8201 Campeau Drive

Transportation Impact Assessment

Step 1 Screening Report

Step 2 Scoping Report

Step 3 Analysis Report (Revision #1)

Prepared for:

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March 2026

PN: 2023-170

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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 and site plan application.

2 Existing and Planned Conditions

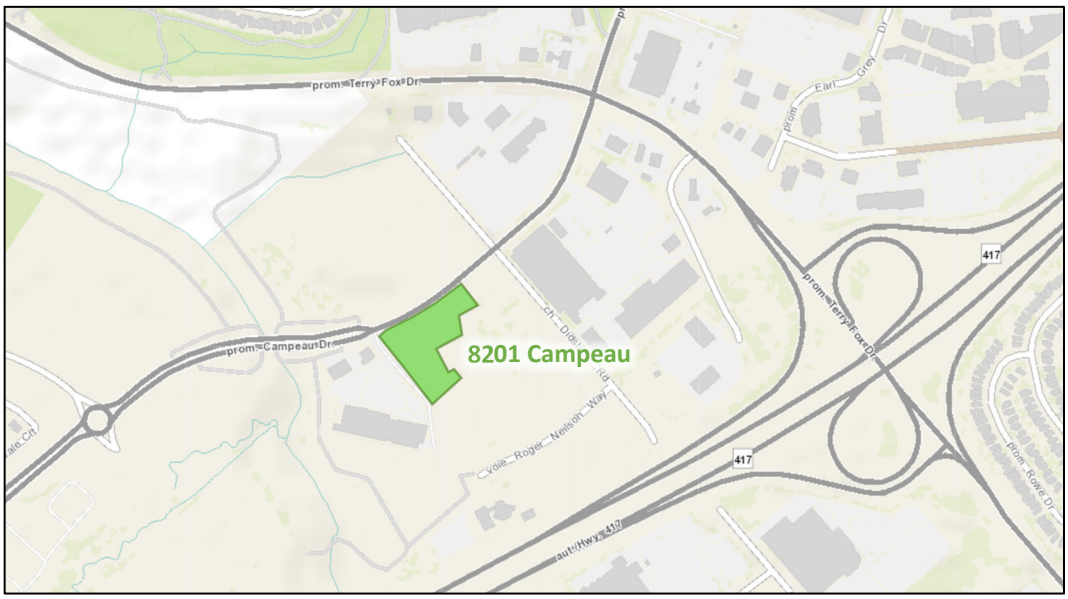
2.1 Proposed Development

The development site is located at 8201 Campeau Drive, and it is currently zoned as Mixed-Use Centre Zone (MC11[74] H(34)). The proposed development is Phase 1 of 8201 Campeau Drive Master Plan and includes two six-storey buildings with a total of 342 dwelling units and 2,930 sq ft of commercial space.

Vehicular access is proposed to Campeau Drive via the existing Kanata Commons drive aisle intersection. As part of the future overall master planning exercise for the site, it will be investigated whether all driveways will remain private, or whether some conversions to public local roads will be pursued. As part of Phase 1 of development, the portion of the Kanata Commons drive aisle between Campeau Drive and the internal drive aisle is proposed to be designed to support such a potential future conversion. In the event that the public road option is pursued, the ultimate condition would be provided either through the full conversion of the Kanata Commons drive aisle as a public road south to a permanent turning basin, or the partial conversion of the Kanata Commons drive aisle to the internal road intersection along with the conveyance of the east-west internal road through the development area to Didsbury Road. As part of Phase 1, a portion of the future internal east-west road stub will be constructed to the southern terminus of the converted public road, providing access to an underground parking garage and a surface parking lot.

A total of 368 vehicle parking spaces and 178 bicycle parking spaces are proposed. The anticipated full built-out is 2028. The site is subject to the Kanata West Area-Specific Policies and Kanata West Concept Plan. 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: April 8, 2025

CLIENT

8201 Campeau Drive Inc.

ISSUES

No.	DESCRIPTION	DATE
01	ISSUED FOR SPC	2025-07-18
02	ISSUED FOR SPC RESUB.	2025-10-03
03	ISSUED FOR SPC RESUB.	2026-02-06

KEY PLAN

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PROJECT

8201 Campeau Drive

PROJECT NO:	30259723
DRAWN BY:	CHECKED BY:
PROJECT MGR:	APPROVED BY:

SHEET TITLE: SITE PLAN PHASE 1	SCALE: 1:400
	DATE
SHEET NUMBER: A003C	ISSUE

D07-12-25-0103 | #19407

2.2 Existing Conditions

2.2.1 Area Road Network

Highway 417: Highway 417 is a Ministry of Transportation of Ontario urban freeway with an eight-lane cross-section within the study area. The posted speed limit is 100 km/h.

Campeau Drive: Campeau Drive is a City of Ottawa arterial road with a divided four-lane urban cross-section west of Didsbury Road and a two-lane urban cross-section to the east of Didsbury Road. Sidewalks are present on both sides of the road west of Terry Fox Drive. East of Terry Fox Drive, a sidewalk is present on the north side of the road and a pathway is present on the south side of the road. Cycletracks are present on both sides of the road west of Didsbury Road and on the north side of the road east of Didsbury Road for 80 metres. The posted speed limit is 60 km/h. The existing right-of-way varies between 37.5 and 40.0 metres west of Didsbury Road with additional local widenings for structures, grading, and surrounding pathways, and the City-protected right-of-way is 40.0 metres east of Didsbury Road within the study area. Campeau Drive, west of Terry Fox Drive, is designated as a truck route.

Terry Fox Drive: Terry Fox Drive is a City of Ottawa arterial road with a four-lane divided urban cross-section. Sidewalks are present on both sides of the road north of Didsbury Drive within the study area. Bike lanes are present on both sides of the road north of Campeau Drive and through the intersection. Bike lanes resume approximately 150 metres south of Roland Michener Drive continuing south through the study area. The posted speed limit is 70km/h, and the City-protected right-of-way is 44.5 metres. Terry Fox Drive is designated as a truck route.

Kanata Avenue: Kanata Avenue is a City of Ottawa arterial road south of Campeau Drive, and a major collector road north of Campeau Drive, with a two-lane urban cross-section. Sidewalks and bike lanes are present on both sides of the road. The speed limit is 50km/h and the City-protected right-of-way is 44.5 metres south of Campeau Drive and 26.0 metres north of Campeau Drive.

Winterset Road: Winterset Road is a City of Ottawa collector road with a two-lane cross-section. Sidewalks are present on the west side of the road south of Basalt Lane and on both sides of the road north of Basalt Lane. The posted speed limit is 40 km/h, and the existing right-of-way is 22.0 metres.

Didsbury Road (segment intersecting Campeau Drive): Didsbury Road is a City of Ottawa local road with a two-lane urban cross-section. Sidewalks are present on the west side of the road. The unposted speed limit is assumed to be 50 km/h, and the City-protected right-of-way is 26.0 metres. It is noted that this right-of-way width would indicate this segment of Didsbury Road is a collector road.

Didsbury Road (segment intersecting Terry Fox Drive): Didsbury Road is a City of Ottawa local road with a two-lane rural cross-section, including gravel shoulders. The posted speed limit is 50 km/h, and the City-protected right-of-way is 26.0 metres.

Herlihey Way: Herlihey Way is a City of Ottawa local road with a two-lane urban cross-section. Sidewalks are present both sides of the road approximately 95 metres south of Campeau Drive. The unposted speed limit is assumed to be 30 km/h and the right-of-way is assumed to be 20.0 according to the Schedule C16.

Kanata Commons Access: Kanata Commons Access is a privately-owned local road with a two-lane cross-section. Sidewalks are present on the west side of the road. The unposted speed limit is assumed to be 30 km/h.

Roland Michener Drive: Roland Michener Drive is a private road west of Earl Grey Drive and a City of Ottawa local road, between Earl Grey Drive and Terry Fox Station. It has an urban two-lane cross-section across its private

alignment. Along its public alignment, it has a two-lane urban cross-section with sidewalks on both sides of the road. The unposted speed limit is assumed to be 30 km/h.

Donum Lane: Donum Lane is a City of Ottawa collector road with a two-lane cross-section, including stubs for sidewalks and cycletracks on both sides. The existing right-of-way is 26.0 meters.

2.2.2 Existing Intersections

The key intersections within one kilometre of the site, as confirmed through consultation with the City of Ottawa via correspondence dated April 11, 2025, have been summarized below:

Campeau Drive at Winterset Road	The intersection of Campeau Drive at Winterset Road is a four-legged roundabout intersection. The northbound approach is currently closed until Donum Lane is constructed and is anticipated to consist of a shared through/left-turn land and a right-turn lane. The southbound approach consists of a shared through/left-turn land and a right-turn lane. The eastbound and westbound approaches each consists of a shared left-turn/through lane and a shared through/right-turn lane. Pedestrian crossovers are provided on each leg and a MUP circulates the roundabout. No turn restrictions were noted.
Campeau Drive at Kanata Commons Access	The intersection of Campeau Drive at Kanata Commons Access is a signalized intersection. The northbound approach consists of an auxiliary left-turn lane and a shared through/right-turn lane. The southbound approach is currently closed and is anticipated to consist of an auxiliary shared left-turn/through lane and a shared through/right-turn lane. The eastbound approach consists of a dual auxiliary left-turn lanes, which are currently closed, two through lanes, an auxiliary right-turn lane and a bike lane, and the westbound approach consists of an auxiliary left-turn lane, reserved space for a future second auxiliary left-turn lane, two through lanes, and a right-turn lane. No turn restrictions were noted.
Campeau Drive at Didsbury Road	The intersection of Campeau Drive at Didsbury Road is a signalized intersection. The northbound and southbound approaches each consist of an auxiliary left-turn lane and a shared through/right-turn lane. The eastbound approach consists of an auxiliary left-turn lane, a through lane, and a shared through/right lane, and the westbound approach consists of an auxiliary left-turn, a through lane, and an auxiliary shared through/right-turn lane. No turn restrictions were noted.
Campeau Drive at Terry Fox Drive	The intersection of Campeau Drive at Terry Fox Drive is a signalized intersection. Terry Fox Drive is assumed to run in the north-south direction, and Campeau Drive is assumed to run in the east-west direction. The northbound approach consists of an auxiliary left-turn lane, two through lanes, a bike lane, and an auxiliary right-turn lane, and the southbound approach consists of an auxiliary left-turn lane, two through lanes, a bike lane, and an auxiliary channelized right-turn lane. The eastbound approach consists of an auxiliary left-turn lane, a

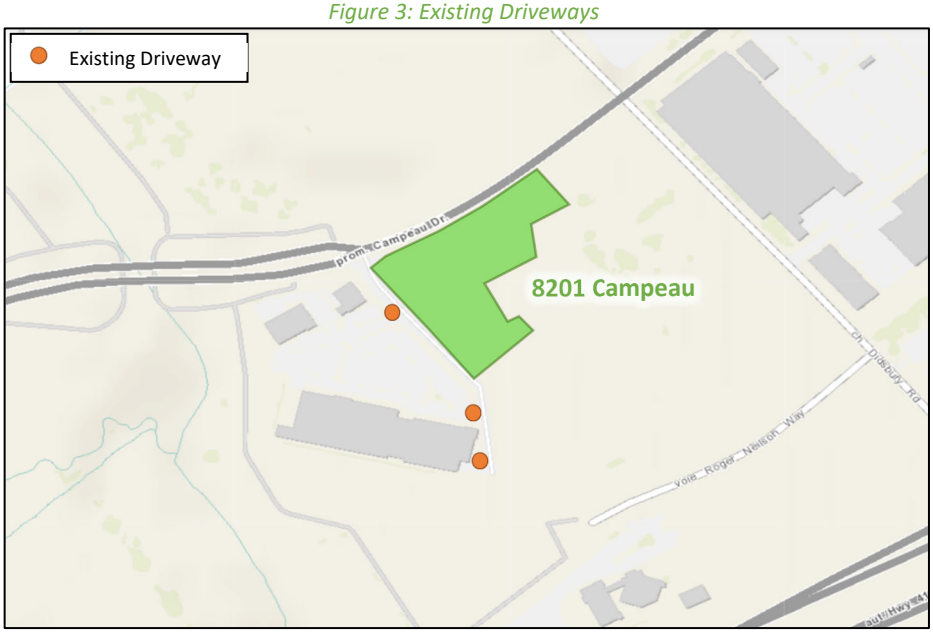
	through lane, and an auxiliary channelized right-turn lane, and the westbound approach consists of an auxiliary left-turn lane, a through lane, a bike lane, and an auxiliary channelized right-turn lane. No turn restrictions were noted.
Campeau Drive at Herlihey Way	The intersection of Campeau Drive at Herlihey Way is a signalized intersection. Herlihey Way is assumed to run in the north-south direction and Campeau Drive is assumed to run in the east-west direction. The northbound approach consists of an auxiliary left-turn lane and a shared through/right-turn lane, and the southbound approach consists of an auxiliary left-turn lane, a through lane, and an auxiliary right-turn lane. The eastbound approach consists of an auxiliary left-turn lane, a shared through/right-turn lane, and a bike lane, and the westbound approach consists of an auxiliary left-turn lane, a through lane, a bike lane, and an auxiliary right-turn lane. No turn restrictions were noted.
Campeau Drive at Kanata Avenue	The intersection of Campeau Drive at Kanata Avenue is a signalized intersection. Kanata Avenue is assumed to run in the north-south direction and Campeau Drive is assumed to run in the east-west direction. The northbound approach consists of an auxiliary left-turn lane, a through lane, a bike lane and an auxiliary right-turn lane. The southbound approach consists of an auxiliary left-turn lane, a through lane, and an auxiliary right-turn lane. The eastbound and westbound approaches each consist of an auxiliary left-turn lane and a shared through/right-turn lane. No turn restrictions were noted.
Terry Fox Drive at Didsbury Road/ Roland Michener Drive	The intersection of Terry Fox Drive at Didsbury Road/Roland Michener Drive is a signalized intersection. Terry Fox Drive is assumed to run in the north-south direction, and Didsbury Road/Roland Michener Drive are assumed to run in the east-west direction. The northbound approach consists of an auxiliary left-turn lane, two trough lanes, and an auxiliary right-turn lane. The southbound approach consists of an auxiliary left-turn lane, a through lane, and a shared through/right-turn lane. The eastbound approach consists of a shared all-movements lane, however operates as a shared left-turn/through lane and a short auxiliary right-turn lane given the pavement width, and the westbound approach consists of two left-turn lanes, and a shared through/right-turn lane. No turn restrictions were noted.
Terry Fox Drive at Highway 417 Westbound Ramp Terminal	The intersection of Terry Fox Drive at Highway 417 Westbound Ramp Terminal is a signalized intersection. The northbound and southbound approaches each consist of two through lanes and an auxiliary channelized right-turn lane to the free-flow on-ramp to the Highway. The westbound approach consists of an auxiliary left-turn lane, a left-turn lane, an auxiliary right-turn lane, and a right-turn lane. The east leg of the intersection is outbound only and do not enter signage for this leg is present at the intersection.

Terry Fox Drive at Highway 417 Eastbound Ramp Terminal	The intersection of Terry Fox Drive at Highway 417 Eastbound Ramp Terminal is a signalized intersection. The northbound and southbound approaches each consist of two through lanes and an auxiliary channelized right-turn lane to the free-flow on-ramp to the Highway. The eastbound approach consists of a left-turn lane and a channelized right-turn lane. The west leg of the intersection is outbound only and do not enter signage for this leg is present at the intersection.

2.2.3 Existing Driveways

There are two existing driveways to Kanata Commons shopping mall within 200 metres of the proposed site access, and access for a loading bay at the terminal end of the private road. Figure 3 illustrates the existing driveways.

Figure 3: Existing Driveways



Source: http://maps.ottawa.ca/geoOttawa/ Accessed: April 14, 2025

2.2.4 Cycling and Pedestrian Facilities

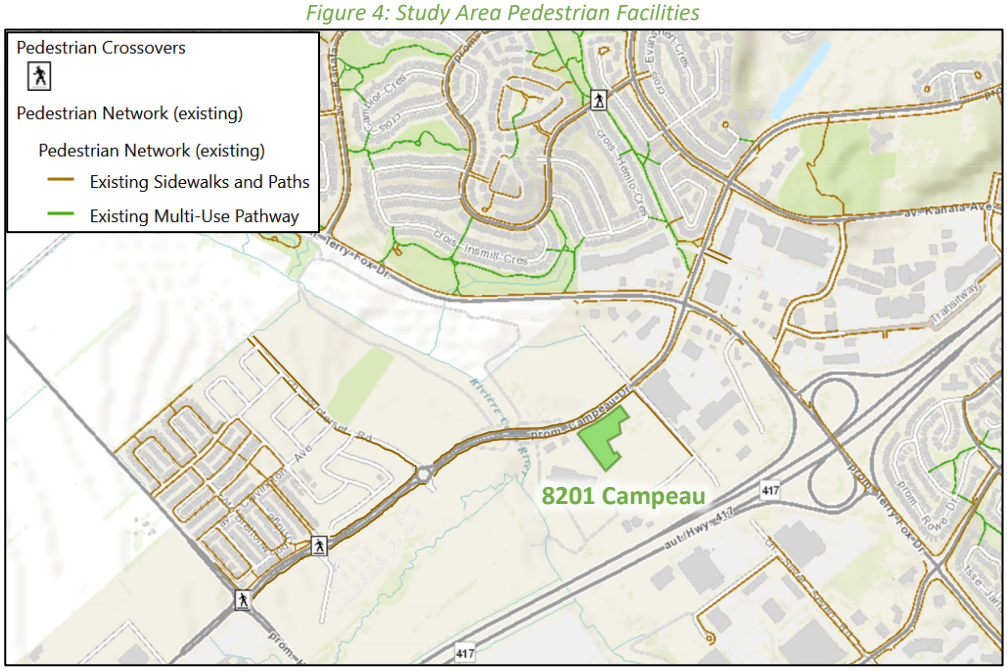
Figure 4 illustrates the pedestrian facilities in the study area and Figure 5 illustrates the cycling facilities.

Sidewalks are present along both sides of Campeau Drive west of Terry Fox Drive. East of Terry Fox Drive, a sidewalk is present on the north side of the Campeau Drive and a pathway is present on the south side of the road. Sidewalks are also provided along both sides of Terry Fox Drive north of Didsbury Drive, Kanata Avenue, and Herlihey Way approximately 95 metres south of Campeau Drive. A sidewalk is present on the west side of Kanata Commons Access, Didsbury Road south of Compeau Drive, on the west side of Winterset Road south of Basalt Lane and along both sides of the Winterset Road north of Basalt Lane.

Cycletracks are present on both sides of Campeau Drive west of Didsbury Road and on the north side of the road east of Didsbury Road for 80 metres. Bike lanes are presented on both sides of Kanata Avenue and Terry Fox Drive north of Campeau Drive. South of Campeau Drive, bike lanes are also provided on both sides of the Terry Fox Drive west of Campeau Drive and through the intersection and resume approximately 150 meters south of Roland Michener Drive southward through the study area. Pathways are present along Carp River north of Highway 417

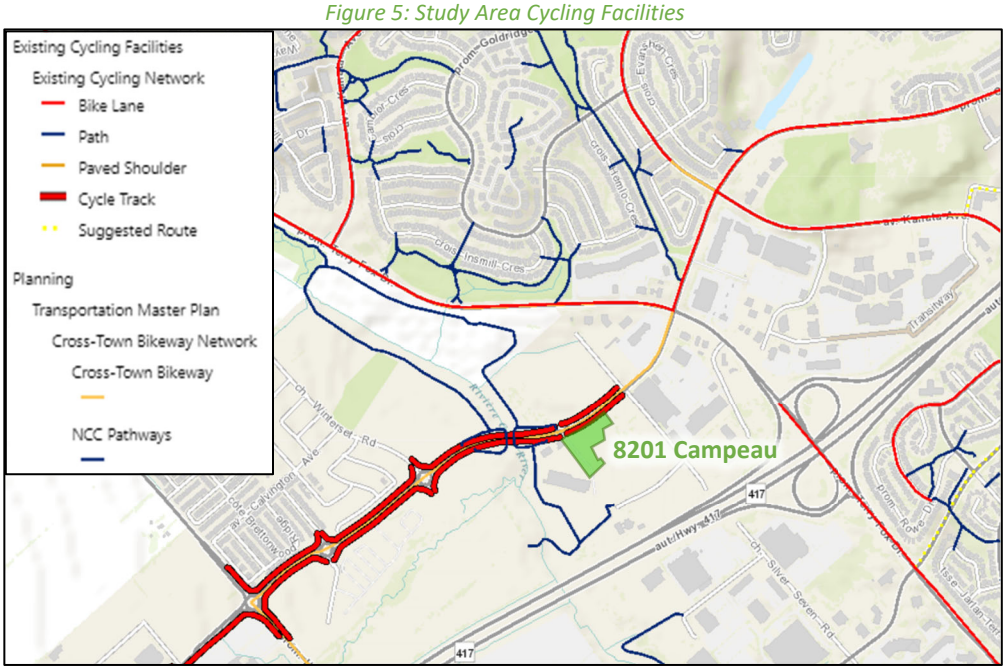
and between Terry Fox and Herlihey Way connecting to Campeau Drive. Terry Fox Drive north of Campeau Drive, Campeau Drive from Huntmar Drive to the east, and Kanata Avenue are cross-town bikeways.

Figure 4: Study Area Pedestrian Facilities



Source: http://maps.ottawa.ca/geoOttawa/ Accessed: April 8, 2025

Figure 5: Study Area Cycling Facilities



Source: http://maps.ottawa.ca/geoOttawa/ Accessed: April 8, 2025

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

Figure 6: Existing Pedestrian Volumes

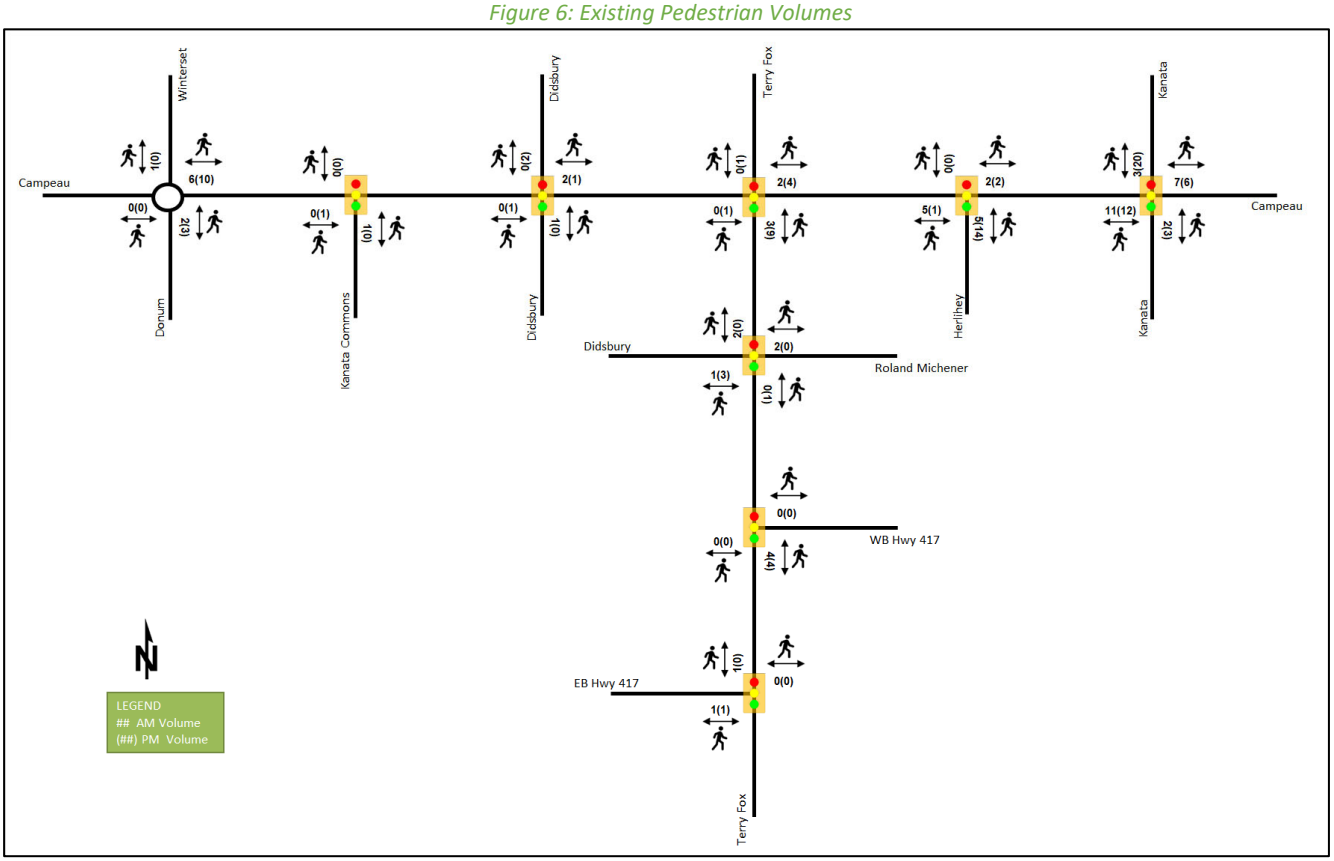
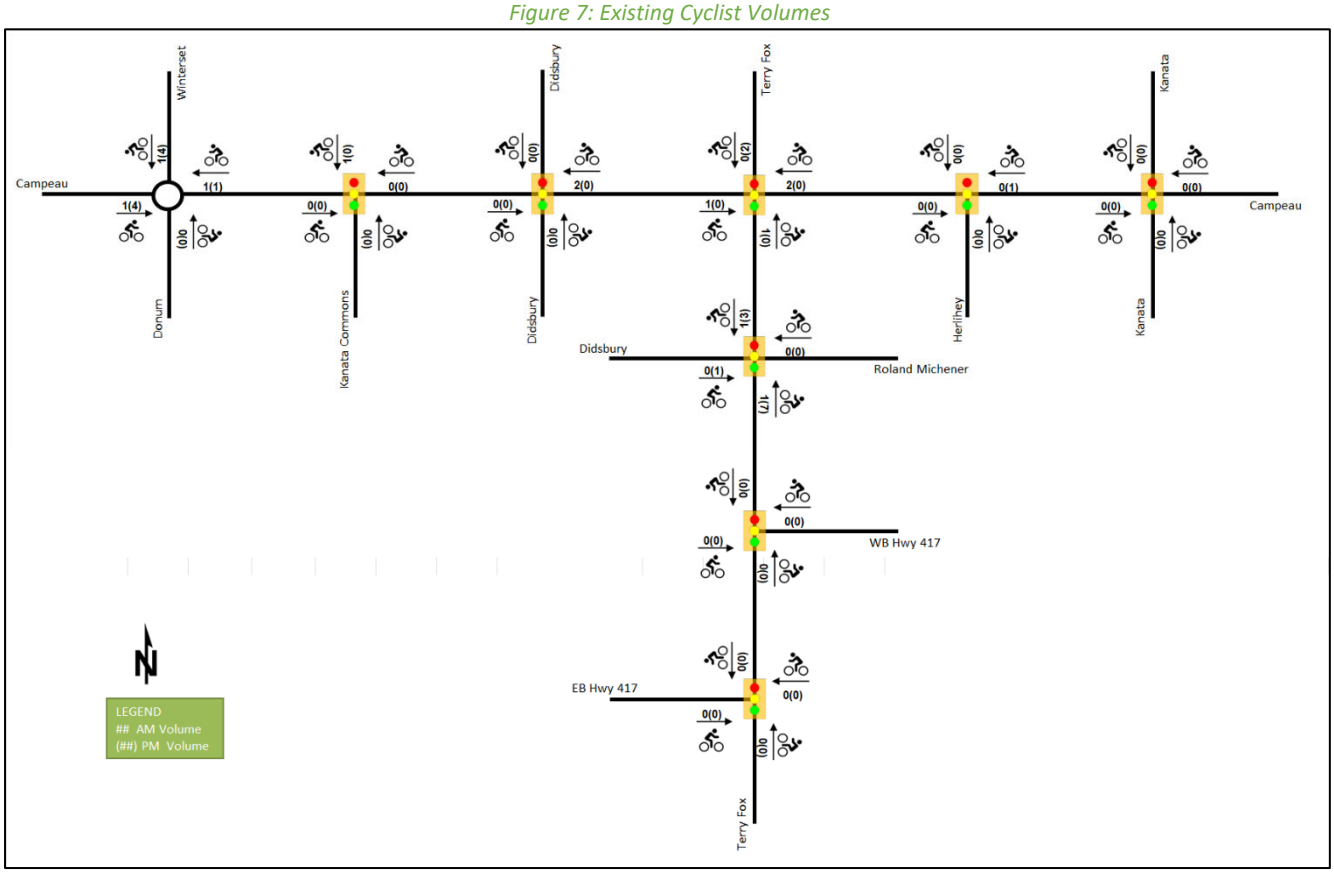


Figure 7: Existing Cyclist Volumes



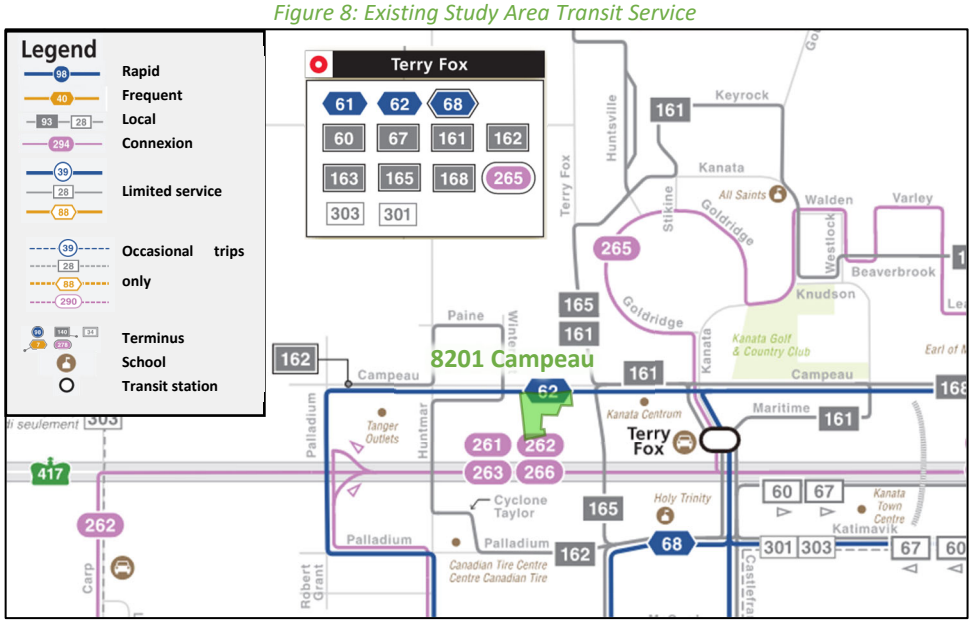
2.2.5 Existing Transit

Figure 8 illustrates the transit system map in the study area and Figure 9 illustrates nearby transit stops. All transit information is from May 13, 2025, and is included for general information purposes and context to the surrounding area.

Within the study area, Route #62 travels along Campeau Drive, Route #165 travel along Terry Fox Drive and Routes #161 and Event route #404 travel along Campeau Drive and Terry Fox Drive. The frequency of this route within proximity of the proposed site based on May 13, 2025, service levels are:

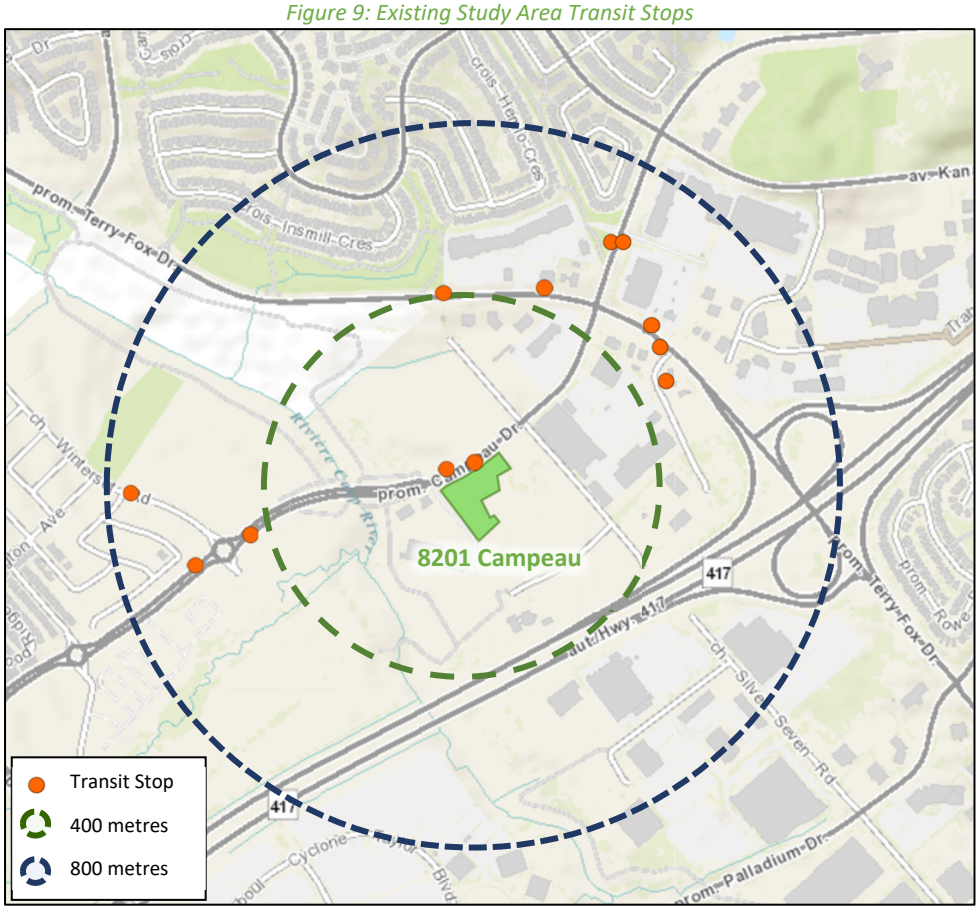
- Route # 62 – 30-minute service all day
- Route #161 – 30-minute service all day
- Route #165 – 30-minute service all day, one hour service after 6:00 PM
- Route # 404 – Event route, only service in major events

Figure 8: Existing Study Area Transit Service



Source: http://www.octranspo.com/ Accessed: May 13, 2025

Figure 9: Existing Study Area Transit Stops



Source: http://www.octranspo.com/ Accessed: May 13, 2025

2.2.6 Existing Area Traffic Management Measures

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

2.2.7 Existing Peak Hour Travel Demand

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

Table 1: Intersection Count Date

Intersection	Count Date	Source
Campeau Drive at Winterset Road	Thursday, September 12, 2024	Accu-Traffic Inc.
Campeau Drive at Kanata Commons Access	Thursday, December 14, 2023	City of Ottawa
Campeau Drive at Didsbury Road	Thursday, December 14, 2023	City of Ottawa
Campeau Drive at Terry Fox Drive	Thursday, October 17, 2024	City of Ottawa
Campeau Drive at Herlihey Way	Wednesday, February 07, 2024	City of Ottawa
Campeau Drive at Kanata Avenue	Tuesday, January 09, 2024	City of Ottawa
Terry Fox Drive at Didsbury Road/Roland Michener Dr	Tuesday, May 06, 2025	J & S Traffic Services
Terry Fox Drive at Highway 417 Westbound Ramp Terminal	Wednesday, September 27, 2023	Ministry of Transportation
Terry Fox Drive at Highway 417 Eastbound Ramp Terminal	Wednesday, September 27, 2023	Ministry of Transportation

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

Figure 10: Existing Traffic Counts

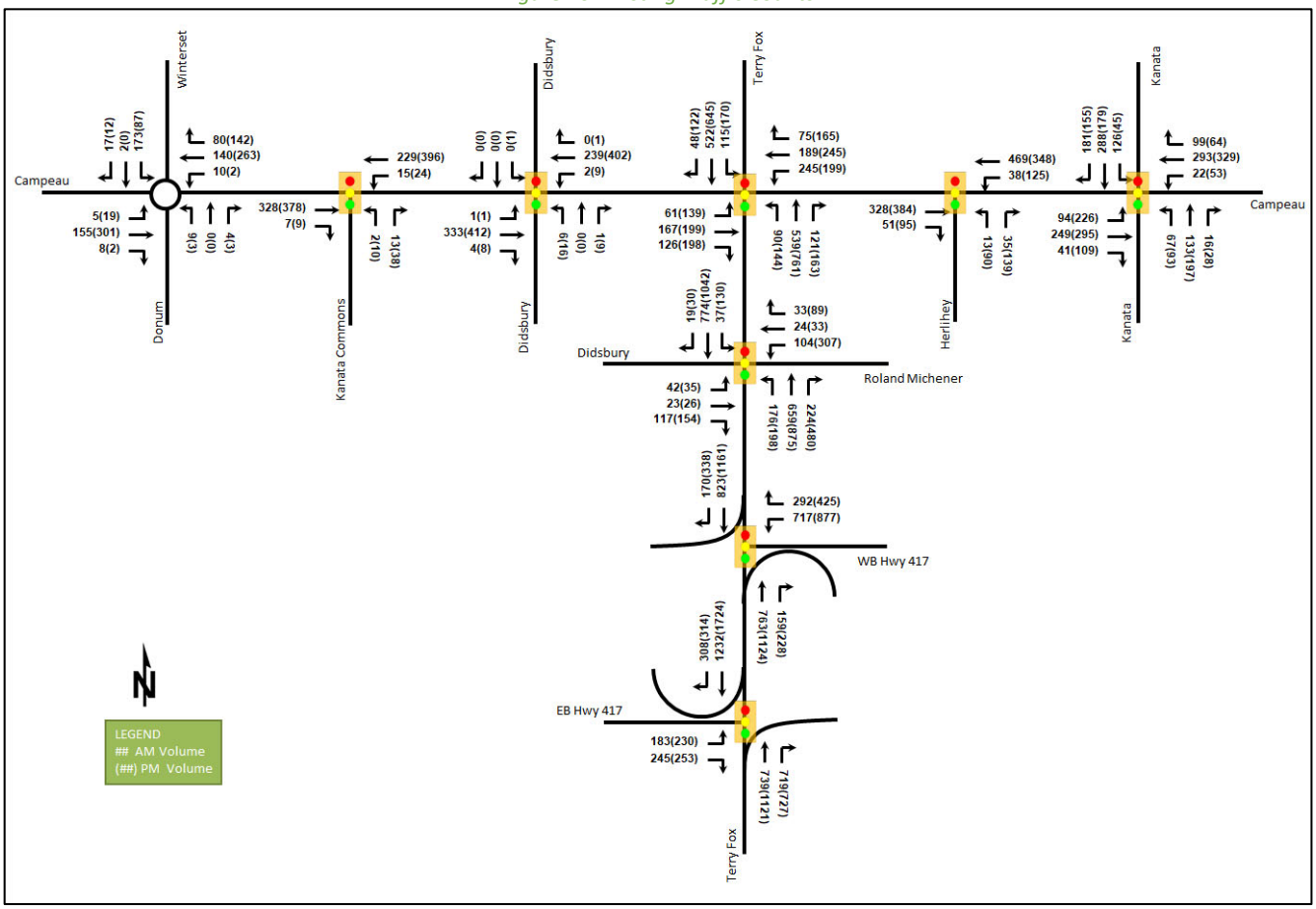


Table 2: Existing Intersection Operations

Intersection	Lane	AM Peak Hour				PM Peak Hour			
		LOS	V/C	Delay (s)	Q (95th)	LOS	V/C	Delay (s)	Q (95th)
Campeau Drive at Winterset Road *Roundabout*	EB	A	0.09	4.3	2.3	A	0.16	4.1	4.4
	WB	A	0.11	3.9	2.8	A	0.17	3.7	4.9
	NB	A	0.01	8.3	0.2	A	0.01	7.4	0.1
	SB	A	0.18	1.9	3.5	A	0.09	2.0	1.7
	Overall	**A**	**0.18**	**3.5**	**3.5**	**A**	**0.17**	**3.7**	**4.9**
Campeau Drive at Kanata Commons Access *Signalized*	EBT	A	0.13	2.6	17.6	A	0.39	13.3	18.7
	EBR	A	0.01	0.0	0.0	A	0.02	0.1	0.0
	WBL	A	0.02	3.7	3.2	A	0.10	11.7	5.2
	WBT	A	0.08	2.6	11.0	A	0.50	14.5	23.8
	NBL	A	0.00	14.5	1.4	A	0.02	8.0	2.7
	NBT/R	A	0.02	0.1	0.0	A	0.05	0.1	0.0
	Overall	**A**	**0.12**	**2.5**	**-**	**A**	**0.46**	**13.1**	**-**

Intersection	Lane	AM Peak Hour				PM Peak Hour			
		LOS	V/C	Delay (s)	Q (95th)	LOS	V/C	Delay (s)	Q (95th)
Campeau Drive at Didsbury Road *Signalized*	EBL	A	0.00	6.0	0.8	A	0.00	13.0	0.9
	EBT/R	A	0.13	3.5	23.6	A	0.48	17.6	25.8
	WBL	A	0.00	5.5	1.1	A	0.04	13.8	3.3
	WBT/R	A	0.08	3.5	15.0	A	0.53	18.4	28.3
	NBL	A	0.02	15.5	3.2	A	0.03	9.0	4.2
	NBT/R	A	0.00	0.0	0.0	A	0.01	0.0	0.0
	SBL	-	-	-	-	A	0.00	9.0	0.8
	Overall	**A**	**0.13**	**3.6**	**-**	**A**	**0.51**	**17.6**	**-**
Campeau Drive at Terry Fox Drive *Signalized*	EBL	A	0.23	28.1	19.5	C	0.74	59.0	52.3
	EBT	A	0.34	30.3	43.5	A	0.45	37.2	58.3
	EBR	A	0.26	4.9	11.6	A	0.40	5.7	15.8
	WBL	D	0.89	58.6	46.9	E	0.93	76.0	**#79.3**
	WBT	A	0.39	28.5	16.1	A	0.57	34.5	67.4
	WBR	A	0.17	2.9	0.0	A	0.36	5.8	15.2
	NBL	A	0.60	65.5	**#58.3**	C	0.75	72.6	**#75.3**
	NBT	A	0.49	16.0	10.1	B	0.66	33.2	113.4
	NBR	A	0.21	4.8	0.1	A	0.27	5.2	15.2
	SBL	A	0.58	60.2	**#72.7**	C	0.73	66.4	**#92.5**
	SBT	A	0.43	26.7	70.9	A	0.52	28.5	92.3
	SBR	A	0.08	1.2	2.1	A	0.19	5.8	13.9
	Overall	**B**	**0.61**	**27.6**	**-**	**C**	**0.72**	**34.4**	**-**
Campeau Drive at Herlihey Way *Signalized*	EBL	A	0.03	10.3	m5.0	A	0.05	12.2	m8.2
	EBT/R	A	0.32	10.5	75.9	B	0.65	31.8	**#162.0**
	WBL	A	0.06	4.9	m4.2	A	0.35	13.8	m27.1
	WBT	A	0.39	4.6	m44.5	A	0.40	18.2	73.6
	WBR	A	0.04	0.2	m0.0	A	0.14	3.7	m4.4
	NBL	A	0.15	54.5	9.4	B	0.62	68.0	40.2
	NBT/R	A	0.25	20.9	12.3	B	0.67	30.5	39.9
	SBL	A	0.20	55.3	12.0	B	0.69	72.5	**#46.7**
	SBT	A	0.04	42.3	5.7	A	0.14	44.1	15.5
	SBR	A	0.09	0.8	0.0	A	0.31	5.0	6.3
	Overall	**A**	**0.37**	**9.1**	**-**	**B**	**0.62**	**28.6**	**-**
Campeau Drive at Kanata Avenue *Signalized*	EBL	A	0.56	40.3	24.7	A	0.49	24.1	37.4
	EBT/R	B	0.66	41.8	70.5	A	0.48	30.5	60.0
	WBL	A	0.10	22.3	8.6	A	0.14	15.6	13.4
	WBT/R	D	0.86	55.4	**#142.8**	B	0.63	36.1	111.0
	NBL	A	0.18	16.4	16.4	A	0.27	27.0	25.8
	NBT	A	0.17	16.6	29.6	A	0.33	28.6	56.4
	NBR	A	0.02	0.1	0.0	A	0.05	0.2	0.0
	SBL	A	0.29	25.9	37.5	A	0.18	37.5	20.2
	SBT	A	0.44	27.6	78.7	A	0.45	41.6	62.4
	SBR	A	0.28	4.2	14.0	A	0.33	7.6	16.0
	Overall	**B**	**0.63**	**33.5**	**-**	**A**	**0.52**	**29.0**	**-**

Intersection	Lane	AM Peak Hour				PM Peak Hour			
		LOS	V/C	Delay (s)	Q (95th)	LOS	V/C	Delay (s)	Q (95th)
Terry Fox Drive at Didsbury Road/ Roland Michener Drive ***Signalized***	EBL/T	A	0.33	47.2	24.3	A	0.35	55.4	26.2
	EBR	A	0.43	10.8	14.1	A	0.54	12.7	17.6
	WBL	A	0.29	46.0	17.7	B	0.66	57.3	55.1
	WBT/R	A	0.28	24.2	15.4	A	0.41	19.4	26.0
	NBL	C	0.72	43.2	**#102.8**	A	0.58	36.4	**#113.6**
	NBT	A	0.38	19.6	88.3	C	0.71	36.7	**#189.5**
	NBR	A	0.23	4.4	24.5	A	0.50	2.6	11.6
	SBL	A	0.12	15.8	m11.2	A	0.48	24.2	39.8
	SBT/R	A	0.46	14.7	**#132.1**	**F**	**1.10**	**100.1**	**#254.2**
	Overall	**A**	**0.52**	**19.8**	-	**E**	**0.91**	**51.9**	-
Terry Fox Drive at Highway 417 Westbound Ramp Terminal ***Signalized***	WBL	B	0.68	33.8	89.3	C	0.80	39.1	127.2
	WBR	A	0.54	9.8	12.2	B	0.68	17.4	30.1
	NBT	A	0.39	17.2	77.3	B	0.69	19.9	135.7
	NBR	A	0.21	2.8	3.6	A	0.29	1.2	2.4
	SBT	A	0.50	16.0	20.1	C	0.75	26.9	150.7
	SBR	A	0.21	4.0	0.0	A	0.39	3.0	14.8
	Overall	**A**	**0.59**	**19.0**	-	**C**	**0.77**	**23.4**	-
Terry Fox Drive at Highway 417 Eastbound Ramp Terminal ***Signalized***	EBL	A	0.50	44.3	49.7	C	0.73	58.1	79.6
	EBR	C	0.80	51.9	70.9	D	0.90	73.6	**#104.0**
	NBT	A	0.30	7.8	47.4	A	0.49	8.9	74.8
	NBR	B	0.63	3.1	13.9	B	0.63	2.9	10.8
	SBT	A	0.55	6.6	109.2	D	0.81	11.7	130.1
	SBR	A	0.29	1.1	5.2	A	0.30	1.3	m7.1
	Overall	**B**	**0.67**	**10.9**	-	**D**	**0.82**	**14.8**	-

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

The study area intersections overall operations are acceptable with capacity issues noted at the Terry Fox Drive at Didsbury Road/ Roland Michener Drive intersection.

At the intersection of Terry Fox Drive at Didsbury Road/Ronald Michener Drive, the northbound left and southbound through/right movements may exhibit extended queues during the AM peak hour. During the PM peak hour, extended queues may occur on the northbound left, northbound through movements. The southbound through/right movement is over the theoretical capacity during the PM peak hour, however given this movement processed all of the counted vehicles within this hour, additional capacity beyond the theoretical value calculated by Synchro is noted to be available. Signal timing adjustments cannot mitigate capacity issues on the southbound through/right movement given the high number of westbound left turns and the minimum split requirements for the conflicting eastbound and westbound movements necessitated by the pedestrian walk and do not walk times. It is noted that the modelled southbound capacity issues are influenced by the split of the northbound and southbound left-turn phases than by the through phases. Finding additional opportunities to increase the split of these left-turn movements could mitigate the associated capacity issues, as discussed further in Section 11.3.

During the AM peak hour, the westbound through/right movement at the Campeau Drive at Kanata Avenue intersection may exhibit extended queues. During the PM peak hour, extended queues may occur for the westbound left movement at the intersection of Campeau Drive at Terry Fox Drive, the eastbound through/right and southbound left movements at the intersection of Campeau Drive at Herlihey Way, and the eastbound right

movement at the intersection of Terry Fox Drive at Highway 417 eastbound ramp terminal. The northbound left and southbound left movements at the intersection of Campeau Drive at Terry Fox Drive may exhibit extended queues during both peak hours.

2.2.8 Collision Analysis

Collision data have been acquired from the City of Ottawa open data website (data.ottawa.ca) for five years prior to the commencement of this TIA for the surrounding study area road network (2018-2022). Table 3 summarizes the collision types and conditions in the study area, Figure 11 illustrates the area collisions, and Table 4 summarizes the total collisions for each of the locations analyzed. Collision data are included in Appendix D.

Table 3: Study Area Collision Summary, 2018-2022

		Number	%
Total Collisions		**59**	**100%**
Classification	**Fatality**	0	0%
	Non-Fatal Injury	14	24%
	Property Damage Only	45	76%
Initial Impact Type	**Approaching**	0	0%
	Angle	15	25%
	Rear end	14	24%
	Sideswipe	5	9%
	Turning Movement	22	37%
	SMV Unattended	0	0%
	SMV Other	3	5%
	Other	0	0%
Road Surface Condition	**Dry**	44	75%
	Wet	9	15%
	Loose Snow	3	5%
	Slush	2	3%
	Packed Snow	0	0%
	Ice	1	2%
	Loose sand or gravel	0	0%
	Unknown	0	0%
Pedestrian Involved		0	0%
Cyclists Involved		0	0%

Figure 11: Study Area Collision Records

Table 4: Summary of Collision Locations, 2018-2022

	Number	%
Intersections / Segments	**59**	**100%**
Campeau Drive at Terry Fox Drive	54	91%
Campeau Drive between Didsbury Road & Terry Fox Drive	3	5%
Campeau Drive at Didsbury Road	2	4%

Within the study area, the intersection of Campeau Drive at Terry Fox Drive is noted to have experienced more collisions during the five-year analysis period than other locations and will be reviewed in further detail. Table 5 summarizes the collision types and conditions for the intersection of Campeau Drive at Terry Fox Drive.

Table 5: Campeau Drive at Terry Fox Drive Collision Summary

		Number	%
Total Collisions		**54**	**100%**
Classification	**Fatality**	0	0%
	Non-Fatal Injury	14	26%
	Property Damage Only	40	74%
Initial Impact Type	**Approaching**	0	0%
	Angle	14	26%
	Rear end	14	26%
	Sideswipe	5	9%
	Turning Movement	20	37%
	SMV Unattended	0	0%
	SMV Other	1	2%
	Other	0	0%

		Number	%
Total Collisions		**54**	**100%**
Road Surface Condition	**Dry**	39	72%
	Wet	9	17%
	Loose Snow	3	5%
	Slush	2	4%
	Packed Snow	0	0%
	Loose Sand or Gravel	0	0%
	Ice	1	2%
	Unknown	0	0%
Pedestrian Involved		0	0%
Cyclists Involved		0	0%

The Campeau Drive at Terry Fox Drive intersection had a total of 54 collisions during the 2018-2022 time period, with 39 involving property damage only and the remaining 12 having non-fatal injuries. The collision types are most represented by turning movement with 20 collisions, rear end with 14, angle with 14, sideswipe with five, and SMV other with one. Rear end collisions and sideswipe collisions are typically associated with congestion.

The City has confirmed that the northbound and southbound collisions referenced below correspond to Terry Fox Drive and the eastbound and westbound collisions correspond to Campeau Drive.

Based on detailed collision records from 2018-2022, of the turning movement collisions, a total of seven collisions were involved southbound left and northbound through vehicles, six collisions involved northbound left and southbound through vehicles, one collision involved northbound right and northbound through vehicle, and the remaining six collisions involved vehicles making eastbound or westbound left-turns and the conflicting east-west movement's traffic. As the majority of these collisions are on the northbound and southbound approaches, they may be associated with the high volume of conflicting through and left-turn movements at the intersection, potentially influenced by drivers pushing gaps in the traffic stream. The current signal timing includes fully protected left-turns on these approaches as of 2023 which is expected to mitigate the majority of turning movements at this intersection that are not associated with drivers failing to obey traffic control.

Angle collisions were observed on all approaches at the intersection. A high proportion of these collisions involved southbound traffic conflicting with eastbound/westbound traffic. As these phases are conflicting, it is expected that these collisions are associated with drivers failing to obey traffic control.

All sideswipe collisions involved lane changes on the north and south legs. No patterns have been observed for the remaining collision types. Weather conditions are not considered to affect collisions at this location. No mitigation is required for the observed collision patterns, and no further review of collisions at this location is required as part of this study.

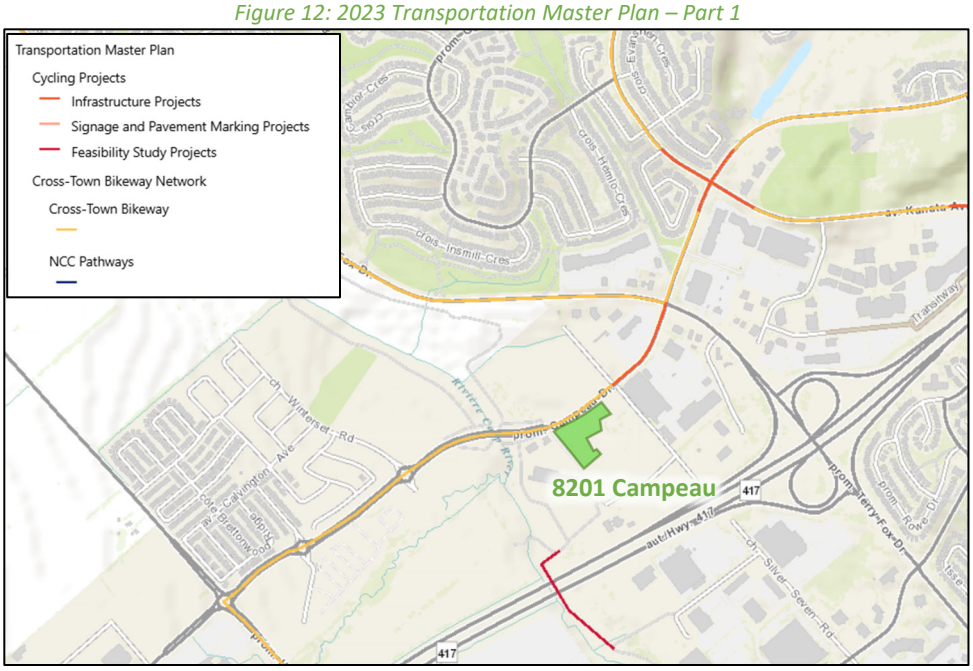
2.3 Planned Conditions

2.3.1 Changes to the Area Transportation Network

2.3.1.1 Transportation Master Plan (TMP) – Part 1 (2023)

The Transportation Master Plan Part 1 provides the active transportation project list, which includes cycling facilities on Campeau Drive from Didsbury Road to Terry Fox Drive and from approximately 85 metres west to 130 metres east of Kanata Avenue and cycling facilities on Kanata Avenue from approximately 150 metres south of Campeau Drive to Macassa Circle. 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: April 9, 2025

2.3.1.2 Transportation Master Plan (TMP) – Part 2 (2025)

The Transportation Master Plan Part 2 is still in public consultation, but a draft project list has been released for road and transit projects, along with the draft capital infrastructure plan. Projects included within the draft Priority Active Transportation Projects List include bike lanes and separated cycling facilities to address missing links along Campeau Drive and Kanata Avenue. Draft road projects within the study area include the extension of Earl Grey Drive with an underpass of Terry Fox Drive as a committed project and the widening of Huntmar Drive from two to four lanes between Maple Grove Road and Campeau Drive in the Priority Network. Draft transit projects within the study area include extension of LTR from Moodie Station to Hazeldean Station including three phases of Moodie Station to Terry Fox Station, Terry Fox Station to Palladium Station, and Palladium Station to Hazeldean Station. The future Didsbury Station along this extension is planned to be located east of Didsbury Road at Roger Neilson Way southeast of 8201 Campeau Drive.

2.3.1.3 Earl Grey Drive extension

The study of Earl Grey Drive extension includes the extension of Earl Grey Drive approximately 140 metres westward to Didsbury Road as a new two-lane road with cycling and pedestrian facilities. A new stop-controlled intersection will also be introduced at Didsbury Road. The extension will pass under Terry Fox Drive, requiring the construction of a new bridge structure. The project also includes upgrades to Didsbury Road East, between Terry Fox Drive and the Earl Grey extension, to accommodate new pedestrian and cycling facilities. Additionally, the intersection of Terry Fox Drive and Didsbury Road will be upgraded to be a protected intersection with separate cycletracks and cross walks, in accordance with the City's protected intersection guidelines. The project is currently planned and is understood to be commencing shortly.

2.3.1.4 Huntmar Drive Widening

The study of Huntmar Drive Widening includes widening of Huntmar Drive from two to four lanes between Campeau Drive and Cyclone Taylor Boulevard, as well as between Palladium Drive and Maple Grove Road. According to the City's Construction and Infrastructure Projects portal, work is planned to commence in 1-2 years.

2.3.2 Other Study Area Developments

8415 Campeau Drive (Arcadia community Stage 6)
The proposed development application includes a site plan for the construction of 264 stacked towns and 104 townhomes. The anticipated build-out horizon is 2025, and the development is forecasted to generate 100 new AM two-way peak-hour auto trips and 123 new PM two-way peak-hour auto trips. (CGH Transportation, 2022)

8370 Campeau Drive (Arcadia community Stage 5)
The proposed development application includes 62 single detached and 160 townhome units. The development is expected to generate 86 AM and 103 PM peak hour two-way auto trips. The anticipated full build-out horizon was initially 2025, however construction has not yet begun, and it will be assumed to be built out by 2028. (CGH Transportation, 2023)

501 Terry Fox Drive
The proposed application includes a site plan for redeveloping existing Gas station into 624.42 m^2 of gas station, 341.74 m^2 of convenience store, and 255.57 m^2 of car wash. The development is anticipated to be built out by 2026 and is expected to generate 61 new AM and 71 new PM peak hour two-way auto trips. (exp, 2022)

770 Silver Seven Road
The proposed application includes a zoning amendment for the construction of an accessory gas bar use associated with the existing 13,233.6 m^2 Costco retail warehouse. No TIA is available for this application.

130 Huntmar Drive
The proposed development application includes a site plan for the construction of 90 single family homes, 226 Townhomes, 426 Stacked townhomes, 30,000 ft^2 of retail, and a 2.409 Ha school. The development was initially anticipated to be built out by 2024 and to generate 435 new AM two-way peak-hour auto trips and 507 new PM two-way peak-hour auto trips. The development will be assumed to be built out by 2033. (Dillon Consulting, 2021)

319 Huntmar Drive
The proposed development application includes a site plan for the construction of four, nine-storey mid-rise apartment buildings with 424 units and an amenity building for the use of the residents. No TIA is available as part of this application.

333 Huntmar Drive
The proposed development application includes a site plan for the construction of 134 hotel rooms and approximately 30,000 ft^2 of restaurant type land uses. The development was initially anticipated to be built out in 2022, but is yet to be constructed and will be assumed to be built out by 2033. The development is forecasted to generate 61 new AM two-way peak-hour auto trips and 309 new PM two-way peak-hour auto trips. (Parsons, 2014)

405 Huntmar Drive
The proposed development application includes a site plan for the construction of 44,493 m^2 of warehouse buildings. The development is currently constructed and occupied, but was not occupied at the time of the area traffic counts. The development was forecasted to generate new 89 AM two-way peak-hour auto trips and 92 new PM two-way peak-hour auto trips. (Novatech, 2022)

1400 Upper Canada Street
The proposed development application includes a site plan for the construction of 65,400 ft^2 of office space and warehouse area by phase one and expands to 76,400 ft^2 of office space and warehouse area by phase two. The

development is currently constructed and occupied, but was not occupied at the time of the area traffic counts. The development was forecasted to generate new 178 AM two-way peak-hour auto trips and 122 new PM two-way peak-hour auto trips by phase one and 213 new AM two-way peak-hour auto trips and 150 new PM two-way peak-hour auto trips by phase two. It will be included in the background horizons. (Parsons, 2020)

8605 Campeau Drive

The proposed development application includes a site plan for the construction of a gas station comprising six gasoline pumps with twelve fueling stations, a car wash, and a convenience store and eating establishment with a drive through. The development is currently constructed and occupied, but was not occupied at the time of the area traffic counts. The development was forecasted to generate 106 new AM two-way peak-hour auto trips and 132 new PM two-way peak-hour auto trips. It will be included in the background horizons. (NexTrans, 2023)

8800 Campeau Drive

The proposed development application includes a site plan for the construction of a 66,000 ft^2 office/warehouse space by phase one and expands to 77,800 ft^2 office/warehouse space by phase two. The phase one was initially anticipated to be built out by 2021 with the facility operating at only 25% of the ultimate capacity, however the construction has not yet begun. The initially assumed phase two horizon year was 2026 but could take upwards of 20 years for this level of operation to materialize depending on market conditions. The development will be assumed to be completed by 2033 and is forecasted to generate 23 new AM and PM two-way peak-hour auto trips by phase one and 26 AM two-way peak-hour auto trips and 27 new PM two-way peak-hour auto trips by phase two. (Parsons, 2021)

3075 Palladium Drive

The proposed development application includes a site plan for approximately 85,153 sq. ft. of retail space including large and small multi-unit retail pads. The anticipated full build-out horizon is 2027 and it is expected to generate 190 PM two-way peak-hour auto trips and 273 Saturday two-way peak-hour auto trips. (WPE Engineering Ltd, 2024)

3095 Palladium Drive

The proposed development application includes a site plan for 3,461 sq. m of retail space including large and small multi-unit retail pads on the northern portion of the site and a 454 sq. m. of car wash on the southern portion of the site. The anticipated full build-out horizon is 2027 and it is expected to generate 90 PM two-way peak-hour auto trips and 117 Saturday two-way peak-hour auto trips. (CGH Transportation, 2024)

3 Study Area and Time Periods

3.1 Study Area

The study area will include the intersections of

- Campeau Drive at:
    - Winterset Road
    - Kanata Commons Access
    - Didsbury Road
    - Terry Fox Drive
    - Herlihey Way
    - Kanata Avenue
- Terry Fox Drive at:
    - Didsbury Road/Roland Michener Dr

  - Highway 417 Westbound Ramp Terminal
  - Highway 417 Eastbound Ramp Terminal
- Kanata Common Access at:
  - Site Access (future conditions)

The boundary road is Campeau Drive. As the site proposes the conversion of the north end of the currently privately-owned Kanata Common Access to a public road, this segment will be reviewed as a boundary road for the future conditions. Screenlines 44 and 53 are present within proximity to the site but will not be analyzed as part of this study.

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

4 Development-Generated Travel Demand

4.1 Mode Shares

Examining the mode shares recommended in the TRANS Trip Generation Manual (2020) for the subject district, derived from the most recent National Capital Region Origin-Destination survey (OD Survey), the existing average district mode shares by land use for Kanata/Stittsville have been summarized in Table 6.

Table 6: TRANS Trip Generation Manual Recommended Mode Shares – Kanata/Stittsville

Travel Mode	Multi-Unit (Mid-Rise)		Commercial Generator	
	AM	PM	AM	PM
Auto Driver	43%	55%	81%	73%
Auto Passenger	26%	19%	12%	22%
Transit	28%	21%	5%	1%
Cycling	0%	0%	0%	0%
Walking	4%	5%	2%	4%
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 11th Edition (2021) using the City-prescribed conversion factor of 1.28. Table 7 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 7: 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 8 summarizes the total person trip generation for the residential land uses and for the non-residential land uses.

Table 8: 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)	342	85	189	274	179	129	308
Land Use	**Units / GFA**	**AM Peak Hour**			**PM Peak Hour**		
		In	**Out**	**Total**	**In**	**Out**	**Total**
Strip Retail Plaza (<40k sq. ft.)	2,930 sq. ft	5	4	9	13	13	25

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 9 represent the percentage of trips to/from the retail use based on the residential component.

Table 9: 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)."

Using the above mode share targets, 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 10 summarizes the residential trip generation and the non-residential trip generation by mode and peak hour.

Table 10: Trip Generation by Mode

Travel Mode		AM Peak Hour				PM Peak Hour			
		Mode Share	**In**	**Out**	**Total**	**Mode Share**	**In**	**Out**	**Total**
Multi-Unit (High-Rise)	Auto Driver	**43%**	17	40	57	**55%**	41	33	74
	Auto Passenger	**26%**	10	24	34	**19%**	15	11	26
	Transit	**28%**	13	29	42	**21%**	17	14	31
	Cycling	**0%**	0	0	0	**0%**	0	0	0
	Walking	**4%**	2	4	6	**5%**	4	4	8
	Total	**100%**	**42**	**97**	**139**	**100%**	**77**	**62**	**139**
Strip Retail Plaza (<40k)	Auto Driver	**81%**	2	1	3	**73%**	5	4	9
	Auto Passenger	**12%**	0	0	0	**22%**	3	2	5
	Transit	**5%**	0	0	0	**1%**	0	0	0
	Cycling	**0%**	0	0	0	**0%**	0	0	0
	Walking	**2%**	0	0	0	**4%**	0	0	0
	Total	**100%**	**2**	**1**	**3**	**100%**	**8**	**6**	**14**
	Internal Capture	*varies*	*-1*	*-1*	*-2*	*varies*	*-1*	*-3*	*-4*
	Pass-by	*40%*	*-1*	*-1*	*-2*	*40%*	*-4*	*-3*	*-7*

Travel Mode		AM Peak Hour				PM Peak Hour			
		Mode Share	In	Out	Total	Mode Share	In	Out	Total
Total	Auto Driver	-	19	41	60	-	46	37	83
	Auto Passenger	-	10	24	34	-	18	13	31
	Transit	-	13	29	42	-	17	14	31
	Cycling	-	0	0	0	-	0	0	0
	Walking	-	2	4	6	-	4	4	8
	Total	-	**44**	**98**	**142**	-	**85**	**68**	**153**
	Internal Capture	*varies*	*-1*	*-1*	*-2*	*varies*	*-1*	*-3*	*-4*
	Pass-by	*40%*	*-1*	*-1*	*-2*	*40%*	*-4*	*-3*	*-7*

As shown above, a total of 60 AM and 83 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 Kanata/ Stittsville. Table 11 below summarizes the distributions.

Table 11: OD Survey Distribution – Kanata/ Stittsville

To/From	Residential % of Trips
North	15%
South	30%
East	50%
West	5%
Total	**100%**

4.4 Trip Assignment

Using the distribution outlined above, turning movement splits, and access to major transportation infrastructure, the trips generated by the site have been assigned to the study area road network. Table 12 summarizes the proportional assignment to the study area roadways, and Figure 13 illustrates the new site generated volumes. Figure 14 illustrates the pass-by volumes.

Table 12: Trip Assignment

To/From	Via
North	15% Terry Fox Dr (N)
South	10% Hwy 417 (W), 20% Campeau Dr (W)
East	5% Kanata Ave (S), 10% Terry Fox Dr (S), 35% Hwy 417 (E)
West	5% Hwy 417 (W)
Total	**100%**

Figure 13: New Site Generation Auto Volumes

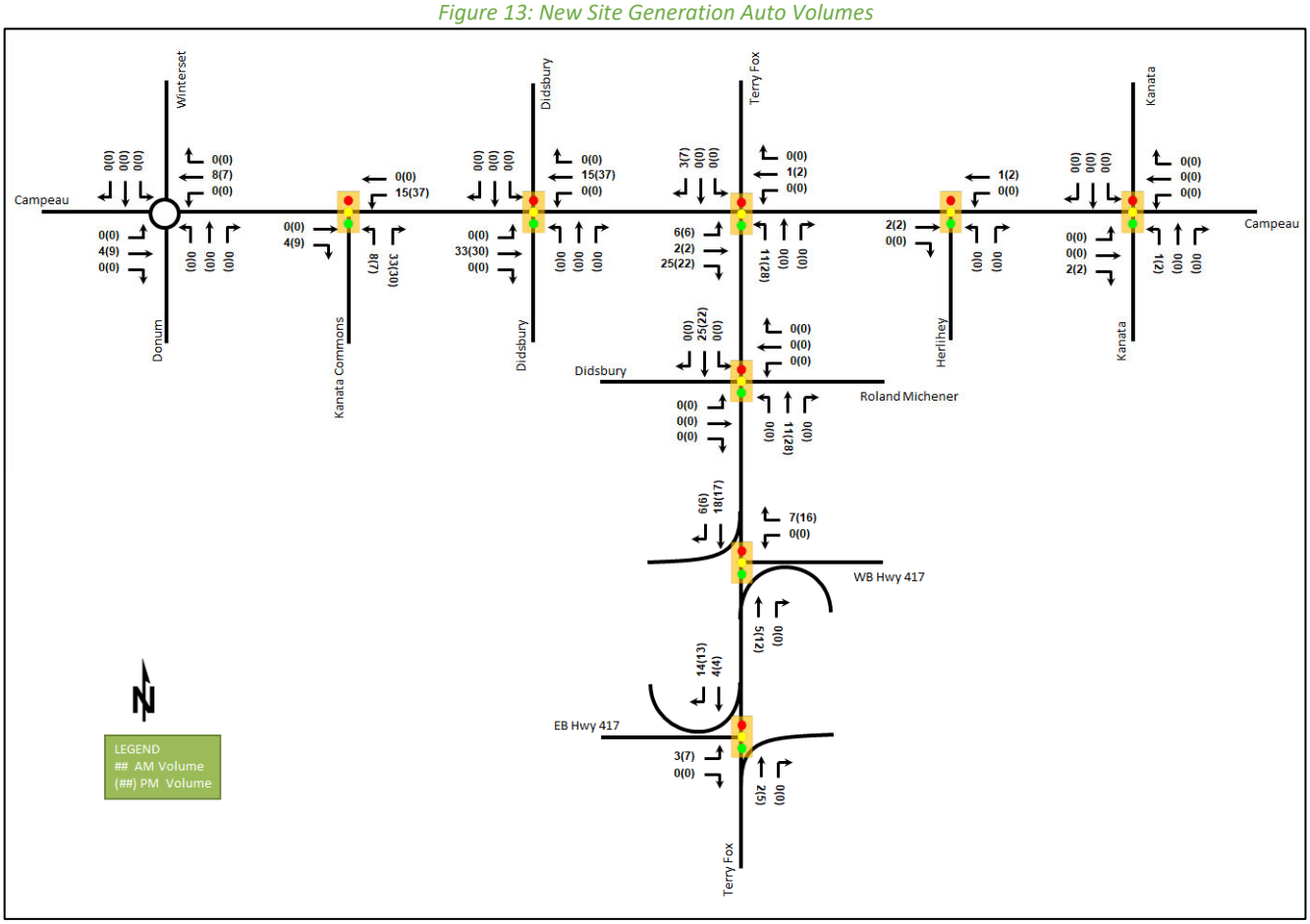
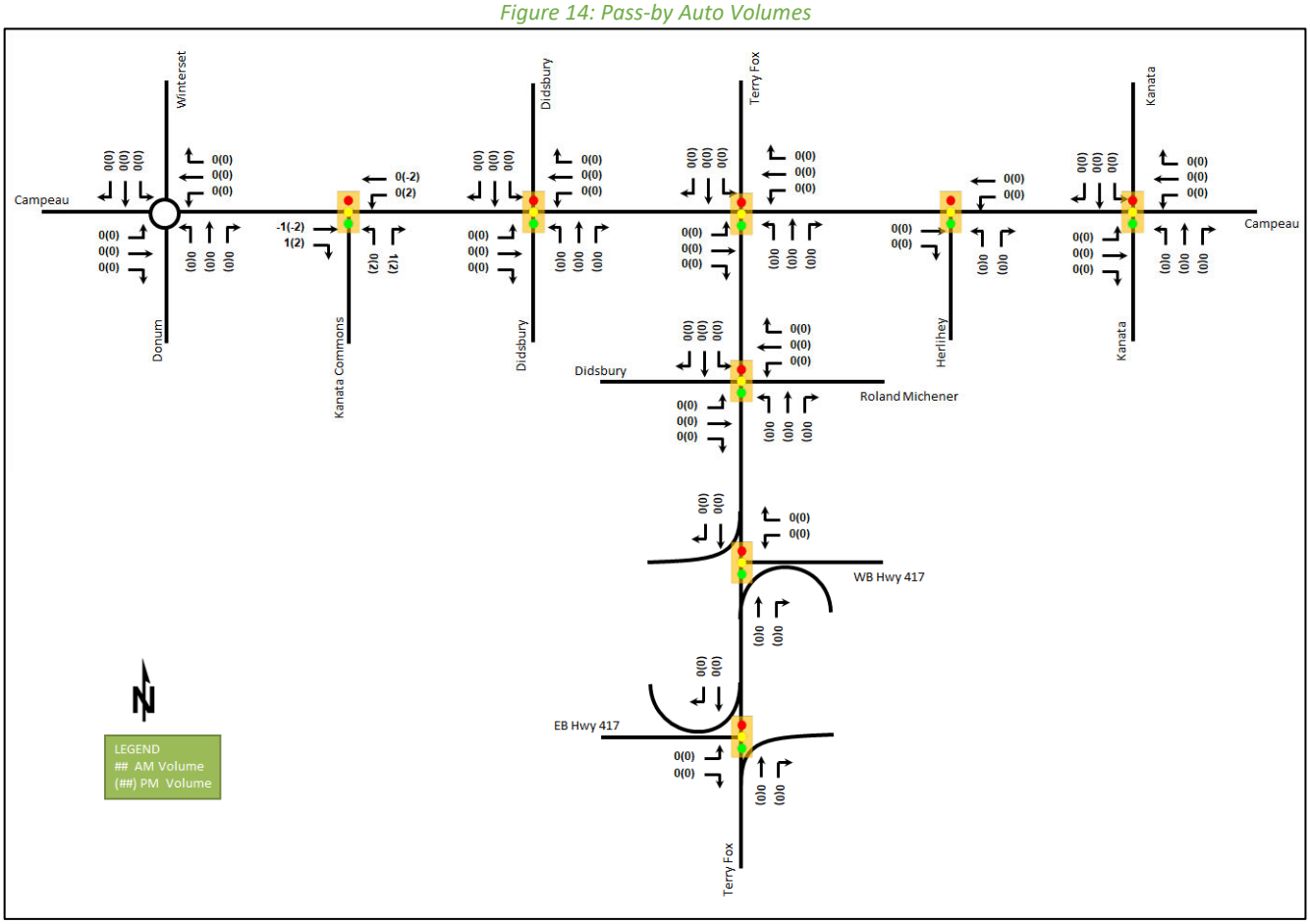


Figure 14: Pass-by Auto Volumes



5 Exemption Review

Table 13 summarizes the exemptions for this TIA.

Table 13: Exemption Review

Module	Element	Explanation	Exempt/Required
Site Design and TDM			
Development Design	4.1.2 Circulation and Access	Only required for site plan and zoning by-law applications	Required
	4.1.3 New Street Networks	Only required for plans of subdivision	Exempt – Provided for discussion of the Kanata Commons drive aisle conversion
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	Required
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	Exempt
	4.7.2 Transit Priority Requirements	Only required when the development generates more than 75 auto trips	Required
Network Concept		Only required when proposed development generates more than 200 person-trips during the peak hour in excess of equivalent volume permitted by established zoning	Exempt
Intersection Design	4.4.1-2/4.9.1 Intersection Control	Only required when the development generates more than 75 auto trips	Required
	4.4.3/4.9.2 Intersection Design	Only required when the development generates more than 75 auto trips	Required

6 Development Design

6.1 Design for Sustainable Modes

The proposed development consists of two six-storey residential buildings with ground floor commercial space in the western of the two buildings. Vehicle parking is located in three below grade parking levels, with the visitor and commercial vehicle parking spaces located at the surface level in an internal courtyard. Bicycle parking is located within the first underground parking level accessed by a ramp with a maximum slope of 15%. Elevators are provided between the parking levels and the ground floor permitting cyclists' ease of access.

Building entrances are proposed along the Kanata Commons drive aisle for the residential and commercial components, a commercial entrance is located on the corner of the building at the Campeau Drive at the Kanata Commons access intersection, and a residential entrance is provided along Campeau Drive. Additional entrances as well as back-of-house uses are located in the internal courtyard.

Existing sidewalks and cycletracks are present along both sides of Campeau Drive through the frontage of the site and a sidewalk is present on the west side of Kanata Commons drive aisle. The development proposes a 1.8-metre-wide sidewalk along the east side of the section of the Kanata Commons drive aisle, and along the north side of the internal east-west road in the interim condition. Hard surface connections from the building entrances to the adjacent sidewalk facilities will be included.

Bus stops on both the north and south sides of the intersection of Campeau Drive at the Kanata Commons access, on the east side of the intersection, are within a 150-metre walk of the main entrances for each the residential and commercial components on Campeau Drive and on the building corner. Crossing to the north side stop is facilitated by the signalized intersection.

The infrastructure TDM checklist is provided in Appendix E.

6.2 Circulation and Access

Vehicular access to the existing road network is proposed through the existing signalized intersection at Campeau Drive at the Kanata Commons drive aisle and the new internal east-west road stub that intersects the drive aisle.

Access to each the underground parking and to the drive aisle permitting surface parking, move-in/-out, and garbage collection are provided on the new internal east-west road stub.

Emergency services can access the site via Campeau Drive and the Kanata Commons drive aisle.

6.3 New Street Networks

The development is proposing the potential development of a local road network within its vicinity which will facilitate additional development and opportunities for connectivity to adjacent retail and future LRT. No changes to the ownership of the existing Kanata Commons drive aisle is proposed as part of phase 1 of development. The future development of this network will be subject to future study as part of the forthcoming master plan, however, as a cross-section is being proposed for the Kanata Commons drive aisle is being proposed as part of this application, this discussion is provided as part of this phase.

A potential future conversion of the Kanata Commons drive aisle would maintain the existing roadway edge on the west side of the drive aisle and provide an 18.0-metre right-of-way to the east. The existing connection consists of two lanes on the approach and two receiving lanes, and the built condition of the west side of the corridor includes an internal boulevard. Consistent with the City standard cross-section, a 1.8-metre sidewalk abutting the road and a 2.95-metre outer boulevard to the edge of the potential right-of-way would be provided on the east

side. While City staff have inquired about the provision of an inner boulevard, and while an inner boulevard is present on the opposite side of the road, to comply with the intent of the above-cited standard, to better tie into the existing sidewalk at the intersection with Campeau Drive, and to facilitate on-street parking on the east side of the future public road, the east side sidewalk would be recommended to abut the roadway. On this basis the cross-section of the presently private Kanata Commons drive aisle includes these elements.

While also remaining a private road in the interim condition, the internal east-west road will be designed to meet the City standard for an 18.0-metre local road. With similar traffic calming elements noted below, parking will ultimately be framed on the south side of this new internal east-west road.

Traffic calming elements proposed as part of the new local road network include the use of a mid-block narrowing between Campeau Drive and the east-west local road, and a bulb-out at the internal road intersection to support a 30 km/h operating speed.

Should it be desirable to all parties to have only the full Kanata Commons drive aisle conveyed as a public right-of-way, a turning basin on the south side of the local road intersection would be recommended to comply with the Type B detail from Ontario Provincial Standard Drawing 500.020.

7 Parking

The site is proposed to include a total of 368 vehicle parking spaces, including 19 spaces at grade, and 178 bicycle parking spaces. The vehicle parking proposed to be allocated as 291 resident spaces, 68 visitor spaces, and nine commercial spaces.

According to the parking provisions in the Zoning By-Law, the minimum vehicle parking provision for the site is 410 vehicle parking spaces for residents, 68 parking spaces for visitors, and nine spaces for the retail component, for a total of 487 vehicle parking spaces, and the minimum bicycle parking provision is 171 residential bicycle parking spaces and one commercial retail bicycle parking space for a total of 172 bicycle parking spaces.

As no transit station listed on Schedule 2A or 2B of the Zoning By-Law is within 600 metres of the site, no maximum vehicle parking rate is applicable to the site. If Didsbury Station were included within one of these Schedules, the maximum parking rate for the site would be 598 residential and 11 commercial parking spaces and the site would comply with these maxima.

Based on the Zoning By-Law parking provisions stated above, the minimum visitor vehicle parking and the minimum bicycle parking will be met, but the resident vehicle parking will be 119 spaces below the Zoning By-Law minimum.

The Zoning By-Law update has been drafted and is expected to change the parking requirements for the site to include no minimum amount of off-street parking required for residents or for the commercial component, and the minimum visitor parking for the residential component would be 32 vehicle spaces. The draft update remains consistent with the existing By-Law as it does not consider the future Didsbury Station within the draft Schedule A4 and therefore no maximum resident parking would therefore be required for the site if this By-Law were in effect. If Didsbury Station were included within this Schedule, the maximum vehicle parking for the site would be 428 residential parking spaces inclusive of visitor parking and ten retail parking spaces. Minimum bicycle parking within this By-Law would equate to 34 short term bicycle parking spaces and 342 long-term bicycle parking spaces for the residential component and three short term spaces for the retail component.

While subject to the current Zoning By-Law (By-law No. 2008-250) and requiring an exemption for the proposed vehicle resident parking rate, the site parking rate reflects the transition in context of the site. This evolving

context of the site is mirrored by the evolving context of the policy framework, noting that if Didsbury Station were included within the draft Zoning By-Law update Schedule A4, the maximum parking provision would be lower than the minimum parking provision by the in-effect Zoning By-Law. Ultimately, the parking strategy and rate selections for the forthcoming master plan for the remainder of the 8201 Campeau Drive parcel will further reflect the future state of this transition and will need to comply or obtain exemptions from the contemporaneous Zoning By-Law at the time of approvals.

8 Boundary Street Design

Table 14 summarizes the MMLOS analysis for the boundary streets of Campeau Drive. The boundary street analysis is based on the policy area of "Mixed Use Centre" for existing conditions and the policy area of "Within 600m of rapid transit station" for future conditions. The MMLOS worksheets has been provided in Appendix F.

Table 14: Boundary Street MMLOS Analysis

Segment		Pedestrian LOS		Bicycle LOS		Transit LOS		Truck LOS	
		PLOS	Target	BLOS	Target	TLOS	Target	TrLOS	Target
Campeau Drive	Ex.	B	C	A	A	D	D	A	D
	Fut.	**B**	A	A	A	D	D	A	D
Kanata Commons	Fut.	A	A	A	D	N/A	D	N/A	D

The boundary Street of Campeau Drive meets the pedestrian, cycling, transit, and truck LOS targets in the existing conditions. Campeau Drive will not meet the pedestrian LOS target in the future conditions. To meet the theoretical PLOS targets, the operational speed would need to be reduced to 50 km/h. The future conditions along the public road conversion of the Kanata Commons drive aisle meets the pedestrian and cycling LOS targets.

9 Transportation Demand Management

9.1 Context for TDM

The mode shares used within the TIA represent the unmodified recommended district mode shares from the TRANS Trip Generation Manual (2021). Overall, the modal shares are likely to be achieved and supporting TDM measures should be provided to encourage shifts towards sustainable modes.

The site is subject to the Kanata West Area-Specific Policies and Kanata West Concept Plan.

The total bedroom count within the development is 393 across 307 one-bedroom and studio units, 19 two-bedroom units, and 16 three-bedroom units. No age restrictions are noted.

9.2 Need and Opportunity

The subject site has been assumed to rely predominantly on auto travel and those assumptions have been carried through the analysis. The study area intersections are anticipated to have residual capacity outside of the southbound through movement at the intersection of Terry Fox Drive at Didsbury Road/Roland Michener Drive. Site traffic is associated with only minor increases in volumes to this movement, and it would be expected that as additional capacity issues on this movement arise, more of the traffic associated with Highway 417 west of the site will travel to/from the west on Campeau Drive than currently forecast. Therefore, risks associated with failing to meet mode share targets are low.

9.3 TDM Program

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

- Display local area maps with walking and cycling routes, and transit route information and schedules at major entrances
- Provide a multimodal travel option information package to new residents
- Unbundle parking cost from purchase or rental costs

10 Background Network Travel Demands

10.1 Transportation Network Plans

The transportation network plans were discussed in Section 2.3. The Earl Grey Drive extension and Huntmar Drive Widening are anticipated to be completed prior to site build-out. The additional linkage between the retail areas is not considered to have a substantial impact on the study area traffic volumes and travel patterns and therefore no traffic reassignment will be included for this study.

10.2 Background Growth

A review of the volume projections from the City's TRANS Regional Model for the 2011 and 2031 horizons was completed to determine the background growth for each of the study area roadways. The background TRANS model growth rates are summarized in Table 15 and TRANS model plots are provided in Appendix G.

Table 15: TRANS Regional Model Projections – Study Area Growth Rates

Street	TRANS Rate	
	Eastbound	**Westbound**
Campeau Dr (West of Terry Fox Dr)	11.33%	6.89%
Campeau Dr (East of Terry Fox Dr)	1.91%	-2.10%
Highway 417 (Offramps)	1.21%	0.71%
Highway 417 (Onramps)	2.97%	-0.16%
	Northbound	**Southbound**
Terry Fox Dr	1.43%	1.69%
Kanata Ave (North of Campeau Dr)	0.95%	0.05%
Kanata Ave (South of Campeau Dr)	1.64%	0.94%

In general, the growth rates in the study area derived from the two TRANS model horizons are projected to be positive. It is noted that the existing volumes on most study area roads exceed the 2031 forecasted volumes on those roads. Growth rates derived from the TRANS model horizons will generally be applied to the mainline and major turning movements for the appropriate roads during the AM peak hour, rounded to the nearest 0.25% and reversed for the PM peak hour.

No background growth in traffic using the arterial to move through the study area is expected on Campeau Drive beyond those background developments contributing volumes to it (as accounted for in Section 10.3), continuing to/from Kanata Avenue. Resultingly, no annual background growth will be applied to the existing volumes on Campeau Drive, and a reduced annual background growth will be applied to Kanata Avenue. Table 16 summarizes the recommended growth rates to be considered within the study area.

Table 16: Recommended Area Growth Rates

Street	AM Peak Hour		PM Peak Hour	
	Eastbound	**Westbound**	**Eastbound**	**Westbound**
Campeau Dr	0.00%	0.00%	0.00%	0.00%
Highway 417	1.25%	0.75%	0.00%	3.00%

Street	AM Peak Hour		PM Peak Hour	
	Northbound	Southbound	Northbound	Southbound
Terry Fox Dr	1.50%	1.75%	1.75%	1.50%
Kanata Ave	1.00%	0.00%	0.00%	1.00%

10.3 Other Developments

The background developments explicitly considered in the background conditions include:

- 8415 Campeau Drive (Arcadia community Stage 6)
- 8370 Campeau Drive (Arcadia community Stage 5)
- 501 Terry Fox Drive
- 130 Huntmar Drive
- 333 Huntmar Drive
- 405 Huntmar Drive
- 1400 Upper Canada Street
- 8605 Campeau Drive
- 8800 Campeau Drive
- 3075 Palladium Drive
- 3095 Palladium Drive

The background development volumes within the study area have been provided in Appendix H and the increase in volumes from these developments at the 2028 and 2033 horizons are illustrated in Figure 15 and Figure 16, respectively.

Figure 15: 2028 Background Development Volumes

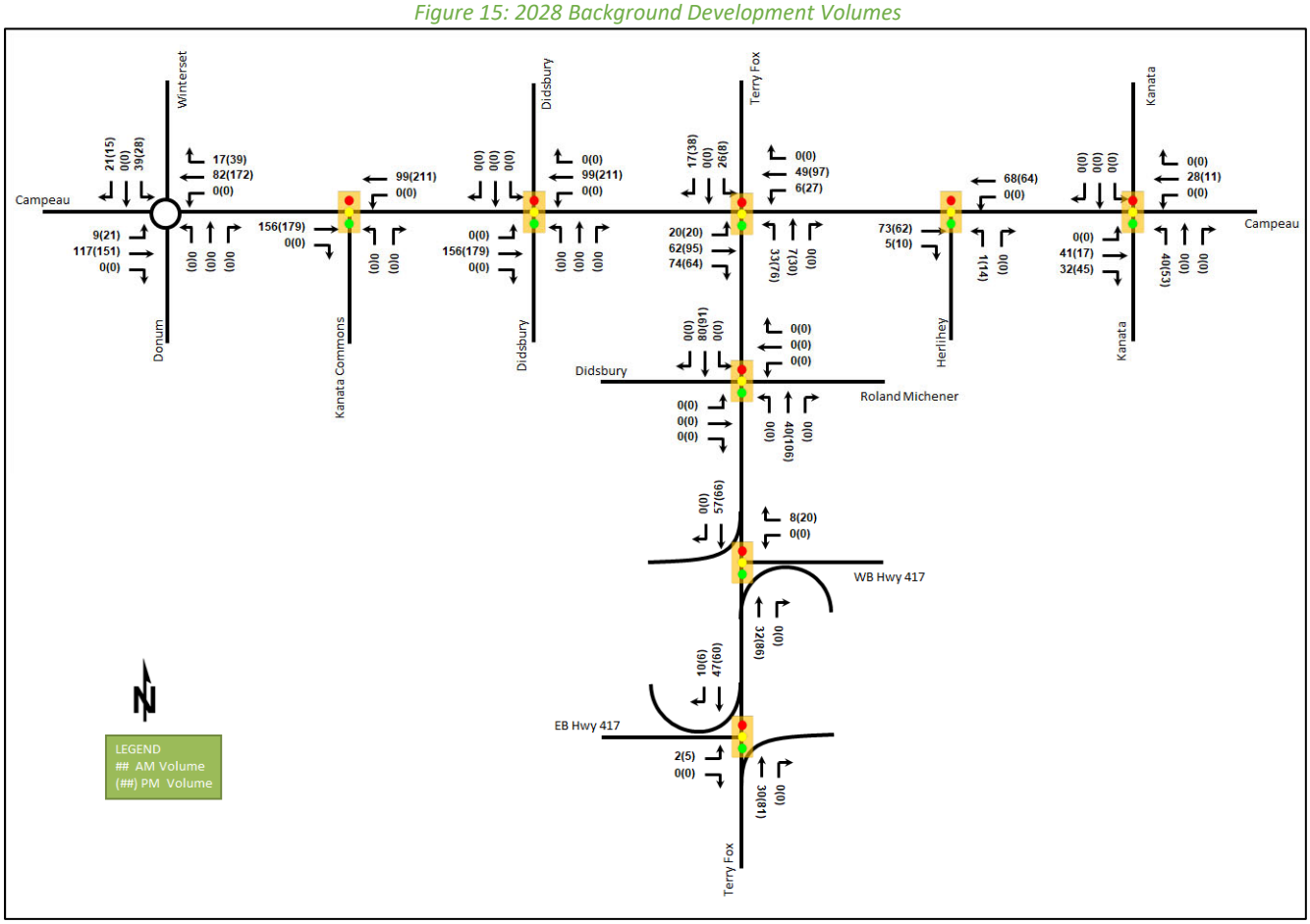
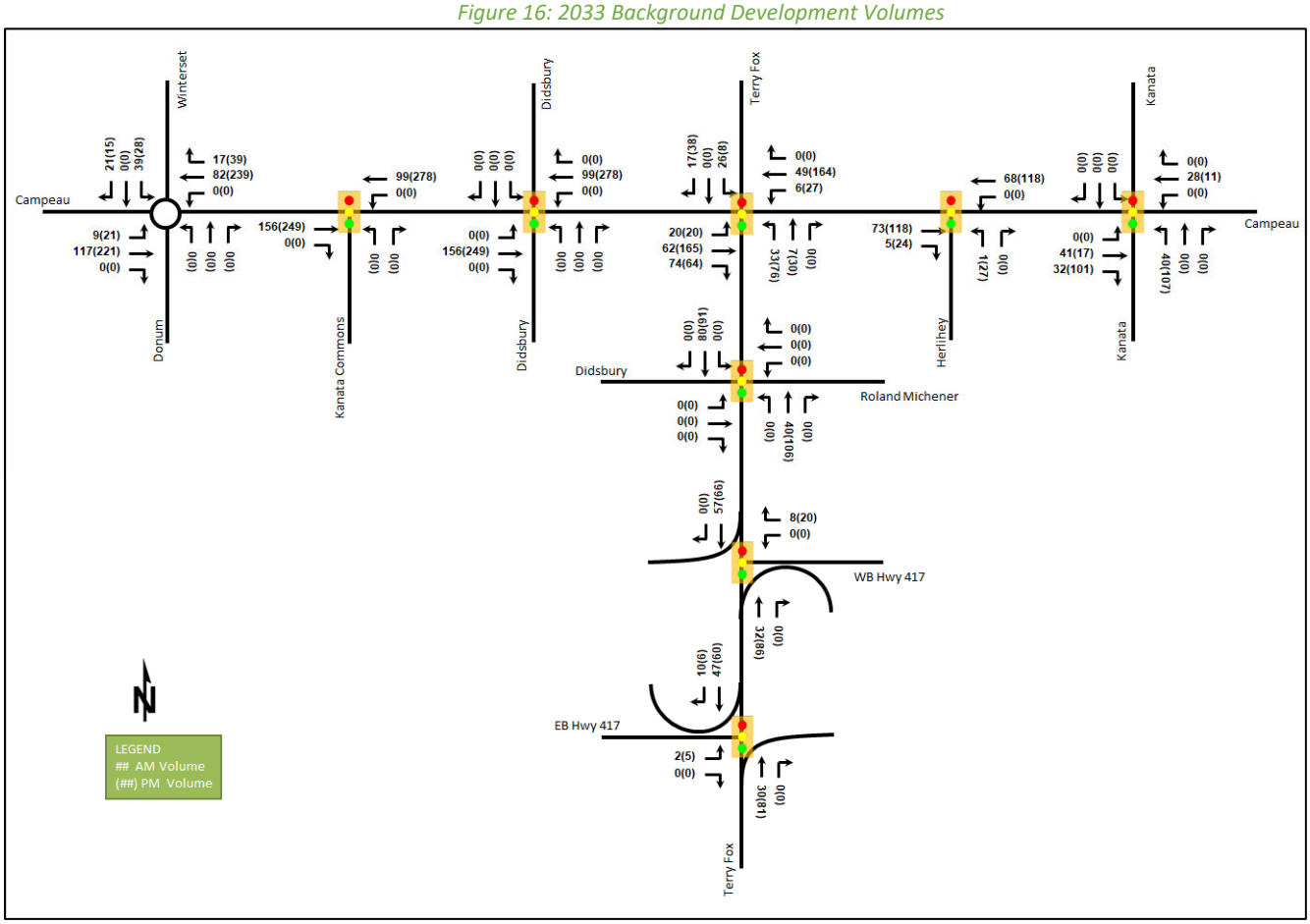


Figure 16: 2033 Background Development Volumes



11 Demand Rationalization

11.1 2028 Future Background Intersection Operations

The existing study area volumes have been balanced for the future background conditions. Figure 17 illustrates the 2028 background volumes and Table 17 summarizes the 2028 background intersection operations. The level of service for signalized intersections is based on volume to capacity ratio (v/c) calculations for individual lane movements and MMLOS Guidelines weighted v/c methodology for the overall intersection, per direction from Transportation Engineering Services, and average delay for unsignalized intersections. The Synchro and Sidra worksheets for the 2028 future background horizon are provided in Appendix I.

