, station wagon	Other motor vehicle	0
					West	Slowing or stopping	Pick-up truck	Other motor vehicle	
2017-Mar-02, Thu,15:28	Clear	Rear end	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2017-Mar-08, Wed,10:45	Clear	Rear end	Non-fatal injury	Dry	West	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					West	Stopped	Automobile, station wagon	Other motor vehicle	
2017-Aug-02, Wed,12:40	Clear	Turning movement	P.D. only	Dry	South	Turning left	Automobile, station wagon	Other motor vehicle	0
					North	Turning right	Automobile, station wagon	Other motor vehicle	
2017-Aug-03, Thu,07:50	Clear	Turning movement	Non-fatal injury	Dry	West	Turning right	Automobile, station wagon	Cyclist	0
					West	Going ahead	Bicycle	Other motor vehicle	
2017-Aug-27, Sun,00:11	Clear	Angle	P.D. only	Dry	South	Going ahead	Police vehicle	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2017-Sep-08, Fri,08:37	Rain	Rear end	P.D. only	Wet	North	Unknown	Automobile, station wagon	Other motor vehicle	0
					North	Stopped	Automobile, station wagon	Other motor vehicle	
2017-Sep-12, Tue,12:30	Clear	Rear end	P.D. only	Dry	East	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					East	Stopped	Delivery van	Other motor vehicle	
2017-Sep-20, Wed,14:47	Clear	Sideswipe	Non-fatal injury	Dry	West	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Motorcycle	Other motor vehicle	

Transportation Services - Traffic Services

Collision Details Report - Public Version

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

Location: CUMMINGS AVE @ OGILVIE RD

Traffic Control: Traffic signal

Total Collisions: 54

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2017-Oct-27, Fri,11:30	Clear	Turning movement	Non-fatal injury	Dry	West	Turning right	Automobile, station wagon	Cyclist	0
					West	Going ahead	Bicycle	Other motor vehicle	
2018-Mar-24, Sat,18:25	Clear	Rear end	Non-fatal injury	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					North	Turning right	Passenger van	Other motor vehicle	
2018-Apr-12, Thu,11:01	Clear	Sideswipe	P.D. only	Dry	West	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Unknown	Other motor vehicle	
2018-May-05, Sat,18:14	Clear	Angle	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
					North	Stopped	Automobile, station wagon	Other motor vehicle	
2018-May-25, Fri,15:00	Clear	Sideswipe	P.D. only	Dry	West	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2018-Jun-11, Mon,18:00	Clear	Turning movement	P.D. only	Dry	South	Turning left	Automobile, station wagon	Other motor vehicle	0
					North	Turning right	Automobile, station wagon	Other motor vehicle	
2018-Jul-23, Mon,09:30	Clear	Rear end	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Stopped	Automobile, station wagon	Other motor vehicle	
2018-Aug-20, Mon,17:00	Clear	Turning movement	Non-fatal injury	Dry	West	Turning right	Automobile, station wagon	Cyclist	0
					West	Going ahead	Bicycle	Other motor vehicle	
2018-Sep-19, Wed,17:07	Clear	Turning movement	P.D. only	Dry	West	Turning right	Automobile, station wagon	Cyclist	0
					West	Going ahead	Bicycle	Other motor vehicle	
2018-Oct-10, Wed,15:15	Clear	Turning movement	P.D. only	Dry	West	Turning left	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2018-Nov-21, Wed,16:10	Clear	Turning movement	P.D. only	Packed snow	East	Turning left	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	

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Collision Details Report - Public Version