Figure 17: 2028 Future Background Volumes

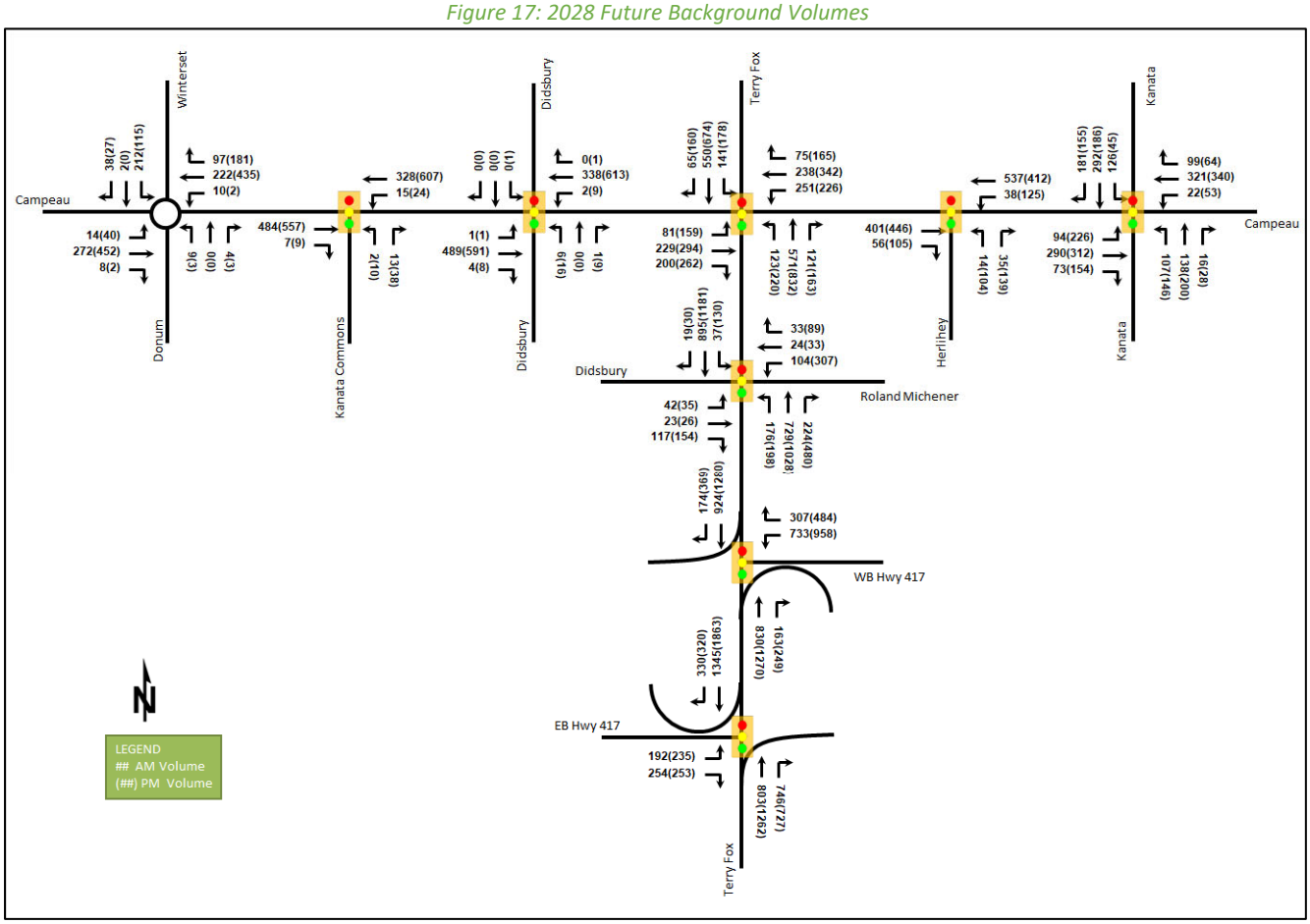


Table 17: 2028 Future Background Intersection Operations

Intersection	Lane	AM Peak Hour				PM Peak Hour			
		LOS	V/C	Delay (s)	Q (95th)	LOS	V/C	Delay (s)	Q (95th)
Campeau Drive at Winterset Road *Roundabout*	EB	A	0.17	4.7	4.5	A	0.25	4.4	7.6
	WB	A	0.15	3.8	4.2	A	0.29	3.8	9.5
	NB	A	0.01	8.6	0.2	A	0.01	7.6	0.1
	SB	A	0.23	2.1	4.8	A	0.14	2.6	2.7
	Overall	**A**	**0.23**	**3.7**	**4.8**	**A**	**0.29**	**3.9**	**9.5**
Campeau Drive at Kanata Commons Access *Signalized*	EBT	A	0.16	2.6	22.1	A	0.55	14.8	28.5
	EBR	A	0.01	0.0	0.0	A	0.02	0.1	0.0
	WBL	A	0.02	3.7	3.0	A	0.11	11.6	4.9
	WBT	A	0.11	2.5	15.1	A	0.60	15.5	31.3
	NBL	A	0.00	14.5	1.4	A	0.02	8.6	2.6
	NBT/R	A	0.02	0.1	0.0	A	0.05	0.1	0.0
	Overall	**A**	**0.15**	**2.6**	-	**A**	**0.57**	**14.4**	-

Intersection	Lane	AM Peak Hour				PM Peak Hour			
		LOS	V/C	Delay (s)	Q (95th)	LOS	V/C	Delay (s)	Q (95th)
Campeau Drive at Didsbury Road *Signalized*	EBL	A	0.00	6.0	0.8	A	0.01	13.0	0.9
	EBT/R	A	0.17	3.5	29.4	B	0.63	19.5	38.4
	WBL	A	0.00	5.5	1.1	A	0.05	13.6	3.1
	WBT/R	A	0.11	3.5	20.3	B	0.65	19.9	39.5
	NBL	A	0.01	15.7	3.0	A	0.03	9.8	3.9
	NBT/R	A	0.00	0.0	0.0	A	0.01	0.0	0.0
	SBL	-	-	-	-	A	0.00	10.0	0.8
	Overall	**A**	**0.17**	**3.6**	**-**	**B**	**0.63**	**19.3**	**-**
Campeau Drive at Terry Fox Drive *Signalized*	EBL	A	0.29	29.9	23.0	C	0.78	61.8	**#63.6**
	EBT	A	0.42	32.0	52.9	A	0.53	36.3	77.9
	EBR	A	0.34	4.8	13.5	A	0.41	5.3	16.9
	WBL	E	0.92	66.2	46.7	E	0.98	85.5	**#95.4**
	WBT	A	0.44	29.5	18.9	B	0.63	31.9	81.2
	WBR	A	0.15	2.3	0.0	A	0.30	3.8	4.2
	NBL	A	0.59	61.9	**#72.2**	D	0.82	72.2	**#83.5**
	NBT	A	0.48	15.6	8.7	B	0.70	37.8	**#131.4**
	NBR	A	0.20	4.9	0.0	A	0.27	7.9	18.8
	SBL	A	0.59	59.1	**#80.1**	C	0.74	67.1	62.5
	SBT	A	0.44	28.0	66.7	A	0.59	36.0	95.7
	SBR	A	0.10	2.5	4.6	A	0.26	7.6	18.0
	Overall	**B**	**0.61**	**28.6**	**-**	**C**	**0.76**	**37.8**	**-**
Campeau Drive at Herlihey Way *Signalized*	EBL	A	0.03	10.1	m4.4	A	0.05	11.2	m5.5
	EBT/R	A	0.35	9.9	75.4	B	0.66	27.2	**#176.9**
	WBL	A	0.06	5.4	m4.3	A	0.33	12.7	m20.5
	WBT	A	0.40	5.0	m50.0	A	0.42	16.6	60.9
	WBR	A	0.03	0.2	m0.1	A	0.12	2.9	m4.6
	NBL	A	0.15	54.5	9.4	A	0.50	59.1	41.5
	NBT/R	A	0.23	21.0	11.6	B	0.62	25.4	33.5
	SBL	A	0.18	55.0	11.1	B	0.65	69.7	42.6
	SBT	A	0.04	42.4	5.2	A	0.13	44.6	14.2
	SBR	A	0.08	0.7	0.0	A	0.28	3.9	3.7
	Overall	**A**	**0.38**	**8.9**	**-**	**B**	**0.61**	**25.4**	**-**
Campeau Drive at Kanata Avenue *Signalized*	EBL	A	0.46	35.9	20.6	A	0.59	28.3	55.7
	EBT/R	A	0.60	40.5	59.6	B	0.65	35.4	97.7
	WBL	A	0.08	22.1	8.2	A	0.16	15.9	12.4
	WBT/R	D	0.84	53.0	**#137.5**	B	0.65	37.0	112.9
	NBL	A	0.26	17.3	22.4	A	0.41	29.7	38.9
	NBT	A	0.16	16.5	27.7	A	0.31	28.0	51.4
	NBR	A	0.02	0.1	0.0	A	0.05	0.1	0.0
	SBL	A	0.28	25.9	33.8	A	0.16	37.1	18.4
	SBT	A	0.43	28.0	70.9	A	0.42	41.2	58.6
	SBR	A	0.27	4.4	13.6	A	0.33	7.6	16.0
	Overall	**A**	**0.60**	**32.5**	**-**	**A**	**0.56**	**31.0**	**-**

Intersection	Lane	AM Peak Hour				PM Peak Hour			
		LOS	V/C	Delay (s)	Q (95th)	LOS	V/C	Delay (s)	Q (95th)
Terry Fox Drive at Didsbury Road/ Roland Michener Drive *Signalized*	EBL	A	0.20	44.2	15.8	A	0.19	51.5	15.7
	EBT	A	0.11	41.7	10.1	A	0.13	49.9	12.7
	EBR	A	0.41	11.2	13.4	A	0.52	13.1	16.7
	WBL	A	0.27	45.6	16.1	B	0.66	58.8	51.0
	WBT/R	A	0.26	24.2	14.1	A	0.40	19.9	24.3
	NBL	B	0.67	40.2	**#92.7**	A	0.59	38.0	**#94.0**
	NBT	A	0.38	19.8	83.4	B	0.70	33.8	**#205.5**
	NBR	A	0.21	4.9	25.0	A	0.46	2.3	11.2
	SBL	A	0.11	15.1	m10.2	A	0.46	21.2	35.1
	SBT/R	A	0.48	14.5	**#140.2**	E	0.98	62.0	**#259.8**
	Overall	**A**	**0.49**	**19.3**	-	**D**	**0.85**	**39.8**	-
Terry Fox Drive at Highway 417 Westbound Ramp Terminal *Signalized*	WBL	B	0.65	34.3	83.9	C	0.79	38.8	124.3
	WBR	B	0.61	10.9	13.5	C	0.71	17.5	31.7
	NBT	A	0.47	17.2	93.7	C	0.75	21.6	159.6
	NBR	A	0.19	2.1	3.1	A	0.29	1.1	2.6
	SBT	A	0.52	15.0	18.5	C	0.75	27.1	153.7
	SBR	A	0.20	3.8	0.0	A	0.39	3.0	14.8
	Overall	**A**	**0.58**	**18.4**	-	**C**	**0.77**	**23.7**	-
Terry Fox Drive at Highway 417 Eastbound Ramp Terminal *Signalized*	EBL	A	0.59	48.3	56.8	C	0.76	62.3	78.6
	EBR	C	0.79	53.0	68.2	D	0.86	67.7	**#86.8**
	NBT	A	0.34	7.8	55.3	A	0.53	8.9	85.2
	NBR	A	0.59	2.7	13.1	A	0.57	2.4	10.5
	SBT	A	0.57	7.1	112.8	C	0.78	10.4	126.0
	SBR	A	0.29	1.2	6.8	A	0.28	1.2	m6.6
	Overall	**B**	**0.64**	**11.2**	-	**C**	**0.79**	**13.8**	-

Notes:
Saturation flow rate of 1800 veh/h/lane
Queue is measured in metres
Peak Hour Factor = 1.00
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 at the 2028 future background horizon operate similarly to the existing conditions.

Incremental operational improvements are noted throughout the study area as a result of the peak hour factor increasing to 1.00 for forecasted conditions, consistent with City methodology. At the intersection of Terry Fox Drive at Didsbury Road/ Roland Michener Drive during the PM peak hour, this effect results in the southbound through/right movement v/c reducing to 0.98 at this horizon, below theoretical capacity.

At the intersection of Campeau Drive at Terry Fox Drive, the eastbound right and northbound through movements may experience extended queues during the PM peak hour at this horizon.

11.2 2033 Future Background Intersection Operations

The existing study area volumes have been balanced for the future background conditions. Figure 18 illustrates the 2033 background volumes and Table 18 summarizes the 2033 background intersection operations. The level of service for signalized intersections is based on volume to capacity ratio (v/c) calculations for individual lane movements and MMLOS Guidelines weighted v/c methodology for the overall intersection, per direction from Transportation Engineering Services, and average delay for unsignalized intersections. The Synchro and Sidra worksheets for the 2033 future background horizon are provided in Appendix J.

Figure 18: 2033 Future Background Volumes

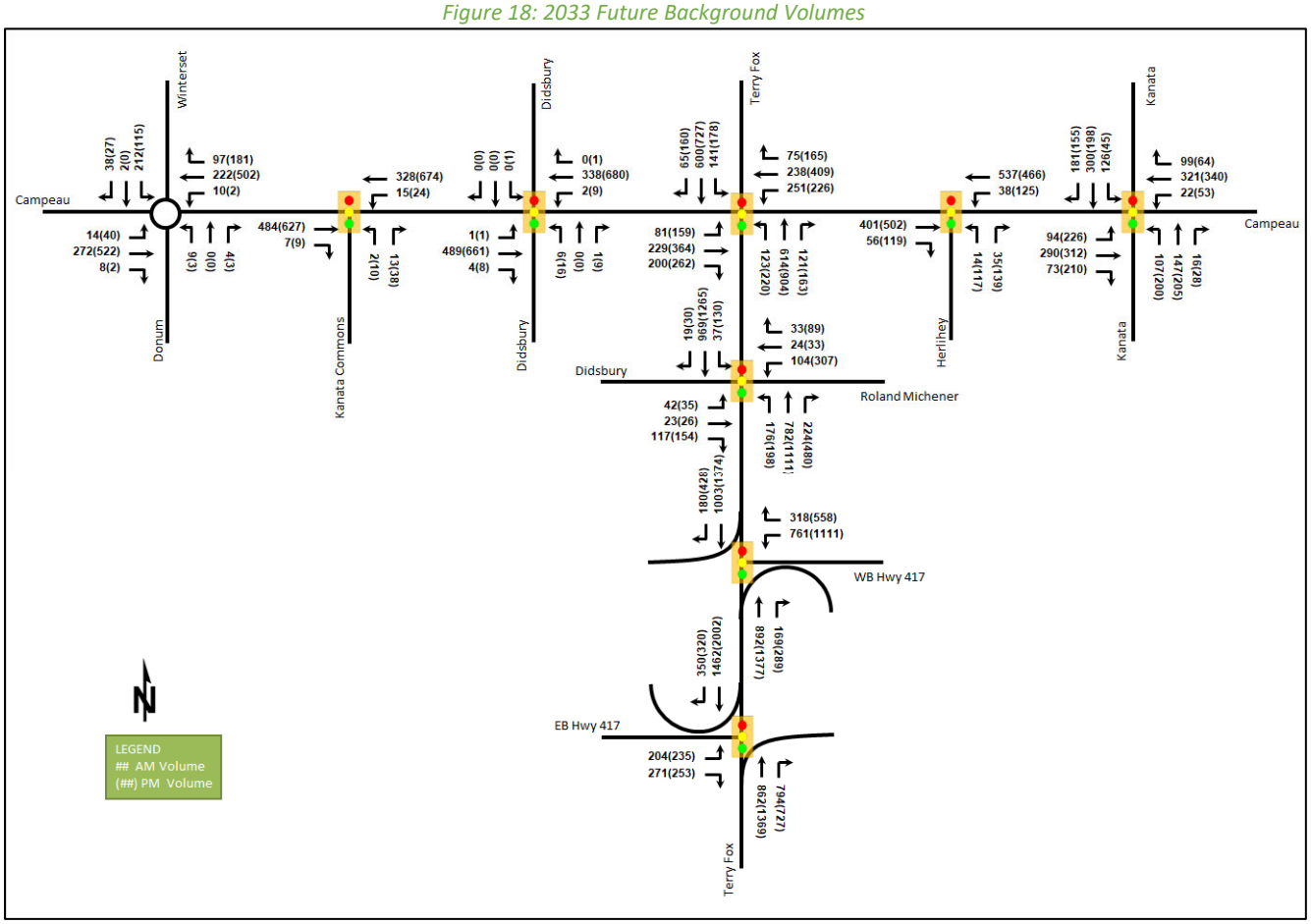


Table 18: 2033 Future Background Intersection Operations

Intersection	Lane	AM Peak Hour				PM Peak Hour			
		LOS	V/C	Delay (s)	Q (95th)	LOS	V/C	Delay (s)	Q (95th)
Campeau Drive at Winterset Road *Roundabout*	EB	A	0.17	4.7	4.5	A	0.29	4.4	9.0
	WB	A	0.15	3.8	4.2	A	0.32	3.8	11.0
	NB	A	0.01	8.6	0.2	A	0.01	7.9	0.1
	SB	A	0.23	2.1	4.8	A	0.15	2.9	2.8
	Overall	**A**	**0.23**	**3.7**	**4.8**	**A**	**0.32**	**4.0**	**11.0**
Campeau Drive at Kanata Commons Access *Signalized*	EBT	A	0.16	2.6	22.1	A	0.59	15.0	32.3
	EBR	A	0.01	0.0	0.0	A	0.02	0.1	0.0
	WBL	A	0.02	3.7	3.0	A	0.12	11.6	4.9
	WBT	A	0.11	2.5	15.1	B	0.63	15.7	35.0
	NBL	A	0.00	14.5	1.4	A	0.02	9.2	2.7
	NBT/R	A	0.02	0.1	0.0	A	0.05	0.1	0.0
	Overall	**A**	**0.15**	**2.6**	-	**A**	**0.60**	**14.7**	-

Intersection	Lane	AM Peak Hour				PM Peak Hour			
		LOS	V/C	Delay (s)	Q (95th)	LOS	V/C	Delay (s)	Q (95th)
Campeau Drive at Didsbury Road *Signalized*	EBL	A	0.00	6.0	0.8	A	0.01	12.0	0.9
	EBT/R	A	0.17	3.5	29.4	B	0.67	19.8	43.3
	WBL	A	0.00	5.5	1.1	A	0.05	13.3	3.0
	WBT/R	A	0.11	3.5	20.3	B	0.68	20.1	44.2
	NBL	A	0.01	15.7	3.0	A	0.03	10.4	4.0
	NBT/R	A	0.00	0.0	0.0	A	0.01	0.0	0.0
	SBL	-	-	-	-	A	0.00	10.0	0.8
	Overall	**A**	**0.17**	**3.6**	**-**	**B**	**0.66**	**19.6**	**-**
Campeau Drive at Terry Fox Drive *Signalized*	EBL	A	0.29	29.9	23.0	C	0.77	60.1	**#69.9**
	EBT	A	0.42	32.0	52.9	A	0.57	35.6	99.0
	EBR	A	0.34	4.8	13.5	A	0.38	4.9	16.9
	WBL	E	0.92	66.2	46.7	E	0.98	**86.9**	#103.3
	WBT	A	0.44	29.5	18.9	B	0.66	31.2	101.2
	WBR	A	0.15	2.3	0.0	A	0.28	3.6	4.5
	NBL	A	0.59	60.0	**#72.1**	D	0.82	72.2	**#83.5**
	NBT	A	0.51	16.2	8.0	D	0.86	47.6	**#150.7**
	NBR	A	0.20	5.4	0.0	A	0.30	9.5	21.2
	SBL	A	0.59	59.1	**#80.1**	C	0.74	67.1	62.5
	SBT	A	0.48	28.7	73.6	C	0.73	42.1	104.6
	SBR	A	0.10	2.5	4.6	A	0.29	9.3	20.3
	Overall	**B**	**0.62**	**28.6**	**-**	**D**	**0.86**	**41.0**	**-**
Campeau Drive at Herlihey Way *Signalized*	EBL	A	0.03	9.9	m4.3	A	0.05	11.3	m4.9
	EBT/R	A	0.35	10.0	75.5	C	0.74	29.0	**#211.3**
	WBL	A	0.06	5.3	m4.3	A	0.38	14.3	m22.8
	WBT	A	0.40	5.0	m49.9	A	0.48	19.1	74.7
	WBR	A	0.03	0.2	m0.1	A	0.12	3.8	m6.6
	NBL	A	0.15	54.5	9.4	A	0.55	60.8	46.1
	NBT/R	A	0.23	21.0	11.6	B	0.61	25.2	33.5
	SBL	A	0.18	55.0	11.1	B	0.65	69.7	42.6
	SBT	A	0.04	42.4	5.2	A	0.14	44.8	14.2
	SBR	A	0.08	0.7	0.0	A	0.29	3.9	3.7
	Overall	**A**	**0.38**	**9.0**	**-**	**B**	**0.66**	**26.9**	**-**
Campeau Drive at Kanata Avenue *Signalized*	EBL	A	0.46	35.9	20.6	A	0.59	29.3	m53.8
	EBT/R	A	0.60	40.5	58.6	C	0.74	38.6	**#108.2**
	WBL	A	0.08	22.1	8.2	A	0.18	16.3	12.4
	WBT/R	D	0.84	53.0	**#137.5**	B	0.65	37.0	112.9
	NBL	A	0.26	17.4	22.4	A	0.57	34.6	52.0
	NBT	A	0.17	16.6	29.5	A	0.31	28.2	53.0
	NBR	A	0.02	0.1	0.0	A	0.05	0.1	0.0
	SBL	A	0.28	26.0	33.9	A	0.16	37.2	18.4
	SBT	A	0.44	28.2	73.0	A	0.45	42.0	62.4
	SBR	A	0.27	4.4	13.6	A	0.34	7.6	16.0
	Overall	**A**	**0.60**	**32.5**	**-**	**B**	**0.62**	**32.6**	**-**

Intersection	Lane	AM Peak Hour				PM Peak Hour			
		LOS	V/C	Delay (s)	Q (95th)	LOS	V/C	Delay (s)	Q (95th)
Terry Fox Drive at Didsbury Road/ Roland Michener Drive *Signalized*	EBL	A	0.20	44.2	15.8	A	0.19	51.5	15.7
	EBT	A	0.11	41.7	10.1	A	0.13	49.9	12.7
	EBR	A	0.41	11.2	13.4	A	0.52	13.1	16.7
	WBL	A	0.27	45.6	16.1	B	0.66	58.8	51.0
	WBT/R	A	0.26	24.2	14.1	A	0.40	19.9	24.3
	NBL	C	0.75	49.2	**#96.3**	A	0.59	38.0	**#94.0**
	NBT	A	0.41	22.2	95.1	C	0.75	35.5	**#229.3**
	NBR	A	0.21	5.8	29.3	A	0.46	2.3	11.2
	SBL	A	0.12	16.2	m10.1	A	0.50	22.8	35.1
	SBT/R	A	0.51	15.7	**#159.2**	**F**	**1.05**	**79.2**	**#283.9**
	Overall	**A**	**0.52**	**21.0**	-	**D**	**0.90**	**46.4**	-
Terry Fox Drive at Highway 417 Westbound Ramp Terminal *Signalized*	WBL	B	0.66	33.9	85.3	D	0.89	44.3	**#156.0**
	WBR	B	0.61	10.3	13.4	C	0.79	24.5	45.9
	NBT	A	0.51	17.6	104.3	D	0.83	25.2	180.7
	NBR	A	0.20	1.8	2.9	A	0.33	1.2	2.9
	SBT	A	0.57	15.6	18.9	D	0.83	31.1	172.7
	SBR	A	0.21	3.7	0.0	A	0.45	3.1	15.6
	Overall	**B**	**0.61**	**18.5**	-	**D**	**0.86**	**27.6**	-
Terry Fox Drive at Highway 417 Eastbound Ramp Terminal *Signalized*	EBL	A	0.57	45.7	58.5	C	0.76	61.6	78.6
	EBR	C	0.80	54.2	74.1	D	0.86	68.7	**#88.4**
	NBT	A	0.38	9.0	64.1	A	0.57	9.6	97.3
	NBR	B	0.63	3.1	14.2	A	0.57	2.4	10.5
	SBT	B	0.64	9.2	129.6	D	0.84	12.1	179.0
	SBR	A	0.32	1.5	9.1	A	0.28	0.9	m3.9
	Overall	**B**	**0.67**	**12.2**	-	**D**	**0.84**	**14.5**	-

Notes:
Saturation flow rate of 1800 veh/h/lane
Queue is measured in metres
Peak Hour Factor = 1.00
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 at the 2033 future background horizon operate similarly to the 2028 future background conditions.

At the intersection of Terry Fox Drive at Highway 417 Westbound Ramp Terminal, the westbound left movement may exhibit extended queues during the PM peak hour.

Similarly to the existing conditions, the southbound through/right movement at the intersection of Terry Fox Drive at Didsbury Road/Ronald Michener Drive is over theoretical capacity during the PM peak hour at this horizon.

11.3 Network Rationalization

The existing conditions identify capacity issues on the southbound approach at the intersection of Terry Fox Drive at Didsbury Road/Roland Michener Drive during the PM peak hour. As noted in Section 2.2.7, limitations to the split of the northbound and southbound left-turn phases limit the performance of the southbound through movement. Given these split requirements prevent an effective signal timing mitigation strategy with the existing minimum values, exploration of options to reduce the impacts of the split phasing could be pursued. For example, if the southern pedestrian crossing were removed at this intersection through the Earl Grey Drive Extension project, and supported by the new pedestrian connections inherent to this extension, the minimum and maximum split on the eastbound movement could be reduced and the difference be added to the northbound left and southbound left phases within the cycle. This timing modification would reduce the v/c of all movements to 0.85 or below at the 2033 future total horizon during the PM peak hour at this intersection. It is recommended that

the City explore this and other solutions through the detailed design and implementation of the Earl Grey Drive Extension project.

Notwithstanding the foregoing discussion, the forecasted v/c on the PM peak hour southbound through/right movement at the intersection of Terry Fox Drive at Didsbury Road/Roland Michener Drive in the future conditions is not anticipated to exceed that of the existing conditions, and no rationalization for site traffic demand or background network demand is required.

11.4 Transit Priority

Site traffic is anticipated to have negligible impact on transit movements throughout the study area.

12 Access Intersection Design

12.1 Location and Design of Access

Site access is proposed via the existing Kanata Commons drive aisle. As noted above, the potential for conveyance of some configuration of drive aisles involving at minimum the conversion of the segment of the Kanata Commons Drive aisle between Campeau Drive and the internal site road is contemplated to be pursued as part of the forthcoming applications supporting the future master plan. The completion of the public road in the development ultimate condition will be either through the continuation of the public road south to a permanent turning basin, or the conveyance to the City of the new internal east-west road through the development area to Didsbury Road. Access considerations for each scenario will be considered below. In the scenario where no conveyance is pursued, the existing Kanata Commons drive aisle access will serve as the Phase 1 site access in perpetuity, and no further supporting analysis is required for this south leg of its signalized intersection with Campeau Drive.

12.1.1 Access Onto Internal East-West Road

In the case of continuation of the public right-of-way via the new internal east-west local road through the development area, the site accesses under consideration would be the two-way garage ramp access and the two-way parking lot access.

These site accesses are proposed to be 6.0-metres-wide. At the underground garage access, the curb radii are 4.525 metres on the west side and 4.50 metres on the east side, and at the surface lot the curb radii are 5.0 metres on both sides. This geometry results in a width of 6.0 metres at the street line for both accesses and a width at the curb line of approximately 15.0 for the underground garage access and 15.5 metres for the surface lot. The maximum width of a two-way access from the Private Approach By-Law is 9.0 metres at both the street line and the curb line. As previously noted, access configurations that permit both inbound and outbound right-turns for passenger vehicles do not meet the application of this provision at the curb line.

For the parking garage, the throat length from the end of the curb return to the first on-site conflict of the garage door is approximately 4.25 metres. It is, however, noted that approximately 7.0 metres of clear space between the garage door and the back of sidewalk is present. For the surface lot, the throat length from the end of the curb return to the first on-site conflict of the parking space is approximately 5.3 metres. While this distance is less than the target, it is noted that the first on-site conflict is 8.0 metres from the back of the sidewalk. Throat lengths are considered adequate for both accesses.

The Geometric Design Guide for Canadian Roads (TAC, 2017) suggests minimum corner clearance values for driveways from intersections of 15.0 metres along local roads. The distance between the future public Kanata Commons drive aisle and the underground parking garage access is 19.8 metres, and therefore this configuration meets suggested minimum corner clearance from TAC.

From the Private Approach By-Law, Section 25(1)(u) states that private approaches serving parking areas with more than 50 parking spaces must not have a grade exceeding 2% within the private property for a distance of 9 metres from the highway line (right-of-way) or future highway line. The driveway providing access to the underground parking is proposed to have a slope of 7.5% for the first four metres beyond the public right-of-way and a slope of 15% for the remaining five metres covered by this provision. This configuration would not conform to the referenced clause of the Private Approach By-Law in the ultimate condition assuming the internal east-west road is conveyed to the City, but it is noted to be compliant in the interim condition. An additional 2.95 metres of boulevard space is available beyond the top of the ramp to the back of the sidewalk, and it is recommended that this configuration be approved.

12.1.2 Access Onto Kanata Commons

In the case of continuation of the public road south to a permanent turning basin, the access for the internal private road is proposed to be 8.5-metres-wide in its typical dimension. This interim width is consistent with the future internal road that will include two travel lanes and one parking lane on the south side of the road. The curb radii between internal private road the future public road are proposed to be 5.0 metres. As a result, the access will be 8.5 metres at the street line and approximately 18.3 metres at the curb line. While the proposed width meets the maximum 9.0-metre width provision in the Private Approach By-Law for driveway widths at the street line, it does not meet this width at the curb line, consistent with access configurations that permit both inbound and outbound right-turns for passenger vehicles.

The throat length to the first on-site conflict of underground ramp access is 19.8 metres and is considered adequate.

It is recommended that in this access scenario, the internal public road access at the future public Kanata Commons drive aisle comply with City standard SC 7.1 for a continuous depressed sidewalk and curb across the access in its ultimate condition as part of the forthcoming master plan.

12.1.3 Existing Signalized Access intersection

No changes are recommended to the existing intersection of Campeau Drive at the Kanata Commons drive aisle through the conversion to a public road. The intersection itself was recently constructed and is contained within the publicly owned 8221 Campeau Drive parcel, and it is recommended that the newly proposed cross-sectional features associated with the public conversion tie into the existing features at the intersection.

12.2 Intersection Control

No change to the existing signalized control is recommended for the access intersection of Campeau Drive at the Kanata Commons drive aisle, and the remaining internal accesses are proposed to be minor stop-controlled on the access approaches.

12.3 Access Intersection Design

12.3.1 2028 Future Total Access Intersection Operations

The 2028 future total intersection volumes are illustrated in Figure 19 and the access intersection operations are summarized below in Table 19. Synchro 11 has been used to model the unsignalized intersections and HCM 2010 methodology was used for unsignalized intersection operations. The Synchro worksheets have been provided in Appendix K.

Figure 19: 2028 Future Total Volumes

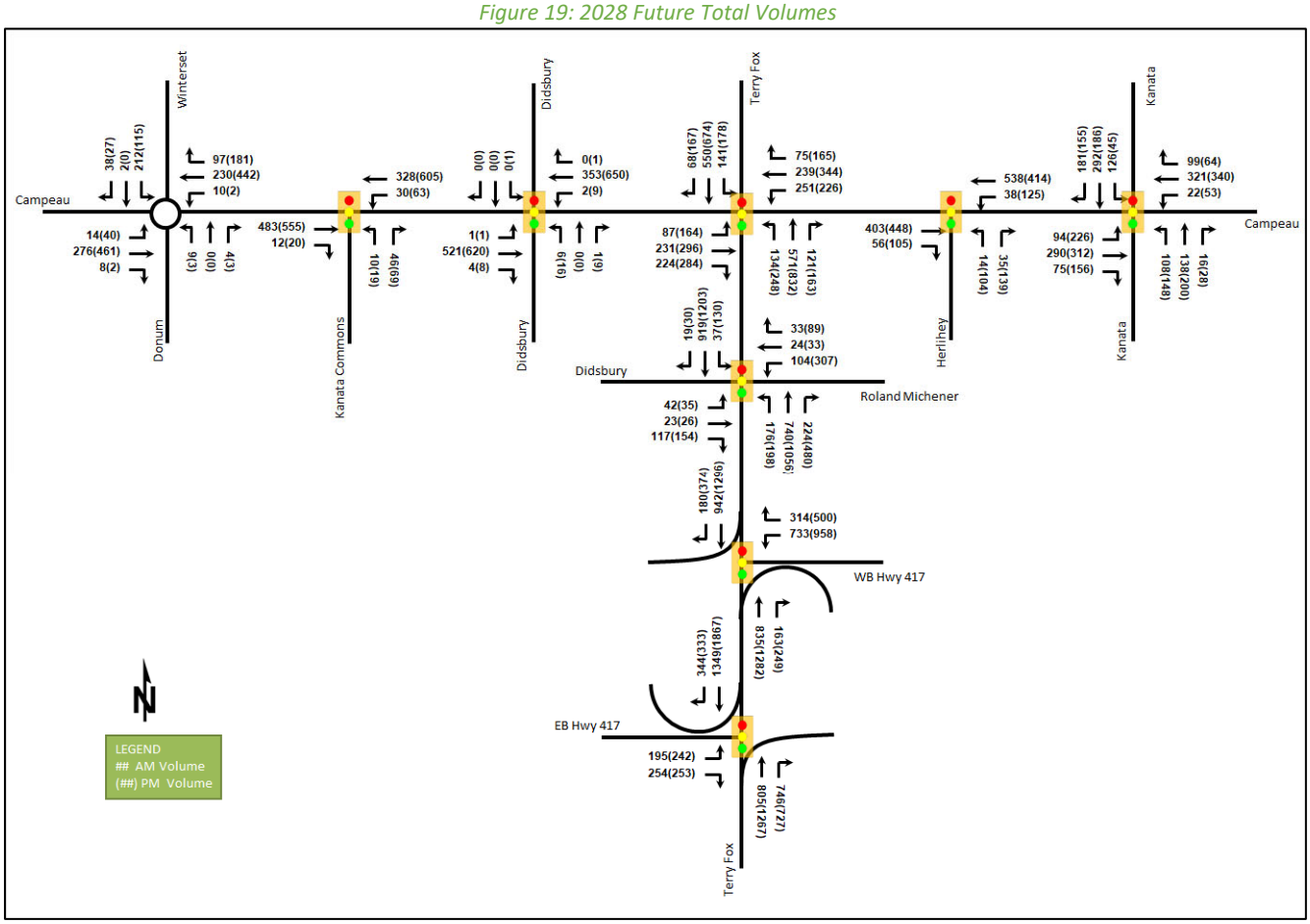


Table 19: 2028 Future Total Access Intersection Operations

Intersection	Lane	AM Peak Hour				PM Peak Hour			
		LOS	V/C	Delay (s)	Q (95th)	LOS	V/C	Delay (s)	Q (95th)
Campeau Drive at Kanata Commons Access ***Signalized***	EBT	A	0.20	6.0	23.5	A	0.54	14.6	28.3
	EBR	A	0.01	0.0	0.0	A	0.04	0.6	0.6
	WBL	A	0.05	7.4	5.3	A	0.28	14.6	10.2
	WBT	A	0.14	5.8	16.1	A	0.59	15.3	31.2
	NBL	A	0.03	12.8	2.8	A	0.03	8.9	3.9
	NBT/R	A	0.09	0.3	0.0	A	0.10	0.3	0.0
	Overall	**A**	**0.19**	**5.7**	-	**A**	**0.54**	**13.9**	-

Notes:
Saturation flow rate of 1800 veh/h/lane
Queue is measured in metres
Peak Hour Factor = 1.00
Delay = average vehicle delay in seconds
m = metered queue
# = volume for the 95th %ile cycle exceeds capacity

The access intersection is anticipated to operate well at the 2028 future total horizon, and similarly to the 2028 future background conditions. All movements are forecast to continue to operate with LOS of A.

12.3.2 2033 Future Total Intersection Operations

The 2033 future total intersection volumes are illustrated in Figure 19 and the 2033 future total access intersection operations are summarized below in Table 20. Synchro 11 has been used to model the unsignalized intersections and HCM 2010 methodology was used for unsignalized intersection operations. The Synchro worksheets have been provided in Appendix L.

Figure 20: 2033 Future Total Volumes

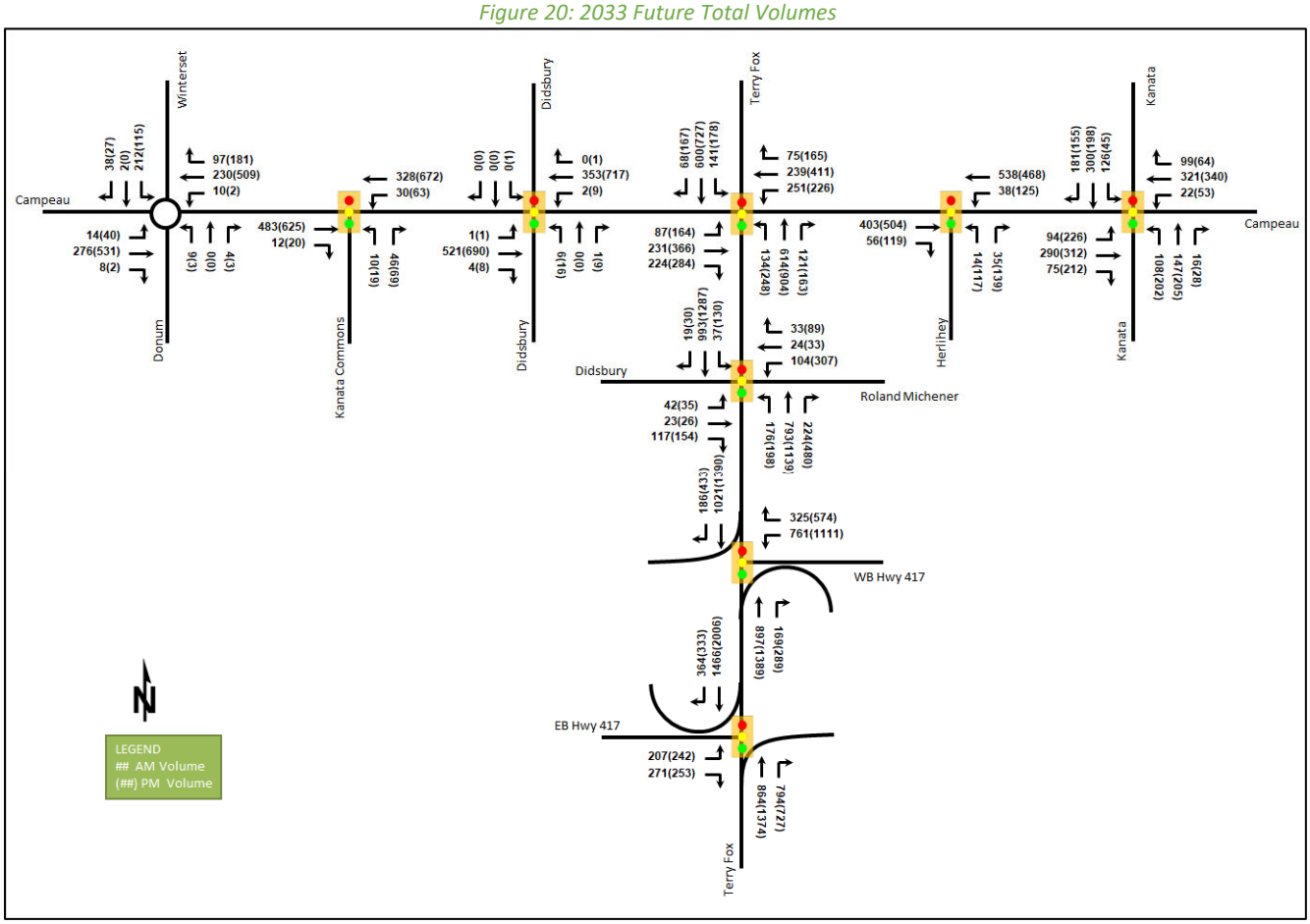


Table 20: 2033 Future Total Access Intersection Operations

Intersection	Lane	AM Peak Hour				PM Peak Hour			
		LOS	V/C	Delay (s)	Q (95th)	LOS	V/C	Delay (s)	Q (95th)
Campeau Drive at Kanata Commons Access ***Signalized***	EBT	A	0.20	6.0	23.5	A	0.59	14.9	32.2
	EBR	A	0.01	0.0	0.0	A	0.04	0.6	0.6
	WBL	A	0.05	7.4	5.3	A	0.30	15.3	10.6
	WBT	A	0.14	5.8	16.1	B	0.63	15.6	35.0
	NBL	A	0.03	12.8	2.8	A	0.03	9.3	4.0
	NBT/R	A	0.09	0.3	0.0	A	0.10	1.0	1.9
	Overall	**A**	**0.19**	**5.7**	-	**A**	**0.58**	**14.3**	-

Notes:
Saturation flow rate of 1800 veh/h/lane
Queue is measured in metres
Peak Hour Factor = 1.00
Delay = average vehicle delay in seconds
m = metered queue
# = volume for the 95th %ile cycle exceeds capacity

The access intersection is anticipated to operate well at the 2033 future total horizon and similarly to the 2033 future background conditions. No change in LOS is noted for any movement beyond the background conditions.

12.3.3 Access Intersection MMLOS

Table 21 summarizes the MMLOS analysis for the access intersection. The access intersection analysis is based on the policy area of "Mixed Use Centre" for existing conditions and the policy area of "Within 600m of rapid transit station" for future conditions. The MMLOS worksheets has been provided in Appendix F.

Table 21: Access Intersection MMLOS Analysis

Intersection		Pedestrian LOS		Bicycle LOS		Transit LOS		Truck LOS		Auto LOS	
		PLOS	Target	BLOS	Target	TLOS	Target	TrLOS	Target	ALOS	Target
Campeau Drive at Kanata Commons Access	Ex.	**F**	C	**B**	A	C	D	D	D	A	D
	Fut.	**F**	A	**B**	A	C	D	D	D	A	E

The MMLOS targets will not be met for the pedestrian and bicycle LOS at the signalized access intersection in both existing and future conditions. The pedestrian level of service would require a maximum of three lane-widths at a crossing to meet a LOS C and a maximum of two lane-widths to meet the future PLOS targets. No change is recommended to the cross-sections of any of the intersection legs to address the PLOS score.

Given the absence of a cycletrack on the Kanata Commons drive aisle approach, consistent with a future local road classification, the bicycle LOS is limited by the left-tun score. It is anticipated that cyclists will enter the northbound crossride from the intersection, however, and continue to make a two-stage left-turn. Therefore, the scoring for the intersection does not reflect the expected turn condition, which is considered to be adequate.

12.4 Recommended Design Elements

No changes to the signalized access intersection are recommended through the foregoing review.

13 Intersection Design

13.1 Intersection Control

No change to the existing signalized control is recommended for the network intersections, which are all signalized.

13.2 Intersection Design

13.2.1 2028 Future Total Intersection Operations

Figure 19 in Section 12.3.1 illustrates the 2028 future total volumes and Table 22 below summarizes the 2028 future total network intersection operations. The level of service for signalized intersections is based on v/c calculations for individual lane movements and MMLOS Guidelines weighted v/c methodology for the overall intersection, per direction from Transportation Engineering Services. The Synchro worksheets have been provided in Appendix K.

Table 22: 2028 Future Total Intersection Operations

Intersection	Lane	AM Peak Hour				PM Peak Hour			
		LOS	V/C	Delay (s)	Q (95th)	LOS	V/C	Delay (s)	Q (95th)
Campeau Drive at Winterset Road *Roundabout*	EB	A	0.17	4.7	4.5	A	0.26	4.4	7.7
	WB	A	0.16	3.8	4.3	A	0.30	3.8	9.6
	NB	A	0.01	8.6	0.2	A	0.01	7.7	0.1
	SB	A	0.23	2.1	4.8	A	0.14	2.6	2.7
	Overall	**A**	**0.23**	**3.7**	**4.8**	**A**	**0.30**	**3.9**	**9.6**

Intersection	Lane	AM Peak Hour				PM Peak Hour			
		LOS	V/C	Delay (s)	Q (95th)	LOS	V/C	Delay (s)	Q (95th)
Campeau Drive at Didsbury Road *Signalized*	EBL	A	0.00	6.0	0.8	A	0.01	12.0	0.9
	EBT/R	A	0.18	3.6	31.6	B	0.65	19.6	40.3
	WBL	A	0.00	5.5	1.1	A	0.05	13.4	3.1
	WBT/R	A	0.12	3.5	21.1	B	0.67	20.1	42.2
	NBL	A	0.01	15.7	3.0	A	0.03	10.0	3.9
	NBT/R	A	0.00	0.0	0.0	A	0.01	0.0	0.0
	SBL	-	-	-	-	A	0.00	10.0	0.8
	Overall	**A**	**0.18**	**3.6**	**-**	**B**	**0.66**	**19.6**	**-**
Campeau Drive at Terry Fox Drive *Signalized*	EBL	A	0.31	30.5	24.5	D	0.81	65.7	**#67.4**
	EBT	A	0.42	32.0	53.6	A	0.53	36.2	78.7
	EBR	A	0.38	4.8	14.3	A	0.44	5.3	17.4
	WBL	E	0.92	67.2	47.9	E	0.98	86.0	**#94.3**
	WBT	A	0.45	29.4	18.9	B	0.63	31.8	81.5
	WBR	A	0.15	2.3	0.0	A	0.30	3.8	4.1
	NBL	A	0.59	60.4	**#79.3**	D	0.87	77.3	**#99.2**
	NBT	A	0.48	15.5	8.5	B	0.70	38.0	**#131.4**
	NBR	A	0.20	4.9	0.0	A	0.27	7.9	18.8
	SBL	A	0.59	59.3	**#80.1**	C	0.74	67.1	62.5
	SBT	A	0.45	28.9	66.7	B	0.61	37.1	95.7
	SBR	A	0.11	2.8	5.3	A	0.28	7.7	18.3
	Overall	**B**	**0.61**	**28.7**	**-**	**C**	**0.75**	**38.6**	**-**
Campeau Drive at Herlihey Way *Signalized*	EBL	A	0.03	10.1	m4.3	A	0.05	11.2	m5.5
	EBT/R	A	0.35	9.9	75.3	B	0.66	27.1	**#177.7**
	WBL	A	0.06	5.4	m4.3	A	0.33	12.7	m20.6
	WBT	A	0.40	5.1	m50.4	A	0.42	16.7	61.2
	WBR	A	0.03	0.2	m0.1	A	0.12	2.9	m4.7
	NBL	A	0.15	54.5	9.4	A	0.50	59.1	41.5
	NBT/R	A	0.23	21.0	11.6	B	0.62	25.4	33.5
	SBL	A	0.18	55.0	11.1	B	0.65	69.7	42.6
	SBT	A	0.04	42.4	5.2	A	0.13	44.6	14.2
	SBR	A	0.08	0.7	0.0	A	0.28	3.9	3.7
	Overall	**A**	**0.38**	**8.9**	**-**	**B**	**0.61**	**25.4**	**-**
Campeau Drive at Kanata Avenue *Signalized*	EBL	A	0.46	35.9	20.6	A	0.59	28.3	56.0
	EBT/R	A	0.60	40.8	61.6	B	0.65	35.5	98.1
	WBL	A	0.08	22.1	8.2	A	0.16	16.0	12.4
	WBT/R	D	0.84	53.0	**#137.5**	B	0.65	37.0	112.9
	NBL	A	0.26	17.4	22.7	A	0.42	29.8	39.3
	NBT	A	0.16	16.5	27.7	A	0.31	28.0	51.4
	NBR	A	0.02	0.1	0.0	A	0.05	0.1	0.0
	SBL	A	0.28	25.9	33.8	A	0.16	37.1	18.4
	SBT	A	0.43	28.0	70.9	A	0.42	41.2	58.6
	SBR	A	0.27	4.4	13.6	A	0.33	7.6	16.0
	Overall	**A**	**0.60**	**32.6**	**-**	**A**	**0.56**	**31.0**	**-**

Intersection	Lane	AM Peak Hour				PM Peak Hour			
		LOS	V/C	Delay (s)	Q (95th)	LOS	V/C	Delay (s)	Q (95th)
Terry Fox Drive at Didsbury Road/ Roland Michener Drive *Signalized*	EBL	A	0.20	44.2	15.8	A	0.19	51.5	15.7
	EBT	A	0.11	41.7	10.1	A	0.13	49.9	12.7
	EBR	A	0.41	11.2	13.4	A	0.52	13.1	16.7
	WBL	A	0.27	45.6	16.1	B	0.66	58.8	51.0
	WBT/R	A	0.26	24.2	14.1	A	0.40	19.9	24.3
	NBL	B	0.69	42.5	**#93.8**	A	0.59	38.0	**#94.0**
	NBT	A	0.38	19.9	84.6	C	0.71	34.3	**#213.3**
	NBR	A	0.21	4.9	25.0	A	0.46	2.3	11.2
	SBL	A	0.11	15.3	m10.1	A	0.47	21.7	35.1
	SBT/R	A	0.49	14.9	**#146.7**	E	1.00	66.2	**#266.1**
	Overall	**A**	**0.50**	**19.5**	-	**D**	**0.86**	**41.4**	-
Terry Fox Drive at Highway 417 Westbound Ramp Terminal *Signalized*	WBL	B	0.65	34.3	83.9	C	0.79	38.8	124.3
	WBR	B	0.62	11.0	13.6	C	0.72	17.7	32.4
	NBT	A	0.47	17.3	94.5	C	0.75	21.9	164.0
	NBR	A	0.19	2.1	3.2	A	0.29	1.1	2.6
	SBT	A	0.53	15.1	18.4	C	0.76	27.5	157.0
	SBR	A	0.21	3.8	0.0	A	0.40	3.0	14.8
	Overall	**A**	**0.58**	**18.4**	-	**C**	**0.77**	**23.8**	-
Terry Fox Drive at Highway 417 Eastbound Ramp Terminal *Signalized*	EBL	A	0.60	48.5	57.7	C	0.79	64.3	81.1
	EBR	C	0.79	53.1	68.3	D	0.86	67.7	**#86.8**
	NBT	A	0.34	7.8	55.4	A	0.53	8.9	85.6
	NBR	A	0.59	2.7	13.2	A	0.57	2.4	10.5
	SBT	A	0.58	7.3	112.7	C	0.78	10.4	126.8
	SBR	A	0.31	1.3	7.3	A	0.29	1.2	m6.6
	Overall	**B**	**0.64**	**11.3**	-	**C**	**0.79**	**14.0**	-

Notes:
Saturation flow rate of 1800 veh/h/lane
Queue is measured in metres
Peak Hour Factor = 1.00
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 operate similarly to the 2028 future background conditions. No new operational issues are noted.

13.2.2 2033 Future Total Intersection Operations

Figure 20 in Section 13.2.2 illustrates the 2033 future total volumes and Table 23 below summarizes the 2033 future total network intersection operations. The level of service for signalized intersections is based on v/c calculations for individual lane movements and MMLOS Guidelines weighted v/c methodology for the overall intersection, per direction from Transportation Engineering Services. The Synchro worksheets have been provided in Appendix L.

Table 23: 2033 Future Total Intersection Operations

Intersection	Lane	AM Peak Hour				PM Peak Hour			
		LOS	V/C	Delay (s)	Q (95th)	LOS	V/C	Delay (s)	Q (95th)
Campeau Drive at Winterset Road *Roundabout*	EB	A	0.17	4.7	4.5	A	0.29	4.4	9.2
	WB	A	0.16	3.8	4.3	A	0.33	3.8	11.2
	NB	A	0.01	8.6	0.2	A	0.01	7.9	0.1
	SB	A	0.23	2.1	4.8	A	0.15	2.9	2.9
	Overall	**A**	**0.23**	**3.7**	**4.8**	**A**	**0.33**	**4.0**	**11.2**

Intersection	Lane	AM Peak Hour				PM Peak Hour			
		LOS	V/C	Delay (s)	Q (95th)	LOS	V/C	Delay (s)	Q (95th)
Campeau Drive at Didsbury Road *Signalized*	EBL	A	0.00	6.0	0.8	A	0.01	12.0	0.9
	EBT/R	A	0.18	3.6	31.6	B	0.68	20.0	45.5
	WBL	A	0.00	5.5	1.1	A	0.05	13.3	3.0
	WBT/R	A	0.12	3.5	21.1	B	0.70	20.4	46.9
	NBL	A	0.01	15.7	3.0	A	0.03	10.6	4.0
	NBT/R	A	0.00	0.0	0.0	A	0.01	0.0	0.0
	SBL	-	-	-	-	A	0.00	10.0	0.8
	Overall	**A**	**0.18**	**3.6**	**-**	**B**	**0.69**	**19.9**	**-**
Campeau Drive at Terry Fox Drive *Signalized*	EBL	A	0.31	30.5	24.5	D	0.81	64.8	**#73.8**
	EBT	A	0.42	32.0	53.6	A	0.58	35.7	99.6
	EBR	A	0.38	4.8	14.3	A	0.41	4.9	17.4
	WBL	E	0.92	67.2	47.9	E	0.99	88.1	**#103.8**
	WBT	A	0.45	29.4	18.9	B	0.66	31.3	102.7
	WBR	A	0.15	2.3	0.0	A	0.28	3.6	4.4
	NBL	A	0.59	58.7	**#78.4**	D	0.88	78.6	**#99.2**
	NBT	A	0.51	16.2	8.0	D	0.86	47.6	**#150.7**
	NBR	A	0.20	5.4	0.0	A	0.30	9.5	21.2
	SBL	A	0.59	59.3	**#80.1**	C	0.74	67.1	62.5
	SBT	A	0.49	29.7	73.6	C	0.75	43.5	104.6
	SBR	A	0.11	2.8	5.3	A	0.31	9.3	20.7
	Overall	**B**	**0.62**	**28.7**	**-**	**D**	**0.87**	**41.9**	**-**
Campeau Drive at Herlihey Way *Signalized*	EBL	A	0.03	10.0	m4.2	A	0.06	11.3	m4.8
	EBT/R	A	0.35	10.0	75.2	C	0.75	29.0	**#211.9**
	WBL	A	0.06	5.4	m4.3	A	0.38	14.4	m22.9
	WBT	A	0.40	5.1	m50.4	A	0.48	19.2	75.2
	WBR	A	0.03	0.2	m0.1	A	0.12	3.8	m6.5
	NBL	A	0.15	54.5	9.4	A	0.55	60.8	46.1
	NBT/R	A	0.23	21.0	11.6	B	0.61	25.2	33.5
	SBL	A	0.18	55.0	11.1	B	0.65	69.7	42.6
	SBT	A	0.04	42.4	5.2	A	0.14	44.8	14.2
	SBR	A	0.08	0.7	0.0	A	0.29	3.9	3.7
	Overall	**A**	**0.38**	**9.0**	**-**	**B**	**0.67**	**27.0**	**-**
Campeau Drive at Kanata Avenue *Signalized*	EBL	A	0.46	35.9	20.6	A	0.59	29.3	m53.6
	EBT/R	A	0.60	40.8	60.7	C	0.74	38.7	**#108.9**
	WBL	A	0.08	22.1	8.2	A	0.18	16.3	12.4
	WBT/R	D	0.84	53.0	**#137.5**	B	0.65	37.0	112.9
	NBL	A	0.26	17.4	22.7	A	0.58	34.8	52.6
	NBT	A	0.17	16.6	29.5	A	0.31	28.2	53.0
	NBR	A	0.02	0.1	0.0	A	0.05	0.1	0.0
	SBL	A	0.28	26.0	33.9	A	0.16	37.2	18.4
	SBT	A	0.44	28.2	73.0	A	0.45	42.0	62.4
	SBR	A	0.27	4.4	13.6	A	0.34	7.6	16.0
	Overall	**A**	**0.60**	**32.5**	**-**	**B**	**0.62**	**32.7**	**-**

Intersection	Lane	AM Peak Hour				PM Peak Hour			
		LOS	V/C	Delay (s)	Q (95th)	LOS	V/C	Delay (s)	Q (95th)
Terry Fox Drive at Didsbury Road/ Roland Michener Drive *Signalized*	EBL	A	0.20	44.2	15.8	A	0.19	51.5	15.7
	EBT	A	0.11	41.7	10.1	A	0.13	49.9	12.7
	EBR	A	0.41	11.2	13.4	A	0.52	13.1	16.7
	WBL	A	0.27	45.6	16.1	B	0.66	58.8	51.0
	WBT/R	A	0.26	24.2	14.1	A	0.40	19.9	24.3
	NBL	C	0.78	52.9	#97.4	A	0.59	38.0	#94.0
	NBT	A	0.41	22.3	96.5	C	0.77	36.1	#237.1
	NBR	A	0.21	5.7	29.3	A	0.46	2.3	11.3
	SBL	A	0.12	16.5	m10.1	A	0.51	23.5	35.1
	SBT/R	A	0.53	16.0	#165.8	F	1.07	84.9	#290.2
	Overall	**A**	**0.54**	**21.4**	-	**E**	**0.92**	**48.7**	-
Terry Fox Drive at Highway 417 Westbound Ramp Terminal *Signalized*	WBL	B	0.66	34.0	85.3	D	0.89	44.3	#156.0
	WBR	B	0.61	10.3	13.5	C	0.80	25.0	47.2
	NBT	A	0.51	17.7	105.1	D	0.84	25.6	183.5
	NBR	A	0.20	1.8	2.9	A	0.33	1.2	2.9
	SBT	A	0.58	15.8	18.8	D	0.84	31.7	176.2
	SBR	A	0.21	3.7	0.0	A	0.45	3.2	15.8
	Overall	**B**	**0.61**	**18.5**	-	**D**	**0.86**	**27.9**	-
Terry Fox Drive at Highway 417 Eastbound Ramp Terminal *Signalized*	EBL	A	0.58	45.9	59.1	C	0.78	63.4	81.1
	EBR	C	0.80	54.3	74.2	D	0.86	68.7	#88.4
	NBT	A	0.38	9.0	64.5	A	0.58	9.7	97.9
	NBR	B	0.63	3.2	14.3	A	0.57	2.4	10.5
	SBT	B	0.64	9.6	130.8	D	0.84	12.1	182.3
	SBR	A	0.33	1.6	10.1	A	0.29	0.9	m3.8
	Overall	**B**	**0.66**	**12.4**	-	**D**	**0.84**	**14.7**	-

Notes:
Saturation flow rate of 1800 veh/h/lane
Queue is measured in metres
Peak Hour Factor = 1.00
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 operate similarly to the 2033 future background conditions. No new operational issues are noted.

13.2.3 Intersection MMLOS

Table 24 summarizes the MMLOS analysis for the study area intersections. Given the intersection of Terry Fox Drive at Didsbury Road/Roland Michener Drive is expected to be upgraded as part of Earl Grey Drive Extension Project by 2027, it will be considered in future conditions. The intersection analysis is based on the policy area of "Mixed Use Centre" and "General Urban Area" for existing conditions and the policy area of "Within 600m of rapid transit station" for future conditions. Where intersection conditions and targets are the same in the existing and future conditions, they will be presented in one row. The MMLOS worksheets has been provided in Appendix F.

Table 24: Study Area Intersection MMLOS Analysis

Intersection		Pedestrian LOS		Bicycle LOS		Transit LOS		Truck LOS		Auto LOS	
		PLOS	Target	BLOS	Target	TLOS	Target	TrLOS	Target	ALOS	Target
Campeau Drive at Didsbury Road	Ex.	F	C	B	A	C	D	B	D	A	D
	Fut.	F	A	B	A	C	D	B	D	A	E

Intersection		Pedestrian LOS		Bicycle LOS		Transit LOS		Truck LOS		Auto LOS	
		PLOS	Target	BLOS	Target	TLOS	Target	TrLOS	Target	ALOS	Target
Campeau Drive at Terry Fox Drive	Ex.	F	C	F	A	F	D	C	D	B	D
	Fut.	F	A	F	A	F	D	C	D	B	E
Campeau Drive at Herlihey Way	Ex.	F	C	E	A	E	D	N/A	D	C	D
	Fut.	F	A	E	A	E	D	N/A	D	C	E
Campeau Drive at Kanata Avenue	Ex./ Fut.	F	C	F	A	F	D	N/A	D	B	D
Terry Fox Drive at Didsbury Road/ Roland Michener Drive	Ex.	F	C	F	C	F	D	B	D	E	D
	Fut.	F	A	B	C	F	D	B	D	E	E
Terry Fox Drive at Highway 417 Westbound	Ex.	F	C	B	C	D	D	B	D	C	D
	Fut.	F	A	B	C	D	D	B	D	C	E
Terry Fox Drive at Highway 417 Eastbound	Ex.	E	C	C	C	C	D	A	D	D	D
	Fut.	E	A	C	C	C	D	A	D	D	E

The pedestrian LOS targets are not met at all study area intersections and will not be in the future. As is typical for arterial roads, the crossing distance does not permit the targets to be met. To meet pedestrian LOS targets, the maximum crossing distance on all pedestrian crossing would need to be reduced to three lane-widths to meet the LOS C in the existing conditions and to two lane-widths to meet LOS A in the future.

The bicycle LOS targets are not met at the intersections of Campeau Drive with Didsbury Road, Terry Fox Drive, Herlihey Way and Kanata Avenue in both existing and future conditions. The mixed traffic approaches for cyclists and pocket bike lane configurations govern the bicycle LOS, and would require two-stage left-turns or bike boxes on all approaches.

The transit LOS targets are not met at the intersection of Campeau Drive at Terry Fox Drive, Campeau Drive at Herlihey Way, Campeau Drive at Kanata Avenue, and Terry Fox Drive at Didsbury Road/Roland Michener Drive in both existing and future conditions. To meet transit LOS targets, the delay would need to be reduced to below 30 seconds.

The truck LOS targets are met at all study area intersections, and auto LOS targets will be met at all future intersections.

Campeau Drive was recently constructed/reconstructed (2021), and the intersection of Terry Fox Drive at Didsbury Road/Roland Michener Drive will be reconstructed as part of the Earl Grey Drive Extension, and these intersections are assumed to meet the City's desired balance of MMLOS trade-offs. No changes to the intersections of Campeau Drive at Terry Fox Drive, Herlihey Way, or Kanata Avenue, or Terry Fox Drive at the Highway 417 ramp terminals are proposed as part of this review.

13.2.4 Recommended Design Elements

No new study area intersection design elements are proposed for the network intersections as part of this study.

14 Summary of Improvements Indicated and Modifications Options

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

Proposed Site and Screening

- The proposed development is Phase 1 of the 8201 Campeau Drive development, and includes two six-storey buildings with a total of 342 dwelling units and 2,930 sq ft of commercial space
- Access will be provided to Campeau Drive via the existing Kanata Commons drive aisle intersection
- As part of the future master planning exercise, conveyance of some configuration of drive aisles to the City as public roads may be pursued
- This conveyance would either constitute the entire Kanata Commons drive aisle, or a portion of the Kanata Commons drive aisle between Campeau Drive and the internal east-west road, along with the internal east-west road
- The site is located within the area subject to the Kanata West Area-Specific Policies and Kanata West Concept Plan
- The trip generation and safety triggers were met for the TIA Screening
- The anticipated built-out is 2028

Existing Conditions

- Highway 417 is an MTO urban freeway, Campeau Drive, Terry Fox Drive, and Kanata Avenue are arterial roads, Winterset Road and Donum Lane are collector roads, and Didsbury Road and Herlihey Way are local roads in the study area
- Sidewalks are provided on both sides of Campeau Drive west of Terry Fox Drive, Terry Fox Drive north of Didsbury Drive, Kanata Avenue, Herlihey Way approximately 95 metres south of Campeau Drive, and Winterset Road north of Basalt Lane and on the north side of Campeau Drive east of Terry Fox Drive, and the west side of Kanata Commons Access, Didsbury Road south of Compeau Drive, Winterset Road south of Basalt Lane
- A pathway is present on the south side Campeau Drive east of Terry Fox Drive and along Carp River north of Highway 417 and between Terry Fox and Herlihey Way connecting to Campeau Drive
- Cycletracks are present on both sides of Campeau Drive west of Didsbury Road and on the north side of the road east of Didsbury Road for 80 metres and bike lanes are present on both sides of Kanata Avenue and Terry Fox Drive north of Campeau Drive and on Terry Fox Drive from 150 meters south of Roland Michener Drive continuing through the study area
- During both the AM and PM peak hours, the study area intersections generally operate satisfactorily with the exception of the intersection of Terry Fox Drive at Didsbury Road/ Roland Michener Drive which may experience capacity issue in the southbound through/right movement during the PM peak hour
- Existing minimum splits do not allow capacity issues to be mitigated through signal timing
- The intersection of Campeau Drive at Terry Fox Drive is noted to have experienced higher collisions than other locations within the study area
- The high volume of conflicting through and left-turn movements at the intersection of Campeau Drive at Terry Fox Drive, potentially influenced by drivers pushing gaps in the traffic stream and is expected to be mitigated by the fully protected left-turn phasing implemented in 2023

Planned Conditions

- Cycling facilities on Campeau Drive from Didsbury Road to Terry Fox Drive and from approximately 85 metres west to 130 metres east of Kanata Avenue and on Kanata Avenue from approximately 150 metres south of Campeau Drive to Macassa Circle are identified in TMP – Part 1 and Part 2
- An Earl Grey Drive extension under Terry Fox Drive and a widening of Huntmar Drive are assumed to be completed by site buildout but are not considered to have a substantial impact on the study area traffic volumes and travel patterns

Development Generated Travel Demand

- The proposed development is forecasted produce 142 two-way people trips during the AM peak hour and 153 two-way people trips during the PM peak hour
- Of the forecasted people trips, 60 two-way trips will be vehicle trips during the AM peak hour, and 83 two-way trips will be vehicle trips during the PM peak hour
- Of the forecasted trips, 15% are anticipated to travel north, 30% to the south, 50% to the east, and 5% to the west

Development Design

- Vehicle parking is located in three parking levels below grade and visitor and commercial vehicle parking spaces are located on the surface accessed by a drive aisle within an internal courtyard accessing the internal east-west road
- Bicycle parking is located within the first underground parking level accessed by a 15% slope ramp and elevators are provided between the parking levels and the ground floor permitting cyclists' ease of access.
- 1.8-metre-wide sidewalks are proposed along the east side of the section of the Kanata Commons drive aisle that will be converted to a public road, and along the north side of the internal east-west road in the interim condition
- Vehicular access to the existing road network is proposed through the existing signalized intersection at Campeau Drive at the Kanata Commons drive aisle and the new internal east-west road stub that intersects the drive aisle
- Emergency services can access the site via Campeau Drive and the Kanata Commons drive aisle
- A typical City 18.0-metre right-of-way road has been applied to the east side of the Kanata Commons drive aisle cross-section, including a 1.8-metre sidewalk abutting the road and a 2.95-metre outer boulevard to the edge of the proposed right-of-way
- Based on a potential future conveyance to the City, the internal east-west road will be designed to meet the City standard for an 18.0-metre local road
- Traffic calming through the use of a mid-block narrowing between Campeau Drive and the internal east-west road, and a bulb-out at the intersection with the internal east-west road will be provided
- Access to each the underground parking and to the drive aisle permitting surface parking, move-in/-out, and garbage collection are provided on the new internal east-west road stub

Parking

- The site is proposed to include a total of 368 vehicle parking spaces, including 19 spaces at grade, and 178 bicycle parking spaces
- the site is proposed to provide 119 fewer resident vehicle parking spaces than required and meets the minimum visitor vehicle parking and bicycle parking space requirements from the in-effect Zoning By-Law
- While subject to the current Zoning By-Law (By-law No. 2008-250) and requiring an exemption for the proposed vehicle parking rate, the site parking rate reflects the transition in context of the site

Boundary Street Design

- Campeau Drive meets the pedestrian, cycling, transit, and truck LOS targets in the existing conditions, but would fail to meet a future increase in pedestrian LOS target for the proximity to future Didsbury Station, due to the operating speeds, requiring speeds to be reduced to 50 km/h to meet targets
- The public road conversion of the Kanata Commons drive aisle will meet meets the pedestrian, cycling, transit, and truck LOS targets

TDM

- Supportive TDM measures to be included within the proposed development should include:
  - Display local area maps with walking and cycling routes, and transit route information and schedules at major entrances
  - Provide a multimodal travel option information package to new residents
  - Unbundle parking cost from purchase or rental costs

Background Conditions

- Background development volumes and growth rates derived from the 2011 and 2031 TRANS models have generally been applied to the mainline and major turning movements throughout the study area
- No annual background growth was applied to the existing volumes on Campeau Drive, and a reduced annual background growth was applied to Kanata Avenue as traffic growth beyond background developments is not expected
- The study area intersections at the 2028 future background horizon are expected to operate similarly to the existing conditions, with incremental improvements resulting from the peak hour factor increasing to 1.00 for modeled conditions
- The study area intersections at the 2033 future background horizon are forecast to operate similarly to the 2028 future background conditions and the southbound through/right movement at the intersection of Terry Fox Drive at Didsbury Road/Ronald Michener Drive is expected to be over theoretical capacity during the PM peak hour, similar to the existing conditions

Transit

- Site traffic is anticipated to have negligible impact on transit movements throughout the study area

Intersection Design

- In the case where no conveyance is pursued, no changes to the existing Kanata Commons drive aisle access are recommended, which forms the south leg of a signalized intersection with Campeau Drive

- In the case of continuation of the public right-of-way via the new internal east-west local road through the development area, the suggested minimum corner clearance from TAC is met and the parking garage and surface lot configurations are considered adequate in terms of throat length
- The site accesses are proposed to be 6.0-metre wide at the street line and approximately 15.0-metres-wide (underground garage) and 15.5-metreswide (surface lot) at the curb line, which do not meet the maximum width provision in the Private Approach By-Law, consistent with access configurations permitting both inbound and outbound right-turns for passenger vehicles
- The driveway providing access to the underground parking does not conform to Section 25(1)(u) of the Private Approach By-Law in the ultimate condition for a 2% grade within nine metres of the right-of-way line but is compliant in the interim condition, however an additional 2.95 metres of boulevard space is available beyond the top of the ramp to the back of the sidewalk, and it is recommended that this configuration be approved
- In the case of continuation of the public road south to a permanent turning basin, the internal east-west private road provides adequate throat length and meets the maximum 9.0-metre width provision in the Private Approach By-Law for driveway widths at the street line, but does not meet this width at the curb line, consistent with access configurations permitting both inbound and outbound right-turns for passenger vehicles
- In this scenario, the internal public road access at the future public Kanata Commons drive aisle is recommended to comply with City standard SC 7.1
- In the case of either conveyance scenario, no change to the existing signalized control is recommended for the access intersection of Campeau Drive at the Kanata Commons drive aisle, and the remaining internal accesses are proposed to be minor stop-controlled on the access approaches
- The access intersection is anticipated to operate well at all future total horizons
- The MMLOS targets will not be met for the pedestrian and bicycle LOS at the signalized access intersection
- The study area intersections at all future total horizons are expected to operate similarly to their corresponding future background conditions
- Network intersection pedestrian LOS targets will not be met at any intersection due to crossing distances, bicycle LOS targets will not be met at any of the Campeau Drive intersections due to mixed traffic approaches and left turn configurations, and transit LOS targets will not be met at Campeau Drive at Terry Fox Drive, Campeau Drive at Herlihey Way, Campeau Drive at Kanata Avenue, and Terry Fox Drive at Didsbury Road/Roland Michener Drive due to delays of over 30 seconds
- Campeau Drive was recently constructed/reconstructed (2021), and the intersection of Terry Fox Drive at Didsbury Road/Roland Michener Drive will be reconstructed as part of the Earl Grey Drive Extension, and these intersections are assumed to meet the City's desired balance of MMLOS trade-offs
- No changes to the intersections of Campeau Drive at Terry Fox Drive, Herlihey Way, or Kanata Avenue, or Terry Fox Drive at the Highway 417 ramp terminals are proposed as part of this review

15 Conclusion

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

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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: 16-Nov-23
Project Number: 2023-170
Project Reference: 8201 Campeau

1.1 Description of Proposed Development	
Municipal Address	8201 Campeau Drive
Description of Location	6.16 ha parcel south of Campeau Dr, west of Didsbury Rd, and north of the LRT corridor
Land Use Classification	Mixed-Use Centre (MC11[74] H(34))
Development Size	2,878 Units
Accesses	One RIRO on Campeau Dr, one full-moves on Didsbury Road, one full-moves on shared private Kanata Commons drive aisle
Phase of Development	Multiple
Buildout Year	2032
TIA Requirement	Full TIA Required

1.2 Trip Generation Trigger		
Land Use Type	Multi-Family (High-Rise)	
Development Size	2,878	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)?	No	
Location Trigger	No	

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	Signalized intersection of Campeau Drive at Didsbury Rd
Is the proposed driveway within auxiliary lanes of an intersection?	No	
Does the proposed driveway make use of an existing median break that serves an existing site?	No	
Is there is a documented history of traffic operations or safety concerns on the boundary streets within 500 m of the development?	No	
Does the development include a drive-thru facility?	No	
Safety Trigger	Yes	

Appendix B

Turning Movement Counts

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Accu-Traffic Inc.

Morning Peak Diagram

Specified Period
From: 7:30:00
To: 10:00:00

One Hour Peak
From: 8:00:00
To: 9:00:00

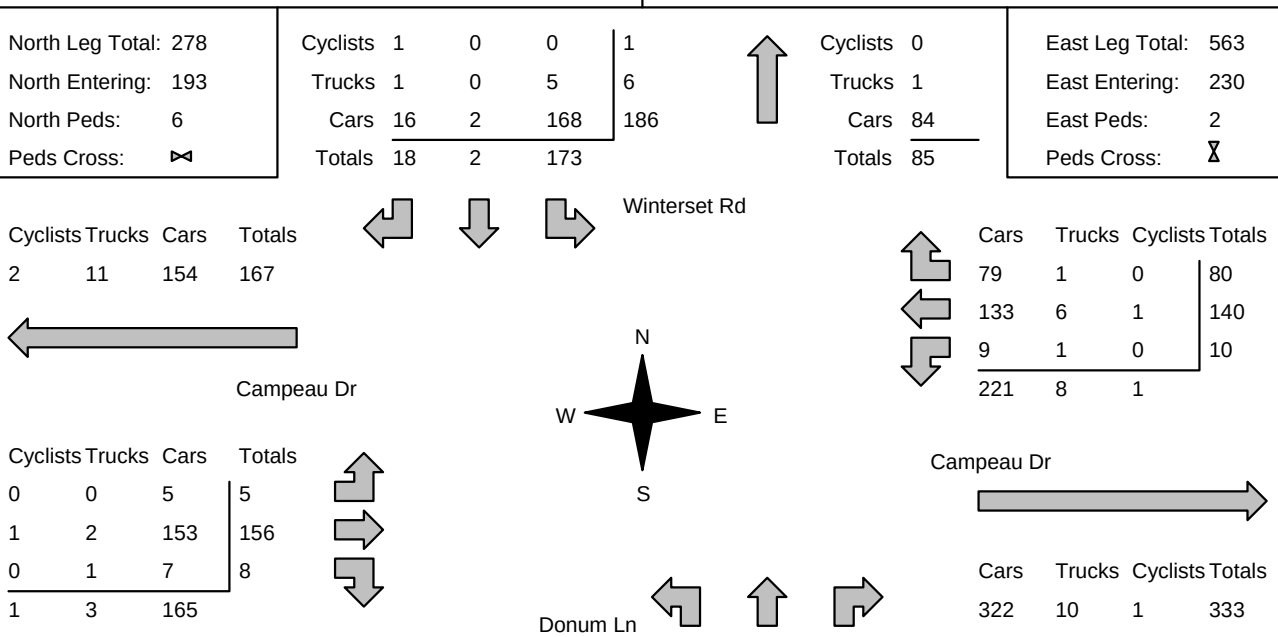
Municipality: Kanata
Site #: 2416900005
Intersection: Campeau Dr & Winterset Rd
TFR File #: 1
Count date: 12-Sep-24

Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Non-Signalized Intersection ****

Major Road: Campeau Dr runs W/E



Comments

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Accu-Traffic Inc.

Afternoon Peak Diagram

Specified Period
From: 15:30:00
To: 18:00:00

One Hour Peak
From: 16:45:00
To: 17:45:00

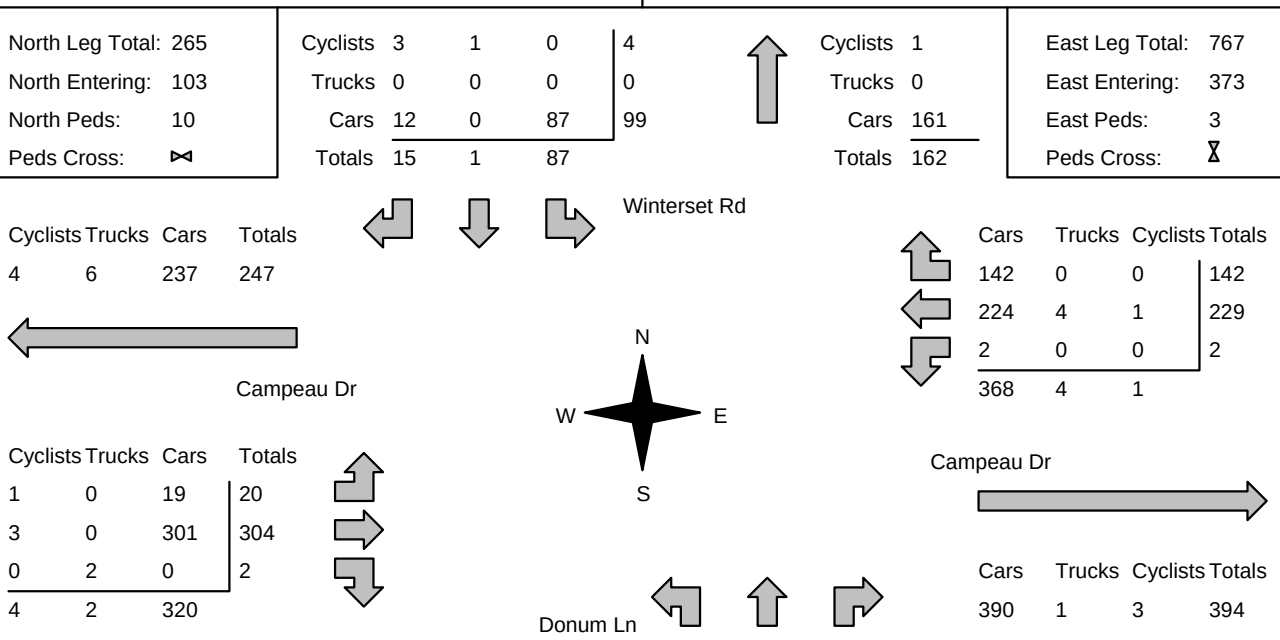
Municipality: Kanata
Site #: 2416900005
Intersection: Campeau Dr & Winterset Rd
TFR File #: 1
Count date: 12-Sep-24

Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Non-Signalized Intersection ****

Major Road: Campeau Dr runs W/E



Comments

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Accu-Traffic Inc.

Total Count Diagram

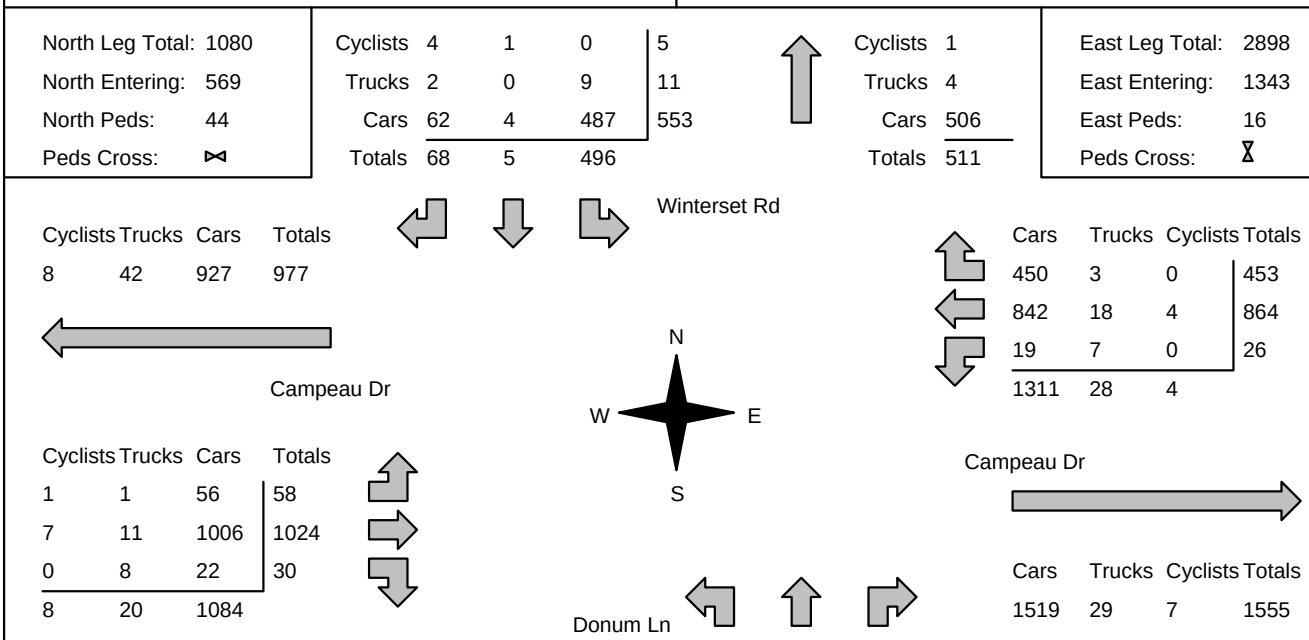
Municipality: Kanata
Site #: 2416900005
Intersection: Campeau Dr & Winterset Rd
TFR File #: 1
Count date: 12-Sep-24

Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Non-Signalized Intersection ****

Major Road: Campeau Dr runs W/E



Comments

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Accu-Traffic Inc.

Traffic Count Summary

Intersection: Campeau Dr & Winterset Rd | **Count Date:** 12-Sep-24 | **Municipality:** Kanata

North Approach Totals

Hour Ending	Includes Cars, Trucks, & Cyclists				Total Peds	North/South Total Approaches
	Left	Thru	Right	Grand Total		
8:00:00	*72*	*0*	*1*	*73*	*1*	*81*
9:00:00	*173*	*2*	*18*	*193*	*6*	*206*
10:00:00	*53*	*2*	*15*	*70*	*3*	*93*
16:00:00	*40*	*0*	*4*	*44*	*9*	*54*
17:00:00	*82*	*0*	*15*	*97*	*13*	*115*
18:00:00	*76*	*1*	*15*	*92*	*12*	*100*
Totals:	496	5	68	569	44	649

South Approach Totals

Hour Ending	Includes Cars, Trucks, & Cyclists				Total Peds
	Left	Thru	Right	Grand Total	
8:00:00	*5*	*0*	*3*	*8*	*0*
9:00:00	*9*	*0*	*4*	*13*	*0*
10:00:00	*14*	*0*	*9*	*23*	*0*
16:00:00	*7*	*0*	*3*	*10*	*0*
17:00:00	*8*	*0*	*10*	*18*	*0*
18:00:00	*2*	*0*	*6*	*8*	*0*
S Totals:	45	0	35	80	0

East Approach Totals

Hour Ending	Includes Cars, Trucks, & Cyclists				Total Peds	East/West Total Approaches
	Left	Thru	Right	Grand Total		
8:00:00	*5*	*44*	*20*	*69*	*0*	*140*
9:00:00	*10*	*140*	*80*	*230*	*2*	*399*
10:00:00	*7*	*130*	*43*	*180*	*2*	*335*
16:00:00	*1*	*106*	*47*	*154*	*5*	*268*
17:00:00	*1*	*216*	*132*	*349*	*3*	*650*
18:00:00	*2*	*228*	*131*	*361*	*4*	*663*
Totals:	26	864	453	1343	16	2455

West Approach Totals

Hour Ending	Includes Cars, Trucks, & Cyclists				Total Peds
	Left	Thru	Right	Grand Total	
8:00:00	*4*	*59*	*8*	*71*	*0*
9:00:00	*5*	*156*	*8*	*169*	*1*
10:00:00	*6*	*143*	*6*	*155*	*0*
16:00:00	*5*	*106*	*3*	*114*	*0*
17:00:00	*16*	*282*	*3*	*301*	*0*
18:00:00	*22*	*278*	*2*	*302*	*0*
W Totals:	58	1024	30	1112	1

Calculated Values for Traffic Crossing Major Street

Hours Ending:	*8:00*	*9:00*	*10:00*	*16:00*	*17:00*	*18:00*	*0:00*	*0:00*
Crossing Values:	*77*	*187*	*71*	*52*	*93*	*83*	*0*	*0*

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Accu-Traffic Inc.

Count Date: 12-Sep-24 Site #: 2416900005

Interval Time	Passenger Cars - North Approach						Trucks - North Approach						Cyclists - North Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		North Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45:00	31	31	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0
8:00:00	69	38	0	0	1	1	3	1	0	0	0	0	0	0	0	0	0	0	1	1
8:15:00	130	61	1	1	2	1	7	4	0	0	0	0	0	0	0	0	1	1	4	3
8:30:00	181	51	2	1	4	2	7	0	0	0	1	1	0	0	0	0	1	0	6	2
8:45:00	207	26	2	0	11	7	8	1	0	0	1	0	0	0	0	0	1	0	6	0
9:00:00	237	30	2	0	17	6	8	0	0	0	1	0	0	0	0	0	1	0	7	1
9:15:00	249	12	2	0	23	6	8	0	0	0	1	0	0	0	0	0	1	0	8	1
9:30:00	266	17	2	0	26	3	8	0	0	0	1	0	0	0	0	0	1	0	10	2
9:45:00	281	15	3	1	28	2	8	0	0	0	1	0	0	0	0	0	1	0	10	0
10:00:00	290	9	4	1	32	4	8	0	0	0	1	0	0	0	0	0	1	0	10	0
10:15:00	290	0	4	0	32	0	8	0	0	0	1	0	0	0	0	0	1	0	10	0
15:30:00	290	0	4	0	32	0	8	0	0	0	1	0	0	0	0	0	1	0	10	0
15:45:00	313	23	4	0	35	3	9	1	0	0	1	0	0	0	0	0	1	0	15	5
16:00:00	329	16	4	0	36	1	9	0	0	0	1	0	0	0	0	0	1	0	19	4
16:15:00	348	19	4	0	37	1	9	0	0	0	2	1	0	0	0	0	1	0	23	4
16:30:00	368	20	4	0	42	5	9	0	0	0	2	0	0	0	0	0	1	0	25	2
16:45:00	386	18	4	0	45	3	9	0	0	0	2	0	0	0	0	0	1	0	30	5
17:00:00	411	25	4	0	48	3	9	0	0	0	2	0	0	0	0	0	3	2	32	2
17:15:00	438	27	4	0	51	3	9	0	0	0	2	0	0	0	0	0	3	0	35	3
17:30:00	452	14	4	0	53	2	9	0	0	0	2	0	0	0	0	0	3	0	36	1
17:45:00	473	21	4	0	57	4	9	0	0	0	2	0	0	0	1	1	4	1	40	4
18:00:00	487	14	4	0	62	5	9	0	0	0	2	0	0	0	1	0	4	0	44	4
18:15:00	487	0	4	0	62	0	9	0	0	0	2	0	0	0	1	0	4	0	44	0
18:15:15	487	0	4	0	62	0	9	0	0	0	2	0	0	0	1	0	4	0	44	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Accu-Traffic Inc.

Count Date: 12-Sep-24 Site #: 2416900005

Interval Time	Passenger Cars - East Approach						Trucks - East Approach						Cyclists - East Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		East Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45:00	2	2	17	17	8	8	1	1	1	1	0	0	0	0	0	0	0	0	0	0
8:00:00	3	1	43	26	19	11	2	1	1	0	1	1	0	0	0	0	0	0	0	0
8:15:00	8	5	70	27	31	12	2	0	6	5	2	1	0	0	0	0	0	0	0	0
8:30:00	9	1	95	25	43	12	3	1	7	1	2	0	0	0	0	0	0	0	0	0
8:45:00	11	2	136	41	72	29	3	0	7	0	2	0	0	0	0	0	0	0	1	1
9:00:00	12	1	176	40	98	26	3	0	7	0	2	0	0	0	1	1	0	0	2	1
9:15:00	14	2	205	29	107	9	3	0	7	0	2	0	0	0	1	0	0	0	2	0
9:30:00	15	1	228	23	117	10	3	0	8	1	2	0	0	0	2	1	0	0	3	1
9:45:00	15	0	256	28	127	10	4	1	10	2	2	0	0	0	2	0	0	0	3	0
10:00:00	16	1	299	43	141	14	6	2	13	3	2	0	0	0	2	0	0	0	4	1
10:15:00	16	0	299	0	141	0	6	0	13	0	2	0	0	0	2	0	0	0	4	0
15:30:00	16	0	299	0	141	0	6	0	13	0	2	0	0	0	2	0	0	0	4	0
15:45:00	16	0	352	53	173	32	6	0	13	0	2	0	0	0	2	0	0	0	8	4
16:00:00	17	1	404	52	188	15	6	0	13	0	2	0	0	0	3	1	0	0	9	1
16:15:00	17	0	469	65	222	34	6	0	13	0	3	1	0	0	3	0	0	0	11	2
16:30:00	17	0	516	47	253	31	6	0	14	1	3	0	0	0	3	0	0	0	11	0
16:45:00	17	0	560	44	288	35	7	1	14	0	3	0	0	0	3	0	0	0	12	1
17:00:00	17	0	615	55	319	31	7	0	17	3	3	0	0	0	4	1	0	0	12	0
17:15:00	17	0	664	49	364	45	7	0	17	0	3	0	0	0	4	0	0	0	14	2
17:30:00	17	0	726	62	395	31	7	0	17	0	3	0	0	0	4	0	0	0	14	0
17:45:00	19	2	784	58	430	35	7	0	18	1	3	0	0	0	4	0	0	0	15	1
18:00:00	19	0	842	58	450	20	7	0	18	0	3	0	0	0	4	0	0	0	16	1
18:15:00	19	0	842	0	450	0	7	0	18	0	3	0	0	0	4	0	0	0	16	0
18:15:15	19	0	842	0	450	0	7	0	18	0	3	0	0	0	4	0	0	0	16	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Accu-Traffic Inc.

Count Date: 12-Sep-24 Site #: 2416900005

Interval Time	Passenger Cars - South Approach						Trucks - South Approach						Cyclists - South Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		South Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45:00	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0
8:00:00	1	1	0	0	3	3	4	2	0	0	0	0	0	0	0	0	0	0	0	0
8:15:00	2	1	0	0	3	0	4	0	0	0	2	2	0	0	0	0	0	0	0	0
8:30:00	2	0	0	0	4	1	5	1	0	0	3	1	0	0	0	0	0	0	0	0
8:45:00	4	2	0	0	4	0	7	2	0	0	3	0	0	0	0	0	0	0	0	0
9:00:00	6	2	0	0	4	0	8	1	0	0	3	0	0	0	0	0	0	0	0	0
9:15:00	7	1	0	0	6	2	9	1	0	0	3	0	0	0	0	0	0	0	0	0
9:30:00	9	2	0	0	6	0	11	2	0	0	3	0	0	0	0	0	0	0	0	0
9:45:00	13	4	0	0	8	2	14	3	0	0	5	2	0	0	0	0	0	0	0	0
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10:15:00	14	0	0	0	10	0	14	0	0	0	6	0	0	0	0	0	0	0	0	0
15:30:00	14	0	0	0	10	0	14	0	0	0	6	0	0	0	0	0	0	0	0	0
15:45:00	18	4	0	0	12	2	15	1	0	0	7	1	0	0	0	0	0	0	0	0
16:00:00	19	1	0	0	12	0	16	1	0	0	7	0	0	0	0	0	0	0	0	0
16:15:00	20	1	0	0	13	1	17	1	0	0	7	0	0	0	0	0	0	0	0	0
16:30:00	22	2	0	0	18	5	18	1	0	0	8	1	0	0	0	0	0	0	0	0
16:45:00	22	0	0	0	19	1	20	2	0	0	8	0	0	0	0	0	0	0	0	0
17:00:00	22	0	0	0	20	1	21	1	0	0	9	1	0	0	0	0	0	0	0	0
17:15:00	23	1	0	0	20	0	22	1	0	0	9	0	0	0	0	0	0	0	0	0
17:30:00	23	0	0	0	20	0	22	0	0	0	9	0	0	0	0	0	0	0	0	0
17:45:00	23	0	0	0	21	1	22	0	0	0	9	0	0	0	0	0	0	0	0	0
18:00:00	23	0	0	0	26	5	22	0	0	0	9	0	0	0	0	0	0	0	0	0
18:15:00	23	0	0	0	26	0	22	0	0	0	9	0	0	0	0	0	0	0	0	0
18:15:15	23	0	0	0	26	0	22	0	0	0	9	0	0	0	0	0	0	0	0	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Accu-Traffic Inc.

Count Date: 12-Sep-24 Site #: 2416900005

Interval Time	Passenger Cars - West Approach						Trucks - West Approach						Cyclists - West Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		West Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:30:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45:00	1	1	25	25	4	4	0	0	0	0	0	0	0	0	1	1	0	0	0	0
8:00:00	4	3	56	31	8	4	0	0	2	2	0	0	0	0	1	0	0	0	0	0
8:15:00	7	3	92	36	8	0	0	0	3	1	1	1	0	0	2	1	0	0	0	0
8:30:00	8	1	136	44	11	3	0	0	3	0	1	0	0	0	2	0	0	0	0	0
8:45:00	8	0	168	32	14	3	0	0	4	1	1	0	0	0	2	0	0	0	1	1
9:00:00	9	1	209	41	15	1	0	0	4	0	1	0	0	0	2	0	0	0	1	0
9:15:00	10	1	240	31	15	0	0	0	5	1	1	0	0	0	2	0	0	0	1	0
9:30:00	10	0	275	35	16	1	0	0	6	1	1	0	0	0	2	0	0	0	1	0
9:45:00	13	3	313	38	16	0	0	0	7	1	2	1	0	0	2	0	0	0	1	0
10:00:00	14	1	347	34	19	3	1	1	8	1	3	1	0	0	3	1	0	0	1	0
10:15:00	14	0	347	0	19	0	1	0	8	0	3	0	0	0	3	0	0	0	1	0
15:30:00	14	0	347	0	19	0	1	0	8	0	3	0	0	0	3	0	0	0	1	0
15:45:00	17	3	395	48	21	2	1	0	8	0	3	0	0	0	3	0	0	0	1	0
16:00:00	19	2	453	58	21	0	1	0	8	0	4	1	0	0	3	0	0	0	1	0
16:15:00	26	7	513	60	22	1	1	0	9	1	4	0	0	0	4	1	0	0	1	0
16:30:00	29	3	569	56	22	0	1	0	9	0	5	1	0	0	4	0	0	0	1	0
16:45:00	32	3	640	71	22	0	1	0	11	2	6	1	0	0	4	0	0	0	1	0
17:00:00	34	2	731	91	22	0	1	0	11	0	6	0	1	1	4	0	0	0	1	0
17:15:00	39	5	803	72	22	0	1	0	11	0	8	2	1	0	5	1	0	0	1	0
17:30:00	46	7	867	64	22	0	1	0	11	0	8	0	1	0	7	2	0	0	1	0
17:45:00	51	5	941	74	22	0	1	0	11	0	8	0	1	0	7	0	0	0	1	0
18:00:00	56	5	1006	65	22	0	1	0	11	0	8	0	1	0	7	0	0	0	1	0
18:15:00	56	0	1006	0	22	0	1	0	11	0	8	0	1	0	7	0	0	0	1	0
18:15:15	56	0	1006	0	22	0	1	0	11	0	8	0	1	0	7	0	0	0	1	0

Transportation Services - Traffic Services

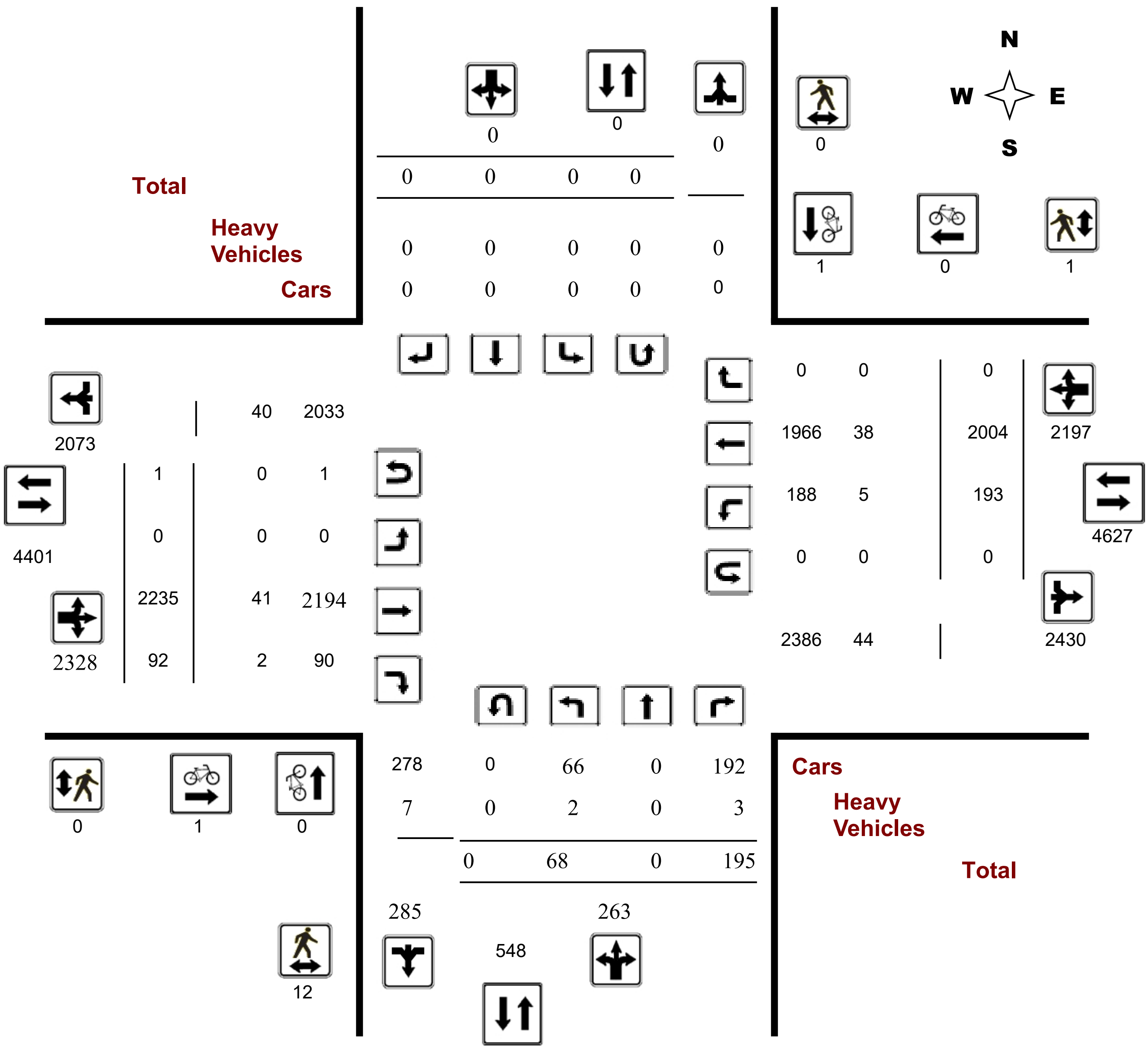
Turning Movement Count - Study Results

CAMPEAU DR @ 247 W OF DISBURY RD

Survey Date: Thursday, December 14, 2023 **WO No:** 41611

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

Full Study Diagram



Transportation Services - Traffic Services

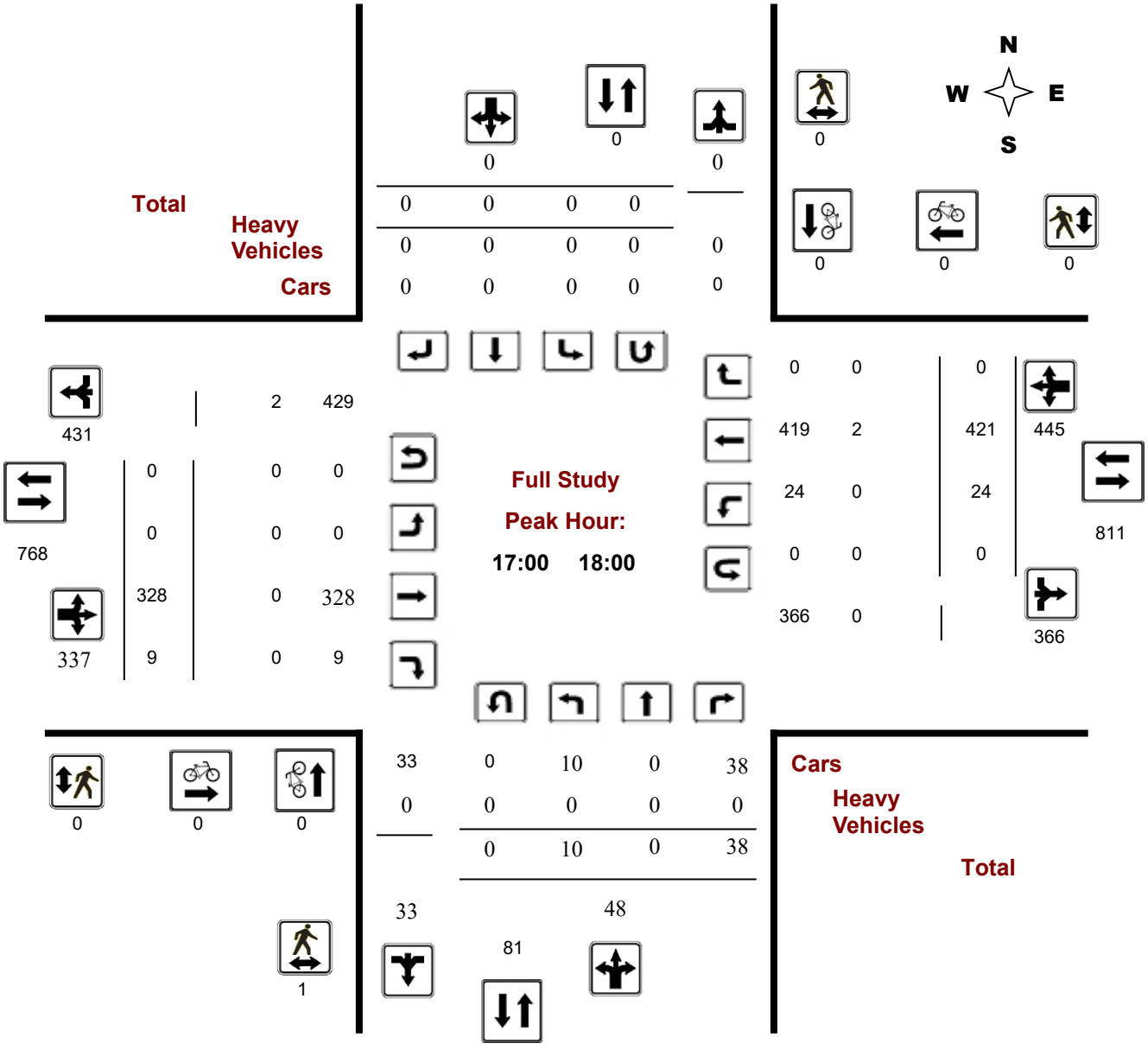
Turning Movement Count - Study Results

CAMPEAU DR @ 247 W OF DISBURY RD

Survey Date: Thursday, December 14, 2023 **WO No:** 41611

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

Full Study Peak Hour Diagram



Transportation Services - Traffic Services

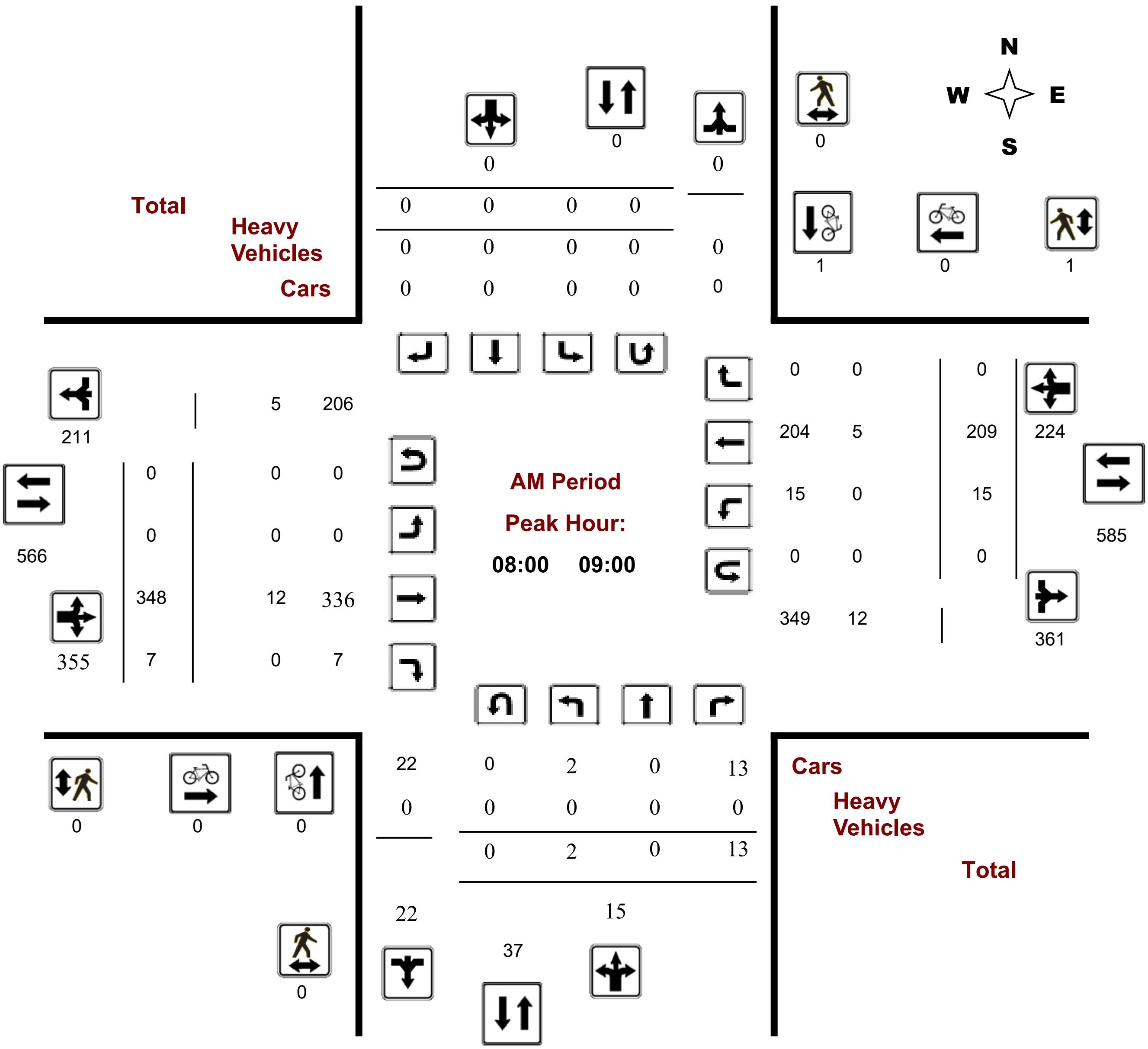
Turning Movement Count - Study Results

CAMPEAU DR @ 247 W OF DISBURY RD

Survey Date: Thursday, December 14, 2023 **WO No:** 41611

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

AM Period Peak Hour Diagram



Transportation Services - Traffic Services

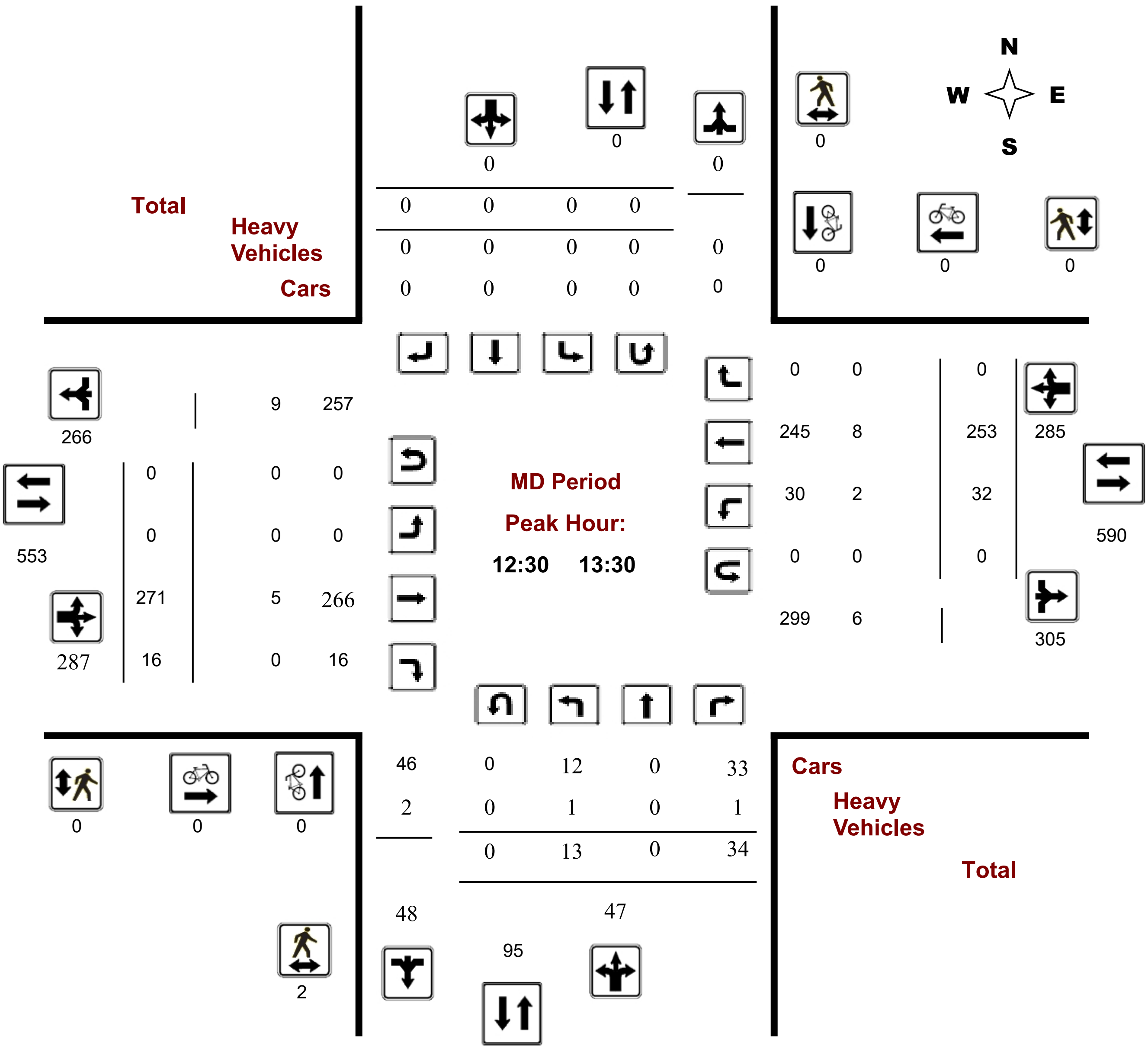
Turning Movement Count - Study Results

CAMPEAU DR @ 247 W OF DISBURY RD

Survey Date: Thursday, December 14, 2023 **WO No:** 41611

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

MD Period Peak Hour Diagram



Transportation Services - Traffic Services

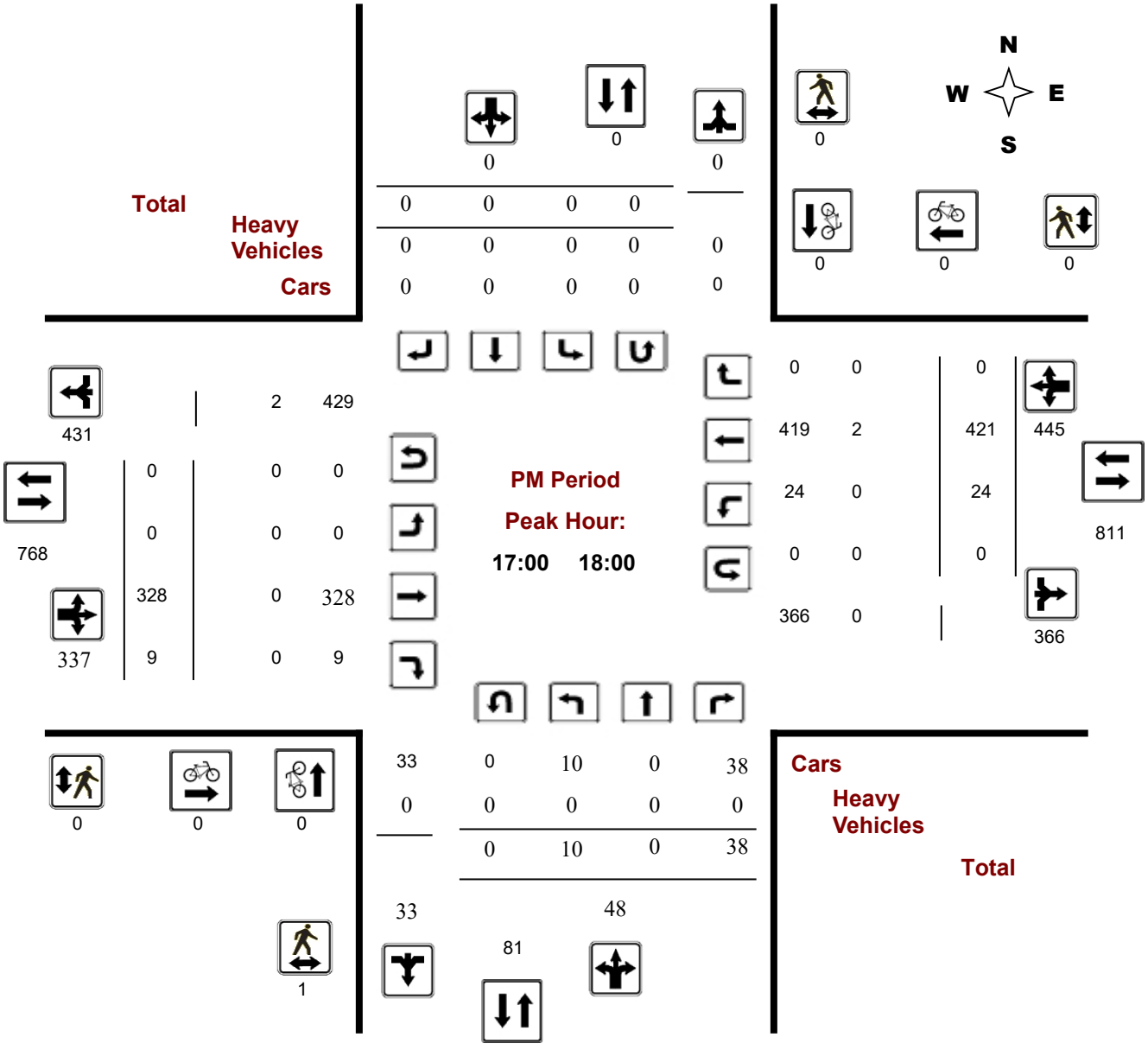
Turning Movement Count - Study Results

CAMPEAU DR @ 247 W OF DISBURY RD

Survey Date: Thursday, December 14, 2023 **WO No:** 41611

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

PM Period Peak Hour Diagram



Transportation Services - Traffic Services

Turning Movement Count - Study Results

CAMPEAU DR @ 247 W OF DISBURY RD

Survey Date: Thursday, December 14, 2023 **WO No:** 41611

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

Full Study Summary (8 HR Standard)

Survey Date: Thursday, December 14, 2023

Total Observed U-Turns

Northbound: 0 Southbound: 0

Eastbound: 1 Westbound: 0

AADT Factor

1.00

	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	1	0	0	**1**	0	0	0	**0**	**1**	0	159	1	**160**	1	84	0	**85**	**245**	**246**
08:00 09:00	2	0	13	**15**	0	0	0	**0**	**15**	0	348	7	**355**	15	209	0	**224**	**579**	**594**
09:00 10:00	5	0	9	**14**	0	0	0	**0**	**14**	0	209	9	**218**	29	167	0	**196**	**414**	**428**
11:30 12:30	6	0	36	**42**	0	0	0	**0**	**42**	0	285	19	**304**	34	198	0	**232**	**536**	**578**
12:30 13:30	13	0	34	**47**	0	0	0	**0**	**47**	0	271	16	**287**	32	253	0	**285**	**572**	**619**
15:00 16:00	13	0	29	**42**	0	0	0	**0**	**42**	0	329	17	**346**	29	346	0	**375**	**721**	**763**
16:00 17:00	18	0	36	**54**	0	0	0	**0**	**54**	0	306	14	**320**	29	326	0	**355**	**675**	**729**
17:00 18:00	10	0	38	**48**	0	0	0	**0**	**48**	0	328	9	**337**	24	421	0	**445**	**782**	**830**
Sub Total	68	0	195	**263**	0	0	0	**0**	**263**	0	2235	92	**2327**	193	2004	0	**2197**	**4524**	**4787**
U Turns				**0**				**0**	**0**				**1**				**0**	**1**	**1**
Total	68	0	195	**263**	0	0	0	**0**	**263**	0	2235	92	**2328**	193	2004	0	**2197**	**4525**	**4788**
EQ 12Hr	95	0	271	**366**	0	0	0	**0**	**366**	0	3107	128	**3236**	268	2786	0	**3054**	**6290**	**6655**
Note: These values are calculated by multiplying the totals by the appropriate expansion factor.														**1.39**					
AVG 12Hr	95	0	271	**366**	0	0	0	**0**	**366**	0	3107	128	**3236**	268	2786	0	**3054**	**6290**	**6655**
Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor.														**1.00**					
AVG 24Hr	124	0	355	**479**	0	0	0	**0**	**479**	0	4070	168	**4239**	351	3650	0	**4001**	**8240**	**8718**
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

CAMPEAU DR @ 247 W OF DISBURY RD

Survey Date: Thursday, December 14, 2023 **WO No:** 41611

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

Full Study 15 Minute Increments

Time Period		Northbound				Southbound					Eastbound				Westbound					
		LT	ST	RT	N TOT	LT	ST	RT	S TOT	STR TOT	LT	ST	RT	E TOT	LT	ST	RT	W TOT	STR TOT	Grand Total
07:00	07:15	0	0	0	0	0	0	0	0	0	0	37	0	37	0	12	0	12	49	49
07:15	07:30	0	0	0	0	0	0	0	0	0	0	31	0	31	0	16	0	16	47	47
07:30	07:45	0	0	0	0	0	0	0	0	0	0	40	1	41	0	23	0	23	64	64
07:45	08:00	1	0	0	1	0	0	0	0	1	0	51	0	51	1	33	0	34	85	86
17:45	18:00	1	0	9	10	0	0	0	0	10	0	70	0	70	3	103	0	106	176	186
08:00	08:15	0	0	4	4	0	0	0	0	4	0	83	2	85	4	43	0	47	132	136
08:15	08:30	1	0	3	4	0	0	0	0	4	0	114	2	116	3	51	0	54	170	174
08:30	08:45	1	0	2	3	0	0	0	0	3	0	79	1	80	3	57	0	60	140	143
08:45	09:00	0	0	4	4	0	0	0	0	4	0	72	2	74	5	58	0	63	137	141
09:00	09:15	2	0	2	4	0	0	0	0	4	0	62	1	63	11	37	0	48	111	115
09:15	09:30	2	0	2	4	0	0	0	0	4	0	51	3	54	4	48	0	52	106	110
09:30	09:45	0	0	1	1	0	0	0	0	1	0	39	2	41	2	44	0	46	87	88
09:45	10:00	1	0	4	5	0	0	0	0	5	0	57	3	61	12	38	0	50	111	116
11:30	11:45	2	0	10	12	0	0	0	0	12	0	67	3	70	7	46	0	53	123	135
11:45	12:00	2	0	8	10	0	0	0	0	10	0	76	6	82	9	47	0	56	138	148
12:00	12:15	1	0	10	11	0	0	0	0	11	0	70	3	73	12	51	0	63	136	147
12:15	12:30	1	0	8	9	0	0	0	0	9	0	72	7	79	6	54	0	60	139	148
12:30	12:45	2	0	9	11	0	0	0	0	11	0	66	2	68	6	64	0	70	138	149
12:45	13:00	4	0	9	13	0	0	0	0	13	0	72	4	76	8	59	0	67	143	156
13:00	13:15	6	0	10	16	0	0	0	0	16	0	72	5	77	9	61	0	70	147	163
13:15	13:30	1	0	6	7	0	0	0	0	7	0	61	5	66	9	69	0	78	144	151
15:00	15:15	4	0	6	10	0	0	0	0	10	0	76	5	81	3	86	0	89	170	180
15:15	15:30	1	0	5	6	0	0	0	0	6	0	101	3	104	10	104	0	114	218	224
15:30	15:45	5	0	7	12	0	0	0	0	12	0	79	6	85	10	74	0	84	169	181
15:45	16:00	3	0	11	14	0	0	0	0	14	0	73	3	76	6	82	0	88	164	178
16:00	16:15	5	0	12	17	0	0	0	0	17	0	67	4	71	10	74	0	84	155	172
16:15	16:30	6	0	9	15	0	0	0	0	15	0	73	1	74	7	88	0	95	169	184
16:30	16:45	2	0	5	7	0	0	0	0	7	0	74	6	80	7	93	0	100	180	187
16:45	17:00	5	0	10	15	0	0	0	0	15	0	92	3	95	5	71	0	76	171	186
17:00	17:15	4	0	12	16	0	0	0	0	16	0	88	3	91	9	88	0	97	188	204
17:15	17:30	2	0	8	10	0	0	0	0	10	0	88	2	90	4	99	0	103	193	203
17:30	17:45	3	0	9	12	0	0	0	0	12	0	82	4	86	8	131	0	139	225	237
Total:		68	0	195	263	0	0	0	0	263	0	2235	92	2328	193	2004	0	2197	4525	4,788

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

Transportation Services - Traffic Services

Turning Movement Count - Study Results

CAMPEAU DR @ 247 W OF DISBURY RD

Survey Date: Thursday, December 14, 2023 **WO No:** 41611

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

Full Study Cyclist Volume

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

Transportation Services - Traffic Services

Turning Movement Count - Study Results

CAMPEAU DR @ 247 W OF DISBURY RD

Survey Date: Thursday, December 14, 2023 **WO No:** 41611

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

Full Study Pedestrian Volume

Time Period	NB Approach (E or W Crossing)	SB Approach (E or W Crossing)	Total	EB Approach (N or S Crossing)	WB Approach (N or S Crossing)	Total	Grand Total
07:00 07:15	0	0	**0**	0	0	**0**	**0**
07:15 07:30	0	0	**0**	0	0	**0**	**0**
07:30 07:45	0	0	**0**	0	0	**0**	**0**
07:45 08:00	0	0	**0**	0	0	**0**	**0**
17:45 18:00	0	0	**0**	0	0	**0**	**0**
08:00 08:15	0	0	**0**	0	0	**0**	**0**
08:15 08:30	0	0	**0**	0	0	**0**	**0**
08:30 08:45	0	0	**0**	0	0	**0**	**0**
08:45 09:00	0	0	**0**	0	1	**1**	**1**
09:00 09:15	1	0	**1**	0	0	**0**	**1**
09:15 09:30	0	0	**0**	0	0	**0**	**0**
09:30 09:45	0	0	**0**	0	0	**0**	**0**
09:45 10:00	0	0	**0**	0	0	**0**	**0**
11:30 11:45	0	0	**0**	0	0	**0**	**0**
11:45 12:00	1	0	**1**	0	0	**0**	**1**
12:00 12:15	3	0	**3**	0	0	**0**	**3**
12:15 12:30	1	0	**1**	0	0	**0**	**1**
12:30 12:45	0	0	**0**	0	0	**0**	**0**
12:45 13:00	0	0	**0**	0	0	**0**	**0**
13:00 13:15	2	0	**2**	0	0	**0**	**2**
13:15 13:30	0	0	**0**	0	0	**0**	**0**
15:00 15:15	0	0	**0**	0	0	**0**	**0**
15:15 15:30	2	0	**2**	0	0	**0**	**2**
15:30 15:45	0	0	**0**	0	0	**0**	**0**
15:45 16:00	0	0	**0**	0	0	**0**	**0**
16:00 16:15	0	0	**0**	0	0	**0**	**0**
16:15 16:30	0	0	**0**	0	0	**0**	**0**
16:30 16:45	0	0	**0**	0	0	**0**	**0**
16:45 17:00	1	0	**1**	0	0	**0**	**1**
17:00 17:15	1	0	**1**	0	0	**0**	**1**
17:15 17:30	0	0	**0**	0	0	**0**	**0**
17:30 17:45	0	0	**0**	0	0	**0**	**0**
Total	12	0	**12**	0	1	**1**	**13**

Transportation Services - Traffic Services

Turning Movement Count - Study Results

CAMPEAU DR @ 247 W OF DISBURY RD

Survey Date: Thursday, December 14, 2023 **WO No:** 41611

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

Full Study Heavy Vehicles

Time Period		Northbound				Southbound					Eastbound				Westbound					
		LT	ST	RT	**N TOT**	LT	ST	RT	**S TOT**	**STR TOT**	LT	ST	RT	**E TOT**	LT	ST	RT	**W TOT**	**STR TOT**	**Grand Total**
07:00	07:15	0	0	0	**0**	0	0	0	**0**	**0**	0	1	0	**1**	0	3	0	**3**	**4**	**4**
07:15	07:30	0	0	0	**0**	0	0	0	**0**	**0**	0	1	0	**1**	0	0	0	**0**	**1**	**1**
07:30	07:45	0	0	0	**0**	0	0	0	**0**	**0**	0	1	0	**1**	0	2	0	**2**	**3**	**3**
07:45	08:00	0	0	0	**0**	0	0	0	**0**	**0**	0	1	0	**1**	0	3	0	**3**	**4**	**4**
17:45	18:00	0	0	0	**0**	0	0	0	**0**	**0**	0	0	0	**0**	0	1	0	**1**	**1**	**1**
08:00	08:15	0	0	0	**0**	0	0	0	**0**	**0**	0	4	0	**4**	0	2	0	**2**	**6**	**6**
08:15	08:30	0	0	0	**0**	0	0	0	**0**	**0**	0	3	0	**3**	0	0	0	**0**	**3**	**3**
08:30	08:45	0	0	0	**0**	0	0	0	**0**	**0**	0	3	0	**3**	0	1	0	**1**	**4**	**4**
08:45	09:00	0	0	0	**0**	0	0	0	**0**	**0**	0	2	0	**2**	0	2	0	**2**	**4**	**4**
09:00	09:15	0	0	0	**0**	0	0	0	**0**	**0**	0	0	0	**0**	1	1	0	**2**	**2**	**2**
09:15	09:30	1	0	0	**1**	0	0	0	**0**	**1**	0	4	0	**4**	1	1	0	**2**	**6**	**7**
09:30	09:45	0	0	0	**0**	0	0	0	**0**	**0**	0	2	0	**2**	0	0	0	**0**	**2**	**2**
09:45	10:00	0	0	0	**0**	0	0	0	**0**	**0**	0	4	1	**5**	0	2	0	**2**	**7**	**7**
11:30	11:45	0	0	1	**1**	0	0	0	**0**	**1**	0	2	0	**2**	1	1	0	**2**	**4**	**5**
11:45	12:00	0	0	0	**0**	0	0	0	**0**	**0**	0	1	0	**1**	0	0	0	**0**	**1**	**1**
12:00	12:15	0	0	0	**0**	0	0	0	**0**	**0**	0	0	0	**0**	0	0	0	**0**	**0**	**0**
12:15	12:30	0	0	0	**0**	0	0	0	**0**	**0**	0	3	1	**4**	0	0	0	**0**	**4**	**4**
12:30	12:45	0	0	1	**1**	0	0	0	**0**	**1**	0	1	0	**1**	0	1	0	**1**	**2**	**3**
12:45	13:00	0	0	0	**0**	0	0	0	**0**	**0**	0	2	0	**2**	0	4	0	**4**	**6**	**6**
13:00	13:15	1	0	0	**1**	0	0	0	**0**	**1**	0	1	0	**1**	1	1	0	**2**	**3**	**4**
13:15	13:30	0	0	0	**0**	0	0	0	**0**	**0**	0	1	0	**1**	1	2	0	**3**	**4**	**4**
15:00	15:15	0	0	0	**0**	0	0	0	**0**	**0**	0	0	0	**0**	0	2	0	**2**	**2**	**2**
15:15	15:30	0	0	1	**1**	0	0	0	**0**	**1**	0	0	0	**0**	0	3	0	**3**	**3**	**4**
15:30	15:45	0	0	0	**0**	0	0	0	**0**	**0**	0	1	0	**1**	0	2	0	**2**	**3**	**3**
15:45	16:00	0	0	0	**0**	0	0	0	**0**	**0**	0	2	0	**2**	0	0	0	**0**	**2**	**2**
16:00	16:15	0	0	0	**0**	0	0	0	**0**	**0**	0	0	0	**0**	0	1	0	**1**	**1**	**1**
16:15	16:30	0	0	0	**0**	0	0	0	**0**	**0**	0	1	0	**1**	0	1	0	**1**	**2**	**2**
16:30	16:45	0	0	0	**0**	0	0	0	**0**	**0**	0	0	0	**0**	0	1	0	**1**	**1**	**1**
16:45	17:00	0	0	0	**0**	0	0	0	**0**	**0**	0	0	0	**0**	0	0	0	**0**	**0**	**0**
17:00	17:15	0	0	0	**0**	0	0	0	**0**	**0**	0	0	0	**0**	0	0	0	**0**	**0**	**0**
17:15	17:30	0	0	0	**0**	0	0	0	**0**	**0**	0	0	0	**0**	0	0	0	**0**	**0**	**0**
17:30	17:45	0	0	0	**0**	0	0	0	**0**	**0**	0	0	0	**0**	0	1	0	**1**	**1**	**1**
Total:	None	2	0	3	**5**	0	0	0	**0**	**5**	0	41	2	**43**	5	38	0	**43**	**86**	**91**

Transportation Services - Traffic Services

Turning Movement Count - Study Results

CAMPEAU DR @ 247 W OF DISBURY RD

Survey Date: Thursday, December 14, 2023 **WO No:** 41611

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

Full Study 15 Minute U-Turn Total

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

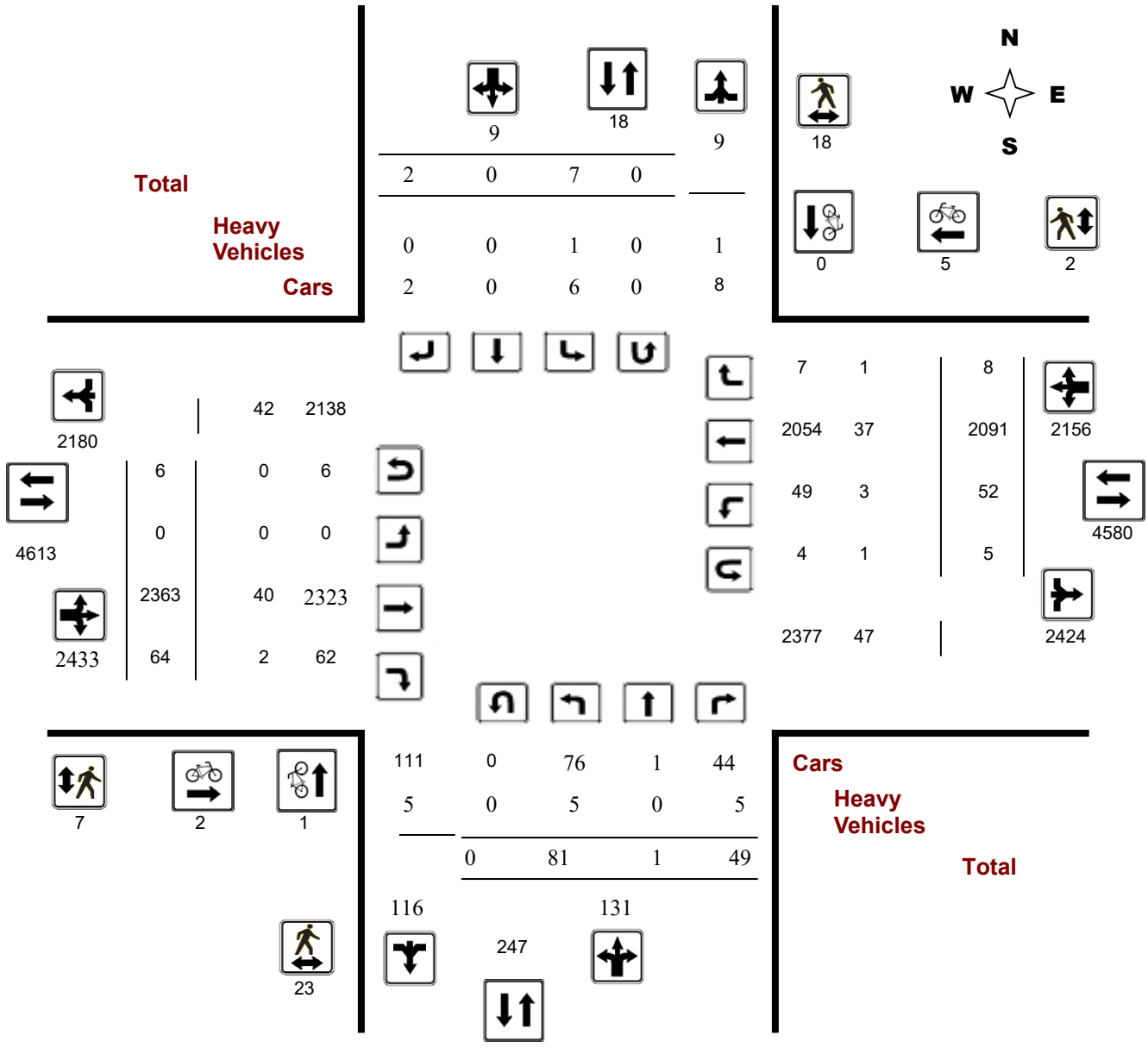
Transportation Services - Traffic Services

Turning Movement Count - Study Results

CAMPEAU DR @ DIDSBURY RD

Survey Date: Thursday, December 14, 2023
Start Time: 07:00
WO No: 41391
Device: Miovision

Full Study Diagram



Transportation Services - Traffic Services

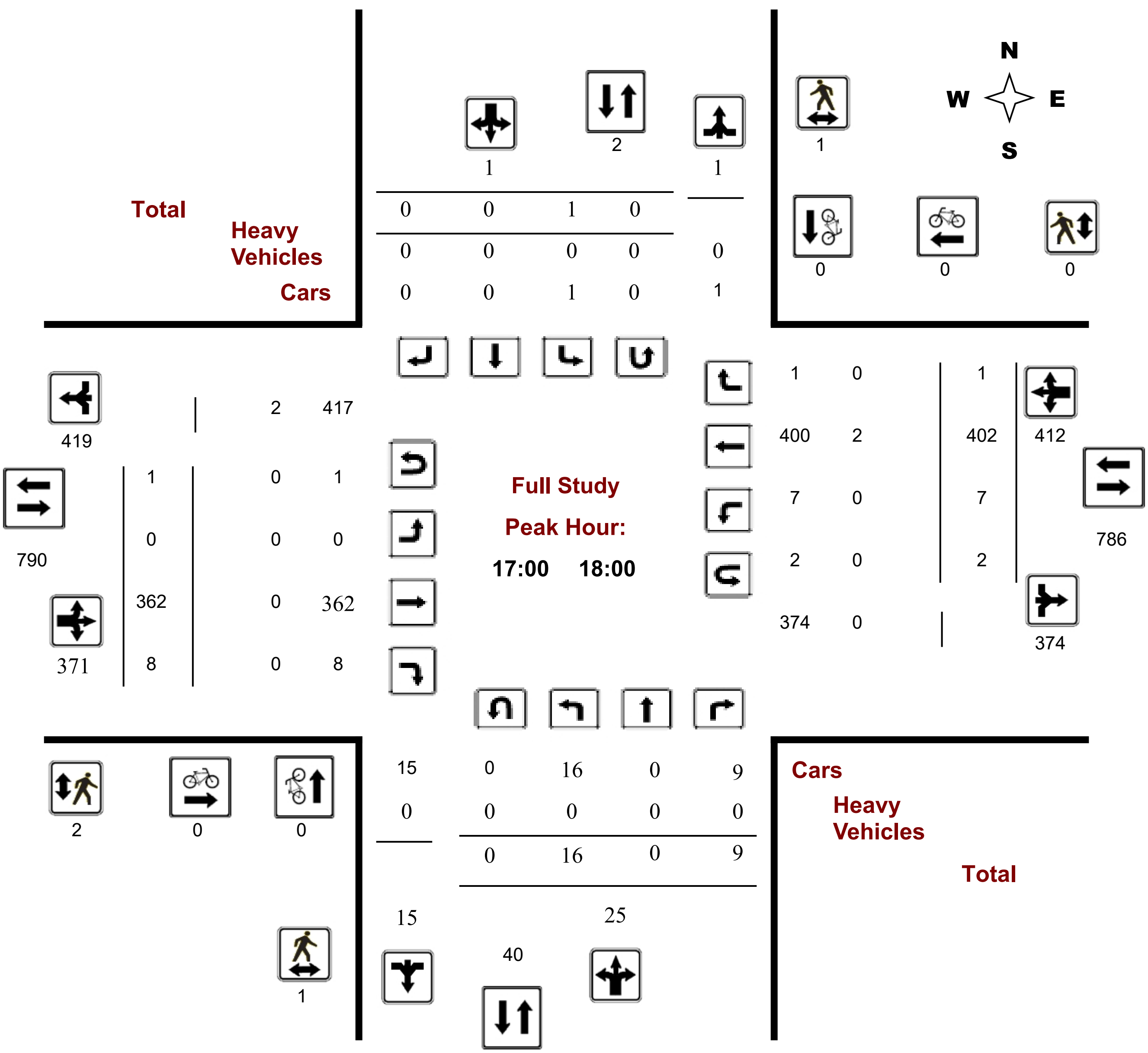
Turning Movement Count - Study Results

CAMPEAU DR @ DIDSBURY RD

Survey Date: Thursday, December 14, 2023 **WO No:** 41391

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

Full Study Peak Hour Diagram



Transportation Services - Traffic Services

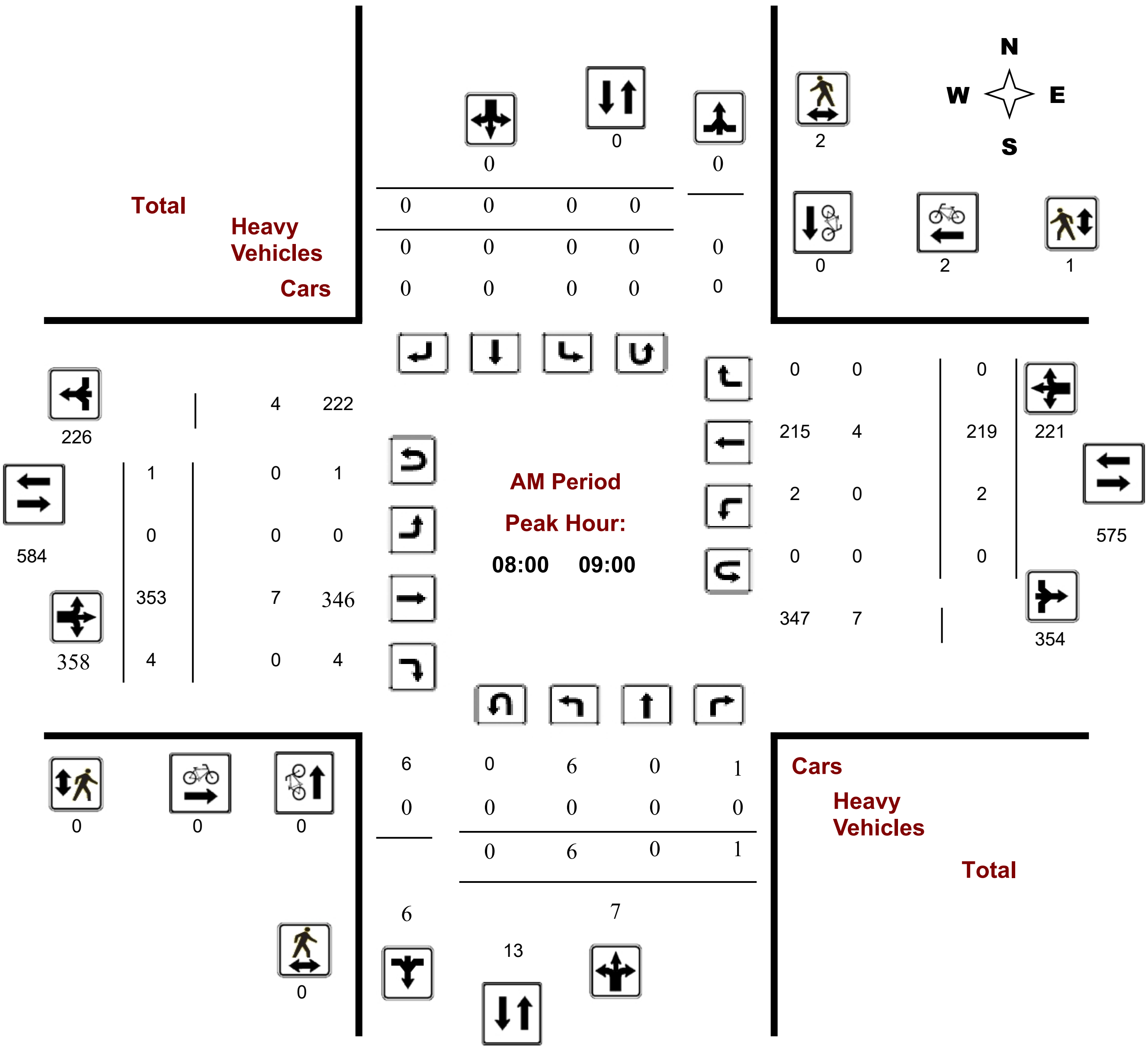
Turning Movement Count - Study Results

CAMPEAU DR @ DIDSBURY RD

Survey Date: Thursday, December 14, 2023 **WO No:** 41391

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

AM Period Peak Hour Diagram



Transportation Services - Traffic Services

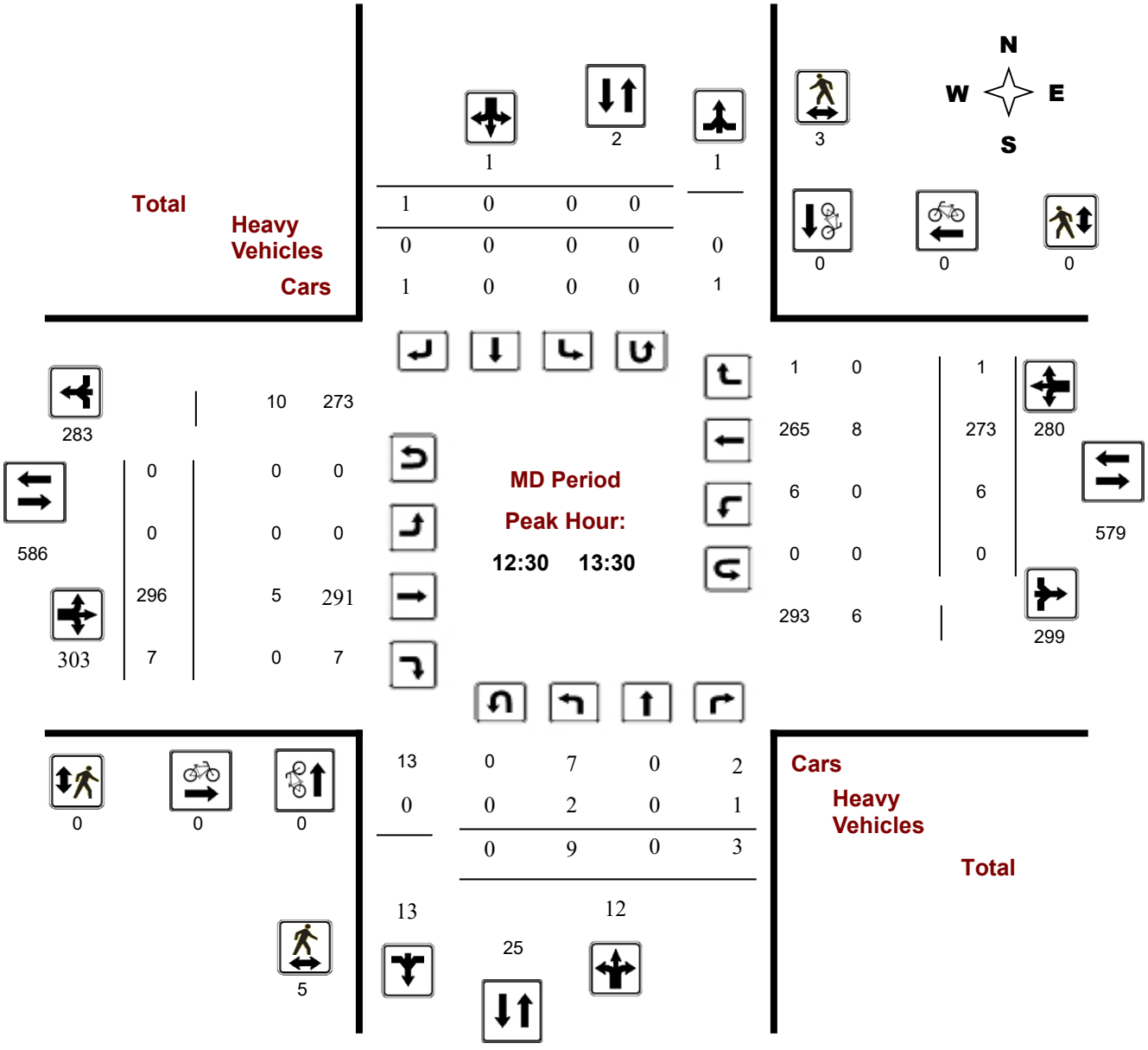
Turning Movement Count - Study Results

CAMPEAU DR @ DIDSBURY RD

Survey Date: Thursday, December 14, 2023 **WO No:** 41391

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

MD Period Peak Hour Diagram



Transportation Services - Traffic Services

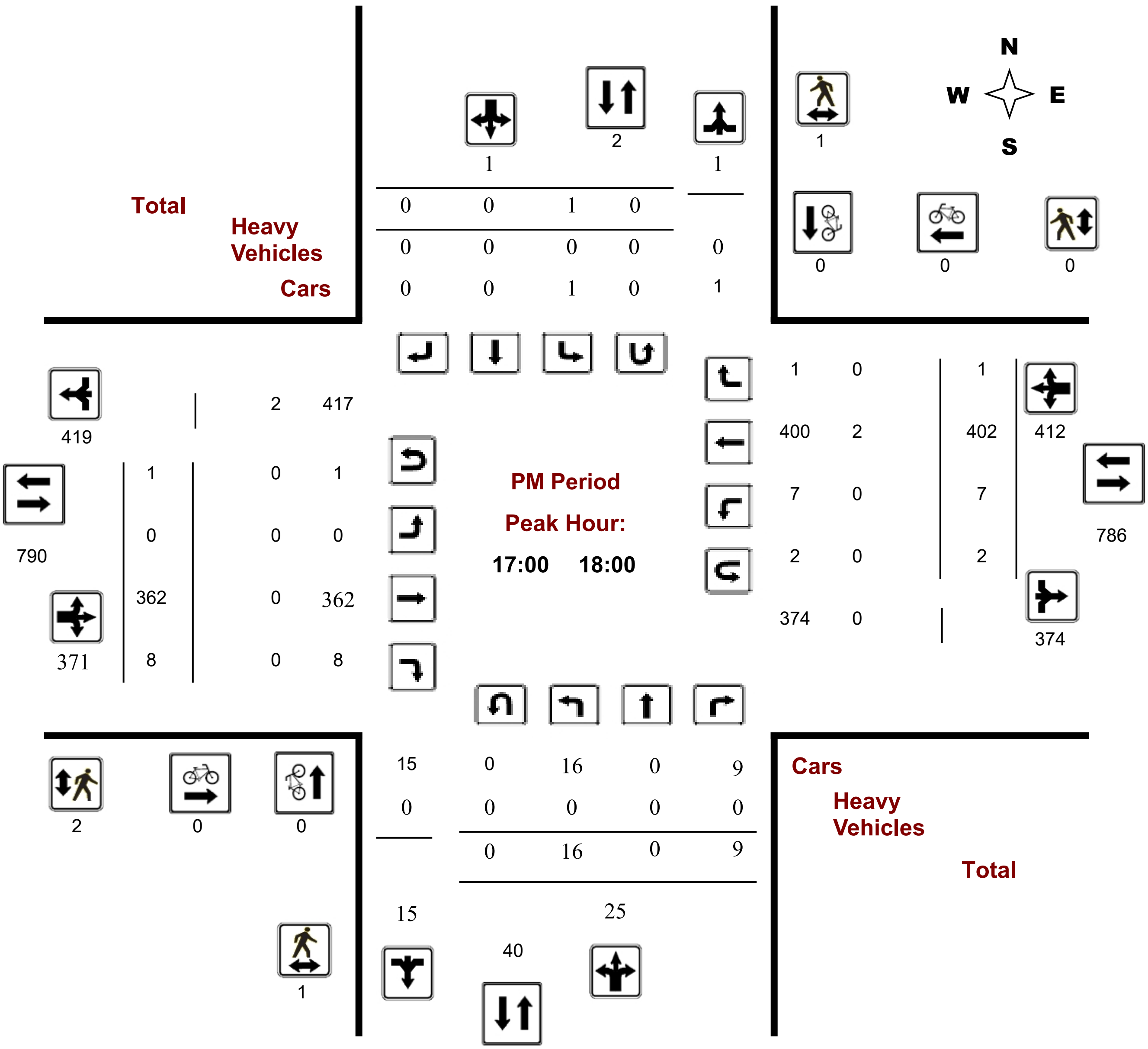
Turning Movement Count - Study Results

CAMPEAU DR @ DIDSBURY RD

Survey Date: Thursday, December 14, 2023 **WO No:** 41391

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

PM Period Peak Hour Diagram



Transportation Services - Traffic Services

Turning Movement Count - Study Results

CAMPEAU DR @ DIDSBURY RD

Survey Date: Thursday, December 14, 2023 **WO No:** 41391

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

Full Study Summary (8 HR Standard)

Survey Date: Thursday, December 14, 2023

Total Observed U-Turns

Northbound: 0 Southbound: 0

Eastbound: 6 Westbound: 5

AADT Factor

1.00

	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	3	0	1	**4**	0	0	0	**0**	**4**	0	154	5	**159**	0	81	0	**81**	**240**	**244**
08:00 09:00	6	0	1	**7**	0	0	0	**0**	**7**	0	353	4	**357**	2	219	0	**221**	**578**	**585**
09:00 10:00	8	0	9	**17**	0	0	0	**0**	**17**	0	210	8	**218**	12	188	0	**200**	**418**	**435**
11:30 12:30	13	1	10	**24**	3	0	0	**3**	**27**	0	310	10	**320**	5	223	2	**230**	**550**	**577**
12:30 13:30	9	0	3	**12**	0	0	1	**1**	**13**	0	296	7	**303**	6	273	1	**280**	**583**	**596**
15:00 16:00	13	0	10	**23**	2	0	0	**2**	**25**	0	342	15	**357**	9	360	3	**372**	**729**	**754**
16:00 17:00	13	0	6	**19**	1	0	1	**2**	**21**	0	336	7	**343**	11	345	1	**357**	**700**	**721**
17:00 18:00	16	0	9	**25**	1	0	0	**1**	**26**	0	362	8	**370**	7	402	1	**410**	**780**	**806**
Sub Total	81	1	49	**131**	7	0	2	**9**	**140**	0	2363	64	**2427**	52	2091	8	**2151**	**4578**	**4718**
U Turns				**0**				**0**	**0**				**6**				**5**	**11**	**11**
Total	81	1	49	**131**	7	0	2	**9**	**140**	0	2363	64	**2433**	52	2091	8	**2156**	**4589**	**4729**
EQ 12Hr	113	1	68	**182**	10	0	3	**13**	**195**	0	3285	89	**3382**	72	2906	11	**2997**	**6379**	**6573**
Note: These values are calculated by multiplying the totals by the appropriate expansion factor.														**1.39**					
AVG 12Hr	113	1	68	**182**	10	0	4	**13**	**195**	0	3285	89	**3382**	72	2906	11	**2997**	**6379**	**6573**
Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor.														**1.00**					
AVG 24Hr	148	1	89	**238**	13	0	5	**17**	**255**	0	4303	117	**4430**	94	3807	14	**3926**	**8356**	**8611**
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

CAMPEAU DR @ DIDSBURY RD

Survey Date: Thursday, December 14, 2023 **WO No:** 41391

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

Full Study 15 Minute Increments

Time Period		Northbound				Southbound					Eastbound				Westbound					
		LT	ST	RT	N TOT	LT	ST	RT	S TOT	STR TOT	LT	ST	RT	E TOT	LT	ST	RT	W TOT	STR TOT	Grand Total
07:00	07:15	0	0	0	0	0	0	0	0	0	0	36	1	38	0	11	0	11	49	49
07:15	07:30	0	0	0	0	0	0	0	0	0	0	31	0	31	0	16	0	16	47	47
07:30	07:45	3	0	1	4	0	0	0	0	4	0	35	3	38	0	20	0	20	58	62
17:45	18:00	3	0	3	6	0	0	0	0	6	0	81	1	83	3	99	0	103	186	192
07:45	08:00	0	0	0	0	0	0	0	0	0	0	52	1	53	0	34	0	34	87	87
08:00	08:15	0	0	0	0	0	0	0	0	0	0	75	1	77	0	46	0	46	123	123
08:15	08:30	2	0	0	2	0	0	0	0	2	0	119	2	121	0	53	0	53	174	176
08:30	08:45	3	0	0	3	0	0	0	0	3	0	82	0	82	0	61	0	61	143	146
08:45	09:00	1	0	1	2	0	0	0	0	2	0	77	1	78	2	59	0	61	139	141
09:00	09:15	3	0	0	3	0	0	0	0	3	0	64	0	64	5	45	0	50	114	117
09:15	09:30	1	0	6	7	0	0	0	0	7	0	50	1	51	3	51	0	54	105	112
09:30	09:45	2	0	3	5	0	0	0	0	5	0	39	2	41	4	43	0	47	88	93
09:45	10:00	2	0	0	2	0	0	0	0	2	0	57	5	62	0	49	0	49	111	113
11:30	11:45	4	1	3	8	0	0	0	0	8	0	69	4	73	1	51	1	53	126	134
11:45	12:00	3	0	6	9	2	0	0	2	11	0	84	3	87	1	53	0	55	142	153
12:00	12:15	3	0	1	4	0	0	0	0	4	0	78	2	80	2	60	0	62	142	146
12:15	12:30	3	0	0	3	1	0	0	1	4	0	79	1	81	1	59	1	61	142	146
12:30	12:45	1	0	1	2	0	0	0	0	2	0	69	1	70	4	67	0	71	141	143
12:45	13:00	2	0	0	2	0	0	0	0	2	0	81	2	83	1	66	0	67	150	152
13:00	13:15	2	0	0	2	0	0	0	0	2	0	79	1	80	1	66	1	68	148	150
13:15	13:30	4	0	2	6	0	0	1	1	7	0	67	3	70	0	74	0	74	144	151
15:00	15:15	1	0	0	1	1	0	0	1	2	0	78	3	82	2	87	1	90	172	174
15:15	15:30	6	0	8	14	0	0	0	0	14	0	105	5	110	6	109	0	115	225	239
15:30	15:45	3	0	2	5	0	0	0	0	5	0	81	4	85	1	82	0	83	168	173
15:45	16:00	3	0	0	3	1	0	0	1	4	0	78	3	81	0	82	2	84	165	169
16:00	16:15	6	0	2	8	1	0	0	1	9	0	81	2	83	3	79	0	82	165	174
16:15	16:30	4	0	1	5	0	0	0	0	5	0	81	1	82	5	91	0	98	180	185
16:30	16:45	3	0	1	4	0	0	0	0	4	0	78	1	79	2	98	0	100	179	183
16:45	17:00	0	0	2	2	0	0	1	1	3	0	96	3	100	1	77	1	79	179	182
17:00	17:15	3	0	1	4	1	0	0	1	5	0	99	1	100	2	88	1	91	191	196
17:15	17:30	3	0	3	6	0	0	0	0	6	0	91	3	94	2	93	0	96	190	196
17:30	17:45	7	0	2	9	0	0	0	0	9	0	91	3	94	0	122	0	122	216	225
Total:		81	1	49	131	7	0	2	9	140	0	2363	64	2433	52	2091	8	2156	4589	4,729

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

Transportation Services - Traffic Services

Turning Movement Count - Study Results

CAMPEAU DR @ DIDSBURY RD

Survey Date: Thursday, December 14, 2023 **WO No:** 41391

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

Full Study Cyclist Volume

Time Period		Northbound	Southbound	Street Total	Eastbound	Westbound	Street Total	Grand Total
07:00	07:15	0	0	0	0	0	0	0
07:15	07:30	0	0	0	0	0	0	0
07:30	07:45	0	0	0	0	1	1	1
17:45	18:00	0	0	0	0	0	0	0
07:45	08:00	0	0	0	0	0	0	0
08:00	08:15	0	0	0	0	0	0	0
08:15	08:30	0	0	0	0	0	0	0
08:30	08:45	0	0	0	0	0	0	0
08:45	09:00	0	0	0	0	2	2	2
09:00	09:15	0	0	0	0	0	0	0
09:15	09:30	0	0	0	0	0	0	0
09:30	09:45	0	0	0	0	0	0	0
09:45	10:00	0	0	0	0	0	0	0
11:30	11:45	0	0	0	0	0	0	0
11:45	12:00	0	0	0	0	1	1	1
12:00	12:15	0	0	0	0	0	0	0
12:15	12:30	0	0	0	1	0	1	1
12:30	12:45	0	0	0	0	0	0	0
12:45	13:00	0	0	0	0	0	0	0
13:00	13:15	0	0	0	0	0	0	0
13:15	13:30	0	0	0	0	0	0	0
15:00	15:15	0	0	0	0	0	0	0
15:15	15:30	0	0	0	0	0	0	0
15:30	15:45	0	0	0	0	0	0	0
15:45	16:00	0	0	0	0	0	0	0
16:00	16:15	0	0	0	1	0	1	1
16:15	16:30	0	0	0	0	0	0	0
16:30	16:45	1	0	1	0	1	1	2
16:45	17:00	0	0	0	0	0	0	0
17:00	17:15	0	0	0	0	0	0	0
17:15	17:30	0	0	0	0	0	0	0
17:30	17:45	0	0	0	0	0	0	0
Total		1	0	**1**	2	5	7	8

Transportation Services - Traffic Services

Turning Movement Count - Study Results

CAMPEAU DR @ DIDSBURY RD

Survey Date: Thursday, December 14, 2023 **WO No:** 41391

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

Full Study Pedestrian Volume

Time Period	NB Approach (E or W Crossing)	SB Approach (E or W Crossing)	Total	EB Approach (N or S Crossing)	WB Approach (N or S Crossing)	Total	Grand Total
07:00 07:15	0	0	**0**	0	0	**0**	**0**
07:15 07:30	0	0	**0**	0	0	**0**	**0**
07:30 07:45	0	0	**0**	0	0	**0**	**0**
17:45 18:00	0	0	**0**	1	0	**1**	**1**
07:45 08:00	0	0	**0**	0	0	**0**	**0**
08:00 08:15	0	0	**0**	0	0	**0**	**0**
08:15 08:30	0	1	**1**	0	1	**1**	**2**
08:30 08:45	0	0	**0**	0	0	**0**	**0**
08:45 09:00	0	1	**1**	0	0	**0**	**1**
09:00 09:15	1	0	**1**	0	0	**0**	**1**
09:15 09:30	1	2	**3**	0	0	**0**	**3**
09:30 09:45	0	1	**1**	0	0	**0**	**1**
09:45 10:00	0	0	**0**	0	0	**0**	**0**
11:30 11:45	0	0	**0**	0	0	**0**	**0**
11:45 12:00	0	0	**0**	0	0	**0**	**0**
12:00 12:15	3	1	**4**	0	0	**0**	**4**
12:15 12:30	1	1	**2**	0	0	**0**	**2**
12:30 12:45	0	1	**1**	0	0	**0**	**1**
12:45 13:00	2	0	**2**	0	0	**0**	**2**
13:00 13:15	3	0	**3**	0	0	**0**	**3**
13:15 13:30	0	2	**2**	0	0	**0**	**2**
15:00 15:15	0	0	**0**	0	0	**0**	**0**
15:15 15:30	1	1	**2**	0	0	**0**	**2**
15:30 15:45	0	1	**1**	0	0	**0**	**1**
15:45 16:00	0	2	**2**	0	0	**0**	**2**
16:00 16:15	0	0	**0**	0	0	**0**	**0**
16:15 16:30	4	1	**5**	2	0	**2**	**7**
16:30 16:45	2	2	**4**	0	1	**1**	**5**
16:45 17:00	4	0	**4**	3	0	**3**	**7**
17:00 17:15	0	1	**1**	0	0	**0**	**1**
17:15 17:30	1	0	**1**	1	0	**1**	**2**
17:30 17:45	0	0	**0**	0	0	**0**	**0**
Total	23	18	**41**	7	2	**9**	**50**

Transportation Services - Traffic Services

Turning Movement Count - Study Results

CAMPEAU DR @ DIDSBURY RD

Survey Date: Thursday, December 14, 2023 **WO No:** 41391

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

Full Study Heavy Vehicles

Time Period		Northbound				Southbound					Eastbound				Westbound					
		LT	ST	RT	**N TOT**	LT	ST	RT	**S TOT**	**STR TOT**	LT	ST	RT	**E TOT**	LT	ST	RT	**W TOT**	**STR TOT**	**Grand Total**
07:00	07:15	0	0	0	**0**	0	0	0	**0**	**0**	0	1	0	**1**	0	2	0	**2**	**3**	**3**
07:15	07:30	0	0	0	**0**	0	0	0	**0**	**0**	0	1	0	**1**	0	0	0	**0**	**1**	**1**
07:30	07:45	0	0	1	**1**	0	0	0	**0**	**1**	0	1	0	**1**	0	2	0	**2**	**3**	**4**
17:45	18:00	0	0	0	**0**	0	0	0	**0**	**0**	0	0	0	**0**	0	1	0	**1**	**1**	**1**
07:45	08:00	0	0	0	**0**	0	0	0	**0**	**0**	0	1	0	**1**	0	3	0	**3**	**4**	**4**
08:00	08:15	0	0	0	**0**	0	0	0	**0**	**0**	0	3	0	**3**	0	2	0	**2**	**5**	**5**
08:15	08:30	0	0	0	**0**	0	0	0	**0**	**0**	0	0	0	**0**	0	0	0	**0**	**0**	**0**
08:30	08:45	0	0	0	**0**	0	0	0	**0**	**0**	0	2	0	**2**	0	1	0	**1**	**3**	**3**
08:45	09:00	0	0	0	**0**	0	0	0	**0**	**0**	0	2	0	**2**	0	1	0	**1**	**3**	**3**
09:00	09:15	0	0	0	**0**	0	0	0	**0**	**0**	0	0	0	**0**	1	2	0	**3**	**3**	**3**
09:15	09:30	0	0	2	**2**	0	0	0	**0**	**2**	0	4	0	**4**	1	2	0	**3**	**7**	**9**
09:30	09:45	0	0	1	**1**	0	0	0	**0**	**1**	0	1	1	**2**	1	0	0	**1**	**3**	**4**
09:45	10:00	0	0	0	**0**	0	0	0	**0**	**0**	0	4	0	**4**	0	3	0	**3**	**7**	**7**
11:30	11:45	2	0	0	**2**	0	0	0	**0**	**2**	0	1	0	**1**	0	0	1	**1**	**2**	**4**
11:45	12:00	0	0	0	**0**	1	0	0	**1**	**1**	0	2	1	**3**	0	0	0	**1**	**4**	**5**
12:00	12:15	0	0	0	**0**	0	0	0	**0**	**0**	0	0	0	**0**	0	0	0	**0**	**0**	**0**
12:15	12:30	0	0	0	**0**	0	0	0	**0**	**0**	0	3	0	**3**	0	0	0	**0**	**3**	**3**
12:30	12:45	1	0	0	**1**	0	0	0	**0**	**1**	0	1	0	**1**	0	0	0	**0**	**1**	**2**
12:45	13:00	1	0	0	**1**	0	0	0	**0**	**1**	0	2	0	**2**	0	3	0	**3**	**5**	**6**
13:00	13:15	0	0	0	**0**	0	0	0	**0**	**0**	0	1	0	**1**	0	2	0	**2**	**3**	**3**
13:15	13:30	0	0	1	**1**	0	0	0	**0**	**1**	0	1	0	**1**	0	3	0	**3**	**4**	**5**
15:00	15:15	0	0	0	**0**	0	0	0	**0**	**0**	0	2	0	**2**	0	2	0	**2**	**4**	**4**
15:15	15:30	0	0	0	**0**	0	0	0	**0**	**0**	0	2	0	**2**	0	3	0	**3**	**5**	**5**
15:30	15:45	0	0	0	**0**	0	0	0	**0**	**0**	0	2	0	**2**	0	2	0	**2**	**4**	**4**
15:45	16:00	0	0	0	**0**	0	0	0	**0**	**0**	0	2	0	**2**	0	0	0	**0**	**2**	**2**
16:00	16:15	1	0	0	**1**	0	0	0	**0**	**1**	0	0	0	**0**	0	0	0	**0**	**0**	**1**
16:15	16:30	0	0	0	**0**	0	0	0	**0**	**0**	0	1	0	**1**	0	1	0	**1**	**2**	**2**
16:30	16:45	0	0	0	**0**	0	0	0	**0**	**0**	0	0	0	**0**	0	1	0	**1**	**1**	**1**
16:45	17:00	0	0	0	**0**	0	0	0	**0**	**0**	0	0	0	**0**	0	0	0	**0**	**0**	**0**
17:00	17:15	0	0	0	**0**	0	0	0	**0**	**0**	0	0	0	**0**	0	0	0	**0**	**0**	**0**
17:15	17:30	0	0	0	**0**	0	0	0	**0**	**0**	0	0	0	**0**	0	0	0	**0**	**0**	**0**
17:30	17:45	0	0	0	**0**	0	0	0	**0**	**0**	0	0	0	**0**	0	1	0	**1**	**1**	**1**
Total:	None	5	0	5	**10**	1	0	0	**1**	**11**	0	40	2	**42**	3	37	1	**42**	**84**	**95**

Transportation Services - Traffic Services

Turning Movement Count - Study Results

CAMPEAU DR @ DIDSBURY RD

Survey Date: Thursday, December 14, 2023 **WO No:** 41391

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

Full Study 15 Minute U-Turn Total

Time Period		Northbound U-Turn Total	Southbound U-Turn Total	Eastbound U-Turn Total	Westbound U-Turn Total	Total
07:00	07:15	0	0	1	0	1
07:15	07:30	0	0	0	0	0
07:30	07:45	0	0	0	0	0
17:45	18:00	0	0	1	1	2
07:45	08:00	0	0	0	0	0
08:00	08:15	0	0	1	0	1
08:15	08:30	0	0	0	0	0
08:30	08:45	0	0	0	0	0
08:45	09:00	0	0	0	0	0
09:00	09:15	0	0	0	0	0
09:15	09:30	0	0	0	0	0
09:30	09:45	0	0	0	0	0
09:45	10:00	0	0	0	0	0
11:30	11:45	0	0	0	0	0
11:45	12:00	0	0	0	1	1
12:00	12:15	0	0	0	0	0
12:15	12:30	0	0	1	0	1
12:30	12:45	0	0	0	0	0
12:45	13:00	0	0	0	0	0
13:00	13:15	0	0	0	0	0
13:15	13:30	0	0	0	0	0
15:00	15:15	0	0	1	0	1
15:15	15:30	0	0	0	0	0
15:30	15:45	0	0	0	0	0
15:45	16:00	0	0	0	0	0
16:00	16:15	0	0	0	0	0
16:15	16:30	0	0	0	2	2
16:30	16:45	0	0	0	0	0
16:45	17:00	0	0	1	0	1
17:00	17:15	0	0	0	0	0
17:15	17:30	0	0	0	1	1
17:30	17:45	0	0	0	0	0
Total		0	0	6	5	11

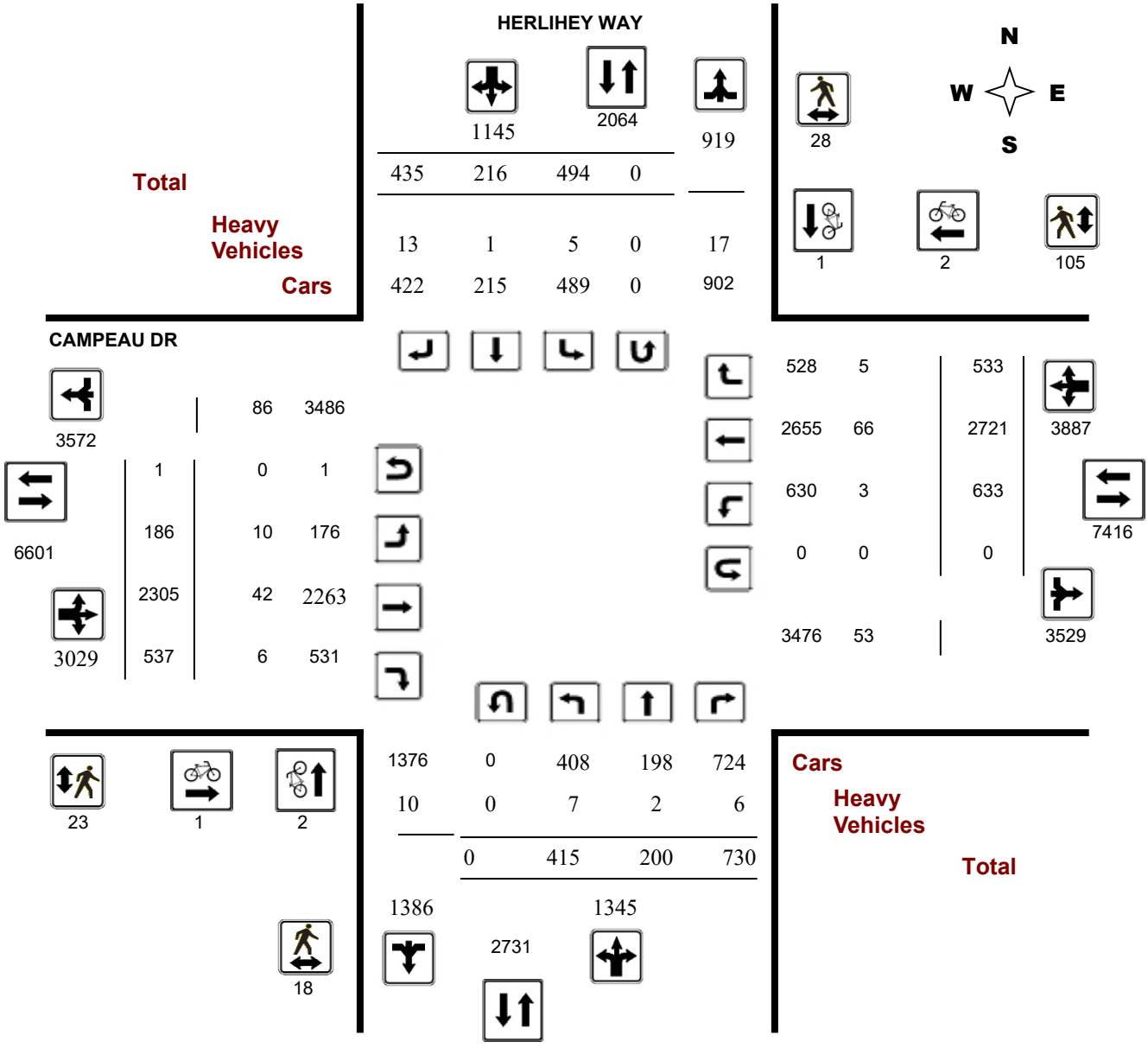
Transportation Services - Traffic Services

Turning Movement Count - Study Results

CAMPEAU DR @ HERLIHEY WAY

Survey Date: Wednesday, February 07, 2024
Start Time: 07:00
WO No: 41469
Device: Miovision

Full Study Diagram



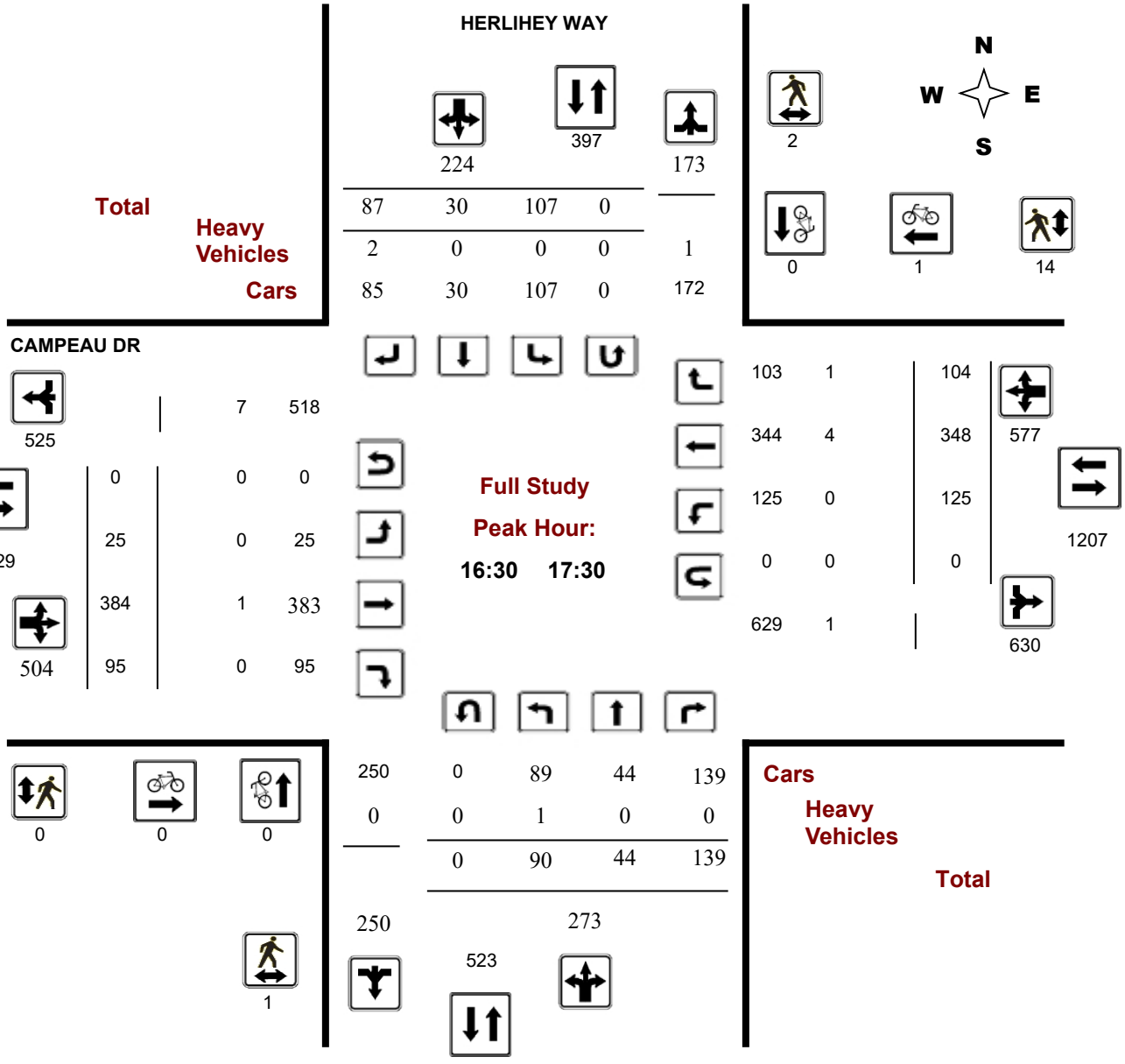
Transportation Services - Traffic Services

Turning Movement Count - Study Results

CAMPEAU DR @ HERLIHEY WAY

Survey Date: Wednesday, February 07, 2024
Start Time: 07:00
WO No: 41469
Device: Miovision

Full Study Peak Hour Diagram



Transportation Services - Traffic Services

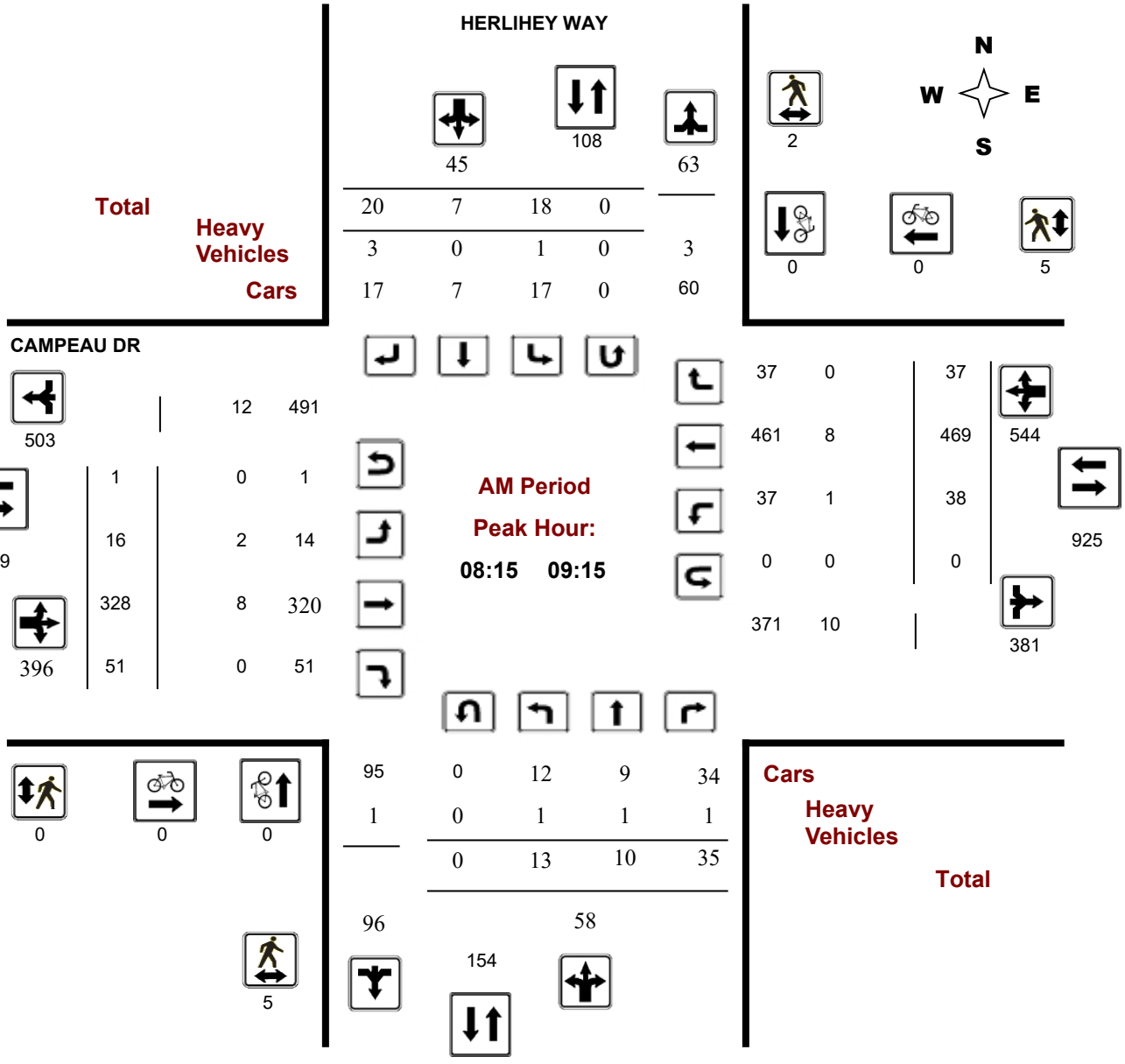
Turning Movement Count - Study Results

CAMPEAU DR @ HERLIHEY WAY

Survey Date: Wednesday, February 07, 2024 **WO No:** 41469

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

AM Period Peak Hour Diagram



Transportation Services - Traffic Services

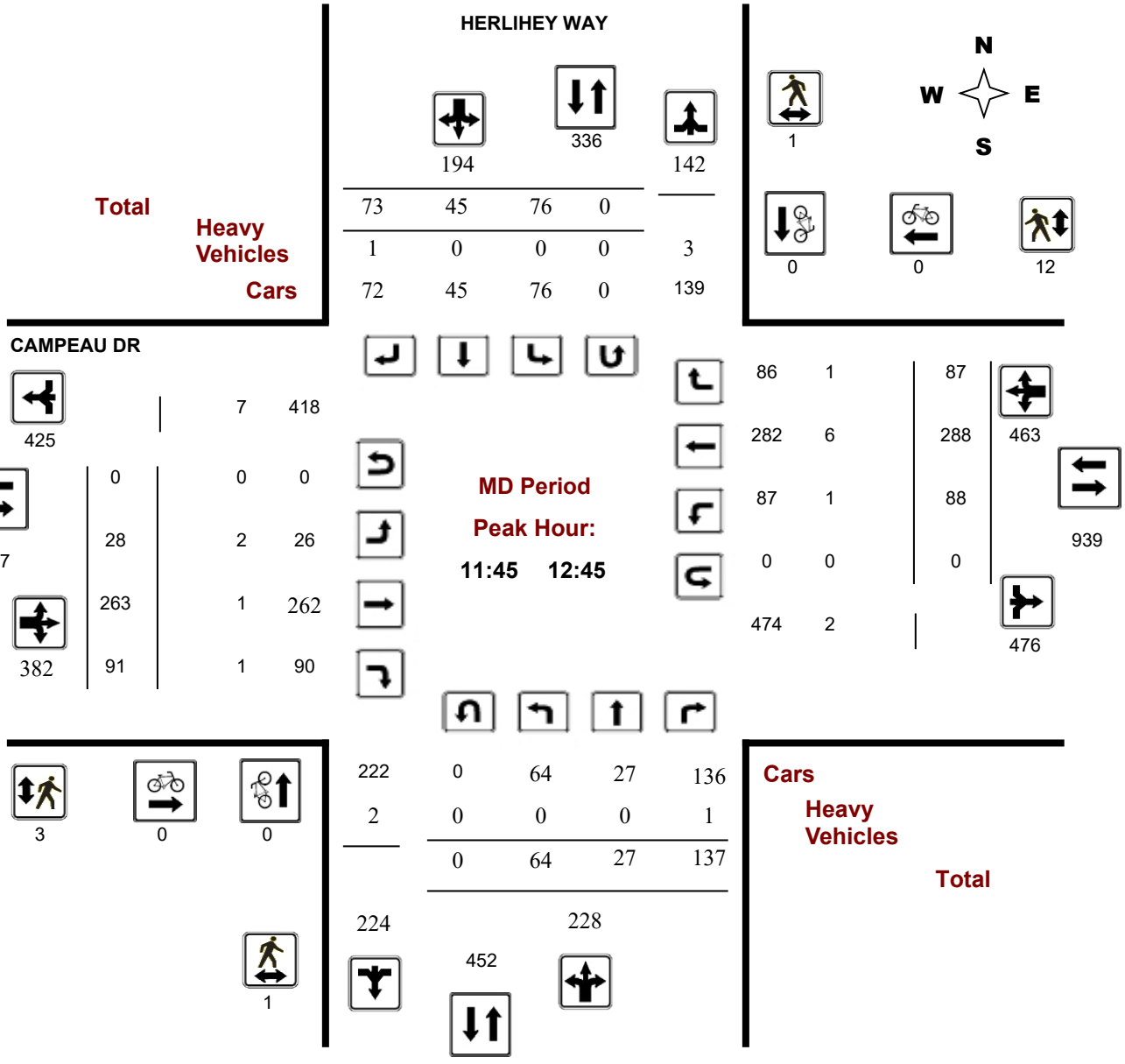
Turning Movement Count - Study Results

CAMPEAU DR @ HERLIHEY WAY

Survey Date: Wednesday, February 07, 2024 **WO No:** 41469

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

MD Period Peak Hour Diagram



Transportation Services - Traffic Services

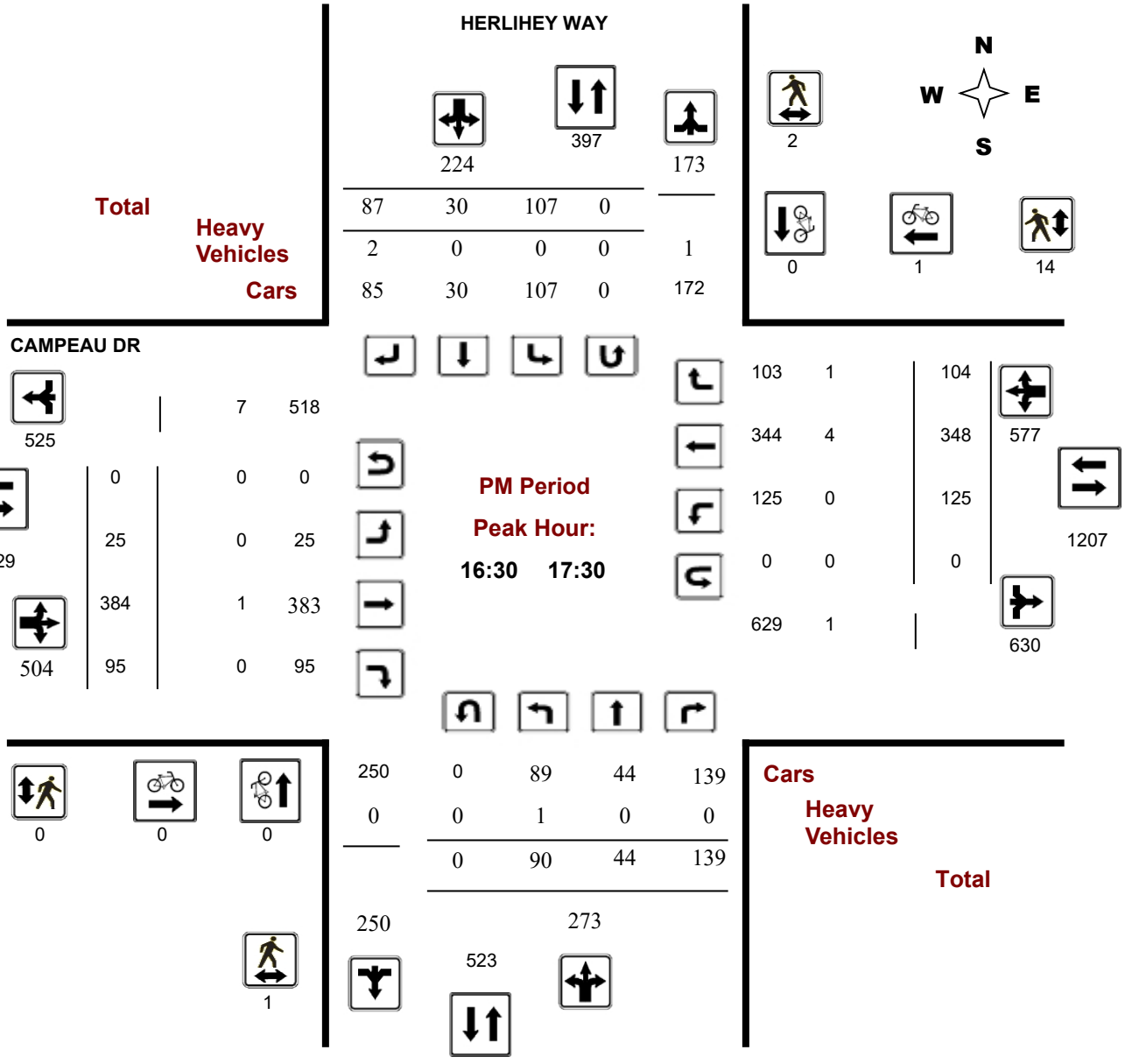
Turning Movement Count - Study Results

CAMPEAU DR @ HERLIHEY WAY

Survey Date: Wednesday, February 07, 2024 **WO No:** 41469

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

PM Period Peak Hour Diagram



Transportation Services - Traffic Services

Turning Movement Count - Study Results

CAMPEAU DR @ HERLIHEY WAY

Survey Date: Wednesday, February 07, 2024 **WO No:** 41469

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

Full Study Summary (8 HR Standard)

Survey Date: Wednesday, February 07, 2024

Total Observed U-Turns

Northbound: 0 Southbound: 0

Eastbound: 1 Westbound: 0

AADT Factor

1.00

	HERLIHEY WAY								CAMPEAU DR									
	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	4	0	27	**31**	8	3	4	**15**	**46**	6	190	27	**223**	27	260	11	**298**	**521**	**567**
08:00 09:00	9	5	29	**43**	12	4	15	**31**	**74**	15	346	41	**402**	38	470	29	**537**	**939**	**1013**
09:00 10:00	29	15	48	**92**	35	12	35	**82**	**174**	23	223	60	**306**	43	320	51	**414**	**720**	**894**
11:30 12:30	75	21	144	**240**	63	41	68	**172**	**412**	30	256	96	**382**	100	287	84	**471**	**853**	**1265**
12:30 13:30	55	40	92	**187**	84	42	70	**196**	**383**	20	249	44	**313**	85	297	74	**456**	**769**	**1152**
15:00 16:00	71	43	127	**241**	86	44	67	**197**	**438**	30	339	79	**448**	121	423	86	**630**	**1078**	**1516**
16:00 17:00	79	38	143	**260**	106	36	87	**229**	**489**	29	341	92	**462**	97	344	104	**545**	**1007**	**1496**
17:00 18:00	93	38	120	**251**	100	34	89	**223**	**474**	33	361	98	**492**	122	320	94	**536**	**1028**	**1502**
Sub Total	415	200	730	**1345**	494	216	435	**1145**	**2490**	186	2305	537	**3028**	633	2721	533	**3887**	**6915**	**9405**
U Turns				**0**				**0**	**0**				**1**				**0**	**1**	**1**
Total	415	200	730	**1345**	494	216	435	**1145**	**2490**	186	2305	537	**3029**	633	2721	533	**3887**	**6916**	**9406**
EQ 12Hr	577	278	1015	**1870**	687	300	605	**1592**	**3461**	259	3204	746	**4210**	880	3782	741	**5403**	**9613**	**13074**
Note: These values are calculated by multiplying the totals by the appropriate expansion factor.														**1.39**					
AVG 12Hr	577	278	1015	**1870**	687	393	792	**1592**	**3461**	259	3204	746	**4210**	880	3782	741	**5403**	**9613**	**13074**
Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor.														**1.00**					
AVG 24Hr	756	364	1330	**2450**	900	515	1038	**2086**	**4534**	339	4197	977	**5515**	1153	4954	971	**7078**	**12593**	**17127**
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

CAMPEAU DR @ HERLIHEY WAY

Survey Date: Wednesday, February 07, 2024 **WO No:** 41469

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

Full Study 15 Minute Increments

		HERLIHEY WAY									CAMPEAU DR									
		Northbound				Southbound					Eastbound				Westbound					
Time Period		LT	ST	RT	N TOT	LT	ST	RT	S TOT	STR TOT	LT	ST	RT	E TOT	LT	ST	RT	W TOT	STR TOT	Grand Total
07:00	07:15	2	0	2	4	1	0	0	1	5	1	29	10	40	7	46	1	54	94	99
07:15	07:30	1	0	7	8	2	2	1	5	13	0	42	5	47	5	68	4	77	124	137
07:30	07:45	1	0	10	11	3	1	1	5	16	3	50	2	55	9	77	0	86	141	157
08:45	09:00	4	0	3	7	2	0	2	4	11	8	62	14	84	10	129	11	150	234	245
17:45	18:00	26	14	32	72	23	9	16	48	120	12	90	30	132	23	76	28	127	259	379
07:45	08:00	0	0	8	8	2	0	2	4	12	2	69	10	81	6	69	6	81	162	174
08:00	08:15	1	0	7	8	3	0	3	6	14	2	75	5	82	4	93	3	100	182	196
08:15	08:30	2	1	11	14	2	0	4	6	20	1	137	10	148	10	105	7	122	270	290
08:30	08:45	2	4	8	14	5	4	6	15	29	4	72	12	88	14	143	8	165	253	282
09:00	09:15	5	5	13	23	9	3	8	20	43	3	57	15	76	4	92	11	107	183	226
09:15	09:30	5	5	12	22	9	0	8	17	39	6	42	18	66	12	81	13	106	172	211
09:30	09:45	10	2	8	20	10	2	12	24	44	6	57	10	73	12	69	10	91	164	208
09:45	10:00	9	3	15	27	7	7	7	21	48	8	67	17	92	15	78	17	110	202	250
11:30	11:45	22	5	40	67	12	7	13	32	99	7	59	19	85	25	84	17	126	211	310
11:45	12:00	11	5	37	53	20	20	10	50	103	5	71	30	106	19	60	22	101	207	310
12:00	12:15	17	2	34	53	18	7	23	48	101	10	71	22	103	25	65	20	110	213	314
12:15	12:30	25	9	33	67	13	7	22	42	109	8	55	25	88	31	78	25	134	222	331
12:30	12:45	11	11	33	55	25	11	18	54	109	5	66	14	85	13	85	20	118	203	312
12:45	13:00	23	11	25	59	17	10	24	51	110	3	65	10	78	16	68	22	106	184	294
13:00	13:15	7	9	13	29	19	15	10	44	73	8	58	8	74	26	77	16	119	193	266
13:15	13:30	14	9	21	44	23	6	18	47	91	4	60	12	76	30	67	16	113	189	280
15:00	15:15	15	9	35	59	21	17	18	56	115	10	94	16	120	23	128	18	169	289	404
15:15	15:30	20	11	28	59	15	13	15	43	102	9	70	17	96	28	99	17	144	240	342
15:30	15:45	16	13	31	60	21	7	17	45	105	5	98	21	124	34	106	26	166	290	395
15:45	16:00	20	10	33	63	29	7	17	53	116	6	77	25	108	36	90	25	151	259	375
16:00	16:15	13	6	25	44	22	11	28	61	105	10	93	22	125	16	98	18	132	257	362
16:15	16:30	24	8	37	69	30	10	20	60	129	8	65	20	93	19	67	23	109	202	331
16:30	16:45	22	11	32	65	33	4	22	59	124	3	106	27	136	28	89	29	146	282	406
16:45	17:00	20	13	49	82	21	11	17	49	131	8	77	23	108	34	90	34	158	266	397
17:00	17:15	23	7	26	56	28	7	27	62	118	5	108	23	136	30	89	19	138	274	392
17:15	17:30	25	13	32	70	25	8	21	54	124	9	93	22	124	33	80	22	135	259	383
17:30	17:45	19	4	30	53	24	10	25	59	112	7	70	23	100	36	75	25	136	236	348
Total:		415	200	730	1345	494	216	435	1145	2490	186	2305	537	3029	633	2721	533	3887	6916	9,406