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

Location: CUMMINGS AVE @ OGILVIE RD

Traffic Control: Traffic signal **Total Collisions:** 54

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2018-Dec-08, Sat,18:00	Snow	Sideswipe	P.D. only	Loose snow	East	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					East	Turning right	Automobile, station wagon	Other motor vehicle	
2019-Jan-11, Fri,16:08	Clear	Sideswipe	P.D. only	Dry	East	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					East	Turning right	Automobile, station wagon	Other motor vehicle	
2019-Jan-23, Wed,12:30	Snow	Sideswipe	P.D. only	Packed snow	East	Changing lanes	Delivery van	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Jan-28, Mon,09:30	Clear	Other	P.D. only	Wet	South	Reversing	Pick-up truck	Other motor vehicle	0
					North	Stopped	Passenger van	Other motor vehicle	
2019-Feb-09, Sat,16:15	Clear	Rear end	P.D. only	Ice	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Mar-06, Wed,09:59	Clear	Rear end	Non-fatal injury	Wet	East	Slowing or stopping	Pick-up truck	Other motor vehicle	0
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Mar-13, Wed,18:40	Snow	Angle	P.D. only	Packed snow	West	Turning right	Automobile, station wagon	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Mar-25, Mon,11:00	Clear	Rear end	P.D. only	Dry	West	Turning right	Automobile, station wagon	Other motor vehicle	0
					West	Turning right	Automobile, station wagon	Other motor vehicle	
2019-May-12, Sun,13:19	Clear	Turning movement	P.D. only	Dry	East	Turning left	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Jun-27, Thu,12:51	Clear	Angle	P.D. only	Dry	East	Turning left	Automobile, station wagon	Other motor vehicle	0
					North	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Jul-20, Sat,13:47	Clear	Rear end	P.D. only	Dry	West	Unknown	Unknown	Other motor vehicle	0
					West	Stopped	Automobile, station wagon	Other motor vehicle	

Transportation Services - Traffic Services

Collision Details Report - Public Version

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

Location: CUMMINGS AVE @ OGILVIE RD

Traffic Control: Traffic signal **Total Collisions:** 54

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2019-Jul-30, Tue,12:30	Rain	Angle	P.D. only	Wet	East	Turning left	Automobile, station wagon	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Aug-01, Thu,18:04	Clear	Rear end	P.D. only	Dry	West	Slowing or stopping	Pick-up truck	Other motor vehicle	0
					West	Stopped	Automobile, station wagon	Other motor vehicle	
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Aug-11, Sun,15:12	Clear	Rear end	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Nov-16, Sat,21:55	Clear	Rear end	P.D. only	Ice	North	Unknown	Unknown	Other motor vehicle	0
					North	Stopped	Automobile, station wagon	Other motor vehicle	
					North	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Nov-25, Mon,09:53	Clear	Rear end	P.D. only	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2020-Jan-06, Mon,07:45	Snow	Turning movement	P.D. only	Ice	East	Turning left	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2020-Jan-10, Fri,12:23	Clear	Rear end	P.D. only	Dry	West	Unknown	Unknown	Other motor vehicle	0
					West	Stopped	Pick-up truck	Other motor vehicle	
2020-Jan-11, Sat,14:55	Snow	Turning movement	P.D. only	Loose snow	North	Going ahead	Unknown	Other motor vehicle	0
					South	Turning left	Automobile, station wagon	Other motor vehicle	
2020-Feb-07, Fri,17:45	Snow	Sideswipe	P.D. only	Loose snow	West	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2020-Mar-06, Fri,07:38	Snow	Rear end	P.D. only	Wet	East	Turning left	Pick-up truck	Other motor vehicle	0
					East	Turning left	Automobile, station wagon	Other motor vehicle	
2020-Jul-13, Mon,18:04	Clear	Turning movement	P.D. only	Dry	East	Turning left	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	

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Collision Details Report - Public Version

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

Location: CUMMINGS AVE @ OGILVIE RD

Traffic Control: Traffic signal **Total Collisions:** 54

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2020-Aug-01, Sat,15:22	Clear	Turning movement	P.D. only	Dry	South	Turning left	Unknown	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2020-Oct-11, Sun,15:40	Clear	Rear end	P.D. only	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Stopped	Pick-up truck	Other motor vehicle	
2020-Dec-11, Fri,18:16	Clear	Sideswipe	P.D. only	Dry	East	Changing lanes	Pick-up truck	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2021-Feb-24, Wed,17:58	Snow	Turning movement	Non-fatal injury	Packed snow	East	Turning left	Pick-up truck	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2021-Jun-06, Sun,17:47	Clear	Angle	Non-fatal injury	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2021-Jun-08, Tue,18:01	Clear	Rear end	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Stopped	Pick-up truck	Other motor vehicle	
2021-Aug-20, Fri,19:40	Clear	Turning movement	P.D. only	Dry	South	Turning left	Delivery van	Other motor vehicle	0
					North	Going ahead	Pick-up truck	Other motor vehicle	
2021-Sep-30, Thu,23:10	Clear	Angle	Non-fatal injury	Dry	West	Going ahead	Passenger van	Other motor vehicle	0
					North	Turning left	Police vehicle	Other motor vehicle	
2021-Nov-06, Sat,14:42	Clear	Turning movement	Non-fatal injury	Dry	East	Making "U" turn	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2021-Dec-02, Thu,12:19	Rain	Turning movement	P.D. only	Wet	West	Turning left	Pick-up truck	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	