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

Transportation Services - Traffic Services

Turning Movement Count - Study Results

CAMPEAU DR @ HERLIHEY WAY

Survey Date: Wednesday, February 07, 2024 **WO No:** 41469

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

Full Study Cyclist Volume

Time Period		HERLIHEY WAY			CAMPEAU DR			
		Northbound	Southbound	Street Total	Eastbound	Westbound	Street Total	Grand Total
07:00	07:15	0	0	0	0	0	0	0
07:15	07:30	0	0	0	0	0	0	0
07:30	07:45	0	0	0	0	0	0	0
08:45	09:00	0	0	0	0	0	0	0
17:45	18:00	0	0	0	0	0	0	0
07:45	08:00	0	0	0	0	0	0	0
08:00	08:15	0	0	0	0	0	0	0
08:15	08:30	0	0	0	0	0	0	0
08:30	08:45	0	0	0	0	0	0	0
09:00	09:15	0	0	0	0	0	0	0
09:15	09:30	0	0	0	0	0	0	0
09:30	09:45	0	0	0	0	0	0	0
09:45	10:00	0	0	0	0	0	0	0
11:30	11:45	0	0	0	0	1	1	1
11:45	12:00	0	0	0	0	0	0	0
12:00	12:15	0	0	0	0	0	0	0
12:15	12:30	0	0	0	0	0	0	0
12:30	12:45	0	0	0	0	0	0	0
12:45	13:00	0	0	0	0	0	0	0
13:00	13:15	0	0	0	0	0	0	0
13:15	13:30	0	0	0	0	0	0	0
15:00	15:15	0	0	0	0	0	0	0
15:15	15:30	0	0	0	0	0	0	0
15:30	15:45	0	0	0	1	0	1	1
15:45	16:00	0	0	0	0	0	0	0
16:00	16:15	1	1	2	0	0	0	2
16:15	16:30	1	0	1	0	0	0	1
16:30	16:45	0	0	0	0	0	0	0
16:45	17:00	0	0	0	0	0	0	0
17:00	17:15	0	0	0	0	0	0	0
17:15	17:30	0	0	0	0	1	1	1
17:30	17:45	0	0	0	0	0	0	0
Total		2	1	**3**	1	2	3	6

Transportation Services - Traffic Services

Turning Movement Count - Study Results

CAMPEAU DR @ HERLIHEY WAY

Survey Date: Wednesday, February 07, 2024 **WO No:** 41469

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

Full Study Pedestrian Volume

	HERLIHEY WAY			CAMPEAU DR			
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	2	0	**2**	0	1	**1**	**3**
07:15 07:30	0	1	**1**	2	2	**4**	**5**
07:30 07:45	1	0	**1**	2	1	**3**	**4**
08:45 09:00	1	0	**1**	0	1	**1**	**2**
17:45 18:00	0	0	**0**	2	0	**2**	**2**
07:45 08:00	0	0	**0**	0	2	**2**	**2**
08:00 08:15	1	0	**1**	0	2	**2**	**3**
08:15 08:30	0	0	**0**	0	1	**1**	**1**
08:30 08:45	4	2	**6**	0	1	**1**	**7**
09:00 09:15	0	0	**0**	0	2	**2**	**2**
09:15 09:30	0	2	**2**	2	1	**3**	**5**
09:30 09:45	0	1	**1**	0	2	**2**	**3**
09:45 10:00	0	3	**3**	1	4	**5**	**8**
11:30 11:45	0	1	**1**	0	8	**8**	**9**
11:45 12:00	0	1	**1**	1	4	**5**	**6**
12:00 12:15	0	0	**0**	1	4	**5**	**5**
12:15 12:30	0	0	**0**	1	3	**4**	**4**
12:30 12:45	1	0	**1**	0	1	**1**	**2**
12:45 13:00	0	3	**3**	0	2	**2**	**5**
13:00 13:15	2	1	**3**	0	4	**4**	**7**
13:15 13:30	0	0	**0**	0	5	**5**	**5**
15:00 15:15	2	4	**6**	3	6	**9**	**15**
15:15 15:30	3	3	**6**	4	5	**9**	**15**
15:30 15:45	0	1	**1**	1	4	**5**	**6**
15:45 16:00	0	2	**2**	1	8	**9**	**11**
16:00 16:15	0	0	**0**	0	9	**9**	**9**
16:15 16:30	0	1	**1**	2	8	**10**	**11**
16:30 16:45	1	1	**2**	0	3	**3**	**5**
16:45 17:00	0	0	**0**	0	2	**2**	**2**
17:00 17:15	0	1	**1**	0	6	**6**	**7**
17:15 17:30	0	0	**0**	0	3	**3**	**3**
17:30 17:45	0	0	**0**	0	0	**0**	**0**
Total	18	28	**46**	23	105	**128**	**174**

Transportation Services - Traffic Services

Turning Movement Count - Study Results

CAMPEAU DR @ HERLIHEY WAY

Survey Date: Wednesday, February 07, 2024 **WO No:** 41469

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

Full Study Heavy Vehicles

		HERLIHEY WAY									CAMPEAU DR									
		Northbound				Southbound					Eastbound				Westbound					
Time Period		LT	ST	RT	**N TOT**	LT	ST	RT	**S TOT**	**STR TOT**	LT	ST	RT	**E TOT**	LT	ST	RT	**W TOT**	**STR TOT**	**Grand Total**
07:00	07:15	0	0	0	**0**	0	0	0	**0**	**0**	0	2	0	**2**	0	2	0	**2**	**4**	**4**
07:15	07:30	1	0	0	**1**	1	0	0	**1**	**2**	0	2	0	**2**	0	1	0	**1**	**3**	**5**
07:30	07:45	0	0	0	**0**	0	0	0	**0**	**0**	1	0	0	**1**	0	2	0	**2**	**3**	**3**
08:45	09:00	0	0	0	**0**	0	0	0	**0**	**0**	1	0	0	**1**	1	1	0	**2**	**3**	**3**
17:45	18:00	0	0	0	**0**	0	0	1	**1**	**1**	0	0	0	**0**	0	0	0	**0**	**0**	**1**
07:45	08:00	0	0	0	**0**	0	0	0	**0**	**0**	0	2	0	**2**	0	2	0	**2**	**4**	**4**
08:00	08:15	0	0	0	**0**	0	0	1	**1**	**1**	0	2	0	**2**	0	2	0	**2**	**4**	**5**
08:15	08:30	0	0	1	**1**	0	0	0	**0**	**1**	0	1	0	**1**	0	1	0	**1**	**2**	**3**
08:30	08:45	0	0	0	**0**	1	0	3	**4**	**4**	1	4	0	**5**	0	5	0	**5**	**10**	**14**
09:00	09:15	1	1	0	**2**	0	0	0	**0**	**2**	0	3	0	**3**	0	1	0	**1**	**4**	**6**
09:15	09:30	1	0	1	**2**	1	0	0	**1**	**3**	0	3	1	**4**	0	5	0	**5**	**9**	**12**
09:30	09:45	1	0	0	**1**	0	0	1	**1**	**2**	0	2	1	**3**	0	4	0	**4**	**7**	**9**
09:45	10:00	0	0	0	**0**	0	0	0	**0**	**0**	1	1	1	**3**	0	3	1	**4**	**7**	**7**
11:30	11:45	0	0	1	**1**	1	0	0	**1**	**2**	0	2	0	**2**	0	2	0	**2**	**4**	**6**
11:45	12:00	0	0	0	**0**	0	0	0	**0**	**0**	0	0	0	**0**	0	3	0	**3**	**3**	**3**
12:00	12:15	0	0	0	**0**	0	0	0	**0**	**0**	0	0	0	**0**	0	1	1	**2**	**2**	**2**
12:15	12:30	0	0	0	**0**	0	0	1	**1**	**1**	1	0	1	**2**	1	0	0	**1**	**3**	**4**
12:30	12:45	0	0	1	**1**	0	0	0	**0**	**1**	1	1	0	**2**	0	2	0	**2**	**4**	**5**
12:45	13:00	0	0	0	**0**	0	0	0	**0**	**0**	0	1	0	**1**	0	3	0	**3**	**4**	**4**
13:00	13:15	1	0	1	**2**	0	0	2	**2**	**4**	1	2	0	**3**	0	0	0	**0**	**3**	**7**
13:15	13:30	0	0	0	**0**	0	0	1	**1**	**1**	1	1	0	**2**	0	2	0	**2**	**4**	**5**
15:00	15:15	0	0	0	**0**	0	0	0	**0**	**0**	1	4	0	**5**	0	6	0	**6**	**11**	**11**
15:15	15:30	1	0	0	**1**	0	1	1	**2**	**3**	0	1	0	**1**	0	4	1	**5**	**6**	**9**
15:30	15:45	0	0	0	**0**	0	0	0	**0**	**0**	1	5	2	**8**	0	1	1	**2**	**10**	**10**
15:45	16:00	0	1	1	**2**	1	0	0	**1**	**3**	0	2	0	**2**	0	4	0	**4**	**6**	**9**
16:00	16:15	0	0	0	**0**	0	0	0	**0**	**0**	0	0	0	**0**	0	3	0	**3**	**3**	**3**
16:15	16:30	0	0	0	**0**	0	0	0	**0**	**0**	0	0	0	**0**	0	2	0	**2**	**2**	**2**
16:30	16:45	0	0	0	**0**	0	0	0	**0**	**0**	0	0	0	**0**	0	4	0	**4**	**4**	**4**
16:45	17:00	0	0	0	**0**	0	0	1	**1**	**1**	0	0	0	**0**	0	0	0	**0**	**0**	**1**
17:00	17:15	1	0	0	**1**	0	0	0	**0**	**1**	0	1	0	**1**	0	0	1	**1**	**2**	**3**
17:15	17:30	0	0	0	**0**	0	0	1	**1**	**1**	0	0	0	**0**	0	0	0	**0**	**0**	**1**
17:30	17:45	0	0	0	**0**	0	0	0	**0**	**0**	0	0	0	**0**	1	0	0	**1**	**1**	**1**
Total:	None	7	2	6	**15**	5	1	13	**19**	**34**	10	42	6	**58**	3	66	5	**74**	**132**	**166**

Transportation Services - Traffic Services

Turning Movement Count - Study Results

CAMPEAU DR @ HERLIHEY WAY

Survey Date: Wednesday, February 07, 2024 **WO No:** 41469

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

Full Study 15 Minute U-Turn Total

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

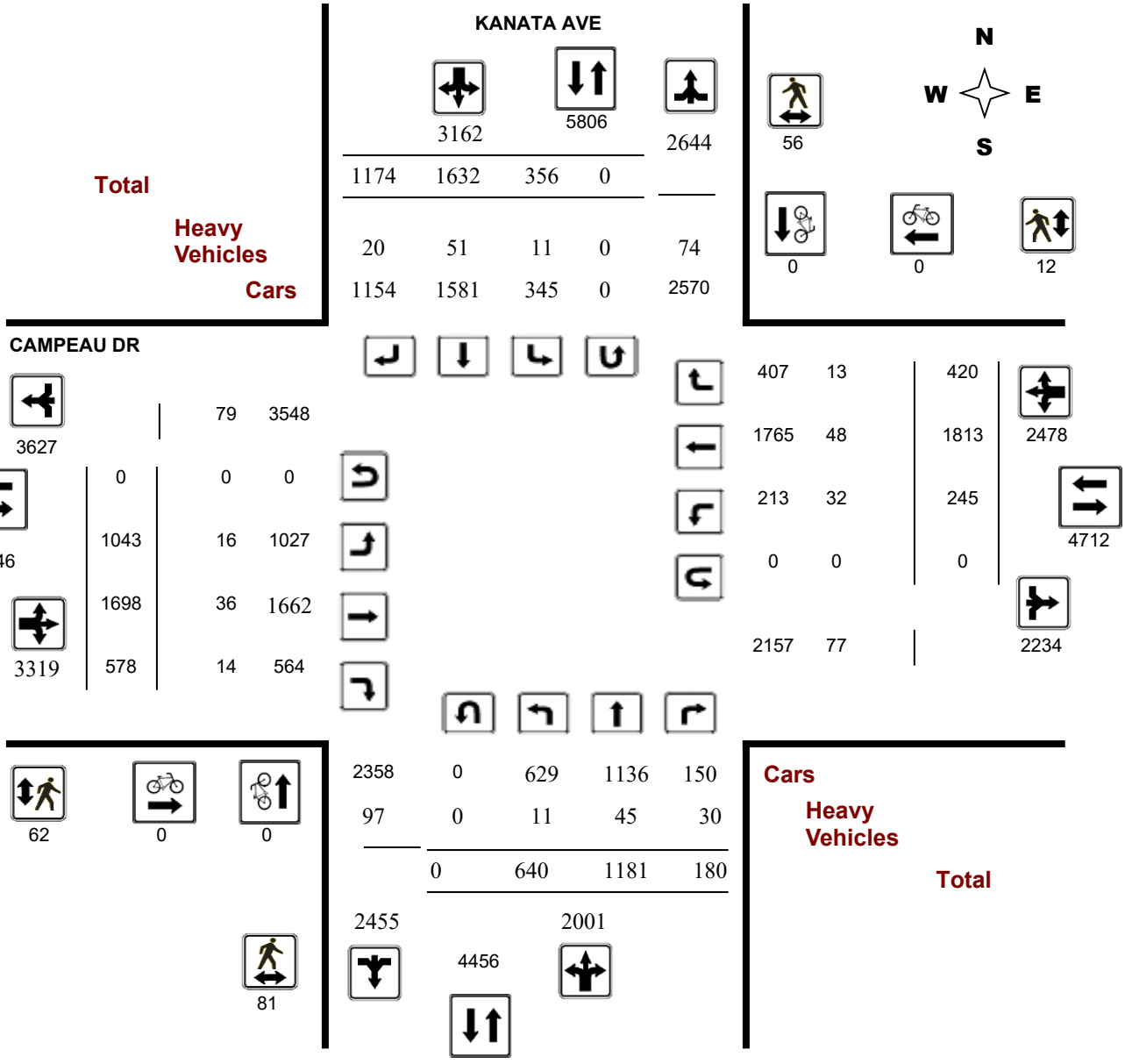
Transportation Services - Traffic Services

Turning Movement Count - Study Results

CAMPEAU DR @ KANATA AVE

Survey Date: Tuesday, January 09, 2024
Start Time: 07:00
WO No: 41473
Device: Miovision

Full Study Diagram



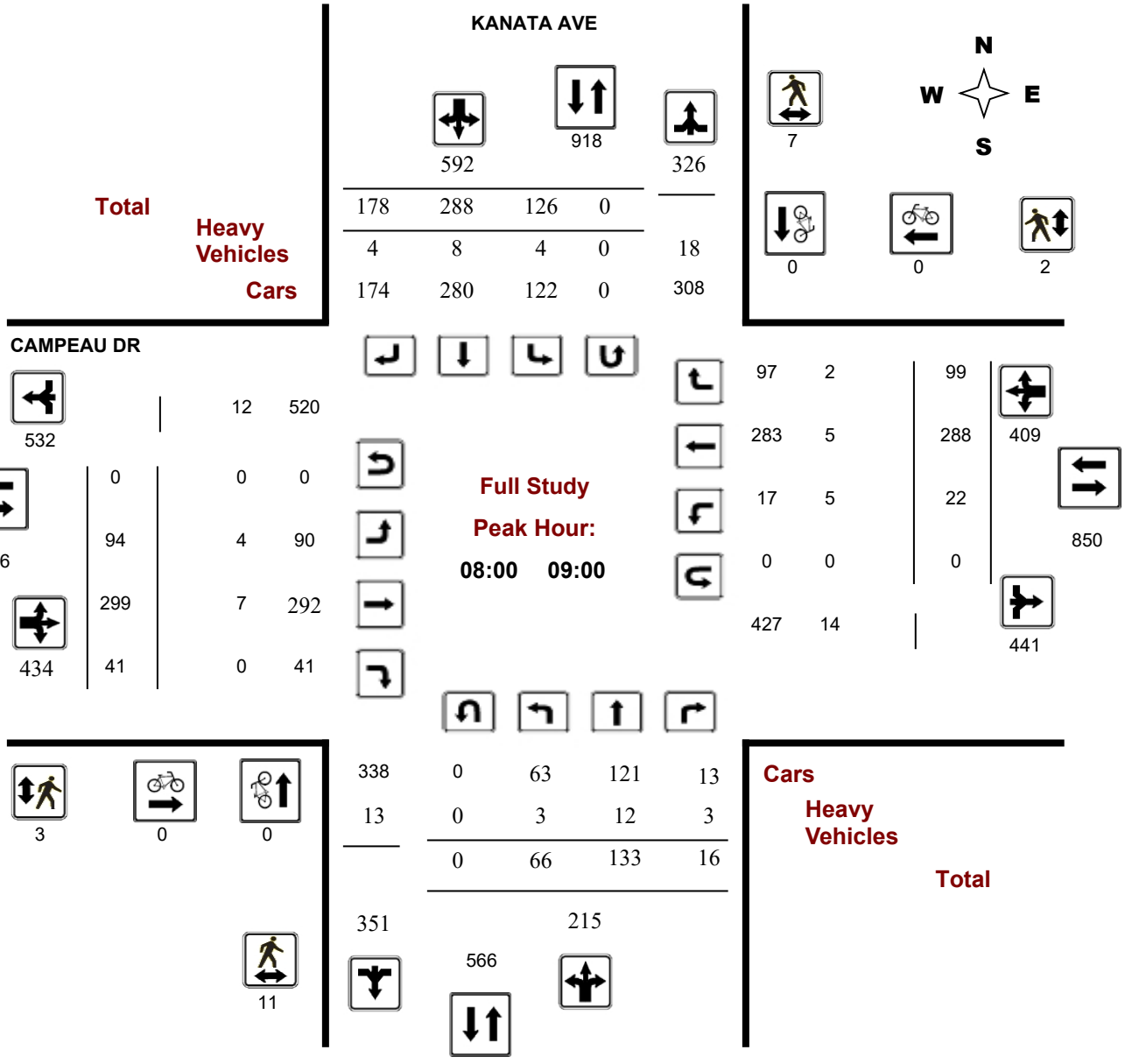
Transportation Services - Traffic Services

Turning Movement Count - Study Results

CAMPEAU DR @ KANATA AVE

Survey Date: Tuesday, January 09, 2024
Start Time: 07:00
WO No: 41473
Device: Miovision

Full Study Peak Hour Diagram



Transportation Services - Traffic Services

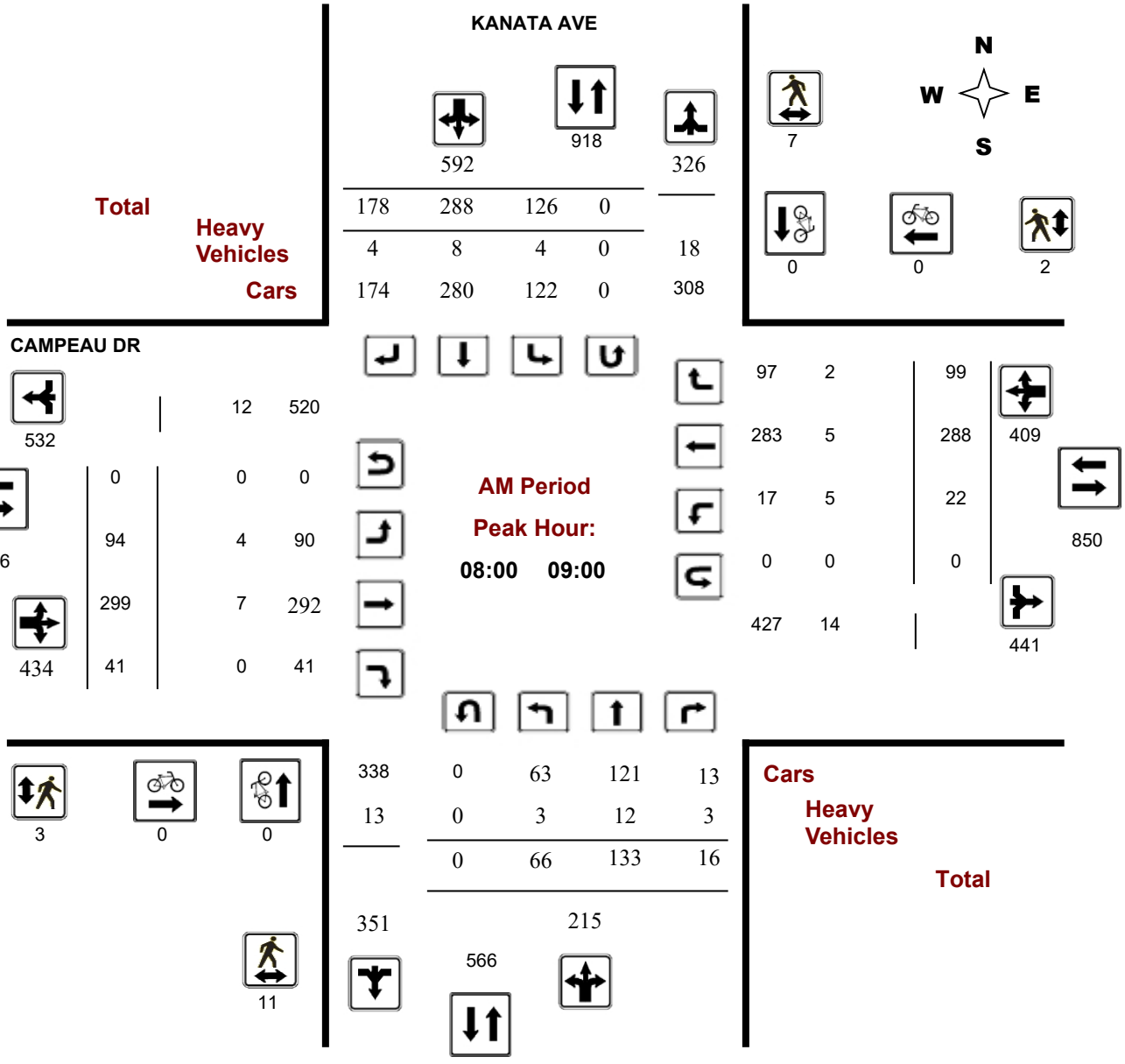
Turning Movement Count - Study Results

CAMPEAU DR @ KANATA AVE

Survey Date: Tuesday, January 09, 2024 **WO No:** 41473

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

AM Period Peak Hour Diagram



Transportation Services - Traffic Services

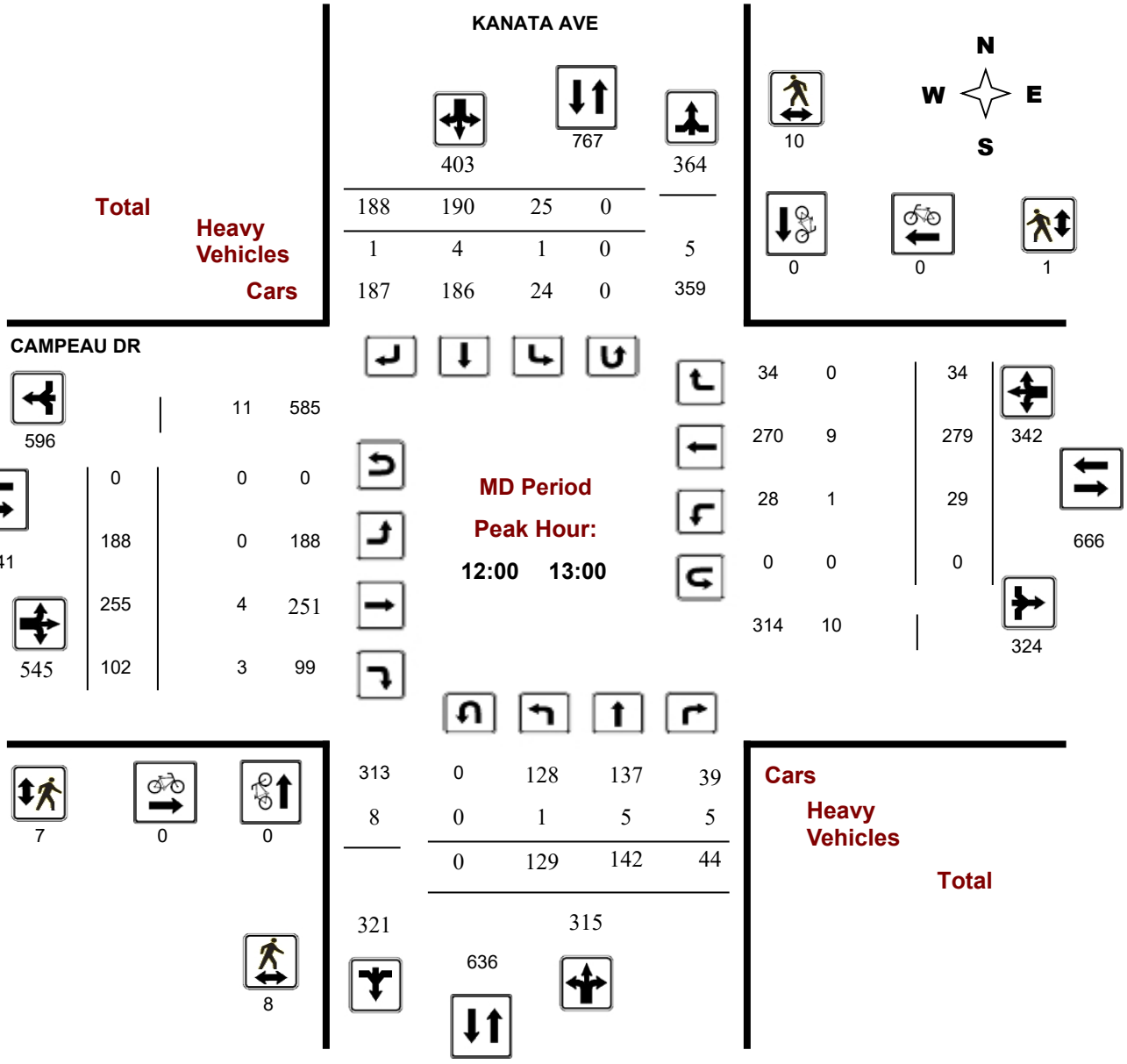
Turning Movement Count - Study Results

CAMPEAU DR @ KANATA AVE

Survey Date: Tuesday, January 09, 2024 **WO No:** 41473

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

MD Period Peak Hour Diagram



Transportation Services - Traffic Services

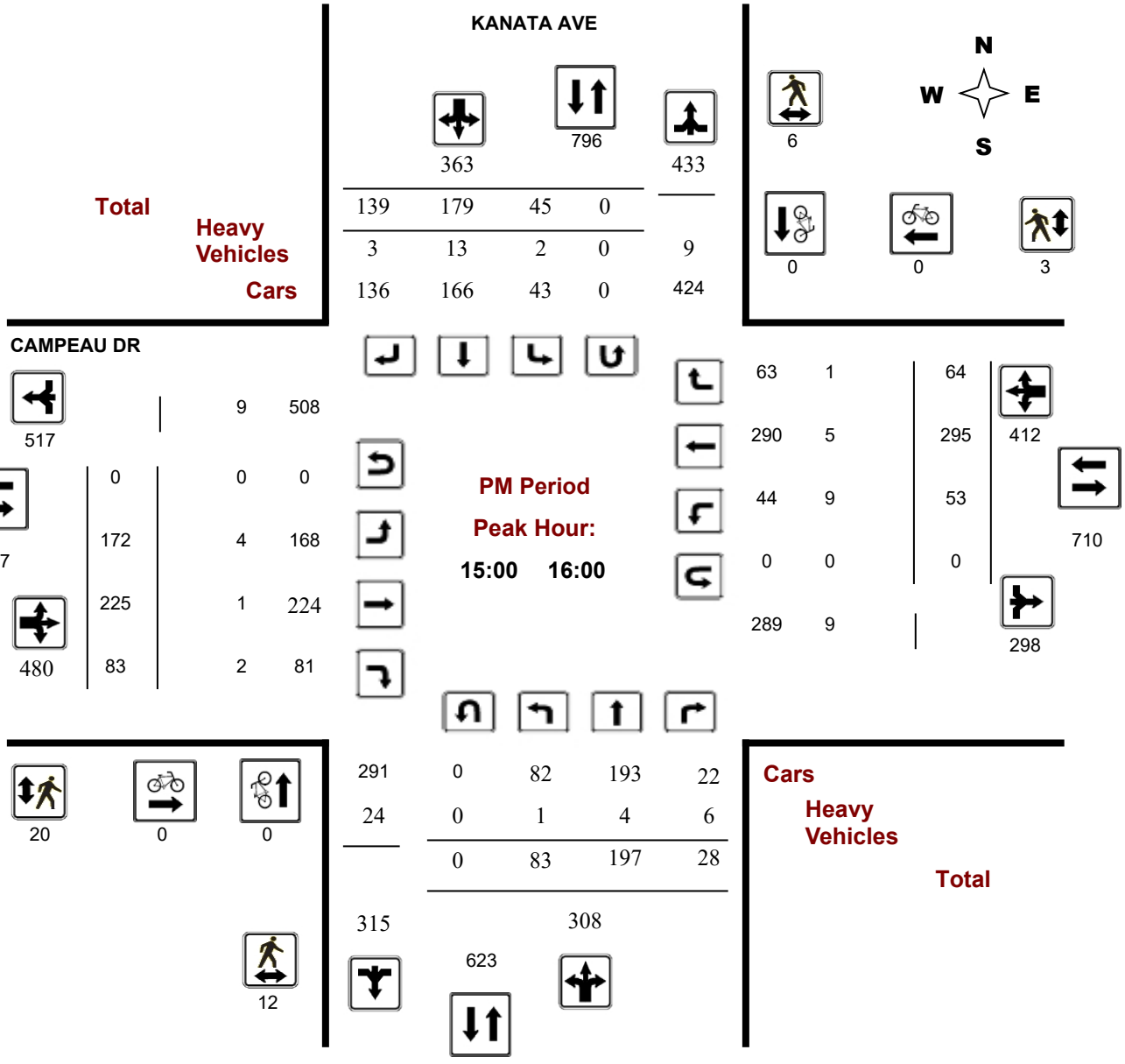
Turning Movement Count - Study Results

CAMPEAU DR @ KANATA AVE

Survey Date: Tuesday, January 09, 2024 **WO No:** 41473

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

PM Period Peak Hour Diagram



Transportation Services - Traffic Services

Turning Movement Count - Study Results

CAMPEAU DR @ KANATA AVE

Survey Date: Tuesday, January 09, 2024 **WO No:** 41473

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

Full Study Summary (8 HR Standard)

Survey Date: Tuesday, January 09, 2024

Total Observed U-Turns

Northbound: 0 Southbound: 0

Eastbound: 0 Westbound: 0

AADT Factor

1.10

	KANATA AVE								CAMPEAU DR									
	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	51	76	12	**139**	49	321	98	**468**	**607**	35	139	40	**214**	19	145	32	**196**	**410**	**1017**
08:00 09:00	66	133	16	**215**	126	288	178	**592**	**807**	94	299	41	**434**	22	288	99	**409**	**843**	**1650**
09:00 10:00	58	108	21	**187**	35	222	182	**439**	**626**	100	166	68	**334**	33	202	35	**270**	**604**	**1230**
11:30 12:30	125	128	29	**282**	31	187	179	**397**	**679**	177	241	107	**525**	35	291	40	**366**	**891**	**1570**
12:30 13:30	120	147	37	**304**	18	162	175	**355**	**659**	177	259	98	**534**	30	224	25	**279**	**813**	**1472**
15:00 16:00	83	197	28	**308**	45	179	139	**363**	**671**	172	225	83	**480**	53	295	64	**412**	**892**	**1563**
16:00 17:00	73	199	16	**288**	26	140	114	**280**	**568**	136	215	71	**422**	27	208	50	**285**	**707**	**1275**
17:00 18:00	64	193	21	**278**	26	133	109	**268**	**546**	152	154	70	**376**	26	160	75	**261**	**637**	**1183**
Sub Total	640	1181	180	**2001**	356	1632	1174	**3162**	**5163**	1043	1698	578	**3319**	245	1813	420	**2478**	**5797**	**10960**
U Turns				**0**				**0**	**0**				**0**				**0**	**0**	**0**
Total	640	1181	180	**2001**	356	1632	1174	**3162**	**5163**	1043	1698	578	**3319**	245	1813	420	**2478**	**5797**	**10960**
EQ 12Hr	890	1642	250	**2781**	495	2268	1632	**4395**	**7177**	1450	2360	803	**4613**	341	2520	584	**3444**	**8058**	**15234**
Note: These values are calculated by multiplying the totals by the appropriate expansion factor.														**1.39**					
AVG 12Hr	979	1806	275	**3059**	544	3269	2352	**4834**	**7895**	1595	2596	883	**5074**	375	2772	642	**3788**	**8864**	**16757**
Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor.														**1.10**					
AVG 24Hr	1282	2366	360	**4007**	713	4282	3081	**6333**	**10342**	2089	3401	1157	**6647**	491	3631	841	**4962**	**11612**	**21952**
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

CAMPEAU DR @ KANATA AVE

Survey Date: Tuesday, January 09, 2024 **WO No:** 41473

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

Full Study 15 Minute Increments

		KANATA AVE									CAMPEAU DR									
		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	15	12	3	30	15	80	21	116	146	6	35	8	49	8	36	5	49	98	244
07:15	07:30	11	15	3	29	7	76	16	99	128	6	34	10	50	3	40	14	57	107	235
07:30	07:45	8	20	2	30	8	88	33	129	159	9	24	8	41	4	31	3	38	79	238
09:00	09:15	16	32	6	54	10	61	49	120	174	24	38	9	71	10	51	6	67	138	312
17:45	18:00	16	38	4	58	5	36	25	66	124	35	39	15	89	6	35	19	60	149	273
07:45	08:00	17	29	4	50	19	77	28	124	174	14	46	14	74	4	38	10	52	126	300
08:00	08:15	15	41	2	58	20	77	30	127	185	23	62	9	94	3	43	14	60	154	339
08:15	08:30	11	24	3	38	64	79	45	188	226	17	117	6	140	2	49	23	74	214	440
08:30	08:45	17	34	6	57	32	59	49	140	197	31	75	11	117	12	101	35	148	265	462
08:45	09:00	23	34	5	62	10	73	54	137	199	23	45	15	83	5	95	27	127	210	409
09:15	09:30	11	26	2	39	9	51	38	98	137	26	37	16	79	5	51	11	67	146	283
09:30	09:45	15	27	5	47	9	60	50	119	166	25	50	20	95	11	52	8	71	166	332
09:45	10:00	16	23	8	47	7	50	45	102	149	25	41	23	89	7	48	10	65	154	303
11:30	11:45	27	32	2	61	9	42	42	93	154	39	59	22	120	10	64	11	85	205	359
11:45	12:00	29	34	3	66	7	48	46	101	167	40	57	37	134	11	58	9	78	212	379
12:00	12:15	39	28	9	76	4	55	52	111	187	49	59	24	132	9	94	13	116	248	435
12:15	12:30	30	34	15	79	11	42	39	92	171	49	66	24	139	5	75	7	87	226	397
12:30	12:45	30	35	9	74	3	51	47	101	175	40	63	20	123	5	61	6	72	195	370
12:45	13:00	30	45	11	86	7	42	50	99	185	50	67	34	151	10	49	8	67	218	403
13:00	13:15	31	39	10	80	2	45	45	92	172	47	67	23	137	9	57	6	72	209	381
13:15	13:30	29	28	7	64	6	24	33	63	127	40	62	21	123	6	57	5	68	191	318
15:00	15:15	30	56	7	93	17	53	22	92	185	38	65	16	119	9	89	21	119	238	423
15:15	15:30	23	42	9	74	7	39	30	76	150	51	63	26	140	20	89	19	128	268	418
15:30	15:45	19	52	6	77	11	49	36	96	173	44	54	25	123	13	67	11	91	214	387
15:45	16:00	11	47	6	64	10	38	51	99	163	39	43	16	98	11	50	13	74	172	335
16:00	16:15	22	62	4	88	10	44	25	79	167	35	50	21	106	9	63	10	82	188	355
16:15	16:30	21	56	3	80	5	15	25	45	125	33	63	18	114	10	52	17	79	193	318
16:30	16:45	8	43	1	52	6	51	37	94	146	29	46	15	90	6	46	13	65	155	301
16:45	17:00	22	38	8	68	5	30	27	62	130	39	56	17	112	2	47	10	59	171	301
17:00	17:15	15	51	2	68	5	32	35	72	140	43	39	23	105	7	45	19	71	176	316
17:15	17:30	15	62	12	89	8	29	26	63	152	44	38	13	95	9	39	20	68	163	315
17:30	17:45	18	42	3	63	8	36	23	67	130	30	38	19	87	4	41	17	62	149	279
Total:		640	1181	180	2001	356	1632	1174	3162	5163	1043	1698	578	3319	245	1813	420	2478	5797	10,960

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

Transportation Services - Traffic Services

Turning Movement Count - Study Results

CAMPEAU DR @ KANATA AVE

Survey Date: Tuesday, January 09, 2024 **WO No:** 41473

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

Full Study Cyclist Volume

Time Period		KANATA AVE			CAMPEAU DR			
		Northbound	Southbound	Street Total	Eastbound	Westbound	Street Total	Grand Total
07:00	07:15	0	0	0	0	0	0	0
07:15	07:30	0	0	0	0	0	0	0
07:30	07:45	0	0	0	0	0	0	0
09:00	09:15	0	0	0	0	0	0	0
17:45	18:00	0	0	0	0	0	0	0
07:45	08:00	0	0	0	0	0	0	0
08:00	08:15	0	0	0	0	0	0	0
08:15	08:30	0	0	0	0	0	0	0
08:30	08:45	0	0	0	0	0	0	0
08:45	09:00	0	0	0	0	0	0	0
09:15	09:30	0	0	0	0	0	0	0
09:30	09:45	0	0	0	0	0	0	0
09:45	10:00	0	0	0	0	0	0	0
11:30	11:45	0	0	0	0	0	0	0
11:45	12:00	0	0	0	0	0	0	0
12:00	12:15	0	0	0	0	0	0	0
12:15	12:30	0	0	0	0	0	0	0
12:30	12:45	0	0	0	0	0	0	0
12:45	13:00	0	0	0	0	0	0	0
13:00	13:15	0	0	0	0	0	0	0
13:15	13:30	0	0	0	0	0	0	0
15:00	15:15	0	0	0	0	0	0	0
15:15	15:30	0	0	0	0	0	0	0
15:30	15:45	0	0	0	0	0	0	0
15:45	16:00	0	0	0	0	0	0	0
16:00	16:15	0	0	0	0	0	0	0
16:15	16:30	0	0	0	0	0	0	0
16:30	16:45	0	0	0	0	0	0	0
16:45	17:00	0	0	0	0	0	0	0
17:00	17:15	0	0	0	0	0	0	0
17:15	17:30	0	0	0	0	0	0	0
17:30	17:45	0	0	0	0	0	0	0
Total		0	0	**0**	0	0	0	0

Transportation Services - Traffic Services

Turning Movement Count - Study Results

CAMPEAU DR @ KANATA AVE

Survey Date: Tuesday, January 09, 2024 **WO No:** 41473

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

Full Study Pedestrian Volume

	KANATA AVE			CAMPEAU DR			
Time Period	NB Approach (E or W Crossing)	SB Approach (E or W Crossing)	**Total**	EB Approach (N or S Crossing)	WB Approach (N or S Crossing)	**Total**	**Grand Total**
07:00 07:15	0	0	**0**	3	0	**3**	**3**
07:15 07:30	1	0	**1**	0	0	**0**	**1**
07:30 07:45	1	1	**2**	0	1	**1**	**3**
09:00 09:15	5	2	**7**	3	0	**3**	**10**
17:45 18:00	2	2	**4**	1	1	**2**	**6**
07:45 08:00	3	0	**3**	2	0	**2**	**5**
08:00 08:15	5	4	**9**	0	0	**0**	**9**
08:15 08:30	1	0	**1**	0	0	**0**	**1**
08:30 08:45	1	1	**2**	0	0	**0**	**2**
08:45 09:00	4	2	**6**	3	2	**5**	**11**
09:15 09:30	3	1	**4**	2	0	**2**	**6**
09:30 09:45	6	3	**9**	3	0	**3**	**12**
09:45 10:00	2	6	**8**	2	0	**2**	**10**
11:30 11:45	2	4	**6**	8	0	**8**	**14**
11:45 12:00	3	2	**5**	0	0	**0**	**5**
12:00 12:15	1	4	**5**	2	0	**2**	**7**
12:15 12:30	3	2	**5**	1	1	**2**	**7**
12:30 12:45	3	2	**5**	3	0	**3**	**8**
12:45 13:00	1	2	**3**	1	0	**1**	**4**
13:00 13:15	3	1	**4**	1	0	**1**	**5**
13:15 13:30	2	3	**5**	3	1	**4**	**9**
15:00 15:15	0	0	**0**	2	0	**2**	**2**
15:15 15:30	6	4	**10**	9	2	**11**	**21**
15:30 15:45	3	2	**5**	6	0	**6**	**11**
15:45 16:00	3	0	**3**	3	1	**4**	**7**
16:00 16:15	3	0	**3**	0	0	**0**	**3**
16:15 16:30	1	1	**2**	0	0	**0**	**2**
16:30 16:45	2	2	**4**	1	0	**1**	**5**
16:45 17:00	4	5	**9**	1	3	**4**	**13**
17:00 17:15	2	0	**2**	0	0	**0**	**2**
17:15 17:30	2	0	**2**	2	0	**2**	**4**
17:30 17:45	3	0	**3**	0	0	**0**	**3**
Total	81	56	**137**	62	12	**74**	**211**

Transportation Services - Traffic Services

Turning Movement Count - Study Results

CAMPEAU DR @ KANATA AVE

Survey Date: Tuesday, January 09, 2024 **WO No:** 41473

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

Full Study Heavy Vehicles

		KANATA AVE									CAMPEAU DR									
		Northbound				Southbound					Eastbound				Westbound					
Time Period		LT	ST	RT	N TOT	LT	ST	RT	S TOT	STR TOT	LT	ST	RT	E TOT	LT	ST	RT	W TOT	STR TOT	Grand Total
07:00	07:15	0	0	0	**0**	1	1	1	**3**	**3**	0	2	0	**2**	2	0	0	**2**	**4**	**7**
07:15	07:30	0	1	3	**4**	0	1	0	**1**	**5**	1	2	1	**4**	0	0	0	**0**	**4**	**9**
07:30	07:45	0	0	0	**0**	1	1	0	**2**	**2**	0	3	1	**4**	2	3	0	**5**	**9**	**11**
09:00	09:15	0	1	1	**2**	0	4	0	**4**	**6**	0	4	0	**4**	1	2	0	**3**	**7**	**13**
17:45	18:00	0	1	0	**1**	0	0	0	**0**	**1**	0	0	1	**1**	0	1	2	**3**	**4**	**5**
07:45	08:00	1	1	1	**3**	0	0	1	**1**	**4**	1	2	0	**3**	0	2	0	**2**	**5**	**9**
08:00	08:15	0	8	0	**8**	0	2	1	**3**	**11**	2	0	0	**2**	1	1	0	**2**	**4**	**15**
08:15	08:30	1	3	2	**6**	2	3	0	**5**	**11**	0	3	0	**3**	1	2	1	**4**	**7**	**18**
08:30	08:45	1	0	0	**1**	0	1	1	**2**	**3**	2	3	0	**5**	2	1	0	**3**	**8**	**11**
08:45	09:00	1	1	1	**3**	2	2	2	**6**	**9**	0	1	0	**1**	1	1	1	**3**	**4**	**13**
09:15	09:30	2	1	1	**4**	0	2	0	**2**	**6**	1	3	0	**4**	1	1	2	**4**	**8**	**14**
09:30	09:45	1	1	0	**2**	1	1	0	**2**	**4**	1	3	0	**4**	1	2	0	**3**	**7**	**11**
09:45	10:00	0	2	2	**4**	0	2	1	**3**	**7**	0	1	1	**2**	2	3	0	**5**	**7**	**14**
11:30	11:45	0	1	0	**1**	0	2	3	**5**	**6**	0	2	0	**2**	1	1	0	**2**	**4**	**10**
11:45	12:00	0	1	1	**2**	0	0	2	**2**	**4**	2	0	2	**4**	1	1	0	**2**	**6**	**10**
12:00	12:15	0	1	2	**3**	0	1	0	**1**	**4**	0	0	1	**1**	0	3	0	**3**	**4**	**8**
12:15	12:30	0	3	2	**5**	1	1	0	**2**	**7**	0	1	1	**2**	0	3	0	**3**	**5**	**12**
12:30	12:45	0	0	1	**1**	0	2	0	**2**	**3**	0	2	0	**2**	1	2	0	**3**	**5**	**8**
12:45	13:00	1	1	0	**2**	0	0	1	**1**	**3**	0	1	1	**2**	0	1	0	**1**	**3**	**6**
13:00	13:15	0	3	1	**4**	0	1	0	**1**	**5**	0	0	1	**1**	2	1	0	**3**	**4**	**9**
13:15	13:30	0	2	0	**2**	0	1	1	**2**	**4**	0	0	0	**0**	1	1	0	**2**	**2**	**6**
15:00	15:15	0	0	1	**1**	1	3	0	**4**	**5**	0	0	1	**1**	1	1	0	**2**	**3**	**8**
15:15	15:30	1	2	3	**6**	0	2	1	**3**	**9**	1	1	0	**2**	5	3	1	**9**	**11**	**20**
15:30	15:45	0	0	0	**0**	1	7	2	**10**	**10**	2	0	1	**3**	2	1	0	**3**	**6**	**16**
15:45	16:00	0	2	2	**4**	0	1	0	**1**	**5**	1	0	0	**1**	1	0	0	**1**	**2**	**7**
16:00	16:15	0	3	0	**3**	0	1	1	**2**	**5**	1	0	0	**1**	0	1	0	**1**	**2**	**7**
16:15	16:30	1	2	1	**4**	0	2	0	**2**	**6**	0	1	0	**1**	2	0	2	**4**	**5**	**11**
16:30	16:45	0	2	0	**2**	1	3	1	**5**	**7**	1	0	0	**1**	0	3	0	**3**	**4**	**11**
16:45	17:00	1	1	2	**4**	0	2	1	**3**	**7**	0	0	0	**0**	0	2	1	**3**	**3**	**10**
17:00	17:15	0	0	0	**0**	0	1	0	**1**	**1**	0	1	0	**1**	0	1	0	**1**	**2**	**3**
17:15	17:30	0	1	3	**4**	0	1	0	**1**	**5**	0	0	0	**0**	1	2	2	**5**	**5**	**10**
17:30	17:45	0	0	0	**0**	0	0	0	**0**	**0**	0	0	2	**2**	0	2	1	**3**	**5**	**5**
Total:	None	11	45	30	**86**	11	51	20	**82**	**168**	16	36	14	**66**	32	48	13	**93**	**159**	**327**

Transportation Services - Traffic Services

Turning Movement Count - Study Results

CAMPEAU DR @ KANATA AVE

Survey Date: Tuesday, January 09, 2024 **WO No:** 41473

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

Full Study 15 Minute U-Turn Total

		KANATA AVE		CAMPEAU DR		
Time Period		Northbound U-Turn Total	Southbound U-Turn Total	Eastbound U-Turn Total	Westbound U-Turn Total	Total
07:00	07:15	0	0	0	0	0
07:15	07:30	0	0	0	0	0
07:30	07:45	0	0	0	0	0
09:00	09:15	0	0	0	0	0
17:45	18:00	0	0	0	0	0
07:45	08:00	0	0	0	0	0
08:00	08:15	0	0	0	0	0
08:15	08:30	0	0	0	0	0
08:30	08:45	0	0	0	0	0
08:45	09:00	0	0	0	0	0
09:15	09:30	0	0	0	0	0
09:30	09:45	0	0	0	0	0
09:45	10:00	0	0	0	0	0
11:30	11:45	0	0	0	0	0
11:45	12:00	0	0	0	0	0
12:00	12:15	0	0	0	0	0
12:15	12:30	0	0	0	0	0
12:30	12:45	0	0	0	0	0
12:45	13:00	0	0	0	0	0
13:00	13:15	0	0	0	0	0
13:15	13:30	0	0	0	0	0
15:00	15:15	0	0	0	0	0
15:15	15:30	0	0	0	0	0
15:30	15:45	0	0	0	0	0
15:45	16:00	0	0	0	0	0
16:00	16:15	0	0	0	0	0
16:15	16:30	0	0	0	0	0
16:30	16:45	0	0	0	0	0
16:45	17:00	0	0	0	0	0
17:00	17:15	0	0	0	0	0
17:15	17:30	0	0	0	0	0
17:30	17:45	0	0	0	0	0
Total		0	0	0	0	0

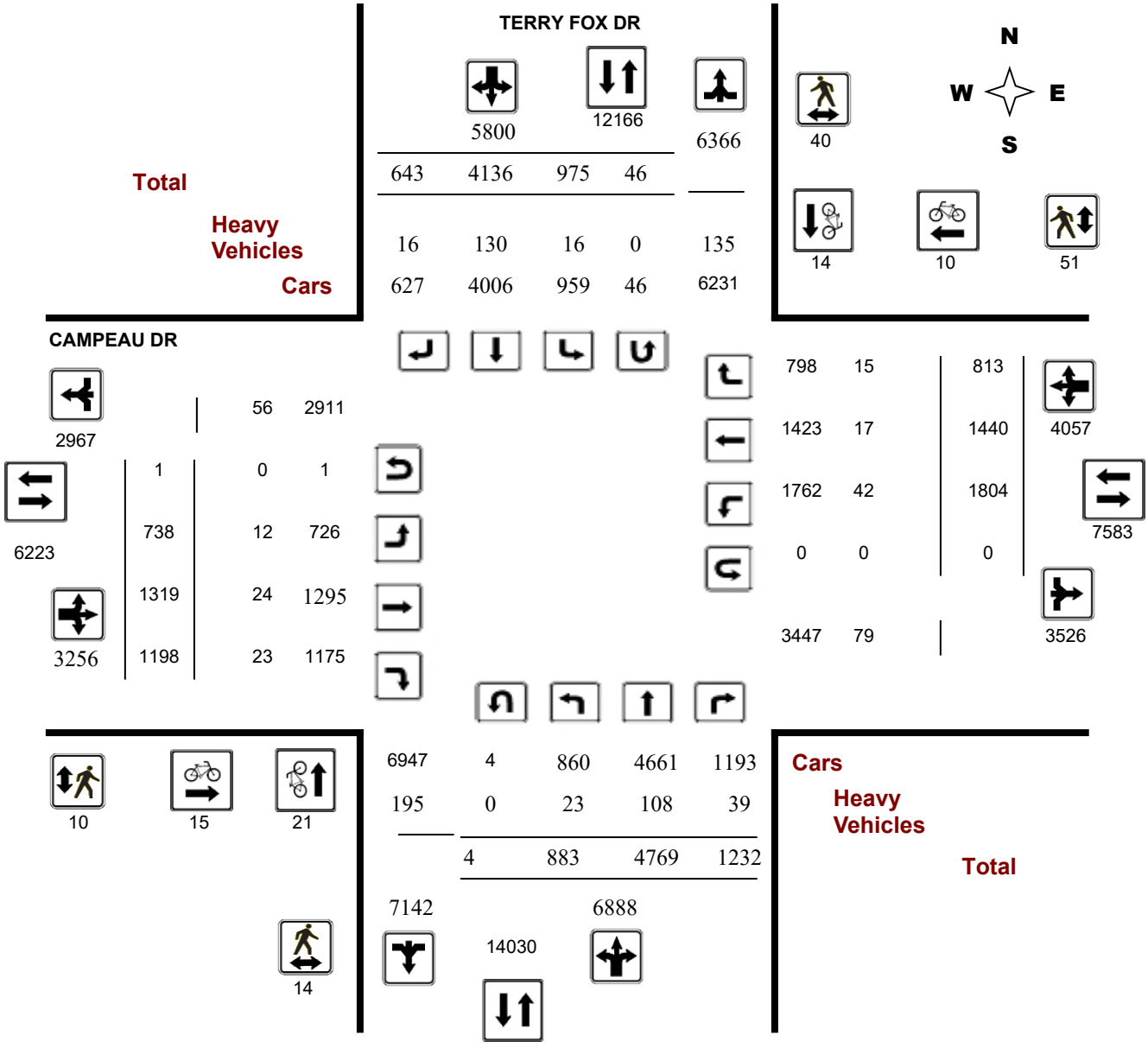
Transportation Services - Traffic Services

Turning Movement Count - Study Results

CAMPEAU DR @ TERRY FOX DR

Survey Date: Thursday, October 17, 2024
Start Time: 07:00
WO No: 42297
Device: Miovision

Full Study Diagram



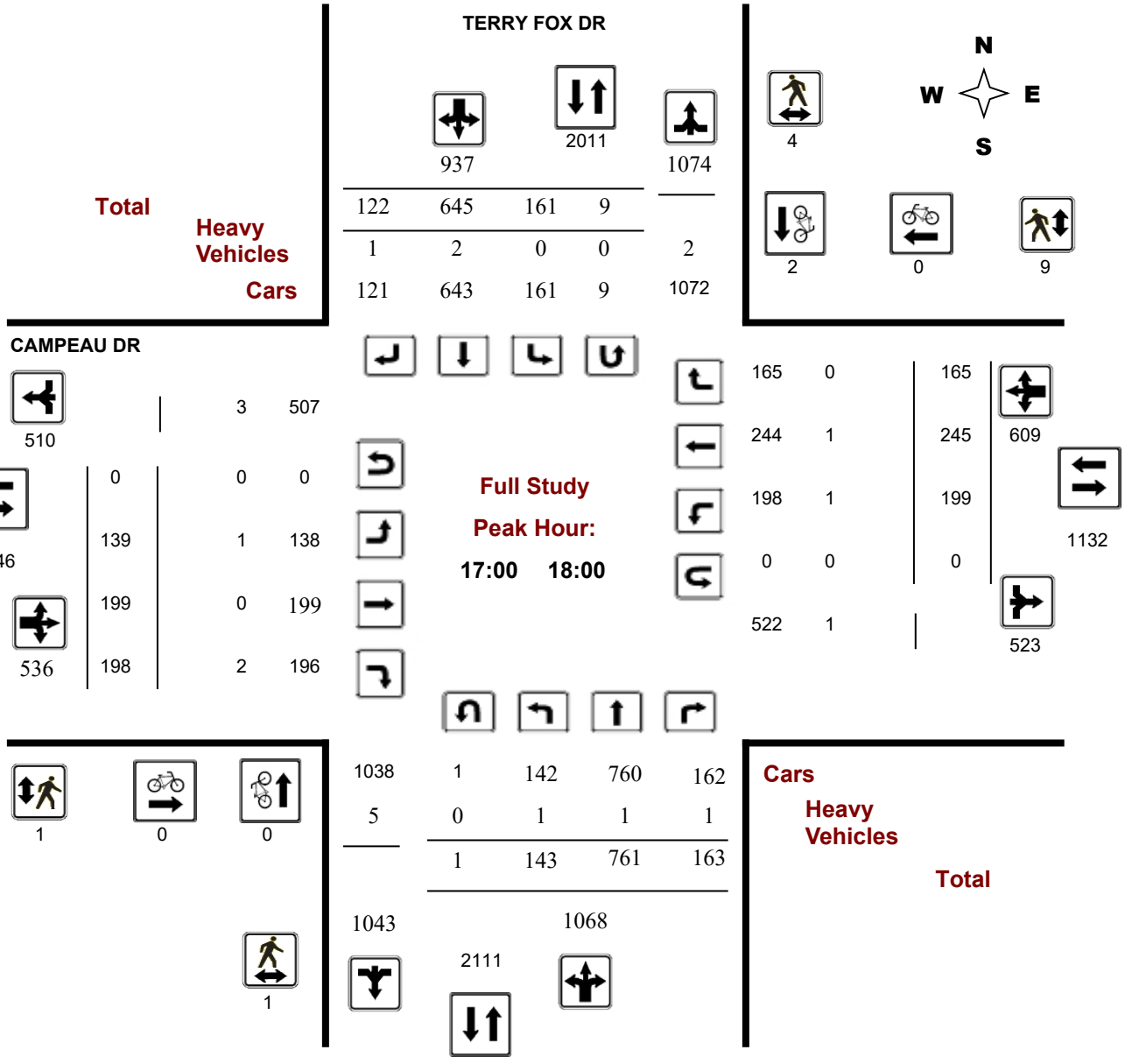
Transportation Services - Traffic Services

Turning Movement Count - Study Results

CAMPEAU DR @ TERRY FOX DR

Survey Date: Thursday, October 17, 2024
Start Time: 07:00
WO No: 42297
Device: Miovision

Full Study Peak Hour Diagram



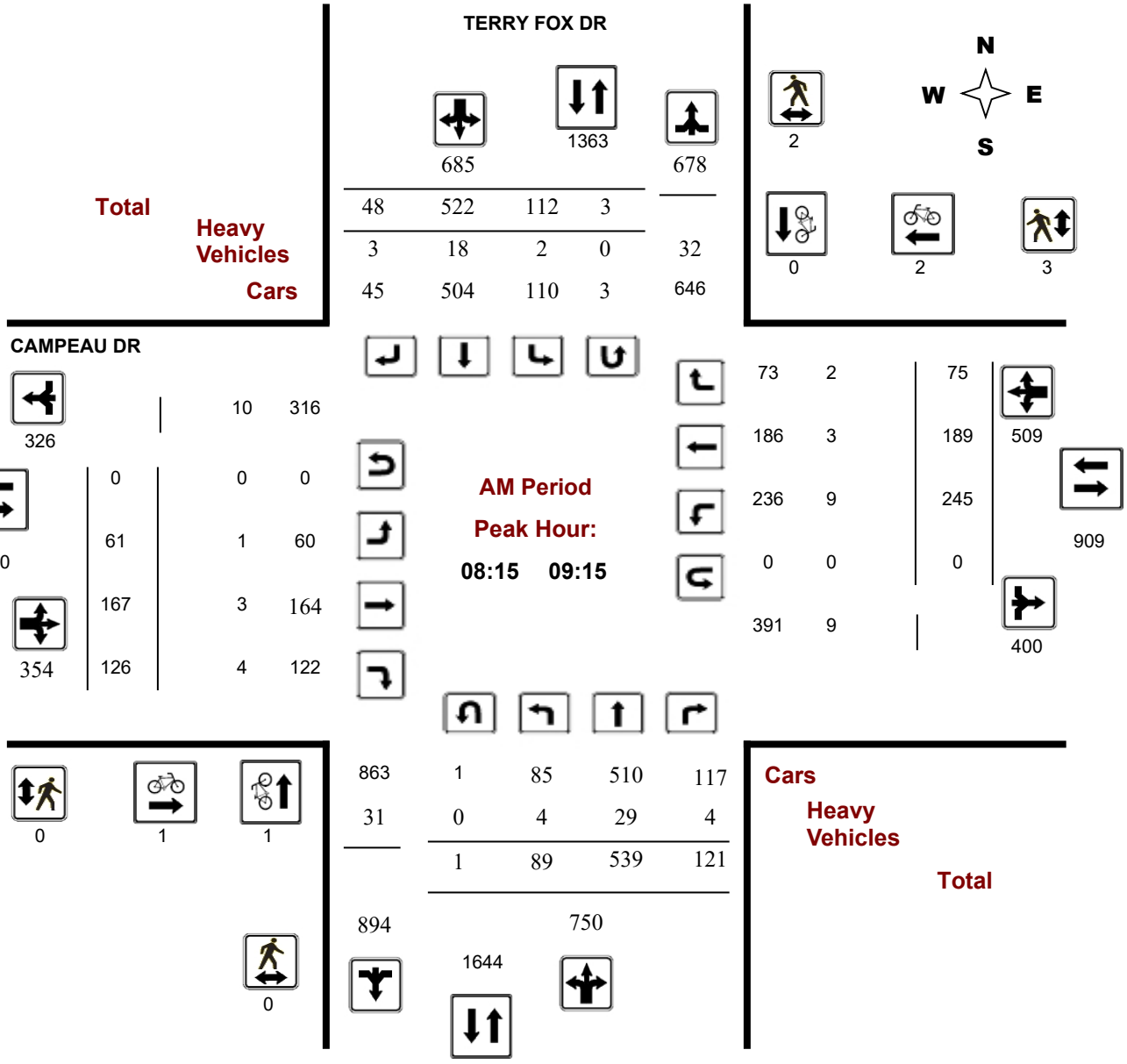
Transportation Services - Traffic Services

Turning Movement Count - Study Results

CAMPEAU DR @ TERRY FOX DR

Survey Date: Thursday, October 17, 2024
Start Time: 07:00
WO No: 42297
Device: Miovision

AM Period Peak Hour Diagram



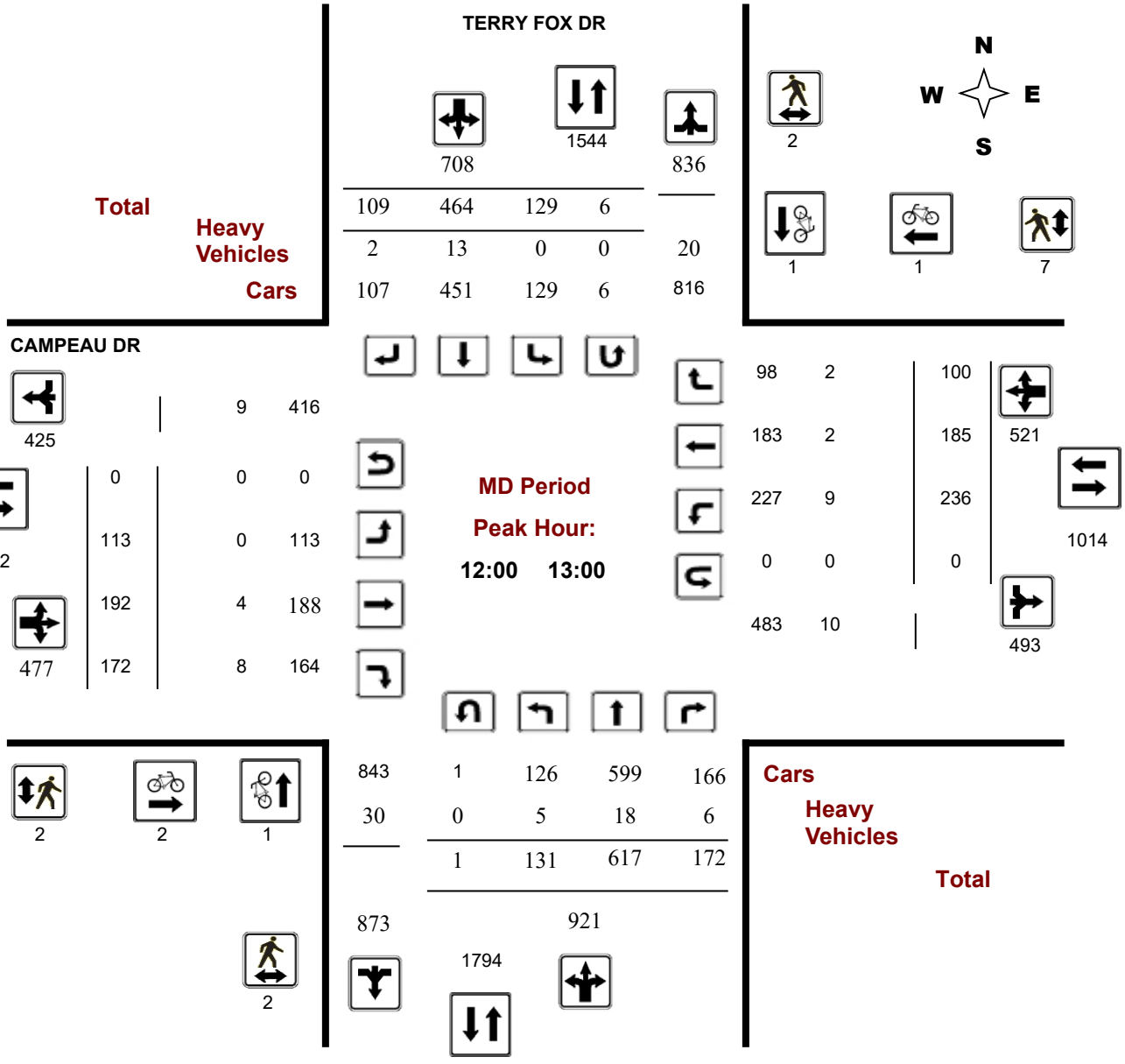
Transportation Services - Traffic Services

Turning Movement Count - Study Results

CAMPEAU DR @ TERRY FOX DR

Survey Date: Thursday, October 17, 2024
Start Time: 07:00
WO No: 42297
Device: Miovision

MD Period Peak Hour Diagram



Transportation Services - Traffic Services

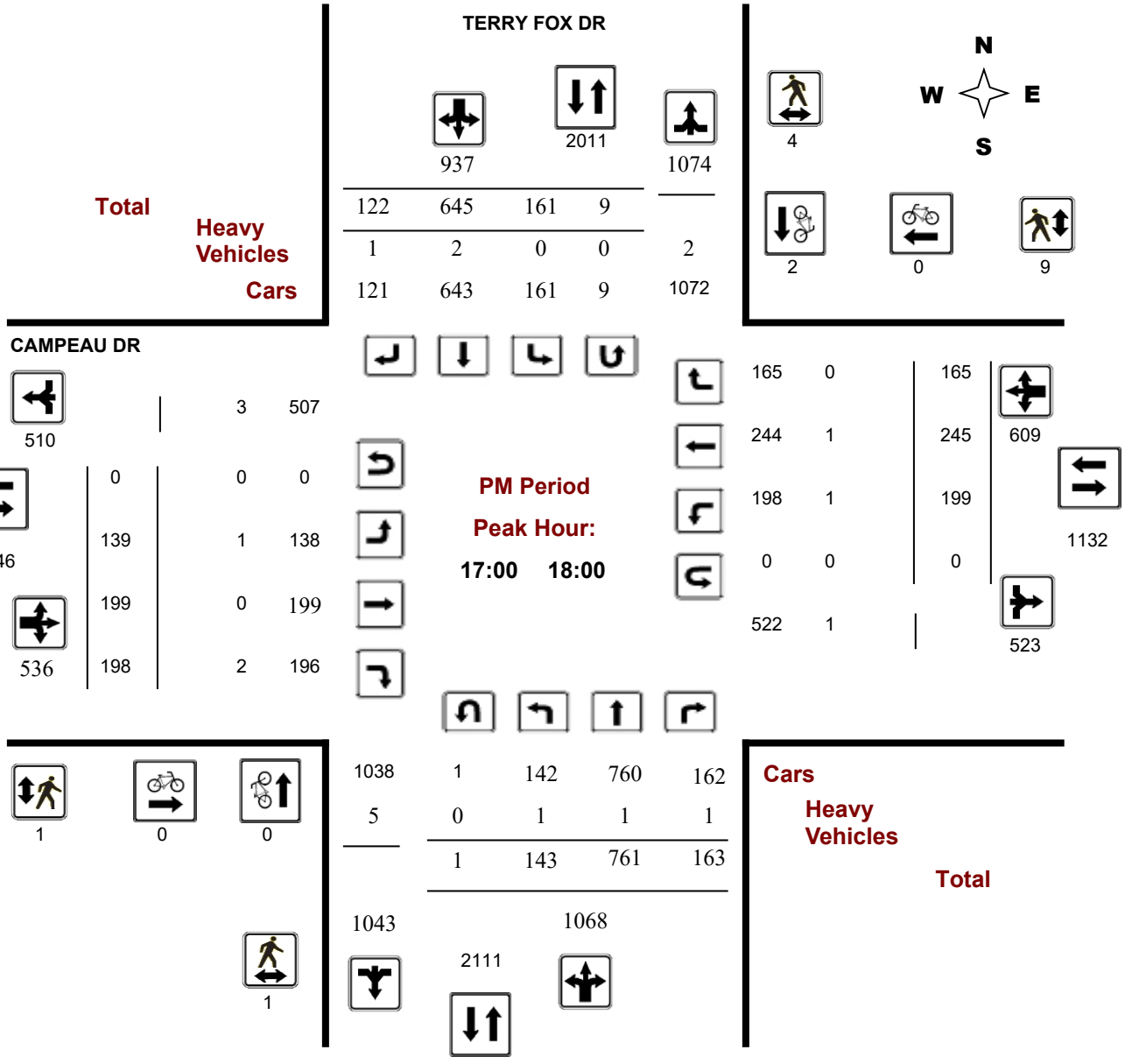
Turning Movement Count - Study Results

CAMPEAU DR @ TERRY FOX DR

Survey Date: Thursday, October 17, 2024 **WO No:** 42297

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

PM Period Peak Hour Diagram



Transportation Services - Traffic Services

Turning Movement Count - Study Results

CAMPEAU DR @ TERRY FOX DR

Survey Date: Thursday, October 17, 2024 **WO No:** 42297

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

Full Study Summary (8 HR Standard)

Survey Date: Thursday, October 17, 2024

Total Observed U-Turns

Northbound: 4 Southbound: 46

Eastbound: 1 Westbound: 0

AADT Factor

.90

	TERRY FOX DR									CAMPEAU DR									
	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	51	326	106	**483**	85	395	27	**507**	**990**	32	71	74	**177**	178	44	45	**267**	**444**	**1434**
08:00 09:00	81	522	136	**739**	111	514	40	**665**	**1404**	50	192	123	**365**	237	160	72	**469**	**834**	**2238**
09:00 10:00	80	490	100	**670**	102	456	68	**626**	**1296**	71	118	119	**308**	245	155	62	**462**	**770**	**2066**
11:30 12:30	126	553	179	**858**	127	457	77	**661**	**1519**	105	192	178	**475**	249	184	98	**531**	**1006**	**2525**
12:30 13:30	120	646	178	**944**	127	459	102	**688**	**1632**	118	166	160	**444**	221	176	93	**490**	**934**	**2566**
15:00 16:00	130	688	188	**1006**	104	612	111	**827**	**1833**	120	201	164	**485**	278	260	109	**647**	**1132**	**2965**
16:00 17:00	152	783	182	**1117**	158	598	96	**852**	**1969**	103	180	182	**465**	197	216	169	**582**	**1047**	**3016**
17:00 18:00	143	761	163	**1067**	161	645	122	**928**	**1995**	139	199	198	**536**	199	245	165	**609**	**1145**	**3140**
Sub Total	883	4769	1232	**6884**	975	4136	643	**5754**	**12638**	738	1319	1198	**3255**	1804	1440	813	**4057**	**7312**	**19950**
U Turns				**4**				**46**	**50**				**1**				**0**	**1**	**51**
Total	883	4769	1232	**6888**	975	4136	643	**5800**	**12688**	738	1319	1198	**3256**	1804	1440	813	**4057**	**7313**	**20001**
EQ 12Hr	1227	6629	1712	**9574**	1355	5749	894	**8062**	**17636**	1026	1833	1665	**4526**	2508	2002	1130	**5639**	**10165**	**27801**

Note: These values are calculated by multiplying the totals by the appropriate expansion factor. **1.39**

AVG 12Hr	1104	5966	1541	**8617**	1220	6778	1054	**7256**	**15872**	923	1650	1498	**4073**	2257	1802	1017	**5075**	**9148**	**25021**

Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor. **.90**

AVG 24Hr	1446	7815	2019	**11288**	1598	8879	1381	**9505**	**20792**	1209	2162	1962	**5336**	2957	2361	1332	**6648**	**11984**	**32778**

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

CAMPEAU DR @ TERRY FOX DR

Survey Date: Thursday, October 17, 2024 **WO No:** 42297

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

Full Study 15 Minute Increments

		TERRY FOX DR									CAMPEAU DR									
		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	8	56	26	90	19	77	4	100	190	6	14	21	41	44	8	13	65	106	296
07:15	07:30	12	74	12	98	20	88	9	120	218	4	12	26	42	36	11	11	58	100	318
07:30	07:45	19	74	27	120	21	105	5	131	251	8	21	3	32	47	7	10	64	96	347
08:00	08:15	13	120	36	169	21	120	11	152	321	8	54	18	80	49	21	10	80	160	481
17:45	18:00	32	178	40	250	50	160	32	245	495	40	51	46	137	49	54	38	141	278	773
12:00	12:15	33	138	42	213	38	114	22	174	387	20	56	42	118	62	52	22	136	254	641
07:45	08:00	12	122	41	175	25	125	9	160	335	14	24	24	62	51	18	11	80	142	477
08:15	08:30	21	128	42	191	33	130	9	172	363	10	64	37	111	56	42	17	115	226	589
08:30	08:45	22	140	27	189	33	129	7	170	359	14	41	34	89	68	43	24	135	224	583
09:15	09:30	15	128	20	163	22	98	16	137	300	13	33	26	72	70	40	13	123	195	495
09:30	09:45	24	123	29	176	32	99	14	145	321	25	27	45	98	58	32	15	105	203	524
11:45	12:00	32	140	42	214	31	119	16	169	383	25	39	40	104	48	47	26	121	225	608
12:15	12:30	36	158	43	237	26	126	25	177	414	33	47	49	129	62	46	29	137	266	680
12:30	12:45	28	153	45	226	32	114	26	175	401	31	55	41	127	47	38	28	113	240	641
15:00	15:15	25	139	55	219	22	114	16	155	374	34	60	44	138	67	64	34	165	303	677
15:15	15:30	39	172	51	262	14	170	23	209	471	28	39	42	109	60	84	33	177	286	757
15:30	15:45	35	179	44	258	37	156	30	226	484	30	49	36	115	84	57	18	159	274	758
15:45	16:00	31	198	38	267	31	172	42	246	513	28	53	42	123	67	55	24	146	269	782
16:00	16:15	34	201	45	280	45	143	23	213	493	28	48	48	124	51	60	39	150	274	767
16:15	16:30	31	198	48	278	37	165	25	229	507	26	41	48	115	51	58	45	154	269	776
17:00	17:15	34	216	44	294	38	157	24	220	514	25	55	54	134	54	64	40	158	292	806
17:30	17:45	34	174	48	257	34	155	30	222	479	38	56	52	146	43	58	34	135	281	760
08:45	09:00	25	134	31	190	24	135	13	173	363	18	33	34	85	64	54	21	139	224	587
09:00	09:15	21	137	21	180	22	128	19	170	350	19	29	21	69	57	50	13	120	189	539
16:45	17:00	52	189	48	289	44	151	25	220	509	28	42	43	113	40	60	43	143	256	765
09:45	10:00	20	102	30	152	26	131	19	178	330	14	29	27	70	60	33	21	114	184	514
11:30	11:45	25	117	52	194	32	98	14	145	339	27	50	47	124	77	39	21	137	261	600
12:45	13:00	34	168	42	245	33	110	36	182	427	29	34	40	103	65	49	21	135	238	665
13:00	13:15	26	151	49	226	33	98	23	155	381	35	44	33	112	52	45	21	118	230	611
13:15	13:30	32	174	42	248	29	137	17	184	432	23	33	46	102	57	44	23	124	226	658
16:30	16:45	35	195	41	271	32	139	23	196	467	21	49	43	113	55	38	42	135	248	715
17:15	17:30	43	193	31	267	39	173	36	250	517	36	37	46	119	53	69	53	175	294	811
Total:		883	4769	1232	6888	975	4136	643	5800	12688	738	1319	1198	3256	1804	1440	813	4057	7313	20,001

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

Transportation Services - Traffic Services

Turning Movement Count - Study Results

CAMPEAU DR @ TERRY FOX DR

Survey Date: Thursday, October 17, 2024 **WO No:** 42297

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

Full Study Cyclist Volume

Time Period		TERRY FOX DR			CAMPEAU DR			
		Northbound	Southbound	Street Total	Eastbound	Westbound	Street Total	Grand Total
07:00	07:15	1	0	1	1	0	1	2
07:15	07:30	0	0	0	0	0	0	0
07:30	07:45	3	0	3	1	0	1	4
08:00	08:15	0	3	3	0	0	0	3
17:45	18:00	0	2	2	0	0	0	2
12:00	12:15	1	0	1	0	0	0	1
07:45	08:00	5	0	5	4	1	5	10
08:15	08:30	1	0	1	1	1	2	3
08:30	08:45	0	0	0	0	0	0	0
09:15	09:30	0	0	0	0	0	0	0
09:30	09:45	0	0	0	0	0	0	0
11:45	12:00	0	0	0	1	0	1	1
12:15	12:30	0	0	0	2	0	2	2
12:30	12:45	0	0	0	0	1	1	1
15:00	15:15	1	1	2	1	0	1	3
15:15	15:30	0	1	1	2	2	4	5
15:30	15:45	3	2	5	0	0	0	5
15:45	16:00	2	0	2	1	1	2	4
16:00	16:15	0	0	0	0	0	0	0
16:15	16:30	1	2	3	0	0	0	3
17:00	17:15	0	0	0	0	0	0	0
17:30	17:45	0	0	0	0	0	0	0
08:45	09:00	0	0	0	0	0	0	0
09:00	09:15	0	0	0	0	1	1	1
16:45	17:00	0	0	0	0	0	0	0
09:45	10:00	0	1	1	0	1	1	2
11:30	11:45	1	1	2	0	1	1	3
12:45	13:00	0	1	1	0	0	0	1
13:00	13:15	2	0	2	0	0	0	2
13:15	13:30	0	0	0	0	0	0	0
16:30	16:45	0	0	0	1	1	2	2
17:15	17:30	0	0	0	0	0	0	0
Total		21	14	**35**	15	10	25	60

Transportation Services - Traffic Services

Turning Movement Count - Study Results

CAMPEAU DR @ TERRY FOX DR

Survey Date: Thursday, October 17, 2024 **WO No:** 42297

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

Full Study Pedestrian Volume

	TERRY FOX DR			CAMPEAU DR			
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	0	**1**	0	0	**0**	**1**
07:15 07:30	0	1	**1**	0	0	**0**	**1**
07:30 07:45	0	0	**0**	0	0	**0**	**0**
08:00 08:15	0	0	**0**	0	0	**0**	**0**
17:45 18:00	0	1	**1**	1	4	**5**	**6**
12:00 12:15	0	1	**1**	1	0	**1**	**2**
07:45 08:00	0	0	**0**	0	0	**0**	**0**
08:15 08:30	0	2	**2**	0	0	**0**	**2**
08:30 08:45	0	0	**0**	0	0	**0**	**0**
09:15 09:30	0	2	**2**	0	0	**0**	**2**
09:30 09:45	0	1	**1**	0	2	**2**	**3**
11:45 12:00	2	2	**4**	0	7	**7**	**11**
12:15 12:30	2	1	**3**	1	2	**3**	**6**
12:30 12:45	0	0	**0**	0	1	**1**	**1**
15:00 15:15	2	4	**6**	1	2	**3**	**9**
15:15 15:30	0	10	**10**	1	4	**5**	**15**
15:30 15:45	2	0	**2**	1	2	**3**	**5**
15:45 16:00	1	3	**4**	0	1	**1**	**5**
16:00 16:15	0	1	**1**	0	1	**1**	**2**
16:15 16:30	1	3	**4**	0	2	**2**	**6**
17:00 17:15	1	2	**3**	0	3	**3**	**6**
17:30 17:45	0	0	**0**	0	0	**0**	**0**
08:45 09:00	0	0	**0**	0	1	**1**	**1**
09:00 09:15	0	0	**0**	0	2	**2**	**2**
16:45 17:00	0	1	**1**	0	2	**2**	**3**
09:45 10:00	0	2	**2**	0	3	**3**	**5**
11:30 11:45	2	1	**3**	4	3	**7**	**10**
12:45 13:00	0	0	**0**	0	4	**4**	**4**
13:00 13:15	0	0	**0**	0	2	**2**	**2**
13:15 13:30	0	0	**0**	0	1	**1**	**1**
16:30 16:45	0	1	**1**	0	0	**0**	**1**
17:15 17:30	0	1	**1**	0	2	**2**	**3**
Total	14	40	**54**	10	51	**61**	**115**

Transportation Services - Traffic Services

Turning Movement Count - Study Results

CAMPEAU DR @ TERRY FOX DR

Survey Date: Thursday, October 17, 2024 **WO No:** 42297

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

Full Study Heavy Vehicles

		TERRY FOX DR									CAMPEAU DR									
		Northbound				Southbound					Eastbound				Westbound					
Time Period		LT	ST	RT	**N TOT**	LT	ST	RT	**S TOT**	**STR TOT**	LT	ST	RT	**E TOT**	LT	ST	RT	**W TOT**	**STR TOT**	**Grand Total**
07:00	07:15	0	4	1	**5**	0	2	0	**2**	**7**	1	0	0	**1**	2	0	1	**3**	**4**	**11**
07:15	07:30	0	5	1	**6**	3	3	0	**6**	**12**	0	1	0	**1**	2	0	0	**2**	**3**	**15**
07:30	07:45	1	4	0	**5**	3	2	1	**6**	**11**	0	1	0	**1**	1	0	0	**1**	**2**	**13**
08:00	08:15	1	6	2	**9**	0	7	0	**7**	**16**	2	2	0	**4**	1	0	1	**2**	**6**	**22**
17:45	18:00	1	0	0	**1**	0	0	0	**0**	**1**	0	0	1	**1**	0	0	0	**0**	**1**	**2**
12:00	12:15	3	7	2	**12**	0	2	0	**2**	**14**	0	2	3	**5**	1	0	1	**2**	**7**	**21**
07:45	08:00	1	2	2	**5**	0	2	0	**2**	**7**	1	1	0	**2**	4	0	0	**4**	**6**	**13**
08:15	08:30	2	11	0	**13**	1	2	1	**4**	**17**	0	2	1	**3**	1	1	1	**3**	**6**	**23**
08:30	08:45	1	12	3	**16**	0	5	0	**5**	**21**	0	1	0	**1**	1	1	1	**3**	**4**	**25**
09:15	09:30	1	4	2	**7**	1	9	0	**10**	**17**	1	1	0	**2**	2	2	1	**5**	**7**	**24**
09:30	09:45	0	7	1	**8**	1	4	0	**5**	**13**	0	0	0	**0**	2	2	2	**6**	**6**	**19**
11:45	12:00	3	4	0	**7**	1	4	2	**7**	**14**	0	2	0	**2**	1	0	1	**2**	**4**	**18**
12:15	12:30	1	5	1	**7**	0	3	1	**4**	**11**	0	0	2	**2**	1	0	0	**1**	**3**	**14**
12:30	12:45	1	4	2	**7**	0	4	1	**5**	**12**	0	2	3	**5**	2	1	1	**4**	**9**	**21**
15:00	15:15	0	1	1	**2**	0	4	0	**4**	**6**	0	1	0	**1**	2	0	0	**2**	**3**	**9**
15:15	15:30	0	3	1	**4**	0	8	1	**9**	**13**	1	3	1	**5**	1	1	1	**3**	**8**	**21**
15:30	15:45	1	1	3	**5**	1	0	0	**1**	**6**	0	1	1	**2**	1	1	0	**2**	**4**	**10**
15:45	16:00	0	3	2	**5**	0	2	2	**4**	**9**	1	1	1	**3**	0	0	0	**0**	**3**	**12**
16:00	16:15	0	2	1	**3**	0	3	1	**4**	**7**	0	0	0	**0**	1	2	0	**3**	**3**	**10**
16:15	16:30	0	2	2	**4**	0	6	1	**7**	**11**	0	1	1	**2**	0	0	1	**1**	**3**	**14**
17:00	17:15	0	0	1	**1**	0	0	0	**0**	**1**	0	0	1	**1**	1	0	0	**1**	**2**	**3**
17:30	17:45	0	0	0	**0**	0	1	0	**1**	**1**	1	0	0	**1**	0	0	0	**0**	**1**	**2**
08:45	09:00	0	3	0	**3**	1	6	0	**7**	**10**	1	0	3	**4**	3	1	0	**4**	**8**	**18**
09:00	09:15	1	3	1	**5**	0	5	2	**7**	**12**	0	0	0	**0**	4	0	0	**4**	**4**	**16**
16:45	17:00	0	0	0	**0**	1	9	0	**10**	**10**	1	0	2	**3**	0	0	1	**1**	**4**	**14**
09:45	10:00	0	4	1	**5**	1	4	0	**5**	**10**	0	2	0	**2**	0	0	0	**0**	**2**	**12**
11:30	11:45	0	0	3	**3**	0	6	0	**6**	**9**	0	0	2	**2**	1	0	1	**2**	**4**	**13**
12:45	13:00	0	2	1	**3**	0	4	0	**4**	**7**	0	0	0	**0**	5	1	0	**6**	**6**	**13**
13:00	13:15	2	2	2	**6**	1	2	2	**5**	**11**	1	0	0	**1**	0	2	1	**3**	**4**	**15**
13:15	13:30	1	5	1	**7**	1	14	0	**15**	**22**	1	0	1	**2**	1	0	0	**1**	**3**	**25**
16:30	16:45	2	1	2	**5**	0	6	0	**6**	**11**	0	0	0	**0**	1	1	0	**2**	**2**	**13**
17:15	17:30	0	1	0	**1**	0	1	1	**2**	**3**	0	0	0	**0**	0	1	0	**1**	**1**	**4**
Total:	None	23	108	39	**170**	16	130	16	**162**	**332**	12	24	23	**59**	42	17	15	**74**	**133**	**465**

Transportation Services - Traffic Services

Turning Movement Count - Study Results

CAMPEAU DR @ TERRY FOX DR

Survey Date: Thursday, October 17, 2024 **WO No:** 42297

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

Full Study 15 Minute U-Turn Total

Time Period		TERRY FOX DR Northbound U-Turn Total	TERRY FOX DR Southbound U-Turn Total	CAMPEAU DR Eastbound U-Turn Total	CAMPEAU DR Westbound U-Turn Total	Total
07:00	07:15	0	0	0	0	0
07:15	07:30	0	3	0	0	3
07:30	07:45	0	0	0	0	0
08:00	08:15	0	0	0	0	0
17:45	18:00	0	3	0	0	3
12:00	12:15	0	0	0	0	0
07:45	08:00	0	1	0	0	1
08:15	08:30	0	0	0	0	0
08:30	08:45	0	1	0	0	1
09:15	09:30	0	1	0	0	1
09:30	09:45	0	0	1	0	1
11:45	12:00	0	3	0	0	3
12:15	12:30	0	0	0	0	0
12:30	12:45	0	3	0	0	3
15:00	15:15	0	3	0	0	3
15:15	15:30	0	2	0	0	2
15:30	15:45	0	3	0	0	3
15:45	16:00	0	1	0	0	1
16:00	16:15	0	2	0	0	2
16:15	16:30	1	2	0	0	3
17:00	17:15	0	1	0	0	1
17:30	17:45	1	3	0	0	4
08:45	09:00	0	1	0	0	1
09:00	09:15	1	1	0	0	2
16:45	17:00	0	0	0	0	0
09:45	10:00	0	2	0	0	2
11:30	11:45	0	1	0	0	1
12:45	13:00	1	3	0	0	4
13:00	13:15	0	1	0	0	1
13:15	13:30	0	1	0	0	1
16:30	16:45	0	2	0	0	2
17:15	17:30	0	2	0	0	2
Total		4	46	1	0	51

Turning Movement Count
Summary Report
Including AM and PM Peak Hours
All Vehicles Except Bicycles and Personal E-Transportation

Didsbury Road/Roland Michener Drive & Terry Fox Drive — Kanata, ON

Survey Date: Tuesday, May 06, 2025 **Start Time:** 0700 **AADT Factor:** 0.9

Weather AM: Cloudy 6° C **Survey Duration:** 6 Hrs. **Survey Hours:** 0700-1000 & 1500-1800

Weather PM: Mostly Cloudy 12° C **Surveyor(s):** J. Mousseau

	Didsbury Rd.					Roland Michener Dr.						Terry Fox Dr.					Terry Fox Dr.						
	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	15	5	63	0	**83**	35	16	19	0	**70**	**153**	81	484	107	0	**672**	25	620	18	3	**666**	**1338**	**1491**
0800-0900	20	10	101	0	**131**	59	11	18	0	**88**	**219**	130	714	145	2	**991**	36	807	15	2	**860**	**1851**	**2070**
0900-1000	42	23	117	0	**182**	104	24	33	0	**161**	**343**	174	659	224	2	**1059**	37	774	19	0	**830**	**1889**	**2232**
1500-1600	24	21	178	0	**223**	298	40	84	1	**423**	**646**	213	843	424	3	**1483**	92	894	24	1	**1011**	**2494**	**3140**
1600-1700	32	36	190	0	**258**	321	36	81	0	**438**	**696**	214	871	467	0	**1552**	107	1001	21	1	**1130**	**2682**	**3378**
1700-1800	35	24	146	0	**205**	303	39	87	0	**429**	**634**	199	864	475	0	**1538**	122	983	26	2	**1133**	**2671**	**3305**
Totals	**168**	**119**	**795**	**0**	**1082**	**1120**	**166**	**322**	**1**	**1609**	**2691**	**1011**	**4435**	**1842**	**7**	**7295**	**419**	**5079**	**123**	**9**	**5630**	**12925**	**15616**

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	n/a	n/a	n/a	n/a	**n/a**	n/a	n/a	n/a	n/a	**n/a**	**n/a**	n/a	n/a	n/a	n/a	**n/a**	n/a	n/a	n/a	n/a	**n/a**	**n/a**	**n/a**

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	n/a	n/a	n/a	n/a	**n/a**	n/a	n/a	n/a	n/a	**n/a**	**n/a**	n/a	n/a	n/a	n/a	**n/a**	n/a	n/a	n/a	n/a	**n/a**	**n/a**	**n/a**

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	n/a	n/a	n/a	n/a	**n/a**	n/a	n/a	n/a	n/a	**n/a**	**n/a**	n/a	n/a	n/a	n/a	**n/a**	n/a	n/a	n/a	n/a	**n/a**	**n/a**	**n/a**

AADT and expansion factors provided by the City of Ottawa

AM Peak Hour Factor ➡					0.97							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. Total
0900-1000	42	23	117	0	**182**	104	24	33	0	**161**	**343**	174	659	224	2	**1059**	37	774	19	0	**830**	**1889**	**2232**

PM Peak Hour Factor ➡					0.97							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.
1630-1730	35	26	154	0	**215**	307	33	89	0	**429**	**644**	198	875	480	0	**1553**	127	1042	30	3	**1202**	**2755**	**3399**

Comments:

OC Transpo and Para Transpo buses, private buses and school buses comprise 30.83% of the heavy vehicle traffic. There were quite a few near misses involving northbound left-turning vehicles and southbound through vehicles. Occasional backup occurred during the PM period southbound from the traffic signal at the westbound Highway 417 off ramp.

Notes:

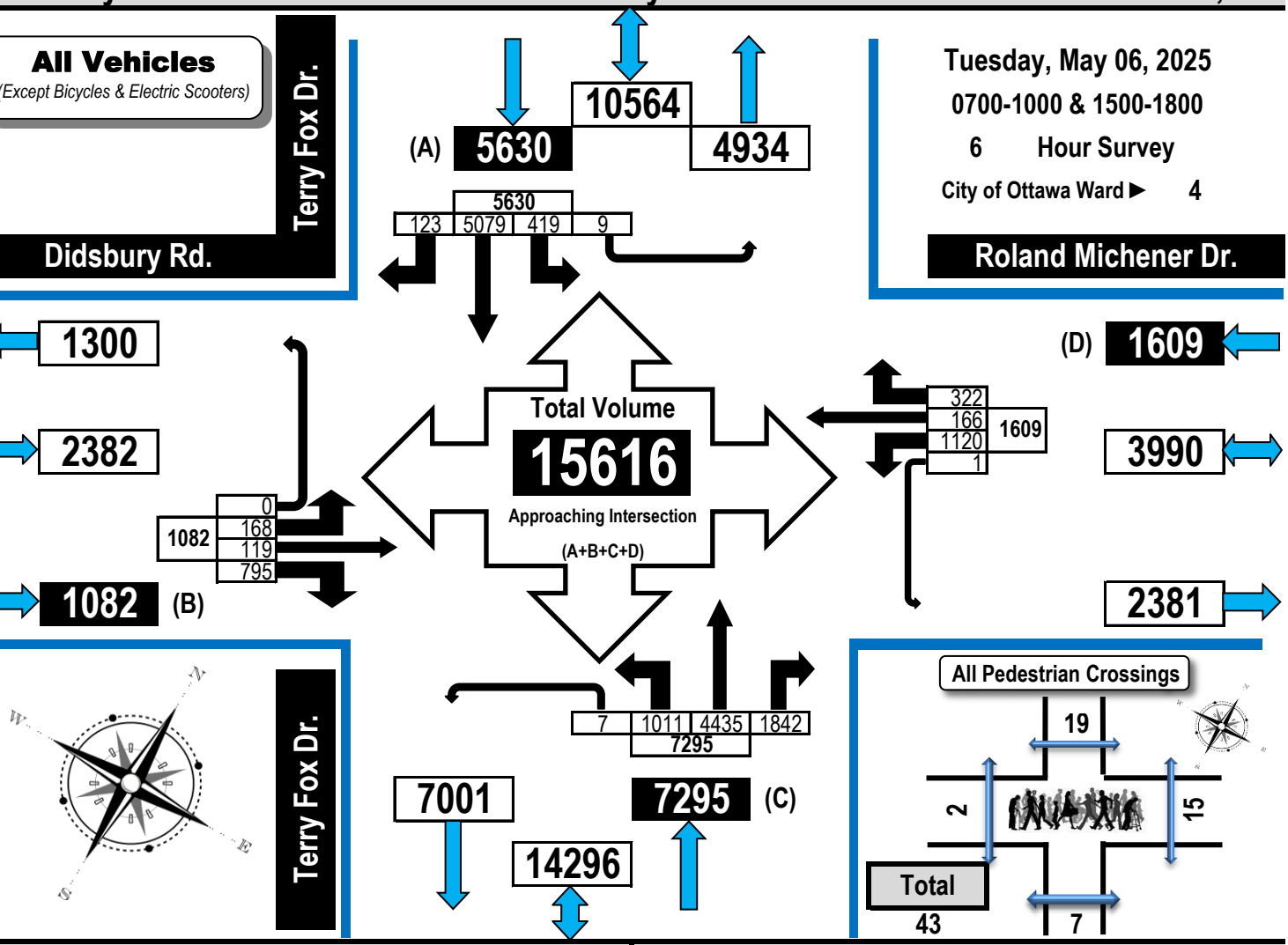
1. Includes all vehicle types except bicycles, electric bicycles, and electric scooters.
2. When expansion and AADT factors are applied, the results will differ slightly due to rounding.

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

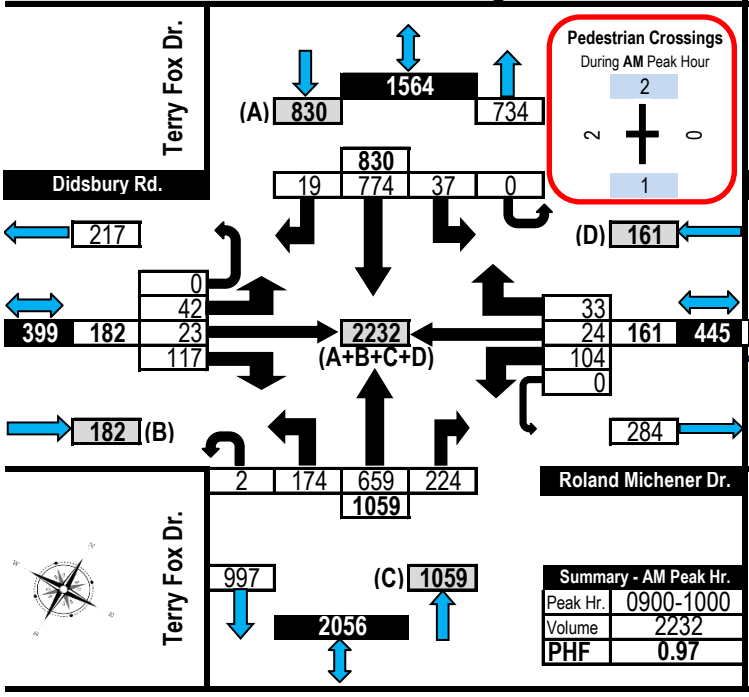
Didsbury Road/Roland Michener Drive & Terry Fox Drive — Kanata, ON

All Vehicles
(Except Bicycles & Electric Scooters)

Tuesday, May 06, 2025
0700-1000 & 1500-1800
6 Hour Survey
City of Ottawa Ward ▶ 4

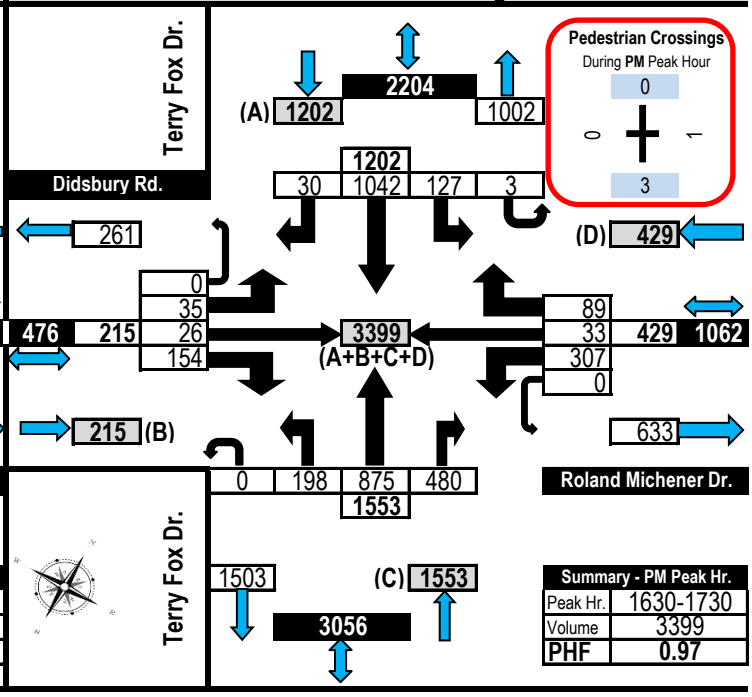


AM Peak Hour Flow Diagram



Summary - AM Peak Hr.	
Peak Hr.	0900-1000
Volume	2232
PHF	0.97

PM Peak Hour Flow Diagram



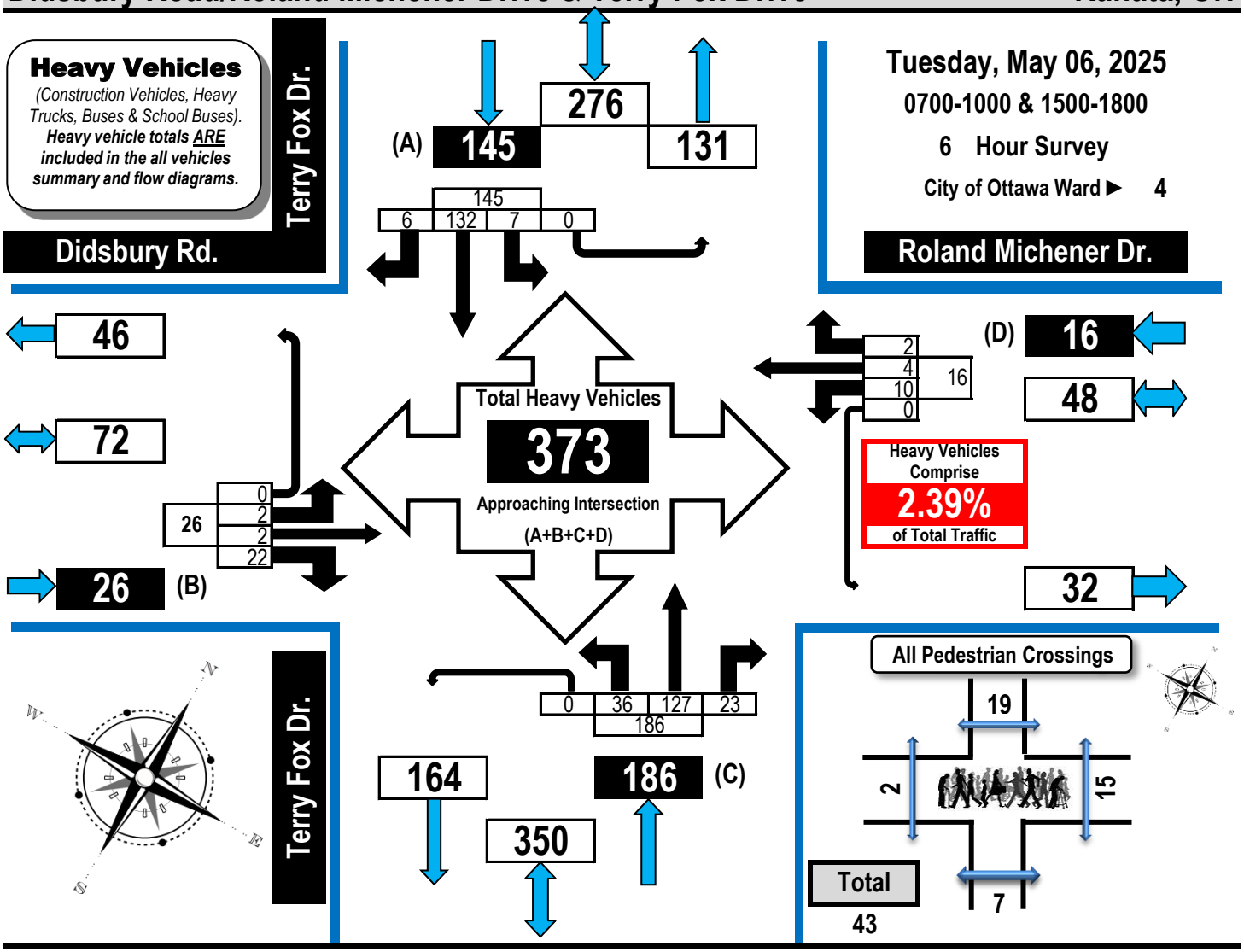
Summary - PM Peak Hr.	
Peak Hr.	1630-1730
Volume	3399
PHF	0.97

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

Didsbury Road/Roland Michener Drive & Terry Fox Drive — Kanata, ON

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

Tuesday, May 06, 2025
0700-1000 & 1500-1800
6 Hour Survey
City of Ottawa Ward ► 4



	Didsbury Rd.					Roland Michener Dr.					Terry Fox Dr.					Terry Fox Dr.				
	Eastbound					Westbound					Northbound					Southbound				
Time Period	LT	ST	RT	UT	EB Tot	LT	ST	RT	UT	WB Tot	LT	ST	RT	UT	NB Tot	LT	ST	RT	UT	SB Tot	GR Tot
0700-0800	1	0	1	0	2	2	1	1	0	4	3	27	11	0	41	2	21	2	0	25	72
0800-0900	0	0	6	0	6	2	2	0	0	4	7	31	6	0	44	2	20	1	0	23	77
0900-1000	0	1	6	0	7	1	1	0	0	2	6	33	1	0	40	1	37	2	0	40	89
1500-1600	1	1	2	0	4	4	0	0	0	4	8	19	1	0	28	1	23	0	0	24	60
1600-1700	0	0	7	0	7	0	0	1	0	1	7	10	0	0	17	0	21	1	0	22	47
1700-1800	0	0	0	0	0	1	0	0	0	1	5	7	4	0	16	1	10	0	0	11	28
Totals	2	2	22	0	26	10	4	2	0	16	36	127	23	0	186	7	132	6	0	145	373

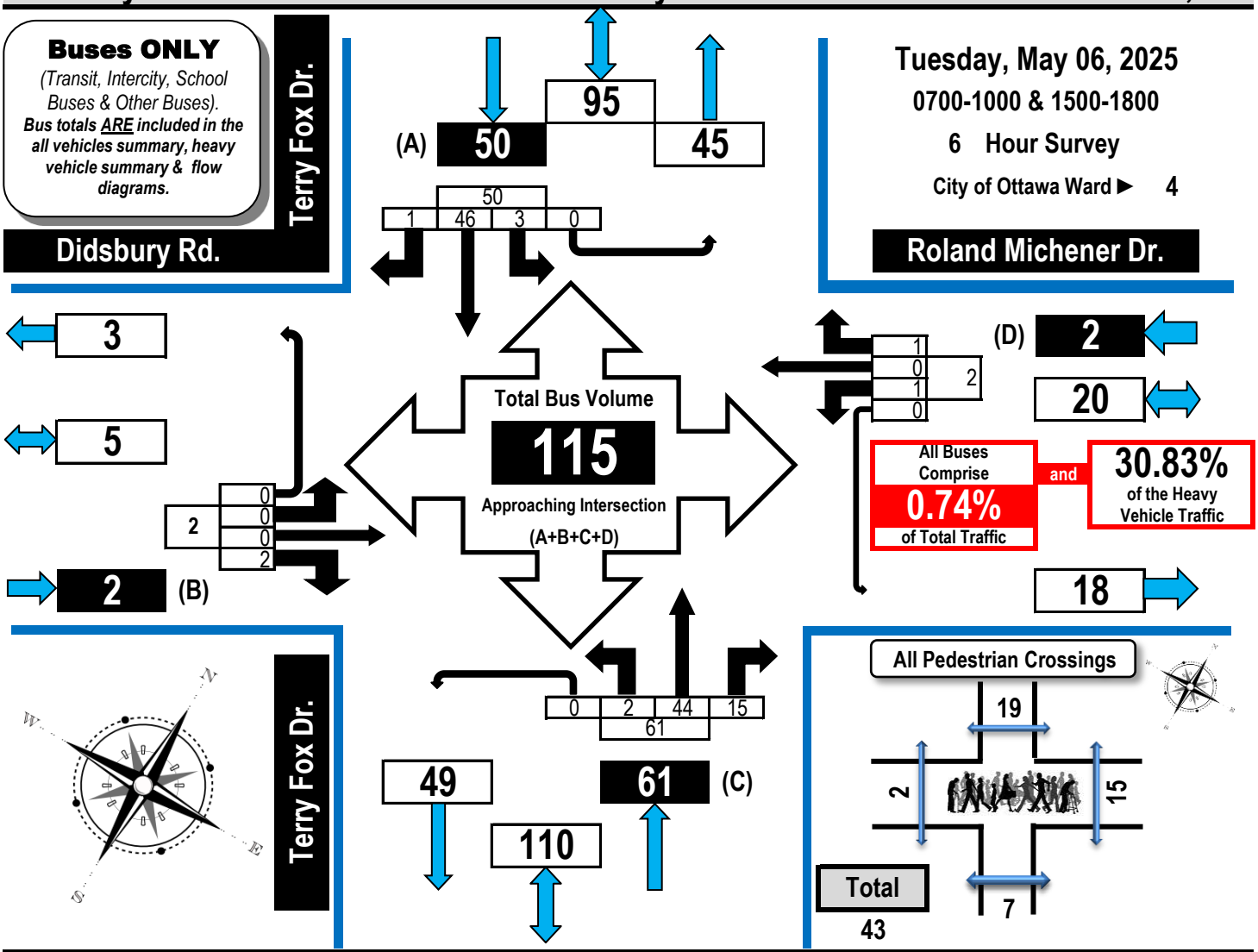
Comments:
OC Transpo and Para Transpo buses, private buses and school buses comprise 30.83% of the heavy vehicle traffic. There were quite a few near misses involving northbound left-turning vehicles and southbound through vehicles. Occasional backup occurred during the PM period southbound from the traffic signal at the westbound Highway 417 off ramp.

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

Didsbury Road/Roland Michener Drive & Terry Fox Drive — Kanata, ON

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

Tuesday, May 06, 2025
0700-1000 & 1500-1800
6 Hour Survey
City of Ottawa Ward ► 4

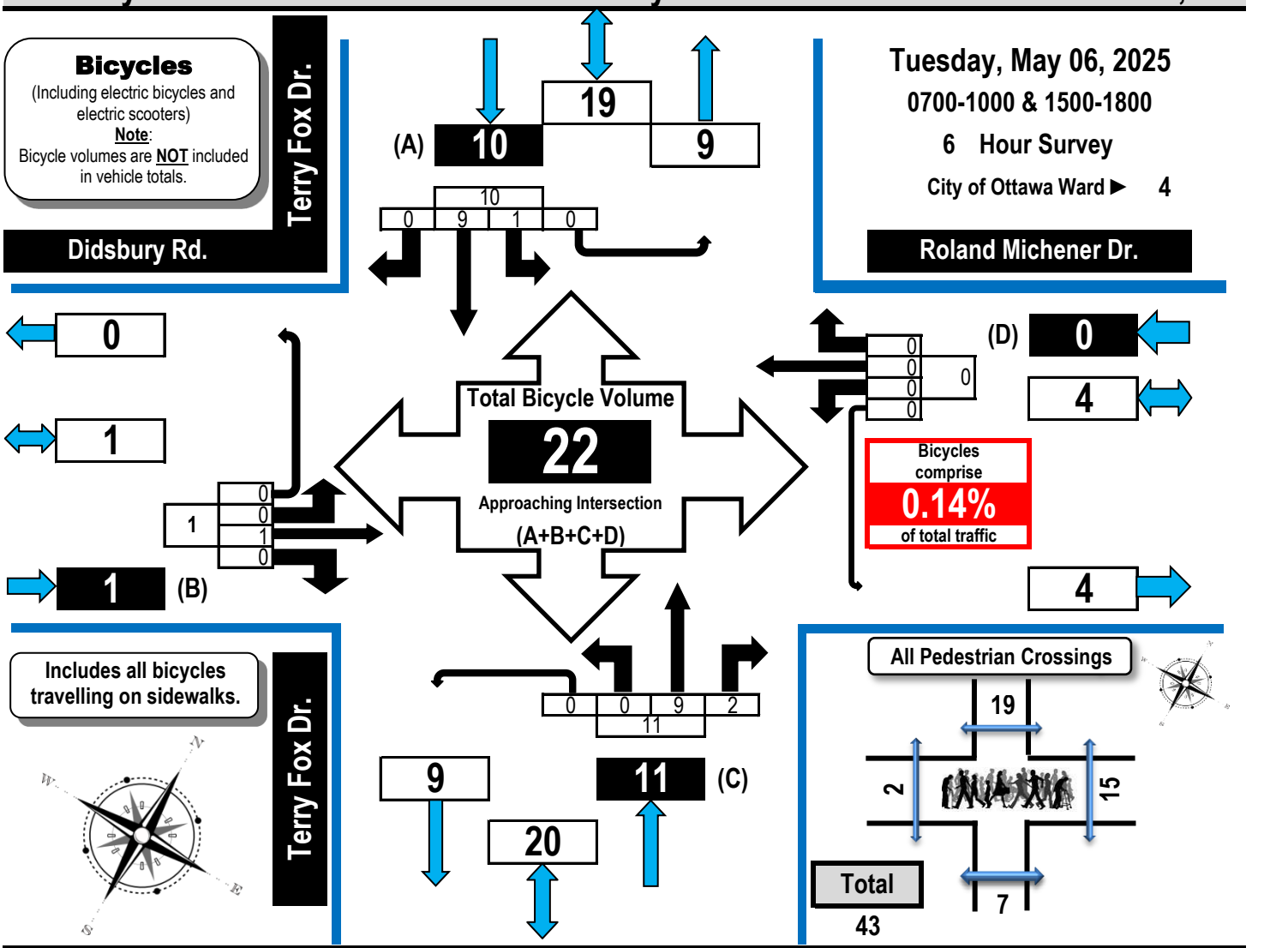


	Didsbury Rd.				Eastbound	Roland Michener Dr.				Westbound	Terry Fox Dr.				Northbound	Terry Fox Dr.				Southbound	
Time Period	LT	ST	RT	UT	EB Tot	LT	ST	RT	UT	WB Tot	LT	ST	RT	UT	NB Tot	LT	ST	RT	UT	SB Tot	GR Tot
0700-0800	0	0	0	0	0	1	0	1	0	2	0	13	10	0	23	2	5	0	0	7	32
0800-0900	0	0	0	0	0	0	0	0	0	0	0	11	1	0	12	1	9	0	0	10	22
0900-1000	0	0	2	0	2	0	0	0	0	0	0	2	0	0	2	0	9	1	0	10	14
1500-1600	0	0	0	0	0	0	0	0	0	0	1	10	0	0	11	0	10	0	0	10	21
1600-1700	0	0	0	0	0	0	0	0	0	0	1	4	0	0	5	0	9	0	0	9	14
1700-1800	0	0	0	0	0	0	0	0	0	0	0	4	4	0	8	0	4	0	0	4	12
Totals	0	0	2	0	2	1	0	1	0	2	2	44	15	0	61	3	46	1	0	50	115

Comments:
OC Transpo and Para Transpo buses, private buses and school buses comprise 30.83% of the heavy vehicle traffic. There were quite a few near misses involving northbound left-turning vehicles and southbound through vehicles. Occasional backup occurred during the PM period southbound from the traffic signal at the westbound Highway 417 off ramp.

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

Didsbury Road/Roland Michener Drive & Terry Fox Drive — Kanata, ON



	Didsbury Rd.					Roland Michener Dr.					Terry Fox Dr.					Terry Fox Dr.					
	Eastbound					Westbound					Northbound					Southbound					
Time Period	LT	ST	RT	UT	EB Tot	LT	ST	RT	UT	WB Tot	LT	ST	RT	UT	NB Tot	LT	ST	RT	UT	SB Tot	GR Tot
0700-0800	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0800-0900	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	4
0900-1000	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0	1	2
1500-1600	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	2
1600-1700	0	1	0	0	1	0	0	0	0	0	0	7	0	0	7	1	2	0	0	3	11
1700-1800	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	2	0	0	2	3
Totals	**0**	**1**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**9**	**2**	**0**	**11**	**1**	**9**	**0**	**0**	**10**	**22**

Comments:

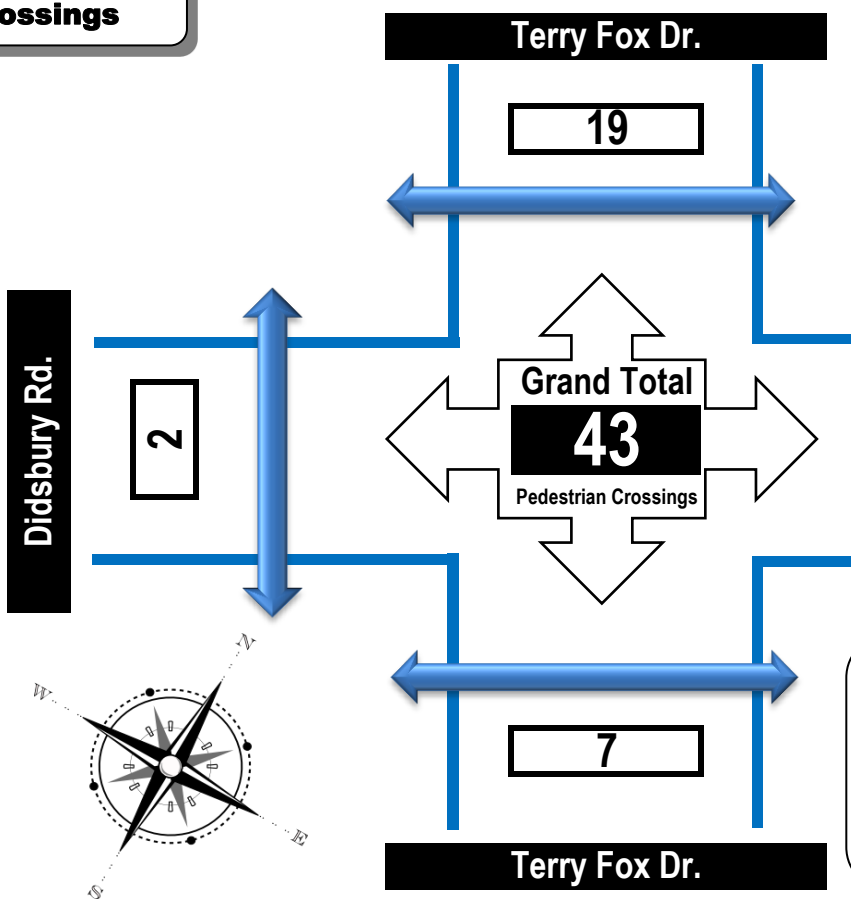
OC Transpo and Para Transpo buses, private buses and school buses comprise 30.83% of the heavy vehicle traffic. There were quite a few near misses involving northbound left-turning vehicles and southbound through vehicles. Occasional backup occurred during the PM period southbound from the traffic signal at the westbound Highway 417 off ramp.

Turning Movement Count
Pedestrian Crossings Summary and Flow Diagram

Didsbury Road/Roland Michener Drive & Terry Fox Drive — Kanata, ON

Pedestrian Crossings

Tuesday, May 06, 2025
0700-1000 & 1500-1800
6 Hour Survey
City of Ottawa Ward ► 4



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 Didsbury Rd.	East Side Crossing Roland Michener Dr.	Street Total	South Side Crossing Terry Fox Dr.	North Side Crossing Terry Fox Dr.	Street Total	Grand Total
0700-0800	0	0	0	0	1	1	1
0800-0900	0	2	2	1	1	2	4
0900-1000	2	0	2	1	2	3	5
1500-1600	0	9	9	2	6	8	17
1600-1700	0	3	3	3	6	9	12
1700-1800	0	1	1	0	3	3	4
Totals	**2**	**15**	**17**	**7**	**19**	**26**	**43**

Comments:
OC Transpo and Para Transpo buses, private buses and school buses comprise 30.83% of the heavy vehicle traffic. There were quite a few near misses involving northbound left-turning vehicles and southbound through vehicles. Occasional backup occurred during the PM period southbound from the traffic signal at the westbound Highway 417 off ramp.

Appendix C

Synchro and Sidra Worksheets – Existing Conditions

MOVEMENT SUMMARY

Site: 101 [Winterset-Campeau AM Existing (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

8201 Campeau
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Donum															
1	L2	All MCs	9	0.0	9	0.0	0.012	10.2	LOS B	0.0	0.2	0.28	0.63	0.28	46.4
2	T1	All MCs	1	0.0	1	0.0	0.012	4.1	LOS A	0.0	0.2	0.28	0.63	0.28	47.5
3	R2	All MCs	3	0.0	3	0.0	0.004	4.3	LOS A	0.0	0.1	0.30	0.46	0.30	51.6
Approach			14	0.0	14	0.0	0.012	8.3	LOS A	0.0	0.2	0.29	0.59	0.29	47.5
East: Campeau															
4	L2	All MCs	11	0.0	11	0.0	0.106	9.4	LOS A	0.4	2.8	0.07	0.35	0.07	51.9
5	T1	All MCs	140	2.0	140	2.0	0.106	3.3	LOS A	0.4	2.8	0.07	0.37	0.07	55.6
6	R2	All MCs	80	2.0	80	2.0	0.106	4.2	LOS A	0.4	2.8	0.07	0.40	0.07	38.6
Approach			231	1.9	231	1.9	0.106	3.9	LOS A	0.4	2.8	0.07	0.38	0.07	48.1
North: Winterset															
7	L2	All MCs	173	2.0	173	2.0	0.177	2.0	LOS A	0.5	3.5	0.22	0.30	0.22	37.4
8	T1	All MCs	2	0.0	2	0.0	0.177	3.7	LOS A	0.5	3.5	0.22	0.30	0.22	31.2
9	R2	All MCs	17	2.0	17	2.0	0.017	0.4	LOS A	0.0	0.3	0.20	0.09	0.20	38.6
Approach			192	2.0	192	2.0	0.177	1.9	LOS A	0.5	3.5	0.22	0.29	0.22	37.5
West: Campeau															
10	L2	All MCs	5	2.0	5	2.0	0.092	10.2	LOS B	0.3	2.3	0.31	0.43	0.31	38.4
11	T1	All MCs	155	2.0	155	2.0	0.092	4.1	LOS A	0.3	2.3	0.31	0.42	0.31	54.7
12	R2	All MCs	8	0.0	8	0.0	0.092	4.3	LOS A	0.3	2.3	0.31	0.41	0.31	51.4
Approach			168	1.9	168	1.9	0.092	4.3	LOS A	0.3	2.3	0.31	0.42	0.31	53.9
All Vehicles			605	1.9	605	1.9	0.177	3.5	LOS A	0.5	3.5	0.19	0.37	0.19	45.2

Site Level of Service (LOS) Method: Delay & v/c (HCM 2010). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 2010 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 101 [Winterset-Campeau PM Existing (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

8201 Campeau
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Donum															
1	L2	All MCs	3	0.0	3	0.0	0.005	10.3	LOS B	0.0	0.1	0.31	0.61	0.31	47.0
2	T1	All MCs	1	0.0	1	0.0	0.005	4.3	LOS A	0.0	0.1	0.31	0.61	0.31	48.2
3	R2	All MCs	2	0.0	2	0.0	0.003	4.5	LOS A	0.0	0.0	0.33	0.47	0.33	51.4
Approach			6	0.0	6	0.0	0.005	7.4	LOS A	0.0	0.1	0.32	0.56	0.32	48.5
East: Campeau															
4	L2	All MCs	2	0.0	2	0.0	0.172	9.4	LOS A	0.7	4.9	0.10	0.32	0.10	52.2
5	T1	All MCs	228	2.0	228	2.0	0.172	3.4	LOS A	0.7	4.9	0.10	0.34	0.10	55.7
6	R2	All MCs	142	2.0	142	2.0	0.172	4.3	LOS A	0.7	4.9	0.10	0.41	0.10	38.5
Approach			372	2.0	372	2.0	0.172	3.7	LOS A	0.7	4.9	0.10	0.36	0.10	47.7
North: Winterset															
7	L2	All MCs	87	2.0	87	2.0	0.094	2.2	LOS A	0.2	1.7	0.25	0.33	0.25	37.4
8	T1	All MCs	1	0.0	1	0.0	0.094	3.9	LOS A	0.2	1.7	0.25	0.33	0.25	31.2
9	R2	All MCs	11	2.0	11	2.0	0.012	0.7	LOS A	0.0	0.2	0.25	0.13	0.25	38.5
Approach			99	2.0	99	2.0	0.094	2.0	LOS A	0.2	1.7	0.25	0.31	0.25	37.4
West: Campeau															
10	L2	All MCs	19	2.0	19	2.0	0.160	9.8	LOS A	0.6	4.4	0.22	0.39	0.22	38.5
11	T1	All MCs	301	2.0	301	2.0	0.160	3.7	LOS A	0.6	4.4	0.22	0.37	0.22	55.0
12	R2	All MCs	2	0.0	2	0.0	0.160	3.9	LOS A	0.6	4.4	0.22	0.35	0.22	52.1
Approach			322	2.0	322	2.0	0.160	4.1	LOS A	0.6	4.4	0.22	0.37	0.22	53.6
All Vehicles			800	2.0	800	2.0	0.172	3.7	LOS A	0.7	4.9	0.17	0.36	0.17	48.2

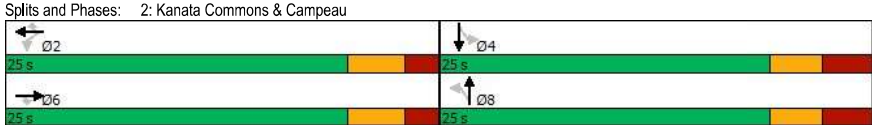
Site Level of Service (LOS) Method: Delay & v/c (HCM 2010). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 2010 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	348	7	15	209	0	2	0	13	0	0	0
Future Volume (vph)	0	348	7	15	209	0	2	0	13	0	0	0
Satd. Flow (prot)	0	3316	1483	1658	3316	1745	1658	1464	0	1745	1745	0
Flt Permitted				0.523								
Satd. Flow (perm)	0	3316	1452	912	3316	1745	1745	1464	0	1745	1745	0
Satd. Flow (RTOR)			63					302				
Lane Group Flow (vph)	0	387	8	17	232	0	2	14	0	0	0	0
Turn Type		NA	Perm	Perm	NA	Perm	Perm	NA		Perm		
Protected Phases		6			2			8			4	
Permitted Phases			6	2		2	8			4		
Detector Phase		6	6	2	2	2	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)		23.3	23.3	23.3	23.3	23.3	23.9	23.9		23.9	23.9	
Total Split (s)		25.0	25.0	25.0	25.0	25.0	25.0	25.0		25.0	25.0	
Total Split (%)		50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%		50.0%	50.0%	
Yellow Time (s)		3.3	3.3	3.3	3.3	3.3	3.0	3.0		3.0	3.0	
All-Red Time (s)		2.0	2.0	2.0	2.0	2.0	2.9	2.9		2.9	2.9	
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)		5.3	5.3	5.3	5.3	5.3	5.9	5.9		5.9	5.9	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode		Max	Max	Max	Max	Max	None	None		None	None	
Act Effct Green (s)		40.7	40.7	40.7	40.7		11.5	11.5				
Actuated g/C Ratio		0.91	0.91	0.91	0.91		0.26	0.26				
v/c Ratio		0.13	0.01	0.02	0.08		0.00	0.02				
Control Delay		2.6	0.0	3.7	2.6		14.5	0.1				
Queue Delay		0.0	0.0	0.0	0.0		0.0	0.0				
Total Delay		2.6	0.0	3.7	2.6		14.5	0.1				
LOS		A	A	A	A		B	A				
Approach Delay		2.5			2.7			1.9				
Approach LOS		A			A			A				
Queue Length 50th (m)		0.0	0.0	0.0	0.0		0.1	0.0				
Queue Length 95th (m)		17.6	0.0	3.2	11.0		1.4	0.0				
Internal Link Dist (m)		129.8			222.4			129.9			12.7	
Turn Bay Length (m)			65.0	120.0			30.0					
Base Capacity (vph)		3013	1325	829	3013		771	815				
Starvation Cap Reductn		0	0	0	0		0	0				
Spillback Cap Reductn		0	0	0	0		0	0				
Storage Cap Reductn		0	0	0	0		0	0				
Reduced v/c Ratio		0.13	0.01	0.02	0.08		0.00	0.02				

Intersection Summary
Cycle Length: 50
Actuated Cycle Length: 44.8
Natural Cycle: 50
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.13

Intersection Signal Delay: 2.5 Intersection LOS: A
Intersection Capacity Utilization 32.9% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 2: Kanata Commons & Campeau

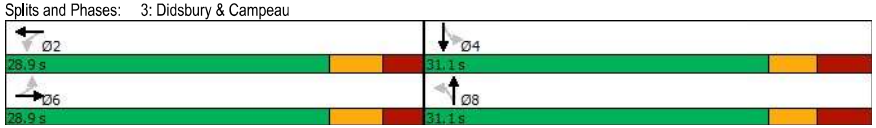


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	353	4	2	219	0	6	0	1	0	0	0
Future Volume (vph)	1	353	4	2	219	0	6	0	1	0	0	0
Satd. Flow (prot)	1658	3309	0	1658	3316	0	1658	1464	0	1745	1745	0
Flt Permitted	0.601			0.518								
Satd. Flow (perm)	1047	3309	0	904	3316	0	1745	1464	0	1745	1745	0
Satd. Flow (RTOR)		2						278				
Lane Group Flow (vph)	1	396	0	2	243	0	7	1	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm		
Protected Phases		6			2			8			4	
Permitted Phases	6			2			8			4		
Detector Phase	6	6		2	2		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	
Minimum Split (s)	27.5	27.5		27.5	27.5		31.1	31.1		31.1	31.1	
Total Split (s)	28.9	28.9		28.9	28.9		31.1	31.1		31.1	31.1	
Total Split (%)	48.2%	48.2%		48.2%	48.2%		51.8%	51.8%		51.8%	51.8%	
Yellow Time (s)	3.7	3.7		3.7	3.7		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.8	2.8		2.8	2.8		3.8	3.8		3.8	3.8	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.5	6.5		6.5	6.5		7.1	7.1		7.1	7.1	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	Max	Max		Max	Max		None	None		None	None	
Act Effct Green (s)	45.1	45.1		45.1	45.1		12.3	12.3				
Actuated g/C Ratio	0.90	0.90		0.90	0.90		0.25	0.25				
v/c Ratio	0.00	0.13		0.00	0.08		0.02	0.00				
Control Delay	6.0	3.5		5.5	3.5		15.5	0.0				
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0				
Total Delay	6.0	3.5		5.5	3.5		15.5	0.0				
LOS	A	A		A	A		B	A				
Approach Delay		3.5			3.5			13.6				
Approach LOS		A			A			B				
Queue Length 50th (m)	0.0	0.0		0.0	0.0		0.4	0.0				
Queue Length 95th (m)	0.8	23.6		1.1	15.0		3.2	0.0				
Internal Link Dist (m)		222.4			123.4			171.0			27.1	
Turn Bay Length (m)	45.0			45.0			15.0					
Base Capacity (vph)	942	2977		813	2983		874	872				
Starvation Cap Reductn	0	0		0	0		0	0				
Spillback Cap Reductn	0	0		0	0		0	0				
Storage Cap Reductn	0	0		0	0		0	0				
Reduced v/c Ratio	0.00	0.13		0.00	0.08		0.01	0.00				

Intersection Summary
Cycle Length: 60
Actuated Cycle Length: 50.1
Natural Cycle: 60
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.13

Intersection Signal Delay: 3.6 — Intersection LOS: A
Intersection Capacity Utilization 37.5% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 3: Didsbury & Campeau



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	61	167	126	245	189	75	90	539	121	115	522	48
Future Volume (vph)	61	167	126	245	189	75	90	539	121	115	522	48
Satd. Flow (prot)	1642	1745	1441	1580	1712	1363	1658	3191	1441	1658	3191	1483
Flt Permitted	0.556			0.592			0.950			0.950		
Satd. Flow (perm)	960	1745	1423	985	1712	1343	1658	3191	1403	1654	3191	1483
Satd. Flow (RTOR)			140			94			134			94
Lane Group Flow (vph)	68	186	140	272	210	83	100	599	134	128	580	53
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	43.4	43.4	43.4	43.4	43.4	43.4	11.5	40.4	40.4	11.5	40.4	40.4
Total Split (s)	54.0	54.0	54.0	54.0	54.0	54.0	14.0	47.0	47.0	14.0	47.0	47.0
Total Split (%)	47.0%	47.0%	47.0%	47.0%	47.0%	47.0%	12.2%	40.9%	40.9%	12.2%	40.9%	40.9%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	4.2	4.2	4.2	4.2	4.2	4.2
All-Red Time (s)	2.7	2.7	2.7	2.7	2.7	2.7	2.3	2.2	2.2	2.3	2.2	2.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.4	6.4	6.4	6.4	6.4	6.4	6.5	6.4	6.4	6.5	6.4	6.4
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	35.9	35.9	35.9	35.9	35.9	35.9	11.6	44.5	44.5	15.3	48.1	48.1
Actuated g/C Ratio	0.31	0.31	0.31	0.31	0.31	0.31	0.10	0.39	0.39	0.13	0.42	0.42
v/c Ratio	0.23	0.34	0.26	0.89	0.39	0.17	0.60	0.49	0.21	0.58	0.43	0.08
Control Delay	28.1	30.3	4.9	58.6	28.5	2.9	65.5	16.0	4.8	60.2	26.7	1.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.1	30.3	4.9	58.6	28.5	2.9	65.5	16.0	4.8	60.2	26.7	1.2
LOS	C	C	A	E	C	A	E	B	A	E	C	A
Approach Delay		20.9			39.2			20.2			30.6	
Approach LOS		C			D			C			C	
Queue Length 50th (m)	11.2	31.9	0.0	41.1	29.6	0.6	23.2	39.8	3.8	26.8	50.3	0.0
Queue Length 95th (m)	19.5	43.5	11.6	46.9	16.1	0.0	#58.3	10.1	0.1	#72.7	70.9	2.1
Internal Link Dist (m)		144.2			146.9			173.9			301.0	
Turn Bay Length (m)	62.5		64.5	70.0		63.5	45.0		62.5	100.0		50.0
Base Capacity (vph)	397	722	671	407	708	610	167	1234	625	220	1335	675
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.26	0.21	0.67	0.30	0.14	0.60	0.49	0.21	0.58	0.43	0.08

Intersection Summary

Cycle Length: 115
Actuated Cycle Length: 115
Offset: 91 (79%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.89
Intersection Signal Delay: 27.6 — Intersection LOS: C
Intersection Capacity Utilization 80.1% — ICU Level of Service D
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 4: Terry Fox & Campeau

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	17	328	51	38	469	37	13	10	35	18	7	20
Future Volume (vph)	17	328	51	38	469	37	13	10	35	18	7	20
Satd. Flow (prot)	1658	1703	0	1658	1745	1483	1658	1502	0	1658	1745	1483
Flt Permitted	0.432			0.494			0.950			0.950		
Satd. Flow (perm)	753	1703	0	858	1745	1448	1658	1502	0	1639	1745	1483
Satd. Flow (RTOR)		10				83		39				86
Lane Group Flow (vph)	19	421	0	42	521	41	14	50	0	20	8	22
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases		6			2		3	8		7	4	
Permitted Phases	6			2		2						4
Detector Phase	6	6		2	2	2	3	8		7	4	4
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0	10.0	5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	35.2	35.2		35.2	35.2	35.2	10.9	28.9		10.9	28.9	28.9
Total Split (s)	67.0	67.0		67.0	67.0	67.0	18.0	30.0		18.0	30.0	30.0
Total Split (%)	58.3%	58.3%		58.3%	58.3%	58.3%	15.7%	26.1%		15.7%	26.1%	26.1%
Yellow Time (s)	3.3	3.3		3.3	3.3	3.3	3.3	3.3		3.3	3.3	3.3
All-Red Time (s)	2.9	2.9		2.9	2.9	2.9	2.6	2.6		2.6	2.6	2.6
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.2	6.2		6.2	6.2	6.2	5.9	5.9		5.9	5.9	5.9
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Recall Mode	C-Max	C-Max		C-Max	C-Max	C-Max	None	None		None	None	None
Act Effct Green (s)	89.0	89.0		89.0	89.0	89.0	6.6	12.6		7.0	12.9	12.9
Actuated g/C Ratio	0.77	0.77		0.77	0.77	0.77	0.06	0.11		0.06	0.11	0.11
v/c Ratio	0.03	0.32		0.06	0.39	0.04	0.15	0.25		0.20	0.04	0.09
Control Delay	10.3	10.2		4.9	4.6	0.2	54.5	20.9		55.3	42.3	0.8
Queue Delay	0.0	0.2		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	10.3	10.5		4.9	4.6	0.2	54.5	20.9		55.3	42.3	0.8
LOS	B	B		A	A	A	D	C		E	D	A
Approach Delay		10.4			4.4			28.2			29.2	
Approach LOS		B			A			C			C	
Queue Length 50th (m)	1.5	39.2		0.7	10.2	0.0	3.1	2.3		4.4	1.7	0.0
Queue Length 95th (m)	m5.0	75.9		m4.2	m44.5	m0.0	9.4	12.3		12.0	5.7	0.0
Internal Link Dist (m)		146.9			220.2			66.0			66.6	
Turn Bay Length (m)	45.0			90.0		75.0				40.0		30.0
Base Capacity (vph)	583	1320		664	1350	1139	174	345		174	365	378
Starvation Cap Reductn	0	323		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	0.03	0.42		0.06	0.39	0.04	0.08	0.14		0.11	0.02	0.06

Intersection Summary
Cycle Length: 115
Actuated Cycle Length: 115
Offset: 15 (13%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.39

Intersection Signal Delay: 9.1	Intersection LOS: A
Intersection Capacity Utilization 57.7%	ICU Level of Service B
Analysis Period (min) 15	

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

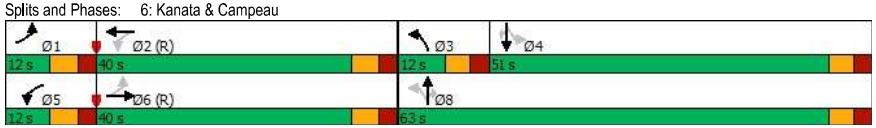
Splits and Phases: 5: Herlihey & Campeau

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	94	299	41	22	288	99	66	133	16	126	288	178
Future Volume (vph)	94	299	41	22	288	99	66	133	16	126	288	178
Satd. Flow (prot)	1658	1705	0	1658	1665	0	1658	1745	1483	1658	1745	1483
Flt Permitted	0.190			0.326			0.412			0.663		
Satd. Flow (perm)	330	1705	0	564	1665	0	717	1745	1447	1152	1745	1443
Satd. Flow (RTOR)		6			15				89			198
Lane Group Flow (vph)	104	378	0	24	430	0	73	148	18	140	320	198
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases	1	6		5	2		3	8			4	
Permitted Phases	6			2			8		8	4		4
Detector Phase	1	6		5	2		3	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	11.2	37.2		11.2	37.2		10.9	29.9	29.9	29.9	29.9	29.9
Total Split (s)	12.0	40.0		12.0	40.0		12.0	63.0	63.0	51.0	51.0	51.0
Total Split (%)	10.4%	34.8%		10.4%	34.8%		10.4%	54.8%	54.8%	44.3%	44.3%	44.3%
Yellow Time (s)	3.7	3.7		3.7	3.7		3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	2.5	2.5		2.5	2.5		2.6	2.6	2.6	2.6	2.6	2.6
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.2	6.2		6.2	6.2		5.9	5.9	5.9	5.9	5.9	5.9
Lead/Lag	Lead	Lag		Lead	Lag		Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes			Yes	Yes	Yes
Recall Mode	None	C-Max		None	C-Max		None	Max	Max	Max	Max	Max
Act Effct Green (s)	42.1	38.6		39.5	33.8		57.1	57.1	57.1	47.5	47.5	47.5
Actuated g/C Ratio	0.37	0.34		0.34	0.29		0.50	0.50	0.50	0.41	0.41	0.41
v/c Ratio	0.56	0.66		0.10	0.86		0.18	0.17	0.02	0.29	0.44	0.28
Control Delay	40.3	41.8		22.3	55.4		16.4	16.6	0.1	25.9	27.6	4.2
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.3	41.8		22.3	55.4		16.4	16.6	0.1	25.9	27.6	4.2
LOS	D	D		C	E		B	B	A	C	C	A
Approach Delay		41.5			53.7			15.3			20.2	
Approach LOS		D			D			B			C	
Queue Length 50th (m)	15.4	80.4		3.3	88.5		8.4	17.7	0.0	21.5	52.9	0.0
Queue Length 95th (m)	24.7	70.5		8.6	#142.8		16.4	29.6	0.0	37.5	78.7	14.0
Internal Link Dist (m)		220.2			90.4			97.8			155.3	
Turn Bay Length (m)	80.0			45.0			50.0		45.0	90.0		90.0
Base Capacity (vph)	187	576		249	499		405	866	763	475	720	712
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	0.56	0.66		0.10	0.86		0.18	0.17	0.02	0.29	0.44	0.28

Intersection Summary
Cycle Length: 115
Actuated Cycle Length: 115
Offset: 16 (14%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.86
Intersection Signal Delay: 33.5 Intersection LOS: C
Intersection Capacity Utilization 79.8% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: Kanata & Campeau



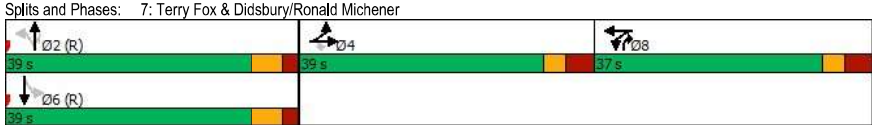
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	42	23	117	104	24	33	176	659	224	37	774	19
Future Volume (vph)	42	23	117	104	24	33	176	659	224	37	774	19
Satd. Flow (prot)	0	1691	1483	3216	1580	0	1658	3316	1483	1658	3300	0
Flt Permitted		0.969		0.950			0.271			0.335		
Satd. Flow (perm)	0	1689	1464	3211	1580	0	473	3316	1453	585	3300	0
Satd. Flow (RTOR)			130		37				249		2	
Lane Group Flow (vph)	0	73	130	116	64	0	196	732	249	41	881	0
Turn Type	Split	NA	Perm	Split	NA		Perm	NA	pm+ov	Perm	NA	
Protected Phases	4	4		8	8			2	8		6	
Permitted Phases			4				2		2	6		
Detector Phase	4	4	4	8	8		2	2	8	6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0		10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	38.7	38.7	38.7	36.7	36.7		38.4	38.4	36.7	38.4	38.4	
Total Split (s)	39.0	39.0	39.0	37.0	37.0		39.0	39.0	37.0	39.0	39.0	
Total Split (%)	33.9%	33.9%	33.9%	32.2%	32.2%		33.9%	33.9%	32.2%	33.9%	33.9%	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		4.2	4.2	3.0	4.2	4.2	
All-Red Time (s)	3.7	3.7	3.7	3.7	3.7		2.2	2.2	3.7	2.2	2.2	
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)		6.7	6.7	6.7	6.7		6.4	6.4	6.7	6.4	6.4	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None		C-Max	C-Max	None	C-Max	C-Max	
Act Effct Green (s)		14.9	14.9	14.1	14.1		66.2	66.2	80.0	66.2	66.2	
Actuated g/C Ratio		0.13	0.13	0.12	0.12		0.58	0.58	0.70	0.58	0.58	
v/c Ratio		0.33	0.43	0.29	0.28		0.72	0.38	0.23	0.12	0.46	
Control Delay		47.2	10.8	46.0	24.2		43.2	19.6	4.4	15.8	14.7	
Queue Delay		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay		47.2	10.8	46.0	24.2		43.2	19.6	4.4	15.8	14.7	
LOS		D	B	D	C		D	B	A	B	B	
Approach Delay		23.9			38.3			20.3			14.7	
Approach LOS		C			D			C			B	
Queue Length 50th (m)		15.9	0.0	12.9	5.8		23.8	30.5	0.0	2.3	33.2	
Queue Length 95th (m)		24.3	14.1	17.7	15.4		#102.8	88.3	24.5	m11.2	#132.1	
Internal Link Dist (m)		103.7			100.9			255.1			173.9	
Turn Bay Length (m)			15.0	70.0			45.0		75.0	30.0		
Base Capacity (vph)		474	504	847	443		272	1909	1151	336	1901	
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		0.15	0.26	0.14	0.14		0.72	0.38	0.22	0.12	0.46	

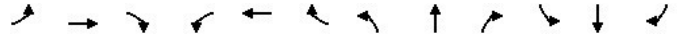
Intersection Summary

Cycle Length: 115
Actuated Cycle Length: 115
Offset: 88 (77%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 145
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.72
Intersection Signal Delay: 19.8 — Intersection LOS: B
Intersection Capacity Utilization 64.1% — 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.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 7: Terry Fox & Didsbury/Ronald Michener





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	717	0	234	0	611	159	0	782	161
Future Volume (vph)	0	0	0	717	0	234	0	611	159	0	782	161
Satd. Flow (prot)	0	0	0	3216	0	2611	0	3316	1483	0	3316	1483
Flt Permitted				0.950								
Satd. Flow (perm)	0	0	0	3216	0	2611	0	3316	1442	0	3316	1483
Satd. Flow (RTOR)						260			177			179
Lane Group Flow (vph)	0	0	0	797	0	260	0	679	177	0	869	179
Turn Type				Prot		Prot		NA	Perm		NA	Perm
Protected Phases				7 8		8		2			6	
Permitted Phases									2			6
Detector Phase				7 8		8		2	2		6	6
Switch Phase												
Minimum Initial (s)						5.0		10.0	10.0		10.0	10.0
Minimum Split (s)						11.1		35.2	35.2		17.2	17.2
Total Split (s)						25.0		59.0	59.0		59.0	59.0
Total Split (%)						21.7%		51.3%	51.3%		51.3%	51.3%
Yellow Time (s)						3.3		4.2	4.2		4.2	4.2
All-Red Time (s)						2.8		3.0	3.0		3.0	3.0
Lost Time Adjust (s)						0.0		0.0	0.0		0.0	0.0
Total Lost Time (s)						6.1		7.2	7.2		7.2	7.2
Lead/Lag						Lag						
Lead-Lag Optimize?						Yes						
Recall Mode						None		C-Max	C-Max		C-Max	C-Max
Act Effct Green (s)				41.9		11.0		59.8	59.8		59.8	59.8
Actuated g/C Ratio				0.36		0.10		0.52	0.52		0.52	0.52
v/c Ratio				0.68		0.54		0.39	0.21		0.50	0.21
Control Delay				33.8		9.8		17.2	2.8		16.0	4.0
Queue Delay				0.0		0.0		0.0	0.0		0.0	0.0
Total Delay				33.8		9.8		17.2	2.8		16.0	4.0
LOS				C		A		B	A		B	A
Approach Delay					27.9			14.3			13.9	
Approach LOS					C			B			B	
Queue Length 50th (m)				79.2		0.0		55.0	3.2		60.3	5.7
Queue Length 95th (m)				89.3		12.2		77.3	3.6		20.1	0.0
Internal Link Dist (m)		95.1			226.2			354.7			255.1	
Turn Bay Length (m)				120.0		195.0			85.0			115.0
Base Capacity (vph)				1361		646		1724	834		1724	857
Starvation Cap Reductn				0		0		0	0		0	0
Spillback Cap Reductn				0		0		0	0		0	0
Storage Cap Reductn				0		0		0	0		0	0
Reduced v/c Ratio				0.59		0.40		0.39	0.21		0.50	0.21

Intersection Summary
Cycle Length: 115
Actuated Cycle Length: 115
Offset: 99 (86%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated

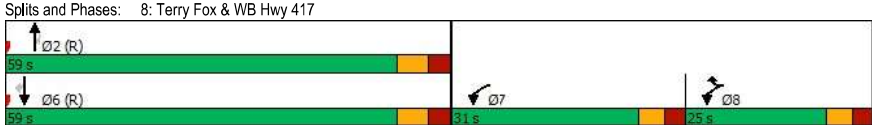
Lane Group	Ø7
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Satd. Flow (RTOR)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	7
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	29.1
Total Split (s)	31.0
Total Split (%)	27%
Yellow Time (s)	3.3
All-Red Time (s)	2.8
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Recall Mode	None
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

Maximum v/c Ratio: 0.68

Intersection Signal Delay: 19.0	Intersection LOS: B
Intersection Capacity Utilization 54.3%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 8: Terry Fox & WB Hwy 417



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	153	0	245	0	0	0	0	619	719	0	1148	287
Future Volume (vph)	153	0	245	0	0	0	0	619	719	0	1148	287
Satd. Flow (prot)	1658	0	1483	0	0	0	0	3316	1483	0	3316	1483
Flt Permitted	0.950											
Satd. Flow (perm)	1658	0	1463	0	0	0	0	3316	1483	0	3316	1447
Satd. Flow (RTOR)			51						799			319
Lane Group Flow (vph)	170	0	272	0	0	0	0	688	799	0	1276	319
Turn Type	Prot		Perm					NA	Perm		NA	Perm
Protected Phases	4							2			6	
Permitted Phases			4						2			6
Detector Phase	4		4					2	2		6	6
Switch Phase												
Minimum Initial (s)	5.0		5.0					10.0	10.0		10.0	10.0
Minimum Split (s)	23.4		23.4					15.7	15.7		17.7	17.7
Total Split (s)	45.0		45.0					70.0	70.0		70.0	70.0
Total Split (%)	39.1%		39.1%					60.9%	60.9%		60.9%	60.9%
Yellow Time (s)	3.3		3.3					4.2	4.2		4.2	4.2
All-Red Time (s)	2.1		2.1					1.5	1.5		1.5	1.5
Lost Time Adjust (s)	0.0		0.0					0.0	0.0		0.0	0.0
Total Lost Time (s)	5.4		5.4					5.7	5.7		5.7	5.7
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None		None					C-Max	C-Max		C-Max	C-Max
Act Effct Green (s)	23.5		23.5					80.4	80.4		80.4	80.4
Actuated g/C Ratio	0.20		0.20					0.70	0.70		0.70	0.70
v/c Ratio	0.50		0.80					0.30	0.63		0.55	0.29
Control Delay	44.3		51.9					7.8	3.1		6.6	1.1
Queue Delay	0.0		0.0					0.0	0.0		0.0	0.0
Total Delay	44.3		51.9					7.8	3.1		6.6	1.1
LOS	D		D					A	A		A	A
Approach Delay		49.0						5.3			5.5	
Approach LOS		D						A			A	
Queue Length 50th (m)	34.1		48.2					27.7	0.0		13.3	0.0
Queue Length 95th (m)	49.7		70.9					47.4	13.9		109.2	5.2
Internal Link Dist (m)		135.3			81.0			64.0			354.7	
Turn Bay Length (m)									95.0			100.0
Base Capacity (vph)	570		537					2317	1277		2317	1107
Starvation Cap Reductn	0		0					0	0		0	0
Spillback Cap Reductn	0		0					0	0		0	0
Storage Cap Reductn	0		0					0	0		0	0
Reduced v/c Ratio	0.30		0.51					0.30	0.63		0.55	0.29

Intersection Summary
Cycle Length: 115
Actuated Cycle Length: 115
Offset: 78 (68%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.80

Intersection Signal Delay: 10.9	Intersection LOS: B
Intersection Capacity Utilization 58.9%	ICU Level of Service B
Analysis Period (min) 15	

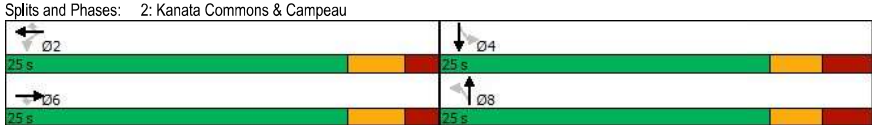
Splits and Phases: 9: Terry Fox & EB Hwy 417

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	328	9	24	421	0	10	0	38	0	0	0
Future Volume (vph)	0	328	9	24	421	0	10	0	38	0	0	0
Satd. Flow (prot)	0	3316	1483	1658	3316	1745	1658	1483	0	1745	1745	0
Flt Permitted				0.535			0.757					
Satd. Flow (perm)	0	3316	1452	933	3316	1745	1321	1483	0	1745	1745	0
Satd. Flow (RTOR)			63					327				
Lane Group Flow (vph)	0	364	10	27	468	0	11	42	0	0	0	0
Turn Type		NA	Perm	Perm	NA	Perm	Perm	NA		Perm		
Protected Phases		6			2			8			4	
Permitted Phases			6	2		2	8			4		
Detector Phase		6	6	2	2	2	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)		23.3	23.3	23.3	23.3	23.3	23.9	23.9		23.9	23.9	
Total Split (s)		25.0	25.0	25.0	25.0	25.0	25.0	25.0		25.0	25.0	
Total Split (%)		50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%		50.0%	50.0%	
Yellow Time (s)		3.3	3.3	3.3	3.3	3.3	3.0	3.0		3.0	3.0	
All-Red Time (s)		2.0	2.0	2.0	2.0	2.0	2.9	2.9		2.9	2.9	
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)		5.3	5.3	5.3	5.3	5.3	5.9	5.9		5.9	5.9	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode		None	None	None	None	None	Max	Max		Max	Max	
Act Effct Green (s)		12.1	12.1	12.1	12.1		19.2	19.2				
Actuated g/C Ratio		0.28	0.28	0.28	0.28		0.45	0.45				
v/c Ratio		0.39	0.02	0.10	0.50		0.02	0.05				
Control Delay		13.3	0.1	11.7	14.5		8.0	0.1				
Queue Delay		0.0	0.0	0.0	0.0		0.0	0.0				
Total Delay		13.3	0.1	11.7	14.5		8.0	0.1				
LOS		B	A	B	B		A	A				
Approach Delay		13.0			14.3			1.7				
Approach LOS		B			B			A				
Queue Length 50th (m)		11.0	0.0	1.4	14.6		0.4	0.0				
Queue Length 95th (m)		18.7	0.0	5.2	23.8		2.7	0.0				
Internal Link Dist (m)		129.8			222.4			129.9			12.7	
Turn Bay Length (m)			65.0	120.0			30.0					
Base Capacity (vph)		1544	709	434	1544		596	848				
Starvation Cap Reductn		0	0	0	0		0	0				
Spillback Cap Reductn		0	0	0	0		0	0				
Storage Cap Reductn		0	0	0	0		0	0				
Reduced v/c Ratio		0.24	0.01	0.06	0.30		0.02	0.05				

Intersection Summary
Cycle Length: 50
Actuated Cycle Length: 42.5
Natural Cycle: 50
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.50

Intersection Signal Delay: 13.1 | Intersection LOS: B
Intersection Capacity Utilization 38.7% | ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 2: Kanata Commons & Campeau

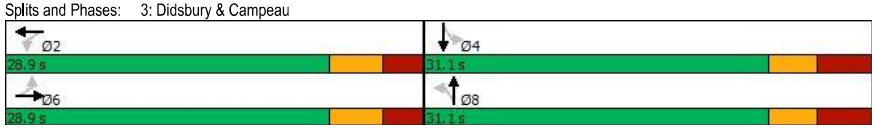


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	362	8	9	402	1	16	0	9	1	0	0
Future Volume (vph)	1	362	8	9	402	1	16	0	9	1	0	0
Satd. Flow (prot)	1658	3304	0	1658	3316	0	1658	1483	0	1658	1745	0
Flt Permitted	0.493			0.511			0.757			0.751		
Satd. Flow (perm)	860	3304	0	891	3316	0	1319	1483	0	1311	1745	0
Satd. Flow (RTOR)		4						266				
Lane Group Flow (vph)	1	411	0	10	448	0	18	10	0	1	0	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm		
Protected Phases		6			2			8			4	
Permitted Phases	6			2			8			4		
Detector Phase	6	6		2	2		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	
Minimum Split (s)	27.5	27.5		27.5	27.5		31.1	31.1		31.1	31.1	
Total Split (s)	28.9	28.9		28.9	28.9		31.1	31.1		31.1	31.1	
Total Split (%)	48.2%	48.2%		48.2%	48.2%		51.8%	51.8%		51.8%	51.8%	
Yellow Time (s)	3.7	3.7		3.7	3.7		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.8	2.8		2.8	2.8		3.8	3.8		3.8	3.8	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.5	6.5		6.5	6.5		7.1	7.1		7.1	7.1	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Act Effct Green (s)	13.0	13.0		13.0	13.0		24.1	24.1		24.1		
Actuated g/C Ratio	0.26	0.26		0.26	0.26		0.47	0.47		0.47		
v/c Ratio	0.00	0.48		0.04	0.53		0.03	0.01		0.00		
Control Delay	13.0	17.6		13.8	18.4		9.0	0.0		9.0		
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0		
Total Delay	13.0	17.6		13.8	18.4		9.0	0.0		9.0		
LOS	B	B		B	B		A	A		A		
Approach Delay		17.6			18.3			5.8			9.0	
Approach LOS		B			B			A			A	
Queue Length 50th (m)	0.1	16.3		0.7	18.2		0.8	0.0		0.1		
Queue Length 95th (m)	0.9	25.8		3.3	28.3		4.2	0.0		0.8		
Internal Link Dist (m)		222.4			292.9			171.0			27.1	
Turn Bay Length (m)	45.0			45.0			15.0			15.0		
Base Capacity (vph)	380	1466		394	1469		626	843		622		
Starvation Cap Reductn	0	0		0	0		0	0		0		
Spillback Cap Reductn	0	0		0	0		0	0		0		
Storage Cap Reductn	0	0		0	0		0	0		0		
Reduced v/c Ratio	0.00	0.28		0.03	0.30		0.03	0.01		0.00		

Intersection Summary
Cycle Length: 60
Actuated Cycle Length: 50.8
Natural Cycle: 60
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.53

Intersection Signal Delay: 17.6 | Intersection LOS: B
Intersection Capacity Utilization 43.3% | ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 3: Didsbury & Campeau



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	139	199	198	199	245	165	144	761	163	170	645	122
Future Volume (vph)	139	199	198	199	245	165	144	761	163	170	645	122
Satd. Flow (prot)	1642	1745	1441	1580	1712	1363	1658	3191	1441	1658	3191	1483
Flt Permitted	0.433			0.515			0.950			0.950		
Satd. Flow (perm)	746	1745	1422	856	1712	1342	1657	3191	1387	1650	3191	1451
Satd. Flow (RTOR)			220			183			177			129
Lane Group Flow (vph)	154	221	220	221	272	183	160	846	181	189	717	136
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	43.4	43.4	43.4	43.4	43.4	43.4	11.5	40.4	40.4	11.5	40.4	40.4
Total Split (s)	50.0	50.0	50.0	50.0	50.0	50.0	20.0	50.0	50.0	20.0	50.0	50.0
Total Split (%)	41.7%	41.7%	41.7%	41.7%	41.7%	41.7%	16.7%	41.7%	41.7%	16.7%	41.7%	41.7%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	4.2	4.2	4.2	4.2	4.2	4.2
All-Red Time (s)	2.7	2.7	2.7	2.7	2.7	2.7	2.3	2.2	2.2	2.3	2.2	2.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.4	6.4	6.4	6.4	6.4	6.4	6.5	6.4	6.4	6.5	6.4	6.4
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	33.5	33.5	33.5	33.5	33.5	33.5	15.4	48.5	48.5	18.7	51.8	51.8
Actuated g/C Ratio	0.28	0.28	0.28	0.28	0.28	0.28	0.13	0.40	0.40	0.16	0.43	0.43
v/c Ratio	0.74	0.45	0.40	0.93	0.57	0.36	0.75	0.66	0.27	0.73	0.52	0.19
Control Delay	59.0	37.2	5.7	76.0	34.5	5.8	72.6	33.2	5.2	66.4	28.5	5.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.0	37.2	5.7	76.0	34.5	5.8	72.6	33.2	5.2	66.4	28.5	5.8
LOS	E	D	A	E	C	A	E	C	A	E	C	A
Approach Delay		31.2			40.3			34.2			32.4	
Approach LOS		C			D			C			C	
Queue Length 50th (m)	32.7	42.6	0.0	47.5	44.7	4.9	35.7	89.2	0.6	41.4	67.8	1.0
Queue Length 95th (m)	52.3	58.3	15.8	#79.3	67.4	15.2	#75.3	113.4	15.2	#92.5	92.3	13.9
Internal Link Dist (m)		292.9			146.9			173.9			301.0	
Turn Bay Length (m)	62.5		64.5	70.0		63.5	45.0		62.5	100.0		50.0
Base Capacity (vph)	271	634	656	311	622	604	216	1289	666	258	1377	699
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	23	0	0	0	0	0	0	2	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.57	0.36	0.34	0.71	0.44	0.30	0.74	0.66	0.27	0.73	0.52	0.19

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 104 (87%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.93

Intersection Signal Delay: 34.4	Intersection LOS: C
Intersection Capacity Utilization 83.8%	ICU Level of Service E
Analysis Period (min) 15	

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

Splits and Phases: 4: Terry Fox & Campeau

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	384	95	125	348	104	90	44	139	107	30	87
Future Volume (vph)	25	384	95	125	348	104	90	44	139	107	30	87
Satd. Flow (prot)	1658	1685	0	1658	1745	1483	1658	1481	0	1658	1745	1483
Flt Permitted	0.502			0.278			0.950			0.950		
Satd. Flow (perm)	874	1685	0	485	1745	1446	1658	1481	0	1612	1745	1483
Satd. Flow (RTOR)		11				133		124				135
Lane Group Flow (vph)	28	533	0	139	387	116	100	203	0	119	33	97
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases	6			2		2						4
Detector Phase	1	6		5	2	2	3	8		7	4	4
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0	10.0	5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	10.8	35.2		10.8	35.2	35.2	10.9	28.9		10.9	28.9	28.9
Total Split (s)	17.0	48.0		17.0	48.0	48.0	20.0	35.0		20.0	35.0	35.0
Total Split (%)	14.2%	40.0%		14.2%	40.0%	40.0%	16.7%	29.2%		16.7%	29.2%	29.2%
Yellow Time (s)	3.3	3.3		3.3	3.3	3.3	3.3	3.3		3.3	3.3	3.3
All-Red Time (s)	2.5	2.9		2.5	2.9	2.9	2.6	2.6		2.6	2.6	2.6
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.8	6.2		5.8	6.2	6.2	5.9	5.9		5.9	5.9	5.9
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	C-Max		None	C-Max	C-Max	None	None		None	None	None
Act Effct Green (s)	64.9	58.1		73.6	66.2	66.2	11.8	15.7		12.5	16.4	16.4
Actuated g/C Ratio	0.54	0.48		0.61	0.55	0.55	0.10	0.13		0.10	0.14	0.14
v/c Ratio	0.05	0.65		0.35	0.40	0.14	0.62	0.67		0.69	0.14	0.31
Control Delay	12.2	31.1		13.8	18.2	3.7	68.0	30.5		72.5	44.1	5.0
Queue Delay	0.0	0.7		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	12.2	31.8		13.8	18.2	3.7	68.0	30.5		72.5	44.1	5.0
LOS	B	C		B	B	A	E	C		E	D	A
Approach Delay		30.8			14.6			42.8			42.5	
Approach LOS		C			B			D			D	
Queue Length 50th (m)	3.0	78.7		10.7	37.9	0.0	22.8	17.9		27.1	7.1	0.0
Queue Length 95th (m)	m8.2	#162.0		m27.1	73.6	m4.4	40.2	39.9		#46.7	15.5	6.3
Internal Link Dist (m)		146.9			220.2			66.0			66.6	
Turn Bay Length (m)	45.0			90.0		75.0				40.0		30.0
Base Capacity (vph)	580	821		414	963	857	194	453		194	423	461
Starvation Cap Reductn	0	83		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	0.05	0.72		0.34	0.40	0.14	0.52	0.45		0.61	0.08	0.21

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 15 (13%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.69

Intersection Signal Delay: 28.6	Intersection LOS: C
Intersection Capacity Utilization 75.9%	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: 5: Herlihey & Campeau

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	172	225	83	53	295	64	83	197	28	45	179	139
Future Volume (vph)	172	225	83	53	295	64	83	197	28	45	179	139
Satd. Flow (prot)	1658	1656	0	1658	1688	0	1658	1745	1483	1658	1745	1483
Flt Permitted	0.307			0.498			0.441			0.621		
Satd. Flow (perm)	533	1656	0	859	1688	0	747	1745	1443	1078	1745	1381
Satd. Flow (RTOR)		17			10				85			154
Lane Group Flow (vph)	191	342	0	59	399	0	92	219	31	50	199	154
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases	1	6		5	2		3	8			4	
Permitted Phases	6			2			8		8	4		4
Detector Phase	1	6		5	2		3	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	11.2	37.2		11.2	37.2		10.9	29.9	29.9	29.9	29.9	29.9
Total Split (s)	20.0	49.0		20.0	49.0		15.0	51.0	51.0	36.0	36.0	36.0
Total Split (%)	16.7%	40.8%		16.7%	40.8%		12.5%	42.5%	42.5%	30.0%	30.0%	30.0%
Yellow Time (s)	3.7	3.7		3.7	3.7		3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	2.5	2.5		2.5	2.5		2.6	2.6	2.6	2.6	2.6	2.6
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.2	6.2		6.2	6.2		5.9	5.9	5.9	5.9	5.9	5.9
Lead/Lag	Lead	Lag		Lead	Lag		Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes			Yes	Yes	Yes
Recall Mode	None	C-Max		None	C-Max		None	Max	Max	Max	Max	Max
Act Effct Green (s)	61.7	51.4		52.1	44.5		45.1	45.1	45.1	30.7	30.7	30.7
Actuated g/C Ratio	0.51	0.43		0.43	0.37		0.38	0.38	0.38	0.26	0.26	0.26
v/c Ratio	0.49	0.48		0.14	0.63		0.27	0.33	0.05	0.18	0.45	0.33
Control Delay	24.1	30.5		15.6	36.1		27.0	28.6	0.2	37.5	41.6	7.6
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.1	30.5		15.6	36.1		27.0	28.6	0.2	37.5	41.6	7.6
LOS	C	C		B	D		C	C	A	D	D	A
Approach Delay		28.2			33.4			25.6			28.1	
Approach LOS		C			C			C			C	
Queue Length 50th (m)	25.6	59.1		6.6	75.5		14.2	36.4	0.0	9.3	39.8	0.0
Queue Length 95th (m)	37.4	60.0		13.4	111.0		25.8	56.4	0.0	20.2	62.4	16.0
Internal Link Dist (m)		220.2			90.4			97.8			155.3	
Turn Bay Length (m)	80.0			45.0			50.0		45.0	90.0		90.0
Base Capacity (vph)	405	718		509	632		349	655	595	275	446	467
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	0.47	0.48		0.12	0.63		0.26	0.33	0.05	0.18	0.45	0.33

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 16 (13%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.63

Intersection Signal Delay: 29.0	Intersection LOS: C
Intersection Capacity Utilization 84.4%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 6: Kanata & Campeau

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	26	154	307	33	89	198	875	480	130	1042	30
Future Volume (vph)	35	26	154	307	33	89	198	875	480	130	1042	30
Satd. Flow (prot)	0	1696	1483	3216	1555	0	1658	3316	1483	1658	3300	0
Flt Permitted		0.972		0.950			0.082			0.208		
Satd. Flow (perm)	0	1696	1459	3198	1555	0	143	3316	1443	363	3300	0
Satd. Flow (RTOR)			171		97				533		2	
Lane Group Flow (vph)	0	68	171	341	136	0	220	972	533	144	1191	0
Turn Type	Split	NA	Perm	Split	NA		pm+pt	NA	pm+ov	pm+pt	NA	
Protected Phases	4	4		8	8		5	2	8	1	6	
Permitted Phases			4				2		2	6		
Detector Phase	4	4	4	8	8		5	2	8	1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0		5.0	10.0	10.0	5.0	10.0	
Minimum Split (s)	38.7	38.7	38.7	36.7	36.7		11.3	38.4	36.7	11.3	38.4	
Total Split (s)	39.0	39.0	39.0	37.0	37.0		13.0	41.0	37.0	13.0	41.0	
Total Split (%)	30.0%	30.0%	30.0%	28.5%	28.5%		10.0%	31.5%	28.5%	10.0%	31.5%	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		4.2	4.2	3.0	4.2	4.2	
All-Red Time (s)	3.7	3.7	3.7	3.7	3.7		2.1	2.2	3.7	2.1	2.2	
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)		6.7	6.7	6.7	6.7		6.3	6.4	6.7	6.3	6.4	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None		None	C-Max	None	None	C-Max	
Act Effct Green (s)		15.0	15.0	20.8	20.8		73.2	53.8	74.3	57.0	42.6	
Actuated g/C Ratio		0.12	0.12	0.16	0.16		0.56	0.41	0.57	0.44	0.33	
v/c Ratio		0.35	0.54	0.66	0.41		0.58	0.71	0.50	0.48	1.10	
Control Delay		55.4	12.7	57.3	19.4		36.4	36.7	2.6	24.2	100.1	
Queue Delay		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay		55.4	12.7	57.3	19.4		36.4	36.7	2.6	24.2	100.1	
LOS		E	B	E	B		D	D	A	C	F	
Approach Delay		24.8			46.5			26.1			91.9	
Approach LOS		C			D			C			F	
Queue Length 50th (m)		17.0	0.0	42.8	8.7		34.7	102.2	0.0	15.0	154.3	
Queue Length 95th (m)		26.2	17.6	55.1	26.0		#113.6	#189.5	11.6	39.8	#254.2	
Internal Link Dist (m)		103.7			100.9			255.1			173.9	
Turn Bay Length (m)			15.0	70.0			45.0		75.0	30.0		
Base Capacity (vph)		421	491	749	436		378	1372	1129	302	1081	
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		0.16	0.35	0.46	0.31		0.58	0.71	0.47	0.48	1.10	

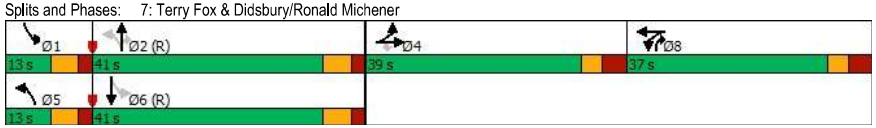
Intersection Summary
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.10

Intersection Signal Delay: 51.9	Intersection LOS: D
Intersection Capacity Utilization 84.1%	ICU Level of Service E
Analysis Period (min) 15	

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

Splits and Phases: 7: Terry Fox & Didsbury/Ronald Michener



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	877	0	396	0	1048	228	0	1138	331
Future Volume (vph)	0	0	0	877	0	396	0	1048	228	0	1138	331
Satd. Flow (prot)	0	0	0	3216	0	2611	0	3316	1483	0	3316	1483
Flt Permitted				0.950								
Satd. Flow (perm)	0	0	0	3216	0	2611	0	3316	1441	0	3316	1483
Satd. Flow (RTOR)						340			253			368
Lane Group Flow (vph)	0	0	0	974	0	440	0	1164	253	0	1264	368
Turn Type				Prot		Prot		NA	Perm		NA	Perm
Protected Phases				7 8		8		2			6	
Permitted Phases									2			6
Detector Phase				7 8		8		2	2		6	6
Switch Phase												
Minimum Initial (s)						5.0		10.0	10.0		10.0	10.0
Minimum Split (s)						11.1		35.2	35.2		17.2	17.2
Total Split (s)						24.0		67.0	67.0		67.0	67.0
Total Split (%)						20.0%		55.8%	55.8%		55.8%	55.8%
Yellow Time (s)						3.3		4.2	4.2		4.2	4.2
All-Red Time (s)						2.8		3.0	3.0		3.0	3.0
Lost Time Adjust (s)						0.0		0.0	0.0		0.0	0.0
Total Lost Time (s)						6.1		7.2	7.2		7.2	7.2
Lead/Lag						Lag						
Lead-Lag Optimize?						Yes						
Recall Mode						None		C-Max	C-Max		C-Max	C-Max
Act Effct Green (s)				45.3		16.3		61.4	61.4		61.4	61.4
Actuated g/C Ratio				0.38		0.14		0.51	0.51		0.51	0.51
v/c Ratio				0.80		0.68		0.69	0.29		0.75	0.39
Control Delay				39.1		17.4		19.9	1.2		26.9	3.0
Queue Delay				0.0		0.0		0.0	0.0		0.0	0.0
Total Delay				39.1		17.4		19.9	1.2		26.9	3.0
LOS				D		B		B	A		C	A
Approach Delay					32.4			16.6			21.5	
Approach LOS					C			B			C	
Queue Length 50th (m)				102.0		11.9		111.3	1.0		123.1	0.0
Queue Length 95th (m)				127.2		30.1		135.7	2.4		150.7	14.8
Internal Link Dist (m)		112.7			226.2			354.7			255.1	
Turn Bay Length (m)				120.0		195.0			85.0			115.0
Base Capacity (vph)				1256		678		1696	860		1696	938
Starvation Cap Reductn				0		0		0	0		0	0
Spillback Cap Reductn				0		0		0	0		0	0
Storage Cap Reductn				0		0		0	0		0	0
Reduced v/c Ratio				0.78		0.65		0.69	0.29		0.75	0.39

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 12 (10%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated

Lane Group	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	7
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	29.1
Total Split (s)	29.0
Total Split (%)	24%
Yellow Time (s)	3.3
All-Red Time (s)	2.8
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Recall Mode	None
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

Maximum v/c Ratio: 0.80

Intersection Signal Delay: 23.4	Intersection LOS: C
Intersection Capacity Utilization 68.9%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 8: Terry Fox & WB Hwy 417

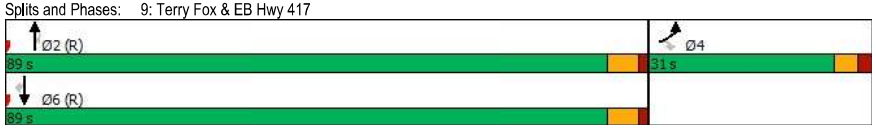
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	214	0	253	0	0	0	0	1042	727	0	1707	311
Future Volume (vph)	214	0	253	0	0	0	0	1042	727	0	1707	311
Satd. Flow (prot)	1658	0	1483	0	0	0	0	3316	1483	0	3316	1483
Flt Permitted	0.950											
Satd. Flow (perm)	1658	0	1463	0	0	0	0	3316	1483	0	3316	1483
Satd. Flow (RTOR)			27						808			346
Lane Group Flow (vph)	238	0	281	0	0	0	0	1158	808	0	1897	346
Turn Type	Prot		Perm					NA	Perm		NA	Perm
Protected Phases	4							2			6	
Permitted Phases			4						2			6
Detector Phase	4		4					2	2		6	6
Switch Phase												
Minimum Initial (s)	5.0		5.0					10.0	10.0		10.0	10.0
Minimum Split (s)	23.4		23.4					15.7	15.7		17.7	17.7
Total Split (s)	31.0		31.0					89.0	89.0		89.0	89.0
Total Split (%)	25.8%		25.8%					74.2%	74.2%		74.2%	74.2%
Yellow Time (s)	3.3		3.3					4.2	4.2		4.2	4.2
All-Red Time (s)	2.1		2.1					1.5	1.5		1.5	1.5
Lost Time Adjust (s)	0.0		0.0					0.0	0.0		0.0	0.0
Total Lost Time (s)	5.4		5.4					5.7	5.7		5.7	5.7
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None		None					C-Max	C-Max		C-Max	C-Max
Act Effct Green (s)	23.8		23.8					85.1	85.1		85.1	85.1
Actuated g/C Ratio	0.20		0.20					0.71	0.71		0.71	0.71
v/c Ratio	0.73		0.90					0.49	0.63		0.81	0.30
Control Delay	58.1		73.6					8.9	2.9		11.7	1.3
Queue Delay	0.0		0.0					0.0	0.0		0.0	0.0
Total Delay	58.1		73.6					8.9	2.9		11.7	1.3
LOS	E		E					A	A		B	A
Approach Delay		66.5						6.4			10.1	
Approach LOS		E						A			B	
Queue Length 50th (m)	51.9		58.3					60.6	0.0		119.7	5.6
Queue Length 95th (m)	79.6		#104.0					74.8	10.8		130.1	m7.1
Internal Link Dist (m)		135.3			95.4			64.0			354.7	
Turn Bay Length (m)									95.0			100.0
Base Capacity (vph)	353		333					2350	1286		2350	1152
Starvation Cap Reductn	0		0					0	0		0	0
Spillback Cap Reductn	0		0					0	0		0	0
Storage Cap Reductn	0		0					0	0		0	0
Reduced v/c Ratio	0.67		0.84					0.49	0.63		0.81	0.30

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.90
Intersection Signal Delay: 14.8 — Intersection LOS: B
Intersection Capacity Utilization 75.7% — 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: 9: Terry Fox & EB Hwy 417



Appendix D

Collision Data

CGH TRANSPORTATION

Accident Date	Accident Year	Accident Time	Location	Environment Condition	Light	Traffic Control	Traffic Control Condition	Classification Of Accident	Initial Impact Type	Road Surface Condition	# Vehicles	# Motorcycles	# Bicycles	# Pedestrians
2019-08-07	2019	15:10	CAMPEAU DR @ DIDSBURY RD (0011857)	01 - Clear	01 - Daylight	02 - Stop sign	0	03 - P.D. only	05 - Turning movement	01 - Dry	2	0	0	0
2022-04-16	2022	11:00	CAMPEAU DR @ DIDSBURY RD (0011857)	01 - Clear	01 - Daylight	02 - Stop sign	0	03 - P.D. only	07 - SMV other	01 - Dry	1	0	0	0
2018-02-03	2018	11:35	CAMPEAU DR @ TERRY FOX DR (0008211)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	01 - Dry	2	0	0	0
2018-02-07	2018	16:58	CAMPEAU DR @ TERRY FOX DR (0008211)	03 - Snow	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	04 - Slush	2	0	0	0
2018-03-12	2018	12:40	CAMPEAU DR @ TERRY FOX DR (0008211)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	02 - Angle	01 - Dry	2	0	0	0
2018-04-27	2018	14:30	CAMPEAU DR @ TERRY FOX DR (0008211)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	04 - Sideswipe	01 - Dry	2	0	0	0
2018-05-16	2018	7:17	CAMPEAU DR @ TERRY FOX DR (0008211)	01 - Clear	01 - Daylight	01 - Traffic signal	0	02 - Non-fatal injury	02 - Angle	01 - Dry	2	0	0	0
2018-06-12	2018	14:40	CAMPEAU DR @ TERRY FOX DR (0008211)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	05 - Turning movement	01 - Dry	2	0	0	0
2018-09-23	2018	18:23	CAMPEAU DR @ TERRY FOX DR (0008211)	01 - Clear	05 - Dusk	01 - Traffic signal	0	03 - P.D. only	05 - Turning movement	01 - Dry	2	0	0	0
2018-10-10	2018	10:44	CAMPEAU DR @ TERRY FOX DR (0008211)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	05 - Turning movement	01 - Dry	2	0	0	0
2018-12-13	2018	11:35	CAMPEAU DR @ TERRY FOX DR (0008211)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	01 - Dry	2	0	0	0
2019-01-11	2019	10:45	CAMPEAU DR @ TERRY FOX DR (0008211)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	02 - Wet	2	0	0	0
2019-01-11	2019	17:00	CAMPEAU DR @ TERRY FOX DR (0008211)	01 - Clear	05 - Dusk	01 - Traffic signal	0	03 - P.D. only	05 - Turning movement	01 - Dry	2	0	0	0
2019-03-02	2019	17:00	CAMPEAU DR @ TERRY FOX DR (0008211)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	01 - Dry	2	0	0	0
2019-07-30	2019	17:10	CAMPEAU DR @ TERRY FOX DR (0008211)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	01 - Dry	2	0	0	0
2019-08-19	2019	16:47	CAMPEAU DR @ TERRY FOX DR (0008211)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	05 - Turning movement	01 - Dry	2	0	0	0
2019-08-28	2019	12:25	CAMPEAU DR @ TERRY FOX DR (0008211)	02 - Rain	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	07 - SMV other	02 - Wet	1	0	0	0
2019-09-10	2019	11:05	CAMPEAU DR @ TERRY FOX DR (0008211)	01 - Clear	01 - Daylight	01 - Traffic signal	0	02 - Non-fatal injury	02 - Angle	01 - Dry	2	0	0	0
2019-11-24	2019	12:30	CAMPEAU DR @ TERRY FOX DR (0008211)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	01 - Dry	2	0	0	0
2019-12-11	2019	16:37	CAMPEAU DR @ TERRY FOX DR (0008211)	01 - Clear	05 - Dusk	01 - Traffic signal	0	02 - Non-fatal injury	02 - Angle	01 - Dry	2	0	0	0
2019-12-31	2019	21:54	CAMPEAU DR @ TERRY FOX DR (0008211)	01 - Clear	07 - Dark	01 - Traffic signal	0	03 - P.D. only	04 - Sideswipe	02 - Wet	2	0	0	0
2020-01-06	2020	16:18	CAMPEAU DR @ TERRY FOX DR (0008211)	01 - Clear	01 - Daylight	01 - Traffic signal	0	02 - Non-fatal injury	05 - Turning movement	04 - Slush	2	0	0	0
2020-01-17	2020	17:15	CAMPEAU DR @ TERRY FOX DR (0008211)	01 - Clear	05 - Dusk	01 - Traffic signal	0	03 - P.D. only	04 - Sideswipe	06 - Ice	2	0	0	0
2020-02-12	2020	19:31	CAMPEAU DR @ TERRY FOX DR (0008211)	01 - Clear	07 - Dark	01 - Traffic signal	0	02 - Non-fatal injury	05 - Turning movement	01 - Dry	2	0	0	0
2020-03-17	2020	9:09	CAMPEAU DR @ TERRY FOX DR (0008211)	02 - Rain	01 - Daylight	01 - Traffic signal	0	02 - Non-fatal injury	02 - Angle	02 - Wet	2	0	0	0
2020-03-26	2020	14:25	CAMPEAU DR @ TERRY FOX DR (0008211)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	05 - Turning movement	01 - Dry	2	0	0	0
2020-07-20	2020	14:30	CAMPEAU DR @ TERRY FOX DR (0008211)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	01 - Dry	2	0	0	0
2021-01-31	2021	11:25	CAMPEAU DR @ TERRY FOX DR (0008211)	01 - Clear	01 - Daylight	01 - Traffic signal	0	02 - Non-fatal injury	05 - Turning movement	01 - Dry	2	0	0	0
2021-03-10	2021	15:35	CAMPEAU DR @ TERRY FOX DR (0008211)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	02 - Angle	01 - Dry	2	0	0	0
2021-03-19	2021	17:15	CAMPEAU DR @ TERRY FOX DR (0008211)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	05 - Turning movement	01 - Dry	2	0	0	0
2021-03-21	2021	18:19	CAMPEAU DR @ TERRY FOX DR (0008211)	01 - Clear	05 - Dusk	01 - Traffic signal	0	03 - P.D. only	05 - Turning movement	01 - Dry	2	0	0	0
2021-04-23	2021	13:44	CAMPEAU DR @ TERRY FOX DR (0008211)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	05 - Turning movement	01 - Dry	2	0	0	0
2021-09-07	2021	13:15	CAMPEAU DR @ TERRY FOX DR (0008211)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	04 - Sideswipe	01 - Dry	2	0	0	0
2021-10-15	2021	16:02	CAMPEAU DR @ TERRY FOX DR (0008211)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	04 - Sideswipe	01 - Dry	2	0	0	0
2021-10-21	2021	16:52	CAMPEAU DR @ TERRY FOX DR (0008211)	01 - Clear	01 - Daylight	01 - Traffic signal	0	02 - Non-fatal injury	05 - Turning movement	01 - Dry	2	0	0	0
2022-01-29	2022	14:00	CAMPEAU DR @ TERRY FOX DR (0008211)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	01 - Dry	2	0	0	0
2022-02-25	2022	16:00	CAMPEAU DR @ TERRY FOX DR (0008211)	03 - Snow	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	02 - Angle	03 - Loose snow	2	0	0	0
2022-02-25	2022	16:18	CAMPEAU DR @ TERRY FOX DR (0008211)	03 - Snow	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	02 - Angle	03 - Loose snow	2	0	0	0
2022-03-01	2022	17:00	CAMPEAU DR @ TERRY FOX DR (0008211)	03 - Snow	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	03 - Loose snow	2	0	0	0
2022-03-30	2022	11:17	CAMPEAU DR @ TERRY FOX DR (0008211)	01 - Clear	01 - Daylight	01 - Traffic signal	0	02 - Non-fatal injury	02 - Angle	01 - Dry	2	0	0	0
2022-04-12	2022	11:48	CAMPEAU DR @ TERRY FOX DR (0008211)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	05 - Turning movement	01 - Dry	2	0	0	0
2022-04-18	2022	13:16	CAMPEAU DR @ TERRY FOX DR (0008211)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	05 - Turning movement	01 - Dry	2	0	0	0
2022-06-01	2022	8:28	CAMPEAU DR @ TERRY FOX DR (0008211)	02 - Rain	01 - Daylight	01 - Traffic signal	0	02 - Non-fatal injury	03 - Rear end	02 - Wet	2	0	0	0
2022-08-04	2022	9:49	CAMPEAU DR @ TERRY FOX DR (0008211)	02 - Rain	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	05 - Turning movement	02 - Wet	2	0	0	0
2022-08-29	2022	12:15	CAMPEAU DR @ TERRY FOX DR (0008211)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	05 - Turning movement	01 - Dry	2	0	0	0
2022-09-10	2022	9:40	CAMPEAU DR @ TERRY FOX DR (0008211)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	01 - Dry	2	0	0	0
2022-09-22	2022	8:12	CAMPEAU DR @ TERRY FOX DR (0008211)	01 - Clear	01 - Daylight	01 - Traffic signal	0	02 - Non-fatal injury	05 - Turning movement	01 - Dry	2	0	0	0
2022-10-07	2022	15:51	CAMPEAU DR @ TERRY FOX DR (0008211)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	01 - Dry	2	0	0	0
2022-10-17	2022	6:59	CAMPEAU DR @ TERRY FOX DR (0008211)	02 - Rain	03 - Dawn	01 - Traffic signal	0	03 - P.D. only	02 - Angle	02 - Wet	2	0	0	0
2022-11-01	2022	18:09	CAMPEAU DR @ TERRY FOX DR (0008211)	01 - Clear	07 - Dark	01 - Traffic signal	0	02 - Non-fatal injury	02 - Angle	01 - Dry	2	0	0	0
2022-11-11	2022	16:15	CAMPEAU DR @ TERRY FOX DR (0008211)	02 - Rain	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	02 - Angle	02 - Wet	2	0	0	0
2022-11-11	2022	15:50	CAMPEAU DR @ TERRY FOX DR (0008211)	02 - Rain	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	02 - Angle	02 - Wet	2	0	0	0
2022-11-26	2022	11:30	CAMPEAU DR @ TERRY FOX DR (0008211)	01 - Clear	01 - Daylight	01 - Traffic signal	0	03 - P.D. only	03 - Rear end	01 - Dry	2	0	0	0
2020-10-20	2020	16:26	CAMPEAU DR btwn DIDSBURY RD & TERRY FOX DR (__3Z071U)	01 - Clear	01 - Daylight	10 - No control	0	03 - P.D. only	02 - Angle	01 - Dry	2	0	0	0
2022-03-02	2022	15:20	CAMPEAU DR btwn DIDSBURY RD & TERRY FOX DR (__3Z071U)	01 - Clear	01 - Daylight	10 - No control	0	03 - P.D. only	05 - Turning movement	01 - Dry	2	0	0	0
2022-03-05	2022	3:34	CAMPEAU DR btwn DIDSBURY RD & TERRY FOX DR (__3Z071U)	01 - Clear	07 - Dark	10 - No control	0	02 - Non-fatal injury	07 - SMV other	01 - Dry	1	0	0	0

Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2018 **To:** December 31, 2022

Location: CAMPEAU DR @ TERRY FOX DR

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-Feb-03, Sat,11:35	Clear	Rear end	P.D. only	Dry	South	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2018-Feb-07, Wed,16:58	Snow	Rear end	P.D. only	Slush	North	Slowing or stopping	Automobile, station wagon	Skidding/sliding	0
					North	Stopped	Automobile, station wagon	Other motor vehicle	
2018-Mar-12, Mon,12:40	Clear	Angle	P.D. only	Dry	South	Turning left	Passenger van	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2018-Apr-27, Fri,14:30	Clear	Sideswipe	P.D. only	Dry	South	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2018-May-16, Wed,07:17	Clear	Angle	Non-fatal injury	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Turning left	Automobile, station wagon	Other motor vehicle	
2018-Jun-12, Tue,14:40	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-Sep-23, Sun,18:23	Clear	Turning movement	P.D. only	Dry	South	Turning left	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2018-Oct-10, Wed,10:44	Clear	Turning movement	P.D. only	Dry	North	Turning right	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2018-Dec-13, Thu,11:35	Clear	Rear end	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Jan-11, Fri,10:45	Clear	Rear end	P.D. only	Wet	South	Turning right	Automobile, station wagon	Other motor vehicle	0
					South	Turning right	Automobile, station wagon	Other motor vehicle	
2019-Jan-11, Fri,17:00	Clear	Turning movement	P.D. only	Dry	South	Turning left	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Mar-02, Sat,17:00	Clear	Rear end	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	

Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2018 **To:** December 31, 2022

Location: CAMPEAU DR @ TERRY FOX DR

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,17:10	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-Aug-19, Mon,16:47	Clear	Turning movement	P.D. only	Dry	North	Turning left	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Aug-28, Wed,12:25	Rain	SMV other	P.D. only	Wet	South	Slowing or stopping	Automobile, station wagon	Curb	0
2019-Sep-10, Tue,11:05	Clear	Angle	Non-fatal injury	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Nov-24, Sun,12:30	Clear	Rear end	P.D. only	Dry	South	Going ahead	Passenger van	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Dec-11, Wed,16:37	Clear	Angle	Non-fatal injury	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Turning left	Automobile, station wagon	Other motor vehicle	
2019-Dec-31, Tue,21:54	Clear	Sideswipe	P.D. only	Wet	North	Changing lanes	Pick-up truck	Other motor vehicle	0
					North	Going ahead	Pick-up truck	Other motor vehicle	
2020-Jan-06, Mon,16:18	Clear	Turning movement	Non-fatal injury	Slush	North	Turning left	Pick-up truck	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2020-Jan-17, Fri,17:15	Clear	Sideswipe	P.D. only	Ice	North	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2020-Feb-12, Wed,19:31	Clear	Turning movement	Non-fatal injury	Dry	West	Turning left	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2020-Mar-17, Tue,09:09	Rain	Angle	Non-fatal injury	Wet	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Turning left	Automobile, station wagon	Other motor vehicle	
2020-Mar-26, Thu,14:25	Clear	Turning movement	P.D. only	Dry	South	Turning left	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Passenger van	Other motor vehicle	

Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2018 **To:** December 31, 2022

Location: CAMPEAU DR @ TERRY FOX DR

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-Jul-20, Mon,14:30	Clear	Rear end	P.D. only	Dry	West	Turning right	Automobile, station wagon	Other motor vehicle	0
					West	Turning right	Pick-up truck	Other motor vehicle	
2021-Jan-31, Sun,11:25	Clear	Turning movement	Non-fatal injury	Dry	West	Turning left	Pick-up truck	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2021-Mar-10, Wed,15:35	Clear	Angle	P.D. only	Dry	East	Turning left	Pick-up truck	Other motor vehicle	0
					North	Going ahead	Pick-up truck	Other motor vehicle	
2021-Mar-19, Fri,17:15	Clear	Turning movement	P.D. only	Dry	South	Turning left	Pick-up truck	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2021-Mar-21, Sun,18:19	Clear	Turning movement	P.D. only	Dry	West	Going ahead	Pick-up truck	Other motor vehicle	0
					East	Turning left	Automobile, station wagon	Other motor vehicle	
2021-Apr-23, Fri,13:44	Clear	Turning movement	P.D. only	Dry	North	Turning left	Pick-up truck	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2021-Sep-07, Tue,13:15	Clear	Sideswipe	P.D. only	Dry	South	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Pick-up truck	Other motor vehicle	
2021-Oct-15, Fri,16:02	Clear	Sideswipe	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2021-Oct-21, Thu,16:52	Clear	Turning movement	Non-fatal injury	Dry	South	Turning left	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2022-Jan-29, Sat,14:00	Clear	Rear end	P.D. only	Dry	South	Slowing or stopping	Passenger van	Other motor vehicle	0
					South	Stopped	Pick-up truck	Other motor vehicle	
2022-Feb-25, Fri,16:00	Snow	Angle	P.D. only	Loose snow	South	Turning right	Unknown	Other motor vehicle	0
					West	Going ahead	Pick-up truck	Other motor vehicle	
2022-Feb-25, Fri,16:18	Snow	Angle	P.D. only	Loose snow	South	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					West	Unknown	Unknown	Other motor vehicle	

Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2018 **To:** December 31, 2022

Location: CAMPEAU DR @ TERRY FOX DR

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
2022-Mar-01, Tue,17:00	Snow	Rear end	P.D. only	Loose snow	West	Turning right	Pick-up truck	Other motor vehicle	0
					West	Turning right	Automobile, station wagon	Other motor vehicle	
2022-Mar-15, Tue,12:54	Clear	Angle	Non-fatal injury	Wet	East	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2022-Mar-30, Wed,11:17	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	
2022-Apr-12, Tue,11:48	Clear	Turning movement	P.D. only	Dry	West	Turning right	Automobile, station wagon	Other motor vehicle	0
					East	Turning left	Pick-up truck	Other motor vehicle	
2022-Apr-18, Mon,13:16	Clear	Turning movement	P.D. only	Dry	North	Turning left	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2022-Jun-01, Wed,08:28	Rain	Rear end	Non-fatal injury	Wet	South	Going ahead	Pick-up truck	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2022-Aug-04, Thu,09:49	Rain	Turning movement	P.D. only	Wet	South	Turning left	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2022-Aug-29, Mon,12:15	Clear	Turning movement	P.D. only	Dry	North	Turning left	Pick-up truck	Other motor vehicle	0
					South	Going ahead	Unknown	Other motor vehicle	
2022-Sep-10, Sat,09:40	Clear	Rear end	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					North	Stopped	Pick-up truck	Other motor vehicle	
2022-Sep-22, Thu,08:12	Clear	Turning movement	Non-fatal injury	Dry	South	Turning left	Delivery van	Other motor vehicle	0
					North	Going ahead	Pick-up truck	Other motor vehicle	
2022-Oct-07, Fri,15:51	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	
2022-Oct-17, Mon,06:59	Rain	Angle	P.D. only	Wet	West	Turning left	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, 2018 **To:** December 31, 2022