Transportation Services - Traffic Services

Collision Details Report - Public Version

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

Location: CUMMINGS AVE btwn WELDON DR & OGILVIE RD

Traffic Control: No control **Total Collisions:** 11

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2017-Mar-08, Wed,09:19	Clear	Rear end	P.D. only	Wet	North	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					North	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
					North	Stopped	Automobile, station wagon	Other motor vehicle	
2018-Feb-21, Wed,16:40	Clear	Angle	P.D. only	Packed snow	East	Turning left	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2018-Jun-16, Sat,14:44	Clear	Angle	P.D. only	Dry	East	Turning left	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Oct-25, Fri,21:38	Clear	Angle	P.D. only	Dry	East	Turning left	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Passenger van	Other motor vehicle	
2019-Nov-05, Tue,18:55	Clear	Angle	P.D. only	Dry	East	Turning right	Unknown	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Nov-27, Wed,17:40	Rain	Turning movement	P.D. only	Wet	South	Turning left	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Passenger van	Other motor vehicle	
2020-Feb-24, Mon,16:11	Clear	Angle	P.D. only	Wet	East	Turning left	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
					South	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2020-Jul-07, Tue,15:00	Clear	Angle	P.D. only	Dry	East	Turning left	Pick-up truck	Other motor vehicle	0
					North	Going ahead	Delivery van	Other motor vehicle	
2021-Jan-10, Sun,11:53	Clear	Turning movement	Non-fatal injury	Dry	North	Turning left	Passenger van	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2021-May-20, Thu,14:25	Clear	Angle	P.D. only	Dry	East	Turning left	Bicycle	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Cyclist	

Transportation Services - Traffic Services

Collision Details Report - Public Version

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

Location: CUMMINGS AVE btwn WELDON DR & OGILVIE RD

Traffic Control: No control **Total Collisions:** 11

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2021-Aug-05, Thu,17:29	Clear	Angle	P.D. only	Dry	East	Turning left	Pick-up truck	Other motor vehicle	0
					South	Going ahead	Pick-up truck	Other motor vehicle	

Appendix E

TDM Checklist

TDM-Supportive Development Design and Infrastructure Checklist:
Non-Residential Developments (office, institutional, retail or industrial)

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: *Non-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: *Non-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: *Non-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 commuter cyclists (assuming the cycling mode share target is met), plus the expected peak number of customer/visitor cyclists	☐
BETTER	2.1.5	Provide bicycle parking spaces equivalent to the expected number of commuter and customer/visitor cyclists, plus an additional buffer (e.g. 25 percent extra) to encourage other cyclists and ensure adequate capacity in peak cycling season	☐
	2.2	**Secure bicycle parking**	
REQUIRED	2.2.1	Where more than 50 bicycle parking spaces are provided for a single office 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 the expected number of commuter cyclists (assuming the cycling mode share target is met)	☐
	2.3	**Shower & change facilities**	
BASIC	2.3.1	Provide shower and change facilities for the use of active commuters	☐
BETTER	2.3.2	In addition to shower and change facilities, provide dedicated lockers, grooming stations, drying racks and laundry facilities for the use of active commuters	☐
	2.4	**Bicycle repair station**	
BETTER	2.4.1	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)	☐

		TDM-supportive design & infrastructure measures: *Non-residential developments*	Check if completed & add descriptions, explanations or plan/drawing references
	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	☐
	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	☐
	4.2	**Carpool parking**	
BASIC	4.2.1	Provide signed parking spaces for carpools in a priority location close to a major building entrance, sufficient in number to accommodate the mode share target for carpools	☐
BETTER	4.2.2	At large developments, provide spaces for carpools in a separate, access-controlled parking area to simplify enforcement	☐
	5.	**CARSHARING & BIKESHARING**	
	5.1	**Carshare parking spaces**	
BETTER	5.1.1	Provide carshare parking spaces in permitted non-residential zones, occupying either required or provided parking spaces *(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	☐