Location: CAMPEAU DR @ TERRY FOX DR

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
2022-Oct-23, Sun,15:42	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	
2022-Nov-01, Tue,18:09	Clear	Angle	Non-fatal injury	Dry	East	Turning left	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Pick-up truck	Other motor vehicle	
2022-Nov-11, Fri,15:50	Rain	Angle	P.D. only	Wet	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					North	Turning left	Automobile, station wagon	Other motor vehicle	
2022-Nov-11, Fri,16:15	Rain	Angle	P.D. only	Wet	South	Turning left	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2022-Nov-26, Sat,11:30	Clear	Rear end	P.D. only	Dry	North	Slowing or stopping	Delivery van	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2022-Dec-14, Wed,06:50	Clear	Turning movement	P.D. only	Wet	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Turning left	Automobile, station wagon	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**	**2023-170**
Scenario	**Existing/Future**	**Date**	**2025-07-11**
Comments			

SEGMENTS			Campeau	Kanata Common	Section	Section	Section	Section	Section	Section	Section
			Ex/Fut	Fut	3	4	5	6	7	8	9
Pedestrian	Sidewalk Width Boulevard Width	-	≥ 2 m 0.5 - 2 m	1.8 m > 2 m							
	Avg Daily Curb Lane Traffic Volume		≤ 3000	≤ 3000							
	Operating Speed On-Street Parking		> 60 km/h no	≤ 30 km/h yes							
	Exposure to Traffic PLoS		**B**	**A**	-	-	-	-	-	-	-
	Effective Sidewalk Width										
	Pedestrian Volume										
	Crowding PLoS		-	-	-	-	-	-	-	-	-
	Level of Service		**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Bicycle	Type of Cycling Facility	**A**	Physically Separated	Mixed Traffic							
	Number of Travel Lanes			≤ 2 (no centreline)							
	Operating Speed			≤ 40 km/h							
	# of Lanes & Operating Speed LoS		-	**A**	-	-	-	-	-	-	-
	Bike Lane (+ Parking Lane) Width										
	Bike Lane Width LoS		-	-	-	-	-	-	-	-	-
	Bike Lane Blockages										
	Blockage LoS		-	-	-	-	-	-	-	-	-
	Median Refuge Width (no median = < 1.8 m)										
	No. of Lanes at Unsignalized Crossing										
	Sidestreet Operating Speed										
	Unsignalized Crossing - Lowest LoS		**A**	-	-	-	-	-	-	-	-
	Level of Service		**A**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Transit	Facility Type	**D**	Mixed Traffic								
	Friction or Ratio Transit:Posted Speed		Vt/Vp ≥ 0.8								
	Level of Service		**D**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Truck	Truck Lane Width	**A**	> 3.7 m								
	Travel Lanes per Direction		> 1								
	Level of Service		**A**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Auto	**Level of Service**	**Not Applicable**									

Multi-Modal Level of Service - Intersections Form

Consultant	**CGH Transportation Inc.**	**Project**	**2023-170**
Scenario	**Existing/Future**	**Date**	**2025-07-11**
Comments			

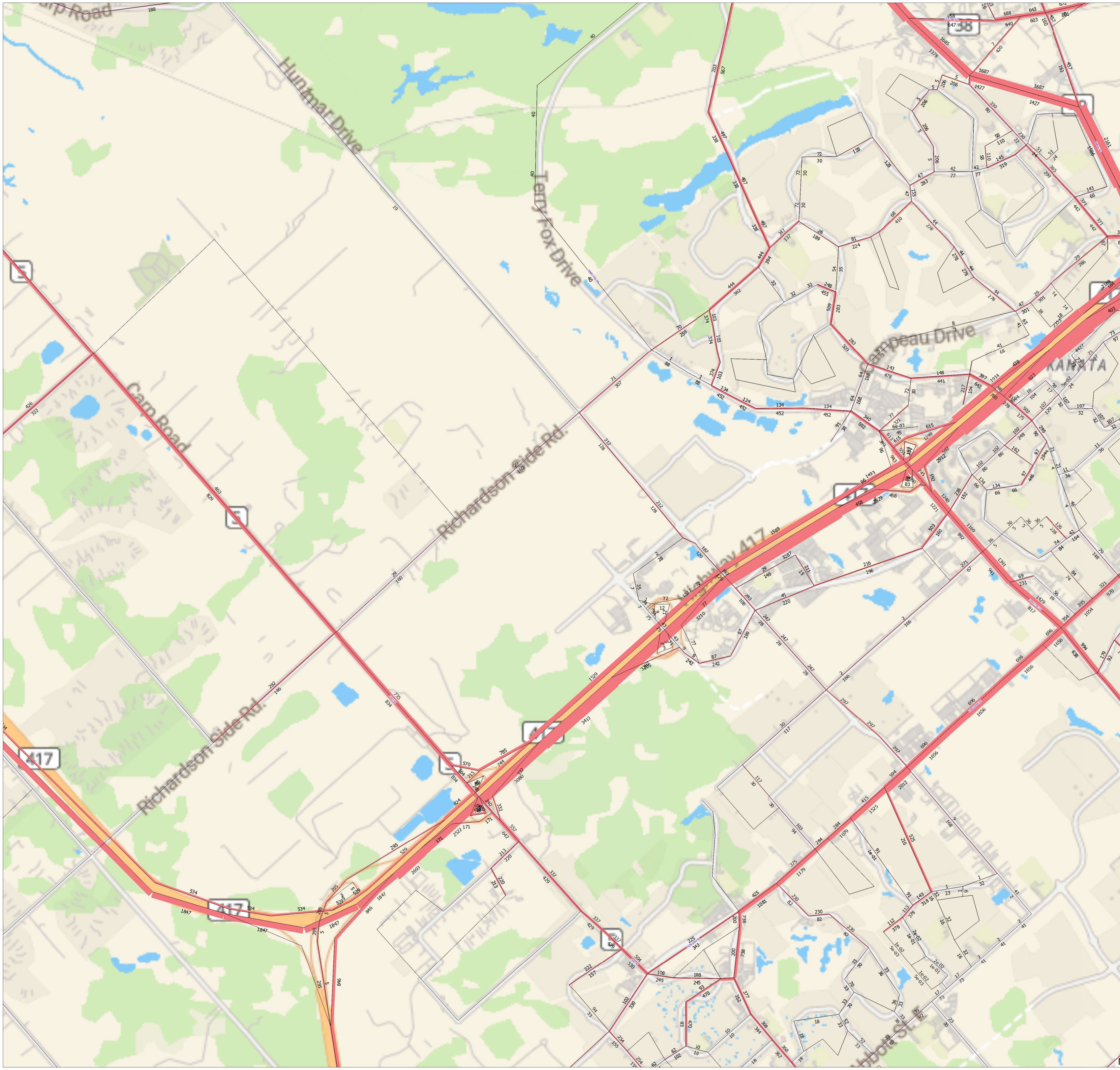
	INTERSECTIONS	Campeau Drive at Kanata Commons Access				Campeau Drive at Didsbury Road				Campeau Drive at Terry Fox Drive			
	Crossing Side	NORTH	SOUTH	EAST	WEST	NORTH	SOUTH	EAST	WEST	NORTH	SOUTH	EAST	WEST
Pedestrian	Lanes		4	8	8		3	6	7	7	8	7	7
	Median		No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m		No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	Median > 2.4 m
	Conflicting Left Turns		Permissive	Permissive	Permissive		Permissive	Permissive	Permissive	Permissive	Permissive	Protected	Protected
	Conflicting Right Turns		Permissive or yield control	Permissive or yield control	Permissive or yield control		Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control
	Right Turns on Red (RToR) ?		RTOR allowed	RTOR allowed	RTOR allowed		RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed
	Ped Signal Leading Interval?		No	No	No		No	No	No	No	No	No	No
	Right Turn Channel		No Channel	No Channel	No Channel		No Channel	No Channel	No Channel	Conv'tl without Receiving Lane	No Channel	Conv'tl without Receiving Lane	Conv'tl without Receiving Lane
	Corner Radius		10-15m	5-10m	10-15m		10-15m	5-10m	10-15m	15-25m	15-25m	15-25m	15-25m
	Crosswalk Type		Zebra stripe hi-vis markings	Zebra stripe hi-vis markings	Zebra stripe hi-vis markings		Zebra stripe hi-vis markings	Zebra stripe hi-vis markings	Zebra stripe hi-vis markings	Std transverse markings	Std transverse markings	Std transverse markings	Std transverse markings
	PETSI Score		**56**	**-8**	**-9**		**73**	**24**	**7**	**6**	**-14**	**14**	**20**
	Ped. Exposure to Traffic LoS	-	**D**	**F**	**F**	-	**C**	**F**	**F**	**F**	**F**	**F**	**F**
	Cycle Length		50	50	50		60	60	60	115	115	120	120
	Effective Walk Time		8	14	14		7	14	14	14	14	14	14
	Average Pedestrian Delay		**18**	**13**	**13**		**23**	**18**	**18**	**44**	**44**	**47**	**47**
	Pedestrian Delay LoS	-	**B**	**B**	**B**	-	**C**	**B**	**B**	**E**	**E**	**E**	**E**
	Level of Service	-	**D**	**F**	**F**	-	**C**	**F**	**F**	**F**	**F**	**F**	**F**
		F				**F**				**F**			
	Approach From	NORTH	SOUTH	EAST	WEST	NORTH	SOUTH	EAST	WEST	NORTH	SOUTH	EAST	WEST
Bicycle	Bicycle Lane Arrangement on Approach		Mixed Traffic	Curb Bike Lane, Cycletrack or MUP	Curb Bike Lane, Cycletrack or MUP		Mixed Traffic	Curb Bike Lane, Cycletrack or MUP	Curb Bike Lane, Cycletrack or MUP	Pocket Bike Lane	Pocket Bike Lane	Pocket Bike Lane	Mixed Traffic
	Right Turn Lane Configuration									Bike lane shifts to the left of right turn	Bike lane shifts to the left of right turn	Bike lane shifts to the left of right turn	
	Right Turning Speed									>25 to 30 km/h	>25 to 30 km/h	>25 to 30 km/h	
	Cyclist relative to RT motorists	-	**#N/A**	**Not Applicable**	**Not Applicable**	-	**#N/A**	**Not Applicable**	**Not Applicable**	**F**	**F**	**F**	**#N/A**
	Separated or Mixed Traffic	-	**Mixed Traffic**	**Separated**	**Separated**	-	**Mixed Traffic**	**Separated**	**Separated**	**Separated**	**Separated**	**Separated**	**Mixed Traffic**
	Left Turn Approach		No lane crossed	2-stage, LT box	2-stage, LT box		No lane crossed	2-stage, LT box	2-stage, LT box	≥ 2 lanes crossed	≥ 2 lanes crossed	1 lane crossed	No lane crossed
	Operating Speed		≤ 40 km/h	≥ 60 km/h	≥ 60 km/h		> 40 to ≤ 50 km/h	≥ 60 km/h	≥ 60 km/h	≥ 60 km/h	≥ 60 km/h	≥ 60 km/h	≥ 60 km/h
	Left Turning Cyclist	-	**B**	**A**	**A**	-	**B**	**A**	**A**	**F**	**F**	**E**	**C**
	Level of Service	-	**B**	**A**	**A**	-	**B**	**A**	**A**	**F**	**F**	**F**	**C**
		B				**B**				**F**			
Transit	Average Signal Delay			≤ 20 sec	≤ 20 sec			≤ 20 sec	≤ 20 sec	> 40 sec	≤ 40 sec	> 40 sec	≤ 40 sec
	Level of Service	-	-	**C**	**C**	-	-	**C**	**C**	**F**	**E**	**F**	**E**
		C				**C**				**F**			
Truck	Effective Corner Radius			< 10 m				10 - 15 m		> 15 m	> 15 m	> 15 m	
	Number of Receiving Lanes on Departure from Intersection			≥ 2				≥ 2		≥ 2	≥ 2	1	
	Level of Service	-	-	**D**	-	-	-	**B**	-	**A**	**A**	**C**	-
		D				**B**				**C**			
Auto	Volume to Capacity Ratio			0.0 - 0.60				0.0 - 0.60				0.61 - 0.70	
	Level of Service	**A**				**A**				**B**			

Campeau Drive at Herlihey Way				Campeau Drive at Kanata Avenue				erry Fox Drive at Didsbury Road/ Roland Michener Drive (Existin				Terry Fox Drive at Didsbury Road/ Roland Michener Drive (Future			
NORTH	SOUTH	EAST	WEST	NORTH	SOUTH	EAST	WEST	NORTH	SOUTH	EAST	WEST	NORTH	SOUTH	EAST	WEST
6	6	5	4	6	7	4	4	7	7	7	6				
No Median - 2.4 m	Median > 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m				
Protected/ Permissive	Protected/ Permissive	Protected	Protected	Protected/ Permissive	Protected/ Permissive	Permissive	Protected/ Permissive	Protected	Protected	Protected/ Permissive	Protected/ Permissive				
Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Permissive or yield control	Protected	Permissive or yield control				
RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR allowed	RTOR prohibited	RTOR allowed	RTOR allowed				
No	No	No	No	No	No	No	No	No	No	No	No				
No Channel	No Channel	No Channel	No Channel	No Channel	No Channel	No Channel	No Channel	No Channel	No Channel	No Channel	No Channel				
10-15m	10-15m	10-15m	10-15m	15-25m	15-25m	15-25m	15-25m	15-25m	15-25m	10-15m	10-15m				
Std transverse markings	Std transverse markings	Std transverse markings	Std transverse markings	Zebra stripe hi-vis markings	Zebra stripe hi-vis markings	Std transverse markings	Zebra stripe hi-vis markings	Std transverse markings	Std transverse markings	Std transverse markings	Std transverse markings				
20	**25**	**45**	**61**	**21**	**5**	**51**	**54**	**10**	**13**	**9**	**20**				
F	**F**	**D**	**C**	**F**	**F**	**D**	**D**	**F**	**F**	**F**	**F**				
115	115	120	120	120	120	115	115	115	115	115	115				
8	8	20	20	15	30	12	12	8	8	7	8				
50	**50**	**42**	**42**	**46**	**34**	**46**	**46**	**50**	**50**	**51**	**50**				
E	**E**	**E**	**E**	**E**	**D**	**E**	**E**	**E**	**E**	**E**	**E**				
F	**F**	**E**	**E**	**F**	**F**	**E**	**E**	**F**	**F**	**F**	**F**				
F				**F**				**F**							
NORTH	SOUTH	EAST	WEST	NORTH	SOUTH	EAST	WEST	NORTH	SOUTH	EAST	WEST	NORTH	SOUTH	EAST	WEST
Mixed Traffic	Mixed Traffic	Pocket Bike Lane Bike lane shifts to the left of right turn ≤ 25 km/h	Curb Bike Lane, Cycletrack or MUP	Mixed Traffic	Pocket Bike Lane Bike lane shifts to the left of right turn >25 to 30 km/h	Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic	Curb Bike Lane, Cycletrack or MUP	Curb Bike Lane, Cycletrack or MUP	Mixed Traffic	Curb Bike Lane, Cycletrack or MUP
#N/A	**#N/A**	**D**	**Not Applicable**	**#N/A**	**F**	**#N/A**	**#N/A**	**#N/A**	**#N/A**	**#N/A**	**#N/A**	**Not Applicable**	**Not Applicable**	**#N/A**	**Not Applicable**
Mixed Traffic	**Mixed Traffic**	**Separated**	**Separated**	**Mixed Traffic**	**Separated**	**Mixed Traffic**	**Mixed Traffic**	**Mixed Traffic**	**Mixed Traffic**	**Mixed Traffic**	**Mixed Traffic**	**Separated**	**Separated**	**Mixed Traffic**	**Separated**
No lane crossed ≤ 40 km/h	No lane crossed ≤ 40 km/h	1 lane crossed ≥ 60 km/h	2-stage, LT box ≥ 60 km/h	No lane crossed > 40 to ≤ 50 km/h	1 lane crossed > 40 to ≤ 50 km/h	No lane crossed ≥ 60 km/h	No lane crossed ≥ 60 km/h	One lane crossed ≥ 60 km/h	One lane crossed ≥ 60 km/h	No lane crossed ≤ 40 km/h	No lane crossed > 40 to ≤ 50 km/h	2-stage, LT box ≥ 60 km/h	2-stage, LT box ≥ 60 km/h	No lane crossed ≤ 40 km/h	2-stage, LT box > 40 to ≤ 50 km/h
B	**B**	**E**	**A**	**B**	**C**	**C**	**C**	**F**	**F**	**B**	**B**	**A**	**A**	**B**	**A**
B	**B**	**E**	**A**	**B**	**F**	**C**	**C**	**F**	**F**	**B**	**B**	**A**	**A**	**B**	**A**
E				**F**				**F**				**B**			
		≤ 30 sec	≤ 40 sec	≤ 30 sec	≤ 30 sec	> 40 sec	> 40 sec	> 40 sec	≤ 40 sec						
-	**-**	**D**	**E**	**D**	**D**	**F**	**F**	**F**	**E**	**-**	**-**				
E				**F**				**F**							
								10 - 15 m ≥ 2	> 15 m ≥ 2		10 - 15 m ≥ 2				
								B	**A**	**-**	**B**				
								B							
0.71 - 0.80				0.61 - 0.70				0.91 - 1.00							
C				**B**				**E**							

Terry Fox Drive at Highway 417 Westbound Ramp Terminal				Terry Fox Drive at Highway 417 Eastbound Ramp Terminal			
NORTH	SOUTH	EAST	WEST	NORTH	SOUTH	EAST	WEST
6	6	7		5	5		0 - 2
No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m		No Median - 2.4 m	No Median - 2.4 m		No Median - 2.4 m
No left turn / Prohib.	Protected	No left turn / Prohib.		Protected	No left turn / Prohib.		No left turn / Prohib.
Protected	No right turn	Permissive or yield control		No right turn	Permissive or yield control		Permissive or yield control
RTOR allowed	RTOR allowed	RTOR allowed		RTOR allowed	RTOR allowed		RTOR allowed
No	No	No		No	No		No
Conventional with Receiving Lane	No Channel	No Channel		Conventional with Receiving Lane	Conventional with Receiving Lane		Smart Channel
>25m	10-15m	15-25m		>25m	>25m		15-25m
Std transverse markings	Std transverse markings	Std transverse markings		Std transverse markings	Std transverse markings		Std transverse markings
31	**33**	**10**		**48**	**43**		**97**
E	**E**	**F**	**-**	**D**	**E**	**-**	**A**
115	115	120		115	115		120
52	31	31		59	64		15
17	**31**	**33**		**14**	**11**		**46**
B	**D**	**D**	**-**	**B**	**B**	**-**	**E**
E	**E**	**F**	**-**	**D**	**E**	**-**	**E**
F				**E**			
NORTH	**SOUTH**	**EAST**	**WEST**	**NORTH**	**SOUTH**	**EAST**	**WEST**
Curb Bike Lane, Cycletrack or MUP	Curb Bike Lane, Cycletrack or MUP	Mixed Traffic		Curb Bike Lane, Cycletrack or MUP	Curb Bike Lane, Cycletrack or MUP		Mixed Traffic
Not Applicable	**Not Applicable**	**#N/A**	**-**	**Not Applicable**	**Not Applicable**	**-**	**#N/A**
Separated	**Separated**	**Mixed Traffic**	**-**	**Separated**	**Separated**	**-**	**Mixed Traffic**
2-stage, LT box	2-stage, LT box	No lane crossed		2-stage, LT box	2-stage, LT box		No lane crossed
≥ 60 km/h	≥ 60 km/h	> 40 to ≤ 50 km/h		≥ 60 km/h	≥ 60 km/h		> 50 to < 60 km/h
A	**A**	**B**	**-**	**A**	**A**	**-**	**C**
A	**A**	**B**	**-**	**A**	**A**	**-**	**C**
B				**C**			
≤ 30 sec	≤ 20 sec			≤ 20 sec	≤ 10 sec		
D	**C**	**-**	**-**	**C**	**B**	**-**	**-**
D				**C**			
> 15 m	10 - 15 m	> 15 m		> 15 m	> 15 m		> 15 m
≥ 2	≥ 2	≥ 2		≥ 2	≥ 2		≥ 2
A	**B**	**A**	**-**	**A**	**A**	**-**	**A**
B				**A**			
0.71 - 0.80				0.81 - 0.90			
C				**D**			

Appendix G

TRANS Model Plots



TRANS Regional Model

Version 2.15 - Assigned June 16, 2020

AM Peak Hour Total Traffic Volume

Campeau Drive Area

2011 Model - Basecase

N/A

User Initials: BusterB
Plot Prepared: 24 Sept. 2021
EMME Scenario: 21711

Legend

AM Peak Hour Total Traffic Volume

1000 2000 3000 4000 5000

Distance (m)

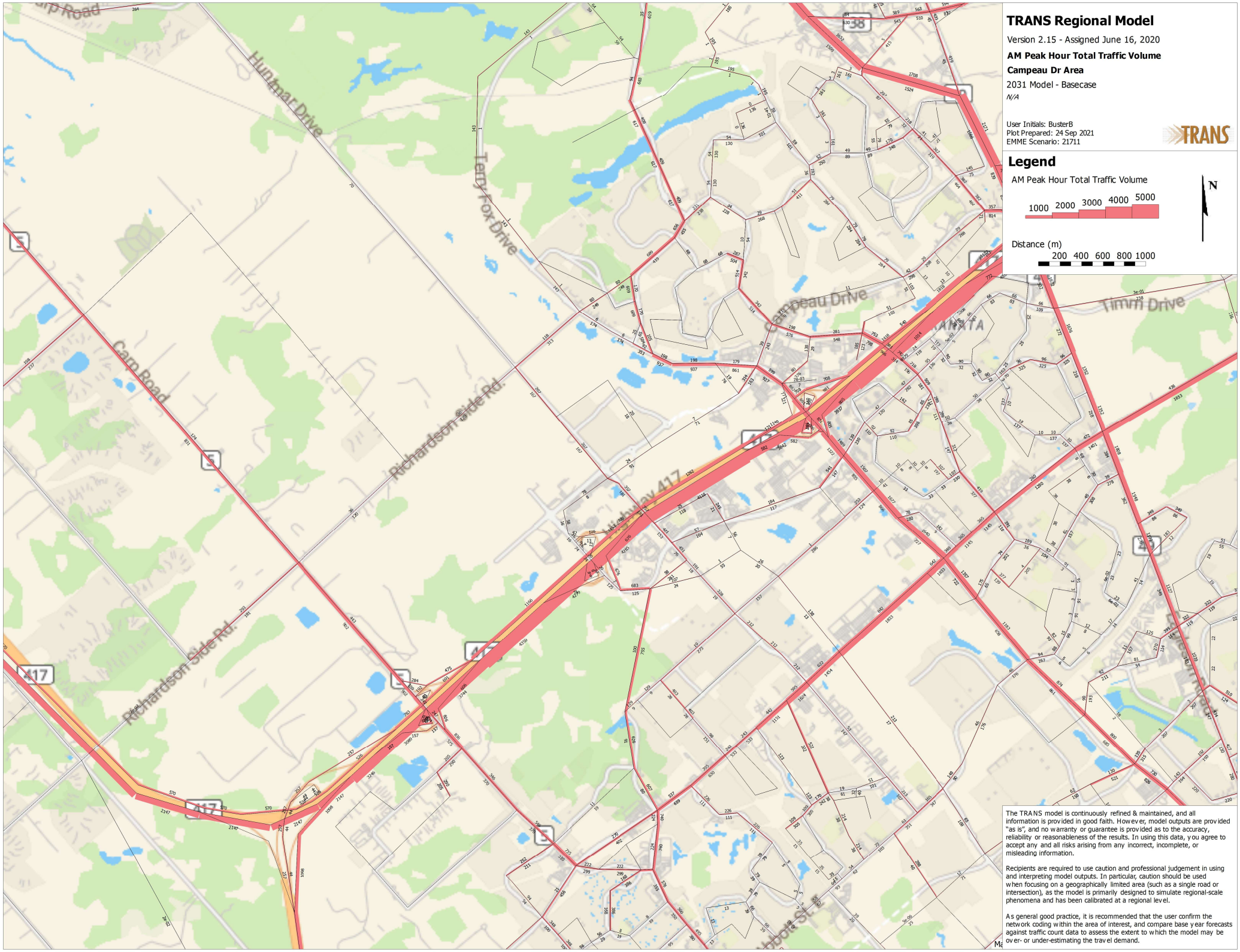
200 400 600 800 1000

N

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

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

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



TRANS Regional Model

Version 2.15 - Assigned June 16, 2020

AM Peak Hour Total Traffic Volume

Campeau Dr Area

2031 Model - Basecase

N/A

User Initials: BusterB
Plot Prepared: 24 Sep 2021
EMME Scenario: 21711

TRANS

Legend

AM Peak Hour Total Traffic Volume

1000 2000 3000 4000 5000

Distance (m)

200 400 600 800 1000

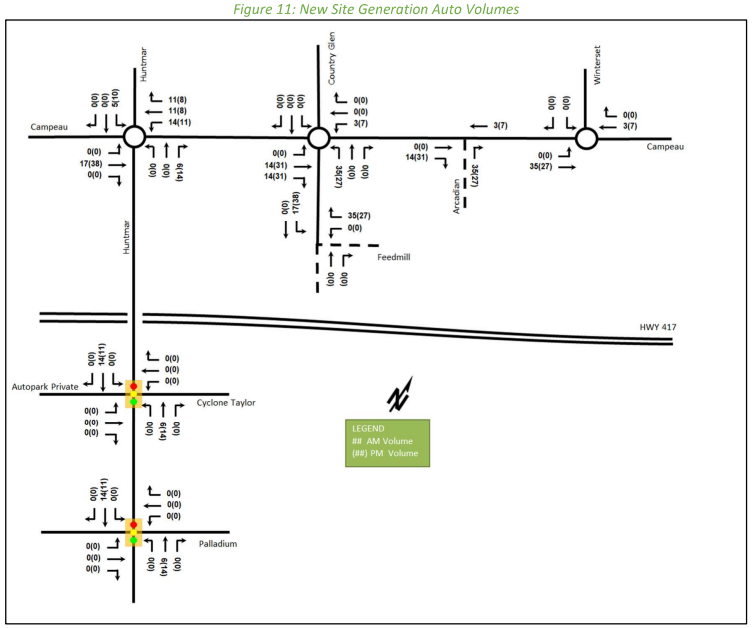
N

Appendix H

Background Developments

CGH TRANSPORTATION

Figure 11: New Site Generation Auto Volumes



6 Background Network Travel Demands

6.1 Transportation Network Plans

The transportation network plans were discussed in Section 2.3. The Campeau Drive extension was completed in the fall of 2021. Given this new network link, a resultant redistribution of area traffic will be applied to future horizons which will be further discussed and illustrated in Section 6.3.

6.2 Background Growth

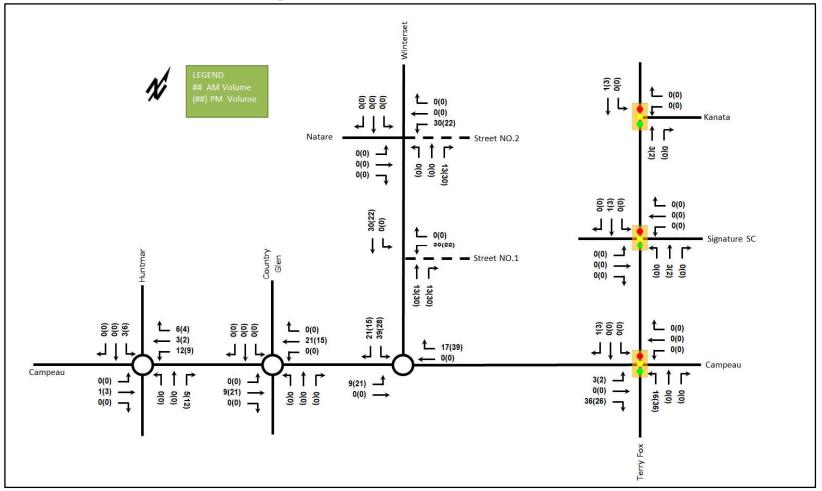
A review of the volume projections from the City's TRANS Regional Model for the 2011 and 2031 horizons was completed to determine the background growth for each of the study area roadways.

In general, the growth rates in the study area derived from the two TRANS model horizons are projected to be positive in both east-west and north-south directions. When reviewing the existing volumes compared to the 2031 model horizon, however, it is noted that forecasted volumes in the study area have been exceeded. Therefore, growth on study area roadways will be accounted for explicitly through the inclusion of area development traffic, with no annual background rates applied. The projections are provided in Appendix E.

Table 9: Trip Assignment

To/From	Via
North	10% Huntmar Drive (N), 5% Terry Fox Drive(N)
South	10% Terry Fox Drive(S), 20% Huntmar Drive (S)
East	50% Terry Fox Drive(S)
West	5% Campeau Drive (W)
Total	**100%**

Figure 11: New Site Generation Auto Volumes



6 Background Network Travel Demands

6.1 Transportation Network Plans

The transportation network plans were discussed in Section 2.3. The Campeau Drive extension was completed and opened in the fall of 2021. Therefore, volumes on Campeau Drive were re-distributed in future horizons based on the existing volumes and other area developments. These are summarized in Section 6.3.

6.2 Background Growth

A review of the background projections from the City's TRANS Regional Model for the 2011 and 2031 horizons was completed to determine the background growth for each of the study area roadways.

In general, the growth rates in the study area derived from the two TRANS model horizons are projected to be positive in both east-west and north-south directions. When reviewing the existing volumes compared to the 2031 model horizon, it is noted that forecasted volumes on eastbound, westbound, and northbound movement in the study area have been exceeded.

501 Terry Fox Drive

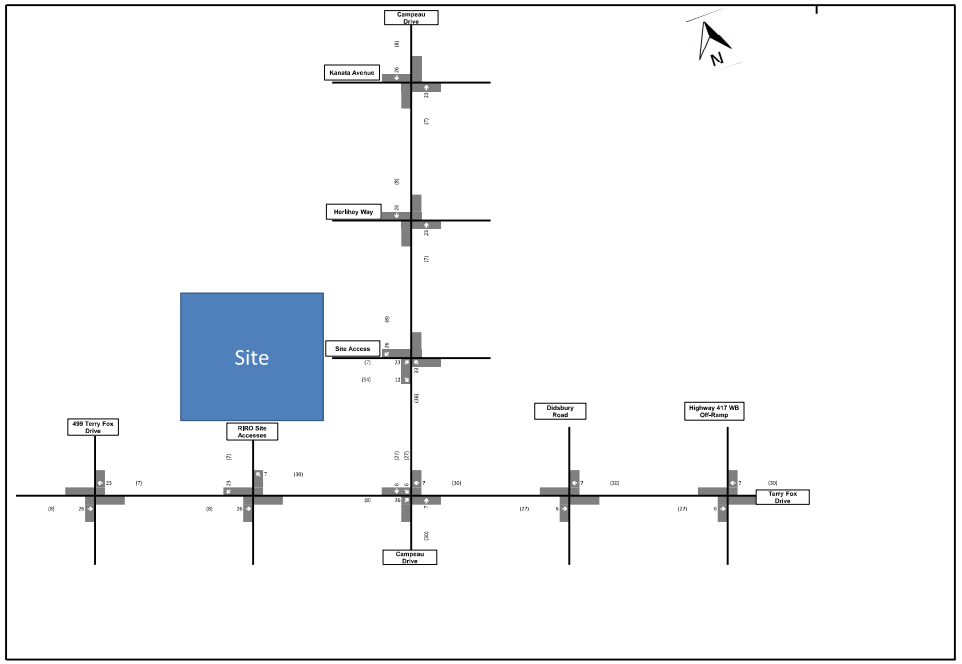
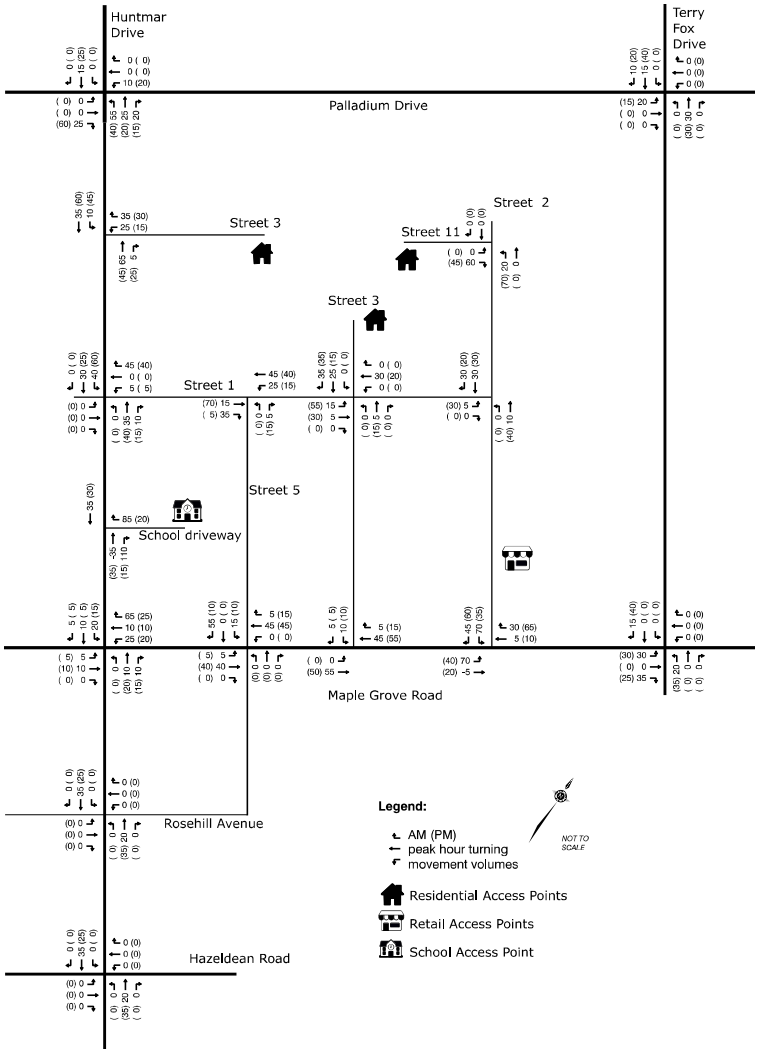


Figure 10 Site Trips

Figure 20: Trip Assignment

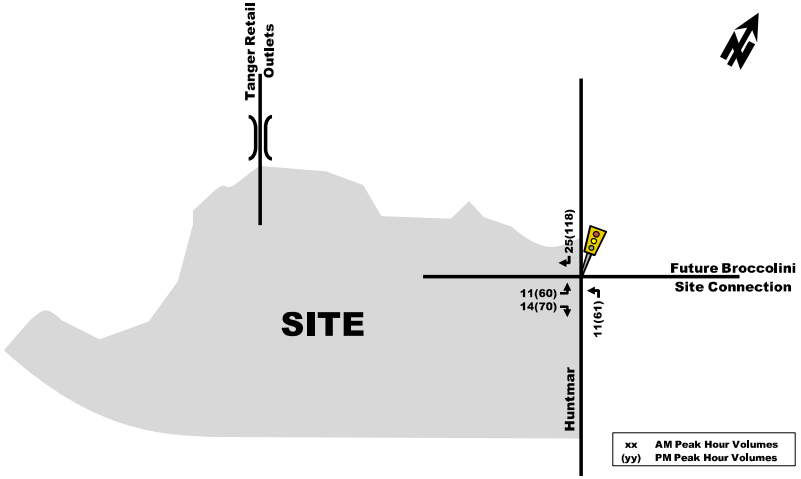


DILLON CONSULTING

It should be noted that a new bridge will be the provided over the Feedmill Creek, providing a connection between the Phase 1 Tanger Retail Outlets to the north and the subject site. With this link, it is reasonable to assume that a portion of the traffic generated by the Phase 1 Tanger Retail Outlets will utilize the new bridge connection to take advantage of the subject site's signalized full-movement driveway connection to Huntmar Drive. Similarly, a portion of the traffic generated by the subject site will originate or be destined to the Phase 1 Tanger Retail Outlets and will travel between the two sites via the new bridge connection. For analysis purposes, it is reasonable to assume that the traffic between the two sites (projected to use the new bridge connection) will be similar. Therefore, a reduction in site generated traffic to account for 'multi-purpose' trips at the site's proposed driveway connection is not included in the subsequent analysis (i.e. any reduction in traffic at the site driveway connection, to account for trips between the subject site and the Phase 1 Tanger Retail Outlets will likely be offset by traffic to/from the Phase 1 Tanger Retails Outlets taking advantage of the subject site's signalized connection to Huntmar Drive).

Based on the foregoing, the following Figure 3 depicts projected 'new' and 'pass-by' site-generated traffic.

Figure 3: 'New' and 'Pass-by' Site-Generated Traffic Volumes



3. Future Traffic Operations

3.1 Projected Intersection Operations

As mentioned previously, there has already been considerable transportation planning work completed for this area to assist in establishing the future study area road network, which includes a widened Huntmar Drive (4-lanes) and a multi-lane roundabout (recently constructed) at the Huntmar/Campeau intersection. As the transportation planning work included a high-level site traffic generation for the subject site (similar to the site-generated traffic summarized above), the future study area transportation network will have sufficient capacity to accommodate the projected traffic generated by the subject site. Therefore, area development and projected intersection operations have not been assessed herein, except for the proposed site connection to Huntmar Drive.

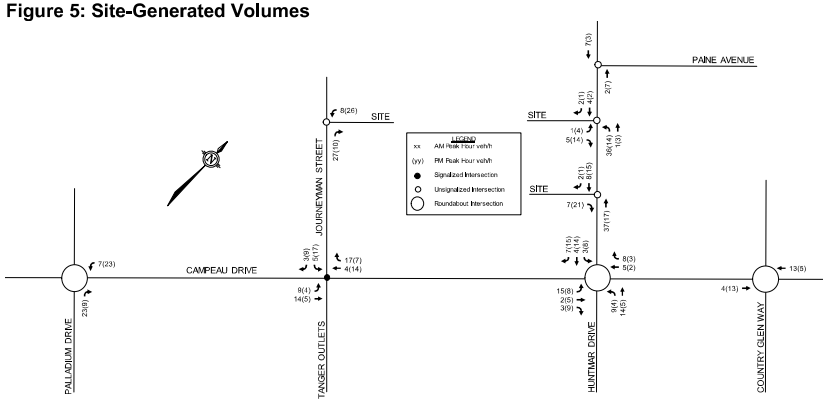
As the extension of Campeau Drive between Winterset Road and Terry Fox Drive was completed in 2021, traffic volumes shown in 2019 count data are anticipated to have changed. To account for changes in background traffic, traffic volumes at the Huntmar Drive/Campeau Drive intersection were balanced and redistributed based on recent counts at the Huntmar Drive/Paine Avenue and Campeau Drive/Country Glen Way intersections.

3.3 Future Traffic Conditions

The figures listed below present the following future traffic conditions:

- Proposed site-generated traffic volumes in 2024 are shown in **Figure 5**;
- Background traffic volumes in 2024 are shown in **Figure 6**;
- Background traffic volumes in 2029 are shown in **Figure 7**;
- Total traffic volumes in 2024 are shown in **Figure 8**;
- Total traffic volumes in 2029 are shown in **Figure 9**.

Figure 5: Site-Generated Volumes



3.1.2. TRIP DISTRIBUTION AND ASSIGNMENT

Based on the 2011 NCR Household Origin-Destination Survey (Kanata – Stittsville district) and the location of adjacent arterial roadways and neighbourhoods, the distribution of site-generated traffic volumes was estimated as follows:

- 25% to/from the north;
- 10% to/from the south;
- 60% to/from the east; and,
- 5% to/from the west.

The expected site-generated auto trips in Table 15 and Table 16 were then assigned to the road networks as shown in Figure 12 and Figure 13, by assessing the flow of existing traffic volumes and the estimated travel times.

Figure 12: Purolator Facility Site-Generated Traffic (Phase 1)

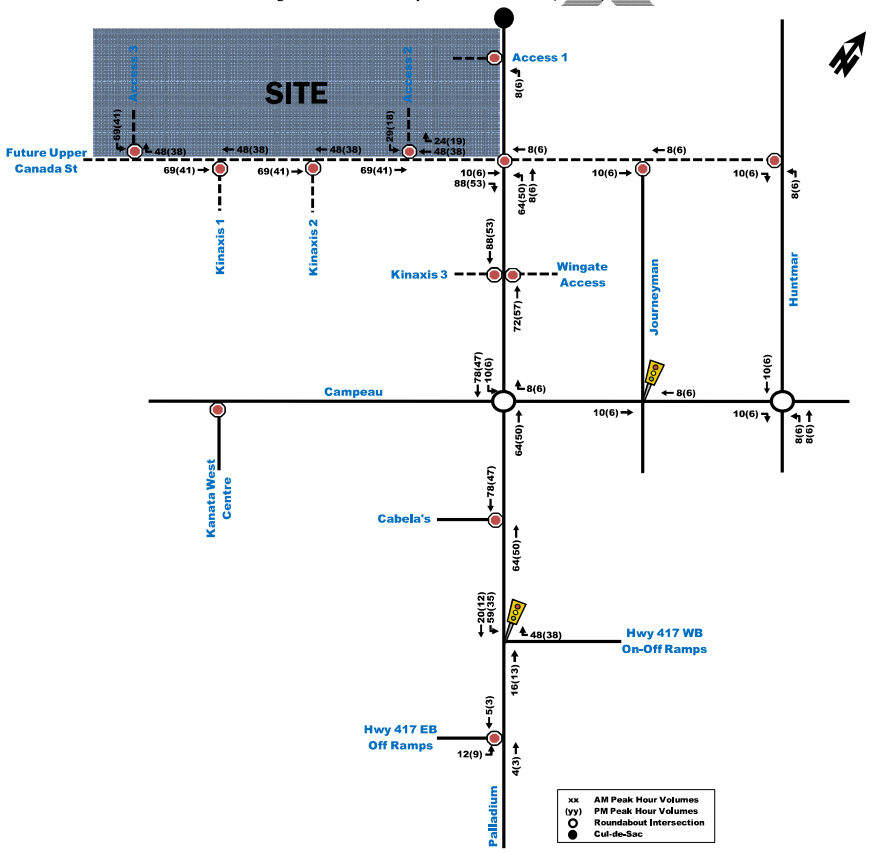
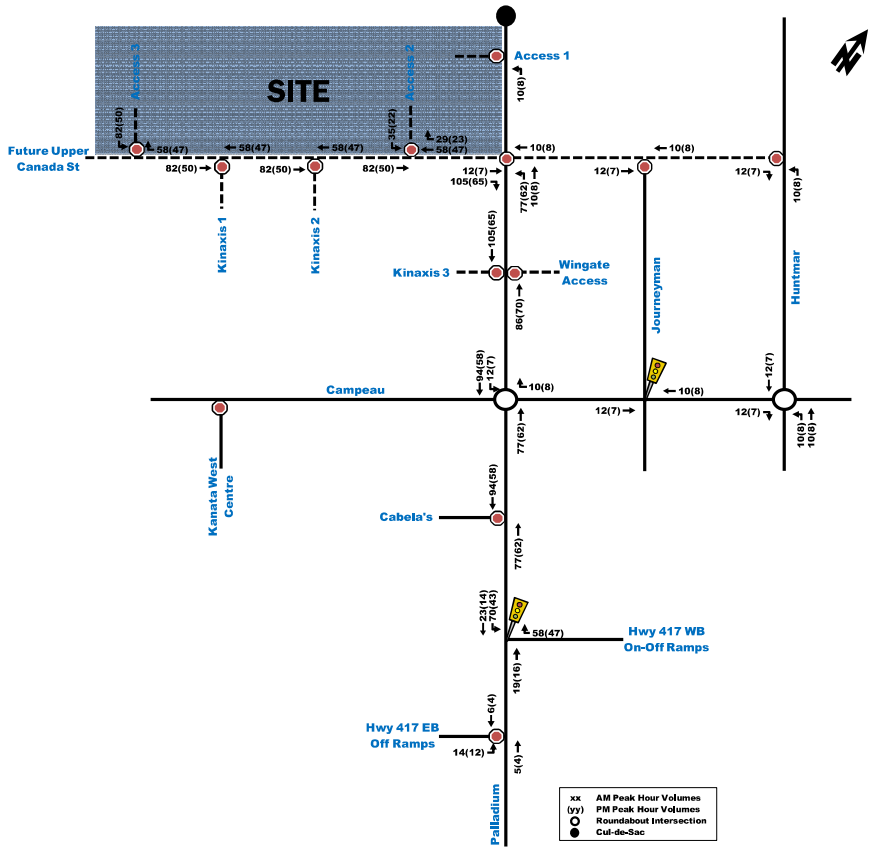


Figure 13: Purolator Facility Site-Generated Traffic (Phase 2)



It was assumed that 25% of site traffic would travel to/from Huntmar Rd, while 75% would use Hwy 417. The majority of employees and customers were anticipated to use Site Access 3, along the future Upper Canada Street, to enter and exit the development site. The remainder would use accesses 1 and 2, with access 1 being used mainly by inbound delivery and transport trucks.

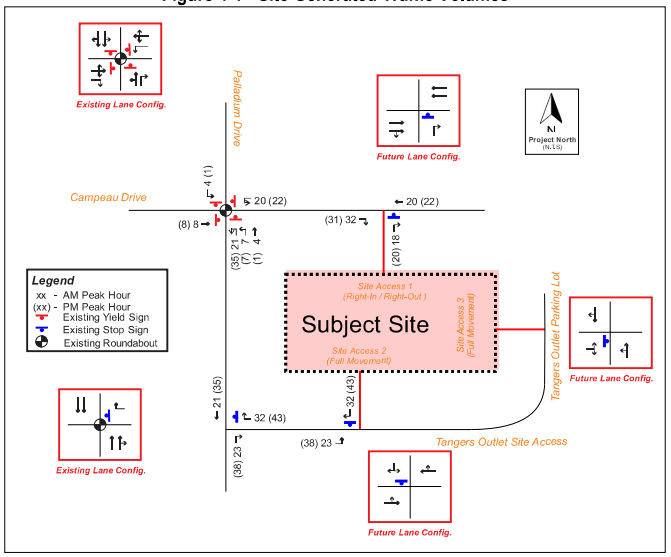
As shown in **Table 4.1**, the proposed development is anticipated to generate 106 two-way trips (56 inbound and 50 outbound) during the AM peak hours and 132 two-way trips (69 inbound and 63 outbound) during the PM peak hours. It is noted that the Trip Generation Manual does not contain AM peak period trip data for LUC 948. However, on weekdays car washes generally experience peak traffic volumes during the PM peak period. As such, the findings of this analysis are not expected to be negatively affected by the omission of AM trips. Additionally, ITE does not provide pass-by trip rates for LUC 948, which typically accounts for a significant portion of car trips.

The assumptions for the trip distribution rates are based on the existing traffic patterns at the Campeau Drive and Palladium Drive intersection, and routes that drivers would likely take to access the subject site and engineering judgement based on ease of site access. As a result, site trip distribution is summarized for the inbound and outbound site traffic movements during the morning and afternoon peak hours in **Table 4.2**.

Table 4.2 – Site Traffic Trip Distribution

Direction	Via	AM Peak Hour		PM Peak Hour	
		Inbound	Outbound	Inbound	Outbound
North	Palladium Drive	8%	8%	2%	2%
South	Palladium Drive	42%	42%	55%	55%
East	Campeau Drive	36%	36%	32%	32%
West	Campeau Drive	14%	14%	11%	11%
Total		**100%**	**100%**	**100%**	**100%**

Figure 4-1 - Site Generated Traffic Volumes



PARSONS

Figure 12: Maritime Ontario Facility Site-Generated Traffic (Phase 1)

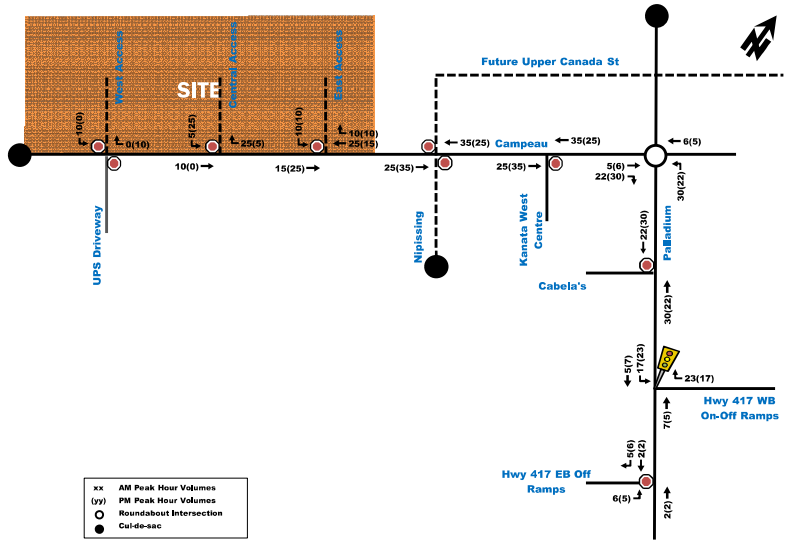
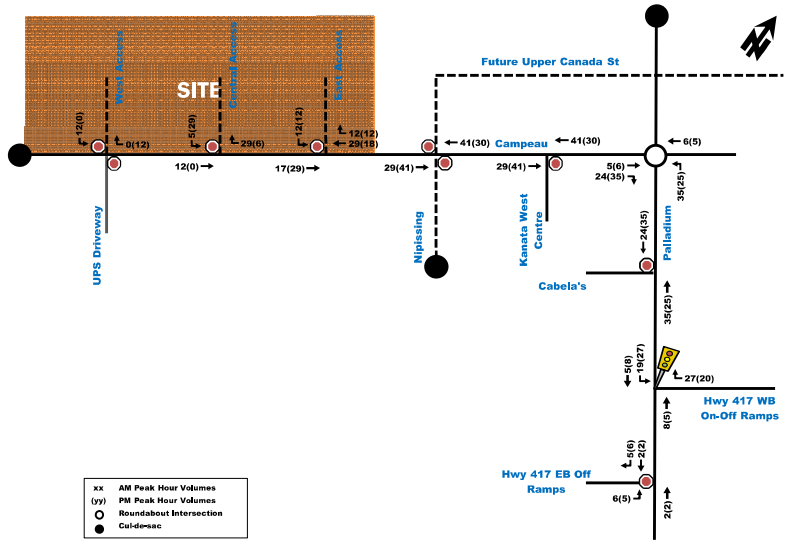


Figure 13: Maritime Ontario Facility Site-Generated Traffic (Phase 2)



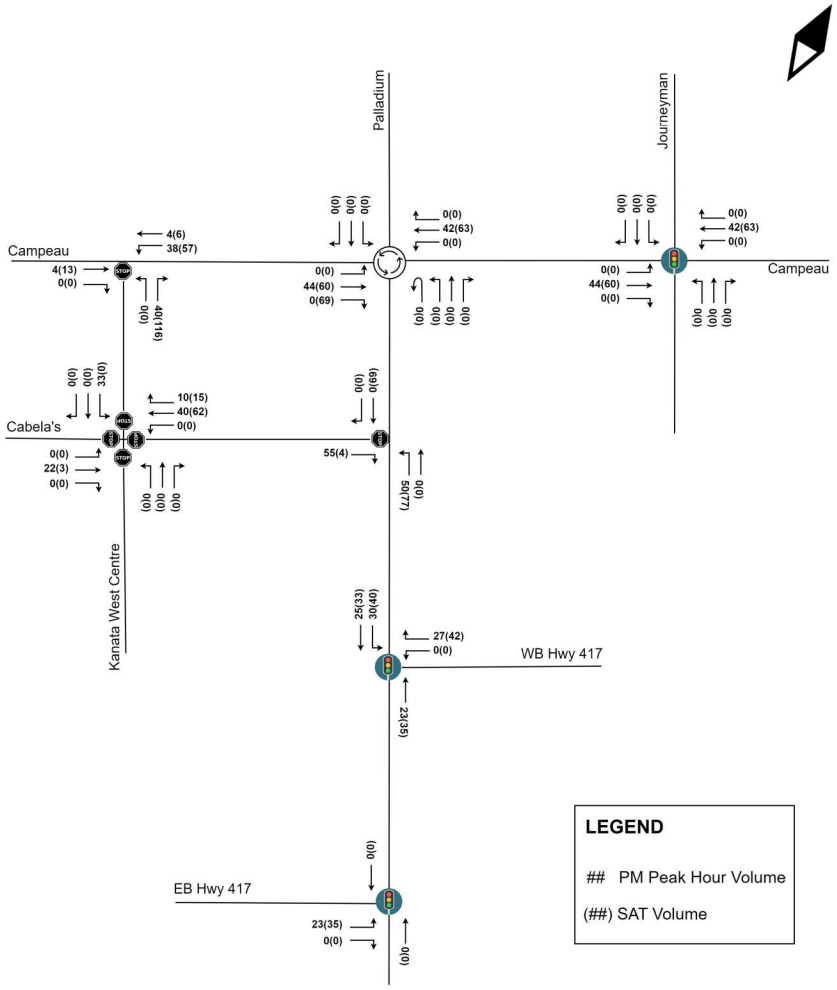
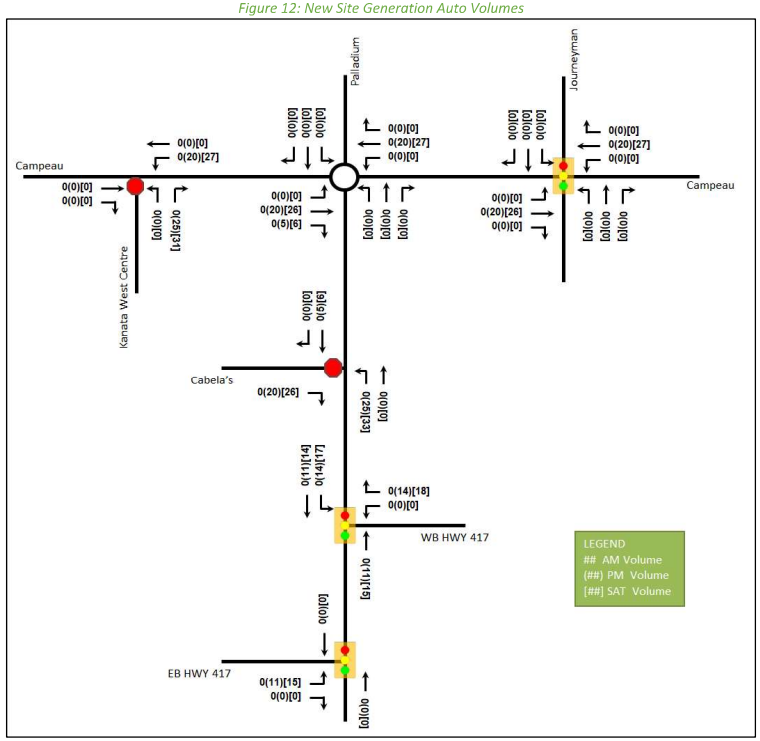


FIGURE 18: SITE GENERATED TRAFFIC

Figure 12: New Site Generation Auto Volumes



Appendix I

Synchro and Sidra Worksheets –2028 Future Background Horizon

MOVEMENT SUMMARY

Site: [101] Winterset-Campeau AM 2028 FB (General)
Output produced by SIDRA INTERSECTION Version: 10.0.3.210

8201 Campeau
Site Category: (None)
Roundabout
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop of Cycles Rate to Depart	Number	Aver. Speed km/h
South: Donum															
1	L2	All MCs	9	0.0	9	0.0	0.013	10.6	LOS B	0.0	0.2	0.35	0.67	0.35	44.4
2	T1	All MCs	1	0.0	1	0.0	0.013	4.6	LOS A	0.0	0.2	0.35	0.67	0.35	45.4
3	R2	All MCs	4	0.0	4	0.0	0.005	4.9	LOS A	0.0	0.1	0.37	0.51	0.37	48.8
Approach			14	0.0	14	0.0	0.013	8.6	LOS A	0.0	0.2	0.36	0.63	0.36	45.6
East: Campeau															
4	L2	All MCs	11	0.0	11	0.0	0.153	9.4	LOS A	0.6	4.2	0.10	0.34	0.10	51.3
5	T1	All MCs	222	2.0	222	2.0	0.153	3.4	LOS A	0.6	4.2	0.10	0.36	0.10	55.1
6	R2	All MCs	97	2.0	97	2.0	0.153	4.3	LOS A	0.6	4.2	0.10	0.39	0.10	38.4
Approach			330	1.9	330	1.9	0.153	3.8	LOS A	0.6	4.2	0.10	0.37	0.10	48.8
North: Winterset															
7	L2	All MCs	212	2.0	212	2.0	0.230	2.3	LOS A	0.7	4.8	0.29	0.36	0.29	36.8
8	T1	All MCs	2	0.0	2	0.0	0.230	4.0	LOS A	0.7	4.8	0.29	0.36	0.29	30.6
9	R2	All MCs	38	2.0	38	2.0	0.041	0.7	LOS A	0.1	0.8	0.26	0.17	0.26	37.9
Approach			252	2.0	252	2.0	0.230	2.1	LOS A	0.7	4.8	0.29	0.33	0.29	36.9
West: Campeau															
10	L2	All MCs	14	2.0	14	2.0	0.167	10.5	LOS B	0.6	4.5	0.36	0.47	0.36	37.8
11	T1	All MCs	272	2.0	272	2.0	0.167	4.4	LOS A	0.6	4.5	0.36	0.45	0.36	53.6
12	R2	All MCs	8	0.0	8	0.0	0.167	4.6	LOS A	0.6	4.5	0.36	0.44	0.36	50.0
Approach			294	1.9	294	1.9	0.167	4.7	LOS A	0.6	4.5	0.36	0.46	0.36	52.5
All Vehicles			890	1.9	890	1.9	0.230	3.7	LOS A	0.7	4.8	0.24	0.39	0.24	45.5

Site Level of Service (LOS) Method: Delay & v/c (HCM 2010). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c >1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 2010 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: [102] Winterset-Campeau PM 2028 FB (General)
Output produced by SIDRA INTERSECTION Version: 10.0.3.210

8201 Campeau
Site Category: (None)
Roundabout
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop of Cycles Rate to Depart	Number	Aver. Speed km/h
South: Donum															
1	L2	All MCs	3	0.0	3	0.0	0.005	10.9	LOS B	0.0	0.1	0.38	0.65	0.38	44.6
2	T1	All MCs	1	0.0	1	0.0	0.005	4.9	LOS A	0.0	0.1	0.38	0.65	0.38	45.7
3	R2	All MCs	3	0.0	3	0.0	0.004	5.2	LOS A	0.0	0.1	0.41	0.53	0.41	48.2
Approach			7	0.0	7	0.0	0.005	7.6	LOS A	0.0	0.1	0.39	0.60	0.39	46.2
East: Campeau															
4	L2	All MCs	2	0.0	2	0.0	0.292	9.6	LOS A	1.3	9.5	0.17	0.33	0.17	51.2
5	T1	All MCs	435	2.0	435	2.0	0.292	3.5	LOS A	1.3	9.5	0.17	0.35	0.17	55.0
6	R2	All MCs	181	2.0	181	2.0	0.292	4.4	LOS A	1.3	9.5	0.17	0.39	0.17	38.2
Approach			618	2.0	618	2.0	0.292	3.8	LOS A	1.3	9.5	0.17	0.36	0.17	48.8
North: Winterset															
7	L2	All MCs	115	2.0	115	2.0	0.143	2.9	LOS A	0.4	2.7	0.36	0.44	0.36	36.4
8	T1	All MCs	1	0.0	1	0.0	0.143	4.6	LOS A	0.4	2.7	0.36	0.44	0.36	30.2
9	R2	All MCs	27	2.0	27	2.0	0.034	1.4	LOS A	0.1	0.6	0.35	0.28	0.35	37.5
Approach			143	2.0	143	2.0	0.143	2.6	LOS A	0.4	2.7	0.36	0.41	0.36	36.6
West: Campeau															
10	L2	All MCs	40	2.0	40	2.0	0.252	10.0	LOS B	1.1	7.6	0.28	0.43	0.28	38.0
11	T1	All MCs	452	2.0	452	2.0	0.252	3.9	LOS A	1.1	7.6	0.28	0.40	0.28	54.2
12	R2	All MCs	2	0.0	2	0.0	0.252	4.1	LOS A	1.1	7.6	0.28	0.38	0.28	51.0
Approach			494	2.0	494	2.0	0.252	4.4	LOS A	1.1	7.6	0.28	0.40	0.28	52.3
All Vehicles			1262	2.0	1262	2.0	0.292	3.9	LOS A	1.3	9.5	0.24	0.38	0.24	48.2

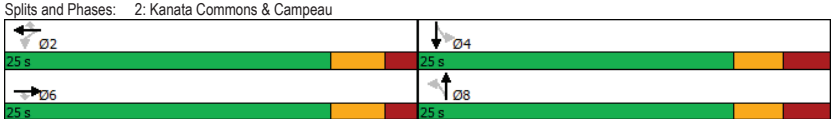
Site Level of Service (LOS) Method: Delay & v/c (HCM 2010). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c >1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 2010 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	484	7	15	328	0	2	0	13	0	0	0
Future Volume (vph)	0	484	7	15	328	0	2	0	13	0	0	0
Satd. Flow (prot)	0	3316	1483	1658	3316	1745	1658	1464	0	1745	1745	0
Flt Permitted				0.476								
Satd. Flow (perm)	0	3316	1452	830	3316	1745	1745	1464	0	1745	1745	0
Satd. Flow (RTOR)			63					217				
Lane Group Flow (vph)	0	484	7	15	328	0	2	13	0	0	0	0
Turn Type		NA	Perm	Perm	NA	Perm	Perm	NA		Perm		
Protected Phases		6			2			8			4	
Permitted Phases			6	2		2	8			4		
Detector Phase		6	6	2	2	2	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)		23.3	23.3	23.3	23.3	23.3	23.9	23.9		23.9	23.9	
Total Split (s)		25.0	25.0	25.0	25.0	25.0	25.0	25.0		25.0	25.0	
Total Split (%)		50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%		50.0%	50.0%	
Yellow Time (s)		3.3	3.3	3.3	3.3	3.3	3.0	3.0		3.0	3.0	
All-Red Time (s)		2.0	2.0	2.0	2.0	2.0	2.9	2.9		2.9	2.9	
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)		5.3	5.3	5.3	5.3	5.3	5.9	5.9		5.9	5.9	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode		Max	Max	Max	Max	Max	None	None		None	None	
Act Effct Green (s)		40.7	40.7	40.7	40.7		11.5	11.5				
Actuated g/C Ratio		0.91	0.91	0.91	0.91		0.26	0.26				
v/c Ratio		0.16	0.01	0.02	0.11		0.00	0.02				
Control Delay		2.6	0.0	3.7	2.5		14.5	0.1				
Queue Delay		0.0	0.0	0.0	0.0		0.0	0.0				
Total Delay		2.6	0.0	3.7	2.5		14.5	0.1				
LOS		A	A	A	A		B	A				
Approach Delay		2.6			2.6			2.0				
Approach LOS		A			A			A				
Queue Length 50th (m)		0.0	0.0	0.0	0.0		0.1	0.0				
Queue Length 95th (m)		22.1	0.0	3.0	15.1		1.4	0.0				
Internal Link Dist (m)		129.8			222.4			129.9			12.7	
Turn Bay Length (m)			65.0	120.0			30.0					
Base Capacity (vph)		3013	1325	754	3013		771	767				
Starvation Cap Reductn		0	0	0	0		0	0				
Spillback Cap Reductn		0	0	0	0		0	0				
Storage Cap Reductn		0	0	0	0		0	0				
Reduced v/c Ratio		0.16	0.01	0.02	0.11		0.00	0.02				

Intersection Summary
Cycle Length: 50
Actuated Cycle Length: 44.8
Natural Cycle: 50
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.16

Intersection Signal Delay: 2.6 — Intersection LOS: A
Intersection Capacity Utilization 32.9% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 2: Kanata Commons & Campeau

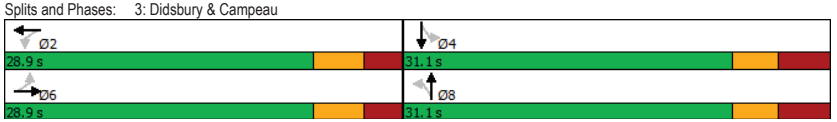


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	489	4	2	338	0	6	0	1	0	0	0
Future Volume (vph)	1	489	4	2	338	0	6	0	1	0	0	0
Satd. Flow (prot)	1658	3312	0	1658	3316	0	1658	1464	0	1745	1745	0
Flt Permitted	0.548			0.472								
Satd. Flow (perm)	955	3312	0	824	3316	0	1745	1464	0	1745	1745	0
Satd. Flow (RTOR)		2						196				
Lane Group Flow (vph)	1	493	0	2	338	0	6	1	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm		
Protected Phases		6			2			8			4	
Permitted Phases	6			2			8			4		
Detector Phase	6	6		2	2		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	
Minimum Split (s)	27.5	27.5		27.5	27.5		31.1	31.1		31.1	31.1	
Total Split (s)	28.9	28.9		28.9	28.9		31.1	31.1		31.1	31.1	
Total Split (%)	48.2%	48.2%		48.2%	48.2%		51.8%	51.8%		51.8%	51.8%	
Yellow Time (s)	3.7	3.7		3.7	3.7		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.8	2.8		2.8	2.8		3.8	3.8		3.8	3.8	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.5	6.5		6.5	6.5		7.1	7.1		7.1	7.1	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	Max	Max		Max	Max		None	None		None	None	
Act Effct Green (s)	45.1	45.1		45.1	45.1		12.3	12.3				
Actuated g/C Ratio	0.90	0.90		0.90	0.90		0.25	0.25				
v/c Ratio	0.00	0.17		0.00	0.11		0.01	0.00				
Control Delay	6.0	3.5		5.5	3.5		15.7	0.0				
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0				
Total Delay	6.0	3.5		5.5	3.5		15.7	0.0				
LOS	A	A		A	A		B	A				
Approach Delay		3.5			3.5			13.4				
Approach LOS		A			A			B				
Queue Length 50th (m)	0.0	0.0		0.0	0.0		0.4	0.0				
Queue Length 95th (m)	0.8	29.4		1.1	20.3		3.0	0.0				
Internal Link Dist (m)		222.4			123.4			171.0			27.1	
Turn Bay Length (m)	45.0			45.0			15.0					
Base Capacity (vph)	859	2980		741	2983		874	831				
Starvation Cap Reductn	0	0		0	0		0	0				
Spillback Cap Reductn	0	0		0	0		0	0				
Storage Cap Reductn	0	0		0	0		0	0				
Reduced v/c Ratio	0.00	0.17		0.00	0.11		0.01	0.00				

Intersection Summary
Cycle Length: 60
Actuated Cycle Length: 50.1
Natural Cycle: 60
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.17

Intersection Signal Delay: 3.6 — Intersection LOS: A
Intersection Capacity Utilization 37.5% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 3: Didsbury & Campeau



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	81	229	200	251	238	75	123	571	121	141	550	65
Future Volume (vph)	81	229	200	251	238	75	123	571	121	141	550	65
Satd. Flow (prot)	1642	1745	1441	1580	1712	1363	1658	3191	1441	1658	3191	1483
Flt Permitted	0.515			0.528			0.950			0.950		
Satd. Flow (perm)	889	1745	1423	878	1712	1343	1658	3191	1403	1654	3191	1483
Satd. Flow (RTOR)			200			94			121			94
Lane Group Flow (vph)	81	229	200	251	238	75	123	571	121	141	550	65
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	43.4	43.4	43.4	43.4	43.4	43.4	11.5	40.4	40.4	11.5	40.4	40.4
Total Split (s)	54.0	54.0	54.0	54.0	54.0	54.0	14.0	47.0	47.0	14.0	47.0	47.0
Total Split (%)	47.0%	47.0%	47.0%	47.0%	47.0%	47.0%	12.2%	40.9%	40.9%	12.2%	40.9%	40.9%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	4.2	4.2	4.2	4.2	4.2	4.2
All-Red Time (s)	2.7	2.7	2.7	2.7	2.7	2.7	2.3	2.2	2.2	2.3	2.2	2.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.4	6.4	6.4	6.4	6.4	6.4	6.5	6.4	6.4	6.5	6.4	6.4
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	35.9	35.9	35.9	35.9	35.9	35.9	14.5	43.1	43.1	16.7	45.2	45.2
Actuated g/C Ratio	0.31	0.31	0.31	0.31	0.31	0.31	0.13	0.37	0.37	0.15	0.39	0.39
v/c Ratio	0.29	0.42	0.34	0.92	0.44	0.15	0.59	0.48	0.20	0.59	0.44	0.10
Control Delay	29.9	32.0	4.8	66.2	29.5	2.3	61.9	15.6	4.9	59.1	28.0	2.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.9	32.0	4.8	66.2	29.5	2.3	61.9	15.6	4.9	59.1	28.0	2.5
LOS	C	C	A	E	C	A	E	B	A	E	C	A
Approach Delay		21.0			42.2			21.0			31.6	
Approach LOS		C			D			C			C	
Queue Length 50th (m)	13.6	40.3	0.0	37.8	33.8	0.3	28.9	37.3	4.3	29.5	49.5	0.0
Queue Length 95th (m)	23.0	52.9	13.5	46.7	18.9	0.0	#72.2	8.7	0.0	#80.1	66.7	4.6
Internal Link Dist (m)		144.2			146.9			173.9			301.0	
Turn Bay Length (m)	62.5		64.5	70.0		63.5	45.0		62.5	100.0		50.0
Base Capacity (vph)	367	722	706	363	708	610	209	1195	601	240	1255	640
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.22	0.32	0.28	0.69	0.34	0.12	0.59	0.48	0.20	0.59	0.44	0.10

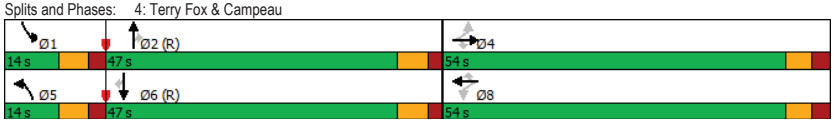
Intersection Summary
Cycle Length: 115
Actuated Cycle Length: 115
Offset: 91 (79%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.92

Intersection Signal Delay: 28.6	Intersection LOS: C
Intersection Capacity Utilization 85.4%	ICU Level of Service E
Analysis Period (min) 15	

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

Splits and Phases: 4: Terry Fox & Campeau



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	17	401	56	38	537	37	14	10	35	18	7	20
Future Volume (vph)	17	401	56	38	537	37	14	10	35	18	7	20
Satd. Flow (prot)	1658	1707	0	1658	1745	1483	1658	1502	0	1658	1745	1483
Flt Permitted	0.423			0.472			0.950			0.950		
Satd. Flow (perm)	737	1707	0	820	1745	1448	1658	1502	0	1638	1745	1483
Satd. Flow (RTOR)		9				83		35				86
Lane Group Flow (vph)	17	457	0	38	537	37	14	45	0	18	7	20
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases		6			2		3	8		7	4	
Permitted Phases	6			2		2						4
Detector Phase	6	6		2	2	2	3	8		7	4	4
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0	10.0	5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	35.2	35.2		35.2	35.2	35.2	10.9	28.9		10.9	28.9	28.9
Total Split (s)	67.0	67.0		67.0	67.0	67.0	18.0	30.0		18.0	30.0	30.0
Total Split (%)	58.3%	58.3%		58.3%	58.3%	58.3%	15.7%	26.1%		15.7%	26.1%	26.1%
Yellow Time (s)	3.3	3.3		3.3	3.3	3.3	3.3	3.3		3.3	3.3	3.3
All-Red Time (s)	2.9	2.9		2.9	2.9	2.9	2.6	2.6		2.6	2.6	2.6
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.2	6.2		6.2	6.2	6.2	5.9	5.9		5.9	5.9	5.9
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Recall Mode	C-Max	C-Max		C-Max	C-Max	C-Max	None	None		None	None	None
Act Effct Green (s)	89.1	89.1		89.1	89.1	89.1	6.6	12.6		6.9	12.8	12.8
Actuated g/C Ratio	0.77	0.77		0.77	0.77	0.77	0.06	0.11		0.06	0.11	0.11
v/c Ratio	0.03	0.35		0.06	0.40	0.03	0.15	0.23		0.18	0.04	0.08
Control Delay	10.1	9.8		5.4	5.0	0.2	54.5	21.0		55.0	42.4	0.7
Queue Delay	0.0	0.2		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	10.1	9.9		5.4	5.0	0.2	54.5	21.0		55.0	42.4	0.7
LOS	B	A		A	A	A	D	C		D	D	A
Approach Delay		10.0			4.8			29.0			28.9	
Approach LOS		A			A			C			C	
Queue Length 50th (m)	1.3	40.9		0.7	10.7	0.0	3.1	2.1		3.9	1.5	0.0
Queue Length 95th (m)	m4.4	75.4		m4.3	m50.0	m0.1	9.4	11.6		11.1	5.2	0.0
Internal Link Dist (m)		146.9			220.2			66.0			66.6	
Turn Bay Length (m)	45.0			90.0		75.0				40.0		30.0
Base Capacity (vph)	571	1324		635	1352	1140	174	342		174	365	378
Starvation Cap Reductn	0	265		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	0.03	0.43		0.06	0.40	0.03	0.08	0.13		0.10	0.02	0.05

Intersection Summary
Cycle Length: 115
Actuated Cycle Length: 115
Offset: 15 (13%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.40

Intersection Signal Delay: 8.9	Intersection LOS: A
Intersection Capacity Utilization 57.7%	ICU Level of Service B
Analysis Period (min) 15	

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

Splits and Phases: 5: Herlihey & Campeau

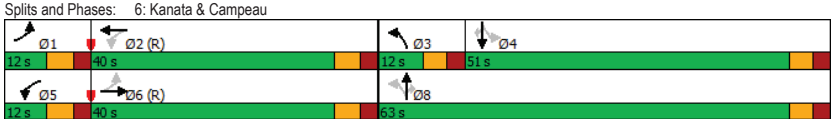
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	94	290	73	22	321	99	107	138	16	126	292	181
Future Volume (vph)	94	290	73	22	321	99	107	138	16	126	292	181
Satd. Flow (prot)	1658	1679	0	1658	1671	0	1658	1745	1483	1658	1745	1483
Flt Permitted	0.212			0.385			0.427			0.669		
Satd. Flow (perm)	368	1679	0	665	1671	0	743	1745	1447	1163	1745	1443
Satd. Flow (RTOR)		11			14				89			181
Lane Group Flow (vph)	94	363	0	22	420	0	107	138	16	126	292	181
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases	1	6		5	2		3	8			4	
Permitted Phases	6			2			8		8	4		4
Detector Phase	1	6		5	2		3	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	11.2	37.2		11.2	37.2		10.9	29.9	29.9	29.9	29.9	29.9
Total Split (s)	12.0	40.0		12.0	40.0		12.0	63.0	63.0	51.0	51.0	51.0
Total Split (%)	10.4%	34.8%		10.4%	34.8%		10.4%	54.8%	54.8%	44.3%	44.3%	44.3%
Yellow Time (s)	3.7	3.7		3.7	3.7		3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	2.5	2.5		2.5	2.5		2.6	2.6	2.6	2.6	2.6	2.6
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.2	6.2		6.2	6.2		5.9	5.9	5.9	5.9	5.9	5.9
Lead/Lag	Lead	Lag		Lead	Lag		Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes			Yes	Yes	Yes
Recall Mode	None	C-Max		None	C-Max		None	Max	Max	Max	Max	Max
Act Effct Green (s)	43.3	41.0		39.5	33.8		57.1	57.1	57.1	45.1	45.1	45.1
Actuated g/C Ratio	0.38	0.36		0.34	0.29		0.50	0.50	0.50	0.39	0.39	0.39
v/c Ratio	0.46	0.60		0.08	0.84		0.26	0.16	0.02	0.28	0.43	0.27
Control Delay	35.9	40.5		22.1	53.0		17.3	16.5	0.1	25.9	28.0	4.4
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.9	40.5		22.1	53.0		17.3	16.5	0.1	25.9	28.0	4.4
LOS	D	D		C	D		B	B	A	C	C	A
Approach Delay		39.6			51.5			15.8			20.4	
Approach LOS		D			D			B			C	
Queue Length 50th (m)	14.3	71.7		3.0	85.9		12.5	16.4	0.0	19.1	47.3	0.0
Queue Length 95th (m)	20.6	59.6		8.2	#137.5		22.4	27.7	0.0	33.8	70.9	13.6
Internal Link Dist (m)		220.2			90.4			97.8			155.3	
Turn Bay Length (m)	80.0			45.0			50.0		45.0	90.0		90.0
Base Capacity (vph)	203	605		279	501		417	866	763	456	684	675
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	0.46	0.60		0.08	0.84		0.26	0.16	0.02	0.28	0.43	0.27

Intersection Summary

Cycle Length: 115
Actuated Cycle Length: 115
Offset: 16 (14%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.84
Intersection Signal Delay: 32.5 — Intersection LOS: C
Intersection Capacity Utilization 79.8% — ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: Kanata & Campeau



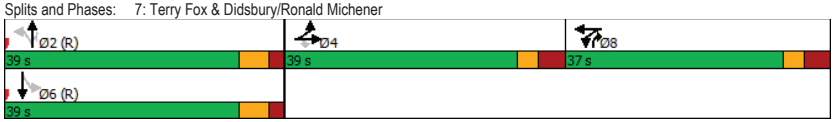
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	42	23	117	104	24	33	176	729	224	37	895	19
Future Volume (vph)	42	23	117	104	24	33	176	729	224	37	895	19
Satd. Flow (prot)	1658	1745	1483	3216	1580	0	1658	3316	1483	1658	3304	0
Flt Permitted	0.950			0.950			0.260			0.337		
Satd. Flow (perm)	1654	1745	1464	3211	1580	0	453	3316	1453	588	3304	0
Satd. Flow (RTOR)			117		33				224		2	
Lane Group Flow (vph)	42	23	117	104	57	0	176	729	224	37	914	0
Turn Type	Split	NA	Perm	Split	NA		Perm	NA	pm+ov	Perm	NA	
Protected Phases	4	4		8	8			2	8		6	
Permitted Phases			4				2		2	6		
Detector Phase	4	4	4	8	8		2	2	8	6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0		10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	38.7	38.7	38.7	36.7	36.7		38.4	38.4	36.7	38.4	38.4	
Total Split (s)	39.0	39.0	39.0	37.0	37.0		39.0	39.0	37.0	39.0	39.0	
Total Split (%)	33.9%	33.9%	33.9%	32.2%	32.2%		33.9%	33.9%	32.2%	33.9%	33.9%	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		4.2	4.2	3.0	4.2	4.2	
All-Red Time (s)	3.7	3.7	3.7	3.7	3.7		2.2	2.2	3.7	2.2	2.2	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.7	6.7	6.7	6.7	6.7		6.4	6.4	6.7	6.4	6.4	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None		C-Max	C-Max	None	C-Max	C-Max	
Act Effct Green (s)	14.4	14.4	14.4	14.0	14.0		66.8	66.8	80.5	66.8	66.8	
Actuated g/C Ratio	0.13	0.13	0.13	0.12	0.12		0.58	0.58	0.70	0.58	0.58	
v/c Ratio	0.20	0.11	0.41	0.27	0.26		0.67	0.38	0.21	0.11	0.48	
Control Delay	44.2	41.7	11.2	45.6	24.2		40.2	19.8	4.9	15.1	14.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	44.2	41.7	11.2	45.6	24.2		40.2	19.8	4.9	15.1	14.5	
LOS	D	D	B	D	C		D	B	A	B	B	
Approach Delay		22.7			38.0			20.0			14.5	
Approach LOS		C			D			C			B	
Queue Length 50th (m)	9.0	4.9	0.0	11.5	5.1		21.8	34.8	0.0	2.0	34.5	
Queue Length 95th (m)	15.8	10.1	13.4	16.1	14.1		#92.7	83.4	25.0	m10.2	#140.2	
Internal Link Dist (m)		103.7			100.9			255.1			173.9	
Turn Bay Length (m)	30.0		30.0	70.0			45.0		75.0	30.0		
Base Capacity (vph)	465	490	495	847	440		263	1925	1149	341	1919	
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	0.09	0.05	0.24	0.12	0.13		0.67	0.38	0.19	0.11	0.48	

Intersection Summary

Cycle Length: 115
Actuated Cycle Length: 115
Offset: 88 (77%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 145
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.67
Intersection Signal Delay: 19.3 Intersection LOS: B
Intersection Capacity Utilization 64.1% 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.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 7: Terry Fox & Didsbury/Ronald Michener



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	733	0	307	0	830	163	0	924	174
Future Volume (vph)	0	0	0	733	0	307	0	830	163	0	924	174
Satd. Flow (prot)	0	0	0	3216	0	2611	0	3316	1483	0	3316	1483
Flt Permitted				0.950								
Satd. Flow (perm)	0	0	0	3216	0	2611	0	3316	1442	0	3316	1483
Satd. Flow (RTOR)						307			163			174
Lane Group Flow (vph)	0	0	0	733	0	307	0	830	163	0	924	174
Turn Type				Prot		Prot		NA	Perm		NA	Perm
Protected Phases				7 8		8		2			6	
Permitted Phases									2			6
Detector Phase				7 8		8		2	2		6	6
Switch Phase												
Minimum Initial (s)						5.0		10.0	10.0		10.0	10.0
Minimum Split (s)						11.1		35.2	35.2		17.2	17.2
Total Split (s)						25.0		59.0	59.0		59.0	59.0
Total Split (%)						21.7%		51.3%	51.3%		51.3%	51.3%
Yellow Time (s)						3.3		4.2	4.2		4.2	4.2
All-Red Time (s)						2.8		3.0	3.0		3.0	3.0
Lost Time Adjust (s)						0.0		0.0	0.0		0.0	0.0
Total Lost Time (s)						6.1		7.2	7.2		7.2	7.2
Lead/Lag						Lag						
Lead-Lag Optimize?						Yes						
Recall Mode						None		C-Max	C-Max		C-Max	C-Max
Act Effct Green (s)				40.2		9.7		61.5	61.5		61.5	61.5
Actuated g/C Ratio				0.35		0.08		0.53	0.53		0.53	0.53
v/c Ratio				0.65		0.61		0.47	0.19		0.52	0.20
Control Delay				34.3		10.9		17.2	2.1		15.0	3.8
Queue Delay				0.0		0.0		0.0	0.0		0.0	0.0
Total Delay				34.3		10.9		17.2	2.1		15.0	3.8
LOS				C		B		B	A		B	A
Approach Delay					27.4			14.8			13.3	
Approach LOS					C			B			B	
Queue Length 50th (m)				72.0		0.0		69.2	2.2		64.4	5.7
Queue Length 95th (m)				83.9		13.5		93.7	3.1		18.5	0.0
Internal Link Dist (m)		95.1			226.2			354.7			255.1	
Turn Bay Length (m)				120.0		195.0			85.0			115.0
Base Capacity (vph)				1361		685		1773	847		1773	874
Starvation Cap Reductn				0		0		0	0		0	0
Spillback Cap Reductn				0		0		0	0		0	0
Storage Cap Reductn				0		0		0	0		0	0
Reduced v/c Ratio				0.54		0.45		0.47	0.19		0.52	0.20

Intersection Summary
Cycle Length: 115
Actuated Cycle Length: 115
Offset: 99 (86%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated

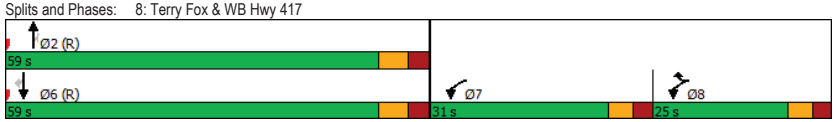
Lane Group	Ø7
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Satd. Flow (RTOR)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	7
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	29.1
Total Split (s)	31.0
Total Split (%)	27%
Yellow Time (s)	3.3
All-Red Time (s)	2.8
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Recall Mode	None
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

Maximum v/c Ratio: 0.65

Intersection Signal Delay: 18.4	Intersection LOS: B
Intersection Capacity Utilization 58.4%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 8: Terry Fox & WB Hwy 417



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	192	0	254	0	0	0	0	803	746	0	1345	330
Future Volume (vph)	192	0	254	0	0	0	0	803	746	0	1345	330
Satd. Flow (prot)	1658	0	1483	0	0	0	0	3316	1483	0	3316	1483
Flt Permitted	0.950											
Satd. Flow (perm)	1658	0	1463	0	0	0	0	3316	1483	0	3316	1447
Satd. Flow (RTOR)			43						746			330
Lane Group Flow (vph)	192	0	254	0	0	0	0	803	746	0	1345	330
Turn Type	Prot		Perm					NA	Perm		NA	Perm
Protected Phases	4							2			6	
Permitted Phases			4						2			6
Detector Phase	4		4					2	2		6	6
Switch Phase												
Minimum Initial (s)	5.0		5.0					10.0	10.0		10.0	10.0
Minimum Split (s)	23.4		23.4					15.7	15.7		17.7	17.7
Total Split (s)	45.0		45.0					70.0	70.0		70.0	70.0
Total Split (%)	39.1%		39.1%					60.9%	60.9%		60.9%	60.9%
Yellow Time (s)	3.3		3.3					4.2	4.2		4.2	4.2
All-Red Time (s)	2.1		2.1					1.5	1.5		1.5	1.5
Lost Time Adjust (s)	0.0		0.0					0.0	0.0		0.0	0.0
Total Lost Time (s)	5.4		5.4					5.7	5.7		5.7	5.7
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None		None					C-Max	C-Max		C-Max	C-Max
Act Effct Green (s)	22.6		22.6					81.3	81.3		81.3	81.3
Actuated g/C Ratio	0.20		0.20					0.71	0.71		0.71	0.71
v/c Ratio	0.59		0.79					0.34	0.59		0.57	0.29
Control Delay	48.3		53.0					7.8	2.7		7.1	1.2
Queue Delay	0.0		0.0					0.0	0.0		0.0	0.0
Total Delay	48.3		53.0					7.8	2.7		7.1	1.2
LOS	D		D					A	A		A	A
Approach Delay		51.0						5.3			5.9	
Approach LOS		D						A			A	
Queue Length 50th (m)	39.6		46.0					32.6	0.0		20.5	0.3
Queue Length 95th (m)	56.8		68.2					55.3	13.1		112.8	6.8
Internal Link Dist (m)		135.3			81.0			64.0			354.7	
Turn Bay Length (m)									95.0			100.0
Base Capacity (vph)	570		531					2344	1267		2344	1119
Starvation Cap Reductn	0		0					0	0		0	0
Spillback Cap Reductn	0		0					0	0		0	0
Storage Cap Reductn	0		0					0	0		0	0
Reduced v/c Ratio	0.34		0.48					0.34	0.59		0.57	0.29

Intersection Summary
Cycle Length: 115
Actuated Cycle Length: 115
Offset: 78 (68%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.79

Intersection Signal Delay: 11.2	Intersection LOS: B
Intersection Capacity Utilization 65.2%	ICU Level of Service C
Analysis Period (min) 15	

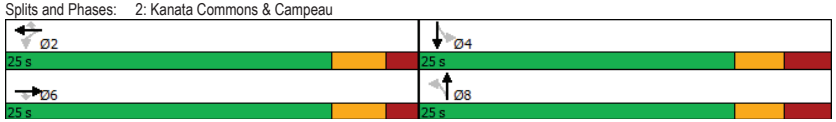
Splits and Phases: 9: Terry Fox & EB Hwy 417

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	557	9	24	607	0	10	0	38	0	0	0
Future Volume (vph)	0	557	9	24	607	0	10	0	38	0	0	0
Satd. Flow (prot)	0	3316	1483	1658	3316	1745	1658	1483	0	1745	1745	0
Flt Permitted				0.423			0.757					
Satd. Flow (perm)	0	3316	1452	738	3316	1745	1321	1483	0	1745	1745	0
Satd. Flow (RTOR)			63					169				
Lane Group Flow (vph)	0	557	9	24	607	0	10	38	0	0	0	0
Turn Type		NA	Perm	Perm	NA	Perm	Perm	NA		Perm		
Protected Phases		6			2			8			4	
Permitted Phases			6	2		2	8			4		
Detector Phase		6	6	2	2	2	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)		23.3	23.3	23.3	23.3	23.3	23.9	23.9		23.9	23.9	
Total Split (s)		25.0	25.0	25.0	25.0	25.0	25.0	25.0		25.0	25.0	
Total Split (%)		50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%		50.0%	50.0%	
Yellow Time (s)		3.3	3.3	3.3	3.3	3.3	3.0	3.0		3.0	3.0	
All-Red Time (s)		2.0	2.0	2.0	2.0	2.0	2.9	2.9		2.9	2.9	
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)		5.3	5.3	5.3	5.3	5.3	5.9	5.9		5.9	5.9	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode		None	None	None	None	None	Max	Max		Max	Max	
Act Effct Green (s)		13.4	13.4	13.4	13.4		19.2	19.2				
Actuated g/C Ratio		0.31	0.31	0.31	0.31		0.44	0.44				
v/c Ratio		0.55	0.02	0.11	0.60		0.02	0.05				
Control Delay		14.8	0.1	11.6	15.5		8.6	0.1				
Queue Delay		0.0	0.0	0.0	0.0		0.0	0.0				
Total Delay		14.8	0.1	11.6	15.5		8.6	0.1				
LOS		B	A	B	B		A	A				
Approach Delay		14.5			15.3			1.9				
Approach LOS		B			B			A				
Queue Length 50th (m)		18.1	0.0	1.3	20.0		0.4	0.0				
Queue Length 95th (m)		28.5	0.0	4.9	31.3		2.6	0.0				
Internal Link Dist (m)		129.8			222.4			129.9			12.7	
Turn Bay Length (m)			65.0	120.0			30.0					
Base Capacity (vph)		1496	689	333	1496		578	743				
Starvation Cap Reductn		0	0	0	0		0	0				
Spillback Cap Reductn		0	0	0	0		0	0				
Storage Cap Reductn		0	0	0	0		0	0				
Reduced v/c Ratio		0.37	0.01	0.07	0.41		0.02	0.05				

Intersection Summary
Cycle Length: 50
Actuated Cycle Length: 43.8
Natural Cycle: 50
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.60

Intersection Signal Delay: 14.4 | Intersection LOS: B
Intersection Capacity Utilization 38.7% | ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 2: Kanata Commons & Campeau

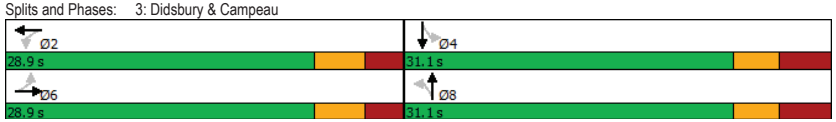


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	591	8	9	613	1	16	0	9	1	0	0
Future Volume (vph)	1	591	8	9	613	1	16	0	9	1	0	0
Satd. Flow (prot)	1658	3308	0	1658	3316	0	1658	1483	0	1658	1745	0
Flt Permitted	0.371			0.383			0.757			0.752		
Satd. Flow (perm)	647	3308	0	668	3316	0	1319	1483	0	1312	1745	0
Satd. Flow (RTOR)		2						134				
Lane Group Flow (vph)	1	599	0	9	614	0	16	9	0	1	0	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm		
Protected Phases		6			2			8			4	
Permitted Phases	6			2			8			4		
Detector Phase	6	6		2	2		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	
Minimum Split (s)	27.5	27.5		27.5	27.5		31.1	31.1		31.1	31.1	
Total Split (s)	28.9	28.9		28.9	28.9		31.1	31.1		31.1	31.1	
Total Split (%)	48.2%	48.2%		48.2%	48.2%		51.8%	51.8%		51.8%	51.8%	
Yellow Time (s)	3.7	3.7		3.7	3.7		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.8	2.8		2.8	2.8		3.8	3.8		3.8	3.8	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.5	6.5		6.5	6.5		7.1	7.1		7.1	7.1	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Act Effct Green (s)	15.1	15.1		15.1	15.1		24.1	24.1		24.1		
Actuated g/C Ratio	0.29	0.29		0.29	0.29		0.46	0.46		0.46		
v/c Ratio	0.01	0.63		0.05	0.65		0.03	0.01		0.00		
Control Delay	13.0	19.5		13.6	19.9		9.8	0.0		10.0		
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0		
Total Delay	13.0	19.5		13.6	19.9		9.8	0.0		10.0		
LOS	B	B		B	B		A	A		A		
Approach Delay		19.5			19.8			6.2			10.0	
Approach LOS		B			B			A			A	
Queue Length 50th (m)	0.1	25.5		0.6	26.4		0.8	0.0		0.1		
Queue Length 95th (m)	0.9	38.4		3.1	39.5		3.9	0.0		0.8		
Internal Link Dist (m)		222.4			292.9			171.0			27.1	
Turn Bay Length (m)	45.0			45.0			15.0			15.0		
Base Capacity (vph)	275	1409		284	1411		601	749		598		
Starvation Cap Reductn	0	0		0	0		0	0		0		
Spillback Cap Reductn	0	0		0	0		0	0		0		
Storage Cap Reductn	0	0		0	0		0	0		0		
Reduced v/c Ratio	0.00	0.43		0.03	0.44		0.03	0.01		0.00		

Intersection Summary
Cycle Length: 60
Actuated Cycle Length: 52.9
Natural Cycle: 60
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.65

Intersection Signal Delay: 19.3
Intersection LOS: B
Intersection Capacity Utilization 49.3%
ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 3: Didsbury & Campeau



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	159	294	262	226	342	165	220	832	163	178	674	160
Future Volume (vph)	159	294	262	226	342	165	220	832	163	178	674	160
Satd. Flow (prot)	1642	1745	1441	1580	1712	1363	1658	3191	1441	1658	3191	1483
Flt Permitted	0.371			0.436			0.950			0.950		
Satd. Flow (perm)	640	1745	1422	725	1712	1342	1657	3191	1386	1650	3191	1451
Satd. Flow (RTOR)			262			165			146			146
Lane Group Flow (vph)	159	294	262	226	342	165	220	832	163	178	674	160
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	43.4	43.4	43.4	43.4	43.4	43.4	11.5	40.4	40.4	11.5	40.4	40.4
Total Split (s)	50.0	50.0	50.0	50.0	50.0	50.0	28.0	42.0	42.0	28.0	42.0	42.0
Total Split (%)	41.7%	41.7%	41.7%	41.7%	41.7%	41.7%	23.3%	35.0%	35.0%	23.3%	35.0%	35.0%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	4.2	4.2	4.2	4.2	4.2	4.2
All-Red Time (s)	2.7	2.7	2.7	2.7	2.7	2.7	2.3	2.2	2.2	2.3	2.2	2.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.4	6.4	6.4	6.4	6.4	6.4	6.5	6.4	6.4	6.5	6.4	6.4
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	38.4	38.4	38.4	38.4	38.4	38.4	19.4	44.9	44.9	17.4	42.9	42.9
Actuated g/C Ratio	0.32	0.32	0.32	0.32	0.32	0.32	0.16	0.37	0.37	0.14	0.36	0.36
v/c Ratio	0.78	0.53	0.41	0.98	0.63	0.30	0.82	0.70	0.27	0.74	0.59	0.26
Control Delay	61.8	36.1	5.3	85.5	31.9	3.8	72.2	37.8	7.9	67.1	36.0	7.6
Queue Delay	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.8	36.3	5.3	85.5	31.9	3.8	72.2	37.8	7.9	67.1	36.0	7.6
LOS	E	D	A	F	C	A	E	D	A	E	D	A
Approach Delay		30.6			42.1			40.1			37.0	
Approach LOS		C			D			D			D	
Queue Length 50th (m)	31.9	53.4	0.0	46.2	53.2	3.7	49.5	92.4	2.7	40.4	73.4	2.3
Queue Length 95th (m)	#63.6	77.9	16.9	#95.4	81.2	4.2	#83.5	#131.4	18.8	62.5	95.7	18.0
Internal Link Dist (m)		292.9			146.9			173.9			301.0	
Turn Bay Length (m)	62.5		64.5	70.0		63.5	45.0		62.5	100.0		50.0
Base Capacity (vph)	232	634	683	263	622	592	297	1194	610	297	1140	612
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	40	0	0	0	0	0	0	3	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.69	0.49	0.38	0.86	0.55	0.28	0.74	0.70	0.27	0.60	0.59	0.26

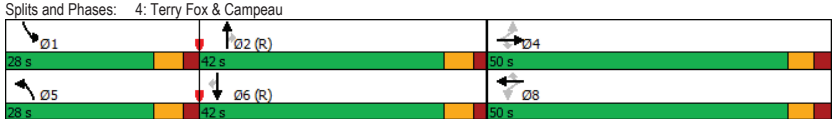
Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 104 (87%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.98

Intersection Signal Delay: 37.8	Intersection LOS: D
Intersection Capacity Utilization 92.6%	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.

Splits and Phases: 4: Terry Fox & Campeau



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	446	105	125	412	104	104	44	139	107	30	87
Future Volume (vph)	25	446	105	125	412	104	104	44	139	107	30	87
Satd. Flow (prot)	1658	1687	0	1658	1745	1483	1658	1481	0	1658	1745	1483
Flt Permitted	0.475			0.267			0.950			0.950		
Satd. Flow (perm)	828	1687	0	466	1745	1446	1658	1481	0	1611	1745	1483
Satd. Flow (RTOR)		11				133		125				135
Lane Group Flow (vph)	25	551	0	125	412	104	104	183	0	107	30	87
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases	6			2		2						4
Detector Phase	1	6		5	2	2	3	8		7	4	4
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0	10.0	5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	10.8	35.2		10.8	35.2	35.2	10.9	28.9		10.9	28.9	28.9
Total Split (s)	17.0	48.0		17.0	48.0	48.0	20.0	35.0		20.0	35.0	35.0
Total Split (%)	14.2%	40.0%		14.2%	40.0%	40.0%	16.7%	29.2%		16.7%	29.2%	29.2%
Yellow Time (s)	3.3	3.3		3.3	3.3	3.3	3.3	3.3		3.3	3.3	3.3
All-Red Time (s)	2.5	2.9		2.5	2.9	2.9	2.6	2.6		2.6	2.6	2.6
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.8	6.2		5.8	6.2	6.2	5.9	5.9		5.9	5.9	5.9
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	C-Max		None	C-Max	C-Max	None	None		None	None	None
Act Effct Green (s)	66.2	59.4		74.2	67.1	67.1	15.1	15.3		12.0	15.4	15.4
Actuated g/C Ratio	0.55	0.50		0.62	0.56	0.56	0.13	0.13		0.10	0.13	0.13
v/c Ratio	0.05	0.66		0.33	0.42	0.12	0.50	0.62		0.65	0.13	0.28
Control Delay	11.2	27.0		12.7	16.6	2.9	59.1	25.4		69.7	44.6	3.9
Queue Delay	0.0	0.2		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	11.2	27.2		12.7	16.6	2.9	59.1	25.4		69.7	44.6	3.9
LOS	B	C		B	B	A	E	C		E	D	A
Approach Delay		26.5			13.6			37.6			40.8	
Approach LOS		C			B			D			D	
Queue Length 50th (m)	2.6	67.8		9.3	39.4	0.5	23.7	13.2		24.4	6.7	0.0
Queue Length 95th (m)	m5.5	#176.9		m20.5	60.9	m4.6	41.5	33.5		42.6	14.2	3.7
Internal Link Dist (m)		146.9			220.2			66.0			66.6	
Turn Bay Length (m)	45.0			90.0		75.0				40.0		30.0
Base Capacity (vph)	567	841		404	976	867	221	453		194	423	461
Starvation Cap Reductn	0	27		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	0.04	0.68		0.31	0.42	0.12	0.47	0.40		0.55	0.07	0.19

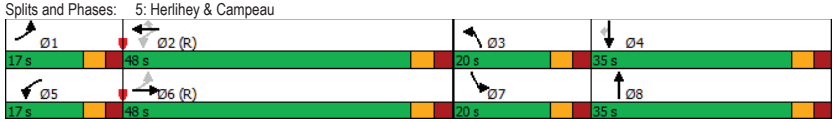
Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 22 (18%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.66

Intersection Signal Delay: 25.4	Intersection LOS: C
Intersection Capacity Utilization 79.9%	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: 5: Herlihey & Campeau



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	226	312	154	53	340	64	146	200	28	45	186	155
Future Volume (vph)	226	312	154	53	340	64	146	200	28	45	186	155
Satd. Flow (prot)	1658	1634	0	1658	1695	0	1658	1745	1483	1658	1745	1483
Flt Permitted	0.293			0.364			0.457			0.632		
Satd. Flow (perm)	509	1634	0	630	1695	0	773	1745	1443	1097	1745	1381
Satd. Flow (RTOR)		23			9				85			155
Lane Group Flow (vph)	226	466	0	53	404	0	146	200	28	45	186	155
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases	1	6		5	2		3	8			4	
Permitted Phases	6			2			8		8	4		4
Detector Phase	1	6		5	2		3	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	11.2	37.2		11.2	37.2		10.9	29.9	29.9	29.9	29.9	29.9
Total Split (s)	20.0	49.0		20.0	49.0		15.0	51.0	51.0	36.0	36.0	36.0
Total Split (%)	16.7%	40.8%		16.7%	40.8%		12.5%	42.5%	42.5%	30.0%	30.0%	30.0%
Yellow Time (s)	3.7	3.7		3.7	3.7		3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	2.5	2.5		2.5	2.5		2.6	2.6	2.6	2.6	2.6	2.6
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.2	6.2		6.2	6.2		5.9	5.9	5.9	5.9	5.9	5.9
Lead/Lag	Lead	Lag		Lead	Lag		Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes			Yes	Yes	Yes
Recall Mode	None	C-Max		None	C-Max		None	Max	Max	Max	Max	Max
Act Effct Green (s)	62.3	51.6		51.2	43.8		45.1	45.1	45.1	30.3	30.3	30.3
Actuated g/C Ratio	0.52	0.43		0.43	0.36		0.38	0.38	0.38	0.25	0.25	0.25
v/c Ratio	0.59	0.65		0.16	0.65		0.41	0.31	0.05	0.16	0.42	0.33
Control Delay	28.3	35.4		15.9	37.0		29.7	28.0	0.1	37.1	41.2	7.6
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.3	35.4		15.9	37.0		29.7	28.0	0.1	37.1	41.2	7.6
LOS	C	D		B	D		C	C	A	D	D	A
Approach Delay		33.1			34.6			26.6			27.2	
Approach LOS		C			C			C			C	
Queue Length 50th (m)	30.2	76.5		5.9	77.8		23.3	32.8	0.0	8.3	36.9	0.0
Queue Length 95th (m)	55.7	97.7		12.4	112.9		38.9	51.4	0.0	18.4	58.6	16.0
Internal Link Dist (m)		220.2			90.4			97.8			155.3	
Turn Bay Length (m)	80.0			45.0			50.0		45.0	90.0		90.0
Base Capacity (vph)	396	715		420	625		357	655	595	276	439	464
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	0.57	0.65		0.13	0.65		0.41	0.31	0.05	0.16	0.42	0.33

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 12 (10%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.65

Intersection Signal Delay: 31.0	Intersection LOS: C
Intersection Capacity Utilization 87.8%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 6: Kanata & Campeau

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	26	154	307	33	89	198	1028	480	130	1181	30
Future Volume (vph)	35	26	154	307	33	89	198	1028	480	130	1181	30
Satd. Flow (prot)	1658	1745	1483	3216	1555	0	1658	3316	1483	1658	3300	0
Flt Permitted	0.950			0.950			0.073			0.192		
Satd. Flow (perm)	1658	1745	1459	3197	1555	0	127	3316	1443	335	3300	0
Satd. Flow (RTOR)			154		89				480		2	
Lane Group Flow (vph)	35	26	154	307	122	0	198	1028	480	130	1211	0
Turn Type	Split	NA	Perm	Split	NA		pm+pt	NA	pm+ov	pm+pt	NA	
Protected Phases	4	4		8	8		5	2	8	1	6	
Permitted Phases			4				2		2	6		
Detector Phase	4	4	4	8	8		5	2	8	1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0		5.0	10.0	10.0	5.0	10.0	
Minimum Split (s)	38.7	38.7	38.7	36.7	36.7		11.3	38.4	36.7	11.3	38.4	
Total Split (s)	39.0	39.0	39.0	37.0	37.0		13.0	41.0	37.0	13.0	41.0	
Total Split (%)	30.0%	30.0%	30.0%	28.5%	28.5%		10.0%	31.5%	28.5%	10.0%	31.5%	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		4.2	4.2	3.0	4.2	4.2	
All-Red Time (s)	3.7	3.7	3.7	3.7	3.7		2.1	2.2	3.7	2.1	2.2	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.7	6.7	6.7	6.7	6.7		6.3	6.4	6.7	6.3	6.4	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None		None	C-Max	None	None	C-Max	
Act Effct Green (s)	14.4	14.4	14.4	18.9	18.9		75.2	58.0	76.6	61.1	48.4	
Actuated g/C Ratio	0.11	0.11	0.11	0.15	0.15		0.58	0.45	0.59	0.47	0.37	
v/c Ratio	0.19	0.13	0.52	0.66	0.40		0.59	0.70	0.46	0.46	0.98	
Control Delay	51.5	49.9	13.1	58.8	19.9		38.0	33.8	2.3	21.2	62.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	51.5	49.9	13.1	58.8	19.9		38.0	33.8	2.3	21.2	62.0	
LOS	D	D	B	E	B		D	C	A	C	E	
Approach Delay		23.8			47.7			25.4			58.0	
Approach LOS		C			D			C			E	
Queue Length 50th (m)	8.6	6.4	0.0	38.9	7.5		30.8	102.9	0.0	12.6	144.6	
Queue Length 95th (m)	15.7	12.7	16.7	51.0	24.3		#94.0	#205.5	11.2	35.1	#259.8	
Internal Link Dist (m)		103.7			100.9			255.1			173.9	
Turn Bay Length (m)	30.0		30.0	70.0			45.0		75.0	30.0		
Base Capacity (vph)	411	433	478	749	430		334	1479	1141	285	1230	
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	0.09	0.06	0.32	0.41	0.28		0.59	0.70	0.42	0.46	0.98	

Intersection Summary

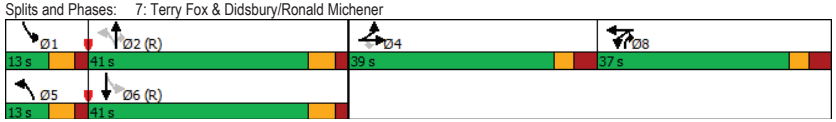
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.98

Intersection Signal Delay: 39.8	Intersection LOS: D
Intersection Capacity Utilization 88.1%	ICU Level of Service E
Analysis Period (min) 15	

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

Splits and Phases: 7: Terry Fox & Didsbury/Ronald Michener



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	958	0	484	0	1270	249	0	1280	369
Future Volume (vph)	0	0	0	958	0	484	0	1270	249	0	1280	369
Satd. Flow (prot)	0	0	0	3216	0	2611	0	3316	1483	0	3316	1483
Flt Permitted				0.950								
Satd. Flow (perm)	0	0	0	3216	0	2611	0	3316	1441	0	3316	1483
Satd. Flow (RTOR)						380			249			369
Lane Group Flow (vph)	0	0	0	958	0	484	0	1270	249	0	1280	369
Turn Type				Prot		Prot		NA	Perm		NA	Perm
Protected Phases				7 8		8		2			6	
Permitted Phases									2			6
Detector Phase				7 8		8		2	2		6	6
Switch Phase												
Minimum Initial (s)						5.0		10.0	10.0		10.0	10.0
Minimum Split (s)						11.1		35.2	35.2		17.2	17.2
Total Split (s)						24.0		67.0	67.0		67.0	67.0
Total Split (%)						20.0%		55.8%	55.8%		55.8%	55.8%
Yellow Time (s)						3.3		4.2	4.2		4.2	4.2
All-Red Time (s)						2.8		3.0	3.0		3.0	3.0
Lost Time Adjust (s)						0.0		0.0	0.0		0.0	0.0
Total Lost Time (s)						6.1		7.2	7.2		7.2	7.2
Lead/Lag						Lag						
Lead-Lag Optimize?						Yes						
Recall Mode						None		C-Max	C-Max		C-Max	C-Max
Act Effct Green (s)				45.1		16.1		61.6	61.6		61.6	61.6
Actuated g/C Ratio				0.38		0.13		0.51	0.51		0.51	0.51
v/c Ratio				0.79		0.71		0.75	0.29		0.75	0.39
Control Delay				38.8		17.5		21.6	1.1		27.1	3.0
Queue Delay				0.0		0.0		0.0	0.0		0.0	0.0
Total Delay				38.8		17.5		21.6	1.1		27.1	3.0
LOS				D		B		C	A		C	A
Approach Delay					31.6			18.2			21.7	
Approach LOS					C			B			C	
Queue Length 50th (m)				99.7		12.5		134.5	0.6		125.6	0.0
Queue Length 95th (m)				124.3		31.7		159.6	2.6		153.7	14.8
Internal Link Dist (m)		112.7			226.2			354.7			255.1	
Turn Bay Length (m)				120.0		195.0			85.0			115.0
Base Capacity (vph)				1256		712		1702	861		1702	941
Starvation Cap Reductn				0		0		0	0		0	0
Spillback Cap Reductn				0		0		0	0		0	0
Storage Cap Reductn				0		0		0	0		0	0
Reduced v/c Ratio				0.76		0.68		0.75	0.29		0.75	0.39

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 12 (10%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

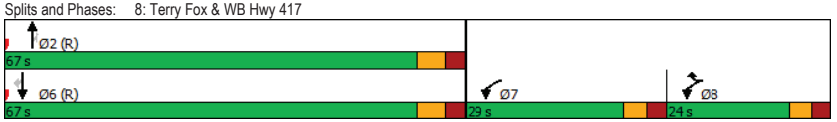
Lane Group	Ø7
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Satd. Flow (RTOR)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	7
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	29.1
Total Split (s)	29.0
Total Split (%)	24%
Yellow Time (s)	3.3
All-Red Time (s)	2.8
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Recall Mode	None
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	

Maximum v/c Ratio: 0.79

Intersection Signal Delay: 23.7	Intersection LOS: C
Intersection Capacity Utilization 75.5%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 8: Terry Fox & WB Hwy 417



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	235	0	253	0	0	0	0	1262	727	0	1863	320
Future Volume (vph)	235	0	253	0	0	0	0	1262	727	0	1863	320
Satd. Flow (prot)	1658	0	1483	0	0	0	0	3316	1483	0	3316	1483
Flt Permitted	0.950											
Satd. Flow (perm)	1658	0	1463	0	0	0	0	3316	1483	0	3316	1483
Satd. Flow (RTOR)			29						727			320
Lane Group Flow (vph)	235	0	253	0	0	0	0	1262	727	0	1863	320
Turn Type	Prot		Perm					NA	Perm		NA	Perm
Protected Phases	4							2			6	
Permitted Phases			4						2			6
Detector Phase	4		4					2	2		6	6
Switch Phase												
Minimum Initial (s)	5.0		5.0					10.0	10.0		10.0	10.0
Minimum Split (s)	23.4		23.4					15.7	15.7		17.7	17.7
Total Split (s)	31.0		31.0					89.0	89.0		89.0	89.0
Total Split (%)	25.8%		25.8%					74.2%	74.2%		74.2%	74.2%
Yellow Time (s)	3.3		3.3					4.2	4.2		4.2	4.2
All-Red Time (s)	2.1		2.1					1.5	1.5		1.5	1.5
Lost Time Adjust (s)	0.0		0.0					0.0	0.0		0.0	0.0
Total Lost Time (s)	5.4		5.4					5.7	5.7		5.7	5.7
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None		None					C-Max	C-Max		C-Max	C-Max
Act Effct Green (s)	22.3		22.3					86.6	86.6		86.6	86.6
Actuated g/C Ratio	0.19		0.19					0.72	0.72		0.72	0.72
v/c Ratio	0.76		0.86					0.53	0.57		0.78	0.28
Control Delay	62.3		67.7					8.9	2.4		10.4	1.2
Queue Delay	0.0		0.0					0.0	0.0		0.0	0.0
Total Delay	62.3		67.7					8.9	2.4		10.4	1.2
LOS	E		E					A	A		B	A
Approach Delay		65.1						6.5			9.0	
Approach LOS		E						A			A	
Queue Length 50th (m)	51.8		50.8					66.9	0.0		114.5	4.7
Queue Length 95th (m)	78.6		#86.8					85.2	10.5		126.0	m6.6
Internal Link Dist (m)		135.3			95.4			64.0			354.7	
Turn Bay Length (m)									95.0			100.0
Base Capacity (vph)	353		334					2392	1272		2392	1159
Starvation Cap Reductn	0		0					0	0		0	0
Spillback Cap Reductn	0		0					0	0		0	0
Storage Cap Reductn	0		0					0	0		0	0
Reduced v/c Ratio	0.67		0.76					0.53	0.57		0.78	0.28

Intersection Summary

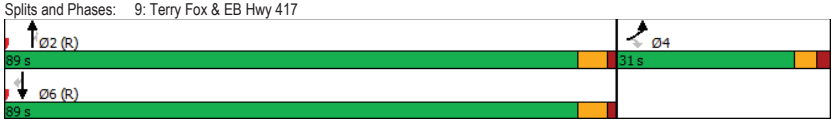
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.86

Intersection Signal Delay: 13.8	Intersection LOS: B
Intersection Capacity Utilization 80.3%	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: 9: Terry Fox & EB Hwy 417



Appendix J

Synchro and Sidra Worksheets –2033 Future Background Horizon

CGH TRANSPORTATION

MOVEMENT SUMMARY

Site: [101] Winterset-Campeau AM 2033 FB (General)
Output produced by SIDRA INTERSECTION Version: 10.0.3.210

8201 Campeau
Site Category: (None)
Roundabout
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop of Cycles Rate to Depart	Number	Aver. Speed km/h
South: Donum															
1	L2	All MCs	9	0.0	9	0.0	0.013	10.6	LOS B	0.0	0.2	0.35	0.67	0.35	44.4
2	T1	All MCs	1	0.0	1	0.0	0.013	4.6	LOS A	0.0	0.2	0.35	0.67	0.35	45.4
3	R2	All MCs	4	0.0	4	0.0	0.005	4.9	LOS A	0.0	0.1	0.37	0.51	0.37	48.8
Approach			14	0.0	14	0.0	0.013	8.6	LOS A	0.0	0.2	0.36	0.63	0.36	45.6
East: Campeau															
4	L2	All MCs	11	0.0	11	0.0	0.153	9.4	LOS A	0.6	4.2	0.10	0.34	0.10	51.3
5	T1	All MCs	222	2.0	222	2.0	0.153	3.4	LOS A	0.6	4.2	0.10	0.36	0.10	55.1
6	R2	All MCs	97	2.0	97	2.0	0.153	4.3	LOS A	0.6	4.2	0.10	0.39	0.10	38.4
Approach			330	1.9	330	1.9	0.153	3.8	LOS A	0.6	4.2	0.10	0.37	0.10	48.8
North: Winterset															
7	L2	All MCs	212	2.0	212	2.0	0.230	2.3	LOS A	0.7	4.8	0.29	0.36	0.29	36.8
8	T1	All MCs	2	0.0	2	0.0	0.230	4.0	LOS A	0.7	4.8	0.29	0.36	0.29	30.6
9	R2	All MCs	38	2.0	38	2.0	0.041	0.7	LOS A	0.1	0.8	0.26	0.17	0.26	37.9
Approach			252	2.0	252	2.0	0.230	2.1	LOS A	0.7	4.8	0.29	0.33	0.29	36.9
West: Campeau															
10	L2	All MCs	14	2.0	14	2.0	0.167	10.5	LOS B	0.6	4.5	0.36	0.47	0.36	37.8
11	T1	All MCs	272	2.0	272	2.0	0.167	4.4	LOS A	0.6	4.5	0.36	0.45	0.36	53.6
12	R2	All MCs	8	0.0	8	0.0	0.167	4.6	LOS A	0.6	4.5	0.36	0.44	0.36	50.0
Approach			294	1.9	294	1.9	0.167	4.7	LOS A	0.6	4.5	0.36	0.46	0.36	52.5
All Vehicles			890	1.9	890	1.9	0.230	3.7	LOS A	0.7	4.8	0.24	0.39	0.24	45.5

Site Level of Service (LOS) Method: Delay & v/c (HCM 2010). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c >1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 2010 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: [102] Winterset-Campeau PM 2033 FB (General)
Output produced by SIDRA INTERSECTION Version: 10.0.3.210

8201 Campeau
Site Category: (None)
Roundabout
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop of Cycles Rate to Depart	Number	Aver. Speed km/h
South: Donum															
1	L2	All MCs	3	0.0	3	0.0	0.006	11.2	LOS B	0.0	0.1	0.40	0.66	0.40	44.4
2	T1	All MCs	1	0.0	1	0.0	0.006	5.1	LOS A	0.0	0.1	0.40	0.66	0.40	45.4
3	R2	All MCs	3	0.0	3	0.0	0.004	5.5	LOS A	0.0	0.1	0.43	0.55	0.43	47.8
Approach			7	0.0	7	0.0	0.006	7.9	LOS A	0.0	0.1	0.41	0.62	0.41	45.9
East: Campeau															
4	L2	All MCs	2	0.0	2	0.0	0.324	9.6	LOS A	1.5	11.0	0.18	0.33	0.18	51.2
5	T1	All MCs	502	2.0	502	2.0	0.324	3.5	LOS A	1.5	11.0	0.18	0.35	0.18	55.0
6	R2	All MCs	181	2.0	181	2.0	0.324	4.4	LOS A	1.5	11.0	0.18	0.38	0.18	38.3
Approach			685	2.0	685	2.0	0.324	3.8	LOS A	1.5	11.0	0.18	0.36	0.18	49.3
North: Winterset															
7	L2	All MCs	115	2.0	115	2.0	0.150	3.1	LOS A	0.4	2.8	0.39	0.48	0.39	36.3
8	T1	All MCs	1	0.0	1	0.0	0.150	4.8	LOS A	0.4	2.8	0.39	0.48	0.39	30.0
9	R2	All MCs	27	2.0	27	2.0	0.036	1.6	LOS A	0.1	0.7	0.38	0.31	0.38	37.3
Approach			143	2.0	143	2.0	0.150	2.9	LOS A	0.4	2.8	0.39	0.44	0.39	36.5
West: Campeau															
10	L2	All MCs	40	2.0	40	2.0	0.288	10.1	LOS B	1.3	9.0	0.30	0.42	0.30	38.0
11	T1	All MCs	522	2.0	522	2.0	0.288	4.0	LOS A	1.3	9.0	0.30	0.40	0.30	54.2
12	R2	All MCs	2	0.0	2	0.0	0.288	4.1	LOS A	1.3	9.0	0.30	0.38	0.30	51.0
Approach			564	2.0	564	2.0	0.288	4.4	LOS A	1.3	9.0	0.30	0.40	0.30	52.6
All Vehicles			1399	2.0	1399	2.0	0.324	4.0	LOS A	1.5	11.0	0.25	0.38	0.25	48.8

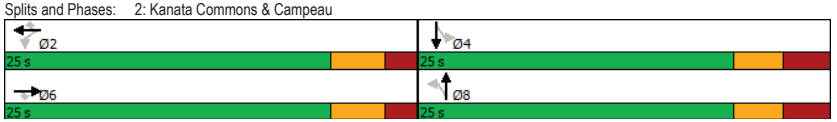
Site Level of Service (LOS) Method: Delay & v/c (HCM 2010). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c >1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 2010 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	484	7	15	328	0	2	0	13	0	0	0
Future Volume (vph)	0	484	7	15	328	0	2	0	13	0	0	0
Satd. Flow (prot)	0	3316	1483	1658	3316	1745	1658	1464	0	1745	1745	0
Flt Permitted				0.476								
Satd. Flow (perm)	0	3316	1452	830	3316	1745	1745	1464	0	1745	1745	0
Satd. Flow (RTOR)			63					217				
Lane Group Flow (vph)	0	484	7	15	328	0	2	13	0	0	0	0
Turn Type		NA	Perm	Perm	NA	Perm	Perm	NA		Perm		
Protected Phases		6			2			8			4	
Permitted Phases			6	2		2	8			4		
Detector Phase		6	6	2	2	2	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)		23.3	23.3	23.3	23.3	23.3	23.9	23.9		23.9	23.9	
Total Split (s)		25.0	25.0	25.0	25.0	25.0	25.0	25.0		25.0	25.0	
Total Split (%)		50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%		50.0%	50.0%	
Yellow Time (s)		3.3	3.3	3.3	3.3	3.3	3.0	3.0		3.0	3.0	
All-Red Time (s)		2.0	2.0	2.0	2.0	2.0	2.9	2.9		2.9	2.9	
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)		5.3	5.3	5.3	5.3	5.3	5.9	5.9		5.9	5.9	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode		Max	Max	Max	Max	Max	None	None		None	None	
Act Effct Green (s)		40.7	40.7	40.7	40.7		11.5	11.5				
Actuated g/C Ratio		0.91	0.91	0.91	0.91		0.26	0.26				
v/c Ratio		0.16	0.01	0.02	0.11		0.00	0.02				
Control Delay		2.6	0.0	3.7	2.5		14.5	0.1				
Queue Delay		0.0	0.0	0.0	0.0		0.0	0.0				
Total Delay		2.6	0.0	3.7	2.5		14.5	0.1				
LOS		A	A	A	A		B	A				
Approach Delay		2.6			2.6			2.0				
Approach LOS		A			A			A				
Queue Length 50th (m)		0.0	0.0	0.0	0.0		0.1	0.0				
Queue Length 95th (m)		22.1	0.0	3.0	15.1		1.4	0.0				
Internal Link Dist (m)		129.8			222.4			129.9			12.7	
Turn Bay Length (m)			65.0	120.0			30.0					
Base Capacity (vph)		3013	1325	754	3013		771	767				
Starvation Cap Reductn		0	0	0	0		0	0				
Spillback Cap Reductn		0	0	0	0		0	0				
Storage Cap Reductn		0	0	0	0		0	0				
Reduced v/c Ratio		0.16	0.01	0.02	0.11		0.00	0.02				

Intersection Summary
Cycle Length: 50
Actuated Cycle Length: 44.8
Natural Cycle: 50
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.16

Intersection Signal Delay: 2.6 — Intersection LOS: A
Intersection Capacity Utilization 32.9% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 2: Kanata Commons & Campeau

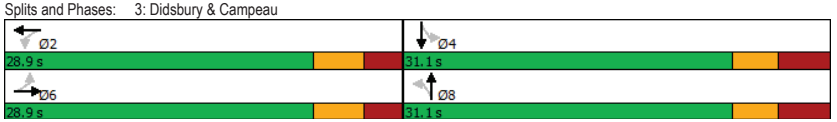


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	489	4	2	338	0	6	0	1	0	0	0
Future Volume (vph)	1	489	4	2	338	0	6	0	1	0	0	0
Satd. Flow (prot)	1658	3312	0	1658	3316	0	1658	1464	0	1745	1745	0
Flt Permitted	0.548			0.472								
Satd. Flow (perm)	955	3312	0	824	3316	0	1745	1464	0	1745	1745	0
Satd. Flow (RTOR)		2						196				
Lane Group Flow (vph)	1	493	0	2	338	0	6	1	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm		
Protected Phases		6			2			8			4	
Permitted Phases	6			2			8			4		
Detector Phase	6	6		2	2		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	
Minimum Split (s)	27.5	27.5		27.5	27.5		31.1	31.1		31.1	31.1	
Total Split (s)	28.9	28.9		28.9	28.9		31.1	31.1		31.1	31.1	
Total Split (%)	48.2%	48.2%		48.2%	48.2%		51.8%	51.8%		51.8%	51.8%	
Yellow Time (s)	3.7	3.7		3.7	3.7		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.8	2.8		2.8	2.8		3.8	3.8		3.8	3.8	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.5	6.5		6.5	6.5		7.1	7.1		7.1	7.1	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	Max	Max		Max	Max		None	None		None	None	
Act Effct Green (s)	45.1	45.1		45.1	45.1		12.3	12.3				
Actuated g/C Ratio	0.90	0.90		0.90	0.90		0.25	0.25				
v/c Ratio	0.00	0.17		0.00	0.11		0.01	0.00				
Control Delay	6.0	3.5		5.5	3.5		15.7	0.0				
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0				
Total Delay	6.0	3.5		5.5	3.5		15.7	0.0				
LOS	A	A		A	A		B	A				
Approach Delay		3.5			3.5			13.4				
Approach LOS		A			A			B				
Queue Length 50th (m)	0.0	0.0		0.0	0.0		0.4	0.0				
Queue Length 95th (m)	0.8	29.4		1.1	20.3		3.0	0.0				
Internal Link Dist (m)		222.4			123.4			171.0			27.1	
Turn Bay Length (m)	45.0			45.0			15.0					
Base Capacity (vph)	859	2980		741	2983		874	831				
Starvation Cap Reductn	0	0		0	0		0	0				
Spillback Cap Reductn	0	0		0	0		0	0				
Storage Cap Reductn	0	0		0	0		0	0				
Reduced v/c Ratio	0.00	0.17		0.00	0.11		0.01	0.00				

Intersection Summary
Cycle Length: 60
Actuated Cycle Length: 50.1
Natural Cycle: 60
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.17

Intersection Signal Delay: 3.6 — Intersection LOS: A
Intersection Capacity Utilization 37.5% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 3: Didsbury & Campeau



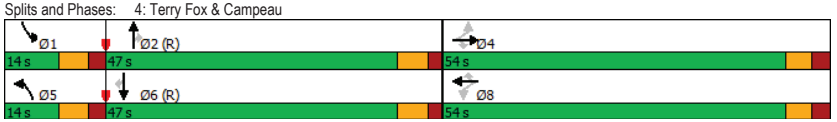
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	81	229	200	251	238	75	123	614	121	141	600	65
Future Volume (vph)	81	229	200	251	238	75	123	614	121	141	600	65
Satd. Flow (prot)	1642	1745	1441	1580	1712	1363	1658	3191	1441	1658	3191	1483
Flt Permitted	0.515			0.528			0.950			0.950		
Satd. Flow (perm)	889	1745	1423	878	1712	1343	1658	3191	1403	1654	3191	1483
Satd. Flow (RTOR)			200			94			121			94
Lane Group Flow (vph)	81	229	200	251	238	75	123	614	121	141	600	65
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	43.4	43.4	43.4	43.4	43.4	43.4	11.5	40.4	40.4	11.5	40.4	40.4
Total Split (s)	54.0	54.0	54.0	54.0	54.0	54.0	14.0	47.0	47.0	14.0	47.0	47.0
Total Split (%)	47.0%	47.0%	47.0%	47.0%	47.0%	47.0%	12.2%	40.9%	40.9%	12.2%	40.9%	40.9%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	4.2	4.2	4.2	4.2	4.2	4.2
All-Red Time (s)	2.7	2.7	2.7	2.7	2.7	2.7	2.3	2.2	2.2	2.3	2.2	2.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.4	6.4	6.4	6.4	6.4	6.4	6.5	6.4	6.4	6.5	6.4	6.4
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	35.9	35.9	35.9	35.9	35.9	35.9	14.5	43.1	43.1	16.7	45.2	45.2
Actuated g/C Ratio	0.31	0.31	0.31	0.31	0.31	0.31	0.13	0.37	0.37	0.15	0.39	0.39
v/c Ratio	0.29	0.42	0.34	0.92	0.44	0.15	0.59	0.51	0.20	0.59	0.48	0.10
Control Delay	29.9	32.0	4.8	66.2	29.5	2.3	60.0	16.2	5.4	59.1	28.7	2.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.9	32.0	4.8	66.2	29.5	2.3	60.0	16.2	5.4	59.1	28.7	2.5
LOS	C	C	A	E	C	A	E	B	A	E	C	A
Approach Delay		21.0			42.2			21.0			31.9	
Approach LOS		C			D			C			C	
Queue Length 50th (m)	13.6	40.3	0.0	37.8	33.8	0.3	29.0	42.1	5.7	29.5	55.0	0.0
Queue Length 95th (m)	23.0	52.9	13.5	46.7	18.9	0.0	#72.1	8.0	0.0	#80.1	73.6	4.6
Internal Link Dist (m)		144.2			146.9			173.9			301.0	
Turn Bay Length (m)	62.5		64.5	70.0		63.5	45.0		62.5	100.0		50.0
Base Capacity (vph)	367	722	706	363	708	610	209	1195	601	240	1255	640
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.22	0.32	0.28	0.69	0.34	0.12	0.59	0.51	0.20	0.59	0.48	0.10

Intersection Summary

Cycle Length: 115
Actuated Cycle Length: 115
Offset: 91 (79%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.92
Intersection Signal Delay: 28.6 — Intersection LOS: C
Intersection Capacity Utilization 85.4% — ICU Level of Service E
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 4: Terry Fox & Campeau



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	17	401	56	38	537	37	14	10	35	18	7	20
Future Volume (vph)	17	401	56	38	537	37	14	10	35	18	7	20
Satd. Flow (prot)	1658	1707	0	1658	1745	1483	1658	1502	0	1658	1745	1483
Flt Permitted	0.423			0.472			0.950			0.950		
Satd. Flow (perm)	737	1707	0	820	1745	1448	1658	1502	0	1638	1745	1483
Satd. Flow (RTOR)		9				83		35				86
Lane Group Flow (vph)	17	457	0	38	537	37	14	45	0	18	7	20
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases		6			2		3	8		7	4	
Permitted Phases	6			2		2						4
Detector Phase	6	6		2	2	2	3	8		7	4	4
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0	10.0	5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	35.2	35.2		35.2	35.2	35.2	10.9	28.9		10.9	28.9	28.9
Total Split (s)	67.0	67.0		67.0	67.0	67.0	18.0	30.0		18.0	30.0	30.0
Total Split (%)	58.3%	58.3%		58.3%	58.3%	58.3%	15.7%	26.1%		15.7%	26.1%	26.1%
Yellow Time (s)	3.3	3.3		3.3	3.3	3.3	3.3	3.3		3.3	3.3	3.3
All-Red Time (s)	2.9	2.9		2.9	2.9	2.9	2.6	2.6		2.6	2.6	2.6
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.2	6.2		6.2	6.2	6.2	5.9	5.9		5.9	5.9	5.9
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Recall Mode	C-Max	C-Max		C-Max	C-Max	C-Max	None	None		None	None	None
Act Effct Green (s)	89.1	89.1		89.1	89.1	89.1	6.6	12.6		6.9	12.8	12.8
Actuated g/C Ratio	0.77	0.77		0.77	0.77	0.77	0.06	0.11		0.06	0.11	0.11
v/c Ratio	0.03	0.35		0.06	0.40	0.03	0.15	0.23		0.18	0.04	0.08
Control Delay	9.9	9.8		5.3	5.0	0.2	54.5	21.0		55.0	42.4	0.7
Queue Delay	0.0	0.2		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	9.9	10.0		5.3	5.0	0.2	54.5	21.0		55.0	42.4	0.7
LOS	A	B		A	A	A	D	C		D	D	A
Approach Delay		10.0			4.8			29.0			28.9	
Approach LOS		A			A			C			C	
Queue Length 50th (m)	1.3	41.7		0.7	10.7	0.0	3.1	2.1		3.9	1.5	0.0
Queue Length 95th (m)	m4.3	75.5		m4.3	m49.9	m0.1	9.4	11.6		11.1	5.2	0.0
Internal Link Dist (m)		146.9			220.2			66.0			66.6	
Turn Bay Length (m)	45.0			90.0		75.0				40.0		30.0
Base Capacity (vph)	571	1324		635	1352	1140	174	342		174	365	378
Starvation Cap Reductn	0	265		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	0.03	0.43		0.06	0.40	0.03	0.08	0.13		0.10	0.02	0.05

Intersection Summary
Cycle Length: 115
Actuated Cycle Length: 115
Offset: 15 (13%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.40

Intersection Signal Delay: 9.0	Intersection LOS: A
Intersection Capacity Utilization 57.7%	ICU Level of Service B
Analysis Period (min) 15	

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

Splits and Phases: 5: Herlihey & Campeau

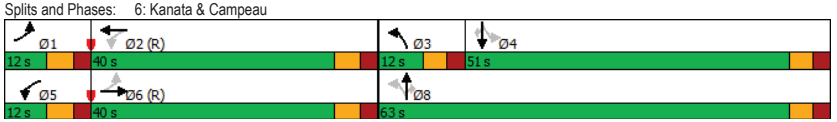
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	94	290	73	22	321	99	107	147	16	126	300	181
Future Volume (vph)	94	290	73	22	321	99	107	147	16	126	300	181
Satd. Flow (prot)	1658	1679	0	1658	1671	0	1658	1745	1483	1658	1745	1483
Flt Permitted	0.212			0.385			0.419			0.663		
Satd. Flow (perm)	368	1679	0	665	1671	0	729	1745	1447	1152	1745	1443
Satd. Flow (RTOR)		11			14				89			181
Lane Group Flow (vph)	94	363	0	22	420	0	107	147	16	126	300	181
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases	1	6		5	2		3	8			4	
Permitted Phases	6			2			8		8	4		4
Detector Phase	1	6		5	2		3	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	11.2	37.2		11.2	37.2		10.9	29.9	29.9	29.9	29.9	29.9
Total Split (s)	12.0	40.0		12.0	40.0		12.0	63.0	63.0	51.0	51.0	51.0
Total Split (%)	10.4%	34.8%		10.4%	34.8%		10.4%	54.8%	54.8%	44.3%	44.3%	44.3%
Yellow Time (s)	3.7	3.7		3.7	3.7		3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	2.5	2.5		2.5	2.5		2.6	2.6	2.6	2.6	2.6	2.6
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.2	6.2		6.2	6.2		5.9	5.9	5.9	5.9	5.9	5.9
Lead/Lag	Lead	Lag		Lead	Lag		Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes			Yes	Yes	Yes
Recall Mode	None	C-Max		None	C-Max		None	Max	Max	Max	Max	Max
Act Effct Green (s)	43.3	41.0		39.5	33.8		57.1	57.1	57.1	45.1	45.1	45.1
Actuated g/C Ratio	0.38	0.36		0.34	0.29		0.50	0.50	0.50	0.39	0.39	0.39
v/c Ratio	0.46	0.60		0.08	0.84		0.26	0.17	0.02	0.28	0.44	0.27
Control Delay	35.9	40.5		22.1	53.0		17.4	16.6	0.1	26.0	28.2	4.4
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.9	40.5		22.1	53.0		17.4	16.6	0.1	26.0	28.2	4.4
LOS	D	D		C	D		B	B	A	C	C	A
Approach Delay		39.6			51.5			15.9			20.7	
Approach LOS		D			D			B			C	
Queue Length 50th (m)	14.3	72.0		3.0	85.9		12.5	17.6	0.0	19.1	48.9	0.0
Queue Length 95th (m)	20.6	58.6		8.2	#137.5		22.4	29.5	0.0	33.9	73.0	13.6
Internal Link Dist (m)		220.2			90.4			97.8			155.3	
Turn Bay Length (m)	80.0			45.0			50.0		45.0	90.0		90.0
Base Capacity (vph)	203	605		279	501		411	866	763	451	684	675
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	0.46	0.60		0.08	0.84		0.26	0.17	0.02	0.28	0.44	0.27

Intersection Summary

Cycle Length: 115
Actuated Cycle Length: 115
Offset: 16 (14%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.84
Intersection Signal Delay: 32.5 — Intersection LOS: C
Intersection Capacity Utilization 79.8% — ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: Kanata & Campeau



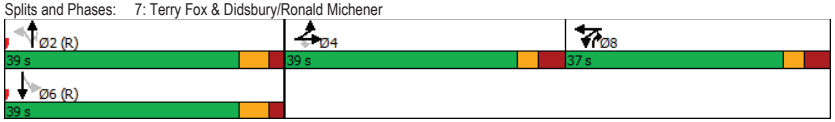
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	42	23	117	104	24	33	176	782	224	37	969	19
Future Volume (vph)	42	23	117	104	24	33	176	782	224	37	969	19
Satd. Flow (prot)	1658	1745	1483	3216	1580	0	1658	3316	1483	1658	3304	0
Flt Permitted	0.950			0.950			0.233			0.314		
Satd. Flow (perm)	1654	1745	1464	3211	1580	0	406	3316	1453	548	3304	0
Satd. Flow (RTOR)			117		33				224		2	
Lane Group Flow (vph)	42	23	117	104	57	0	176	782	224	37	988	0
Turn Type	Split	NA	Perm	Split	NA		Perm	NA	pm+ov	Perm	NA	
Protected Phases	4	4		8	8			2	8		6	
Permitted Phases			4				2		2	6		
Detector Phase	4	4	4	8	8		2	2	8	6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0		10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	38.7	38.7	38.7	36.7	36.7		38.4	38.4	36.7	38.4	38.4	
Total Split (s)	39.0	39.0	39.0	37.0	37.0		39.0	39.0	37.0	39.0	39.0	
Total Split (%)	33.9%	33.9%	33.9%	32.2%	32.2%		33.9%	33.9%	32.2%	33.9%	33.9%	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		4.2	4.2	3.0	4.2	4.2	
All-Red Time (s)	3.7	3.7	3.7	3.7	3.7		2.2	2.2	3.7	2.2	2.2	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.7	6.7	6.7	6.7	6.7		6.4	6.4	6.7	6.4	6.4	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None		C-Max	C-Max	None	C-Max	C-Max	
Act Effct Green (s)	14.4	14.4	14.4	14.0	14.0		66.8	66.8	80.5	66.8	66.8	
Actuated g/C Ratio	0.13	0.13	0.13	0.12	0.12		0.58	0.58	0.70	0.58	0.58	
v/c Ratio	0.20	0.11	0.41	0.27	0.26		0.75	0.41	0.21	0.12	0.51	
Control Delay	44.2	41.7	11.2	45.6	24.2		49.2	22.2	5.8	16.2	15.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	44.2	41.7	11.2	45.6	24.2		49.2	22.2	5.8	16.2	15.7	
LOS	D	D	B	D	C		D	C	A	B	B	
Approach Delay		22.7			38.0			23.1			15.7	
Approach LOS		C			D			C			B	
Queue Length 50th (m)	9.0	4.9	0.0	11.5	5.1		24.0	41.6	0.0	2.0	37.5	
Queue Length 95th (m)	15.8	10.1	13.4	16.1	14.1		#96.3	95.1	29.3	m10.1	#159.2	
Internal Link Dist (m)		103.7			100.9			255.1			173.9	
Turn Bay Length (m)	30.0		30.0	70.0			45.0		75.0	30.0		
Base Capacity (vph)	465	490	495	847	440		235	1925	1149	318	1919	
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	0.09	0.05	0.24	0.12	0.13		0.75	0.41	0.19	0.12	0.51	

Intersection Summary

Cycle Length: 115
Actuated Cycle Length: 115
Offset: 88 (77%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 145
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.75
Intersection Signal Delay: 21.0 Intersection LOS: C
Intersection Capacity Utilization 66.2% 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.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 7: Terry Fox & Didsbury/Ronald Michener



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	761	0	318	0	892	169	0	1003	180
Future Volume (vph)	0	0	0	761	0	318	0	892	169	0	1003	180
Satd. Flow (prot)	0	0	0	3216	0	2611	0	3316	1483	0	3316	1483
Flt Permitted				0.950								
Satd. Flow (perm)	0	0	0	3216	0	2611	0	3316	1442	0	3316	1483
Satd. Flow (RTOR)						318			169			180
Lane Group Flow (vph)	0	0	0	761	0	318	0	892	169	0	1003	180
Turn Type				Prot		Prot		NA	Perm		NA	Perm
Protected Phases				7 8		8		2			6	
Permitted Phases									2			6
Detector Phase				7 8		8		2	2		6	6
Switch Phase												
Minimum Initial (s)						5.0		10.0	10.0		10.0	10.0
Minimum Split (s)						11.1		35.2	35.2		17.2	17.2
Total Split (s)						25.0		59.0	59.0		59.0	59.0
Total Split (%)						21.7%		51.3%	51.3%		51.3%	51.3%
Yellow Time (s)						3.3		4.2	4.2		4.2	4.2
All-Red Time (s)						2.8		3.0	3.0		3.0	3.0
Lost Time Adjust (s)						0.0		0.0	0.0		0.0	0.0
Total Lost Time (s)						6.1		7.2	7.2		7.2	7.2
Lead/Lag						Lag						
Lead-Lag Optimize?						Yes						
Recall Mode						None		C-Max	C-Max		C-Max	C-Max
Act Effct Green (s)				41.0		10.3		60.7	60.7		60.7	60.7
Actuated g/C Ratio				0.36		0.09		0.53	0.53		0.53	0.53
v/c Ratio				0.66		0.61		0.51	0.20		0.57	0.21
Control Delay				33.9		10.3		17.6	1.8		15.6	3.7
Queue Delay				0.0		0.0		0.0	0.0		0.0	0.0
Total Delay				33.9		10.3		17.6	1.8		15.6	3.7
LOS				C		B		B	A		B	A
Approach Delay					27.0			15.1			13.8	
Approach LOS					C			B			B	
Queue Length 50th (m)				75.6		0.0		75.6	1.4		68.2	6.1
Queue Length 95th (m)				85.3		13.4		104.3	2.9		18.9	0.0
Internal Link Dist (m)		95.1			226.2			354.7			255.1	
Turn Bay Length (m)				120.0		195.0			85.0			115.0
Base Capacity (vph)				1361		694		1749	840		1749	867
Starvation Cap Reductn				0		0		0	0		0	0
Spillback Cap Reductn				0		0		0	0		0	0
Storage Cap Reductn				0		0		0	0		0	0
Reduced v/c Ratio				0.56		0.46		0.51	0.20		0.57	0.21

Intersection Summary
Cycle Length: 115
Actuated Cycle Length: 115
Offset: 99 (86%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated

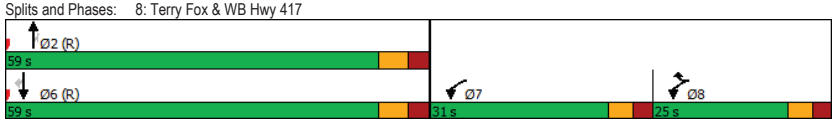
Lane Group	Ø7
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Satd. Flow (RTOR)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	7
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	29.1
Total Split (s)	31.0
Total Split (%)	27%
Yellow Time (s)	3.3
All-Red Time (s)	2.8
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Recall Mode	None
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

Maximum v/c Ratio: 0.66

Intersection Signal Delay: 18.5	Intersection LOS: B
Intersection Capacity Utilization 61.5%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 8: Terry Fox & WB Hwy 417



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	204	0	271	0	0	0	0	862	794	0	1462	350
Future Volume (vph)	204	0	271	0	0	0	0	862	794	0	1462	350
Satd. Flow (prot)	1658	0	1483	0	0	0	0	3316	1483	0	3316	1483
Flt Permitted	0.950											
Satd. Flow (perm)	1658	0	1463	0	0	0	0	3316	1483	0	3316	1447
Satd. Flow (RTOR)			32						794			350
Lane Group Flow (vph)	204	0	271	0	0	0	0	862	794	0	1462	350
Turn Type	Prot		Perm					NA	Perm		NA	Perm
Protected Phases	4							2			6	
Permitted Phases			4						2			6
Detector Phase	4		4					2	2		6	6
Switch Phase												
Minimum Initial (s)	5.0		5.0					10.0	10.0		10.0	10.0
Minimum Split (s)	23.4		23.4					15.7	15.7		17.7	17.7
Total Split (s)	45.0		45.0					70.0	70.0		70.0	70.0
Total Split (%)	39.1%		39.1%					60.9%	60.9%		60.9%	60.9%
Yellow Time (s)	3.3		3.3					4.2	4.2		4.2	4.2
All-Red Time (s)	2.1		2.1					1.5	1.5		1.5	1.5
Lost Time Adjust (s)	0.0		0.0					0.0	0.0		0.0	0.0
Total Lost Time (s)	5.4		5.4					5.7	5.7		5.7	5.7
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None		None					C-Max	C-Max		C-Max	C-Max
Act Effct Green (s)	24.7		24.7					79.2	79.2		79.2	79.2
Actuated g/C Ratio	0.21		0.21					0.69	0.69		0.69	0.69
v/c Ratio	0.57		0.80					0.38	0.63		0.64	0.32
Control Delay	45.7		54.2					9.0	3.1		9.2	1.5
Queue Delay	0.0		0.0					0.0	0.0		0.0	0.0
Total Delay	45.7		54.2					9.0	3.1		9.2	1.5
LOS	D		D					A	A		A	A
Approach Delay		50.5						6.2			7.7	
Approach LOS		D						A			A	
Queue Length 50th (m)	41.4		51.7					38.7	0.0		50.9	1.1
Queue Length 95th (m)	58.5		74.1					64.1	14.2		129.6	9.1
Internal Link Dist (m)		135.3			81.0			64.0			354.7	
Turn Bay Length (m)									95.0			100.0
Base Capacity (vph)	570		524					2283	1268		2283	1105
Starvation Cap Reductn	0		0					0	0		0	0
Spillback Cap Reductn	0		0					0	0		0	0
Storage Cap Reductn	0		0					0	0		0	0
Reduced v/c Ratio	0.36		0.52					0.38	0.63		0.64	0.32

Intersection Summary
Cycle Length: 115
Actuated Cycle Length: 115
Offset: 78 (68%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.80

Intersection Signal Delay: 12.2	Intersection LOS: B
Intersection Capacity Utilization 69.7%	ICU Level of Service C
Analysis Period (min) 15	

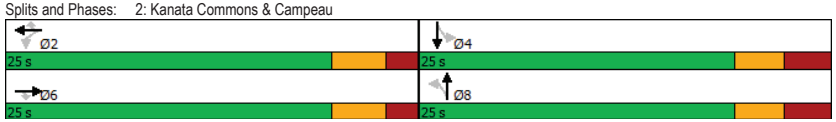
Splits and Phases: 9: Terry Fox & EB Hwy 417

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	627	9	24	674	0	10	0	38	0	0	0
Future Volume (vph)	0	627	9	24	674	0	10	0	38	0	0	0
Satd. Flow (prot)	0	3316	1483	1658	3316	1745	1658	1483	0	1745	1745	0
Flt Permitted				0.371			0.757					
Satd. Flow (perm)	0	3316	1452	647	3316	1745	1321	1483	0	1745	1745	0
Satd. Flow (RTOR)			63					133				
Lane Group Flow (vph)	0	627	9	24	674	0	10	38	0	0	0	0
Turn Type		NA	Perm	Perm	NA	Perm	Perm	NA		Perm		
Protected Phases		6			2			8			4	
Permitted Phases			6	2		2	8			4		
Detector Phase		6	6	2	2	2	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)		23.3	23.3	23.3	23.3	23.3	23.9	23.9		23.9	23.9	
Total Split (s)		25.0	25.0	25.0	25.0	25.0	25.0	25.0		25.0	25.0	
Total Split (%)		50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%		50.0%	50.0%	
Yellow Time (s)		3.3	3.3	3.3	3.3	3.3	3.0	3.0		3.0	3.0	
All-Red Time (s)		2.0	2.0	2.0	2.0	2.0	2.9	2.9		2.9	2.9	
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)		5.3	5.3	5.3	5.3	5.3	5.9	5.9		5.9	5.9	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode		None	None	None	None	None	Max	Max		Max	Max	
Act Effct Green (s)		14.5	14.5	14.5	14.5		19.2	19.2				
Actuated g/C Ratio		0.32	0.32	0.32	0.32		0.43	0.43				
v/c Ratio		0.59	0.02	0.12	0.63		0.02	0.05				
Control Delay		15.0	0.1	11.6	15.7		9.2	0.1				
Queue Delay		0.0	0.0	0.0	0.0		0.0	0.0				
Total Delay		15.0	0.1	11.6	15.7		9.2	0.1				
LOS		B	A	B	B		A	A				
Approach Delay		14.8			15.5			2.0				
Approach LOS		B			B			A				
Queue Length 50th (m)		20.8	0.0	1.3	22.8		0.4	0.0				
Queue Length 95th (m)		32.3	0.0	4.9	35.0		2.7	0.0				
Internal Link Dist (m)		129.8			222.4			129.9			12.7	
Turn Bay Length (m)			65.0	120.0			30.0					
Base Capacity (vph)		1461	675	285	1461		564	709				
Starvation Cap Reductn		0	0	0	0		0	0				
Spillback Cap Reductn		0	0	0	0		0	0				
Storage Cap Reductn		0	0	0	0		0	0				
Reduced v/c Ratio		0.43	0.01	0.08	0.46		0.02	0.05				

Intersection Summary
Cycle Length: 50
Actuated Cycle Length: 45
Natural Cycle: 50
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.63

Intersection Signal Delay: 14.7
Intersection LOS: B
Intersection Capacity Utilization 38.7%
ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 2: Kanata Commons & Campeau

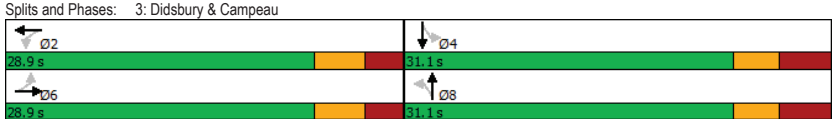


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	661	8	9	680	1	16	0	9	1	0	0
Future Volume (vph)	1	661	8	9	680	1	16	0	9	1	0	0
Satd. Flow (prot)	1658	3308	0	1658	3316	0	1658	1483	0	1658	1745	0
Flt Permitted	0.324			0.333			0.757			0.752		
Satd. Flow (perm)	565	3308	0	581	3316	0	1319	1483	0	1312	1745	0
Satd. Flow (RTOR)		2						103				
Lane Group Flow (vph)	1	669	0	9	681	0	16	9	0	1	0	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm		
Protected Phases		6			2			8			4	
Permitted Phases	6			2			8			4		
Detector Phase	6	6		2	2		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	
Minimum Split (s)	27.5	27.5		27.5	27.5		31.1	31.1		31.1	31.1	
Total Split (s)	28.9	28.9		28.9	28.9		31.1	31.1		31.1	31.1	
Total Split (%)	48.2%	48.2%		48.2%	48.2%		51.8%	51.8%		51.8%	51.8%	
Yellow Time (s)	3.7	3.7		3.7	3.7		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.8	2.8		2.8	2.8		3.8	3.8		3.8	3.8	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.5	6.5		6.5	6.5		7.1	7.1		7.1	7.1	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Act Effct Green (s)	16.5	16.5		16.5	16.5		24.1	24.1		24.1		
Actuated g/C Ratio	0.30	0.30		0.30	0.30		0.44	0.44		0.44		
v/c Ratio	0.01	0.67		0.05	0.68		0.03	0.01		0.00		
Control Delay	12.0	19.8		13.3	20.1		10.4	0.0		10.0		
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0		
Total Delay	12.0	19.8		13.3	20.1		10.4	0.0		10.0		
LOS	B	B		B	C		B	A		A		
Approach Delay		19.8			20.0			6.6			10.0	
Approach LOS		B			B			A			A	
Queue Length 50th (m)	0.1	29.3		0.6	30.1		0.8	0.0		0.1		
Queue Length 95th (m)	0.9	43.3		3.0	44.2		4.0	0.0		0.8		
Internal Link Dist (m)		222.4			292.9			171.0			27.1	
Turn Bay Length (m)	45.0			45.0			15.0			15.0		
Base Capacity (vph)	234	1373		241	1375		586	716		583		
Starvation Cap Reductn	0	0		0	0		0	0		0		
Spillback Cap Reductn	0	0		0	0		0	0		0		
Storage Cap Reductn	0	0		0	0		0	0		0		
Reduced v/c Ratio	0.00	0.49		0.04	0.50		0.03	0.01		0.00		

Intersection Summary
Cycle Length: 60
Actuated Cycle Length: 54.3
Natural Cycle: 60
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.68

Intersection Signal Delay: 19.6
Intersection LOS: B
Intersection Capacity Utilization 51.2%
ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 3: Didsbury & Campeau



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	159	364	262	226	409	165	220	904	163	178	727	160
Future Volume (vph)	159	364	262	226	409	165	220	904	163	178	727	160
Satd. Flow (prot)	1642	1745	1441	1580	1712	1363	1658	3191	1441	1658	3191	1483
Flt Permitted	0.330			0.382			0.950			0.950		
Satd. Flow (perm)	569	1745	1422	635	1712	1342	1657	3191	1386	1650	3191	1451
Satd. Flow (RTOR)			262			165			135			135
Lane Group Flow (vph)	159	364	262	226	409	165	220	904	163	178	727	160
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	43.4	43.4	43.4	43.4	43.4	43.4	11.5	40.4	40.4	11.5	40.4	40.4
Total Split (s)	50.0	50.0	50.0	50.0	50.0	50.0	28.0	42.0	42.0	28.0	42.0	42.0
Total Split (%)	41.7%	41.7%	41.7%	41.7%	41.7%	41.7%	23.3%	35.0%	35.0%	23.3%	35.0%	35.0%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	4.2	4.2	4.2	4.2	4.2	4.2
All-Red Time (s)	2.7	2.7	2.7	2.7	2.7	2.7	2.3	2.2	2.2	2.3	2.2	2.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.4	6.4	6.4	6.4	6.4	6.4	6.5	6.4	6.4	6.5	6.4	6.4
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	43.6	43.6	43.6	43.6	43.6	43.6	19.4	39.7	39.7	17.4	37.7	37.7
Actuated g/C Ratio	0.36	0.36	0.36	0.36	0.36	0.36	0.16	0.33	0.33	0.14	0.31	0.31
v/c Ratio	0.77	0.57	0.38	0.98	0.66	0.28	0.82	0.86	0.30	0.74	0.73	0.29
Control Delay	60.1	35.1	4.9	86.9	30.9	3.6	72.2	47.6	9.5	67.1	42.1	9.3
Queue Delay	0.0	0.5	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.1	35.6	4.9	86.9	31.2	3.6	72.2	47.6	9.5	67.1	42.1	9.3
LOS	E	D	A	F	C	A	E	D	A	E	D	A
Approach Delay		30.3			41.2			47.0			41.4	
Approach LOS		C			D			D			D	
Queue Length 50th (m)	32.8	68.4	0.0	54.6	68.3	5.0	49.5	105.2	4.5	40.4	82.0	4.2
Queue Length 95th (m)	#69.9	99.0	16.9	#103.3	101.2	4.5	#83.5	#150.7	21.2	62.5	104.6	20.3
Internal Link Dist (m)		292.9			146.9			173.9			301.0	
Turn Bay Length (m)	62.5		64.5	70.0		63.5	45.0		62.5	100.0		50.0
Base Capacity (vph)	206	634	683	230	622	592	297	1055	548	297	1001	548
Starvation Cap Reductn	0	0	0	0	21	0	0	0	0	0	0	0
Spillback Cap Reductn	0	63	0	0	0	0	0	0	4	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.77	0.64	0.38	0.98	0.68	0.28	0.74	0.86	0.30	0.60	0.73	0.29

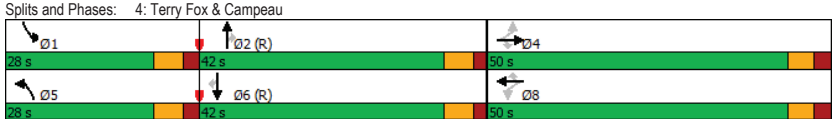
Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 104 (87%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.98

Intersection Signal Delay: 41.0	Intersection LOS: D
Intersection Capacity Utilization 96.4%	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.

Splits and Phases: 4: Terry Fox & Campeau



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	502	119	125	466	104	117	44	139	107	30	87
Future Volume (vph)	25	502	119	125	466	104	117	44	139	107	30	87
Satd. Flow (prot)	1658	1687	0	1658	1745	1483	1658	1481	0	1658	1745	1483
Flt Permitted	0.428			0.212			0.950			0.950		
Satd. Flow (perm)	746	1687	0	370	1745	1446	1658	1481	0	1611	1745	1483
Satd. Flow (RTOR)		11				133		125				135
Lane Group Flow (vph)	25	621	0	125	466	104	117	183	0	107	30	87
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases	6			2		2						4
Detector Phase	1	6		5	2	2	3	8		7	4	4
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0	10.0	5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	10.8	35.2		10.8	35.2	35.2	10.9	28.9		10.9	28.9	28.9
Total Split (s)	17.0	48.0		17.0	48.0	48.0	20.0	35.0		20.0	35.0	35.0
Total Split (%)	14.2%	40.0%		14.2%	40.0%	40.0%	16.7%	29.2%		16.7%	29.2%	29.2%
Yellow Time (s)	3.3	3.3		3.3	3.3	3.3	3.3	3.3		3.3	3.3	3.3
All-Red Time (s)	2.5	2.9		2.5	2.9	2.9	2.6	2.6		2.6	2.6	2.6
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.8	6.2		5.8	6.2	6.2	5.9	5.9		5.9	5.9	5.9
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	C-Max		None	C-Max	C-Max	None	None		None	None	None
Act Effct Green (s)	65.7	59.0		74.0	67.0	67.0	15.4	15.5		12.0	15.2	15.2
Actuated g/C Ratio	0.55	0.49		0.62	0.56	0.56	0.13	0.13		0.10	0.13	0.13
v/c Ratio	0.05	0.74		0.38	0.48	0.12	0.55	0.61		0.65	0.14	0.29
Control Delay	11.3	28.9		14.3	19.1	3.8	60.8	25.2		69.7	44.8	3.9
Queue Delay	0.0	0.1		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	11.3	29.0		14.3	19.1	3.8	60.8	25.2		69.7	44.8	3.9
LOS	B	C		B	B	A	E	C		E	D	A
Approach Delay		28.3			15.9			39.1			40.8	
Approach LOS		C			B			D			D	
Queue Length 50th (m)	2.4	72.7		10.8	50.9	2.1	26.7	13.2		24.4	6.7	0.0
Queue Length 95th (m)	m4.9	#211.3		m22.8	74.7	m6.6	46.1	33.5		42.6	14.2	3.7
Internal Link Dist (m)		146.9			220.2			66.0			66.6	
Turn Bay Length (m)	45.0			90.0		75.0				40.0		30.0
Base Capacity (vph)	524	835		356	973	865	221	453		194	423	461
Starvation Cap Reductn	0	12		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	0.05	0.75		0.35	0.48	0.12	0.53	0.40		0.55	0.07	0.19

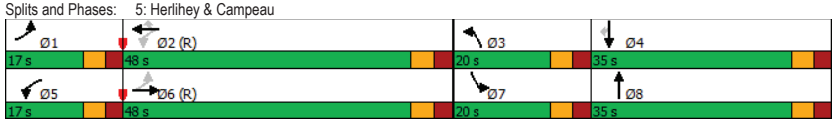
Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 22 (18%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.74

Intersection Signal Delay: 26.9	Intersection LOS: C
Intersection Capacity Utilization 84.0%	ICU Level of Service E
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: 5: Herlihey & Campeau



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	226	312	210	53	340	64	200	205	28	45	198	155
Future Volume (vph)	226	312	210	53	340	64	200	205	28	45	198	155
Satd. Flow (prot)	1658	1612	0	1658	1695	0	1658	1745	1483	1658	1745	1483
Flt Permitted	0.293			0.301			0.438			0.629		
Satd. Flow (perm)	509	1612	0	522	1695	0	742	1745	1443	1091	1745	1381
Satd. Flow (RTOR)		31			9				85			155
Lane Group Flow (vph)	226	522	0	53	404	0	200	205	28	45	198	155
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases	1	6		5	2		3	8			4	
Permitted Phases	6			2			8		8	4		4
Detector Phase	1	6		5	2		3	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	11.2	37.2		11.2	37.2		10.9	29.9	29.9	29.9	29.9	29.9
Total Split (s)	20.0	49.0		20.0	49.0		15.0	51.0	51.0	36.0	36.0	36.0
Total Split (%)	16.7%	40.8%		16.7%	40.8%		12.5%	42.5%	42.5%	30.0%	30.0%	30.0%
Yellow Time (s)	3.7	3.7		3.7	3.7		3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	2.5	2.5		2.5	2.5		2.6	2.6	2.6	2.6	2.6	2.6
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.2	6.2		6.2	6.2		5.9	5.9	5.9	5.9	5.9	5.9
Lead/Lag	Lead	Lag		Lead	Lag		Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes			Yes	Yes	Yes
Recall Mode	None	C-Max		None	C-Max		None	Max	Max	Max	Max	Max
Act Effct Green (s)	62.3	51.6		51.2	43.8		45.1	45.1	45.1	30.1	30.1	30.1
Actuated g/C Ratio	0.52	0.43		0.43	0.36		0.38	0.38	0.38	0.25	0.25	0.25
v/c Ratio	0.59	0.74		0.18	0.65		0.57	0.31	0.05	0.16	0.45	0.34
Control Delay	29.3	38.6		16.3	37.0		34.6	28.2	0.1	37.2	42.0	7.6
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.3	38.6		16.3	37.0		34.6	28.2	0.1	37.2	42.0	7.6
LOS	C	D		B	D		C	C	A	D	D	A
Approach Delay		35.8			34.6			29.3			28.1	
Approach LOS		D			C			C			C	
Queue Length 50th (m)	31.2	101.8		5.9	77.8		33.1	33.8	0.0	8.3	39.6	0.0
Queue Length 95th (m)	m53.8	#108.2		12.4	112.9		52.0	53.0	0.0	18.4	62.4	16.0
Internal Link Dist (m)		220.2			90.4			97.8			155.3	
Turn Bay Length (m)	80.0			45.0			50.0		45.0	90.0		90.0
Base Capacity (vph)	396	710		381	625		348	655	595	273	437	462
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	0.57	0.74		0.14	0.65		0.57	0.31	0.05	0.16	0.45	0.34

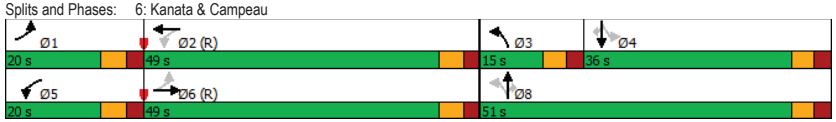
Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 12 (10%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.74

Intersection Signal Delay: 32.6	Intersection LOS: C
Intersection Capacity Utilization 90.9%	ICU Level of Service E
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: 6: Kanata & Campeau



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	26	154	307	33	89	198	1111	480	130	1265	30
Future Volume (vph)	35	26	154	307	33	89	198	1111	480	130	1265	30
Satd. Flow (prot)	1658	1745	1483	3216	1555	0	1658	3316	1483	1658	3304	0
Flt Permitted	0.950			0.950			0.073			0.157		
Satd. Flow (perm)	1658	1745	1459	3197	1555	0	127	3316	1443	274	3304	0
Satd. Flow (RTOR)			154		89				480		2	
Lane Group Flow (vph)	35	26	154	307	122	0	198	1111	480	130	1295	0
Turn Type	Split	NA	Perm	Split	NA		pm+pt	NA	pm+ov	pm+pt	NA	
Protected Phases	4	4		8	8		5	2	8	1	6	
Permitted Phases			4				2		2	6		
Detector Phase	4	4	4	8	8		5	2	8	1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0		5.0	10.0	10.0	5.0	10.0	
Minimum Split (s)	38.7	38.7	38.7	36.7	36.7		11.3	38.4	36.7	11.3	38.4	
Total Split (s)	39.0	39.0	39.0	37.0	37.0		13.0	41.0	37.0	13.0	41.0	
Total Split (%)	30.0%	30.0%	30.0%	28.5%	28.5%		10.0%	31.5%	28.5%	10.0%	31.5%	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		4.2	4.2	3.0	4.2	4.2	
All-Red Time (s)	3.7	3.7	3.7	3.7	3.7		2.1	2.2	3.7	2.1	2.2	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.7	6.7	6.7	6.7	6.7		6.3	6.4	6.7	6.3	6.4	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None		None	C-Max	None	None	C-Max	
Act Effct Green (s)	14.4	14.4	14.4	18.9	18.9		75.2	58.0	76.6	61.1	48.4	
Actuated g/C Ratio	0.11	0.11	0.11	0.15	0.15		0.58	0.45	0.59	0.47	0.37	
v/c Ratio	0.19	0.13	0.52	0.66	0.40		0.59	0.75	0.46	0.50	1.05	
Control Delay	51.5	49.9	13.1	58.8	19.9		38.0	35.5	2.3	22.8	79.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	51.5	49.9	13.1	58.8	19.9		38.0	35.5	2.3	22.8	79.2	
LOS	D	D	B	E	B		D	D	A	C	E	
Approach Delay		23.8			47.7			26.8			74.1	
Approach LOS		C			D			C			E	
Queue Length 50th (m)	8.6	6.4	0.0	38.9	7.5		30.8	115.4	0.0	12.6	161.2	
Queue Length 95th (m)	15.7	12.7	16.7	51.0	24.3		#94.0	#229.3	11.2	35.1	#283.9	
Internal Link Dist (m)		103.7			100.9			255.1			173.9	
Turn Bay Length (m)	30.0		30.0	70.0			45.0		75.0	30.0		
Base Capacity (vph)	411	433	478	749	430		334	1479	1141	262	1232	
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	0.09	0.06	0.32	0.41	0.28		0.59	0.75	0.42	0.50	1.05	

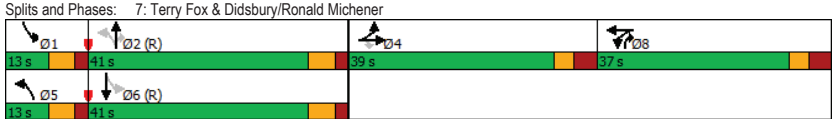
Intersection Summary
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.05

Intersection Signal Delay: 46.4	Intersection LOS: D
Intersection Capacity Utilization 90.6%	ICU Level of Service E
Analysis Period (min) 15	

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

Splits and Phases: 7: Terry Fox & Didsbury/Ronald Michener



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	1111	0	558	0	1377	289	0	1374	428
Future Volume (vph)	0	0	0	1111	0	558	0	1377	289	0	1374	428
Satd. Flow (prot)	0	0	0	3216	0	2611	0	3316	1483	0	3316	1483
Flt Permitted				0.950								
Satd. Flow (perm)	0	0	0	3216	0	2611	0	3316	1441	0	3316	1483
Satd. Flow (RTOR)						378			289			428
Lane Group Flow (vph)	0	0	0	1111	0	558	0	1377	289	0	1374	428
Turn Type				Prot		Prot		NA	Perm		NA	Perm
Protected Phases				7 8		8		2			6	
Permitted Phases									2			6
Detector Phase				7 8		8		2	2		6	6
Switch Phase												
Minimum Initial (s)						5.0		10.0	10.0		10.0	10.0
Minimum Split (s)						11.1		35.2	35.2		17.2	17.2
Total Split (s)						24.0		67.0	67.0		67.0	67.0
Total Split (%)						20.0%		55.8%	55.8%		55.8%	55.8%
Yellow Time (s)						3.3		4.2	4.2		4.2	4.2
All-Red Time (s)						2.8		3.0	3.0		3.0	3.0
Lost Time Adjust (s)						0.0		0.0	0.0		0.0	0.0
Total Lost Time (s)						6.1		7.2	7.2		7.2	7.2
Lead/Lag						Lag						
Lead-Lag Optimize?						Yes						
Recall Mode						None		C-Max	C-Max		C-Max	C-Max
Act Effct Green (s)				46.7		17.7		60.0	60.0		60.0	60.0
Actuated g/C Ratio				0.39		0.15		0.50	0.50		0.50	0.50
v/c Ratio				0.89		0.79		0.83	0.33		0.83	0.45
Control Delay				44.3		24.5		25.2	1.2		31.1	3.1
Queue Delay				0.0		0.0		0.0	0.0		0.0	0.0
Total Delay				44.3		24.5		25.2	1.2		31.1	3.1
LOS				D		C		C	A		C	A
Approach Delay					37.7			21.0			24.5	
Approach LOS					D			C			C	
Queue Length 50th (m)				123.9		22.9		151.1	0.2		141.3	0.0
Queue Length 95th (m)				#156.0		45.9		180.7	2.9		172.7	15.6
Internal Link Dist (m)		112.7			226.2			354.7			255.1	
Turn Bay Length (m)				120.0		195.0			85.0			115.0
Base Capacity (vph)				1256		711		1658	865		1658	955
Starvation Cap Reductn				0		0		0	0		0	0
Spillback Cap Reductn				0		0		0	0		0	0
Storage Cap Reductn				0		0		0	0		0	0
Reduced v/c Ratio				0.88		0.78		0.83	0.33		0.83	0.45

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 12 (10%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

Lane Group	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	7
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	29.1
Total Split (s)	29.0
Total Split (%)	24%
Yellow Time (s)	3.3
All-Red Time (s)	2.8
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Recall Mode	None
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	

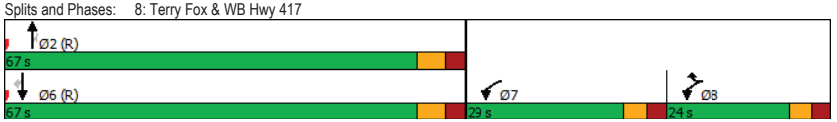
Intersection Summary

Maximum v/c Ratio: 0.89

Intersection Signal Delay: 27.6	Intersection LOS: C
Intersection Capacity Utilization 83.0%	ICU Level of Service E
Analysis Period (min) 15	

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

Splits and Phases: 8: Terry Fox & WB Hwy 417



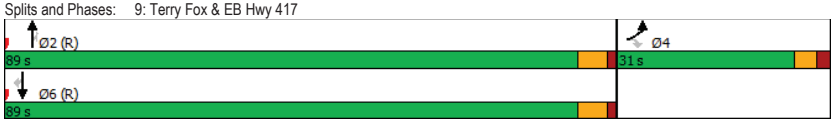
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	235	0	253	0	0	0	0	1369	727	0	2002	320
Future Volume (vph)	235	0	253	0	0	0	0	1369	727	0	2002	320
Satd. Flow (prot)	1658	0	1483	0	0	0	0	3316	1483	0	3316	1483
Flt Permitted	0.950											
Satd. Flow (perm)	1658	0	1463	0	0	0	0	3316	1483	0	3316	1483
Satd. Flow (RTOR)			25						727			320
Lane Group Flow (vph)	235	0	253	0	0	0	0	1369	727	0	2002	320
Turn Type	Prot		Perm					NA	Perm		NA	Perm
Protected Phases	4							2			6	
Permitted Phases			4						2			6
Detector Phase	4		4					2	2		6	6
Switch Phase												
Minimum Initial (s)	5.0		5.0					10.0	10.0		10.0	10.0
Minimum Split (s)	23.4		23.4					15.7	15.7		17.7	17.7
Total Split (s)	31.0		31.0					89.0	89.0		89.0	89.0
Total Split (%)	25.8%		25.8%					74.2%	74.2%		74.2%	74.2%
Yellow Time (s)	3.3		3.3					4.2	4.2		4.2	4.2
All-Red Time (s)	2.1		2.1					1.5	1.5		1.5	1.5
Lost Time Adjust (s)	0.0		0.0					0.0	0.0		0.0	0.0
Total Lost Time (s)	5.4		5.4					5.7	5.7		5.7	5.7
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None		None					C-Max	C-Max		C-Max	C-Max
Act Effct Green (s)	22.5		22.5					86.4	86.4		86.4	86.4
Actuated g/C Ratio	0.19		0.19					0.72	0.72		0.72	0.72
v/c Ratio	0.76		0.86					0.57	0.57		0.84	0.28
Control Delay	61.6		68.7					9.6	2.4		12.1	0.9
Queue Delay	0.0		0.0					0.0	0.0		0.0	0.0
Total Delay	61.6		68.7					9.6	2.4		12.1	0.9
LOS	E		E					A	A		B	A
Approach Delay		65.2						7.1			10.6	
Approach LOS		E						A			B	
Queue Length 50th (m)	51.6		51.6					77.2	0.0		129.2	3.2
Queue Length 95th (m)	78.6		#88.4					97.3	10.5		179.0	m3.9
Internal Link Dist (m)		135.3			95.4			64.0			354.7	
Turn Bay Length (m)									95.0			100.0
Base Capacity (vph)	353		331					2386	1271		2386	1157
Starvation Cap Reductn	0		0					0	0		0	0
Spillback Cap Reductn	0		0					0	0		0	0
Storage Cap Reductn	0		0					0	0		0	0
Reduced v/c Ratio	0.67		0.76					0.57	0.57		0.84	0.28

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.86
Intersection Signal Delay: 14.5 — Intersection LOS: B
Intersection Capacity Utilization 84.3% — ICU Level of Service E
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: 9: Terry Fox & EB Hwy 417



Appendix K

Synchro and Sidra Worksheets –2028 Future Total Horizon

CGH TRANSPORTATION

MOVEMENT SUMMARY

Site: [101] Winterset-Campeau AM 2028 FT (General)
Output produced by SIDRA INTERSECTION Version: 10.0.3.210

8201 Campeau
Site Category: (None)
Roundabout
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop of Cycles Rate to Depart	Number	Aver. Speed km/h
South: Donum															
1	L2	All MCs	9	0.0	9	0.0	0.013	10.6	LOS B	0.0	0.2	0.35	0.67	0.35	44.4
2	T1	All MCs	1	0.0	1	0.0	0.013	4.6	LOS A	0.0	0.2	0.35	0.67	0.35	45.4
3	R2	All MCs	4	0.0	4	0.0	0.005	4.9	LOS A	0.0	0.1	0.37	0.51	0.37	48.8
Approach			14	0.0	14	0.0	0.013	8.6	LOS A	0.0	0.2	0.36	0.63	0.36	45.5
East: Campeau															
4	L2	All MCs	11	0.0	11	0.0	0.156	9.4	LOS A	0.6	4.3	0.10	0.34	0.10	51.3
5	T1	All MCs	230	2.0	230	2.0	0.156	3.4	LOS A	0.6	4.3	0.10	0.36	0.10	55.1
6	R2	All MCs	97	2.0	97	2.0	0.156	4.3	LOS A	0.6	4.3	0.10	0.39	0.10	38.4
Approach			338	1.9	338	1.9	0.156	3.8	LOS A	0.6	4.3	0.10	0.36	0.10	48.9
North: Winterset															
7	L2	All MCs	212	2.0	212	2.0	0.231	2.3	LOS A	0.7	4.8	0.30	0.36	0.30	36.8
8	T1	All MCs	2	0.0	2	0.0	0.231	4.1	LOS A	0.7	4.8	0.30	0.36	0.30	30.6
9	R2	All MCs	38	2.0	38	2.0	0.042	0.7	LOS A	0.1	0.8	0.26	0.17	0.26	37.9
Approach			252	2.0	252	2.0	0.231	2.1	LOS A	0.7	4.8	0.29	0.33	0.29	36.9
West: Campeau															
10	L2	All MCs	14	2.0	14	2.0	0.169	10.5	LOS B	0.6	4.5	0.36	0.47	0.36	37.8
11	T1	All MCs	276	2.0	276	2.0	0.169	4.4	LOS A	0.6	4.5	0.36	0.45	0.36	53.6
12	R2	All MCs	8	0.0	8	0.0	0.169	4.6	LOS A	0.6	4.5	0.36	0.44	0.36	50.0
Approach			298	1.9	298	1.9	0.169	4.7	LOS A	0.6	4.5	0.36	0.46	0.36	52.5
All Vehicles			902	1.9	902	1.9	0.231	3.7	LOS A	0.7	4.8	0.25	0.39	0.25	45.6

Site Level of Service (LOS) Method: Delay & v/c (HCM 2010). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c >1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 2010 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: [102] Winterset-Campeau PM 2028 FT (General)
Output produced by SIDRA INTERSECTION Version: 10.0.3.210

8201 Campeau
Site Category: (None)
Roundabout
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop of Cycles Rate to Depart	Number	Aver. Speed km/h
South: Donum															
1	L2	All MCs	3	0.0	3	0.0	0.005	11.0	LOS B	0.0	0.1	0.39	0.65	0.39	44.6
2	T1	All MCs	1	0.0	1	0.0	0.005	4.9	LOS A	0.0	0.1	0.39	0.65	0.39	45.6
3	R2	All MCs	3	0.0	3	0.0	0.004	5.3	LOS A	0.0	0.1	0.41	0.54	0.41	48.2
Approach			7	0.0	7	0.0	0.005	7.7	LOS A	0.0	0.1	0.40	0.60	0.40	46.2
East: Campeau															
4	L2	All MCs	2	0.0	2	0.0	0.295	9.6	LOS A	1.4	9.6	0.17	0.33	0.17	51.2
5	T1	All MCs	442	2.0	442	2.0	0.295	3.5	LOS A	1.4	9.6	0.17	0.35	0.17	55.0
6	R2	All MCs	181	2.0	181	2.0	0.295	4.4	LOS A	1.4	9.6	0.17	0.39	0.17	38.2
Approach			625	2.0	625	2.0	0.295	3.8	LOS A	1.4	9.6	0.17	0.36	0.17	48.9
North: Winterset															
7	L2	All MCs	115	2.0	115	2.0	0.144	2.9	LOS A	0.4	2.7	0.37	0.45	0.37	36.4
8	T1	All MCs	1	0.0	1	0.0	0.144	4.6	LOS A	0.4	2.7	0.37	0.45	0.37	30.2
9	R2	All MCs	27	2.0	27	2.0	0.034	1.4	LOS A	0.1	0.6	0.36	0.28	0.36	37.5
Approach			143	2.0	143	2.0	0.144	2.6	LOS A	0.4	2.7	0.36	0.42	0.36	36.6
West: Campeau															
10	L2	All MCs	40	2.0	40	2.0	0.256	10.0	LOS B	1.1	7.7	0.28	0.43	0.28	38.0
11	T1	All MCs	461	2.0	461	2.0	0.256	3.9	LOS A	1.1	7.7	0.28	0.40	0.28	54.2
12	R2	All MCs	2	0.0	2	0.0	0.256	4.1	LOS A	1.1	7.7	0.28	0.38	0.28	51.0
Approach			503	2.0	503	2.0	0.256	4.4	LOS A	1.1	7.7	0.28	0.40	0.28	52.4
All Vehicles			1278	2.0	1278	2.0	0.295	3.9	LOS A	1.4	9.6	0.24	0.38	0.24	48.3

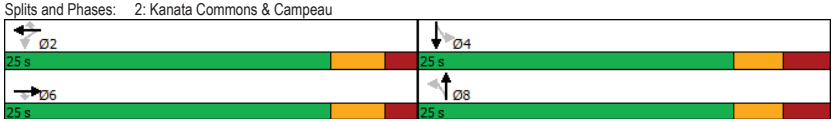
Site Level of Service (LOS) Method: Delay & v/c (HCM 2010). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c >1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 2010 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	483	12	30	328	0	10	0	47	0	0	0
Future Volume (vph)	0	483	12	30	328	0	10	0	47	0	0	0
Satd. Flow (prot)	0	3316	1483	1658	3316	1745	1658	1439	0	1745	1745	0
Flt Permitted				0.476			0.757					
Satd. Flow (perm)	0	3316	1452	830	3316	1745	1321	1439	0	1745	1745	0
Satd. Flow (RTOR)			63					218				
Lane Group Flow (vph)	0	483	12	30	328	0	10	47	0	0	0	0
Turn Type		NA	Perm	Perm	NA	Perm	Perm	NA		Perm		
Protected Phases		6			2			8			4	
Permitted Phases			6	2		2	8			4		
Detector Phase		6	6	2	2	2	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)		23.3	23.3	23.3	23.3	23.3	23.9	23.9		23.9	23.9	
Total Split (s)		25.0	25.0	25.0	25.0	25.0	25.0	25.0		25.0	25.0	
Total Split (%)		50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%		50.0%	50.0%	
Yellow Time (s)		3.3	3.3	3.3	3.3	3.3	3.0	3.0		3.0	3.0	
All-Red Time (s)		2.0	2.0	2.0	2.0	2.0	2.9	2.9		2.9	2.9	
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)		5.3	5.3	5.3	5.3	5.3	5.9	5.9		5.9	5.9	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode		Max	Max	Max	Max	Max	None	None		None	None	
Act Effct Green (s)		32.9	32.9	32.9	32.9		11.7	11.7				
Actuated g/C Ratio		0.71	0.71	0.71	0.71		0.25	0.25				
v/c Ratio		0.20	0.01	0.05	0.14		0.03	0.09				
Control Delay		6.0	0.0	7.4	5.8		12.8	0.3				
Queue Delay		0.0	0.0	0.0	0.0		0.0	0.0				
Total Delay		6.0	0.0	7.4	5.8		12.8	0.3				
LOS		A	A	A	A		B	A				
Approach Delay		5.8			6.0			2.5				
Approach LOS		A			A			A				
Queue Length 50th (m)		9.5	0.0	1.0	6.2		0.9	0.0				
Queue Length 95th (m)		23.5	0.0	5.3	16.1		2.8	0.0				
Internal Link Dist (m)		129.8			222.4			129.9			12.7	
Turn Bay Length (m)			65.0	120.0			30.0					
Base Capacity (vph)		2364	1053	592	2364		554	730				
Starvation Cap Reductn		0	0	0	0		0	0				
Spillback Cap Reductn		0	0	0	0		0	0				
Storage Cap Reductn		0	0	0	0		0	0				
Reduced v/c Ratio		0.20	0.01	0.05	0.14		0.02	0.06				

Intersection Summary
Cycle Length: 50
Actuated Cycle Length: 46.2
Natural Cycle: 50
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.20

Intersection Signal Delay: 5.7 — Intersection LOS: A
Intersection Capacity Utilization 47.4% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 2: Kanata Commons & Campeau

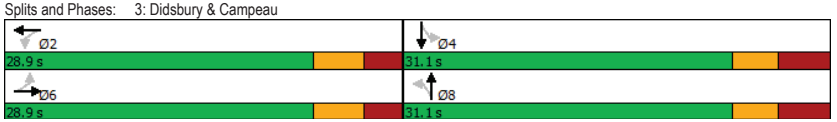


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	522	4	2	353	0	6	0	1	0	0	0
Future Volume (vph)	1	522	4	2	353	0	6	0	1	0	0	0
Satd. Flow (prot)	1658	3312	0	1658	3316	0	1658	1464	0	1745	1745	0
Flt Permitted	0.540			0.457								
Satd. Flow (perm)	941	3312	0	796	3316	0	1745	1464	0	1745	1745	0
Satd. Flow (RTOR)		1						172				
Lane Group Flow (vph)	1	526	0	2	353	0	6	1	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm		
Protected Phases		6			2			8			4	
Permitted Phases	6			2			8			4		
Detector Phase	6	6		2	2		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	
Minimum Split (s)	27.5	27.5		27.5	27.5		31.1	31.1		31.1	31.1	
Total Split (s)	28.9	28.9		28.9	28.9		31.1	31.1		31.1	31.1	
Total Split (%)	48.2%	48.2%		48.2%	48.2%		51.8%	51.8%		51.8%	51.8%	
Yellow Time (s)	3.7	3.7		3.7	3.7		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.8	2.8		2.8	2.8		3.8	3.8		3.8	3.8	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.5	6.5		6.5	6.5		7.1	7.1		7.1	7.1	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	Max	Max		Max	Max		None	None		None	None	
Act Effct Green (s)	45.1	45.1		45.1	45.1		12.3	12.3				
Actuated g/C Ratio	0.90	0.90		0.90	0.90		0.25	0.25				
v/c Ratio	0.00	0.18		0.00	0.12		0.01	0.00				
Control Delay	6.0	3.6		5.5	3.5		15.7	0.0				
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0				
Total Delay	6.0	3.6		5.5	3.5		15.7	0.0				
LOS	A	A		A	A		B	A				
Approach Delay		3.6			3.5			13.4				
Approach LOS		A			A			B				
Queue Length 50th (m)	0.0	0.0		0.0	0.0		0.4	0.0				
Queue Length 95th (m)	0.8	31.6		1.1	21.1		3.0	0.0				
Internal Link Dist (m)		222.4			123.4			171.0			27.1	
Turn Bay Length (m)	45.0			45.0			15.0					
Base Capacity (vph)	847	2980		716	2983		874	819				
Starvation Cap Reductn	0	0		0	0		0	0				
Spillback Cap Reductn	0	0		0	0		0	0				
Storage Cap Reductn	0	0		0	0		0	0				
Reduced v/c Ratio	0.00	0.18		0.00	0.12		0.01	0.00				

Intersection Summary
Cycle Length: 60
Actuated Cycle Length: 50.1
Natural Cycle: 60
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.18

Intersection Signal Delay: 3.6 — Intersection LOS: A
Intersection Capacity Utilization 37.5% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 3: Didsbury & Campeau



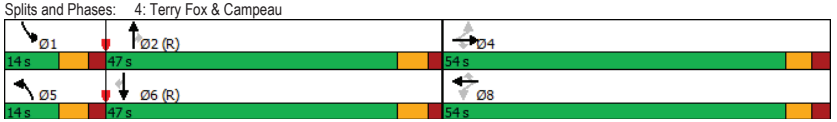
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	87	231	225	251	239	75	134	571	121	141	550	68
Future Volume (vph)	87	231	225	251	239	75	134	571	121	141	550	68
Satd. Flow (prot)	1642	1745	1441	1580	1712	1363	1658	3191	1441	1658	3191	1483
Flt Permitted	0.514			0.525			0.950			0.950		
Satd. Flow (perm)	887	1745	1420	872	1712	1343	1657	3191	1403	1654	3191	1451
Satd. Flow (RTOR)			225			94			121			94
Lane Group Flow (vph)	87	231	225	251	239	75	134	571	121	141	550	68
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	43.4	43.4	43.4	43.4	43.4	43.4	11.5	40.4	40.4	11.5	40.4	40.4
Total Split (s)	54.0	54.0	54.0	54.0	54.0	54.0	14.0	47.0	47.0	14.0	47.0	47.0
Total Split (%)	47.0%	47.0%	47.0%	47.0%	47.0%	47.0%	12.2%	40.9%	40.9%	12.2%	40.9%	40.9%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	4.2	4.2	4.2	4.2	4.2	4.2
All-Red Time (s)	2.7	2.7	2.7	2.7	2.7	2.7	2.3	2.2	2.2	2.3	2.2	2.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.4	6.4	6.4	6.4	6.4	6.4	6.5	6.4	6.4	6.5	6.4	6.4
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	36.0	36.0	36.0	36.0	36.0	36.0	15.9	43.1	43.1	16.6	43.8	43.8
Actuated g/C Ratio	0.31	0.31	0.31	0.31	0.31	0.31	0.14	0.37	0.37	0.14	0.38	0.38
v/c Ratio	0.31	0.42	0.38	0.92	0.45	0.15	0.59	0.48	0.20	0.59	0.45	0.11
Control Delay	30.5	32.0	4.8	67.2	29.4	2.3	60.4	15.5	4.9	59.3	28.9	2.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.5	32.0	4.8	67.2	29.4	2.3	60.4	15.5	4.9	59.3	28.9	2.8
LOS	C	C	A	E	C	A	E	B	A	E	C	A
Approach Delay		20.5			42.6			21.3			32.2	
Approach LOS		C			D			C			C	
Queue Length 50th (m)	14.7	40.6	0.0	37.7	33.9	0.3	31.4	37.4	4.5	29.5	50.5	0.0
Queue Length 95th (m)	24.5	53.6	14.3	47.9	18.9	0.0	#79.3	8.5	0.0	#80.1	66.7	5.3
Internal Link Dist (m)		144.2			146.9			173.9			301.0	
Turn Bay Length (m)	62.5		64.5	70.0		63.5	45.0		62.5	100.0		50.0
Base Capacity (vph)	367	722	719	360	708	610	228	1195	601	239	1215	611
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.32	0.31	0.70	0.34	0.12	0.59	0.48	0.20	0.59	0.45	0.11

Intersection Summary

Cycle Length: 115
Actuated Cycle Length: 115
Offset: 91 (79%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.92
Intersection Signal Delay: 28.7 — Intersection LOS: C
Intersection Capacity Utilization 86.7% — ICU Level of Service E
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 4: Terry Fox & Campeau



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	17	403	56	38	538	37	14	10	35	18	7	20
Future Volume (vph)	17	403	56	38	538	37	14	10	35	18	7	20
Satd. Flow (prot)	1658	1707	0	1658	1745	1483	1658	1502	0	1658	1745	1483
Flt Permitted	0.422			0.470			0.950			0.950		
Satd. Flow (perm)	735	1707	0	817	1745	1448	1658	1502	0	1638	1745	1483
Satd. Flow (RTOR)		9				83		35				86
Lane Group Flow (vph)	17	459	0	38	538	37	14	45	0	18	7	20
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases		6			2		3	8		7	4	
Permitted Phases	6			2		2						4
Detector Phase	6	6		2	2	2	3	8		7	4	4
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0	10.0	5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	35.2	35.2		35.2	35.2	35.2	10.9	28.9		10.9	28.9	28.9
Total Split (s)	67.0	67.0		67.0	67.0	67.0	18.0	30.0		18.0	30.0	30.0
Total Split (%)	58.3%	58.3%		58.3%	58.3%	58.3%	15.7%	26.1%		15.7%	26.1%	26.1%
Yellow Time (s)	3.3	3.3		3.3	3.3	3.3	3.3	3.3		3.3	3.3	3.3
All-Red Time (s)	2.9	2.9		2.9	2.9	2.9	2.6	2.6		2.6	2.6	2.6
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.2	6.2		6.2	6.2	6.2	5.9	5.9		5.9	5.9	5.9
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Recall Mode	C-Max	C-Max		C-Max	C-Max	C-Max	None	None		None	None	None
Act Effct Green (s)	89.1	89.1		89.1	89.1	89.1	6.6	12.6		6.9	12.8	12.8
Actuated g/C Ratio	0.77	0.77		0.77	0.77	0.77	0.06	0.11		0.06	0.11	0.11
v/c Ratio	0.03	0.35		0.06	0.40	0.03	0.15	0.23		0.18	0.04	0.08
Control Delay	10.1	9.7		5.4	5.1	0.2	54.5	21.0		55.0	42.4	0.7
Queue Delay	0.0	0.2		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	10.1	9.9		5.4	5.1	0.2	54.5	21.0		55.0	42.4	0.7
LOS	B	A		A	A	A	D	C		D	D	A
Approach Delay		9.9			4.8			29.0			28.9	
Approach LOS		A			A			C			C	
Queue Length 50th (m)	1.3	40.9		0.7	10.7	0.0	3.1	2.1		3.9	1.5	0.0
Queue Length 95th (m)	m4.3	75.3		m4.3	m50.4	m0.1	9.4	11.6		11.1	5.2	0.0
Internal Link Dist (m)		146.9			220.2			66.0			66.6	
Turn Bay Length (m)	45.0			90.0		75.0				40.0		30.0
Base Capacity (vph)	569	1324		632	1352	1140	174	342		174	365	378
Starvation Cap Reductn	0	262		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	0.03	0.43		0.06	0.40	0.03	0.08	0.13		0.10	0.02	0.05

Intersection Summary
Cycle Length: 115
Actuated Cycle Length: 115
Offset: 15 (13%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.40

Intersection Signal Delay: 8.9	Intersection LOS: A
Intersection Capacity Utilization 57.7%	ICU Level of Service B
Analysis Period (min) 15	

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

Splits and Phases: 5: Herlihey & Campeau

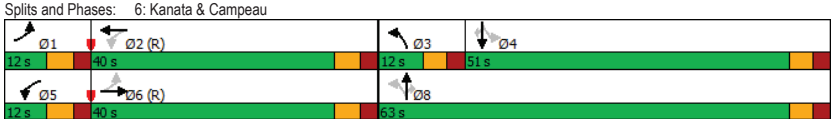
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	94	290	75	22	321	99	108	138	16	126	292	181
Future Volume (vph)	94	290	75	22	321	99	108	138	16	126	292	181
Satd. Flow (prot)	1658	1677	0	1658	1671	0	1658	1745	1483	1658	1745	1483
Flt Permitted	0.212			0.382			0.427			0.669		
Satd. Flow (perm)	368	1677	0	660	1671	0	743	1745	1447	1163	1745	1443
Satd. Flow (RTOR)		11			14				89			181
Lane Group Flow (vph)	94	365	0	22	420	0	108	138	16	126	292	181
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases	1	6		5	2		3	8			4	
Permitted Phases	6			2			8		8	4		4
Detector Phase	1	6		5	2		3	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	11.2	37.2		11.2	37.2		10.9	29.9	29.9	29.9	29.9	29.9
Total Split (s)	12.0	40.0		12.0	40.0		12.0	63.0	63.0	51.0	51.0	51.0
Total Split (%)	10.4%	34.8%		10.4%	34.8%		10.4%	54.8%	54.8%	44.3%	44.3%	44.3%
Yellow Time (s)	3.7	3.7		3.7	3.7		3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	2.5	2.5		2.5	2.5		2.6	2.6	2.6	2.6	2.6	2.6
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.2	6.2		6.2	6.2		5.9	5.9	5.9	5.9	5.9	5.9
Lead/Lag	Lead	Lag		Lead	Lag		Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes			Yes	Yes	Yes
Recall Mode	None	C-Max		None	C-Max		None	Max	Max	Max	Max	Max
Act Effct Green (s)	43.3	41.0		39.5	33.8		57.1	57.1	57.1	45.1	45.1	45.1
Actuated g/C Ratio	0.38	0.36		0.34	0.29		0.50	0.50	0.50	0.39	0.39	0.39
v/c Ratio	0.46	0.60		0.08	0.84		0.26	0.16	0.02	0.28	0.43	0.27
Control Delay	35.9	40.8		22.1	53.0		17.4	16.5	0.1	25.9	28.0	4.4
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.9	40.8		22.1	53.0		17.4	16.5	0.1	25.9	28.0	4.4
LOS	D	D		C	D		B	B	A	C	C	A
Approach Delay		39.8			51.5			15.8			20.4	
Approach LOS		D			D			B			C	
Queue Length 50th (m)	14.3	72.2		3.0	85.9		12.7	16.4	0.0	19.1	47.3	0.0
Queue Length 95th (m)	20.6	61.6		8.2	#137.5		22.7	27.7	0.0	33.8	70.9	13.6
Internal Link Dist (m)		220.2			90.4			97.8			155.3	
Turn Bay Length (m)	80.0			45.0			50.0		45.0	90.0		90.0
Base Capacity (vph)	203	604		277	501		417	866	763	456	684	675
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	0.46	0.60		0.08	0.84		0.26	0.16	0.02	0.28	0.43	0.27