	TDM-supportive design & infrastructure measures: *Non-residential developments*		Check if completed & add descriptions, explanations or plan/drawing references
	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	Separate short-term and long-term parking areas using signage or physical barriers, to permit access controls and simplify enforcement (i.e. to discourage employees from parking in visitor spaces, and vice versa)	☐
	7. OTHER		
	7.1 On-site amenities to minimize off-site trips		
BETTER	7.1.1	Provide on-site amenities to minimize mid-day or mid-commute errands	☐

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)	☑

TDM Measures Checklist:
Non-Residential Developments (office, institutional, retail or industrial)

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: *Non-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	☑
		2.2 Bicycle skills training	
		Commuter travel	
BETTER	★	2.2.1 Offer on-site cycling courses for commuters, or subsidize off-site courses	☐
		2.3 Valet bike parking	
		Visitor travel	
BETTER		2.3.1 Offer secure valet bike parking during public events when demand exceeds fixed supply (e.g. for festivals, concerts, games)	☐

		TDM measures: *Non-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	☑
BASIC		3.1.2 Provide online links to OC Transpo and STO information	☐
BETTER		3.1.3 Provide real-time arrival information display at entrances	☐
		3.2 Transit fare incentives	
		Commuter travel	
BETTER		3.2.1 Offer preloaded PRESTO cards to encourage commuters to use transit	☐
BETTER	★	3.2.2 Subsidize or reimburse monthly transit pass purchases by employees	☐
		Visitor travel	
BETTER		3.2.3 Arrange inclusion of same-day transit fare in price of tickets (e.g. for festivals, concerts, games)	☐
		3.3 Enhanced public transit service	
		Commuter travel	
BETTER		3.3.1 Contract with OC Transpo to provide enhanced transit services (e.g. for shift changes, weekends)	☐
		Visitor travel	
BETTER		3.3.2 Contract with OC Transpo to provide enhanced transit services (e.g. for festivals, concerts, games)	☐
		3.4 Private transit service	
		Commuter travel	
BETTER		3.4.1 Provide shuttle service when OC Transpo cannot offer sufficient quality or capacity to serve demand (e.g. for shift changes, weekends)	☐
		Visitor travel	
BETTER		3.4.2 Provide shuttle service when OC Transpo cannot offer sufficient quality or capacity to serve demand (e.g. for festivals, concerts, games)	☐

			TDM measures: *Non-residential developments*	Check if proposed & add descriptions
		4.	**RIDESHARING**	
		4.1	**Ridematching service**	
			Commuter travel	
BASIC	★	4.1.1	Provide a dedicated ridematching portal at OttawaRideMatch.com	☐
		4.2	**Carpool parking price incentives**	
			Commuter travel	
BETTER		4.2.1	Provide discounts on parking costs for registered carpools	☐
		4.3	**Vanpool service**	
			Commuter travel	
BETTER		4.3.1	Provide a vanpooling service for long-distance commuters	☐
		5.	**CARSHARING & BIKESHARING**	
		5.1	**Bikeshare stations & memberships**	
BETTER		5.1.1	Contract with provider to install on-site bikeshare station for use by commuters and visitors	☐
			Commuter travel	
BETTER		5.1.2	Provide employees with bikeshare memberships for local business travel	☐
		5.2	**Carshare vehicles & memberships**	
			Commuter travel	
BETTER		5.2.1	Contract with provider to install on-site carshare vehicles and promote their use by tenants	☐
BETTER		5.2.2	Provide employees with carshare memberships for local business travel	☐
		6.	**PARKING**	
		6.1	**Priced parking**	
			Commuter travel	
BASIC	★	6.1.1	Charge for long-term parking (daily, weekly, monthly)	☐
BASIC		6.1.2	Unbundle parking cost from lease rates at multi-tenant sites	☐
			Visitor travel	
BETTER		6.1.3	Charge for short-term parking (hourly)	☐