Intersection Summary

Cycle Length: 115
Actuated Cycle Length: 115
Offset: 16 (14%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.84
Intersection Signal Delay: 32.6 — Intersection LOS: C
Intersection Capacity Utilization 79.8% — ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: Kanata & Campeau



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	42	23	117	104	24	33	176	740	224	37	920	19
Future Volume (vph)	42	23	117	104	24	33	176	740	224	37	920	19
Satd. Flow (prot)	1658	1745	1483	3216	1580	0	1658	3316	1483	1658	3304	0
Flt Permitted	0.950			0.950			0.251			0.332		
Satd. Flow (perm)	1654	1745	1464	3211	1580	0	438	3316	1453	579	3304	0
Satd. Flow (RTOR)			117		33				224		2	
Lane Group Flow (vph)	42	23	117	104	57	0	176	740	224	37	939	0
Turn Type	Split	NA	Perm	Split	NA		Perm	NA	pm+ov	Perm	NA	
Protected Phases	4	4		8	8			2	8		6	
Permitted Phases			4				2		2	6		
Detector Phase	4	4	4	8	8		2	2	8	6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0		10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	38.7	38.7	38.7	36.7	36.7		38.4	38.4	36.7	38.4	38.4	
Total Split (s)	39.0	39.0	39.0	37.0	37.0		39.0	39.0	37.0	39.0	39.0	
Total Split (%)	33.9%	33.9%	33.9%	32.2%	32.2%		33.9%	33.9%	32.2%	33.9%	33.9%	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		4.2	4.2	3.0	4.2	4.2	
All-Red Time (s)	3.7	3.7	3.7	3.7	3.7		2.2	2.2	3.7	2.2	2.2	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.7	6.7	6.7	6.7	6.7		6.4	6.4	6.7	6.4	6.4	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None		C-Max	C-Max	None	C-Max	C-Max	
Act Effct Green (s)	14.4	14.4	14.4	14.0	14.0		66.8	66.8	80.5	66.8	66.8	
Actuated g/C Ratio	0.13	0.13	0.13	0.12	0.12		0.58	0.58	0.70	0.58	0.58	
v/c Ratio	0.20	0.11	0.41	0.27	0.26		0.69	0.38	0.21	0.11	0.49	
Control Delay	44.2	41.7	11.2	45.6	24.2		42.5	19.9	4.9	15.3	14.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	44.2	41.7	11.2	45.6	24.2		42.5	19.9	4.9	15.3	14.9	
LOS	D	D	B	D	C		D	B	A	B	B	
Approach Delay		22.7			38.0			20.4			14.9	
Approach LOS		C			D			C			B	
Queue Length 50th (m)	9.0	4.9	0.0	11.5	5.1		22.3	35.6	0.0	2.0	36.0	
Queue Length 95th (m)	15.8	10.1	13.4	16.1	14.1		#93.8	84.6	25.0	m10.1	#146.7	
Internal Link Dist (m)		103.7			100.9			255.1			173.9	
Turn Bay Length (m)	30.0		30.0	70.0			45.0		75.0	30.0		
Base Capacity (vph)	465	490	495	847	440		254	1925	1149	336	1919	
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	0.09	0.05	0.24	0.12	0.13		0.69	0.38	0.19	0.11	0.49	

Intersection Summary

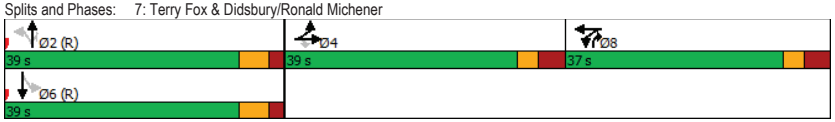
Cycle Length: 115
Actuated Cycle Length: 115
Offset: 88 (77%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 145
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.69

Intersection Signal Delay: 19.5	Intersection LOS: B
Intersection Capacity Utilization 64.8%	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.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 7: Terry Fox & Didsbury/Ronald Michener



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	733	0	314	0	835	163	0	942	180
Future Volume (vph)	0	0	0	733	0	314	0	835	163	0	942	180
Satd. Flow (prot)	0	0	0	3216	0	2611	0	3316	1483	0	3316	1483
Flt Permitted				0.950								
Satd. Flow (perm)	0	0	0	3216	0	2611	0	3316	1442	0	3316	1483
Satd. Flow (RTOR)						314			163			180
Lane Group Flow (vph)	0	0	0	733	0	314	0	835	163	0	942	180
Turn Type				Prot		Prot		NA	Perm		NA	Perm
Protected Phases				7 8		8		2			6	
Permitted Phases									2			6
Detector Phase				7 8		8		2	2		6	6
Switch Phase												
Minimum Initial (s)						5.0		10.0	10.0		10.0	10.0
Minimum Split (s)						11.1		35.2	35.2		17.2	17.2
Total Split (s)						25.0		59.0	59.0		59.0	59.0
Total Split (%)						21.7%		51.3%	51.3%		51.3%	51.3%
Yellow Time (s)						3.3		4.2	4.2		4.2	4.2
All-Red Time (s)						2.8		3.0	3.0		3.0	3.0
Lost Time Adjust (s)						0.0		0.0	0.0		0.0	0.0
Total Lost Time (s)						6.1		7.2	7.2		7.2	7.2
Lead/Lag						Lag						
Lead-Lag Optimize?						Yes						
Recall Mode						None		C-Max	C-Max		C-Max	C-Max
Act Effct Green (s)				40.2		9.7		61.5	61.5		61.5	61.5
Actuated g/C Ratio				0.35		0.08		0.53	0.53		0.53	0.53
v/c Ratio				0.65		0.62		0.47	0.19		0.53	0.21
Control Delay				34.3		11.0		17.3	2.1		15.1	3.8
Queue Delay				0.0		0.0		0.0	0.0		0.0	0.0
Total Delay				34.3		11.0		17.3	2.1		15.1	3.8
LOS				C		B		B	A		B	A
Approach Delay					27.3			14.8			13.3	
Approach LOS					C			B			B	
Queue Length 50th (m)				72.0		0.0		69.8	2.0		66.2	6.2
Queue Length 95th (m)				83.9		13.6		94.5	3.2		18.4	0.0
Internal Link Dist (m)		95.1			226.2			354.7			255.1	
Turn Bay Length (m)				120.0		195.0			85.0			115.0
Base Capacity (vph)				1361		691		1773	847		1773	877
Starvation Cap Reductn				0		0		0	0		0	0
Spillback Cap Reductn				0		0		0	0		0	0
Storage Cap Reductn				0		0		0	0		0	0
Reduced v/c Ratio				0.54		0.45		0.47	0.19		0.53	0.21

Intersection Summary
Cycle Length: 115
Actuated Cycle Length: 115
Offset: 99 (86%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated

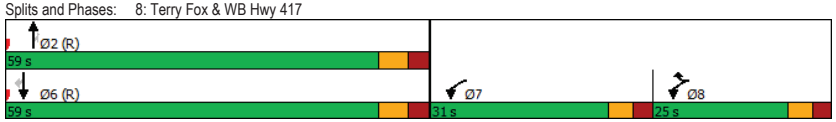
Lane Group	Ø7
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Satd. Flow (RTOR)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	7
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	29.1
Total Split (s)	31.0
Total Split (%)	27%
Yellow Time (s)	3.3
All-Red Time (s)	2.8
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Recall Mode	None
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

Maximum v/c Ratio: 0.65

Intersection Signal Delay: 18.4	Intersection LOS: B
Intersection Capacity Utilization 58.9%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 8: Terry Fox & WB Hwy 417



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	195	0	254	0	0	0	0	805	746	0	1349	344
Future Volume (vph)	195	0	254	0	0	0	0	805	746	0	1349	344
Satd. Flow (prot)	1658	0	1483	0	0	0	0	3316	1483	0	3316	1483
Flt Permitted	0.950											
Satd. Flow (perm)	1658	0	1463	0	0	0	0	3316	1483	0	3316	1447
Satd. Flow (RTOR)			42						746			344
Lane Group Flow (vph)	195	0	254	0	0	0	0	805	746	0	1349	344
Turn Type	Prot		Perm					NA	Perm		NA	Perm
Protected Phases	4							2			6	
Permitted Phases			4						2			6
Detector Phase	4		4					2	2		6	6
Switch Phase												
Minimum Initial (s)	5.0		5.0					10.0	10.0		10.0	10.0
Minimum Split (s)	23.4		23.4					15.7	15.7		17.7	17.7
Total Split (s)	45.0		45.0					70.0	70.0		70.0	70.0
Total Split (%)	39.1%		39.1%					60.9%	60.9%		60.9%	60.9%
Yellow Time (s)	3.3		3.3					4.2	4.2		4.2	4.2
All-Red Time (s)	2.1		2.1					1.5	1.5		1.5	1.5
Lost Time Adjust (s)	0.0		0.0					0.0	0.0		0.0	0.0
Total Lost Time (s)	5.4		5.4					5.7	5.7		5.7	5.7
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None		None					C-Max	C-Max		C-Max	C-Max
Act Effct Green (s)	22.7		22.7					81.2	81.2		81.2	81.2
Actuated g/C Ratio	0.20		0.20					0.71	0.71		0.71	0.71
v/c Ratio	0.60		0.79					0.34	0.59		0.58	0.31
Control Delay	48.5		53.1					7.8	2.7		7.3	1.3
Queue Delay	0.0		0.0					0.0	0.0		0.0	0.0
Total Delay	48.5		53.1					7.8	2.7		7.3	1.3
LOS	D		D					A	A		A	A
Approach Delay		51.1						5.4			6.1	
Approach LOS		D						A			A	
Queue Length 50th (m)	40.3		46.1					32.8	0.0		23.4	1.1
Queue Length 95th (m)	57.7		68.3					55.4	13.2		112.7	7.3
Internal Link Dist (m)		135.3			81.0			64.0			354.7	
Turn Bay Length (m)									95.0			100.0
Base Capacity (vph)	570		531					2342	1266		2342	1123
Starvation Cap Reductn	0		0					0	0		0	0
Spillback Cap Reductn	0		0					0	0		0	0
Storage Cap Reductn	0		0					0	0		0	0
Reduced v/c Ratio	0.34		0.48					0.34	0.59		0.58	0.31

Intersection Summary
Cycle Length: 115
Actuated Cycle Length: 115
Offset: 78 (68%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.79

Intersection Signal Delay: 11.3	Intersection LOS: B
Intersection Capacity Utilization 65.3%	ICU Level of Service C
Analysis Period (min) 15	

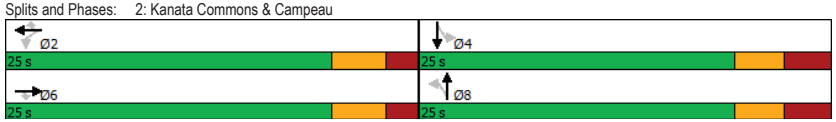
Splits and Phases: 9: Terry Fox & EB Hwy 417

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	555	20	63	605	0	19	0	70	0	0	0
Future Volume (vph)	0	555	20	63	605	0	19	0	70	0	0	0
Satd. Flow (prot)	0	3316	1483	1658	3316	1745	1658	1447	0	1745	1745	0
Flt Permitted				0.425			0.757					
Satd. Flow (perm)	0	3316	1450	741	3316	1745	1320	1447	0	1745	1745	0
Satd. Flow (RTOR)			63					169				
Lane Group Flow (vph)	0	555	20	63	605	0	19	70	0	0	0	0
Turn Type		NA	Perm	Perm	NA	Perm	Perm	NA		Perm		
Protected Phases		6			2			8			4	
Permitted Phases			6	2		2	8			4		
Detector Phase		6	6	2	2	2	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)		23.3	23.3	23.3	23.3	23.3	23.9	23.9		23.9	23.9	
Total Split (s)		25.0	25.0	25.0	25.0	25.0	25.0	25.0		25.0	25.0	
Total Split (%)		50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%		50.0%	50.0%	
Yellow Time (s)		3.3	3.3	3.3	3.3	3.3	3.0	3.0		3.0	3.0	
All-Red Time (s)		2.0	2.0	2.0	2.0	2.0	2.9	2.9		2.9	2.9	
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)		5.3	5.3	5.3	5.3	5.3	5.9	5.9		5.9	5.9	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode		None	None	None	None	None	Max	Max		Max	Max	
Act Effct Green (s)		13.6	13.6	13.6	13.6		19.2	19.2				
Actuated g/C Ratio		0.31	0.31	0.31	0.31		0.44	0.44				
v/c Ratio		0.54	0.04	0.28	0.59		0.03	0.10				
Control Delay		14.6	0.6	14.6	15.3		8.9	0.3				
Queue Delay		0.0	0.0	0.0	0.0		0.0	0.0				
Total Delay		14.6	0.6	14.6	15.3		8.9	0.3				
LOS		B	A	B	B		A	A				
Approach Delay		14.1			15.2			2.1				
Approach LOS		B			B			A				
Queue Length 50th (m)		18.0	0.0	3.5	20.0		0.7	0.0				
Queue Length 95th (m)		28.3	0.6	10.2	31.2		3.9	0.0				
Internal Link Dist (m)		129.8			222.4			129.9			12.7	
Turn Bay Length (m)			65.0	120.0			30.0					
Base Capacity (vph)		1491	686	333	1491		575	726				
Starvation Cap Reductn		0	0	0	0		0	0				
Spillback Cap Reductn		0	0	0	0		0	0				
Storage Cap Reductn		0	0	0	0		0	0				
Reduced v/c Ratio		0.37	0.03	0.19	0.41		0.03	0.10				

Intersection Summary
Cycle Length: 50
Actuated Cycle Length: 44
Natural Cycle: 50
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.59

Intersection Signal Delay: 13.9 | Intersection LOS: B
Intersection Capacity Utilization 53.3% | ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 2: Kanata Commons & Campeau

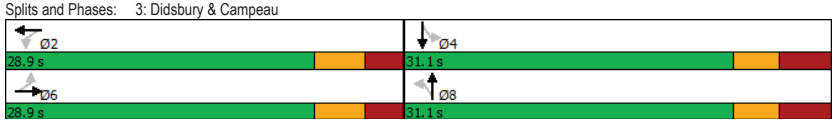


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	621	8	9	650	1	16	0	9	1	0	0
Future Volume (vph)	1	621	8	9	650	1	16	0	9	1	0	0
Satd. Flow (prot)	1658	3308	0	1658	3316	0	1658	1483	0	1658	1745	0
Flt Permitted	0.344			0.361			0.757			0.752		
Satd. Flow (perm)	600	3308	0	629	3316	0	1319	1483	0	1312	1745	0
Satd. Flow (RTOR)		2						117				
Lane Group Flow (vph)	1	629	0	9	651	0	16	9	0	1	0	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm		
Protected Phases		6			2			8			4	
Permitted Phases	6			2			8			4		
Detector Phase	6	6		2	2		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	
Minimum Split (s)	27.5	27.5		27.5	27.5		31.1	31.1		31.1	31.1	
Total Split (s)	28.9	28.9		28.9	28.9		31.1	31.1		31.1	31.1	
Total Split (%)	48.2%	48.2%		48.2%	48.2%		51.8%	51.8%		51.8%	51.8%	
Yellow Time (s)	3.7	3.7		3.7	3.7		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.8	2.8		2.8	2.8		3.8	3.8		3.8	3.8	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.5	6.5		6.5	6.5		7.1	7.1		7.1	7.1	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Act Effct Green (s)	15.7	15.7		15.7	15.7		24.1	24.1		24.1		
Actuated g/C Ratio	0.29	0.29		0.29	0.29		0.45	0.45		0.45		
v/c Ratio	0.01	0.65		0.05	0.67		0.03	0.01		0.00		
Control Delay	12.0	19.6		13.4	20.1		10.0	0.0		10.0		
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0		
Total Delay	12.0	19.6		13.4	20.1		10.0	0.0		10.0		
LOS	B	B		B	C		A	A		A		
Approach Delay		19.6			20.0			6.4			10.0	
Approach LOS		B			C			A			A	
Queue Length 50th (m)	0.1	27.1		0.6	28.4		0.8	0.0		0.1		
Queue Length 95th (m)	0.9	40.3		3.1	42.2		3.9	0.0		0.8		
Internal Link Dist (m)		222.4			292.9			171.0			27.1	
Turn Bay Length (m)	45.0			45.0			15.0			15.0		
Base Capacity (vph)	252	1393		264	1395		594	732		591		
Starvation Cap Reductn	0	0		0	0		0	0		0		
Spillback Cap Reductn	0	0		0	0		0	0		0		
Storage Cap Reductn	0	0		0	0		0	0		0		
Reduced v/c Ratio	0.00	0.45		0.03	0.47		0.03	0.01		0.00		

Intersection Summary
Cycle Length: 60
Actuated Cycle Length: 53.5
Natural Cycle: 60
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.67

Intersection Signal Delay: 19.6 | Intersection LOS: B
Intersection Capacity Utilization 50.3% | ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 3: Didsbury & Campeau



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	165	296	284	226	344	165	248	832	163	178	674	167
Future Volume (vph)	165	296	284	226	344	165	248	832	163	178	674	167
Satd. Flow (prot)	1642	1745	1441	1580	1712	1363	1658	3191	1441	1658	3191	1483
Flt Permitted	0.369			0.434			0.950			0.950		
Satd. Flow (perm)	636	1745	1420	721	1712	1342	1656	3191	1386	1650	3191	1449
Satd. Flow (RTOR)			284			165			146			152
Lane Group Flow (vph)	165	296	284	226	344	165	248	832	163	178	674	167
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	43.4	43.4	43.4	43.4	43.4	43.4	11.5	40.4	40.4	11.5	40.4	40.4
Total Split (s)	50.0	50.0	50.0	50.0	50.0	50.0	28.0	42.0	42.0	28.0	42.0	42.0
Total Split (%)	41.7%	41.7%	41.7%	41.7%	41.7%	41.7%	23.3%	35.0%	35.0%	23.3%	35.0%	35.0%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	4.2	4.2	4.2	4.2	4.2	4.2
All-Red Time (s)	2.7	2.7	2.7	2.7	2.7	2.7	2.3	2.2	2.2	2.3	2.2	2.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.4	6.4	6.4	6.4	6.4	6.4	6.5	6.4	6.4	6.5	6.4	6.4
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	38.5	38.5	38.5	38.5	38.5	38.5	20.6	44.8	44.8	17.4	41.6	41.6
Actuated g/C Ratio	0.32	0.32	0.32	0.32	0.32	0.32	0.17	0.37	0.37	0.14	0.35	0.35
v/c Ratio	0.81	0.53	0.44	0.98	0.63	0.30	0.87	0.70	0.27	0.74	0.61	0.28
Control Delay	65.7	36.1	5.3	86.0	31.8	3.8	77.3	38.0	7.9	67.1	37.1	7.7
Queue Delay	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	65.7	36.2	5.3	86.0	31.8	3.8	77.3	38.0	7.9	67.1	37.1	7.7
LOS	E	D	A	F	C	A	E	D	A	E	D	A
Approach Delay		30.9			42.2			41.9			37.5	
Approach LOS		C			D			D			D	
Queue Length 50th (m)	33.5	53.6	0.0	46.2	53.3	3.8	56.5	92.7	2.7	40.4	74.4	2.5
Queue Length 95th (m)	#67.4	78.7	17.4	#94.3	81.5	4.1	#99.2	#131.4	18.8	62.5	95.7	18.3
Internal Link Dist (m)		292.9			146.9			173.9			301.0	
Turn Bay Length (m)	62.5		64.5	70.0		63.5	45.0		62.5	100.0		50.0
Base Capacity (vph)	231	634	696	261	622	592	299	1190	608	297	1105	601
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	40	0	0	0	0	0	0	3	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.71	0.50	0.41	0.87	0.55	0.28	0.83	0.70	0.27	0.60	0.61	0.28

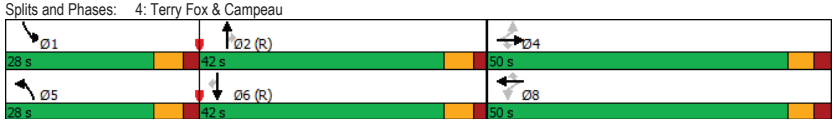
Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 104 (87%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.98

Intersection Signal Delay: 38.6	Intersection LOS: D
Intersection Capacity Utilization 95.3%	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.

Splits and Phases: 4: Terry Fox & Campeau



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	448	105	125	414	104	104	44	139	107	30	87
Future Volume (vph)	25	448	105	125	414	104	104	44	139	107	30	87
Satd. Flow (prot)	1658	1689	0	1658	1745	1483	1658	1481	0	1658	1745	1483
Flt Permitted	0.473			0.266			0.950			0.950		
Satd. Flow (perm)	824	1689	0	464	1745	1446	1658	1481	0	1611	1745	1483
Satd. Flow (RTOR)		11				133		125				135
Lane Group Flow (vph)	25	553	0	125	414	104	104	183	0	107	30	87
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases	6			2		2						4
Detector Phase	1	6		5	2	2	3	8		7	4	4
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0	10.0	5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	10.8	35.2		10.8	35.2	35.2	10.9	28.9		10.9	28.9	28.9
Total Split (s)	17.0	48.0		17.0	48.0	48.0	20.0	35.0		20.0	35.0	35.0
Total Split (%)	14.2%	40.0%		14.2%	40.0%	40.0%	16.7%	29.2%		16.7%	29.2%	29.2%
Yellow Time (s)	3.3	3.3		3.3	3.3	3.3	3.3	3.3		3.3	3.3	3.3
All-Red Time (s)	2.5	2.9		2.5	2.9	2.9	2.6	2.6		2.6	2.6	2.6
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.8	6.2		5.8	6.2	6.2	5.9	5.9		5.9	5.9	5.9
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	C-Max		None	C-Max	C-Max	None	None		None	None	None
Act Effct Green (s)	66.2	59.4		74.2	67.1	67.1	15.1	15.3		12.0	15.4	15.4
Actuated g/C Ratio	0.55	0.50		0.62	0.56	0.56	0.13	0.13		0.10	0.13	0.13
v/c Ratio	0.05	0.66		0.33	0.42	0.12	0.50	0.62		0.65	0.13	0.28
Control Delay	11.2	27.0		12.7	16.7	2.9	59.1	25.4		69.7	44.6	3.9
Queue Delay	0.0	0.2		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	11.2	27.1		12.7	16.7	2.9	59.1	25.4		69.7	44.6	3.9
LOS	B	C		B	B	A	E	C		E	D	A
Approach Delay		26.4			13.7			37.6			40.8	
Approach LOS		C			B			D			D	
Queue Length 50th (m)	2.6	68.1		9.4	39.7	0.5	23.7	13.2		24.4	6.7	0.0
Queue Length 95th (m)	m5.5	#177.7		m20.6	61.2	m4.7	41.5	33.5		42.6	14.2	3.7
Internal Link Dist (m)		146.9			220.2			66.0			66.6	
Turn Bay Length (m)	45.0			90.0		75.0				40.0		30.0
Base Capacity (vph)	565	842		403	976	867	221	453		194	423	461
Starvation Cap Reductn	0	27		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	0.04	0.68		0.31	0.42	0.12	0.47	0.40		0.55	0.07	0.19

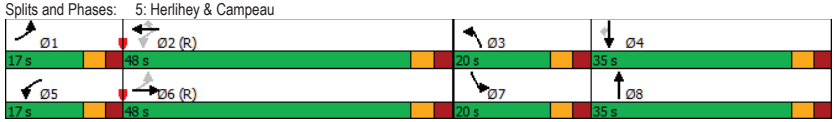
Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 22 (18%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.66

Intersection Signal Delay: 25.4	Intersection LOS: C
Intersection Capacity Utilization 80.1%	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: 5: Herlihey & Campeau



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	226	312	156	53	340	64	148	200	28	45	186	155
Future Volume (vph)	226	312	156	53	340	64	148	200	28	45	186	155
Satd. Flow (prot)	1658	1634	0	1658	1695	0	1658	1745	1483	1658	1745	1483
Flt Permitted	0.293			0.361			0.457			0.632		
Satd. Flow (perm)	509	1634	0	625	1695	0	773	1745	1443	1097	1745	1381
Satd. Flow (RTOR)		23			9				85			155
Lane Group Flow (vph)	226	468	0	53	404	0	148	200	28	45	186	155
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases	1	6		5	2		3	8			4	
Permitted Phases	6			2			8		8	4		4
Detector Phase	1	6		5	2		3	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	11.2	37.2		11.2	37.2		10.9	29.9	29.9	29.9	29.9	29.9
Total Split (s)	20.0	49.0		20.0	49.0		15.0	51.0	51.0	36.0	36.0	36.0
Total Split (%)	16.7%	40.8%		16.7%	40.8%		12.5%	42.5%	42.5%	30.0%	30.0%	30.0%
Yellow Time (s)	3.7	3.7		3.7	3.7		3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	2.5	2.5		2.5	2.5		2.6	2.6	2.6	2.6	2.6	2.6
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.2	6.2		6.2	6.2		5.9	5.9	5.9	5.9	5.9	5.9
Lead/Lag	Lead	Lag		Lead	Lag		Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes			Yes	Yes	Yes
Recall Mode	None	C-Max		None	C-Max		None	Max	Max	Max	Max	Max
Act Effct Green (s)	62.3	51.6		51.2	43.8		45.1	45.1	45.1	30.2	30.2	30.2
Actuated g/C Ratio	0.52	0.43		0.43	0.36		0.38	0.38	0.38	0.25	0.25	0.25
v/c Ratio	0.59	0.65		0.16	0.65		0.42	0.31	0.05	0.16	0.42	0.33
Control Delay	28.3	35.5		16.0	37.0		29.8	28.0	0.1	37.1	41.2	7.6
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.3	35.5		16.0	37.0		29.8	28.0	0.1	37.1	41.2	7.6
LOS	C	D		B	D		C	C	A	D	D	A
Approach Delay		33.1			34.6			26.6			27.3	
Approach LOS		C			C			C			C	
Queue Length 50th (m)	30.1	77.4		5.9	77.8		23.7	32.8	0.0	8.3	36.9	0.0
Queue Length 95th (m)	56.0	98.1		12.4	112.9		39.3	51.4	0.0	18.4	58.6	16.0
Internal Link Dist (m)		220.2			90.4			97.8			155.3	
Turn Bay Length (m)	80.0			45.0			50.0		45.0	90.0		90.0
Base Capacity (vph)	396	715		418	625		357	655	595	276	439	463
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	0.57	0.65		0.13	0.65		0.41	0.31	0.05	0.16	0.42	0.33

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 12 (10%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.65

Intersection Signal Delay: 31.0	Intersection LOS: C
Intersection Capacity Utilization 87.9%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 6: Kanata & Campeau

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	26	154	307	33	89	198	1056	480	130	1203	30
Future Volume (vph)	35	26	154	307	33	89	198	1056	480	130	1203	30
Satd. Flow (prot)	1658	1745	1483	3216	1555	0	1658	3316	1483	1658	3300	0
Flt Permitted	0.950			0.950			0.073			0.180		
Satd. Flow (perm)	1658	1745	1459	3197	1555	0	127	3316	1443	314	3300	0
Satd. Flow (RTOR)			154		89				480		2	
Lane Group Flow (vph)	35	26	154	307	122	0	198	1056	480	130	1233	0
Turn Type	Split	NA	Perm	Split	NA		pm+pt	NA	pm+ov	pm+pt	NA	
Protected Phases	4	4		8	8		5	2	8	1	6	
Permitted Phases			4				2		2	6		
Detector Phase	4	4	4	8	8		5	2	8	1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0		5.0	10.0	10.0	5.0	10.0	
Minimum Split (s)	38.7	38.7	38.7	36.7	36.7		11.3	38.4	36.7	11.3	38.4	
Total Split (s)	39.0	39.0	39.0	37.0	37.0		13.0	41.0	37.0	13.0	41.0	
Total Split (%)	30.0%	30.0%	30.0%	28.5%	28.5%		10.0%	31.5%	28.5%	10.0%	31.5%	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		4.2	4.2	3.0	4.2	4.2	
All-Red Time (s)	3.7	3.7	3.7	3.7	3.7		2.1	2.2	3.7	2.1	2.2	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.7	6.7	6.7	6.7	6.7		6.3	6.4	6.7	6.3	6.4	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None		None	C-Max	None	None	C-Max	
Act Effct Green (s)	14.4	14.4	14.4	18.9	18.9		75.2	58.0	76.6	61.1	48.4	
Actuated g/C Ratio	0.11	0.11	0.11	0.15	0.15		0.58	0.45	0.59	0.47	0.37	
v/c Ratio	0.19	0.13	0.52	0.66	0.40		0.59	0.71	0.46	0.47	1.00	
Control Delay	51.5	49.9	13.1	58.8	19.9		38.0	34.3	2.3	21.7	66.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	51.5	49.9	13.1	58.8	19.9		38.0	34.3	2.3	21.7	66.2	
LOS	D	D	B	E	B		D	C	A	C	E	
Approach Delay		23.8			47.7			25.9			62.0	
Approach LOS		C			D			C			E	
Queue Length 50th (m)	8.6	6.4	0.0	38.9	7.5		30.8	107.0	0.0	12.6	148.9	
Queue Length 95th (m)	15.7	12.7	16.7	51.0	24.3		#94.0	#213.3	11.2	35.1	#266.1	
Internal Link Dist (m)		103.7			100.9			255.1			173.9	
Turn Bay Length (m)	30.0		30.0	70.0			45.0		75.0	30.0		
Base Capacity (vph)	411	433	478	749	430		334	1479	1141	277	1230	
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	0.09	0.06	0.32	0.41	0.28		0.59	0.71	0.42	0.47	1.00	

Intersection Summary

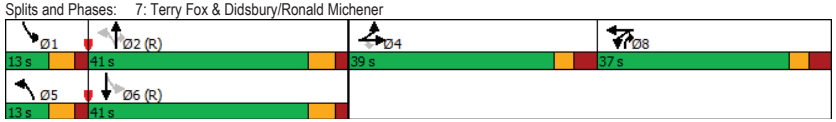
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.00

Intersection Signal Delay: 41.4	Intersection LOS: D
Intersection Capacity Utilization 88.8%	ICU Level of Service E
Analysis Period (min) 15	

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

Splits and Phases: 7: Terry Fox & Didsbury/Ronald Michener



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	958	0	500	0	1282	249	0	1297	375
Future Volume (vph)	0	0	0	958	0	500	0	1282	249	0	1297	375
Satd. Flow (prot)	0	0	0	3216	0	2611	0	3316	1483	0	3316	1483
Flt Permitted				0.950								
Satd. Flow (perm)	0	0	0	3216	0	2611	0	3316	1441	0	3316	1483
Satd. Flow (RTOR)						393			249			375
Lane Group Flow (vph)	0	0	0	958	0	500	0	1282	249	0	1297	375
Turn Type				Prot		Prot		NA	Perm		NA	Perm
Protected Phases				7 8		8		2			6	
Permitted Phases									2			6
Detector Phase				7 8		8		2	2		6	6
Switch Phase												
Minimum Initial (s)						5.0		10.0	10.0		10.0	10.0
Minimum Split (s)						11.1		35.2	35.2		17.2	17.2
Total Split (s)						24.0		67.0	67.0		67.0	67.0
Total Split (%)						20.0%		55.8%	55.8%		55.8%	55.8%
Yellow Time (s)						3.3		4.2	4.2		4.2	4.2
All-Red Time (s)						2.8		3.0	3.0		3.0	3.0
Lost Time Adjust (s)						0.0		0.0	0.0		0.0	0.0
Total Lost Time (s)						6.1		7.2	7.2		7.2	7.2
Lead/Lag						Lag						
Lead-Lag Optimize?						Yes						
Recall Mode						None		C-Max	C-Max		C-Max	C-Max
Act Effct Green (s)				45.1		16.1		61.6	61.6		61.6	61.6
Actuated g/C Ratio				0.38		0.13		0.51	0.51		0.51	0.51
v/c Ratio				0.79		0.72		0.75	0.29		0.76	0.40
Control Delay				38.8		17.7		21.9	1.1		27.5	3.0
Queue Delay				0.0		0.0		0.0	0.0		0.0	0.0
Total Delay				38.8		17.7		21.9	1.1		27.5	3.0
LOS				D		B		C	A		C	A
Approach Delay					31.5			18.5			22.0	
Approach LOS					C			B			C	
Queue Length 50th (m)				99.7		12.8		136.4	0.6		128.3	0.0
Queue Length 95th (m)				124.3		32.4		164.0	2.6		157.0	14.8
Internal Link Dist (m)		112.7			226.2			354.7			255.1	
Turn Bay Length (m)				120.0		195.0			85.0			115.0
Base Capacity (vph)				1256		723		1702	861		1702	943
Starvation Cap Reductn				0		0		0	0		0	0
Spillback Cap Reductn				0		0		0	0		0	0
Storage Cap Reductn				0		0		0	0		0	0
Reduced v/c Ratio				0.76		0.69		0.75	0.29		0.76	0.40

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 12 (10%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

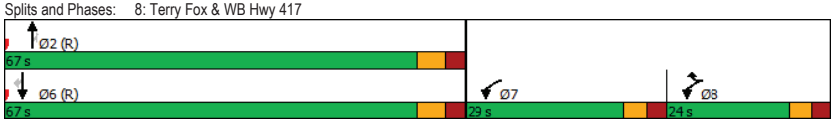
Lane Group	Ø7
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Satd. Flow (RTOR)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	7
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	29.1
Total Split (s)	29.0
Total Split (%)	24%
Yellow Time (s)	3.3
All-Red Time (s)	2.8
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Recall Mode	None
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	

Maximum v/c Ratio: 0.79

Intersection Signal Delay: 23.8	Intersection LOS: C
Intersection Capacity Utilization 76.0%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 8: Terry Fox & WB Hwy 417



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	242	0	253	0	0	0	0	1267	727	0	1867	333
Future Volume (vph)	242	0	253	0	0	0	0	1267	727	0	1867	333
Satd. Flow (prot)	1658	0	1483	0	0	0	0	3316	1483	0	3316	1483
Flt Permitted	0.950											
Satd. Flow (perm)	1658	0	1463	0	0	0	0	3316	1483	0	3316	1483
Satd. Flow (RTOR)			29						727			333
Lane Group Flow (vph)	242	0	253	0	0	0	0	1267	727	0	1867	333
Turn Type	Prot		Perm					NA	Perm		NA	Perm
Protected Phases	4							2			6	
Permitted Phases			4						2			6
Detector Phase	4		4					2	2		6	6
Switch Phase												
Minimum Initial (s)	5.0		5.0					10.0	10.0		10.0	10.0
Minimum Split (s)	23.4		23.4					15.7	15.7		17.7	17.7
Total Split (s)	31.0		31.0					89.0	89.0		89.0	89.0
Total Split (%)	25.8%		25.8%					74.2%	74.2%		74.2%	74.2%
Yellow Time (s)	3.3		3.3					4.2	4.2		4.2	4.2
All-Red Time (s)	2.1		2.1					1.5	1.5		1.5	1.5
Lost Time Adjust (s)	0.0		0.0					0.0	0.0		0.0	0.0
Total Lost Time (s)	5.4		5.4					5.7	5.7		5.7	5.7
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None		None					C-Max	C-Max		C-Max	C-Max
Act Effct Green (s)	22.3		22.3					86.6	86.6		86.6	86.6
Actuated g/C Ratio	0.19		0.19					0.72	0.72		0.72	0.72
v/c Ratio	0.79		0.86					0.53	0.57		0.78	0.29
Control Delay	64.3		67.7					8.9	2.4		10.4	1.2
Queue Delay	0.0		0.0					0.0	0.0		0.0	0.0
Total Delay	64.3		67.7					8.9	2.4		10.4	1.2
LOS	E		E					A	A		B	A
Approach Delay		66.0						6.6			9.0	
Approach LOS		E						A			A	
Queue Length 50th (m)	53.6		50.8					67.2	0.0		113.9	4.8
Queue Length 95th (m)	81.1		#86.8					85.6	10.5		126.8	m6.6
Internal Link Dist (m)		135.3			95.4			64.0			354.7	
Turn Bay Length (m)									95.0			100.0
Base Capacity (vph)	353		334					2392	1272		2392	1162
Starvation Cap Reductn	0		0					0	0		0	0
Spillback Cap Reductn	0		0					0	0		0	0
Storage Cap Reductn	0		0					0	0		0	0
Reduced v/c Ratio	0.69		0.76					0.53	0.57		0.78	0.29

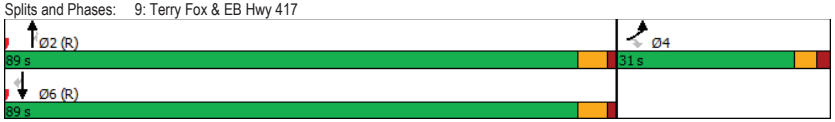
Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.86

Intersection Signal Delay: 14.0	Intersection LOS: B
Intersection Capacity Utilization 80.4%	ICU Level of Service D
Analysis Period (min) 15	

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

Splits and Phases: 9: Terry Fox & EB Hwy 417



Appendix L

Synchro and Sidra Worksheets –2033 Future Total Horizon

MOVEMENT SUMMARY

Site: [101] Winterset-Campeau AM 2033 FT (General)
Output produced by SIDRA INTERSECTION Version: 10.0.3.210

8201 Campeau
Site Category: (None)
Roundabout
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop of Cycles Rate to Depart	Number	Aver. Speed km/h
South: Donum															
1	L2	All MCs	9	0.0	9	0.0	0.013	10.6	LOS B	0.0	0.2	0.35	0.67	0.35	44.4
2	T1	All MCs	1	0.0	1	0.0	0.013	4.6	LOS A	0.0	0.2	0.35	0.67	0.35	45.4
3	R2	All MCs	4	0.0	4	0.0	0.005	4.9	LOS A	0.0	0.1	0.37	0.51	0.37	48.8
Approach			14	0.0	14	0.0	0.013	8.6	LOS A	0.0	0.2	0.36	0.63	0.36	45.5
East: Campeau															
4	L2	All MCs	11	0.0	11	0.0	0.156	9.4	LOS A	0.6	4.3	0.10	0.34	0.10	51.3
5	T1	All MCs	230	2.0	230	2.0	0.156	3.4	LOS A	0.6	4.3	0.10	0.36	0.10	55.1
6	R2	All MCs	97	2.0	97	2.0	0.156	4.3	LOS A	0.6	4.3	0.10	0.39	0.10	38.4
Approach			338	1.9	338	1.9	0.156	3.8	LOS A	0.6	4.3	0.10	0.36	0.10	48.9
North: Winterset															
7	L2	All MCs	212	2.0	212	2.0	0.231	2.3	LOS A	0.7	4.8	0.30	0.36	0.30	36.8
8	T1	All MCs	2	0.0	2	0.0	0.231	4.1	LOS A	0.7	4.8	0.30	0.36	0.30	30.6
9	R2	All MCs	38	2.0	38	2.0	0.042	0.7	LOS A	0.1	0.8	0.26	0.17	0.26	37.9
Approach			252	2.0	252	2.0	0.231	2.1	LOS A	0.7	4.8	0.29	0.33	0.29	36.9
West: Campeau															
10	L2	All MCs	14	2.0	14	2.0	0.169	10.5	LOS B	0.6	4.5	0.36	0.47	0.36	37.8
11	T1	All MCs	276	2.0	276	2.0	0.169	4.4	LOS A	0.6	4.5	0.36	0.45	0.36	53.6
12	R2	All MCs	8	0.0	8	0.0	0.169	4.6	LOS A	0.6	4.5	0.36	0.44	0.36	50.0
Approach			298	1.9	298	1.9	0.169	4.7	LOS A	0.6	4.5	0.36	0.46	0.36	52.5
All Vehicles			902	1.9	902	1.9	0.231	3.7	LOS A	0.7	4.8	0.25	0.39	0.25	45.6

Site Level of Service (LOS) Method: Delay & v/c (HCM 2010). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c >1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 2010 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: [102] Winterset-Campeau PM 2033 FT (General)
Output produced by SIDRA INTERSECTION Version: 10.0.3.210

8201 Campeau
Site Category: (None)
Roundabout
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop of Cycles Rate to Depart	Number	Aver. Speed km/h
South: Donum															
1	L2	All MCs	3	0.0	3	0.0	0.006	11.2	LOS B	0.0	0.1	0.41	0.67	0.41	44.3
2	T1	All MCs	1	0.0	1	0.0	0.006	5.1	LOS A	0.0	0.1	0.41	0.67	0.41	45.3
3	R2	All MCs	3	0.0	3	0.0	0.004	5.5	LOS A	0.0	0.1	0.43	0.55	0.43	47.8
Approach			7	0.0	7	0.0	0.006	7.9	LOS A	0.0	0.1	0.42	0.62	0.42	45.8
East: Campeau															
4	L2	All MCs	2	0.0	2	0.0	0.327	9.6	LOS A	1.6	11.2	0.18	0.33	0.18	51.2
5	T1	All MCs	509	2.0	509	2.0	0.327	3.5	LOS A	1.6	11.2	0.18	0.35	0.18	55.0
6	R2	All MCs	181	2.0	181	2.0	0.327	4.4	LOS A	1.6	11.2	0.18	0.38	0.18	38.3
Approach			692	2.0	692	2.0	0.327	3.8	LOS A	1.6	11.2	0.18	0.36	0.18	49.4
North: Winterset															
7	L2	All MCs	115	2.0	115	2.0	0.151	3.2	LOS A	0.4	2.9	0.39	0.48	0.39	36.3
8	T1	All MCs	1	0.0	1	0.0	0.151	4.9	LOS A	0.4	2.9	0.39	0.48	0.39	30.0
9	R2	All MCs	27	2.0	27	2.0	0.036	1.6	LOS A	0.1	0.7	0.38	0.32	0.38	37.3
Approach			143	2.0	143	2.0	0.151	2.9	LOS A	0.4	2.9	0.39	0.45	0.39	36.5
West: Campeau															
10	L2	All MCs	40	2.0	40	2.0	0.292	10.1	LOS B	1.3	9.2	0.30	0.42	0.30	38.0
11	T1	All MCs	531	2.0	531	2.0	0.292	4.0	LOS A	1.3	9.2	0.30	0.40	0.30	54.2
12	R2	All MCs	2	0.0	2	0.0	0.292	4.2	LOS A	1.3	9.2	0.30	0.38	0.30	51.0
Approach			573	2.0	573	2.0	0.292	4.4	LOS A	1.3	9.2	0.30	0.40	0.30	52.6
All Vehicles			1415	2.0	1415	2.0	0.327	4.0	LOS A	1.6	11.2	0.25	0.38	0.25	48.8

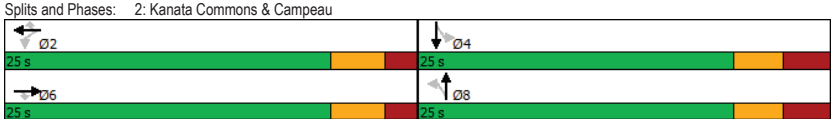
Site Level of Service (LOS) Method: Delay & v/c (HCM 2010). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c >1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 2010 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	483	12	30	328	0	10	0	47	0	0	0
Future Volume (vph)	0	483	12	30	328	0	10	0	47	0	0	0
Satd. Flow (prot)	0	3316	1483	1658	3316	1745	1658	1439	0	1745	1745	0
Flt Permitted				0.476			0.757					
Satd. Flow (perm)	0	3316	1452	830	3316	1745	1321	1439	0	1745	1745	0
Satd. Flow (RTOR)			63					218				
Lane Group Flow (vph)	0	483	12	30	328	0	10	47	0	0	0	0
Turn Type		NA	Perm	Perm	NA	Perm	Perm	NA		Perm		
Protected Phases		6			2			8			4	
Permitted Phases			6	2		2	8			4		
Detector Phase		6	6	2	2	2	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)		23.3	23.3	23.3	23.3	23.3	23.9	23.9		23.9	23.9	
Total Split (s)		25.0	25.0	25.0	25.0	25.0	25.0	25.0		25.0	25.0	
Total Split (%)		50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%		50.0%	50.0%	
Yellow Time (s)		3.3	3.3	3.3	3.3	3.3	3.0	3.0		3.0	3.0	
All-Red Time (s)		2.0	2.0	2.0	2.0	2.0	2.9	2.9		2.9	2.9	
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)		5.3	5.3	5.3	5.3	5.3	5.9	5.9		5.9	5.9	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode		Max	Max	Max	Max	Max	None	None		None	None	
Act Effct Green (s)		32.9	32.9	32.9	32.9		11.7	11.7				
Actuated g/C Ratio		0.71	0.71	0.71	0.71		0.25	0.25				
v/c Ratio		0.20	0.01	0.05	0.14		0.03	0.09				
Control Delay		6.0	0.0	7.4	5.8		12.8	0.3				
Queue Delay		0.0	0.0	0.0	0.0		0.0	0.0				
Total Delay		6.0	0.0	7.4	5.8		12.8	0.3				
LOS		A	A	A	A		B	A				
Approach Delay		5.8			6.0			2.5				
Approach LOS		A			A			A				
Queue Length 50th (m)		9.5	0.0	1.0	6.2		0.9	0.0				
Queue Length 95th (m)		23.5	0.0	5.3	16.1		2.8	0.0				
Internal Link Dist (m)		129.8			222.4			129.9			12.7	
Turn Bay Length (m)			65.0	120.0			30.0					
Base Capacity (vph)		2364	1053	592	2364		554	730				
Starvation Cap Reductn		0	0	0	0		0	0				
Spillback Cap Reductn		0	0	0	0		0	0				
Storage Cap Reductn		0	0	0	0		0	0				
Reduced v/c Ratio		0.20	0.01	0.05	0.14		0.02	0.06				

Intersection Summary
Cycle Length: 50
Actuated Cycle Length: 46.2
Natural Cycle: 50
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.20

Intersection Signal Delay: 5.7 — Intersection LOS: A
Intersection Capacity Utilization 47.4% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 2: Kanata Commons & Campeau

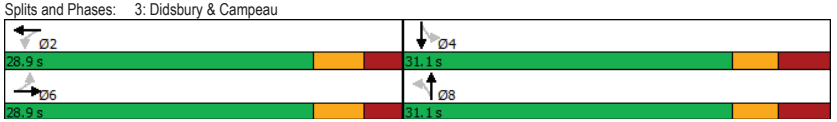


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	522	4	2	353	0	6	0	1	0	0	0
Future Volume (vph)	1	522	4	2	353	0	6	0	1	0	0	0
Satd. Flow (prot)	1658	3312	0	1658	3316	0	1658	1464	0	1745	1745	0
Flt Permitted	0.540			0.457								
Satd. Flow (perm)	941	3312	0	796	3316	0	1745	1464	0	1745	1745	0
Satd. Flow (RTOR)		1						172				
Lane Group Flow (vph)	1	526	0	2	353	0	6	1	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm		
Protected Phases		6			2			8			4	
Permitted Phases	6			2			8			4		
Detector Phase	6	6		2	2		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	
Minimum Split (s)	27.5	27.5		27.5	27.5		31.1	31.1		31.1	31.1	
Total Split (s)	28.9	28.9		28.9	28.9		31.1	31.1		31.1	31.1	
Total Split (%)	48.2%	48.2%		48.2%	48.2%		51.8%	51.8%		51.8%	51.8%	
Yellow Time (s)	3.7	3.7		3.7	3.7		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.8	2.8		2.8	2.8		3.8	3.8		3.8	3.8	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.5	6.5		6.5	6.5		7.1	7.1		7.1	7.1	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	Max	Max		Max	Max		None	None		None	None	
Act Effct Green (s)	45.1	45.1		45.1	45.1		12.3	12.3				
Actuated g/C Ratio	0.90	0.90		0.90	0.90		0.25	0.25				
v/c Ratio	0.00	0.18		0.00	0.12		0.01	0.00				
Control Delay	6.0	3.6		5.5	3.5		15.7	0.0				
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0				
Total Delay	6.0	3.6		5.5	3.5		15.7	0.0				
LOS	A	A		A	A		B	A				
Approach Delay		3.6			3.5			13.4				
Approach LOS		A			A			B				
Queue Length 50th (m)	0.0	0.0		0.0	0.0		0.4	0.0				
Queue Length 95th (m)	0.8	31.6		1.1	21.1		3.0	0.0				
Internal Link Dist (m)		222.4			123.4			171.0			27.1	
Turn Bay Length (m)	45.0			45.0			15.0					
Base Capacity (vph)	847	2980		716	2983		874	819				
Starvation Cap Reductn	0	0		0	0		0	0				
Spillback Cap Reductn	0	0		0	0		0	0				
Storage Cap Reductn	0	0		0	0		0	0				
Reduced v/c Ratio	0.00	0.18		0.00	0.12		0.01	0.00				

Intersection Summary
Cycle Length: 60
Actuated Cycle Length: 50.1
Natural Cycle: 60
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.18

Intersection Signal Delay: 3.6 — Intersection LOS: A
Intersection Capacity Utilization 37.5% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 3: Didsbury & Campeau



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	87	231	225	251	239	75	134	614	121	141	600	68
Future Volume (vph)	87	231	225	251	239	75	134	614	121	141	600	68
Satd. Flow (prot)	1642	1745	1441	1580	1712	1363	1658	3191	1441	1658	3191	1483
Flt Permitted	0.514			0.525			0.950			0.950		
Satd. Flow (perm)	887	1745	1420	872	1712	1343	1657	3191	1403	1654	3191	1451
Satd. Flow (RTOR)			225			94			121			94
Lane Group Flow (vph)	87	231	225	251	239	75	134	614	121	141	600	68
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	43.4	43.4	43.4	43.4	43.4	43.4	11.5	40.4	40.4	11.5	40.4	40.4
Total Split (s)	54.0	54.0	54.0	54.0	54.0	54.0	14.0	47.0	47.0	14.0	47.0	47.0
Total Split (%)	47.0%	47.0%	47.0%	47.0%	47.0%	47.0%	12.2%	40.9%	40.9%	12.2%	40.9%	40.9%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	4.2	4.2	4.2	4.2	4.2	4.2
All-Red Time (s)	2.7	2.7	2.7	2.7	2.7	2.7	2.3	2.2	2.2	2.3	2.2	2.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.4	6.4	6.4	6.4	6.4	6.4	6.5	6.4	6.4	6.5	6.4	6.4
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	36.0	36.0	36.0	36.0	36.0	36.0	15.9	43.1	43.1	16.6	43.8	43.8
Actuated g/C Ratio	0.31	0.31	0.31	0.31	0.31	0.31	0.14	0.37	0.37	0.14	0.38	0.38
v/c Ratio	0.31	0.42	0.38	0.92	0.45	0.15	0.59	0.51	0.20	0.59	0.49	0.11
Control Delay	30.5	32.0	4.8	67.2	29.4	2.3	58.7	16.2	5.4	59.3	29.7	2.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.5	32.0	4.8	67.2	29.4	2.3	58.7	16.2	5.4	59.3	29.7	2.8
LOS	C	C	A	E	C	A	E	B	A	E	C	A
Approach Delay		20.5			42.6			21.2			32.6	
Approach LOS		C			D			C			C	
Queue Length 50th (m)	14.7	40.6	0.0	37.7	33.9	0.3	31.4	42.2	5.7	29.5	56.1	0.0
Queue Length 95th (m)	24.5	53.6	14.3	47.9	18.9	0.0	#78.4	8.0	0.0	#80.1	73.6	5.3
Internal Link Dist (m)		144.2			146.9			173.9			301.0	
Turn Bay Length (m)	62.5		64.5	70.0		63.5	45.0		62.5	100.0		50.0
Base Capacity (vph)	367	722	719	360	708	610	228	1195	601	239	1215	611
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.32	0.31	0.70	0.34	0.12	0.59	0.51	0.20	0.59	0.49	0.11

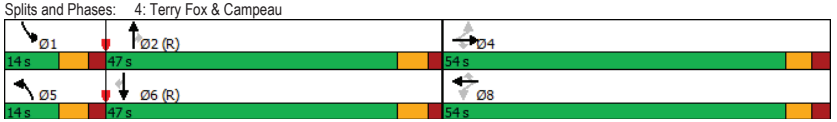
Intersection Summary
Cycle Length: 115
Actuated Cycle Length: 115
Offset: 91 (79%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.92

Intersection Signal Delay: 28.7	Intersection LOS: C
Intersection Capacity Utilization 86.7%	ICU Level of Service E
Analysis Period (min) 15	

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

Splits and Phases: 4: Terry Fox & Campeau



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	17	403	56	38	538	37	14	10	35	18	7	20
Future Volume (vph)	17	403	56	38	538	37	14	10	35	18	7	20
Satd. Flow (prot)	1658	1707	0	1658	1745	1483	1658	1502	0	1658	1745	1483
Flt Permitted	0.422			0.470			0.950			0.950		
Satd. Flow (perm)	735	1707	0	817	1745	1448	1658	1502	0	1638	1745	1483
Satd. Flow (RTOR)		9				83		35				86
Lane Group Flow (vph)	17	459	0	38	538	37	14	45	0	18	7	20
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases		6			2		3	8		7	4	
Permitted Phases	6			2		2						4
Detector Phase	6	6		2	2	2	3	8		7	4	4
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0	10.0	5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	35.2	35.2		35.2	35.2	35.2	10.9	28.9		10.9	28.9	28.9
Total Split (s)	67.0	67.0		67.0	67.0	67.0	18.0	30.0		18.0	30.0	30.0
Total Split (%)	58.3%	58.3%		58.3%	58.3%	58.3%	15.7%	26.1%		15.7%	26.1%	26.1%
Yellow Time (s)	3.3	3.3		3.3	3.3	3.3	3.3	3.3		3.3	3.3	3.3
All-Red Time (s)	2.9	2.9		2.9	2.9	2.9	2.6	2.6		2.6	2.6	2.6
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.2	6.2		6.2	6.2	6.2	5.9	5.9		5.9	5.9	5.9
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Recall Mode	C-Max	C-Max		C-Max	C-Max	C-Max	None	None		None	None	None
Act Effct Green (s)	89.1	89.1		89.1	89.1	89.1	6.6	12.6		6.9	12.8	12.8
Actuated g/C Ratio	0.77	0.77		0.77	0.77	0.77	0.06	0.11		0.06	0.11	0.11
v/c Ratio	0.03	0.35		0.06	0.40	0.03	0.15	0.23		0.18	0.04	0.08
Control Delay	10.0	9.8		5.4	5.1	0.2	54.5	21.0		55.0	42.4	0.7
Queue Delay	0.0	0.2		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	10.0	10.0		5.4	5.1	0.2	54.5	21.0		55.0	42.4	0.7
LOS	A	A		A	A	A	D	C		D	D	A
Approach Delay		10.0			4.8			29.0			28.9	
Approach LOS		A			A			C			C	
Queue Length 50th (m)	1.3	41.7		0.7	10.7	0.0	3.1	2.1		3.9	1.5	0.0
Queue Length 95th (m)	m4.2	75.2		m4.3	m50.4	m0.1	9.4	11.6		11.1	5.2	0.0
Internal Link Dist (m)		146.9			220.2			66.0			66.6	
Turn Bay Length (m)	45.0			90.0		75.0				40.0		30.0
Base Capacity (vph)	569	1324		632	1352	1140	174	342		174	365	378
Starvation Cap Reductn	0	262		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	0.03	0.43		0.06	0.40	0.03	0.08	0.13		0.10	0.02	0.05

Intersection Summary
Cycle Length: 115
Actuated Cycle Length: 115
Offset: 15 (13%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.40

Intersection Signal Delay: 9.0	Intersection LOS: A
Intersection Capacity Utilization 57.7%	ICU Level of Service B
Analysis Period (min) 15	

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

Splits and Phases: 5: Herlihey & Campeau

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	94	290	75	22	321	99	108	147	16	126	300	181
Future Volume (vph)	94	290	75	22	321	99	108	147	16	126	300	181
Satd. Flow (prot)	1658	1677	0	1658	1671	0	1658	1745	1483	1658	1745	1483
Flt Permitted	0.212			0.382			0.419			0.663		
Satd. Flow (perm)	368	1677	0	660	1671	0	729	1745	1447	1152	1745	1443
Satd. Flow (RTOR)		11			14				89			181
Lane Group Flow (vph)	94	365	0	22	420	0	108	147	16	126	300	181
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases	1	6		5	2		3	8			4	
Permitted Phases	6			2			8		8	4		4
Detector Phase	1	6		5	2		3	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	11.2	37.2		11.2	37.2		10.9	29.9	29.9	29.9	29.9	29.9
Total Split (s)	12.0	40.0		12.0	40.0		12.0	63.0	63.0	51.0	51.0	51.0
Total Split (%)	10.4%	34.8%		10.4%	34.8%		10.4%	54.8%	54.8%	44.3%	44.3%	44.3%
Yellow Time (s)	3.7	3.7		3.7	3.7		3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	2.5	2.5		2.5	2.5		2.6	2.6	2.6	2.6	2.6	2.6
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.2	6.2		6.2	6.2		5.9	5.9	5.9	5.9	5.9	5.9
Lead/Lag	Lead	Lag		Lead	Lag		Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes			Yes	Yes	Yes
Recall Mode	None	C-Max		None	C-Max		None	Max	Max	Max	Max	Max
Act Effct Green (s)	43.3	41.0		39.5	33.8		57.1	57.1	57.1	45.1	45.1	45.1
Actuated g/C Ratio	0.38	0.36		0.34	0.29		0.50	0.50	0.50	0.39	0.39	0.39
v/c Ratio	0.46	0.60		0.08	0.84		0.26	0.17	0.02	0.28	0.44	0.27
Control Delay	35.9	40.8		22.1	53.0		17.4	16.6	0.1	26.0	28.2	4.4
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.9	40.8		22.1	53.0		17.4	16.6	0.1	26.0	28.2	4.4
LOS	D	D		C	D		B	B	A	C	C	A
Approach Delay		39.8			51.5			15.9			20.7	
Approach LOS		D			D			B			C	
Queue Length 50th (m)	14.4	72.7		3.0	85.9		12.7	17.6	0.0	19.1	48.9	0.0
Queue Length 95th (m)	20.6	60.7		8.2	#137.5		22.7	29.5	0.0	33.9	73.0	13.6
Internal Link Dist (m)		220.2			90.4			97.8			155.3	
Turn Bay Length (m)	80.0			45.0			50.0		45.0	90.0		90.0
Base Capacity (vph)	203	604		277	501		411	866	763	451	684	675
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	0.46	0.60		0.08	0.84		0.26	0.17	0.02	0.28	0.44	0.27

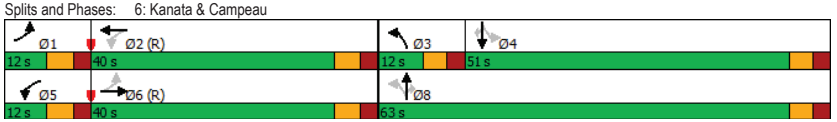
Intersection Summary
Cycle Length: 115
Actuated Cycle Length: 115
Offset: 16 (14%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.84

Intersection Signal Delay: 32.5	Intersection LOS: C
Intersection Capacity Utilization 79.8%	ICU Level of Service D
Analysis Period (min) 15	

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

Splits and Phases: 6: Kanata & Campeau



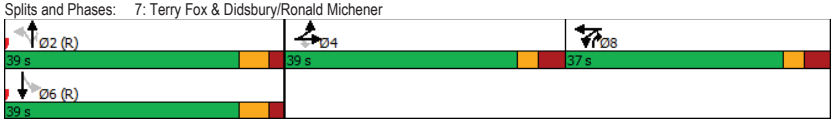
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	42	23	117	104	24	33	176	793	224	37	994	19
Future Volume (vph)	42	23	117	104	24	33	176	793	224	37	994	19
Satd. Flow (prot)	1658	1745	1483	3216	1580	0	1658	3316	1483	1658	3304	0
Flt Permitted	0.950			0.950			0.224			0.309		
Satd. Flow (perm)	1654	1745	1464	3211	1580	0	391	3316	1453	539	3304	0
Satd. Flow (RTOR)			117		33				224		2	
Lane Group Flow (vph)	42	23	117	104	57	0	176	793	224	37	1013	0
Turn Type	Split	NA	Perm	Split	NA		Perm	NA	pm+ov	Perm	NA	
Protected Phases	4	4		8	8			2	8		6	
Permitted Phases			4				2		2	6		
Detector Phase	4	4	4	8	8		2	2	8	6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0		10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	38.7	38.7	38.7	36.7	36.7		38.4	38.4	36.7	38.4	38.4	
Total Split (s)	39.0	39.0	39.0	37.0	37.0		39.0	39.0	37.0	39.0	39.0	
Total Split (%)	33.9%	33.9%	33.9%	32.2%	32.2%		33.9%	33.9%	32.2%	33.9%	33.9%	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		4.2	4.2	3.0	4.2	4.2	
All-Red Time (s)	3.7	3.7	3.7	3.7	3.7		2.2	2.2	3.7	2.2	2.2	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.7	6.7	6.7	6.7	6.7		6.4	6.4	6.7	6.4	6.4	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None		C-Max	C-Max	None	C-Max	C-Max	
Act Effct Green (s)	14.4	14.4	14.4	14.0	14.0		66.8	66.8	80.5	66.8	66.8	
Actuated g/C Ratio	0.13	0.13	0.13	0.12	0.12		0.58	0.58	0.70	0.58	0.58	
v/c Ratio	0.20	0.11	0.41	0.27	0.26		0.78	0.41	0.21	0.12	0.53	
Control Delay	44.2	41.7	11.2	45.6	24.2		52.9	22.3	5.7	16.5	16.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	44.2	41.7	11.2	45.6	24.2		52.9	22.3	5.7	16.5	16.0	
LOS	D	D	B	D	C		D	C	A	B	B	
Approach Delay		22.7			38.0			23.7			16.0	
Approach LOS		C			D			C			B	
Queue Length 50th (m)	9.0	4.9	0.0	11.5	5.1		24.9	42.4	0.0	2.0	39.1	
Queue Length 95th (m)	15.8	10.1	13.4	16.1	14.1		#97.4	96.5	29.3	m10.1	#165.8	
Internal Link Dist (m)		103.7			100.9			255.1			173.9	
Turn Bay Length (m)	30.0		30.0	70.0			45.0		75.0	30.0		
Base Capacity (vph)	465	490	495	847	440		226	1925	1149	312	1919	
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	0.09	0.05	0.24	0.12	0.13		0.78	0.41	0.19	0.12	0.53	

Intersection Summary

Cycle Length: 115
Actuated Cycle Length: 115
Offset: 88 (77%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 145
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.78
Intersection Signal Delay: 21.4 — Intersection LOS: C
Intersection Capacity Utilization 67.0% — 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.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 7: Terry Fox & Didsbury/Ronald Michener



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	761	0	325	0	897	169	0	1021	186
Future Volume (vph)	0	0	0	761	0	325	0	897	169	0	1021	186
Satd. Flow (prot)	0	0	0	3216	0	2611	0	3316	1483	0	3316	1483
Flt Permitted				0.950								
Satd. Flow (perm)	0	0	0	3216	0	2611	0	3316	1442	0	3316	1483
Satd. Flow (RTOR)						325			169			186
Lane Group Flow (vph)	0	0	0	761	0	325	0	897	169	0	1021	186
Turn Type				Prot		Prot		NA	Perm		NA	Perm
Protected Phases				7 8		8		2			6	
Permitted Phases									2			6
Detector Phase				7 8		8		2	2		6	6
Switch Phase												
Minimum Initial (s)						5.0		10.0	10.0		10.0	10.0
Minimum Split (s)						11.1		35.2	35.2		17.2	17.2
Total Split (s)						25.0		59.0	59.0		59.0	59.0
Total Split (%)						21.7%		51.3%	51.3%		51.3%	51.3%
Yellow Time (s)						3.3		4.2	4.2		4.2	4.2
All-Red Time (s)						2.8		3.0	3.0		3.0	3.0
Lost Time Adjust (s)						0.0		0.0	0.0		0.0	0.0
Total Lost Time (s)						6.1		7.2	7.2		7.2	7.2
Lead/Lag						Lag						
Lead-Lag Optimize?						Yes						
Recall Mode						None		C-Max	C-Max		C-Max	C-Max
Act Effct Green (s)				41.0		10.3		60.7	60.7		60.7	60.7
Actuated g/C Ratio				0.36		0.09		0.53	0.53		0.53	0.53
v/c Ratio				0.66		0.61		0.51	0.20		0.58	0.21
Control Delay				34.0		10.3		17.7	1.8		15.8	3.7
Queue Delay				0.0		0.0		0.0	0.0		0.0	0.0
Total Delay				34.0		10.3		17.7	1.8		15.8	3.7
LOS				C		B		B	A		B	A
Approach Delay					26.9			15.2			13.9	
Approach LOS					C			B			B	
Queue Length 50th (m)				75.6		0.0		76.2	1.5		70.0	6.6
Queue Length 95th (m)				85.3		13.5		105.1	2.9		18.8	0.0
Internal Link Dist (m)		95.1			226.2			354.7			255.1	
Turn Bay Length (m)				120.0		195.0			85.0			115.0
Base Capacity (vph)				1361		700		1750	840		1750	870
Starvation Cap Reductn				0		0		0	0		0	0
Spillback Cap Reductn				0		0		0	0		0	0
Storage Cap Reductn				0		0		0	0		0	0
Reduced v/c Ratio				0.56		0.46		0.51	0.20		0.58	0.21

Intersection Summary
Cycle Length: 115
Actuated Cycle Length: 115
Offset: 99 (86%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated

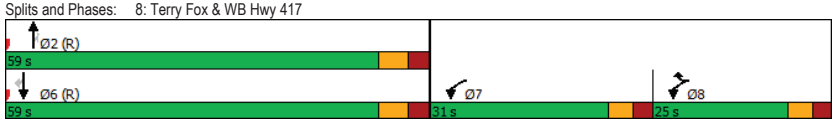
Lane Group	Ø7
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Satd. Flow (RTOR)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	7
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	29.1
Total Split (s)	31.0
Total Split (%)	27%
Yellow Time (s)	3.3
All-Red Time (s)	2.8
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Recall Mode	None
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

Maximum v/c Ratio: 0.66

Intersection Signal Delay: 18.5	Intersection LOS: B
Intersection Capacity Utilization 62.0%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 8: Terry Fox & WB Hwy 417



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	207	0	271	0	0	0	0	864	794	0	1466	364
Future Volume (vph)	207	0	271	0	0	0	0	864	794	0	1466	364
Satd. Flow (prot)	1658	0	1483	0	0	0	0	3316	1483	0	3316	1483
Flt Permitted	0.950											
Satd. Flow (perm)	1658	0	1463	0	0	0	0	3316	1483	0	3316	1447
Satd. Flow (RTOR)			31						794			364
Lane Group Flow (vph)	207	0	271	0	0	0	0	864	794	0	1466	364
Turn Type	Prot		Perm					NA	Perm		NA	Perm
Protected Phases	4							2			6	
Permitted Phases			4						2			6
Detector Phase	4		4					2	2		6	6
Switch Phase												
Minimum Initial (s)	5.0		5.0					10.0	10.0		10.0	10.0
Minimum Split (s)	23.4		23.4					15.7	15.7		17.7	17.7
Total Split (s)	45.0		45.0					70.0	70.0		70.0	70.0
Total Split (%)	39.1%		39.1%					60.9%	60.9%		60.9%	60.9%
Yellow Time (s)	3.3		3.3					4.2	4.2		4.2	4.2
All-Red Time (s)	2.1		2.1					1.5	1.5		1.5	1.5
Lost Time Adjust (s)	0.0		0.0					0.0	0.0		0.0	0.0
Total Lost Time (s)	5.4		5.4					5.7	5.7		5.7	5.7
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None		None					C-Max	C-Max		C-Max	C-Max
Act Effct Green (s)	24.8		24.8					79.1	79.1		79.1	79.1
Actuated g/C Ratio	0.22		0.22					0.69	0.69		0.69	0.69
v/c Ratio	0.58		0.80					0.38	0.63		0.64	0.33
Control Delay	45.9		54.3					9.0	3.2		9.6	1.6
Queue Delay	0.0		0.0					0.0	0.0		0.0	0.0
Total Delay	45.9		54.3					9.0	3.2		9.6	1.6
LOS	D		D					A	A		A	A
Approach Delay		50.7						6.2			8.0	
Approach LOS		D						A			A	
Queue Length 50th (m)	42.0		51.9					38.9	0.0		66.0	1.9
Queue Length 95th (m)	59.1		74.2					64.5	14.3		130.8	10.1
Internal Link Dist (m)		135.3			81.0			64.0			354.7	
Turn Bay Length (m)									95.0			100.0
Base Capacity (vph)	570		524					2281	1268		2281	1109
Starvation Cap Reductn	0		0					0	0		0	0
Spillback Cap Reductn	0		0					0	0		0	0
Storage Cap Reductn	0		0					0	0		0	0
Reduced v/c Ratio	0.36		0.52					0.38	0.63		0.64	0.33

Intersection Summary
Cycle Length: 115
Actuated Cycle Length: 115
Offset: 78 (68%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.80

Intersection Signal Delay: 12.4	Intersection LOS: B
Intersection Capacity Utilization 69.8%	ICU Level of Service C
Analysis Period (min) 15	

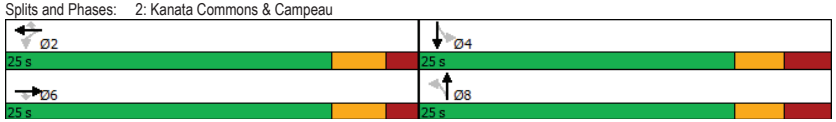
Splits and Phases: 9: Terry Fox & EB Hwy 417

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	625	20	63	672	0	19	0	70	0	0	0
Future Volume (vph)	0	625	20	63	672	0	19	0	70	0	0	0
Satd. Flow (prot)	0	3316	1483	1658	3316	1745	1658	1447	0	1745	1745	0
Flt Permitted				0.372			0.757					
Satd. Flow (perm)	0	3316	1450	648	3316	1745	1320	1447	0	1745	1745	0
Satd. Flow (RTOR)			63					133				
Lane Group Flow (vph)	0	625	20	63	672	0	19	70	0	0	0	0
Turn Type		NA	Perm	Perm	NA	Perm	Perm	NA		Perm		
Protected Phases		6			2			8			4	
Permitted Phases			6	2		2	8			4		
Detector Phase		6	6	2	2	2	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)		23.3	23.3	23.3	23.3	23.3	23.9	23.9		23.9	23.9	
Total Split (s)		25.0	25.0	25.0	25.0	25.0	25.0	25.0		25.0	25.0	
Total Split (%)		50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%		50.0%	50.0%	
Yellow Time (s)		3.3	3.3	3.3	3.3	3.3	3.0	3.0		3.0	3.0	
All-Red Time (s)		2.0	2.0	2.0	2.0	2.0	2.9	2.9		2.9	2.9	
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)		5.3	5.3	5.3	5.3	5.3	5.9	5.9		5.9	5.9	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode		None	None	None	None	None	Max	Max		Max	Max	
Act Effct Green (s)		14.5	14.5	14.5	14.5		19.2	19.2				
Actuated g/C Ratio		0.32	0.32	0.32	0.32		0.43	0.43				
v/c Ratio		0.59	0.04	0.30	0.63		0.03	0.10				
Control Delay		14.9	0.6	15.3	15.6		9.3	1.0				
Queue Delay		0.0	0.0	0.0	0.0		0.0	0.0				
Total Delay		14.9	0.6	15.3	15.6		9.3	1.0				
LOS		B	A	B	B		A	A				
Approach Delay		14.5			15.6			2.8				
Approach LOS		B			B			A				
Queue Length 50th (m)		20.7	0.0	3.6	22.8		0.8	0.0				
Queue Length 95th (m)		32.2	0.6	10.6	35.0		4.0	1.9				
Internal Link Dist (m)		129.8			222.4			129.9			12.7	
Turn Bay Length (m)			65.0	120.0			30.0					
Base Capacity (vph)		1461	674	285	1461		564	694				
Starvation Cap Reductn		0	0	0	0		0	0				
Spillback Cap Reductn		0	0	0	0		0	0				
Storage Cap Reductn		0	0	0	0		0	0				
Reduced v/c Ratio		0.43	0.03	0.22	0.46		0.03	0.10				

Intersection Summary
Cycle Length: 50
Actuated Cycle Length: 45
Natural Cycle: 50
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.63

Intersection Signal Delay: 14.3 | Intersection LOS: B
Intersection Capacity Utilization 55.3% | ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 2: Kanata Commons & Campeau

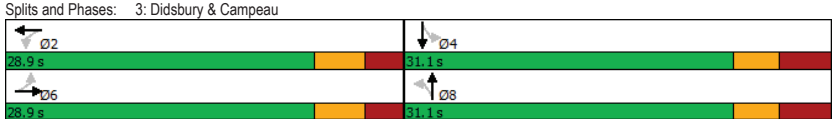


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	691	8	9	717	1	16	0	9	1	0	0
Future Volume (vph)	1	691	8	9	717	1	16	0	9	1	0	0
Satd. Flow (prot)	1658	3308	0	1658	3316	0	1658	1483	0	1658	1745	0
Flt Permitted	0.300			0.314			0.757			0.752		
Satd. Flow (perm)	523	3308	0	547	3316	0	1319	1483	0	1312	1745	0
Satd. Flow (RTOR)		2						91				
Lane Group Flow (vph)	1	699	0	9	718	0	16	9	0	1	0	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm		
Protected Phases		6			2			8			4	
Permitted Phases	6			2			8			4		
Detector Phase	6	6		2	2		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	
Minimum Split (s)	27.5	27.5		27.5	27.5		31.1	31.1		31.1	31.1	
Total Split (s)	28.9	28.9		28.9	28.9		31.1	31.1		31.1	31.1	
Total Split (%)	48.2%	48.2%		48.2%	48.2%		51.8%	51.8%		51.8%	51.8%	
Yellow Time (s)	3.7	3.7		3.7	3.7		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.8	2.8		2.8	2.8		3.8	3.8		3.8	3.8	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.5	6.5		6.5	6.5		7.1	7.1		7.1	7.1	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Act Effct Green (s)	17.0	17.0		17.0	17.0		24.1	24.1		24.1		
Actuated g/C Ratio	0.31	0.31		0.31	0.31		0.44	0.44		0.44		
v/c Ratio	0.01	0.68		0.05	0.70		0.03	0.01		0.00		
Control Delay	12.0	20.0		13.3	20.4		10.6	0.0		10.0		
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0		
Total Delay	12.0	20.0		13.3	20.4		10.6	0.0		10.0		
LOS	B	B		B	C		B	A		A		
Approach Delay		19.9			20.3			6.8			10.0	
Approach LOS		B			C			A			A	
Queue Length 50th (m)	0.1	31.0		0.6	32.2		0.9	0.0		0.1		
Queue Length 95th (m)	0.9	45.5		3.0	46.9		4.0	0.0		0.8		
Internal Link Dist (m)		222.4			292.9			171.0			27.1	
Turn Bay Length (m)	45.0			45.0			15.0			15.0		
Base Capacity (vph)	214	1360		224	1361		580	703		577		
Starvation Cap Reductn	0	0		0	0		0	0		0		
Spillback Cap Reductn	0	0		0	0		0	0		0		
Storage Cap Reductn	0	0		0	0		0	0		0		
Reduced v/c Ratio	0.00	0.51		0.04	0.53		0.03	0.01		0.00		

Intersection Summary
Cycle Length: 60
Actuated Cycle Length: 54.8
Natural Cycle: 60
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.70

Intersection Signal Delay: 19.9 | Intersection LOS: B
Intersection Capacity Utilization 52.3% | ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 3: Didsbury & Campeau



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	165	366	284	226	411	165	248	904	163	178	727	167
Future Volume (vph)	165	366	284	226	411	165	248	904	163	178	727	167
Satd. Flow (prot)	1642	1745	1441	1580	1712	1363	1658	3191	1441	1658	3191	1483
Flt Permitted	0.327			0.380			0.950			0.950		
Satd. Flow (perm)	564	1745	1420	631	1712	1342	1656	3191	1386	1650	3191	1449
Satd. Flow (RTOR)			284			165			135			141
Lane Group Flow (vph)	165	366	284	226	411	165	248	904	163	178	727	167
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	43.4	43.4	43.4	43.4	43.4	43.4	11.5	40.4	40.4	11.5	40.4	40.4
Total Split (s)	50.0	50.0	50.0	50.0	50.0	50.0	28.0	42.0	42.0	28.0	42.0	42.0
Total Split (%)	41.7%	41.7%	41.7%	41.7%	41.7%	41.7%	23.3%	35.0%	35.0%	23.3%	35.0%	35.0%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	4.2	4.2	4.2	4.2	4.2	4.2
All-Red Time (s)	2.7	2.7	2.7	2.7	2.7	2.7	2.3	2.2	2.2	2.3	2.2	2.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.4	6.4	6.4	6.4	6.4	6.4	6.5	6.4	6.4	6.5	6.4	6.4
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	43.6	43.6	43.6	43.6	43.6	43.6	20.5	39.7	39.7	17.4	36.6	36.6
Actuated g/C Ratio	0.36	0.36	0.36	0.36	0.36	0.36	0.17	0.33	0.33	0.14	0.30	0.30
v/c Ratio	0.81	0.58	0.41	0.99	0.66	0.28	0.88	0.86	0.30	0.74	0.75	0.31
Control Delay	64.8	35.2	4.9	88.1	31.1	3.6	78.6	47.6	9.5	67.1	43.5	9.3
Queue Delay	0.0	0.5	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	64.8	35.7	4.9	88.1	31.3	3.6	78.6	47.6	9.5	67.1	43.5	9.3
LOS	E	D	A	F	C	A	E	D	A	E	D	A
Approach Delay		30.9			41.6			48.8			42.1	
Approach LOS		C			D			D			D	
Queue Length 50th (m)	34.7	68.8	0.0	54.7	69.2	5.1	57.0	105.2	4.5	40.4	82.0	4.4
Queue Length 95th (m)	#73.8	99.6	17.4	#103.8	102.7	4.4	#99.2	#150.7	21.2	62.5	104.6	20.7
Internal Link Dist (m)		292.9			146.9			173.9			301.0	
Turn Bay Length (m)	62.5		64.5	70.0		63.5	45.0		62.5	100.0		50.0
Base Capacity (vph)	204	634	696	229	622	592	297	1055	548	297	974	540
Starvation Cap Reductn	0	0	0	0	21	0	0	0	0	0	0	0
Spillback Cap Reductn	0	63	0	0	0	0	0	0	4	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.81	0.64	0.41	0.99	0.68	0.28	0.84	0.86	0.30	0.60	0.75	0.31

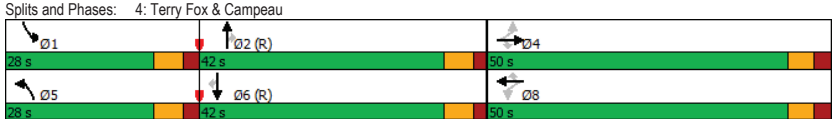
Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 104 (87%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 110
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.99

Intersection Signal Delay: 41.9	Intersection LOS: D
Intersection Capacity Utilization 98.8%	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.

Splits and Phases: 4: Terry Fox & Campeau



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	504	119	125	468	104	117	44	139	107	30	87
Future Volume (vph)	25	504	119	125	468	104	117	44	139	107	30	87
Satd. Flow (prot)	1658	1687	0	1658	1745	1483	1658	1481	0	1658	1745	1483
Flt Permitted	0.426			0.211			0.950			0.950		
Satd. Flow (perm)	742	1687	0	368	1745	1446	1658	1481	0	1611	1745	1483
Satd. Flow (RTOR)		11				133		125				135
Lane Group Flow (vph)	25	623	0	125	468	104	117	183	0	107	30	87
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases	6			2		2						4
Detector Phase	1	6		5	2	2	3	8		7	4	4
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0	10.0	5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	10.8	35.2		10.8	35.2	35.2	10.9	28.9		10.9	28.9	28.9
Total Split (s)	17.0	48.0		17.0	48.0	48.0	20.0	35.0		20.0	35.0	35.0
Total Split (%)	14.2%	40.0%		14.2%	40.0%	40.0%	16.7%	29.2%		16.7%	29.2%	29.2%
Yellow Time (s)	3.3	3.3		3.3	3.3	3.3	3.3	3.3		3.3	3.3	3.3
All-Red Time (s)	2.5	2.9		2.5	2.9	2.9	2.6	2.6		2.6	2.6	2.6
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.8	6.2		5.8	6.2	6.2	5.9	5.9		5.9	5.9	5.9
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	C-Max		None	C-Max	C-Max	None	None		None	None	None
Act Effct Green (s)	65.7	59.0		74.0	67.0	67.0	15.4	15.5		12.0	15.2	15.2
Actuated g/C Ratio	0.55	0.49		0.62	0.56	0.56	0.13	0.13		0.10	0.13	0.13
v/c Ratio	0.06	0.75		0.38	0.48	0.12	0.55	0.61		0.65	0.14	0.29
Control Delay	11.3	28.9		14.4	19.2	3.8	60.8	25.2		69.7	44.8	3.9
Queue Delay	0.0	0.1		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	11.3	29.0		14.4	19.2	3.8	60.8	25.2		69.7	44.8	3.9
LOS	B	C		B	B	A	E	C		E	D	A
Approach Delay		28.4			16.0			39.1			40.8	
Approach LOS		C			B			D			D	
Queue Length 50th (m)	2.4	72.7		10.8	51.3	2.1	26.7	13.2		24.4	6.7	0.0
Queue Length 95th (m)	m4.8	#211.9		m22.9	75.2	m6.5	46.1	33.5		42.6	14.2	3.7
Internal Link Dist (m)		146.9			220.2			66.0			66.6	
Turn Bay Length (m)	45.0			90.0		75.0				40.0		30.0
Base Capacity (vph)	522	835		355	973	865	221	453		194	423	461
Starvation Cap Reductn	0	12		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	0.05	0.76		0.35	0.48	0.12	0.53	0.40		0.55	0.07	0.19

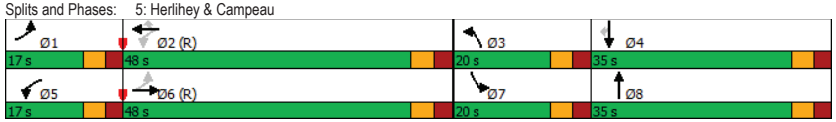
Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 22 (18%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.75

Intersection Signal Delay: 27.0	Intersection LOS: C
Intersection Capacity Utilization 84.1%	ICU Level of Service E
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: 5: Herlihey & Campeau



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	226	312	212	53	340	64	202	205	28	45	198	155
Future Volume (vph)	226	312	212	53	340	64	202	205	28	45	198	155
Satd. Flow (prot)	1658	1610	0	1658	1695	0	1658	1745	1483	1658	1745	1483
Flt Permitted	0.293			0.299			0.438			0.629		
Satd. Flow (perm)	509	1610	0	518	1695	0	742	1745	1443	1091	1745	1381
Satd. Flow (RTOR)		32			9				85			155
Lane Group Flow (vph)	226	524	0	53	404	0	202	205	28	45	198	155
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	Perm	NA	Perm
Protected Phases	1	6		5	2		3	8			4	
Permitted Phases	6			2			8		8	4		4
Detector Phase	1	6		5	2		3	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	11.2	37.2		11.2	37.2		10.9	29.9	29.9	29.9	29.9	29.9
Total Split (s)	20.0	49.0		20.0	49.0		15.0	51.0	51.0	36.0	36.0	36.0
Total Split (%)	16.7%	40.8%		16.7%	40.8%		12.5%	42.5%	42.5%	30.0%	30.0%	30.0%
Yellow Time (s)	3.7	3.7		3.7	3.7		3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	2.5	2.5		2.5	2.5		2.6	2.6	2.6	2.6	2.6	2.6
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.2	6.2		6.2	6.2		5.9	5.9	5.9	5.9	5.9	5.9
Lead/Lag	Lead	Lag		Lead	Lag		Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes			Yes	Yes	Yes
Recall Mode	None	C-Max		None	C-Max		None	Max	Max	Max	Max	Max
Act Effct Green (s)	62.3	51.6		51.2	43.8		45.1	45.1	45.1	30.1	30.1	30.1
Actuated g/C Ratio	0.52	0.43		0.43	0.36		0.38	0.38	0.38	0.25	0.25	0.25
v/c Ratio	0.59	0.74		0.18	0.65		0.58	0.31	0.05	0.16	0.45	0.34
Control Delay	29.3	38.7		16.3	37.0		34.8	28.2	0.1	37.2	42.0	7.6
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.3	38.7		16.3	37.0		34.8	28.2	0.1	37.2	42.0	7.6
LOS	C	D		B	D		C	C	A	D	D	A
Approach Delay		35.8			34.6			29.5			28.1	
Approach LOS		D			C			C			C	
Queue Length 50th (m)	31.2	103.0		5.9	77.8		33.5	33.8	0.0	8.3	39.6	0.0
Queue Length 95th (m)	m53.6	#108.9		12.4	112.9		52.6	53.0	0.0	18.4	62.4	16.0
Internal Link Dist (m)		220.2			90.4			97.8			155.3	
Turn Bay Length (m)	80.0			45.0			50.0		45.0	90.0		90.0
Base Capacity (vph)	396	710		380	625		348	655	595	273	437	462
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	0.57	0.74		0.14	0.65		0.58	0.31	0.05	0.16	0.45	0.34

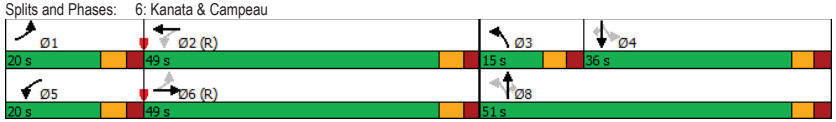
Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 12 (10%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.74

Intersection Signal Delay: 32.7	Intersection LOS: C
Intersection Capacity Utilization 91.0%	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: 6: Kanata & Campeau



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	26	154	307	33	89	198	1139	480	130	1287	30
Future Volume (vph)	35	26	154	307	33	89	198	1139	480	130	1287	30
Satd. Flow (prot)	1658	1745	1483	3216	1555	0	1658	3316	1483	1658	3304	0
Flt Permitted	0.950			0.950			0.073			0.146		
Satd. Flow (perm)	1658	1745	1459	3197	1555	0	127	3316	1443	255	3304	0
Satd. Flow (RTOR)			154		89				479		2	
Lane Group Flow (vph)	35	26	154	307	122	0	198	1139	480	130	1317	0
Turn Type	Split	NA	Perm	Split	NA		pm+pt	NA	pm+ov	pm+pt	NA	
Protected Phases	4	4		8	8		5	2	8	1	6	
Permitted Phases			4				2		2	6		
Detector Phase	4	4	4	8	8		5	2	8	1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0		5.0	10.0	10.0	5.0	10.0	
Minimum Split (s)	38.7	38.7	38.7	36.7	36.7		11.3	38.4	36.7	11.3	38.4	
Total Split (s)	39.0	39.0	39.0	37.0	37.0		13.0	41.0	37.0	13.0	41.0	
Total Split (%)	30.0%	30.0%	30.0%	28.5%	28.5%		10.0%	31.5%	28.5%	10.0%	31.5%	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		4.2	4.2	3.0	4.2	4.2	
All-Red Time (s)	3.7	3.7	3.7	3.7	3.7		2.1	2.2	3.7	2.1	2.2	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.7	6.7	6.7	6.7	6.7		6.3	6.4	6.7	6.3	6.4	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None		None	C-Max	None	None	C-Max	
Act Effct Green (s)	14.4	14.4	14.4	18.9	18.9		75.2	58.0	76.6	61.1	48.4	
Actuated g/C Ratio	0.11	0.11	0.11	0.15	0.15		0.58	0.45	0.59	0.47	0.37	
v/c Ratio	0.19	0.13	0.52	0.66	0.40		0.59	0.77	0.46	0.51	1.07	
Control Delay	51.5	49.9	13.1	58.8	19.9		38.0	36.1	2.3	23.5	84.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	51.5	49.9	13.1	58.8	19.9		38.0	36.1	2.3	23.5	84.9	
LOS	D	D	B	E	B		D	D	A	C	F	
Approach Delay		23.8			47.7			27.4			79.4	
Approach LOS		C			D			C			E	
Queue Length 50th (m)	8.6	6.4	0.0	38.9	7.5		30.8	119.8	0.1	12.6	165.8	
Queue Length 95th (m)	15.7	12.7	16.7	51.0	24.3		#94.0	#237.1	11.3	35.1	#290.2	
Internal Link Dist (m)		103.7			100.9			255.1			173.9	
Turn Bay Length (m)	30.0		30.0	70.0			45.0		75.0	30.0		
Base Capacity (vph)	411	433	478	749	430		334	1479	1141	255	1232	
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	0.09	0.06	0.32	0.41	0.28		0.59	0.77	0.42	0.51	1.07	

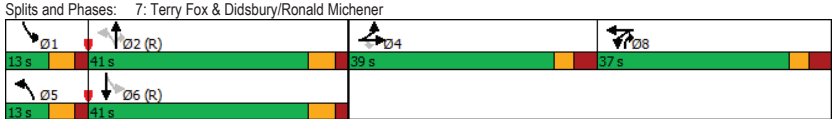
Intersection Summary
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.07

Intersection Signal Delay: 48.7	Intersection LOS: D
Intersection Capacity Utilization 91.2%	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.

Splits and Phases: 7: Terry Fox & Didsbury/Ronald Michener



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	1111	0	574	0	1389	289	0	1391	434
Future Volume (vph)	0	0	0	1111	0	574	0	1389	289	0	1391	434
Satd. Flow (prot)	0	0	0	3216	0	2611	0	3316	1483	0	3316	1483
Flt Permitted				0.950								
Satd. Flow (perm)	0	0	0	3216	0	2611	0	3316	1441	0	3316	1483
Satd. Flow (RTOR)						389			288			434
Lane Group Flow (vph)	0	0	0	1111	0	574	0	1389	289	0	1391	434
Turn Type				Prot		Prot		NA	Perm		NA	Perm
Protected Phases				7 8		8		2			6	
Permitted Phases									2			6
Detector Phase				7 8		8		2	2		6	6
Switch Phase												
Minimum Initial (s)						5.0		10.0	10.0		10.0	10.0
Minimum Split (s)						11.1		35.2	35.2		17.2	17.2
Total Split (s)						24.0		67.0	67.0		67.0	67.0
Total Split (%)						20.0%		55.8%	55.8%		55.8%	55.8%
Yellow Time (s)						3.3		4.2	4.2		4.2	4.2
All-Red Time (s)						2.8		3.0	3.0		3.0	3.0
Lost Time Adjust (s)						0.0		0.0	0.0		0.0	0.0
Total Lost Time (s)						6.1		7.2	7.2		7.2	7.2
Lead/Lag						Lag						
Lead-Lag Optimize?						Yes						
Recall Mode						None		C-Max	C-Max		C-Max	C-Max
Act Effct Green (s)				46.7		17.7		60.0	60.0		60.0	60.0
Actuated g/C Ratio				0.39		0.15		0.50	0.50		0.50	0.50
v/c Ratio				0.89		0.80		0.84	0.33		0.84	0.45
Control Delay				44.3		25.0		25.6	1.2		31.7	3.2
Queue Delay				0.0		0.0		0.0	0.0		0.0	0.0
Total Delay				44.3		25.0		25.6	1.2		31.7	3.2
LOS				D		C		C	A		C	A
Approach Delay					37.7			21.4			24.9	
Approach LOS					D			C			C	
Queue Length 50th (m)				123.9		23.7		153.4	0.3		144.4	0.0
Queue Length 95th (m)				#156.0		47.2		183.5	2.9		176.2	15.8
Internal Link Dist (m)		112.7			226.2			354.7			255.1	
Turn Bay Length (m)				120.0		195.0			85.0			115.0
Base Capacity (vph)				1256		720		1658	864		1658	958
Starvation Cap Reductn				0		0		0	0		0	0
Spillback Cap Reductn				0		0		0	0		0	0
Storage Cap Reductn				0		0		0	0		0	0
Reduced v/c Ratio				0.88		0.80		0.84	0.33		0.84	0.45

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 12 (10%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

Lane Group	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	7
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	29.1
Total Split (s)	29.0
Total Split (%)	24%
Yellow Time (s)	3.3
All-Red Time (s)	2.8
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Recall Mode	None
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	

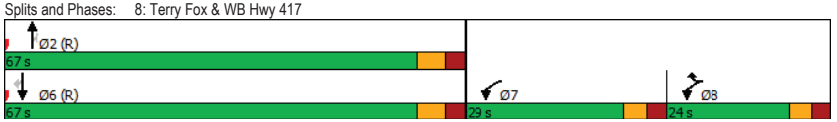
Intersection Summary

Maximum v/c Ratio: 0.89

Intersection Signal Delay: 27.9	Intersection LOS: C
Intersection Capacity Utilization 83.4%	ICU Level of Service E
Analysis Period (min) 15	

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

Splits and Phases: 8: Terry Fox & WB Hwy 417



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	242	0	253	0	0	0	0	1374	727	0	2006	333
Future Volume (vph)	242	0	253	0	0	0	0	1374	727	0	2006	333
Satd. Flow (prot)	1658	0	1483	0	0	0	0	3316	1483	0	3316	1483
Flt Permitted	0.950											
Satd. Flow (perm)	1658	0	1463	0	0	0	0	3316	1483	0	3316	1483
Satd. Flow (RTOR)			25						727			333
Lane Group Flow (vph)	242	0	253	0	0	0	0	1374	727	0	2006	333
Turn Type	Prot		Perm					NA	Perm		NA	Perm
Protected Phases	4							2			6	
Permitted Phases			4						2			6
Detector Phase	4		4					2	2		6	6
Switch Phase												
Minimum Initial (s)	5.0		5.0					10.0	10.0		10.0	10.0
Minimum Split (s)	23.4		23.4					15.7	15.7		17.7	17.7
Total Split (s)	31.0		31.0					89.0	89.0		89.0	89.0
Total Split (%)	25.8%		25.8%					74.2%	74.2%		74.2%	74.2%
Yellow Time (s)	3.3		3.3					4.2	4.2		4.2	4.2
All-Red Time (s)	2.1		2.1					1.5	1.5		1.5	1.5
Lost Time Adjust (s)	0.0		0.0					0.0	0.0		0.0	0.0
Total Lost Time (s)	5.4		5.4					5.7	5.7		5.7	5.7
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None		None					C-Max	C-Max		C-Max	C-Max
Act Effct Green (s)	22.5		22.5					86.4	86.4		86.4	86.4
Actuated g/C Ratio	0.19		0.19					0.72	0.72		0.72	0.72
v/c Ratio	0.78		0.86					0.58	0.57		0.84	0.29
Control Delay	63.4		68.7					9.7	2.4		12.1	0.9
Queue Delay	0.0		0.0					0.0	0.0		0.0	0.0
Total Delay	63.4		68.7					9.7	2.4		12.1	0.9
LOS	E		E					A	A		B	A
Approach Delay		66.1						7.2			10.5	
Approach LOS		E						A			B	
Queue Length 50th (m)	53.4		51.6					77.7	0.0		128.7	3.2
Queue Length 95th (m)	81.1		#88.4					97.9	10.5		182.3	m3.8
Internal Link Dist (m)		135.3			95.4			64.0			354.7	
Turn Bay Length (m)									95.0			100.0
Base Capacity (vph)	353		331					2386	1271		2386	1160
Starvation Cap Reductn	0		0					0	0		0	0
Spillback Cap Reductn	0		0					0	0		0	0
Storage Cap Reductn	0		0					0	0		0	0
Reduced v/c Ratio	0.69		0.76					0.58	0.57		0.84	0.29

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.86
Intersection Signal Delay: 14.7 — Intersection LOS: B
Intersection Capacity Utilization 84.4% — ICU Level of Service E
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: 9: Terry Fox & EB Hwy 417