			TDM measures: *Non-residential developments*	Check if proposed & add descriptions
		7.	**TDM MARKETING & COMMUNICATIONS**	
		7.1	**Multimodal travel information**	
			Commuter travel	
BASIC	★	7.1.1	Provide a multimodal travel option information package to new/relocating employees and students	☑
			Visitor travel	
BETTER	★	7.1.2	Include multimodal travel option information in invitations or advertising that attract visitors or customers (e.g. for festivals, concerts, games)	☐
		7.2	**Personalized trip planning**	
			Commuter travel	
BETTER	★	7.2.1	Offer personalized trip planning to new/relocating employees	☐
		7.3	**Promotions**	
			Commuter travel	
BETTER		7.3.1	Deliver promotions and incentives to maintain awareness, build understanding, and encourage trial of sustainable modes	☐
		8.	**OTHER INCENTIVES & AMENITIES**	
		8.1	**Emergency ride home**	
			Commuter travel	
BETTER	★	8.1.1	Provide emergency ride home service to non-driving commuters	☐
		8.2	**Alternative work arrangements**	
			Commuter travel	
BASIC	★	8.2.1	Encourage flexible work hours	☐
BETTER		8.2.2	Encourage compressed workweeks	☐
BETTER	★	8.2.3	Encourage telework	☐
		8.3	**Local business travel options**	
			Commuter travel	
BASIC	★	8.3.1	Provide local business travel options that minimize the need for employees to bring a personal car to work	☐
		8.4	**Commuter incentives**	
			Commuter travel	
BETTER		8.4.1	Offer employees a taxable, mode-neutral commuting allowance	☐
		8.5	**On-site amenities**	
			Commuter travel	
BETTER		8.5.1	Provide on-site amenities/services to minimize mid-day or mid-commute errands	☐

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

Legend

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

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

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

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

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

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

Appendix F

MMLOS Sheets

Multi-Modal Level of Service - Segments Form

Consultant	**CGH Transportation Inc**	**Project**	**1137 Ogilvie Road & 1111 Cummings Avenue**
Scenario	**Existing/Future**	**Date**	**2024-06-11**
Comments			

SEGMENTS			Ogilvie Rd Existing	Ogilvie Rd Future	Cummings Ave Existing	Cummings Ave Future	
Pedestrian	Sidewalk Width Boulevard Width		1.5 m > 2 m	1.5 m > 2 m	1.5 m < 0.5 m	1.5 m < 0.5 m	
	Avg Daily Curb Lane Traffic Volume		> 3000	> 3000	> 3000	> 3000	
	Operating Speed On-Street Parking		> 60 km/h no	> 60 km/h no	> 50 to 60 km/h no	> 50 to 60 km/h no	
	Exposure to Traffic PLoS	**-**	**E**	**E**	**F**	**F**	**-**
	Effective Sidewalk Width						
	Pedestrian Volume						
	Crowding PLoS		**-**	**-**	**-**	**-**	**-**
	Level of Service		**-**	**-**	**-**	**-**	**-**
Bicycle	Type of Cycling Facility		Curbside Bike Lane	Curbside Bike Lane	Mixed Traffic	Curbside Bike Lane	
	Number of Travel Lanes		≤ 1 each direction	≤ 1 each direction	2-3 lanes total	≤ 1 each direction	
	Operating Speed		>50 to 70 km/h	>50 to 70 km/h	≥ 50 to 60 km/h	>50 to 70 km/h	
	# of Lanes & Operating Speed LoS		**C**	**C**	**E**	**C**	**-**
	Bike Lane (+ Parking Lane) Width		≥1.5 to <1.8 m	≥1.5 to <1.8 m		≥ 1.8 m	
	Bike Lane Width LoS	**E**	**B**	**B**	**-**	**A**	**-**
	Bike Lane Blockages		Rare	Rare		Rare	
	Blockage LoS		**A**	**A**	**-**	**A**	**-**
	Median Refuge Width (no median = < 1.8 m)		< 1.8 m refuge	< 1.8 m refuge	< 1.8 m refuge	< 1.8 m refuge	
	No. of Lanes at Unsignalized Crossing		≤ 3 lanes	≤ 3 lanes	≤ 3 lanes	≤ 3 lanes	
	Sidestreet Operating Speed		≤ 40 km/h	≤ 40 km/h	≤ 40 km/h	≤ 40 km/h	
	Unsignalized Crossing - Lowest LoS		**C**	**A**	**A**	**A**	**-**
	Level of Service		**C**	**C**	**E**	**C**	**-**
Transit	Facility Type		Mixed Traffic	Mixed Traffic			
	Friction or Ratio Transit:Posted Speed	**D**	Vt/Vp ≥ 0.8	Vt/Vp ≥ 0.8			
	Level of Service		**D**	**D**	**-**	**-**	**-**
Truck	Truck Lane Width		≤ 3.5 m	≤ 3.5 m	> 3.7 m	> 3.7 m	
	Travel Lanes per Direction	**B**	> 1	> 1	1	1	
	Level of Service		**A**	**A**	**B**	**B**	**-**
Auto	**Level of Service**	**Not Applicable**					